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### Statement:

As a landlord or facility/infrastructure “owner “on numerous sites throughout the complex, EM is faced with the responsibility of an increasing amount of aging infrastructure. In some cases the EM infrastructure is slated for demolition and only minimal maintenance is warranted. However, in many other cases EM will need to maintain and utilize this infrastructure for a period of some of years. GAO has an interest in this area as well.

A recurring question arises as how to treat, from both a project and a financial management perspective, this infrastructure that requires maintenance, repair, alterations or betterments. This Lessons Learned Bulletin results from questions posed and proposed solutions developed by several EM sites.

### Discussion:

**Background.** The DOE Financial Management Handbook defines the following terms that are pertinent to this discussion:

**Repair.** Repair is the restoration or replacement of a deteriorated item of property, plant and equipment (PP&E), such that it may be utilized for its designated purpose.

**Maintenance.** Maintenance is the recurring day-to-day work that is required to maintain and preserve PP&E in a condition suitable for it to be utilized for its designated purpose.

**Alteration.** Alterations are adjustments to interior arrangements or other physical characteristics of an existing property record unit so that it may be more effectively adapted to or utilized for its designated purpose.

**Betterment.** Betterments are improvements to PP&E that result in better quality, higher capacity, or an extended useful life, or work required to accommodate regulatory and other requirement changes.

**Discussion.** The cost of repair is normally charged to an operating expense account and includes amounts for labor and associated supervision and materials. Maintenance differs from repair in that it is normally worked to correct wear and tear before major repair is required, and it is usually less involved than repair work. Maintenance work is typically also charged to an operating expense account. Preventive maintenance is a specialized category for the broader category of maintenance and is again typically charged to an operating expense account. (An alteration which is making adjustments to physical characteristics, does not result in a betterment to the property record unit and is again treated as an operating expense.)

Oftentimes repairs are made by replacing all or parts of the systems or components and these are known as “repairs by replacement”. The determination of whether a repair by replacement is classified as a “betterment”, which is capitalized and added to the value of a property record, or is classified as an operations maintenance expense is guided by the DOE Financial Management Handbook. It allows each field office to set the exact replacement limits, for each of their property records. The individual property record is permitted to specify the replacement limits before a maintenance expenditure becomes a capitalized betterment. If a repair exceeds the limit set by a field office for that class of property, it becomes a betterment and is to be capitalized and added to the acquisition cost on that property record. At that point, the actual total estimate cost (TEC) becomes important. If it is less than \$10M, the project is considered “minor construction” and will be managed within the operations activities applying the principles of DOE 413.3B. If the TEC is greater than \$10M, it becomes a line item-sized repair by replacement project and will be managed as an EM operating expense funded “capital” project in accordance with DOE 413.3B

A few years ago, the EM budget office developed a Construction Line Item Decision Tree guidance document which has been utilized for internal budget deliberations/decision-making. This Decision Tree, which includes new provisions from 50 USC 2741 and 2743, may be helpful to understanding certain aspects of this process, is shown below:

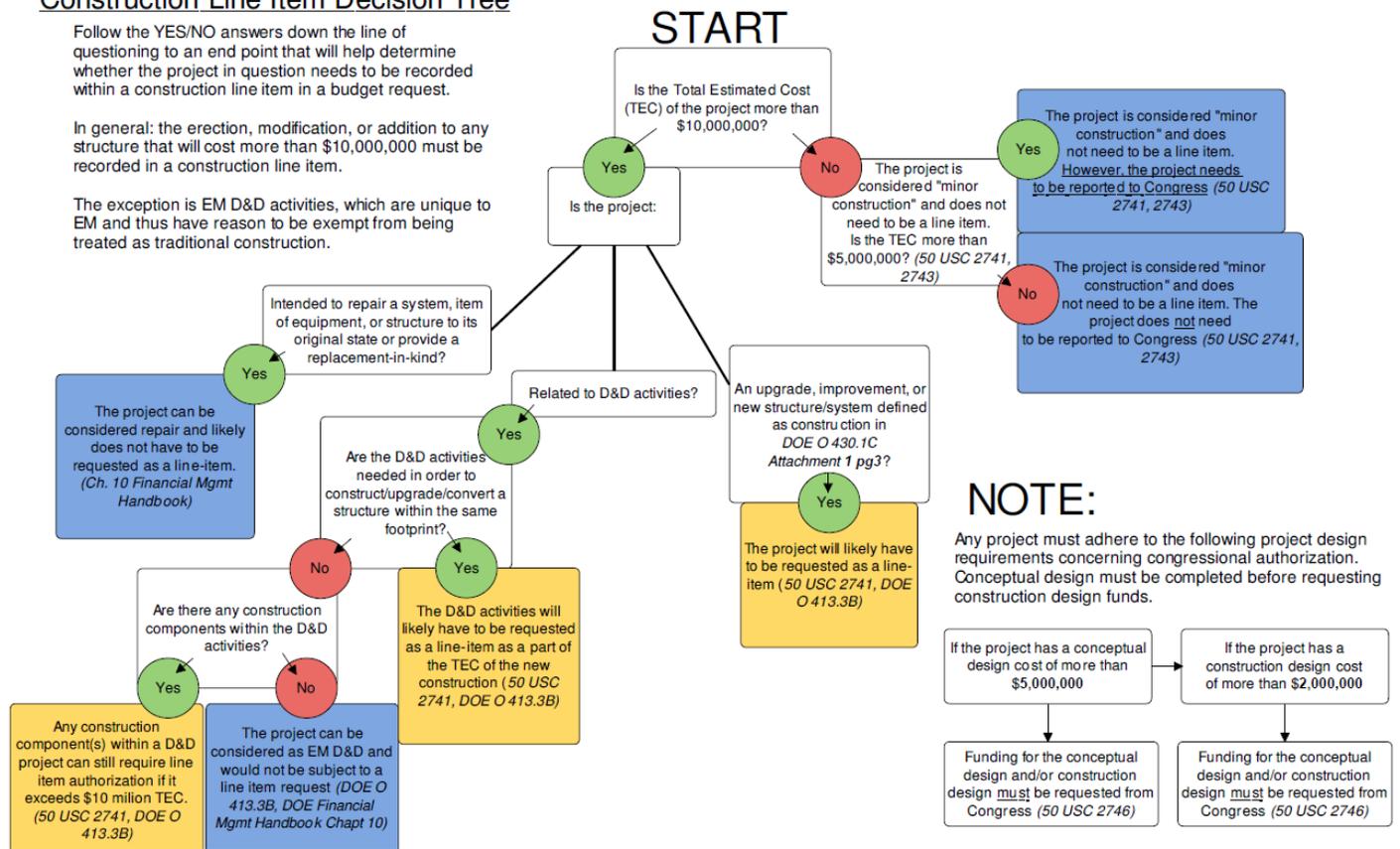
### Construction Line Item Decision Tree v.2a - Untitled

#### Construction Line Item Decision Tree

Follow the YES/NO answers down the line of questioning to an end point that will help determine whether the project in question needs to be recorded within a construction line item in a budget request.

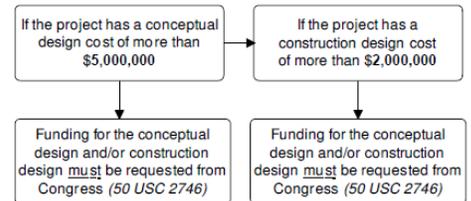
In general: the erection, modification, or addition to any structure that will cost more than \$10,000,000 must be recorded in a construction line item.

The exception is EM D&D activities, which are unique to EM and thus have reason to be exempt from being treated as traditional construction.



#### NOTE:

Any project must adhere to the following project design requirements concerning congressional authorization. Conceptual design must be completed before requesting construction design funds.



**Conclusion.** Infrastructure maintenance, to a greater or lesser degree, is a concern of GAO and is an important consideration at many EM sites. Therefore, the lessons learned is that cognizant EM Field Office personnel need to remain aware of the need to appropriately maintain their site infrastructure and maintain awareness of the DOE financial accounting and project management requirements that govern this process. There are several documents, listed below in the reference section, that have pertinent information regarding this process.

#### Recommended Actions:

Utilize the Decision Tree (above) to aid in determining whether an item of property, plant or equipment is capitalized and added to the value of a property record, or is classified as an operations maintenance expense. The DOE Financial Handbook provides additional guidance for proper classification.

Critical Decision(s): CD-1 to CD-4

Facility Type(s): All

Work Functions(s): Project/Program Management

## References:

1. DOE Order 430.1C Real Property Asset Management dated 8-19-2016, (<https://www.directives.doe.gov/directives-documents/400-series/0430.1-BOrder-c/@@images/file>)
2. DOE Order 413.3B Change 3, Program and Project Management for the Acquisition of Capital Assets dated 12-20-2016, (<https://www.directives.doe.gov/directives-documents/400-series/0413.3-BOrder-B-chg3-pgchg/@@images/file>)
3. DOE Financial Management Handbook dated 7-18-2011, (<https://energy.gov/cfo/downloads/financial-management-handbook>)