CITY OF MORGAN HILL

CITY COUNCIL STAFF REPORT

MEETING DATE: August 24, 2011

Agenda Item # 30

Prepared By:

City Engineer

Approved By:

Assistant City Manager

Submitted By:

City Manager

SELECTION OF INTERSECTION DESIGN FOR HALE AVENUE EXTENSION PROJECT

RECOMMENDED ACTION:

1. Hear report on community engagement process.
2. Confirm staff recommendations for intersection designs.

EXECUTIVE SUMMARY: On February 16, 2011, Council approved moving forward the Hale Avenue Extension Project and directed staff to go back to the community to obtain feedback on intersection and cross-section design alternatives.

On July 19, 2011, staff held a third community engagement meeting at the Community and Cultural Center to present intersection and cross-section design concepts and to obtain feedback from the community. This meeting was a follow-up to the November 4, 2010 and December 9, 2010 community engagement meetings concerning the same project. Staff, together with the City consultant, presented various intersection design concepts for all three intersections to the community. In addition, project features to suppress noise and minimize back-lighting, such as sound walls, earth berms, street light placement and landscaping treatments were also shown and discussed.

Approximately 30 community members attended the meeting. Staff received favorable feedback regarding the conceptual design issues with respect to the intersections. Overwhelmingly, the community was in strong support of the roundabout concept for all three of the proposed intersections. As for the project features; the community was in strong support of sound walls and the bike path, recommend vegetation adjacent to the wall, and prefer street lighting in the median. The community meeting minutes are attached.

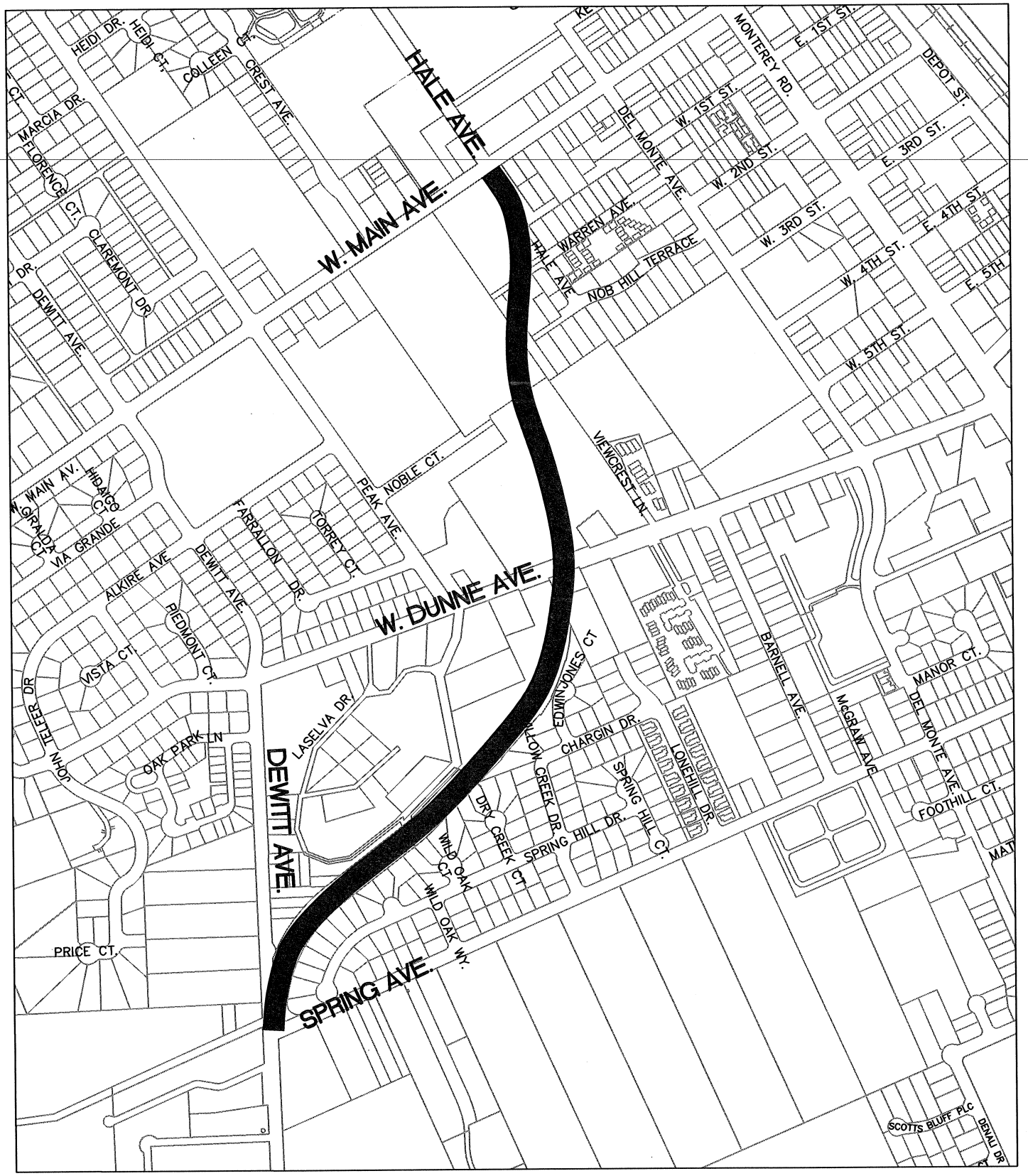
Having completed the community outreach process and considering the community input as well as safe and efficient traffic movements, staff recommends that Council approve the following intersection design concepts so that staff can begin the next process of the design, establishing the roadway alignment:

1. Main/Hale intersection, staff recommends a standard 4-way intersection design, (either signalized or non-signalized.
2. Dunne/Hale intersection, staff recommends a roundabout intersection design.
3. DeWitt/Hale intersection, staff recommends two standard 3-way intersection designs, one at Hale/Spring with stop control and one at Hale/DeWitt with no stop control.

These recommendations come after careful consideration of the communities input coupled with current traffic volumes and sound engineering principles relating to traffic safety.

FISCAL/RESOURCE IMPACT: None with this action. The Hale Avenue Extension project is currently budgeted in the 5-Year adopted CIP under Project Number 546007.

THIS PAGE LEFT BLANK INTENTIONALLY



SCALE: NTS

City of Morgan Hill

Public Works Department

CITY OF MORGAN HILL

LOCATION PLAN

Hale Avenue Extension

Date: 8/24/11	Drwn by: DIG	PAGE 1 OF 1

N:\PROJECTS\CIP\STREETS\546007-Santa Teresa Const\Staff Reports\hale plot 8-24-11.dwg

CITY OF MORGAN HILL

Memorandum

Community Development Agency-Engineering

Date: **August 24, 2011**

To: **Karl Bjarke, City Engineer**

From: **David Gittleson – Associate Engineer**

Subject: **Hale Avenue Extension Project**
Intersection Alternative Selection

The Hale Avenue Extension project was formally known as the Santa Teresa "Gap Fill" project. At its February 16, 2011 meeting, the City Council confirmed the need for the project and directed staff to proceed with the design. The limits of the Hale Avenue Extension project are Main Avenue at the north end and DeWitt Avenue at the south end. Council will recall that this reach of roadway has been a planned arterial in the City's General Plan since 1969. When completed, Morgan Hill residents and public safety responders will have a safer and more efficient means of driving north or south through the western part of the City. In addition, the new roadway segment will reduce traffic congestion on nearby local streets, thereby reducing the potential for accidents during peak commute hours and school drop-off/pick-up times. The project will be designed as a two-lane roadway with a median, bike lanes, and pedestrian walkways in conformance with the City's multi-modal arterial standard and the community's input.

At the February 16, 2011 Council meeting, staff presented findings and recommendations taken from two community engagement meetings held in November and December of 2010. The Council was told that the street cross-sections and the intersections with Main Avenue, W. Dunne Avenue, and DeWitt Avenue needed to be studied more carefully as a pre-curser to launching full design. City Council approved the project moving forward and directed staff to go back to the community to obtain feedback on intersection and cross-section design alternatives.

On March 23, 2011, City Council awarded the design contract with Mark Thomas & Company for the Hale Avenue Extension project. The scope of work includes developing alternatives for the intersections and sharing those with the community for feedback and then coming back to the Council for approval.

On July 19, 2011, staff held a third community engagement meeting at the Community and Cultural Center to present intersection and cross-section design concepts to the community and to obtain feedback. Staff, together with the City consultant, presented various intersection design concepts for all three intersections to the community. In addition, project features to suppress noise and minimize back-lighting, such as: sound walls, earth berms, street light placement and landscaping treatments were also shown and discussed.

For each of the three intersections described, staff wanted to present at least two alternatives for the community to consider. Staff received favorable feedback regarding the conceptual design issues with respect to the intersections. Overwhelmingly, those attending the community were in strong support of the roundabout concept for all three of the proposed intersections. As for the project features; the community was in strong support of sound walls and the bike path, recommend vegetation adjacent to the wall, and prefer street lighting in the median. The community meeting minutes are attached.

Having completed the community outreach process and receiving valuable community input and taking into consideration safe and efficient traffic movements, staff recommends that the following intersection design concepts be selected by Council so that staff can begin establishing the roadway alignment and finalizing the design plans:

1. Main/Hale intersection, staff recommends a standard 4-way intersection design, (either signalized or non-signalized.

   Even though the community was not shown a roundabout alternative for this intersection, the feedback received was that a roundabout should be considered. Staff therefore examined two intersection concepts for this intersection location, a roundabout design and a conventional 4-way stop or signalized design. We started with a roundabout concept that had an offset at the intersection to avoid impacting a residence at the north-west corner. This configuration would still substantially encroach onto the north-west property as well as the south-east corner property and West Little Llagas Creek, thus requiring the City to purchase additional right of way.

   Due to the high volume of pedestrian and school children that cross this intersection, staff felt that a roundabout was not appropriate for this location. In addition, the large area required for a roundabout design becomes very costly to purchase, will have detrimental impacts to the house located at the northwest corner, and increases the design and environmental costs. For these reasons, staff recommends a standard 4-way intersection design for this location. An option to consider for the standard 4-way intersection to improve congestion and efficiency could be to add a dedicated right turn lane from the proposed northbound direction of Hale Avenue onto West Main Avenue toward downtown; however, this option would cost significantly more as it impacts West Little Llagas Creek, triggering additional environmental studies and mitigation. Staff will evaluate this option to determine if traffic volumes dictate its need at this point in time.

2. Dunne/Hale intersection, staff recommends a roundabout intersection design.

   Staff investigated two options for this intersection, a roundabout design and a standard 4-way signalized design. Both concepts work equally well and are roughly equal in costs for this location; however, the community outreach favored the roundabout design for its unique design and more free flowing characteristics. The standard 4-way design is more compact and requires less right of way and thus less road improvement costs, but would require the addition of a traffic signal. The roundabout design would require more right

of way and the road improvement costs would be more extensive. The positives of the roundabout concept are that it would be unique, provide better traffic flow, reduced emissions, provide traffic calming, reduced vehicle speeds, reduce injury severity, increase pedestrian safety, and utilize no electrical consumption or require maintenance. Roundabout drawbacks include; motorist unfamiliarity, does not reduce the number of accidents, and not as bicycle friendly as conventional intersection. Staff recommends that the roundabout design be used for this location with an emphasis on roundabout designs that increase bicycle and pedestrian safety.

3. DeWitt/Hale intersection, staff recommends two standard 3-way intersection designs, one at Hale/Spring with stop control and one at Hale/DeWitt with no stop control, including a right turn entrance onto Dewitt, a right turn only exit from DeWitt, and a left turn from Hale onto DeWitt.

   Staff examined various intersection concepts for this intersection location; multiple roundabout designs and conventional intersections with stop controls. The community was again in favor of a roundabout concept for this location, so staff explored this concept first. Staff worked with the consultant to develop three roundabout concepts. All three designs would significantly impact adjacent property owners and their driveway access and require substantial right of way takes. In order to fit a roundabout in this location, the roundabout itself needed to be modified from a standard configuration, thereby creating a non-standard design. Since the roundabout concept is fairly new to our transportation system, staff does not recommend deviating from the State standards for roundabout designs in order to fit the roundabout in this particular location. In addition to the impacts to adjacent property owners and requiring more right of way, the roundabout design could also cause confusion due to its offset intersecting streets and hence compromise safety.

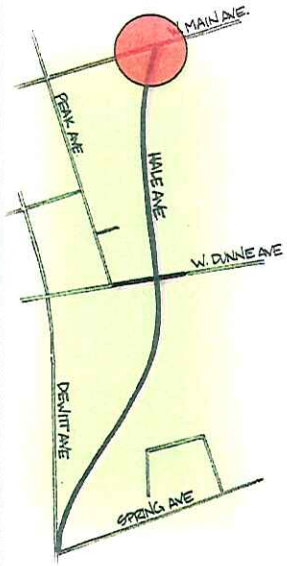
   Staff also looked into an alternate where Hale Avenue would "T-bone" into DeWitt which would make DeWitt the primary through street. However, staff did not consider this as a viable option as it does not meet the City's Circulation Plan of converting Hale Avenue into one contiguous north-south roadway segment for the west part of the City.

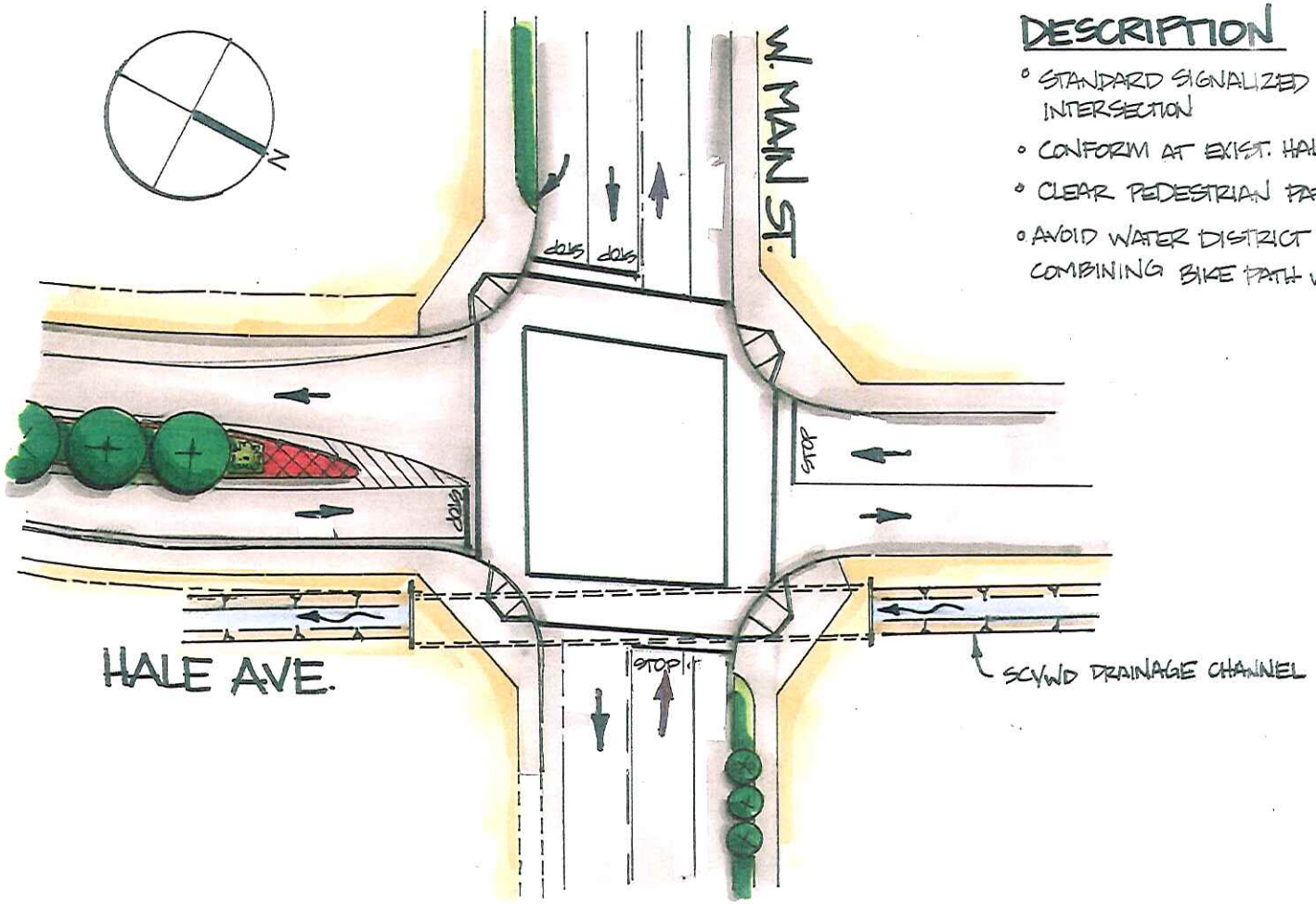
   Staff recommends an intersection design that offers the most traffic movements as conveyed in the community meetings. It incorporates the use of two traditional type intersections, one at Spring/Hale with stop control and one at DeWitt/Hale without stop control, but with turning restrictions. The intersection at Spring/Hale would consist of a 3-way standard intersection with full stop control, including pedestrian crosswalks. The intersection at DeWitt/Hale also consists of a 3-way standard intersection, but without stop controls on Hale, has no crosswalks, and restricts left turn movements across Hale. Left turn restrictions are necessary in order to minimize the potential for collisions. Staff believes that this concept combines excellent circulation with maximum safety for motorists, pedestrians, and bicyclists and meets the City's envision for one contiguous roadway segment.

Staff also recommends that the following project features be included in the design of the project to suppress noise and minimize back-lighting for the adjacent residents; soundwall adjacent to homes on the east side of the proposed Hale Avenue, raised median with native type landscaping, street lights in the median, no curb/gutter, bio-swale, native landscaping, rubberized asphalt, meandering pedestrian pathway on east side of roadway with a standard sidewalk on the west side.

Once approval is given for these critical intersections and project design features, staff and the consultant will then proceed with developing the alignment and hence complete the design documents. The entire design process is expected to take 9 months. The project must also acquire CEQA clearance and all needed right-of-way prior to starting construction.

Recommended Concept For Hale/West Main Intersection

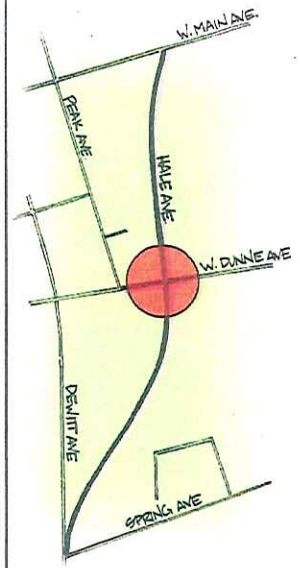


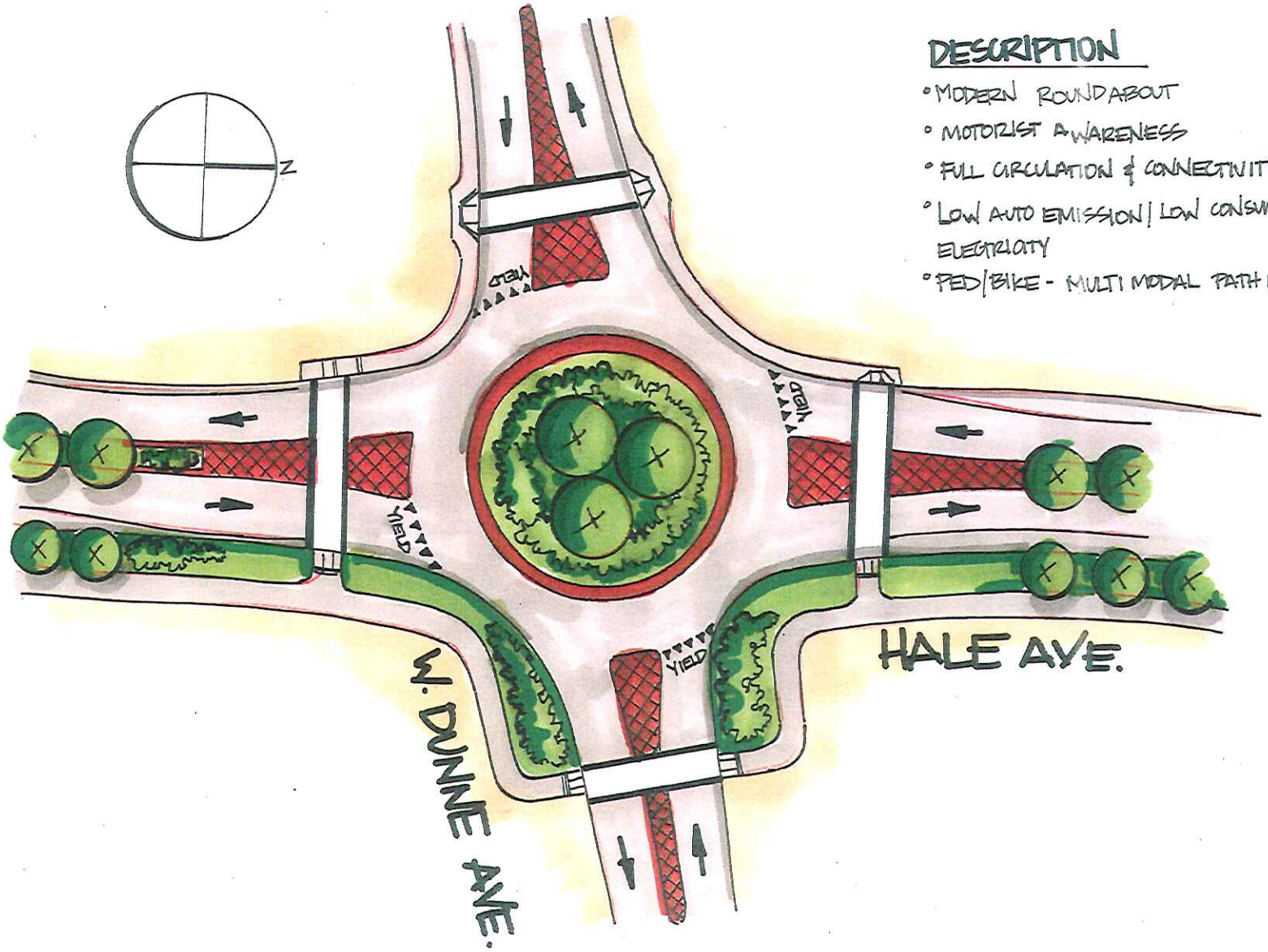


DESCRIPTION

- STANDARD SIGNALIZED OR STOP CONTROLLED INTERSECTION
- CONFORM AT EXIST. HALE AVE/ W.MAIN ST.
- CLEAR PEDESTRIAN PATHWAY
- AVOID WATER DISTRICT CHANNEL BY COMBINING BIKE PATH WITH ROAD SHOULDER

Recommended Concept For Hale/West Dunne Intersection

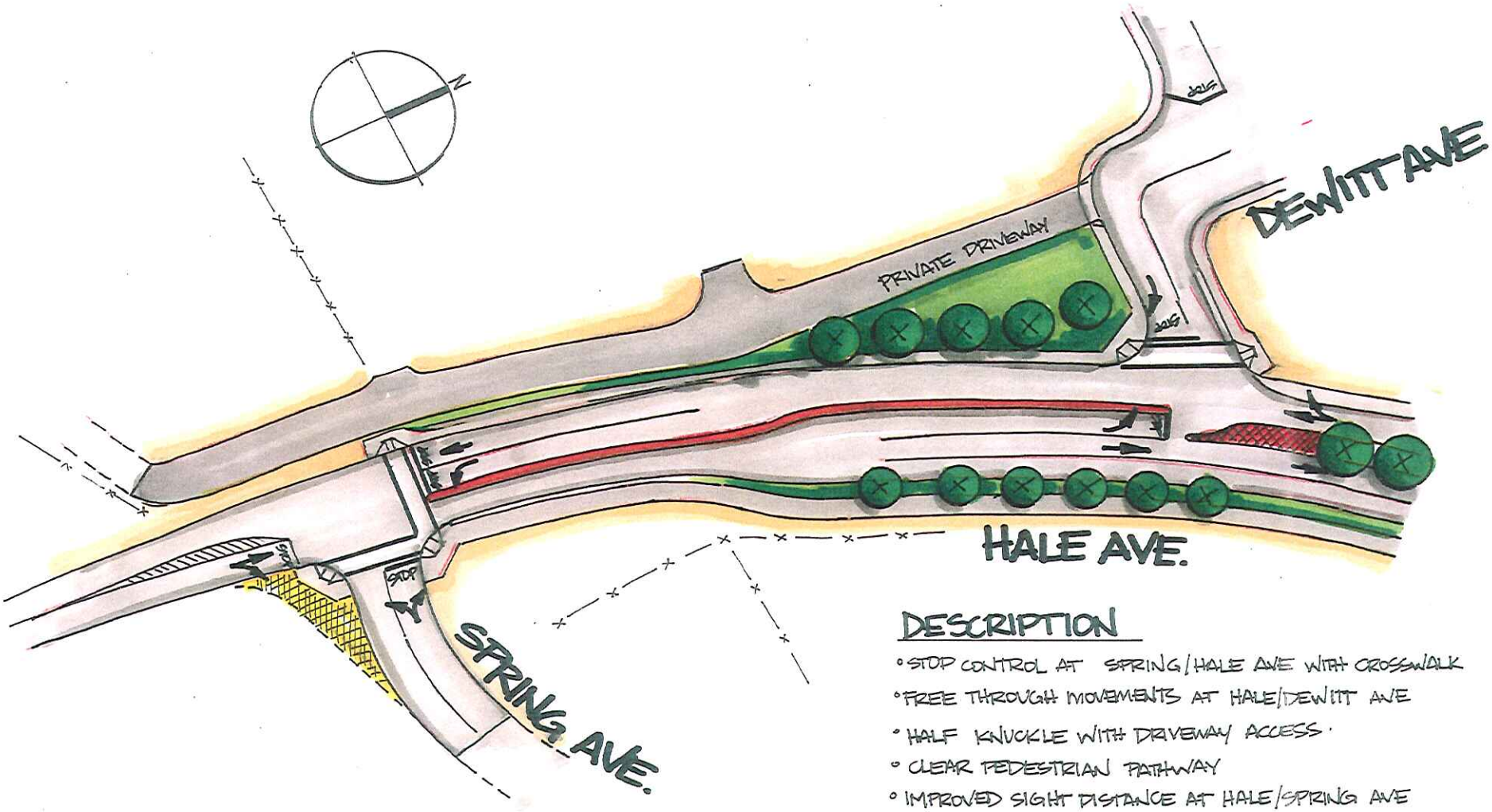




DESCRIPTION

- MODERN ROUNDABOUT
- MOTORIST AWARENESS
- FULL CIRCULATION & CONNECTIVITY
- LOW AUTO EMISSION / LOW CONSUMPTION OF ELECTRICITY
- PED/BIKE - MULTI MODAL PATH MOVEMENTS

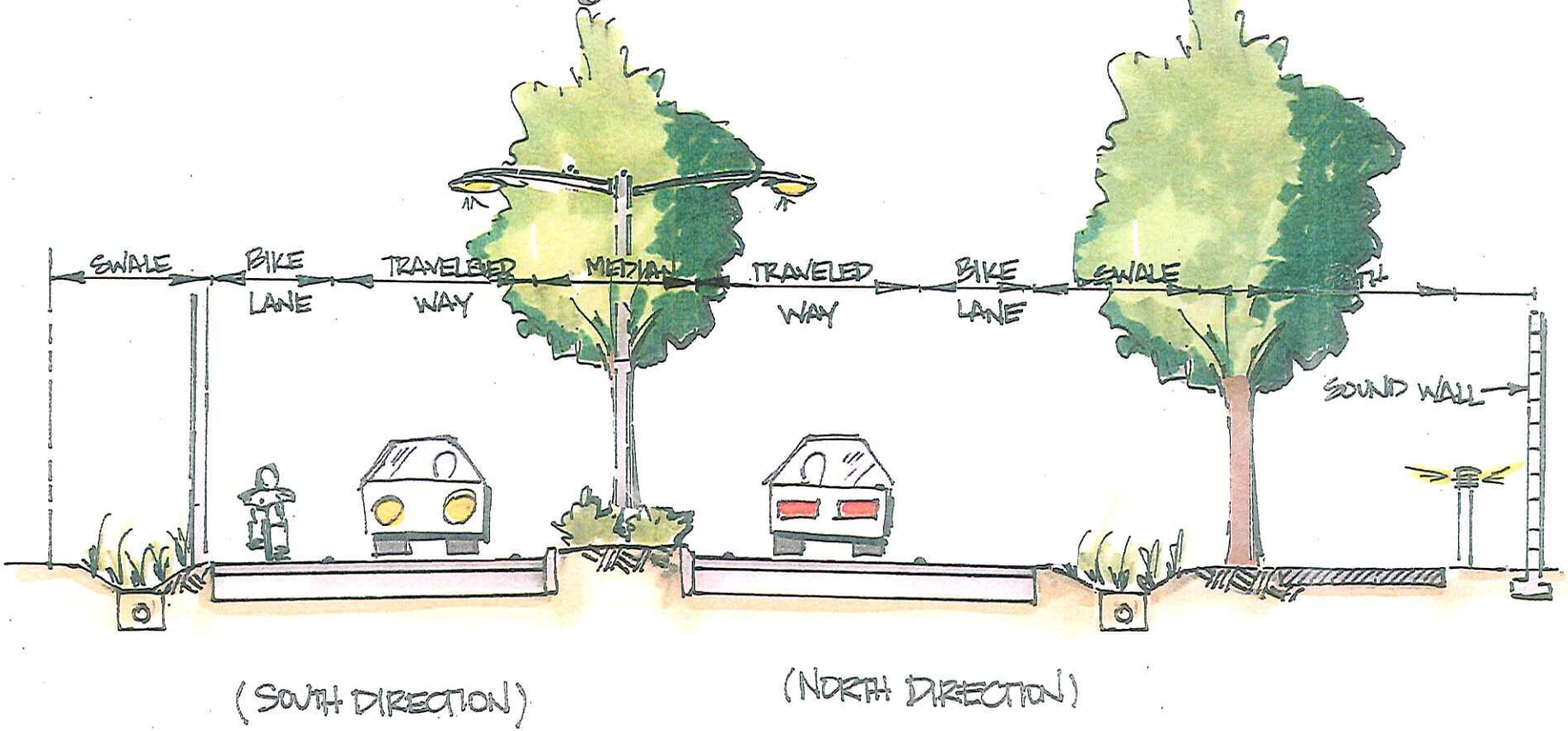
Recommended Concept For Hale/De Witt Intersection



DESCRIPTION

- STOP CONTROL AT SPRING/HALE AVE WITH CROSSWALK
- FREE THROUGH MOVEMENTS AT HALE/DEWITT AVE
- HALF KNUCKLE WITH DRIVEWAY ACCESS.
- CLEAR PEDESTRIAN PATHWAY
- IMPROVED SIGHT DISTANCE AT HALE/SPRING AVE
- NO LEFT TURN FROM DEWITT TO HALE AVE

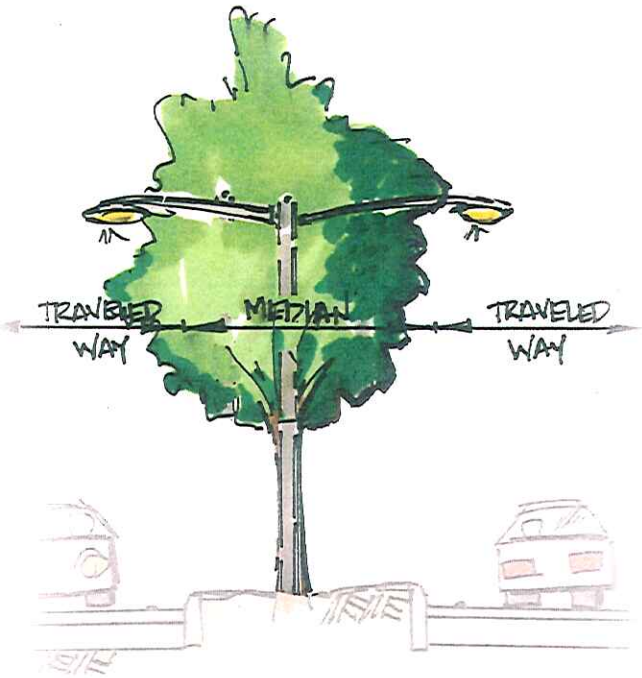
Project Features

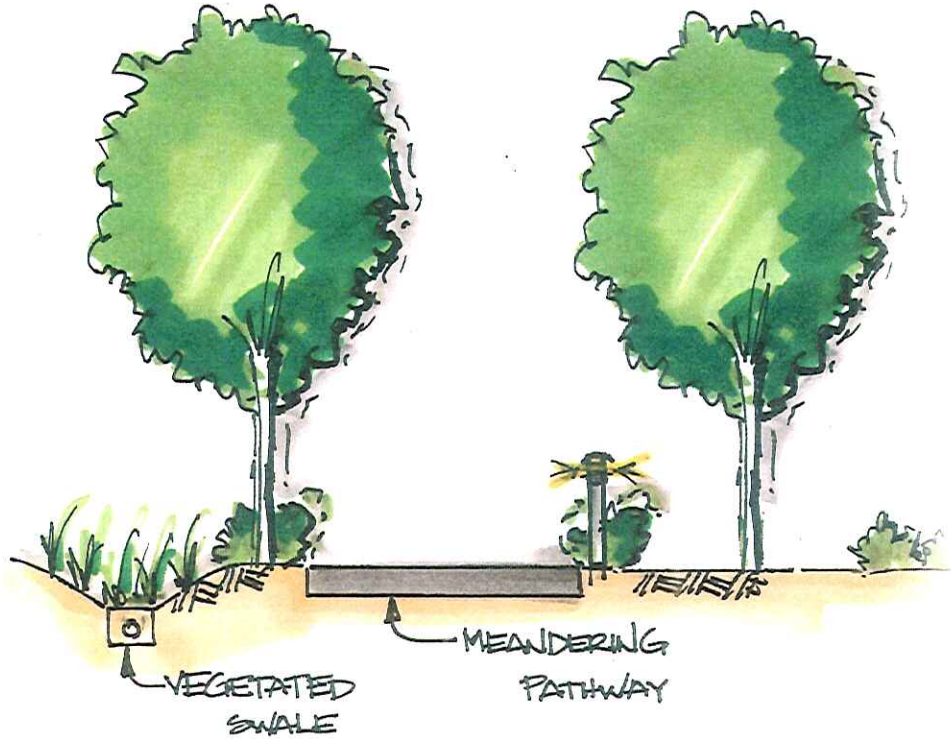


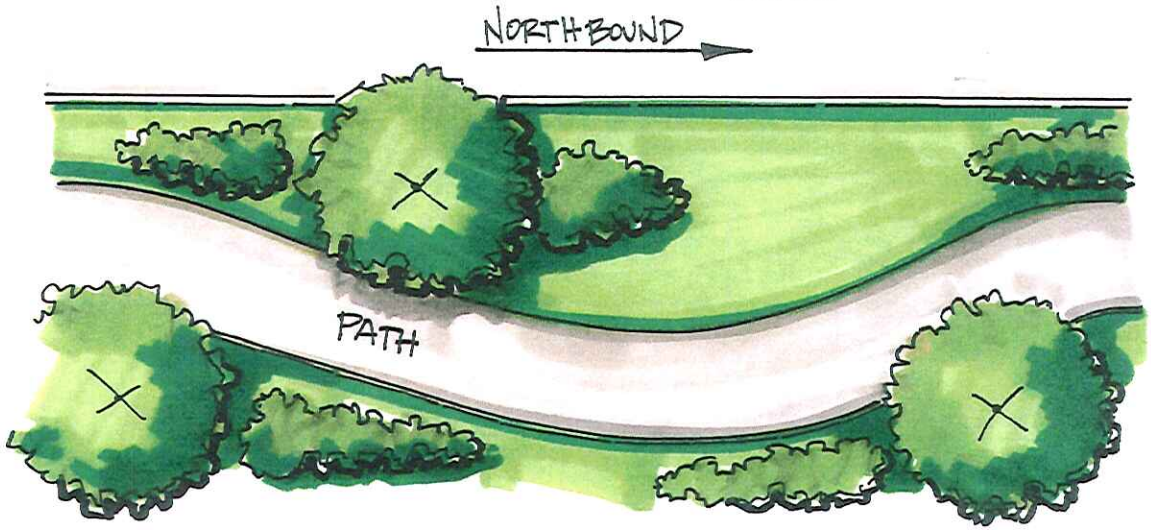
COMMUNITY INPUT

- BIOSWALES
- LIGHTING | CUT OFF SHIELDS
- MEDIAN (TREES OR SHRUBS)
- MEANDERING PATHWAY
- SOUND MITIGATION

Project Features







CITY OF MORGAN HILL:
HALE AVENUE EXTENSION PROJECT
COMMUNITY ENGAGEMENT MEETING

Summary of Community Meeting
July 19, 2011

A Community Engagement Meeting was held concerning proposed extension of Hale Avenue in the City of Morgan Hill. The meeting was held on July 19, 2011, at the Community and Cultural Center, 17000 Monterey Road, Morgan Hill. The meeting started at 7:00 p.m. and concluded at 9:00 p.m.

This meeting was a follow-up to the November 4, 2010 and December 9, 2010 Community Engagement meetings concerning the same project (formerly known as the Santa Teresa Boulevard Improvement Project). These previous meetings were held pursuant to the City Council's request for community engagement with respect to *what* the project should look like and *when* it should be built. The meeting on July 19th was to engage the community and take input regarding design features of the proposed project.

Notice of the meeting was provided by various means; including a letter mailed by the City to approximately 800 addresses near the project alignment, a press release issued by City staff, a notice in the Morgan Hill Times on-line edition, the City website and Calendar of Events, and word of mouth. Most of the attendees had attended at least one previous meeting.

The following summary of the meeting was prepared by Eileen Goodwin, Apex Strategies, who moderated the meeting.

Meeting Summary:

The meeting started at 7:00 p.m. In addition to the personnel there to answer questions and present information, approximately thirty (30) members of the public attended.

Ms. Goodwin discussed the purpose of the meeting and introduced: Karl Bjarke, City of Morgan Hill, City Engineer. After Mr. Bjarke's presentation and overview, John Kenyon of Mark Thomas & Company presented various intersection design options and additional project features.

Ms. Goodwin solicited input and questions from the meeting attendees. The first part of the meeting included questions concerning the project; generally followed by questions concerning features of the project. The community members were asked for input concerning conceptual design issues with respect to the intersections along the extended road and cross-section options for the roadway and multi-modal trail. Mr. Bjarke and Mr. Kenyon provided responses to any questions raised. The meeting concluded at approximately 9:00 p.m.

Community Comments and Responses:

The following comments and questions were made at the Community Meeting:

	Comment/Question	Response/Answer
	Project Questions	
1	How was the Council decision made? How was the voting counted from the previous meetings?	The Council was given the written summaries of the two community meetings including the voting results from those meetings. They weighed that input when they voted to continue the project.
2	Will Hale be widened to the North?	No only within the project limits
3	Water District channel - Explain the main impact on right turn pocket in new section.	Answer provided using the visuals in the PowerPoint presentation.
4	Will the new section of Hale be that much wider?	It will conform to the widths and location of the existing intersection.
5	With respect to Hale and West Dunne Avenue, there are questions about the number of lanes.	Information clarified.
6	Would the Peak Avenue intersection with Dunne Avenue stay the same?	Yes it will remain a three-way stop controlled intersection
7	How far east of Peak Avenue is the new intersection going to be?	It will be close (approximately 350 feet).
8	How would the Spring Avenue / DeWitt Avenue intersection work?	Explanation provided utilizing visuals.
9	Are there similar designs of offset intersections somewhere that could be viewed?	Yes, offset intersections are common, but each location is different. The proposed offset for this location is related to the close proximity of both DeWitt and Spring Ave.
10	Does the City have the right-of-way for the project?	The City does not yet own the whole right-of-way.
11	The DeWitt turn looks "extreme."	Standard designs are being used.
12	Does the driveway serve the church at West Hills?	The West Hills Community Church is located south of Spring Avenue so the proposed driveway on the west side of Hale Ave under Options 1, 2 and 3 will not serve the church.
	Project Features	

	Comment/Question	Response/Answer
13	Where will the storm water go? What about subterranean water?	There is an existing 60-inch storm drain pipe under the "proposed alignment" that may be used for roadway drainage. In addition to bio-swales, a retention basis may also be used to address water quality requirements. Subterranean water issues will be reviewed during design with respect to the proposed improvements.
14	A neighbor wants trees and soundwalls to protect their property.	Comments noted.
15	A community member had concerns about sidewalk placement, citing security and privacy issues.	Comments noted.
16	A neighbor was concerned that the divided roadway configuration would result in noise carrying to adjacent neighborhoods.	Comment noted.
17	There were questions by a community member on the earth berm, especially related to security.	Comments noted.
18	Would like to see these design plans over aerial photos with property lines shown.	Comment noted.
	Hale and West Main Options	
19	Concern expressed regarding potential cost of project.	Comment noted.
20	Can a roundabout option be looked at? The speaker supports Option 1 over Option 2. Is the intersection large enough for a roundabout?	The roundabout option may be possible and will be looked at.
21	Does either option mitigate potential flooding?	No, but there is a separate design effort underway for a new 100-year storm structure a which is being managed by the Santa Clara Valley Water District..
22	A speaker likes the options because they want a right turn pocket.	Comment noted.
23	A speaker likes Option #2, but wonders about effect on the pedestrian walkway.	There will be curb ramps at all four corners.
24	A speaker stated that everyone would want right hand turn lanes.	Comment noted.
25	Why keep the median?	Earlier meeting input expressed a desire for landscaping in the median to soften the look of the road.

	Comment/Question	Response/Answer
26	A speaker does not like the possible roundabout, citing too many busses among other issues.	Comments noted.
27	A community member likes Option #1 because it seems to keep traffic slower and safer.	Comment noted.
28	Community requested opportunity to vote by show of hands. Hale/West Main Option #1 versus Hale/West Main Option #2	Eighteen (18) people preferred Option #1, twenty (20) people preferred Option #2 and fourteen (14) people preferred a roundabout if it was possible.
	Hale and West Dunne Avenue Options	
29	Prefers the Option #2 because of the landscaping.	Comment noted.
30	With respect to roundabouts, why the "modern" term? Where is information on whether these work?	Audience members suggested staff look into roundabouts recently constructed in the cities of Tracy, Modesto and Clovis. In addition staff will look at roundabouts in other California cities (ie Santa Cruz recently constructed a roundabout). Informational Design Guides for roundabouts are published by FHWA and CALTRANS. See links for roundabout information: http://www.fhwa.dot.gov/publications/research/safety/00067/index.cfm http://www.dot.ca.gov/hq/oppd/dib/dib80-01.htm
31	Is there more maintenance, such as landscaping costs, with a roundabout?	The exhibits for the various options all show landscaping; thatcan be substituted with hardscape if deemed appropriate. Roundabouts save on the electrical cost of traffic signals as they aren't constructed at roundabouts.
32	A speaker likes the opportunity for statue or public art in a roundabout.	Comment noted.
33	There a concern about bicyclists and pedestrians cutting through roundabouts.	Comment noted.
34	A speaker noted that there is the perception that roundabouts slow traffic and likes the traffic calming.	Comment noted.
35	Will there be pedestrian control for the crosswalks on the roundabout?	There could be. There are options, including pedestrian actuated push buttons where walkers can activate surface mounted warning lights.

	Comment/Question	Response/Answer
36	Speaker pointed out there is a roundabout in Morgan Hill within the Capriano Subdivision at Dougherty Ave/Coriander Ave.	Comment noted.
37	Community requested opportunity to vote by show of hands. Hale/West Dunne Option #1 versus Hale/West Dunne Option #2	Thirty-six (36) people preferred Option #1 and twenty-five (25) people preferred Option #2.
	Hale and DeWitt/Spring Options	
38	A speaker voiced concern that property condemnations would be tied back to the votes taken at the meeting.	Comment Noted. Property owners in this area will be contacted at the appropriate time.
39	A speaker felt that the options were clever, but wondered what happened to the option where Hale Avenue came to a T intersection with DeWitt.	Having Hale Avenue tie into DeWitt Ave as a "Tee Intersection" was not considered since Hale Avenue is intended to be a through movement arterial roadway.
40	Is a roundabout feasible?	Yes, all designs shown in the PowerPoint were laid out according to design standards and are feasible.
41	A property owner across from Spring Avenue suggested that the option that requires the least amount of property to be acquired is the best. The stretch of roadway between DeWitt and Edmundson Avenue is dangerous, stating that it is irresponsible to do this work without fixing the dog-legged curve south of this project, suggesting that big support can be added to this project if that fix is done.	The area of concern is in County jurisdiction. The City staff and the County are coordinating to have that area addressed.
42	A property owner on DeWitt was hoping that DeWitt would become a cul de sac, which would stop cut-through traffic.	Comment noted.
43	Option #2 is poorly designed --- cars will fly through a blind curve. The speaker prefers Option #1 or Option #3.	Comment noted.
44	What will happen to existing power lines? Can it be undergrounded?	The utility relocation will depend on the design chosen.
45	Will there be noise differences between the options?	Noise issues will be studied in the EIR.
46	Who will make the final decision on the options?	Mr. Bjarke explained that staff will present a recommendation to Council based on several factors, including input from the community meetings.
47	A speaker stated that neighbors need access to local destinations, regardless of the design, and felt that Options #2 and #3 may be better.	Comment noted.
48	Short cut is questionable.	Comment noted.

	Comment/Question	Response/Answer
49	Community requested opportunity to vote by show of hands. Hale/DeWitt/Spring Option #1 versus Hale/ DeWitt/Spring Option #2 versus Roundabout	Zero (0) people preferred Option #1, four (4) people preferred Option #2, and twenty-four (24) people preferred a roundabout.
	Project Features	
50	Soundwalls should be included, whether required or not. A berm is not preferred due to the "jump-over" potential. Likes bushes in front of the wall, like along Santa Teresa Boulevard in Gilroy.	Comments noted.
51	Can the soundwalls be done first to mitigate construction noise?	That can be looked in to.
52	Why is there only one soundwall in the graphics? Would like to have both sides with soundwalls to limit reflectivity and provide sound attenuation.	Existing homes line the east side of the alignment, that is why the soundwall was shown there on the graphics; could be considered on the west too.
53	How effective is a soundwall over the hill? There is a high need for trees in that area.	The need for soundwalls will be reviewed in the EIR. Comment regarding the trees is noted.
54	How wide is the bio-swale? Could foundations of the lighting be accommodated in the same location?	The bio-swale will be seven (7) to ten (10) feet wide and will accommodate lighting foundations
55	A speaker suggested vegetation next to the soundwalls, including vines to help prevent graffiti.	Comment noted.
56	A speaker noted there are elevation differences for different segments. Berm and wall are o.k. with the speaker and the combinations of the options are o.k.	Comments noted.
57	A speaker does not like the meandering path idea and wants the path to be next to the road as far away from homes as possible.	Comment noted.
58	With respect to the split roadway on the hill, a speaker expressed concern for deer and children and is not sure that this is the best solution. The speaker does not like the vertical wall and the treatments, stating they are not rural in feel.	Comments noted.
59	Put the lights in the middle, not the sides.	Comment noted.
60	A hill neighbor stated concern about children who cross the area where the roadway is proposed between West Main and West Dunne.	City doesn't want to encourage mid-block crossings; however may need to consider existing hillside pedestrian routes.

	Comment/Question	Response/Answer
61	What about funding and the schedule? Why do the project?	The project is planned for construction beginning in 2013. Mr. Bjarke told the audience that at the July 20th Council Meeting, Council would consider a staff recommendation to remove construction funding for the project to help pay the RDA "ransom". Funding for design, environmental clearance and right-of-way would remain.
62	Should the project go forward? *(by the time this question was asked many of the attendees had left as it was after 9:00PM)*	The people still at the meeting discussed the RDA funding issue with Mr. Bjarke. They requested a project vote and wanted to vote on the necessity of the project as a whole. Sixteen (16) people voted to stop the project, one (1) voted to continue.

Meeting Summary prepared by Eileen Goodwin, Apex Strategies