

ITEM 16

MEETING DATE: April 29, 2022

TITLE: Review of Economic Impact Study prepared by Varshney & Associates

PREPARED BY: Derek Minnema

RECOMMENDATION

Review this draft report and provide input as desired.

BACKGROUND

Staff has been working with Varshney & Associates to prepare an Economic Impact Analysis that compliments the Benefit-Cost Analysis of the 34-mile Connector project.

The study's overall objective is to measure the direct, indirect, and induced benefits associated with building the Connector and the benefits that will continue to accrue to the residents and businesses of the Greater Sacramento metro area ("Region") for years after the Connector is complete.

EXECUTIVE SUMMARY

Total measurable economic impact resulting from Connector construction, new incremental housing construction, and new incremental household spendings through 2040 can generate the following impact:

- Produce \$1.8 billion of economic output
- Create 11,300 new jobs through 2040
- Result in \$770 million of new labor income
- Yield \$1.1 billion of new value added
- Generate \$80 million in new state and local taxes on production and imports

DISCUSSION

Varshney & Associates calculates the economic impact using the econometric input-output impact model called IMPLAN. It is widely recognized and used nationally and regionally. IMPLAN data can be used to compute economic impact at the national, state, regional, and county levels.

Particular outputs include employment, value added as measured by employee compensation, proprietary income, other property income, taxes on production and imports, and final demand of institutions (i.e., households, federal government, state and local governments, businesses).

The economic benefit from the Connector is not limited by the effect of the road construction and related activities. The easier connection between employment and population centers will contribute to the vibrancy of the local economy. The additional benefit will result from making the Region more attractive for investment in new housing construction due to creating new options for transportation and commuting.

SUMMARY

This study finds that investment in the construction program by the JPA over the next few years would create a substantial gross economic impact in the Region.

The Connector is a strategic interregional corridor that will drive economic growth by linking residential areas with employment centers, attracting new corporations in the Region, providing mobility for critical rural freight, and facilitating community development.

The improvement in ease and speed of transportation of goods will lead to the increased economic vibrancy of the Region bringing higher growth and prosperity.

According to Mr. Varshney:

"Constructing the Connector will be a historic chance to increase long-term economic competitiveness and attractiveness of the Project area communities and Sacramento and El Dorado counties as a whole.

The investment has a tremendous payoff potential worth billions of dollars in the long run. The new local taxes on production and imports could benefit the jurisdictions as they seek to make their local communities more economically vibrant.

A spirit of entrepreneurship, cooperation, and investment together with the vision of the long-term benefits of the Connector will lead the area to a new level of competitiveness and prosperity as a region."

ATTACHMENTS

- a. Draft Economic Impact Study, dated March 03, 2022



“Mobility is key to prosperity. The Connector provides greater workforce mobility, greater mobility for goods and services and new mobility for active recreation. When you couple that with the direct economic benefit of the jobs created and the materials purchased in order to construct it, there is no denying the Connector is a significant economic driver for our region.”

– Pat Hume, Elk Grove Councilmember and JPA Board of Directors

Capital SouthEast Connector



The Capital SouthEast Connector (Connector) is an innovative, 34-mile multimodal solution to the transportation challenges of South Sacramento County.

Project Overview

South Sacramento County lacks sufficient connectivity and multimodal facilities to accommodate the community needs and its growing economy. Existing roadways are in poor condition and often flood during severe storm events. The facilities lack bicycle and pedestrian accommodations to provide for non-motorized travel. There are limited roadway connections from east to west causing motorists to use the already congested freeways for travel.

The Connector replaces existing two-lane rural roads with a four-lane modern expressway including a separated Class I multi-use path. The redesigned roadway provides capacity for a growing population, active transportation opportunities, access to employment centers, addresses climate resiliencies, deploys innovative technology, and provides for improved quality of life.

Economic Benefits

The Capital SouthEast Connector (Connector) is more than a regional multimodal roadway facility. Economists agree that the Connector provides significant economic development benefits to the region.

The Connector JPA prepared an economic study in 2022 to determine the direct and indirect benefits of the Connector construction. This study finds that a \$552.5 million investment in construction by the Connector JPA would create a substantial gross economic impact. The incremental economic impact to the region between 2021 and 2040 would produce \$1.1 billion of economic output and create 7,347 new full-time jobs. The Connector would also generate \$43.1 million in new indirect business taxes. Creating new well-paying jobs will serve a tremendous lift to the region's economy.

Key Benefits

- \$585.7 million in travel time savings benefits to commuters
- \$37.3 million in residual investment value of Connector construction
- \$19.5 million in safety benefits from avoided collisions
- \$17.2 million in avoided pavement rehabilitation costs
- \$6.8 million in increased walking and biking benefits for the community
- \$6.3 million in reduced vehicle emissions benefits for the region
- \$3.5 million in savings from reduced truck miles traveled and operating costs

“Our population has doubled between 1980 and 2020 — my lifetime. To accommodate that growth in population we must continue to make investments that expand the capacity of all infrastructure: adding a new airport terminal, raising Folsom Dam, and building new roadways are all important investments to grow our economy.”

– Derek Minnema, Executive Director, Capital SouthEast Connector JPA



Key Benefits

- Replaces 2-lane rural roads with 4-lane expressway
- Adds a separated Class I multi-use path along the corridor
- Establishes an efficient and reliable freight corridor in the region
- Addresses regional climate resiliency and environmental stewardship issues
- Deploys innovative smart technologies to manage and improve traffic flow
- Reduces vehicle miles traveled and travel times for commuters
- Provides new interregional route connecting I-5 to SR 99 to SR 16 to US 50
- Enhances safety by constructing medians, improved intersections, separated Class I multi-use path, buffered bike lanes, and removing obstructions from the clear recovery zone.
- Reduces vehicle miles traveled and greenhouse gas emissions, provides resiliency by correcting persistent road-way flooding issues, avoids impacts on underserved communities, and supports habitat conservation.
- Provides multimodal connectivity to affordable and workforce housing, job centers, healthcare, and recreational facilities and removes barriers to opportunity.
- Improves traffic operations to job centers, supports regional jobs creation, and supports truck throughput and operations from aggregate mines.
- Improves affordable transportation choices for underserved communities with the accessibility of bicycle and pedestrian facilities and access to bus transit.
- Implements a “fix it first, fix it right” approach to replace failing pavement
- Extensive support from local, state, and federal elected officials, labor unions, business groups, agencies, and residents.
- Constructs a smart corridor with emerging technologies

Key Supporters

U.S. Senator Alex Padilla

U.S. Representative Ami Bera

CA Assemblymember Ken Cooley

Sacramento County Sheriff Jim Cooper

“In recent years Greater Sacramento Area struggled a lot in attracting new industries, business, and jobs. Transport infrastructure is a well proven driver of economic development and vibrancy. For instance, construction of Highway 65 was a huge positive impact on communities of Lincoln and Roseville as well as the whole Placer county. This Project will be a historic chance to increase long-term economic competitiveness and attractiveness of Project area communities as well as Sacramento and El Dorado counties as a whole. The investment of \$600 million has a tremendous payoff potential that is worth billions of dollars in the long run. The new local taxes on production and imports could be beneficial to the jurisdictions as they seek to make their local communities more economically vibrant. A spirit of entrepreneurship, cooperation, and investment together with vision of the long-term benefits will lead Project area to the new level of competitiveness and prosperity as a region.”

– Sanjay Varshney

THE ECONOMIC IMPACT OF THE CAPITAL SOUTHEAST CONNECTOR



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THE ECONOMIC IMPACT OF THE CAPITAL SOUTHEAST CONNECTOR

Varshney & Associates

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EXECUTIVE SUMMARY

This study describes the economic impact of constructing the Capital SouthEast Connector (hereafter “Connector”). The Connector, a multi-lane roadway with 34.26 miles length, when built, will connect the communities of El Dorado County and Sacramento County and link the cities of Folsom and Rancho Cordova to Elk Grove. Another major benefit of the Connector would be alleviation of traffic congestion on Routes 50, 5, and 99, time and distance savings for those travelling along those corridors by bypassing the downtown area of Sacramento, and avoidance of delays due to rush hour traffic.

The overall objective of the study is to measure the direct, indirect, and induced benefits associated with building the Connector, and the benefits that will continue to accrue to the residents and businesses of the Greater Sacramento metro area (thereafter “Region”)¹ for years after the Connector project is completed.

The Connector could be viewed as an important catalyst for greater economic activity and new jobs that would be created both directly and indirectly. The areas of economic impact will include:

- *Capital Investments to Construct the Connector*
- *Economic Value of Linking Residential Areas with Employment Centers (Attraction of New Employment Centers, Housing, and Other Economic Activity)*
- *Economic Value of Time and Distance Savings (Improvement in Ease and Speed of Transportation of Goods)*
- *Increased Economic Vibrancy of the Region Leading to Higher Growth*

The estimates of economic impact are calculated using the econometric input-output impact model called IMPLAN. It provides modeling based on data and tools to assess economic impacts at the state, county, and multi-county levels. It is widely recognized and used nationally and regionally. IMPLAN data can be used to compute economic impact at the national, state, regional, and county levels. Of particular interest are industry output, employment, value added as measured by employee compensation, proprietary income, other property type income, and taxes on production and imports), and final demand of institutions (i.e., households, federal government, state and local governments, businesses).

The full range of economic impacts includes direct, indirect, and induced benefits.

¹ Greater Sacramento metro area for the purpose of this study is defined as the seven-county region including Sacramento, El Dorado, Nevada, Placer, Sutter, Yolo, and Yuba counties.

- **Direct benefits** consist of economic activity contained exclusively within the designated sector(s). This includes all expenditures made by the company and all of its employees.
- **Indirect benefits** define the creation of additional economic activity that results from linked businesses, suppliers of goods and services, and provision of operating inputs.
- **Induced benefits** measure the consumption expenditures of direct and indirect sector employees. Examples of induced benefits include employees' expenditures on items such as retail purchases, housing, doctors and dentists, banking, and insurance.

The total direct, indirect, and induced benefits arising due to the multiplier effect are presented in the following ways:

- **Employment** demonstrates the number of jobs generated and is calculated in a full-time equivalent employment value on an annual basis.
- **Output** accounts for total revenues including all sources of income or the value of production generated by an industry for a given time period. This is the best overall measure of business and economic activity because it is the measure most firms use to determine current activity levels.
- **Taxes on Production & Imports, less Subsidies (TOPI)** (previously called Indirect Business Taxes) include sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments that would be paid by businesses and generated for the local economy. While all taxes during the normal operation of businesses are included, taxes on profits or income are not included.
- **Total Value Added** is the gross regional product derived from the income paid to the owners of the factors of production in the model year. This is the same as GDP.
- **Labor Income** includes all forms of employee compensation that would be paid by employers (e.g., total payroll costs including benefits, wages and salaries of workers, health and life insurance, retirement payments, non-cash compensation), and proprietary income (e.g., self employment income, income received by private business owners including doctors, lawyers).

The construction of the Connector proposes total investment of approximately \$600.3 million US dollars \$340.3 million of which (NPV in 2021 US dollars) have yet to be invested over the next several years. The size and scope of such large scale investments will add to the economic output of the seven county Region, act as a catalyst for new economic activity, create new jobs, add to the labor income, produce net new taxes on production and imports, and in general add to the gross state product of the Region.

This study finds that a \$340.3 million investment in the construction program by the JPA over the next few years would create a substantial gross economic impact in the Region. The total economic impact to the Region (to include direct, indirect, and induced effects) would:

- Produce \$552.5 million of economic Output
- Create 2,961 new Employment full-time equivalent jobs calculated on annual basis²
- Result in \$220.6 million of new Labor Income
- Yield \$334.8 million of new Value Added
- Generate \$25.3 million in new state and local Taxes on Production & Imports

The economic impact from the Connector is not limited by the effect of the road construction and related activities. The additional impact will result from making the Region more attractive for investment in new housing construction due to creating new options for transportation and commuting. The easier connection between employment and population centers will contribute to the vibrancy of the local economy. According to the SACOG 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) Update the total number of housing units in the six county Region is expected to achieve 1,180,950 by 2040³ which means construction of approximately 188,800 new housing units or 19% increase of their total number during the period between 2021 and 2040.⁴

Regarding the areas directly adjacent to the Connector (Cities of Folsom, Rancho Cordova, Elk Grove, CDPs El Dorado Hills, Vineyard, Franklin, and unincorporated communities on both sides of the road)⁵, the total number of their housing units in 2021 is 167,023 that constitutes 13.35% growth compared to 2010. This is the substantially higher growth than in Sacramento County and State of California during the same period (8.01% and 6.36% respectively).⁶ Under the No Project Alternative (assuming that the Connector is not built) and assumption of retaining the same growth rate there are still 35,300 new housing units that are expected to be built in the Project area till 2040.

This study finds that an increase in population and households and construction of approximately 35,300 new housing units between 2021 and 2040 would create the following gross economic impact in the Region:

- Produce \$22.3 billion of economic Output
- Create 165,576 new Employment full-time equivalent jobs calculated on annual basis
- Result in \$10.1 billion of new Labor Income
- Yield \$13.9 billion of new Value Added
- Generate \$883 million in new state and local Taxes on production and imports

² Employment demonstrates the number of jobs generated and is calculated on an annual full-time/part-time basis. IMPLAN is an annual model, therefore Employment estimates provided by IMPLAN represent annualized Employment values (i.e. if a worker works 6 months, IMPLAN counts that as 0.5 jobs, and one job sustained over 5 years counts as 5 jobs).

³ Sacramento Area Council of Governments (SACOG) 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy, <https://www.sacog.org/2020-metropolitan-transportation-plansustainable-communities-strategy-update>

⁴ According to State of California Department of Finance 2021 Population and Housing Estimate the total number of housing units in six county region is 992,102 as of beginning of 2021. <https://www.dof.ca.gov/forecasting/demographics/estimates/e-5/>.

⁵ For the purpose of this study the territories of the following twelve zip codes were considered adjacent to the Connector: 95762, 95672,95682 (all El Dorado Hills), 95630 (Folsom), 95670, 95742, 95827 (all Rancho Cordova), 95624, 95758 (both Elk Grove), 95757 (Elk Grove and Franklin), 95829 (Vineyard), 95830 (unincorporated).

⁶ Sacramento County Public Health. 2021 *Demographics*. <http://www.behealthysacramento.org/demographicdata>

The economic activity outlined here is expected to take place even if the Connector is not built. However the Project will support it and become a catalysator of the additional activity due to increased connectivity in the area. While it is difficult to precisely estimate what incremental economic activity will take place due to the Connector construction and operation it is evident that it will facilitate additional population growth and contribute to the economic vibrancy of the area. It is conceivable that once the Project enters its active stage the real estate owners, investors, and developers will accelerate repurposing and development of properties located along the Connector. It can be expected that the growth of population and new jobs creation will take place sooner than could be expected under No Project Alternative. This, in turn, will result in the incremental economic growth attributed to the Project.

In order to quantify this incremental economic impact we make a conservative assumption that the Connector role in new housing construction will be limited by accelerating its timetable by 5% per year. It is simply that 5% of the homes projected to be built will get built faster due to the perceived benefits of the Connector resulting in population and economic activity occurring sooner than otherwise would happen, and this effect will take place starting from 2022. Based on the assumption above, the incremental economic impact of the Connector on the housing construction sector in the Project area (to include direct, indirect, and induced effects) between 2021 and 2040 can be expected as the following:

- Produce \$1.1 billion of economic Output.
- Create 7,347 new Employment full-time full-time equivalent jobs calculated on annual basis
- Result in \$495 million of new Labor Income.
- Yield \$678 billion of new Value Added
- Generate \$43.1 million in new state and local Taxes on production and imports.

In addition to it the incremental impact of new households spending will result in:

- \$166 million of economic Output
- 971 new Employment (full-time equivalent jobs calculated on annual basis)
- \$53 million of new Labor Income
- \$101 million of new Value Added
- \$12 million of new state and local Taxes on production and imports

As a result total measurable economic impact resulting from Connector construction, new incremental housing construction and new incremental households spendings between 2021 and 2040 can generate the following impact:

- Produce \$1.8 billion of economic Output.
- Create 11,3 thousand of new Employment (full-time equivalent jobs calculated on annual basis)
- Result in \$770 million of new Labor Income.
- Yield \$1.1 billion of new Value Added
- Generate \$80 million in new state and local Taxes on production and imports.

The most current post-COVID demographic data also provides the evidence in favor of importance of the Connector as the regional driver of economic growth. While California lost 182,000 residents last year,

bringing the state's population to 39.467 million, the Sacramento region continued to grow. The region netted 12,750 new residents (a 0.5 percent increase), bringing the six-county population total to 2.56 million. The bulk of the growth occurred in Placer and Sacramento counties (the area of Connector construction), in high degree due to COVID-related workforce migration from Bay Area. Placer County grew at a rate of 1.5 percent. Among the region's cities, Elk Grove (1.2 percent growth) jumped to the 26th largest city in the state and City of Sacramento (0.5 percent growth) remains the 6th largest in the state.⁷

Finally, to fully understand the total economic impact of the Connector once it is completed, one must also understand the economic value of time and distance savings, linking residential areas with employment centers, attraction of new corporations in the Region, infrastructure and community development and other economic activities. The improvement in ease and speed of transportation of goods will lead to the increased economic vibrancy of the Region leading to higher growth and prosperity.

This is especially promising in the context of the upcoming post-COVID era that brought historically large scale geographic shifts on the workforce market. According to a Gallup poll, "Three in five U.S. workers who have been doing their jobs from home during the coronavirus pandemic would prefer to continue to work remotely as much as possible, once public health restrictions are lifted."⁸ According to Global Workplace Analytics, just 3.6% of the US workforce worked from home in 2018 while the estimate is that 25-30% of the workforce will be working-from-home multiple days a week by the end of 2021. It is estimated that after full lifting of restrictions at least a half of this time will still remain work-from-home.⁹ In the context of this study this historical shift first of all means that the increase of San Francisco and Bay Area workforce in Greater Sacramento Area is a long-term trend, and part of the housing demand along the Connector (first of all Vineyard and other communities located between I-5 and US-50) can be expected due to this workforce migration.

In recent years Greater Sacramento Area struggled a lot in attracting new industries, business, and jobs. Transport infrastructure is a well proven driver of economic development and vibrancy. For instance, construction of Highway 65 was a huge positive impact on communities of Lincoln and Roseville as well as the whole Placer county. This Project will be a historic chance to increase long-term economic competitiveness and attractiveness of Project area communities as well as Sacramento and El Dorado counties as a whole. The investment of \$600 million has a tremendous payoff potential that is worth billions of dollars in the long run. The new local taxes on production and imports could be beneficial to the jurisdictions as they seek to make their local communities more economically vibrant. A spirit of entrepreneurship, cooperation, and investment together with vision of the long-term benefits will lead Project area to the new level of competitiveness and prosperity as a region.

⁷ SACOG. *Sacramento Region Grows While State Loses Population Overall*. <https://www.sacog.org/post/sacramento-region-grows-while-state-loses-population-overall>

⁸ Gallup. *U.S. Workers Discovering Affinity for Remote Work*, by Megan Brenan, <https://buildremote.co/companies/companies-going-remote-permanently/>

⁹ Globalworkplaceanalytics.com. *Latest Work-At-Home/Telecommuting/Mobile Work/Remote Work Statistics*, June 2021. <https://globalworkplaceanalytics.com/telecommuting-statistics>

THE ECONOMIC IMPACT OF THE CAPITAL SOUTHEAST CONNECTOR

Varshney & Associates

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INTRODUCTION

This study describes the economic impact of constructing the Capital SouthEast Connector (hereafter “Connector”). The Connector, a multi-lane roadway with 34.26 miles length, when built, will connect the communities of El Dorado County and Sacramento County and link the cities of Folsom and Rancho Cordova to Elk Grove. Another major benefit of the Connector would be alleviation of traffic congestion on Routes 50, 5, and 99, time and distance savings for those travelling along those corridors by bypassing the downtown area of Sacramento, and avoidance of delays due to rush hour traffic.

The study presents the objectives, some of the major areas of economic impact, and the resulting analyses.

OBJECTIVES OF THE STUDY

The overall objective is to measure the direct, indirect, and induced benefits associated with building the Connector, and the benefits that will continue to accrue to the residents and businesses of the greater Sacramento region for years after the Connector project is completed.

The study measures and presents the economic impact and analysis along at least three dimensions:

- **Geography.** The values are computed for the seven-county Greater Sacramento Region (officially Sacramento–Roseville, CA Combined Statistical Area) that includes El Dorado County, Nevada County, Placer County, Sacramento County, Sutter County, Yolo County, and Yuba County. The study provides a localized analysis of the value to people and businesses within the community.
- **Industry Sectors.** The study measures the impacts by industry sectors (hotels, restaurants, construction, agriculture, financial services) for all activities directly and indirectly impacted by the activities.
- **Particular constituencies.** The analysis examines the value of the Connector not only to the general population but to particular constituencies such as local and county governments.

BACKGROUND

Project Overview

Project site

The Capital SouthEast Connector (Project) will cover the area starting from the interstate 5/Hood-Franklin Road interchange in southwest Sacramento County and terminating at US Highway 50 in the vicinity of Silva Valley Parkway approximately 3 miles past the El Dorado County line. It is expected to provide 4-6 lanes to accommodate existing vehicle traffic and create new multi-modal options.

Figure 1. Project map



Project purpose

The Project is envisioned to serve regional and local transportation needs by filling an existing gap in the connectivity in Greater Sacramento Area with linking the residential and employment centers for the surrounding communities. Together with transforming of two lane rural roads into four to six lanes expressway will substantially reduce the excessive traffic and provide the congestion relief on the existing roadways.

Currently there are numerous issues related to connectivity and transportation infrastructure in the Project area. The most critical ones include but are not limited to inadequate transportation capacity and mobility for people, goods, and freight, lack of connectivity between residential areas and employment centers in the region, lack of routes of effective evacuation in case of natural disasters, technological or man-made accidents, medical and other emergencies, traffic congestions caused by the necessity to use US 50/Business 80/SR 99 interchange in Sacramento Downtown for traveling from east of El Dorado Hills to Elk Grove area and further to the south on I-5. The Project will provide a remedy for the limitations in transportation capacity, safety, resiliency, environmental protection, and land use. Together with these benefits the Project will have the immediate and substantial impact in developing economic vibrancy for the region.

PEIR Study

The Capital SouthEast Connector Joint Powers Authority (JPA) was established in December 2006 as a result of collaborative efforts of Sacramento and El Dorado Counties along with Cities of Elk Grove, Rancho Cordova, and Folsom. The purpose of forming this structure was to facilitate planning, environmental review, engineering design, and development of the Capital SouthEast Connector Expressway.

The Program Environmental Impact Report (EIR) was completed by JPA for the purpose of providing the CEQA and other stakeholders with the expert review of existing and potential environmental issues and related data. Another goal of PEIR was to clarify the areas of environmental impact and avoid unnecessary repetition for future Project reviews.

Significant and unavoidable impacts

According to PEIR¹⁰, implementation of this Project does have certain significant and unavoidable impacts that include:

¹⁰ Capital SouthEast Connector Joint Powers Authority. *Findings of Fact And Statement of Overriding Considerations Regarding the Program Environmental Impact Report for the Capital SouthEast Connector Project Final Program Environmental Impact Report.* http://www.mmrandletest.weebly.com/uploads/8/3/3/5/83350278/2012_03_findings_of_fact_statement_of_overriding_considerations_re_peir.pdf

- A diminished rural, agricultural, and natural visual character of certain areas
- Contribution to increased traffic emissions above the current threshold
- Permanent impacts on wetlands and loss or disturbance on special-species wildlife and habitats
- Possible destruction or damage to cultural resources or historic architectural resources
- Conversion of prime farmland and Williamson Act lands to non-agricultural uses
- Exposure of noise-sensitive land uses to noise and vibration
- Increase in traffic volumes on some nonproject roadways and intersections

Project benefits

Together with that the benefits of the Project that will offset some of the less desired impacts include the following:

- Decreased traffic on several arterial/collector segments and portions of the US 50, SR 99, and I-5
- Reduced congested VMT and VHT percentages that would occur on congested roadways
- Substantially reduced overall delay and travel times along the project alignment
- Reduced overall delay on entire roadway system serving the area
- Reduced travel time between communities along project alignment
- Improved goods movement in the corridor by substantially reducing delay and travel times
- Increased transit ridership through capital improvements

Cumulative and growth-related impacts

The cumulative impacts outlined in the PEIR include:

- Degradation in aesthetic character and visual quality
- Increased greenhouse gas emissions
- Conversion of land uses to urban uses and disruption of established communities
- Conversion of agricultural lands
- Increased traffic noise
- Increased loss of vernal pool species and habitat
- Level of Service (LOS) impacts on non-project roadway segments

Growth-inducing impact

According to PIER , under certain circumstances, improvements in mobility can result in making land more attractive for development. Through the improved transportation and access the Project could have the unintentional impact of contributing to the inducement of economic and population growth. Improvements in mobility can result in making some areas not currently planned for development more attractive to urbanization, economic activity, and settlement. As a result, the Project would result in a significant unavoidable impact regarding inducement of substantial population growth because it could remove an obstacle to growth.

Further study is aimed at quantifying total direct, indirect and induced economic impact from the road construction as well as future population and housing construction incremental growth caused by the Project.

AREA OF ECONOMIC IMPACT

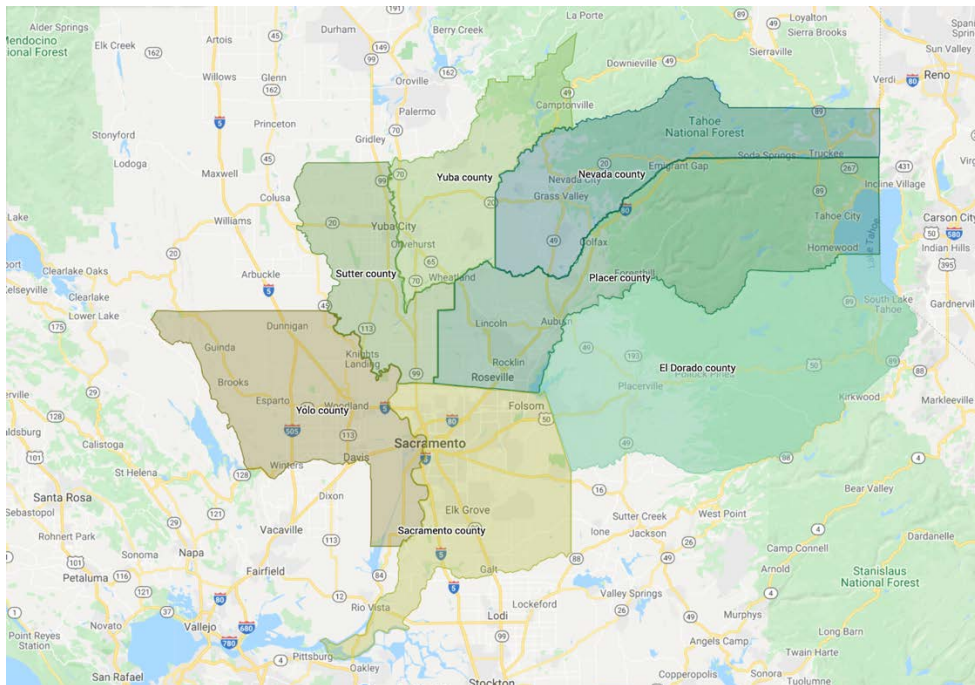
Geographic scope

The economic impact analysis is performed for the Greater Sacramento Area (GSA) that for the purposes of this study was defined to include Sacramento, Placer, Yolo, El Dorado, Yuba, Nevada, and Sutter counties. It corresponds to the definition of the Greater Sacramento area, or officially Sacramento–Roseville, CA Combined Statistical Area (CSA) as a territory consisting of the two metropolitan statistical areas and one micropolitan statistical area. The two metropolitan statistical areas (MSA) are Sacramento-Roseville-Folsom, CA MSA (Sacramento, Yolo, Placer, and El Dorado counties) and Yuba City, CA MSA (Sutter and Yuba counties). The micropolitan area is Truckee-Grass Valley, CA MSA comprised of Nevada county.

In the 2020 census, the Sacramento–Roseville, CA Combined Statistical Area had a population of 2,639,124. The total area of CSA is 7,287.2 sq. miles, population density is 362.2 people per square mile, median per capita income is \$37,458, and median household income is \$75,428 ¹¹.

For a graphic representation of the GSA definition for the purposes of this study see Figure 2.

Figure 2. Greater Sacramento Area definition for the purpose of the study



¹¹ U.S.Sensus Bureau. *Census Reporter*. <https://censusreporter.org/profiles/33000US472-sacramento-roseville-ca-csa/>

While the Connector links communities in Sacramento and El Dorado Counties including the cities of Folsom, Rancho Cordova, and Elk Grove, the industries and households that will be impacted and the economic impacts are more than likely to be present in the seven county Region than just be isolated to the counties of Sacramento and El Dorado. This is because the people who will be employed through the activities of the construction of the Connector and the linking of population and employment centers thereafter, take home labor income, spend on goods and services that will in turn affect other industries and generate taxes on production and imports and new economic output, and are likely to live anywhere in the seven county Region. It is also likely that some of the economic impact leakages will occur due to some people living and working outside the seven county Region. However, for the purpose of the study defining the study area to comprise the adjoining seven counties will likely capture the vast majority of new economic activity and impact generated.

Industrial scope

As more population was attracted to the Greater Sacramento Area, the construction sector became one of the largest sources of employment and one of the key drivers for the region’s economic growth and investment activity. It is also one of the leading forces of the economic recovery in the region after COVID-19 pandemic. The expected total growth in construction in 2021 is 15.7% compared to 2020.¹²

The Greater Sacramento Area ranks larger in economic output than the total state economies of more than half the states in the United States. However, much of the region’s economy comprises public administration, educational, health, social services, and other service sector jobs that service the increased population. Overall, service sector share in GSA employment is substantially higher than in State of California economy as a whole (see Table 1).

Table 1. Comparison of Occupation (Service Sector) in State of California and Greater Sacramento¹³

	California		Sacramento-Roseville, CA CSA	
	Number of employed	Percent of total employed	Number of employed	Percent of total employed
Finance and insurance, and real estate and rental and leasing	1,112,459	5.8%	84,100	6.8%
Professional, scientific, and management, and administrative and waste management services	2,700,235	14.2%	150,375	12.1%
Educational services, and health care and social assistance	4,037,088	21.2%	276,767	22.3%
Arts, entertainment, and recreation, and accommodation and food services	1,966,467	10.3%	124,281	10.0%
Other services, except public administration	960,853	5.0%	58,634	4.7%

¹²Cumming Group. *Following a surprisingly active market in the first quarter, construction in Sacramento is expected to see a lot of attention in the coming years.* <https://infogram.com/2021-q3-w-sacramento-1-1hd12yxewdn7w6k>

¹³ Source: U.S.Census Bureau. *American Community Survey, 2019.* https://data.census.gov/cedsci/table?q=&t=Industry%3AOccupation&g=0400000US06_330M600US472&tid=ACSST1Y2019.S2405

Public administration	855,686	4.5%	106,102	8.6%
<i>Total Percent Allocated in Service Sector</i>		<i>61.0%</i>		<i>64.5%</i>

Subsequently the share of employment in industrial sectors in GSA is lower than is California as a whole (Table 2). Economists agree that the industry mix of the region needs diversification and wonder why GSA is slow in attracting new industries, companies, and jobs. In addition to it, GSA also trails the State in per household income (\$80,440 in State vs \$75,428 in GSA)¹⁴.

Table 2. Comparison of Occupation (Industry Sector) in State of California and Greater Sacramento CSA¹⁵

	California		Sacramento-Roseville, CA CSA	
	Number of employed	Percent of total employed	Number of employed	Percent of total employed
Agriculture, forestry, fishing and hunting, and mining	409,074	2.1%	17,445	1.4%
Construction	1,288,091	6.8%	92,410	7.5%
Manufacturing	1,660,969	8.7%	66,915	5.4%
Wholesale trade	516,975	2.7%	33,986	2.7%
Retail trade	1,939,035	10.2%	138,952	11.2%
Transportation and warehousing, and utilities	1,089,249	5.7%	69,946	5.6%
Information	541,920	2.8%	20,137	1.6%
<i>Total Percent Allocated in Industry Sector</i>		<i>39.0%</i>		<i>35.5%</i>

Directions of growth catalyzation

One of the reasons of lower economic vibrancy of GSA compared to the State as a whole is that the region’s public roads and infrastructure are overburdened and seem inadequate for the region’s needs. The Connector could be viewed as that catalyst for greater economic activity and new jobs that would be created both directly and indirectly.

The direction of economic impact will include:

- *Capital Investments to Construct the Connector*
- *Economic Value of Linking Residential Areas with Employment Centers (Attraction of New Employment Centers, Housing, and Other Economic Activity)*
- *Economic Value of Time and Distance Savings (Improvement in Ease and Speed of Transportation of Goods)*
- *Increased Economic Vibrancy of the Region Leading to Higher Growth*

¹⁴ Source: U.S.Census Bureau. *American Community Survey, 2019*. https://data.census.gov/cedsci/table?t=Earnings%20%28Individuals%29%3AIncome%20and%20Poverty&g=0400000US06_330M500US472_330M600US472&tid=ACSST1Y2019.S1901

¹⁵ Source: U.S.Census Bureau. *American Community Survey, 2019*. https://data.census.gov/cedsci/table?q=&t=Industry%3AOccupation&g=0400000US06_330M600US472&tid=ACSST1Y2019.S2405

While not all areas of impact above may be easily measured, a discussion on the benefits associated with all of these can certainly be useful to better understand the areas of economic impact and resultant activity.

MEASURES OF ECONOMIC IMPACT

Methodology

The methodology applied in this study is based on economic input–output modeling. It is a quantitative approach that measures and forecasts the interdependencies between different sectors of a national economy. Under this methodology inter-industry relationships within an economy are quantified and represented in the input-output matrix.

Model

The estimates of economic impact are calculated using the econometric model called IMPLAN. This model is the mechanism that computes the impact of a level of expenditures in terms of overall economic activity, job creation, non-income tax generation, etc. It is widely recognized and used nationally and regionally. IMPLAN has more than 2,000 active users in the United States and internationally. These include clients in federal and state government, universities, and private sector consultants. The model provides modeling based on data and tools to assess economic impacts at the state, county, and micro (zip-code) levels.

The benefit of using input-output models, including IMPLAN, is that they help evaluate the effects of industries on each other based on the supposition that industries use the outputs of other industries as inputs. Some other models measuring economic activity examine only the total output or employment of an industry, and not the dual causality that may run both ways. The use of an input-output model provides a much more comprehensive view of the inter-related economic impacts. It examines economic relationships between businesses and between business and consumers. This impact analysis then measures changes in any one or several economic variables on an entire economy.

Multiplier Effect

Multipliers are the basis of how an input-output analysis system such as IMPLAN makes estimations of the potential impacts of economic changes. Each industry that produces goods and services has an influence on, and in turn is influenced by, the production of goods and services of other industries. These interrelationships are captured through a multiplier effect as the demand and supply vary from industry to industry (direct and derived demand) and thus impact total output, compensation, employment, etc.

Content and definition

The multiplier is defined as the impact of a one-unit change in indicators such as income, sales, employment, that causes the respective effect in income, sales, employment in the economy of the area. Expressed as a rate of change, a multiplier describes how for a given change in a particular industry a resultant change will occur in the overall economy. For instance, for every dollar spent in the economy an additional \$0.25 of economic activity is generated locally, implying a multiplier of 1.25.

The multiplier effect is generated when new output or employment is added in one sector, but generates additional output or employment in other sectors that supply goods and services (indirect impact) and consumer services to employees (induced impact). Multipliers may differ across the regions depending on the strength of these interrelationships. Of particular interest are industry output, employment, labor income, value added, proprietary income, other property type income, taxes on production and imports, and final demand of institutions (i.e., households, federal government, state and local governments, businesses).

Types of multipliers

The direct, indirect, and induced benefits arising due to the multiplier effects can be measured as five different types: output, employment, labor income, value added, and taxes on production and imports.

- **Output** accounts for total revenues including all sources of income for a given time period for an industry in dollars. It is the total production value and includes all components of production such as employee compensation, proprietor income, intermediate expenditures, taxes on production and imports, and other property type income. This is the best overall measure of business and economic activity. For example, an output multiplier of 1.5 means that for each dollar of spending on the Project, an additional 50 cents is spent in other sectors because of related business-to-business and consumer spending.
- **Employment** demonstrates the number of jobs generated and is calculated on an annual full-time/part-time basis. IMPLAN is an annual model, therefore Employment estimates provided by IMPLAN represent annualized Employment values (i.e. if a worker works 6 months, IMPLAN counts that as 0.5 jobs, and one job sustained over 5 years counts as 5 jobs). A person can hold more than one job, so the job count is not necessarily the same as the count of employed persons. For example, an employment multiplier of 1.5 means that for each two jobs created by the Project, an additional one job is created because of related business-to-business and consumer spending.
- **Labor Income** represents the total value of all forms of employment income paid for a given time period. It includes all forms of employee compensation paid by employers (e.g., total payroll costs including benefits, wages and salaries of workers, health and life insurance, retirement payments, non-cash compensation), and proprietary income (payments received by self-employed individuals and/or unincorporated business owners such as self-employment income, income received by private business owners including doctors, lawyers). For example, a labor income multiplier of 1.5 means that for each dollar of labor income created by the Project, an additional 50 cents of labor income is created in other sectors because of related business-to-business and consumer spending.
- **Value Added** is the difference between an industry's total output and the cost of its intermediate inputs for a given time period. It equals gross output (i.e., sales or receipts and other operating income, plus inventory change) minus intermediate inputs (i.e., consumption of goods and services purchased from other industries or imported). Value Added is a measure of the contribution to GDP made by an individual producer, industry, or sector. For example, a Value Added multiplier of 1.5 means that for each dollar of value added by the Project there will be an additional value added in the amount of 50 cents in other sectors because of related business-to-business and consumer spending.

- **Taxes on Production and Imports less Subsidies (TOPI)**¹⁶ is one of the components of Value Added and includes sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments. For all industries other than government enterprises, subsidies are counted as a negative figure towards TOPI. While all taxes during the normal operation of businesses are included, taxes on profits or income are not included. For example, a TOPI multiplier of 1.5 means that for each dollar of taxes generated by the Project an additional 50 cents is paid as taxes by taxpayers in other sectors because of related business-to-business and consumer spending.

Types of effects

Four types of multiplier effect are usually analyzed in the output-input models like IMPLAN: direct, indirect, induced, and total.

- The *direct* effect characterizes an initial impact of an economic activity on the region's economy. For every dollar spent in an industry, if the industry exists in the region, there is one-dollar worth of direct impact in the local economy.
 - For Output, this Effect is either 1.00 or 0.00. For every dollar spent in an Industry, if the Industry exists in the region, there is a dollar's worth of activity in the local economy. If the Industry doesn't exist in the region, the effect is 0.00.
 - For Employment, the Effect represents the number of jobs per \$1,000,000 of production in the Industry.
 - Labor Income Effects represent the Labor Income dollars per \$1,000,000 of production in the Industry.
 - Value Added Effects represent the Total Value Added and various Value Added subset dollars per \$1,000,000 of production in the Industry.
 - For TOPI, the Effect represents the tax dollars per \$1,000,000 of production in the Industry.
- The *indirect* effect defines the creation of additional economic activity that results from linked businesses, suppliers of goods and services, and provision of operating inputs. For example, the Project purchases food, detergents, blankets and other products and services.
 - For Output, the Effect represents the sum of local business-to-business purchases per dollar of Output.
 - For Employment, the Effect represents the number of jobs per \$1,000,000 of business-to-business purchases by all resultant rounds of local Industry purchases.
 - Labor Income Effect represents the value of Labor Income dollars per \$1,000,000 of business-to-business purchases by all resultant rounds of local Industry purchases.
 - Value Added Effect represents the value of Value Added dollars per \$1,000,000 of business-to-business purchases by all resultant rounds of local Industry purchases.

¹⁶ In IMPLAN based studies "taxes on production and import (TOPI)" are also termed as "indirect business taxes (IBT)".

- For TOPI, the Effect represents the value of tax dollars per \$1,000,000 of business-to-business purchases by all resultant rounds of local Industry purchases.
- The *induced* effect measures the consumption expenditures of direct and indirect sector employees. While indirect effect considers business-to-business transactions only, the induced effect includes the sum of household purchases per dollar spent, based on the respective labor income payments. Examples of induced benefits include employees’ expenditures on items such as retail purchases, housing, banking, medical services, and insurance.
 - For Output, the Effect represents the sum of local Household purchases per dollar of Output, based on Labor Income payments made by the originating Industry and the local Industries from which they purchase.
 - For Employment, the Effect represents the number of jobs supported in local Industries per \$1,000,000 of Direct spending in the originating Industry as a result of Household purchases derived from Labor Income payments throughout all rounds of the impact.
 - Labor Income Effect represents the value of Labor Income dollars per \$1,000,000 of Direct spending in the originating Industry in local Industries as a result of Household purchases derived from Labor Income payments throughout all rounds of the impact.
 - Value Added Effect represents the Value Added dollars per \$1,000,000 of Direct spending in the originating Industry in local Industries as a result of Household purchases derived from Labor Income payments throughout all rounds of the impact.
 - For TOPI, the Effect represents the value of tax dollars per \$1,000,000 of Direct spending in the originating Industry in local Industries as a result of Household purchases derived from Labor Income payments throughout all rounds of the impact.
- The *total* effect is the sum of the direct, indirect, and induced effects.

Table 3 contains the summary of types of multipliers and effects.

Table 3. Project-Related Economic Impact Multiplier

Type of Multiplier	Direct	Indirect	Induced
Output Multiplier	Project spending	Local business- to-business purchases due to Project spendings	Local household purchases due to Project spendings
Employment Multiplier	Number of jobs in the Project	Number of jobs due to all resultant rounds of local industry purchases caused by Project spendings	Number of jobs as a result of household purchases caused by Project spendings

Labor Income Multiplier	Labor income of Project employees and proprietors	Labor income due to all resultant rounds of local industry purchases caused by Project spendings	Labor income as a result of household purchases caused by Project spendings
Value Added	Total value added dollars created by Project operations	Value added dollars due to all resultant rounds of local industry purchases caused by Project spendings	Value added dollars as a result of household purchases caused by Project spendings
TOPI	Sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments paid by the Project	Sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments paid due to all resultant rounds of local industry purchases caused by Project spendings	Sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments paid as a result of household purchases caused by Project spendings

Other Assumptions of the Study

To measure the economic impact of the Project, the study makes the following assumptions:

- No price changes after 2021 are built in the model. All impacts are estimated in 2021 Net Present Value dollars, and for updating the analysis base, IMPLAN dataset(s) for subsequent years should be used;
- This is the benefit-only study which scope does not include possible offsets (e.g., adverse impacts from rental or housing price increases, land acquisition, crowding out effects, traffic and environmental issues etc.) that should be the subject of separate studies;
- All benefits are computed for a 10-year period and while in any individual year the numbers could vary, the totals represent aggregate impact over 10 years.
- The numerical input in the model is based on the data provided by The Capital SouthEast Connector Joint Powers Authority (JPA). Given the longitudinal nature of the study, an assumption of inflation is made, and deflator coefficients are used by IMPLAN for calculating real rather than nominal values.

Model Output

The IMPLAN model quantifies the multiplier effect that occurs when new output or employment is added in the geographical area via the designated economic activities. The economic impact is measured for 544 industries identified in the newest version of IMPLAN. For purposes of this study, the analysts then aggregated the results for the individual industries into 8 industry categories which were created in a manner

that takes into account key sectors in the regional economy and are based generally on the North American Industrial Classification System (NAICS):

- Agriculture
- Mining
- Construction
- Manufacturing
- Transportation, Information, Power, and Utilities
- Trade
- Service
- Government

ANALYSIS AND FINDINGS

As described in the Measures of Economic Impact section, the IMPLAN analysis consists of five measures: Output, Employment, Labor Income, Value Added, and Taxes on Production and Import (TOPI). The results for the direct, indirect, and induced economic impact of the Capital SouthEast Connector on the seven county Greater Sacramento Area comprising El Dorado County, Nevada County, Placer County, Sacramento County, Sutter County, Yolo County, and Yuba County are described below. Summary data from IMPLAN output are presented within the report narrative as exhibits.

Regional Demographics

Tables 4.A through 4.D present the population and employment data and characteristics for the seven county Region.

Table 4.A shows the population and growth for the period from 2010 till 2020 for the State of California, El Dorado County, Nevada County, Placer County, Sacramento County, Sutter County, Yolo County, and Yuba County. The population for the State grew from 37.2 million people in the year 2010 to 39.5 million people in 2020, approximately by 6.1% total and averaging annual growth rate of approximately 0.5%.

During the same time, the seven county Region grew faster at 11.0% total and annual average growth rate of 0.92% from 2.4 million people to 2.7 million people. El Dorado County grew from 181,058 people to 191,185 averaging an annual growth rate of 0.47%. Nevada County grew from 98,764 people to 102,241 averaging the lowest among seven counties annual growth rate of 0.29%. Placer County grew from 348,432 people to 404,739 averaging the highest among seven counties annual growth rate of 1.35%. Sacramento County grew from 1.42 million people to 1.59 million people averaging an annual growth rate of 0.98%. Sutter County grew from 94,737 people to 99,633 people averaging an annual growth rate of 0.43%. Yolo County grew from 200,849 people to 216,403 people averaging an annual growth rate of 0.65%. Finally, Yuba County grew from 72,155 people to 81,575 people averaging an annual growth rate of 1.09%.

Table 4.B contains the population growth data on four major Cities in the region impacted by the Project – Elk Grove, Folsom, Rancho Cordova, and Sacramento. Population of each of these cities during the period

between 2010 and 2020 Census grew at a rate higher than State of California average, with the annual growth rate either exceeding or being close to 1%. Elk Grove grew from 153,015 people to 176,124 people averaging an annual growth rate of 1.26%. Folsom grew from 72,203 people to 80,454 people averaging an annual growth rate of 0.95%. Rancho Cordova grew from 64,776 people to 79,332 people averaging an annual growth rate of 1.87%. City of Sacramento grew from 466,488 people to 524,943 people averaging an annual growth rate of 1.04%.

Tables 4.C and 4.D present data on number of households, average household size, civilian workforce older than 16 years, and employment within the seven county CSA¹⁷.

Regional Model Area Information

Tables 5.A through 5.G provide detailed information from IMPLAN about the seven county Region as well as about each of the individual counties that comprise the Region. Tables 6.A through 6.G provide summary measures of employment, labor income, and output for the top 10 industries for the Region as well for each of the counties in the Region. Tables 7.A through 7.G provide summary economic measures for the Region and Counties aggregated by the two digit SIC code for all industries in the region.

The Region is a vibrant economic center of over 2.6 million people, producing an annual Gross Regional Product of over \$158.7 billion, employment of 1.532 million people, personal income of approximately \$154 billion, and taxes on production and imports worth \$11.96 billion. The region encompasses 7,285 square miles of land mass, has 461 industries, and 960,771 households with an average household income of \$160,486.

El Dorado County has 192,843 people, producing an annual Gross Regional Product of over \$8.18 billion, employment of 94,382 people, personal income of approximately \$13.3 billion, and taxes on production and imports worth \$635 million. The County encompasses 1,711 square miles of land mass, has 275 industries, and 73,843 households with an average household income of \$180,256.

Nevada County has 99,755 people, producing an annual Gross Regional Product of over \$4.84 billion, employment of 59,077 people, personal income of approximately \$6.33 billion, and taxes on production and imports worth \$690 million. The County encompasses 958 square miles of land mass, has 262 industries, and 41,449 households with an average household income of \$152,747.

Placer County has 398,329 people, producing an annual Gross Regional Product of over \$25.89 billion, employment of 246,255 people, personal income of approximately \$27.16 billion, and taxes on production and imports worth \$2.19 billion. The County encompasses 1,404 square miles of land mass, has 331 industries, and 149,595 households with an average household income of \$181,573.

¹⁷ Source: U.S.Census Bureau. QuickFacts.

<https://www.census.gov/quickfacts/fact/table/yubacountycalifornia,yolocountycalifornia,nevadacountycalifornia,placercountycalifornia,sacramentocountycalifornia,eldoradocountycalifornia/PST045219>

Sacramento County has 1,522,058 people, producing an annual Gross Regional Product of over \$96.68 billion, employment of 906,933 people, personal income of approximately \$86.85 billion, and taxes on production and imports worth \$6.70 billion. The County encompasses 966 square miles of land mass, has 404 industries, and 559,224 households with an average household income of \$155,302. In the Region, Sacramento County is the largest economic center.

Sutter County has 96,971 people, producing an annual Gross Regional Product of nearly \$3.80 billion, employment of 44,950 people, personal income of approximately \$4.44 billion, and taxes on production and imports worth \$329 million. The County encompasses 603 square miles of land mass, has 228 industries, and 31,774 households with an average household income of \$139,691.

Yolo County has 220,500 people, producing an annual Gross Regional Product of over \$15.73 billion, employment of 148,882 people, personal income of approximately \$12.77 billion, and taxes on production and imports worth \$1.15 billion. The County encompasses 1,012 square miles of land mass, has 292 industries, and 78,579 households with an average household income of \$162,559.

Yuba County has 78,668 people, producing an annual Gross Regional Product of nearly \$3.62 billion, employment of 31,973 people, personal income of approximately \$3.33 billion, and taxes on production and imports worth \$270 million. The County encompasses 630 square miles of land mass, has 217 industries, and 26,306 households with an average household income of \$126,405. In the Region, Yuba County is the smallest economic center.

Economic Impact of Road Construction

Overall impact

The findings of the IMPLAN analyses are presented below, and in detail in Tables 6.A through 6.F and 7.A through 7.E at the end of this Summary Report. The impacts are grouped into the categories of output, employment, labor income, value added, and taxes on production and imports. They are further separated in each category into the major industrial sectors such as agriculture, mining, construction, manufacturing, TIPU (transportation, information, power, and utilities), trade, service, and government. For demonstrating the industry-specific effect the findings are also presented for each category for the top twenty industries that will experience the greatest impact.

Exhibit A. Overall Impact of Connector Construction – Direct, Indirect, Induced

Impact Type	Employment	Labor Income	Value Added	Output	Taxes on Production & Imports (TOPI)
Direct Effect	1,796	\$152,786,887	\$210,720,572	\$340,290,006	\$8,662,588
Indirect Effect	334	\$22,742,659	\$39,468,668	\$73,090,970	\$6,639,210
Induced Effect	831	\$45,110,839	\$84,626,700	\$139,085,802	\$10,007,606
Total Effect	2,961	\$220,640,386	\$334,815,941	\$552,466,778	\$25,309,404

Exhibit A shows that in 2021 NPV dollars, a \$340 million investment in the Connector construction would create a gross economic impact (to include direct effects, indirect effects, and induced effects) of \$552.5 million of economic Output, 2,961 new full-time equivalent Employment of jobs, \$220.6 million in new Labor Income, \$334.8 million of new Value Added in the regional economy, and generate \$25.3 million in new Taxes on Production and Imports for the seven county Region. This total impact, as measured over the duration of the actual period of construction, would provide a significant economic boost to the Region.

This new economic activity is the total gross impact of all monies spent through the construction of the Connector. It does not measure the incremental economic activity after accounting for any redistribution of economic resources based on how the Connector construction is financed. In other words, it does not account for any economic benefits lost due to a potential substitution effect due to resources being redirected away from other uses (for example, toll that people may pay to finance the construction may result in lower consumer spending on other goods and services).

Industry-specific impact

Table 6.B provides summary measures of all key economic variables of activity (Output, Value Added, Employment, Labor Income, and Taxes on Production and Imports) for the seven county Region aggregated by eight key sectors of economy as introduced in Model Output section above. Tables 6.C through 6.F show the total impact for each measure (direct, indirect, and induced) aggregated by eight key sectors of regional economy. Tables 7.A through 7.E present the same impact on the top 20 industries in the Region.

Economic Impact of Housing Construction

Methodology of approach

The economic impact from the Connector is not limited by the effect of the road construction and related activities. The additional impact will result from making the Region more attractive for investment in new housing construction due to creating new options for transportation and commuting. The easier connection between employment and population centers will contribute to the vibrancy of the local economy. According to the SACOG 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) Update the total number of housing units in the six county Region¹⁸ is expected to achieve 1,181,251 by 2040¹⁹ which means construction of approximately 188,800 new housing units or 19% increase of their total number during the period between 2021 and 2040.²⁰

¹⁸ SACOG geographical area includes six out of seven Sacramento-Roseville CSA counties (except Nevada County)

¹⁹ Sacramento Area Council of Governments (SACOG). *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy*, https://www.sacog.org/sites/main/files/file-attachments/ch._12_lu__planning_pdeir.pdf?1569040194

²⁰ According to State of California Department of Finance 2021 Population and Housing Estimate the total number of housing units in six county region is 992,102 as of beginning of 2021. <https://www.dof.ca.gov/forecasting/demographics/estimates/e-5/>.

Regarding the areas directly adjacent to the Connector (Cities of Folsom, Rancho Cordova, Elk Grove, CDPs El Dorado Hills, Vineyard, Franklin, and unincorporated communities on both sides of the road)²¹, the total number of their housing units in 2021 is 167,023 that constitutes 13.35% growth compared to 2010. This is the substantially higher growth than in Sacramento County and State of California during the same period (8.01% and 6.36% respectively).²² Under the No Project Alternative (assuming that the Connector is not built) and assumption of retaining the same growth rate there are still 35,300 new housing units that are expected to be built in the Project area till 2040.

Overall impact

The study evaluated the gross economic impact from increase in population and households and construction of approximately 35,300 new housing units between 2021 and 2040 in the Region.

Exhibit B. Overall Impact of New Housing Construction – Direct, Indirect, Induced

Impact Type	Employment	Labor Income	Value Added	Output	Taxes on Production & Imports (TOPI)
Direct Effect	108,231	\$ 6,944,536,905	\$ 8,085,410,726	\$12,614,118,419	\$136,262,026
Indirect Effect	19,137	\$ 1,118,864,027	\$ 1,915,995,748	\$ 3,345,278,212	\$339,330,797
Induced Effect	38,208	\$ 2,073,605,918	\$ 3,889,083,226	\$ 6,392,125,945	\$407,511,480
Total Effect	165,576	\$10,137,006,849	\$13,890,489,699	\$ 22,351,522,576	\$883,104,303

Exhibit B shows that in 2021 NPV dollars, building new housing units in the Region would create a gross economic impact (to include direct effects, indirect effects, and induced effects) of more than \$22.3 billion of economic Output, 165,576 new full-time equivalent Employment of jobs (8,714 jobs per year), more than \$10.1 billion in new Labor Income, nearly \$13.9 billion of new Value Added in the regional economy, and generate more than \$883 million in new Taxes on Production and Imports for the seven county Region.

The economic activity outlined here is expected to take place even if the Connector is not built. However the Project will support it and become a catalysator of the additional activity due to increased connectivity in the area. While it is difficult to precisely estimate what incremental economic activity will take place due to the Connector construction and operation it is evident that it will facilitate additional population growth and contribute to the economic vibrancy of the area. It is conceivable that once the Project enters its active stage the real estate owners, investors, and developers will accelerate repurposing and development of properties located along the Connector. It can be expected that the growth of population and new jobs creation will take place sooner than could be expected under No Project Alternative. This, in turn, will result in the incremental economic growth attributed to the Project.

²¹ For the purpose of this study the territories of the following twelve zip codes were considered adjacent to the Connector: 95762, 95672,95682 (all El Dorado Hills), 95630 (Folsom), 95670, 95742, 95827 (all Rancho Cordova), 95624, 95758 (both Elk Grove), 95757 (Elk Grove and Franklin), 95829 (Vineyard), 95830 (unincorporated).

²² Sacramento County Public Health. 2021 Demographics. <http://www.behealthysacramento.org/demographicdata>

Incremental impact

In order to quantify the incremental economic impact we make a conservative assumption that the Connector role in new housing construction will be limited by accelerating its timetable on average by 5% per year. It is simply that on average 5% of the homes projected to be built will get built faster due to the perceived benefits of the Connector resulting in population and economic activity occurring sooner than otherwise would happen, and this effect will take place starting from 2022.

Another assumption is that this incremental effect will take place with increasing rate during the Connector construction period, i.e. be smaller than 5% at the beginning and larger than that at the end. The reason for that assumption is that road infrastructure investments are usually making long- rather than short-term impact on residential housing development, and this impact is not immediate but delayed by years or sometimes even decades²³.

Based on the assumptions above, the incremental economic impact of the Connector on the housing construction sector in the Project area (to include direct, indirect, and induced effects) between 2022 and 2040 can be expected as the following.

Exhibit C. Incremental Impact of New Housing Construction – Direct, Indirect, Induced

Impact Type	Employment	Labor Income	Value Added	Output	Taxes on Production & Imports (TOPI)
Direct Effect	4,549	\$338,802,862	\$394,462,630	\$615,404,522	\$6,647,810
Indirect Effect	934	\$54,585,977	\$93,475,613	\$163,205,963	\$16,554,919
Induced Effect	1,864	\$101,164,934	\$189,736,558	\$311,852,409	\$19,881,247
Total Effect	7,347	\$494,553,773	\$677,674,800	\$1,090,462,894	\$43,083,977

Exhibit C shows that in 2021 NPV dollars, building new housing units in the Region would create a gross economic impact (to include direct effects, indirect effects, and induced effects) of nearly \$1.1 billion of economic Output, 7,347 new full-time equivalent Employment of jobs (387 jobs per year), more than \$494 million in new Labor Income, nearly \$678 million of new Value Added in the regional economy, and generate more than \$43 million in new Taxes on Production and Imports for the seven county Region.

Other impact factors

The most current post-COVID demographic data also provides the evidence in favor of importance of the Connector as the regional driver of economic growth. While California lost 182,000 residents last year, bringing the state’s population to 39.467 million, the Sacramento region continued to grow. The region netted 12,750 new residents (a 0.5 percent increase), bringing the six-county population total to 2.56

²³ Congressional Research Service. *Economic Impact of Infrastructure Investment* by Jeffrey M. Stupak, <https://sgp.fas.org/crs/misc/R44896.pdf>

million. The bulk of the growth occurred in Placer and Sacramento counties (the area of Connector construction), in high degree due to COVID-related workforce migration from Bay Area. Placer County grew at a rate of 1.5 percent. Among the region’s cities, Elk Grove (1.2 percent growth) jumped to the 26th largest city in the state and City of Sacramento (0.5 percent growth) remains the 6th largest in the state.²⁴

Except new residential construction the incremental economic activity will happen due to additional household spendings. The assumption is that the number of new households will equal the number of new housing units. With Sacramento median household income of \$83,184 the incremental household spendings due to the project are expected to be 165.9 million. Unlike construction incremental household spendings create induced impact only.

The incremental impact of new households spending will result in:

- \$166 million of economic Output
- 971 new Employment (full-time equivalent jobs calculated on annual basis)
- \$53 million of new Labor Income
- \$101 million of new Value Added
- \$12 million of new state and local Taxes on production and imports

As a result total measurable economic impact resulting from Connector construction, new incremental housing construction and new incremental households spendings between 2021 and 2040 can generate the following impact:

- Produce \$1.8 billion of economic Output.
- Create 11,3 thousand of new Employment (full-time equivalent jobs calculated on annual basis)
- Result in \$770 million of new Labor Income.
- Yield \$1.1 billion of new Value Added
- Generate \$80 million in new state and local Taxes on production and imports.

Finally, to fully understand the total economic impact of the Connector once it is completed, one must also understand the economic value of time and distance savings, linking residential areas with employment centers, attraction of new corporations in the Region, infrastructure and community development and other economic activities. The improvement in ease and speed of transportation of goods will lead to the increased economic vibrancy of the Region leading to higher growth and prosperity.

This is especially promising in the context of the upcoming post-COVID era that brought historically large scale geographic shifts on the workforce market. According to a Gallup poll, “Three in five U.S. workers who have been doing their jobs from home during the coronavirus pandemic would prefer to continue to work remotely as much as possible, once public health restrictions are lifted.”²⁵ According to Global

²⁴ SACOG. *Sacramento Region Grows While State Loses Population Overall*. <https://www.sacog.org/post/sacramento-region-grows-while-state-loses-population-overall>

²⁵ Gallup. *U.S. Workers Discovering Affinity for Remote Work*, by Megan Brenan, retrieved from <https://buildremote.co/companies/companies-going-remote-permanently/>

Workplace Analytics, just 3.6% of the US workforce worked from home in 2018 while the estimate is that 25-30% of the workforce will be working-from-home multiple days a week by the end of 2021. It is estimated that after full lifting of restrictions at least a half of this time will still remain work-from-home.²⁶ In the context of this study this historical shift first of all means that the increase of San Francisco and Bay Area workforce in Greater Sacramento Area is a long-term trend, and part of the housing demand along the Connector (first of all Vineyard and other communities located between I-5 and US-50) can be expected due to this workforce migration.

CONCLUSION

In recent years Greater Sacramento Area struggled a lot in attracting new industries, business, and jobs. Transport infrastructure is a well proven driver of economic development and vibrancy. For instance, construction of Highway 65 was a huge positive impact on communities of Lincoln and Roseville as well as the whole Placer county.

This Project will be a historic chance to increase long-term economic competitiveness and attractiveness of Project area communities as well as Sacramento and El Dorado counties as a whole. The investment has a tremendous payoff potential that is worth billions of dollars in the long run. The new local taxes on production and imports could be beneficial to the jurisdictions as they seek to make their local communities more economically vibrant. A spirit of entrepreneurship, cooperation, and investment together with vision of the long-term benefits will lead Project area to the new level of competitiveness and prosperity as a region.

²⁶ Globalworkplaceanalytics.com. *Latest Work-At-Home/Telecommuting/Mobile Work/Remote Work Statistics*, June 2021. <https://globalworkplaceanalytics.com/telecommuting-statistics>

APPENDIX

Table 4A. Population in Sacramento Seven County Region

	Population, Census, April 1, 2010	Population, Census, April 1, 2020	10 year Percent Change	Annual Percent Change
State of California	37,253,956	39,538,223	6.1%	0.51%
El Dorado County	181,058	191,185	5.6%	0.47%
Nevada County	98,764	102,241	3.5%	0.29%
Placer County	348,432	404,739	16.2%	1.35%
Sacramento County	1,418,788	1,585,055	11.7%	0.98%
Sutter County	94,737	99,633	5.2%	0.43%
Yolo County	200,849	216,403	7.7%	0.65%
Yuba County	72,155	81,575	13.1%	1.09%
Seven County Region Total	2,414,783	2,680,831	11.0%	0.92%

Table 4B. Population in Major Cities Impacted by the Project

	Population, Census, April 1, 2010	Population, Census, April 1, 2020	Percent change	Percent change per year
Folsom City	72,203	80,454	11.4%	0.95%
Rancho Cordova City	64,776	79,332	22.5%	1.87%
Elk Grove City	153,015	176,124	15.1%	1.26%
Sacramento City	466,488	524,943	12.5%	1.04%
Four Cities Total	756,482	860,853	13.8%	1.15%

Table 4C. Households in Sacramento Seven County Region

	Households, 2015- 2019	Persons per household, 2015-2019
El Dorado County	70,974	2.63
Nevada County	40,855	2.40
Placer County	142,855	2.67
Sacramento County	543,025	2.76
Sutter County	32,636	2.91
Yolo County	74,296	2.81
Yuba County	26,354	2.84

Table 4D. Employment and Payroll in Sacramento Seven County Region

	Total employer establishments, 2019	Total employment, 2019	Total annual payroll, 2019 (\$1,000)
El Dorado County	4,626	49,977	2,560,132
Nevada County	3,119	29,332	1,256,289
Placer County	11,279	160,796	8,832,781
Sacramento County	30,796	505,255	30,063,622
Sutter County	1,849	22,192	993,026
Yolo County	4,234	70,273	3,569,326
Yuba County	828	10,834	531,526

Table 5A. Sacramento Seven County Region IMPLAN Model Information

		<i>Value Added</i>	
GRP	\$158,754,307,655	Employee Compensation	\$90,640,188,020
Total Personal Income	\$154,190,600,000	Proprietor Income	\$12,026,659,599
Total Employment	1,532,452	Other Property Type Income	\$44,123,943,750
		Tax on Production and Import	\$11,963,516,284
Number of Industries	461		
Land Area (Sq. Miles)	7,285	Total Value Added	\$158,754,307,655
Area Count	7		
Population	2,639,124	<i>Final Demand</i>	
Total Households	960,771	Households	135,216,362,753
Average Household Income	\$160,486	State/Local Government	\$50,192,644,728
		Federal Government	\$7,215,012,088
Trade Flows Method	Trade Flows Model	Capital	\$38,179,520,778
Model Status	Multipliers	Exports	\$46,955,872,452
		Imports	-\$109,934,109,572
Economic Indicators		Institutional Sales	-\$9,070,991,496
Shannon-Weaver Index	.73847	Total Final Demand:	\$158,754,311,732

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Table 5B. El Dorado County IMPLAN Model Information

		<i>Value Added</i>	
GRP	\$8,184,314,041	Employee Compensation	\$4,009,758,588
Total Personal Income	\$13,310,710,000	Proprietor Income	\$1,015,911,421
Total Employment	94,382	Other Property Type Income	\$2,523,993,527
		Tax on Production and Import	\$634,650,504
Number of Industries	275		
Land Area (Sq. Miles)	1,711	Total Value Added	\$8,184,314,041
Area Count	1		
Population	192,843	<i>Final Demand</i>	11,469,079,837
Total Households	73,843	Households	\$1,587,419,080
Average Household Income	\$180,256	State/Local Government	\$184,647,294
		Federal Government	\$3,345,227,119
Trade Flows Method	Trade Flows Model	Capital	\$3,577,294,450
Model Status	Multipliers	Exports	-\$11,646,698,724
		Imports	-\$332,654,785
Economic Indicators		Institutional Sales	
Shannon-Weaver Index	.72425	Total Final Demand:	\$8,184,314,271

Table 5C. Nevada County IMPLAN Model Information

		<i>Value Added</i>	
GRP	\$4,844,000,992	Employee Compensation	\$2,049,721,822
Total Personal Income	\$6,331,232,000	Proprietor Income	\$773,272,854
Total Employment	59,077	Other Property Type Income	\$1,330,703,343
		Tax on Production and Import	\$690,302,973
Number of Industries	262		
Land Area (Sq. Miles)	958	Total Value Added	\$4,844,000,992
Area Count	1		
Population	99,755	<i>Final Demand</i>	5,688,681,850
Total Households	41,449	Households	\$1,090,652,731
Average Household Income	\$152,747	State/Local Government	\$83,372,107
		Federal Government	\$1,933,601,175
Trade Flows Method	Trade Flows Model	Capital	\$2,535,564,747
Model Status	Multipliers	Exports	-\$5,924,565,394
		Imports	-\$563,306,146
Economic Indicators		Institutional Sales	
Shannon-Weaver Index	.73189	Total Final Demand:	\$4,844,001,070

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Table 5D. Placer County IMPLAN Model Information

		<i>Value Added</i>	
GRP	\$25,892,558,116	Employee Compensation	\$13,388,328,404
Total Personal Income	\$27,162,270,000	Proprietor Income	\$2,073,854,334
Total Employment	246,255	Other Property Type Income	\$8,243,585,447
		Tax on Production and Import	\$2,186,789,931
Number of Industries	331		
Land Area (Sq. Miles)	1,404	Total Value Added	\$25,892,558,116
Area Count	1		
Population	398,329	<i>Final Demand</i>	23,464,842,533
Total Households	149,595	Households	\$3,420,531,530
Average Household Income	\$181,573	State/Local Government	\$205,095,031
	\$25,892,558,116	Federal Government	\$8,254,757,251
Trade Flows Method	\$27,162,270,000	Capital	\$11,359,026,134
Model Status	246,255	Exports	-\$20,113,336,099
		Imports	-\$698,357,634
Economic Indicators	331	Institutional Sales	
Shannon-Weaver Index	1,404	Total Final Demand:	\$25,892,558,746

Table 5E. Sacramento County IMPLAN Model Information

		<i>Value Added</i>	
GRP	\$96,684,619,791	Employee Compensation	\$58,028,505,840
Total Personal Income	\$86,848,890,000	Proprietor Income	\$6,464,975,275
Total Employment	906,933	Other Property Type Income	\$25,486,844,364
		Tax on Production and Import	\$6,704,294,311
Number of Industries	404		
Land Area (Sq. Miles)	966	Total Value Added	\$96,684,619,791
Area Count	1		
Population	1,552,058	<i>Final Demand</i>	76,211,911,313
Total Households	559,224	Households	\$35,313,035,645
Average Household Income	\$155,302	State/Local Government	\$3,869,676,598
		Federal Government	\$20,592,619,422
Trade Flows Method	Trade Flows Model	Capital	\$28,366,185,045
Model Status	Multipliers	Exports	-\$61,464,184,255
		Imports	-\$6,204,620,478
Economic Indicators		Institutional Sales	
Shannon-Weaver Index	.71834	Total Final Demand:	\$96,684,623,289

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Table 5F. Sutter County IMPLAN Model Information

		<i>Value Added</i>	
GRP	\$3,797,841,025	Employee Compensation	\$1,877,087,470
Total Personal Income	\$4,438,553,000	Proprietor Income	\$428,459,049
Total Employment	44,950	Other Property Type Income	\$1,162,826,700
		Tax on Production and Import	\$329,467,806
Number of Industries	228		
Land Area (Sq. Miles)	603	Total Value Added	\$3,797,841,025
Area Count	1		
Population	96,971	<i>Final Demand</i>	4,045,350,545
Total Households	31,774	Households	\$718,422,399
Average Household Income	\$139,691	State/Local Government	\$41,229,671
		Federal Government	\$752,568,704
Trade Flows Method	Trade Flows Model	Capital	\$2,272,630,345
Model Status	Multipliers	Exports	-\$3,837,042,647
		Imports	-\$195,317,881
Economic Indicators		Institutional Sales	
Shannon-Weaver Index	.69341	Total Final Demand:	\$3,797,841,136

Table 5G. Yolo County IMPLAN Model Information

		<i>Value Added</i>	
GRP	\$15,734,302,661	Employee Compensation	\$9,421,981,807
Total Personal Income	\$12,773,700,000	Proprietor Income	\$1,058,156,336
Total Employment	148,882	Other Property Type Income	\$4,106,000,984
		Tax on Production and Import	\$1,148,163,534
Number of Industries	292		
Land Area (Sq. Miles)	1,012	Total Value Added	\$15,734,302,661
Area Count	1		
Population	220,500	<i>Final Demand</i>	11,141,755,083
Total Households	78,579	Households	\$7,280,863,893
Average Household Income	\$162,559	State/Local Government	\$242,451,545
		Federal Government	\$2,616,636,761
Trade Flows Method	Trade Flows Model	Capital	\$9,106,951,927
Model Status	Multipliers	Exports	-\$13,752,110,917
		Imports	-\$902,245,456
Economic Indicators		Institutional Sales	
Shannon-Weaver Index	.70248	Total Final Demand:	\$15,734,302,834

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Table 5H. Yuba County IMPLAN Model Information

		<i>Value Added</i>	
GRP	\$3,616,672,325	Employee Compensation	\$1,864,804,670
Total Personal Income	\$3,325,281,000	Proprietor Income	\$212,030,365
Total Employment	31,973	Other Property Type Income	\$1,269,989,898
		Tax on Production and Import	\$269,847,392
Number of Industries	217		
Land Area (Sq. Miles)	630	Total Value Added	\$3,616,672,325
Area Count	1		
Population	78,668	<i>Final Demand</i>	3,194,742,138
Total Households	26,306	Households	\$781,720,494
Average Household Income	\$126,405	State/Local Government	\$2,588,539,643
		Federal Government	\$684,110,302
Trade Flows Method	Trade Flows Model	Capital	\$1,377,464,333
Model Status	Multipliers	Exports	-\$4,835,415,422
		Imports	-\$174,489,131
Economic Indicators		Institutional Sales	
Shannon-Weaver Index	.64389	Total Final Demand:	\$3,616,672,357

Table 6A. Overall Impact of Connector Construction

Impact Type	Employment	Labor Income	Value Added	Output	Taxes on Production & Imports (TOPI)
Direct Effect	1,796	\$152,786,887	\$210,720,572	\$340,290,006	\$8,662,588
Indirect Effect	334	\$22,742,659	\$39,468,668	\$73,090,970	\$6,639,210
Induced Effect	831	\$45,110,839	\$84,626,700	\$139,085,802	\$10,007,606
Total Effect	2,961	\$220,640,386	\$334,815,941	\$552,466,778	\$25,309,404

Table 6B. Combined Direct, Indirect, and Induced Economic Impact of Connector Construction - Aggregated Key Sectors

Sector	Output	Value Added	Labor Income	Employment
Agriculture	\$ 286,541.37	\$ 185,608.82	\$ 108,591.95	2
Mining	\$ 1,345,039.92	\$ 593,988.20	\$ 233,707.11	4
Construction	\$ 342,385,612.27	\$211,749,896.98	\$ 153,444,331.67	1,805
Manufacturing	\$ 14,280,479.69	\$ 4,479,471.96	\$ 2,691,122.82	37
TIPU	\$ 20,217,627.31	\$ 9,874,181.63	\$ 6,151,736.02	109
Trade	\$ 37,468,440.30	\$ 22,907,886.57	\$ 10,656,247.70	213
Service	\$ 131,564,243.07	\$ 82,570,459.91	\$ 45,290,198.06	773
Government	\$ 4,918,794.92	\$ 2,454,447.36	\$ 2,064,450.80	17
Total	\$ 552,466,778.86	\$334,815,941.43	\$ 220,640,386.12	2,961

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Table 6C. Economic Impact of Connector Construction by Output – Aggregated Key Sectors

Sector	Direct	Indirect	Induced	Total
Agriculture	\$ -	\$ 68,993.78	\$ 217,547.60	\$ 286,541.37
Mining	\$ -	\$ 1,286,186.45	\$ 58,853.47	\$ 1,345,039.92
Construction	\$ 340,290,006.72	\$ 405,046.19	\$ 1,690,559.37	\$342,385,612.27
Manufacturing	\$ -	\$ 12,705,963.37	\$ 1,574,516.31	\$ 14,280,479.69
TIPU	\$ -	\$ 9,470,546.88	\$ 10,747,080.43	\$ 20,217,627.31
Trade	\$ -	\$ 18,095,273.22	\$ 19,373,167.08	\$ 37,468,440.30
Service	\$ -	\$ 29,965,264.42	\$ 101,598,978.65	\$131,564,243.07
Government	\$ -	\$ 1,093,695.78	\$ 3,825,099.14	\$ 4,918,794.92
Total	\$ 340,290,006.72	\$ 73,090,970.10	\$ 139,085,802.04	\$552,466,778.86

Table 6D. Economic Impact of Connector Construction by Value Added – Aggregated Key Sectors

Sector	Direct	Indirect	Induced	Total
Agriculture	\$ -	\$ 53,785.20	\$ 131,823.62	\$ 185,608.82
Mining	\$ -	\$ 578,834.11	\$ 15,154.08	\$ 593,988.20
Construction	\$210,720,572.93	\$ 199,069.07	\$ 830,254.98	\$ 211,749,896.98
Manufacturing	\$ -	\$ 4,048,853.79	\$ 430,618.17	\$ 4,479,471.96
TIPU	\$ -	\$ 4,614,763.66	\$ 5,259,417.96	\$ 9,874,181.63
Trade	\$ -	\$ 11,177,008.69	\$11,730,877.88	\$ 22,907,886.57
Service	\$ -	\$ 18,202,537.26	\$64,367,922.65	\$ 82,570,459.91
Government	\$ -	\$ 593,816.51	\$ 1,860,630.86	\$ 2,454,447.36
Total	\$210,720,572.93	\$ 39,468,668.29	\$84,626,700.20	\$ 334,815,941.43

Table 6E. Economic Impact of Connector Construction by Labor Income – Aggregated Key Sectors

Sector	Direct	Indirect	Induced	Total
Agriculture	\$ -	\$ 48,482.46	\$ 60,109.49	\$ 108,591.95
Mining	\$ -	\$ 229,621.48	\$ 4,085.62	\$ 233,707.11
Construction	\$152,786,887.19	\$ 125,096.19	\$ 532,348.28	\$153,444,331.67
Manufacturing	\$ -	\$ 2,443,160.98	\$ 247,961.84	\$ 2,691,122.82
TIPU	\$ -	\$ 3,368,757.09	\$ 2,782,978.93	\$ 6,151,736.02
Trade	\$ -	\$ 4,089,861.56	\$ 6,566,386.14	\$ 10,656,247.70
Service	\$ -	\$ 11,929,912.87	\$ 33,360,285.18	\$ 45,290,198.06
Government	\$ -	\$ 507,766.66	\$ 1,556,684.14	\$ 2,064,450.80
Total	\$152,786,887.19	\$ 22,742,659.29	\$ 45,110,839.64	\$220,640,386.12

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Table 6F. Economic Impact of Connector Construction by Taxes on Production and Import – Aggregated Key Sectors

Sector	Direct	Indirect	Induced	Total
Agriculture	\$ -	\$ 1,140.59	\$ 2,117.57	\$ 3,258.15
Mining	\$ -	\$ 71,499.57	\$ 5,062.87	\$ 76,562.44
Construction	\$ 1,601,922.17	\$ 3,806.97	\$ 26,478.38	\$ 1,632,207.52
Manufacturing	\$ -	\$ 114,065.15	\$ 32,983.32	\$ 147,048.47
TIPU	\$ -	\$ 126,681.55	\$ 363,781.22	\$ 490,462.77
Trade	\$ -	\$ 5,174,089.76	\$3,602,000.81	\$ 8,776,090.57
Service	\$ -	\$ 964,329.71	\$5,054,065.96	\$ 6,018,395.67
Government	\$ -	\$ (38,092.14)	\$ (215,379.31)	\$ (253,471.45)
Total	\$ 1,601,922.17	\$ 6,417,521.15	\$8,871,110.82	\$ 16,890,554.15

Table 6G. Economic Impact of Connector Construction by Employment – Aggregated Key Sectors

Sector	Direct	Indirect	Induced	Total
Agriculture	0	1	2	3
Mining	0	4	0	4
Construction	1,796	2	7	1,805
Manufacturing	0	33	4	37
TIPU	0	52	57	109
Trade	0	63	150	213
Service	0	175	598	773
Government	0	4	13	17
Total	1,796	334	831	2,961

Table 7A. Economic Impact of Connector Construction by Output – Top 20 Industries

Industry	Direct	Indirect	Induced	Total
Construction of new highways and streets	\$340,290,006.72	\$ -	\$ -	\$340,290,006.72
Owner-occupied dwellings	\$ -	\$ -	\$22,062,899.57	\$ 22,062,899.57
Other real estate	\$ -	\$ 3,879,396.32	\$ 5,667,432.54	\$ 9,546,828.86
Hospitals	\$ -	\$ -	\$ 7,703,651.47	\$ 7,703,651.47
Wholesale - Other durable goods merchant wholesalers	\$ -	\$ 6,569,382.43	\$ 844,544.43	\$ 7,413,926.86
Truck transportation	\$ -	\$ 4,269,276.62	\$ 1,181,033.52	\$ 5,450,310.14
Insurance carriers, except direct life	\$ -	\$ 589,845.22	\$ 4,778,724.46	\$ 5,368,569.68
Commercial and industrial machinery	\$ -	\$ 4,827,905.62	\$ 244,646.22	\$ 5,072,551.85

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and equipment rental and leasing				
Ready-mix concrete manufacturing	\$ -	\$ 4,931,538.19	\$ 28,238.67	\$ 4,959,776.86
Wholesale - Petroleum and petroleum products	\$ -	\$ 3,716,662.19	\$ 874,837.42	\$ 4,591,499.61
Architectural, engineering, and related services	\$ -	\$ 3,910,030.82	\$ 331,921.38	\$ 4,241,952.21
Limited-service restaurants	\$ -	\$ 97,325.99	\$ 4,006,683.42	\$ 4,104,009.41
Management of companies and enterprises	\$ -	\$ 2,132,261.31	\$ 1,797,077.52	\$ 3,929,338.83
Monetary authorities and depository credit intermediation	\$ -	\$ 1,123,030.73	\$ 2,641,599.03	\$ 3,764,629.76
Offices of physicians	\$ -	\$ -	\$ 3,673,355.82	\$ 3,673,355.82
Full-service restaurants	\$ -	\$ 219,387.59	\$ 3,406,201.35	\$ 3,625,588.94
Tenant-occupied housing	\$ -	\$ -	\$ 3,514,656.94	\$ 3,514,656.94
Insurance agencies, brokerages, and related activities	\$ -	\$ 467,266.11	\$ 3,043,104.25	\$ 3,510,370.37
Legal services	\$ -	\$ 1,548,017.84	\$ 1,597,377.51	\$ 3,145,395.35
Employment services	\$ -	\$ 1,539,878.56	\$ 1,519,562.46	\$ 3,059,441.02

Table 7B. Economic Impact of Connector Construction by Value Added – Top 20 Industries

Industry	Direct	Indirect	Induced	Total
Construction of new highways and streets	\$210,720,572.93	\$ -	\$ -	\$210,720,572.93
Owner-occupied dwellings	\$ -	\$ -	\$17,230,812.22	\$ 17,230,812.22
Hospitals	\$ -	\$ -	\$ 4,757,763.77	\$ 4,757,763.77
Other real estate	\$ -	\$ 1,796,726.16	\$ 2,624,847.65	\$ 4,421,573.81
Wholesale - Petroleum and petroleum products	\$ -	\$ 3,484,293.06	\$ 820,141.78	\$ 4,304,434.84
Wholesale - Other durable goods merchant wholesalers	\$ -	\$ 3,229,115.73	\$ 415,127.56	\$ 3,644,243.30
Commercial and industrial machinery and equipment rental and leasing	\$ -	\$ 3,442,288.36	\$ 174,432.33	\$ 3,616,720.69
Tenant-occupied housing	\$ -	\$ -	\$ 3,313,933.73	\$ 3,313,933.73
Truck transportation	\$ -	\$ 2,171,469.51	\$ 600,705.58	\$ 2,772,175.09
Offices of physicians	\$ -	\$ -	\$ 2,766,895.08	\$ 2,766,895.08

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Architectural, engineering, and related services	\$ -	\$ 2,336,333.63	\$ 198,330.68	\$ 2,534,664.31
Monetary authorities and depository credit intermediation	\$ -	\$ 680,733.38	\$ 1,601,224.79	\$ 2,281,958.17
Legal services	\$ -	\$ 1,116,972.73	\$ 1,152,588.21	\$ 2,269,560.93
Management of companies and enterprises	\$ -	\$ 1,220,991.46	\$ 1,029,056.01	\$ 2,250,047.47
Full-service restaurants	\$ -	\$ 134,911.08	\$ 2,094,623.03	\$ 2,229,534.10
Insurance carriers, except direct life	\$ -	\$ 242,220.57	\$ 1,962,388.29	\$ 2,204,608.86
Employment services	\$ -	\$ 1,048,132.99	\$ 1,034,304.64	\$ 2,082,437.64
Limited-service restaurants	\$ -	\$ 48,798.19	\$ 2,008,907.49	\$ 2,057,705.69
Automotive repair and maintenance, except car washes	\$ -	\$ 500,675.94	\$ 1,234,162.70	\$ 1,734,838.63
Retail - Building material and garden equipment and supplies stores	\$ -	\$ 1,143,332.34	\$ 493,818.60	\$ 1,637,150.94

Table 7C. Economic Impact of Connector Construction by Labor Income– Top 20 Industries

Industry	Direct	Indirect	Induced	Total
Construction of new highways and streets	\$152,786,887.19	\$ -	\$ -	\$152,786,887.19
Hospitals	\$ -	\$ -	\$ 4,053,602.86	\$ 4,053,602.86
Offices of physicians	\$ -	\$ -	\$ 2,600,320.08	\$ 2,600,320.08
Truck transportation	\$ -	\$ 1,954,049.92	\$ 540,559.60	\$ 2,494,609.52
Architectural, engineering, and related services	\$ -	\$ 2,017,207.48	\$ 171,240.16	\$ 2,188,447.64
Management of companies and enterprises	\$ -	\$ 1,060,534.15	\$ 893,822.01	\$ 1,954,356.16
Wholesale - Other durable goods merchant wholesalers	\$ -	\$ 1,680,730.86	\$ 216,070.83	\$ 1,896,801.69
Automotive repair and maintenance, except car washes	\$ -	\$ 513,616.80	\$ 1,266,061.84	\$ 1,779,678.64
Employment services	\$ -	\$ 760,084.00	\$ 750,055.97	\$ 1,510,139.97
Full-service restaurants	\$ -	\$ 89,770.30	\$ 1,393,769.45	\$ 1,483,539.75
Other real estate	\$ -	\$ 592,482.55	\$ 865,561.19	\$ 1,458,043.74
Legal services	\$ -	\$ 682,929.01	\$ 704,704.69	\$ 1,387,633.70
Limited-service restaurants	\$ -	\$ 29,580.15	\$ 1,217,745.58	\$ 1,247,325.73

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Commercial and industrial machinery and equipment rental and leasing	\$ -	\$ 1,148,674.62	\$ 58,207.21	\$ 1,206,881.83
Outpatient care centers	\$ -	\$ -	\$ 1,146,306.71	\$ 1,146,306.71
Insurance agencies, brokerages, and related activities	\$ -	\$ 148,432.55	\$ 966,677.68	\$ 1,115,110.23
Other local government enterprises	\$ -	\$ 160,442.53	\$ 894,915.01	\$ 1,055,357.54
Retail - Food and beverage stores	\$ -	\$ 7,243.24	\$ 1,005,257.84	\$ 1,012,501.07
Ready-mix concrete manufacturing	\$ -	\$ 1,001,309.76	\$ 5,733.64	\$ 1,007,043.39
Insurance carriers, except direct life	\$ -	\$ 107,239.87	\$ 868,820.83	\$ 976,060.71

Table 7D. Economic Impact of Connector Construction by Taxes on Production and Import – Top 20 Industries

Industry	Direct	Indirect	Induced	Total
Wholesale - Petroleum and petroleum products	\$ -	\$ 3,328,969.50	\$ 783,581.33	\$ 4,112,550.83
Owner-occupied dwellings	\$ -	\$ -	\$ 2,328,936.72	\$ 2,328,936.72
Construction of new highways and streets	\$ 1,601,922.17	\$ -	\$ -	\$ 1,601,922.17
Wholesale - Other durable goods merchant wholesalers	\$ -	\$ 753,658.84	\$ 96,888.62	\$ 850,547.46
Wholesale - Other nondurable goods merchant wholesalers	\$ -	\$ 216,051.95	\$ 371,620.10	\$ 587,672.06
Retail - Building material and garden equipment and supplies stores	\$ -	\$ 365,056.11	\$ 157,672.00	\$ 522,728.11
Retail - General merchandise stores	\$ -	\$ 8,864.78	\$ 410,157.16	\$ 419,021.95
Limited-service restaurants	\$ -	\$ 9,029.52	\$ 371,724.31	\$ 380,753.84
Automotive repair and maintenance, except car washes	\$ -	\$ 96,819.77	\$ 238,660.07	\$ 335,479.84
Tenant-occupied housing	\$ -	\$ -	\$ 306,864.03	\$ 306,864.03
Full-service restaurants	\$ -	\$ 18,566.42	\$ 288,261.32	\$ 306,827.73
Commercial and industrial machinery and equipment rental and leasing	\$ -	\$ 287,746.64	\$ 14,581.09	\$ 302,327.73

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Wholesale - Household appliances and electrical and electronic goods	\$ -	\$ 247,749.98	\$ 35,250.17	\$ 283,000.14
Insurance carriers, except direct life	\$ -	\$ 29,938.44	\$ 242,550.98	\$ 272,489.42
Retail - Motor vehicle and parts dealers	\$ -	\$ 10,578.46	\$ 259,792.91	\$ 270,371.37
Retail - Nonstore retailers	\$ -	\$ 6,276.65	\$ 241,062.86	\$ 247,339.50
Retail - Food and beverage stores	\$ -	\$ 1,768.09	\$ 245,385.06	\$ 247,153.14
Car washes	\$ -	\$ 41,287.48	\$ 202,463.86	\$ 243,751.35
Retail - Clothing and clothing accessories stores	\$ -	\$ 123.09	\$ 213,862.85	\$ 213,985.94
Other real estate	\$ -	\$ 73,138.69	\$ 106,848.73	\$ 179,987.42

Table 7E. Economic Impact of Connector Construction by Employment– Top 20 Industries

Industry	Direct	Indirect	Induced	Total
Construction of new highways and streets	1,796	0	0	1,796
Full-service restaurants	0	3	45	48
Limited-service restaurants	0	1	46	47
Other real estate	0	17	25	43
Individual and family services	0	0	35	35
Truck transportation	0	27	7	34
Hospitals	0	0	33	33
Employment services	0	16	16	32
Wholesale - Other durable goods merchant wholesalers	0	27	3	31
Transit and ground passenger transportation	0	6	21	27
Automotive repair and maintenance, except car washes	0	7	18	26
Architectural, engineering, and related services	0	22	2	24
Retail - Food and beverage stores	0	0	22	22
Retail - General merchandise stores	0	0	21	22
All other food and drinking places	0	1	19	20
Offices of physicians	0	0	20	20
Personal care services	0	0	18	18
Management of companies and enterprises	0	10	8	18
Retail - Building material and garden equipment and supplies stores	0	12	5	17
Legal services	0	8	8	16