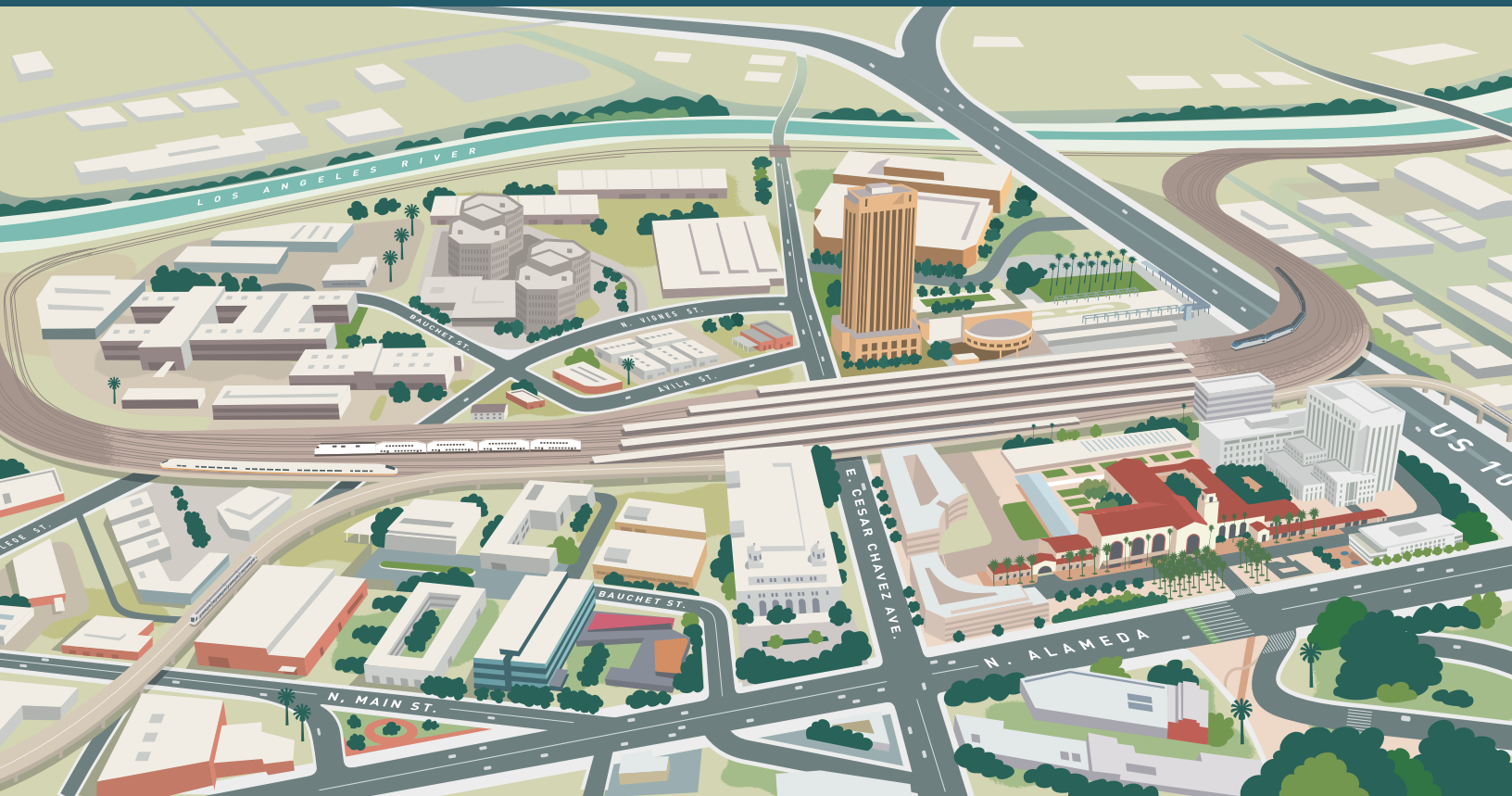


Link Union Station

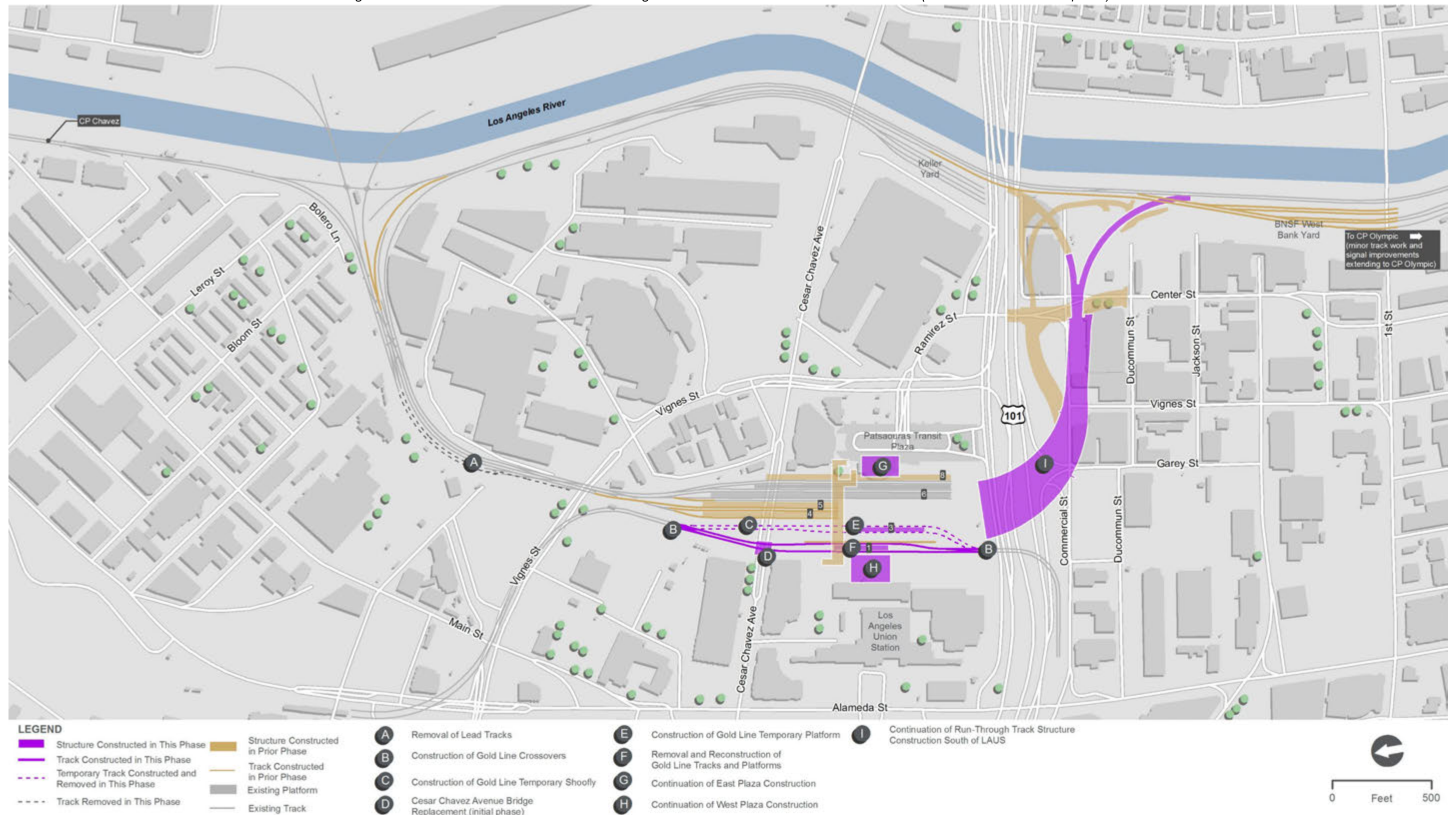
Traffic Impact Assessment

June 2019



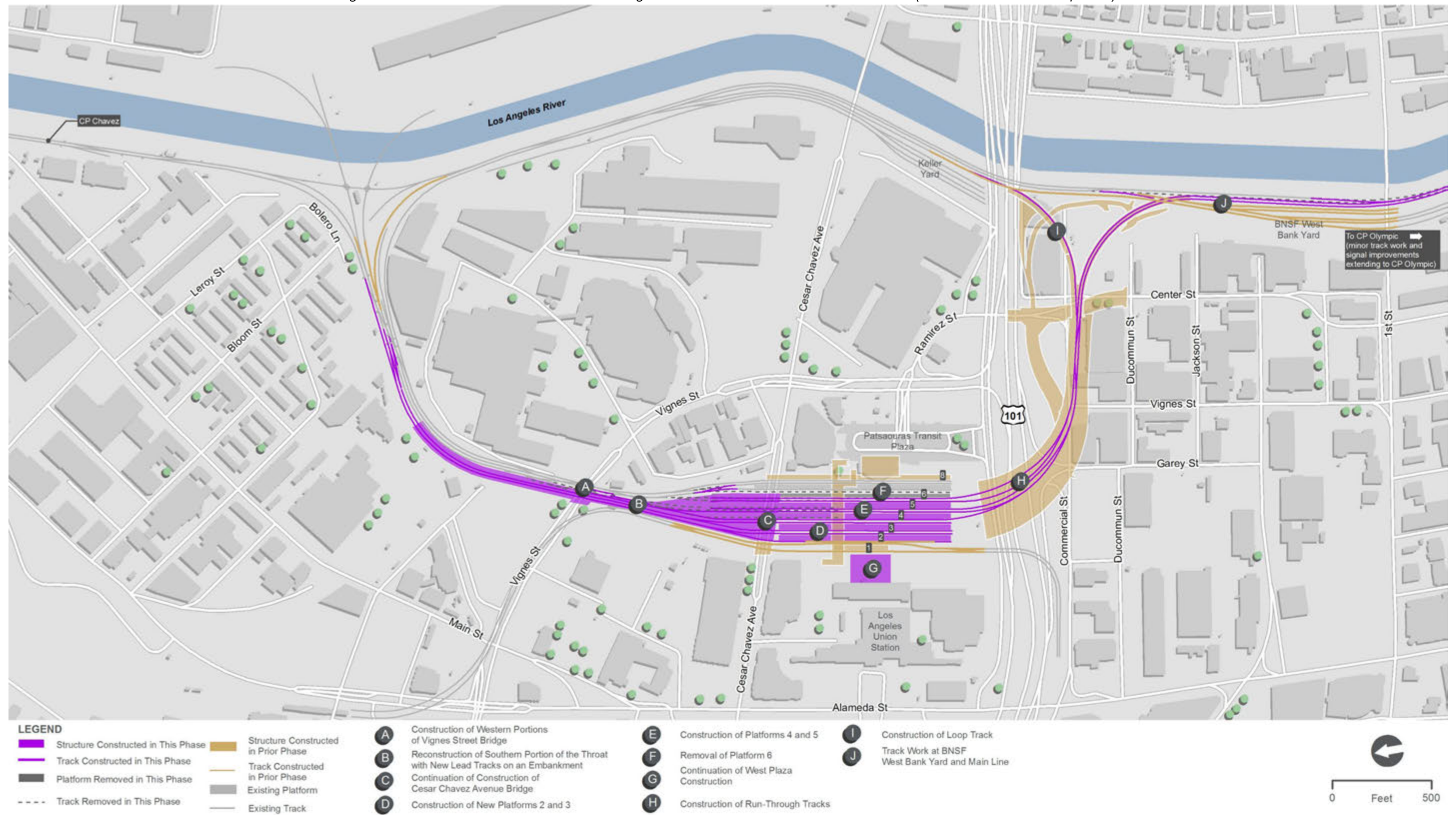
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Figure 7-11. Build Alternative with At-Grade Passenger Concourse – Detailed Construction Scenario (Phase II Construction Steps 5-7)



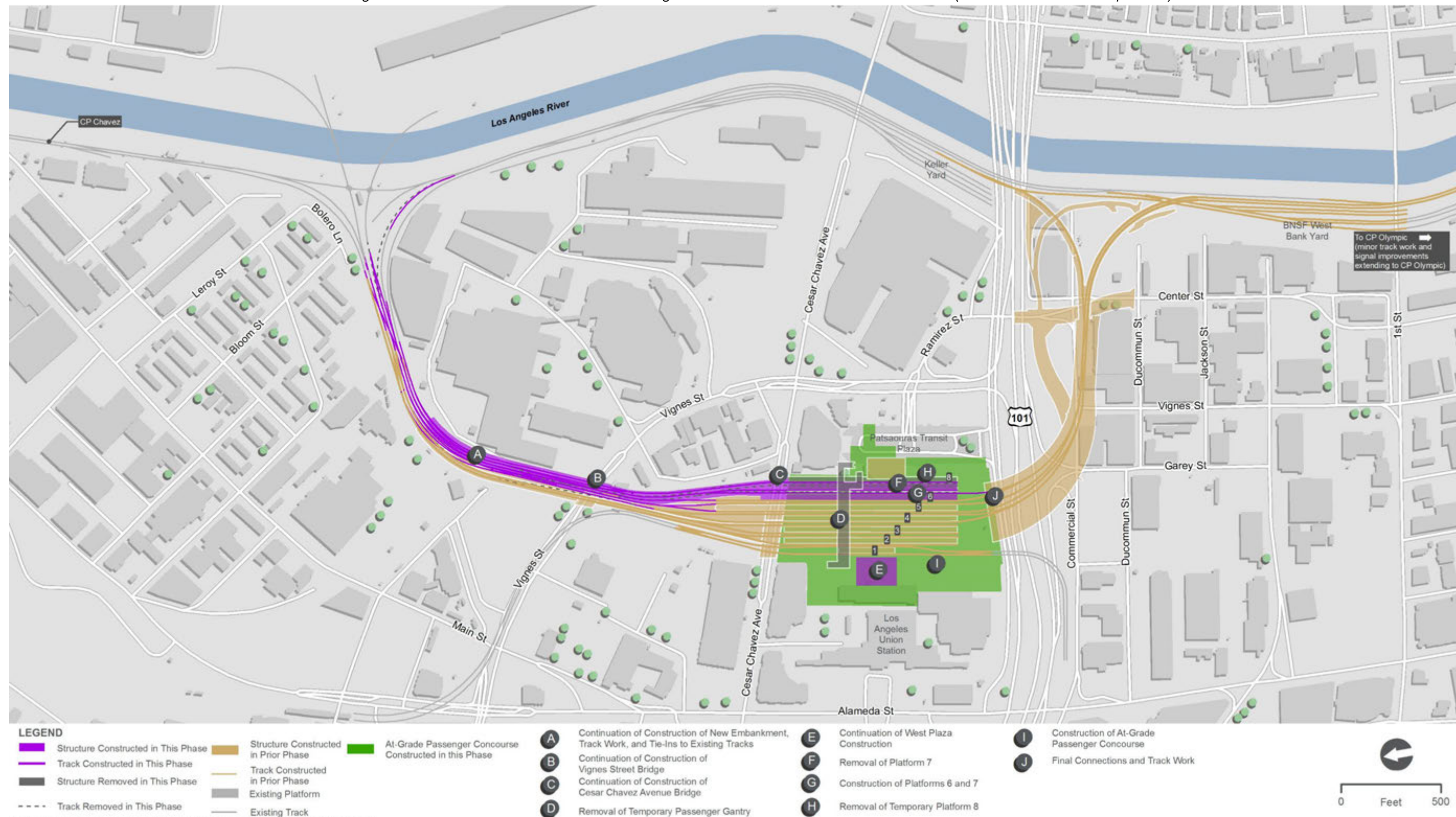
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Figure 7-12. Build Alternative with At-Grade Passenger Concourse – Detailed Construction Scenario (Phase III Construction Steps 8-12)



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Figure 7-13. Build Alternative with At-Grade Passenger Concourse – Detailed Construction Scenario (Phase IV Construction Steps 13-17)



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Figure 7-14. Potential Staging Areas



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7.4.2 Construction Detours and Street Closures

Construction of the build alternatives would require multiple phases and stages. Traffic detours for required street closures would be identified as part of a comprehensive traffic management plan. A summary of the detours and street closures in the project study area is provided below. Illustrations of the construction detours and street closures are shown on Figure 7-15, Figure 7-16, and Figure 7-17.

Segment 1: Throat Segment

The Vignes Street Bridge would be reconstructed in two portions: the westerly and easterly portions, resulting in closure of Vignes Street during the reconstruction of either portion. During this duration, traffic along Vignes Street would be rerouted along Cesar Chavez Avenue and Alameda Street, which would require a detailed traffic management plan prepared by the contractor to identify site-specific mitigation for temporary access restrictions on affected roadways.

Segment 2: Concourse Segment

A new Cesar Chavez Avenue Bridge would be constructed at the same location as the existing bridge, resulting in closure of Cesar Chavez Avenue during the demolition of the existing bridge. During this duration, traffic along Cesar Chavez Avenue would be rerouted along Vignes Street and Alameda Street, which would require a detailed traffic management plan prepared by the contractor to identify site-specific mitigation.

Segment 3: Run-Through Segment

During the lowering of the existing Center Street/Commercial Street intersection and construction of run-through track infrastructure south of US-101, the portion of Commercial Street between the US-101 ramp/Garey Street and Center Street would be subject to full closure. During this duration, traffic would be rerouted along Ducommun Street and Center Street, or Ducommun Street, Vignes Street, and the portion of Commercial Street west of the US-101 ramp/Garey Street intersection. This closure would require a detailed traffic management plan prepared to identify site-specific mitigation. Center Street would be lowered in halves so that one lane of traffic is maintained in each direction. Center Street at the superbent location would then be closed during bent construction. Metro may also consider building a temporary Center Street detour alignment east of the proposed superbent to maintain traffic and circulation.

All existing traffic lanes along the El Monte Busway and US-101 would be maintained during the peak hour throughout construction of run-through track infrastructure, although short-term overnight closures of the El Monte Busway, US-101 main line, and southbound ramps at Commercial Street would be necessary to erect and dismantle falsework during construction of the US-101 viaduct.

The US-101 main line would be closed temporarily during the night (10:00 PM to 6:00 AM) in one direction at a time during construction of the bridge superstructure. These night closures are expected to last up to 20 consecutive days. The southbound ramps at Commercial Street may be either partially or fully restricted for extended periods during construction of the US-101 viaduct over the existing on- and off-ramps.

Construction Traffic Management Plan

Prior to construction, a comprehensive construction management plan should be prepared that includes applicable diagrams, documents, drawings, and specifications that identify the steps that would be taken to demonstrate how the impacts on the local traffic mobility and circulation would be minimized to avoid significant traffic impacts during construction.

Traffic Demand Management Program

A traffic demand management program should be implemented during construction to provide a variety of additional transportation access choices in order to promote non-auto travel for construction workers. The traffic demand management program should demonstrate that the project has minimized the number of construction worker vehicles traveling to the construction areas. The traffic demand management program may consist of a project-sponsored vanpool, project shuttle, carpool program, transit fare subsidy, and other applicable programs.

7.4.3 Construction Trips

Construction of the build alternatives would require large numbers of workers and materials with equipment working simultaneously in multiple locations. The additional traffic generated during construction would consist of construction equipment, construction employee vehicles, and construction material deliveries and hauling of landfill materials in trucks. The 2031 plus project construction condition traffic volumes were developed based on the projected distribution of construction traffic between four construction phases for the build alternatives with an at-grade or above-grade passenger concourse with new expanded passageway (worst-case scenarios). The four construction phases do not consider implementation of interim improvements because these scenarios include simultaneous work in all project segments—throat, concourse, and run-through—based on the full build-out condition. Further details of the construction phases are provided in Section 7.4.4.

Construction Workers' Trips

Construction workers would arrive at and depart from the construction site during early AM peak and early PM peak hours, respectively. As a result, construction worker traffic has been added to the AM and PM peak hour traffic volumes for the 2031 plus project construction condition.

As discussed in Section 4.0, the impact evaluation provided in this traffic impact assessment is conservative, and identifies the greatest potential for project-related traffic impacts. The evaluation is based on detailed construction phasing plans for concurrent construction of new lead tracks and an elevated rail yard, the passenger concourse, and run-through track infrastructure south of LAUS with the highest daily and AM and PM peak hour project-related construction workers' trips that could occur. The average numbers of construction workers per day were taken from construction estimate information in Appendix H.

Construction Vehicle Trips

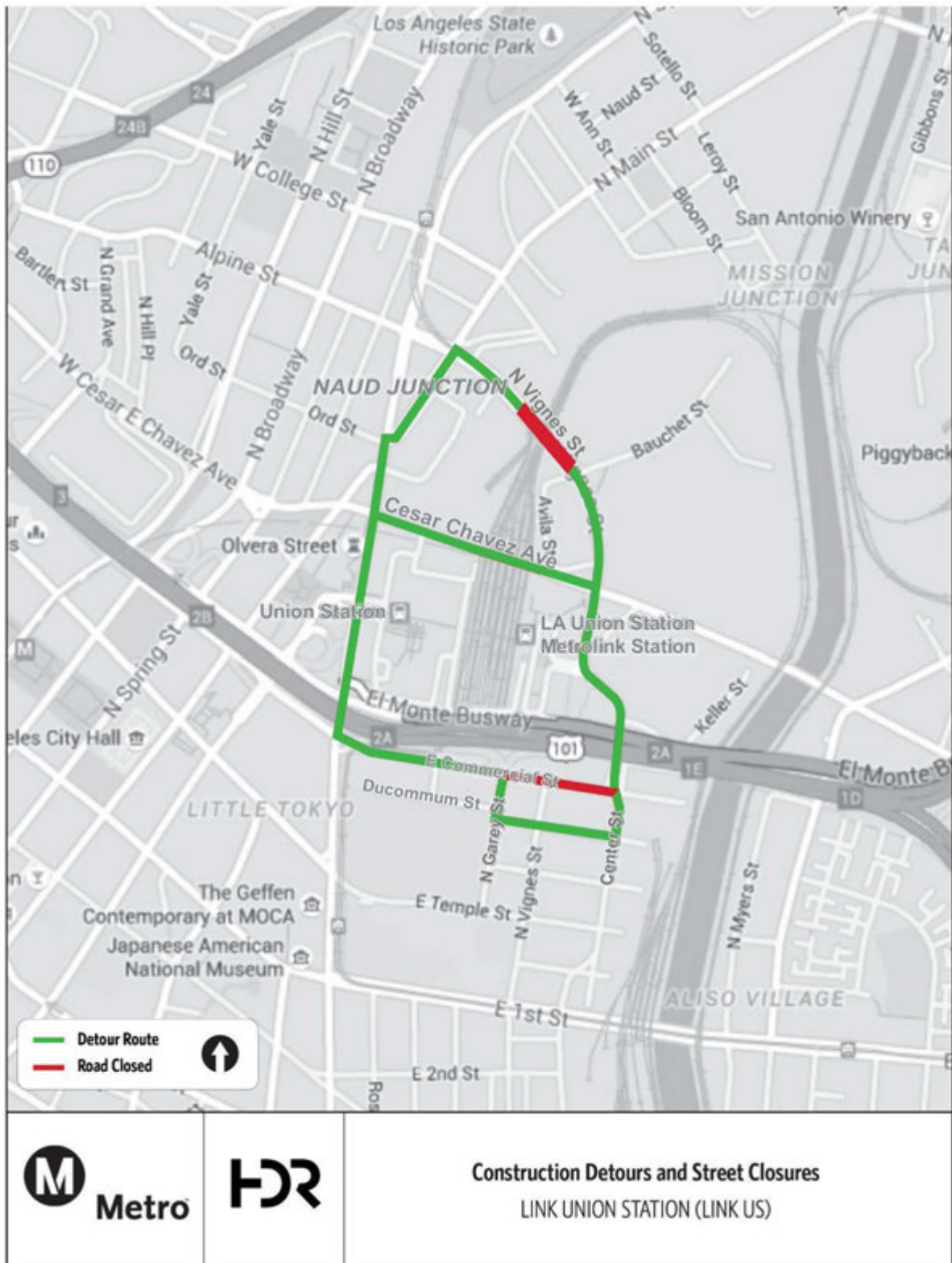
This analysis assumes that trucks would arrive and depart the construction site throughout the workday. The truck trips included in the evaluation are associated with delivery of supplies/equipment and hauling of soil/materials to the landfill site, and vary substantially between the two build alternatives and associated concourse options evaluated.

- If an at-grade passenger concourse is constructed, this traffic impact assessment assumes that a maximum of 63 trucks (or 315 passenger car equivalent) would cycle in and out of the study area and project staging areas on any given day for each construction phase. Based on this estimate, it is assumed that during the construction peak, 40 trucks would arrive or depart during the AM peak hour, and 16 trucks would arrive or depart during the PM peak hour (Table 7-2).
- If an above-grade passenger concourse with new expanded passageway is constructed, this traffic impact assessment assumes that a maximum of 35 trucks (or 175 passenger car equivalent) would cycle in and out of the study area and project staging areas on any given day for each construction phase. Based on this estimate, it is assumed that during the peak hour of construction, 22 trucks would arrive or depart during the AM peak hour, and 8 trucks would arrive or depart during the PM peak hour (Table 7-3).

The particular purposes and distribution of the truck trips would depend on the phase of construction being undertaken. Truck trips would likely occur along Mission Road, Cesar Chavez Avenue, Alameda Street, and Vignes Street between construction sites, staging areas, and concrete facilities north of the project study area, and at the landfill located outside of the project study area. Figure 7-18 presents the truck haul routes. The greatest numbers of construction vehicle trips, both daily and for the AM and PM peak hour conditions, were included as part of the traffic analysis. The numbers of trucks were taken from construction estimate information in Appendix H. Construction vehicle trips for early action/interim improvements that would occur during Phase A would not exceed the estimates provided herein.

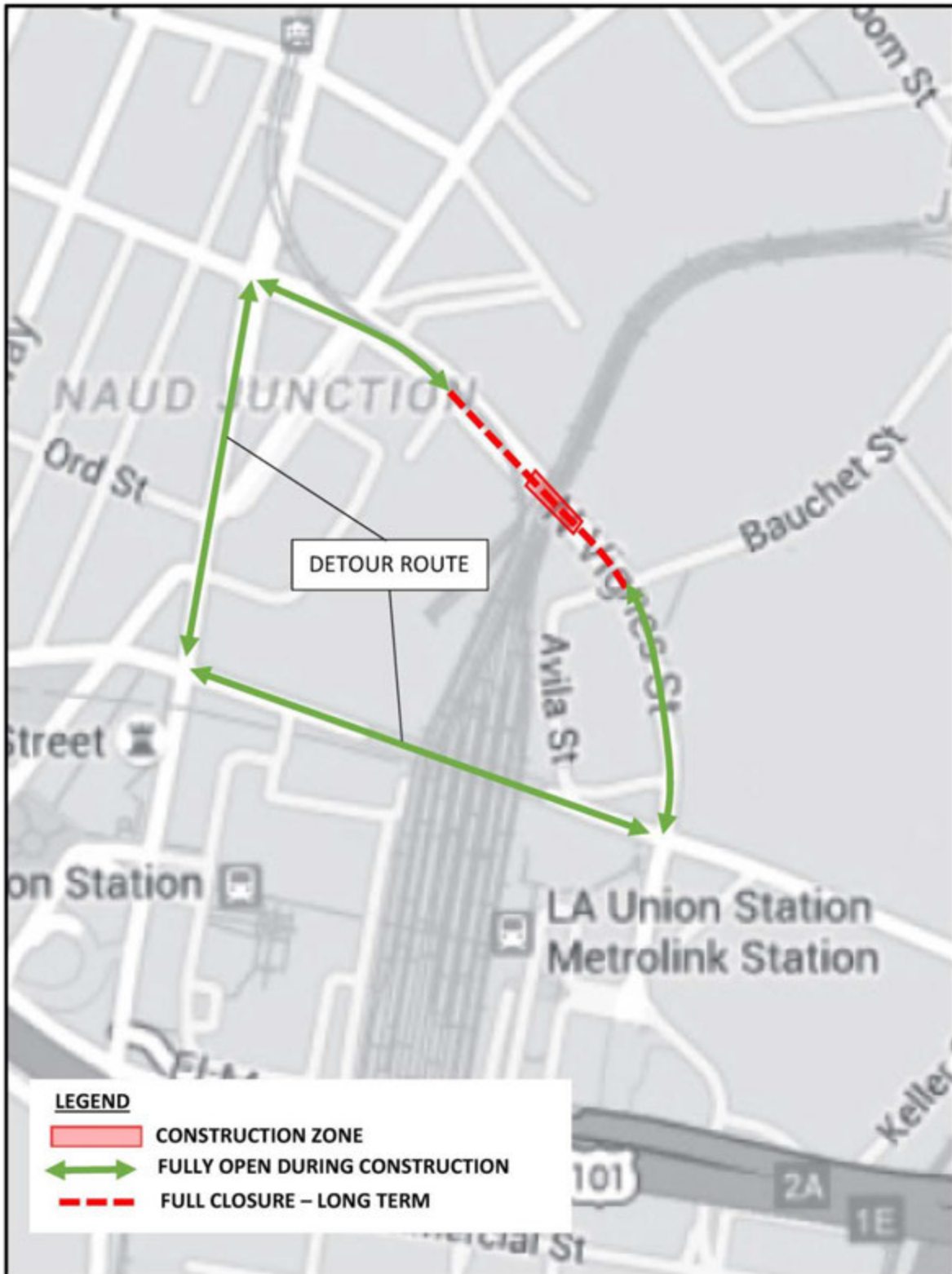
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Figure 7-15. Construction Detours and Street Closures



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Figure 7-16. Construction Detours and Vignes Street Closure



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Figure 7-17. Construction Detours and Cesar Chavez Avenue Closure



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Figure 7-18. Truck Haul Routes



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Table 7-3 and Table 7-2 summarize the construction-related trips that would be generated based on the detailed construction phasing plans, and staging, and projections for required materials and labor force for construction of the proposed project with an above-grade passenger concourse with new expanded passageway and build alternative with an at-grade passenger concourse, respectively.

| Table 7-2. Construction Trip Generation –Above-Grade Passenger Concourse with New Expanded Passageway | | | | | | | | | |
|---|-------------------------|---------|-------------------|--------------------|-----|-------|--------------------|-----|-------|
| Trip Type | Number Required per day | Unit | Daily Trips (PCE) | AM Peak Hour (PCE) | | | PM Peak Hour (PCE) | | |
| | | | | In | Out | Total | In | Out | Total |
| Phase 1 | | | | | | | | | |
| Employee Vehicles/ Construction Worker Trips | 234 | workers | 468 | 234 | 0 | 234 | 0 | 94 | 94 |
| Trucks | 35 | trucks | 175 | 11 | 11 | 22 | 4 | 4 | 8 |
| <i>Total Trips - Phase 1</i> | — | — | 643 | 245 | 11 | 256 | 4 | 98 | 102 |
| Phase 2 | | | | | | | | | |
| Employee Vehicles/ Construction Worker Trips | 143 | workers | 286 | 143 | 0 | 143 | 0 | 57 | 57 |
| Trucks | 27 | trucks | 135 | 9 | 9 | 18 | 4 | 4 | 8 |
| <i>Total Trips - Phase 2</i> | — | — | 421 | 152 | 9 | 161 | 4 | 61 | 65 |
| Phase 3 | | | | | | | | | |
| Employee Vehicles/ Construction Worker Trips | 154 | workers | 308 | 154 | 0 | 154 | 0 | 62 | 62 |
| Trucks | 30 | trucks | 150 | 10 | 10 | 20 | 4 | 4 | 8 |
| <i>Total Trips - Phase 3</i> | — | — | 458 | 164 | 10 | 174 | 4 | 66 | 70 |
| Phase 4 | | | | | | | | | |
| Employee Vehicles/ Construction Worker Trips | 174 | workers | 348 | 174 | 0 | 174 | 0 | 70 | 70 |
| Trucks | 8 | trucks | 40 | 3 | 3 | 6 | 1 | 1 | 2 |
| <i>Total Trips - Phase 4</i> | — | — | 388 | 177 | 3 | 180 | 1 | 71 | 72 |

Table 7-2. Construction Trip Generation –Above-Grade Passenger Concourse with New Expanded Passageway

| Trip Type | Number Required per day | Unit | Daily Trips (PCE) | AM Peak Hour (PCE) | | | PM Peak Hour (PCE) | | |
|--|-------------------------|------|-------------------|--------------------|-----------|------------|--------------------|-----------|------------|
| | | | | In | Out | Total | In | Out | Total |
| Total Construction Traffic in PCE (Worst Phase) | | | 643 | 245 | 11 | 256 | 4 | 98 | 102 |

Notes:

PCE of 2.5 for truck trips.

Number of trucks was taken from construction estimate tables in Appendix H.

As a worst-case scenario, assumed all employees would arrive during the AM peak hour. Assumed that PM peak hour trips will be 40 percent of AM peak hour trips.

For AM peak hour truck trips, hourly average of daily truck trips was split equally for inbound and outbound. Assumed that PM peak hour truck trips will be 40 percent of AM peak hour trips.

Assumed 8-hour workday.

PCE=Passenger Car Equivalent

Table 7-3. Construction Trip Generation – Build Alternative with At-Grade Passenger Concourse

| Trip Type | Number Required per day | Unit | Daily Trips (PCE) | AM Peak Hour (PCE) | | | PM Peak Hour (PCE) | | |
|--|-------------------------|---------|-------------------|--------------------|-----|-------|--------------------|-----|-------|
| | | | | In | Out | Total | In | Out | Total |
| Phase 1 | | | | | | | | | |
| Employee Vehicles/ Construction Worker Trips | 610 | workers | 1,220 | 610 | 0 | 610 | 0 | 244 | 244 |
| Trucks | 63 | trucks | 315 | 20 | 20 | 40 | 8 | 8 | 16 |
| <i>Total Trips - Phase 1</i> | — | — | 1,535 | 630 | 20 | 650 | 8 | 252 | 260 |
| Phase 2 | | | | | | | | | |
| Employee Vehicles/ Construction Worker Trips | 374 | workers | 748 | 374 | 0 | 374 | 0 | 150 | 150 |
| Trucks | 49 | trucks | 245 | 16 | 16 | 32 | 6 | 6 | 12 |
| <i>Total Trips - Phase 2</i> | — | — | 993 | 390 | 16 | 406 | 6 | 156 | 162 |
| Phase 3 | | | | | | | | | |
| Employee Vehicles/ Construction Worker Trips | 401 | workers | 802 | 401 | 0 | 401 | 0 | 160 | 160 |
| Trucks | 55 | trucks | 275 | 18 | 18 | 36 | 7 | 7 | 14 |
| <i>Total Trips - Phase 3</i> | — | — | 1,077 | 419 | 18 | 437 | 7 | 167 | 174 |

Table 7-3. Construction Trip Generation – Build Alternative with At-Grade Passenger Concourse

| Trip Type | Number Required per day | Unit | Daily Trips (PCE) | AM Peak Hour (PCE) | | | PM Peak Hour (PCE) | | |
|--|-------------------------|---------|-------------------|--------------------|-----------|------------|--------------------|------------|------------|
| | | | | In | Out | Total | In | Out | Total |
| Phase 4 | | | | | | | | | |
| Employee Vehicles/ Construction Worker Trips | 454 | workers | 908 | 454 | 0 | 454 | 0 | 182 | 182 |
| Trucks | 12 | trucks | 60 | 4 | 4 | 8 | 2 | 2 | 4 |
| <i>Total Trips - Phase 4</i> | — | — | 968 | 458 | 4 | 462 | 2 | 184 | 186 |
| Total Construction Traffic in PCE (Worst Phase) | | | 1,535 | 630 | 20 | 650 | 8 | 252 | 260 |

Notes:

PCE of 2.5 for truck trips.

Number of trucks was taken from construction estimate tables in Appendix H.

As a worst-case scenario, assumed all employees would arrive during the AM peak hour. Assumed that PM peak hour trips will be 40 percent of AM peak hour trips.

For AM peak hour truck trips, hourly average of daily truck trips was split equally for inbound and outbound. Assumed that PM peak hour truck trips will be 40 percent of AM peak hour trips.

Assumed 8-hour workday.

PCE=Passenger Car Equivalent

7.4.4 Project Construction Trip Distribution and Assignment

Project construction trip distribution assumptions for the project study area were developed using the SCAG regional traffic model as a guide and considering the project site access, surrounding land uses, and the roadway network. Trip distribution percentages and peak hour intersection volumes that were discussed and approved by LADOT as part of the MOU process are shown in the Appendix A.

7.4.5 2031 plus Project Construction Trip Projections

Project Construction Trip Distributions

Trip distribution is the process of identifying the probable origins, destinations, and directions or traffic routes that will be utilized by construction traffic. The potential interaction between the proposed construction staging areas per corresponding phases and surrounding regional access routes is considered to identify the route where the traffic will distribute.

It was assumed that the majority of the construction workers would travel to and from the construction staging areas via US-101, utilizing the Vignes Street and Commercial Street ramps. Other construction workers would travel to and from the construction staging areas from the north via Main Street and Spring Street and from the south via Los Angeles Street and Alameda Street.

It was also assumed that trucks would travel on surrounding designated truck routes (Mission Road, Cesar Chavez Avenue, Alameda Street, and Vignes Street) to and from the construction staging areas. A majority of the trucks would travel to and from the construction staging areas via US-101, utilizing the Mission Road and Vignes Street ramps. Other trucks would travel to and from the construction staging areas via Main Street.

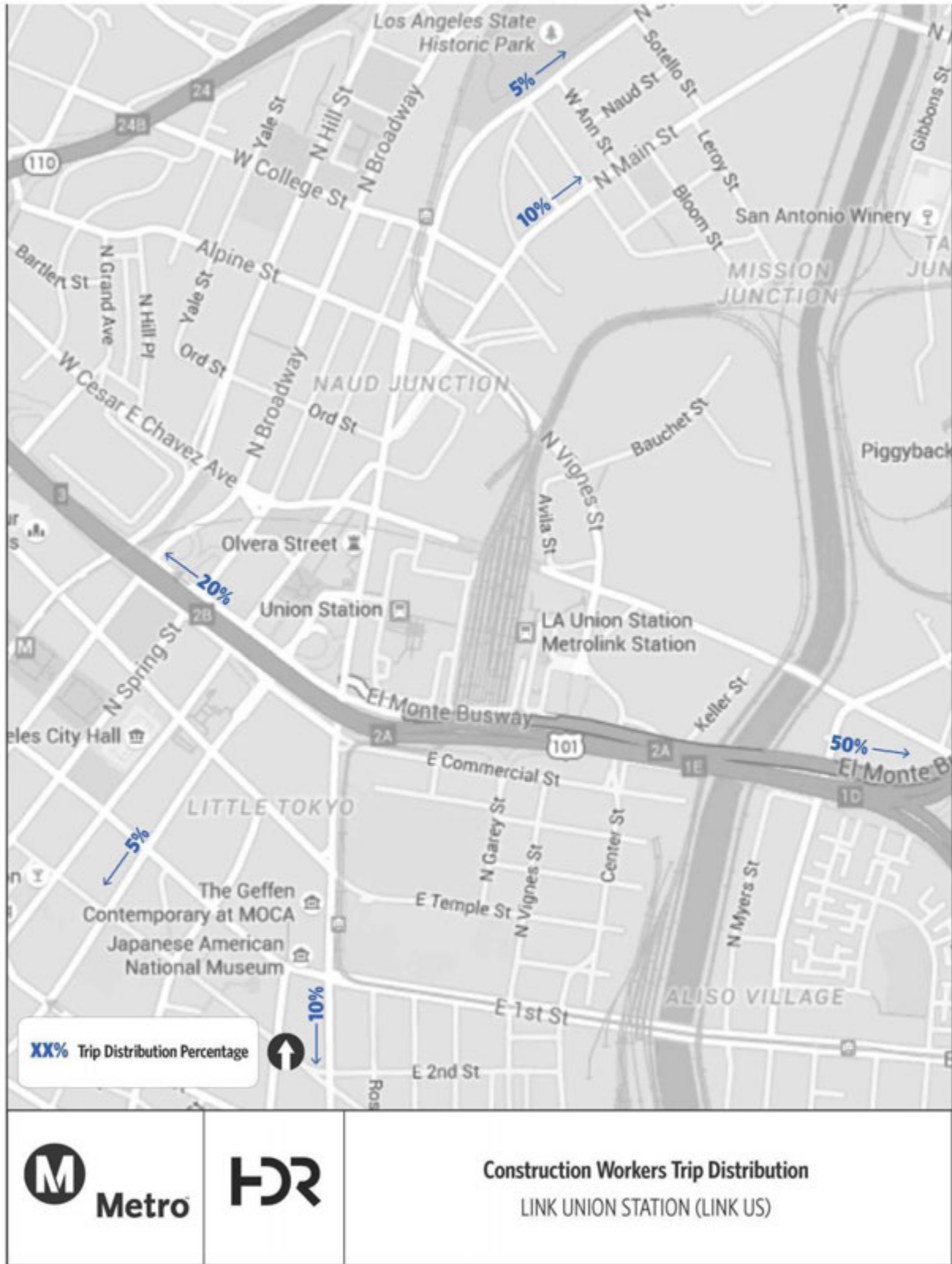
Construction vehicles' and workers' trip distribution percentages are depicted on Figure 7-19 and Figure 7-20, respectively. Illustrations of the construction workers, vehicles, and 2031 plus project construction (with an above-grade passenger concourse with new expanded passageway) peak hour traffic volumes are shown on Figure 7-21, Figure 7-22, and Figure 7-23, respectively.

Illustrations of the construction workers, vehicles, and 2031 plus project construction (with an at-Grade passenger concourse) peak hour traffic volumes are depicted on Figure 7-24, Figure 7-25, and Figure 7-26, respectively.

Projected peak hour traffic volume distributions during construction activity in 2031 are included in Appendix J.

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Figure 7-20. Construction Workers' Trip Distribution



Construction Workers Trip Distribution
 LINK UNION STATION (LINK US)

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Figure 7-21. 2031 plus Project Construction – Construction Workers' Peak Hour Traffic Volumes (Above-Grade Passenger Concourse with New Expanded Passageway)



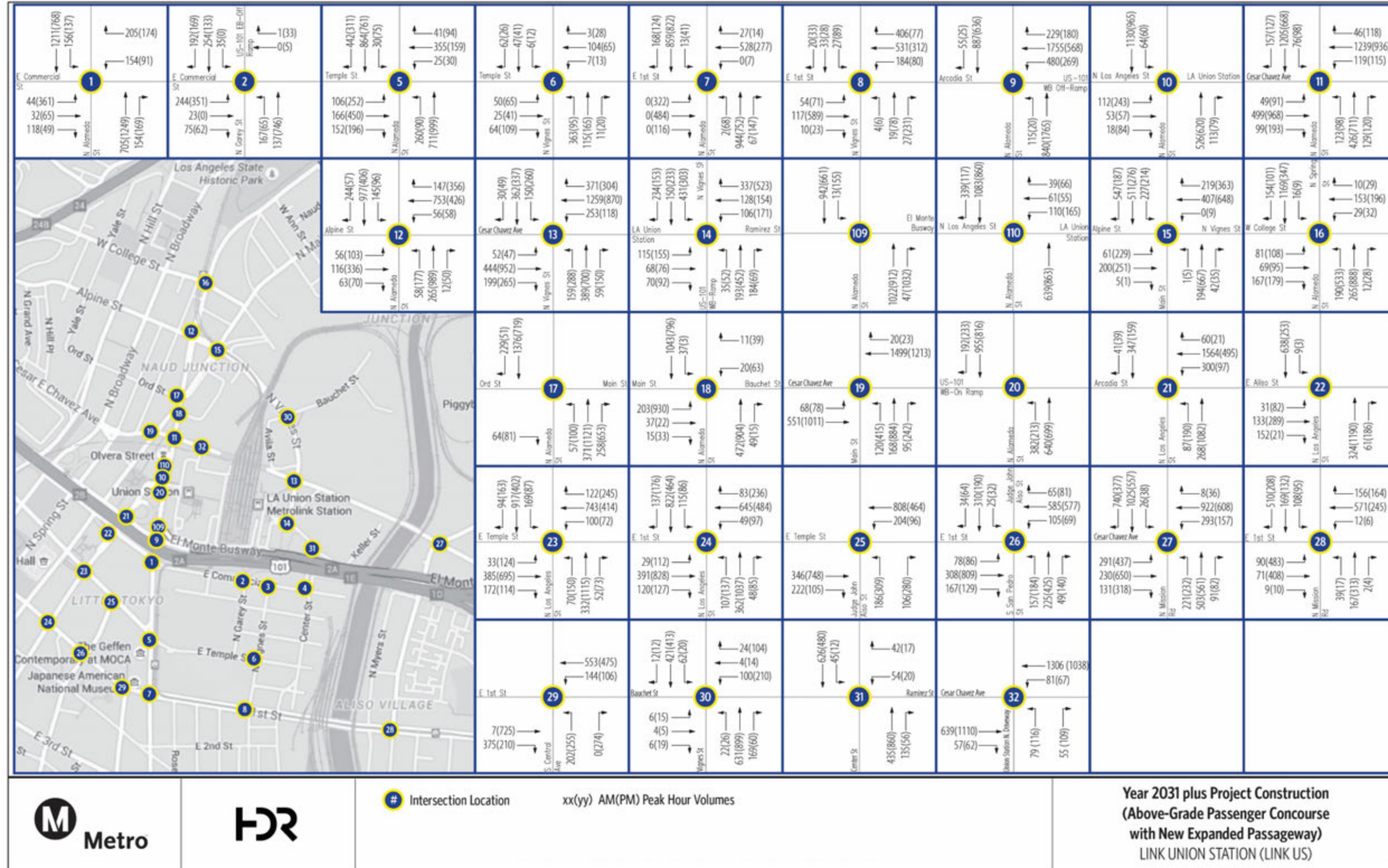
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Figure 7-22. 2031 plus Project Construction – Construction Vehicles' Peak Hour Traffic Volumes (Above-Grade Passenger Concourse with New Expanded Passageway)



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Figure 7-23. 2031 plus Project Construction Peak Hour Traffic Volumes (Above-Grade Passenger Concourse with New Expanded Passageway)



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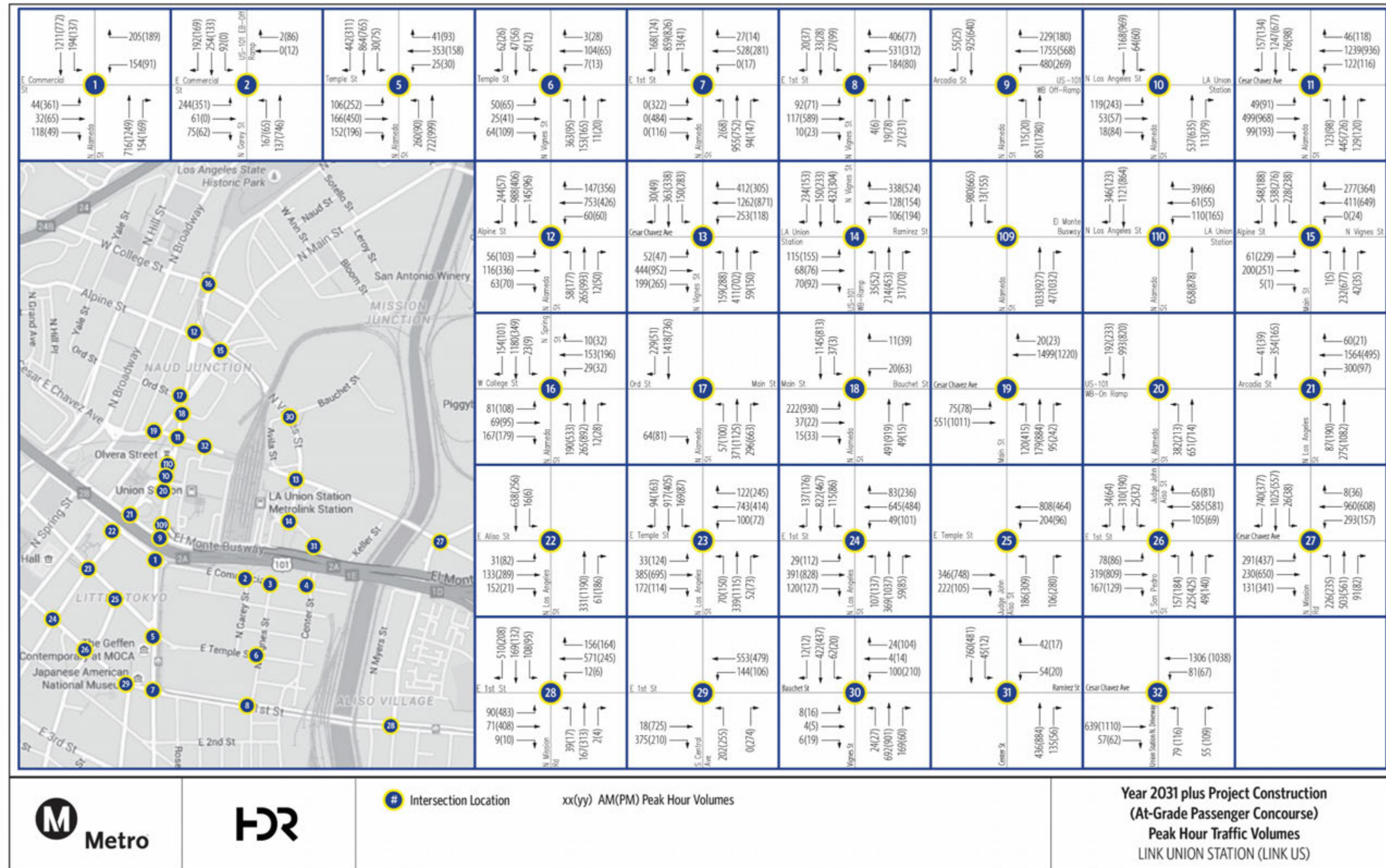
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Figure 7-25. 2031 plus Project Construction – Construction Vehicles' Peak Hour Traffic Volumes (At-Grade Passenger Concourse)



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Figure 7-26. 2031 plus Project Construction – Peak Hour Traffic Volumes (At-Grade Passenger Concourse)



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7.5 Project Traffic Generation

The project-related trip generation is based on trip generation rates approved by LADOT.

The trip generation consists of three elements:

1. Growth in background traffic due to increased non-project-related activity at LAUS
2. Growth in traffic from new retail/commercial land uses at LAUS
3. Growth in passengers ridership from increased bus/train activity at LAUS

7.5.1 Growth in Background Traffic Due to Increased Non-Project-Related Activity at Los Angeles Union Station

This trip generation methodology takes into consideration non-project-related background traffic that would already be in place if the project were not implemented. The background traffic growth rate of 0.2 percent per year (Section 7.1) is applied for the time period between 2016 and 2040. With a background traffic growth rate of 0.2 percent per year, a 4.8 percent growth in traffic levels is anticipated between 2016 and 2040. These trips are background traffic because they are related to the increased non-project-related activities that would occur in the vicinity of the project in the near future.

7.5.2 Growth in Traffic from New Retail/Commercial Land Uses at Los Angeles Union Station

This trip generation methodology takes into consideration the additional trips and associated travel demand for new land uses proposed as part of the project. The project includes up to 160,000 square feet (SF) of transit-oriented retail space and approximately 30,400 SF of office/commercial space within the new passenger concourse. As discussed below, the majority of the customers to this retail space are assumed to be transit passengers and, thus, would be arriving/departing the retail space as pedestrians. The additional vehicle trips associated with this retail space would be limited to vendors, deliveries, and employees required to serve the transit riders at this retail space.

The scale and size of the proposed retail and office/commercial space within the new passenger concourse are based on a 2016 market study conducted for Metro (The Concord Group 2016). The market study indicated that up to 189,800 SF of retail and commercial space could be supported by transit passengers coming through LAUS; it further identified the types of retail and commercial uses that could be supported without generating outside visitors who could result in additional vehicular traffic to and from LAUS. Therefore, for the purposes of this project-related trip generation methodology, all customers using the proposed 160,000 SF of retail space and 30,400 SF of office/commercial space are assumed to be traveling to and from LAUS using bus or transit, and their trips would not be made by automobiles. However, the employees in the retail and commercial space would arrive by automobile, and customers would be existing transit passengers coming to and from LAUS. The 80 percent transit mode split for the employees in the

retail and office/commercial space is a reasonable assumption for the project, given the results of the 2016 market study and the mode split surveys conducted at LAUS, as discussed below.

7.5.3 Growth in Passengers/Increased Ridership from Increased Bus/Train Activity at Los Angeles Union Station

Ridership growth at LAUS is expected due to the operational efficiencies realized by the proposed project-related capacity enhancements that would allow for increased future rail/transit services.

In 2011, Metro conducted a system-wide onboard survey of passengers at LAUS to determine the ridership mode splits. A total of 20,200 passengers in the AM peak period, 24,400 passengers in the mid-day peak period, and 26,600 passengers in the PM peak period were surveyed. The mode split of passengers to and from LAUS is presented on Figure 7-27 (inbound trips) and Figure 7-28 (outbound trips). As shown, the trips in and out of LAUS consist of 93 to 97 percent of the AM trips, 94 to 90 percent of the mid-day trips, and 94 to 95 percent of the PM trips transferred from one form of transit to another (and did not include an automobile trip to and from LAUS). The remaining 10 percent trips in and out of LAUS consist of passengers walking. This indicates that the majority of passengers who arrive at LAUS transfer from one mode of transit to another. Therefore, for the purposes of this project-related trip generation methodology, vehicular trips generated due to the increased ridership resulting from project-related capacity enhancements at LAUS are negligible. The passengers walking to and from LAUS constitute primarily local trips that originate and end within 1 mile of LAUS (first mile to last mile). Figure 7-29 presents the walking trip distribution of passengers to and from LAUS.

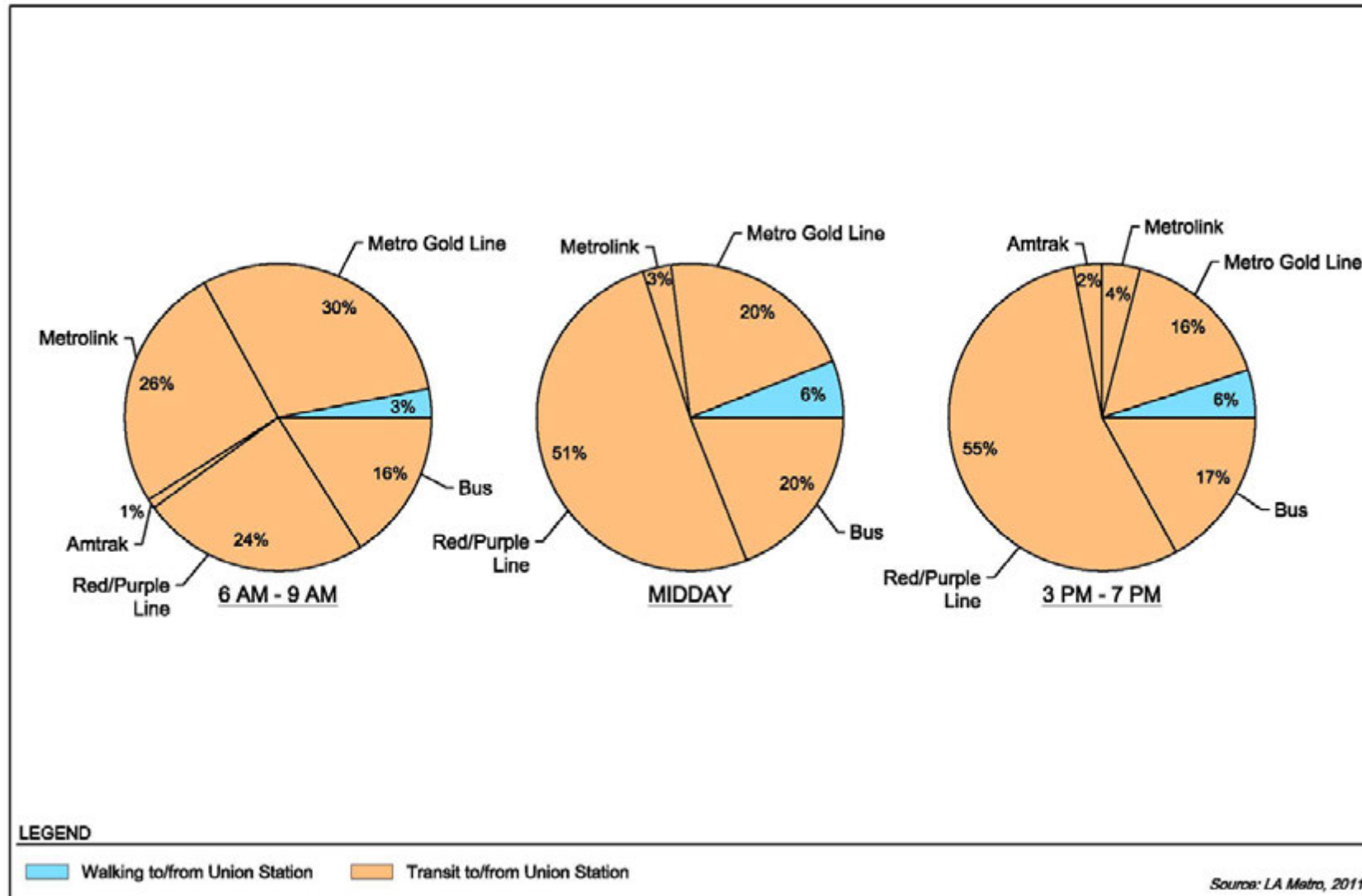
While the background traffic growth is not part of the project trip increment, the background traffic growth and the project-related traffic combine to illustrate the total trips to/from LAUS. The project-related traffic impact may appear low because the actual number of trips associated with the transit-oriented retail and office/commercial space are low, given the transit capture of these trips.

7.5.4 Project Trip Generation

The project is anticipated to have a positive impact on regional transportation and circulation through increased efficiency and enhanced capacity of the regional/intercity rail network and increased transportation services at LAUS.

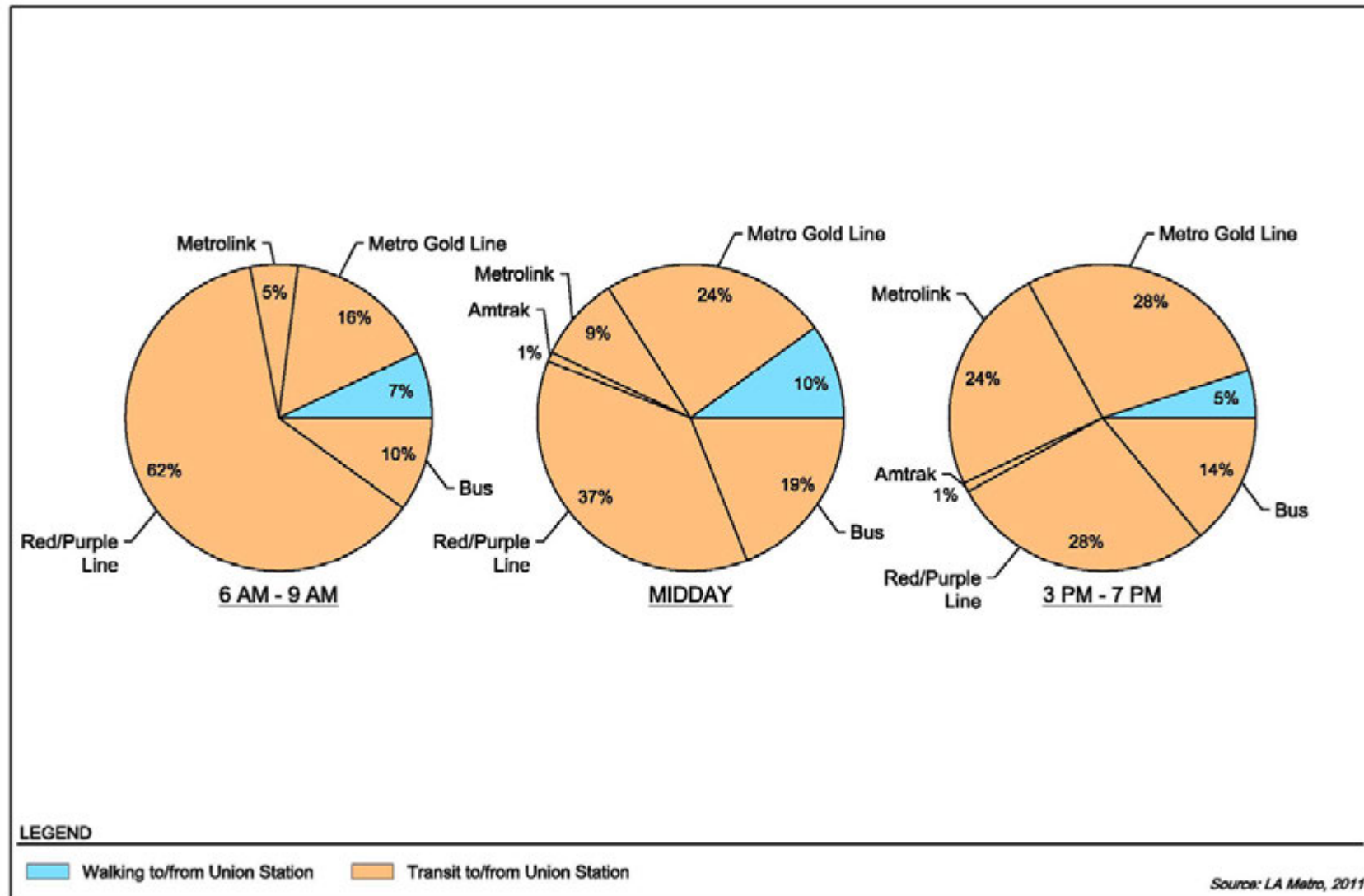
Table 7-4 summarizes the projected trip generation in 2031 and 2040. As shown, the project is anticipated to generate a net of 40 additional vehicular trips during the AM peak hour, and 127 additional vehicular trips during the PM peak hour.

Figure 7-27. Mode Split for Inbound Trips



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Figure 7-28. Mode Split for Outbound Trips



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Figure 7-29. Walking Trip Distribution



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7.5.5 Land Use Equivalency Program

A project land use equivalency program was developed to maintain flexibility of project uses and floor areas so Metro could respond to the dynamic and evolving needs of the Southern California economy. This program, which was submitted to and approved by LADOT, defines a framework within which the proposed mix of land uses, discussed in Section 7.5.2, could be modified within the development footprint as defined by the approved entitlements without resulting in any new significant impacts on the local transportation network. The program directs how development would be implemented within the project footprint(s) for the proposed project and the build alternative, and allows for flexibility so that existing land uses could be exchanged for other permitted land uses such that no additional trips would result from any exchange that is consistent with the program.

In the context of traffic circulation and impacts, this relates to the overall number of trips generated by the project and allows land use exchanges as long as the total number of peak hour trips generated does not exceed the totals identified in this traffic impact assessment. Table 7-5 shows the land use trip equivalencies developed for the project. These are based on the PM peak hour trips, as this is the higher of the peak periods studied, and reflect the highest street system traffic volumes.

Table 7-5 identifies the conversion factor for the land use exchange. For example, to exchange 30,400 SF of office/commercial space to retail space, the amount of office/commercial square footage (30,400 SF) would be multiplied by the exchange rate of 0.40 ($30,400 \times 0.40$), which would equate to 12,160 SF of retail space.

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| Table 7-4. Project Trip Generation | | | | | | | | | | | | | | | | | | |
|--|-------|-------|-------------------|---------------------------|--------------|-----|-----|--------------|-----|-----------------|---|--------------|-----|-----|--------------|-----|-------|--|
| Land Use ^a | Size | Units | ITE Land Use Code | Trip Generation Rates (a) | | | | | | Trip Generation | | | | | | | | |
| | | | | Daily Rate | AM Peak Hour | | | PM Peak Hour | | | Daily Trips | AM Peak Hour | | | PM Peak Hour | | | |
| | | | | | Rate | In | Out | Rate | In | Out | | Total | In | Out | Total | In | Out | |
| East Plaza | | | | | | | | | | | | | | | | | | |
| Transit-Oriented Retail | 69.22 | KSF | 820 | 42.70 | 0.96 | 62% | 38% | 3.71 | 48% | 52% | 2,956 | 66 | 41 | 25 | 257 | 123 | 134 | |
| Office/Commercial | 30.40 | KSF | 710 | 11.03 | 1.56 | 88% | 12% | 1.49 | 17% | 83% | 335 | 47 | 42 | 6 | 45 | 8 | 38 | |
| Concourse | | | | | | | | | | | | | | | | | | |
| Transit-Oriented Retail | 40.00 | KSF | 820 | 42.70 | 0.96 | 62% | 38% | 3.71 | 48% | 52% | 1,708 | 38 | 24 | 15 | 148 | 71 | 77 | |
| West Plaza | | | | | | | | | | | | | | | | | | |
| Transit-Oriented Retail (Plaza) | 17.7 | KSF | 820 | 42.70 | 0.96 | 62% | 38% | 3.71 | 48% | 52% | 756 | 17 | 11 | 6 | 66 | 32 | 34 | |
| Transit-Oriented Retail (Terrace) | 32.48 | KSF | 820 | 42.70 | 0.96 | 62% | 38% | 3.71 | 48% | 52% | 1,387 | 31 | 19 | 12 | 121 | 58 | 63 | |
| Shared Transit Trip Reduction | | | | | | | | | | | 5713 | 160 | 109 | 51 | 509 | 233 | 276 | |
| | | | | | | | | | | | <i>80% Transit mode split reduction</i> | | | | | | | |
| Subtotal New Trips due to Link US | | | | | | | | | | | 1,428 | 40 | 27 | 13 | 127 | 58 | 69 | |
| Existing Union Station Vehicular Trips (b) | | | | | | | | | | | 22,111 | 1,573 | 930 | 643 | 1,698 | 670 | 1,028 | |

| Table 7-4. Project Trip Generation | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|------|-------|-------------------|---------------------------|--------------|----|-----|--------------|----|-----------------|-------------|--------------|----|-----|--------------|----|-----|--|--|
| Land Use ^a | Size | Units | ITE Land Use Code | Trip Generation Rates (a) | | | | | | Trip Generation | | | | | | | | | |
| | | | | Daily Rate | AM Peak Hour | | | PM Peak Hour | | | Daily Trips | AM Peak Hour | | | PM Peak Hour | | | | |
| | | | | | Rate | In | Out | Rate | In | Out | | Total | In | Out | Total | In | Out | | |
| TOTAL NEW TRIPS | | | | | | | | 1,428 | 40 | 27 | 13 | 127 | 58 | 69 | | | | | |
| <i>Percentage of existing traffic</i> | | | | | | | | 6% | 3% | 3% | 2% | 7% | 9% | 7% | | | | | |

Notes:

^a Project land uses based on build alternative descriptions as of September 14, 2018.

Trip generation rates/fitted curve equations from Trip Generation, 9th Edition, Institute of Transportation Engineers, 2012.

Existing 2015 driveway counts collected by Fehr and Peers on November 19, 2015

ITE=Institute of Transportation Engineers; Link US=Link Union Station; KSF=units of 1,000 square feet

| Table 7-5. Land Use Equivalency – PM Peak Hour Traffic | | | | | | |
|--|---------------------------------|---------------------------|------------------|-----------------|------------------|---------------|
| Donor Land Use ^a | Recipient Lane Use ^b | | | | | |
| | Retail (KSF) | Office / Commercial (KSF) | Restaurant (KSF) | Apartments (DU) | Condominium (DU) | Hotel (Rooms) |
| Retail (KSF) | — | 2.49 | 0.50 | 5.98 | 7.13 | 6.18 |
| Office / Commercial (KSF) | 0.40 | — | 0.20 | 2.40 | 2.87 | 2.48 |
| Restaurant (KSF) | 2.02 | 5.03 | — | 12.08 | 14.40 | 12.48 |
| Apartments (DU) | 0.17 | 0.42 | 0.08 | — | 1.19 | 1.03 |
| Condominiums (DU) | 0.14 | 0.35 | 0.07 | 0.84 | — | 0.87 |
| Hotel (Rooms) | 0.16 | 0.40 | 0.08 | 0.97 | 1.15 | — |

Source: Trip generation rates/fitted curve equations from Trip Generation, 9th Edition, Institute of Transportation Engineers 2012

Notes:

^a Land use change from

^b Land use change to

DU=dwelling units; ITE=Institute of Transportation Engineers; KSF=units of 1,000 square feet

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