
Technical Release 18: Implementation Guidance for Establishing Opening Balances

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Summary

Statement of Federal Financial Accounting Standards (SFFAS) 50, *Establishing Opening Balances for General Property, Plant, and Equipment*, permits a reporting entity, under specific conditions, to apply alternative methods in establishing opening balances for general property, plant, and equipment (PP&E).

This Technical Release (TR) provides additional guidance to those reporting entities in applying the alternative methods. This TR explains the alternative valuation methods in greater detail and describes examples of the acceptable types of documentation that may support the valuation as outlined in SFFAS 6, *Accounting for Property, Plant, and Equipment*, as amended. This TR does not provide guidance on the validation of the existence and completeness of general PP&E.

The alternative methods provided in SFFAS 50 are meant to be less costly options to implement generally accepted accounting principles when establishing opening balances for general PP&E. This TR acknowledges that the reporting entity may select any of the alternative methods and that there is no preferred method. Management is not required to select the most precise or best method.

While this TR is specific to reporting entities that apply SFFAS 50 or the alternative methods, there are additional TRs the reporting entity may find helpful and still apply. For example, TR 13, *Implementation Guide for Estimating the Historical Cost of General Property, Plant, and Equipment*, addresses the estimation of historical cost, one of the deemed cost methods.

Materiality

The provisions of this TR need not be applied to immaterial items. The determination of whether an item is material depends on the degree to which omitting or misstating information about the item makes it probable that the judgment of a reasonable person relying on the information would have been changed or influenced by the omission or the misstatement.

Table of Contents

	Page
Summary	1
Technical Guidance	3
Scope	3
Alternative methods	3
Effective Date	24
Appendix A: Basis for Conclusions	25

Technical Guidance

Scope

1. Readers of this Technical Release (TR) should first refer to the hierarchy of accounting standards in Statement of Federal Financial Accounting Standards (SFFAS) 34, *The Hierarchy of Generally Accepted Accounting Principles, Including the Application of Standards Issued by the Financial Accounting Standards Board*. This TR supplements the relevant accounting standards but is not a substitute for and does not take precedence over the standards.
2. SFFAS 50, *Establishing Opening Balances for General Property, Plant, and Equipment*, permits a reporting entity, under specific conditions, to apply alternative methods in establishing opening balances for general property, plant, and equipment (PP&E). This TR provides additional guidance to those reporting entities in applying the alternative methods.

Alternative Methods

3. This implementation guidance provides assistance in applying the alternative methods for opening balances. It explains the alternative valuation methods¹ in greater detail and describes documentation that may support the valuation, as outlined in SFFAS 6, *Accounting for Property, Plant, and Equipment*, as amended. This TR does not provide guidance on validation of the existence and completeness of general PP&E.
4. In Statement of Federal Financial Accounting Concepts (SFFAC) 1, *Objectives of Federal Financial Reporting*, the Federal Accounting Standards Advisory Board (FASAB or "the Board") acknowledges that accounting standards sometimes necessitate judgments about the cost and benefits of producing information or of reporting it differently. The standards-setter must, to some extent, be aware of these potential effects when considering the cost

¹The Accounting and Auditing Policy Committee developed this guidance to explain the alternative valuation methods and describe the documentation that may support the valuation as outlined in SFFAS 6, as amended. Deemed cost (one of the alternative valuation methods) is also an acceptable valuation method for opening balances of inventory, operating materials, and supplies, and stockpile materials. SFFAS 48, *Opening Balances for Inventory, Operating Materials and Supplies, and Stockpile Materials*, amended SFFAS 3, *Accounting for Inventory and Related Property*, to permit alternative valuation methods in establishing opening balances. Reporting entities may reference relevant portions of this guide when establishing opening balances in accordance with SFFAS 3, par. 20, 22-26, 42, 44, and 53, as amended.

and benefits of any given accounting alternative. The benefits of the standards should exceed the cost of applying them.

5. A premise for issuing SFFAS 50 was to consider the cost and benefit associated with establishing general PP&E opening balance information. As explained in the basis for conclusions of SFFAS 50, the Board made the following conclusions:

A6. The Board noted that while DoD has had numerous years to meet the standards and become GAAP compliant, they have not. Conditions remain that existed when FASAB issued many of these standards, and the cost to implement all the standards concurrently is greater than would have been incurred if standards were implemented in a timely manner. The goal of this Statement is to avoid requiring the expenditure of taxpayer dollars in recreating information that would have been of greater benefit in the past (for example, to evaluate major acquisition/construction programs as they were executed), but for which the current use is limited to accountability and assessing the cost of current services. The Board proposed less costly alternatives that will support this objective.

A7. The Board believes assisting DoD with establishing a baseline benefits all parties. Providing a starting point will enable DoD to focus on needed improvements to systems and controls to process transactions going forward and thereby establish and maintain reliable financial information regarding future PP&E acquisitions. Establishing a sound financial management system is of primary importance.

6. The alternative methods provided in SFFAS 6, as amended by SFFAS 50, are meant to be less costly options to implement generally accepted accounting principles (GAAP) for general PP&E; this allows reporting entities to focus on needed improvements to systems and controls to process transactions going forward. By establishing and maintaining reliable financial information, such reporting entities will be more informed about costs of future general PP&E acquisitions.
7. The alternative methods provide the needed flexibility for establishing opening balances. At times, it is not practical or cost effective to determine the historical cost of general PP&E because of inadequate systems and/or insufficient documentation.
8. The alternative methods include (1) using deemed cost as an alternative valuation method for opening balances of general PP&E, (2) selecting between deemed cost and prospective capitalization of internal use software, and (3) allowing an exclusion of land and land rights from opening balances with disclosure of acreage information and expensing of future acquisitions.

Management Responsibility and Documentation

9. Management is responsible for establishing accounting policies, including the determination of which method to use. Any of the methods provided by SFFAS 6, as amended, are acceptable. It appears management would apply cost-benefit considerations and other

practical concerns under different alternatives. It is important to be mindful that the alternative methods for establishing opening balances are based on the concept of reasonable estimates and therefore do not seek precision.² Also, assessments of materiality and cost versus benefit should be guiding factors because cost-beneficial options are a major goal of SFFAS 50.

10. The reporting entity may select any of the alternative methods when establishing opening balances; there is no preferred method among those permitted. Therefore, making comparisons among the methods or attempting to identify the best method is inappropriate. Management should expect to provide adequate documentation that is consistent with the method used and supports the overall reasonableness of the valuation. However, management is not required to select the most precise or best method.
11. Management is also responsible for maintaining adequate documentation of data sources and the application of methodologies. It is reasonable to expect that sufficient, relevant and reliable historical cost information may not be available for general PP&E when applying the alternatives provided by SFFAS 50. In the absence of sufficient, relevant and reliable historical cost information on which to base the valuation, reporting entities should maintain supporting documentation for the alternative method and data used to establish opening balances. Management should expect to support alternative methods with auditable documented information. Adequate documentation of the source of the data and the application of the methodology used will help support management's assertion that the valuations are in compliance with accounting standards in all material respects.
12. The documentation should describe the methodology (alternative method used and description) and the reporting entity's review process to determine that the valuations are reasonable. While the documentation may differ from what is expected to support historical cost, it "should be complete and stand on its own." That is, a knowledgeable, independent person could perform the same procedures in the methodology and replicate the results. This should be maintained in a manner to facilitate the auditor's testing of the alternative methods. If the documentation were from a source that would normally be destroyed, then copies should be maintained for the purpose of reconstructing the amounts.
13. Additional information, including specific examples of documentation that may be acceptable, is included under each alternative method.

²As used in this document, "precision" refers to an exact amount that represents the one correct amount. This is in contrast to a reasonable estimate, which refers to an amount that is within a reasonable range of possible amounts, based on what is being measured.

Deemed Cost

14. The primary focus of this guidance is on the application of deemed cost. Deemed cost is a surrogate for initial amounts and an acceptable valuation method for opening balances for general PP&E. Use of deemed cost is intended to provide a cost-effective approach to the adoption of SFFAS 6, as amended, where historical cost information and systems do not support such balances.
15. Deemed cost may include several valuation methods because the reporting entity may have multiple component or subcomponent reporting entities³ (1) using different methods simultaneously and/or (2) adopting a method permitted under SFFAS 6, as amended, at different times prior to establishing opening balances. Large and complex reporting entities, such as the Department of Defense (DoD), may have used a variety of valuation methods.
16. It is acceptable for the reporting entity to have multiple component or subcomponent reporting entities that use various valuation methods simultaneously. Deemed cost should be based on one, or a combination, of the following three valuation methods permitted by SFFAS 6, as amended: (1) replacement cost, (2) estimated historical cost, or (3) fair value. While no disclosure of the distinction or breakout of the amount of deemed cost of general PP&E included in the opening balance is required, documentation should clearly indicate the valuation method applied to each asset or class of assets.
17. While flexibility is offered, some options require additional disclosures,⁴ such as when component or subcomponent reporting entities elect to apply alternative methods⁵ besides deemed cost. SFFAS 6, as amended, provides that in the event a different alternative method is applied by a subcomponent reporting entity consolidated into a larger reporting entity, the alternative adopted by each significant subcomponent should be disclosed.

³SFFAS 47, *Reporting Entity*, provides that "component reporting entity" is used broadly to refer to a reporting entity within a larger reporting entity. Examples of component reporting entities include organizations such as executive departments and agencies. Component reporting entities would also include subcomponents that may themselves prepare general purpose federal financial reports (GPFFRs). One example is a bureau that is within a larger department that prepares its own standalone GPFFR.

⁴See SFFAS 6, as amended, par. 40.h-i and SFFAS 10, par. 36.f-g for information about disclosures.

⁵As explained in par. 8, the alternative methods used to establish opening balances of general PP&E include (1) using deemed cost as an alternative valuation method for opening balances of general PP&E, (2) selecting between deemed cost and prospective capitalization of internal use software, and (3) allowing an exclusion of land and land rights from opening balances with disclosure of acreage information and expensing of future acquisitions.

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18. Adoption of deemed cost includes various valuation methods that may require the use of assumptions to develop an approximate initial amount when there is no precise means of measurement.
 19. There may be high uncertainty in the underlying assumptions used to establish opening balances under deemed cost methods. This guidance postulates that deemed cost will be subject to an inherent lack of precision because of the limitations regarding information available to the reporting entity. In using deemed cost, the reporting entity should consider the reasonableness of the assumptions selected, the relationship of the assumptions to the available documentation that is consistent with the methodology, and the overall reasonableness of the valuation.
 20. This guidance provides a foundation for preparers to exercise judgment in developing surrogates for use as deemed cost. Unlike some judgments that management makes, deemed cost will not be "trued up" to reflect the actual value in the future. As addressed by SFFAS 50, deemed cost is a surrogate for the actual or historic cost associated with general PP&E, and there is no expectation the deemed cost will be updated or changed for the passage of time, except for error corrections. Said differently, when a reporting entity elects to adopt deemed cost to establish opening balances, the reporting entity establishes opening balances that are considered consistent with GAAP. The established opening balances are not expected to be updated at a later point in time (except for the recognition of the associated depreciation) or to be evaluated retrospectively.
 21. The methods are described more fully below and not listed in order of preference.

Replacement Cost

22. Replacement cost is the amount required for an entity to replace the remaining service potential of an existing asset in a current transaction at the reporting date, including the amount that the entity would receive from disposing of the asset at the end of its useful life.⁶ The use of replacement cost would be applied for valuing opening balances and not maintained through revaluation in the future.
23. SFFAC 7, *Measurement of the Elements of Accrual-Basis Financial Statements in Periods After Initial Recording*, explains replacement cost and that there may be several ways of arriving at an approximation of it:

⁶SFFAC 7, *Measurement of the Elements of Accrual-Basis Financial Statements in Periods After Initial Recording*, par. 46.

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47. Replacement cost is a remeasured amount, an entry value that is often advocated for assets used in providing services, such as capital assets and inventory not held for sale. Replacing the remaining service potential of an existing asset is not the same as acquiring an identical asset. However, in practice, it may be difficult to measure remaining service potential directly. There may be several ways of arriving at an approximation. For example, one way would be to measure the current cost of a similar asset, reduced by an appropriate amount to allow for the lower service potential of the existing asset due to its age and condition. Thus, the replacement cost of an asset is not the same as the fair value of either an equivalent new asset or the existing asset at the reporting date. For example, to arrive at the replacement cost of a fifty-year-old office building at the mid-point of its expected life, the fair value of an equivalent, newly constructed office building would have to be adjusted for the value of the difference in age or service potential. In addition, the fair value of the existing building may be higher than the replacement cost because the building can be put to alternative uses that produce greater benefits to the owner.
48. The relevance of replacement cost is high, especially for assessments of financial position and future resource needs. The level of understandability, reliability, and comparability across entities of reported replacement cost amounts may vary according to the data used and the complexity of the calculation.
49. Reporting the replacement cost of capital assets used in providing services and related service costs can facilitate comparisons between program and activity costs and accomplishments related to the same period. An objection sometimes raised is that replacement cost is not an attribute of the asset that is actually owned. However, the asset being measured is not the physical asset but the services it can provide.
24. Generally, replacement cost is the amount that a reporting entity would pay to replace the service potential of an existing asset at current transaction prices with a similar asset. Replacement cost is different than reproduction cost. Reproduction cost is the cost to construct an exact duplicate of the structure at today's cost. Reproduction cost would result in reconstructing the item as is, using manufacturing/construction techniques and standards applicable at the time the asset (and any modifications) entered service. Replacement cost using today's materials and standards is typically lower than reproduction cost, as reproduction of older methods today is less efficient and more expensive.
25. As explained in SFFAC 7, a reporting entity must consider the remaining service potential or age of the general PP&E to arrive at replacement cost. For example, the cost of a new item of PP&E could be adjusted by the equivalent of accumulated depreciation based on the remaining useful life compared to the original useful life to arrive at replacement cost.
26. Under deemed cost, an effective managerial costing system that employs replacement cost information may be an acceptable source for replacement cost data.

Plant Replacement Value⁷ One Acceptable Replacement Cost Method for Real Property)

27. Plant replacement value (PRV) represents the cost to design and construct a notional facility to current standards or to replace an existing facility at the same location. PRV was developed to support large-scale, program-level estimates for planning purposes and is used in the Federal Real Property Profile (FRPP).⁸ While not previously used for financial reporting purposes, PRV is used for decision making and management purposes. PRV may be an appropriate starting point in establishing replacement cost for real property.

Figure 1: Plant Replacement Value Factors⁹

$$PRV = \text{Facility Quantity} \times \text{Replacement Unit Cost} \times \text{Area Cost Factor} \times \text{Historical Records Adjustment} \times \text{Planning and Design Factor} \times \text{Supervision Inspection and Overhead Factor} \times \text{Contingency Factor}$$

Source: GAO.

28. PRV is based on the factors identified in figure 1 above. The processes and methodology supporting the PRV model should be documented and maintained. To perform the calculation, the facility quantity (size or unit of measure, such as square footage) needs to be obtained for the real property asset. The replacement unit cost factors are derived from multiple sources, such as government-contract awards and commercial-estimating applications. Area cost factors are developed based on local conditions affecting construction costs. Actual contract award data may span multiple years due to the frequency of relevant awards. In collecting data for use in establishing area cost factors, timing issues will arise and some assets may take more than one year (often several) to plan, contract, and construct. Therefore, averaging the data represents a trade-off, but is acceptable. While more precision could be available, it might require a broader search for relevant cost data that may or may not enhance the resulting valuation.

29. PRV also includes historical records adjustment; planning and design cost factors; supervision, inspection, and overhead cost factors; and contingency cost factors. Because PRV will lead to a replacement cost value, the asset characteristics and factors included in

⁷Plant Replacement Value (PRV) may also serve as a basis to establish estimated historical cost. If so, adjustments for inflation/deflation may be appropriate.

⁸The FRPP is a "database of all real property under the custody and control of all executive branch agencies, except when otherwise required for reasons of national security." Federal Real Property Profile Management System. Accessed May 15, 2017. https://www.realpropertyprofile.gov/FRPPMS/FRPP_Login.

⁹PRV is not limited to the factors included in this figure and described in the following paragraphs. This is an example of one agency's model and factors. Other agencies may have different factors.

the model do not contain all possible attributes and factors associated with the actual asset. As noted in SFFAC 7 (par. 49), replacement cost is not an attribute of the actual asset; instead, it is the theoretical cost to replace the service potential embodied in the asset. Close alignment of the physical characteristics of the actual asset and the theoretical replacement asset is therefore not critical to arrive at a reasonable value.

30. Because of these inherent limitations, the PRV associated with a particular real property asset may not be indicative of all of the specific features of that asset. In fact, the specific features of the asset may not be consistent with current building codes, materials, or methods. Further, the specific characteristics of the asset may not be catalogued in sufficient detail to establish highly granular cost factors.
31. Potentially acceptable forms of supporting documentation¹⁰ for PRV¹¹ or data elements include some or all of the following:
 - a. A process to establish and verify the facility quantity
 - b. Geospatial data and space management systems
 - c. Maps with addresses or utilities
 - d. Plot plans, as built blueprints, plats, and other schematics serving as facilities management documentation for the asset(s) in question
 - e. State, city, and other municipality tax assessment documentation
 - f. Designation letter
32. PRV is inclusive of capital improvements. For example, the primary sources of replacement unit costs are contract data and commercial estimating applications. Some of these factors are not explicitly addressed in PRV but are still embedded in the process. Further, the replacement-unit costs are intended to establish a notional amount for a large number of assets, rather than a specific asset. This representative amount is then applied to individual assets.
33. If PRV is used in establishing the opening balance for real property, then an adjustment for the difference in age between the existing asset and a replacement asset is required to

¹⁰The forms of documentation are not listed in any order of preference. They are examples and there may be others not included in this list. The list is not exhaustive. Certain documentation would be more significant based on the PRV formula or other factors, but such assessments require judgment.

¹¹PRV does not represent actual cost and is based on several factors that may be made up of different supporting documents, elements, and formulas.

arrive at replacement cost, per SFFAC 7, paragraph 47. This could be accomplished by recognizing accumulated depreciation based on the remaining useful life of the real property. Alternatively, other methods could be used to adjust the PRV for the difference between the remaining service potential of the asset and that of a new replacement asset. Statistical methods of approximating the remaining service potential may provide a cost-beneficial option for making such adjustments. This adjustment is unrelated to inflation or deflation since the acquisition of the existing asset.

Other Acceptable Replacement Cost Methods for General Property Plant & Equipment (PP&E)

34. There are several sources for current replacement-cost amounts for general PP&E. Potentially acceptable forms of supporting documentation¹² for this method include the information obtained from the following sources, guides, or lists:
- a. Published price list-the basic price of an item as published in a catalog, list price, or advertisement before any discounts are taken. If the price is reasonably current,¹³ it may be used to establish replacement cost. Sources of price lists may include the following:
 - i. The original equipment manufacturer
 - ii. A vendor involved in the manufacture of the same or a similar asset
 - iii. Federal Logistics Data (FED LOG) published by the Defense Logistics Agency (FED LOG prices may also serve as a basis to establish estimated historical cost.)¹⁴

¹²The forms of documentation are not listed in any order of preference. They are examples and there may be others not included on this list.

¹³Reasonably current means that no material adjustments are required for changes in the general price level or for changes in specific prices.

¹⁴ FED LOG may be a potentially acceptable form of supporting documentation unless unit pricing updates based on recent acquisitions and/or cost of living inflation factors are lacking. Assets listed in FED LOG will have a National Stock Number (NSN) or National Item Identification Number. FED LOG prices may also serve as a basis to establish estimated historical cost. Therefore, FED LOG is identified as a potentially acceptable form of supporting documentation under that discussion. In some situations, inactive acquisitions and older data may be indexed to derive estimated historical cost. In others, historical-cost information for certain types of assets (low-velocity items or major end items such as weapons systems or tanks) are likely to cover only the base asset value and not include later capital improvements or modifications. For example, when a major modification is made to a weapons system, typically a new NSN is created to differentiate the new capability from the older item. For example, FED LOG most likely will have an NSN for an Abrams M1A1 and a separate NSN for an Abrams variant M1A2. Therefore, flexibility must be allowed in determining if FED LOG can be used as replacement cost or estimating a reasonable historical cost.

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- iv. General Services Administration schedule
 - b. Published industry price guide-examples of such price guides include the Kelley Blue Book, Aircraft Blue Book, National Automotive Dealers Association guides, and Edmunds.com, which provide prices for the same or similar assets.
 - c. Values based on sales by the reporting entity of the same or similar assets to outside parties

Estimated Historical Cost (Initial Amount)

- 35. A reasonable estimate of historical cost may be based on one or more, or a combination, of the following methods:
 - a. Cost of the same or similar assets at the time of acquisition
 - b. Current cost of the same or similar assets discounted for inflation since the time of acquisition (that is, deflating current costs to costs at the time of acquisition by general price index)
 - c. Other reasonable estimation methods, including latest acquisition cost and estimation methods based on information such as, but not limited to, budget, appropriations, engineering documents, contracts, or other reports reflecting amounts to be expended
- 36. This list of reasonable estimates is not intended to establish any hierarchy of methodologies. As noted, reasonable estimates of historical cost do not require a precise measure of cost. Materiality and cost should be considered when weighing the benefits of greater precision.
- 37. Management is responsible for estimates included in the financial statements. Estimates are based on both subjective and objective factors and, as a result, judgment is required to estimate opening balances. Although reasonable estimates are applicable to any general PP&E, certain special considerations would be applied when establishing opening balances. The following is additional guidance that may assist in establishing opening balances based on a reasonable estimate of historical cost.
- 38. As noted, cost-beneficial options are a major goal of SFFAS 50. Estimating historical cost of an asset is not the same as recreating the accounting records that would have been created had the reporting entity undertaken a GAAP-accounting approach at the time the asset was acquired. SFFAS 50 is intended to avoid the expenditure of taxpayer dollars in recreating information that would have been of greater benefit in the past (for example, to evaluate

major acquisition/construction programs as they were executed), but for which the information's current use is limited to accountability and assessing the cost of current services.

39. Reporting entities must provide adequate supporting documentation appropriate for the deemed cost methodology selected to establish opening balances. SFFAS 50 and guidance clarified in this TR allows reporting entities flexibilities that should be considered when developing assumptions (see the next section) and documenting reasonable estimates of historical cost methodology.

Assumptions

40. Assumptions are basic beliefs about the future operating and functional characteristics.¹⁵ For purposes of establishing opening balances of general PP&E, reasonable assumptions may be needed to make up for a lack of actual data. When reasonable assumptions are made, they should be documented and based on a consistent approach. Reporting entities should ensure that the assumptions are reasonable in the context of the asset, and that the overall valuation is reasonable.
41. Estimated historical cost is an estimate of the costs incurred to bring the PP&E to a form and location suitable for its intended use. SFFAS 6, as amended, paragraph 26, provides examples of the costs that may be included. When management opts to use "other reasonable estimation methods" (par. 35.c. above) such as budget records to estimate historical cost, this list is relevant.¹⁶
42. Many of the examples (such as direct costs of inspection, supervision, and administration of construction contracts and construction work) would require managerial cost accounting systems to calculate an appropriate capitalizable amount during the process of acquiring an asset. Including such costs in estimated historical cost would be especially challenging. The reporting entity may find that critical data elements are missing. For example, a reporting entity may utilize a contract for valuation of modifications even though the contract is missing one or more critical elements to allow for proper cost allocation.
43. The reporting entity should consider whether including all such costs is necessary or cost beneficial to arrive at a reasonable estimate. In doing so, the reporting entity may consider

¹⁵FASAB Handbook, Version 15 (06/16).

¹⁶Note that deemed cost methods other than estimated historical cost inherently include costs such as the costs identified in this list. Therefore, this list would not be relevant when management elects to apply methods identified at paragraphs 35.a. and 35.b.

whether comparable costs today are material. If material, management may elect to use current cost-accounting information to estimate historical costs of a similar nature. For example, if inspection and supervision costs are approximately six percent of contract costs today, then that may be a reasonable and cost-beneficial assumption about past costs.

44. Determination of whether to capitalize a particular cost as a cost of general PP&E should be based on general guidance in SFFAS 4, *Managerial Cost Accounting Standards and Concepts*, and SFFAS 6, as amended. While these standards are imperative for the go-forward approaches implemented, it is difficult to apply these approaches in establishing opening balances under the alternative methods.
45. For example, SFFAS 4 provides that each reporting entity should accumulate and report the cost of its activities on a regular basis for management-information purposes and that costs should be assigned to outputs in one of the methods listed below in the order of preference:
 - a. Directly tracing costs wherever feasible and economically practicable
 - b. Assigning costs on a cause-and-effect basis
 - c. Allocating costs on a reasonable and consistent basis
46. A reporting entity eligible to apply the provisions of SFFAS 50 has not been in compliance with SFFAS 4 or SFFAS 6 in the past. There may be little benefit in retrospectively establishing cost-assignment processes to capture indirect costs for the purpose of establishing opening balances. In addition, given that many assets may be near fully depreciated, there may be an argument to expense indirect costs based on materiality. These factors should be considered in developing the reasonable estimate.
47. The discussion below provides *examples* (that are not required or expected) of considerations that may be appropriate for a reasonable estimate of historical cost in establishing opening balances. The list below is not exhaustive and additional considerations (even if not specifically identified in the list below) may be necessary.
48. Considerations that may be appropriate for a reasonable estimate of historical cost in establishing opening balances include the following:
 - a. It is a reasonable estimate; it does not seek precision.
 - b. Materiality is a guiding factor in arriving at assumptions and the cost of more precise assumptions should be considered in relation to the materiality of their effect.

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- c. Multiple assumptions may be used to develop the reasonable estimate. This may include rates developed by other program offices, such as depot labor rates, maintenance, or other unique program rates that would be used for labor.
 - d. While conflicting documentation may exist regarding a particular item of general PP&E, the reasonableness of the estimate should be based primarily on the method selected. For example, deflating the current cost of a similar asset may result in an estimate that differs from a reasonable estimate based on budget records. Both estimates may be reasonable despite arriving at different amounts. The reporting entity is responsible for establishing a reasonable estimate, and it is not necessary to validate the estimate against alternative ways of arriving at it. The reporting entity should ensure its method is documented.
 - e. The deemed cost approach does not anticipate that the full series of entries related to general PP&E be recreated.
 - i. For example, it would not be cost effective or beneficial to expect reporting entities to apply the full cost standards as they would have been applied¹⁷ in establishing opening balances for general PP&E.
 - 1. Reporting entities may develop reasonable assumptions to determine the capitalizable portion of contract costs or pooled costs. An analysis of current contract costs, looking at the amount of capitalizable and non-capitalizable costs, may provide a reasonable proxy for historical experience. An analysis may provide for a certain percentage or to capitalize all costs of certain programs.
 - 2. Reporting entities may develop reasonable assumptions or methodologies to determine the capitalizable indirect costs for programs. An analysis of a few select programs may support that applying a set indirect rate to all remaining programs is reasonable.

¹⁷Conditions remain that existed when FASAB issued many of these standards, and the cost to implement all the standards concurrently is greater than would have been incurred if standards were implemented in a timely manner. The goal of SFFAS 50 was to avoid requiring the expenditure of taxpayer dollars in recreating information that would have been of greater benefit in the past (for example, to evaluate major acquisition/construction programs as they were executed), but for which the current use is limited to accountability and assessing the cost of current services. The Board proposed less costly alternatives that will support this objective. (SFFAS 50, par. A6.)

Documentation

49. Traditional supporting documentation often was not available for legacy weapon programs. The reporting entity may have relied on other supporting documentation that may have been subsequently removed from the acquisition and/or asset management processes.
50. For example, third-party documentation¹⁸ (such as congressional reports, cost documents, websites devoted to military weapon systems, historical newspaper articles referencing government sources, and other information obtained on the internet) and indexed appraisals may be considered acceptable. However, it is important that reporting entities document and maintain support for the data and assumptions used to develop reasonable estimates.
51. Examples of potentially acceptable documentation are included under each reasonable estimate method.

Estimates-Budget Based

52. The Budget of the U.S. Government (commonly referred to as the President's Budget) and related supporting documentation for a program or asset may have adequate detail to support a reasonable estimate. Specifically, the budget detail provides visibility of the various cost estimates for the program or asset by year. To ensure the full program and funding amounts have been reviewed, the amounts should be reconciled and documented at the appropriation level with Public Laws and allocated to individual programs based on information provided in pertinent budgetary documents. Examples of such budgetary documents may include the following:¹⁹
 - a. Executive agency budget submission/request information
 - b. Congressional conference committee reports
 - c. House and Senate committee reports
 - d. Congressional budget requests

¹⁸The forms of documentation are not listed in any order of preference. They are examples and there may be others not included on this list.

¹⁹The examples of budgetary documents are not listed in any order of preference. They are examples and there may be others not included on this list.

- e. Apportionment and Re-apportionment Schedule (SF-132) forms and Report on Budget Execution and Budgetary Resources (SF-133) forms
 - f. Other relevant documentation such as Department of the Treasury warrants, material supplemental appropriations, reprogramming, rescissions, transfers, or other budgetary documents that lead to a change in amount.
53. Although this method is relatively straightforward for individual assets or those recently acquired, it is much more complex when considering program or weapon systems that include a variety of assets and spare parts, logistics, and support equipment. The process is compounded when the information relates to assets, systems, and programs that date over 20 years or more.
54. Therefore, certain flexibilities should be afforded because reporting formats and information needs change over time. Examples may include the following:
- a. Budget-based estimates may need to be reconciled to the documents listed in paragraph 52.a. - f., if available, or to alternative documents. Older assets (such as assets acquired in 1990 or before) and legacy systems may have different supporting documentation available.²⁰
 - b. Budget documents in a summary format do not preclude a budget-based estimate; estimates may be made at the summary level when adequately explained.
55. Potentially acceptable forms of documentation for this method include the following:²¹
- a. Budget justification materials and items discussed in paragraph 52.a. - f.
 - b. Appropriation data
 - c. Selected acquisition reports
 - d. P-1 documents and R-1 documents

²⁰Reporting entities may use a Selected Acquisition Report, a congressionally mandated report for major weapon programs outlining budget projections. They may also use a P-1 document, which provides a breakout of all procurement appropriations by line item and an R-1 document, which provides a breakout of all research, development, test, and evaluation appropriations by program element.

²¹The forms of documentation are not listed in any order of preference. They are examples and there may be others not included on this list.

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- e. Program office analysis
 - f. Allocated per unit cost report
 - g. Technical specifications and estimates
 - h. Industry estimates reports of amounts to be expended
 - i. FED LOG²²

Estimates-Contract Based

- 56. The best case scenario is a "conformed contract" providing all the information available that needs to be allocated to a particular asset, including all the modifications and delivery orders associated with the contract. However, this is not normally the case because costs to be capitalized are included in multiple contract line items and multiple contracts. This methodology involves valuing assets using the pricing data included in contracts. Although challenging, reasonable estimates based on contracts are still permitted.
- 57. Contracts contain specific contract line item numbers, which delineate specific production and non-production activities (for example, materials, installation, proposal prep, spare parts). As noted above, the determination of whether to capitalize a particular cost as a cost of general PP&E should be based on general guidance in SFFAS 4, and SFFAS 6, as amended. While these standards are imperative for the go-forward approaches implemented, it is difficult to apply these approaches in establishing opening balances under the alternative methods.
- 58. Potentially acceptable forms of documentation for this method include the following:²³
 - a. Acquisition contracts
 - b. Time Compliance and Technical Orders (TCTOs)
 - c. Comprehensive Cost and Requirement System Reports
 - d. Program office delivery schedule

²²See the FED LOG discussion on p. 10.

²³The forms of documentation are not listed in any order of preference. They are examples and there may be others not included on this list.

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- e. Maintenance delivery schedule
 - f. DD Form-250, *Material Inspection and Receiving Report*, and other receiving reports
 - g. Invoices
 - h. Program office analysis
 - i. FED LOG²⁴

Estimates-Engineering Document Based

- 59. Detailed technical and engineering documents lay out the assumptions, materials, and estimated cost to produce an asset. In these instances, the engineering documents can provide a sufficient basis for estimating deemed cost for opening balances.
- 60. Potentially acceptable forms of documentation for this method include the following:²⁵
 - a. Technical specifications and estimates
 - b. Maintenance delivery schedule
 - c. Bill of material
 - d. Invoices
 - e. Vendor quotes on material costs/sale rates
 - f. TCTOs
 - g. Industry estimates
 - h. FED LOG²⁶

²⁴See the FED LOG discussion on p. 10.

²⁵The forms of documentation are not listed in any order of preference. They are examples and there may be others not included on this list.

²⁶See the FED LOG discussion on p. 10.

Estimate-Deflation of Current Cost

61. SFFAS 6, as amended, provides that general PP&E may be estimated based on current cost of the same or similar assets discounted for inflation since the time of acquisition (that is, deflating current costs to costs at the time of acquisition by general price index). This method is appropriate when a series of similar items are being acquired over time and there is a reliable value for a base asset.
62. Considerable flexibility is permitted within the framework as long as the method is properly indexed. For example, estimation may extend beyond current costs, provided it is properly indexed. It may be possible that the cost of a similar asset listed in a price guide two years before or after acquisition, properly indexed, is a reasonable estimate and likely more accurate than an indexed cost taken from a current price guide.
63. Potentially acceptable forms of documentation for this method include the following:²⁷
 - a. Current cost of a similar asset
 - b. Appropriate pricing index to discount the current asset cost to its estimated cost at the time of acquisition
 - i. Consumer Price Index
 - ii. Other indices from the Department of Labor's Bureau of Labor Statistics
 - c. FED LOG²⁸

Cost Estimators²⁹

64. In certain instances, an informed opinion of an expert cost estimator may be used to support reasonable estimates consistent with the provisions of SFFAS 50 and this TR. Informed opinion refers to the judgment of others who make estimates based on their programmatic knowledge and/or experience without using a fully satisfactory information store and, in some cases, without using an econometric or other statistical model. If an expert cost estimator is used, the expert's credentials or qualifications should be articulated and

²⁷The forms of documentation are not listed in any order of preference. They are examples and there may be others not included on this list.

²⁸See the FED LOG discussion on p. 10.

²⁹Cost estimators may also serve as a basis to establish fair value. Therefore, cost estimators are identified as a potentially acceptable documentation under that discussion.

documented in sufficient detail to allow review and validation by independent sources, including independent auditors. For example, reports and studies on relevant issues and other relevant communications describing the basis for any assumptions or changes in assumptions should be maintained in support of the expert's opinion.

65. Potentially acceptable forms of documentation for this method include the following:³⁰
- a. Reports and studies
 - b. Memos with outside experts and minutes from internal meetings describing the basis for any assumptions or changes in assumptions
 - c. Previous studies conducted by the expert, including industry studies, journal articles, and third-party studies

Fair Value

66. Fair value is the amount at which an asset or liability could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.³¹ When determining the value of opening property balances, fair value is an acceptable valuation method to use in absence of actual cost data and associated supporting documents.
67. FASAB has not developed detailed guidance regarding the approaches to use in establishing fair value. Other standards-setters have provided guidance. For example, the Governmental Accounting Standards Board (GASB) issued Statement No. 72, *Fair Value Measurement and Application*, which is summarized as follows:

Fair value is described as an exit price. Fair value measurements assume a transaction takes place in a government's principal market, or a government's most advantageous market in the absence of a principal market. The fair value also should be measured assuming that general market participants would act in their economic best interest. Fair value should not be adjusted for transaction costs.

To determine a fair value measurement, a government should consider the unit of account of the asset or liability. The unit of account refers to the level at which an asset or a liability is aggregated or disaggregated for measurement, recognition, or disclosure purposes as provided by the accounting standards. For example, the unit of account for investments held in a brokerage account is each individual security, whereas the unit of account for an investment in a mutual fund is each share in the mutual fund held by a government.

³⁰The forms of documentation are not listed in any order of preference. They are examples and there may be others not included on this list.

³¹SFFAC 7, par. 38.

This Statement requires a government to use valuation techniques that are appropriate under the circumstances and for which sufficient data are available to measure fair value. The techniques should be consistent with one or more of the following approaches: the market approach, the cost approach, or the income approach. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets, liabilities, or a group of assets and liabilities. The cost approach reflects the amount that would be required to replace the present service capacity of an asset. The income approach converts future amounts (such as cash flows or income and expenses) to a single current (discounted) amount. Valuation techniques should be applied consistently,³² though a change may be appropriate in certain circumstances. Valuation techniques maximize the use of relevant observable inputs and minimize the use of unobservable inputs.

68. SFFAS 6, as amended by SFFAS 50, permits use of fair value as one option for valuing opening balances and does not require that fair value be maintained through revaluation in the future. Generally, where fair value is applied in other circumstances it is maintained as a current value and updated each reporting period. Because SFFAS 50 seeks cost-effective approaches to a one-time valuation, the reporting entity should use fair value approaches that are cost effective. The data available should be appropriate to the circumstances of establishing a cost-effective opening balance for unique assets.
69. In such cases, the markets may be inherently limited given the unique nature of government assets, such as defense assets. In fact, many assets may be highly specialized, making fair value difficult to determine. For example, there may be few observable transactions and transactions may not be indicative of an active market between willing buyers and sellers.
70. 70. For these reasons, and to afford use of fair value in a cost-effective manner, opening balances at fair value may be determined based upon generally accepted approaches established by the GASB as well as
 - a. market approaches where both the market and data are limited (hereafter "limited market approaches");
 - b. cost estimators; and/or
 - c. desktop appraisals.

³²Cost-beneficial options are a major goal of SFFAS 50. The reporting entity may select any method; there is no preferred method among the methods permitted. The reporting entity should consider the reasonableness of the methodology selected and its relation to the available documentation. However, making comparisons among the methods or attempting to identify the most cost-beneficial method would be inappropriate. Management is not required to select the most precise or the best method.

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71. Limited market approaches may include transactions under the foreign military sales program, prices charged for sales between federal government agencies, and other transfer programs for which reimbursement occurs.
 72. Fair value can be established through an appraisal performed by an independent, qualified professional. The appraisal must be performed in accordance with the Uniform Standards of Professional Appraisal Practice to be considered compliant.
 73. Although appraisals require the expenditure of resources, they may be justified for significant assets or when multiple, or groups of, assets can be appraised at the same time.
 74. For the purpose of establishing deemed cost, desktop appraisals that do not require physical inspection of the assets are acceptable. Mass appraisals, which leverage systematic procedures and statistical testing techniques to value multiple assets concurrently, are also acceptable for establishing deemed cost.
 75. Potentially acceptable forms of documentation for this method include the following:³³
 - a. Appraisal documents from qualified professionals
 - b. Methodology describing the fair value process
 - c. Documentation showing a recent sales transaction and amount for a similar asset in similar condition
 - d. Documentation showing a third-party sales price for a similar asset in similar condition
 - e. Documentation to support the cost estimator

Land Rights

76. One alternative method permitted under SFFAS 50 is an exclusion of land and land rights from opening balances with disclosure of acreage information and expensing of future acquisitions.
77. Reporting entities may elect to exclude land and land rights in establishing opening balances of general PP&E (consistent with the alternative method established in SFFAS 6,

³³The forms of documentation are not listed in any order of preference. They are examples and there may be others not included on this list.

as amended, par. 40.f.i). It is important to consider what information should be disclosed regarding land rights.

78. SFFAS 6, as amended, states that a component reporting entity electing to exclude land and land rights from its general PP&E opening balances

must disclose, with a reference on the balance sheet to the related disclosure, the number of acres held at the beginning of each reporting period, the number of acres added during the period, the number of acres disposed of during the period, and the number of acres held at the end of each reporting period. A reporting entity electing to exclude land and land rights from its general PP&E opening balance should continue to exclude future land and land rights acquisition amounts and provide the disclosures. (SFFAS 6, as amended, par. 40.h.ii)

However, SFFAS 6, as amended, and the basis for conclusions for SFFAS 50, acknowledge the diverse nature of land rights. SFFAS 6 acknowledges that some land rights may be depreciable or amortizable while others are not. For example, land rights for a limited period of time are depreciated or amortized, whereas land rights that are permanent, such as with a deeded easement or right of way, are not.

79. The reporting entity should consider quantitative and qualitative criteria in determining if land rights disclosures of acreage are appropriate. A reporting entity electing to exclude land rights from the opening balances and to expense subsequent acquisitions of land rights would disclose acreage when a land right provides control of acreage. Generally, when a land right does not provide acreage to the entity (that is, by allowing the entity to control specific acreage), there would be no acreage to disclose. Therefore, there may not be land rights disclosures required by SFFAS 6, as amended, by SFFAS 50.
80. In addition, materiality is an overarching consideration in financial reporting.

Effective Date

81. This TR is effective upon issuance.

The provisions of this Technical Release need not be applied to immaterial items.

Appendix A: Basis for Conclusions

This appendix discusses some factors considered significant by Committee members in reaching the conclusions in this Technical Release. It includes the reasons for accepting certain approaches and rejecting others. Individual members gave greater weight to some factors than to others. The guidance enunciated in this Technical Release—not the material in this appendix—should govern the accounting for specific transactions, events, or conditions.

This Technical Release may be affected by later Statements or other pronouncements. The Handbook is updated annually and includes a status section directing the reader to any pronouncement that changed this Technical Release. Within the text of the Technical Release, the guidance sections are updated for changes. However, this appendix will not be updated to reflect future changes. The reader can review the basis for conclusions of the amending Statements or other pronouncements for the rationale for each amendment.

Project History and Guidance

- A1. FASAB issued SFFAS 50, *Establishing Opening Balances for General Property, Plant, and Equipment*, on August 4, 2016, in response to DoD's request for guidance on establishing opening balances for general PP&E.
- A2. The alternative methods provided in SFFAS 50 are meant to be less costly options to implement GAAP when establishing opening balances for general PP&E.
- A3. In August 2016, the Accounting and Auditing Policy Committee (AAPC or "the Committee") approved two projects related to SFFAS 50. This guidance is a result of the AAPC's second project to develop timely implementation guidance to assist with issues related to SFFAS 50.³⁴ The AAPC established a task force to assist in developing the guidance. The task force comprised subject matter experts from outside the federal government (such as independent public accounting firms and consulting firms) and inside the federal government (such as chief financial officer staff and program office staff) to ensure diverse perspectives were represented.
- A4. The AAPC task force was divided into sub-groups (general PP&E, land rights, and broad issues) to assist FASAB staff and expedite the identification of issues. The task force

³⁴The first project resulted in conforming amendments to existing TRs. FASAB issued TR 17, *Conforming Amendments to Technical Releases for SFFAS 50, Establishing Opening Balances for General Property, Plant, and Equipment*, in April 2017.

considered draft documents prepared by FASAB staff. As a result of the task force input, FASAB staff developed the implementation guidance presented in this TR.

- A5. This guidance applies to reporting entities electing to apply SFFAS 50. This TR provides additional guidance to those reporting entities strictly in applying the alternative methods in establishing opening balances.
- A6. This implementation guidance assists in applying the alternative methods for opening balances and provides clarification on how the foundation and flexibility of SFFAS 50 encourage reporting entities to consider cost-benefit based on the availability of information or other practical considerations. It confirms that reporting entities may select any of the SFFAS 50 methods and there is no preferred method. Management is not required to select the most precise or best method.
- A7. This guidance explains the alternative valuation methods and describes the documentation that may be used to support the valuation as outlined in SFFAS 6, as amended. This TR does not provide guidance on the validation of existence and completeness of general PP&E.

Summary of Outreach Efforts and Responses

- A8. The exposure draft (ED), *Implementation Guidance for Establishing Opening Balances*, was issued June 21, 2017, with comments requested by July 21, 2017.
- A9. Upon release of the ED, FASAB provided notices and press releases to the FASAB subscription email list, the Federal Register, *FASAB News*, the *Journal of Accountancy*, Association of Government Accountants Topics, the *CPA Journal*, *Government Executive*, the *CPA Letter*, the Chief Financial Officers Council, the Council of the Inspectors General on Integrity and Efficiency, and committees of professional associations generally commenting on EDs in the past (for example, the Greater Washington Society of CPAs and the Association of Government Accountants Financial Management Standards Board).
- A10. The AAPC received six responses from preparers and users of federal financial information. The majority of respondents agreed with the proposals provided in the TR.
- A11. The AAPC considered responses to the ED at its August 17, 2017, public meeting. The AAPC did not rely on the number in favor of or opposed to a given position. Information about the respondents majority view is provided only as a means of summarizing the comments. The AAPC considered the arguments in each response and weighed the merits of the points raised.

A12. Of the six responses, four agreed with the proposals. Specifically, the respondents agreed that the TR provides clear technical guidance, clarifies the flexibility intended in selecting among methods by SFFAS 50, and explains that management is not required to select the most precise or best method. Two respondents neither agreed nor disagreed with the proposal. One respondent provided a letter indicating they had no comments. The other respondent provided editorial comments.

A13. Certain respondents provided suggestions and editorial comments. The respondents' comments were carefully considered by the Committee and several were adopted.

AAPC & Board Approval

A14. The TR was approved by the AAPC for release to FASAB for issuance. The Board has reviewed this TR and a majority of its members do not object to its issuance. Written ballots are available for public inspection at the FASAB office.