TRAFFIC AND PARKING ANALYSIS FOR DEPARTMENT OF VETERAN AFFAIRS WEST LOS ANGELES MEDICAL CENTER MASTER PLAN DEVELOPMENT

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EXECUTIVE SUMMARY

The Department of Veterans Affairs has proposed a Master Plan development (the "Project") for the West Los Angeles Medical Center (WLA VAMC). The Project site is comprised of the North and South Campuses, which are located north and south of Wilshire Boulevard, respectively. The Project is proposed to be developed in four phases, i.e., Immediate, Short-Term, Mid-Term, and Long-Term Phases. These phases would be from the current year, 2015, through the year 2045. Most of the development would occur on the North Campus, with development on the South Campus largely occurring during the Mid-Term Phase. This traffic and parking analysis was prepared to analyze the existing and future traffic and parking conditions, without and with the Project, and is generally consistent with methodologies and procedures of the City of Los Angeles and County of Los Angeles Congestion Management Program (CMP) guidelines.

It is estimated that upon completion, the Project would generate approximately 8,428 net vehicle trips per day, including 486 and 180 trips during the respective AM and PM peak hours. These trip estimates account for reductions due to less intensification of building uses, building removals, increased transit usage by residents, employees and visitors, and reduced vehicle ownership by Veteran residents.

Currently, the Project site has parking supplies of 1,882 spaces on the North Campus and 2,023 spaces on the South Campus (excluding motorcycle and leased parking spaces). The existing parking utilization on the South Campus already exceeds its supply. It is estimated that the completed Project would have peak parking demands of approximately 2,553 spaces on the North campus and approximately 2,306 to 2,583 spaces on the South Campus.

Thirty-three (33) study intersections were analyzed, including 25 off-site intersection and eight intersections within the Project site, were analyzed. Ten (10) internal roadways segments were also analyzed. New traffic counts at all study locations were conducted in late September 2015 after UCLA had started its fall quarter.

Thirteen (13) study intersections are currently operating at poor service levels, i.e., Level of Service (LOS) E or F, during one or both peak hours. The 13 intersections include all of the study intersections along Wilshire Boulevard, most of the study intersections along Santa Monica Boulevard, and the study intersection of Sunset Boulevard / Barrington Place. Of the on-site study intersections, the intersection of Wilshire Boulevard / Bonsall Avenue Eastbound Ramps is experiencing the poorest service level, LOS D, during the PM peak hour.

Although existing daily volumes on some internal roadway segments of Bonsall Avenue and Sawtelle Boulevard are high, approximately 6,900 to 8,200 vehicles per day, no significant traffic problems were observed on either street.

Under Existing conditions, the addition of cumulative Project trips attributable to the Mid-Term and Long-Term Phases would result in significant traffic impacts at up to 13 study intersections during one or both peak hours, including the two on-site intersections of Wilshire Boulevard Eastbound Ramps / Bonsall Avenue and Wilshire Boulevard Westbound Ramps / Bonsall Avenue. Under Future conditions and with the addition of the same cumulative Project trips, the same study intersections, plus one additional off-site intersection, would be significantly impacted, for a total of 14 intersections.

The significant impacts would be mostly at intersections along Wilshire Boulevard and Santa Monica Boulevard. The significant impact at the intersection of Sunset Boulevard / Barrington Place is attributable to the north-south internal roadway being extended northerly through the Project site and intersecting Barrington Place, resulting in more Project trips accessing the site via Barrington Place. The addition of Project trips generated up through the Short-Term Phase would not result in significant impacts, which would be largely due to the proposed uses generating fewer trips than the existing uses being removed or replaced during the first two phases.

The completed Project would add daily traffic volume increases of approximately 20 to 27 percent to the most heavily used on-site roadway segments of Bonsall Avenue, and to Sawtelle Boulevard. These large daily volume increases would be expected to adversely affect traffic flow on these segments until remedial measures are implemented.

Project peak-hour trips added to CMP intersection and freeway monitoring locations would be less than the CMP thresholds requiring more comprehensive analysis, with the exception of the intersection of Wilshire Boulevard / Sepulveda Boulevard. As this is also a study intersection, it was analyzed in detail and determined to be one of the intersections that would be significantly impacted by Project trips.

Based on an analysis of existing and future public transit operations, including the Westside Subway Extension Project, it is estimated that overall future transit capacity serving the Project site during the peak hour would be 30,802 persons. The highest peak-hour transit demand generated by the completed Project would be estimated 591 person trips. This demand would use approximately 1.9 percent of the forecast capacity. As this percentage is relatively low, the Project impact on transit is not anticipated to be significant.

No feasible physical mitigation measures could be identified for the 12 off-site intersections that would be significantly impacted by Project traffic. Infeasibility constraints include one or more of the following: The lack of sufficient public right-of-way that could be used for roadway widenings and the installation of additional traffic lanes; the inability to adequately accommodate other transportation facilities currently provided at or designated for impacted locations, such as bike lanes; the high cost of acquiring private property, which could also include private buildings,

in order to provide sufficient right-of-way for roadway improvements; and the potentially significant secondary impacts that could result from physical measures, such as the loss of on-street parking that could not be adequately replaced.

Recognizing such constraints, the City recommends different mitigation options, generally involving reduction of demand for trips by single-occupant vehicles, improvements to transit, and expansion of intersection capacity. Although it is unlikely that implementation of the various measures would adequately mitigate all Project traffic impacts to less than significant levels, it is recommended, to the extent feasible, that such measures be pursued. Such action would at least reduce those impacts, encourage use of other transportations modes, and demonstrate that the Project is taking responsible steps to improve traffic conditions.

For the significantly impacted on-site intersections of Wilshire Boulevard Eastbound Ramp / Bonsall Avenue and Wilshire Boulevard Westbound Ramps / Bonsall Avenue, it is recommended that the feasibility of installing traffic signals in place of the all-way stop-controls be studied. Traffic signals at both intersections would increase capacity, improve service levels and mitigate their impacts to less than significant levels. The signals would also provide a means of interrupting heavy traffic flow to allow other traffic, both vehicular and pedestrian, to enter or cross. They would also better regulate and improve traffic flow along Bonsall Avenue north and south of Wilshire Boulevard.

Upon Project completion, approximately 4,859 to 5,136 parking spaces would be needed site-wide, far exceeding the existing site-wide parking supply of 3,905 spaces. In order to ensure that sufficient but not excessive parking is provided for the Project as it goes forward, it is recommended that the VA WLA prepare a parking management plan with measures and strategies to accommodate the parking demand with the available parking supply as much as feasible. This plan would be periodically updated as conditions evolve.

As part of the parking management plan effort, it is recommended that a comprehensive parking study of both the North and South Campuses be prepared. This study should include the determination of empirical parking demand rates in order to more accurately gauge the parking demands of the site, if national parking demand rates or generalized parking models are deemed inappropriate in this case. Such a study should also reassess the location, type and accessibility of proposed parking facilities for the primary users. In addition, it should examine the return of leased parking facilities and the restriping of parking areas to yield additional spaces to satisfy parking needs.

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INTRODUCTION

Crain & Associates has prepared this analysis of existing and future traffic and parking conditions for the proposed Department of Veteran Affairs West Los Angeles Medical Center Master Plan (VA WLA) development (the "Project"). This analysis covers the development of the Project over the period of 2015 to 2045. As the Project site is within the City of Los Angeles, the traffic analysis was conducted using methodologies and procedures generally consistent with those for traffic studies in the City of Los Angeles. Analyses were also conducted consistent with the guidelines of the Los Angeles County Congestion Management Program (CMP). Thirty-three (33) intersections, including eight internal intersections, and 10 internal roadway segments were evaluated for existing and future conditions, without and with the Project. The parking analysis was based on recently collected parking data, parking ratios provided by the Project design team, parking demand rates from standard reference sources, and recent parking studies related to the site.

PROJECT DESCRIPTION

The Project site is the VA WLA property, which encompasses approximately 387 acres northwest and southwest of Wilshire Boulevard and I-405 / San Diego Freeway. The site is bounded by the Brentwood School and single-family homes on the north; single-family homes and the San Diego Freeway / I-405 on the east; Ohio Avenue on the south; and Barrington Place, US Post Office, Barrington Avenue, Bringham Avenue, multiple-family residential buildings, commercial buildings, San Vicente Boulevard, and the US Air Force, US Army and California National Guard properties on the west. Wilshire Boulevard bisects the site into the North and South Campuses.

The Project is to be developed in four phases. These include an Immediate Phase (2015); a Short-Term Phase (2016 - 2018); a Mid-Term Phase (2019 - 2026); and a Long-Term Phase (2027 - 2045). On the North Campus, bridge, transitional and permanent supportive housing for Veterans would be provided in renovated existing buildings and / or newly constructed facilities. There would also be complimentary services for Veterans and their families. On the South Campus, improved healthcare facilities would be provided, including a new acute Bed Care Tower and diagnostic and treatment platform, and research and support facilities. In addition, the Project would construct a Columbarium on approximately 13 acres on the North Campus, which would be under the auspices of the Veteran Affairs National Cemetery Administration. New parking facilities, including structured parking, would also be constructed to support Project uses. The individual buildings and facilities being renovated, constructed or removed are identified in detail in the Project trip generation table in Appendix A. The Conceptual Project Site Plan is illustrated in Figure 1.

Figure 1, Conceptual Project Site Plan

During the Mid-Term and Long-Term Phases, internal roadways would be constructed or modified, including a "Primary Boulevard" extending from Barrington Place at the northern end of the North Campus to Ohio Avenue at the south end of the South Campus. Much of the Primary Boulevard would follow approximately the existing alignment of Bonsall Avenue, Dowlen Drive West and Sawtelle Boulevard. The Primary Boulevard would have controlled vehicular access at Barrington Place. In addition, during the Mid-Term Phase, the Eisenhower Avenue gate at Bringham Avenue would be reopened and have controlled vehicular access, and the gate opposite Gorham Avenue at Bringham Avenue would be reopened for use by pedestrian and bicycle traffic only.

Although not proposed by the Project development program, a subway station ("VA Station") will be constructed on the South Campus as part of the Westside Subway Extension Project. Currently, the preferred location for this station is underneath Parking Lot 42 on the south side of Wilshire Boulevard between Bonsall Avenue and I-405 / San Diego Freeway Southbound On-Ramp. According to the Final EIS / EIR Phased Construction Scenario for the Subway Project, the VA station is expected to be in operation by approximately 2035-36, which would be during the Long-Term Phase of the Master Plan.

The following sections describe the methodology used to analyze the Project.

METHODOLOGY

TRANSPORTATION FACILITIES

Roadways

Regional access for the Project site and the surrounding area is provided by an extensive freeway network. The arterial and local street systems also provide excellent site access. These facilities are described below.

I-405 / San Diego Freeway runs north-south from the northern San Fernando Valley, through Los Angeles County, and into Orange County. It is adjacent to the Project site on the east and provides primary regional access to the site. It generally has four lanes, along with a high-vehicle occupancy lane, in each direction. In the study area, I-405 runs north-south, interchanges with I-10 / Santa Monica Freeway, and has full or partial ramp connections at Sunset Boulevard, Wilshire Boulevard and Santa Monica Boulevard. According to current information on the Caltrans website, I-405 has an average daily traffic volume of 279,000 to 300,000 vehicles near Wilshire Boulevard.

I-10 / Santa Monica Freeway begins in the City of Santa Monica on the west and extends easterly through Downtown Los Angeles, and continues easterly as the San Bernardino

Freeway. I-10 generally has four lanes in each direction in the study area and interchanges with I-405. The Caltrans website indicates that average daily traffic volume on I-10 is 235,000 to 247,000 vehicles near the I-405 junction.

East-West Surface Roadways

Sunset Boulevard is an Avenue I roadway that is within two blocks of the northern end of the North Campus. It extends easterly from the Pacific Ocean into the Echo Park / Downtown Los Angeles area, where it becomes Cesar Chavez Avenue. Sunset Boulevard has two travel lanes and left-turn channelization at signalized intersections as well as on- / off-ramp connections with I-405.

Montana Avenue, an Avenue II roadway west of San Vicente Boulevard and a local street to the east, provides one to two travel lanes per direction and left-turn lanes at key intersections.

Wilshire Boulevard begins in the City of Santa Monica and continues easterly into Downtown Los Angeles. It is a Boulevard I roadway in the City of Los Angeles, extending through the Project site and serving as the primary access for the site. In the site vicinity, Wilshire Boulevard is striped with three travel lanes per direction, with left-turn channelization. Generally, within the City of Los Angeles, the eastbound and westbound curb lanes are restricted to bus and right-turn-only operation during the weekday morning and afternoon peak periods. Wilshire Boulevard is grade-separated over Bonsall Avenue, with on- / off-ramps accessing Bonsall Avenue. Wilshire Boulevard also has northbound and southbound ramp connections with I-405.

Ohio Avenue is a Collector Street serving the neighborhood south of the Project site. Ohio Avenue forms the southern boundary of the Project site. It is striped with one travel lane per direction and a bike lane in the eastbound direction, with left-turn channelization installed at key intersections.

Santa Monica Boulevard also begins in the City of Santa Monica and continues easterly into the Silver Lake community. It is a State highway, State Route 2, except for the segment within the City of West Hollywood. Santa Monica Boulevard is also designated a Boulevard II roadway in the City of Los Angeles. It has two travel lanes per direction and left-turn channelization at major intersections in the Project site vicinity. Santa Monica Boulevard has full ramp connections with I-405.

North-South Surface Roadways

Westwood Boulevard is designated an Avenue I roadway north of Wilshire Boulevard, a Boulevard II roadway between Wilshire Boulevard and Santa Monica Boulevard, and an Avenue II roadway south of Santa Monica Boulevard. Westwood Boulevard provides two travel lanes

per direction, except at Wilshire Boulevard where it has three northbound lanes. Left- and/or right-turn lanes are available on Westwood Boulevard at some locations.

Gayley Avenue is an Avenue II roadway that is a primary access route for Westwood Village and UCLA. South of Wilshire Boulevard, it becomes Midvale Avenue. Gayley Avenue has two travel lanes and left-turn channelization at key intersections, along with right-turn lanes at Wilshire Boulevard.

Veteran Avenue extends from Sunset Boulevard to south of Pico Boulevard. Veteran Avenue is an Avenue II roadway from Sunset Boulevard to Missouri Avenue, a Collector Street from Missouri Avenue to Pico Boulevard, and then a local street farther south. It is striped with two travel lanes and left- and right-turn channelization north and south of Wilshire Boulevard.

Sepulveda Boulevard is one of the longest, continuous arterials in Los Angeles County. A Boulevard II roadway in the City of Los Angeles, Sepulveda Boulevard extends from the northern San Fernando Valley to the South Bay. It runs along the east side of I-405 and provides secondary access to the Project site at its intersection with Constitution Avenue. Sepulveda Boulevard is generally striped with two travel lanes per direction, along with left-turn channelization.

Sawtelle Boulevard provides primary access for the South Campus, terminating within the site north of Dowlen Drive. On-site, Sawtelle Boulevard is a private street, with one through travel lane in each direction. From Ohio Avenue to Olympic Boulevard, it is a Collector Street. South of Olympic Boulevard, it is an Avenue I roadway. Sawtelle Boulevard has one travel lane northbound and southbound between Ohio Avenue and Olympic Boulevard, with left-turn channelization at Olympic Boulevard.

Bringham Avenue, a fairly short local street, forms part of the western boundary of the North Campus north of San Vicente Boulevard. Bringham Avenue has one northbound travel lane and two southbound ravel lanes, separated by left-turn channelization.

San Vicente Boulevard extends northerly from Wilshire Boulevard where Federal Avenue terminates, and then curves westerly into the City of Santa Monica. San Vicente Boulevard is designated an Avenue II roadway within the City of Los Angeles, where it provides two northbound / westbound travel lanes and two to three southbound /eastbound travel lanes, separated by a raised median. Left-turn channelization is provided at signalized intersections.

Federal Avenue is proximate to the western boundary of the South Campus. From Wilshire Boulevard to Idaho Avenue, it is a Collector Street. It becomes a local street south of Idaho Avenue. Federal Avenue has one to two travel lanes per direction, along with left-turn channelization at key intersections. The prolongation of Federal Avenue north of Wilshire Boulevard is San Vicente Boulevard.

Barrington Place, a short local street, is adjacent to the northern end of the North Campus. It runs between between Sunset Boulevard and Barrington Avenue, with one travel lane in each direction.

Barrington Avenue is a local street north of Sunset Boulevard and an Avenue II roadway south to Pico Boulevard. It becomes an Avenue I roadway south of Pico Boulevard. Barrington Avenue is adjacent to or within two blocks of the western boundary of the North Campus. It has one to two travel lanes in each direction, plus left-turn lanes at Wilshire Boulevard, Ohio Avenue and Santa Monica Boulevard.

Bundy Drive is a Collector Street north of Wilshire Boulevard and an Avenue I roadway to the south. It provides one travel lane each way north of Wilshire Boulevard and two travel lanes each way to the south, along with left-turn channelization.

(Note: The designation nomenclatures of the above east-west and north-south surface roadways are in accordance with the recently adopted City of Los Angeles Mobility Plan 2035.)

In addition to Sawtelle Boulevard, on-site circulation is provided by a series of private streets. Bonsall Avenue serves as the primary north-south access roadway for the North Campus and, along with Sawtelle Boulevard, is a primary access roadway for the South Campus. Bonsall Avenue extends northerly from Dowlen Drive on the South Campus, passes under Wilshire Boulevard, and continues northerly to MacArthur Avenue on the North Campus. Several streets on the North Campus intersect and branch off Bonsall Avenue, including Eisenhower Avenue, Grant Avenue, Pershing Avenue and Nimitz Avenue. Constitution Avenue, also on the North Campus, runs east-west between a feeder roadway on the west and Sepulveda Boulevard on the east, and is used for secondary access to and from Sepulveda Boulevard. Dowlen Drive is a ring road on the South Campus, intersected by Bonsall Avenue on its northern perimeter and Sawtelle Boulevard on its southern perimeter, creating “East” and “West” segment designations. Dowlen Drive accesses all of the major parking lots and buildings on the South Campus. Generally, these private streets have two-way flow, one travel lane in each direction, and no on-street parking. All intersections on-site are stop-controlled, with most having all-way stops.

Public Transportation

There is an extensive network of existing public transportation serving the Project site and the surrounding area. Multiple regional and local public transportation operators include Metro, Santa Monica Big Blue Bus, Culver City Bus, Los Angeles Department of Transportation (LADOT) Commuter Express, and Antelope Valley Transit Authority. Public transportation connections are also available to / from Union Station, the hub of the regional rail system in Southern California, including the Metrolink and Amtrak systems. The main public transportation lines serving the Project study area are described below.

Metro Bus Service

Metro, the Los Angeles County Metropolitan Transportation Authority, operates both bus services and rail services throughout Los Angeles County. The Metro lines below serve the Project study area:

Metro Local Line 2 / 302, an east-west line, runs along Sunset Boulevard from Downtown Los Angeles to Pacific Palisades. Additionally, this line provides both limited and late night Owl service. Line 2 / 302 travels north of the Project site and has a stop at the intersection of Sunset Boulevard / Barrington Avenue. It operates daily with headways of approximately 15-30 minutes during the weekday peak hours and approximately 20-50 minutes on the weekend.

Metro Local Line 4 provides east-west service along Sunset Boulevard and Santa Monica Boulevard from Downtown Los Angeles to Santa Monica. This line has late night Owl service as well. It travels along Santa Monica Boulevard, two blocks south of the Project site, and can be accessed at the intersection of Santa Monica Boulevard / Sawtelle Boulevard. Line 4 operates daily with headways of approximately 10-15 minutes during weekday peak hours. Generally, headways for both directions are approximately 10-15 minutes on the weekend.

Metro Local Line 20, an east-west line, runs along Wilshire Boulevard from Downtown Los Angeles to Santa Monica. It also operates late night Owl service. It has an eastbound bus stop at Bonsall Avenue and Wilshire Boulevard, in addition to eastbound and westbound bus stops at the intersection of Wilshire Boulevard / San Vicente Boulevard-Federal Avenue. Line 20 operates daily with headways of approximately 5-15 minutes during weekday peak hours and approximately 15-20 minutes on the weekend.

Metro Rapid Line 704, an east-west line, runs along Santa Monica Boulevard from Santa Monica to the Patsaouras Transit Plaza adjacent to Union Station in Downtown Los Angeles. This line can be accessed at the intersection of Santa Monica Boulevard / Sepulveda Boulevard. It operates daily with headways of approximately 10-30 minutes during weekday peak hours and approximately 20-30 minutes on the weekend.

Metro Rapid Line 720 provides east-west service along Wilshire Boulevard, connecting Santa Monica and the City of Commerce. It has an eastbound bus stop at Bonsall Avenue and Wilshire Boulevard. Line 720 operates daily with weekday headways of approximately 4-15 minutes during the peak hours and approximately 10-20 minutes on the weekend.

Metro Rapid Line 734 operates north-south service along Sepulveda Boulevard from Westwood to the Sylmar San Fernando Metrolink Station. Line 734 can be accessed east of the Project site at the bus stop on Sepulveda Boulevard south of Wilshire Boulevard. It operates daily with headways of approximately 15-20 minutes during weekday peak hours. Weekend service is not provided.

Metro Express Line 788 has north-south service along Van Nuys Boulevard and I-405 from Arleta to Westwood. It has a bus stop on Sepulveda Boulevard south of Wilshire Boulevard, east of the Project site. Line 788 operates daily with headways of approximately 20 minutes during weekday peak hours. It has no weekend service.

Santa Monica Big Blue Bus Service

Big Blue Bus is a transit service operated by the City of Santa Monica. The line names are typically abbreviated to "BBB" with the line number afterward. The following are BBB lines serving the Project study area:

BBB1 offers east-west local service along Santa Monica Boulevard between Venice Beach and the Hilgard Terminal at UCLA. This line can be accessed south of the Project site at the intersection of Santa Monica Boulevard /Sawtelle Boulevard. BBB1 operates daily with headways of approximately 10-15 minutes during weekday peak hours and approximately15-20 minutes on the weekend.

BBB2, an east-west local line, runs along Wilshire Boulevard from Santa Monica to the Hilgard Terminal at UCLA. It has eastbound and westbound bus stops at Bonsall Avenue and Wilshire Boulevard. BBB2 operates daily with headways of approximately 15 minutes during weekday peak hours and approximately 25 minutes on the weekend.

BBB3M offers east-west local service via San Vicente Boulevard and Wilshire Boulevard from Santa Monica to the Hilgard Terminal at UCLA. Eastbound and westbound bus stops are located at Bonsall Avenue and Wilshire Boulevard. BBB3 operates daily with headways of approximately 20-30 minutes during weekday peak hours and approximately 40 minutes on the weekend.

BBB4, an east-west local line, runs between the Westside Pavilion and Santa Monica. As part of this route, BBB4 travels along Sawtelle and also on-site. It has bus stops at the intersection of Ohio Avenue / Sawtelle Boulevard and on-site proximate to the VA Hospital. BBB4 operates daily with headways of approximately 30 minutes during weekday peak. Weekend service is not provided.

BBB8 provides east-west local service between Santa Monica and the Hilgard Terminal at UCLA via Westwood Boulevard. Its bus stop closest to the Project site is at the intersection of Wilshire Boulevard / Westwood Boulevard. BBB8 operates daily with headways of approximately 15-20 minutes during the weekday peak hours and approximately 30 minutes on the weekend.

BBB12 has north-south local service between the Metro Culver City Expo (Rail) Station and the Hilgard Terminal at UCLA. It travels along Westwood Boulevard and has a stop at the intersection of Wilshire Boulevard / Westwood Boulevard. BBB12 operates daily with headways

of approximately 15 minutes during weekday peak hours and approximately 30 minutes on the weekend.

BBBR12 offers north-south express service between the Metro Culver City Expo (Rail) Station and the Hilgard Terminal at UCLA, traveling a slightly different route than BBB12. This line also uses Westwood Boulevard and has a stop at the intersection of Wilshire Boulevard / Westwood Boulevard. BBBR12 has headways of approximately 15-20 minutes during weekday peak hours. It has no weekend service.

BBB14 provides north-south local service between Brentwood and Playa Vista via Bundy Drive. BBB14 can be accessed at the intersection of San Vicente Boulevard / Barrington Avenues. This line operates daily with headways of approximately 15 minutes during weekday peak hours and approximately 20-35 minutes on the weekend.

BBB15 travels a north-south local route between Brentwood Village and West Los Angles via Barrington Place and Barrington Avenue. This line has bus stops at the intersections of Barrington Place, Montana Avenue / Barrington Avenue, San Vicente Boulevard / Barrington Avenue, and Wilshire Boulevard / Barrington Avenue. BBB15 operates daily with headways of approximately 30 minutes during weekday peak hours and approximately 30-60 minutes on the weekend.

Culver City Bus Service

Culver City Bus Line 6 runs along Sepulveda Boulevard between the Metro Green (Rail) Line LAX / Aviation Station and UCLA, passing the Project site to the east. It has bus stops along Sepulveda Boulevard at Santa Monica Boulevard and Ohio Avenue, and at the intersection of Wilshire Boulevard / Veteran Avenue. Line 6 operates on weekdays with headways of approximately 15-20 minutes during weekday peak hours and 20-25 minutes during the weekend.

Culver City Bus Line 6-Rapid is an express line along the Line 6 route, operating on weekdays during the AM and PM peak hours only, with headways of 15-20 minutes. This line offers express service by limiting its stops. Included in its stops is the intersection of Santa Monica Boulevard / Sepulveda Boulevard.

LADOT Commuter Express Service

Commuter Express is a transit service operated by the City of Los Angeles. Their line names are typically abbreviated to “CE” with the line number afterward. The following are lines that serve the Project study area:

CE431 provides east-west commuter service between Downtown Los Angeles and Westwood via the Santa Monica Freeway. Within the Project site, a bus stop is provided at the Park &

Ride Lot located at Constitution Avenue and Davis Avenue. CE431 operates on the weekday with headways of approximately 30 minutes during peak hours, and generally travels eastbound during the AM peak period and westbound during the PM peak period. Weekend service is not provided.

CE534 offers east-west commuter service between Downtown Los Angeles and Westwood via Wilshire Boulevard, Santa Monica Boulevard and Olympic Boulevard. The bus stop closest to the Project site is at the intersection of Wilshire Boulevard / Veteran Avenue. CE534 has weekday headways of approximately 30 minutes during peak hours, and generally travels westbound during the AM peak hours and eastbound during the PM peak hours. It does not have weekend service.

CE573 provides north-south commuter service between Mission Hills and Century City via I-405. The bus stop at intersection of Wilshire Boulevard / Glendon Avenue, several blocks to the east, is the closest to the Project site. This line operates on the weekday with headways of approximately 15-25 minutes during peak hours, and generally travels southbound during the AM peak hours and westbound during the PM peak hours. Weekend service is not provided.

Antelope Valley Transit Authority

The Antelope Valley Transit Authority provides transit service to the communities of northern Los Angeles County (e.g. Lancaster, Palmdale). Their line names are typically abbreviated to "AV" with the line number afterward.

AV786 provides north-south commuter service between Antelope Valley and Century City / West Los Angeles. The closest bus stop is located at the intersection of Wilshire Boulevard / Galey Avenue-Midvale Avenue to the east. AV786 operates daily with headways of approximately 25 minutes during weekday peak hours, and generally travels southbound during the AM peak hours and northbound during the PM peak hours. It does not operate on the weekend.

The locations and general routes of the above bus lines relative to the Project site and surrounding areas are depicted in Figure 2.

Also, as previously discussed, the Westside Subway Extension Project will directly access the Project site. A subway station, the VA Station, will be constructed on-site, with the currently preferred location being underneath Parking Lot 42 on the south side of Wilshire Boulevard between Bonsall Avenue and the I-405 Southbound On-Ramp. The VA Station is currently programmed to be operational by approximately 2035-36, unless additional funding is secured that would accelerate its construction.

Figure 2, Public Transportation Lines

Shuttle Service

The WLA VAMC offers patient shuttle transportation services that include internal circulation within the Project site and regional connections to the Community of Sepulveda, the clinic on Temple Street in Downtown Los Angeles, the City of Bakersfield, the City of Santa Maria, and the City of Simi Valley. Shuttles to Sepulveda and the Downtown Los Angeles clinic operate daily with limited service, running approximately once every two hours during the day.

Long-distance shuttle service is provided via a contract bus service and requires passengers to make reservations in advance. This includes service to / from Bakersfield, which is organized through the Bakersfield Clinic, and to / from Santa Maria, which is organized through the Santa Barbara Clinic. In addition, a shuttle service to Simi Valley is operated by DAV Van. The contract bus service generally runs once daily.

The Project proposes to provide an internal shuttle service. It would run from the Medical Center on the South Campus to the northern end of the North Campus. Stops are planned at one location on the South Campus and seven locations on the North Campus.

TRANSPORTATION ANALYSIS

Existing and future traffic conditions were analyzed for the streets and roadways serving the Project site. Traffic volumes were analyzed at intersections expected to be used by a significant volume of Project trips and, therefore, where potential Project impacts most likely would occur. These included 25 off-site intersections, all signalized, adjacent to or surrounding the Project site vicinity, and eight private internal intersections, all stop-controlled, within the site. These 33 study intersections are listed below and denoted on Figure 3.

1. Sunset Boulevard / Barrington Place (signalized)
2. Sunset Boulevard / Barrington Avenue (signalized)
3. Barrington Place / Barrington Avenue (signalized)
4. Montana Avenue / Barrington Avenue (signalized)
5. San Vicente Boulevard / Barrington Avenue (signalized)
6. Constitution Avenue / Sepulveda Boulevard (signalized)
7. Wilshire Boulevard / Bundy Drive (signalized)
8. Wilshire Boulevard / Barrington Avenue (signalized)
9. Wilshire Boulevard / San Vicente Boulevard-Federal Avenue (signalized)
10. Wilshire Boulevard / Sepulveda Boulevard (signalized)
11. Wilshire Boulevard / Veteran Avenue (signalized)
12. Wilshire Boulevard / Gayley Avenue-Midvale Avenue (signalized)
13. Wilshire Boulevard / Westwood Boulevard (signalized)
14. Ohio Avenue / Barrington Avenue (signalized)

Figure 3, Project Site Vicinity & Study Locations Map

15. Ohio Avenue / Federal Avenue (signalized)
16. Ohio Avenue / Sawtelle Boulevard (signalized)
17. Ohio Avenue / Sepulveda Boulevard (signalized)
18. Ohio Avenue / Veteran Avenue (signalized)
19. Santa Monica Boulevard / Barrington Avenue (signalized)
20. Santa Monica Boulevard / Federal Avenue (signalized)
21. Santa Monica Boulevard / Sawtelle Boulevard (signalized)
22. Santa Monica Boulevard / I-405 Freeway Southbound Ramps-Beloit Avenue (signalized)
23. Santa Monica Boulevard / I-405 Freeway Northbound Ramps-Cotner Avenue (signalized)
24. Santa Monica Boulevard / Sepulveda Boulevard (signalized)
25. Santa Monica Boulevard / Veteran Avenue (signalized)
26. Nimitz Avenue / Bonsall Avenue (stop-controlled)
27. Pershing Avenue / Bonsall Avenue (stop-controlled)
28. Eisenhower Avenue / Dewey Avenue (stop-controlled)
29. Eisenhower Avenue / Bonsall Avenue
30. Wilshire Boulevard Westbound Ramps / Bonsall Avenue (stop-controlled)
31. Wilshire Boulevard Eastbound Ramps/Bonsall Avenue (stop-controlled)
32. Dowlen Drive / Bonsall Avenue (stop-controlled)
33. Dowlen Drive / Sawtelle Boulevard (stop-controlled)

(Note: During the Mid-Term Phase, proposed internal roadway changes would result in reconfiguration and/or shifting of intersections 26, 27, 32, and 33. However, for simplicity and continuity, the existing names for these intersections have been retained in the Mid-Term and Long-Term analyses.)

In addition, the following 10 internal street segments, also denoted on Figure 3, were evaluated for on-site traffic circulation:

1. Patton Avenue north of Bonsall Avenue
2. Bonsall Avenue bet. Arnold Avenue & Vandergrift Avenue
3. Nimitz Avenue bet. MacArthur Avenue & Bonsall Avenue
4. Constitution Avenue east of David Avenue
5. Bonsall Avenue bet. Pershing Avenue & Grant Avenue
6. Dewey Avenue bet. Eisenhower Avenue & Grant Avenue
7. Eisenhower Avenue bet. Dewey Avenue & Bonsall Avenue
8. Bonsall Avenue bet. Eisenhower Avenue & Wilshire Boulevard Westbound Ramps

9. Bonsall Avenue bet. Wilshire Boulevard Eastbound Ramps & Dowlen Drive
10. Sawtelle Boulevard bet. Dowlen Drive & Ohio Avenue

Existing peak-hour traffic volumes for the 33 study intersections were obtained from traffic counts conducted on September 29, 2015. Existing traffic volumes for the 10 internal roadway segments were obtained from 24-hour traffic counts that were also conducted on the same day. It should be noted that these counts include traffic generated by UCLA, which began its fall quarter on September 24. UCLA is a major traffic generator in the study area. The existing intersection volumes are depicted in Figures C-1 and C-2, Appendix C. (The traffic count data sheets are contained in Appendix E.)

Project Trip Generation, Distribution & Assignment

Development of the Project involves four phases, with existing buildings changing uses or being removed, new buildings being constructed, some uses being relocated from the North Campus to the South Campus, and some access points and internal roadways being added or modified. To estimate the Project trip generations associated with the development changes, trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition manual and the West Los Angeles Transportation Improvement and Mitigation (WLA TIMP) were used. As the Project site is within the boundaries of the WLA TIMP area, PM peak-hour trips were calculated according to the trip rates in Table A-5, Appendix A, to the extent feasible. ITE trip rates were used for the calculation of daily and AM peak-hour trips, and for PM peak-hour trips where no appropriate WLA TIMP trip rates could be identified. In cases where Project uses were not found in the ITE manual or the WLA TIMP, the trip rates for an alternative use exhibiting similar operational and/or trip-making characteristics were assumed. For the proposed Columbarium, the ITE "Cemetery" trip rates were used, which were increased by an assumed factor of 10 due to this facility having significantly more capacity per acre to store remains than a typical cemetery.

Appendix A contains the detailed trip generation estimates for the four Project development phases. It also includes the trip generation rates and assumptions used to estimate Project trips. These trip generations were reduced 15 to 20 percent for the Immediate, Short-Term and Mid-Term Phases to account for above-average transit usage due to the excellent and improving transit service along the Wilshire Boulevard corridor and elsewhere in this area, as well as anticipated below average vehicle ownership by Veterans inhabiting the Project. (This would also reduce the parking demand for those buildings inhabited by Veterans). The Westside Subway Extension Project, which is currently programmed to be completed during the Long-Term Phase, would be expected to further increase transit usage. As a result, for this analysis, it was estimated that there would be an approximate 25 percent in Long-Term Project

trips due to the increased transit usage and below average vehicle ownership by Veterans. This 25 percent factor was also applied to the proposed Project use trips in the Immediate, Short-Term and Mid-Term Phases when these three phases were analyzed together with the Long-Term Phase. Table 1 summarizes the net Project trip generation by phase and for all four phases combined. As shown, it is estimated that upon completion, the Project would generate approximately 8,428 net trips per day, including 486 net AM and 180 net PM peak-hour trips.

TABLE 1
NET PROJECT TRIP GENERATION

Phase	Daily	AM Peak Hour I/B	AM Peak Hour O/B	PM Peak Hour I/B	PM Peak Hour O/B
Immediate					
North Campus	284	-30	48	26	-32
South Campus	N/C	N/C	N/C	N/C	N/C
Total	*284*	*-30*	*48* *[18]*	*26*	*-32* *[-6]*
Short Term					
North Campus	-527	-150	111	35	-178
South Campus	N/C	N/C	N/C	N/C	N/C
Total	*-527*	*-150*	*111* *[-39]*	*35*	*-178* *[-143]*
Mid Term					
North Campus	4,881	-161	359	262	-116
South Campus	3,872	259	131	82	164
Total	*8,753*	*98*	*490* *[588]*	*344*	*48* *[392]*
Long Term					
North Campus	2,173	-17	98	90	2
South Campus	360	41	6	6	44
Total	*2,533*	*24*	*104* *[128]*	*96*	*46* *[142]*
Combined Phases					
North Campus	6,811	-358	616	413	-324
South Campus	4,232	300	137	88	208
Total	*11,043*	*-58*	*753* *[695]*	*501*	*-116* *[385]*
Combined Phases With With Additional Transit Reduction Applied to Immediate - Mid-Term Phases Due to Westside Subway Extension					
North Campus	6,129	-379	578	386	-356
South Campus	2,299	201	86	37	113
Total	***8,428***	***-178***	***664*** ***[486]***	***423***	***-243*** ***[180]***

Below is the general regional distribution estimated for Project trips. This distribution was based on the nature of the Project uses; existing traffic patterns; characteristics of the surrounding roadway system; geographic location of the Project site and its proximity to freeways and major travel routes; and areas expected to be origins or destinations of Project users.

TABLE 2
ESTIMATED PROJECT REGIONAL TRIP DISTRIBUTION

North: 22%	South: 31%	East: 31%	West: 16%

This directional distribution was used to estimate the trip assignment routes and intersections traversed by existing and proposed uses accessing the Project site. Project site access and internal circulation changes that would occur during the Mid-Term and Long-Term Phases were considered in this process. The resulting inbound and outbound existing and proposed use trip assignment percentages for the study locations are illustrated in Figures B-1 through B-12 in Appendix B. Applying these percentages to the Project trip generations, the net Project peak-hour traffic volumes at the study locations were determined. These volumes are shown in Figures C-9 through C-16 in Appendix C.

Cumulative Development Traffic Volumes

The analysis of future traffic conditions included potential traffic volume increases attributable to other projects and developments that may occur in the surrounding area. To estimate these volume increases, a traffic volume growth factor of 1.0 percent per year was used. This growth factor is approximately four times the average growth factor of 0.245 percent per year determined from the 2010 Los Angeles County Congestion Management Program (CMP) for Regional Statistical Area (RSA) 16, the RSA containing the Project site. Use of the 1.0 percent factor provided a more conservative basis for estimating future traffic volumes than the CMP growth factor. (Note: This growth factor methodology was utilized to estimate future cumulative traffic volumes, as the approved work scope for the traffic analysis did not authorize consultation with local surrounding jurisdictions to obtain information regarding specific potential projects and developments in the area.)

The 1.0 percent factor, compounded annually, was applied to the existing traffic volumes of the study intersections external to the Project site. For the study intersections of Constitution Avenue / Sepulveda Boulevard and Ohio Avenue / Sawtelle Boulevard, which adjoin the site, this growth factor was applied to only those existing volumes not entering or exiting the site. Also, as traffic volume increases due to outside development would not be expected to add to internal site volumes, no growth factor was applied to internal study intersection and roadway segments. The resulting Future “Without Project” study intersection volumes for the years 2018, 2026 and 2045 are shown in Figures C-3 through C-8, Appendix C.

Existing & Future With Project Traffic Volumes

The net Project volumes, per Figures C-9 through C-16, Appendix C, were added to the Existing and Future Without Project volumes in Figures C-1 and C-2 and C-3 through C-8, Appendix C, respectively. This produced the peak-hour intersection volumes for the Existing and Future "With Project" scenarios, which are depicted in Figures C-17 through C-24 and C-25 through C-30, Appendix C, respectively. (Note: If the addition of net Project trips at a study intersection resulted in a With Project through, left-turn or right-turn volume being less than 10, that With Project volume was kept at 10. However, if the existing count volume for a through, left-turn or right-turn movement was less than 10, the With Project volume was allowed to be decreased but to no less than the existing count volume for that movement.)

Signalized Intersection Analysis Methodology

As the signalized study intersections are under the operation of the City of Los Angeles, their levels of service were analyzed using the LADOT methodology. This methodology is based on the Critical Movement Analysis (CMA) procedures outlined in Circular Number 212, published in 1980 by the Transportation Research Board. This document describes procedures for determining the operating characteristics of an intersection in terms of the "Level of Service" provided for different levels of traffic volume and other variables, such as the number of critical signal phases and traffic lanes.

The term "Level of Service" (LOS) describes the quality of traffic flow, ranging from excellent conditions at LOS A to failure conditions at LOS F. LOS D is recognized by many cities as an acceptable service level in urban areas. The LOS at an intersection can be determined by first dividing the sum of the critical movement volumes by the capacity of that intersection, resulting in a volume-to-capacity (V/C) ratio. Using Table 3 below, the LOS corresponding to a V/C ratio can be identified.

TABLE 3
SIGNALIZED INTERSECTIONS
LEVELS OF SERVICE
AS A FUNCTION OF V/C RATIOS

Level of Service	Description of Operating Characteristics	Range of V/C Ratios
A	Excellent. No vehicle waits longer than one red light.	0.000 - 0.600
B	Very Good. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles	0.601 - 0.700
C	Good. Occasionally, drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	0.701 - 0.800
D	Fair. Delays may be substantial during portions of the rush hour, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	0.801 - 0.900
E	Poor. Represents the most vehicles that intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	0.901 - 1.000
F	Failure. Backups from nearby intersections or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	> 1.000

The CMA methodology does not account for signal timing enhancements, however, which can increase the capacity of an intersection. The signalized study intersections are currently operating under the City of Los Angeles' Automated Traffic Surveillance and Control (ATSAC) / Adaptive Traffic Control System (ATCS), a highly sophisticated computerized system that continually monitors traffic demand at signalized intersections within the system and modifies signal timing to maximize capacity and decrease overall delay. Overall, ATSAC / ATCS has been recognized to increase intersection capacity by approximately 10 percent. Accordingly, the calculated V/C ratios for the signalized study intersections were adjusted downward by 0.100 before determining the corresponding LOS.

In addition, in order to better account for the heavy peak-period congestion and queuing on Wilshire Boulevard and Santa Monica Boulevard, which limit traffic volume throughput, intersection capacities were adjusted at the signalized study intersections along both streets. Based on recent AM and PM peak-hour observations, the intersection capacities were reduced as follows:

1,000 vehicles per hour at Wilshire Boulevard intersections from San Vicente Boulevard-Federal Avenue to Westwood Boulevard/ San Vicente Boulevard-Federal Avenue; Wilshire Boulevard / Sepulveda, and Santa Monica Boulevard intersections from Sawtelle Boulevard to Sepulveda Boulevard; and

1,100 vehicles per hour at Wilshire Boulevard / Bundy Drive, Wilshire Boulevard / Barrington Avenue, Santa Monica Boulevard / Barrington Avenue, Santa Monica Boulevard / Federal Avenue, and Santa Monica Boulevard / Veteran Avenue

Unsignalized Intersection Analysis Methodology

The Highway Capacity Manual (HCM) methodology for stop-controlled intersections was used to analyze the eight internal study intersections, all of which are unsignalized. The HCM methodology calculates delay, in seconds per vehicle for each approach and for the intersection as a whole, for which a corresponding LOS is determined. Intersections with volumes that are at or near capacity experience greater congestion and longer vehicle delays. The Highway Capacity Software (HCS) 2010 Program was used to analyze the unsignalized study intersections. Table 4 summarizes the determination of Levels of Service for unsignalized intersections based on stop-controlled intersection (average) delay.

TABLE 4
UNSIGNALIZED INTERSECTIONS LEVELS OF SERVICE
AS A FUNCTION OF STOP-CONTROLLED INTERSECTION DELAY

LOS	Stop-Controlled Intersection Delay (sec/veh)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Existing & Future Intersection LOS Analyses

Based on the methodologies, procedures, assumptions, and adjustments described in the preceding section, the Existing and Future LOS intersection conditions were analyzed for the scenarios listed below. As previously determined, the peak-hour volumes for these scenarios are presented in Figures C-1 through C-30, Appendix C.

Existing (2015)
Existing (2015) With Project
- With Immediate Phase
- With Immediate & Short-Term Phases
- With Immediate, Short-Term & Mid Term Phases
- With Immediate, Short-Term, Mid-Term & Long-Term Phases

Future (2018) Without Project
Future (2018) With Project
- With Immediate & Short-Term Phases

Future (2026) Without Project
Future (2026) With Project
- With Immediate, Short-Term & Mid-Term Phases

Future (2045) Without Project
Future (2045) With Project
- With Immediate, Short-Term, Mid-Term & Long-Term Phases

The results of the LOS analyses for the above scenarios are summarized in Table 5. (The LOS calculation worksheets are contained in Appendix F.)

As shown, 13 of the 25 off-site study intersections are currently operating at LOS E or F during one or both peak hours. This includes all of the study intersections along Wilshire Boulevard, most of the study intersections along Santa Monica Boulevard, and the study intersection of Sunset Boulevard / Barrington Place. The internal study intersection of Wilshire Boulevard Eastbound Ramps / Bonsall Avenue is operating at LOS D during the PM peak hour. With the addition of Project trips to existing volumes, conditions would deteriorate, but no additional external intersection at LOS E or F is forecast. The internal intersection of Wilshire Boulevard Eastbound Ramps / Bonsall Avenue would deteriorate to LOS E / F, and the internal intersection of Wilshire Boulevard Westbound Ramps / Bonsall Avenue would fall from LOS B to LOS D during the AM peak hour.

Under Future conditions, without Project traffic, LOS E and F conditions are forecast for one or both peak hours at 13 study intersections by 2018, 16 study intersections by 2026 and 22 study intersections by 2045. All of these are off-site intersections. One internal study intersection, Wilshire Boulevard Eastbound Ramps / Bonsall Avenue, would be at LOS D during the PM peak hour. With the addition of Project traffic, there would be no increase in the number of study intersections operating at LOS E or F. However, the internal intersections of Wilshire Boulevard Eastbound Ramps / Bonsall Avenue and Wilshire Boulevard Westbound Ramps / Bonsall Avenue would worsen to LOS E / F during the PM peak hour and LOS D during the AM peak hour, respectively.

Table 5, Intersection LOS Summary

Intersection Significant Impact Criteria & Impacts

The LADOT significant impact criteria for signalized intersections were applied to the 25 signalized study intersections. Under these criteria, a significant impact is identified as an increase in the V/C ratio, due to project-related traffic, of 0.010 or more when the final (with project) LOS is E or F; a V/C increase of 0.020 or more when the final LOS is D; or an increase of 0.040 or more when the final LOS is C. No significant intersection impact is identified when the final LOS is A or B.

LADOT does not have significant impact criteria for stop-controlled intersections. For purposes of this analysis, it was assumed that a significant traffic impact attributable to a project would occur at an all-way stop-controlled intersection if the average intersection delay were 4.0 seconds or more when the final LOS is D, or 3.0 seconds or more when the final LOS is E or F. For a non-all-way stop-controlled intersection, a significant impact was assumed to occur if the stop-controlled approach or critical turning movement degraded to LOS E or F and its delay increased by 6.0 seconds or more due to a project's additive traffic.

Based on these criteria, under Existing conditions, the addition of cumulative Project trips per the Mid-Term and Long-Term Phase scenarios would result in significant traffic impacts at up to 13 study intersections, i.e., 11 off-site and two internal intersections, during one or both peak hours. Under Future conditions, these same off-site and internal intersections would be significantly impacted by the addition of cumulative Project trips per the Mid-Term and Long-Term Phase scenarios, plus one additional off-site intersection, for a total of 14 significantly impacted intersections. These significantly impacted intersections are listed below.

Significantly Impacted Study Intersections

Sunset Boulevard / Barrington Place
Wilshire Boulevard / Bundy Drive
Wilshire Boulevard / Barrington Avenue
Wilshire Boulevard / Sepulveda Boulevard
Wilshire Boulevard / Veteran Avenue
Wilshire Boulevard / Gayley Avenue-Midvale Avenue
Ohio Avenue / Sepulveda Boulevard
Santa Monica Boulevard / Barrington Avenue
Santa Monica Boulevard / Sawtelle Boulevard
Santa Monica Boulevard / I-405 Southbound Ramps-Beloit Avenue
Santa Monica Boulevard / I-405 Northbound Ramps-Cotner Avenue
Santa Monica Boulevard / Sepulveda Boulevard
Wilshire Boulevard Westbound Ramps / Bonsall Avenue
Wilshire Boulevard Eastbound Ramps / Bonsall Avenue

The significant impacts would be mostly at intersections along Wilshire Boulevard and Santa Monica Boulevard. The significant impact at the intersection of Sunset Boulevard / Barrington Place is attributable to the north-south internal roadway being extended northerly through the site and intersecting Barrington Place, resulting in more Project trips accessing the site via Barrington Place. Significant Project impacts were not determined for Immediate and Short-Term Phase conditions, which is largely due to the proposed uses generating fewer trips than the existing uses being removed or replaced during those phases.

Roadway Segment Analysis

The 10 internal roadway segments were analyzed in terms of existing daily traffic volumes and the relative percentage change to these volumes as a result of Project site development. As previously mentioned, no traffic growth factor was applied to internal site volumes, as trips generated by outside development would not be expected to be added to the internal roadways. Table 6 shows the existing daily volumes on these study segments, along with the estimated cumulative daily volumes added by the Project phases.

Bonsall Avenue and Sawtelle Boulevard function as collector streets, which generally have a design capacity in the range of 5,000 to 7,500 vehicles per day. However, depending on the circumstances, the upper limit of this range can often be exceeded while still providing acceptable traffic flow. Although existing daily volumes on some segments of Bonsall Avenue and Sawtelle Boulevard are in range of the 6,900 - 8,200 vehicles per day, no significant traffic problems were observed on either street.

The combined Immediate, Short-Term, Mid-Term, and Long-Term Phases would add large daily traffic increases to the most heavily used segments of Bonsall Avenue, and to Sawtelle Boulevard. As shown in Table 6, it is estimated that the Project-related increases on Bonsall Avenue between Eisenhower Avenue and Dowlen Drive, and Sawtelle Boulevard between Dowlen Drive and Ohio Avenue would be approximately 20 to 27 percent. It is anticipated that these segments would not be able to accommodate the additive volumes without traffic flow being adversely affected.

This would be due to not only the large volumes increases, but also the worsened service levels at the adjacent intersections, which affect the upstream and downstream traffic flow of these segments. The intersections of Wilshire Boulevard Eastbound Ramps / Bonsall Avenue and Ohio Avenue / Sawtelle Boulevard are forecast to be operating at LOS E, the former in the PM peak hour and the latter in AM peak hour. In addition, the intersection of Wilshire Boulevard Westbound Ramps / Bonsall Avenue would be at LOS D during the AM peak hour. To improve conditions, measures should be taken to increase the capacities of these internal segments and/or intersections, or to reduce traffic demand at these locations.

TABLE 6
ROADWAY SEGMENT ANALYSIS

Roadway Segment	Existing Vol.	Proj. Phase(s)	Proj. Phase(s) Vol.	Existing With Proj. Phase(s) Vol.	% Proj. Related Change
MacArthur Ave.	235	I	0	235	0.0%
n/o Bonsall Ave.		I, ST	0	235	0.0%
		I, ST, MT	456	691	194.0%
		I, ST, MT, LT	924	1,159	393.2%
Bonsall Ave.	2,290	I	268	2,558	11.7%
bet. Arnold Ave. & Vandergrift Ave.		I, ST	1,054	3,344	46.0%
		I, ST, MT	249	2,539	10.9%
		I, ST, MT, LT	1,883	4,173	82.2%
Nimtz Ave.	1,795	I	0	1,795	0.0%
w/o Bonsall Ave.		I, ST	-139	1,656	-7.7%
		I, ST, MT	1,364	3,159	76.0%
		I, ST, MT, LT	1,483	3,278	82.6%
Constitution Ave.	3,050	I	147	3,197	4.8%
e/o Bonsall Ave.		I, ST	424	3,474	13.9%
		I, ST, MT	945	3,995	31.0%
		I, ST, MT, LT	1,481	4,531	48.6%
Bonsall Ave.	4,083	I	132	4,215	3.2%
bet. Pershing Ave. & Grant Ave.		I, ST	-720	3,363	-17.6%
		I, ST, MT	-1,043	3,040	-25.5%
		I, ST, MT, LT	-60	4,023	-1.5%
Dewey Ave.	747	I	0	747	0.0%
bet. Eisenhower Ave. & Grant Ave.		I, ST	0	747	0.0%
		I, ST, MT	20	2,539	2.7%
		I, ST, MT, LT	309	4,173	41.4%
EisenhowerAve.	1,322	I	-31	1,291	-2.3%
bet. Dewey Ave. & Bonsall Ave.		I, ST	-31	1,291	-2.3%
		I, ST, MT	-75	1,247	-5.7%
		I, ST, MT, LT	-75	1,247	-5.7%
Bonsall Ave.	7,999	I	154	8,153	1.9%
bet. Eisenhower Ave. & Wilshire		I, ST	-494	7,505	-6.2%
Blvd. WB Ramps		I, ST, MT	1,287	9,286	16.1%
		I, ST, MT, LT	2,164	10,163	27.1%
Bonsall Ave.	8,241	I	-77	8,164	-0.9%
bet. Wilshire Blvd. EB Ramps &.		I, ST	-454	7,787	-5.5%
Dowlen Dr.		I, ST, MT	1,069	9,310	13.0%
		I, ST, MT, LT	1,612	9,853	19.6%
Sawtelle Blvd.	6,905	I	-77	6,828	-1.1%
bet. Dowlen Dr. & Ohio Ave.		I, ST	-454	6,451	-6.6%
		I, ST, MT	1,224	8,129	17.7%
		I, ST, MT, LT	1,795	8,700	26.0%

I = Immediate Phase; ST = Short-Term Phase; MT = Mid-Term Phase; LT = Long-Term Phase

Congestion Management Program (CMP) Traffic Analysis

The CMP requires that a traffic impact analysis be prepared for CMP monitoring intersections where a project would likely add 50 or more peak-hour trips. The nearest such monitoring intersections are Wilshire Boulevard / Sepulveda Boulevard, Wilshire Boulevard / Beverly Glen Boulevard, Santa Monica Boulevard / Bundy Drive, and Santa Monica Boulevard / Westwood Boulevard. A review of the trips generated by the completed Project and extrapolation of the Project trip distribution pattern determined that the Project peak-hour contributions would be no more than 34 trips to the intersection of Wilshire Boulevard / Beverly Glen Boulevard, 22 trips to the intersection of Santa Monica Boulevard / Bundy Drive, and approximately 29 trips to the intersection of Santa Monica Boulevard / Westwood Boulevard. These additive Project trips are below the 50 trips threshold and, therefore, no detailed intersection impact analysis for CMP purposes is required.

The completed Project would add up to 111 net peak-hour trips to the CMP monitoring intersection of Wilshire Boulevard / Sepulveda Boulevard, which exceeds the CMP 50 trips threshold. As this is also a study intersection, it has already been analyzed in detail, with the determination that it would be significantly impacted by Project trips during the AM and PM peak hours.

The CMP also requires a traffic impact analysis to be conducted for any CMP freeway monitoring segments where a project is expected to add 150 or more peak-hour trips in either direction. The freeway monitoring segments nearest the Project site are I-405 south of Mulholland Drive, I-405 north of Venice Boulevard, I-10 at Lincoln Boulevard, and I-10 east of Overland Avenue. It is estimated that the net peak-hour trips added by the completed Project would be no more than 48 trips to I-405 south of Mulholland Drive, 97 trips to I-405 north of Venice Boulevard, 24 trips to I-10 at Lincoln Boulevard, and 73 trips to I-10 east of Overland Avenue. These Project trip additions are below the 150 trips threshold and, therefore, a more detailed CMP freeway impact analysis is not required.

Congestion Management Program (CMP) Transit Analysis

A transit impact analysis was performed using the CMP transit impact review guidelines. The methodology involves calculation of the person trips generated by the Project using an average vehicle ridership (AVR) factor of 1.4 to convert vehicle trip to transit person trips. As previously described, reductions due to transit were applied to the vehicle trips generated by each Project phase. These vehicle trip reductions ranged from 15 to 25 percent, depending on the Project use (see Table A-1 through A-4, Appendix A). These reductions were consistent with LADOT's transit credit policy for traffic analyses. As shown in Table 7, the Long-Term phase would generate the most transit demand of 7,827 daily person trips, including 591 AM peak-hour and 477 PM peak-hour trips.

TABLE 7
ESTIMATED PERSON TRIPS CORRESPONDING TO
PROJECT VEHICLE TRIP REDUCTIONS DUE TO TRANSIT USAGE

Phase			Daily	AM Peak Hour	PM Peak Hour
Immediate	Vehicle Trip Reductions:	Existing	-102	-8	-13
		Proposed	240	18	18
			138	10	5
	Person Trips per 1.4 Conversion Factor		193	14	7
Short-Term	Vehicle Trip Reductions:	Existing	-684	-51	-82
(Incl. preceding		Proposed	867	65	65
Phase)			183	14	-17
	Person Trips per 1.4 conversion Factor		256	20	-24
Mid-Term	Vehicle Trip Reductions:	Existing	-3,312	-267	-319
(Incl. preceding		Proposed	5,559	424	408
Phases)			2,247	157	89
	Person Trips per 1.4 Conversion Factor		3,146	220	125
Long-Term	Vehicle Trip Reductions:	Existing	-3,396	-283	-338
(Incl. preceding		Proposed	9,087	705	679
Phases)			5,591	422	341
	Person Trips per 1.4 Conversion Factor		7,827	591	477

Approximately 46 to 55 buses, including larger capacity Metro Rapid buses, directly serve or travel proximate to the Project site during the peak hours. Additionally, the Metro Westside Subway Extension Westwood/VA Station is anticipated to be open during the Project's Long-Term Phase. This would provide a substantial increase in transit capacity that would serve the Project site. During the peak hours, the Westside Subway Extension is scheduled to have four-minute headways, or approximately 15 trains every hour. Based on a review of existing transit and future subway operations, the estimated transit capacity serving or traveling proximate to the Project site would be 30,802 persons per hour during the AM peak hour (the highest estimated transit usage by the Project).[1] The 591 Project person trips forecast to use transit during the highest peak hour would use 1.9 percent of the overall capacity. As this percentage is relatively low, the impact on transit attributable to the additional ridership generated by the Project is not anticipated to be significant.

[1] Per the Westside Subway Extension Final Environmental Impact Report, Metro, March 2012, the subway capacity is up to 14,000 passengers/hour/direction. For bus capacities, 45-foot bus capacity includes 46 seats and upwards of 60 passengers with 1.3 load factor, and 60-foot bus capacity includes 57 seats and upwards of 74 passengers with 1.3 load factor. Estimate of overall capacity based on the following:

- Westside Subway Extension = 14,000 X 2 = 28,000
- Rapid Bus Line = 3 (60-foot buses) X 74 = 222
- Local Bus Line = 43 (45-foot buses) X 60 = 2,580

PARKING FACILITIES

Existing Conditions Analysis

In August 2015, Crain & Associates conducted a parking inventory and parking utilization survey on the North Campus. There are currently 1,882 parking spaces on the North Campus, excluding spaces for motorcycle parking and spaces leased to private entities. The survey found the peak parking utilization on the North Campus to be 1,212 spaces, leaving a surplus of 670 spaces.

As part of its analysis of the proposed Bed Care Tower project, Walker Parking Consultants (WPC) inventoried the parking supply on the South Campus.[2] This inventory, conducted in October 2013, arrived at a parking supply of 2,023 spaces, excluding motorcycle and leased parking spaces. WPC observed "over capacity" conditions on the South Campus parking supply estimated the existing peak parking utilization to be approximately 2,225 spaces, i.e., approximately 10 percent more than the supply. The WPC parking supply and peak utilization numbers have been assumed as representative of existing conditions on the South Campus. Summaries of existing parking conditions on the North and South Campuses are provided in Tables D-1 and D-2, Appendix D.

Future Conditions Analysis

Table D-3 in Appendix D contains the detailed future parking demand analysis for the North Campus, as prepared by Crain & Associates. This analysis assumed Project completion and was based primarily on two parking demand rate sources. For housing and domiciliary uses on the North Campus, the parking ratio of 0.75 spaces per dwelling unit or bed, as proposed by the Master Plan architect, HOK, was assumed. For the other facilities and uses on the North Campus, whether new, renovated or remaining, parking demand rates in Parking Generation, 4th Edition, published by ITE, were assumed. The ITE parking demand rates, which are widely used by traffic engineering professionals, cover a variety of uses, including hospital, medical office, general office, and assisted living. To account for the effects of increased transit usage, below average vehicle ownership and other factors, reductions were applied to the ITE parking demand rates that were consistent with the reductions applied to the ITE trip generation rates. From this analysis, it was determined that the North Campus peak parking demand would be approximately 2,553 spaces.

[2] VA WLA Clinical Addition and Building Renovations to Building 500 Section 1.c. Parking Studies, Walker Parking Consultants, October 2013.

WPC prepared a parking demand forecast spaces for the South Campus, which included completion of the Bed Care Tower project. This forecast was based largely on the updated VA Parking Demand Model and information that could be provided to WPC at the time of their October 2013 analysis. WPC indicated that several fields in the VA Parking Demand Model remained incomplete or had to be estimated. Excluding motorcycle and leased parking spaces, WPC calculated a future parking demand of 2,306 spaces for the South Campus, an increase of 81 spaces above the existing parking utilization of 2,225 spaces.

WPC remarked that given the large size of the Bed Care Tower project, approximately 450,000 square feet, which is an approximate 50 percent increase over the existing 900,000 square-foot medical tower, an 81-space increase in parking demand seemed low based on typical medical industry parking norms. On the other hand, WPC commented that if the Bed Care Tower project were related more to increasing the quality of care and the patient experience by reducing overcrowding in the existing facilities, as opposed to increasing services and patient capacity (and, therefore, would not result in net new uses, staff, patients or visitors), it would be reasonable that the increase in parking demand would be relatively low.

For purposes of comparison, Crain & Associates prepared a detailed future parking demand analysis for the South Campus, which is also contained in Table D-3, Appendix D. As with the North Campus analysis, ITE parking demand rates were applied and adjusted to account for increased transit usage, including due to the Westside Subway Extension and VA Station, and other factors that consistent with the reductions applied to the ITE trip generation rates. Under this methodology, the South Campus parking demand would be approximately 2,583 spaces upon Project completion.

Development, internal roadway changes and other activities would remove or impact many of the existing parking facilities. No information could be found for either campus identifying how much existing parking would be lost or replaced, or how much new parking would be constructed. Table 8 below, which summarizes the parking analysis results for Existing and Future conditions, provides an indication of the amount of parking needed.

TABLE 8
PARKING ANALYSIS SUMMARY

	Existing Supply	Existing Utilization	Existing Surplus/Deficit	Future Demand	Future Deficit
North Campus	1,882	1,212	+670	2,553	-671
South Campus	2,023	2,225	-202	2,306 to 2,583	-283 to -560
Overall Total	3,905	3,437	+468	4,859 to 5,136	-954 to -1,231

FINDINGS

The Project site has excellent access to the regional freeway, arterial and local street systems. The site is also well-served by numerous public transit operators.

Thirteen (13) of the 33 study intersections are currently operating at poor service levels, i.e., LOS E or F, during one or both peak hours. The 13 intersections include all of the study intersections along Wilshire Boulevard, most of the study intersections along Santa Monica Boulevard, and the study intersection of Sunset Boulevard / Barrington Place. Of the on-site study intersections, the intersection of Wilshire Boulevard / Bonsall Avenue Eastbound Ramps is experiencing the poorest service level, LOS D, during the PM peak hour.

Some internal roadway segments, including segments of Bonsall Avenue and Sawtelle Boulevard, are experiencing daily volumes ranging from approximately 6,900 to 8,200 vehicles per day. However, no significant traffic problems have been observed on these more heavily used segments.

Upon completion, the Project would generate an estimated 8,428 net vehicle trips per day, including 486 trips during the AM peak hour and 180 trips during the PM peak hour. These estimated trips take into account reductions due to less intensification of buildings uses, building removals, increased transit usage over time by residents, employees and visitors, and reduced vehicle ownership by Veterans residing on-site.

The completed Project would also add an estimated 7,827 person trips to public transit, including 591 AM and 477 PM peak-hour person trips.

Overall, the North Campus has a peak parking demand of approximately 1,212 spaces, compared to an existing parking supply of 1,882 spaces (excluding motorcycle and leased parking spaces). Development and changes on the North Campus would remove or impact many of the existing parking facilities. It is estimated that upon Project completion, the peak parking demand for the North Campus would be approximately 2,553 spaces, accounting for increased transit usage by residents, employees and visitors, reduced vehicle ownership by Veteran residents, and other factors.

The South Campus has an existing parking supply of 2,023 spaces (excluding motorcycle and leased parking spaces). Its current peak parking demand of approximately 2,225 spaces is “over capacity”. Development on this campus would also remove or impact some existing parking facilities. It is forecast that the completed South Campus development would have a peak parking demand of 2,306 to 2,583 spaces, depending on the intensity of use of the new Bed Care Tower project.

CONCLUSIONS

Under Existing conditions, the addition of cumulative Project trips per the Mid-Term and Long-Term Phase scenarios would result in significant traffic impacts at up to 13 study intersections, i.e., 11 off-site and two internal intersections, during one or both peak hours. Under Future conditions, these same off-site and internal intersections would be significantly impacted by the addition of cumulative Project trips per the Mid-Term and Long-Term Phase scenarios, as well as one additional off-site intersection, for a total of 14 significantly impacted intersections.

The significant impacts would be mostly at intersections along Wilshire Boulevard and Santa Monica Boulevard. The significant impact at the intersection of Sunset Boulevard / Barrington Place is attributable to the north-south internal roadway being extended northerly through the Project site and intersecting Barrington Place, resulting in more Project trips accessing the site via Barrington Place. Significant Project impacts were not determined for Immediate and Short-Term Phase conditions, which would be largely due to the proposed uses generating fewer trips than the existing uses being removed or replaced during those phases.

Internally, the completed Project would add daily traffic volume increases of approximately 20 to 27 percent to the most heavily used segments of Bonsall Avenue, and to Sawtelle Boulevard. It is anticipated that these segments would not be able to accommodate the additive traffic without being adversely affected.

The peak-hour Project trips added to CMP monitoring intersections and freeway monitoring segments would be less than the thresholds requiring more comprehensive analysis, with the exception of the intersection of Wilshire Boulevard / Sepulveda Boulevard. As this is also a study intersection, it has analyzed in detail, with the determination that it would be significantly impacted by Project trips during both peak hours.

Based on an analysis of existing transit and future subway operations and capacity, the highest transit demand generated by the Project, an estimated 591 person trips, would use approximately 1.9 percent of the forecast capacity of 30,802 persons. As this percentage is relatively low, the Project impact on transit is not anticipated to be significant.

The parking supply of 1,882 spaces on the North Campus is more than adequate to satisfy its existing parking needs. However, much more parking would be necessary in order to satisfy the estimated future demand of 2,553 spaces and avoid parking spillover effects.

On the South Campus, the existing parking need is approximately 2,225 spaces, which is significantly more than the parking supply of 2,023 spaces. This shortfall would be exacerbated by the projected increase in parking demand to 2,306 to 2,583 spaces, depending on the intensity of use of the proposed Bed Care Tower project. Much more parking would be needed on the South Campus to accommodate this demand and avoid parking spillover.

RECOMMENDATIONS

No feasible physical mitigation measures could be identified for the 12 offsite intersections that would be significantly impacted by Project traffic. This infeasibility is attributable to one or more of the following constraints: The lack of sufficient public right-of-way that could be used for roadway widenings and the installation of additional traffic lanes; the inability to adequately accommodate other transportation facilities currently provided at or designated for impacted locations, such as bike lanes; the high cost of acquiring private property, which could also include private buildings, in order to provide sufficient right-of-way for roadway improvements; and the potentially significant secondary impacts that could result from physical measures, such as the loss of on-street parking that could not be adequately replaced.

Cognizant of the above constraints, and because sustainability, smart growth and the reduction of greenhouse gas emissions have become prime concerns for the City of Los Angeles, LADOT recommends that mitigation programs be developed that first focus on minimizing the demand for trips by single-occupant vehicles through trip reduction strategies and encouraging other modes of travel, such as public transit and bicycling. LADOT recommends that the mitigation categories, listed below in priority order, be considered in transportation mitigation proposals. More detailed descriptions and explanations regarding these mitigation categories are provided in Appendix G, which contains relevant excerpts from LADOT's *"Traffic Study Policies & Procedures, August 2014"* document.

1. Transportation Demand Management (TDM) Program
2. Transit Capacity and Access Improvements
3. Parking Management Measures
4. Jobs/Housing Balance Measures
5. Traffic Signal Operational Improvements
6. Street Widening and Other Physical Improvements
7. Street Re-striping and Parking Prohibitions
8. Fair Share Contributions
9. Transportation Specific Plan Mitigation Trust Fund
10. Infeasible Mitigation Measures
11. Substitute Mitigations
12. Unmitigated Impacts

Some of the above mitigation categories may have applicability to the Project. Although it is unlikely that implementation of measures within the applicable mitigation categories would adequately mitigate all Project traffic impacts to less than significant levels, it is recommended that such measures be pursued, to the extent feasible. Such action would at least reduce those

impacts, encourage use of other transportations modes, and demonstrate that the Project is taking responsible steps to improve traffic conditions.

For the significantly impacted internal intersections of Wilshire Boulevard Eastbound Ramps / Bonsall Avenue and Wilshire Boulevard Westbound Ramps / Bonsall Avenue, it is recommended that the feasibility of installing a traffic signal in place of the all-way stop-control be studied. Traffic signals at these two intersections would increase capacity, improve service levels and mitigate their impacts to less than significant levels. The signals would also provide a means of interrupting heavy traffic flow to allow other traffic, both vehicular and pedestrian, to enter or cross. They would also better regulate and improve traffic flow along Bonsall Avenue north and south of Wilshire Boulevard.

Based on current information and the analysis herein, it is estimated that upon Project completion, approximately 4,859 to 5,136 parking spaces would be needed site-wide. In order to ensure that sufficient but not excessive parking is provided for the Project as it goes forward, it is recommended that the VA WLA prepare a parking management plan with measures and strategies to accommodate parking demand with the available parking supply as much as feasible. This plan would be periodically updated as conditions evolve.

As part of the parking management plan effort, it is recommended that a comprehensive parking study of both the North and South Campuses be conducted. This study should include the determination of empirical parking demand rates in order to more accurately gauge the actual parking demands of the site, if national parking demand rates or generalized parking models are deemed inappropriate in this case. Such a study should also reassess the location, type and accessibility of proposed parking facilities for the primary users. In addition, it should examine the return of leased parking facilities and the restriping of parking areas to yield additional spaces to satisfy parking needs.

APPENDIX A
PROJECT TRIP GENERATION ANALYSIS

APPENDIX B
PROJECT TRIP PERCENTAGES

APPENDIX C
INTERSECTION VOLUMES

APPENDIX D
PARKING ANALYSIS

APPENDIX E
TRAFFIC COUNT DATA SHEETS

APPENDIX F
LOS CALCULATION WORKSHEETS

APPENDIX G
LADOT TRAFFIC MITIGATION CATEGORIES