

# **Appendix I**

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## **Traffic Impact Analysis**

## TECHNICAL MEMORANDUM

Date: February 20, 2019

To: Wendy Lockwood

From: Stephen Bise, P.E.

Subject: **Usage Projection and Vehicle Miles Traveled (VMT) Reduction  
LA River Bikeway Gap Closure Project; Segments 1 & 2, Los Angeles**  
*KOA Project JB81168*

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In 2016 the City of Los Angeles Bureau of Engineer (BOE) retained a team of consultants to study the feasibility of an LA River bikeway gap closure from Vanalden Avenue to Forest Lawn Drive/Zoo Drive, approximately 15 miles. This memo only account fo r Segments 1 & 2 of the study; from Vanalden Avenue to Balboa Boulevard, approximately 3 miles.

The gap closure of the LA River Bikeway will be beneficially to the City, local patrons and the general environment and economy. The current lack of alternate transportation infrastructure, drive potential users to utilize vehicles and motorized transportation for utilitarian and recreational uses. By implementing facilities and policies to shift the share of personal vehicle trips to other modes (pedestrian, bikes, transit), we can effectively reduce the vehicle miles traveled (VMT) and obtain significant environmental and economic benefits.

### Methodology

To project VMT reduction for the LA River Bikeway project, we first need to forecast new bicycle trips and bicycle miles traveled (BMT) by purpose (work, non-work, utilitarian, and recreational) based on the proposed project parameters. To do this, we utilized Metro's Bike Sketch Plan Tool (BSPT), which is a web-based GIS tool that allows jurisdictions to analyze a single bicycle project. The Tool forecasts bicycle trips at the community level over a 20 year period. To forecast bikeway impacts, BSPT has two mathematical trip forecast models estimating the relationship between processed data, user-defined bike facilities, and resulting increases in bike travel: (1) a work/utilitarian trip forecast model; and (2) a recreational trip forecast model. The BSPT performs GIS calculations based on the location of bikeways and attributes of all projects in the scenario, which feed into trip forecast models and produce benefit outputs. All benefit measures are reported as annual forecasts in future year 2035, compared to a year 2035 scenario in which the portfolio of projects was not constructed. In other words, the Bicycle Sketch Plan Tool shows us the annual forecasted impact of this project in one future year, 2035.

## Results

Below is a summary of the forecast results for the LA River Bikeway project:

### ***New Annual Bicycle Trips (2035)***

Utilitarian	39,277
Recreational	114,955
Total	154,232

### ***New Annual Bicycle Miles Traveled (BMT) (2035)***

Utilitarian	93,480
Recreational	643,744
Total	737,224

### ***New Annual Vehicle Miles Traveled (VMT) Reduction (2035)***

Utilitarian	57,303
Recreational	394,615
Total	457,918

The forecasts can be used to estimate greenhouse gas (GHG) emissions, energy consumption reduction, air pollution damage saving, and even reduction in health care and mortality costs.

## On-Street Impacts

The majority of with bikeway within Segments 1 & 2 are contained within the LA River right-of-way and traverse under the street crossings. At White Oak Avenue a two-way Class IV bikeway is proposed on the east side of the street to transition the bikeway from the south, to the north side of the LA River. The proposed improvements do not anticipate to impact the existing bike lanes, parking, or number of travel lanes. The proposed improvements include shifting the median and travel lane to the west.

## Safety

The proposed Los Angeles River Bikeway Gap Closure Project is identified as part of the City of Los Angeles Mobility Plan 2035. Furthermore, the streets with the proposed on-road improvements are also identified as part of the Mobility Plan 2035's Neighborhood Enhanced Network (NEN). Under the NEN, such streets are prioritized for traffic calming improvements such as mini-traffic circles, speed humps, and other speed-reduction enhancements, among others.

The transportation improvements identified in the Mobility Plan are not expected to introduce new safety hazards at intersections or along roadway segments. The facilities would be designed according to all regulatory guidelines in order to maximize user safety and reduce hazards. The implementation of these facilities is also expected to reduce the number of people bicycling along parallel, vehicle-oriented corridors, thus reducing their exposure to motor vehicle traffic.