

**APPENDIX J**  
**ECONOMIC AND FISCAL IMPACT ANALYSIS**

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**Environmental Impact Statement for  
Department of State  
Foreign Affairs Security Training Center at  
Nottoway County, Virginia**

**Economic and Fiscal Impact Studies  
Technical Report**

**Final Report August 6, 2012**

Prepared for: U.S. General Services Administration  
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## **ACRONYMS AND ABBREVIATIONS**

DOS	U.S. Department of State
EIS	Environmental Impact Statement
FASTC	Foreign Affairs Security Training Center
FTE	full-time equivalent
FY	Fiscal Year
GSA	U.S. General Services Administration
IMPLAN	Impacts Analysis for Planning
NAICS	North American Industry Classification System
O&M	operations and maintenance
PCE	Personal Consumption Expenditure
ROI	region of influence
VDHCD	Virginia Department of Housing and Community Development

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## **EXECUTIVE SUMMARY**

The economic and fiscal impact technical studies were prepared as a stand-alone study to the Foreign Affairs Security Training Center (FASTC) Environmental Impact Statement (EIS) for the proposed construction and operations of FASTC in Nottoway County, Virginia. The purpose of this study is to provide estimates of the potential impact of the proposed project on the economic and fiscal conditions of the surrounding region that would be most strongly affected. Analyses in the technical studies quantify the following types of impacts on the referenced geographic regions:

- Economic impacts from the construction of FASTC on an eight-county economic region
- Economic impacts from the operations of FASTC on an eight-county economic region
- Fiscal impacts from the operations of FASTC on local governments in Nottoway County
- Fiscal impacts from the operations of FASTC on local governments in Chesterfield County

The technical studies do not address alternatives to the proposed action, cumulative or other impacts unrelated to the proposed action, significance of impacts, or potential mitigations. Such issues are addressed in appropriate sections of the EIS. The technical studies were prepared using the most current and best available data for relevant issues such as geographic origin of the necessary construction labor force and the locations of residence for expected new population, as well as project implementation schedules. These impact analyses are essentially a snapshot in time; however, ongoing planning, scheduling, and federal legislative activities could result in changes to various input assumptions and therefore to the impact conclusions as well.

Impacts are presented on a year-by-year basis. Since the year 2021 would be the first complete year of FASTC full-operations, estimates of impacts for that year are considered steady-state impacts, meaning that the same magnitude of impacts could be expected every year during the lifetime of FASTC operations, given current planning assumptions and economic conditions. Impacts are also estimated based upon current economic conditions and dollars; all quantified dollar impacts are presented in constant 2012 dollar values. Economic conditions that may be affected by the value of currency and multi-factor productivity and other macro-economic conditions are held constant due to the high potential for errors in projecting these into the future.

### Economic Impact Summary Results

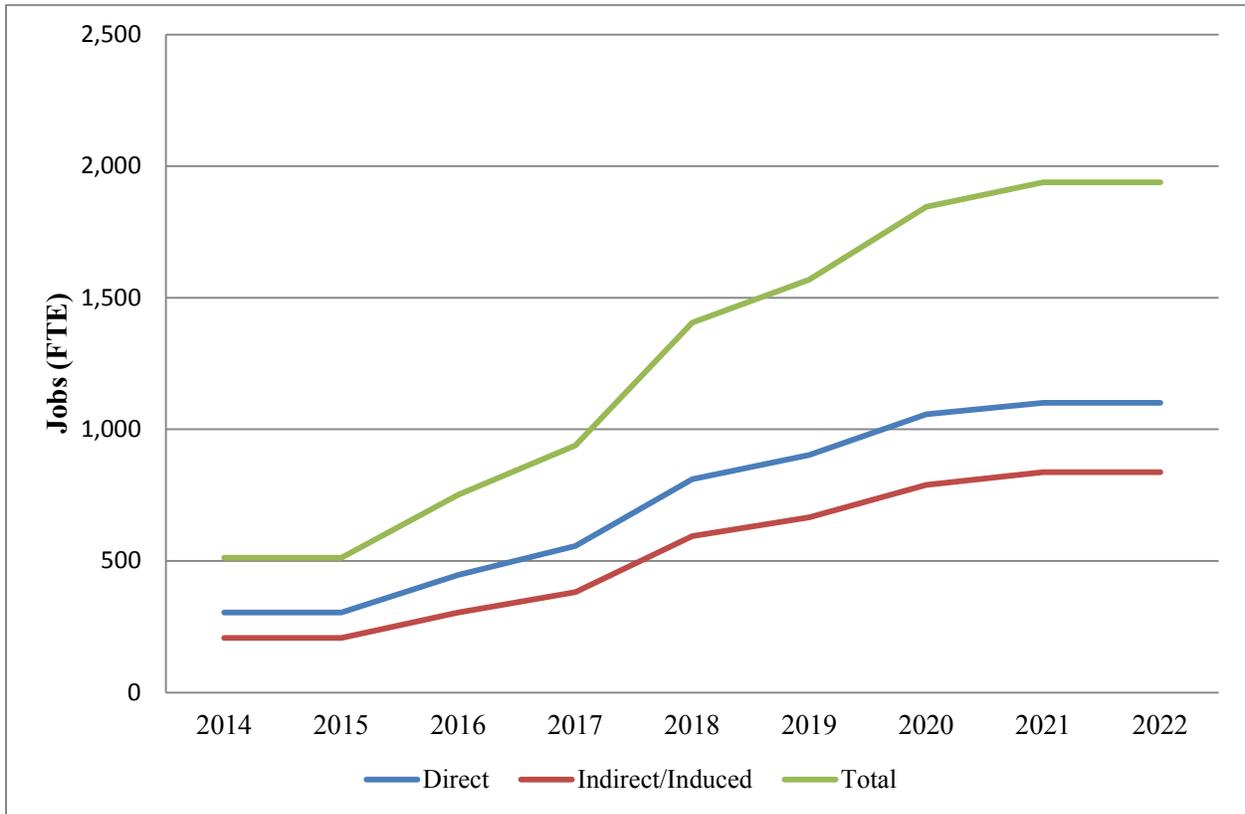
The economic technical study addresses impacts to Nottoway County and the region surrounding it by analyzing a combined economic region consisting of eight counties. Since the project would be located in Nottoway County, economic impacts would be expected to be concentrated there as well as in nearby Chesterfield County, which has a relatively large and quickly growing economy. The other six counties included in the economic region – Amelia, Brunswick, Dinwiddie, Lunenburg, Mecklenburg, and Prince Edward – would be expected to share in the residual economic impacts.

Tables ES-1, ES-2, and ES-3 provide summary economic impact results for the eight-county economic region and Figures ES-1, ES-2, and ES-3 illustrate those results along with results for the year 2022 that further illustrate the nature of steady-state impacts:

**Table ES-1. Total Impact - Full-time Equivalent Jobs<sup>(1)</sup>**

	2014	2015	2016	2017	2018	2019	2020	2021
Construction	512	512	751	938	427	185	185	0
Operations	0	0	0	0	978	1,383	1,660	1,938
Total	512	512	751	938	1,405	1,568	1,845	1,938

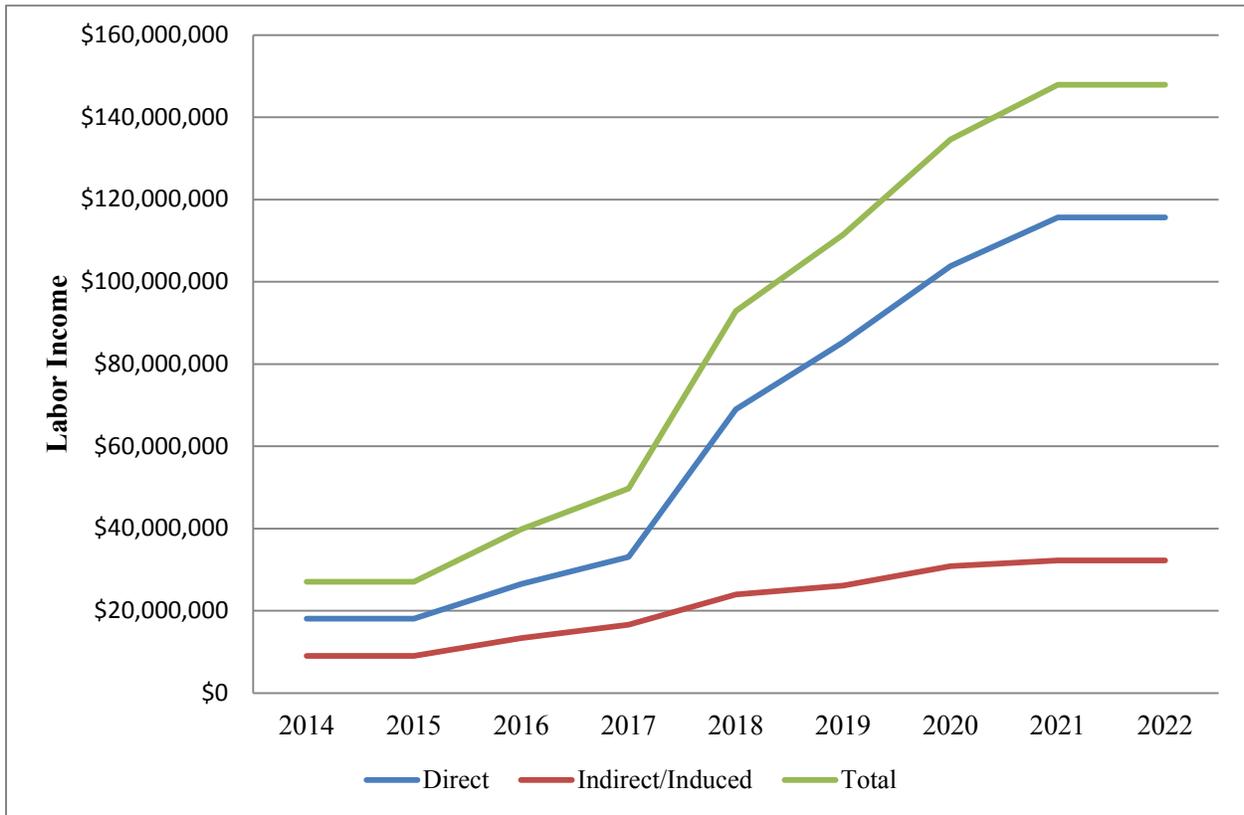
<sup>(1)</sup>Jobs directly attributed to FASTC employment plus jobs created through economic output in the region.



**Figure ES-1. FTE Jobs Impact from Combined Construction and Operations, 2014-2022**

**Table ES-2. Total Impact – Labor Income (2012 Constant Dollars)**

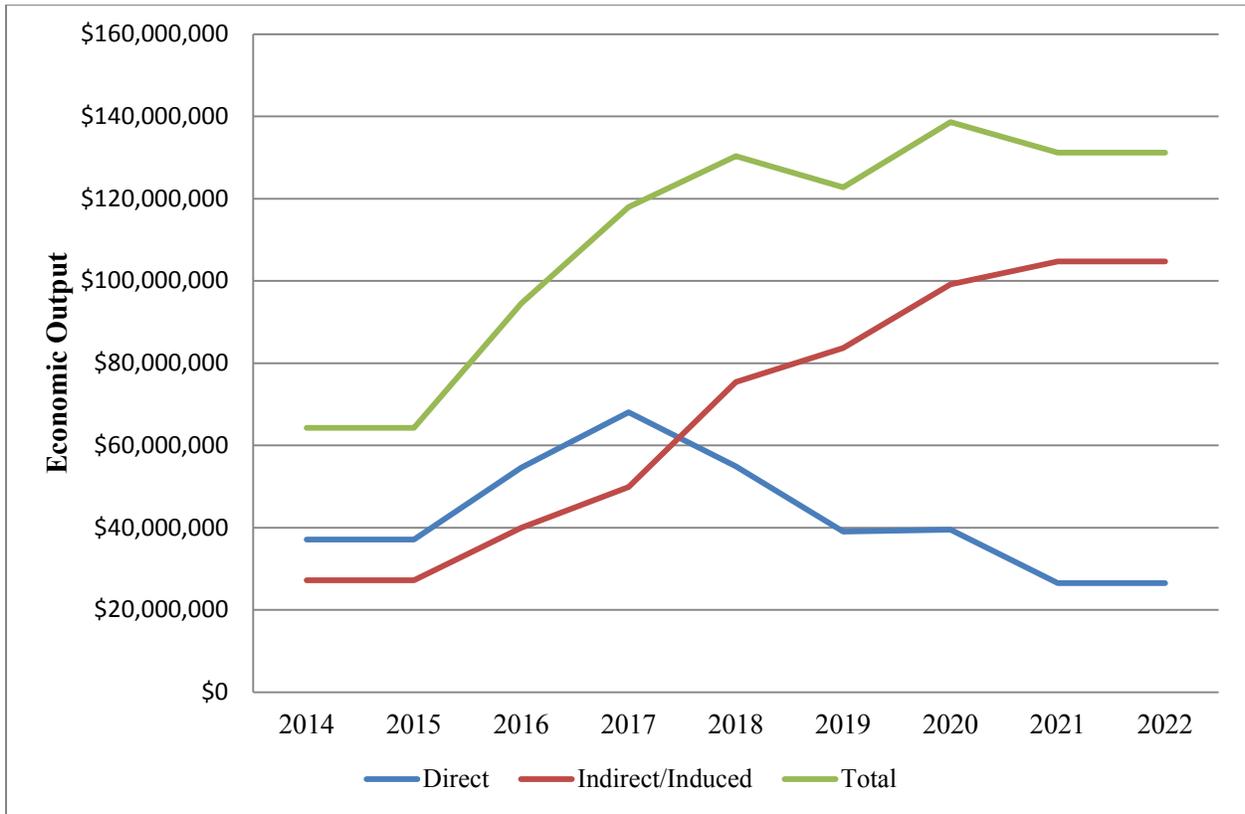
	2014	2015	2016	2017	2018	2019	2020	2021
Construction	\$27,083,389	\$27,083,389	\$39,830,787	\$49,693,018	\$22,610,813	\$9,821,334	\$9,821,334	\$0
Operations	\$0	\$0	\$0	\$0	\$70,302,492	\$101,614,625	\$124,745,126	\$147,875,629
Total	\$27,083,389	\$27,083,389	\$39,830,787	\$49,693,018	\$92,913,305	\$111,435,959	\$134,566,460	\$147,875,629



**Figure ES-2. Labor Income Impact from Combined Construction and Operations, 2014-2022, Constant 2012 Dollars**

**Table ES-3. Total Impact – Economic Output (2012 Constant Dollars)**

	2014	2015	2016	2017	2018	2019	2020	2021
Construction	\$64,280,187	\$64,280,187	\$94,547,189	\$117,941,144	\$53,664,896	\$23,310,125	\$23,310,125	\$0
Operations	\$0	\$0	\$0	\$0	\$76,682,167	\$99,404,089	\$115,298,938	\$131,193,795
Total	\$64,280,187	\$64,280,187	\$94,547,189	\$117,941,144	\$130,347,063	\$122,714,214	\$138,609,062	\$131,193,795



**Figure ES-3. Economic Output Impact from Combined Construction and Operations, 2014-2022, Constant 2012 Dollars**

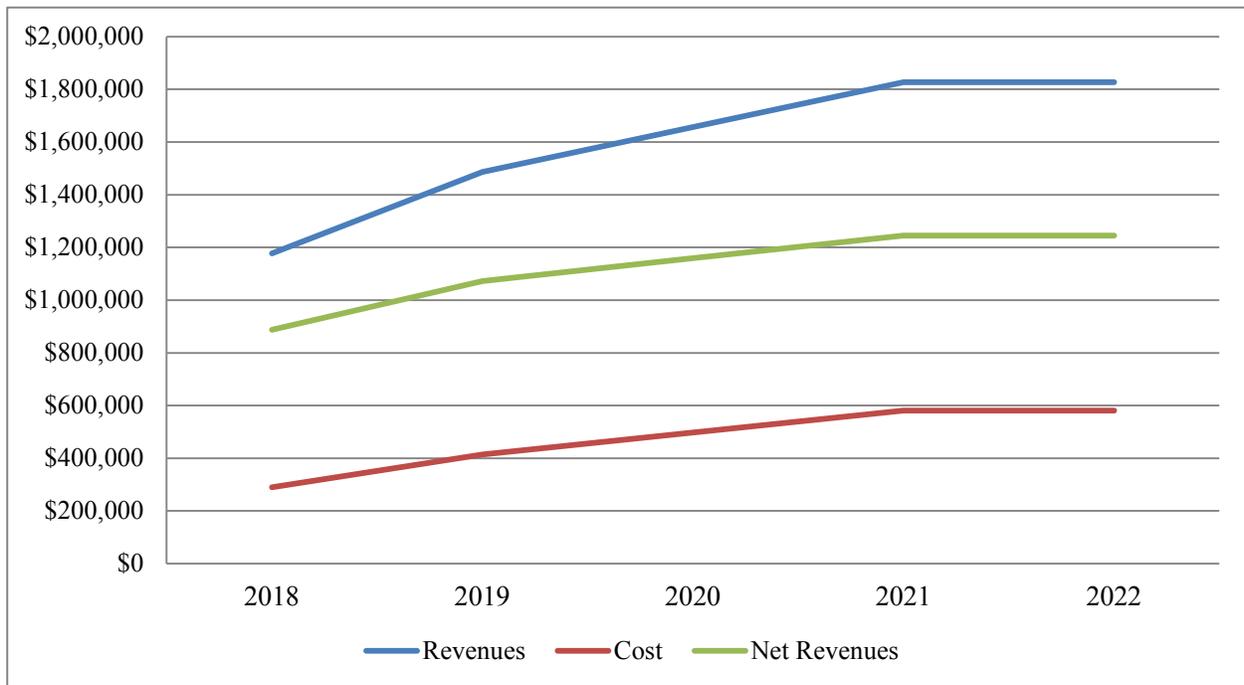
Fiscal Impact Summary Results

The fiscal technical study quantifies impacts to local governments within Nottoway County and Chesterfield County. Fiscal conditions in these two counties would be expected to be most strongly affected. Fiscal impacts to local governments are addressed for the operations phase only. The operations phase, unlike the construction phase, would impose costs on local governments and have long-term effects. The primary result of fiscal analyses is the impact to local government net revenues (total revenues minus total costs) that would result directly and indirectly from FASTC. Qualitative analysis of potential impacts from the operations phase to net revenues in the remaining six counties in the ROI is also provided. The small percentage of potential residents that may be added throughout the other counties is not known in sufficient detail to provide a quantitative fiscal impact analysis for those counties. Combined, local governments in other counties in the ROI would be expected to receive less revenue, incur lower costs, and see only marginal changes in net revenue.

Table ES-4 shows summary results for net revenues for Nottoway and Chesterfield Counties and Figures ES-4 and ES-5 illustrate those results along with results for the year 2022 that further illustrate the nature of steady-state impacts.

**Table ES-4. Total Impact – Net Revenues to Local Governments from FASTC Operations**

	2018	2019	2020	2021
Nottoway County	\$887,952	\$1,072,588	\$1,159,043	\$1,245,498
Chesterfield County	\$766,796	\$867,475	\$989,985	\$1,112,494



**Figure ES-4. Nottoway County Local Government Revenue, Cost, and Net Revenue, 2018 to 2022, Constant 2012 Dollars**

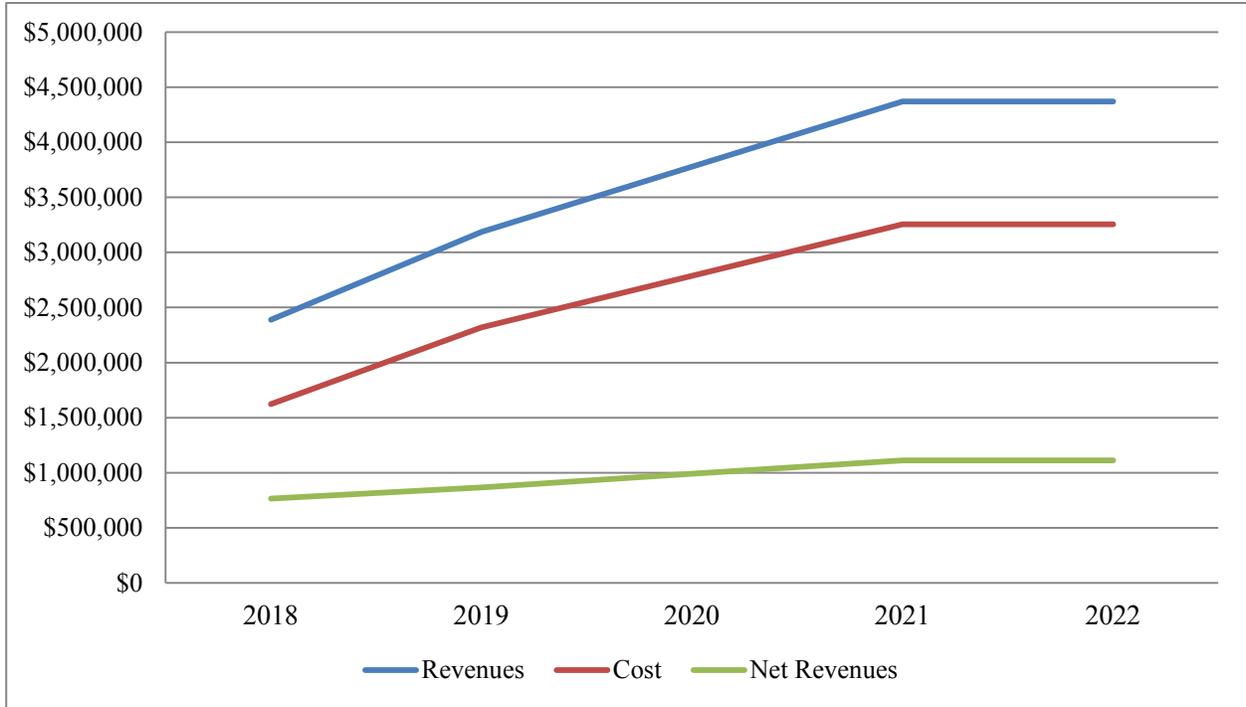


Figure ES-5. Chesterfield County Local Government Revenue, Cost, and Net Revenue, 2018 to 2022, Constant 2012 Dollars

## **CHAPTER 1. INTRODUCTION**

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The United States (U.S.) General Services Administration (GSA) is proposing to acquire land and develop a U.S. Department of State (DOS), Bureau of Diplomatic Security (DS) Foreign Affairs Security Training Center (FASTC) in Nottoway County, Virginia. The proposed location is near the town of Blackstone within and adjacent to the Army National Guard Maneuver Training Center Fort Pickett. The development of FASTC would establish a consolidated training center from which DS may efficiently conduct training for a wide array of DS law enforcement and security disciplines to meet increased demand for well-trained personnel. Currently, DS training functions are conducted in 19 separate leased and contracted training facilities dispersed around the country. The proposed FASTC would consolidate training functions at one central facility.

The consolidated center would provide training for 8,000-10,000 students per year. FASTC would include driving tracks, firing ranges, mock urban environments, explosives ranges, classrooms, simulation labs, a fitness center, administrative offices, dormitories, a dining hall, and emergency response facilities.

To accommodate these facilities, a minimum of 1,500 developable acres would be required for the programmatic needs and for appropriate safety buffers and security perimeters surrounding the facility. DOS also requires proximity to Washington, D.C., specifically a site within a four hour drive and 220 miles of DS headquarters in Arlington, Virginia.

The proposed FASTC project would consist of two major phases, a construction phase and an operations phase. Construction of FASTC would last about 7 years and is expected to begin in 2014 and be completed in 2020. Some FASTC operations would overlap with construction efforts; operations would begin in 2018 and increase in magnitude until full operations begin in 2020, upon completion of the construction phase. FASTC operations would then continue annually for the foreseeable future.

This technical report identifies the economic and fiscal impacts associated with implementation of the proposed FASTC project. Economic impacts relate to the project's potential for generating jobs, labor income, and economic output. Fiscal impacts relate to the project's potential for generating revenues and costs to local governments. The Impact Analysis for Planning (IMPLAN) model, a standard tool used for economic impact analysis, was used to generate economic impacts. The IMPLAN model was also used to generate estimates of local government revenue impacts, while impacts to local government costs were estimated based on expected new population to the region and per capita local government costs. New population is the main driver of potential increases in government costs.

The economic and fiscal studies are presented separately; Chapter 2 presents the economic impact study and Chapter 3 presents the fiscal impact study. Both Chapter 2 and Chapter 3 contain two major sections – an approach to analysis section and an estimated impacts section. The approach to analysis sections address the data and methods that were used to conduct the economic and fiscal analyses and the estimated impacts sections provide the results of analyses. The results of the economic impact analysis are presented for three economic variables – jobs, labor income, and economic output. Results for the fiscal impact analysis present expected total local government revenues, costs, and net revenues

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## **CHAPTER 2. ECONOMIC IMPACT TECHNICAL STUDY**

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### **2.1 APPROACH TO ANALYSIS OF ECONOMIC IMPACTS**

This economic impact technical study analyzes the economic impacts of the FASTC project on a combined Region of Influence (ROI) consisting of eight counties in southern Virginia; all results are presented for the combined region. While the FASTC project would be located in Nottoway County, the economic effects of the project would extend into surrounding counties that have close ties (for example, purchase of goods and services; employee residential locations; etc.) to the Nottoway County economy. Counties in the ROI include Amelia, Brunswick, Chesterfield, Dinwiddie, Lunenburg, Mecklenburg, Nottoway, and Prince Edward. In order to conduct the analysis and present results for the combined ROI, eight sets of IMPLAN data – one for each county in the ROI – were combined into a single economic model.

#### **2.1.1 Primary Data, Estimates, and Assumptions**

Primary economic data were collected from DOS and are based on experience and knowledge that DOS has gained from construction and operation of facilities with similar functions as the proposed FASTC. For analysis of the construction phase, DOS provided information on construction expenditures and estimation factors that could be used to divide expenditures data into payroll and non-payroll expenditure classifications. For analysis of the operations phase, DOS provided data on payroll and non-payroll operational expenditures, operational employment, and the projected number and length of stay for visiting trainees. DOS also provided a timeline for construction and operations, which allowed for the analysis to be conducted on a year-by-year basis.

Some estimates were made prior to economic modeling to allow for incorporation of primary data into the IMPLAN model. Additional estimates were made, post-modeling, such as conversion of IMPLAN jobs estimates to full-time equivalent (FTE), so that results could be presented in a consistent manner. Estimates typically used factors that were gathered from DOS, federal statistical agencies, or the private firm that has proprietorship over the IMPLAN model. In order to complete certain portions of the analyses, some assumptions were made. Where feasible, and in most cases during the economic analysis, assumptions were based on quantitative data published by federal statistical agencies.

Primary data, estimates, and assumptions are summarized in the following sections of the approach to analysis.

##### **2.1.1.1 Construction Expenditures**

In total, DOS estimated construction expenditures to be approximately \$700 million. This initial estimate was used as a basis to establish the amount of construction expenditures that would be made within the ROI. Portions of the initial estimate that relate to construction contractor contingencies, certain fees, and items that would be purchased outside of the ROI were removed from analysis. The initial estimate also included expenditures related to escalation, or construction cost inflation. Escalation was also removed from analysis because the analysis was conducted in constant dollars (assuming no changes,

over time, to prices, wages, or other economic variables). After removing expenditures that would likely not reach the economy of the ROI, it was estimated that over the course of the construction phase a total of \$365 million would be spent on construction within the ROI. Table 2-1 shows construction expenditures in the ROI spread out over the course of the construction phase.

**Table 2-1. Total Construction Expenditures in the ROI, 2014 to 2020, Constant 2012 Dollars**

2014	2015	2016	2017	2018	2019	2020
\$53,138,417	\$53,138,417	\$78,231,755	\$97,501,506	\$44,363,089	\$19,269,751	\$19,269,751

Source: DOS 2012.

Note: DOS construction estimate adjusted to include only expenditures made in the ROI.

Construction Employment and Payroll Expenditures

DOS provided an implied estimation factor that was used to convert construction expenditures in the ROI into the direct construction employment estimates presented in Table 2-2. The estimation factor equated every \$1 million in local construction expenditures to 5.7 FTE construction jobs. Upon review of industry employment data published by the Bureau of Labor Statistics (BLS 2012), it was determined that the construction labor supply of the ROI would be able to staff the entire construction project, and given higher costs associated with importing construction workers, it was assumed that all construction workers would reside within the ROI.

**Table 2-2. Estimated Direct Construction Employment (FTE), 2014 to 2020**

2014	2015	2016	2017	2018	2019	2020
304	304	447	557	254	110	110

Source: DOS 2012.

Note: Estimate based on data provided by DOS.

DOS provided the skill level and compensation rate data in Table 2-3. These data were used in conjunction with estimated direct construction employment (Table 2-2) to estimate direct construction payroll. Construction jobs were distributed among skill categories and then multiplied by projected hourly benefits for each skill category to estimate the total income of direct construction workers (Table 2-4).

**Table 2-3. Breakdown of Expected Construction Worker Skill and Compensation Rates**

	Percent of Total Work Force	Wage Rate (Hourly)	Benefits Rate (Hourly)
Skilled construction worker	60%	\$20.94	\$7.33
Unskilled constructor laborer	30%	\$13.29	\$1.73
Construction manager and supervisor	10%	\$29.18	\$10.21

Source: DOS 2012.

**Table 2-4. Estimated Income of Direct Construction Workers, 2014 to 2020, Constant 2012 Dollars**

2014	2015	2016	2017	2018	2019	2020
\$16,055,510	\$16,055,510	\$23,637,337	\$29,459,597	\$13,404,088	\$5,822,260	\$5,822,260

Source: Estimate based on information provided by DOS.

Non-payroll Construction Expenditures

Non-payroll construction expenditures represent expenditures for construction materials, equipment rental, and other associated construction expenses. Non-payroll construction expenditures made within the ROI were estimated by subtracting construction payroll expenditures (Table 2-4) from construction expenditures in the ROI (Table 2-1). Non-payroll construction expenditures are presented in Table 2-5 for each year of the construction phase.

**Table 2-5. Estimated Non-Payroll Construction Expenditures in the ROI, 2014 to 2020**

2014	2015	2016	2017	2018	2019	2020
\$37,082,907	\$37,082,907	\$54,594,418	\$68,041,908	\$30,959,001	\$13,447,491	\$13,447,491

Source: Estimate based on information provided by DOS.

**2.1.1.2 Operational Expenditures**

There would be three major sources of local expenditures derived from operational activities associated with implementation of FASTC: 1) payroll; 2) purchases of goods and services that would be required to operate FASTC; and 3) purchases by visitors who would train at FASTC. Since it is expected that FASTC would maintain operations for the foreseeable future, impacts related to FASTC operations would be considered economically sustainable in comparison to the construction phase (which would be completed in 2020). The following sections discuss the sources and magnitude of FASTC operational expenditures during the early start-up stages (2018-2020) and the steady-state (2021 forward).

Operational Payroll Expenditures

DOS provided detailed information on total employment and payroll that would be associated with FASTC operations. The employment totals in Table 2-6 represent all government employees and employment generated directly from contract expenditures. As Table 2-6 indicates, direct operational employment related to FASTC would build up from the first year of operations in 2018 until full operations are reached sometime in 2020. Since 2021 would be the first full year of steady-state operations, the 1,070 direct operational jobs indicated in Table 2-6 would be generated every year in perpetuity, absent any unforeseen changes.

**Table 2-6. Estimated Direct Operational Employment (FTE), 2018 to 2021**

2018	2019	2020	2021*
533	762	916	1,070

Source: DOS 2012.

Note: \*2021 represents a steady-state. This number of jobs would be expected to continue annually for the foreseeable future.

Table 2-7 shows payroll expenditures that would be associated with direct operational employment; this information was provided by DOS. Similar to growth in employment from 2018 to 2021, payroll expenditures would increase from the start of operations in 2018 until full operations would be reached in 2021.

**Table 2-7. Estimated Income of Direct Operations Workers,  
2014 to 2020, Constant 2012 Dollars**

2018	2019	2020	2021*
\$51,794,846	\$76,500,895	\$94,915,216	\$113,329,537

Source: DOS 2012.

Note: \*Estimate for 2021 represents steady-state payroll expenditures. This level of payroll would be expected to continue annually for the foreseeable future.

Non-payroll Operational Expenditures

DOS provided information on FASTC non-payroll operational expenditures. These data represent purchases of goods and services within the ROI that would be made to maintain the operations of FASTC. Because operational expenditures would be related to on-site activities, these operational expenditures would be paid to firms in the ROI that would be contracted to provide goods and services. Table 2-8 details the types of goods and services that would be required to operate FASTC and the expected level of expenditures for each type of goods and services. Data in Table 2-8 do not include expenditures for labor since firms contracted to provide goods and services associated with FASTC operations would be compensated as labor costs. For purposes of this analysis, the labor portion of these expenditures is included in Table 2-7 (operational payroll expenditures). Non-payroll operational expenditures would be expected to reach a steady-state in 2021, at about \$25 million per year.

**Table 2-8. Non-payroll Operational Expenditures in the ROI,  
2018 to 2021, Constant 2012 Dollars**

Expenditure Category	2018	2019	2020	2021*
Shuttle service	\$176,928	\$176,928	\$176,928	\$176,928
Site security	\$738,521	\$738,521	\$738,521	\$738,521
Training vehicle maintenance	\$5,706,975	\$5,706,975	\$5,706,975	\$5,706,975
Track maintenance	\$3,182,889	\$3,182,889	\$3,182,889	\$3,182,889
Wrecker/salvage	\$219,811	\$219,811	\$219,811	\$219,811
Grounds maintenance	\$282,515	\$282,515	\$282,515	\$282,515
Range maintenance	\$287,812	\$287,812	\$287,812	\$287,812
Janitorial services	\$158,065	\$158,065	\$158,065	\$158,065
Facilities engineering	\$1,412,576	\$1,412,576	\$1,412,576	\$1,412,576
Food services	\$1,315,543	\$1,315,543	\$1,315,543	\$1,315,543
Hotel Management	\$32,500	\$32,500	\$32,500	\$32,500
Off-site lodging for students	\$3,853,792	\$3,853,792	\$3,853,792	\$3,853,792
Booking/reception/guest services	\$352,413	\$352,413	\$352,413	\$352,413
Housekeeping (Dorms)	\$175,628	\$526,883	\$526,883	\$526,883
Technology maintenance	\$698,964	\$698,964	\$698,964	\$698,964
Utilities and related O&M	\$3,646,325	\$4,557,906	\$5,013,697	\$5,469,487
Other small O&M	\$455,791	\$455,791	\$455,791	\$455,791
Operational Expenditures (Total)	\$22,697,048	\$23,959,884	\$24,415,675	\$24,871,465

Source: DOS 2012.

Notes: \*Estimate for 2021 represents steady-state non-payroll operational expenditures. This level of expenditure would be expected to continue annually for the foreseeable future.

O&M = operations and maintenance

Expenditures by Visiting Trainees

The primary focus of FASTC would be to train security personnel. Trainees would visit FASTC and would be expected to spend money in the local communities within the ROI. Table 2-9 shows expected annual number of visitor-days (annual number of trainees multiplied by the number of days each trainee would spend at FASTC). Visitor-days were multiplied by an estimate of daily visitor expenditures to yield total visitor expenditures in the ROI. Daily visitor expenditures were estimated based on GSA data on per diem government travel rates, and data from the Virginia Tourism Corporation. Visitor expenditures from per diem were adjusted to exclude hotel stays and meals because FASTC would contract for these services (contracted hotel and cafeteria contract values are included in Table 2-8). After the adjustment, per diem expenditures were estimated to be \$1.50 per visitor day. In addition to per diem related spending, visiting trainees would be expected to interact with the local economy through personal spending at retail establishments and restaurants, during their free time (which was estimated by DoS to be 1.4 hours per day). Daily spending such as this was estimated based to be \$8.79 per day. In total, daily spending, per visitor, was estimated to equal \$10.29 (\$1.5 related to per diem and \$8.79 from personal related spending).

**Table 2-9. Annual Visitor Days by Trainees and Estimated Local Expenditures**

	2018	2019	2020	2021*
Annual Visitor Days	262,920	334,600	334,600	334,600
Annual Local Expenditures	\$2,705,447	\$3,443,034	\$3,443,034	\$3,443,034

Sources: DOS 2012 (for visitor days), GSA 2012, (for per diem), VATC 2012 (additional visitor expenditures).

Note: \*Estimate for 2021 represents steady-state visiting trainee expenditures. This level of expenditure would be expected to continue annually for the foreseeable future.

**2.1.2 Modeling Preparation**

This section discusses how data and estimates were incorporated into the IMPLAN model to generate estimates of economic impacts. For the construction and operations phases, personal expenditures and non-payroll expenditures were input into the model. Additionally, for the operations phase, estimated expenditures by visiting trainees were input into the model.

**2.1.2.1 Personal Expenditures**

Personal expenditures are derived from payrolls; they include the portion of payroll that is spent and exclude portions of payroll that are taxed and saved. To derive personal expenditures from payroll, a measure of Personal Consumption Expenditures (PCE) was used. According to Table B-30 of the 2012 Economic Report of the President, the most recent estimate of PCE was 82.7% (Government Printing Office 2012). Payroll expenditures for both construction and operations (see Table 2-4 and Table 2-7, respectively) were multiplied by 0.827 prior to being input into the economic model.

Table 2-10 shows the estimated personal expenditures that were input into the IMPLAN model. The values were distributed into pay ranges (based on information provided by DOS) because the IMPLAN model contains information specific to spending patterns at differing levels of income. Distributing personal expenditures into income categories allows the economic model to account for different expenditure patterns. Data in Table 2-10 provide expenditures as they were entered into the economic

model. The IMPLAN model does make further adjustments prior to generating estimates of impacts; it adjusts for retail and wholesale margins and for portions of expenditures that are made outside of the ROI.

**Table 2-10. Personal Expenditures Included in Economic Model, 2014-2021, by Annual Pay**

	Pay Range (1,000s)	2014	2015	2016	2017	2018	2019	2020	2021*
Construction	15-25	\$1,327,791	\$1,327,791	\$1,954,808	\$2,436,309	\$1,108,518	\$481,501	\$481,501	\$0
	35-50	\$3,319,477	\$3,319,477	\$4,887,020	\$6,090,772	\$2,771,295	\$1,203,752	\$1,203,752	\$0
	50-75	\$6,638,953	\$6,638,953	\$9,774,039	\$12,181,543	\$5,542,590	\$2,407,504	\$2,407,504	\$0
	75-100	\$1,991,686	\$1,991,686	\$2,932,212	\$3,654,463	\$1,662,777	\$722,251	\$722,251	\$0
	Totals	\$13,277,907	\$13,277,907	\$19,548,079	\$24,363,087	\$11,085,180	\$4,815,008	\$4,815,008	\$0
Operations	15-25	\$0	\$0	\$0	\$0	\$1,237,532	\$1,827,833	\$2,267,805	\$2,707,778
	35-50	\$0	\$0	\$0	\$0	\$1,832,419	\$2,706,479	\$3,357,949	\$4,009,418
	75-100	\$0	\$0	\$0	\$0	\$32,521,251	\$48,033,830	\$59,595,921	\$71,158,012
	100-150	\$0	\$0	\$0	\$0	\$6,079,577	\$8,979,524	\$11,140,960	\$13,302,397
	150+	\$0	\$0	\$0	\$0	\$1,163,559	\$1,718,575	\$2,132,248	\$2,545,922
	Totals	\$0	\$0	\$0	\$0	\$42,834,338	\$63,266,241	\$78,494,883	\$93,723,527

Note: \*Estimate for 2021 represents steady-state personal expenditures. This level of expenditures would be expected to continue annually for the foreseeable future.

**2.1.2.2 Non-Payroll Expenditures**

Non-payroll expenditures refer to expenditures that are made for goods and services that would facilitate the construction and operations of FASTC; they amount to total expenditures minus payroll expenditures. Non-payroll construction expenditures in the ROI are presented in Table 2-5. Non-payroll operational expenditures in the ROI are displayed in Table 2-8.

Non-payroll expenditures, both for construction and operations, were input into the IMPLAN model by allocating them into appropriate IMPLAN sectors. The IMPLAN model requires that expenditures be allocated into sectors because, by virtue of their unique expenditure patterns, every sector of the economy generates different levels of economic impacts.

Non-payroll construction expenditures were allocated to the IMPLAN sector “Construction of new nonresidential commercial and health care structures,” which is best correlated to the type of construction required for FASTC. Non-labor operational expenditures were allocated into several industries based on primary data presented in Table 2-8. The expenditure categories in Table 2-8 were provided by DOS and are shown in Table 2-11, but these categories required conversion into IMPLAN sectors. To convert DOS expenditure categories into IMPLAN sectors they were first converted into North American Industry Classification System (NAICS) industries. Once classified according to NAICS industry, a table bridging NAICS industries and IMPLAN sectors was used to ensure operational expenditures were allocated into appropriate IMPLAN sectors. Table 2-11 shows expenditure categories, as provided by DOS, and the IMPLAN sector each category was assigned to. Table 2-11 also shows the percentage of non-payroll operational expenditures that was allocated to each IMPLAN sector.

**Table 2-11. Allocation on Non-Payroll Operational Expenditures into IMPLAN Sectors**

<b>Expenditure Category</b>	<b>IMPLAN Sector</b>	<b>% of Non-payroll Expenditures*</b>
Training vehicle maintenance	Automotive repair and maintenance, except car washes	22.9%
Utilities and related O&M	Electric power generation, transmission, and distribution	22.0%
Off-site lodging for students	Hotels and motels	15.5%
Track maintenance	Maintenance and repair construction of nonresidential structures	12.8%
Facilities engineering	Facilities support services	5.7%
Food services	Food services and drinking places	5.3%
Site security	Investigation and security services	3.0%
Technology maintenance	Electronic and precision equipment repair and maintenance	2.8%
Housekeeping (Dorms)	Services to buildings and dwellings	2.1%
Other small O&M	Facilities support services	1.8%
Booking/reception/guest services	Office administrative services	1.4%
Range maintenance	Waste management and remediation services	1.2%
Grounds maintenance	Facilities support services	1.1%
Wrecker/salvage	Scenic and sightseeing transportation and support activities for transportation	0.9%
Shuttle service	Transit and ground passenger transportation	0.7%
Janitorial services	Services to buildings and dwellings	0.6%
Hotel Management	Office administrative services	0.1%

Note: \*Percentages are for steady-state operations.  
O&M = operations and maintenance

### **2.1.2.3 Visiting Trainee Expenditures**

Estimated visiting trainee expenditures were prepared for modeling in much the same way as non-payroll operational expenditures. Expenditures presented in Table 2-9 were allocated into appropriate IMPLAN sectors with about half of visitor expenditures allocated to food services establishments, and about half allocated into a variety of retail trade establishments. While cafeteria services would be provided onsite at FASTC, it is expected that visiting trainees would patronize local restaurants, as well as a variety of retail establishments (for incidentals, gifts, and other miscellaneous purchases). All economic impacts resulting from visiting trainee expenditures are considered as part of operational phase impacts.

### **2.1.3 Result Variables and Implied Multipliers**

#### **2.1.3.1 Result Variables**

Economic impact variables that are presented as results include Jobs, Labor Income, and Economic Output. Each of these variables consists of a direct and an indirect/induced element.

Direct impacts are associated with FASTC itself and include construction and operations jobs; the incomes earned by those workers; and the economic output associated with initial purchases of local construction materials and supplies; and goods and services that facilitate the operations of FASTC.

Estimates of direct impacts are mainly driven by data provided by DOS (as presented in Tables 2-2, 2-5, 2-6, 2-8, 2-9, and 2-10). Additional direct impacts are generated through non-payroll expenditures and visiting trainee expenditures, which are generated by the IMPLAN model and are presented only in Section 2.2 as results).

Indirect impacts are the jobs, income, and economic output generated by the businesses that supply goods and services to FASTC. Indirect jobs include jobs at companies that supply construction materials/supplies or support jobs directly related to FASTC operations. Indirect jobs extend to include jobs related to the manufacture of products used to construct and operate the facility. Indirect labor income includes the income earned by people working indirect jobs. Indirect output includes the total sales volume related to the supply of goods and services to FASTC.

Induced impacts are the result of spending of the wages and salaries of the direct and indirect employees on items such as food, housing, transportation, and medical services. This spending creates induced employment in nearly all sectors of the economy, especially service sectors.

### Jobs

Jobs impacts represent the number of FTE jobs that would be created or sustained within the ROI as a result of the construction and operations of FASTC. The bulk of direct jobs that would be generated by the construction and operations of FASTC were estimated prior to the modeling process. Direct jobs estimated prior to modeling are presented in Table 2-2 (for construction) and Table 2-6 (for operations). These direct jobs were not entered into the IMPLAN Model because, according to the model, jobs do not generate other jobs. Jobs impacts are generated through increases in economic activity that would be spurred by personal expenditures, non-payroll expenditures, and visiting trainee expenditures that would be associated with the construction and operations of FASTC. The IMPLAN model generates jobs numbers that include part-time jobs but these jobs numbers were adjusted to FTE, using conversion factors published by MIG Inc. (MIG Inc. 2012), the developer of the IMPLAN model; all jobs are presented in the results as FTE jobs.

### Labor Income

Labor income impacts represent the income generated through the FTE jobs that would be created or sustained within the ROI as a result of the construction and operations of FASTC. The bulk of direct labor income that would be generated by the construction and operations of FASTC were estimated prior to the modeling process. Direct labor income is income associated with direct jobs. Direct labor income is estimated prior to modeling and is presented in Table 2-4 (for construction) and Table 2-6 (for operations). Additional direct labor income is derived by the IMPLAN model, in the form of proprietor income, which represents the income of owners of businesses that are contracted to support the construction and operations of FASTC.

## Economic Output

Economic output impacts represent total production and sales volume that would be generated in the ROI as a result of the construction and operations of FASTC. Economic output is generated by increases in personal expenditures, non-payroll expenditures, and visiting trainee expenditures.

### **2.1.3.2 Implied Multipliers**

In generating estimates of impacts, the IMPLAN model utilizes detailed expenditure patterns, which are unique to different income levels (for personal expenditures) and intra-industry spending patterns (for non-payroll expenditures and visiting trainee expenditures). In doing so, the model results are more accurate than if a single set of multipliers was utilized. However, once the analysis was completed, multipliers were implied through a comparison of input data and total impacts. Multipliers are implied through a comparison of expenditures input into the economic model and total impacts generated by the economic model. Jobs multipliers are calculated on a per \$1 million basis, while labor income and output multipliers are on a per \$1 basis.

#### Implied Multipliers for Personal Expenditures

Impacts from personal expenditures are generated when income received by workers associated with the construction and operations of FASTC is spent within the ROI. Personal expenditures are generated from direct labor income (see Table 2-4 and Table 2-7) via payroll; estimated personal expenditures (Table 2-10) were entered into the IMPLAN model as increases in “household institutional spending”. Note that these multiplier effects are related to the spending of construction workers, and the multipliers presented do not include effects related to the direct construction jobs or direct construction labor income estimated prior to modeling.

The technique of accounting for payroll via personal expenditures, as compared to accounting for payroll via labor income, provided a means to achieve the best available detail in terms of how payroll expenditures would generate impact. An additional adjustment was required to capture that additional detail – when personal expenditures are introduced into the model, the model generates direct and indirect/induced impacts. However, since the personal expenditures are by definition induced by the construction and operations of FASTC, all impacts from personal expenditures are technically induced impacts. For purposes of reporting results, an adjustment was made to impacts generated by personal expenditures – results for direct impacts were shifted into the indirect/induced category. Given the adjustment, all impacts generated by income/payroll via personal expenditures are reported as indirect/induced impacts.

Implied multipliers presented in Table 2-12 represent the ratio of direct personal expenditures to total impacts for the result variables presented in the following section: jobs, labor income, and economic output. The implied jobs multipliers for the construction and operations phases are similar (only differences in pay ranges created variation); they suggest that for every \$1 million of personal expenditures, 8.5 and 7.1 jobs (respectively) would be created or sustained within the ROI. The implied labor income multipliers suggest that for every \$1 in direct personal expenditures related to both

construction and operations of FASTC, approximately \$0.31 and \$0.26, respectively, in labor income would be generated in the ROI. The implied output multipliers suggest that for every \$1 of direct personal expenditures, economic output in the ROI would increase by a total of less than \$1 (\$0.995 for construction and \$0.84 for operations).

Each of the implied multipliers presented in Table 2-12 are affected by the IMPLAN model’s discounting of personal expenditures that are made outside of the ROI. According to data in the IMPLAN model, about 60% to 70% of personal expenditures would remain in the ROI, and the residual 30% to 40% would leak out and generate no economic impacts in the ROI. If the rates of leakage were lower, then implied multipliers would be higher, and vice versa. Leakages on personal expenditures are largely generated by the IMPLAN model’s accounting for retail and wholesale margins, which are often the only portion of retail and wholesale expenditures that remain in the ROI.

**Table 2-12. Implied Multipliers\* – Personal Expenditures**  
**Construction and Operations**

Phase	Result Variable	Implied Multiplier
Construction	Jobs	8.5
	Labor Income	0.31
	Output	0.995
Operations	Jobs	7.1
	Labor Income	0.26
	Output	0.84

*Note:*\* Multipliers are implied through a comparison of expenditures input into the economic model and total impacts generated by the economic model. Jobs multipliers are on a per \$1 million basis, while labor income and output multipliers are on a per \$1 basis. Construction multipliers presented here are from analysis conducted for the year 2017. Operations multipliers presented here are from analysis conducted for the year 2021.

Implied Multipliers for Non-payroll Expenditures

Impacts from non-payroll expenditures are generated when expenditures associated with the construction and operations of FASTC are made within the ROI. Direct Non-payroll expenditures are presented in Table 2-5 for construction and Table 2-8 for operations. These expenditures are typically paid to businesses that provide goods and services that would facilitate the construction and operations of FASTC.

*Non-payroll Construction Expenditures*

Non-payroll expenditures associated with the construction of FASTC (see Table 2-5) were entered into the IMPLAN model to estimate economic impacts. Non-payroll construction expenditures generated

estimated impacts related to jobs, labor income, and economic output. Table 2-13 provides approximate implied multipliers that illustrate the ratio of direct non-payroll construction expenditures to total jobs, labor income, and economic output.

The implied jobs multiplier shown in Table 2-13 suggests that for every \$1 million dollars in non-payroll construction expenditures, an estimated 2.9 jobs would be created or sustained in the ROI (note that this multiplier effect does not include the direct construction jobs estimated prior to modeling). With regard to labor income, for every \$1 of direct non-payroll construction expenditures, approximately \$0.19 in labor income would be generated in the ROI (not including the direct construction labor income estimated prior to modeling). The implied economic output multiplier suggests that for every \$1 of non-payroll construction expenditures, economic output in the ROI would increase by \$1.38.

**Table 2-13. Implied Multipliers\* – Non-payroll  
Construction Expenditures**

<b>Result Variable</b>	<b>Implied Multiplier</b>
Jobs	2.9
Labor Income	0.19
Output	1.38

*Note:\** Multipliers are implied through a comparison of expenditures input into the economic model and total impacts generated by the economic model. Jobs multipliers are on a per \$1 million basis, while labor income and output multipliers are on a per \$1 basis. Construction multipliers presented here are from analysis conducted for the year 2017.

#### *Non-payroll Operational Expenditures*

Non-payroll expenditures associated with the operations of FASTC (see Table 2-8) were entered into the IMPLAN model to estimate economic impacts. Non-payroll operational expenditures generated estimated impacts related to jobs, labor income, and economic output. Table 2-14 provides approximate implied multipliers that illustrate the ratio of direct non-payroll operational expenditures to total jobs, labor income, and economic output.

The implied jobs multiplier shown in Table 2-14 suggests that for every \$1 million dollars in non-payroll operational expenditures, an estimated 3 jobs would be created or sustained in the ROI (note that this multiplier effect does not include the direct operational jobs estimated prior to modeling). With regard to labor income, for every \$1 of direct non-payroll construction expenditures, approximately \$0.12 in labor income would be generated in the ROI (not including direct operational labor income, which was estimated prior to modeling). The implied economic output multiplier suggests that for every \$1 of non-payroll operational expenditures, economic output in the ROI would increase by \$1.36.

**Table 2-14. Implied Multipliers\* – Non-payroll  
Operational Expenditures**

<b>Result Variable</b>	<b>Implied Multiplier</b>
Jobs	3.0
Labor Income	0.19
Output	1.36

*Note:*\* Multipliers are implied through a comparison of expenditures input into the economic model and total impacts generated by the economic model. Jobs multipliers are on a per \$1 million basis, while labor income and output multipliers are on a per \$1 basis. Multipliers presented here are from analysis conducted for the year 2021.

Implied Multipliers for Visiting Trainee Expenditures

Non-payroll expenditures associated with visiting trainees (see Table 2-9) were entered into the IMPLAN model to estimate economic impacts. Visiting trainee expenditures generated estimated impacts related to jobs, labor income, and economic output. Table 2-15 provides approximate implied multipliers that illustrate the ratio of direct non-payroll operational expenditures to total jobs, labor income, and economic output.

The implied jobs multiplier shown in Table 2-15 suggests that for every \$1 million dollars in visiting trainee expenditures, 12.1 jobs would be created or sustained in the ROI. With regard to labor income, for every \$1 of direct non-payroll construction expenditures, approximately \$0.29 in labor income would be generated in the ROI. The implied economic output multiplier suggests that for every \$1 of non-payroll operational expenditures, economic output in the ROI would increase by approximately \$0.79. Similar to personal expenditures implied multipliers, visiting trainee expenditure implied multipliers are reduced by the model’s adjustment for retail margins.

**Table 2-15. Implied Multipliers\* –  
Visiting Trainee Expenditures**

<b>Result Variable</b>	<b>Implied Multiplier</b>
Jobs	12.1
Labor Income	0.29
Output	0.79

*Note:*\* Multipliers are implied through a comparison of expenditures input into the economic model and total impacts generated by the economic model. Jobs multipliers are on a per \$1 million basis, while labor income and output multipliers are on a per \$1 basis. Multipliers presented here are from analysis conducted for the year 2021.

**2.2 ESTIMATED ECONOMIC IMPACTS**

This section presents results from the analysis of economic impacts of proposed FASTC construction and operations on the local economy within the ROI. Result variables that are presented include jobs, labor income, and economic output. Results are provided in terms of direct and indirect/induced impacts for each year in which there would be construction or operational activity. FASTC operations are expected

to continue annually for the foreseeable future; therefore, results presented for the year 2021 are considered steady-state results that would continue each year over an indefinite period of time.

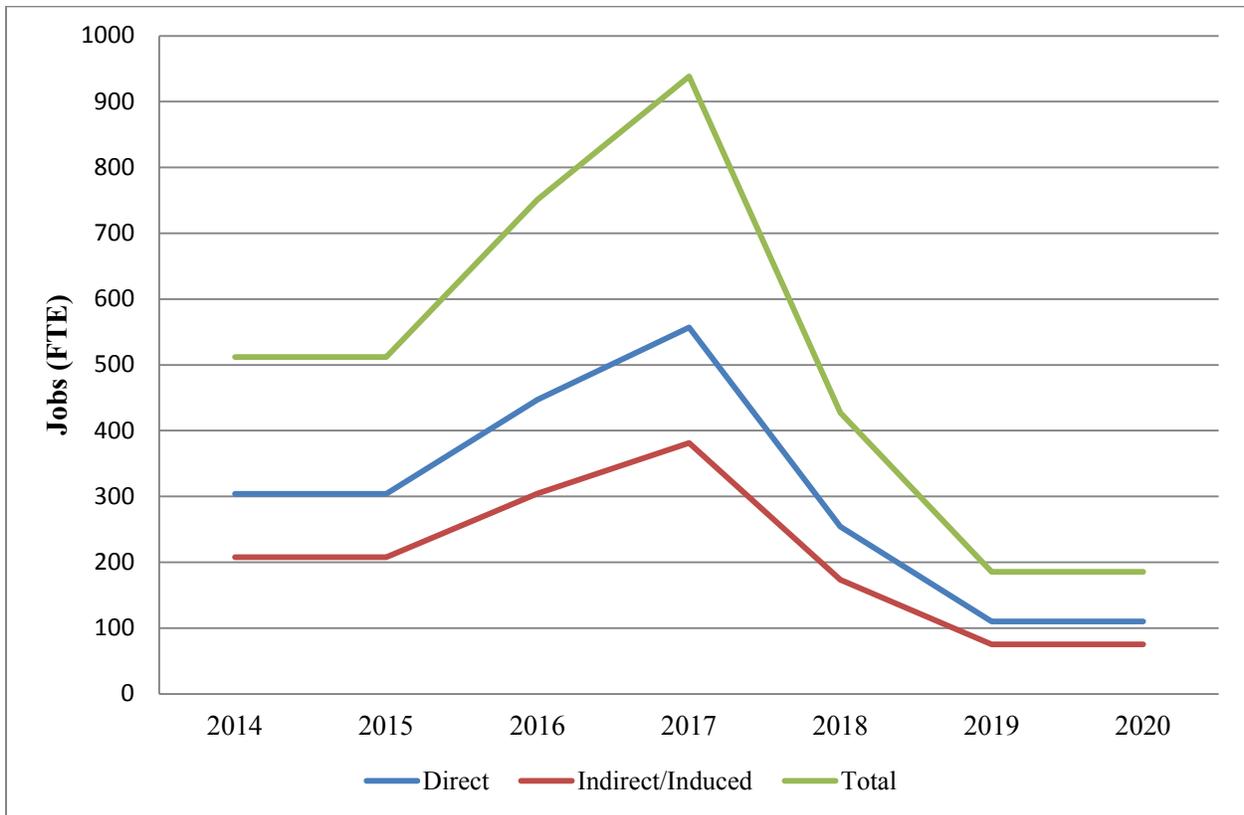
**2.2.1 Jobs**

**2.2.1.1 Construction Phase**

Table 2-16 presents impacts on FTE jobs that would be generated by the construction of FASTC, during the life of the construction phase, from 2014 to 2020. Construction would be expected to begin in 2014 and build up, reaching a peak in 2017. At the peak of the construction phase, 938 FTE jobs would be generated or sustained within the ROI. After 2017, construction would begin to wind down. During the years 2019 and 2020, 185 jobs would be generated in the ROI as a result of the construction of FASTC. Figure 2-1 illustrates the results presented in Table 2-16.

**Table 2-16. FTE Jobs Impact from Construction, 2014-2020**

	2014	2015	2016	2017	2018	2019	2020
Direct	304	304	447	557	254	110	110
Indirect/Induced	208	208	304	381	173	75	75
Total	512	512	751	938	427	185	185



**Figure 2-1. FTE Jobs Impact from Construction, 2014-2020**

**2.2.1.2 Operations Phase**

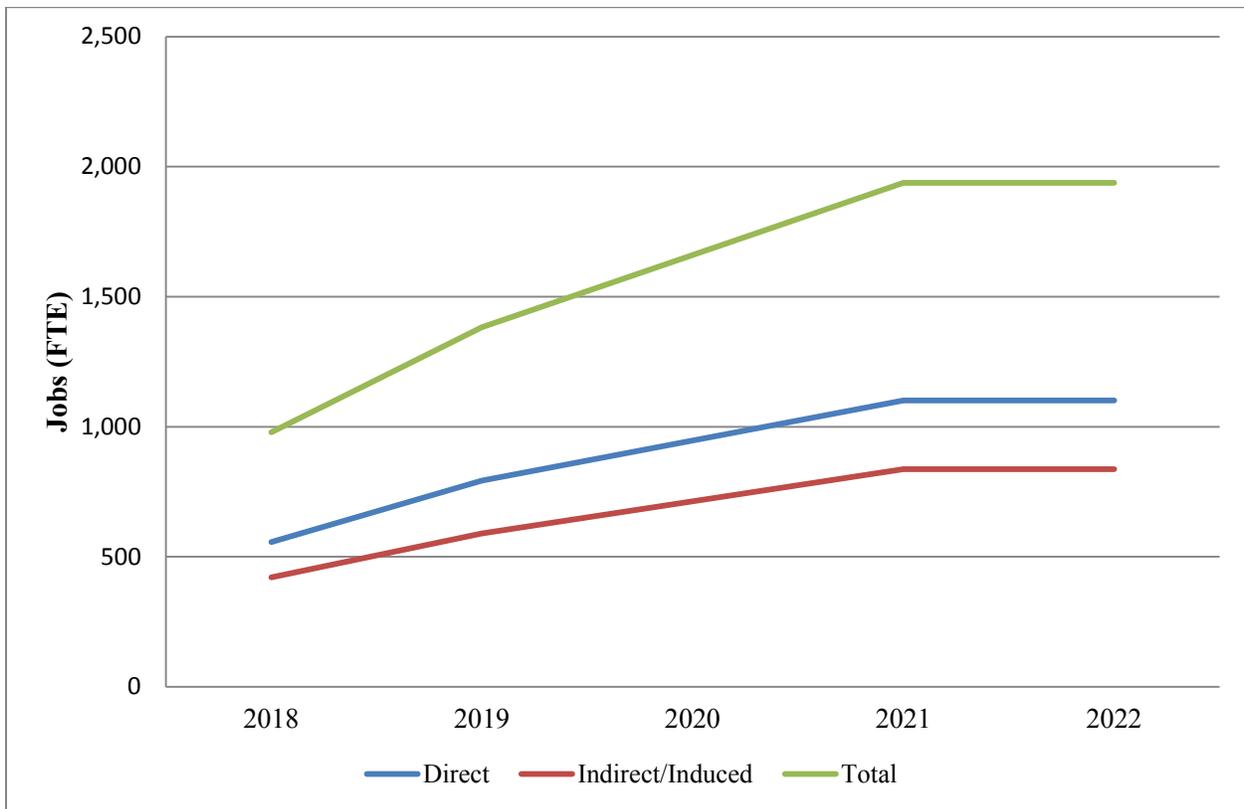
Table 2-17 presents impacts on FTE jobs that would result from the operations phase of FASTC. Operations would be expected to begin in 2018 and build up to a steady-state by 2021. At steady-state operations 1,101 direct jobs and 837 indirect/induced jobs would be generated or sustained within the ROI. Total jobs impacts would increase from 978 in 2018 to a steady-state total of 1,938 jobs in 2021. Figure 2-2 illustrates the results presented in Table 2-17 along with results for the year 2022 to further illustrate the steady-state nature of operational impacts.

**Table 2-17. FTE Jobs Impact from Operations, 2018-2021**

	2018	2019	2020	2021 <sup>1</sup>
Direct <sup>2</sup>	557	793	947	1,101
Indirect/Induced	421	590	714	837
Total	978	1,383	1,660	1,938

Notes: <sup>1</sup>Estimate for 2021 represents steady-state operations. This level of jobs would be expected to continue annually for the foreseeable future.

<sup>2</sup> Direct operations jobs include those directly related to FASTC (see Table 2-6) and direct jobs from visitor spending, which is generated by the IMPLAN model.



**Figure 2-2. FTE Jobs Impact from Operations, 2018-2022**

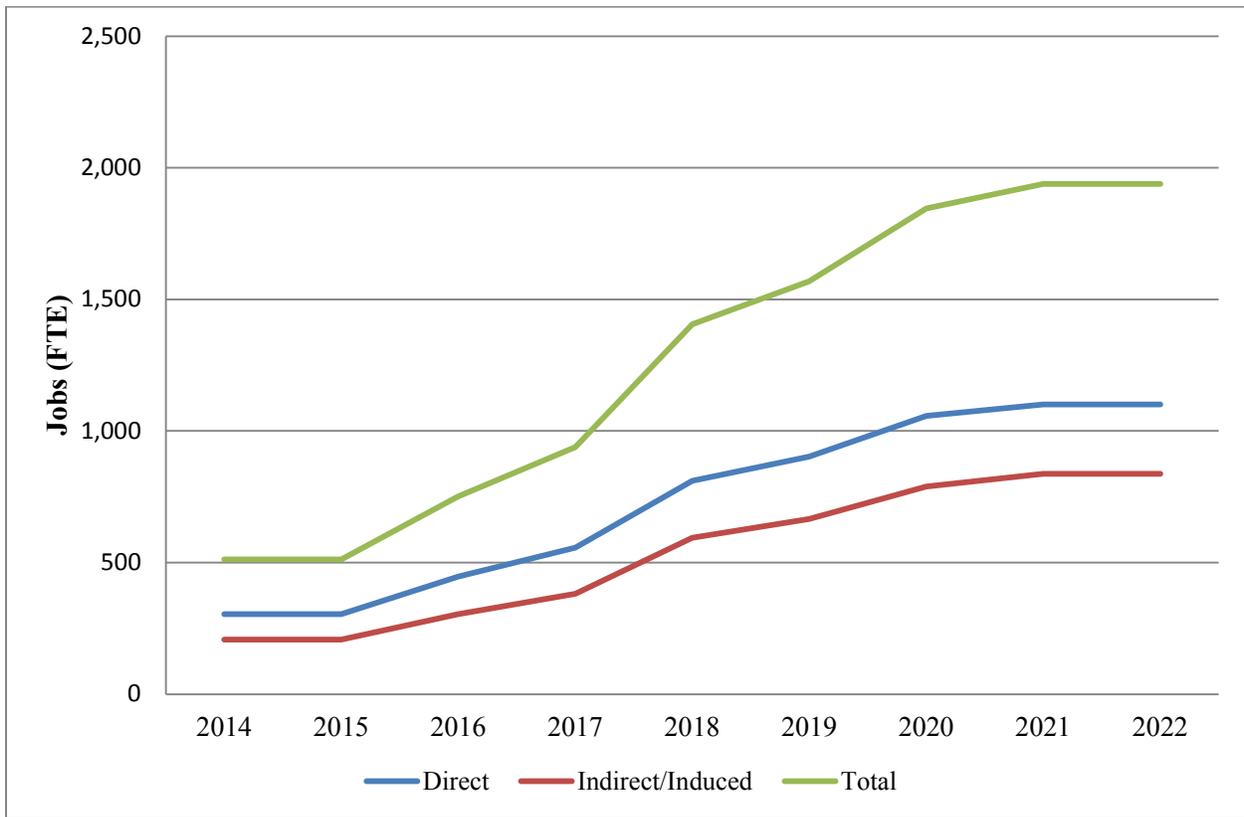
**2.2.1.3 Combined Construction and Operations**

Table 2-18 presents impacts on FTE jobs that would result from the combined construction and operations of FASTC. Construction would be expected to begin in 2014 and build up, reaching a peak in 2017. Operations would be expected to begin in 2018 and build up, reaching a steady-state by 2021. From 2018 to 2020 construction and operations would take place simultaneously. During these years, job impacts related to operational activities would exceed impacts related to construction. Figure 2-3 illustrates the results presented in Table 2-18 along with results for the year 2022 that further illustrate the steady-state nature of impacts.

**Table 2-18. FTE Jobs Impact from Combined Construction and Operations, 2014-2021**

	2014	2015	2016	2017	2018	2019	2020	2021*
Direct	304	304	447	557	811	903	1,057	1,101
Indirect/Induced	208	208	304	381	595	665	789	837
Total	512	512	751	938	1,405	1,568	1,845	1,938

Note: \*Estimate for 2021 represents steady-state operations. This level of jobs would be expected to continue annually for the foreseeable future.



**Figure 2-3. FTE Jobs Impact from Combined Construction and Operations, 2014-2022**

**2.2.2 Labor Income**

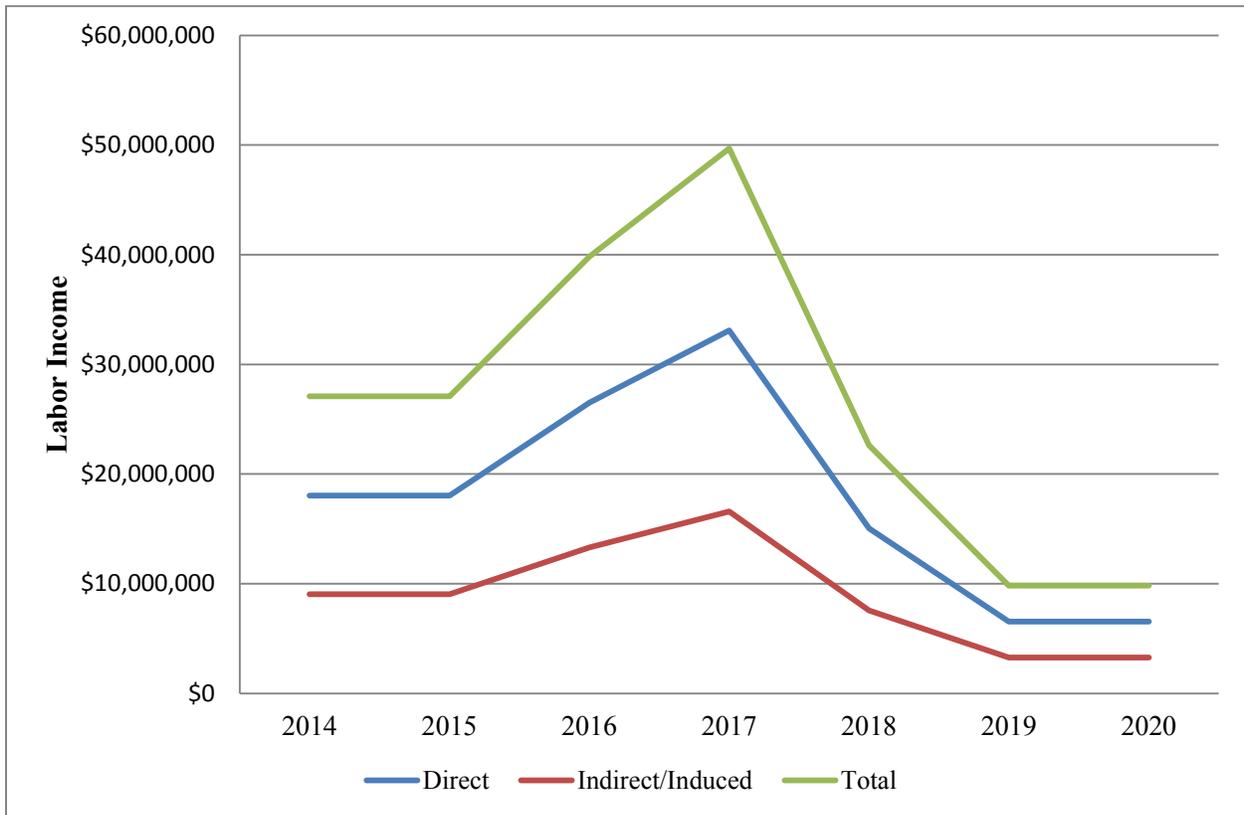
**2.2.2.1 Construction Phase**

Table 2-19 presents impacts on labor income that would be generated by the construction of FASTC during the life of the construction phase, from 2014 to 2020. Construction would be expected to begin in 2014 and build up, reaching a peak in 2017. At the peak of the construction phase, nearly \$50 million in labor income would be generated within the ROI. After 2017, construction would begin to wind down. During the years 2019 and 2020 \$9.8 million in labor income would be generated in the ROI as a result of the construction of FASTC. Figure 2-4 illustrates the results presented in Table 2-19.

**Table 2-19. Labor Income Impact from Construction, 2014-2020, Constant 2012 Dollars**

	2014	2015	2016	2017	2018	2019	2020
Direct	\$18,037,566	\$18,037,566	\$26,514,139	\$33,096,391	\$15,058,825	\$6,541,019	\$6,541,019
Indirect/Induced	\$9,045,823	\$9,045,823	\$13,316,647	\$16,596,627	\$7,551,987	\$3,280,315	\$3,280,315
Total	\$27,083,389	\$27,083,389	\$39,830,787	\$49,693,018	\$22,610,813	\$9,821,334	\$9,821,334

Note: Direct construction labor income impacts include estimated income of direct construction workers (see Table 2-4) and direct proprietor income, which is generated by the IMPLAN model.



**Figure 2-4. Labor Income Impact from Construction, 2014-2020, Constant 2012 Dollars**

2.2.2.2 Operations Phase

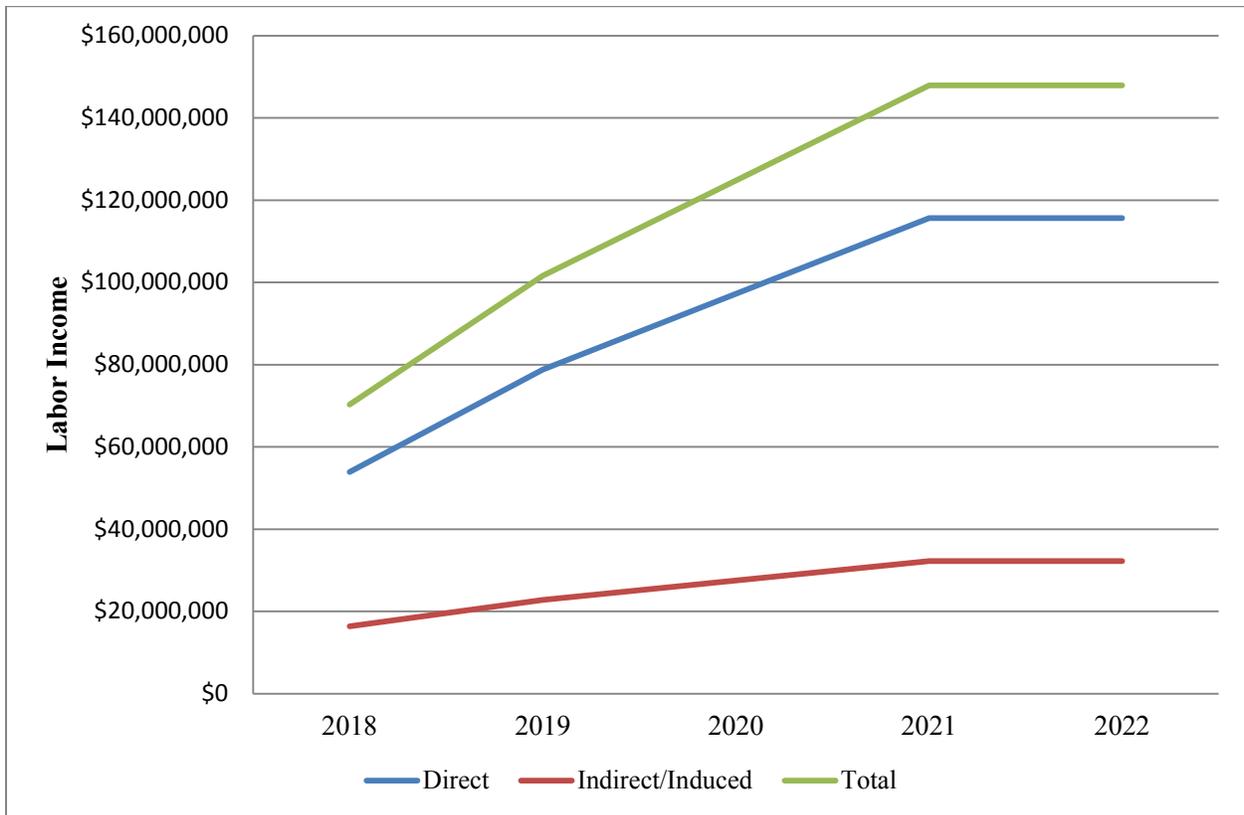
Table 2-20 presents impacts on labor income that would result from the operations of FASTC. Operations would be expected to begin in 2018 and build up, reaching a steady-state by 2021. At steady-state operations, \$115.6 million in direct labor income and \$32.2 million in indirect/induced labor income would be generated as a result of FASTC operations. Total labor income impacts would increase from \$70.3 million in 2018 to a steady-state total of \$147.9 million in 2021. Figure 2-5 illustrates the results presented in Table 2-20 along with results for the year 2022 that further illustrate the steady-state nature of impacts.

**Table 2-20. Labor Income Impact from Operations, 2018-2021**

	2018	2019	2020	2021 <sup>1</sup>
Direct <sup>2</sup>	\$53,932,249	\$78,798,613	\$97,216,674	\$115,634,736
Indirect/Induced	\$16,370,243	\$22,816,012	\$27,528,451	\$32,240,893
Total	\$70,302,492	\$101,614,625	\$124,745,126	\$147,875,629

Notes: <sup>1</sup> Estimate for 2021 represents steady-state operations. This level of labor income would be expected to continue annually for the foreseeable future.

<sup>2</sup> Direct operations labor income includes income of workers directly employed at FASTC and direct proprietor income, which is generated by the IMPLAN model.



**Figure 2-5. Labor Income Impact from Operations, 2018-2022, Constant 2012 Dollars**

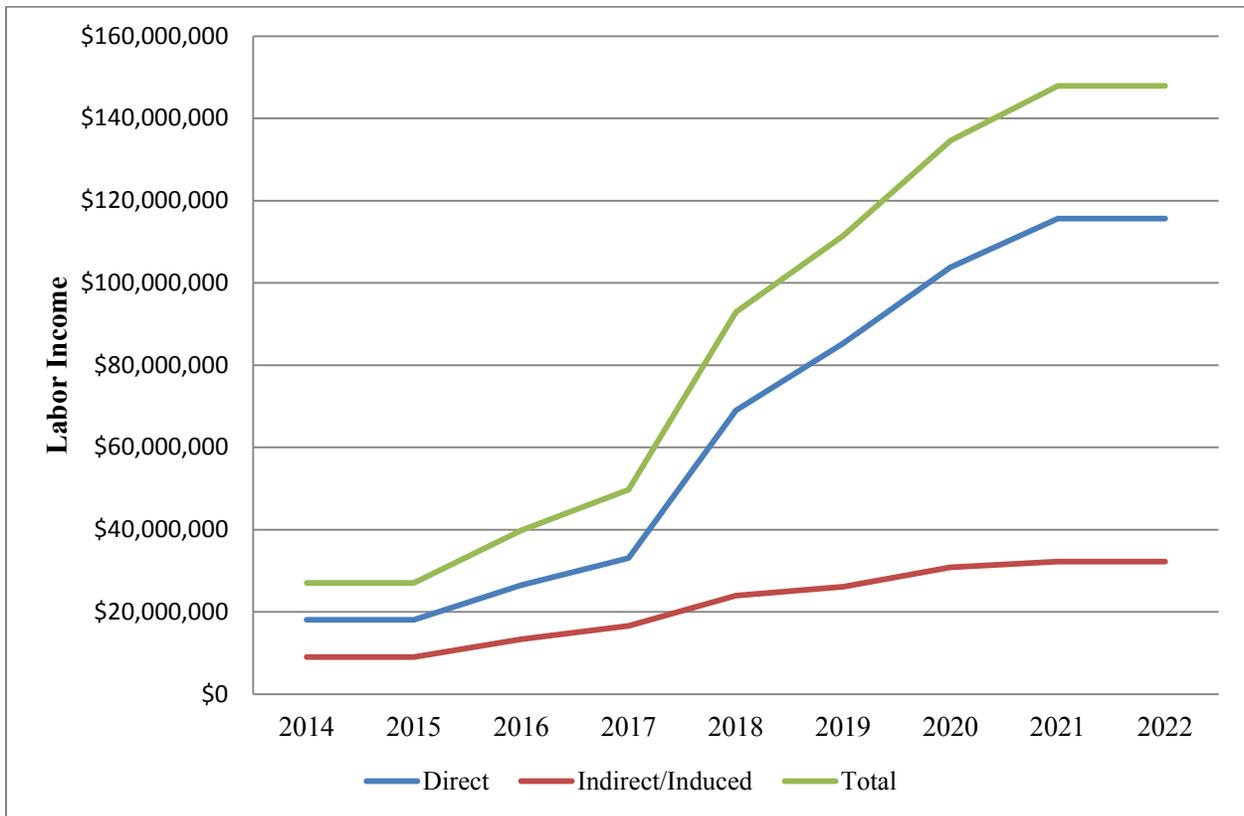
**2.2.2.3 Combined Construction and Operations**

Table 2-21 presents impacts on labor income that would result from the combined construction and operations of FASTC. Construction would be expected to begin in 2014 and build up, reaching a peak in 2017. Operations would be expected to begin in 2018 and build up, reaching a steady-state by 2021. From 2018 to 2020 construction and operations would take place simultaneously; during these years labor income impacts related to operational activities would exceed impacts related to construction. Figure 2-6 illustrates the results presented in Table 2-21 along with results for the year 2022 that further illustrate the steady-state nature of impacts.

**Table 2-21. Labor Income Impact from Combined Construction and Operations, 2014-2021, Constant 2012 Dollars**

	2014	2015	2016	2017	2018	2019	2020	2021*
Direct	\$18,037,566	\$18,037,566	\$26,514,139	\$33,096,391	\$68,991,075	\$85,339,632	\$103,757,694	\$115,634,736
Indirect/Induced	\$9,045,823	\$9,045,823	\$13,316,647	\$16,596,627	\$23,922,230	\$26,096,327	\$30,808,766	\$32,240,893
Total	\$27,083,389	\$27,083,389	\$39,830,787	\$49,693,018	\$92,913,305	\$111,435,959	\$134,566,460	\$147,875,629

Note: \*Estimate for 2021 represents steady-state operations. This level of labor income would be expected to continue annually for the foreseeable future."



**Figure 2-6. Labor Income Impact from Combined Construction and Operations, 2014-2022, Constant 2012 Dollars**

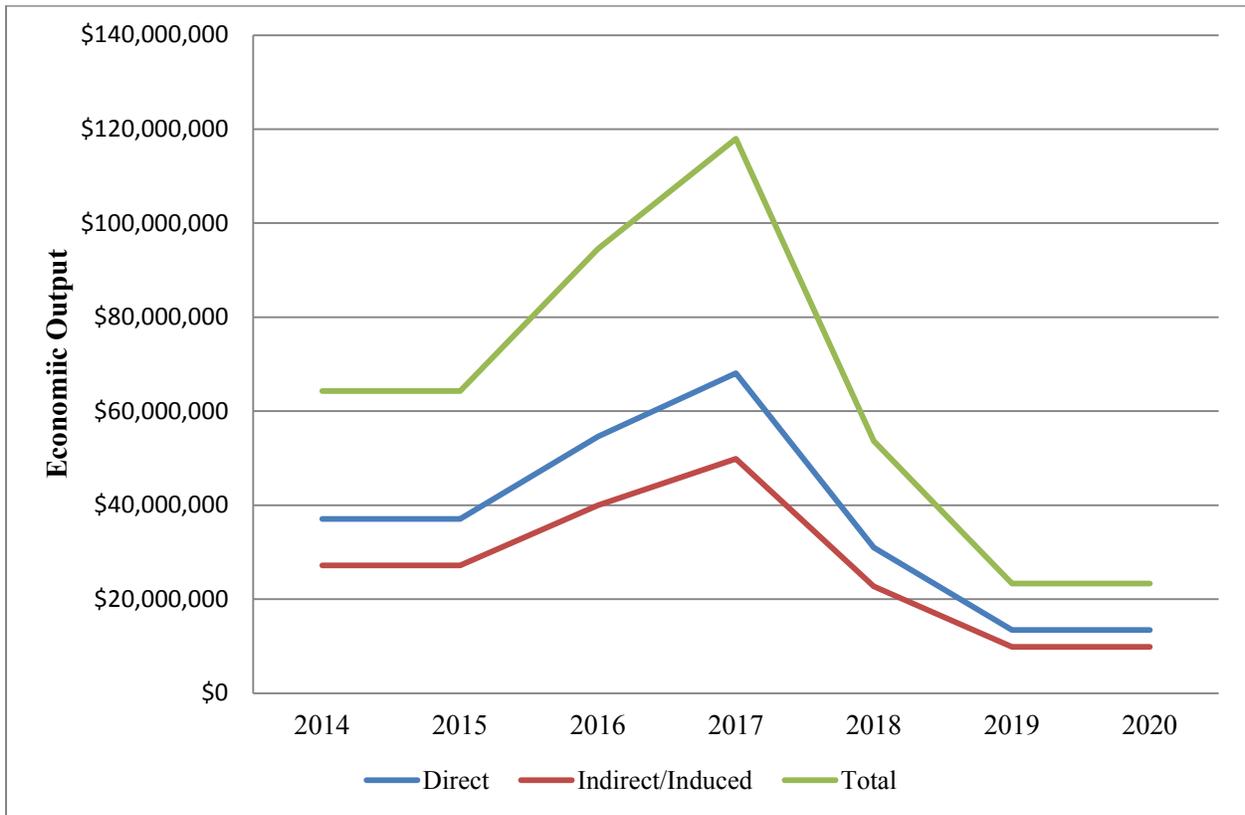
**2.2.3 Economic Output**

**2.2.3.1 Construction Phase**

Table 2-22 shows impacts to economic output that would be generated by the construction of FASTC during the life of the construction phase, from 2014 to 2020. Construction would be expected to begin in 2014 and build up, reaching a peak in 2017. Impacts to economic output would be \$64.3 million in 2014 and 2015 and increase to \$117.9 million at peak construction in 2017. Impacts to economic output would begin to decline after 2017 with impacts to economic output of \$53.7 million in 2018 and then \$23.3 million in 2019 and 2020. Figure 2-7 illustrates the results presented in Table 2-22.

**Table 2-22. Economic Output Impact from Construction, 2014-2020, Constant 2012 Dollars**

	2014	2015	2016	2017	2018	2019	2020
Direct	\$37,082,907	\$37,082,907	\$54,594,418	\$68,041,908	\$30,959,001	\$13,447,491	\$13,447,491
Indirect/Induced	\$27,197,280	\$27,197,280	\$39,952,771	\$49,899,236	\$22,705,895	\$9,862,634	\$9,862,634
Total	\$64,280,187	\$64,280,187	\$94,547,189	\$117,941,144	\$53,664,896	\$23,310,125	\$23,310,125



**Figure 2-7. Economic Output Impact from Construction, 2014-2020, Constant 2012 Dollars**

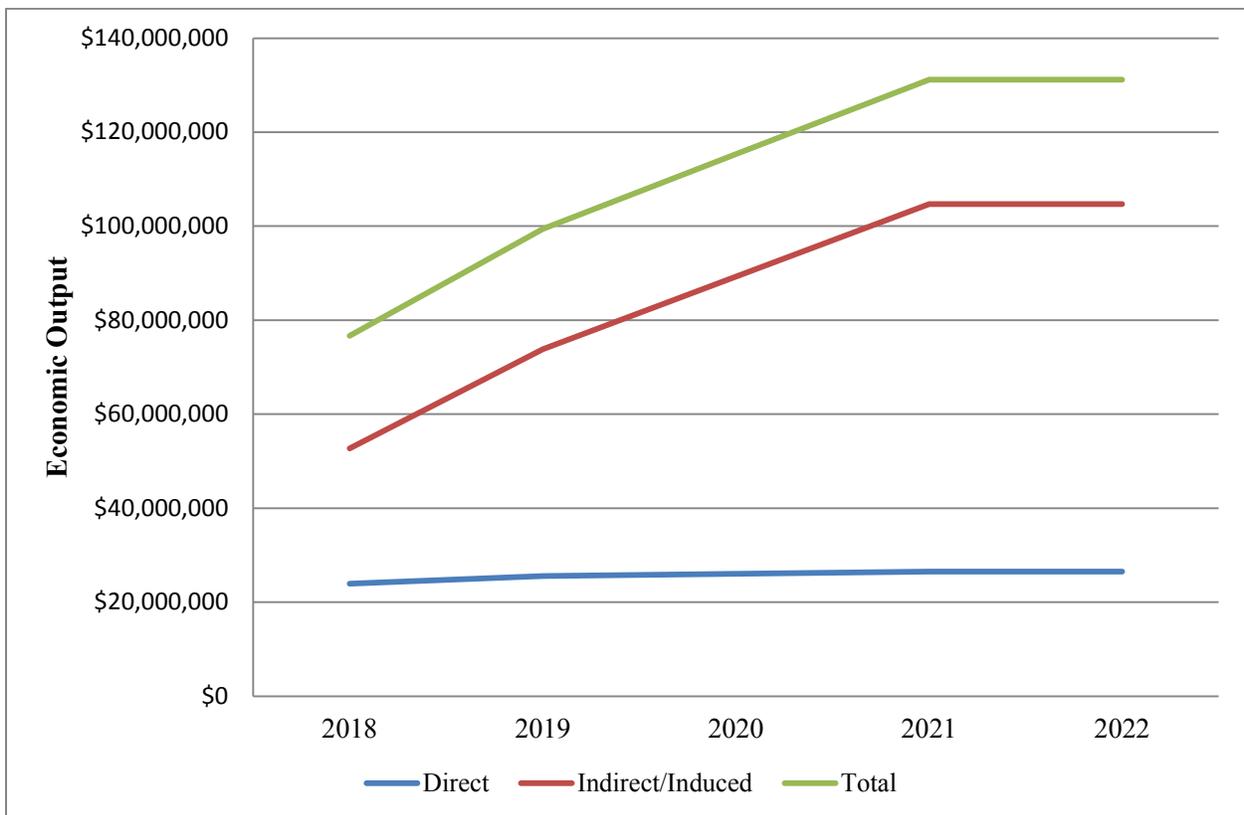
**2.2.3.2 Operations Phase**

Table 2-22 presents impacts on economic output that would result from the operations of FASTC. Operations would be expected to begin in 2018 and build up, reaching a steady-state by 2021. At steady-state operations, \$26.5 million in direct economic output and \$104.7 million in indirect/induced economic output would be generated as a result of FASTC operations. Direct impacts to economic output would be smaller than indirect/induced economic output because the bulk of FASTC operational expenditures would be associated with payroll, which generates indirect/induced output through personal expenditures. Total economic output impacts would increase from \$76.7 million in 2018 to a steady-state total of \$131.2 million in 2021. Figure 2-8 illustrates the results presented in Table 2-23 along with results for the year 2022 that further illustrate the steady-state nature of impacts.

**Table 2-23. Economic Output Impact from Operations, 2018-2021, Constant 2012 Dollars**

	2018	2019	2020	2021*
Direct	\$23,970,212	\$25,580,151	\$26,035,942	\$26,491,732
Indirect/Induced	\$52,711,955	\$73,823,938	\$89,262,996	\$104,702,063
Total	\$76,682,167	\$99,404,089	\$115,298,938	\$131,193,795

Note: \*Estimate for 2021 represents steady-state operations. This level of labor income would be expected to continue annually for the foreseeable future."



**Figure 2-8. Economic Output Impact from Operations, 2018-2022, Constant 2012 Dollars**

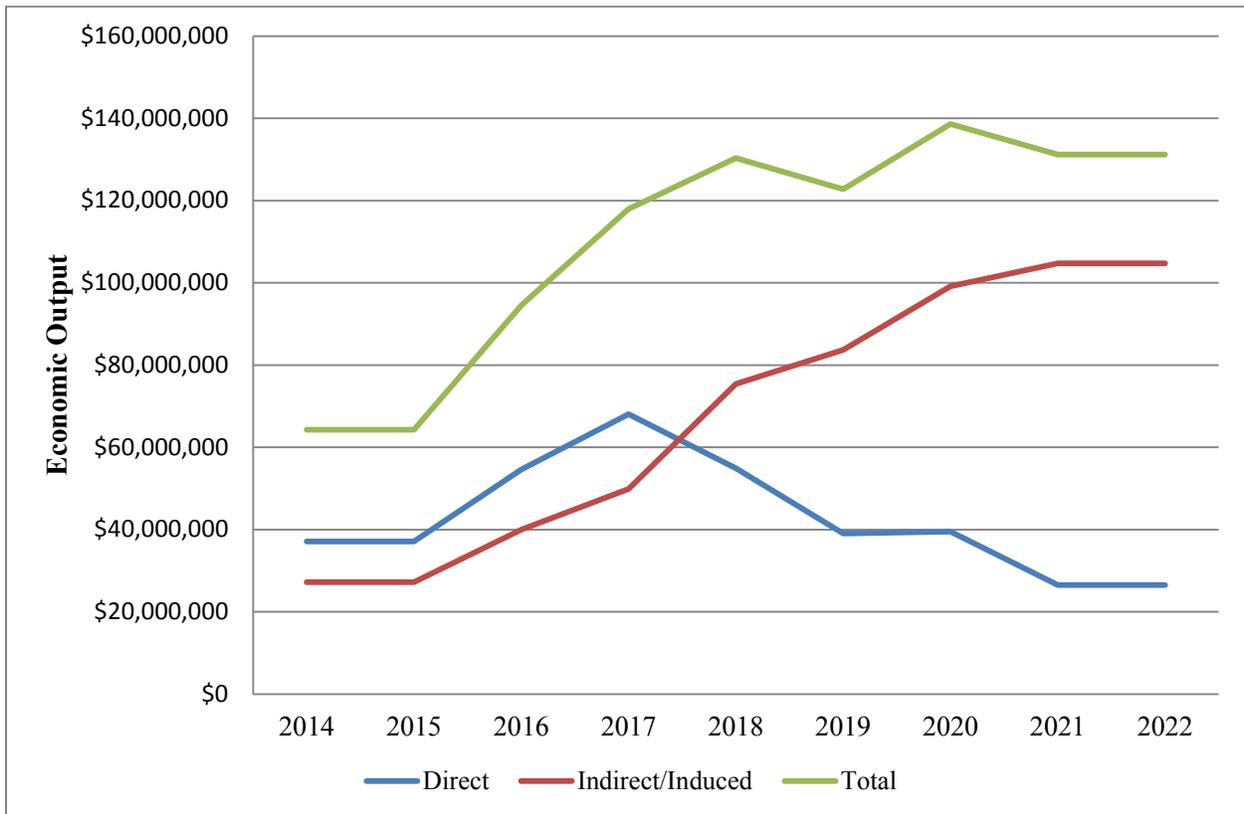
**2.2.3.3 Combined Construction and Operations**

Table 2-24 shows impacts on economic output that would result from the combined construction and operations of FASTC. Construction would begin in 2014 and build up, reaching a peak in 2017. Operations would begin in 2018 and build up, reaching a steady-state by 2021. From 2018 to 2020 construction and operations would take place simultaneously; during these years economic output impacts related to operational activities would exceed impacts related to construction. Figure 2-9 illustrates the results presented in Table 2-24, along with results for the year 2022 that further illustrate the steady-state nature of impacts.

**Table 2-24. Economic Output Impact from Combined Construction and Operations, 2014-2021, Constant 2012 Dollars**

	2014	2015	2016	2017	2018	2019	2020	2021*
Direct	\$37,082,907	\$37,082,907	\$54,594,418	\$68,041,908	\$54,929,213	\$39,027,642	\$39,483,433	\$26,491,732
Indirect/ Induced	\$27,197,280	\$27,197,280	\$39,952,771	\$49,899,236	\$75,417,850	\$83,686,572	\$99,125,630	\$104,702,063
Total	\$64,280,187	\$64,280,187	\$94,547,189	\$117,941,144	\$130,347,063	\$122,714,214	\$138,609,063	\$131,193,795

Note: \*Estimate for 2021 represents steady-state operations. This level of labor income would be expected to continue annually for the foreseeable future.”



**Figure 2-9. Economic Output Impact from Combined Construction and Operations, 2014-2022, Constant 2012 Dollars**

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## **CHAPTER 3. FISCAL IMPACT TECHNICAL STUDY**

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### **3.1 APPROACH TO ANALYSIS OF FISCAL IMPACTS**

The fiscal impact technical study analyzes local government revenue and local government costs that would be associated with the operations phase of FASTC. Fiscal impacts of the construction phase are not analyzed because construction would be temporary and would not be expected to induce any new population to relocate to the ROI. With no additional population relocating to the ROI for the construction phase, government costs related to construction would be minimal and it would be expected that local governments would benefit fiscally.

The fiscal impact analysis focuses on the two counties where impacts would be expected to be the largest – Nottoway and Chesterfield Counties. Fiscal impacts are the results of an increase in population caused by the project. In a survey of residential preference conducted among existing DOS employees who would likely relocate to work at FASTC, Nottoway and Chesterfield Counties were identified as the areas most likely to see an influx of residents. Therefore the fiscal impact analysis focuses on these counties. In order to estimate fiscal impacts for these counties, estimates of population and place of residence were incorporated into the economic analysis to separate portions of input variables (personal expenditures, non-payroll expenditures, and visiting trainee expenditures) that would be relevant to the two counties being analyzed.

Estimates of local government revenue were generated by the IMPLAN model by conducting individual economic impact analysis for Nottoway and Chesterfield Counties. Additional local government revenues from the sale of land needed for FASTC that would be paid directly to Nottoway County is discussed but not included in quantitative analysis because the sale is assumed to be revenue neutral over time. Theoretically, in real estate valuation, the sale price of the land is equal the discounted value of monthly lease and rental fee revenue that would otherwise be received by Nottoway County over time.

Local government costs were established on a per-capita basis, with new population in Nottoway and Chesterfield counties creating demands on local government services, increasing overall costs to local governments. It is expected that, due to potential cost sharing agreements between DOS and the Army National Guard at Ft. Pickett, local governments would avoid costs directly associated with the FASTC facility (such as fire protection and emergency medical services).

#### **3.1.1 Local Government Revenue**

Estimated local government revenue were generated by the IMPLAN model, similar to how economic impacts were generated – through personal expenditures, non-payroll expenditures, and visiting trainee expenditures that would be associated with FASTC. Personal expenditures, non-payroll expenditures, and visiting trainee expenditures were adjusted to reflect the portions of expenditures that would occur in Nottoway and Chesterfield counties. Although the fiscal impact analysis references counties in particular, revenue impacts would not only accrue to county governments; revenue estimates are for total revenue to all local governments within each county, including County and Town or other

municipal governments. Information for the town of Blackstone municipal government are included in the estimates for Nottoway County; the IMPLAN model does not provide the capability to split revenue estimates between local county governments (i.e. the model does not report how much revenue would go to the Nottoway County Government Vs. the Blackstone Town Government. As a general guide though, at present, Nottoway County has revenues about 2.5 times the size of Blackstone’s revenues, which implies, based on current conditions, that of the total local government revenues generated within Nottoway County, the Nottoway County Government would receive 70%-75% and the Blackstone Town Government would receive between 20% and 25%.

**3.1.1.1 Personal Expenditures**

Personal expenditures would generate revenue to local governments through sales taxes and through other means such as utilities taxes, business license taxes, and miscellaneous non-tax sources associated with general increases in economic activity. Table 3-1 shows the percentage of personal expenditures related to the operations of FASTC that would be made in Nottoway and Chesterfield Counties. The information in Table 3-1 was generated based on a survey of existing DOS employees who would likely relocate to work at FASTC. Survey results are representative of where relocating FASTC employees would likely reside and the expected place of residence was used to proxy the location of personal spending. Almost 70% of FASTC employees would be expected to reside in Chesterfield County and 15% would be expected to reside in Nottoway County. The remaining 15% of FASTC employees would be expected to reside in other counties in the ROI, and personal expenditures would be distributed among Amelia, Brunswick, Dinwiddie, Lunenburg, Mecklenburg, and Prince Edward counties.

**Table 3-1. Percentage of Total Personal Expenditures, by County**

<b>County</b>	<b>% of Personal Expenditures</b>
Nottoway County	15%
Chesterfield County	69.7%
Other ROI Counties*	15%

*Source:* Estimated based on place of residence for new FASTC employees as determined in survey of existing DOS employees who would likely relocate.

*Note:* \* Amelia, Brunswick, Dinwiddie, Lunenburg, Mecklenburg, and Prince Edward counties

Table 3-2 and Table 3-3 show the direct personal expenditures that were input into the IMPLAN model to generate estimates of local government revenue in Nottoway and Chesterfield Counties. The percentage of potential expenditures that would be spread out among each of the other ROI counties is not known in sufficient detail to model in IMPLAN; therefore, quantitative fiscal impact analysis for those counties was not conducted. The estimates of personal expenditures for Nottoway and Chesterfield counties were calculated using personal expenditures information presented in Table 2-10 in conjunction with percentages presented in Table 3-1. Since it would be expected that a larger proportion of FASTC employees would reside in Chesterfield County, personal expenditures there would be expected to be higher than in Nottoway County.

**Table 3-2. Personal Expenditures in Nottoway County,  
2018-2021, Constant 2012 Dollars**

<b>Pay Range (1,000s)</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021*</b>
15-25	\$187,505	\$276,944	\$343,607	\$410,269
35-50	\$277,639	\$410,073	\$508,780	\$607,488
75-100	\$4,927,462	\$7,277,853	\$9,029,685	\$10,781,517
100-150	\$921,148	\$1,360,534	\$1,688,024	\$2,015,515
150+	\$176,297	\$260,390	\$323,068	\$385,746
<b>Totals</b>	<b>\$6,490,051</b>	<b>\$9,585,794</b>	<b>\$11,893,164</b>	<b>\$14,200,535</b>

*Note:* \*Estimate for 2021 represents steady-state personal expenditures. This level of expenditure would be expected to continue annually for the foreseeable future.

**Table 3-3. Personal Expenditures in Chesterfield County,  
2018-2021, Constant 2012 Dollars**

<b>Pay Range (1,000s)</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021*</b>
15-25	\$862,522	\$1,273,944	\$1,580,591	\$1,887,239
35-50	\$1,277,140	\$1,886,334	\$2,340,388	\$2,794,443
75-100	\$22,666,326	\$33,478,124	\$41,536,551	\$49,594,978
100-150	\$4,237,281	\$6,258,456	\$7,764,912	\$9,271,368
150+	\$810,966	\$1,197,795	\$1,486,113	\$1,774,430
<b>Totals</b>	<b>\$29,854,235</b>	<b>\$44,094,653</b>	<b>\$54,708,555</b>	<b>\$65,322,458</b>

*Note:* \*Estimate for 2021 represents steady-state personal expenditures. This level of expenditure would be expected to continue annually for the foreseeable future.

**3.1.1.2 Non-payroll Expenditures**

Non-payroll expenditures would be made to local firms to facilitate the construction and operations of FASTC. These expenditures would generate local government revenue through taxes and fees. The geographic location of firms that would contract with FASTC is unknown at this time and estimates of non-payroll expenditures by county shown in Table 3-4 and Table 3-5 are in no way certain or binding. The estimates are based on data relating to the presence of existing business establishments. However, in the event that new businesses were to develop in Nottoway County, and do business with FASTC, then local government revenue associated with non-payroll expenditures in Nottoway County would increase. Also, it is possible that out of region contractors could obtain contracts with FASTC; however, since most of the contract expenditures are related to work that would be done on-site, it is likely that business would be drawn to the region, as opposed to conducting work remotely.

Based on data related to the number and size of establishments in relevant industries, and the total amount of non-payroll expenditures (presented in Tables 2-8 and 2-11), Table 3-4 shows estimated non-payroll expenditures (by expenditure category) that would be expected to be made to businesses in Nottoway County for goods and services associated with the operations of FASTC.

**Table 3-4. Non-payroll Expenditures in Nottoway County, 2018-2021, Constant 2012 Dollars<sup>(1)</sup>**

<b>Expenditure Category</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021*</b>
Utilities and related O&M	\$3,646,325	\$4,557,906	\$5,013,697	\$5,469,487
Food services	\$1,315,543	\$1,315,543	\$1,315,543	\$1,315,543
Training vehicle maintenance	\$1,141,395	\$1,141,395	\$1,141,395	\$1,141,395
Facilities engineering	\$847,545	\$847,545	\$847,545	\$847,545
Track maintenance	\$636,578	\$636,578	\$636,578	\$636,578
Housekeeping (Dorms)	\$131,721	\$395,162	\$395,162	\$395,162
Off-site lodging for students	\$385,379	\$385,379	\$385,379	\$385,379
other small O&M	\$273,474	\$273,474	\$273,474	\$273,474
Booking/reception/guest services	\$246,689	\$246,689	\$246,689	\$246,689
Wrecker/salvage	\$219,811	\$219,811	\$219,811	\$219,811
Grounds maintenance	\$169,509	\$169,509	\$169,509	\$169,509
Janitorial services contractor	\$118,549	\$118,549	\$118,549	\$118,549
Site security	\$73,852	\$73,852	\$73,852	\$73,852
Technology maintenance	\$69,896	\$69,896	\$69,896	\$69,896
Hotel Management	\$22,750	\$22,750	\$22,750	\$22,750
Range maintenance contractor	\$14,391	\$14,391	\$14,391	\$14,391
<b>Totals</b>	<b>\$9,313,407</b>	<b>\$10,488,429</b>	<b>\$10,944,220</b>	<b>\$11,400,010</b>

Notes: <sup>(1)</sup> Contractors to FASTC are unknown at this time; estimates are based on existing data and are not certain or binding.

\*Estimate for 2021 represents steady-state non-payroll expenditures. This level of expenditures would be expected to continue annually for the foreseeable future.

O&M = operations and maintenance

Table 3-5 shows estimated non-payroll expenditures (by expenditure category) that would be expected to be made to businesses in Chesterfield County for goods and services associated with the operations of FASTC.

**Table 3-5. Non-payroll Expenditures in Chesterfield County,  
2018-2021, Constant 2012 Dollars<sup>(1)</sup>**

<b>Expenditure Category</b>	<b>2018-2021*</b>
Training vehicle maintenance	\$3,994,882
Off-site lodging for students	\$3,275,723
Track maintenance	\$2,546,311
Site security	\$664,669
Technology maintenance	\$629,068
Facilities engineering	\$423,773
Range maintenance contractor	\$259,031
Shuttle service	\$176,928
other small incidentals and wet land	\$136,737
Grounds maintenance	\$84,755
Booking/reception/guest services	\$70,483
Housekeeping (Dorms)	\$8,781
Janitorial services contractor	\$7,903
Hotel Management	\$6,500
<b>Totals</b>	<b>\$12,285,544</b>

Notes: <sup>(1)</sup> Contractors to FASTC are unknown at this time; estimates are based on existing data and are not certain or binding.

\*Estimate for 2021 represents steady-state non-payroll expenditures. This level of expenditures would be expected to continue annually for the foreseeable future.

**3.1.1.3 Visiting Trainee Expenditures**

Table 3-6 shows the percentage of visiting trainee expenditures assumed to be spent in Nottoway and Chesterfield counties. The assumptions in Table 3-6 were generated based on the location of FASTC and the amount of free time that visiting trainees would have, about an hour and a half per day, which would not afford much time to travel to other locations to make expenditures; visitor expenditures would likely take place mostly in the town of Blackstone.

**Table 3-6. Assumed Percentage of Visiting Trainee  
Expenditures by County**

<b>County</b>	<b>% of Visiting Trainee Expenditures</b>
Nottoway County	75%
Chesterfield County	10%

Table 3-7 shows estimated total visiting trainee expenditures, distributed between Nottoway and Chesterfield Counties. Visiting trainee expenditures would generate tax revenue, primarily through local sales taxes.

**Table 3-7. Visiting Trainee Expenditures by County**

<b>County</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021*</b>
Nottoway County	\$2,029,085	\$2,582,276	\$2,582,276	\$2,582,276
Chesterfield County	\$270,545	\$344,303	\$344,303	\$344,303

*Note:* \*Estimate for 2021 represents steady-state visiting trainee expenditures. This level of expenditures would be expected to continue annually for the foreseeable future.

### **3.1.2 Local Government Costs**

Local government costs associated with FASTC were estimated based on expected increases in population to Nottoway and Chesterfield Counties. New population can increase local government costs due to higher levels of public services such as education, police, and fire protection that local governments would need to provide to accommodate a higher number of residents. Estimates of local government costs were calculated by multiplying expected new population that would result from the operations of FASTC by per capita local government costs. Primary data related to the number of relocating personnel were provided by DOS. Since relocating personnel would likely relocate with family members or other household members, the number of relocating personnel is expanded to approximate household size. Per capita local government cost data were gathered from the Virginia Department of Housing and Community Development (VDHCD) (2009). Per capita government costs data were inflated to 2012 levels (most recent available data was from Fiscal Year (FY) 2008) in order to establish consistency with revenue estimates, which are presented in 2012 dollars.

In addition to local government costs associated with expected increases in population, the FASTC facility itself would require services such as fire protection and emergency medical services. GSA and DOS intend to enter into an agreement with the Army National Guard for the shared use of certain facilities, including fire and emergency medical services. This fiscal impact analysis assumes that this agreement would cover those services and that local governments would not incur costs associated with providing such services to the FASTC facility.

**3.1.2.1 New Population**

Table 3-8 displays the number of employees who would be expected to relocate from their current residences to work at FASTC. These employees would add to the populations of Nottoway and Chesterfield counties. All other employment associated with FASTC would be expected to be filled by current residents of the region and thus would not be expected to add to current population.

**Table 3-8. FASTC Transfer Employees, 2018-2021**

2018	2019	2020	2021*
248	354	425	497

Source: DOS 2012

Note: \*2021 transfer employees represent a steady-state. This number of transfer employees would be expected to continue annually for the foreseeable future.

FASTC transfers may bring their families or other household members, which would also serve to increase population in the region. Table 3-9 shows the average household size for the United States. The average household size of 2.58 persons per household implies that for every employee who transfers to work at FASTC, an additional 1.58 persons (for instance, a spouse and 0.58 children on average) would also relocate to the region, adding to population.

**Table 3-9. Average Household Size,  
2010 U.S. Average**

	U.S. Average
Average Household Size	2.58

Source: U.S. Census Bureau 2010a.

Table 3-10 displays the estimated total new population to the region resulting from FASTC operations, given the number of transfer employees and the assumed average household size. This population would be spread throughout the region, but the bulk of new population would be expected to reside in Nottoway and Chesterfield counties. The percentage breakdown of place of residence for new population provided in Table 3-1 suggests that 69.7% of new population would reside in Chesterfield County and 15% would reside in Nottoway County.

**Table 3-10. Total New Population to the Region**

2018	2019	2020	2021*
639	913	1,098	1,282

Note: \*2021 new population represents a steady-state. This number of new population would be expected to continue annually for the foreseeable future.

Given total new population and the percentage breakdown, Table 3-11 shows the expected number of new residents for Nottoway and Chesterfield counties. Not all of the new population to the region would reside in Nottoway and Chesterfield counties (about 85% would, according to DOS survey of potentially transferred employees). As shown in Table 3-11, at steady-state operations, which begin in

2021, there would be 192 new people residing in Nottoway County and 894 new people residing in Chesterfield County. Each new resident identified in Table 3-11 would receive government services and thus increase costs to local government.

**Table 3-11. New Population by County, 2018-2021**

	2018	2019	2020	2021*
Nottoway County	96	137	165	192
Chesterfield County	445	636	765	894

Note: \*2021 new population represents a steady-state.  
This number of new population would be expected to continue annually for the foreseeable future.

Table 3-12 and Table 3-13 provide a breakdown of per capita government costs during FY 2008 for Nottoway County and Chesterfield County, respectively. A total of \$2,248 per person was spent by Nottoway County and \$2,868 per person was spent by Chesterfield County in FY 2008. The highest per capita cost items included education, public safety, and health and welfare.

**Table 3-12. Nottoway County, Per Capita Government Costs, FY 2008**

Expenditure Category	Per Capita Expenditure
General Government and Administration	\$67
Judicial Administration	\$41
Public Safety	\$246
Public Works	\$101
Health and Welfare	\$263
Education	\$1,446
Parks, Recreation, and Cultural Services	\$12
Community Development	\$70
Total	\$2,246

Source: VDHCD 2009.

**Table 3-13. Chesterfield County, Per Capita Government Costs, FY 2008**

Expenditure Category	Per Capita Expenditure
General Government and Administration	\$108
Judicial Administration	\$48
Public Safety	\$500
Public Works	\$68
Health and Welfare	\$232
Education	\$1,808
Parks, Recreation, and Cultural Services	\$58
Community Development	\$47
Total	\$2,869

Source: VDHCD 2009.

Since revenue impacts were estimated in constant 2012 dollars, the FY 2008 per capita costs were adjusted to 2012 levels. The adjustment was based on the average annual change in per capita government costs from FY 2004 to FY 2008. Nottoway County per capita government costs increased at an average rate of 8% per year from FY 2004 to FY 2008 and Chesterfield County per capita costs

increased at an average rate of 6% per year. Applying those rate increases to FY 2008 per capita costs yielded the 2012 per capita costs shown in Table 3-14.

**Table 3-14. Nottoway and Chesterfield County Per Capita Government Costs, 2012**

<b>County</b>	<b>Per Capita Government Cost</b>
Nottoway County	\$3,021
Chesterfield County	\$3,643

The per capita government costs shown in Table 3-14 were multiplied by the expected new populations for each county (Table 3-11) to yield local government costs.

### **3.2 ESTIMATED FISCAL IMPACTS**

Estimated fiscal impacts compare projected local government revenue to projected local government costs during the operations phase of FASTC for Nottoway and Chesterfield counties. Due to the expectation that more new population associated with FASTC would live in Chesterfield County, local government revenue and local government costs are higher there than in Nottoway County. Local governments in both counties would be expected to have positive net revenue as a result of FASTC operations.

The other counties of the ROI - Amelia, Brunswick, Dinwiddie, Lunenburg, Mecklenburg, and Prince Edward, would gain revenue from personal expenditures at a similar level as Nottoway County, but revenue from visitor expenditures and business taxes would be lower than in Nottoway County because most spending would occur closest to the FASTC facility. Government costs for the remainder of the ROI, generated by new population, would be similar to estimates for Nottoway County. Given similar costs and lower revenue, net revenue to other local governments in the ROI would be positive, but lower than total net revenue estimated for Nottoway County.

Fiscal impacts from the construction phase are not quantified in this section (refer to Section 3.1); however, it would be expected that there would be increased government revenues in Nottoway County, Chesterfield County, and other counties in the ROI. Government costs associated with construction would be minimal in all counties of the ROI, as no new population would relocate to the area for the temporary project. Government costs associated with construction would be most likely to occur in Nottoway County; these costs would be associated with use of roads and other municipal infrastructure, but since the construction project itself would take place at Fort Pickett, costs to governments in Nottoway County would be minimal. Net revenues to all counties would be neutral to positive, with higher levels of effects associated with higher beneficial impacts to net revenues.

#### **3.2.1 Nottoway County**

Table 3-15 shows projected local government revenue, cost, and net revenue (revenue minus cost) for Nottoway County from 2018 to 2021. In 2021, the first year of FASTC steady-state operations, local governments in Nottoway County would collect about \$1.8 million in revenue and expend about \$580 thousand. Steady-state total net revenue for local governments would be about \$1.2 million. Figure 3-1

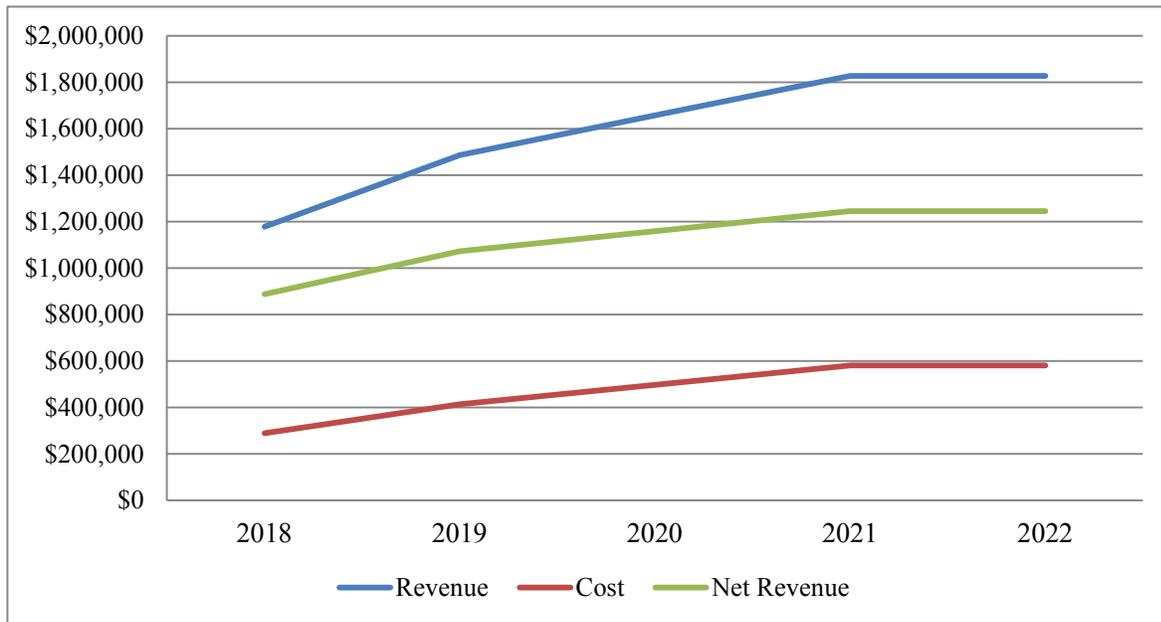
illustrates the results presented in Table 3-15, along with results for the year 2022 that further illustrate the steady-state nature of impacts.

In addition to revenues presented in Table 3-15, Nottoway County would receive a one-time payment for the sale of the LRA parcels. Since the amount of the payment is unknown at this time, and the payment is assumed to be net revenue neutral over the long-run, the value of the sale is not included in the fiscal analysis. (See Appendix A of this technical study for details on this assumption).

**Table 3-15. Nottoway County Local Government Revenue, Cost, and Net Revenue, 2018 to 2021, Constant 2012 Dollars**

	2018	2019	2020	2021*
Revenue	\$1,177,406	\$1,486,404	\$1,656,491	\$1,826,578
Cost	\$289,454	\$413,816	\$497,448	\$581,080
Net Revenue	\$887,952	\$1,072,588	\$1,159,043	\$1,245,498

Note: \*2021 local government revenue, cost, and net revenue represent a steady-state. These numbers would be expected to continue annually for the foreseeable future.



**Figure 3-1. Nottoway County Local Government Revenue, Cost, and Net Revenue, 2018 to 2022, Constant 2012 Dollars**

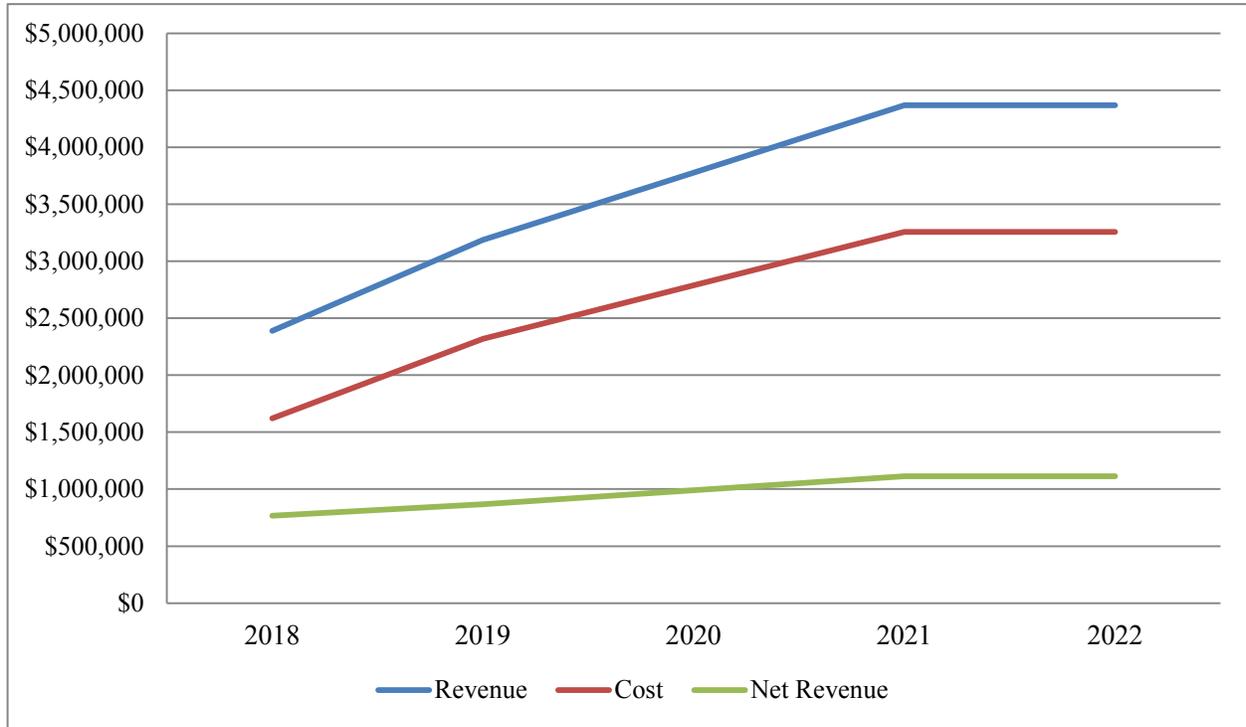
### 3.2.2 Chesterfield County

Table 3-16 shows projected local government revenue, cost, and net revenue (revenue minus cost) for Chesterfield County from 2018 to 2021. In 2021, the first year of FASTC steady-state operations, local governments in Chesterfield County would collect about \$4.37 million in revenue and expend about \$3.26 million. Net revenue for local governments would be about \$1.1 million. Figure 3-2 illustrates the results presented in Table 3-16, along with results for the year 2022 that further illustrate the steady-state nature of impacts.

**Table 3-16. Chesterfield County Local Government Revenue, Cost, and Net Revenue, 2018 to 2021, Constant 2012 Dollars**

	2018	2019	2020	2021*
Revenue	\$2,388,773	\$3,186,325	\$3,777,473	\$4,368,622
Cost	\$1,621,978	\$2,318,850	\$2,787,489	\$3,256,128
Net Revenue	\$766,795	\$867,475	\$989,984	\$1,112,494

Note: \*2021 local government revenue, cost, and net revenue represent a steady-state. These numbers would be expected to continue annually for the foreseeable future.



**Figure 3-2. Chesterfield County Local Government Revenue, Cost, and Net Revenue, 2018 to 2022, Constant 2012 Dollars**

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## **CHAPTER 4. REFERENCES**

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## **APPENDIX A: Summary of Assumptions**

### **General**

- Alternative 1 and Alternative 2 of the FASTC Environmental Impact State include identical facilities and phasing; therefore, this analysis considers the overall proposed action.

### **Economic Impact Analysis**

- The economic effects of the project would be in Nottoway County and also extend into surrounding counties where the purchase of goods and services and employee residential locations; etc. would occur. Counties in the ROI include Amelia, Brunswick, Chesterfield, Dinwiddie, Lunenburg, Mecklenburg, Nottoway, and Prince Edward.
- Construction expenditures and estimation factors that could be used to divide expenditures data into payroll and non-payroll expenditure classifications were provided by DOS.
- Operations data on payroll and non-payroll operational expenditures, operational employment, and the projected number and length of stay for visiting trainees were provided by DOS.
- Phasing timeline provided by GSA/DOS used in the analysis: Phase 1 2014-2017; Phase 2 2016-2018; and Phase 3 2017-2020 with full operation in 2020. Facilities included in each phase were provided by Building Phasing Table dated April 20, 2012.
- FTE jobs were estimated from factors gathered from DOS, federal statistical agencies, and the IMPLAN model.
- Construction Expenditures: DOS estimated construction expenditures to be approximately \$700 million. After removing expenditures that would likely not reach the economy of the ROI (construction contractor contingencies, certain fees, and expenditures related to purchases outside ROI and escalation or construction cost inflation), it was estimated that over the course of the construction phase a total of \$365 million would be spent on construction within the ROI.
- Operations expenditures include: local expenditures derived from operational activities associated with implementation of FASTC: 1) payroll; 2) purchases of goods and services that would be required to operate FASTC; and 3) purchases by visitors who would train at FASTC.

### **Fiscal Impact Analysis**

- Analyzes local government revenue and local government costs that would be associated with the operations phase of FASTC
- Fiscal impacts are the results of an increase in population caused by the project. A DOS employee survey identified Nottoway and Chesterfield Counties as the areas most likely to see an influx of residents. Therefore the fiscal impact analysis focuses on these counties.
- Other counties in the ROI were evaluated in general, qualitative terms. The small percentage of potential residents that may be added throughout the other counties is not known in sufficient detail to provide a quantitative fiscal impact analysis for those counties.

- It was assumed that a proposed cost sharing agreement between DOS and the Army National Guard at Ft. Pickett would avoid costs to local governments directly associated with the FASTC facility (such as fire protection and emergency medical services).
- The purchase of land from Nottoway County, by DOS, is assumed to be revenue neutral over time for the County. The sales price would theoretically equal the discounted value of monthly lease and rental income that would have been received by the County.