DESIGN ELEMENT: Lane Reconfiguration Guidelines

DISCUSSION

Lane reconfiguration, commonly referred to as a road diet, and lane repurposing projects reallocate space on the roadway, reduce the number of vehicular travel lanes, and reorganize the street to accommodate the safe travel of multiple roadway users, including motor vehicles, transit vehicles, bicycles, and pedestrians. The most common lane reconfiguration project involves the conversion of a four-lane roadway with no center channelization into a three-lane roadway with one travel lane in each direction and creation of center/left turn channelization, commonly referred to as a "4 to 3" reconfiguration. Agencies typically use the remaining street space to install bicycle lanes. Practitioners call this a "classic" road diet.

Other lane reconfigurations rightsize streets with an existing center two-way left-turn lane and multiple through lanes by reducing the number of through lanes and installing buffered or protected bicycle lanes. Some lane reconfigurations can include installation of raised median islands and left turn channelization at intersections, with a reduction in the number of through lanes in both directions. A project lead or designer may decide to remove a through lane in only one direction of traffic and maintain the number of through lanes in the opposite direction on streets where volume data demonstrates significant vehicle travel in one direction.

The Federal Highway Administration (FHWA) <u>Road Diet Informational Guide</u>, released in 2014 by the FHWA Safety Program, offers a brief history of lane reconfigurations, summarizes their potential benefits, recommends feasibility criteria, provides guidance for designing roadway reconfigurations and road diets, and suggests analysis methods to help agencies determine effectiveness. The FHWA guide focuses on 4 to 3 lane reconfigurations.



Figure 1 - 4 to 3 lane reconfiguration along Virgil Avenue, Los Angeles

Los Angeles has successfully implemented many lane reconfigurations in recent years (see Table 1); however, additional local guidance is needed for use of this treatment in Los Angeles where roadway volumes are generally high and existing configurations vary greatly.

BENEFITS

The following benefits are associated with properly designed lane reconfigurations:

- A 2010 FHWA study of crash outcomes of road diets found a reduction in total crashes in the range of 19 to 47 percent for study sites that included data from six cities in California. These studies have demonstrated that the following crash types may be reduced by lane reconfigurations:
 - o Rear End by removing stopped vehicles attempting to turn left from the through lane (in a 4 to 3 reconfiguration)
 - o Sideswipe by reducing the need to change lanes
 - o Left Turn by eliminating the negative offset between opposing left-turn vehicles and increasing available sight distance (in a 4 to 3 reconfiguration)
 - o Bicycle and Pedestrian by separating bicycles from traffic and offering pedestrians fewer lanes to cross and a de-facto refuge area.
- Similarly, a UCLA graduate student's longitudinal analysis of five (5) Los Angeles lane reconfiguration corridors found an average crash rate reduction of 32 percent and injury rate reduction of 36 percent after the City introduced lane reconfigurations.¹
- Speed reduction of motor vehicles may result, leading to a reduction in crash severity. Case studies of road diets on Cordova Street in Pasadena and Ocean Boulevard in Santa Monica show reduced traffic speeds along these corridors after the City implemented roadway reconfigurations. On Ocean Boulevard, the City reduced injury crashes by 60 percent.
- Reduced bottlenecks caused by left-turning vehicles blocking the inner lane, and weaving brought on by such blockages (in a 4 to 3 reconfiguration). A study by <u>Burden</u> <u>and Lagerwey</u> in multiple cities determined that adding center turn lanes could increase roadway operational efficiency by up to 30 percent.
- Improved ability to make left-turn from side-streets or driveways onto the mainline roadway since there are fewer lanes to cross, slower speeds along the mainline, and the center two-way left-turn lane can facilitate a two-stage left-turn.
- Create opportunity to reallocate space to bicycle infrastructure, bus lanes, on-street parking, wider sidewalks, planted medians, transit stops and/or other elements that improve multi-modal transportation or place-making conditions.
- Calm the roadway and create greater comfort for all modes by organizing the roadway space between various users and reducing speeds.

¹ Martinez, S. (2016). Who Wins When Streets Lose Lanes? UCLA Luskin School of Public Affairs

- Improved transit service speed and reliability.
- Improved first/last mile connectivity to public transit and promote transit use.
- May improve emergency vehicle access and reduce instances of emergency responders being called to address traffic collisions.
- Create opportunities for urban greening, park space, and providing additional shade to a street.
- Reduced number of vehicle travel lanes a pedestrian must cross, thereby reducing exposure to potential conflict and improve pedestrian visibility at crossings.
- Create opportunities for stormwater capture and retention projects that reduce run-off, street flooding, and can improve reliability/conditions in inclement weather.

ADVERSE EFFECTS

Lane reductions may yield any of the following adverse impacts, which LADOT must consider and weigh with the expected benefits of the project:

- Increased traffic congestion and delays caused by reduced capacity. Stopped or slow-moving traffic queues may result in blockages at intersections, driveways, and alleys.
- Increased difficulty making left-turns due to less gaps in vehicular traffic or increased queuing.
- Increased vehicle speeds in off-peak conditions due to elimination of side friction.
- Delay to transit vehicle travel if congestion is high which may affect schedules and service performance.
- Traffic diversion onto adjacent parallel streets, including neighborhood streets with previously low vehicle volumes.
- Project introduces design elements that could affect emergency vehicle access.

Lane reconfigurations typically involve other operational improvements to the roadway, such as installation of parking-protected bicycle lanes, traffic signal retiming, installation of bus boarding islands for in-line bus boarding, and changes to parking. Community engagement and education of both the expected benefits and possible negative outcomes is needed. LADOT must clearly communicate potential direct and indirect outcomes of a lane reconfiguration and its effect on the neighborhood to community stakeholders. Transparency and open discussion are paramount to gain community support for any project. Additionally, LADOT prefers the expressed support of the affected Councilmember(s) prior to initiating a lane reconfiguration project.

APPLICATION AND GUIDANCE

A lane reconfiguration project should satisfy the purpose of the implementation as communicated to community stakeholders and be consistent with demonstrated needs of the neighborhood. Project managers and leads should consider all factors before deciding to implement a lane reconfiguration.

Defining and communicating the objective(s) of the lane reconfiguration early in the project's life cycle is critical to successful project delivery. Roadway reconfigurations must satisfy at least one of the following:

- The street segment currently has more than one travel lane in each direction and no center two-way left-turn lane.
- The street segment is on the City's High Injury Network and the project is expected to improve overall safety of the facility.
- The street segment is on the City's Bicycle Lane Network, Bicycle Enhanced Network, Neighborhood Enhanced Network, Pedestrian Enhanced District or Transit Enhanced Network in the Mobility Plan 2035, and a lane reconfiguration would afford the opportunity to install bicycle, transit, and/or pedestrian infrastructure that meets the street's designation.
- There is a desire by the community and/or the Department to encourage increased travel by other modes and/or vulnerable road users such as people who bicycle or walk.
- The surrounding community, local council office, and/or the Department aim to calm traffic and reduce vehicle speeds on the street segment.

While a lane reconfiguration may not significantly reduce free-flow speeds enough to affect the setting of the posted speed limit, it may reduce speeds during "shoulder" periods, generally defined as periods when traffic is somewhere between congested and light, and where traffic can only move as fast as the slowest vehicle.

 Relevant community stakeholders, including but not limited to elected officials, local residents, and business owners/operators, have demonstrated an understanding of anticipated congestion associated with the lane reconfiguration and are willing to accept potential delays and other impacts for the expected community benefits of the street after modification.

Additionally, expressed support from the affected Councilmember is necessary before proceeding with the lane reconfiguration project.

VOLUME ANALYSIS

Average daily traffic (ADT) is a good first approximation of the effects a lane reconfiguration may have on existing street use, specifically congestion and traffic diversion. For 4 to 3 lane reconfigurations, the FHWA suggests that roadways with an ADT of 20,000 or less are good candidates for reconfiguration and agencies should evaluate them for feasibility. However, the FHWA also acknowledges that some agencies have successfully implemented 4 to 3 lane reconfigurations in places where ADT exceeds 20,000 vehicles per day. Extrapolation of these metrics for roadways with three (3) lanes in each direction suggests that lane reductions can be effective on roadways with ADTs as high as 37,500 vehicles per day.

A better metric to estimate potential congestion and diversion is peak hour volume analysis. The most recent version of the Highway Capacity Manual (2016) indicates the maximum saturation flow rate of uninterrupted flow at 45 MPH is 1,900 vehicles per lane. Urban conditions significantly reduce maximum flow, with lower travel speeds, greater intersection density, interrupted flow, reduced lane widths, and the presence of parking and driveways. One study conducted a sensitivity analysis to determine at what hourly volume urban arterial Level of Service (LOS) would decline because of a lane reconfiguration. The study observed a decrease in LOS above a peak hour per lane volume of 875 vehicles.

The FHWA cites an Iowa guideline [Pawlovich, et al., (2005)] stating a lane reduction is:

- Likely feasible below 750 vehicles per hour per lane (vphpl)
- Should be considered cautiously between 750 and 875 vphpl
- Less feasible above 875 vphpl

To estimate the level and extent within a 24-hour period that vehicle volumes are expected to exceed these thresholds after the lane reduction, a traffic volume distribution analysis must be performed using recent, within two (2) years, pre-project traffic count data (see sample Attachment A).

DELAY GUIDELINE

To quantify potential increases in delay, LADOT must perform a delay study when post-project traffic volumes are expected to exceed 750 vphpl for at least two (2) consecutive hours in a 24-hour period. The delay analysis must consider ambient growth of traffic, anticipated traffic added by approved future projects, and any developer-required mitigation measures that could affect delay. This guideline is intended for analysis of delay for vehicles traversing the corridor. LADOT should also conduct a separate analysis of potential increased delay on major cross streets to assess any additional impacts of the project.



Figure 2 - 6 to 4 lane reconfiguration with parking protected bike lane on Venice Boulevard, Los Angeles

Use the following delay guideline to determine when the lane reconfiguration should be pursued:

- **Green** : If expected additional delay after lane reduction is less than 2 minutes per mile of corridor, lane reduction may proceed.
- **Yellow**: If expected additional delay after lane reduction is between 2 and 5 minutes per mile, proceed with caution and consider the degree to which project objectives listed under the 'Application and Guidance' Section prevail, and consideration of 'Other Feasibility Considerations' as indicated below.
- **Red**: If expected additional delay after lane reduction is greater than 5 minutes per mile, install only if there is a substantiated overriding need for safety enhancements, or if the improvement was identified in an adopted plan.

LADOT should communicate the results of such analyses to the community and elected officials.

OTHER FEASIBILITY CONSIDERATIONS

As with many other measures and the decision to move to implementation, use engineering and policy judgement, and consider all factors. Many of these considerations are difficult to quantify. Local context is important to consider before re-allocating traffic lanes. Beyond volumes and delay, consider these other factors carefully:

- The Mobility Plan 2035 designation of the corridor and its primary intended use
- The percentage of trips along a corridor that are less than three (3) miles in length, as demonstrated in an origin-destination analysis, if available.
- Proximity (or lack of proximity), ability and character of adjacent parallel routes to accommodate traffic diversion

- If there is an expected or documented increase in cut-through traffic on adjacent neighborhood streets, traffic calming or other corrective measures may be warranted and should be carefully considered.
- The utilization of the subject roadway as an alternative to a nearby parallel freeway or state highway in times of heavy congestion, or during emergency closures of the state facility. It may be a goal of the project to "localize" the roadway in such cases and move forward with the project.
- Interactions and conflict points between vehicles, persons walking and persons biking.
- The proximity of fire stations, police stations and hospitals to the corridor or on the corridor, or use of the corridor as a primary route for emergency vehicles where the new design may impede emergency access. A roadway where median islands exist may limit the ability of emergency responders to traverse the roadway under certain conditions.
- The existence of railroad crossings on the corridor. Use care and consider expected queue lengths and their effect on these crossings.
- The spacing of intersections and signals on the corridor. Applying a lane reduction on a corridor with frequent signalized intersections will have a larger impact on automobiles as the corridor is more likely to have queued traffic at adjacent signals. Use care and consider expected queue lengths and their effect on major intersections.
- The presence of complicated intersections where reduced capacity may result in extra-long queues.
- The impact of the redesign on transit vehicles, transit performance, and stops.
- The impact to parking, particularly if the parking is the only way to access local businesses. If projects do impact parking supply, consider if parking management techniques can be incorporated into the project to reduce impacts.
- Consideration to parking maneuvers should be given before and after the lane reduction, both as they affect the movement of traffic in the remaining lanes and their effect on people walking and biking.

Early and continuous outreach to affected transit providers is important as the project lead identifies project impacts to transit and stops. It is generally safer to relocate bus stops from the nearside to the farside at busy intersections. This will require evaluation of alighting conditions at relocated stops, possibly new bus pads and new pedestrian security lighting that must be coordinated and taken into consideration.

For completed projects, project managers and leads should be open to re-evaluation of the project after implementation and making changes to improve the functionality of the corridor. Changes can include measures to improve traffic flow and safety, such as:

- Improved signal coordination and timing
- Installation of transit priority and emergency vehicle priority at traffic signals
- Redesign of turning movements, i.e., installation of additional turn lanes or improving right turn merge areas
- Lengthening of turn pockets and exclusive phases can help reduce conflicts and increase storage/capacity issues at affected intersection locations.
- Consideration of other transit-related amenities, such as bus shelters, benches, lighting, next bus information, etc.

The implementation of a lane reconfiguration project can still be very challenging. Many projects have demonstrated that public opposition can be strongest in the early stages of the project, especially as users adjust to new conditions. A temporary trial implementation (pilot) over a sufficient time can be used to help address concerns, evaluate challenges and successes while making minor adjustments where needed, and make a more informed determination. Permanent roadway reconfigurations (built in concrete) should be implemented with interim materials first, whenever feasible.

In addition to early engagement efforts, lane reconfiguration projects require continual engagement during the procurement and installation process to alert roadway users of the coming changes and help establish expectations.

Projects expected to be controversial will need additional formalized planning. In such cases, project managers and leads should develop a specific and documented evaluation plan, communication plan, and outreach plan. These should be part of a project charter document.

ENVIRONMENTAL CONSIDERATIONS

A. Project Evaluation Requirements

Project managers and leads should consult with the Planning and Development Review Bureau when developing the scope of the transportation analysis for environmental review.

If the project scope also includes installation of a bicycle lane as part of the lane reduction and the proposed bicycle lane is designated in the Mobility Plan 2035 Bicycle Lane Network, Bicycle Enhanced Network, or the Neighborhood Enhanced Network, then the project is statutorily exempt from California Environmental Quality Act (CEQA). However, the project lead will still need to file a Notice of Exemption (NOE), assess the impacts of the project on traffic and safety, and a public hearing may be required.

For all lane reconfiguration projects, collect pre-project traffic count data to support the project's environmental review pursuant to CEQA, even if the project is considered exempt. Intersection count data should be collected during the count season (see Definitions) for all potentially impacted signalized intersections. Collect new counts if the existing traffic counts

are older than two (2) years. The most updated signal timing charts will be also necessary to inform the simulation analysis.

For lane reconfigurations that do not exceed the Project Evaluation Screening Threshold (see Definitions), a NOE must be prepared and filed. The project manager can attach the traffic count sheets to the NOE and provide a brief narrative to substantiate that the project would not be expected to result in substantial travel delay. For lane reductions that would reduce vehicular travel capacity that exceed the Project Evaluation Screening Threshold, a Traffic and Safety Assessment will need to be completed, as well as public engagement to support the final decision to install the project.

If the project is a pilot project featuring a demonstration phase, the project team should identify the intended features that are part of a demonstration and highlight the project's objectives.

B. Public Engagement

For lane reduction projects that exceed the Project Evaluation Screening Threshold, the project team shall, at minimum hold one public open house workshop at the Conceptual Design Stage and provide information on project goals, supporting data, potential design countermeasure/treatments, potential project alternatives, project evaluation criteria, and a project evaluation and phasing timeline.

Once the required project evaluation is complete, the project team shall hold a noticed public open house that incorporates a public hearing station. At the open house, the project team shall present on project goals, supporting data, proposed design strategies, the preferred project alternative, and report on the results of the project traffic and safety analysis. A Hearing Officer should staff the hearing station to collect written and oral comments from the public. LADOT shall send the notice for the project's open house to the City Clerk to post in the Los Angeles Daily Journal, and provide the notice to the Council Office(s), neighborhood council, anyone signed up on the project notification list, property owners along the project's block face, and relevant public agencies.

Project leads shall also notify affected businesses or property owners if substantial on-street parking is to be removed as a result of the project. LADOT shall send notice to any affected business owners as a result of parking removal of any public meetings related to the project. The project notice will also need to be included in the City's Early Notification System. Project leads should also compile all relevant meeting materials, meeting notices and updates on a project web page on LADOT's website.

DEFINITIONS

Count Season - All traffic counts should be conducted when local schools or colleges are in session, on days of good weather, on Tuesdays through Thursdays during non-Summer months, and should avoid being taken on weeks with a holiday.

Level 3 Project - Major roadway reconfiguration or network level projects taking a holistic view of the street or street network and requiring comprehensive community engagement.

Major Roadway Changes - Any project elements that include lane reconfigurations, or striping or civil improvements that may lead to the change in operation of traffic, or access by emergency responders. Major Roadway Changes are typically inclusive of many Level 3 projects.

Project Evaluation Screening Threshold - the threshold where major roadway changes effectively reduce roadway capacity and recent traffic counts show that vehicle volumes would be equal to, or greater than 750 vehicles per lane per hour for any single lane after the project is implemented.

Table 1

						D DIETS AS OF 6/30/18			
			1	Maarda	Date(s)			D. Want Dila	
#	Street Name	Limits	(Miles)	Implemented	Implemented (from S. Martinez)	Old Configuration	New Configuration	Lanes?	Comments
						2 lanes each direction south of Berkeley;	1 lane each direction with left turn channelization south of Berkeley Ave.;		
_ ·	1 Silver Lake Blvd.	Glendale Blvd. to Reservoir St.	1.6	1999		channelization north of Berkeley.	channelization north of Berkeley Ave.	No	
	2 York Blvd.	Eagle Rock Blvd. to South Pasadena City Limit	2.7	2006, 2010, 2011, 2014		2 lanes each direction with no left turn channelization	1 Iane each direction with left turn channelization west of Ave. 55; 1 lane west, 2 Ianes east with left turn channelization east of Ave. 55; 2 Ianes east, 2 Ianes west from Figueroa St. to Ave. 64; 2 Ianes east, 1 Iane west from Ave. 64 to South Pasadena City Limit.	No	Road diet west of Ave. 55 first implemented in 2006 with no bike lanes; bike lanes added to this section in 2010; road diet with bike lanes extended to Figueroa St. in 2011; road diet with bike lanes extended to South Pasadena City Limit in 2014.
	3 Hoover St	109th St. to 120th St	0.9	2008		2 lanes each direction with no left turn channelization	1 lane each direction with left turn	No	
	4 Myra Ave.	Fountain Ave. to Santa Monica Blvd.	0.4	2009		2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
	5 Wilbur Ave.	Devonshire St. to Nordhoff St.	1.5	2010		2 lanes each direction with left turn channelization	1 lane each direction with left turn channelization	No	
	6 Via Dolce	Washington Blvd. to Marquesas Wy.	0.4	2011		2 lanes each direction with left turn channelization	1 lane south, 2 lanes north with left turn channelization	No	
;	7 7th St.	Catalina St. to Main St.	2.8	2011, 2013		2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	Road diet west of Figueroa St. implemented in 2011; road diet extended to Main St. in 2013 (Req. AB 2245).
	2 Spring St	Coost E. Chours Ave to 0th St	1.4	2011		3 full-time southbound lanes, 1 peak- hour southbound bus lane, 1 peak-hour	3 full-time southbound lanes north of 2nd St., 2 full-time southbound lanes south of 2nd St., 1 peak-hour south of 2nd St.	Van	
			1.4	2011		2 lanes each direction with no left turn	1 lane each direction with left turn	165	
	9 Main St. (Venice)	Santa Monica City Limit to Windward Cir.	0.8	2011		channelization 2 lanes each direction with left turn channelization from Venice Blvd./16th St. to Olympic Blvd.; 2 lanes south, 3 lanes north with left turn channelization from Olympic Blvd. to 9th St.; 3 full-time northbound lanes, 1 full-time northbound bus lane from 9th St. to 6th St.; 3 full- time northbound lanes, 1 peak-hour northbound bus lane from 6th St. to 1st	1 lane south, 2 lanes north with left turn channelization south of 9th St.; 3 northbound lanes from 9th St. to 5th St.; 2 full-time northbound lanes, 1 northbound peak-hour lane from 5th St. to 2nd St.; 3 northbound lanes from	NO	Road diet south of 9th St. implemented in 2011; road diet extended to 1st St. in
1(0 Main St.	1st St. to 16th St./Venice Blvd.	1.7	2011, 2012		St.	2nd St. to 1st St.	Yes	2012.
1	1 Winnetka Ave.	Devonshire St. to Nordhoff St.	1.7	2012		hour lane each direction with left turn channelization	2 lanes each direction with left turn channelization	Yes	
1:	2 Los Angeles St.	Alameda St. to 1st St.	0.5	2012		3 full-time lanes each direction with left turn channelization	2 lanes each direction with left turn channelization	Yes	
1:	3 1st St.	Beaudry Ave. to San Pedro St.	1	2012, 2013		2 full-time lanes each direction with left turn channelization, 1 peak-hour lane each direction	2 lanes each direction with left turn channelization	No	Road diet east of Grand Ave. implemented in 2012; road diet extended to Beaudry Ave. in 2013.
14	4 Olive St.	7th St. to Washington Blvd.	1.2	2012		4 northbound lanes	3 northbound lanes	Yes	
1:	5 Grand Ave.	Wilshire Blvd. to Jefferson Blvd.	2.2	2012, 2013, 2014		4 southbound lanes north of 17th St.; 3 southbound lanes from 17th St. to 18th St.; 2 southbound lanes, 1 northbound lane with left turn channelization from Adams Blvd. to 17th St.; 2 lanes each direction with no left turn channelization from 30th St. to Adams Blvd.	3 southbound lanes north of 17th St.; 2 southbound lanes from 17th St. to 18th St.; 1 lane each direction with left turn channelization from 30th St. to 17th St.	Yes	Road diet north of Washington Blvd. implemented in 2012; road diet extended to 30th St. in 2013 (Req. AB 2245); road diet extended to Jefferson Blvd. in 2014.
1	6 Motor Ave.	National Blvd. to Venice Blvd.	0.7	2012		2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
1	7 Santa Monica Blvd.	Virgil Ave. to Manzanita St.	0.3	2012		2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
18	8 8th St.	Boyle Ave. to Olympic Blvd.	1.4	2012		2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
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Table 1

					LADOT - ROA	D DIETS AS OF 6/30/18			
#	Street Name	Limits	Length (Miles)	Year(s) Implemented	Date(s) Implemented (from S. Martinez)	Old Configuration	New Configuration	Buffered Bike Lanes?	Comments
19	Opp St.	Fries Ave. to Banning Blvd.	0.4	2012		2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
20	Wilmington Blvd.	Anaheim St. to C St.	0.5	2012		2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
21	Neptune Ave.	Anaheim St. to C St.	0.5	2012		2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
22	Via Marisol	Monterey Rd. to Lomitas Dr.	0.2	2013		2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
23	Alla Rd.	Maxella Ave. to Marina Expwy.	0.6	2013		2 lanes each direction with left turn channelization	1 lane north, 2 lanes south with left turn channelization	No	
24	Rowena Ave.	Hyperion Ave. to Glendale Blvd.	0.5	2013	3/11/13	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
25	Cypress Ave.	Jeffries Ave. to Arroyo Seco Ave.	0.2	2013		3 lanes north, 1 lane south with left turn channelization	2 lanes north, 1 lane south with left turn channelization	No	
26	San Pedro St.	Vernon Ave. to Jefferson Blvd.	0.8	2013	3/31/13	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
27	Griffin Ave./Zonal Ave.	Altura St. to State St.	1.1	2013		2 lanes each direction with left turn channelization	1 lane each direction with left turn channelization	Yes	
28	54th St.	7th Ave. to Arlington Ave.	0.4	2013	4/14/13	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
29	Capitol Dr.	Western Ave. to Gaffey St.	1	2013		2 lanes each direction with left turn channelization	1 lane east, 2 lanes west with left turn channelization	No	
30	Westmont Dr.	Western Ave. to Gaffey St.	1.1	2013		2 lanes each direction with left turn channelization	1 lane each direction with left turn channelization	Yes	
31	Avalon Blvd.	L St. to Harry Bridges Blvd.	1.1	2013	5/20/13	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
32	Broad Ave.	Pacific Coast Hwy. to Anaheim St.	0.8	2013	5/29/13	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
33	San Pedro St.	Florence Ave. to 120th St.	3.5	2010, 2013	S/O 115th: 2010 N/O 115th: 6/9/13	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	Road diet south of 115th St. implemented in 2010; road diet north of 115th St. implemented in 2013.
34	Clybourn Ave.	San Fernando Rd. to Sherman Wy.	1	2013		2 lanes each direction with no left turn channelization	2 lanes north, 1 lane south with left turn channelization	Yes	
35	25th St.	Mermaid Dr. to Patton Ave.	1.2	2013		1 lane west, 2 lanes east with left turn channelization	1 lane each direction with left turn channelization	No	
36	E St.	Avalon Blvd. to Alameda St.	0.7	2013	6/17/13	2 lanes each direction with left turn channelization	1 lane each direction with left turn channelization	Yes	
37	Paseo Del Mar	Gaffey St to Roxbury St	0.5	2013	7/16/13	1 to 2 lanes each direction with left turn channelization	1 lane each direction with left turn channelization	Yes	Added from S. Martinez's 9/6/18 list
38	San Pedro PI.	41st PI. to Main St.	0.5	2013		2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
39	Mission Rd.	North Broadway to North Main St.	0.8	2013		2 lanes each direction with left turn channelization	2 lanes north, 1 lane south with left turn channelization	No	
40	Compton Ave.	Century Blvd. to 104th St.	0.3	2013		2 lanes each direction with left turn channelization	1 lane each direction with left turn channelization	Yes	
41	Grand Blvd.	Windward Cir. to Venice Blvd.	0.4	2013		2 lanes each direction with no left turn channelization	2 lanes east, 1 lane west with left turn channelization	No	
42	120th St.	Vermont Ave. to Main St.	1	2013		2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	Yes	
43	Broadway	Eagle Dale Ave. to Colorado Blvd.	0.3	2013		3 lanes each direction with left turn channelization	2 lanes east, 3 lanes west with left turn channelization	Yes	
44	Colorado Blvd.	Broadway to Figueroa St.	2.2	2013		3 lanes each direction with left turn channelization west of SR-134 Fwy.; 2 lanes each direction with left turn channelization east of SR-134 Fwy.	2 lanes each direction with left turn channelization west of SR-134 Fwy.; 2 lanes west, 1 lane east, east of SR- 134 Fwy.	Yes	Req. AB 2245
45	2nd St	Glandala Blud, to Spring St	1	2013		2 lanes each direction with left turn channelization west of Hill St.; 2 lanes west, 1 full-time lane and 1 peak-hour lane east of Hill St	2 lanes east, 1 lane west with left turn channelization west of Figueroa St.; 1 lane each direction east of Figueroa St	Ves	Reg. AB 2245
140	2110 01.	Ciendale Divu. to Opining St.	· ·	2015			0.	100	Noy. AD 2240

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LADOT -					LADOT - ROA	D DIETS AS OF 6/30/18			
#	Street Name	Limits	Length (Miles)	Year(s) Implemented	Date(s) Implemented (from S. Martinez)	Old Configuration	New Configuration	Buffered Bike Lanes?	Comments
46	Clybourn Ave.	Victory Blvd. to Vanowen St.	0.5	2013	12/31/13	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
47	Virgil Ave.	Santa Monica Blvd. to Melrose Ave.	0.5	2014	1/17/14	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	Req. AB 2245
48	48th St.	Crenshaw Blvd. to Normandie Ave.	1.7	2014	3/13/14	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
49	Chase St.	Van Nuys Blvd. to Woodman Ave.	0.9	2014	4/28/2014	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
50	1st St.	Vermont Ave. to Commonwealth Ave.	0.4	2014	4/28/14	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
51	San Vicente Blvd.	Bundy Dr. to Bringham Ave.	0.7	2014		2 full-time lanes each direction, 1 AM peak-hour eastbound lane with left turn channelization	2 full-time lanes each direction with left turn channelization	No	
52	Loyola Blvd.	Westchester Pkwy. to Lincoln Blvd.	0.3	2014		2 lanes each direction with left turn channelization	1 lane each direction with left turn channelization	Yes	
53	Wilmington Ave.	Century Blvd. to 104th St.	0.3	2014		2 lanes each direction with left turn channelization	1 lane each direction with left turn channelization	Yes	
54	West Blvd.	Slauson Ave. to 68th St.	0.8	2014	5/20/14	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	
55	Califa St.	Topanga Cyn. Blvd. to 200' E/O Canoga Ave.	0.5	2014		2 lanes each direction with left turn channelization	1 lane each direction with left turn channelization	Yes	
56	Venice Way	Venice Blvd to Pacific Av	0.32	2014	7/2/14	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	Added from S. Martinez's 9/6/18 list
57	Vineland Ave	Chandler Blvd. to Ventura Blvd.	2.2	2015		2 or 3 lanes each direction with left turn channelization or center median	2 lanes each direction with left turn channelization or center median	Yes	
58	Pacific Avenue	15th St to 22nd St	0.4	2014	8/6/2014	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	Added from S. Martinez's 9/6/18 list
59	Pacific Avenue	O'Farrell St to 15th St	1.1	2015	9/10/2015	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	Added from S. Martinez's 9/6/18 list
60	Avenue 36	Fletcher Dr to Eagle Rock Blvd	0.1	2016	8/2/2016	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization		Added from S. Martinez's 9/6/18 list
61	Fletcher Drive	Delay Dr to Avenue 36	0.6	2016	8/2/2016	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization		Added from S. Martinez's 9/6/18 list
62	Pacific Avenue	Upland Av to O'Farrell St	0.2	2016	8/2/2016	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization	No	Added from S. Martinez's 9/6/18 list
63	Venice Blvd.	Inglewood Blvd to Beethoven St	0.8	2017	5/20/2017	3 lanes each direction with median islands, left turn channelization and buffered bike lanes	2 lanes each direction with median islands, left turn channelization and parking protected bike lane		
64	Alhambra Avenue	Lowell Av to Druid St	1.1	2018	6/28/2018	2 lanes each direction with no left turn channelization	1 lane each direction with left turn channelization		Added from S. Martinez's 9/6/18 list
		Add new lines above this line							
		TOTAL:	59.22]					

ATTACHMENT A - SAMPLE VOLUME DISTRIBUTION

ADT

Summary

Max Per Lane Volume Existing Max Per Lane Volume Post

Volume Distribution for: Count Date:

Venice Bl w/o Colonial Av 9/22/2015

Enter:	NB/WB	SB/EB
Number of Existing Through Lanes	3	3
Number of Proposed Through Lanes	2	2

Total Hourly Volume						
Hour Beginning	NR/WR	SB/FB	Total			
12:00 AM	188	132	320			
1:00 AM	87	78	165			
2:00 AM	51	60	111			
3:00 AM	50	37	87			
4:00 AM	63	57	120			
5:00 AM	182	137	319			
6:00 AM	421	440	861			
7:00 AM	1,318	1,280	2,598			
8:00 AM	1,238	1,720	2,958			
9:00 AM	1,326	1,326	2,652			
10:00 AM	1,177	864	2,041			
11:00 AM	1,047	842	1,889			
12:00 PM	1,042	857	1,899			
1:00 PM	1,213	968	2,181			
2:00 PM	1,126	997	2,123			
3:00 PM	1,297	1,505	2,802			
4:00 PM	1,329	1,609	2,938			
5:00 PM	1,402	1,757	3,159			
6:00 PM	1,304	1,103	2,407			
7:00 PM	1,095	993	2,088			
8:00 PM	800	652	1,452			
9:00 PM	607	488	1,095			
10:00 PM	533	348	881			
11:00 PM	295	230	525			
Totals	19,191	18,480	37,671			

Existing Per Lane Volume						
Hour	NB/M/B	SB/EB				
12:00 AM	62	00/20				
12.00 AW	03	44				
1:00 AM	29	20				
2:00 AM	17	20				
3:00 AM	17	12				
4:00 AM	21	19				
5:00 AM	61	46				
6:00 AM	140	147				
7:00 AM	439	427				
8:00 AM	413	573				
9:00 AM	442	442				
10:00 AM	392	288				
11:00 AM	349	281				
12:00 PM	347	286				
1:00 PM	404	323				
2:00 PM	375	332				
3:00 PM	432	502				
4:00 PM	443	536				
5:00 PM	467	586				
6:00 PM	435	368				
7:00 PM	365	331				
8:00 PM	267	217				
9:00 PM	202	163				
10:00 PM	178	116				
11:00 PM	98	77				

Proposed Per Lane Volume				
NB/WB	SB/EB			
94	66			
44	39			
26	30			
25	19			
32	29			
91	69			
211	220			
659	640			
619	860			
663	663			
589	432			
524	421			
521	429			
607	484			
563	499			
649	753			
665	805			
701	879			
652	552			
548	497			
400	326			
304	244			
267	174			
148	115			
	NB/WB 94 94 94 291 255 322 91 211 659 663 524 521 607 563 649 665 701 652 548 400 304 267 148			

37,671 586 879



