



## **PUBLIC WORKS DEPARTMENT**

**Council Meeting Date: June 16, 2015**

**Staff Report #: 15-103**

**CONSENT CALENDAR:**            **Adopt a Resolution Supporting the US 101/Willow Road Interchange Project and Submit an Application to the Measure A Highway Program and Authorize the City Manager to Execute the Necessary Funding Agreements**

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### **RECOMMENDATION**

Staff recommends that Council adopt a resolution (Attachment A) to support the US 101/Willow Road Interchange Project and submit an application to the Measure A Highway Program and authorize the City Manager to execute the necessary funding agreements.

### **POLICY ISSUES**

The US 101/Willow Road Interchange Project is consistent with the City's General Plan policies that support safe and efficient transportation.

### **BACKGROUND**

On May 8, 2015, the San Mateo County Transportation Authority (SMCTA) issued a call for projects for the Measure A Highway Program. On June 2, 2015, the Council directed staff to assume the role of project sponsor for the US 101/Willow Road Interchange project. The staff report is provided in Attachment C.

### **ANALYSIS**

The Willow Road/US 101 interchange project is included in the list of eligible candidate projects in the Original Measure A 1998 Expenditure Plan. The SMCTA requires agencies that apply for funding as the sponsor agency to provide a resolution in support of the project application. The resolution would affirm the sponsor agency's support for the overall project, and the sponsor's role for the project scope. The approved governing board resolutions are due by July 17, 2015.

## **IMPACT ON CITY RESOURCES**

The funding requested from the Measure A Highway program for the US 101/Willow Road Interchange Project application is approximately \$64M. This will ensure the project can move forward with the construction. Currently, approximately \$17M in State Transportation Improvement Program (STIP) funds are programmed for the project, but for fiscal year 2017-2018 and the project would need to be advanced to meet its timeline. On June 5, 2015, C/CAG submitted a grant application to the United States Department of Transportation's Transportation Investment Generating Economic Recovery program for \$12.8M for this project. The City will continue to work with the Transportation Authority, C/CAG and other stakeholders to seek out grant funding sources to reduce the request under the Measure A Highway Program for this project.

## **ENVIRONMENTAL REVIEW**

Environmental clearance for the project was obtained by Caltrans on November 25, 2013.

## **PUBLIC NOTICE**

Public Notification was achieved by posting the agenda, with this agenda item being listed, at least 72 hours prior to the meeting.

## **ATTACHMENTS**

- A. Resolution of Support for the US 101/Willow Road Interchange Project
- B. May 7, 2013 – Staff Report on Design Alternatives for US 101/Willow Road
- C. June 2, 2015 – Staff Report on Project Sponsorship for US 101/Willow Road

Report prepared by:  
*Nicole H. Nagaya, P.E.*  
*Transportation Manager*

**RESOLUTION NO.**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MENLO PARK  
SUPPORTING THE US 101/WILLOW ROAD INTERCHANGE PROJECT AND  
SUBMITTING AN APPLICATION FOR MEASURE A HIGHWAY PROGRAM  
FUNDING FOR THE US 101/WILLOW ROAD INTERCHANGE PROJECT**

WHEREAS, there is increased congestion and limited access for bicyclists and pedestrians at the interchange of US 101 and Willow Road; and

WHEREAS, there is a proposed Caltrans project to improve the safety, multi-modal access and traffic operation at the interchange; and

WHEREAS, it will cost \$64,000,000 to implement the construction of the US 101/Willow Road Interchange Project; and

WHEREAS, the City wishes to sponsor the construction of the US 101/Willow Road Interchange Project; and

WHEREAS, the City seeks \$64,000,000 for the construction of the US 101/Willow Road Interchange Project; and

WHEREAS, on June 7, 1988, the voters of San Mateo County approved a ballot measure to allow the collection and distribution by the San Mateo County Transportation Authority (TA) of a half-cent transactions and use tax in San Mateo County for 25 years, with the tax revenues to be used for highway and transit improvements pursuant to the Transportation Expenditure Plan presented to the voters (Original Measure A); and

WHEREAS, on November 2, 2004, the voters of San Mateo County approved the continuation of the collection and distribution by the TA the half-cent transactions and use tax for an additional 25 years to implement the 2004 Transportation Expenditure Plan beginning January 1, 2009 (New Measure A); and

WHEREAS, TA issued a Call for Projects for the Measure A Highway Program funds on May 8, 2015; and

WHEREAS, TA requires a governing board resolution from the City in support of the City's application for \$64,000,000 in San Mateo County Measure A Highway Program funds for construction of the US 101/Willow Road Interchange; and

WHEREAS, TA requires a governing board resolution from the City committing the City to the completion of the construction of the US 101/Willow Road Interchange; and

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Menlo Park does hereby resolve as follows:

1. Directs staff to submit an application for TA Measure A Highway Program funds for \$64,000,000 for the construction of the US 101/Willow Road Interchange
2. Authorizes the City Manager to execute a funding agreement with the San Mateo County Transportation Authority to encumber any Measure A Highway Program funds awarded.

I, Pamela Aguilar, City Clerk of the City of Menlo Park, do hereby certify that the above and foregoing Council Resolution was duly and regularly passed and adopted at a meeting by said Council on the sixteenth day of June, 2015 by the following votes:

AYES:

NOES:

ABSENT:

ABSTAIN:

IN WITNESS THEREOF, I have hereunto set my hand and affixed the Official Seal of said City, this sixteenth day of June, 2015.

Pamela Aguilar  
City Clerk



## PUBLIC WORKS DEPARTMENT

Council Meeting Date: May 7, 2013  
Staff Report #: 13-075

Agenda Item #: F-1

**REGULAR BUSINESS:**                    **Provide Direction On The State Route 101/Willow Road Interchange Project Alternatives**

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### RECOMMENDATION

Staff recommends that the City Council receive the SR 101/Willow Interchange Project Alternative Report and provide direction to staff to include the Project Preferred Alternative 1B Modified Partial Cloverleaf (Attachment B) as the selected interchange design concept to be evaluated in the Environmental Analysis for this project.

### BACKGROUND

The original SR 101/Willow Interchange was constructed in 1955. Willow Road is classified as a major arterial east of the SR 101/Willow Road interchange and a minor arterial west of the SR 101/Willow Road interchange. Approximately 30,000 vehicles per day travel on Willow Road between Middlefield Road and Bayfront Expressway. The existing interchange configuration in Figure 1 shows a “Four Quadrant Cloverleaf (Attachment A).”

Funding for the design and construction of the SR 101/Willow Road Interchange Project (The Project) is proposed to be funded by C/CAG’s Regional Improvements Program (RIP) and by Measure A funds, and was originally approved in the original Measure A Expenditure Plan in 1988 and extended in 2004 by voters of San Mateo County. A project study report was completed in 1989 and a Project Study Report-Project Development Report was completed in 2005. The project proposes to reconstruct the existing SR 101/Willow Road (SR 114) interchange to a partial cloverleaf or diamond interchange.

The Project is being led by Caltrans in partnership with San Mateo County Transportation Authority, C/CAG, East Palo Alto and Menlo Park. The Project is currently in the conceptual stages of design and environmental analysis. Traffic modeling and traffic operational analysis were completed in 2012 for the conceptual stages under two horizon year scenarios -2020 “Opening Year” and 2040 “Design Year.” The traffic operational analysis evaluated six alternative configurations for the interchange. The configurations were designed to minimize the overall traffic impacts to both the local streets and the freeway as well as improve all modes of transportation (vehicular, bicycle and pedestrian). The following Project Alternatives were evaluated:

1. Alternative 1A – Partial Cloverleaf
2. Alternative 1B – Condensed Partial Cloverleaf
3. Alternative 2 – Partial Cloverleaf with Auxiliary Lane
4. Alternative 3 – Partial Cloverleaf with Collector Distributor Road
5. Alternative 4A – Compact Diamond
6. Alternative 4B – Condensed Compact Diamond
7. Alternative 5 – Existing Four-Quadrant Cloverleaf (No Build)

The results of the analysis for the alternatives are shown in Table 1. Some of the alternatives could involve right-of-way impacts to adjacent property owners, while some of the alternatives minimize these impacts. The project impacts will be evaluated as part of the environmental analysis.

**Table 1: Comparison of Project Alternatives**

	Alternative 1A		Alternative 1B		Alternative 2		Alternative 3		Alternative 4A		Alternative 4B	
Construction Capital Cost(\$)	\$ 43.0 M		\$ 41.9 M		\$ 43.6 M		\$ 44.2 M		\$ 39.0 M		\$ 37.5 M	
Right of Way Capital Cost(\$)	\$ 11.8 M		\$ 0.6 M		\$ 4.8 M		\$ 7.2 M		\$ 4.5 M		\$ 0.7 M	
Geometry	Partial Cloverleaf		Condensed Partial cloverleaf		Partial Cloverleaf w/ Aux Lane		Partial Cloverleaf w/Collector Rd		Compact Diamond		Condensed Compact Diamond	
Right of Way												
Number of Parcels Affected	25		11		20		26		21		11	
Full Take Impacts (SQFT)	93,870		0		24,167		48,000		24,264		0	
Partial Take Impacts (SQFT)	35,142		3,013		21,014		33,291		19,325		4,293	
Traffic Operation												
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Overall Network VH Delay (Veh-hr)	15,629	16,681	15,552	16,836	15,464	17,481	16,510	21,529	16,503	16,500	16,754	16,003
N/B New Intersections LOS	D	C	E	C	D	C	E	C	E	D	E	D
S/B New Intersection LOS	C	C	C	C	C	C	D	C	F	D	F	D
Environmental Impacts	Great Surface Streets realignment & access modifications Possible Environmental Justice		Low No access modifications		Medium, some realignment & access modifications		Medium, some realignment & access modifications		Great Surface Streets realignment & access modifications Possible Environmental Justice		Low No access modifications	

On June 12, 2012, the City Council adopted Resolution 8062 in support of SR 101/Willow Road Interchange Project and secured funding in the amount of \$500,000 to assist the City during the environmental phase of the Project. Staff is currently in the process of hiring a consultant for this support. Staff will be completing a funding agreement with San Mateo County Transportation Authority for use of these funds.

The project alternatives were initially presented to the City Council at its regular meeting on October 9, 2012. At this meeting, Council gave direction to ensure all modes of travel are considered and incorporating evaluations of the feasibility of having a median bicycle lane on Willow Road though the interchange, similar to SR 101/3<sup>rd</sup> Avenue

interchange in San Mateo, and to evaluate the option of a separate bicycle/pedestrian bridge facility.

## **ANALYSIS**

The “Project Need” is to address short weaving segments between loop ramps along SR 101 and Willow Road and to address all modes of transportation. These weaving conflicts cause safety concerns, reduce speed, cause back-ups, and create upstream queuing on 101. Additionally, there are deficient bicycle and pedestrian facilities at this interchange. The “Project Purpose” is to address the operational deficiencies of the interchange by eliminating the traffic weaves and to provide adequate storage on the off-ramps, improve operation of the interchange and as a result this will also improve the different modes of transportation and provide adequate bicycle and pedestrian facilities at the new interchange.

A scoping meeting and several community meetings have been held in both East Palo Alto and Menlo Park as follows:

- October 9, 2012 - City Council Presentation
- October 17, 2012 - Menlo Park Public Scoping Meeting
- October 24, 2012 - East Palo Alto Public Scoping Meeting
- November 29, 2012 - Presentation to Menlo Park Chamber-Transportation Committee
- March 6, 2013 - Joint East Palo Alto/Menlo Park Community Update Meeting
- March 11, 2013 & April 8, 2013 - Menlo Park Bicycle Commission
- March 13, 2013 - Transportation Commission

Comments and key points brought up during the public meetings included the following:

- Provide bicycle and pedestrian facilities
- Design for all 3 modes (Bicycle, Pedestrians, and Vehicles) of transportation
- Use alternatives 1B or 4B with the least residential housing impacts
- Use alternative 4B “Condensed Compact Diamond,” with signalized intersection for bicycle & pedestrian safety
- Use separate bicycle/pedestrian bridge next to the interchange (1 comment)
- Use alternatives 1A or 1B “Partial Cloverleaf”
- Do not use Alternative 1A (too much right-of-way impact)
- Separate Bicycle/pedestrian Bridge Facility
- Median Bicycle lane similar to SR 101/3<sup>rd</sup> Avenue Interchange in San Mateo

After receiving comments, the Caltrans project team evaluated three new possible options. The options evaluated included the following:

1. Alternative 1B Modified “Condensed Partial Cloverleaf”: This proposed new alternative is a variation between “Alternative 1B” and “Alternative 4B”, which are

shown for reference in Attachments C and D . This alternative is also consistent and in line with the need and purpose of the project by addressing the following:

- a. Improves overall operational benefits that are superior to all other Project Alternatives studied.
  - b. Minimizes overall right-of-way impacts from all other Project Alternatives.
  - c. Minimizes environmental impacts compared to from all other Project Alternatives.
  - d. Provides an improvement for the new signalized intersections in comparison to Project Alternative 4B which requires left turns for on-ramps at the signalized intersection that will increase delays on Willow Road.
  - e. Provides both Class I (off street bike path), and Class II (on street bike lanes) Bicycle/Pedestrian facilities on each side of the overcrossing design.
  - f. Provides a new configuration with squared Right Turns at Intersection crossing to reduce the bicycle/vehicle speed differential at these movements to improve safety.
2. Separate Bicycle/Pedestrian Bridge Facilities: This facility was evaluated, and is not being recommended at this time. Project Alternative 1B Modified, provides similar facilities and it accommodates this function within the project, without a significant increase in cost. A separate bicycle/pedestrian bridge would only be located on one side of the interchange, thus making it a longer travel distance for one direction or the other. Additionally, this option would create additional right-of-way impacts, privacy concerns, and is outside the project limit.
3. Median Bicycle Lane similar to 101/3<sup>rd</sup> Avenue Interchange in San Mateo: This option was studied, and is not a feasible option. The proposed recommended Alternative 1B Modified is a condensed partial cloverleaf in comparison with the 101/3<sup>rd</sup> Avenue Interchange which is a full cloverleaf interchange, which doesn't include any signalized intersections. This option would create a bicycle only intersection in the middle of the road at each off-ramp, which is non-standard and would create some safety concerns. It would also require additional right-of-way, and expansion the project limits to the intersections at Bay Road to the south, and Newbridge Street to the north, which is not within the project limits or scope.

The information above and the inclusion of the Alternative 1B modified as the main design concept were included in the presentations at a joint East Palo Alto/Menlo Park community meeting on March 6, 2013 and at the Transportation Commission, and Bicycle Commission meetings. The following is a summary of the meetings:

- The joint East Palo Alto/Menlo Park community outreach meeting was attended by about 30 participants from both East Palo Alto and Menlo Park. The meeting was an open house, and was accompanied by a project presentation, and questions and answer session. There was no opposition to the project, and appeared to be well received.

- The Transportation Commission generally supported the project and had no comments.
- The Bicycle Commission, recommended approval of a Project Alternative 1B Modified, “Condense Partial Cloverleaf” as shown in Figure 2 in Attachment A. This option was recommended in combination with a lane geometric configuration and a cross section that provides a Class I, and Class II bicycle lanes separated by medians, and a 10 feet sidewalk. This alternative is also shown in Figure 3 in Attachment A.

After the community outreach process was completed, an independent analysis of the project was performed by a team of engineers from Caltrans who have not been involved in the design of this project. The team included representatives from East Palo Alto, Menlo Park, and San Mateo County Transportation Authority. The value analysis was completed over several days from February 4<sup>th</sup> through 7<sup>th</sup> of 2013. The team assessed the elements of cost, performance, construction time, and risk as they relate to project value. Key performance attributes assessed included mainline operations, pedestrian/cyclist, operations, local operations, maintainability, construction impacts, and environmental impacts. Project Alternative 1B Modified was used as the baseline for the comparison. The value analysis team concluded that this proposed Project Alternative 1B Modified provides the best value.

This project’s environmental phase is fully funded, and the project team has a very aggressive project schedule. The overall anticipated schedule for this project is as follow:

- Environmental Analysis (PA&ED): Late 2013
- Complete Design (PS&E): Mid 2015
- Advertise, Open Bid & Award: Late 2015
- Start Construction: Early 2016
- Project Completion: Early 2018

## **IMPACT ON CITY RESOURCES**

This project is a regional project that will be added to the Menlo Park Capital Improvement Plan, and additional resources will be required to support this project. Staff is currently in the process of hiring a consultant team to support this project.

## **POLICY ISSUES**

The project is consistent with the City of Menlo Park General Plan, Sections II-A-12 and II-D.

## **ENVIRONMENTAL REVIEW**

The US 101/Willow Road Interchange Project CEQA environmental review will be completed by Caltrans.

## **PUBLIC NOTICE**

Public Notification was achieved by posting the agenda, with this agenda item being listed, at least 72 hours prior to the meeting.

## **ATTACHMENTS**

- A. Existing US 101/Willow Road Interchange
- B. US 101/Willow Road Alternative 1B Modified
- C. US 101/Willow Road Alternative 1B
- D. US 101/Willow Road Alternative 4B

Report prepared by:  
Fernando G. Bravo,  
Engineering Services Manager

Report prepared by:  
Charles W. Taylor,  
Public Works Director



## PUBLIC WORKS DEPARTMENT

Council Meeting Date: June 2, 2015

Staff Report #: 15-094

**REGULAR BUSINESS:**                    **Authorize the City to Assume the Role of Project Sponsor for the US 101/Willow Road Interchange Project**

### RECOMMENDATION

Staff recommends the Council approve the City assuming the role as Project Sponsor for the US 101/Willow Road Interchange Project, including taking the lead role to secure adequate construction funds for the project.

### POLICY ISSUES

The US 101/Willow Road Interchange Project is consistent with the City's General Plan policies that support safe and efficient transportation.

### BACKGROUND

On November 2, 2004, the voters of San Mateo County approved the continuation of the collection and distribution by the San Mateo County Transportation Authority (TA) of the Measure A half cent transaction and use tax for the additional 25 years to implement the 2004 Transportation Expenditure Plan, beginning January 1, 2009 (new Measure A).

On May 24, 2012, the TA issued a call for projects for the Highway Program and in response to the call for projects, the City of Menlo Park (City) requested the TA provide \$500,000 in Measure A funds to engage a consultant team to support the City's review of the environmental review and design documents for the US 101/Willow Road Interchange Project. This project met the intent of the 2004 Transportation Expenditure Plan and TA's 2009-2013 Strategic Plan and on October 4, 2012, TA programmed and allocated up to \$500,000 from the new Measure A Supplemental Roadway Highway Program Category the project.

On May 7, 2013, Caltrans staff presented a series of design alternatives to the City Council. The staff report is included in Attachment A. Council voted in support of a preferred design alternative. On November 25, 2013, Caltrans certified the environmental review documents and identified the preferred design alternative for this project, consistent with the Council's recommendations.

Since that time, Caltrans has been preparing the detailed design documents for the project, currently near 95% complete. City staff has been involved in reviewing engineering documents and design details that interface with or may affect City streets, utilities, or right-of-way. A consultant team led by Swinerton Engineers was brought on board in late 2014 to assist the City with this effort. Final design documents are anticipated to be completed in late 2015. The project would be ready for construction starting in early 2016. The San Mateo County Transportation Authority (SMCTA) through Measure A has provided the main source of funding for the environmental and design phases of this project, supporting the design work underway by Caltrans, as well as funding for consulting support to assist the City with design review.

## **ANALYSIS**

The SMCTA has informed City staff that, for the project to be completed, the City of Menlo Park would need to assume the role of Project Sponsor. If the City does not assume this role, the project would not be completed. The SMCTA funding agreements include the Project Sponsor's responsibilities as listed below:

1. Sponsor Oversight of Work Plan
2. Obtaining Required Approvals
3. Contract & Project Management
4. Funding Commitment

The information on sponsorship responsibilities is evolving as of publication of the staff report. The City will continue to work with SMCTA, the City/County Association of Governments of San Mateo County (C/CAG) and Caltrans to better define the responsibilities for each stakeholder in advance of the June 2, 2015 Council meeting. It is anticipated that Caltrans would manage the construction phase. Of most significance at this point for the City of Menlo Park is item 4, Funding Commitment, including the need to secure funding to complete the construction phase of the project.

The initial project construction cost estimate was approximately \$48M, prepared at the time the environmental documents were certified in 2013. Due to escalation in construction costs since that time, the project cost has increased to approximately \$65M. Current available funding for this project is approximately \$17M from the State Transportation Improvement Program, or STIP. However, the STIP funds are currently programmed for fiscal year (FY) 2016-2017 and would need to be advanced to FY2015-2016 to be used for this project. The remaining balance of approximately \$48M still needs to be secured.

## **IMPACT ON CITY RESOURCES**

Accepting sponsorship of this project will impact staff capacity, particularly in the Public Works Department, and delay other capital project design and construction schedules due to grant deadlines in June 2015.

Staff is working to assess the available potential funding sources for this project, if the City were to assume sponsorship. Potential options include:

- Pursuing grant funds from federal, state, or regional sources
- Committing local funds
- Bonding against local revenues

Staff is currently working to determine the feasibility of all potential options for funding for this project. Grant funding options will be fully explored to minimize any local commitments if the project is to proceed. A potential list of grant funding sources is outlined as follows:

- San Mateo County Measure A Highway Program
- U.S. Department of Transportation's (DOT) Transportation Investment Generating Economic Recovery (TIGER) Competitive Program
- State or Regional Active Transportation Program

However, each of the grant programs identified is extremely competitive, thus awards are uncertain. Funding deadlines are approaching in June 2015. If unsuccessful in grant awards, the City would be responsible for securing other funds or the project could not be completed. At the time of this report, it is uncertain if the City could bond for a construction project on a facility owned by another agency (Caltrans, in this case).

Financial implications of accepting the role of project sponsorship are still being determined, but could impact City funds particularly if grant applications are not successful. Staff is working to evaluate funding options in advance of the June 2, 2015 Council meeting and will provide as much additional information as possible during the staff presentation.

## **ENVIRONMENTAL REVIEW**

Environmental clearance for the project was obtained by Caltrans on November 25, 2013.

## **PUBLIC NOTICE**

Public Notification was achieved by posting the agenda, with this agenda item being listed, at least 72 hours prior to the meeting.

## **ATTACHMENTS**

- A. May 7, 2013 Staff Report – Provide Direction on the US 101/Willow Road Interchange Project Alternatives

Report prepared by:  
*Nicole H. Nagaya, P.E.*  
*Transportation Manager*



## PUBLIC WORKS DEPARTMENT

Council Meeting Date: May 7, 2013  
Staff Report #: 13-075

Agenda Item #: F-1

**REGULAR BUSINESS:**                    **Provide Direction On The State Route 101/Willow Road Interchange Project Alternatives**

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### RECOMMENDATION

Staff recommends that the City Council receive the SR 101/Willow Interchange Project Alternative Report and provide direction to staff to include the Project Preferred Alternative 1B Modified Partial Cloverleaf (Attachment B) as the selected interchange design concept to be evaluated in the Environmental Analysis for this project.

### BACKGROUND

The original SR 101/Willow Interchange was constructed in 1955. Willow Road is classified as a major arterial east of the SR 101/Willow Road interchange and a minor arterial west of the SR 101/Willow Road interchange. Approximately 30,000 vehicles per day travel on Willow Road between Middlefield Road and Bayfront Expressway. The existing interchange configuration in Figure 1 shows a “Four Quadrant Cloverleaf (Attachment A).”

Funding for the design and construction of the SR 101/Willow Road Interchange Project (The Project) is proposed to be funded by C/CAG’s Regional Improvements Program (RIP) and by Measure A funds, and was originally approved in the original Measure A Expenditure Plan in 1988 and extended in 2004 by voters of San Mateo County. A project study report was completed in 1989 and a Project Study Report-Project Development Report was completed in 2005. The project proposes to reconstruct the existing SR 101/Willow Road (SR 114) interchange to a partial cloverleaf or diamond interchange.

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1. Alternative 1A – Partial Cloverleaf
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3. Alternative 2 – Partial Cloverleaf with Auxiliary Lane
4. Alternative 3 – Partial Cloverleaf with Collector Distributor Road
5. Alternative 4A – Compact Diamond
6. Alternative 4B – Condensed Compact Diamond
7. Alternative 5 – Existing Four-Quadrant Cloverleaf (No Build)

The results of the analysis for the alternatives are shown in Table 1. Some of the alternatives could involve right-of-way impacts to adjacent property owners, while some of the alternatives minimize these impacts. The project impacts will be evaluated as part of the environmental analysis.

**Table 1: Comparison of Project Alternatives**

	Alternative 1A		Alternative 1B		Alternative 2		Alternative 3		Alternative 4A		Alternative 4B	
Construction Capital Cost(\$)	\$ 43.0 M		\$ 41.9 M		\$ 43.6 M		\$ 44.2 M		\$ 39.0 M		\$ 37.5 M	
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Right of Way												
Number of Parcels Affected	25		11		20		26		21		11	
Full Take Impacts (SQFT)	93,870		0		24,167		48,000		24,264		0	
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	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Overall Network VH Delay (Veh-hr)	15,629	16,681	15,552	16,836	15,464	17,481	16,510	21,529	16,503	16,500	16,754	16,003
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S/B New Intersection LOS	C	C	C	C	C	C	D	C	F	D	F	D
Environmental Impacts	Great Surface Streets realignment & access modifications Possible Environmental Justice		Low No access modifications		Medium, some realignment & access modifications		Medium, some realignment & access modifications		Great Surface Streets realignment & access modifications Possible Environmental Justice		Low No access modifications	

On June 12, 2012, the City Council adopted Resolution 8062 in support of SR 101/Willow Road Interchange Project and secured funding in the amount of \$500,000 to assist the City during the environmental phase of the Project. Staff is currently in the process of hiring a consultant for this support. Staff will be completing a funding agreement with San Mateo County Transportation Authority for use of these funds.

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interchange in San Mateo, and to evaluate the option of a separate bicycle/pedestrian bridge facility.

## **ANALYSIS**

The “Project Need” is to address short weaving segments between loop ramps along SR 101 and Willow Road and to address all modes of transportation. These weaving conflicts cause safety concerns, reduce speed, cause back-ups, and create upstream queuing on 101. Additionally, there are deficient bicycle and pedestrian facilities at this interchange. The “Project Purpose” is to address the operational deficiencies of the interchange by eliminating the traffic weaves and to provide adequate storage on the off-ramps, improve operation of the interchange and as a result this will also improve the different modes of transportation and provide adequate bicycle and pedestrian facilities at the new interchange.

A scoping meeting and several community meetings have been held in both East Palo Alto and Menlo Park as follows:

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- March 11, 2013 & April 8, 2013 - Menlo Park Bicycle Commission
- March 13, 2013 - Transportation Commission

Comments and key points brought up during the public meetings included the following:

- Provide bicycle and pedestrian facilities
- Design for all 3 modes (Bicycle, Pedestrians, and Vehicles) of transportation
- Use alternatives 1B or 4B with the least residential housing impacts
- Use alternative 4B “Condensed Compact Diamond,” with signalized intersection for bicycle & pedestrian safety
- Use separate bicycle/pedestrian bridge next to the interchange (1 comment)
- Use alternatives 1A or 1B “Partial Cloverleaf”
- Do not use Alternative 1A (too much right-of-way impact)
- Separate Bicycle/pedestrian Bridge Facility
- Median Bicycle lane similar to SR 101/3<sup>rd</sup> Avenue Interchange in San Mateo

After receiving comments, the Caltrans project team evaluated three new possible options. The options evaluated included the following:

1. Alternative 1B Modified “Condensed Partial Cloverleaf”: This proposed new alternative is a variation between “Alternative 1B” and “Alternative 4B”, which are

shown for reference in Attachments C and D . This alternative is also consistent and in line with the need and purpose of the project by addressing the following:

- a. Improves overall operational benefits that are superior to all other Project Alternatives studied.
  - b. Minimizes overall right-of-way impacts from all other Project Alternatives.
  - c. Minimizes environmental impacts compared to from all other Project Alternatives.
  - d. Provides an improvement for the new signalized intersections in comparison to Project Alternative 4B which requires left turns for on-ramps at the signalized intersection that will increase delays on Willow Road.
  - e. Provides both Class I (off street bike path), and Class II (on street bike lanes) Bicycle/Pedestrian facilities on each side of the overcrossing design.
  - f. Provides a new configuration with squared Right Turns at Intersection crossing to reduce the bicycle/vehicle speed differential at these movements to improve safety.
2. Separate Bicycle/Pedestrian Bridge Facilities: This facility was evaluated, and is not being recommended at this time. Project Alternative 1B Modified, provides similar facilities and it accommodates this function within the project, without a significant increase in cost. A separate bicycle/pedestrian bridge would only be located on one side of the interchange, thus making it a longer travel distance for one direction or the other. Additionally, this option would create additional right-of-way impacts, privacy concerns, and is outside the project limit.
3. Median Bicycle Lane similar to 101/3<sup>rd</sup> Avenue Interchange in San Mateo: This option was studied, and is not a feasible option. The proposed recommended Alternative 1B Modified is a condensed partial cloverleaf in comparison with the 101/3<sup>rd</sup> Avenue Interchange which is a full cloverleaf interchange, which doesn't include any signalized intersections. This option would create a bicycle only intersection in the middle of the road at each off-ramp, which is non-standard and would create some safety concerns. It would also require additional right-of-way, and expansion the project limits to the intersections at Bay Road to the south, and Newbridge Street to the north, which is not within the project limits or scope.

The information above and the inclusion of the Alternative 1B modified as the main design concept were included in the presentations at a joint East Palo Alto/Menlo Park community meeting on March 6, 2013 and at the Transportation Commission, and Bicycle Commission meetings. The following is a summary of the meetings:

- The joint East Palo Alto/Menlo Park community outreach meeting was attended by about 30 participants from both East Palo Alto and Menlo Park. The meeting was an open house, and was accompanied by a project presentation, and questions and answer session. There was no opposition to the project, and appeared to be well received.

- The Transportation Commission generally supported the project and had no comments.
- The Bicycle Commission, recommended approval of a Project Alternative 1B Modified, “Condense Partial Cloverleaf” as shown in Figure 2 in Attachment A. This option was recommended in combination with a lane geometric configuration and a cross section that provides a Class I, and Class II bicycle lanes separated by medians, and a 10 feet sidewalk. This alternative is also shown in Figure 3 in Attachment A.

After the community outreach process was completed, an independent analysis of the project was performed by a team of engineers from Caltrans who have not been involved in the design of this project. The team included representatives from East Palo Alto, Menlo Park, and San Mateo County Transportation Authority. The value analysis was completed over several days from February 4<sup>th</sup> through 7<sup>th</sup> of 2013. The team assessed the elements of cost, performance, construction time, and risk as they relate to project value. Key performance attributes assessed included mainline operations, pedestrian/cyclist, operations, local operations, maintainability, construction impacts, and environmental impacts. Project Alternative 1B Modified was used as the baseline for the comparison. The value analysis team concluded that this proposed Project Alternative 1B Modified provides the best value.

This project’s environmental phase is fully funded, and the project team has a very aggressive project schedule. The overall anticipated schedule for this project is as follow:

- Environmental Analysis (PA&ED): Late 2013
- Complete Design (PS&E): Mid 2015
- Advertise, Open Bid & Award: Late 2015
- Start Construction: Early 2016
- Project Completion: Early 2018

## **IMPACT ON CITY RESOURCES**

This project is a regional project that will be added to the Menlo Park Capital Improvement Plan, and additional resources will be required to support this project. Staff is currently in the process of hiring a consultant team to support this project.

## **POLICY ISSUES**

The project is consistent with the City of Menlo Park General Plan, Sections II-A-12 and II-D.

## **ENVIRONMENTAL REVIEW**

The US 101/Willow Road Interchange Project CEQA environmental review will be completed by Caltrans.

## **PUBLIC NOTICE**

Public Notification was achieved by posting the agenda, with this agenda item being listed, at least 72 hours prior to the meeting.

## **ATTACHMENTS**

- A. Existing US 101/Willow Road Interchange
- B. US 101/Willow Road Alternative 1B Modified
- C. US 101/Willow Road Alternative 1B
- D. US 101/Willow Road Alternative 4B

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