

# Job Creation & Economic Stimulus

## Summary of Missouri Economic Research and Information Center REMI Model Findings

### *Short-Term and Long-Term Job Creation*

The long-term economic benefits and impacts were determined using a Regional Economic Models, Inc (REMI) model from the Missouri Economic Research and Information Center specifically calibrated for the economic conditions in Missouri. The REMI model is an econometric model used to create dynamic economic forecasts that incorporate complete inter-industry relationships and demonstrate economic change over time. In general, the output shows how the investment in right-of-way, engineering and construction efforts for both the initial I-70 Truck-Only Lanes Project and the 200-mile statewide project will affect the Missouri economy over the facilities' life spans. Specifically, it shows the annual economic impacts, annual fiscal impacts, cumulative benefit-cost and annual industry impacts. These impacts include new jobs created each year along with an industry-specific break down, wage and salary income and total economic output.

MoDOT chose to use the REMI model due to its ability to capture the economic benefits to the state of Missouri over the life of the statewide 200-mile project. The life of the project is defined as the typical 30-year life-cycle of the roadway, beginning with statewide project opening in 2020 and ending in design year 2050. The model also estimates the immediate job creation and economic stimulus benefits of constructing the initial I-70 Truck-Only Lanes Project. The REMI model also provides the anticipated user benefits (cost savings) that will accrue for the traveling public and would cycle through the economy resulting in the creation of more jobs, more wages and increased economic output.

MoDOT developed the following four scenarios for the economic analysis:

- 1) Complete 200-mile corridor with statewide impacts;
- 2) Initial I-70 Truck-Only Lanes Project with statewide impacts;
- 3) Initial I-70 Truck-Only Lanes Project with impacts to three project-specific economically distressed counties (Saline, Cooper and Pettis); and
- 4) Statewide user benefits for the complete 200-mile corridor.

Each scenario discussed below will highlight both the short-term (construction phase) and long-term (post construction phase) impacts on job creation, wages and the total economic benefit.

### **200-mile Statewide Impact Scenario**

The 200-mile statewide scenario shows the economic benefits from right-of-way, engineering and construction costs (all by year) to build truck-only lanes between Kansas City and St. Louis. MoDOT expects that the full 200-mile project would take 13 years to complete. Starting in 2010, estimates on the total investment approach nearly \$3.5 billion. Over the 30-year life cycle of the entire project (2010 through 2050), Missouri's Department of Economic Development estimates that the project will create an average of 3,753 new jobs each year with an average wage of \$39,731. The DED expects the total economic output over the entire life of the project to average \$644 million per year, with new value-added to the state's economy of \$405 million per

year. Comparing the construction costs with the total economic output shows that for every \$1 spent on construction we can expect to see \$6.83 generated within the economy, for a total of \$26.4 billion over the life of the project.

During the construction phase, which runs from 2010 to 2023 (year 2 through year 14), the state estimates an average of 2,164 new jobs will be created each year with an average wage of \$39,189. Jobs during the construction phase will primarily be in the construction industry; however there is job creation in retail trade, professional and technical services and health care and social assistance.

Post construction, 2024 to 2051 (year 15 through year 42), new job creation doubles that of construction levels to an average of 4,490 per year with an average wage of \$39,655. Industries such as health care and social assistance, retail trade and construction continue to dominate the growth. However, manufacturing and the accommodation and food service industries see sharp increases over their construction phase levels. Total economic output averages \$238 million per year during construction, post construction it rises to an average of \$831 million per year with a few years topping out over \$1 billion.

### **Initial I-70 Truck-Only Lanes Project Statewide Impact Scenario**

The initial I-70 Truck-Only Lanes Project statewide scenario shows the economic benefits from right-of-way, engineering and construction costs (all by year) to build the initial project. MoDOT estimates that the initial project investment would cost \$240 million and would take approximately three years to complete. Expectations are that over the entire 30-year life cycle of the project (2010 to 2050) the initial I-70 Truck-Only Lanes Project will create, on average, 657 new jobs per year with an average wage of \$34,023. The total economic output over the initial truck-only lanes facility's life cycle averages \$86.5 million per year and \$58.5 million per year in new, value-added to the economy.

Comparing the construction costs to the total economic output shows that for every \$1 spent on construction we expect to see \$11.28 generated within the economy. Beginning in 2010, the construction phase is expected to last three years while creating on average of 791 new jobs per year paying an average wage of \$31,282. During the construction phase, jobs will be primarily created in the construction industry; however significant jobs will also be created in the retail trade and professional and technical services industries.

Post construction (2014 through 2051), job creation is anticipated to be 647 new jobs per year while the average wage increases to \$34,283. Retail trade remains high in the post construction years; the state also sees sharp increases in the health care and social assistance, manufacturing and real estate, rental and leasing industries. During construction the total economic output averages \$67 million per year, post construction it increases to \$88 million per year.

### **Initial I-70 Truck-Only Lanes Project Economically Distressed Counties Impact Scenario**

The Missouri Economic Research and Information Center also analyzed the initial I-70 Truck-Only Lanes Project for its effects on three federally designated economically distressed counties in the immediate project area: Cooper, Saline and Pettis. The three economically distressed counties contain the local communities of Marshall, Sedalia and Boonville. Over the entire life of the project (2010 through 2050), the project is expected to create on average 149 new jobs each year with an average wage of \$26,463. The expected total economic output over the

lifespan of the project averages \$16.2 million per year and \$10.4 million per year in new, value-added to the economy.

Comparing construction costs to total economic output, it is estimated that for every \$1 spent on construction we expect to see \$2.11 generated in the economy in this three-county area. During the construction phase (2010 through 2013) on average 149 jobs will be created each year with an average wage of \$19,907. The new jobs created during the construction phase are primarily in the construction industry.

Post construction, new job creation stays the same averaging 149 new jobs each year. Furthermore, the average wage increases to \$34,283. While the construction industry dominated during construction, post construction a shift would occur to retail trade with health care and social assistance and construction coming in a close second. During construction the total economic output averages \$7.7 million per year; post construction it more than doubles to \$16.9 million per year.

In addition, the initial I-70 Truck-Only Lanes Project would convert the U.S. 65 and I-70 interchange to a truck-car separated interchange. MoDOT anticipates that the interchange conversion would stimulate new development interest to the surrounding interchange area, as well as some new development to local communities to the north and south along the U.S. 65 corridor within Marshall and Sedalia. The U.S. 54 interchange at Kingdom City has similar rural and demographic characteristics as the U.S. 65 interchange area. However, the U.S. 54 (Kingdom City) interchange is heavily developed with a strong mix of highway influenced retail and services. As a result, the U.S. 54 interchange was used as a baseline for comparison with the U.S. 65 interchange for projecting potential retail sales, business and employment, wages and traffic growth projections. An economic study was conducted for the U.S. 54 interchange at Kingdom City during the I-70 Second Tier Environmental Studies. The results of that study were used as part of the economic analysis and development of projections for the U.S. 65 interchange as well.

Since economic development and activity at the U.S. 54 interchange is driven largely by traffic generated by the interstate and highway, the U.S. 65 interchange is projected to have the potential to attract a similar set of businesses, especially in the identified business categories driven by interstate traffic including transportation, retail trade, hotels and lodging and automotive services. The comparative analysis suggests that the area surrounding the U.S. 65 interchange has the potential under today's I-70 traffic volumes to support a direct economic impact of over \$25.8 million in retail spending. The area could support approximately 14 new businesses, employing 284 employees, with total wages of \$4.25 million annually. Considering 2030 traffic projections for the area, if the interchange is developed to its estimated potential, the surrounding three-mile radius has the potential to support 35 businesses that generate \$60 million in retail sales and employ 610 workers earning \$9.9 million in wages annually. Over the period to 2030, the combined annual retail sales and wages could total almost \$855 million and \$141 million, respectively.

### **200-mile Statewide User Benefits Scenario**

The 200-mile statewide user benefits scenario takes the cost savings (travel time savings, vehicle operating cost savings and crash savings) which accrue over the life of the project should all 200-miles be constructed and translates that into economic impact (jobs, wages and total economic output). Overall positive user benefits attract people and jobs to the state of Missouri. Over the entire life of the project (2010 to 2050) it would create, on average 1,455 new

jobs each year with an average wage of \$18,921. The total economic output for user benefits equates to \$5.8 billion dollars over the life of the project.

Comparing the construction costs to the user benefits we find that for every \$1 spent on construction we expect \$1.50 in economic output. For the first 10 years of construction there are no user benefits because the entire facility will not be open; however when the facility partially opens in the 11<sup>th</sup> year we begin to see user benefits for the last three years of the construction phase. On average during those last three years of construction, 454 new jobs are created each year with an average wage of \$24,478. Post construction new jobs created increases to an average of 1,559 each year with an average wage of \$25,098. The jobs during post construction are primarily in state and local government, retail trade and other services. However most industries do see some affect from the project. During construction the total economic output generated by the user benefits over the whole 13-year construction period averages \$9.4 million; however it is more useful to look at the total economic benefit for only the last three years of construction as the first 10 do not have any user benefit because the facility is not open. For the final three years of the construction period the total economic output averages \$40.7 million. The total economic output for the post construction phase increase dramatically to an average of \$203.1 million per year.

### ***Conclusions***

Each of the four scenarios demonstrate that improving and widening the I-70 Corridor through the addition of truck-only lanes will provide an economic benefit to the state of Missouri in the form of jobs, wages and total economic output. In each case, the investment of \$1 leads to the creation of between \$2 and nearly \$11.50 in economic output, depending on the construction scenario. The three economically distressed counties within or near the initial project, Cooper, Pettis and Saline, will see several hundred new jobs per year, both in the short and long-term, averaging about 20 percent of the total new jobs created by this project in the state. The project will quickly create jobs within the first two years and will continue through the lifespan of the facility. Not only will the construction of the facility itself lead to economic impacts, the savings produced by the project in the form of travel time savings, vehicle operating cost savings, crash savings and freight-related productivity savings will also provide an economic benefit to Missouri.