IV. ENVIRONMENTAL IMPACT ANALYSIS
K. TRAFFIC AND TRANSPORTATION

The information in this section is based primarily on the Traffic Impact Analysis Report prepared by Hirsch/Green Transportation Consulting, Inc. (Hirsch/Green), Revised March 2009 (included in Appendix H to this Draft EIR).

ENVIRONMENTAL SETTING

The proposed project is located within the West Los Angeles Transportation Improvement and Mitigation Specific Plan (TIMP) area and within the West Los Angeles community of the City of Los Angeles. The proposed project is located generally in the northwest quadrant of the intersection of Olympic Boulevard and Bundy Drive. The project site is located one block from the border with the City of Santa Monica and one-half block from the intersection of Olympic Boulevard and Bundy Drive. The City of Los Angeles/City of Santa Monica boundary is located immediately west of the project site.

Area Transportation Facilities

The project area is well served by both local and regional transportation facilities. The San Diego Freeway (I-405) and the Santa Monica Freeway (I-10) are less than one mile and one-half mile, respectively, from the project site; both freeways provide ramp connections to the surface street network in the immediate project vicinity. In addition to the regional freeway facilities, several major and secondary arterials serve the study area, as does a well-developed local street grid. The key transportation facilities in the project vicinity are discussed below.

Freeways

Santa Monica Freeway (I-10)

One of primary east-west transportation facilities in the region, the Santa Monica Freeway (I-10) begins at Pacific Coast Highway and continues eastward into San Bernardino County and beyond. In the project vicinity, the Santa Monica Freeway is generally an eight-lane facility, providing four through travel lanes in each direction, plus additional auxiliary lanes near ramp or interchange locations, and provides surface street ramp connections at 20th Street, Cloverfield Boulevard, Centinela Avenue, and Bundy Drive, as well as a full interchange with the San Diego Freeway.

The San Diego Freeway (I-405)

The key north-south transportation roadway on the west side of Los Angeles, this freeway generally provides five travel lanes per direction, plus additional lanes at ramps or interchanges. The San Diego Freeway serves the entire western portion of the Los Angeles basin, including the Los Angeles International Airport. In the project vicinity, the San Diego Freeway provides surface street ramps at

Wilshire Boulevard, Santa Monica Boulevard, Tennessee Avenue (access to Sawtelle and Sepulveda Boulevards), and National Boulevard.

Streets and Highways

Major/Arterial Highways

Olympic Boulevard

This east-west oriented roadway is located along the south side of the project site. Olympic Boulevard is striped to provide three through lanes in each direction plus left-turn channelization in the project area, although west of Centinela Avenue through the City of Santa Monica, Olympic Boulevard has a raised median island and reduces to two travel lanes in each direction, plus left-turn channelization. On-street parking is prohibited on many segments of Olympic Boulevard, although near the project site, some segments of this roadway provide limited metered parking.

Santa Monica Boulevard

Another east-west roadway, Santa Monica Boulevard runs through the northern portion of the study area, and extends from near downtown Los Angeles to the Santa Monica Bay. Through the study area, this roadway generally provides three travel lanes in each direction, plus left-turn channelization and on-street parking. East of Sepulveda Boulevard, Santa Monica Boulevard previously exhibited a dual roadway configuration, with the northern roadway (major) providing the primary regional circulation roadway, and the southern roadway ("Little Santa Monica") serving as a local access roadway. The segment of Santa Monica Boulevard (both north and south roadways) between Sepulveda Boulevard and the City of Beverly Hills is currently being reconstructed to eliminate the dual configuration.

Wilshire Boulevard

This east-west roadway is located in the northern portion of the study area, and currently provides three through lanes in each direction, with left-turn lanes provided at key intersections, and center two-way left-turn channelization available at most other locations. On-street parking is generally allowed along both sides of Wilshire Boulevard in the project vicinity.

Pico Boulevard

Located south of the project site, this east-west oriented roadway provides access generally between the Santa Monica Bay and Central Avenue in downtown Los Angeles. In the project vicinity, Pico Boulevard provides two through lanes plus left-turn channelization in both the eastbound and westbound directions. On-street parking is generally permitted along Pico Boulevard through the project area; although a raised median island is present along much of this roadway through the City of Santa Monica, where this configuration generally prohibits on-street parking.

Ocean Park Boulevard

This east-west oriented roadway provides access generally between Neilson Way in the City of Santa Monica to the west and Bundy Drive/Centinela Avenue in West Los Angeles. East of Bundy Drive/Centinela Avenue, this roadway is renamed Gateway Boulevard, which continues to the northeast to its terminus at Pico Boulevard, just west of I-405 . Through the project area, Ocean Park Boulevard provides two through lanes plus left-turn channelization in both the eastbound and westbound directions and on-street parking is generally permitted.

San Vicente Boulevard

Located north of the project site, this generally east-west oriented roadway provides access between Ocean Avenue in Santa Monica and Federal Avenue in West Los Angeles. San Vicente Boulevard is developed with a raised median island along its entire length through the project area, and provides two through lanes plus left-turn channelization in both the eastbound and westbound directions at key intersections. On-street parking is generally permitted along most segments of this roadway.

Sepulveda Boulevard

This roadway serves as a primary alternative to the San Diego Freeway throughout much of the west side of Los Angeles, between Rinaldi Street in the Mission Hills area to the Terminal Island Freeway (SR-103) in Long Beach. Through the study area, Sepulveda Boulevard generally provides two travel lanes in each direction, plus left-turn channelization at most cross street intersections, and right-turn lanes at some key intersections. On-street parking is allowed along many portions of Sepulveda Boulevard.

Westwood Boulevard

This relatively short north-south roadway is located at the eastern edge of the study area, and provides service between its northern terminus at Le Conte Avenue at the southern boundary of the University of California Los Angeles (UCLA) campus and its redesignation as National Place south of National Boulevard. Although this roadway is designated as a major/divided major highway between Santa Monica Boulevard and Le Conte Avenue in Westwood Village, this roadway is a secondary highway through much of the project area. Westwood Boulevard generally provides two to three through lanes in each direction, plus left-turn channelization, and right-turn only lanes are also provided at major intersections. On-street parking is permitted along most segments of Westwood Boulevard.

Secondary/Collector Highways

Bundy Drive

This north-south oriented roadway forms the eastern boundary of the project site. This roadway runs between San Vicente Boulevard to the north of the project site to National Boulevard, where it is renamed Centinela Avenue and continues southward through West Los Angeles and Mar Vista. In the study area, Bundy Drive provides two travel lanes per direction during peak hours, plus left-turn channelization at key intersections. On-street parking is allowed in some areas, but is prohibited during peak periods to provide the second travel lane.

South of Pico Boulevard, Bundy Drive/Centinela Avenue is designated as a major highway and generally provides two travel lanes in each direction plus left-turn channelization. Between Wilshire Boulevard and San Vicente Boulevard, Bundy Drive is designated as a collector street and typically provides one travel lane per direction. Bundy Drive becomes Kenter Avenue north of San Vicente Boulevard.

Centinela Avenue

A separate, northern component of Centinela Avenue also exists besides that described above as the continuation of Bundy Drive. Extending between Montana Avenue to just south of Ocean Park Boulevard, this segment generally forms the boundary between the Cities of Los Angeles and Santa Monica. Within the City of Santa Monica, Centinela Avenue is designated as a local street, while the portions south of Wilshire Boulevard are classified by the City of Los Angeles as a collector street. The north and south legs of the intersection of Centinela Avenue and Olympic Boulevard are offset by approximately 500 feet. The project driveway on Olympic Boulevard is located opposite the southern leg of Centinela Avenue. South of Olympic Boulevard, Centinela Avenue provides one lane in each direction, with left- turn channelization provided only at major intersections, with limited on-street parking. To the north of Olympic Boulevard, Centinela Avenue widens to provide two travel lanes per direction, plus left-turn channelization and on street parking.

Nebraska Avenue

This roadway also passes through both the City of Los Angeles and City of Santa Monica, but does not change names at the City boundary. Nebraska Avenue is classified as a collector street through the City of Los Angeles and a local street in the City of Santa Monica. Although designated as a collector, this east-west roadway acts primarily as a local residential access, providing only a single travel lane and on-street parking in each direction.

Texas Avenue

Designated as a collector roadway in the City of Los Angeles portion of the project area, this east-west oriented roadway changes names to Arizona Avenue in the City of Santa Monica, and is designated as a feeder street between Centinela Avenue and Lincoln Boulevard, and a local street between Lincoln Boulevard and Ocean Avenue. Texas Avenue/Arizona Avenue generally provides one lane in each direction, and on-street parking is typically permitted on both sides of the street.

La Grange Avenue

This east-west roadway provides vehicular access through the study area between Bundy Drive and the San Diego Freeway. La Grange Avenue provides only a single travel lane in each direction, and on-street parking is generally allowed along both sides of this street in the vicinity of the project site.

Idaho Avenue

At the City boundary between Los Angeles and Santa Monica, Idaho Avenue becomes Colorado Avenue west of Centinela Avenue. Idaho Avenue is designated as a secondary highway to the west of Bundy Drive, although it is downgraded to collector street status to the east. Colorado Avenue is a collector street between Centinela Avenue and 26th Street, and an arterial roadway west of 26th Street. Both Idaho Avenue and Colorado Avenue typically provide one travel lane per direction with on-street parking permitted, although some approaches at key intersections exhibit parking prohibitions in order to install left-turn channelization.

Sawtelle Boulevard

This north-south roadway is a collector street between Olympic Boulevard and its northern terminus at Ohio Avenue, although it becomes a secondary highway south of Olympic Boulevard. Along the collector street portion, Sawtelle Boulevard is generally striped to provide one travel lane in each direction, along with on-street parking, although the street flares to allow left-turn channelization at key intersections. South of Olympic Boulevard, Sawtelle Boulevard widens to a four-lane roadway providing left-turn channelization at major intersections, although on-street parking is prohibited along some segments of the roadway in this area.

Barrington Avenue

A north-south roadway located east of the project site, Barrington Avenue proves service between Sunset Boulevard on the north and Federal Avenue in the Mar Vista community to the south, where its name becomes McLaughlin Avenue, and continues southward to just south of Washington Boulevard. Barrington Avenue provides one travel lane per direction to the north of Olympic Boulevard, and widens to provide two lanes per direction to the south. Full left-turn channelization is provided at the intersection with Santa Monica Boulevard, and at all key intersections south of Olympic Boulevard. On-street parking is generally permitted along all segments of this roadway.

Montana Avenue

This east-west roadway is located in the northern part of the study area, and serves the West Los Angeles and Santa Monica area generally between Barrington Avenue to Ocean Avenue. Montana Avenue is typically improved with one travel lane in each direction plus on-street parking in most areas, although additional travel lanes and left-turn channelization are available at key intersections.

National Avenue

This east-west roadway begins at Bundy Drive and travels eastward through the southern portion of the City of Los Angeles study area, providing two eastbound and two westbound lanes in the vicinity of the project site, plus on-street parking in most areas and left- turn channelization at key intersections.

Federal Avenue

Designated as a collector roadway in the northern portion of the study area between Wilshire Boulevard and Ohio Avenue, Federal Avenue is downgraded to local street status throughout the remainder if its length. Federal Avenue is discontinuous between Olympic Boulevard to south of the Santa Monica Freeway. Through the study area, Federal Avenue generally provides one travel lane in each direction, with left-turn channelization provided at major intersections and on-street parking generally permitted along both sides of this roadway.

Stewart Street/28th Street

This short roadway begins at Colorado Avenue and is one of only a few streets in the area to provide access across the Santa Monica Freeway. At Pico Boulevard, Stewart Street is renamed 28th Street, and continues southward to provide access into the Santa Monica Airport, where it terminates. Stewart Street/28th Street typically provides a single travel lane in each direction, although the roadway widens to allow additional left-turn and/or right-turn lanes at major intersections. On-street parking is generally permitted along all segments of this roadway.

26th Street

Designated as a collector roadway through much of the study area, 26th Street is upgraded to an arterial street between Cloverfield Boulevard and Wilshire Boulevard. This roadway serves the City of Santa Monica between San Vicente Boulevard (although it extends north of San Vicente Boulevard as Allenford Avenue), and Cloverfield Boulevard. Through the study area, 26th Street typically provides two travel lanes in each direction, and on-street parking is generally permitted along most segments of this roadway, except for the one-way northbound segment between Cloverfield Boulevard and Olympic Boulevard.

Cloverfield Boulevard

A short but important roadway through the southern portion of the City of Santa Monica near the western edge of the study area, this roadway serves the area between Santa Monica Boulevard on the north, and Ocean Park Boulevard on the south. Cloverfield Boulevard not only provides access across the Santa Monica Freeway, but allows access to the Freeway via westbound off- and eastbound on-ramps located between Pico Boulevard and Olympic Boulevard. Cloverfield Boulevard is designated as an arterial roadway along the segment north of Pico Boulevard, but is downgraded to collector street designation to the south. This roadway typically provides at least two travel lanes in each direction, although the roadway widens to allow additional left-turn and/or right-turn lanes at major intersections and at the freeway ramps. On-street parking is generally not permitted along any of the segments of Cloverfield Boulevard within the study area.

20th Street

This important roadway traverses north-south through nearly the entire City of Santa Monica, from San Vicente Boulevard on the north to Ocean Park Boulevard on the south. This roadway is generally designated as a collector street, although the portion north of Montana Avenue is designated as a feeder street. 20th Street provides important local area access across the Santa Monica Freeway, and also serves as an access point to the Freeway via eastbound off- and westbound on-ramps located between Pico Boulevard and Olympic Boulevard. This roadway typically provides two travel lanes in each direction, except south of Pico Boulevard, where the roadway provides only a single travel lane per direction, and is improved to allow additional left-turn and/or right-turn lanes at major intersections and at the freeway ramps. On-street parking is generally permitted.

Beloit Avenue and Cotner Avenue

These short collector streets serve essentially as frontage streets and ramp access locations for the San Diego Freeway, although they also provide access to the residential and commercial uses fronting these streets. Beloit Avenue parallels the Freeway on the west side from Ohio Avenue to just south of Olympic Boulevard, while Cotner Avenue is located on the east side of the Freeway, and serves the area between Ohio Avenue and Pico Boulevard. Both roadways typically provide one lane in each direction, with on-street parking generally permitted along all segments of this roadway, although additional lanes and parking restrictions are evident at the intersections with Santa Monica Boulevard, and near the freeway ramp connections.

Local Streets

Missouri Avenue

This east-west roadway runs roughly parallel to Olympic Boulevard between Holmby Avenue (two blocks west of Beverly Boulevard) on the east and Bundy Drive on the west, and like Nebraska Avenue and La Grange Avenue, is discontinuous at the San Diego Freeway. The intersection of Missouri Avenue and Bundy Drive is signalized, and is the proposed location for the northernmost of the two project driveways along the Bundy Drive frontage. Missouri Avenue provides a single travel lane in each direction, and on-street parking is generally allowed throughout the length of the street.

Purdue Avenue, Corinth Avenue, and Colby Avenue

These north-south roadways provide primarily residential service between Ohio Avenue and approximately Pearl Street, although all are discontinuous at Pico Boulevard. Purdue Avenue and Colby Avenue are signalized at their intersections with both Santa Monica Boulevard and Olympic Boulevard, while Corinth Avenue is signalized at Santa Monica Boulevard and Pico Boulevard. All of these roadways provide a single travel lane in each direction, and on-street parking is generally allowed along both sides of this roadway throughout the length of the street.

Brockton Avenue

Located in the northern portion of the study area, this short north-south roadway serves as local access to the primarily residential uses in the area, and provides a single travel lane in each direction. On-street parking is generally allowed along both sides of this roadway throughout the study area.

Pearl Street

This east-west roadway is classified as a local street through the City of Los Angeles portion of the study area, and a feeder street in the City of Santa Monica. Located approximately mid way between Pico Boulevard and Ocean Park Boulevard, it provides service between Barrington Avenue and Lincoln Boulevard, although there are other discontinuous portions of Pearl Street between Barrington Avenue and Sepulveda Boulevard. Pearl Street is striped for a single travel lane in each direction, and on-street parking is generally allowed throughout the study area. Traffic-calming “chokers” are installed at the entrance to some blocks on Pearl Street within the City of Santa Monica, in order to slow traffic speeds along the street and discourage cut-through traffic.

Westgate Avenue

A north-south oriented roadway providing service from San Vicente Boulevard on the north to just north of National Boulevard on the south, this street is designated as a secondary highway between Wilshire Boulevard and La Grange Avenue, but is otherwise classified as a local street. Westgate Avenue provides a single travel lane in each direction along its entire length, and on street parking is generally permitted.

23rd Street

This relatively discontinuous roadway serves primarily residential areas of the City of Santa Monica between San Vicente Boulevard and Dewey Street, where it changes names to Walgrove Avenue in the City of Los Angeles. This roadway is generally designated as a local street, although the segments between Wilshire Boulevard and Santa Monica Boulevard, and between Pico Boulevard and Dewey Street are designated as collector roadways due to their important connectivity through these portions of the study area. 23rd Street generally provides one travel lane in each direction and on-street parking.

Public Transportation

Two bus routes travel within convenient walking distance (i.e., one-quarter mile) of the project site, both operated by Santa Monica Big Blue Bus Lines (BBB), which is the primary service provider in the West Los Angeles/City of Santa Monica area. Both of these routes (Routes 5 and 14) provide stops immediately adjacent to the project, at the intersection of Olympic Boulevard and Bundy Drive. Route 5 travels primarily along Olympic Boulevard in the project vicinity between the City of Santa Monica and the Rimpau Transit Center in the Miracle Mile/Hancock Park area of the City of Los Angeles. Route 14 provides service along Barrington Avenue and Bundy Drive/Centinela Avenue between Moraga Drive and Sepulveda Boulevard in the Brentwood area of Los Angeles to Culver Boulevard in Mar Vista. These bus routes provide direct access to the project from communities north of the project, including Brentwood and Westwood, the community of Mar Vista to the south, the City of Santa Monica to the west, and Mid-City area of Los Angeles to the east. The BBB also offers multiple connection opportunities to the regional transit services offered by the Los Angeles County Metropolitan Transportation Authority (Metro) and other transit providers. A map of the bus and rail transit service in the project vicinity is shown in Appendix H, and the operations of Routes 5 and 14, the two lines serving the project site directly, are described in more detail below.

BBB 5

This bus line provides weekday service between downtown Santa Monica on the west and the Rimpau Transit Center near the intersection of Olympic Boulevard and Rimpau Boulevard in the Miracle Mile/Hancock Park area of Los Angeles on the east. Route 5 begins at 5th Street and Wilshire Boulevard, then travels along 4th Street to Colorado Avenue, and then along Colorado Avenue between 4th Street and 26th Street before moving to Olympic Boulevard, where it continues the remainder of the route except for a loop through Century City on Century Park West, Constellation Boulevard, and Century Park East. Route 5 provides direct access to the project site via a stop at Olympic Boulevard at Bundy Drive, near the southeast corner of the project site, and an additional stop at Centinela Avenue, adjacent to the project entrance to the medical office component of the project. Route 5 is in service through the project area between approximately 5:30 AM and 10:30 PM on non-holiday weekdays, with approximate 10-minute westbound and 20-minute eastbound headways during the peak hours. Weekend and holiday service hours are somewhat reduced, with operations running between about 6:00 AM and 10:30 PM on approximately 30-minute headways throughout the day.

BBB 14

This bus line operates between Moraga Drive/Sepulveda Boulevard on the north and the community of Mar Vista to the south, traveling primarily by way of Barrington Avenue, Bundy Drive, and Centinela Avenue, serving the community of Brentwood and the Santa Monica Municipal Airport along the way. This bus route also serves the project site directly via stops located at Bundy Drive and Nebraska Avenue, at Bundy Drive and La Grange Avenue, and at Olympic Boulevard and Bundy Drive. On weekdays, Route 14 serves the project area between approximately 6:00 AM and 9:00 PM, with travel headways of approximately 10 minutes during the peak morning and afternoon travel periods, and every 30 minutes in the off-peak periods. Route 14 also operates on a more limited basis on weekends and holidays, with service provided between approximately 6:45 AM to 8:30 PM and headways approximately every 30 minutes throughout these days.

The BBB provides additional bus service in the area, although these other routes do not serve the project site directly. These lines include Route 4 along Wilshire Boulevard, Routes 1 and 10 along Santa Monica

Boulevard, and Route 7 along Pico Boulevard. The Metro also provides some service in the study area, but the closest of those routes is limited to Wilshire Boulevard (Route 20/720) and Santa Monica Boulevard (Route 4/304, Route). While access to these additional routes is certainly available from the proposed project, the nearest stops along those lines are nearly one-half mile from the project site. This distance is generally considered too far to walk comfortably on a regular basis and these additional BBB and Metro lines were not considered as providing significant service to project employees or patrons. However, the two lines providing direct service to the project site (BBB Routes 5 and 14) allow transfers to and from these additional BBB and Metro lines, and as a result, area wide transit service is available to residents and patrons of the proposed project.

Study Intersections and Forecast Scenarios

Based on the analysis requirements of the City of Los Angeles Department of Transportation (LADOT), the existing and forecast future traffic conditions during both the AM and PM peak hours were studied at a total of 64 intersections in the project vicinity, including locations in both the City of Los Angeles and the adjacent City of Santa Monica. These intersections, listed below, represent the locations most likely to be affected by traffic generated by the proposed project.

1. San Vicente Boulevard, Montana Avenue, and Westgate Avenue
2. San Vicente Boulevard and Barrington Avenue
3. Wilshire Boulevard and Bundy Drive
4. Wilshire Boulevard and Barrington Avenue
5. Wilshire Boulevard and Westwood Boulevard
6. Arizona Avenue and Bundy Drive
7. Santa Monica Boulevard and Centinela Avenue
8. Santa Monica Boulevard and Bundy Drive
9. Santa Monica Boulevard and Brockton Avenue
10. Santa Monica Boulevard and Westgate Avenue
11. Santa Monica Boulevard and Barrington Avenue
12. Santa Monica Boulevard and Federal Avenue
13. Santa Monica Boulevard and I-405 SB On/Off-Ramps/Beloit Avenue
14. Santa Monica Boulevard and I-405 NB On/Off-Ramps/Cotner Avenue
15. Santa Monica Boulevard and Westwood Boulevard
16. Broadway/Ohio Avenue and Centinela Avenue
17. Ohio Avenue and Bundy Drive
18. Colorado Avenue and Stewart St (City of Santa Monica)
19. Colorado Avenue/Idaho Avenue and Centinela Avenue
20. Idaho Avenue and Bundy Drive
21. Nebraska Avenue and Centinela Avenue
22. Nebraska Avenue and Bundy Drive (north and south intersections)
23. Nebraska Avenue and Barrington Avenue
24. Missouri Avenue/Project Driveway and Bundy Drive
25. La Grange Avenue and Bundy Drive

26. La Grange Avenue and Barrington Avenue
27. Mississippi Avenue and Barrington Avenue
28. Olympic Boulevard and 20th St (City of Santa Monica)
29. Olympic Boulevard and Cloverfield Boulevard (City of Santa Monica)
30. Olympic Boulevard and 26th St (City of Santa Monica)
31. Olympic Boulevard and Stewart St (City of Santa Monica)
32. Olympic Boulevard and Centinela Avenue (north leg)
33. Olympic Boulevard and Centinela Avenue (south leg)/Project Driveway
34. Olympic Boulevard and Bundy Drive
35. Olympic Boulevard and Barrington Avenue
36. Olympic Boulevard and Colby Avenue
37. Olympic Boulevard and Purdue Avenue
38. Olympic Boulevard and Sawtelle Boulevard
39. Olympic Boulevard and Sepulveda Boulevard
40. Tennessee Avenue/I-405 SB Off-Ramp and Sawtelle Boulevard
41. 20th St and I-10 WB On-Ramp (City of Santa Monica)
42. 20th St and I-10 EB Off-Ramp (City of Santa Monica)
43. Centinela Avenue and I-10 WB On/Off-Ramps
44. Pico Boulevard and 23rd St (City of Santa Monica)
45. Pico Boulevard and Cloverfield Boulevard (City of Santa Monica)
46. Pico Boulevard and Stewart St/28th St (City of Santa Monica)
47. Pico Boulevard and I-10 EB Off-Ramp/34th St (City of Santa Monica)
48. Pico Boulevard and Centinela Avenue
49. Pico Boulevard and Bundy Drive
50. Pico Boulevard and Barrington Avenue
51. Pico Boulevard and Gateway Avenue
52. Pico Boulevard and Corinth Avenue
53. Pico Boulevard and Sawtelle Boulevard
54. Centinela Avenue and I-10 EB On-Ramp
55. Bundy Drive (northbound) and I-10 WB Off-Ramp
56. Bundy Drive and I-10 EB On-Ramp
57. Pearl St and Centinela Avenue
58. Pearl St and Bundy Drive
59. Ocean Park Boulevard and 23rd St (City of Santa Monica)
60. Ocean Park Boulevard and Cloverfield Boulevard (City of Santa Monica)
61. Ocean Park Boulevard and Centinela Avenue
62. Ocean Park Boulevard/Gateway Boulevard and Bundy Drive
63. Gateway Boulevard and Barrington Avenue
64. National Boulevard and Bundy Drive/Centinela Avenue

In addition to these 64 intersections, the project could affect traffic conditions within the nearby residential neighborhoods located to the north and east of the project site. Therefore, existing and future conditions were also evaluated for the following 10 street segments, to identify the project's potential effects on nearby local neighborhood traffic circulation.

(a) Amherst Avenue, north of Nebraska Avenue;

(b) Wellesley Avenue, north of Nebraska Avenue;

(c) Carmelina Avenue, north of Nebraska Avenue;

(d) Idaho Avenue, east of Bundy Drive;

(e) Iowa Avenue, east of Bundy Drive;

(f) Nebraska Avenue, east of Centinela Avenue;

(g) Nebraska Avenue, west of Bundy Drive;

(h) Nebraska Avenue, east of Bundy Drive;

(i) Missouri Avenue, east of Bundy Drive; and

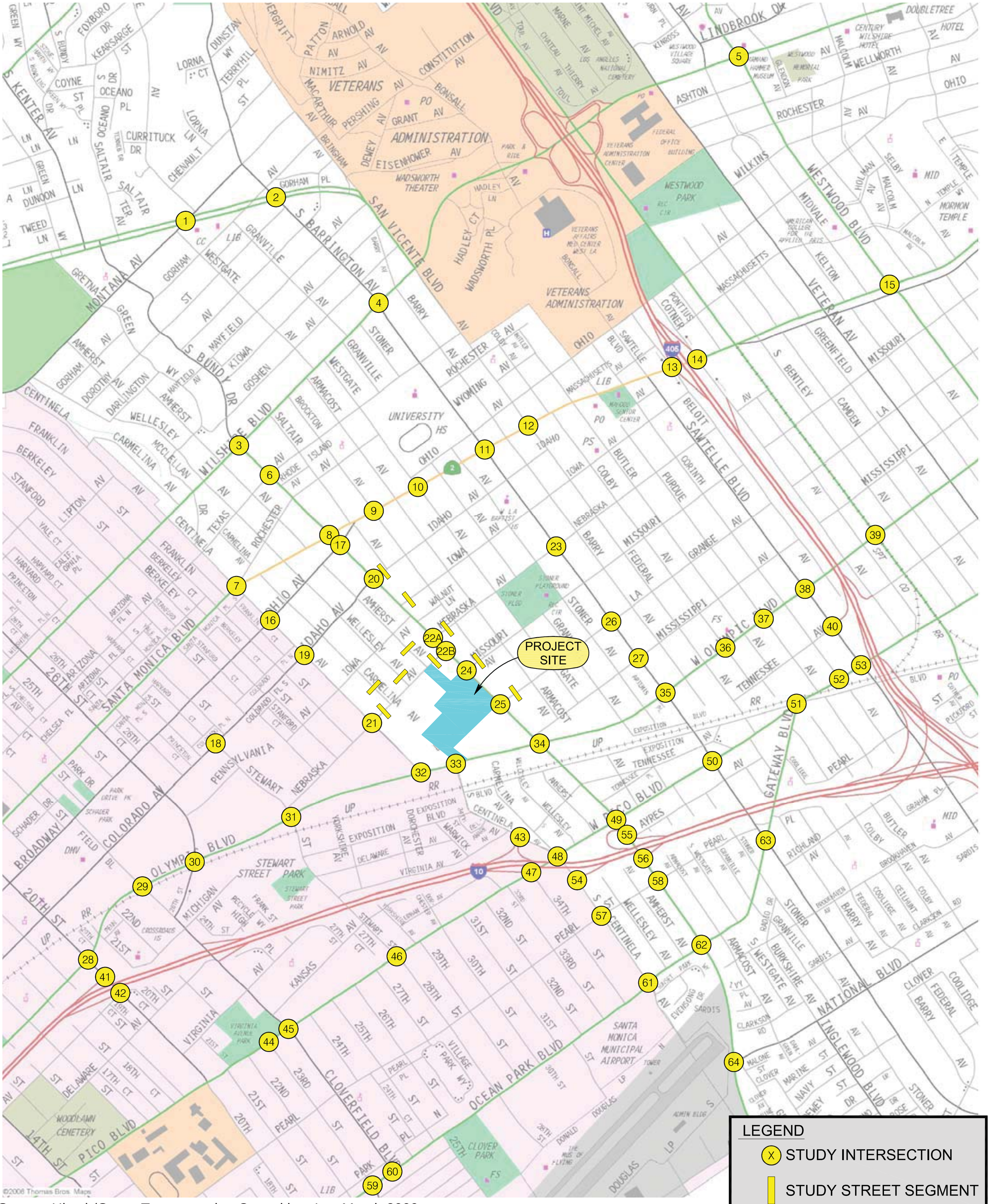
(j) La Grange Avenue, east of Bundy Drive.

The locations of the 64 intersections and 10 residential street segments selected for analysis are shown in relation to the project site in Figure IV.K-1, Locations of Project Study Intersections and Study Segments.

Most of the 64 study intersections are currently signalized, although the intersections of Nebraska Avenue at both Centinela Avenue and Bundy Drive are STOP-sign controlled. All of the signalized intersections in the project area under the jurisdiction of the City of Los Angeles Department of Transportation (LADOT) are currently equipped with the City's Automated Traffic Surveillance and Control (ATSAC) system, and several locations, primarily those locations at or near the I-405 on/off-ramps proximate to the project site are further improved with the next-generation Adaptive Traffic Control System (ATCS) signal coordination software. These advance traffic control programs enhance the overall capacity of a network of interconnected traffic signals by monitoring the traffic flow from adjacent intersections and adjusting signal timing and/or signal phasing in real time to maximize vehicular throughput at intersections and minimize delay along entire traffic corridors.

Existing Traffic Volumes

Traffic volume count data for the study intersections were obtained from counts performed in early April 2006. Although these traffic counts are approximately three years old, recent traffic count data indicates that traffic conditions within the study area have not changed substantially since the original traffic data was collected, and the 2006 traffic volume data is considered to accurately reflect the actual traffic volumes and intersection operations within the study area for current conditions. This conclusion is based on supplemental traffic count data collected at 12 key intersections in the project vicinity during early and mid November 2007, which was compared to the April 2006 traffic count data to identify any potential changes in area traffic conditions. The selected "correlation" intersections represent locations both in the



Source: Hirsch/Green Transportation Consulting, Inc, March 2009.

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NORTH

Figure IV.K-1
Locations of Project Study Intersections and Study Segments

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immediate project area, so as to evaluate the potential changes in traffic volumes and conditions at intersections most directly affected by the project, as well as several locations farther away from the project site which were used to gauge overall changes in area wide traffic activity.

A review of the comparison of the April 2006 and November 2007 traffic data indicated that traffic volumes at the studied intersections has not changed significantly over time, with most locations exhibiting volume differentials of less than plus or minus five percent. Typical engineering practice, supported by the LADOT, is that traffic volumes at intersections or on area roadways can vary by as much as 10 percent on a daily basis and, therefore, volumes differences of five percent are generally accepted as closely correlating sets of data. The list of “correlation” intersections, and tables summarizing the comparison of the April 2006 and November 2007 data are contained in the Appendix H.

Based on these comparisons, the April 2006 traffic count data continues to accurately reflect the current traffic conditions in the study area, and were not revised for this analysis. The 2007 correlation counts are presented herein for comparison, but were not utilized in the evaluation of intersection operations in order to maintain consistency with traffic count data for the other study intersection and residential/local street segments analyzed; the original April 2006 traffic count data was used at all of the study intersections and associated analyses summarized herein. The approach used in this analysis to accurately reflect the existing traffic volumes, based on the April 2006 traffic count data and the 2007 correlation counts, was accepted by the LADOT.

The “existing” AM and PM peak hour traffic volumes at the 64 study intersections are shown in Figures IV.K-2, Existing Traffic Volumes AM Peak Hour, and IV.K-3, Existing Traffic Volumes PM Peak Hour.

At the time of the traffic counts in April 2006, the Santa Monica Boulevard Transit Way project was under construction along Santa Monica Boulevard between, approximately, the San Diego Freeway and the City of Beverly Hills. Construction activities in this area at that time generated a substantial amount of traffic flow disruption and congestion at three of the study intersections (Santa Monica Boulevard and both the northbound and southbound San Diego Freeway On/Off-Ramps, and at Santa Monica Boulevard and Westwood Boulevard), limiting the number of vehicles which could travel through the affected intersections.

Therefore, in order to account for these conditions, based on a review of pre-construction traffic volumes at these three locations, the “through” traffic volumes shown in Figures IV.K-2 and IV.K-3 for the eastbound and westbound approaches of Santa Monica Boulevard were manually adjusted upward by approximately 20 percent in both the eastbound and westbound directions during the AM peak hour, and by approximately 15 percent during the PM peak hour to account for the latent traffic demand on Santa Monica Boulevard that could not be accommodated due to the construction-related delays, and to better replicate the actual operations of the intersections. However, traffic movements along the San Diego Freeway ramps, on Westwood Boulevard, and at the turning movements on Santa Monica Boulevard were relatively unaffected by the construction activity and were, therefore, not adjusted. In addition, the

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Source: Hirsch/Green Transportation Consulting, Inc, March 2009.

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Figure IV.K-2
Existing Traffic Volumes
AM Peak Hour

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Source: Hirsch/Green Transportation Consulting, Inc, March 2009.

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Figure IV.K-3
Existing Traffic Volumes
PM Peak Hour

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intersection of Santa Monica Boulevard and Westwood Boulevard is one of the "correlation count" intersections, to ensure that the estimates for existing traffic were accurate and appropriate.

Analysis of Existing Traffic Conditions

Existing AM and PM peak hour intersection conditions are shown in Table IV.K-1. As summarized in Table IV.K-1, most of the 64 study intersections are currently operating at acceptable urban levels (LOS D or better) during both peak commute hours. However, a total of 17 locations exhibit LOS E or LOS F operations during one or both of the peak hours. These intersections are generally along the primary transportation corridors in the area (Wilshire Boulevard, Santa Monica Boulevard, Olympic Boulevard), or at or near high congestion areas such as freeway on- and off-ramps or intersections of two major arterials. However, operations of these intersections, and throughout the study area, improve from the levels of service shown in Table IV.K-1, Critical Movement Analysis Summary - Existing Conditions, during the off-peak hours, due to a decline in hourly traffic volumes.

Table IV.K-1
Critical Movement Analysis Summary - Existing Conditions

No.	Intersection	Peak Hour	Existing CMA	Existing LOS
1	San Vicente Boulevard, Montana Avenue, and Westgate Avenue	AM PM	0.679 0.810	B D
2	San Vicente Boulevard and Barrington Avenue	AM PM	0.709 0.838	C D
3	Wilshire Boulevard and Bundy Drive	AM PM	0.769 0.796	C C
4	Wilshire Boulevard and Barrington Avenue	AM PM	0.845 0.721	D C
5	Wilshire Boulevard and Westwood Boulevard	AM PM	0.529 0.798	A C
6	Texas Avenue and Bundy Drive	AM PM	0.519 0.748	A C
7	Santa Monica Boulevard and Centinela Avenue	AM PM	0.660 0.674	B B
8	Santa Monica Boulevard and Bundy Drive	AM PM	0.697 0.780	B C
9	Santa Monica Boulevard and Brockton Avenue	AM PM	0.299 0.375	A A
10	Santa Monica Boulevard and Westgate Avenue	AM PM	0.410 0.552	A A
11	Santa Monica Boulevard and Barrington Avenue	AM PM	0.727 0.803	C D
12	Santa Monica Boulevard and Federal Avenue	AM PM	0.547 0.571	A A
13	Santa Monica Boulevard and I-405 SB On/Off-Ramps/Beloit Avenue	AM PM	0.808 0.603	D B
14	Santa Monica Boulevard and I-405 NB On/Off-Ramps/Cotner Avenue	AM PM	0.862 0.776	D C

Table IV.K-1 (Continued)
Critical Movement Analysis Summary - Existing Conditions

No.	Intersection	Peak Hour	Existing CMA	Existing LOS
15	Santa Monica Boulevard and Westwood Boulevard	AM PM	0.876 0.971	D E
16	Broadway/Ohio Avenue and Centinela Avenue	AM PM	0.525 0.606	A B
17	Ohio Avenue and Bundy Drive	AM PM	0.634 0.610	B B
18	Colorado Avenue and Stewart Street (City of Santa Monica)	AM PM	0.693 0.837	B D
19	Colorado Avenue/Idaho Avenue and Centinela Avenue	AM PM	0.687 0.853	B D
20	Idaho Avenue and Bundy Drive	AM PM	0.756 0.780	C C
21	Nebraska Avenue and Centinela Avenue (STOP controlled)	AM PM	0.713 0.857	C D
22a	Nebraska Avenue (east leg) and Bundy Drive (STOP controlled)	AM PM	0.638 0.554	B A
22b	Nebraska Avenue (west leg) and Bundy Drive (STOP controlled)	AM PM	0.693 0.659	B B
23	Nebraska Avenue and Barrington Avenue	AM PM	0.657 0.647	B B
24	Missouri Avenue/Project Driveway and Bundy Drive	AM PM	0.498 0.519	A A
25	La Grange Avenue and Bundy Drive	AM PM	0.505 0.494	A A
26	La Grange Avenue and Barrington Avenue	AM PM	0.597 0.804	A D
27	Mississippi Avenue and Barrington Avenue	AM PM	0.745 0.977	C E
28	Olympic Boulevard and 20th Street (City of Santa Monica)	AM PM	1.000 0.916	E E
29	Olympic Boulevard and Cloverfield Boulevard (City of Santa Monica)	AM PM	0.870 0.961	D E
30	Olympic Boulevard and 26th Street (City of Santa Monica)	AM PM	0.774 0.794	C C
31	Olympic Boulevard and Stewart Street (City of Santa Monica)	AM PM	0.788 1.051	C F
32	Olympic Boulevard and Centinela Avenue (north leg)	AM PM	0.647 0.717	B C
33	Olympic Boulevard and Centinela Avenue (south leg)/Project Driveway	AM PM	0.582 0.656	A B
34	Olympic Boulevard and Bundy Drive	AM PM	0.926 0.924	E E
35	Olympic Boulevard and Barrington Avenue	AM PM	0.879 0.915	D E
36	Olympic Boulevard and Colby Avenue	AM PM	0.458 0.547	A A

Table IV.K-1 (Continued)
Critical Movement Analysis Summary - Existing Conditions

No.	Intersection	Peak Hour	Existing CMA	Existing LOS
37	Olympic Boulevard and Purdue Avenue	AM PM	0.600 0.699	B B
38	Olympic Boulevard and Sawtelle Boulevard	AM PM	1.426 1.445	F F
39	Olympic Boulevard and Sepulveda Boulevard	AM PM	0.881 0.942	D E
40	Tennessee Avenue/I-405 SB Off-Ramp and Sawtelle Boulevard	AM PM	0.436 0.645	A B
41	20th Street and I-10 WB On-Ramp (City of Santa Monica)	AM PM	0.538 0.664	A B
42	20th Street and I-10 EB Off-Ramp (City of Santa Monica)	AM PM	0.671 0.588	B A
43	Centinela Avenue and I-10 WB On/Off-Ramps	AM PM	0.872 1.125	D F
44	Pico Boulevard and 23rd Street (City of Santa Monica)	AM PM	0.602 0.780	B C
45	Pico Boulevard and Cloverfield Boulevard (City of Santa Monica)	AM PM	0.700 0.768	B C
46	Pico Boulevard and Stewart Street/28th Street (City of Santa Monica)	AM PM	0.710 0.682	C B
47	Pico Boulevard and I-10 EB Off-Ramp/34th Street (City of Santa Monica)	AM PM	0.735 0.727	C C
48	Pico Boulevard and Centinela Avenue	AM PM	0.811 0.773	D C
49	Pico Boulevard and Bundy Drive	AM PM	1.074 1.149	F F
50	Pico Boulevard and Barrington Avenue	AM PM	0.932 0.956	E E
51	Pico Boulevard and Gateway Avenue	AM PM	0.873 0.929	D E
52	Pico Boulevard and Corinth Avenue	AM PM	0.461 0.695	A B
53	Pico Boulevard and Sawtelle Boulevard	AM PM	0.901 1.031	E F
54	Centinela Avenue and I-10 EB On-Ramp	AM PM	0.613 0.679	B B
55	Bundy Drive (northbound) and I-10 WB Off-Ramp	AM PM	0.955 1.239	E F
56	Bundy Drive and I-10 EB On-Ramp	AM PM	0.627 0.642	B B
57	Pearl Street and Centinela Avenue	AM PM	0.547 0.671	A B
58	Pearl Street and Bundy Drive	AM PM	0.547 0.774	A C
59	Ocean Park Boulevard and 23rd Street (City of Santa Monica)	AM PM	0.755 0.790	C C

Table IV.K-1 (Continued)
Critical Movement Analysis Summary - Existing Conditions

No.	Intersection	Peak Hour	Existing CMA	Existing LOS
60	Ocean Park Boulevard and Cloverfield Boulevard (City of Santa Monica)	AM PM	0.708 0.569	C A
61	Ocean Park Boulevard and Centinela Avenue	AM PM	0.753 0.891	C D
62	Ocean Park Boulevard/Gateway Boulevard and Bundy Drive	AM PM	1.035 0.962	F E
63	Gateway Boulevard and Barrington Avenue	AM PM	0.787 0.823	C D
64	National Boulevard and Bundy Drive/Centinela Avenue	AM PM	1.042 0.885	F D

Source: Hirsch/Green Transportation Consulting, Inc., Revised March 2009.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

In accordance with Appendix G to the State CEQA Guidelines, a significant traffic impact may occur if the Project would result in any of the following conditions:

(a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);

(b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;

(c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;

(d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

(e) Result in inadequate emergency access;

(f) Result in inadequate parking capacity; and

(g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

As discussed in Section IV.A, Impacts Found to be Less Than Significant in this Draft EIR, the project would have no potential impacts with respect to Thresholds (c) and (e) listed above. As such, the following analysis focuses on Thresholds (a), (b), (d), (f), (g), and (h).

Impact Significance Criteria

The LADOT defines a significant traffic impact attributable to a project based on a "stepped scale", with intersections at high volume-to-capacity ratios being more sensitive to additional traffic than those operating with available surplus capacity. A significant impact is identified as an increase in the CMA value, due to project-related traffic, of 0.010 or more when the final ("with project") Level of Service (LOS) is E or F, a CMA increase of 0.020 or more when the final LOS is LOS D, or an increase of 0.040 or more at LOS C. No significant impacts are deemed to occur at LOS A or B, as these operating conditions exhibit sufficient surplus capacities to accommodate large traffic increases with little effect on traffic delays. These criteria are summarized in Table IV.K-2, City of Los Angeles Significant Traffic Impact Criteria.

Table IV.K-2
City of Los Angeles Significant Traffic Impact Criteria

LOS	Final (With Project) CMA Value	Project-Related Increase in CMA Value
A or B	≤0.700	No Impacts
C	>0.700 ≤0.800	≥0.040
D	>0.800 ≤0.900	≥0.020
E or F	>0.900	≥0.010

Source: Hirsch/Green Transportation Consulting, Inc., Revised March 2009.

Critical Movement Analysis

This traffic analysis used the Critical Movement Analysis methodology for the analysis and evaluation of traffic operations at signalized intersections, as detailed in Circular Number 212 published by the Transportation Research Board. This methodology describes the operating characteristics of an intersection in terms of the Level of Service, based on intersection traffic volume and other variables such as number and type of signal phasing, lane geometries, and other factors which determine both the quantity of traffic that can move through an intersection ("capacity") and the quality of that traffic flow ("Level of Service"). Capacity represents the maximum total hourly volume of vehicles in the critical lanes, which has a reasonable expectation of passing through an intersection under prevailing roadway and traffic conditions. Critical lanes are defined generally as those intersection movement or groups of movements which exhibit the highest "per lane" volumes, thus, defining the maximum amount of vehicles attempting to negotiate through the intersection during a specific time period. The capacity of an intersection also varies based on the number of signal phases for the location.

The intersection capacities for various levels of service, based on the number of traffic signal phases, are shown in Table IV.K-3, Critical Movement Analysis Volume Ranges per Level of Service. For intersection evaluation and planning purposes, the capacity of an intersection equates to the value of LOS E, which represents the highest level of traffic through urban area intersections that can be adequately accommodated without a breakdown in operation resulting in stop-and-go conditions.

Table IV.K-3
Critical Movement Analysis Volume Ranges per Level of Service [a]

Level of Service	Maximum Sum of Critical Volumes (VPH) vs. Number of Signal Phases		
	Two Phases	**Three Phases**	**Four or More Phases**
A	900	855	825
B	1,050	1,000	965
C	1,200	1,140	1,100
D	1,350	1,275	1,225
E	1,500	1,425	1,375
F	Not Applicable		

[a] For planning applications only. Not appropriate for operations/design applications.
Source: Hirsch/Green Transportation Consulting, Inc., Revised March 2009.

The "Critical Movement" indices at an intersection are determined by first identifying the sum of all critical movement volumes at that intersection. This value is then divided by the appropriate capacity value for the type of signal control at the study intersection to arrive at the "CMA value" for the intersection, which is roughly equivalent to the volume-to-capacity ratio for the location. LOS A through LOS C provide good traffic flow characteristics, with little or no congestion or vehicle delay. LOS D typically is the level for which a metropolitan area street system is designed, and represents the highest level of smooth traffic flow. LOS E represents volumes at or near the capacity of the intersection and can result in stoppages of momentary duration and unstable traffic flow at the upper reaches of this condition. LOS F occurs when a roadway is overloaded and is characterized by stop-and-go traffic with stoppages of long duration. The LOS definitions do not represent a single intersection operation condition, but rather correspond to a range of CMA values, as shown in Table IV.K-4, Level of Service as a Function of CMA Value.

However, field observation indicated that high levels of traffic and pedestrian activity currently inhibit traffic operations at the intersection of Wilshire Boulevard and Westwood Boulevard (Study Intersection No. 5). As such, the theoretical capacity at this intersection was reduced by approximately 25 percent from the applicable value in Table IV.K-3 (for the PM peak hour only) to adjust for the effect of current traffic congestion and pedestrian traffic at this location.

Unlike the capacity adjustments associated with the ongoing but temporary construction activity on the Santa Monica Freeway, these congestion and pedestrian-related adjustments were assumed to continue into the future and, therefore, this reduction in intersection capacity was incorporated into the PM peak hour analyses for this location for both the existing and future conditions.

Table IV.K-4
Level of Service as a Function of CMA Value

CMA Value	Level of Service	Intersection Operation/Traffic Flow Characteristics
< 0.600	A	No congestion; all vehicles clear in a single cycle.
> 0.600 < 0.700	B	Minimal congestion; all vehicles still clear in a single cycle.
> 0.700 < 0.800	C	No major congestion; most vehicles clear in a single cycle.
> 0.800 < 0.900	D	Generally uncongested, but vehicles may wait through more than one cycle; no short duration queues form on critical
>0.900 < 1.000	E	Increased congestion on critical approaches; long duration queues form at higher end of range.
> 1.000	F	Over capacity; forced flow with long periods of congestion; substantial queues form.

Source: Hirsch/Green Transportation Consulting, Inc., Revised March 2009.

By applying the analysis procedures described above to the study intersections, including the assumed intersection capacity reductions to account for existing area traffic congestion at several key locations, the CMA value and the corresponding LOS for existing traffic conditions were calculated. These basic CMA calculations were further adjusted, however, to account for the ATSAC/ATCS traffic signal coordination enhancements that are not considered in the basic CMA analysis methodology. As described previously, the City's ATSAC traffic signal coordination system has been implemented at all of the signalized intersections in the study area under the jurisdiction of LADOT, with the ATCS upgrades installed at several of the study intersections, resulting in increased capacity and reduced delay throughout the signal network.

LADOT has determined that intersections connected to the ATSAC system experience an approximate seven percent increase in capacity as compared to non-ATSAC locations, while locations equipped with the additional ATCS upgrades experience an approximate ten percent increase in capacity compared to non-ATSAC/ATCS locations (or an additional three percent improvement above ATSAC-only locations). Therefore, per LADOT policy, the basic CMA value calculated using the standard methodologies were reduced by 0.070 for intersections equipped with ATSAC, and by 0.100 for locations improved with ATSAC/ATCS, in order to estimate the effectiveness of the resulting increases in intersection capacity.

The 13 intersections under the operational jurisdiction of the City of Santa Monica are not connected to the ATSAC or ATCS traffic signal coordination network, and operate on a vehicle actuation basis. The signalized intersections assumed in this analysis as non-ATSAC/ATCS locations, within the City of Santa Monica, are listed below.

18. Colorado Avenue and Stewart Street;

28. Olympic Boulevard and 20th Street;

29. Olympic Boulevard and Cloverfield Boulevard;

30. Olympic Boulevard and 26th Street;

31. Olympic Boulevard and Stewart Street;

41. 20th Street and I-10 WB On-Ramp;

42. 20th Street and I-10 WB Off-Ramp;

44. Pico Boulevard and 23rd Street;

45. Pico Boulevard and Cloverfield Boulevard;

46. Pico Boulevard and Stewart Street/28th Street;

47. Pico Boulevard and I-10 EB Off-Ramp/34th Street;

59. Ocean Park Boulevard and 23rd Street; and

60. Ocean Park Boulevard and Cloverfield Boulevard

Finally, although designed for use with signalized intersections, the CMA methodology is also useful in the analysis of unsignalized locations, and for purposes of this analysis, a modified CMA analysis assuming reduced capacity to adjust for STOP sign control was used to examine the unsignalized (STOP sign controlled) intersections of Nebraska Avenue at Centinela Avenue (Study Intersection No. 21) and Nebraska Avenue at Bundy Drive (Study Intersection No. 22).

The existing AM and PM peak hour intersection conditions are shown above in Table IV.K-1. As summarized in Table IV.K-1, most of the 64 study intersections are currently operating at acceptable urban levels (LOS D or better) during both peak commute hours. However, a total of 17 locations exhibit LOS E or LOS F operations during one or both of the peak hours. These intersections are generally along the primary transportation corridors in the area (Wilshire Boulevard, Santa Monica Boulevard, Olympic Boulevard), or at or near high congestion areas such as freeway on- and off-ramps or intersections of two major arterials. However, operations of these intersections, and throughout the study area, improve from the levels of service shown in Table IV.K-1 during the off-peak hours, due to a decline in hourly traffic volumes.

Project Impacts

Construction Traffic

Haul Route

The haul location (destination of exported site materials) is anticipated to be the La Puente Landfill in the unincorporated area of Los Angeles County near the Cities of Pico Rivera and Industry. The haul vehicles would travel between the project site and the landfill via the I-10, the I-405, the I-105, the SR-60, and the I-605, as shown in Figure IV.K-4, Regional Haul Route.

In the project vicinity, empty haul vehicles would travel to and from the project site from the I-10 Freeway along Centinela Avenue (see Figure IV.K-5, Local Haul Route). The proposed haul route minimizes haul vehicle impacts to the surface streets and intersections by utilizing the most direct route between the project site and the I-10 Freeway, along Centinela Avenue; thereby, avoiding the current congestion along Olympic Boulevard, Bundy Drive, and other facilities in the area.

Staging Areas

Staging areas are locations where vehicles await use at the site; typically they are radio-called to the construction site when needed. Staging areas for project construction and haul vehicles, as well as the final haul route itself, are subject to a hearing conducted by the Department of Building and Safety. Currently, a maximum of approximately 20 haul trucks per day are anticipated to be used for hauling activities for the proposed project. All trucks and other construction vehicles are anticipated to stage on the project site.

Trip Generation and Traffic Impacts

As discussed in Section II, Project Description, of this Draft EIR, the construction activities for the project involve three different phases: demolition, excavation, and building construction. The analyses of construction impacts involved the following general assumptions. First, it was assumed that construction materials transport, and demolition and excavation/import hauling would occur typically over an approximately seven hour work day, beginning at 9:00 AM and ending at 4:00 PM. These hours are generally consistent with the Mayor’s directive to limit construction traffic impacts to non-peak travel periods of the day. It was further assumed that construction activities would occur six days a week from Monday through Saturday. No activity would occur on Sunday. Finally, it was assumed that the haul vehicles would be 15-cubic-yard capacity semi-trailer trucks. For analysis purposes, these vehicles are assumed to have a passenger car equivalency factor (pce) of approximately 3.0 or, more plainly stated, each semi-trailer haul truck is assumed to have the traffic impact equivalent of three typical automobiles, due to greater length, larger turning radii, and acceleration/deceleration characteristics.

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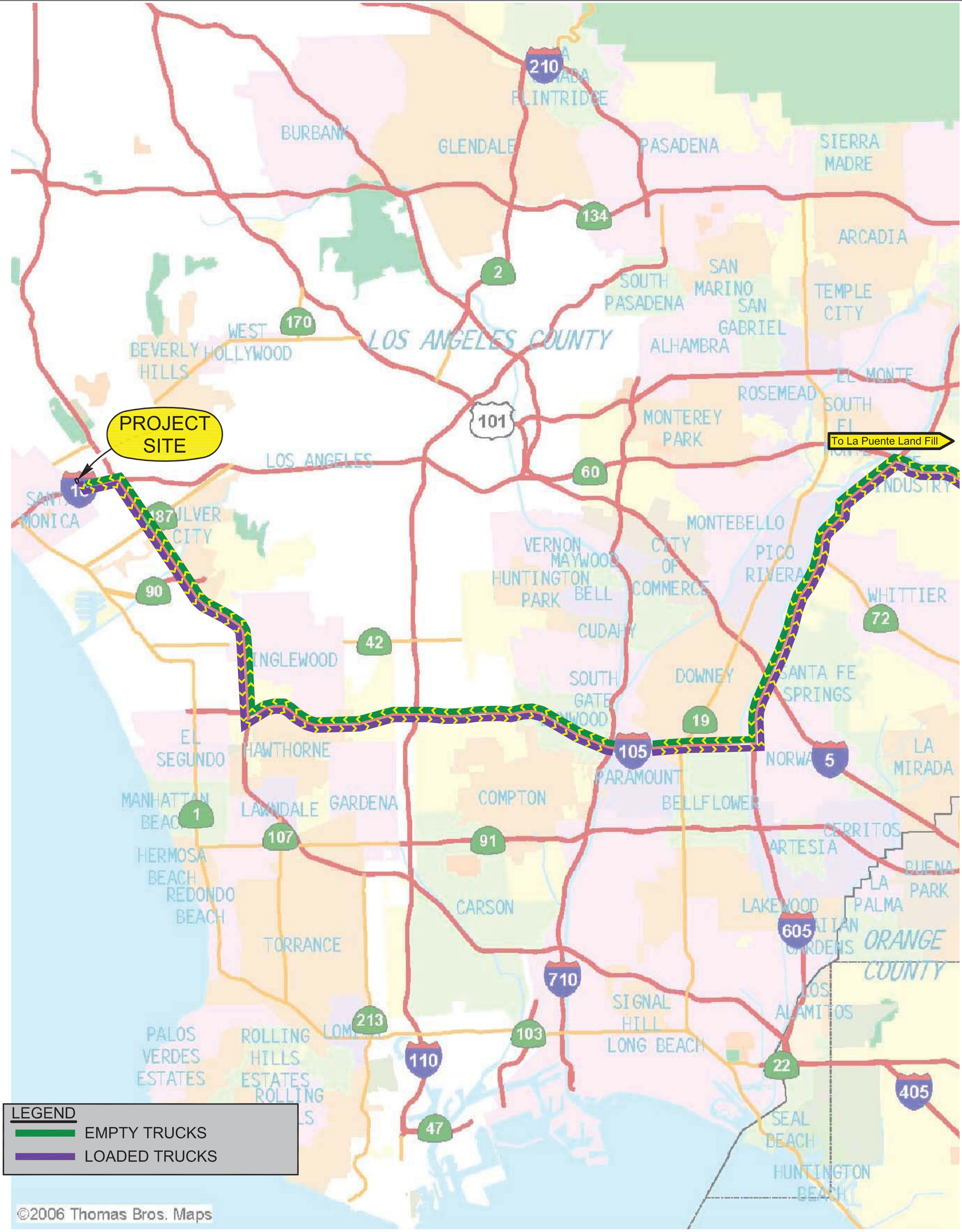

Source: Hirsch/Green Transportation Consulting, Inc, 04/23/2007.

CHRISTOPHER A. JOSEPH & ASSOCIATES
Environmental Planning and Research

Figure IV.K-4
Regional Haul Route

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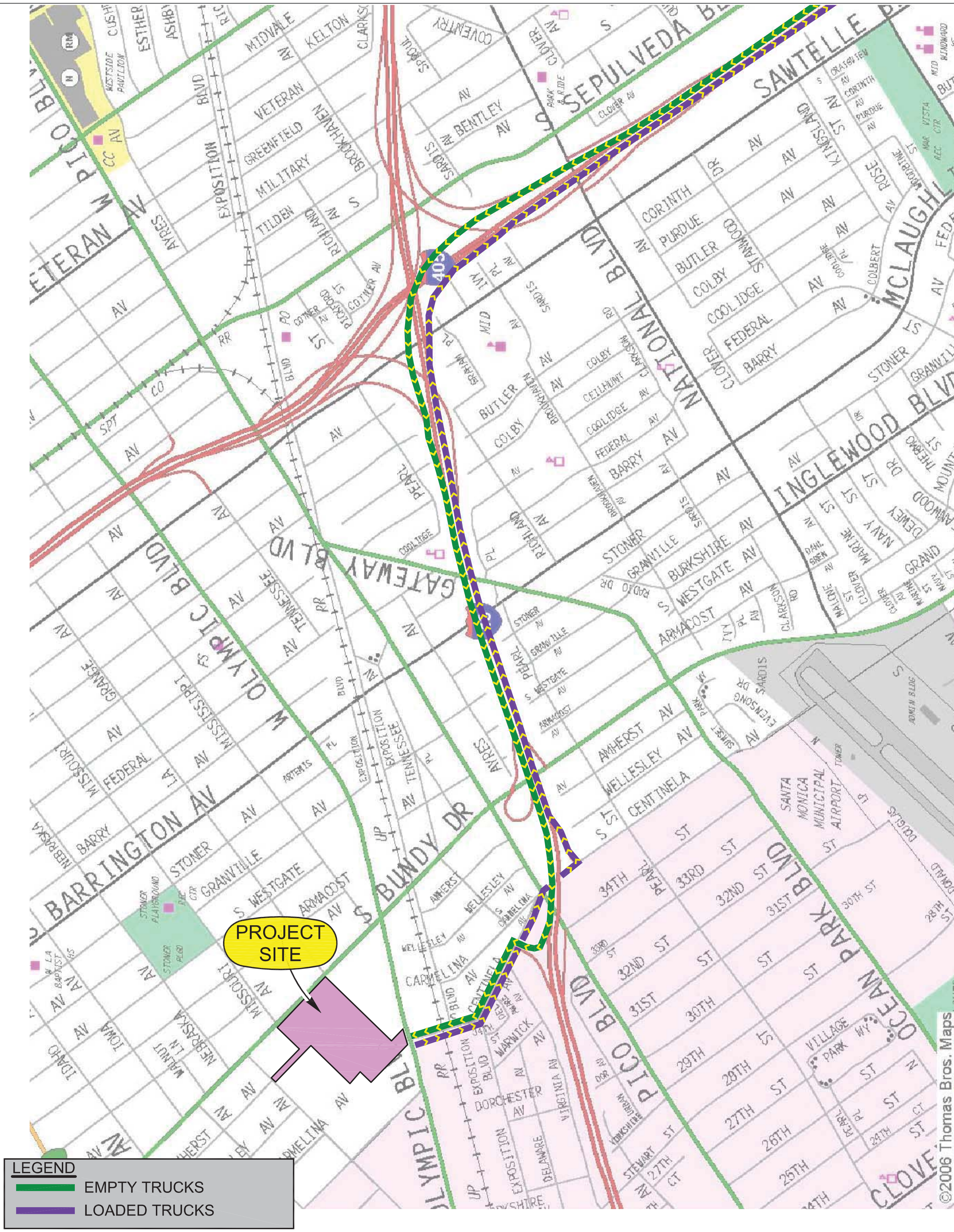

Source: Hirsch/Green Transportation Consulting, Inc, 04/23/2007.

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NORTH

Figure IV.K-5
Local Haul Route

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<u>Demolition Phase</u>

The demolition phase would involve the removal of the Teledyne facilities along Olympic Boulevard, and the existing office buildings along Bundy Drive, paving, landscaping, and other on-site materials. A total of approximately 16,050 cubic yards of material are anticipated to be removed. Using the assumed 15 cubic yard haul truck capacity, this equates to a total of approximately 1,070 truck loads of materials; accounting for the assumed 3.0 pce factor for haul trucks, this level of trucking activity results in a total traffic-generation equivalency of approximately 3,210 passenger cars.

The demolition activities are anticipated to occur over approximately four months (16 weeks). Assuming a six-day work week, with seven-hour work days, the demolition phase would result in a total of approximately 672 hours available for hauling activities, equating to an average of approximately five total one-way pce trips per hour throughout the work day (3,210 pce haul vehicles/672 hours for the demolition phase = 4.8 pce vehicles/hour), or a total of approximately 10 pce trips (5 inbound trips and 5 outbound trips) per hour. Over the course of the assumed seven-hour work day, a total of approximately 70 pce haul truck trips could be expected during the demolition phase of activity. As described earlier, these truck trips would occur between 9:00 AM and 4:00 PM, outside the typical "commuter traffic" peak hours in the project vicinity, further reducing the potential for significant impacts.

The demolition activities would also result in on-site worker trips. The maximum number of workers at the project site during this phase is not anticipated to exceed 20 persons, including equipment operators, flag persons, and others. Trips generated by these employees would be nominal, and the contractor would provide on-site parking areas for these employees. Furthermore, under no circumstance would construction worker parking be permitted on the streets in the project area. All construction vehicles, including worker vehicles, would be staged (or parked) on the project site.

Assuming average vehicle occupancy of approximately 1.2 persons per vehicle, these 20 workers would produce about 17 vehicle trips, primarily inbound during the morning, and outbound during the evening; assuming some mid-day trips to obtain equipment/supplies, lunch, etc., approximately 50 worker trips per day are anticipated. It is expected that these worker trips would occur prior to 9:00 AM and after 4:00 PM and would, thus, occur during the AM and PM peak traffic hours in the project vicinity. However, they would not generally overlap the haul truck trips, reducing the potential for significant impacts. The worker trips would not be required to follow any specific travel route to or from the project site.

Finally, the on-site equipment for this phase is expected to consist of typical demolition-process vehicles, including but not limited to a grade-all/bulldozer, loader/backhoe, forklift, and other similar vehicles. Transportation of this equipment to and removing it from the project site would not produce any significant traffic, as they would not all be delivered/removed at the same time.

Therefore, based on the preceding assumptions, the total number of demolition-phase trips is expected to be approximately 120 pce trips per day, including about 17 trips during the AM peak hour (inbound construction worker trips), about 10 pce trips per hour (5 inbound and 5 outbound) between 9:00 AM and 4:00 PM (haul vehicle trips), and 17 trips during the PM peak hour (outbound construction worker trips).

However, it is important to recognize that, during the demolition, excavation, and construction phases of the proposed project, the trips generated by the existing development would have been removed, partially offsetting the new trips generated by the construction activities. Based on the operational traffic analyses below in Table IV.K-6 and contained in the Appendix H, the existing site activities (Teledyne facilities and the Bundy Drive offices) produce a total of approximately 2,509 daily trips, including 342 trips during the AM peak hour, and 332 trips during the PM peak hour, although only a portion of these existing use trips utilize Centinela Avenue to travel to and from the project site between Olympic Boulevard and the I-10 Freeway. Existing site activities contribute to approximately 850 trips per day to Centinela Avenue, including about 115 trips during each of the AM and PM peak hours. Thus, the removal of these existing trips would fully offset the anticipated peak hour construction worker trips (the only demolition phase trips that would occur during the peak hours) and, therefore, no significant impacts are anticipated during these most critical travel periods.

Construction traffic impacts to the "off peak" hours were also investigated, as all of the haul truck activity would occur between 9:00 AM and 4:00 PM, outside of the peak hours. As described above, this activity is anticipated to result in a total of approximately 10 total pce trips per hour (5 inbound and 5 outbound) on Centinela Avenue between Olympic Boulevard and the I-10 Freeway. The existing development would also generate some off peak hour traffic; these trips were estimated using the following procedures. First, due to the existing traffic congestion and delays experienced in the project vicinity, it was assumed that the AM and PM "peak hour" trips actually continue for more than one hour, representing average hourly traffic occurring during the 7:00 to 8:30 AM and 4:30 to 6:00 PM peak periods. This results in a total of approximately 512 AM and 498 PM peak period trips generated by the existing site development. Subtracting these 1,010 peak period trips from the total of 2,509 existing use daily trips leaves approximately 1,499 existing trips that would occur throughout the remainder of the day. Further it was assumed that a typical day consists of approximately 18 hours (5:00 AM to 11:00 PM); deducting the total three "peak hours" described above results in 15 "off peak" traffic hours during the day; dividing the 1,499 off peak trips by 15 off peak hours produces a result of approximately 100 off peak trips per hour. Again, only a portion of these off peak hour trips occur on Centinela Avenue, with about 34 trips per hour using that roadway. The removal of this amount of existing site trips would continue to more than offset the anticipated 10 pce haul truck trips per hour on Centinela Avenue and, therefore, no significant off peak hour impacts are anticipated due to demolition phase haul truck activity.

Furthermore, based on a comparison of the potential haul truck trips to the "regional impact" analyses, the nominal number of haul truck trips (5 pce trips per direction per hour) is not anticipated to produce any significant impacts to any of the I-10 Freeway or any of the other freeway facilities expected to be utilized as haul routes. Therefore, a less-than-significant traffic impact would occur during the demolition phase.

<u>Excavation Phase</u>

The excavation phase involves the export of earth and other materials necessary to grade the site for building construction, including excavation for the subterranean parking garages. A total of approximately 221,400 cubic yards of excavated material is expected, although approximately 18,200 cubic yards is anticipated to be reprocessed and reused at the project site, resulting in a net excavation quantity of approximately 203,200 cubic yards of total export material. Using the assumed 15.0 cubic yard haul truck capacity noted earlier, this equates to a total of approximately 13,547 truck loads of materials, or a passenger car equivalent (assuming a pce factor of 3.0) of approximately 40,640 passenger vehicles anticipated during the duration of the excavation phase.

The excavation phase is expected to last approximately three months (12 weeks), or about 504 total work hours. This results in a total of approximately 80.6 pce vehicles per hour (40,640 pce haul vehicles/504 hours for the excavation phase = 81 pce vehicles/hour), or a total of about 162 pce trips (81 inbound trips and 81 outbound trips) per hour. Over the course of the assumed seven-hour work day, approximately 1,134 pce haul truck trips could be expected during the excavation phase. As described above, these truck trips would occur between 9:00 AM and 4:00 PM, outside the typical "commuter traffic" peak hours.

The excavation activities would also produce a relatively nominal number of on-site worker trips, with a maximum of approximately 20 workers at the project site during this phase, including equipment operators, flag persons, and others. Assuming average vehicle occupancy of approximately 1.2 persons per vehicle, these 20 workers would produce about 17 vehicle trips, again primarily inbound during the morning, and outbound during the evening; a total of approximately 50 worker trips per day are anticipated during excavation activities. As with the demolition phase activities described earlier, these worker trips would occur prior to 9:00 AM and after 4:00 PM, generally during the AM and PM peak traffic hours in the project site vicinity. However, they would not typically overlap the haul truck trips, reducing the potential for combined significant impacts.

The worker trips would not be required to follow any specific travel route to or from the project site and, as described above, the contractor would provide on-site parking areas for these employees.

Finally, the on-site equipment for this phase is expected to consist of typical excavation-process vehicles, including but not limited to a grade-all/bulldozer, loader/backhoe, forklift, and other similar vehicles. Transportation of this equipment to and removing it from the site will not produce any significant traffic, as they would not all be delivered/removed at the same time.

Based on the preceding assumptions, the total number of demolition trips is expected to be approximately 1,184 pce trips per day, including about 17 trips during the AM peak hour (inbound construction worker trips), about 162 pce trips per hour (81 inbound and 81 outbound) between 9:00 AM and 4:00 PM (haul vehicle trips), and 17 trips during the PM peak hour (outbound construction worker trips). As noted in the discussion of the demolition phase activities, the anticipated AM and PM peak hour construction worker trips during the excavation phase would be fully offset by the removal of the trips associated with the existing site activities, and no significant impacts would occur.

Further, the off peak hour haul truck trips would be partially offset by removal of the existing site trips. As noted earlier, the haul truck activity is expected to produce about 162 pce trips per hour during the off peak hours along Centinela Avenue between the project site and the I-10 Freeway. As described earlier, the existing on-site activities generate about 34 trips per hour during the 9:00 AM to 4:00 PM off peak period on Centinela Avenue, resulting in a net increase of about 128 pce trips per hour during the excavation phase of proposed project development (about 64 net pce trips per direction). A review of the traffic conditions in the study area (see Appendix H) indicates that the intersection of Olympic Boulevard and Centinela currently is forecast to operate at LOS C during both the AM and PM peak hours in the future ("without project" conditions), while the intersection of Centinela Avenue and the I-10 Freeway westbound off-ramp (haul truck inbound route) is forecast to operate at LOS F during both peak hours, and the intersection of Centinela Avenue and the I-10 Freeway eastbound on-ramp (outbound haul truck route) would operate at LOS B during the AM and LOS C during the PM peak hour. Therefore, it is possible that, although no peak hour impacts to these locations are anticipated, temporary significant impacts could result during some of the midday (off peak) hours, particularly at Centinela Avenue and the I-10 westbound off-ramp. However, the 81 directional pce trips per hour anticipated during the off peak hour operations of the proposed project's excavation phase are not anticipated to result in significant regional traffic impacts to the I-10 Freeway or any of the other haul route freeway facilities. Therefore, a less-than-significant traffic impact would occur during the excavation phase.

Construction Phase

The construction phase includes the actual building construction of the on-site structures and landscaping, as well as any roadway improvements adjacent to the project site. This phase is expected to take a total of approximately 20 months to complete. Unlike the demolition or excavation activities, the construction phase does not produce a significant number of "average" daily haul trips; trucking activities to and from the site are dependent on the construction schedule, weather, and other factors, and generally involve only one or two trucks at a time delivering construction materials. The most intense activity would occur during concrete pouring for the parking structure or other building components. While such concrete pouring can generate a substantial number of vehicles during the day it occurs, the trucks would be spread out over a period of several hours, and the actual number of vehicles traveling to or from the project site at any particular time is expected to be fewer than 10 vehicles per hour. Additionally, based on the size of the proposed project, these pours would take only a couple of days during the entire 20-month construction period. As a result, no significant concrete-pour traffic impacts would likely occur during these few days.

The on-site equipment for this phase is expected to be similar to that described earlier for the demolition and excavation phases, in addition to trash and delivery trucks. This equipment is not expected to produce any significant impacts during its delivery or removal from the project site.

The construction phase of the proposed project would require more on-site workers than the demolition or excavation phases, with a maximum of up to approximately 200 workers at the project site at any time, with most of this activity occurring during the latter, interior "finishing" stages of construction; although, typical worker levels during much of the actual "construction" phase are expected to be approximately 100 to 120 workers. Assuming an average vehicle occupancy of 1.2 persons per vehicle, the maximum level of about 200 workers could result in approximately 167 vehicle trips inbound to the project site during the AM peak hour and about 167 trips outbound from the site during the PM peak hour; a total maximum of about 500 worker trips per day could occur during peak activity days. However, as noted previously, the removal of the existing site trips would result in a reduction of over 2,500 daily trips, including about 342 AM and 332 PM peak hour trips, which would more than offset the temporary addition of the construction phase worker trips. Therefore, a less-than-significant impact would occur during the construction phase.

Operational Traffic and Transportation

Traffic-generating characteristics of many land uses, including residential, commercial, and retail uses that comprise the proposed project, have been extensively surveyed and documented in studies conducted for the Institute of Transportation Engineers (ITE). The most recent information is available in the ITE 7th Edition Trip Generation. However, the project site lies within an area under the jurisdiction of the West Los Angeles Transportation Improvement and Mitigation Specific Plan (WLA TIMP, City of Los Angeles Ordinance Number 171,492). This document identifies traffic management and analysis strategies specifically tailored for the West Los Angeles area. The TIMP defines PM peak hour trip generation rates for a variety of land uses, including the proposed medical office, specialty market (assumed as "supermarket"), retail, market-rate residential (assumed as "condominium") and senior housing uses, as well as the general office uses currently existing at the project site. LADOT requires the use of the WLA TIMP PM peak hour trip generation rates where applicable, and they were used in the traffic analysis. The LADOT recommended using the applicable 7th Edition ITE rates and equations for the appropriate land uses to estimate trip generation during these time periods. The trip generation rates utilized in this analysis are summarized in Table IV.K-5, Project Trip Generation Rates.

Table IV.K-5
Project Trip Generation Rates [a]

Proposed Uses	
Retail/Commercial Components	
Shopping Center - per 1,000 gross square feet of floor area (ITE Land Use 820)	
Daily Trips:	Ln(T) = 0.65 Ln(A) + 5.83
AM Peak Hour:	Ln(T) = 0.60 Ln(A) + 2.29; I/B = 61%, O/B = 39%
PM Peak Hour:[a]	T = 7.99 (A); I/B = 48%, O/B = 52%
Supermarket - per 1,000 gross square feet of floor area (ITE Land Use 850)	
Daily Trips:	T = 102.24 (A)
AM Peak Hour:	T = 3.25 (A); I/B = 61%, O/B = 39%
PM Peak Hour: [a]	T = 10.34 (A); I/B = 51%, O/B = 49%
Restaurant (High-Turnover, Sit-Down) - per 1,000 gross square feet of floor area (ITE Land Use 932)	
Daily Trips:	T = 127.15 (A)
AM Peak Hour:	T = 11.52 (A); I/B = 52%, O/B = 48%
PM Peak Hour: [a]	T = 12.92 (A); I/B = 61%, O/B = 39%
Medical Office - per 1,000 gross square feet of floor area (ITE Land Use 720)	
Daily Trips:	T = 40.89 (A) – 214.94
AM Peak Hour:	T = 2.48 (A); I/B = 79%, O/B = 21%
PM Peak Hour: [a]	T = 4.08 (A); I/B = 27%, O/B = 73%

Table IV.K-5 (Continued)
Project Trip Generation Rates [a]

Proposed Uses	
Existing Uses	
General Office - per 1,000 gross square feet of floor area (ITE Land Use 710)	
Daily Trips:	Ln(T) = 0.77 Ln(A) + 3.65
AM Peak Hour:	Ln(T) = 0.80 Ln(A) + 1.55; I/B = 88%, O/B = 12%
PM Peak Hour: [a]	T = 2.03 (A); I/B = 17%, O/B = 83% (69,000 sf Amp'd Mobile/G4 Media Offices)
	T = 2.56 (A); I/B = 17%, O/B = 83% (29,600 sf Teledyne Offices)
Research and Development - per 1,000 gross square feet of floor area (ITE Land Use 760)	
Daily Trips:	Ln(T) = 0.82 Ln(A) + 3.14
AM Peak Hour:	Ln(T) = 0.88 Ln(A) + 0.88; I/B = 83%, O/B = 17%
PM Peak Hour: [a]	T = 1.07 (A); I/B = 15%, O/B = 85%
Manufacturing - per 1,000 gross square feet of floor area (ITE Land Use 140)	
Daily Trips:	T = 3.88 (A) - 20.70
AM Peak Hour:	T = 0.83 (A) - 28.88; I/B = 77%, O/B = 23%
PM Peak Hour: [a]	T = 0.75 (A); I/B = 36%, O/B = 64%
Residential Components	
Condominium - per dwelling unit (ITE Land Use 230)	
Daily Trips:	T = 5.86 (U)
AM Peak Hour:	T = 0.44 (U); I/B = 17%, O/B = 83%
PM Peak Hour: [a]	T = 0.55 (U); I/B = 67%, O/B = 33%
Senior Residential (Attached) - per dwelling unit (ITE Land Use 252)	
Daily Trips:	T = 3.48 (U)
AM Peak Hour:	T = 0.08 (U); I/B = 45%, O/B = 55%
PM Peak Hour: [a]	T = 0.08 (U); I/B = 61%, O/B = 39%
Where: T = Trip Ends	Ln = Natural Logarithm (mathematical function)
A = Building Area in 1,000 sf	I/B = Inbound Trip Percentage
U = Dwelling Units	O/B = Outbound Trip Percentage

[a] *Note: PM peak hour trip generates specified by West Los Angeles Transportation Improvement Specific Plan. Daily and AM peak hour trip generation rates per 7th Ed. ITE Trip Generation, unless noted.*

Source: Hirsch/Green Transportation Consulting, Inc., Revised March 2009.

The baseline trip generation for the project, derived using the trip generation equations and rates summarized in Table IV.K-5, was adjusted to account for the anticipated effects of both “internal interaction” and “pass-by” use on the site’s traffic-generating characteristics. Internal interaction reflects the use of on-site services and amenities by other patrons or residents of the site. It is expected that, at a minimum, residents of the new development would shop and dine at the project’s retail and restaurant components. The proposed medical office facilities would also provide convenient on-site services for many of the residents, particularly the occupants of the proposed senior residential units. This use by residents of the project itself would reduce the number of vehicle trips to and from the site’s retail and restaurant uses, as well as to the proposed medical offices. The internal interaction adjustment was also expanded to include “multi-purpose” trips, where patrons of one retail store shop at other stores or dine in one of the restaurants during a single trip. This factor reduces the traffic generation of individual "stand alone" uses as generally identified in the ITE trip generation rates and equations.

Further, although not accounted for directly in the traffic analysis, the project's proposed retail and restaurant components would provide local-serving facilities within convenient walking distance of the existing nearby neighborhoods. The ability of area residents to conveniently walk to nearby retail and dining establishments also reduces vehicle traffic not only to and from the site, but throughout the area, as area residents would not need to drive to other stores and restaurants.

The medical offices located on the western side of the project site are also anticipated to be patronized by residents of the nearby residential communities, in a similar manner.

Consultation with the LADOT staff regarding these factors indicated that a total of approximately five percent of trips generated by both the retail and medical office patronage could come from project residents, or via multi-purpose visits, while approximately 10 percent of the activity associated with on-site restaurants would be anticipated to come from site residents or multi-purpose trips. As noted earlier, no specific trip reductions were assumed in the traffic analysis to account for "redirected" patronage of the proposed project's retail, restaurant, and/or medical office uses from residents of the nearby neighborhoods, although this factor is expected to result in additional traffic reductions beyond those specifically identified in the traffic analysis.

The second adjustment involved acknowledgement of the effects on pass-by trips on the project's net new traffic additions to the vicinity. The concept of pass-by traffic adjustments involves the "capture" of an existing trip passing by the project site. These existing trips are already on the area roadway network for other purposes, such as a trip to or from work, or perhaps to or from other shopping destinations. As these trips pass by the project site, the specific convenient facilities provided by the project, or other factors produces a stop at the project site. As these trips pass by the project site, the specific convenient facilities provided by the project, or other factors produces a stop at the site. Such activity is considered to be an interim stop along a trip which existed without the development of the project and, therefore, vehicles making these stops are not considered to be newly generated project-related traffic.

As summarized below in Table IV.K-6, Project Trip Generation, once completed and occupied, the project is expected to generate approximately 20,073 net new daily trips, including approximately 833 (527 inbound and 306 outbound) net new trips during the AM peak hour, and 1,879 (754 inbound and 1,125 outbound) net new trips during the PM peak hour.

Trip credits for the anticipated pass-by activity were not applied to the project's driveways, nor, per LADOT policy, to the study intersections immediately adjacent to or closest to the project site, since pass-by trips, while not new to the area roadways, are included in the number of vehicles that enter and exit the project site. Net project traffic volumes at the site-adjacent study intersections are anticipated to be approximately 24,629 net daily trips, including 1,023 (658 inbound and 365 outbound) net trips during the AM peak hour, and 2,336 (949 inbound and 1,387 outbound) net trips during the PM peak hour. These volumes were used to estimate potential project traffic impacts at the following eight intersections:

Table IV.K-6
Project Trip Generation

Size	Land Use	Daily Trips	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Bundy Site (Parcel A) – Retail, Restaurant, and Supermarket								
59,317 sf	Retail	4,836	70	44	114	228	246	474
	(Less 5% Internal Project Capture)	(242)	(4)	(2)	(6)	(12)	(12)	(24)
	(Less 30% Pass By Trips)	(1,378)	(20)	(12)	(32)	(65)	(70)	(135)
	Subtotal Retail Trips	3,216	446	30	76	151	164	315
9,500 sf	Restaurant	1,208	57	52	109	75	48	123
	(Less 10% Internal Use/Walk-in Trips)	(121)	(6)	(5)	(11)	(7)	(5)	(12)
	(Less 20% Pass-by Trips)	(217)	(10)	(10)	(20)	(13)	(9)	(22)
	Subtotal Restaurant Trips	870	41	37	78	55	34	89
51,021 sf	Supermarket	5,216	101	65	166	269	259	528
	(Less 5% Internal Project Capture)	(261)	(5)	(3)	(8)	(13)	(13)	(26)
	(Less 30% Pass By Trips)	(1,487)	(29)	(18)	(47)	(77)	(74)	(151)
	Subtotal Supermarket Trips	3,468	67	44	111	179	172	351
Total Retail and Supermarket Trips		7,554	154	111	265	385	370	755
Less Existing Bundy Site Commercial Development								
54,000 sf	Amp'd Mobile Office	830	101	14	115	19	91	110
5,000 sf	G4 Media Office	310	36	5	41	5	25	30
	Total Existing Office Uses	1,140	137	19	156	24	116	140
Total Net Bundy Site Commercial/Retail Trips		**6,414**	**17**	**92**	**109**	**361**	**254**	**615**
Bundy Site (Parcel A) – Residential								
177 units	Condominium	1,037	13	65	78	65	32	97
208 units	Senior Housing	724	8	9	17	10	7	17
	Total Condominium and Senior Housing	1,761	21	74	95	75	39	114
Total Net New Bundy Site (Parcel A) Project Trips		***8,175***	***38***	***166***	***204***	***436***	***293***	***729***
Olympic Site (Parcel B) - Medical Office								
384,730 sf	Medical Office and Pharmacy	15,517	754	200	954	424	1,146	1,570
	(Less 5% Internal Project Capture)	(776)	(38)	(10)	(48)	(21)	(58)	(79)
	(Less 10% Pass By Trips)	(1,474)	(72)	(19)	(91)	(40)	(109)	(149)
	Subtotal Medical Office Trips	13,267	644	171	815	363	979	1,342

Table IV.K-6 (Continued)
Project Trip Generation

Size	Land Use	Daily Trips	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Less Existing Olympic Site Commercial Development								
29,600 sf	Teledyne Offices	522	62	9	71	13	63	76
42,942 sf	Teledyne R & D	504	55	11	66	7	39	46
93,741 sf	Teledyne Manufacturing	343	38	11	49	25	45	70
Total Olympic Site Existing Trips		1,369	155	31	186	45	147	192
Total Net New Olympic Site Project Trips		***11,898***	***489***	***140***	***629***	***318***	***832***	***1,150***
Total Net New Project Trips		**20,073**	**527**	**306**	**833**	**754**	**1,125**	**1,879**

Source: Hirsch/Green Transportation Consulting, Inc., Revised March 2009.

Centinela Avenue and Nebraska Avenue, Bundy Drive and Nebraska Avenue (both east and west approaches), Bundy Drive and Missouri Avenue/Project Driveway, Bundy Drive and La Grange Avenue, Centinela Avenue (north approach) and Olympic Boulevard, Centinela Avenue (south approach)/Project Driveway and Olympic Boulevard, and Bundy Drive and Olympic Boulevard.

Finally, project traffic volumes at the project driveways were also calculated. While these volumes also do not include the pass-by trip discounts described above, no trip credits for removal of the existing site trips were applied to the anticipated project driveway volumes.

Any existing traffic at these locations would be concomitantly reduced as the proposed project is constructed, there would be no "net" increase at the driveways, which would need to be designed to accommodate all of the proposed project's traffic. However, the previously described "internal interaction" discounts are still considered applicable, since this factor accounts for utilization of the project site's facilities and services by project residents or via multi-purpose trips, and result in the actual removal of trips to and from the project site. Based on these assumptions, the anticipated total project driveway volumes are approximately 27,138 daily trips, including 1,365 AM peak hour trips (950 inbound and 415 outbound) and 2,668 PM peak hour trips (1,018 inbound and 1,650 outbound). These trip values were used to ensure that project driveway capacity is adequate to serve the anticipated traffic loads without resulting in unacceptable vehicular queuing and traffic delays on the adjacent streets or within the project site.

Project Geographic Trip Distribution

General geographic distribution of the project trips was also identified, based on several factors, including the relative distribution of the relative distribution of population from which employees and patients of the proposed medical offices would be drawn, and employment opportunities, shopping and entertainment venues, locations of other services for project residents. Local and regional demographic information was also reviewed, and the existing traffic patterns and land uses in the project area were analyzed to identify likely destination locations for the project residents. This information was used to estimate the overall geographic distribution of project trips throughout the local area and surrounding region. The resulting general geographic distribution of project-related trips, by direction and type of transportation roadway, is shown in Table IV.K-7, Geographic Project Trip Distribution Percentages.

Project Traffic Assignment

The assignment of project traffic to the street and highway systems was accomplished in several steps. First, the general geographic directional distribution percentages for the surface streets and freeways shown below in Table IV.K-7 were assigned to key routes serving the project area.

This step considered many factors influencing the project traffic's access routes to and from the site, including turn restrictions at various intersections and the locations of freeway ramps proximate to the project site. Additionally, differences in trip-making characteristics, as well as potential origin/destination factors, were considered for the different land uses proposed for the project. These separate geographic directional distributions resulted in different trip assignments for the "commercial" (including the medical office, retail/restaurant, and specialty market uses) and "residential" components of the project. The resulting project trip assignment percentages to the key travel roadways in the study area are shown in Figure IV.K-6, Project Study Intersections and Commercial/Retail Distribution Percentages, for the commercial uses (including the medical office, retail/restaurant, and market uses), and Figure IV.K-7, Project Study Intersections and Residential Distribution Percentages, for the project's residential components.

Table IV.K-7
Geographic Project Trip Distribution Percentages

Direction	Commercial Land Uses			Residential Land Uses		
	Street	**Freeway**	**Total**	**Street**	**Freeway**	**Total**
North	15%	10%	25%	8%	15%	23%
South	15%	10%	25%	11%	10%	21%
East	14%	15%	29%	16%	20%	36%
West	16%	5%	21%	15%	5%	20%
Totals	**60%**	**40%**	**100%**	**50%**	**50%**	**100%**

Source: Hirsch/Green Transportation Consulting, Inc., Revised March 2009.

The next step in the project traffic assignment process involved the refinement of the general travel patterns described in Table IV.K-7 and shown in Figures IV.K-6 and IV.K-7, to identify the intersection-level turning movements along the key travel routes to and from the project site. Again, separate travel pattern assumptions were identified for the commercial and residential components of the site, based on the varying percentages of traffic for each of these project components along the assumed travel routes. This step considered such factors as turning movement restrictions at various intersections in the project area, and the locations of the proposed project's driveways in assigning project trip movements at the study intersections.

The final step was to calculate the number of net new project "commercial" and "residential" trips using the identified travel routes and traveling through each of the 64 study intersections, including the removal of the trips associated with the existing site uses. The results of the project traffic assignment process provide the necessary level of detail to conduct the traffic analysis and to identify incremental project traffic impacts at the study intersections. For purposes of this analysis, the existing commercial land uses were assumed to exhibit the same travel patterns as the commercial component of the proposed project, shown previously in Figure IV.K-6. However, due to the access locations for these uses (Parcel A cannot be accessed from the driveway on Olympic Boulevard, nor can the Parcel B site be accessed via any of the Bundy Drive or Nebraska Avenue driveways), specific turning movement assignment percentages, based on the general geographic distributions shown in Figure IV.K-6, were developed for each of the existing uses.

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Source: Hirsch/Green Transportation Consulting, Inc, March 2009.

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Figure IV.K-6
Project Study Intersections
and Commercial/Retail Distribution Percentages

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Source: Hirsch/Green Transportation Consulting, Inc, March 2009.

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Figure IV.K-7
Project Study Intersections
and Residential Distribution Percentages

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Similarly, based on the expected operations of the proposed project's components, the trip assignment percentages for the residential, mixed-use commercial, and medical office uses of the project were also assumed to exhibit slightly different utilizations at several intersections in the immediate vicinity of the project, and as such, detailed trip assignment percentages were also developed for each of these proposed component uses. The individual project component intersection-level traffic assignment percentages, as well as the resulting AM and PM peak hour project component traffic volumes, are contained in Appendix H. The individual AM and PM peak hour project component volumes were then added together, and the existing traffic generated by the on-site land uses subtracted from these values, to produce the net new project-related traffic additions to each of the 64 study intersections. The total net new project traffic volumes at each of the study intersections are shown in Figure IV.K-8 for the AM peak hour conditions and in Figure IV.K-9 for the PM peak hour conditions.

Project Parking and Access

Parking Requirements

Parking for the proposed project would be provided by a combination of above grade and subterranean parking structures. The parking facilities for the medical office buildings would be provided in Building F. This structure would house approximately 1,857 striped spaces; an additional 119 spaces would be available through the implementation of a planned valet parking operations plan, resulting in a total of approximately 1,976 medical office parking spaces.

Parking for the mixed-use residential and retail/commercial portions of the project would be provided in Building C and in two additional subterranean parking levels located below Parcel A. No internal circulation between the upper level and subterranean level parking in Parcel A would be provided. Parking facilities serving Parcel A would provide approximately 1,419 spaces, including approximately 737 residential spaces and 682 commercial/retail spaces.

The LAMC requires "medical office" developments to provide a minimum of 5.0 parking spaces for each 1,000 square feet of floor area, while typical retail uses, including "specialty market" use, require a minimum of 4.0 parking spaces per 1,000 square feet of floor area, and restaurant use requires a minimum of 10.0 parking spaces for each 1,000 square feet of floor area. These ratios would require a total of 1,924 spaces for the proposed 384,735-square-foot medical office component. As noted above, a total of approximately 1,976 spaces (including valet) would be provided for the medical office component. The commercial (retail, restaurant, and specialty market) facilities would require approximately 204 spaces for the 51,021 square foot specialty market, a total of approximately 237 spaces for the 59,317 square feet of retail components, and an additional 95 spaces for the anticipated 9,500 square feet of restaurant uses, for a total commercial component parking requirement of approximately 536 spaces. The project proposes to provide a total of approximately 682 parking spaces for these commercial uses within the subterranean levels of the Parcel A parking garage.

Parking requirements for the proposed residences are based on the current "stepped" requirements in the LAMC, which identify the amount of parking per unit based on the number of "habitable rooms." The

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Source: Hirsch/Green Transportation Consulting, Inc, March 2009.

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Figure IV.K-8
Total Net Project Trip AM Peak Hour

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Source: Hirsch/Green Transportation Consulting, Inc, March 2009.

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Figure IV.K-9
Total Net Project Trip PM Peak Hour

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generally accepted interpretation of these LAMC requirements call for the provision of a minimum of 1.0 spaces per unit for "bachelor" or "efficiency" apartments (one habitable room), 1.5 spaces per unit for one-bedroom units (two habitable rooms), to 2.0 spaces per unit for two-bedroom (three habitable rooms) or larger units. However, recent actions and historical recommendations by the Advisory Agency of the City of Los Angeles have identified parking requirements for "market-rate" residential uses of 2.0 parking spaces per unit (generally regardless of the number of bedrooms), plus additional guest parking provided at between 0.25 and 0.50 spaces per unit if the project is located in a "parking congestion" zone. Further, recently-adopted provisions of the LAMC indicate that senior residential units shall provide 1.0 parking space per unit, inclusive of guest parking (these requirements are part of the newly-created "Elder Care" parking category, but are applicable to all senior residential units regardless of whether or not they are part of an elder care facility).

Although the exact mix of units (e.g., number of bedrooms per unit) has not been established for the market-rate residential units, for purposes of this analysis, it was assumed that each of the market-rate residential units would require the maximum parking identified by the Advisory Agency recommendations, while each of the senior units (both market-rate and affordable) would be subject to the reduced requirements identified in the LAMC. Based on these requirements, the project's 177 market-rate residential units would be required to provide resident parking of 2.0 spaces per unit plus guest parking of 0.5 spaces per unit, for a total of approximately 354 resident and 89 guest spaces, or 443 total spaces. The 208 senior residential units (including 62 affordable units) would require an additional 208 parking spaces, for a total residential parking requirement of approximately 651 spaces. The proposed project includes a total of approximately 737 residential parking spaces.

Vehicular Access and Operations

Access to the proposed project is currently planned via four driveways, with an internal drive layout that would allow access to the entire project site's parking facilities from each of the proposed driveways. Access to the medical office component and its associated parking facilities is intended to be primarily via a single driveway on the north side of Olympic Boulevard, opposite the southern leg of Centinela Avenue (the approximate location of the existing Teledyne driveway). Access to the mixed-use residential and retail components of the proposed project is planned via two driveways on Bundy Drive between Missouri Avenue and La Grange Avenue. The northernmost driveway would be located opposite Missouri Avenue, and utilize the existing traffic signal at this intersection to also control project access. The southern Bundy Drive driveway is located near the southern property line north of La Grange Avenue, and would not be signalized. Due to the anticipated future two-way left-turn lane adjacent to the project site, the operations of the Bundy/La Grange driveway are assumed to allow both left-turns and right-turns into the site, although heavy traffic volumes on Bundy Drive are anticipated to limit the exiting move at this location to right-turn only operations.

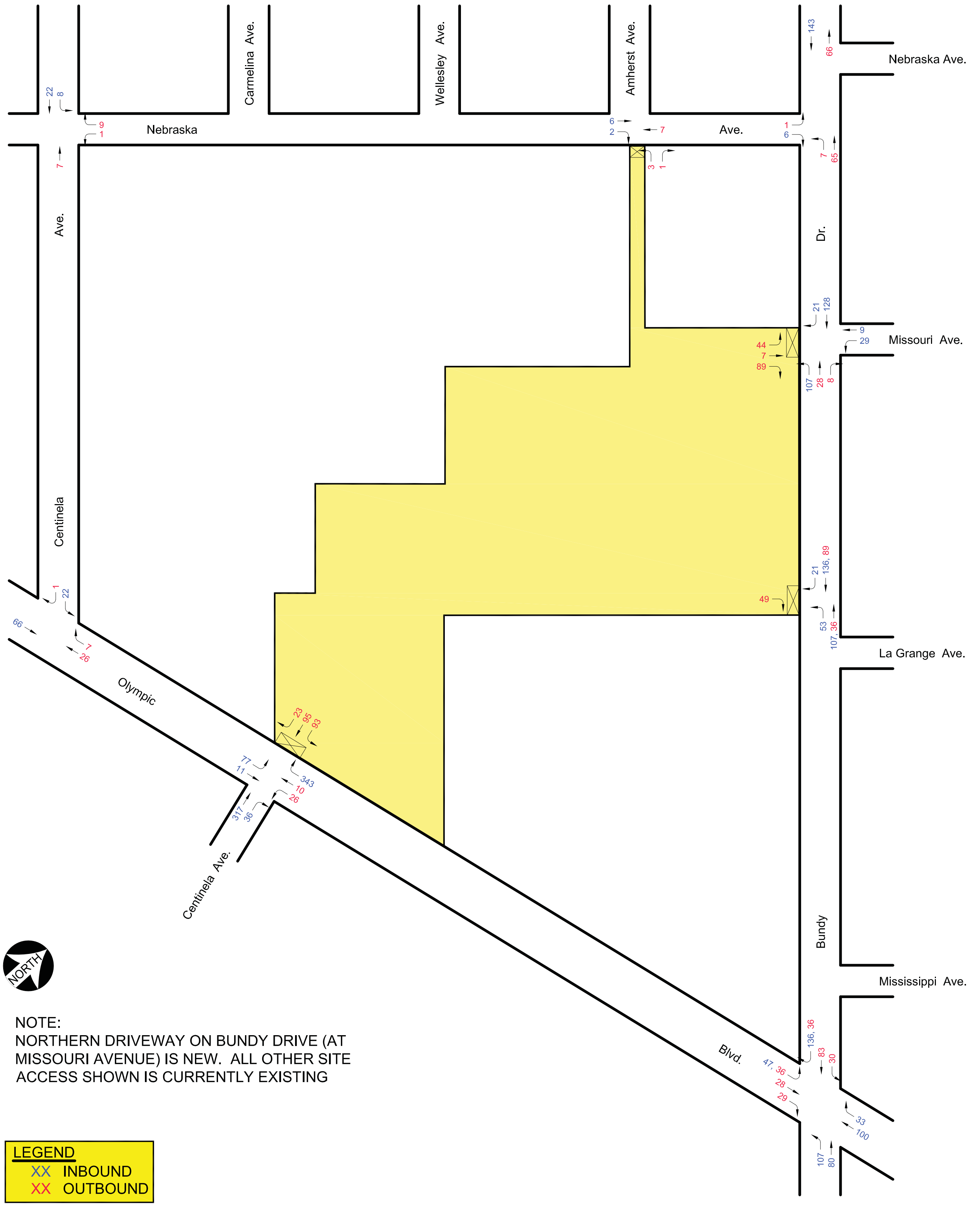
The remaining site access point is proposed via an existing easement between the project site and an existing driveway on Nebraska Avenue. This easement and the existing driveways on Nebraska Avenue are currently used by the existing Bundy Drive project site uses, as well as by a number of other existing non-project related businesses occupying the area to the north and west of the project. However, this driveway location is not intended as a primary project access location, and may be limited to employee or emergency vehicle access only at the project boundary to minimize project traffic impacts on Nebraska Avenue.

The operations of the parking facility driveways were also examined, to assure that adequate capacity would be available to accommodate the anticipated vehicular access demands of the project. The traffic volumes at each of the project's driveways were determined by first identifying the individual medical office, residential, and commercial/retail project component trips at each driveway, using the specific project component trip assignment percentages described earlier. The project driveway volumes do not include "trip credits" for removal of the existing site development, as do the project's net intersection volumes shown in Figures IV.K-8 and IV.K-9, since the project driveways must accommodate all of the anticipated project trips, not simply the "net" trips that would travel through the area roadway system. However, the driveway volumes do include anticipated trip reductions to account for the effects of internal interaction and transit use, as described earlier; these factors would reduce the number of vehicle trips generated by the project. These individual project component volumes were then added together to produce the total project traffic volumes at each of the driveways.

The resulting project driveway volumes are shown in Figure IV.K-10, Driveway Trips AM Peak Hour and IV.K-11, Driveway Trips PM Peak Hour, for the AM and PM peak hours, respectively. It should be noted that, as described above, the values shown in these figures reflect the total driveway volumes at each location, including the medical office component along Olympic Boulevard, as well as the residential and retail/commercial uses located along Bundy Drive. As indicated in these figures, based on the assumptions noted previously, the project's driveways are expected to accommodate a total of approximately 1,365 total trips (950 inbound trips and 415 outbound trips) during the AM peak hour, and a total of approximately 2,668 trips (1,018 inbound trips and 1,650 outbound trips) during the PM peak hour.

The access-restricted (employee and/or emergency only) driveway along Nebraska Avenue would be anticipated to exhibit total AM peak hour volumes of approximately 6 trips (2 inbound trips and 4 outbound trips), while during the PM peak hour, this driveway could be expected to accommodate a total of about 7 trips (4 inbound trips and 3 outbound trips).

Individually, peak hour peak volumes at the Olympic Boulevard driveway (opposite Centinela Avenue) are expected to generate 737 inbound trips and 211 outbound trips during the AM peak hour, and approximately 457 inbound and 1,138 outbound trips during the PM peak hour. Driveway volumes at the Bundy Drive signalized driveway opposite Missouri Avenue are expected to be about 137 inbound and 140 outbound trips during the AM peak hour, and approximately 364 inbound and 369 outbound trips during the PM peak hour, while the southern, unsignalized driveway is anticipated to accommodate approximately 74 inbound and 60 outbound (right-turn only) trips during the AM peak hour, and 193 inbound and 140 outbound (right-turn only) trips during the PM peak hour.



NOTE:
NORTHERN DRIVEWAY ON BUNDY DRIVE (AT MISSOURI AVENUE) IS NEW. ALL OTHER SITE ACCESS SHOWN IS CURRENTLY EXISTING

Source: Hirsch/Green Transportation Consulting, Inc, March 2009.

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Figure IV.K-10
Driveway Trip AM Peak Hour

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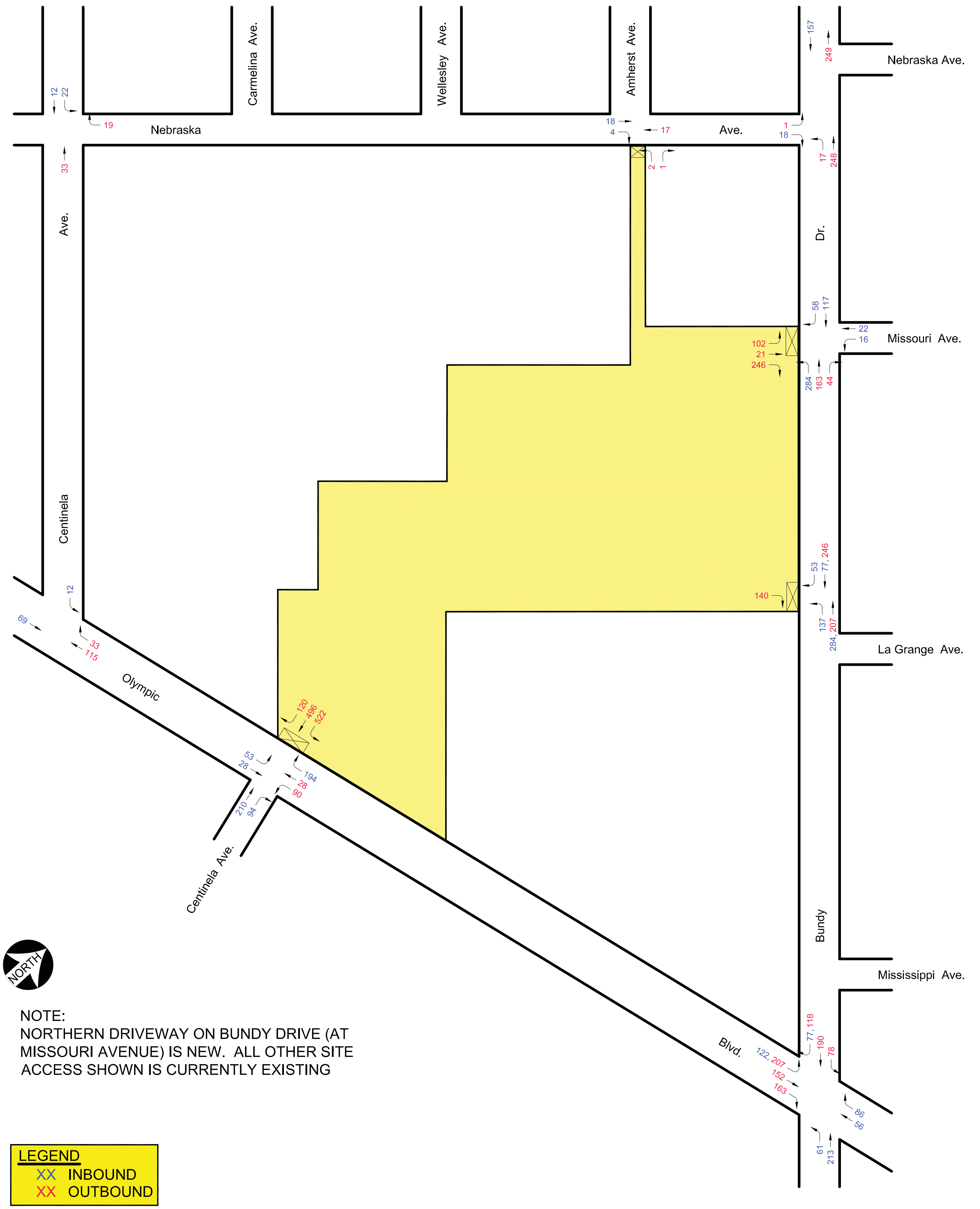

NOTE:
NORTHERN DRIVEWAY ON BUNDY DRIVE (AT MISSOURI AVENUE) IS NEW. ALL OTHER SITE ACCESS SHOWN IS CURRENTLY EXISTING

Source: Hirsch/Green Transportation Consulting, Inc, March 2009.

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Figure IV.K-11
Driveway Trip PM Peak Hour