



EXECUTIVE SUMMARY

This study, prepared by Kimley-Horn and Associates, Inc., evaluates the potential traffic-related impacts associated with the Barrio Logan Community Plan Update.

Two land use alternatives were presented and analyzed as part of the Barrio Logan Community Plan Update. The purpose of these alternatives is to regulate and guide the strategic growth of the community. In addition to the land use alternatives within the Barrio Logan Community Plan Update, a Mobility Element was prepared based on the existing conditions within the community, potential future transportation deficiencies and improvement recommendations and extensive input from the community stakeholders.

Based on the intersection peak-hour analysis included in this study, the Barrio Logan Community Plan Update Land Use Alternatives will be considered to have a cumulative traffic related impact at the following twenty intersections:

- *National Avenue and 16th Street;*
- *Harbor Drive and Sigsbee Street;*
- *Logan Avenue and Beardsley Street/I-5 SB off-ramp;*
- *National Avenue and Beardsley Street;*
- *Harbor Drive and Beardsley Street;*
- *Logan Avenue and Cesar Chavez Parkway;*
- *National Avenue and Cesar Chavez Parkway;*
- *Newton Avenue and Cesar Chavez Parkway;*
- *Main Street and Cesar Chavez Parkway;*
- *Harbor Drive and Cesar Chavez Parkway;*
- *Logan Avenue and Sampson Street;*
- *Main Street and 26th Street;*
- *Harbor Drive and Schley Street;*
- *National Avenue and 28th Street;*
- *Boston Avenue and 28th Street;*
- *Main Street and 28th Street;*
- *Harbor Drive and 28th Street;*
- *Boston Avenue and I-5 Southbound On-ramp;*
- *32nd Street and Wabash Street; and*
- *Harbor Drive and 32nd Street.*

The following intersection improvements are needed to mitigate the peak-hour intersection impacts of the proposed Barrio Logan Community Plan Update Land Use Alternatives. With the exception of the improvements recommended at the Harbor Drive/Cesar Chavez Parkway and Boston Avenue/28th Street intersections, all improvements would be the same for both alternative land use scenarios. Some improvements at the Harbor Drive /Cesar Chavez Parkway and Boston Avenue/28th Street intersections would only be needed with Alternative 2 Land Use scenario.



- National Avenue and 16th Street: A new traffic signal is recommended to be installed at this intersection.
- Harbor Drive and Sigsbee Street: A traffic signal is recommended to be installed at the intersection of Sigsbee Street and Harbor Drive. The signal is needed to serve the increased traffic from land uses proposed, as well as accommodating the traffic that would be diverted from Beardsley Street due to the median closure along Harbor Drive.
- Logan Avenue and Beardsley Street/I-5 SB off-ramp: A traffic signal is recommended to be installed at the intersection.
- National Avenue and Beardsley Street: A traffic signal is recommended to be installed at the intersection.
- Harbor Drive and Beardsley Street: This improvement would extend the raised median along Harbor Drive in front of Beardsley Street converting the intersection to right-in/right-out only movements.
- Logan Avenue and Cesar Chavez Parkway: The addition of an exclusive eastbound right-turn lane and a northbound right-turn overlap phase are recommended to be installed at this intersection. The addition of the exclusive eastbound right-turn lane could be implemented by restriping changes only. An existing MTS bus stop is located where the exclusive right-turn lane is recommended. To reduce the impact to on-street parking, the relocation of the existing MTS bus stop is not recommended at this point. Further coordination with MTS is required before the implementation of this improvement. This improvement will not affect the existing on-street parking. The entrance to the State Route 75 ramps would be reconfigured to improve pedestrian circulation. This improvement could include the removal of the free northbound right-turn access from Cesar Chavez Parkway to the State Route 75 ramps.
- National Avenue and Cesar Chavez Parkway: Exclusive eastbound and westbound right-turn lanes are recommended to be installed at this intersection in order to reduce queuing along National Avenue. These improvements could be implemented by restriping changes only. These improvements will not affect the existing on-street parking. An existing MTS bus stop is located where the exclusive westbound right-turn lane is recommended. To reduce the impact to on-street parking, the relocation of the existing MTS bus stop is not recommended at this point. Further coordination with MTS is required before the implementation of this improvement.
- Main Street and Cesar Chavez Parkway: An exclusive westbound right-turn lane is recommended to be installed at this intersection in order to reduce queuing along Main Street. This improvement could be implemented by restriping changes only. This improvement will not affect the existing on-street parking. An existing MTS bus stop is located where the exclusive westbound right-turn lane is recommended. To reduce the impact to on-street parking, the relocation of the existing MTS bus stop is not recommended at this point. Further coordination with MTS is required before the implementation of this improvement.
- Harbor Drive and Cesar Chavez Parkway: A southbound right-turn overlap phase, dual eastbound left-turn lanes and an exclusive northbound right-turn lane are recommended to be installed. For Alternative 2 scenario, an exclusive westbound right-turn lane is also recommended. It is anticipated that the exclusive northbound right-turn lane will be completed by Caltrans in conjunction with the extension of the westbound left-turn lane.
- Logan Avenue and Sampson Street: A traffic signal is recommended to be installed. Also, southbound and northbound left-turn lanes are recommended. These lanes could be added with restriping changes only at the time of signalization, and would not require roadway widening. The configuration changes would require the removal of on-street parking along Sampson Street. A total of 16 parking spaces are anticipated to be removed as part of this improvement. The



removed parking spaces are likely serving commercial uses along Logan Avenue and multi-family residential units along Sampson Street. The removal of on-street parking spaces will create a shortage of on-street parking within the vicinity of this intersection.

- Main Street and 26th Street: A partial street closure is recommended at the intersection for truck traffic restrictions. The northbound through and eastbound left movements would be eliminated. This improvement is not required to mitigate intersection level of services, but it is recommended for a reduction of truck traffic along residential streets within the community.
- Harbor Drive and Schley Street: The southbound through and southbound left-turn movements are recommended to be prohibited. Right-turn overlap signal phasing is recommended for the southbound movement.
- National Avenue and 28th Street: An exclusive southbound right-turn lane is recommended to be added. This improvement could be accomplished by restriping the roadway without the need for widening. A removal of one on-street parking space would be required along the west side of National Avenue to accommodate a 100-foot southbound exclusive right-turn lane.
- Boston Avenue and 28th Street: An exclusive eastbound right-turn lane is recommended to be added. This improvement could be implemented by restriping changes only and will not affect on-street parking. This improvement is needed under Alternative 2 only.
- Harbor Drive and 28th Street: A second southbound left-turn lane and a second eastbound left-turn lane are recommended to be added.
- Boston Avenue and Interstate 5 Southbound Ramp-29th Street: This recommendation includes a truck right-turn prohibition for the northbound movement at the intersection of 28th Street and Boston Avenue and truck turning signage to encourage vehicles to use Main Street and 29th Street to enter the Interstate 5 southbound freeway. The Interstate 5 Southbound Ramp and Boston Avenue intersection is recommended to be signalized.
- 32nd Street and Wabash Boulevard: Potential improvements at this intersection will be further defined once Caltrans completes its truck access improvement study.
- Harbor Drive and 32nd Street: Same as the improvements for Wabash Boulevard and 32nd Street.

With the implementation of the recommended improvements, all intersections within the study area would operate at LOS D or better with the following exceptions:

- Harbor Drive and 28th Street (will continue to operate at LOS E during the afternoon peak-hour period);
- 32nd Street and Wabash Street (will continue to operate at LOS F and LOS E during the morning and afternoon peak-hour periods, respectively); and
- Harbor Drive and 32nd Street (will continue to operate at LOS F during both peak-hour periods).

The Harbor Drive/32nd Street and 32nd Street/Wabash Street intersections are being studied further in an on-going Caltrans study. The latest report includes the installation of a unidirectional connector ramp from eastbound Harbor Drive to northbound State Route 15. Another improvement under study is the Vesta Street Overcrossing at Harbor Drive which would connect the wet and dry sides of the Naval Base San Diego. On November 1, 2010 the Navy temporarily closed the eastern leg (Norman Scott Road) of the 32nd Street/Norman Street-Wabash Street intersection to improve safety. The Navy is monitoring traffic to determine if this closure should remain. A preliminary analysis indicates that the mentioned projects would improve the intersection to acceptable levels and decrease the potential queuing problems.



Harbor Drive/28th Street is projected to operate at LOS E, even with improvements. There is the potential that improvements to be made between Harbor Drive and State Route 15 (Caltrans study) could divert some traffic off of 28th Street, further improving this intersection

SANDAGs 2050 Regional Transportation Plan (RTP) unconstrained network recommends the grade separation of the trolley lines at 28th Street and at 32nd Street. A peak-hour intersection analysis was conducted for the intersections of 28th Street and 32nd Street with Harbor Drive assuming these proposed grade separations. The results of the analysis indicated that the proposed grade separation would improve both intersections to LOS D or better during both peak-hour periods under the Horizon Year scenario with either alternative. The proposed grade separations are included in the “revenue constrained scenario”. Due to the benefits to adjacent intersections, these grade separation projects are recommended.

Based on the roadway segment capacity analysis included in this study, the Barrio Logan Community Plan Update will be considered to have a cumulative traffic related impact along the following roadway segments:

- *Cesar Chavez Parkway between Logan Avenue and National Avenue (both Alternatives);*
- *Cesar Chavez Parkway between National Avenue and Newton Avenue (both Alternatives);*
- *Cesar Chavez Parkway between Newton Avenue and Main Street (both Alternatives);*
- *Sampson Street between National Avenue and Harbor Drive (both Alternatives);*
- *26th Street between National Avenue and Main Street (both Alternatives);*
- *28th Street between I-5 and Boston Avenue (both Alternatives);*
- *29th Street between Boston Avenue and Main Street (Alternative 2 only);*
- *32nd Street between Main Street and Wabash Boulevard (both Alternatives);*
- *Vesta Street between Main Street and I-5 Ramps (both Alternatives);*
- *Logan Avenue between Sigsbee Street and Cesar Chavez Parkway (both Alternatives);*
- *National Avenue between 16th Street and Sigsbee Street (Alternative 2 only);*
- *National Avenue between Sigsbee Street and Beardsley Street (Alternative 2 only);*
- *National Avenue between Beardsley Street and Cesar Chavez Parkway (both Alternatives);*
- *National Avenue between Cesar Chavez Parkway and Evans Street (both Alternatives);*
- *National Avenue between Sicard Street and 27th Street (both Alternatives);*
- *Boston Avenue between 28th Street and 29th Street (both Alternatives);*
- *Boston Avenue between 29th Street and 32nd Street (both Alternatives);*
- *Main Street between Cesar Chavez Parkway and Evans Street (both Alternatives);*
- *Main Street between Evans Street and 26th Street (both Alternatives);*
- *Main Street between 26th Street and 28th Street (both Alternatives);*
- *Main Street between 28th Street and 29th Street (both Alternatives);*
- *Main Street between 29th Street and 32nd Street (both Alternatives);*
- *Main Street between 32nd Street and Rigel Street (both Alternatives);*
- *Main Street between Rigel Street and Una Street (both Alternatives); and*
- *Main Street between Una Street and I-5 SB Off-ramp (both Alternatives).*

The following roadway segment improvements are recommended to mitigate the roadway segment cumulative impacts of the proposed Barrio Logan Community Plan Update. The improvements listed would be the same for both land use alternatives.



- Cesar Chavez Parkway between Logan Avenue and Harbor Drive: This roadway segment will be reclassified as a three-lane urban major facility between Logan Avenue and Main Street. Between Main Street and Harbor Drive, the roadway segment will be reclassified as a three-lane major arterial. A raised median will be installed between Harbor Drive and Logan Avenue. The roadway segment will have two lanes in the northbound direction and one lane in the southbound direction. On-street parking will be allowed between Logan Avenue and Main Street. A southbound right-turn auxiliary lane will be present between Main Street and Harbor Drive. The entire roadway segment should be considered for “sharrow” bicycle marking treatment and will be considered a class III bicycle facility.
- 28th Street between I-5 and National Avenue: This roadway segment will be reconfigured as a four-lane major arterial with a five-foot raised median. The new configuration would allow for two-lanes in each direction and an auxiliary lane in the southbound direction.
- National Avenue between Cesar Chavez Parkway and Evans Street: This roadway segment will be reclassified as a two-lane collector with a two-way left-turn lane.
- National Avenue between Sicard and 27th Street: This roadway segment will be reclassified as a two-lane collector with a two-way left-turn lane.
- Main Street between Evans Street and 26th Street: This roadway segment will be reclassified as a two-lane collector with a two-way left-turn lane.

Although the above listed improvements will not mitigate all the roadway segment cumulative impacts identified in the study, no additional improvements are being proposed.

Boston Avenue, National Avenue and 26th Street are desired by the community of Barrio Logan to be more pedestrian and bicycle friendly corridors. The widening of these roadways to improve vehicular circulation was not desired by the community. The vehicular operations along these three facilities could be congested during peak periods and vehicular speeds would be low. Additional widening is not recommended. Traffic calming measures should be evaluated along National Avenue to further enhance the pedestrian and bicycle circulation.

Additional improvements to the failing roadway segments of Sampson Street, 28th Street, 32nd Street, Vesta Street, Logan Avenue and Main Street are not recommended since the roadway segment analysis used in this study is based on theoretical capacities based on the number of travel lanes. The analysis does not take into account other physical features that can affect the capacity of a roadway segment like grades, number of traffic signals, number of driveways, parking availability, etc. In addition, the analysis does not take into account the different traffic peak periods experienced on these roadways due to the surrounding land uses. As an example, the Barrio Logan traffic patterns are unique in that they are heavily influenced by the Port of San Diego and the Navy Base traffic generators whose peak-hour of use do not correspond to typical peak-hour commuter traffic. Therefore, the typical planning level capacity for these streets may understate the carrying capacity of these roadways. To better represent the conditions of a roadway segment within the Barrio Logan community, the operations of the upstream and downstream intersections of each respective segment during the peak periods would indicate whether the roadway segment would have adequate capacity. As shown in the intersection analysis tables, all intersections along the failing roadway segments would operate at acceptable LOS.

In addition to the roadway segment improvements listed above, it is recommended that 28th Street between Harbor Drive and the I-5 Ramps be classified as a four-lane major arterial. For the segment between Harbor Drive and Main Street, a raised median should be installed with an entrance to the Navy



Commissary. The proposed configuration would allow two lanes in each direction with an auxiliary lane for the heavy southbound right-turn movements at Harbor Drive. Parking would need to be removed along both sides of the roadway, with a total loss of approximately 20 parking spaces. The removed parking spaces are likely utilized by NASCO employees or Naval Base San Diego employees or visitors. Additional diagonal parking is recommended to be evaluated for installation along Boston Avenue between 28th Street and 29th Street to replace the loss of parking along 28th Street. The west side of the roadway could be widened by 4 feet to accommodate the proposed interim cross-sections. The east sidewalk will widen to 10 feet to enhance pedestrian circulation. This improvement is not part of mitigation for a roadway segment impact. The improvement is recommended to encourage heavy truck traffic to use 28th Street instead of Main Street and to provide for pedestrians. The ultimate recommended cross-section of 28th Street will include a designated bike lane along both sides of the roadway and a fourteen foot parkway. The ultimate configuration along 28th Street will require additional roadway widening and right-of-way acquisition. An alignment study is required to further define the extent of additional right-way needed and future widening.

Based on the freeway segment capacity analysis included in this study, Barrio Logan Community Plan Update is considered to have a cumulative traffic related impact along the following freeway segments:

- I-5 from J Street to SR-75 Junction;
- I-5 from SR-75 Junction to 28th Street;
- I-5 from 28th Street to I-15 Interchange;
- I-5 from I-15 Interchange to Division Street; and
- I-15 from I-5 Interchange to Ocean View Boulevard

SANDAG's Draft 2050 Regional Transportation Plan (RTP) hybrid network includes the following freeway improvements:

- Operational freeway improvements along Interstate 5 between Interstate 15 and Interstate 8; and
- Addition of one (1) main lane and one (1) managed lane in each direction between Interstate 15 and State Route 54;

Both improvements listed above were included in the hybrid network's revenue constrained scenario, approved by SANDAG's board for further study on December 17th, 2010. The improvements included in the RTP are recommended to enhance the regional connectivity and accommodate the forecasted growth of the San Diego region. It should be noted that both land use alternatives presented on this plan would generate less traffic than the current adopted Community Plan land use alternative. Either proposed alternative would lessen, but not eliminate cumulative freeway traffic impacts.

In addition to the proposed freeway improvements listed in the SANDAG's Draft 2050 RTP, the following freeway access improvements are recommended within the Barrio Logan Community:

- Signalization of the intersection of Logan Avenue and Beardsley Street/ Interstate 5 SB off-ramp;
- Traffic signal modification at the intersection of Logan Avenue and Cesar Chavez Parkway (State Route 75 on-ramp);
- Signalization of the intersection of Boston Avenue and Interstate 5 SB on-ramp- 29th Street;



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- Roadway improvements along 28th Street to accommodate an additional southbound lane, including the potential for widening the Interstate 5 overcrossing;
- Signalization of the intersection of 28th Street and Interstate 5 southbound off-ramp;
- Changes to the roadway striping along Main Street between 28th Street and 29th Street to facilitate freeway access to the Interstate 5 southbound on-ramp at Boston Avenue;
- Installation of a unidirectional connector ramp from eastbound Harbor Drive to northbound State Route 15 (under study by the Port of San Diego, and Caltrans);
- Construction of the Vesta Street Overcrossing at Harbor Drive (under study by the Navy);
- Coordination of City of San Diego and Navy related to the closure of the east leg of the 32nd Street and Norman Street-Wabash Street intersection (recently completed on a trial basis by the Navy); and
- Grade separation of the trolley tracks at the 28th Street and Harbor Drive and 32nd Street and Harbor Drive intersections (to be completed by SANDAG and part of the 2050 draft RTP).

The improvements listed above would decrease congestion along the major freeway access locations within the community.

Figures E-1 and E-2 illustrates the summary of Horizon Year intersections and roadway segments level of services with the implementation of the recommended improvements associated with Alternative 1 and 2, respectively.



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LEGEND

- Barrio Logan Community Plan Area
- Freeway/Ramp
- Park/Open Space
- City Boundary
- SDMTS Trolley and Station
- School
- Port District
- Naval Station San Diego
- LOS A,B, or C
- LOS D
- LOS E
- LOS F
- AM PM
 Intersection LOS

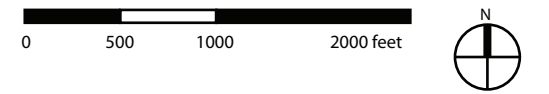


Figure E-1: Summary of Final LOS Results for Alternative 1 with Improvements



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LEGEND

- Barrio Logan Community Plan Area
- Freeway/Ramp
- Park/Open Space
- City Boundary
- + SDMTS Trolley and Station
- School
- Port District
- Naval Station San Diego
- LOS A,B, or C
- LOS D
- LOS E
- LOS F



Figure E-2: Summary of Final LOS Results for Alternative 2 with Improvements