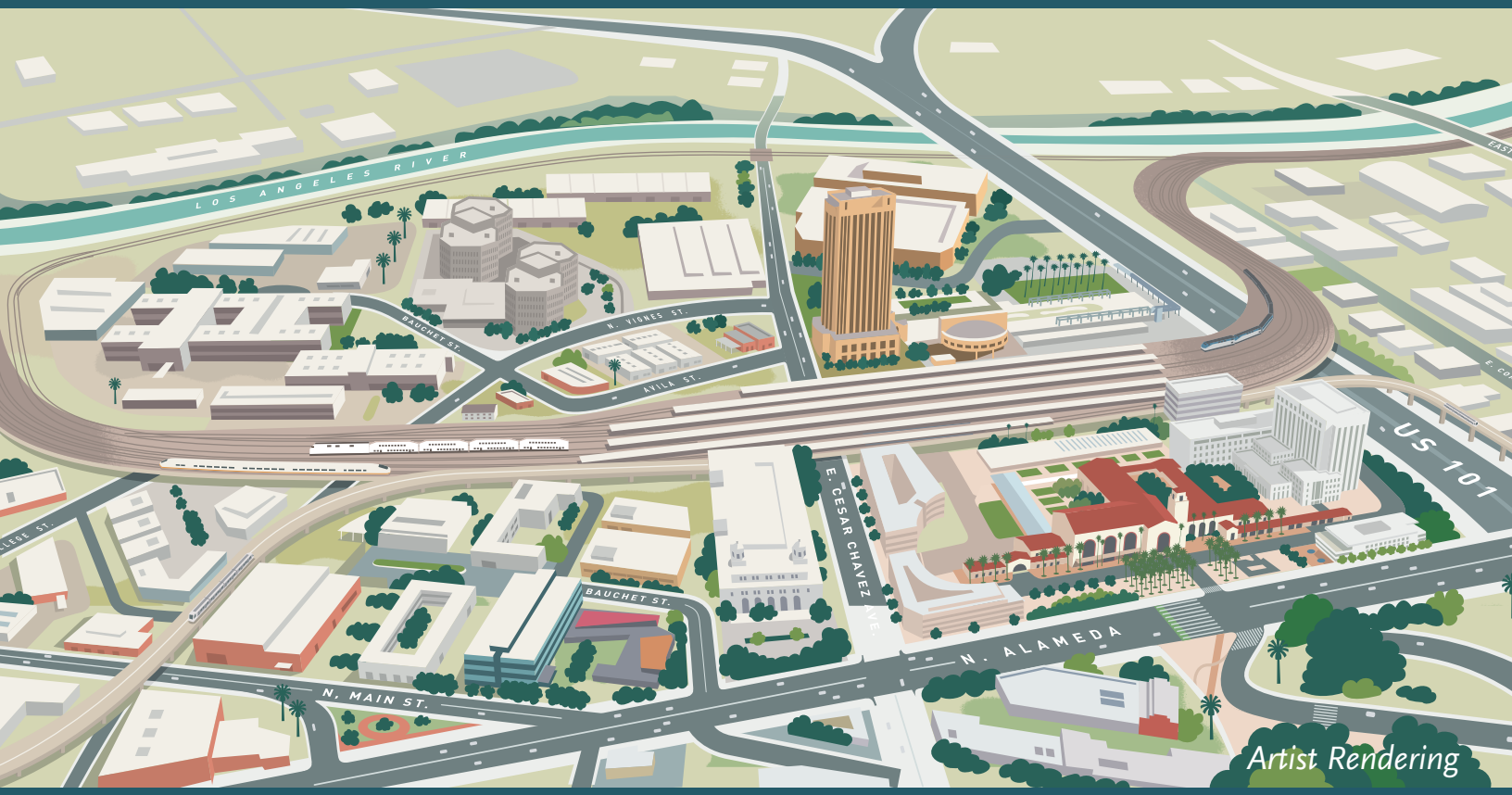
Link Union Station

Draft Economic and Fiscal Impact Assessment

June 2024



The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by the State of California pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated July 23, 2019, and executed by the Federal Railroad Administration and the State of California.

Metro

CALIFORNIA High-Speed Rail Authority

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ACRONYMS

CFR	Code of Federal Regulations
CHSRA	California High-Speed Rail Authority
EIS	Environmental Impact Statement
FRA	Federal Railroad Administration
FTE	Full-Time Equivalent
HSR	High-Speed Rail
LAUS	Los Angeles Union Station
Link US	Link Union Station
Project	Link Union Station Project
Metro	Los Angeles County Metropolitan Transportation Authority
MOU	memorandum of understanding
NEPA	National Environmental Policy Act
ROW	Right-of-Way
SCAG	Southern California Association of Governments
US-101	United States Highway 101

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Executive Summary

This economic and fiscal impact assessment was prepared to identify the economic and fiscal impacts of the proposed infrastructure improvements as part of the Link Union Station (Link US) Project (Project or proposed action). In particular, this analysis considers the impacts from short-term construction spending, as well as long-term incremental operating and maintenance spending required to support the concourse-related improvements and passenger support services at LAUS. The potential job displacement and lost property tax revenues are also considered due to the required right-of-way (ROW) acquisitions. These negative effects are compared with the expected job creation and generation of property tax revenues from the concourse-related improvements and new retail activity. The Project could also result in reduced sales tax revenues; however, the impact cannot be estimated with any certainty as other businesses in the Project study area would pick up some of the sales lost by affected businesses. Information contained in this economic and fiscal impact assessment should not be used to make investment decisions.

A summary of the findings is presented below.

ES.1 Multiplier Effects from Short-Term Capital Spending

Capital expenditures during Project construction would result in short-term economic impacts.[1] In addition to impacts generated directly from capital spending, follow-on multiplier effects are expected. To estimate the multiplier effects in the economy due to construction, the IMPLAN® input-output model was used (Section 3.0). The model estimates three types of effect:

- **Direct effect.** This refers to the economic activity occurring as a result of direct spending by businesses or agencies (e.g., direct spending on construction and professional services).
- **Indirect effect.** This refers to the economic activity resulting from purchases by local firms who are the suppliers to the directly affected businesses or agencies (e.g., spending by suppliers of the contractor responsible for individual components).
- **Induced effect.** This represents the increase in economic activity, over and above the direct and indirect effects, associated with the increased labor income that accrues to workers (of the contractor and all suppliers) and is spent on household goods and services purchased from businesses.

Construction spending for the Build Alternative is broken down in this study into two stages: the interim condition and full build-out condition. Capital expenditures during the interim condition are

[1] These impacts are expected to last as long as the construction period.

expected to be $950.4 million. During the full build-out condition, an additional $1.35 billion of capital expenditure is expected.[2]

This capital expenditure is expected to generate short-term economic impacts. In particular, the Build Alternative is expected to generate 23,618 job-years,[3] which would also translate to $3.79 billion in output and $0.53 billion in federal, state, and local tax revenues. A summary of the multiplier effects expected during construction is provided in Table ES-1.

Table ES-1. Total Construction Economic Impacts by Type and Metric
($2019 million)

Impact Metric	Direct	Indirect	Induced	Total
Output	$2,065	$768	$952	$3,785
Value added	$1,073	$460	$585	$2,118
Labor income	$1,065	$309	$335	$1,709
Employment (job-years)	12,782	4,486	6,351	23,619
Tax revenues	—	—	—	$534

Notes:
Totals are rounded for reporting purposes.
Results are reported in constant dollars of 2019 (i.e., the year the analysis was conducted).

ES.2 Job Displacement and Property Tax Losses from Industrial/Manufacturing and Commercial Right-of-Way Acquisitions

The Build Alternative would not result in permanent residential displacements; however, may require the full or partial acquisition of several parcels and the subsequent demolition of up to 34,784 square feet of building space associated with Amay's Bakery and 122,050 square feet of building space associated with the Life Storage Self Storage facility. Assuming that all businesses on the parcels would be permanently displaced (worst-case scenario), these acquisitions and demolition of industrial/commercial buildings are expected to result in the loss of 20 to 60 jobs (depending on how many relocate within Los Angeles County) and reduced property tax revenues

[2] These cost estimates assume Rail Yard Canopy Design Option 1 (Individual Canopies) is selected. This is a reasonable assumption given the budget for the Project. In addition, there is no cost estimate for Rail Yard Canopy Design Option 2 (Grand Canopy), as it depends on the size of the grand canopy implemented, among other factors. It is expected the Rail Yard Canopy Design Option 2 would cost substantially more than the amount of Rail Yard Canopy Design Option 1.

[3] A job-year can be defined as 1 person employed for 1 year, whether part-time or full-time.

of up to $335,221. Assuming some level of business relocation would occur, the resulting number of jobs lost would decrease to approximately 20.

ES.3 Direct Fiscal Impacts of Concourse-Related Improvements

The existing passenger concourse would be expanded with up to 160,000 square feet of new retail space. The concourse-related improvements are expected to lead to new transit-serving retail businesses and, thus, new retail sales. The total fiscal impacts are estimated to be $4.3 million, considering the incremental retail sales, lease revenues, property taxes and the incremental cost of facility operations. Taking into account the expected reduction in property tax revenues from property acquisitions, the net fiscal impacts would be $4.0 million (in 2019 dollars).

ES.4 Direct Long-Term Jobs Created from Build Alternative

To support the new concourse-related improvements, LAUS would require additional staff for facility operations and maintenance. The anticipated new retail establishments would also result in additional retail jobs. Expanded Metrolink and Amtrak services and the introduction of the planned high-speed rail (HSR) system are also anticipated to generate jobs. Taking all three of these into account, the Build Alternative is expected to generate a total of 171 new full-time equivalent (FTE)[4] positions, as detailed below.

ES4.1 Janitorial, Engineering, and Security Service Jobs

Staffing needed to operate and maintain the concourse-related improvements is assumed to start in 2032 (first full year of operations). In total, 50 FTE positions would be needed.

ES4.2 Retail Service Jobs

The new retail space at LAUS is expected to generate long-term retail trade jobs, some of which would have been captured in other locations within Los Angeles County; others would represent a gain in local employment. The number of new retail FTE positions is estimated to be 96, based on basic planning metrics (i.e., 1 employee per 400 square feet [United States Green Building Council 2008]) and the estimated percentage of retail expenditures by out-of-county station patrons.

[4] Full-time equivalent (FTE) employment is the number of FTE jobs, defined as total hours worked divided by average annual hours worked in full-time jobs.

ES4.3 Passenger Support Service Jobs

In addition, many other FTE positions associated with expanded Metrolink and Amtrak services and the introduction of the planned high-speed rail (HSR) system are anticipated to be generated. These positions would include support for back-office functions and customer operations. By 2034 (1 full year after the planned HSR system is anticipated to be in operation [2033]), it is estimated that passenger support services for expanded regional/intercity rail service and new HSR service would create at least 25 new jobs.

ES.5 Multiplier Effects from Long-Term Project Operations and Maintenance Spending

As mentioned above, additional personnel would be needed to operate the concourse-related improvements (janitorial, engineering, security, and rail services). These jobs would also have a multiplier effect on the local economy. Overall, the 75 FTE jobs at LAUS would lead to 145 full- and part-time jobs, $24.94 million in output, and $2.70 million in total tax revenues, annually. These multiplier effects are summarized in Table ES-2.

Table ES-2. Annual Operating and Maintenance Impacts
($2019 million)

Impact Metric	Direct	Indirect	Induced	Total
Output	$13.6	$5.8	$5.5	$24.9
Value added	$7.3	$3.2	$3.4	$13.9
Labor income	$5.9	$2.0	$1.9	$9.9
Employment	81	27	37	145
Tax revenues	—	—	—	$2.7

Under the No Action Alternative, the proposed improvements would not be implemented and, thus, no property acquisitions would be required. As a result, there would be no displaced businesses and no loss in jobs or reduction in property and sales tax revenues. However, there would also be no gain in jobs and tax revenues from the proposed improvements. No new construction would take place. The existing stub-end rail configuration at the LAUS would remain, and, as a result, there would be no economic impacts from construction. Finally, under the No Action Alternative, the Los Angeles County Metropolitan Transportation Authority (Metro) would not increase operational capacity at LAUS to meet the demands of the broader rail system. Operation would remain unchanged, and the additional janitorial, engineering, security, passenger support service, and retail jobs anticipated from the Project would not be realized. The expected follow-on effects (output, income, value added, and tax revenues) from these long-term jobs would also not be generated.

1.0 Introduction

The Los Angeles County Metropolitan Transportation Authority (Metro), as the owner of Los Angeles Union Station (LAUS), is proposing the infrastructure improvements associated with the Link Union Station (Link US) Project (Project or proposed action) to address existing capacity constraints at LAUS. For the purposes of the National Environmental Policy Act (NEPA), Metro is serving as the local Project sponsor and joint lead agency.

Pursuant to 23 United States Code Section 327 and a memorandum of understanding (MOU) between the Federal Railroad Administration (FRA) and the State of California, effective July 23, 2019, under a program known as NEPA Assignment, the California High-Speed Rail Authority (CHSRA) is responsible for the federal review and approval of environmental documents for projects on the high-speed rail (HSR) system and other passenger rail projects that directly connect to the HSR system, including the Link US Project. For the purposes of the environmental impact statement (EIS) being prepared, CHSRA is serving as the federal lead agency with NEPA responsibilities pursuant to the requirements of the NEPA Assignment MOU. CHSRA and Metro are preparing the EIS in compliance with NEPA (42 United States Code Section 4321 et seq.), the Council on Environmental Quality regulations implementing NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508), FRA's Procedures for Considering Environmental Impacts (FRA's Environmental Procedures) (*Federal Register* [FR] 64(101), 28545-28556, May 26, 1999), 23 United States Code Section 139, and the NEPA Assignment MOU.[5, 6]

Pursuant to the MOU requirements between FRA and the State of California, FRA's Environmental Procedures are being used to determine environmental effects of the No Action Alternative and the Build Alternative.

Below is an overview of the purpose and need, the Project study area, the No Action Alternative, and the major components associated with the on-site infrastructure improvements proposed at and within the vicinity of LAUS that are associated with the Build Alternative considered in the EIS.

[5] While this environmental document was being prepared, FRA adopted new NEPA compliance regulations (23 CFR 771). Those regulations only apply to actions initiated after November 28, 2018. See 23 CFR 771.109(a)(4). Because this environmental document was initiated prior to that date, it remains subject to FRA's Environmental Procedures rather than the Part 771 regulations.

[6] The Council on Environmental Quality issued new regulations, effective April 20, 2022, updating the NEPA implementing procedures at 40 CFR Parts 1500–1508. However, because this environmental document was initiated prior to the effective date, it is not subject to the new regulations and CHSRA is relying on the regulations as they existed on the date of the initial Notice of Intent, May 31, 2016. Therefore, all citations to Council on Environmental Quality regulations in this environmental document refer to the 1978 regulations and the 1986 amendment, 51 *Federal Register* 15618 (April 25, 1986).

1.1 Purpose

The purpose of the proposed action is to increase the regional and intercity rail service capacity of LAUS and to improve schedule reliability at LAUS through the implementation of a run-through tracks configuration and elimination of the current stub end tracks configuration while preserving current levels of freight rail operations, accommodating the planned HSR system in Southern California, increasing the passenger/pedestrian capacity and enhancing the safety of LAUS through the implementation of a new passenger concourse, meeting the multi-modal transportation demands at LAUS.

1.2 Need

The need for the proposed action is generated by the forecasted increase in regional population and employment; implementation of federal, state, and regional transportation plans that provide for increased operational frequency for regional and intercity trains; and introduction of the planned HSR system in Southern California. Localized operational, safety, and accessibility upgrades in and around LAUS will be required to meet existing demand and future growth.

1.3 Project Location and Study Area

The Build Alternative consists of infrastructure improvements in Downtown Los Angeles in the vicinity of LAUS (Figure 1-1). LAUS is located at 800 Alameda Street in the City of Los Angeles, California. LAUS is bounded by United States Highway 101 (US-101) to the south, Alameda Street to the west, Cesar Chavez Avenue to the north, and Vignes Street to the east. The northern Project limit is at North Main Street (Mile Post 1.18) and the southern Project limit is in the vicinity of Control Point (CP) Olympic, south of Interstate 10 and Olympic Boulevard (Mile Post 142.70).

Figure 1-2 depicts the Project study area, which is generally used to characterize the affected environment, unless otherwise specified, and provide a geographic context for the existing and proposed infrastructure improvements at and within the vicinity of LAUS. The Project study area includes three main segments (Segment 1: Throat Segment, Segment 2: Concourse Segment, and Segment 3: Run-Through Segment). The existing conditions within each segment are summarized north to south below:

- **Segment 1: Throat Segment** – This segment, known as the LAUS throat, includes CP Chavez and the area north of the platforms at the LAUS rail yard, from North Main Street at the north to Cesar Chavez Avenue at the south. In the throat segment, all arriving and departing trains are required to traverse through a complex network of lead tracks, switches, and crossovers. Five lead tracks provide access into and out of the rail yard, except for one location near the Vignes Street Bridge, where it reduces to four lead tracks. Currently, special track work consisting of multiple turnouts and double-slip switches are used in the throat to direct trains into and out of the appropriate assigned terminal platform tracks. The Garden Tracks (stub-end tracks where private train cars are currently stored)

are also located just north of the platforms. Land uses in the vicinity of the throat segment are residential, industrial, and institutional.

- **Segment 2: Concourse Segment** – This segment is between Cesar Chavez Avenue and US-101 and includes LAUS, the rail yard, the East Portal Building, the baggage handling building with associated parking areas and access roads, the ticketing/waiting halls, and the 28-foot-wide pedestrian passageway with connecting ramps and stairways below the rail yard. Land uses in the vicinity of the concourse segment are residential, commercial, and public.
- **Segment 3: Run-Through Segment** – This segment is south of LAUS and extends east to west from Alameda Street to the west bank of the Los Angeles River and north to south from Keller Yard to CP Olympic. This segment includes US-101, the Commercial Street/Ducommun Street corridor, Metro Red and Purple Lines Maintenance Yard (Division 20 Rail Yard), BNSF Railway (BNSF) West Bank Yard, Keller Yard, the main line tracks on the west bank of the Los Angeles River from Keller Yard to CP Olympic, and the Amtrak lead track connecting the main line tracks with Amtrak's Los Angeles Maintenance Facility in the vicinity of 8th Street. Land uses in the vicinity of the run-through segment are primarily industrial and manufacturing.

The Project study area has a dense street network ranging from major highways to local city streets. The roadways within the Project study area include the El Monte Busway, US-101, Bolero Lane, Leroy Street, Bloom Street, Cesar Chavez Avenue, Commercial Street, Ducommun Street, Jackson Street, East Temple Street, Banning Street, First Street, Alameda Street, Garey Street, Vignes Street, Main Street, Aliso Street, Avila Street, Bauchet Street, and Center Street.

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Figure 1-1. Project Location and Regional Vicinity

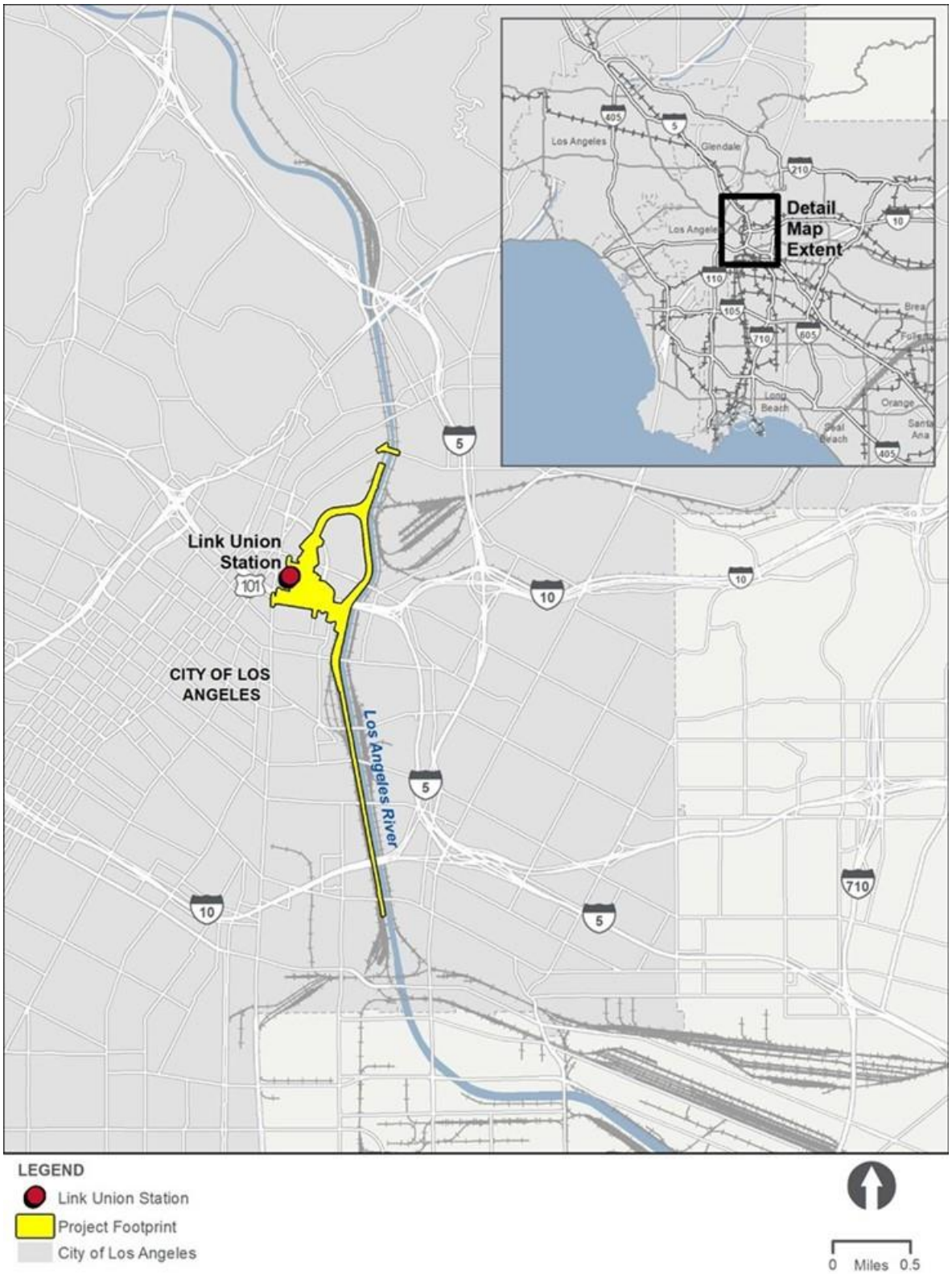

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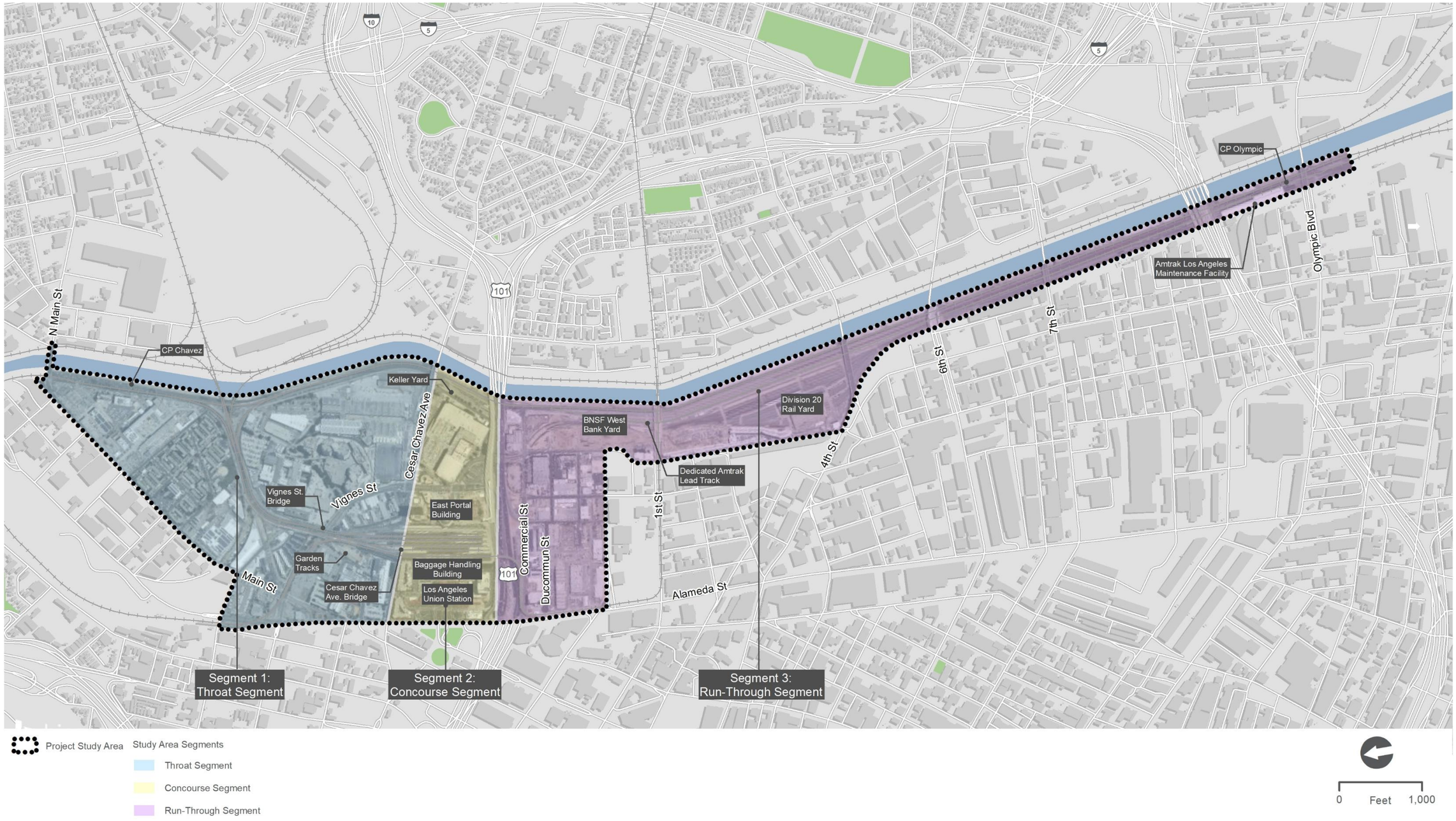
Figure 1-2. Project Study Area



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1.4 Project Alternatives

The EIS includes an evaluation of the No Action Alternative and one build alternative (Build Alternative). The Build Alternative would include, but not be limited to, new lead tracks north of LAUS (Segment 1: Throat Segment), an elevated throat and rail yard with concourse-related improvements at LAUS (Segment 2: Concourse Segment), and 10 run-through tracks south of LAUS (Segment 3: Run-Through Segment).

1.4.1 No Action Alternative

NEPA (40 CFR 1502.14(d)) requires federal agencies to include an analysis of "the alternative of no action." For NEPA purposes, the No Action Alternative is the baseline against which the effects of implementing the Build Alternative is evaluated against to determine the extent of environmental and community effects. For the No Action Alternative, the baseline year is 2016, and the horizon year is 2040.

The No Action Alternative represents the future conditions that would occur if the proposed infrastructure improvements and the operational capacity enhancements at LAUS were not implemented. The No Action Alternative reflects the foreseeable effects of growth planned for the area in conjunction with other existing, planned, and reasonably foreseeable projects and infrastructure improvements in the Los Angeles area, as identified in planning documents prepared by Southern California Association of Governments (SCAG), Metro, and/or Metrolink, including the *2023 Federal Transportation Improvement Program* (SCAG 2023), *Final 2008 Regional Comprehensive Plan* (SCAG 2008), and the *2020* Regional Transportation Plans*/Sustainable Communities Strategy: Connect SoCal* (SCAG 2020).

Conditions in the Project study area would remain similar to the existing condition, as described below:

- **Segment 1: Throat Segment** – Trains would continue to operate on five lead tracks that do not currently accommodate the planned HSR system. The tracks north of LAUS would remain at the current elevation, and the Vignes Street Bridge and Cesar Chavez Avenue Bridge would remain in place.
- **Segment 2: Concourse Segment** – LAUS would not be transformed from a stub-end tracks station into a run-through tracks station, and the 28-foot-wide pedestrian passageway would be retained in its current configuration. No modifications to the existing passenger circulation routes or addition of vertical circulation elements (escalators and elevators) at LAUS would occur.
- **Segment 3: Run-Through Segment** – Commercial Street would remain in its existing configuration, and implementation of active transportation improvements would likely be implemented along Center Street in concert with the *Connect US Action Plan* (Metro 2015). No modifications to the BNSF West Bank Yard would occur.

1.4.2 Build Alternative

The key components associated with the Build Alternative are summarized north to south below:

- **Segment 1: Throat Segment (lead tracks and throat track reconstruction)** – The Build Alternative includes subgrade and structural improvements in Segment 1 of the Project study area (throat segment) to increase the elevation of the tracks leading to the rail yard. The Build Alternative includes the addition of one new lead track in the throat segment for a total of six lead tracks to facilitate enhanced operations for regional/intercity rail trains (Metrolink/Amtrak) and future operations for HSR trains within a shared track alignment. Regional/intercity and HSR trains would share the two western lead tracks in the throat segment. The existing railroad bridges in the throat segment at Vignes Street and Cesar Chavez Avenue would also be reconstructed. North of CP Chavez on the west bank of the Los Angeles River, the Build Alternative also includes safety improvements at the Main Street public at-grade railroad crossing (medians, restriping, signals, and pedestrian and vehicular gate systems) to facilitate future implementation of a quiet zone by the City of Los Angeles.
- **Segment 2: Concourse Segment (elevated rail yard and expanded passageway)** – The Build Alternative includes an elevated rail yard and expansion of the existing 28-foot-wide pedestrian passageway in Segment 2 of the Project study area (concourse segment). The rail yard would be elevated approximately 15 feet. New passenger platforms would be constructed on the elevated rail yard with associated vertical circulation elements (stairs, escalators, and elevators) to enhance safety elements and improve Americans with Disabilities Act accessibility. Platform 1, serving the Gold Line, would be lengthened, and elevated to optimize east to west passenger circulation. The pedestrian passageway would be expanded at the current grade to a 140-foot width to accommodate a substantial increase in passenger capacity with new functionally modern passenger amenities while providing points of safety to meet applicable California Building Code (CBC) and National Fire Protection Association 130 Standards for Fixed Guideway Transit Systems. The expanded passageway and associated concourse improvements would facilitate enhanced passenger circulation and provide space for ancillary support functions (back-of-house uses, baggage handling, etc.), transit-serving retail, and office/commercial uses while creating an opportunity for an outdoor, community-oriented space with new plazas east and west of the elevated rail yard (East and West Plazas). Amtrak ticketing and baggage check-in services would be enhanced, and new baggage carousels would be constructed in a centralized location under the rail yard. A canopy would be constructed over the West Plaza up to 70 feet in height, and two design options are considered for canopies that would extend over the rail yard (Section 1.4.3).
- **Segment 3: Run-Through Segment (10 run-through tracks)** – The Build Alternative includes 10 new run-through tracks south of LAUS in Segment 3 of the Project study area (run-through segment). The Build Alternative includes common rail infrastructure from LAUS to the west bank of the Los Angeles River (vicinity of First Street Bridge) to support run-through tracks for both regional/intercity rail trains and future HSR

trains. At the BNSF West Bank Yard, dedicated lead tracks for Amtrak trains and BNSF trains, in combination with implementation of common rail infrastructure would result in permanent loss of freight rail storage track capacity at the north end of BNSF West Bank Yard (5,500 track feet).

The Build Alternative would also require modifications to US-101 and local streets (including potential street closures and geometric modifications); improvements to railroad signal, positive train control, and communication systems; modifications to the Gold Line light rail platform and tracks; modifications to the main line tracks on the west bank of the Los Angeles River; modifications to the Amtrak lead track; addition of access roadways to the railroad right-of-way (ROW); land acquisitions; addition of utilities; utility relocations, replacements, and abandonments; and addition of drainage facilities/water quality improvements.

1.4.3 Rail Yard Canopy Design Options

Two design options for canopies over the elevated platforms in the rail yard are considered in conjunction with the concourse-related improvements as part of the Build Alternative.

- **Rail Yard Canopy Design Option 1 (individual canopies)** – This design option would include replacing the existing historic butterfly canopies with individual canopies above each platform. New individual canopies would extend up to 25 feet above each platform and would be similar in form to the existing butterfly canopies but sized to fit the widened and lengthened platforms. Platform lengths would vary between 450 and 1,445 feet. Platforms would be up to 30 feet wide.
- **Rail Yard Canopy Design Option 2 (grand canopy)** – This design option would include replacing the existing historic butterfly canopies with a large grand canopy that would extend up to 75 feet above the elevated rail yard platforms. The grand canopy would be up to 1,500 feet long and wide enough to provide cover over all elevated platforms in the rail yard.

1.5 Project Implementation Approach

The implementation of infrastructure improvements would generally occur in three main phases that are evaluated as scenario years in the EIS: the interim condition, the full build-out condition and the full build-out with HSR condition. The infrastructure improvements for each of these scenarios are described below.

1.5.1 Interim Condition

The interim condition is when the run-through track infrastructure south of LAUS and the associated signal modifications, property acquisitions, and civil/structural improvements to facilitate new run-through service would be implemented. The interim condition does not include new lead tracks north of LAUS, or the elevated rail yard and new concourse-related improvements at LAUS. The interim condition aligns with a construction completion date as early as 2026.

A summary of the proposed activities associated with the interim condition is provided below.

- Acquire properties south of LAUS within the Project footprint.
- Relocate utilities north and south of LAUS.
- Acquire a portion of the BNSF West Bank Yard (majority north of First Street) and remove 5,500 feet of existing storage tracks at BNSF West Bank Yard.
- Construct special track work and modify signal/communication infrastructure north of LAUS.
- Construct a run-through track ramp on the southern extent of Platform 4 at LAUS.
- Construct a common viaduct/deck over US-101.
- Construct a common embankment from Vignes Street to Center Street south of LAUS.
- Construct common Center Street Bridge south of LAUS.
- Construct common embankment or new common bridge from Center Street to Amtrak Bridge south of LAUS.
- Construct common Amtrak Bridge south of LAUS.
- Construct Division 20 access road.
- Construct common rail embankment on the west bank of the Los Angeles River (from Amtrak Bridge to First Street Bridge).
- Construct new dedicated lead tracks for BNSF freight trains and Amtrak trains.
- Construct two run-through tracks from Platform 4 at LAUS to the main line tracks along the west bank of the Los Angeles River.

Some embankments and/or bridges south of LAUS could be constructed in a phased manner.

1.5.2 Full Build-Out Condition

The full build-out condition is when new lead tracks and the elevated throat north of LAUS, along with the elevated rail yard and concourse-related improvements at LAUS would be implemented. The full build-out condition aligns with a construction completion date as early as 2031.

A summary of the proposed activities associated with the full build-out condition is provided below.

- Construct new compatible lead tracks and reconstruct throat north of LAUS.
- Construct new bridges over Vignes Street and Cesar Chavez Avenue north of LAUS.
- Construct elevated rail yard, concourse-related improvements, and East/West Plazas at LAUS.

- Construct remaining run-through tracks for regional/intercity rail operations on previously constructed structures south of LAUS.

1.5.3 Full Build-Out with High-Speed Rail Condition

The full build-out with HSR condition is when HSR tracks and catenaries would be implemented through the Project limits to facilitate operation of the planned HSR system. CHSRA is responsible for construction and operation of the planned HSR system, and the EIS identifies where future HSR tracks, catenaries, and related operational infrastructure would be located throughout the Link US Project limits. Operation of HSR trains would occur on two of the lead tracks north of LAUS, Platforms 2 and 3 and associated Tracks 3 through 6 at LAUS, and common rail bridges and embankments south of LAUS. The full build-out with HSR condition corresponds to an HSR opening year consistent with CHSRA's 2022 Business Plan (as early as 2033).

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2.0 Approach

The overall approach to conduct the analysis consisted of the following elements:

- **Document review.** Project documents were reviewed, and model inputs were developed based on Project assumptions, including annual construction costs by category, an inventory of planned parcel acquisitions for the Build Alternative, and the amount and phasing of new retail development at LAUS.
- **Direct jobs creation.** An estimate of direct jobs created was generated based on the 160,000 square feet of additional retail area that is part of the concourse-related improvements. This includes jobs to operate the concourse and work at the additional retail businesses anticipated at LAUS. To estimate retail jobs, an average metric of retail employees per 1,000 square feet was used. The number of additional operations-related jobs was estimated based on the needs of the expanded concourse. The jobs lost due to the ROW acquisitions were also estimated based on the existing industrial/manufacturing and commercial buildings on the affected parcels.
- **Follow-on economic impacts.** Economic multipliers from IMPLAN®, a nationally recognized input-output model, were used to calculate the direct, indirect, and induced economic impacts of the capital expenses during construction, as well as incremental operating expenses due to additional staffing required for concourse-related improvements.
- **Fiscal impacts.** Potential impacts on fiscal (government) revenues were assessed, including net changes in property and sales taxes as tax-generating properties are taken off the Los Angeles County assessor roll to accommodate infrastructure improvements and new retail/commercial uses within LAUS that would become subject to taxation. These impacts are based on the appropriate local tax rate and the corresponding value of sales or property value.

Supporting data are provided in Appendix A.

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3.0 Multiplier Effects of Capital Expenditures during Construction

The Project represents a substantial investment for Metro and its funding partners. The Project's capital expenditures (mostly construction and professional services) are expected to generate significant direct, indirect, and induced impacts on the local economy during construction. The analysis of these impacts builds on preliminary work completed for potential improvements (The Concord Group 2016a).

3.1 IMPLAN® Analysis

To measure the economic and fiscal impacts associated with the Project's capital expenditures, IMPLAN®, an input-output-based regional economic assessment modeling system, was used. The IMPLAN® data files include transaction information (intraregional and import/export) on 536 industrial sectors (corresponding to four- and five-digit North American Industry Classification System codes) and data on more than 20 different economic variables, including industry output and labor income. For this assessment, the IMPLAN® system was populated with 2015 data for Los Angeles County. Spending is entered into the IMPLAN® model in year-of-expenditure dollars, and results are converted to constant 2019 dollars by the IMPLAN® model using the gross domestic product deflator.

Typically, economic impacts are measured in terms of industry output, value added, employment, and tax revenue. While output is the broadest measure of economic activity and refers to the total volume of sales, value added is the value a company adds to a product or service. It is measured as the difference between the amount a company spends to acquire the product or service and its value at the time it is sold to other users. Thus, value added can be thought of as a measure of the contribution to the gross domestic product made by an establishment or an industry. The total value added within a region is equivalent to the gross regional product and consists of compensation of employees, taxes on production and imports (less subsidies), and gross operating surplus.

With respect to employment, two impact metrics are calculated: labor income and jobs. Labor income includes employee compensation and proprietor income. Employee compensation, in turn, consists of wage and salary payments, as well as benefits (health, retirement, etc.) and employer-paid payroll taxes (employer side of social security, unemployment taxes, etc.). Proprietor income consists of payments received by self-employed individuals (e.g., farmers and painters) and unincorporated business owners. The job impact measures the number of jobs created for a full year. Unless specified otherwise, these job estimates should not be interpreted as FTE, as they reflect the mix of full- and part-time jobs that is typical for each industry. The jobs should not be interpreted as permanent jobs, either, but rather as job-years. Since the analysis is done on an annual basis, 1 job-year can be defined as 1 person employed for 1 year, whether part-time or full-time.

Fiscal impacts include all federal taxes and state/local taxes. State and local tax impacts are combined and cannot be separated within IMPLAN®.

The analysis involved the estimation of three types of effect for each impact category, commonly referred to as direct, indirect, and induced effects:

- **Direct effect.** Economic activity occurring as a result of direct spending by businesses or agencies (e.g., direct spending on construction and professional services).
- **Indirect effect.** Economic activity resulting from purchases by local firms who are the suppliers to the directly affected businesses or agencies (e.g., spending by suppliers of the contractor responsible for individual components).
- **Induced effect.** The increase in economic activity, over and above the direct and indirect effects, associated with the increased labor income that accrues to workers (of the contractor and all suppliers) and is spent on household goods and services purchased from businesses.

The total economic impact is the sum of the direct, indirect, and induced effects occurring due to the Build Alternative. The indirect and induced effects are sometimes referred to as multiplier effects, as they can make the total economic impact substantially larger than the direct effect alone.

3.2 Model Inputs and Assumptions

An estimate of the Build Alternative costs is provided in Table 3-1 by phase.

Table 3-1. Estimated Cost of Build Alternative by Phase
($ Million Year-of-Expenditure)

Build Alternative Phase	Amount
Interim Condition	$950.4
Full Build-Out Condition	$1,350.0
Total	$2,300.4

Source: LA Metro, Link Union Station: Presentation to Planning and Programming Committee Meeting, November 14, 2018.
Notes:
Capital costs associated with the implementation of the planned HSR system are not part of the Link US cost estimates because Metro's expenditures would occur during the interim and full build-out.

As shown in Table 3-1, the estimated costs to implement the first phase of the Build Alternative is $950.40 million in year-of-expenditure dollars. The cost estimate for the full build-out condition

is estimated to be $1.35 billion (year-of-expenditure dollars).[7] In total, costs for the Build Alternative are estimated to be $2.3 billion.

However, not all costs should be considered in the economic impact analysis:

- **Property acquisition (ROW) costs.** Selling a property is a transfer of asset between entities, and there is no economic activity associated with it, except for small real estate/ bank fees.
- **Costs incurred outside of the Project study area (economic leakage).** Imports to Los Angeles County are excluded from the estimation of indirect and induced impacts by means of the IMPLAN® National Trade Flows Model.

After netting out these costs, total capital costs amount to $2.18 billion (or 94.6 percent of the total). Table 3-2 provides a breakdown of the Build Alternative costs by major cost category.

Table 3-2. Summary of Capital Expenditures Leading to Local Economic Impacts
($ Million Year-of-Expenditure)

Major Spending Category	Build Alternative Cost
Construction	$1,092
Professional services and other	$1,084
Total	**$2,176**

Also, the following should be noted:

- Capital costs are inclusive of all contingencies and exclude ROW acquisitions.
- In the absence of a detailed schedule for spending for the full build-out condition, capital costs are spread evenly across the construction period.
- In the absence of spending by cost category for the full build-out condition, the same distribution of percent spending by category was used as the interim condition.

The selection of IMPLAN® sectors for the analysis of capital costs is done in two steps. The first step is to identify the 2012 North American Industry Classification System industry codes corresponding to the different cost items (site structures, train control and signals, engineering, etc.). The second step is to match each North American Industry Classification System industry

[7] These cost estimates assume Rail Yard Canopy Design Option 1 (Individual Canopies) is selected. This is a reasonable assumption given the budget for the Project. In addition, there is no cost estimate for Rail Yard Canopy Design Option 2 (Grand Canopy), as it depends on the size of the grand canopy implemented, among other factors. It is expected the Rail Yard Canopy Design Option 2 would cost substantially more than the amount of Rail Yard Canopy Design Option 1.

with the appropriate IMPLAN® sector. Table 3-3 shows the different IMPLAN® sectors used to conduct the analysis.

Table 3-3. IMPLAN® Sectors

Sector Code	Sector Description
54	Construction of new power and communication structures
57	Construction of new commercial structures, including farm structures
58	Construction of other new nonresidential structures
306	Other communications equipment manufacturing
315	Search, detection, and navigation instruments manufacturing
447	Legal services
449	Architectural, engineering, and related services
471	Waste management and remediation services
524	Local government passenger transit

3.3 Economic and Fiscal Impacts

Table 3-4 shows the impacts from construction spending on the Build Alternative. The table shows the direct (capital spending), indirect (supply-chain spending), induced (employee spending), and total impacts. The impacts are broken down by impact metric (i.e., output, value added, labor income, employment, and tax revenues) and by type of effect (i.e., direct, indirect, and induced). All dollar amounts are expressed in millions of 2019 dollars.[8]

Table 3-4. Total Construction Economic Impacts by Type and Metric
($2019 Million)

Impact Metric	Direct	Indirect	Induced	Total
Output	$2,065	$768	$952	$3,785
Value added	$1,073	$460	$585	$2,118
Labor income	$1,065	$309	$335	$1,709
Employment (job-years)	12,782	4,486	6,351	23,619

[8] The economic and fiscal impact assessment was conducted in 2019.

Table 3-4. Total Construction Economic Impacts by Type and Metric
($2019 Million)

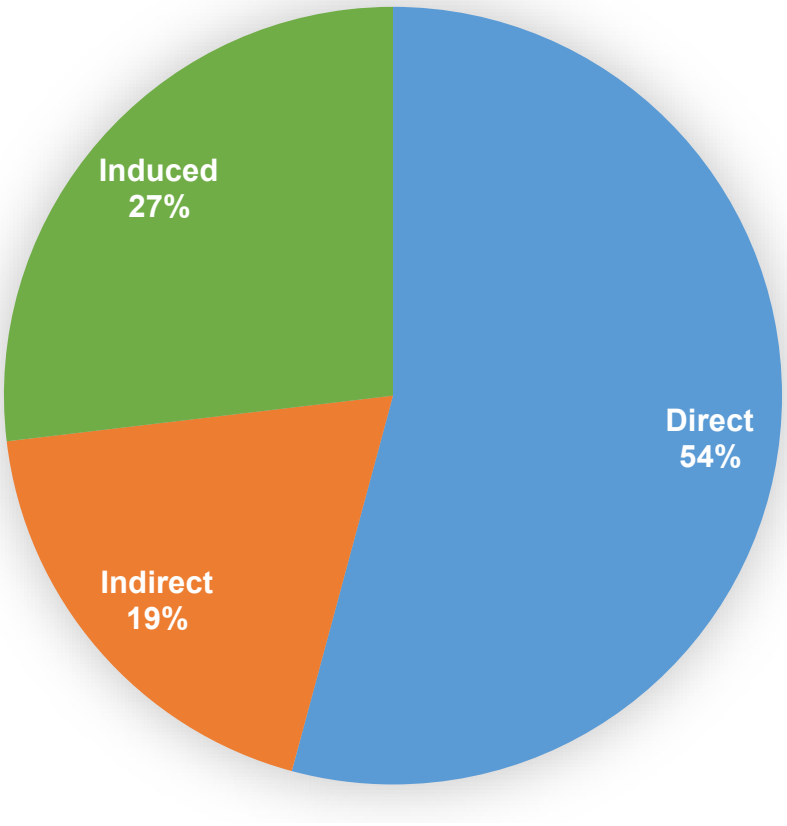
Impact Metric	Direct	Indirect	Induced	Total
Tax Revenues	—	—	—	$534

Notes: Totals are rounded for reporting purposes.
Results are reported in constant dollars of 2019 (i.e., the year the analysis was conducted).

As shown in Table 3-4, the Build Alternative is expected to generate 23,619 job-years (representing more than $1.7 billion in labor income) during the construction period. It is expected to create $3.8 billion in output (including $2.1 billion in value added) and $0.5 billion in total federal, state, and local tax revenues. On average, every dollar of capital expenditure would generate an additional $0.83 in Los Angeles County (i.e., the output multiplier effect is 1.83).

A breakdown of the job impacts by type of effect is shown on Figure 3-1.[9]

Figure 3-1. Breakdown of Job Impacts by Type of Effect



[9] As stated earlier, in the absence of spending by cost category for the full build-out condition, the same distribution of percent spending by cost category was used as the interim condition.

As shown on Figure 3-1, slightly more than half of the job impacts can be attributed to direct spending on construction. The indirect effect (or supply-chain effect) accounts for 19 percent of the job impacts, while the induced effect (or employee spending effect) represents 27 percent.

A breakdown of impacts by construction phase is provided in Table 3-5. As explained above, capital expenditures for this timeframe are spread evenly across the construction period to calculate impacts.

Table 3-5. Total Construction Economic Impacts by Phase and by Impact Metric
($2019 Million)

Impact Metric	Interim Condition	Full Build-Out Condition
Output	$1,474.2	$2,310.5
Value added	$824.1	$1,294.3
Labor income	$665.1	$1,043.2
Employment (job-years)	9,204	14,414
Tax revenues	$208.1	$326.3

Notes:
Impacts for the interim condition also include spending to date.
There is construction spending in 2026 for both interim condition and full build-out condition; thus, both phases include impacts in 2026.
Total spending during the interim condition applied toward impacts is $825.8 million (year-of-expenditure). Spending used to calculate impacts from the full build-out condition is $1.35 billion.

As shown in Table 3-5, most of the impacts are expected during the full build-out condition.

4.0 Long-Term Direct Impacts from Property Acquisitions and Concourse

In addition to the short-term impacts expected during construction, the Project is expected to lead to long-term changes in jobs as well as sales and property tax revenues. This section describes the direct impacts anticipated from the required property acquisitions, as well as from the concourse-related improvements.

4.1 Impacts of Property Acquisitions

Property acquisitions could result in two major long-term economic and fiscal impacts:

- Property tax revenue losses to the county and local jurisdictions in which the land parcels acquired are located; and
- Job losses as businesses on the acquired parcels might close down permanently or relocate within or outside of Los Angeles County.

Property acquisitions could also result in reduced sales tax revenues; however, the impact cannot be estimated with any certainty as other businesses in Los Angeles County would pick up some of the sales lost by affected businesses.

Based on the Project footprint for the Build Alternative, multiple types of properties may be affected to accommodate the proposed infrastructure:

- For residential properties, the analysis would account for the number of housing units demolished, the number of displaced residents, and the decrease in residential property tax revenues that could result from acquisition of residential property. However, this analysis found that no residential impacts would occur from the Project because no residential properties would need to be acquired (either partially or fully).
- For commercial and industrial/manufacturing properties, the analysis would account for the square footage of buildings demolished, the loss of economic activity associated with displacement/relocation of businesses, including the number of jobs temporarily or permanently lost, the decrease in commercial property tax revenues, and the additional tax revenue from added retail square footage.[10]

The data sources used to estimate these effects include the following:

- Parcel tax assessment and square footage information (Nite Owl 2019).
- Employee data based on business information (Business Use).

[10] As mentioned previously, the impact on sales tax revenues is uncertain and cannot be estimated accurately.

- The list of affected industrial/manufacturing and commercial parcels provided in Appendix A.
- Proposition 13 (officially named the People's Initiative to Limit Property Taxation) tax rates (both the 1.0 percent general property tax plus bonded indebtedness and direct assessment taxes of all parcels) and escalation (2.0 percent per year) was also used in the analysis.

4.1.1 Residential Effects

Two multifamily residential properties are identified within or adjacent to the Project footprint for the Build Alternative: William Mead Homes and the Mozaic Apartments. The residential-related tax revenue impacts for these two residential properties are described below.

- The William Mead Homes is a 415-unit apartment complex that is owned by the Housing Authority of the City of Los Angeles. If each unit corresponds to one household, a household size of 3.0 persons (United States Census Bureau 2019) would suggest that the building houses 1,245 persons. No part of this parcel is proposed for ROW acquisition and therefore residential property tax revenue impacts are not quantified. No permanent residential displacements would occur.
- The Mozaic Apartments complex is a 272-unit apartment complex located directly adjacent to and to the north of LAUS. No part of this parcel is proposed for ROW acquisition and therefore residential property tax revenue impacts are not quantified. No permanent residential displacements would occur.

No other residential-related tax revenue impacts are identified.

4.1.2 Potential Businesses Affected

The Build Alternative may result in several businesses being impacted, which could result in property tax loss and job loss.

The Build Alternative may require the full or partial acquisition of several parcels and the subsequent demolition of up to 34,784 square feet of building space associated with Amay's Bakery and 122,050 square feet of building space associated with the Life Storage Self Storage facility (see Appendix A). In fiscal year 2019, the total property taxes levied on all these parcels amounted to $335,221 (Nite Owl 2019); all of which would be considered lost property tax revenue representing less than 0.5 percent of total property taxes levied in Los Angeles County.[11] Unlike residential occupants, businesses are referred to, not offered, potential and/or suitable replacement sites pursuant to Metro's Relocation Assistance Program. Some businesses may choose to re-locate within the county, while others may not.

[11] Property taxes levied in Los Angeles County in FY 2019 amounted to $17.9 billion (County of Los Angeles 2019).

The demolition of two industrial/manufacturing buildings (or 34,784 building square feet) and one commercial building (or 122,050 building square feet) would also result in permanent displacement of businesses south of LAUS. Up to 60 jobs would be lost as a result of the demolition of these buildings. The methodology used to derive these job estimates is described in the *Link US Relocation Impact Report* (Metro 2024).

However, given that there is available land within the immediate vicinity of the neighborhoods surrounding the Project study area and that industrial businesses may not be dependent on local patronage, some relocation of businesses could be assumed (Metro 2024). A national business relocation survey conducted by O. R. Colan Associates in 2010 (Federal Highway Administration 2010) found that, on average, 67 percent of displaced businesses were eligible to receive relocation financial assistance. Using this estimate and assuming all businesses receiving financial assistance would relocate within the county, the resulting jobs lost due to the Project drops from 60 to 20.

4.2 Impacts of Concourse-Related Improvements

4.2.1 Fiscal Effects

Up to 160,000 square feet of transit-serving retail amenities would be constructed at LAUS as part of the Build Alternative. According to The Concord Group, the real estate advisory firm that produced the market analysis for the Project, the concourse-related improvements are likely to consist of a program of retail uses as shown in Table 4-1, including full- and limited-service restaurants, bars, small-format grocery and department stores, and other retail establishments. This mix is based on the expected user demand from local residents, employees, tourists, and transit riders. The proposed retail uses are assumed to be a net addition to retail square footage in Los Angeles County and as such should not detract from other retail establishments in other areas of the county.

Table 4-1. Annual Net Operating Income from New Concourse-Related Retail Uses
($2032)

Retail Use	Total Square Footage	Rent per Square Foot	Gross Rental Income
Full-service restaurant	28,800	$80.2353	$2,310,777
Limited-service eating places	33,600	$59.3741	$1,994,971
Bar	4,800	$80.2353	$385,130
Groceries	32,000	$36.9083	$1,181,064
Drug store	9,600	$36.9083	$354,319
Clothing	25,600	$67.3977	$1,725,380
Book/music	3,200	$67.3977	$215,673

Table 4-1. Annual Net Operating Income from New Concourse-Related Retail Uses
($2032)

Retail Use	Total Square Footage	Rent per Square Foot	Gross Rental Income
Department stores	14,400	$36.9083	$531,479
Other retail	8,000	$56.1647	$449,318
Total	**160,000**	**—**	**$9,148,110**
Less 6 percent vacancy			**($548,887)**
Net operating income			**$8,599,224**

Source: Calculations are based on data from Ernst & Young (2016) and The Concord Group (2016b).
Note:
Total square footage and rent per square foot values are rounded; thus, multiplying these values would not necessarily yield the same result as the gross rental income provided in the table.

The anticipated mix of retail uses as part of the concourse-related improvements is forecast to generate net operating income to Metro of about $8.6 million in the first full year of operations at LAUS (2032 dollars). This estimate is derived by multiplying the total square footage (by retail use) by the anticipated rent per square foot. A vacancy rate of 6 percent is assumed (Ernst & Young 2016) and subtracted from the gross rental income.

Using a capitalization rate[12] of 5.5 percent (CBRE 2014), the capitalized market value[13] of the retail uses is estimated at $156.3 million in 2032[14] ($8.6 million annual net operating income divided by 5.5 percent). Between years 2019 and 2032, the average annual growth in the Los Angeles metropolitan statistical area consumer price index is projected to be 2.42 percent (California Department of Finance 2019). Applying this inflation growth, the $156.3 million concourse value translates to $114.6 million in 2019 dollars. Applying the average 1.22 percent local (City of Los Angeles) property tax rate to the concourse assessed value, the retail uses from concourse-related improvements would generate just under $1.4 million (2019 dollars) in additional property tax revenues in the opening year (Table 4-2). These property tax revenues would recur each year thereafter and would likely increase over time.

[12] The capitalization rate refers to the rate of return on a property base. It is calculated by dividing net operating income by property asset value on the net operating income that the property generates.

[13] The capitalized market value refers to the dollar value that investors place on the retail uses for the Project.

[14] It is assumed that the first full year of operations would be 2032.

Table 4-2. Calculation of Property Tax Revenues Generated from New Concourse-Related Retail Uses

Element	Value
Net operating income (2032 dollars)	$8,599,224
Capitalization rate	5.50%
Estimated Concourse market value (2032 dollars)	$156,349,524
Average annual growth in inflation	2.42%
Concourse assessed value (2019 dollars)	$114,638,001
Local property tax rate (average)	1.22%
Local property tax revenues (2019 dollars)	**$1,398,584**

In the opening year, these new retail establishments would also generate an estimated $60.7 million in sales in 2032 dollars (or $44.5 million in 2019 dollars), based on Urban Land Institute's *Dollar & Cents of Shopping Centers* handbook (2008) of target sales per square foot for various retail types, as shown in Table 4-3. This estimate is derived by multiplying the total square footage (by retail use) by the target sales per square foot. A vacancy rate of 6 percent is assumed (Ernst & Young 2016) and subtracted from the total gross sales.

Table 4-3. Annual Sales from New Concourse-Related Retail Uses
($2032)

Retail Use	Total Square Footage	Rent per Square Foot	Gross Sales
Full-service restaurant	28,800	$570	$16,416,000
Limited-service eating places	33,600	$420	$14,112,000
Bar	4,800	$570	$2,736,000
Groceries	32,000	$260	$8,320,000
Drug store	9,600	$260	$2,496,000
Clothing	25,600	$470	$12,032,000
Book/music	3,200	$470	$1,504,000
Department stores	14,400	$260	$3,744,000
Other retail	8,000	$400	$3,200,000
Total	**160,000**	**—**	**$64,560,000**

Table 4-3. Annual Sales from New Concourse-Related Retail Uses
($2032)

Retail Use	Total Square Footage	Rent per Square Foot	Gross Sales
Less 6 percent vacancy			**($3,873,600)**
Total annual sales			**$60,686,400**

Source: Calculations are based on data from The Concord Group (2016b) and Urban Land Institute (2008).
Notes:
This has been escalated to 2032 dollars.

The level of net new sales tax generation to the county would depend on the ability of the proposed retail to attract a higher level of out-of-county commuter, visitor, or tourist spending than current retail offerings capture (for in-county residents, total household spending is expected to remain the same but might simply be redistributed toward the concourse-related improvements, with no net impact on taxable sales volume in the county).

Currently, approximately 13.6 percent of all weekday trips originating or ending at LAUS involve users crossing county lines on Metrolink trains and Amtrak trains – a percentage that is expected to remain the same on opening day (Metrolink 2018)[15] (Metro 2013a). However, these passengers would likely account for a disproportionately larger share of overall retail spending than their total user percentage suggests. Intercity rail passengers on Amtrak California routes have a substantially higher median household income estimated at $76,000, based on a 2013 survey (Amtrak 2013), and accordingly, are likely to spend more than local Metro rail or bus riders, who, for the same year, had a median household income of $16,000 to $21,000 (Metro 2013b).

A survey of retail spending patterns at comparable transportation facilities estimates a median expenditure of $5.04 (in 2018 dollars) on food and beverage per regional or intercity rail trip – a target unlikely to be currently achieved at LAUS based on the limited retail offerings available (Airports Council International North America 2015). Per passenger trip expenditures on news, gift, and specialty retail—categories not currently offered at LAUS but anticipated in the mix of uses in the concourse expansion—constitute an additional $2.78 (in 2018 dollars) (Airports Council International North America 2015).[16] Assuming a conservative $1.00 increase in the per-trip expenditure of projected 2032 passengers due to expanded concourse retail, and approximately 7.1 million regional or intercity trips annually by out-of-county station users

[15] As of 2018, the 13.6 percent is made up of 60 percent Metrolink trips and 100 percent Amtrak rail trips.

[16] Uses median gross retail sales per enplanement for small airports as a comparable for Los Angeles Union Station (LAUS).

(Metrolink 2018),[17] net new retail spending would account for about 16 percent[18] of the Project's $44.5 million in annual taxable retail sales.

As shown in Table 4-4, those annual taxable retail sales would translate into new local sales tax revenues of $230,724 (in 2019 dollars). In summary, this number is derived by first multiplying the $44.5 million in taxable retail sales (see discussion for Table 4-3) by the local sales tax share of 3.25 percent. This tax share estimate is based on the 1.25 percent local share of the 7.25 percent base sales tax rate (California Department of Tax and Fee Administration n.d.), plus 2.00 percent in voter-approved transportation sales taxes (Proposition A, Proposition C, Measure R, and Measure M), for a total tax rate of 3.25 percent that flows directly and solely to Los Angeles County (California State Board of Equalization n.d.).[19] Then, the local sales tax revenues are multiplied by the percent of net new local sales (15.9546 percent, as explained in the previous paragraph). These new local sales tax revenues would recur annually after the opening year.

Table 4-4. Calculation of Sales Tax Generated from New Concourse-Related Retail Uses
($2019)

Element	Value
Taxable retail sales	$44,496,251
Local sales tax share	3.25%
Local sales tax revenues	$1,446,128
Percent new sales	15.9546%
Net new local sales tax revenues	**$230,724**

Source:
California Department of Tax and Fee Administration n.d.; California State Board of Equalization n.d.

4.2.2 Direct Long-Term Jobs Created

In terms of employment gain, the proposed new retail space as part of the concourse-related improvements is expected to generate long-term retail trade jobs.

To calculate the new retail jobs, first the 160,000 square feet of new retail area created by the Project is multiplied by an average metric of 2.5 retail employees per 1,000 square feet (United

[17] This estimate is based on percent of out of county trips from Metrolink, average daily trips from LAUS Summary Report, and annualization factor of 261 days per year.

[18] The 16 percent is calculated by dividing net revenues from out-of-county passengers ($7.1 million) by Project annual taxable retail sales ($44.5 million).

[19] Other components of the 7.50 percent state base sales tax share flow indirectly to counties and cities.

States Green Building Council 2008). This results in 400 new retail employees in the concourse. As mentioned earlier, some of these retail jobs can be assumed to be redistributed from other retail facilities in the county. The percentage of annual taxable retail sales by out-of-county station users (16 percent; see Table 4-4) can be used as a proxy for the split between redistributed and new retail jobs within the county. Thus, of these 400 new retail jobs, 64 of them represent net new retail jobs created by implementation of the Build Alternative. Assuming 1.5 shifts per day, this translates into 96 net new FTE retail jobs created. Table 4-5 summarizes these results.

Table 4-5. Calculation of New Concourse-Related Retail Jobs

Element	Value
Concourse area (square feet)	160,000
Retail employees per 1,000 square feet	2.5
Total estimated concourse retail employees	400
Percent net new retail jobs	16%
Net new retail jobs created	64
Shifts per day	1.5
FTE jobs created	**96**

Source: Calculations are based on data from United States Green Building Council (2008).
Notes:
Uses blended average of retail employees per square foot for multiple business types, reflective of program mix shown in Table 4-3.
FTE=full-time equivalent

Beyond initial staffing, additional jobs are also anticipated to be required to operate and maintain the proposed concourse-related improvements after the full build-out. Metro's consultant, Morlin Asset Management, provided FTE projections for janitorial, engineering, and security services for the expanded concourse. Table 4-6 shows the number and annual operations cost of these positions.

Table 4-6. New Concourse-Related Operations Jobs (after Full Build-Out)

Passenger Support Services	FTE	Total Cost ($2019)
Journeyman day	1	$189,188
Journeyman swing	2	$384,636
Apprentice	1	$132,367
Security professional	33	$1,607,332

Table 4-6. New Concourse-Related Operations Jobs (after Full Build-Out)		
Passenger Support Services	**FTE**	**Total Cost ($2019)**
Cleaner	13	$832,984
Total	**50**	**$3,146,506**

Source: Morlin Asset Management, 2016 data inflated to $2019
Notes:
Total Cost corresponds to labor income (includes benefits)
FTE=full-time equivalent

Some of the additional $3.15 million annual operations cost to Metro associated with these positions would be offset through Metro's agreements with Metrolink, Amtrak, and CHSRA. As these operators expand their services and account for more of the daily passengers utilizing the concourse over time, an increased share of the operations cost is presumed to be shifted toward those operators through leasing agreements and/or the re-negotiation of cost allocation policies. The precise fiscal impact on Metro is difficult to forecast, as a portion of the costs attributable to increased Metrolink service through the concourse would ultimately be borne by Metro as a member agency of the Southern California Regional Rail Authority (the operator of Metrolink trains). Currently, Metro contributes 50.7 percent of Metrolink's annual $142 million operating subsidy.

As shown in Table 4-7, a number of other FTE operation positions associated with expanded Metrolink and Amtrak services and the introduction of planned HSR service would be needed. Once the planned HSR system is operational at LAUS, it is estimated that passenger support services for expanded and new regional/intercity rail and HSR operations would create 25 new jobs.

Table 4-7. Additional New Concourse-Related Operations Jobs (Full Build-Out with HSR Condition)	
Passenger Support Services	**FTE**
Cross-trained CHSRA/Amtrak/Metrolink ticketing counter staff	4
Passenger information counter/lost and found staff	2
Passenger first aid	2
Business lounge staff	4
Station manager	1
CHSRA ticketing administrator	2
Station operations room	2
Red cap luggage assistance	4

Table 4-7. Additional New Concourse-Related Operations Jobs (Full Build-Out with HSR Condition)

Passenger Support Services	FTE
Operation management (booth on platform)	4
Total	**25**

Source: HDR 2016.
Notes:
CHSRA=California High-Speed Rail Authority; FTE=full-time equivalent

4.3 Net Long-Term Direct Impacts

Table 4-8 provides a summary of the job impacts in the opening year of the full build-out condition. As discussed in section 4.1.2, due to ROW acquisition, the Build Alternative is expected to result in the loss of 20 to 60 jobs, depending on how many businesses relocate within the county. In total, the Build Alternative would support 146 new FTE jobs in retail, janitorial, engineering, security services in the full build-out condition (Table 4-5 and Table 4-6) due to the 160,000 square feet of new retail area as part of the concourse-related improvements. After subtracting jobs that would be lost due to ROW acquisition, a gain in long-term jobs is expected, ranging from 86 to 126 net new jobs.

Table 4-8. Business Impacts from the Build Alternative

Activity	Job Impacts		Developed Building Area (Square Feet)	
	Total Displacement	Partial Displacement	Total Displacement	Partial Displacement
ROW acquisition	-60	-20	-156,834	-105,079
Concourse expansion	146		160,000	
Net impact	**86**	**126**	**3,166**	**54,921**

Notes:
The 146 FTE jobs include 96 retail jobs and 50 concourse operations jobs (see Table 4-5 and Table 4-6)
ROW acquisition is expected to result in up to 60 jobs lost. However, supposing 67 percent of businesses relocate nearby, this would result in only 20 jobs lost.
ROW=right-of-way

In the horizon year of this analysis, 1 full year after implementation of the planned HSR system, the number of long-term FTE jobs would increase to 171, as additional positions are created to support expanded passenger rail services (Table 4-7).

For ROW acquisition of parcels that are owned by BNSF, it is assumed that all employees would be relocated within the City of Los Angeles, thus job impacts related to acquisition of these parcels

are not evaluated. Because BNSF-owned parcels are tax-exempt, tax effects related to acquisition of these parcels are not evaluated either.

Table 4-9 provides a summary of fiscal impacts from the Build Alternative. Because Metro is both the owner of LAUS and a county governmental entity, concourse retail lease revenues and operations costs are included in the fiscal impact analysis, in addition to the net change in property and sales taxes, only some of which would accrue directly to Metro.

Table 4-9. Net Fiscal Operational Impacts from the Build Alternative
($2019)

Impact Category	Value
Property tax – parcel acquisitions	($335,221)
Property tax – new concourse retail uses	$1,398,584
Net additional sales tax – new concourse retail uses	$230,724
Lease revenues – new concourse retail uses	$5,855,653
Facility operations – concourse	($3,146,506)
Net change	**$4,003,233**

Notes:
The impact of property acquisitions on sales tax revenues cannot be estimated with any certainty and is not included in Net additional sales tax revenues.
Lease revenues correspond to Net operating income from Table 4-1 ($8,599,224) and have been de-escalated to 2019 dollars.

As shown in Table 4-9 and discussed in Section 4.1.2, the ROW acquisitions required for the Build Alternative are expected to create a loss in property tax revenues of approximately $0.34 million. The concourse expansion is expected to result in an additional $1.40 million in property tax revenues (Table 4-2), $0.23 million in sales tax revenues (Table 4-4), and $5.86 million in lease revenues (Table 4-1). The expanded concourse would also require additional personnel for operations, which translates to a negative fiscal impact of $3.15 million (Table 4-6).

Overall, the Build Alternative is estimated to increase local government revenues in the opening year by $4.00 million based on known and quantifiable direct impacts; however, additional impacts may be considered as data becomes available, including:

- **Losses in city gross receipts tax.** To the extent that displaced businesses do not relocate in the City of Los Angeles, these businesses would no longer be subject to the City's gross receipts tax, resulting in revenue loss to the City. However, the current level of gross receipts tax being collected by affected businesses is assumed to be relatively small.

- **Losses in city parking tax revenues.** At least two of the parcels planned for potential acquisition contain active parking uses. To the extent that these spaces are leased and generate parking tax revenue to the City, their acquisition would reduce parking tax revenues currently collected by the City. More information on the use of these parcels is needed to determine fiscal impacts.

5.0 Long-Term Multiplier Effects from Project Operating and Maintenance Spending

As mentioned in the previous section, additional personnel would be needed to operate the new concourse (janitors, security guards, etc.) and to accommodate expanded Metrolink and Amtrak services and the new CHSRA service (e.g., ticketing counter staff). Overall, not including new retail jobs, it is expected that about 75 FTE jobs would be generated when the concourse would operate at full capacity.

The follow-on economic and fiscal impacts associated with the additional jobs at LAUS were estimated in IMPLAN® using an approach similar to that described in Section 3.1 for capital spending. Before conducting the impact analysis, IMPLAN® sectors corresponding to the jobs listed above were identified. FTE estimates were converted to actual (part-time and full-time) jobs for each industry using IMPLAN's FTE and Employment Compensation Conversion Table. The conversion factors are provided by IMPLAN® sector in Table 5-1.

Table 5-1. Full-Time Equivalent to Employment Conversion

IMPLAN® Sector	Conversion Factor
409 - Rail transportation	1.05820106
449 - Architectural, engineering, and related services	1.05327305
467 - Investigation and security services	1.09867878
468 - Services to buildings	1.09867878

During the operational phase (the first full year of operations after implementation of the planned HSR system), the Build Alternative is expected to generate 145 full- and part-time jobs in Los Angeles County, representing about $9.9 million in labor income per year. Eighty-one of these jobs (or 56 percent of the total) would be at LAUS (direct effect). Utilizing the conversion factor in Table 5-1, these jobs correspond to the 75 FTE jobs shown in Table 4-6 and Table 4-7. The Build Alternative is also expected to create $24.9 million in output (including $13.9 million in value added) and $2.7 million in tax revenues on an annual basis. For the purpose of this analysis, the concourse-related improvements at LAUS are assumed to operate at full capacity; so, these results should be considered as maximum annual estimates.

Table 5-2 shows the results of the IMPLAN® analysis by type of effect and by impact metric. All dollar amounts are expressed in millions of 2019 dollars and employment impacts are expressed in total job-years.

Table 5-2. Annual Impacts from New Concourse-Related Operations Jobs (by Type and Metric)
($2019 Million)

Impact Metric	Direct	Indirect	Induced	Total
Output	$13.6	$5.8	$5.5	$24.9
Value added	$7.3	$3.2	$3.4	$13.9
Labor income	$5.9	$2.0	$1.9	$9.9
Employment (job-years)	81	27	37	145
Tax revenues	—	—	—	$2.7

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Appendix A:
List of Potentially Affected Parcels

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Assessor's Parcel Number	Property Owner	Estimated Employees	Type of Acquisition	Business Occupant/Type Affected	Improvement Value	Land Value	Property Tax	Building Square Footage	Lot Square Footage
5173-019-011	Victory Investment Group, LLC	25	Full	Occupant: Amay's Bakery & Noodle Company, Inc. Business Type: Cookie and Noodle Bakery	$1,148,502	$1,605,607	$38,363	20,984	29,278
5173-003-002	Amay's Bakery & Noodle Company, Inc.	15	(Assumed) Full	Occupant: Amay's Bakery & Noodle Company, Inc. Business Type: Storage Facility for Cookie and Noodle Bakery	$900,781	$1,171,017	$27,911	13,800	13,844
5173-021-813	BNSF	Unknown	Full	Occupant: BNSF Business Type: Private Freight Railroad Storage Yard	$0	$0	$0	—	924
5173-021-811	BNSF	Unknown	Full		$0	$0	$0	—	20,490
5173-022-808	BNSF	Unknown	Full		$0	$0	$0	—	75,838
5173-023-805	BNSF	Unknown	Full		$0	$0	$0	—	47,001
5163-017-806	BNSF	Unknown	Partial		$0	$0	$0	—	282,051
5173-003-011	PBR Realty, LLC	0	Full	Undeveloped	$18,585	$688,009	$9,787.04	—	15,540
5173-003-012	PBR Realty, LLC	0	Full	Undeveloped	$23,266	$861,118	$12,247.20	—	19,144
5173-018-001	PBR Realty, LLC	0	Full	Undeveloped	$0	$3,024,541	$41,091	—	59,067
5173-019-006	Sovran Acquisition Limited Partnership	20	Full	Occupants: Life Storage and multiple sub-tenants Business Type: Self Storage Facility	$2,334,657	$13,477,341	$205,822	122,050	41,665
Total					**$4,425,791**	**$20,827,633**	**$335,221**	**156,834**	**604,842**

Source: Nite Owl 2019, and employment data is based on Business Use.
Notes:
Blank cells denote information that is not available or not updated.

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