



## Staff Reports

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**File #:** 1339-2018, **Version:** 1

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**To:** Honorable Mayor and Members of City Council

**From:** Jacques R. LaRoche, Public Works Director

**Prepared By:** John Ferons, Senior Civil Engineer

**TITLE:**

Linda Vista Avenue Bridge Over Napa Creek Project Update

**RECOMMENDED ACTION:**

Receive update from staff regarding Linda Vista Avenue Bridge Over Napa Creek (BR14PW02) and request direction from City Council on how to proceed.

**DISCUSSION:**

City Council last heard a project update on Linda Vista Avenue Bridge Over Napa Creek at the regularly scheduled council meeting December 2, 2014. See Attachment 1 for a project location map. At that meeting, Council was presented three road/bridge alignment options developed from engineering study and input from community meetings. The result was a motion selecting Option 3 of the alignment alternatives and direction to staff to return to Council with an informational update to answer questions raised by Council at the December 2, 2014 meeting. It was understood at the time that the City was updating its Citywide Travel Demand Model and staff would return to Council once the Model was updated, calibrated and running. The Model is necessary to answer questions related to future traffic projections. Option 3 was determined to be advantageous because it has the greatest potential for slowing vehicle traffic, it will require the least amount of overall right-of-way acquisition area, and the least number of trees to be removed. Option 3 is included as Attachment 2 of this report.

This staff report provides information utilizing the Citywide Travel Demand Model as well as information regarding Fire Department Travel times and call distribution by fire station.

**TRAFFIC PROJECTIONS**

To better analyze the City's local travel demands, Public Works staff, in conjunction with Omni-Means, Ltd., developed a new Citywide Travel Demand Model to supplement the Regional Napa-Solano Travel Demand Model managed by Solano Transportation Authority. The Citywide Travel Demand Model establishes existing base year traffic volumes and predicted future traffic volumes to determine street improvements needed to address capacity, safety, and level of service needs in the City of Napa. The Citywide Model provides the level of detail needed to evaluate a proposed project's specific impacts to the City of Napa's transportation network.

The City analyzed the traffic impacts of the Linda Vista Bridge project over Napa Creek by utilizing

the Citywide Travel Demand Model to compare existing travel patterns to forecasted travel patterns for a scenario that included the bridge connection. As expected, the Model forecasts that with a bridge connection there is a redistribution of traffic in the project area. The connection of Linda Vista Avenue provided by the bridge would provide a more direct route between neighborhoods on either side of the creek, relieving the need for some residents to take a more circuitous route through local neighborhood streets as currently traveled. This helps to reduce daily traffic volumes on many local streets surrounding the project area. Attachment 3 shows a graphical representation of the traffic redistribution for the project area.

Linda Vista Avenue is classified as a collector roadway in the City's General Plan. The function of a collector roadway is to serve as a connector between local and arterial streets and to provide direct access to parcels. The Model forecasts that with the bridge connection in place, the average daily traffic for Linda Vista Avenue south of the bridge will be approximately 2,500 vehicles per day. This is within the acceptable range for average daily traffic for both a collector roadway and a local roadway, which can accommodate up to 12,000 and 5,000 vehicles per day, respectively.

### FIRE DEPARTMENT TRAVEL TIME & CALL DISTRIBUTION

The City of Napa Fire Department is committed to the community by being "always here, always ready, to serve with pride and excellence". As such they are continuously evaluating opportunities to improve performance and reduce travel times when responding to emergency calls.

The National Fire Protection Association (NFPA) defines travel time as *"the time interval that begins when a unit is en-route to the emergency incident and ends when the unit arrives at the scene"*. NFPA also requires that travel times for units responding on the first alarm must arrive within 4 minutes. Many factors influence travel time and Department response. Distance to the scene via roadways is one of those significant factors and is controlled by street connectivity. This is where the proposed Linda Vista Bridge comes in to play. Fire Department analysis indicates that connecting Linda Vista Avenue with a bridge over Napa Creek would greatly reduce response travel times to a significant portion of the City west of SR 29. With the South Napa earthquake and recent wildfires, improved response times are needed. Even with the addition of Station No. 5, which provided a significant benefit to the Browns Valley neighborhoods, improved roadway connectivity is needed to improve response times in other areas as well as provide more options for escape routes during emergencies.

There is currently a region in the City north of Napa Creek bounded on the east by SR 29, Lone Oak Avenue to the south, Redwood Road to the north and W. Pueblo Avenue to the west whose response travel times would be reduced to 1 to 2 minutes if the bridge were in place. That region contains approximately 2000 households with a population of approximately 5000 residents.

The following example exhibits the benefit for reduced travel times to the intersection of Linda Vista and Lone Oak Avenues within the region described above.

WITHOUT bridge, response from:

- Fire Station 2 = 2.5 minutes
- Fire Station 3 = 3.4 minutes
- **Fire Station 5 = 3.4 minutes**

WITH bridge, response from:

- **Fire Station 5 = 1 minute**

Other neighborhoods within the same area would also realize similarly reduced travel times. These shorter travel times are important for both emergency medical service calls as well as fire response. The American Heart Association states that Brain Death occurs at 4-6 minutes (EMS Response). A quicker attack on a fire will help keep a structure fire to its room and its contents as opposed to a completely involved structure fire (Fire Response).

Another effect of the bridge construction is much better zone coverage distributing Citywide responses from all 5 Fire Station zones and their fire personnel as follows:

WITHOUT Linda Vista Bridge in place:

- Fire Station 1 = 16.8% of calls
- Fire Station 2 = 29.7% of calls
- Fire Station 3 = 23.4% of calls
- Fire Station 4 = 20.5% of calls
- Fire Station 5 = 9.6% of calls

WITH Linda Vista Bridge in place:

- Fire Station 1 = 16.8% of calls
- Fire Station 2 = 27.9% of calls; down 1.8%
- Fire Station 3 = 17.4% of calls; down 6.0%
- Fire Station 4 = 20.5% of calls
- Fire Station 5 = 17.5% of calls; up 7.9%

Attachment 4 includes Fire Department Maps with layers indicating positive effects and areas better covered with Linda Vista Bridge and Fire Station 5.

#### **FINANCIAL IMPACTS:**

\$221,100 is budgeted for FY19 and \$402,000 is budgeted for FY20 to prepare the preliminary design and conduct the environmental review process.

#### **CEQA:**

The Public Works Director has determined that the Recommended Action described in this Agenda Report is not in-and-of-itself a “project” (pursuant to CEQA Guidelines Section 15378) since it does not result in a physical change in the environment. Should Council opt to move forward with this project and direct staff to proceed with preliminary design, it would be part of a larger “project” that will be subject to environmental review in accordance with CEQA at the “earliest feasible time” prior to “approval” consistent with CEQA Guidelines Sections 15004 and 15352. The larger “project” consists of the construction of a new street connection and bridge over Napa Creek, and staff would bring back a CEQA analysis of that project to Council prior to Council’s anticipated action to authorize construction.

**DOCUMENTS ATTACHED:**

ATCH 1 - Project Location Map

ATCH 2 - Preferred Alignment (Option 3)

ATCH 3 - Traffic Model Results

ATCH 4 - Fire Maps

**NOTIFICATION:**

Mailing by USPS on May 24, 2018 to residences within a 2000-foot radius surrounding the project and schools along Linda Vista Avenue