



Biometric Entry-Exit H-1B and L-1 Fees Spend Plan

October 12, 2022

Fiscal Year 2022 Report to Congress



**Homeland
Security**

U.S. Customs and Border Protection

Message from the Deputy Commissioner

October 12, 2022

I am pleased to submit the following report, “Biometric Entry-Exit H-1B and L-1 Fees Spend Plan,” for Fiscal Year (FY) 2022, which has been prepared by U.S. Customs and Border Protection (CBP).

This document was compiled pursuant to direction set forth in the Joint Explanatory Statement and House Report 117-87, which accompany the FY 2022 Department of Homeland Security (DHS) Appropriations Act (P.L. 117-103). The report provides a detailed expenditure plan for biometric air entry-exit activities, which outlines how innovative technology and effective collaboration with airports and airlines will minimize the need for additional CBP staffing. This report also provides a spend plan for the H-1B and L-1 fees and other resources being applied to biometric exit implementation in FY 2022.



Pursuant to congressional requirements, this report is being provided to the following Members of Congress:

The Honorable Lucille Roybal-Allard
Chairwoman, House Appropriations Subcommittee on Homeland Security

The Honorable Chuck Fleischmann
Ranking Member, House Appropriations Subcommittee on Homeland Security

The Honorable Chris Murphy
Chair, Senate Appropriations Subcommittee on Homeland Security

The Honorable Shelley Moore Capito
Ranking Member, Senate Appropriations Subcommittee on Homeland Security

I would be pleased to respond to any questions that you may have. Please do not hesitate to contact my office at (202) 344-2001.

Sincerely,

A handwritten signature in black ink, appearing to read "Troy A. Miller". The signature is fluid and stylized, with a large loop at the beginning and a long, sweeping tail.

Troy A. Miller
Deputy Commissioner
U.S. Customs and Border Protection

Executive Summary

The 9/11 Commission stated that “a biometric entry-exit system is an essential investment in national security.”¹ This Biometric Entry-Exit H-1B and L-1 Fees Spend Plan describes estimates to expend funds authorized by the FY 2016 DHS Appropriations Act (P.L. 114-113), which allows for up to \$1 billion over a 10-year period for implementing a biometric entry-exit program. P.L. 115-123 extended the authorized collection of these funds through FY 2027.

The Biometric Entry-Exit Program is funded by variable fee collections on certain H-1B and L-1 visas. The Congressional Budget Office originally estimated an annual fee collection of \$115 million per year. Actual collections were dramatically lower than expected each year since FY 2016. On the basis of the current collection rates and projections, the Biometric Entry-Exit Program will collect just 50 to 70 percent of the estimated \$1 billion by FY 2027.

The impact of the Coronavirus Disease 2019 (COVID-19) global health pandemic has exacerbated the funding shortfall further. In FY 2021, CBP received \$28.3 million in collections to execute the congressional mandate for biometric processing. The drastic reduction in expected collections affects the most recently approved lifecycle cost estimate (LCCE) and budget forecasts that are detailed in this report. The program’s cost forecasting team currently is working with the DHS Office of the Chief Financial Officer’s Cost Analysis Division and with stakeholders in CBP’s Office of Information and Technology to update the LCCE. This update will take into account program changes due to the impact of the COVID-19 global health pandemic.

Continued reliance on fees that have not met the expected collections could affect the ability to support the operation and maintenance of the biometric matching service, which is critical to CBP operations and to maintaining industry partnerships. Using the funds received to date, CBP has developed a biometric matching service that allows biometrics to be integrated seamlessly into current airport operations. The backend infrastructure is fully scalable for nationwide deployment. Partnership with the airlines has maximized the use of the fee funds while allowing airports and airlines to select biometric collection equipment that meets their specific needs. The Biometric Entry-Exit Program has partnered with airlines, airport authorities, and sea cruise lines to promote a touchless travel environment, which will build traveler confidence in safe travel and will assist in economic recovery. CBP’s partnership with airlines, airports, and other industry stakeholders is essential to successful implementation of a nationwide biometric entry-exit system.

In FY 2022, CBP began to develop a decommissioning plan to prepare for a potential end of the biometric confirmation service because variable fee collections on certain H-1B and L-1 visas currently are scheduled to sunset in FY 2027. To prepare for sunset, in FY 2025, the program will begin to decommission the CBP biometric matching service and to prepare industry stakeholders (airlines, airport authorities, and sea cruise lines) for the elimination of biometric

¹ *National Commission on Terrorist Attacks Upon the United States* (9/11 Commission Report), p. 389.

confirmation at airport and seaport locations nationwide. By 2027, unless the program is funded, CBP no longer will provide this service.

CBP intends to update the spend plan annually on the basis of fees collected each year and to refine the deployment schedule of biometric entry-exit capabilities at airports. CBP will continue to assess the program to identify operational and technical efficiencies that may lower the overall cost.



Biometric Entry-Exit H-1B and L-1 Fees Spend Plan (FY 2022)

Table of Contents

I.	Legislative Language.....	1
II.	Background.....	2
III.	Discussion.....	4
	A. Scope.....	5
	B. CBP’s Biometric Entry-Exit Vision for Air	6
	C. Cost Elements and Assumptions.....	7
	1. IT Investment.....	7
	2. Entry Applications.....	8
	D. Programmatic and Operational Support	8
	1. Program Management	8
	2. Communications.....	9
	E. Technology Innovation Costs	9
	F. CBP Officers.....	10
IV.	Spend Plan Estimate	11
V.	Conclusion	13
VI.	Appendices.....	14
	Appendix A – List of Abbreviations.....	14
	Appendix B – Top 20 U.S. International Airports by Volume.....	15

I. Legislative Language

This document was compiled pursuant to direction set forth in the Joint Explanatory Statement and House Report 117-87, which accompany the Fiscal Year (FY) 2022 Department of Homeland Security (DHS) Appropriations Act (P.L. 117-103).

The Joint Explanatory Statement states:

Biometric Exit.—Not later than 30 days after the date of enactment of this Act, the Department is directed to provide an expenditure plan for H-1 B and L-1 fee revenue and any other resources to be applied to biometric exit implementation.

House Report 117-87 states:

Biometric Exit.—The Committee continues direction for CBP to provide a detailed expenditure plan for biometric exit activities within 90 days of the date of enactment of this Act, in the same manner as described for such plan in House Report 114-668.

As referenced above, House Report 114-668, which accompanies the FY 2017 DHS Appropriations Act (P.L. 115-131), provides additional guidance:

The Committee directs the Commissioner to provide a detailed expenditure plan to the Committees not later than 90 days after the date of enactment of this Act, regarding the expenditure of funds available in the 9/11 Response and Biometric Exit Account established in Division O of Public Law 114-113, for the purpose of implementing the biometric entry and exit data system required by section 7208 of the Intelligence Reform and Terrorism Prevention Act. The plan should include information on the timeline for deployment of a biometric exit system, as well as a description of the capability that this funding can procure and support. Further, the plan should include a realistic cost estimate for full implementation.

II. Background

As authorized in several statutes and regulations,² U.S. Customs and Border Protection (CBP) is mandated congressionally to implement a biometric entry-exit system. CBP's Office of Field Operations (OFO) developed a long-term strategy to implement a comprehensive biometric entry-exit solution. On the basis of the funding authorized under the FY 2016 DHS Appropriations Act (P.L. 114-113), OFO established a program of record for the Biometric Entry-Exit Program in FY 2018.

As a part of the program of record, OFO completed and updated multiple program artifacts, which documented concepts of operations and operational requirements for the comprehensive biometric entry-exit solution. These concepts and requirements are informed by CBP's past and ongoing market research, including findings from biometric experiments³ conducted to date and in partnership with the DHS Science and Technology Directorate. In FY 2020, the program received DHS approval from the Deputy Undersecretary for Management for Acquisition Decision Event-3, meaning that the air segment of the program was authorized for full-scale deployment nationwide. The initial focus was to implement the air segment. The current and future scope of the program will cover all travel modes, including sea, vehicle, and pedestrian.

CBP's vision for seamless, end-to-end travel uses a traveler's face to streamline identity verification and to eliminate repetitive manual checks of paper documentation. To achieve that vision, CBP built the Traveler Verification Service (TVS), which is a device-and-environment-agnostic facial comparison service.

CBP is committed to ensuring that its use of technology does not erode privacy protections. CBP published its most recent privacy impact assessment (PIA) on November 14, 2018, and an update to the PIA appendix on February 8, 2021.⁴ The PIA explains all aspects of CBP's biometric entry/exit programs, to include policies and procedures for the collection, storage, analysis, use, dissemination, retention, and/or deletion of data.

² Statutes that require DHS to take action to create an integrated entry-exit system: Sec. 2(a) of the Immigration and Naturalization Service Data Management Improvement Act of 2000, P.L. 106-215, 114 Stat. 337; Sec. 110 of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, P.L. 104-208, 110 Stat. 3009-546; Sec. 205 of the Visa Waiver Permanent Program Act of 2000, P.L. 106-396, 114 Stat. 1637, 1641; Sec. 414 of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001, P.L. 107-56, 115 Stat. 272, 353; Sec. 302 of the Enhanced Border Security and Visa Entry Reform Act of 2002 (Border Security Act), P.L. 107-173, 116 Stat. 543, 552; Sec. 7208 of the Intelligence Reform and Terrorism Prevention Act of 2004, P.L. 108-458, 118 Stat. 3638, 3817; Sec. 711 of the Implementing Recommendations of the 9/11 Commission Act of 2007, P.L. 110-53, 121 Stat. 266, 338; and Sec. 802 of the Trade Facilitation and Trade Enforcement Act of 2015, P.L. 114-125, 130 Stat. 122, 199.

³ Experiments have included Biometric Exit Mobile, Pedestrian Biometric Exit, 1-to-1 Face Comparison, and the Atlanta Departure Information System Test, among others.

⁴ See *Traveler Verification Service Privacy Impact Assessment*, available at: <https://www.dhs.gov/publication/dhscbppia-056-traveler-verification-service>.

In the air environment, this cloud-based service uses existing passenger information to create a pre-populated “gallery” of face images from U.S. Government databases. These photographs may come from passport applications, visa applications, and/or interactions with CBP at a prior border encounter where CBP took a photograph. The facial comparison service compares a live photo of the traveler to the gallery of face images to identify the traveler biometrically and to enable CBP to confirm and expedite the traveler’s arrival or departure. This expansive back-end infrastructure can handle all arriving and departing flights and is scaled fully to support a nationwide biometric entry-exit solution.

CBP’s partnership with airlines, airports, cruise line operators, and other industry stakeholders is critical to implementation of a nationwide biometric entry-exit system, and CBP is committed to a process that meets the needs of all public and private stakeholders. If CBP were to deploy a government-only solution, cumbersome layers would be added to existing travel processes, adversely affecting travel as a whole. Instead, CBP is partnering with airline, airport, and sea cruise line industry stakeholders to complete the biometric entry-exit system while facilitating legitimate travel. Partnerships with airlines, airports, and sea cruise lines have demonstrated significant benefits, including faster boarding times, enhanced customer experience, and improved utilization of CBP staff.

The Biometric Entry-Exit Program has seen significant updates since its inception in 2016. CBP leveraged the successes of facial comparison to develop a facial comparison entry process. This updated entry process makes the inspection process more efficient and improves the throughput of travelers arriving in the United States. The streamlined entry process reduces the need for CBP to scan a travel document and to take fingerprints to pull up a known traveler’s biographic data for inspection, because facial comparison performs more quickly. CBP is able to reduce the administrative burden on frontline personnel and to allow them to focus on enforcement. Additionally, the use of facial comparison results in better security by reducing the imposter threat. Since implementation of the new facial comparison entry process in 2018, CBP officers have intercepted 67 imposters in the airport environment who then were denied admission into the United States.

As of May 2022, the Biometric Entry-Exit Program was deployed for arrivals at 238 U.S. airports, including all preclearance locations, for the air entry and exit environments. Airports and airlines have invested in biometric collection equipment and are using CBP’s biometric comparison service to perform biometric exit processing. To expand this program to other modalities, CBP has obtained commitments from nine sea cruise lines. CBP will continue to pursue additional commitments from other major stakeholders in an ongoing effort to expand operations.

Since June 2017, CBP officers have verified more than 208 million passengers biometrically on more than 1.5 million flights and vessels, and 169,636 overstays have been confirmed biometrically. Across the air entry, preclearance, and pedestrian entry modalities, the program has identified 1,592 imposters. Of these imposters, 67 were identified in the air environment and 1,525 in the land environment. To date, no imposters have been identified in the sea segment.

III. Discussion

In 2016, Congress funded the Biometric Entry-Exit Program up to \$1 billion in fees collected by U.S. Citizenship and Immigration Services (USCIS) on H-1B and L-1 applications through FY 2027.⁵ The Congressional Budget Office (CBO) initially estimated an annual fee collection of \$115 million per year for the fees dedicated to biometric exit. This estimate indicated that fee collections would provide sufficient funding to reach the congressional authorization of \$1 billion prior to the FY 2027 end date.

CBP determined that \$1 billion in fee collections would allow the deployment and maintenance of full biometric air and sea entry and exit operations through the end of FY 2027 and would allow CBP to conduct some biometric technical demonstrations in the land environments.

The biometric fee account never has reached the original annual estimate of \$115 million and likely will not reach the \$1 billion cap by 2027. Since inception, the fees collected by USCIS have fallen short of CBO projections and have decreased each year since 2016. Collections for FYs 2018-2019 were approximately \$59 million per year, fell to \$36 million in FY 2020, and totaled \$28.3 million in FY 2021, as depicted in Figure 1. Through April 2022, \$12.7 million in fees have been collected with a total collection for FY 2022 estimated at \$30 million. On the basis of previous collections and projections, CBP now expects to collect between \$500 million and \$700 million before the FY 2027 end date.

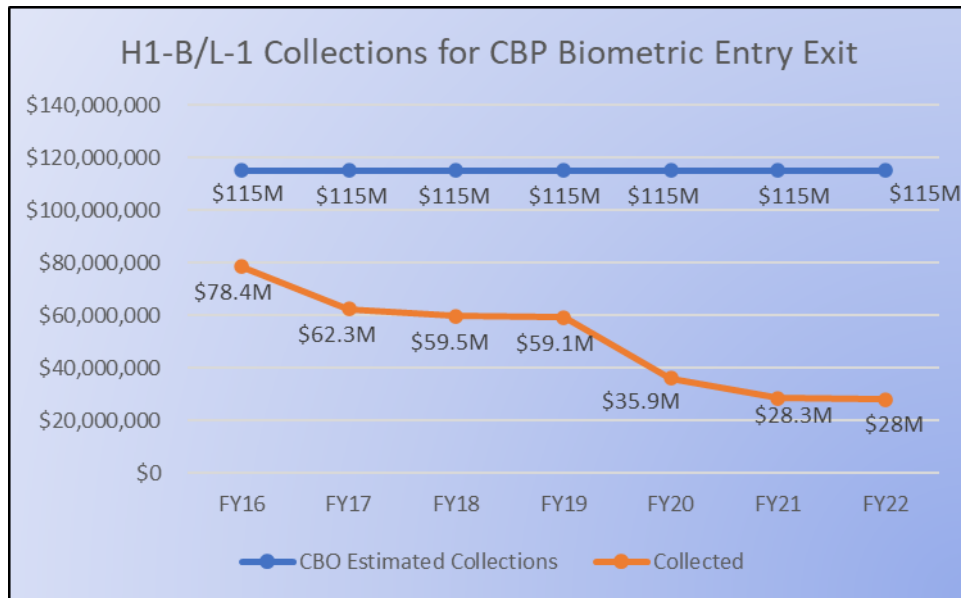


Figure 1. Annual H-1B/L-1 Collections by Fiscal Year

There are three primary drivers for the reduction in USCIS collections on H-1B/L-1 visa applications. One driver that USCIS used was to collect fees on new visa applications only and

⁵ Biometric Entry-Exit Program funding specified in P.L. 114-113 was originally in effect until September 20, 2025, but was amended to extend the end date to 2027. See 49 U.S.C 40101.

not on extensions. On the basis of USCIS data, this resulted in roughly a 50-percent decrease in fees from the original CBO estimate of \$115 million per year. The other drivers include the impact of the Coronavirus Disease 2019 pandemic that has depressed international travel, and issuance of a presidential proclamation under the previous administration suspending entry into the United States.

Because of continued expectations that the H-1B/L-1 visa application collections never will reach the original CBO estimate and will continue to be significantly less than what is required to maintain and expand the use of this capability, CBP is developing a decommissioning plan that would end the use of TVS for facial comparison matching purposes. CBP is at the beginning of the planning process, which is scheduled for a full TVS decommissioning in FY 2027.

The spend plan below shows actual obligations and collections through FY 2021 and uses the program lifecycle cost estimate (LCCE) to estimate FY 2022 collections. An updated LCCE was approved in December 2019 and assumes that pre-pandemic fee collection patterns will continue. CBP is working on a revised LCCE, but the plan below still reflects pre-pandemic assumptions and cost estimates.

CBP's focus is on the air environment with continued technical demonstrations for sea and land operational environments. The sea segment is similar to the air exit segment of the program, whereby the cruise lines own, operate, and maintain front-end, photo-capture equipment.

The program's land segment is conducting technical demonstrations to gather data to evaluate the technical maturity, feasibility, operational effectiveness, and cost of the solution in the pedestrian environment. As of May 2022, more than 41.7 million travelers have been verified biometrically in the land environment, with more than 1,400 imposters identified.

A. Scope

The spend plan shows actual obligations and collections through FY 2021 and uses the program LCCE to estimate FY 2022 collections.

CBP's initial focus was on the air environment with continued technical demonstrations for sea and land operational environments. CBP is going through the DHS acquisition lifecycle for the sea segment, with an expectation to achieve the Acquisition Decision Event-3 milestone in FY 2023. The sea segment is similar to the air exit segment of the program, whereby the cruise lines own, operate, and maintain front-end, photo-capture equipment, which significantly reduces the cost to the government. At this phase of the program, the sea segment costs are a fraction of the cost to use and maintain the TVS.

CBP also is evaluating the use of this technology in the vehicle and pedestrian departure segments. Several technology demonstrations have been conducted in these segments to gather data to evaluate the technical maturity, feasibility, operational effectiveness, and cost of the solution in the pedestrian and vehicle environments.

Although this spend plan covers through FY 2027, it focuses primarily on FY 2022 and FY 2023 because those costs can be estimated with the most fidelity. This document describes each of the cost elements required to continue implementation of the biometric air exit solution and the integration of biometric devices and applications in the air entry environment:

- **Information Technology (IT) Investment**, to include network and infrastructure costs, as well as upgrades or creation of entry and exit applications to support biometric entry-exit data collection;
- **Programmatic and Operational Support**, to include costs for managing the program, including acquisition, stakeholder management, and communications; and
- **Technology Innovation**, to continue furthering biometric entry-exit in the air, land, and sea environments.

B. CBP's Biometric Entry-Exit Vision for Air

Working in partnership with the air travel industry, CBP is leading the transformation of air travel using biometrics as the key to enhancing security and to unlocking benefits that dramatically improve the entire traveler experience. CBP is working toward full implementation of biometric exit in the air environment to account for more than 97 percent of departing commercial air travelers from the United States. CBP envisions that facial comparison can create a touchless automatic process for many routine aspects of airline travel. Ultimately, this will make air travel more convenient, more secure, and safer through decreasing pathogen transmission. Facial comparison also reinforces identity checks at multiple stages in the traveler's journey while meeting the biometric exit mandate and complying with the requirements of the Privacy Act of 1974⁶ and all DHS and U.S. Government-wide privacy policies.

CBP's use of facial comparison technology is carried out through a privacy-by-design model and comports firmly within the DHS Fair Information Practice Principles, including the principles of use limitation and data minimization.⁷ For instance, CBP prohibits its approved partners, such as airlines, airport authorities, or cruise lines, from retaining the photos that they collect under this process for their own business purposes. The partners must purge the images immediately following transmittal to CBP, and the partner must allow CBP to audit compliance with this requirement. CBP developed business requirements to document this commitment, to which the private-sector partners must agree as a condition of participation.

A comprehensive system that leverages both biographic and biometric data is key to supporting CBP's mission. Adding biometrics provides greater assurance of the accuracy of information already collected by CBP and will allow for future facilitated processing upon entry and exit. CBP will use facial comparison technology as the primary tool for comparing travelers to their travel documents and for facilitating their entry to and exit from the United States. Benefits of facial comparison include faster boarding times, enhanced customer service, improved utilization

⁶ 5 U.S.C. §552a, and as amended.

⁷ See DHS privacy policies (<https://www.dhs.gov/privacy-policy-guidance>) and Office of Management and Budget privacy policies (<https://www.whitehouse.gov/omb/information-regulatory-affairs/privacy/>).

of CBP staffing, and faster flight clearance times on arrival. Additionally, biometrics significantly help to reduce the imposter threat and to improve security.

Fingerprints remain a foundational aspect of CBP's biometric system. Fingerprint scans have been proven to be an effective law enforcement tool, and CBP will continue to capture fingerprints as the initial identification biometric during first-time encounters for certain foreign nationals. This will enable CBP to continue leveraging fingerprints for watchlist checks.

Leveraging advancements in facial comparison technology as well as improved accuracy and reliability of this technology, CBP's biometric air entry and exit solution utilizes facial comparison to streamline passenger processes throughout the air travel continuum. A facial comparison process at the time of boarding provides airport and airline entities with a convenient way for in-scope foreign nationals⁸ to meet their exit requirement utilizing existing information systems and available data. CBP's system offers a facial comparison service at no cost to airline and airport partners, whose investment in biometric technology replaces manual identification of traveler identification and boarding passes. CBP is supporting additional innovative projects, including biometric check-in, baggage drop, Transportation Security Administration document checks, self-boarding gates, and other equipment to provide for a seamless experience for travelers. This system ultimately enables a biometric-based entry-exit system to provide significant benefits to private-sector air travel partners, in addition to establishing a biometric air exit system for the government.

C. Cost Elements and Assumptions

1. IT Investment

CBP has built a biometric entry-exit system that is fully scalable to support international air entry and exit nationwide.

Scalable Infrastructure and System Maintenance

CBP has built a biometric matching service that facilitates investment in camera hardware and software by airlines, airports, or other stakeholders. CBP has the capacity to support increased usage of the CBP biometric matching service as more airlines participate. Costs associated with operating and maintaining the service under current requirements include the cost of monitoring the health of the service, troubleshooting and repairing software and system-related issues, and testing performance and managing system interoperability. Additional test, evaluation, and monitoring activities for matching algorithm performance are captured within this cost. System maintenance also includes integrating other transportation modes and applications into the service as they are deployed, developing and testing innovative concepts to facilitate biometric operations, enhancing disaster recovery, and upgrading infrastructure over time.

⁸ An "in-scope" traveler is any person who is required by law to provide biometrics upon exit from the United States, pursuant to 8 Code of Federal Regulations § 235.1(f)(ii).

Estimated IT Investment Cost (\$ in millions)	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FYs 2025-2027
Scalable Infrastructure and System Maintenance	\$28.55	\$26.50	\$27.48	\$27.50	\$28.00.	\$84.00

2. Entry Applications

To support the collection and verification of multimodal biometrics, existing CBP entry applications for processing arriving travelers required upgrades to support new device interfaces, transmission of biometric data, and verification of biometric data. The applications will work on any platform (desktop, tablet, phone, etc.). The costs associated with the entry applications include development, testing, training, and security. Estimated outyear costs include the cost to maintain change requests to the applications. Estimates are based on prior work efforts, modifications to CBP’s primary applications, and current requirements.

Estimated IT Investment Cost (\$ in millions)	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FYs 2025-2027
Entry Applications	\$3.66	\$10.50	\$12.50	\$12.75	\$13.00	\$39.00

Operations and Maintenance (O&M) of these applications include performance monitoring to identify and resolve risks prior to negative impact on mission performance. O&M costs also include tiers two and three support for deficiencies or outages and provide system engineering, testing, and production training. O&M costs are evaluated annually and are revised on the basis of performance and evolving requirements.

D. Programmatic and Operational Support

1. Program Management

Program management support will be required over the lifecycle of the Biometric Entry-Exit Program. The program management costs consist of contractor support costs. Government full-time equivalent costs are accounted for in a separate salaries and expenses category outside of the program scope. The program management office is responsible for the Biometric Entry-Exit Program operations, including upholding standards; maintaining and establishing public and private partnerships; coordinating integration of the biometric entry-exit solution; addressing the privacy, legal, and regulatory challenges of implementing a biometric entry-exit solution; monitoring performance; and reporting.

Contractor support costs for program management are included in the overall estimate for program management services. In the initial years of the program, the total cost allocated for program management support from contractors is higher than in the outyears to support the acquisition and program management documentation, oversight, requirements, deployment, and

test and evaluation. The table below provides the annual programmatic and IT costs that will fund contract services.

Contractor Support Cost (\$ in millions)	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FYs 2025-2027
Program Management Costs	\$9.58	\$7.10	\$8.03	\$8.50	\$9.00	\$27.00

2. Communications

Communications will consist of both national and local outreach for biometric entry-exit to educate travelers. Additionally, resources will be required to work with travel authorities, such as airports and airlines, to ensure that biometric entry-exit solutions are integrated with existing travel processes. Estimated costs for communications and outreach are based on programs of similar size and complexity, such as the Western Hemisphere Travel Initiative/Land Border Integration.

The communications and outreach costs include a communications team to support the overall planning and national implementation of the program. The communications team will continue to manage the media and marketing strategy for industry and travelers and will continue to produce materials for public awareness.

Communication Cost (\$ in millions)	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FYs 2025-2027
Communications Team	\$0.77	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00

E. Technology Innovation Costs

CBP will continue to conduct biometric entry and exit innovation tests in air, land, and sea operational environments to implement CBP’s strategic vision, working with stakeholders to implement these tests. CBP will evaluate new and emerging technologies, which could facilitate biometric entry-exit. The costs may include hardware, software, deployment, and operations and may vary by the type of test. CBP utilized historical cost data from previous biometric entry-exit projects for the estimate; however, CBP has not been able to fund additional innovation projects since FY 2018.

Technology Innovation Cost (\$ in millions)	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FYs 2025-2027
Cost	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

F. CBP Officers

CBP performs watchlist vetting of departing travelers. On the basis of law enforcement information, CBP must respond to identified watchlist hits, such as wants and warrants, and those travelers unlawfully present in the United States without inspection. An additional 441 CBP officers are required to perform this additional enforcement work nationwide. This increased workload originally was supported by the Biometric Entry-Exit Fee authorization, but because of the decline of that fee (see Section III above), CBP has moved the officer staffing to the overall unmet requirement in the OFO's Workload Staffing Model.

IV. Spend Plan Estimate

The Biometric Entry-Exit Program has developed a biometric matching service that allows biometric exit to be integrated seamlessly into current airport operations. The back-end infrastructure is fully scalable for nationwide deployment. Partnership with the airlines has maximized use of the fee funds for this development while allowing airports and airlines to select biometric collection equipment that meets their specific needs. This ensures a simple and integrated exit process for travelers. The CBP system leverages a cloud-hosting environment, minimizing cost because database management is handled through services rather than through onsite personnel. In addition, the program management support team has adhered to and met all privacy and security requirements.

In developing the facial comparison system, CBP implemented a privacy-by-design approach to ensure that CBP embedded data protection into its use of facial comparison technology. CBP employs four primary safeguards to secure data: secure storage, a short CBP retention period (14 days) for TVS performance evaluation purposes, biometric templates that cannot be reverse-engineered, and secure encryption during data storage and transfer. Additionally, CBP has a rigorous process in place to review data and metrics associated with biometric facial comparison matching performance. The program also is undergoing thorough cybersecurity testing to optimize system integrity and penetration testing to ensure protection of personally identifiable information.

Figure 2 presents the spend plan estimate to deploy the biometric entry-exit capability on the basis of the anticipated fee funding level of \$ 479.21 million. All nonlabor requirements are projected to be affordable under the current funding estimates from fee collections. The final deployment schedule will be dependent on completion of public and private partnerships and funding availability.

	2017	2018	2019	2020	2021	2022	2023	2024	2025-27	Total
Estimated Fee Funding Per Year	\$140.74 M	\$59.52 M	\$59.13 M	\$35.96 M	\$28.36 M	\$28 M	\$25.5 M	\$25.5 M	\$76.5 M	\$479.21 M
CBP Supplemental Funding	\$0 M	\$0 M	\$0 M	\$0 M	\$8.94 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M
IT Investment (Non-Recurring and O&M)	\$29.21 M	\$52.36 M	\$44.41 M	\$32.21 M	\$37 M	\$39.98 M	\$40.25 M	\$41 M	\$123 M	\$439.42 M
Phase I - Operationalize Departure Information Systems	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M
Phase II - Build Enterprise Services and End-State Biometric Exit	\$24.84 M	\$39.64 M	\$5.06 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$69.54 M
Phase III - Scalable Infrastructure	\$0 M	\$0 M	\$27.29 M	\$28.55 M	\$26.5 M	\$27.48 M	\$27.5 M	\$28 M	\$84 M	\$249.32 M
Entry Applications	\$4.37 M	\$12.72 M	\$12.06 M	\$3.66 M	\$10.5 M	\$12.5 M	\$12.75 M	\$13 M	\$39 M	\$120.56 M
Programmatic and Operational Support	\$22.84 M	\$20.91 M	\$17.72 M	\$10.35 M	\$7.3 M	\$8.03 M	\$8.5 M	\$9 M	\$27 M	\$131.65 M
Program Management	\$21.17 M	\$18.7 M	\$15.04 M	\$9.58 M	\$7.1 M	\$8.03 M	\$8.5 M	\$9 M	\$27 M	\$124.12 M
Communications and Stakeholder Management	\$1.67 M	\$2.21 M	\$2.68 M	\$0.77 M	\$0.2 M	\$0 M	\$0 M	\$0 M	\$0 M	\$7.53 M
Technology Innovation Costs	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M
Site Deployments: Top 20 Airports	\$9.49 M	\$1.42 M	\$21.22 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$32.13 M
Entry Infrastructure Upgrades	\$7.6 M	\$0.22 M	\$10.16 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$17.98 M
Exit Network Upgrades - Terminal & Gates (w/O&M)	\$1 M	\$1.2 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$2.2 M
Exit Gate Equipment - (Public/Private Partnership)	\$0.89 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0.89 M
Site Operations and Maintenance	\$0 M	\$0 M	\$11.06 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$0 M	\$11.06 M
Total Programmatic and IT Investment	\$61.54 M	\$74.69 M	\$83.35 M	\$42.56 M	\$44.3 M	\$48.01 M	\$48.75 M	\$50 M	\$150 M	\$603.2 M
Funding Remaining	\$79.2 M	\$64.03 M	\$39.81 M	\$33.21 M	\$26.21 M	\$6.2 M	\$-17.05 M	\$-41.55 M	\$-115.05 M	\$-123.99 M

Figure 2. Spend Plan Based on Current Funding Estimates

* The above numbers represent multiple cost factors that are rounded to the nearest ten thousandths' place. The calculations in this table are based on the actual unrounded numbers. Any marginal discrepancies in the summation of numbers in this table represent the variance between the rounded and actual numbers.

V. Conclusion

CBP identified the challenges associated with biometric exit implementation and recognized that the path to successful implementation was through partnership and collaboration with industry. In partnership with external stakeholders, CBP devised a facial comparison solution that utilizes existing business models, data, and infrastructure to enhance national security and to facilitate lawful travel. This resulted in an exit solution that is flexible and feasible with minimal hardware requirements. Providing a facial comparison matching service significantly reduces the need to handle travel documents, resulting in time savings that benefit CBP, travel stakeholders, and the traveling public.

CBP has used the Biometric Entry-Exit H-1B and L-1 Fee authorized by Congress to build the backend infrastructure and to provide programmatic and operational support to enable biometric entry-exit at the top 20 (i.e., by passenger volume) airports, which are used by more than 97 percent of departing commercial air travelers. The sea cruise line environment also has proven successful, and CBP will seek to deploy this solution nationwide.

CBP will continue to explore opportunities to partner with airports, airlines, and sea cruise lines to integrate facial comparison into travel processes to benefit facilitation and national security.

VI. Appendices

Appendix A – List of Abbreviations

Abbreviation	Definition
CBO	Congressional Budget Office
CBP	U.S. Customs and Border Protection
COVID-19	Coronavirus Disease 2019
DHS	Department of Homeland Security
FY	Fiscal Year
IT	Information Technology
LCCE	Lifecycle Cost Estimate
O&M	Operations and Maintenance
OFO	Office of Field Operations
PIA	Privacy Impact Assessment
TVS	Traveler Verification Service
USCIS	U.S. Citizenship and Immigration Services

Appendix B – Top 20 U.S. International Airports by Volume

1	NEWARK (EWR)
2	CHICAGO O'HARE (ORD)
3	ATLANTA (ATL)
4	SAN FRANCISCO (SFO)
5	NEW YORK (JFK)
6	MIAMI (MIA)
7	LOS ANGELES (LAX)
8	HOUSTON (IAH)
9	WASHINGTON DULLES (IAD)
10	HONOLULU (HNL)
11	DALLAS FORT WORTH (DFW)
12	BOSTON (BOS)
13	PHILADELPHIA (PHL)
14	ORLANDO (MCO)
15	SEATTLE (SEA)
16	DETROIT (DTW)
17	LAS VEGAS (LAS)
18	MINNEAPOLIS ST. PAUL (MSP)
19	FORT LAUDERDALE (FLL)
20	CHARLOTTE (CDL)