



Report to the Chairman, Subcommittee
on Capital Markets, Securities, and
Investment, Committee on Financial
Services, House of Representatives

April 2018

BUREAU OF ENGRAVING AND PRINTING

Options for and Costs of a Future Currency Production Facility

GAO Highlights

Highlights of [GAO-18-338](#), a report to the Chairman, Subcommittee on Capital Markets, Securities, and Investment, Committee on Financial Services, House of Representatives

Why GAO Did This Study

BEP, within Treasury, designs and produces U.S. currency notes at BEP's facilities in Washington, D.C., and Fort Worth, Texas. The Federal Reserve pays for BEP's operational expenses, including currency production. BEP is requesting legal authority to purchase land and construct a new production facility in the D.C. area. BEP officials told GAO that, if it does not receive the necessary legal authority for a new production facility, it will renovate the D.C. facility.

GAO was asked to review BEP's facility planning process. This report: (1) describes the results of facility studies that BEP has funded and factors that led BEP to propose a new production facility, (2) examines the extent to which BEP's actions align with leading capital planning and cost estimating practices, and (3) describes other factors that could affect total federal costs of BEP's actions.

GAO analyzed BEP documents and data from 2010-2017 on currency note production, visited both BEP production facilities, assessed BEP's actions against leading capital planning and cost estimating practices, and interviewed officials from BEP, GSA, the Federal Reserve, and Treasury.

GAO provided the draft report to BEP, GSA, the Federal Reserve, and Treasury for review. BEP coordinated with Treasury in its comments. In the comments, reproduced in Appendix I, BEP emphasized the factors that led BEP to determine that a new facility is the preferred alternative. BEP and the Federal Reserve also provided technical comments, which we incorporated as appropriate. GSA did not provide comments.

View [GAO-18-338](#). For more information, contact Lori Rectanus at (202) 512-2834 or rectanusl@gao.gov.

April 2018

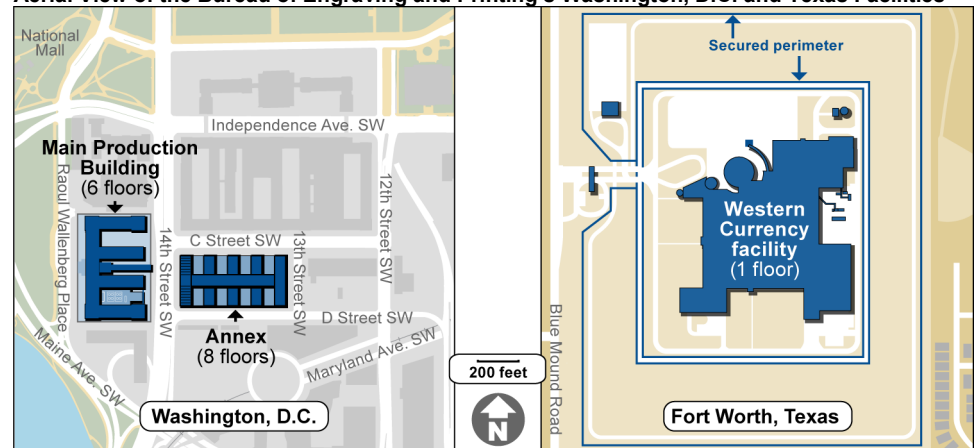
BUREAU OF ENGRAVING AND PRINTING

Options for and Costs of a Future Currency Production Facility

What GAO Found

The Bureau of Engraving and Printing's (BEP) studies and research determined that a new production facility would be less expensive and better address BEP's need for secure, efficient, and flexible currency production than a renovation of its Washington, D.C. facility. According to 2017 cost estimates, BEP's preferred option—a new production facility in the Washington, D.C., area and some renovated administrative space in its current D.C. facility—would cost approximately \$1.4 billion, while a renovation of its current facility for both production and administrative functions would cost approximately \$2.0 billion. A new facility similar to BEP's Texas facility could have a secure perimeter that meets federal building security standards. Such a perimeter is not possible with the current facility. A new facility could also house production on a single production floor to allow for a more efficient production process.

Aerial View of the Bureau of Engraving and Printing's Washington, D.C. and Texas Facilities



Sources: National Park Service and GAO. | GAO-18-338

BEP generally followed leading capital-planning practices, and its 2017 cost estimate of a new production facility partially met the characteristics of a reliable cost estimate. BEP's capital planning followed leading practices, for example, by including a needs assessment, a link to BEP's strategic plan, and a long-term capital plan. BEP's cost estimate partially followed leading practices, for example, by including most life-cycle cost components and documentation of the data used for the estimate. However, it did not include sufficient sensitivity analyses, which identify a range of costs-based on varying assumptions. BEP officials stated that they plan to follow the updated GSA guidance that includes GAO's cost-estimating leading practices when updating this early stage estimate.

The ability to sell or repurpose any part of the current D.C. facility could affect the total federal costs of BEP's actions. According to officials from the Department of the Treasury (Treasury) and the General Services Administration (GSA), there could be savings if Treasury could consolidate staff or operations into the vacated facility. There could also be savings if the unneeded facility could be sold to a private buyer. However there would be costs to prepare the facility for use by other entities or if the unneeded facility does not sell. Agency officials said that it is too early to determine specific costs and savings.

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Abbreviations

BEP	Bureau of Engraving and Printing
D.C.	Washington, D.C.
GSA	General Services Administration
ISC	Interagency Security Committee

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April 5, 2018

The Honorable Bill Huizenga
Chairman
Subcommittee on Capital Markets, Securities, and Investment
Committee on Financial Services
House of Representatives

Dear Mr. Chairman:

For over 150 years, the Bureau of Engraving and Printing (BEP) within the U.S. Department of the Treasury (Treasury) has been responsible for designing and producing U.S. currency notes. BEP prints the notes for the Federal Reserve System (Federal Reserve), which is BEP's primary client.¹ BEP reported that in fiscal year 2018, it plans to produce 7.4 billion notes worth about \$233 billion at its facilities in Washington, D.C., and Fort Worth, Texas. The D.C. facility is over 100 years old, and currency production primarily takes place on different floors in one of its two multi-wing, multi-level buildings. The Fort Worth facility is less than 30 years old and includes a large, one-level open space for producing currency.

BEP has explored renovating the D.C. facility or replacing it with a new facility in the D.C. area to bring its currency production up to 21st-century production standards. BEP has proposed building a new currency production facility in the D.C. area and repurposing one of its current D.C. buildings for administrative functions. According to Treasury officials, while BEP has the legal authority to use its revolving fund to renovate an existing facility, it does not have legal authority to purchase land and construct a new facility, nor the authority to use the revolving fund to pay for such a project. As a result, BEP is seeking the necessary legal authority to purchase land and construct a new building in the D.C. area, as part of the fiscal year 2018 President's budget proposal. BEP officials have stated that if BEP does not receive this legal authority and funding, it will begin a renovation of the current D.C. facility. According to BEP, it would be designed to address the facility's deficiencies and to accommodate new, larger printing equipment that BEP anticipates

¹According to BEP officials, almost 100 percent of BEP's production consists of producing bank notes for the Federal Reserve. On occasion, BEP receives orders from other agencies to print certificates and other documents.

needing over the next few years for security features being developed for new currency notes.

You asked us to review BEP's proposal to build a new production facility in the Washington, D.C., area. This report:

- describes the results of the facility studies that BEP has funded and factors that led BEP to propose a new production building;
- examines the extent to which BEP's actions align with leading capital-planning and cost-estimating practices; and
- describes other factors that could affect total federal costs if BEP were to construct a new production facility or renovate its existing D.C. facility.

To describe the results of the facility studies that BEP has funded and the factors BEP considered in proposing a new currency production facility, we reviewed studies and cost estimates BEP undertook between 2010 and 2017, its strategic plans, and pertinent BEP operations and production data. Specifically, we reviewed workers' compensation claims and manufacturing costs from fiscal years 2013 through 2016. We also reviewed employee staffing levels as of September 2017. While we did not independently assess the validity of these data, we reviewed the data for outliers and obvious errors. We found the data to be sufficiently reliable for our purposes. We conducted a literature review of research on currency demand. We reviewed the President's 2017 and 2018 budget proposals as well as relevant statutes and regulations. We visited BEP's facilities in Washington, D.C., and Fort Worth, Texas, to examine the production process at both facilities. We interviewed officials from BEP, the Federal Reserve, and Treasury. We also interviewed officials from the General Services Administration (GSA), which is responsible for helping federal agencies acquire and dispose of office space, among other things.

To determine the extent to which BEP's actions aligned with leading capital-planning and cost-estimating practices, we first identified leading capital-planning and cost-estimating practices from a variety of federal sources. In particular, we reviewed the leading capital investment decision-making practices identified by GAO and OMB in their respective

guides,² as well as leading cost-estimating practices identified in GAO's Cost Estimating and Assessment Guide.³ We focused on the capital-planning processes that would be most applicable to BEP, which has limited real property. The applicable processes include:

- conducting an assessment of current and future needs;
- evaluating alternatives to determine how to best bridge performance gaps;
- strategically linking capital investments to a strategic-planning process; and
- documenting the agency's goals and objectives, among other things, in a long-term capital plan.⁴

We compared these leading practices against actions BEP took since 2010 that led BEP to conclude that the agency would be best served by a new production facility. Specifically, we reviewed BEP's 2010 and 2013 feasibility studies, BEP and Treasury strategic and long-term capital plans, and other relevant documents. Regarding cost estimating, we focused on four broad characteristics of high quality, reliable cost estimates identified in the Cost Estimating and Assessment Guide. These characteristics include that the estimates are comprehensive, well-documented, accurate, and credible. We compared BEP's 2017 estimate for the cost of BEP's proposal for a new facility to these practices because it was BEP's most recent cost estimate for constructing a new facility. As part of our work, we reviewed the cost information that BEP used to develop its 2017 cost estimate and interviewed senior BEP officials on the estimates.

To describe other factors that could affect the overall cost to the federal government if BEP were to construct a new production facility or renovate

²GAO, *Executive Guide: Leading Practices in Capital Decision-Making*. [GAO/AIMD-99-32](#) (Washington, D.C.: December 1998); and OMB, *Capital Programming Guide, Supplement to Office of Management and Budget Circular A-11: Planning, Budgeting, and Acquisition of Capital Assets* (2017).

³GAO, *GAO Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs*. [GAO-09-2SP](#) (Washington, D.C.: March 2009).

⁴We found that not all leading capital-planning practices were applicable to BEP, such as a review and approval of a framework with established criteria for selecting capital investments and project prioritization. BEP's proposal for a new D.C. facility is not contingent on capital decisions made for its Fort Worth facility.

its existing D.C. facility, we reviewed BEP studies and discussed potential uses of BEP's current buildings with BEP, Treasury, and GSA officials. We reviewed GSA documentation and previous GAO work on the building disposal process, and interviewed officials at BEP, Treasury, and GSA on their plans for the use of each BEP building depending on the selected alternative.

We conducted this performance audit from April 2017 to April 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

BEP produces notes at the request of the Federal Reserve. Each year, the Federal Reserve determines how many currency notes are needed to meet the demand for currency. Federal Reserve and BEP officials then agree on a payment amount for note production, including costs associated with maintaining BEP's facilities. The Federal Reserve's payments are deposited into BEP's revolving fund; the revolving fund is used for BEP's operational expenses, including note production.⁵

According to Treasury officials, the revolving fund can pay for renovations and retrofitting of a production facility, but not for land purchase or new building construction.⁶ In 2016, the Federal Reserve paid around \$660 million for note production.

In order to cover all expenses associated with the Federal Reserve's needs, including currency production, the Federal Reserve generates income primarily from the interest on their holdings of U.S. government securities, agency mortgage-backed securities, and agency debt acquired through open market operations. The Federal Reserve is required to transfer any surplus funds over \$7.5 billion to the General Fund of the

⁵See 12 U.S.C. § 420; 31 U.S.C. § 5142.

⁶Treasury officials based this interpretation, in part, on a 1951 Comptroller General decision, which determined that BEP's revolving fund could be used for the cost of replacements and additions of such equipment and installations as elevators, air conditioning, water cooling, electrical, plumbing and heating equipment, permanent and semi-permanent partitions, and flooring. See B-104492, Oct. 4, 1951.

U.S. Treasury.⁷ Increases or decreases in operating costs or BEP's currency production could affect these surpluses and subsequent transfers to the General Fund. Historically, the Federal Reserve has had significant surpluses. In 2016, the Federal Reserve transferred \$92 billion to the General Fund.

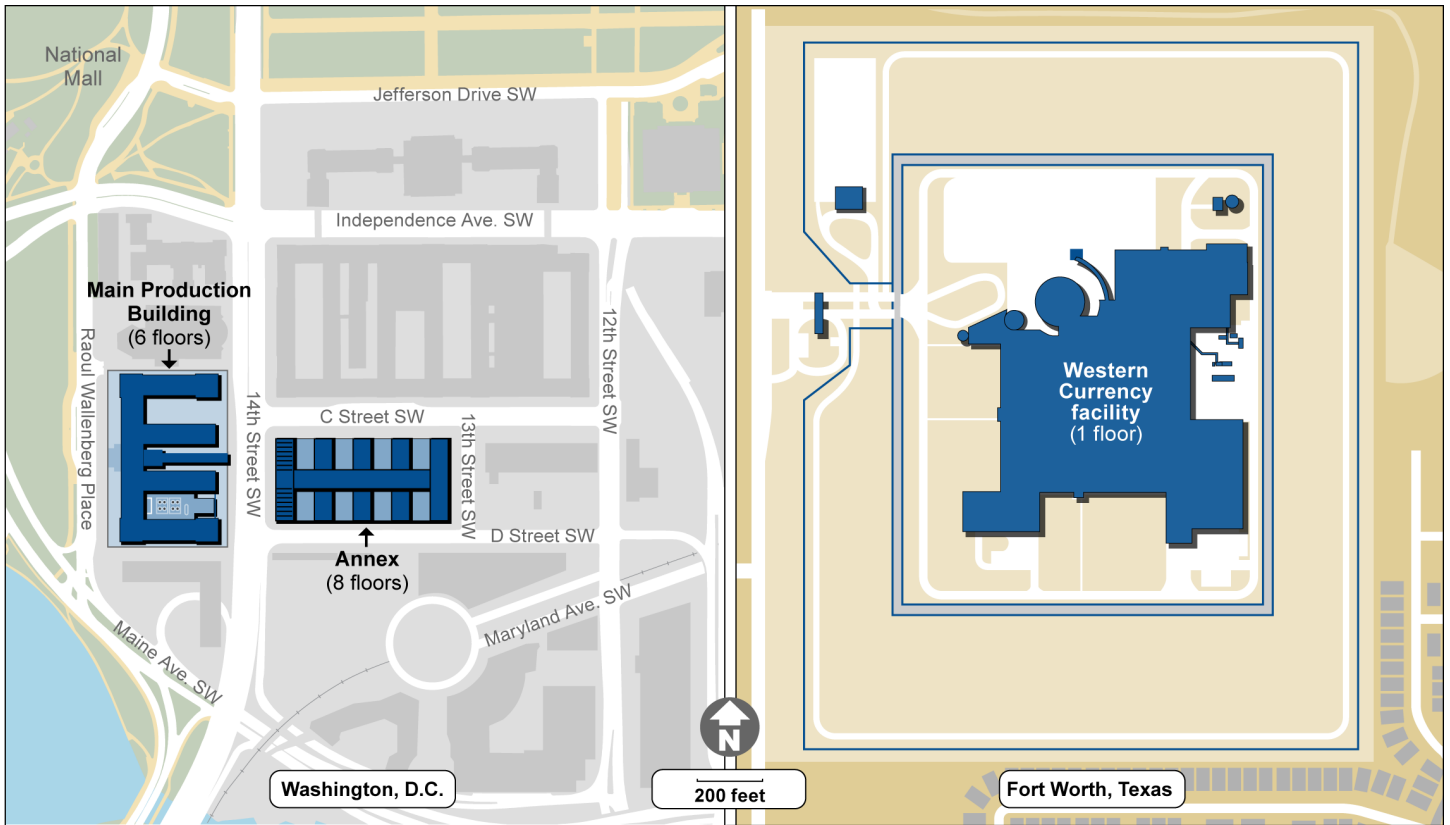
BEP's Washington, D.C., facility consists of a 104-year old, multi-story, multi-wing Main Building and an 80-year old multi-story, multi-wing Annex Building (see fig. 1). The Main Building is the primary production building, and the Annex Building is used primarily for administrative functions. Both buildings qualify for historic designation and thus any alterations would be subject to certain requirements under the National Historic Preservation Act of 1966, as amended.⁸ In addition to these buildings, BEP leases a warehouse in Landover, Maryland, to store production supplies in part because the two Washington, D.C., buildings do not have the necessary infrastructure to accommodate shipments carried by large commercial trucks.⁹

⁷12 U.S.C. § 289 (a)(3).

⁸See Pub. L. No. 89-665, 80 Stat. 915 (Oct 15, 1966) (codified as amended at 54 U.S.C. §§ 300101-307108).

⁹In March 2012, BEP renewed a 10-year lease with GSA to continue use of the warehouse. BEP rents the building through GSA from a private owner, and makes part of the building available for use by other Treasury components through interagency agreements. According to GSA officials, the cost to BEP is approximately \$2.9 million per year after payments from other Treasury components.

Figure 1: Aerial Views of the Bureau of Engraving and Printing’s Washington, D.C., and Fort Worth, Texas, Facilities



Sources: National Park Service and GAO. | GAO-18-338

Note: The figure does not include the warehouse in Landover, Maryland

BEP’s Fort Worth facility was built in order to ensure reliable currency production in the event of any disruption of operations at the D.C. facility. BEP was able to obtain donated land and a building in Fort Worth and therefore did not need to purchase land or construct a new facility.¹⁰ Specifically, in 1986, BEP accepted a proposal from the City of Fort Worth that included 100 acres of donated land and a donated building shell to be built to BEP’s specifications. BEP then used its revolving fund to pay for the building’s interior retrofitting, including a central energy plant and installation of currency presses. The Fort Worth facility began

¹⁰The Department of the Treasury has the authority to accept gifts of real and personal property for the purpose of aiding or facilitating the work of the Department of the Treasury. 31 U.S.C. § 321(d)(1).

producing notes in December 1990 and was intended to produce around 25 percent of U.S. notes. According to BEP officials, as a result of increased demand for U.S. notes and production limitations associated with the D.C. facility, the Fort Worth facility has produced an increasingly large share of notes. In fiscal year 2016 the Fort Worth facility produced nearly 60 percent of notes, while the D.C. facility produced the remaining 40 percent.

BEP's Proposal for a New Production Facility Considered Project Costs and Feasibility, Security, Efficiency, Safety, and Future Flexibility

BEP Studies from 2010 to 2017 Determined the Cost and Feasibility of Multiple Alternatives

From 2010 through 2017, BEP contracted for various studies to investigate alternatives, costs, potential sites, and program requirements to ensure future currency production in the D.C. area (see table 1 for details of the studies).¹¹ In BEP's 2013 study and since then, the agency has focused on three alternatives:

- "Renovation"—a major renovation of the current facility
- "New build"—a new building in a different location that would house currency production and all administrative functions
- "Hybrid"—a new building in a different location that would house currency production, but having administrative functions in one of its current buildings

According to BEP officials, the cost estimates in the 2013 study were an important factor in their preference for a new facility instead of a renovation.

¹¹Bureau of Engraving and Printing, *Feasibility Study for Renovation and/or Relocation of the Washington, DC Facility* (Dec. 15, 2010); Bureau of Engraving and Printing, *Facility Strategic Alternatives Study* (Jan. 23, 2013); *Federal Agency Initial Site Investigation and Screening* (Sept. 30, 2015); Bureau of Engraving and Printing, *Future Workplace Recommendations Report* (Aug. 17, 2017)

Table 1: Studies Related to a New Production Facility Commissioned by the Bureau of Engraving and Printing (BEP) Since 2010

Date Completed	December 2010	January 2013	September 2015	August 2017
Purpose	Identify and rank nine alternative solutions for future BEP operations	Review and rank three alternatives (new build, renovation, and hybrid) to continue production in the Washington, D.C. area	Identify and rate potential sites for a new BEP production facility within 30 miles of the Washington Monument	Identify program requirements and cost estimates for (1) the hybrid and (2) renovation alternatives.
Conclusion	Ranked the new build option highest	Ranked the new build option highest	Identified 31 federal and non-federal sites	Estimated the cost for (1) the hybrid option at \$1.389 billion and (2) renovation at \$1.957 billion ^a

Source: GAO analysis of BEP data. | GAO-18-338

^aThe cost estimate includes additional project costs determined by BEP.

The 2013 study concluded that BEP should pursue the new build alternative because it was estimated to be the least costly option, could be completed in the shortest time frame, and promised the greatest efficiencies. The study found that the renovation alternative would be the most costly option and take the longest time to complete because it would require BEP to produce currency at its current location while it was being renovated. BEP officials told us this would require moving production equipment from the Main Building to the Annex during the renovation and back to the Main Building once it was renovated.¹² According to GSA officials, renovations are often more costly than new construction. According to Federal Reserve officials, moving large, complex printing presses and machines from one building to another and then back again significantly expands the renovation’s timeframe, as time would be needed to test the machines to get them back into specification. The Federal Reserve further noted that some modern presses will not fit into the Main Building without significant structural alterations, which would add cost and time to a renovation.

Following the release of the 2013 study, BEP proposed to the Secretary of Treasury, with the support of Treasury officials, that Treasury and BEP pursue the hybrid alternative as their first choice (see table 2 for details on BEP’s proposal). BEP officials told us that they, along with Treasury,

¹²Federal Reserve officials noted that equipment past its useful life would most likely be replaced with new equipment and thus not be moved back into the Main Building. However, some equipment could be moved back into renovated space.

selected the hybrid alternative even though the hybrid was more expensive than the new build alternative. According to BEP officials, the cost difference between the hybrid and new build was outweighed by the value of maintaining administrative functions in Washington, D.C., to facilitate the day-to-day decision-making process among BEP, Treasury, and Federal Reserve officials. According to Treasury officials, the ability for other Treasury employees to co-locate in the Main Building after the repurposing is completed would also provide long-term cost benefits to Treasury because Treasury could save on expensive lease agreements in downtown Washington, D.C. Further, Treasury officials noted that it is important that the Treasury Department maintain the Main Building as an asset because of its location and history, and Treasury officials prefer that BEP maintain some functions in the building. The 2017 study provided cost estimates of BEP's and Treasury's preferred hybrid option, as well as the renovation option that BEP officials said they would pursue if BEP does not receive the necessary legal authority to construct a new facility. The study estimated that the hybrid option would cost approximately \$1.389 billion and that the renovation option would cost approximately \$1.957 billion.¹³

Table 2: Current and Proposed Use of Bureau of Engraving and Printing's (BEP) Buildings in the D.C. Area under the Hybrid Alternative

Building	Use	
	Current	Proposed
Main Building	Houses most production functions, some administrative functions, and public tour	Would house primary BEP administrative functions and visitor center; remaining two-thirds of space could house other Treasury bureaus and offices
Annex Building	Houses most administrative functions and some production functions	Would be declared excess and enter GSA's disposal process
Warehouse	Stores production materials	GSA lease would not be renewed once new facility is complete
New construction	Not applicable	Would house all production functions, some administrative functions, a gift shop, and space for a public tour

Source: GAO analysis of BEP data. | GAO-18-338

Federal Reserve officials told us they concur with the 2013 study that a new facility is warranted, that a renovation of the existing facility would be more costly than a new facility, and a renovation would not provide the same degree of efficiency. Federal Reserve officials said that they prefer the new build alternative because the 2013 study identified this alternative

¹³The cost estimates include additional project costs determined by BEP.

as the least expensive option, and would provide a modern, efficient manufacturing process. These officials also told us that, whatever alternative BEP pursues, the Federal Reserve will be financially responsible—whether it is for a new building,¹⁴ a renovated building, or the continuation of the currency production process in the D.C. facility.

BEP officials stated that they support a new building over a renovation because the new build would both be less expensive and have greater benefits than a renovation. Furthermore, BEP officials told us that while they prefer to remain in the D.C. area, they would approve of the construction of a new facility in a different location if necessary. However, BEP officials also told us that if BEP does not get the legal authority necessary to use its revolving fund to purchase land and build a new facility in 2018, BEP will pursue a renovation of the existing D.C. facility beginning at the end of 2018.

BEP Considered Other Factors in Deciding to Propose a New Production Facility

Security

As a federal facility, BEP must meet physical security standards established by the Interagency Security Committee (ISC).¹⁵ According to an assessment conducted by BEP's Office of Security¹⁶, the D.C. facility does not meet many of the necessary requirements for a facility of its security level. While certain security improvements, such as blast resistant windows or vehicle barriers, could be installed if the facility is renovated, other standards could only be addressed with a new facility. Specifically, the current buildings are located in an urban center

¹⁴According to Federal Reserve officials, it is not clear if the Board currently has the authority to acquire land and pay for the construction of the building "shell" for a new BEP facility.

¹⁵The ISC, housed within the Department of Homeland Security, defines the criteria and process used to determine a facility's risk level and the applicable physical security standards for each risk level. Exec. Order No. 12977, 60 Fed. Reg. 54411 (Oct. 24, 1995). Each executive agency and department must cooperate and comply with the policies and recommendations of the ISC except where the Director of Central Intelligence determines that compliance would jeopardize intelligence sources and methods.

¹⁶Bureau of Engraving and Printing, *Facility Risk Assessment* (July 25, 2015).

surrounded by buildings (see fig. 1 above). As a result, according to the assessment, the facility does not have a secure perimeter because it lacks the required setback between the building and any point where an unscreened vehicle can travel or park. BEP officials said that even after a renovation, the facility would continue to have inadequate setback distance. According to the assessment, the facility's designation as a historic building also limits BEP's ability to make changes to the current facility to meet the necessary level of protection. For example, the facility's placement on the historic registry limits BEP's ability to make certain structural changes that could mitigate the building's chances of progressively collapsing in the event of certain types of destructive attacks or actions. BEP's Office of Security attributed certain security deficiencies to the facility's limited setback distance and the buildings' structure, and determined that the D.C. facility is at relatively high risk to threats such as an externally-placed portable explosive device.

Efficiency

BEP aims to provide quality banknotes in an efficient, cost effective manner.¹⁷ However, BEP officials concluded that the layout of the D.C. facility makes production less efficient than the Fort Worth facility. According to BEP production data, from 2013 to 2016, manufacturing costs were higher at the D.C. facility for all comparable denominations. For example, in 2016, production costs of \$1 and \$20 notes were 23 percent and 7 percent higher, respectively, at the D.C. facility compared to the Fort Worth facility.¹⁸ Additionally, the D.C. facility employs more manufacturing personnel than Fort Worth, even though it produces fewer notes (see table 3). BEP officials attributed the difference in the costs to the D.C. facility's multi-floor, multi-wing production layout. Specifically, in D.C., after notes are printed on one side, they are moved to another floor to dry for at least 72 hours, brought back to the original floor to be printed on the opposite side, and again moved to the other floor to dry. In Fort Worth, because the production occurs in one large room on one floor, these processes occur in adjacent spaces on the same floor. As a result, according to BEP, notes travel more than twice as far during production in the D.C. facility.

¹⁷Bureau of Engraving and Printing, *2014-2018 Strategic Plan*.

¹⁸Manufacturing cost includes depreciation costs. Each note costs a different amount because of variations in processes and materials used. Note production is divided between the two facilities, but each facility does not produce every denomination. Therefore, only the \$1 and \$20 programs are comparable between the two facilities.

Table 3: Fiscal Year 2016 Production Reported by the Bureau of Engraving and Printing (BEP) at Washington, D.C., and Fort Worth, Texas, Facilities

	D.C. facility	Fort Worth facility
Percentage of notes produced	42%	58%
Distance travelled by currency paper	5,615 feet	2,230 feet
Manufacturing cost per 1,000 \$1 notes ^a	\$29.62	\$24.07
Manufacturing cost per 1,000 \$20 notes ^b	\$47.59	\$44.61
Number of manufacturing employees ^c	464	422

Source: GAO analysis of BEP data. | GAO-18-338

Note: We did not independently validate the accuracy of these figures.

^aManufacturing cost includes depreciation costs.

^bEach note costs a different amount because of variations in processes and materials used. Note production is divided between the two facilities, but each facility does not produce every denomination. Therefore, only the \$1 and \$20 programs are comparable between the two facilities.

^cNumber of employees is as of September 2017

According to BEP, Treasury, and Federal Reserve officials, a new production facility would offer greater efficiency gains than a renovated facility. According to BEP officials, maintaining production on one floor in an open space improves production efficiency. They added that a renovation of the D.C. facility could include tearing down some walls and raising ceilings, steps that could improve some production processes. However, they also noted that because the D.C. facility qualifies for a historic designation, according to BEP officials, a renovation could not alter the building’s shape. As a result, production would still occur on multiple levels and in separate wings if the facility were renovated. We have reported in the past that agencies faced challenges in rehabilitating and modernizing historic buildings for contemporary use because of their age, specific design characteristics, and their particular historical features.¹⁹

Safety

According to its Strategic Plan, BEP is committed to providing a safe and positive work environment for its employees. However, BEP officials said that manufacturing employees at the D.C. facility face greater injury risk than at the Fort Worth facility. According to BEP workers’ compensation claim data, approved workers’ compensation claims at the D.C. facility accounted for approximately 67 percent of BEP’s approved claims from

¹⁹GAO, *Federal Real Property: Improved Data Needed to Strategically Manage Historic Buildings, Address Multiple Challenges*, [GAO-13-35](#) (Washington, D.C.: Dec. 11, 2012).

fiscal year 2013 through fiscal year 2016, or 200 of 297 approved claims. BEP officials attributed the higher number of workers' compensation claims in the D.C. facility to the relatively high number of employees needed to produce fewer notes (see table 3) and the increased opportunity for employee injury because production material must be transported farther and between floors. BEP officials estimated that approximately 65 to 70 percent of all worker injuries are related to materials handling.

BEP officials noted that there is an estimated \$196-million deferred-maintenance backlog at the D.C. facility. This backlog includes maintenance to the facility's electrical and architectural systems. Even if BEP had taken care of these maintenance issues in the past, it would not negate the need for a renovation or a new facility. BEP officials noted that a renovation would reduce some safety concerns, such as upgrading the facility's electrical systems and adding more fire-rated exits as required by Occupational Safety and Health Administration regulations;²⁰ however, a renovation would not be able to address the multi-floor production process that BEP officials attributed to employee injuries.

Flexibility

According to BEP officials, it is important for BEP to maintain flexible currency production to respond to production needs that may change over time. Specifically, BEP officials said that a production facility should have the ability to adapt to changes in production equipment. Both BEP and Federal Reserve officials told us that the new equipment likely will be larger than current machinery. According to a representative from a leading currency printing equipment manufacturer from which BEP buys its printing equipment, future equipment is unlikely to decrease in size. BEP officials said that, while the D.C. facility could be renovated to accommodate larger equipment, it would not be possible to replicate the large, open production floor of the Fort Worth facility, which allows for simple installation of equipment. BEP officials told us that, unlike the current D.C. facility, a new production facility would be able to easily

²⁰29 C.F.R. § 1910.36. The Occupational Safety and Health Administration (OSHA) within the Department of Labor sets and enforces workplace standards to assure safe and healthful working conditions.

accommodate the printing equipment necessary for security features that BEP is currently developing for the next currency redesign.²¹

Flexibility is also an important factor when considering the future demand for currency. The demand for currency fluctuates, and recent changes in how the public makes purchases could affect the demand for currency. Some observers have noted that the increased use of new payment technologies—such as online banking and phone applications—as well as the rise in online purchases may lead to a substantially reduced demand for currency. In a few countries, such as Sweden, noncash transactions have become common and the demand for currency has fallen substantially.

In the United States, there are several indications that currency demand will not substantially decline within the next decade. For example, the yearly number of U.S. currency notes in circulation increased by 43 percent from 2008 to 2016. In addition, the number of ATMs in the United States continues to grow, and a 2016 Federal Reserve study of consumer payment choice found that cash still accounted for 32 percent of all transactions, and more than 50 percent of transactions under \$25.²² This continued strength in the demand of cash has several sources.²³ Cash can be seen as a hedge against uncertainties, such as natural disasters or political or economic turmoil, and also has advantages related to privacy, anonymity, and personal data security. Moreover, according to the Federal Deposit Insurance Corporation, approximately 25 percent of U.S. households have limited access to the products and services of the banking industry, and therefore, these “unbanked” and “underbanked”

²¹Additionally, a court order requires Treasury to “take such steps as may be required to provide meaningful access to United States currency for blind and other visually impaired persons...not later than the date when a redesign of that denomination is next approved by the Secretary of the Treasury.” *Am. Council of the Blind v. Paulson*, 581 F. Supp. 2d 1 (D.D.C. 2008). BEP recommended pursuing a tactile feature as a potential means of identifying each denomination by way of touch. See 75 Fed. Reg. 28331 (May 20, 2010). As we previously reported, the Secretary of the Treasury approved BEP’s approach on May 31, 2011. See GAO, *U.S. Currency: Reader Program Should Be Evaluated While Other Accessibility Features for Visually Impaired Persons Are Developed*, [GAO-14-823](#) (Washington, D.C.: Sept. 26, 2014).

²²*The State of Cash*, Cash Produce Office Federal Reserve System, November 2016.

²³One source of U.S. currency demand is from people in other countries. About half of the outstanding value of U.S. currency is held outside the United States, largely in the form of \$100 denominated notes. Foreign demand for U.S. currency derives from its role as a global reserve currency and reliable store of value.

populations, who may not have many alternative means of payment, rely largely on cash.

Federal Reserve and Treasury officials we spoke with do not believe that the use of cash in the U.S. will decline in any significant way over the next decade. In particular, the Federal Reserve predicts a continued rise in demand for cash over the next 10 years, despite the increased availability of noncash payment options, indicating that a new or renovated facility will still be required for currency production. According to BEP officials, a new production facility would better manage the ebbs and flows in the future demand for currency than a renovation of the current facility. Specifically, should production demand increase, a new production facility could be designed to easily scale to meet new production requirements. Conversely, should the demand for currency decline in the coming years or substantially decline in the future, unused space in a new facility could be partitioned off and be used for other purposes or by another Treasury agency.

BEP Generally Followed Leading Capital-Planning Practices, and Its 2017 Cost Estimate Partially Met the Characteristics of a Reliable Cost Estimate

BEP Generally Followed Applicable Leading Capital-Planning Practices

Capital investments in infrastructure can require significant resources to construct, operate, and maintain over the course of their life-cycle. Leading capital-planning practices can help agencies determine the resources needed to meet their mission, goals, and objectives and how to efficiently and effectively satisfy those needs throughout the capital decision-making process. As shown in table 4, we found that BEP's capital investment decision-making process that resulted in its decision to pursue a new currency-production facility (as part of the previously

described hybrid option) followed three applicable capital-planning leading practices and substantially followed the fourth.²⁴

Table 4: GAO’s Assessment of the Bureau of Engraving and Printing’s Adherence to Leading Capital-Planning Practices for Its Proposed New Currency Production Facility

Leading practice	Key Activities	Assessment
Needs assessment	<ul style="list-style-type: none"> Considers the capability of existing resources as well as current information on asset condition. Using this information, an organization can make decisions about where to invest in facilities. Identifies the resources needed to fulfill both immediate requirements and anticipated future needs. 	Followed ^a
Alternatives evaluation	<ul style="list-style-type: none"> Determine how best to bridge performance gaps by identifying and evaluating alternative approaches. Before choosing to purchase or construct a capital asset or facility, leading organizations carefully consider a wide range of alternatives and funding options, such as using existing assets, leasing, or privatizing the activity 	Substantially followed ^b
Strategic linkage	<ul style="list-style-type: none"> Provide a long-range plan for the capital asset portfolio in order to meet the goals and objectives in the agency’s strategic plans. Agency strategic plans should identify capital assets and define how they will help the agency achieve its goals and objectives. 	Followed ^a
Long-term capital plan	<ul style="list-style-type: none"> The long-term capital plan should be the final and principal product resulting from the agency’s capital-planning process. The capital plan should cover 5 years or more, updated annually or biennially, and should reflect decision makers’ priorities for the future. Capital plans should include a statement of the agency mission, strategic goals and objectives; and a description of the agency’s planning process. 	Followed ^a

Source: GAO analysis of Bureau of Engraving and Printing’s capital planning process. | GAO-18-338

^aFollowed: BEP provided evidence that it fully followed the activities associated with the practice.

^bSubstantially followed: BEP provided evidence that it followed most of the activities associated with the practice.

Needs assessment: BEP followed this leading practice, which calls for comprehensively assessing the resources needed as a basis for investment decisions. BEP conducted a facility condition assessment in 2004 that contributed to BEP’s effort to seek a new production facility, resulting in the studies from 2010-2017 discussed above. The assessment identified the current condition of the facility and the facility’s capabilities, including production inefficiencies that led BEP to begin a multi-year effort to determine its immediate and future infrastructure

²⁴GAO, *Executive Guide: Leading Practices in Capital Decision-Making*. [GAO/AIMD-99-32](#) (Washington, D.C.: December 1998); and OMB, *Capital Programming Guide, Supplement to Office of Management and Budget Circular A-11: Planning, Budgeting, and Acquisition of Capital Assets* (2017).

needs. BEP also determined in 2004 that the agency had almost \$200 million in deferred maintenance needs. BEP officials told us that they consulted with Federal Reserve officials²⁵ and concluded that it would not be prudent to spend substantial funds to address this deferred maintenance. For example, officials determined that it would not be prudent to replace the heating and plumbing systems while pursuing a new production facility. As a result, BEP deferred some maintenance items, such as replacing heating systems, which would not compromise safety and production. However, BEP officials said that they prioritized and maintained critical items, such as its cleaning and recycling systems, and implemented energy conservation initiatives to help reduce costs. As of October 2017, BEP's deferred maintenance backlog was about \$196 million.

Alternatives evaluation: BEP substantially followed this leading practice, which calls for a determination of how best to bridge performance gaps by identifying and evaluating alternative approaches. As noted above, BEP first considered multiple alternatives on how to achieve its mission to efficiently produce banknotes. Further, BEP considered different methods to fund and obtain land and a shell for a new production facility (see table 5). To evaluate alternatives for the location of a new facility, a contractor identified, in 2015, potential construction sites in the D.C. area and compared each site to a set of criteria. However, BEP officials told us that they discounted locations outside the metropolitan D.C. area because they believed it would be costly to relocate employees or hire and train new manufacturing personnel to replace employees who do not relocate. BEP officials said that the few employees who relocated from the D.C. facility to the Fort Worth facility when it first opened were paid \$50,000 each for their move. Based on these factors, BEP focused on a D.C.-area location and did not conduct an analysis of the financial implications of building a new facility outside the D.C. area, where construction or other costs could be less expensive.

²⁵The Federal Reserve is required to pay all costs incurred by BEP for the production of currency notes. 12 U.S.C. § 420. According to Federal Reserve officials, for expenses greater than \$1 million, BEP notifies the Federal Reserve in accordance with an agreement codified in a Memorandum of Understanding between Treasury and the Federal Reserve. Federal Reserve officials told us this is not approval authority, but it gives the Federal Reserve the ability to ask questions before such large purchases are made. Federal Reserve officials told us that they have no document related to the maintenance needs and deferral of key maintenance activities; however, BEP may have informed Federal Reserve staff of its decision to defer such costs in light of Treasury's pursuit of a new facility.

Table 5: Alternative Methods BEP Considered to Fund and Obtain Land and a Building for a New Production Facility

Method considered	Justification given for not selecting an alternative
Donated land and building shell	According to BEP officials, given the high value of land in the D.C. area, it is unlikely that a private entity or municipal government would donate land and a building shell.
Swap-construct exchange	BEP officials explored the idea of entering into a “swap-construct” exchange in which a private developer would build a new facility for BEP in exchange for title to BEP’s current building(s). However, GSA determined that a “swap-construct” exchange would not be feasible in this case because of the long timeline required to migrate the existing production equipment to a new production facility. In addition, GSA has limited experiences with swap-construct projects and recent attempts have been cancelled. ^a
Congressional appropriations	BEP officials inquired about receiving congressional appropriations to fund the land purchase and construction, but Treasury, OMB, and GSA officials said that since the purpose of a new production facility would be to produce currency notes, the funds should originate from the Federal Reserve.
Federal Buildings Fund	BEP and GSA officials discussed using funds appropriated from the Federal Buildings Fund to purchase land and construct a building; however officials believed that Congress would be unlikely to appropriate such funds since BEP does not pay rent into the Federal Buildings Fund.

Source: GAO analysis | GAO-18-338

^aGAO, Federal Real Property: Observations on GSA’s Canceled Swap Exchange Involving Buildings in the Federal Triangle South Area, [GAO-16-571R](#) (Washington, D.C.: June 16, 2016)

Strategic linkage: BEP followed this leading practice, which stresses the importance of linking plans for capital asset investments both to an organization’s overall mission and to its strategic goals. In the 2014-2018 Strategic Plan, BEP noted that it would seek approval to proceed with the 2013 study’s recommendation to construct a new production facility. According to the strategic plan, a new production facility would help achieve BEP’s long-articulated strategic goal of being a printer of world-class currency notes, providing its customers and the public with superior products through excellence in manufacturing and technological innovation. Furthermore, Treasury concurred with BEP’s assessment and added its request for legal authority to purchase land and build a new facility in the fiscal year 2018 President’s Budget proposal.

Long-term capital plan: BEP followed this leading practice, which calls for a capital plan that documents an agency’s decisions and describes its mission, planning process, and risk management, among other things. BEP completed all of the key activities associated with this practice. For example, in its fiscal year 2018 capital investment plan, BEP lays out the purpose, goals, and benefits of a new currency production facility. It also notes the implications of exposing currency production to vulnerabilities relating to potential facility systems failures and inefficiencies.

BEP's 2017 Cost Estimate Partially Met the Four Characteristics of a High-Quality, Reliable Estimate

A reliable cost estimate—a summation of individual cost elements—is critical to support the capital planning process by providing the basis for informed investment decision-making, realistic budget formulation and program resourcing, and accountability for results. BEP's 2017 cost estimate includes a contractor-developed estimate of the cost for the construction of a new production plant and the repurposing of the Main Building for BEP's administrative offices (the hybrid alternative) and a BEP-developed estimate of additional project costs, such as additional production equipment and real estate acquisition. We found this estimate partially met the four characteristics of a high-quality, reliable cost estimate (see table 6). In developing this estimate, BEP relied on GSA guidance that was available at the time.²⁶ That guidance did not refer to leading practices for cost estimates that are identified in GAO's Cost Guide. GSA has recently updated its guidance to refer to the leading practices in GAO's Cost Guide, and BEP officials told us that they will follow this updated GSA guidance when developing any future cost estimates.

Table 6: GAO'S Assessment of the Extent to Which the Bureau of Engraving and Printing's (BEP) 2017 Cost Estimate Meets the Characteristics of a High-Quality, Reliable Cost Estimate.

Characteristic	Leading practice	Overall assessment
Comprehensive	<ul style="list-style-type: none"> • The cost estimate includes all life-cycle costs. • The cost estimate completely defines the program, reflects the current schedule, and is technically reasonable. • The cost estimate work breakdown structure is product-oriented, traceable to the statement of work/objective, and at an appropriate level of detail to ensure that cost elements are neither omitted nor double-counted. • The cost estimate documents all cost-influencing ground rules and assumptions. 	Substantially met ^a

²⁶The guidance is GSA, *P-120: Project Estimating Requirements for the Public Buildings Service*. GSA Office of the Chief Architect (Washington, D.C.: January 2007). According to GSA officials, GSA updated its guidance to include GAO's best practices in August 2016, after BEP had begun the cost estimating process.

Characteristic	Leading practice	Overall assessment
Well-documented	<ul style="list-style-type: none"> The documentation should capture the source data used, the reliability of the data, and how the data were normalized. The documentation describes in sufficient detail the calculations performed and the estimating methodology used to derive each element's cost. The documentation describes step-by-step how the estimate was developed so that a cost analyst unfamiliar with the program could understand what was done and replicate it. The documentation discusses the technical baseline description and the data in the baseline is consistent with the estimate. The documentation provides evidence that the cost estimate was reviewed and accepted by management. 	Partially met ^b
Accurate	<ul style="list-style-type: none"> The cost estimate results are unbiased, not overly conservative or optimistic, and based on an assessment of most likely costs. The estimate has been adjusted properly for inflation. The estimate contains few, if any, minor mistakes. The cost estimate is regularly updated to reflect significant changes in the program so that it is always reflecting current status. Variances between planned and actual costs are documented, explained, and reviewed. The estimate is based on a historical record of cost estimating and actual experiences from other comparable programs. The estimating technique for each cost element was used appropriately. 	Partially met ^b
Credible	<ul style="list-style-type: none"> The cost estimate includes a sensitivity analysis that identifies a range of possible costs based on varying major assumptions, parameters, and data input. A risk and uncertainty analysis was conducted that quantified the imperfectly understood risks and identified the effects of changing key cost driver assumptions and factors. Major cost elements were cross-checked to see whether results were similar. An independent cost estimate was conducted by a group outside the acquiring organization to determine whether other estimating methods produce similar results. 	Partially met ^b

Source: GAO analysis of Bureau of Engraving and Printing's cost estimates. | GAO-18-338

^aSubstantially met: BEP provided evidence that it followed most of the practices associated with the characteristic.

^bPartially met: BEP provided evidence that it followed about half of the practices associated with the characteristic.

Comprehensive: BEP's 2017 cost estimate substantially met the comprehensive characteristic. For example, the estimate included most life-cycle cost components, defined the program and its current schedule and included a consistent work breakdown structure. However, the estimate did not include operating and sustainment costs or information regarding the ground rules and assumptions used to develop the costs.

Well documented: BEP's 2017 cost estimate partially met the well-documented characteristic. For example, the estimate documented the source data and the technical assumptions used for the construction

costs, which were reviewed by GSA and BEP personnel. However, documentation for the contractor's estimate and its sources for the factors used in the estimate did not include details to enable an outside cost analyst to replicate the work. According to BEP officials, the cost data are the contractor's proprietary data. BEP officials also told us that sources for the factors used were based on subject matter expert opinion.

Accurate: BEP's cost estimate partially met the accurate characteristic. While we found minor rounding errors and no errors in the model build-up calculations and did not find any calculation or adjustment errors in the estimate, the estimate nonetheless did not provide information regarding the bias of the costs and the appropriateness of the estimating technique used. However, BEP did follow industry standards to develop contingency costs for a pre-design estimate for a program that has not yet been authorized. We also found that \$515 million of the internal estimate (37 percent of the program's total cost estimate) was based on undocumented subject matter opinion or escalated incorrectly from the 2013 study estimate. Further, BEP's estimate did not use the same construction year mid-point as its contractor for the inflation assumptions. According to BEP officials, that lack is because BEP's costs were projected based upon the contractor's estimate of fiscal year 2022, while the production equipment was escalated to fiscal year 2021 because this is the projected year for purchasing equipment. The officials also acknowledged that this rationale, however, was not documented in the cost estimate. BEP clarified that the estimates did not explicitly state a confidence level because the estimate is in the pre-planning stage. They added that it is common in the design and construction industry that contingencies are applied to the estimate based on the completeness of design, and as the design progresses, these contingencies are reduced as more becomes known about the project. As there have not been actual costs yet, variances between planned and actual costs have not been documented, explained, and reviewed.

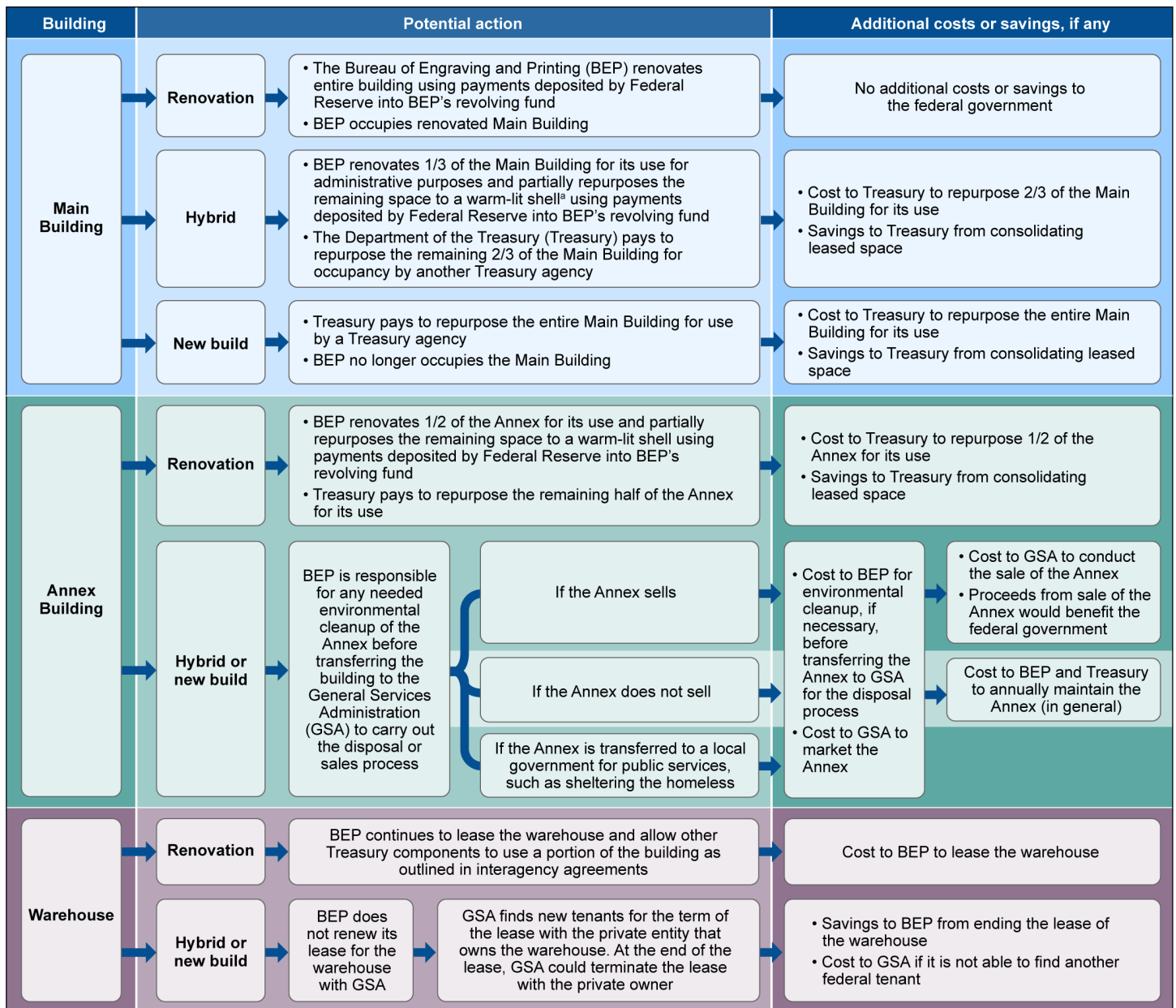
Credible: BEP's 2017 cost estimate partially met the credible characteristic. For example, BEP provided documentation showing that both BEP and GSA reviewed the contractor's construction estimate and its technical assumptions. However, the estimate did not include a sensitivity analysis for the construction costs, a risk and uncertainty analysis, or cross-checks to see whether similar results could be obtained. A cross-check could include an independent cost estimate conducted by an outside group to determine whether other estimating methods would produce similar results, but BEP officials told us that no independent cost estimate was developed because this was too early in

the project to do such a comparison and that the construction estimate was developed in response to a government contract statement of work to prepare a preliminary budget forecast for BEP. Rather, BEP relied on what it characterized as an extensive review by BEP management and GSA officials.

Ability to Sell or Repurpose Potentially Vacant Space Could Affect the Total Cost to the Federal Government

The alternative that BEP pursues could have a financial effect on the federal government and ultimately taxpayers. Below, we discuss potential costs and potential savings associated with the disposition of the three buildings under the different scenarios based on our review of BEP documents and interviews with Treasury and GSA officials (see fig. 2). For example, Treasury, which has custody and control over the Main Building and the Annex, could experience costs if it needs to spend money to upgrade these buildings, but could also experience savings if it can repurpose the buildings or consolidate its employees into fewer buildings. GSA, which serves as the federal government's primary real property and disposal agent, could incur costs for the marketing and disposal process, but could create savings for the government if it could repurpose or sell any vacated buildings. Proceeds from sales of Treasury-controlled facilities would benefit the federal government.

Figure 2: Potential Disposition and Funding of BEP’s Washington, D.C., Facility and Related Potential Costs or Savings



Source: GAO analysis of BEP, Treasury, and GSA data. | GAO-18-338

^aA “warm lit shell” is a commercial or residential building with a minimally finished interior, usually with ceilings, lighting, plumbing, heating and cooling (HVAC), interior walls (painted or unpainted), electrical outlets, elevators, rest rooms, and a concrete floor. A warm lit shell is considered ready to lease and ready for tenant improvements.

Note: The Federal Reserve deposits payments for currency production, including BEP's operational expenses, into BEP's revolving fund. BEP uses its revolving fund to pay for all of its operational costs.

While it is possible to identify some potential costs and benefits, it is too early to determine which costs or benefits may be realized or to attempt to quantify them. GSA and Treasury officials told us that the actions of other agencies or interested third parties (e.g., those potentially interested in purchasing the Annex) would affect the costs and cost-savings of any alternative. In addition, there are factors outside of the government's control, such as timing and market conditions, that could affect costs and cost-savings. For example, changes in the Washington, D.C., real estate market could affect the opportunity to sell the Annex. Based on interviews with officials at GSA, Treasury, the Federal Reserve, and BEP, we have identified the following potential costs and savings for each building.

Potential costs and savings associated with the Main Building: Both BEP and Treasury officials told us that the Main Building will remain under Treasury's custody and control, regardless of which alternative BEP undertakes.

- **Renovation:** BEP would use its revolving fund to replace existing heating/cooling systems and windows in the Main Building with higher efficiency ones. Ideally, there would be some long-term cost savings because the new systems would be less costly to operate. However, BEP officials told us that a renovation may be more expensive than currently estimated because the Main Building is over 100 years old and there could be unforeseen expenses depending on what is found once walls and ceilings are removed.
- **New build:** Treasury would likely pay to renovate the Main Building once BEP vacates it because the Main building would remain under Treasury's custody and control. The cost of this renovation could be partially offset by savings associated with co-locating other Treasury offices in the Main Building after the renovation is complete. For example, Treasury bureaus currently have 15 leased facilities with about 1.9-million square feet in the downtown D.C. area. The annual cost of these facilities is \$91.7 million. While, not all of the employees currently in leased space could move into a renovated Main Building, the Main Building's 530,000 square feet could provide opportunities to reduce leasing costs. However, because these potential renovations and staff moves are not likely to occur for several years, Treasury officials told us that they are not able to determine either the costs or benefits of moving Treasury staff to the Main Building.

-
- **Hybrid:** BEP's revolving fund would pay for the renovation of one-third of the Main Building that would serve as BEP's administrative office and a future visitors' center. This step would leave the remaining two-thirds to be renovated to a "warm lit shell"²⁷ to allow others to occupy the building. At this time, Treasury does not know what entity or account would pay for the renovation of the remaining two-thirds because, according to Treasury officials, they have not determined what the use of the balance of the Main Building would be, including what entity would fund any modifications needed for new occupants. If Treasury decided to use the Main Building for its own staff, then Treasury could fund the cost to convert to offices for other Treasury agencies. Under this scenario, there is both a cost to Treasury to renovate the space it plans to use as well as a savings in having Treasury staff vacate other leased space and move to a Treasury-controlled building.

Potential costs and savings associated with Treasury's Annex: The Annex could either remain for BEP's administrative offices or could be declared excess and transferred to GSA for disposal.

- **Renovation:** BEP's revolving fund would cover the cost of renovating the entire Annex as a "warm lit shell" and a more extensive renovation of the portion of the Annex that BEP would use first as temporary space for its currency printing equipment and then permanently for its administrative office. According to BEP officials, the Annex would be renovated to accommodate currency-printing lines that would be relocated from the Main Building in order for the Main Building to be renovated. Once the Main Building is renovated, the Annex would then be renovated to become administrative space for BEP. This process could be quite costly and take more time as the Annex would be renovated twice for different purposes. However, if the unused part of the Annex could be used by Treasury for other Treasury offices, there could be some cost savings to Treasury. According to BEP officials, while BEP would use its revolving fund to renovate the Annex to a "warm lit shell," the agency that ultimately occupies the unused space would be responsible for the costs associated with repurposing that space for its own purposes.

²⁷A "warm lit shell" is a commercial or residential building with a minimally finished interior, usually with ceilings, lighting, plumbing, heating and cooling (HVAC), interior walls (painted or unpainted), electrical outlets, elevators, rest rooms, and a concrete floor. A warm lit shell is considered ready to lease and ready for tenant improvements.

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- **New build and Hybrid:** BEP's revolving fund would pay for any necessary environmental clean-up needed in order for the Annex to be declared as excess and transferred to GSA for disposal. GSA, as part of its mission, would incur costs such as marketing, conducting the disposition process, and concluding the property transfer. GSA's disposal process can result in the building being transferred for use by another Federal agency, being sold to a local or state government via a negotiated sale, being conveyed to a public entity or eligible non-profit for public uses (e.g. homeless use), or being sold to a private party via a public sale. As the Annex is centrally located in Washington, D.C., the building could be attractive to potential developers.²⁸ GSA recently sold another federal building near the Annex for over \$30 million. GSA officials believe that there would be significant market interest in the Annex due to the Annex's location and recent private development in the area. Treasury and GSA officials stated that proceeds from the sale of the Annex would be deposited into the Land and Water Conservation Fund to benefit the federal government.²⁹

On the other hand, there is no guarantee that GSA would be able to sell the Annex: our previous work found that the most frequent method of disposal for federal buildings from fiscal years 2011 through 2015 was demolition (57 percent) rather than sale (14 percent). Federal buildings identified for disposal may not be suitable for sale for reasons such as their age, location, and condition, factors that often make demolition the preferred disposal method. The unique configuration of the Annex with its five wings, its age and condition, and historic-designation eligibility could deter some potential buyers. The future demand for the building, interest from private-sector buyers, and the general economic and real estate market are

²⁸Part of the Annex is a small building known as the "Railroad Siding Building." The building sits on a larger tract of land owned by a private developer. According to BEP officials, the land was transferred by the District of Columbia Redevelopment Land Agency to the developer subject to an easement that preserves BEP's property interest in the building. BEP officials are uncertain as to what would happen to this property interest if Treasury declares the Annex as excess.

²⁹According to Treasury officials, Treasury does not have the authority to retain proceeds from sales of its buildings. According to Treasury and GSA officials, the proceeds from the sale of the Annex would be deposited into the Land and Water Conservation Fund. See 54 U.S.C. § 200302. Amounts in the fund must be appropriated before they can be used. Once appropriated, amounts in the fund are generally available for purposes related to land and water acquisitions for national parks, national forests, and national wildlife refuges, or as otherwise permitted in the appropriation act making them available.

uncertain and can change quickly. If the Annex is not sold and remains on the government's real property inventory, generally BEP or Treasury would be responsible for any annual maintenance costs for the building.³⁰ Alternatively, the unsold Annex could be donated to a state or local government that would then be responsible for maintenance costs.

Potential costs and savings associated with the leased warehouse: The warehouse is a GSA-leased property.

- **Renovation:** BEP would continue its annual leasing of the warehouse, which would still be needed to accommodate large trucks that cannot access the D.C. facility. The current lease costs approximately \$3.4 million each year, and BEP recovers about \$500,000 per year of these costs by permitting other Treasury components to use the building through interagency agreements.
- **New build and Hybrid:** If BEP discontinued its lease after a new facility is completed, it would save approximately \$2.9 million per year. If BEP ended its lease prior to the end of the lease term, GSA would need to find another entity to occupy the warehouse for the remainder of the lease term.

Agency Comments

We provided copies of the draft report to the BEP, GSA, the Federal Reserve, and Treasury for review and comment. BEP coordinated with Treasury in providing comments. In these comments, reproduced in Appendix I, BEP emphasized the factors that led BEP to determine that a new facility is the preferred alternative for its currency production process and acknowledged our findings on those factors. BEP and the Federal Reserve also provided technical comments, which we incorporated as appropriate. GSA did not provide comments.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the Director of the Bureau of Engraving and Printing, the Secretary of the Treasury, the Chair of the Federal Reserve Board, and the Administrator of the General Services

³⁰Generally, the landholding agency is responsible for the cost of protection and maintenance of excess or surplus property until the property is transferred or disposed, but generally not for more than 15 months. 41 C.F.R. § 102-75.970.

Administration. In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-2834 or RectanusL@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix II.

Sincerely yours,

A handwritten signature in black ink that reads "Lori Rectanus". The signature is written in a cursive style with a large, looping initial "L".

Lori Rectanus
Director, Physical Infrastructure Issues

Appendix I: Comments from the Department of the Treasury

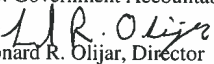


DIRECTOR

DEPARTMENT OF THE TREASURY
BUREAU OF ENGRAVING AND PRINTING
WASHINGTON, D.C. 20228

March 9, 2018

MEMORANDUM FOR: Lori Rectanus, Director – Physical Infrastructure Team
U.S. Government Accountability Office

FROM: 
Leonard R. Olijar, Director
Bureau of Engraving and Printing
Department of the Treasury

SUBJECT: Bureau of Engraving and Printing Facility Planning
Draft Report Agency Comments
GAO Engagement Code: 101990/GAO-18-338

The Bureau of Engraving and Printing (BEP) thanks the members of the U.S. Government Accountability Office (GAO) review team for their professionalism while reviewing the options for and federal costs of a future production facility to manufacture United States Federal Reserve notes (FRNs). The BEP preferred option – to build a new production facility in the Washington, D.C. area and renovate some administrative space in its current DC facility – would: (1) save federal costs; (2) allow for a secure perimeter that meets federal building security standards; and (3), improve production efficiencies by enabling the BEP to manufacture FRNs on a single production floor utilizing modern processes and equipment.

The GAO found the BEP generally followed leading capital planning practices relevant at the time, and its 2017 cost estimate of a new production facility partially met the characteristics of a reliable cost estimate. As acknowledged in the GAO report, the BEP relied on the General Service Administration guidance that was available at the time, which did not refer to the leading practices for cost estimates identified by GAO in its cost guide. In addition, GAO verified the reliability of the BEP data gathered from multiple facility studies conducted over the past three decades that all concluded the agency would be best served by construction of a new production facility.

In order to stay ahead of worldwide counterfeiting trends and threats amplified by ever-improving commercial and non-commercial printing capabilities, the BEP must recapitalize its production equipment and Washington, DC facility. The current production environment in the facility is inadequate to meet the challenges of counterfeit deterrence and complete the robust annual currency order from the Board of Governors of the Federal Reserve System (Board), all while maintaining or surpassing world-class quality currency note standards. For this reason, the Department of the Treasury, the Office of Management and Budget, and the White House included a legislative proposal in both the Fiscal Year (FY) 2018 and 2019 Presidential Budget Submissions to Congress that would enable the BEP to lower federal costs by building a new facility in the Washington, DC area.

The BEP agrees with GAO's analysis that a new production facility and some renovated administrative space in its current Washington, DC facility would accommodate modern, more efficient equipment, and based upon the FY 2019 Presidential Budget Submission to Congress would save the federal government \$579 million dollars in comparison to the alternative of renovating the BEP's 100-year-old, multi-story buildings in downtown Washington, D.C. As a result of this notable savings, the Congressional Budget Office scored the legislation requested by the BEP to authorize construction of a new production facility as a cost-neutral proposal. Of course, all construction program estimates are a snapshot in time and are subject to change with the passage of time due to inflationary pressures.

During its review, GAO also heard from Board officials who concur a new facility is warranted, because multiple studies have indicated renovation of the existing facility would be more costly and would not provide the same degree of production efficiency. Board officials indicated they prefer the new building alternative because it is the least expensive option. These officials also told GAO the Board will be financially responsible for funding a new facility.

The BEP would be able to continue its manufacturing operations, but will not gain any significant production efficiencies by renovating its antiquated, multi-floor facilities in Washington, DC. In addition, high operating costs that would be eliminated in a modern, warehouse-like production facility would continue, as would the exorbitant maintenance costs that result from force-fitting manufacturing operations in a downtown office building. While U.S. currency dates back to the 1800s, it must be considered a contemporary product requiring a twenty-first century production facility. If not, the Government of the United States will continue to bear unnecessary costs, as well as unnecessary risks associated with process inefficiencies.

To satisfy the manufacturing needs of the next generation of state-of-the-art currency note design, as well as the BEP's commitment to quality, the agency will need to initiate large-scale renovations of its existing facilities if it does not obtain the requisite statutory authority to construct a new production facility in the Washington, DC area in a timely manner. Renovating existing facilities, which can be done without congressional action, would forgo the manufacturing efficiencies that would be realized by creating a new, streamlined facility. It also would eliminate the anticipated reduction of approximately 25 percent of the BEP's real estate portfolio, and the estimated \$579 million in cost savings that would result from constructing a new facility.

The BEP is not an ordinary government agency requiring an ordinary government building. The BEP is a manufacturing facility – a printing plant – which produces an iconic commodity trusted worldwide. GAO is aware the BEP has studied the issue of recapitalizing its DC-based equipment and facilities for decades. The studies show clear and justified reasoning for a new production facility.

The BEP's mission requires a near-term decision: to proceed with a new facility; or embark on costly renovations of the existing Washington, DC facility. It is the BEP's hope that GAO's thorough review of the BEP facility recapitalization program will provide Congress the necessary data to consider and approve the legislation the BEP needs to construct a new facility.

Appendix II: GAO Contact and Staff Acknowledgments

GAO Contact

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Staff Acknowledgments

In addition to the individual named above, John W. Shumann (Assistant Director); Martha Chow (Analyst in Charge); Amy Abramowitz; Lacey Copping; Delwen Jones; Jennifer Leotta; Josh Ormond; and Tomas Wind made key contributions to this report.

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