

Capital Project Funding Guide

Insights and Guidance
to Understand
and Manage Money
on a DGS Capital Project

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I. Introduction

Pennsylvania law charges the Department of General Services' ("DGS") Public Works Deputate with the responsibility to manage all aspects of non-transportation construction projects ("capital projects") for executive agencies under the Governor's jurisdiction and some independent agencies.¹ The primary principle underlying every capital project is very simple: a capital project represents a gift from the taxpayers, to be treated with respect and a deep appreciation for the fiscal debt incurred by the Commonwealth to fund the project. As project managers, DGS Public Works balances our role of stewards for the taxpayers and advocates for our client agencies, carefully supervising every element of each project, including budget.

A successful project requires adequate funding managed in a standard and transparent manner. Funding issues can doom a project, preventing the agency from ever receiving the project. Data analysis indicates only 39% of projects released and approved in a Capital Plan between 2006-2014 ever proceeded to construction. Of the projects that were actually awarded and constructed, 40% required additional funding for the project from the Client Agency's GGO funds. Inadequate funding exposes the project to delays and places the Client Agency's precious operating funds at risk if additional funds become necessary for the project. The Cost Module of Public Works' new software, coupled with the new standardized approach to project funding established in this memo, will minimize the risk of delay and structure budgets to allow each project to proceed from Capital Planning through construction without needing any agency operating funds.

This memo provides a brief background and then describes how funding will be re-adjusted on existing projects and allocated on new projects. Public Works personnel, Client Agencies and our outside design professionals should refer to this memo as needed to continuously monitor project budgets throughout the lifecycle of a DGS Public Works capital project.

II. Background Information

Effective management of a "capital project" (a.k.a. Public Improvement Project ("PIP")) starts with understanding certain terms:

'Construction' is the process of building, altering, repairing, improving or demolishing any public structure or building or other public improvements of any kind to any public real property.

'Project' includes all work necessary to complete the entire scope of work, including all general construction, hazardous material removal, fire suppression, elevator, HVAC, plumbing, and electrical work.

¹ Act 45 of 1975 - established the contract administration responsibilities for all projects authorized by Commonwealth capital authorization acts to the Department of General Services. In fact, DGS administers contracts for professional services and construction based upon Act 45, the Commonwealth Procurement Code (62 Pa.C.S.), and departmental instructions. "Capital Project" (a.k.a. Public Improvement Project) includes bond funded projects greater than \$100,000 funded by bonds and agency funded projects greater than \$300,000.

‘Capital Project’ is authorized in a Capital Budget Itemization Act when:

- 1. State bond proceeds are used and the total project is valued at \$100,000 or more; or*
- 2. Current revenue (or GGO) are used and the total project is valued at more than \$300,000; and*
- 3. Its useful life is at least 30 years.*

‘Land Acquisition’ requires legislative authorization.

The first critical criteria established in the definition focuses upon the value threshold. Any work, regardless of scope, with a cost equal to or exceeding \$100,000 for bond proceeds or \$300,000 for GGO funds is a capital project.² The second critical criteria focuses upon the need for the project to be legislatively authorized in a Capital Budget Project Itemization Act.³



REMEMBER: Any project funded by GGO whose total costs, including design, exceeds \$300,000 represents a capital project to be managed by DGS Public Works and must have legislative authorization in a Capital Budget Project Itemization Act.⁴

The Legislature usually, although not always, enacts a Capital Budget Project Itemization Act (“Capital Budget Act”) every two to three years. Each Capital Budget Act contains several sections authorizing projects using different funding sources; these Capital Budget Acts are not light reading, typically ranging from 300-500 pages. Capital projects that Public Works manages appear mostly in Section 3 of each Capital Budget Act.⁵ Public Works enters the legislative language (which defines the scope and budget for the project) in e-Builder on the Details page under Legislative Scope.

Managing funds for a capital project requires a basic appreciation of the separation of powers within government. The legislative branch creates and enacts the Capital Budget Act. The executive branch acts based upon, and limited by, the legislative language. As the agency

² When GGO funds are used, artificially breaking a project into increments less than \$300,000 subjects an agency to review for violations of the Procurement Code. (Don’t build a parking lot in increments of \$50,000.)

³ Capital funds are commonly referred to as “PIP” funds, meaning Public Improvement Project funds. Projects using PIP must be anticipated to last at least 30 years. There are various legislative bills relating to Capital Budgets but the focus of this memo is the Itemized Capital Budget bills that list specific projects. If, during the course of a project, additional funding is needed, an Agency can transfer funds as needed from an Agency’s General Government Operations (“GGO”) funds through the use of a Letter of Commitment (“LOC”). Agency GGO funds transferred into a capital project through an LOC should be for a purpose that is in line with the legislatively authorized scope of the capital project.

⁴ Emergency projects can exceed \$300,000 and be performed through the JOC program but a JOC emergency must be funded only with Agency GGO funds.

⁵ Each Capital Budget Itemized Act also contains language establishing funds for “Fixtures, Furniture & Equipment” (“FFE”) to be purchased for capital projects. FFE language appears in Section 4 of the bill. FFE funds cannot be used for construction, nor should scope of work that is actually construction be deferred to FFE funds for purchase, such as bleachers or various A/V work. DGS PW personnel, designers and agencies should refer to the “FFE List” in e-Builder for guidance on what items fall within PIP, GGO and FFE. In addition, moving expenses (moving furniture out, back in or into the building from another site) are not eligible to be paid from PIP or FFE; GGO must cover these costs.

designated to manage capital projects, Public Works accepts responsibility for being familiar with the project-specific legislative authorization and to ensure the project scope falls within this authorization. (Public Works must deny any request to build a swimming pool if the legislative language authorizes us to build a science center.) If there are questions about scope, do not hesitate to submit the question to the DGS Office of Chief Counsel who can assist with interpreting the statutory language.



HARDSTOP⁶ – During any point in the project, Public Works personnel may have to address whether the agency has Legislative language in a Capital Budget Project Itemized Act that authorizes the scope of work requested during design or as a change order during construction. If the additional scope exceeds either the scope or budget authorized by legislation, the project must stop until the issue is resolved by either adding GGO funds or by getting legislative authorization to add additional PIP funds and/or to expand permissible scope.



REMEMBER: If the intended use exceeds the legislative authority, the agency has no authority to use PIP funds for the work.

III. Capital Planning Process

Public Works manages the Capital Planning process within the Bureau of Pre-Construction. A detailed discussion of the steps and phases for Public Works and each Client Agency on Capital Planning is presented in a separate memo. For purposes of this memo, all you need to know is that each year (usually in mid-fall) the Governor’s Office, the Budget Office and DGS Public Works create a Capital Plan for that fiscal year, essentially a release strategy that identifies the Capital Projects that will be released (funded/allowed to proceed) during each quarter of the fiscal year. Upon approval by the Governor, (usually in late-fall) the capital projects itemized for release during that fiscal year are posted on the DGS website. Prior to the start of the project, the project is entered into e-Builder and a project number is assigned by DGS Public Works Selections personnel. The Capital Planning Coordinator works with DGS Public Works Fiscal to set up project funding in the Cost Module based upon the project-specific legislative language.

IV. Project Funding – Converting Existing Portfolio

The language in any Capital Budget Act creates 4 typical project scenarios:

- A. Add additional funds to an existing capital project (usually stalled in design), or
- B. Create a new project with funding language designating money for land acquisition, base allocation and design contingency; or
- C. Create a new project with funding language separated into base allocation and design contingency; or

⁶ This memo will designate “HARDSTOPS” that can occur throughout the course of a project which stop progress on the project until the issue(s) presented are finally resolved.

D. Create a new project with ‘lump sum’ language.

Setting up funding in the e-Builder Cost Module differs, depending upon the type of legislative language used to create the project. For purposes of this memo, the following guidelines will be used to convert all existing capital projects in our design portfolio:

- All existing projects currently in Capital Planning, Selections, Programming, Schematic, and DD (no approved DD submission) phase will have immediate funding adjustments as described in this memo.
- All existing projects in Interim Construction or Construction Document phase will proceed though design to bidding with no immediate funding adjustments, but will be re-evaluated at the Post-Bid Hardstop to reflect the new funding mechanism described in this memo.
- Existing Construction projects (post-Notice of Award) will not be adjusted.



HARDSTOP – During re-adjustment of existing projects in the design portfolio, if the project needs additional funding (PIP or GGO) during the Capital Planning, Selections, Programming, Schematic or DD phase, the project must be suspended until such time as funding becomes available.

During or after the initial re-adjustment of existing project funds, if, for any reason (Agency program changes, price escalation, *etc.*) the project encounters funding issues, the Agency must select between these three options:

- provide additional GGO funds for all design and construction costs (with no ability to be ‘reimbursed’ once PIP funds are available); or
- request release of existing legislatively authorized PIP funds that have not been released to date on the project (subject to eliminating/revising projects on the Agency’s approved Capital Plan by the same amount); or
- suspend the project until the next Capital Budget Act passes that adds funding.



REMEMBER: PW may not allow design to proceed on a project that we do not have sufficient funds in the Construction line item to award.

V. Project Funding – Creating New Projects⁷

The language in any Capital Budget Act creates 4 typical project scenarios:

- A. Add additional funds to a capital project (original legislation is not a lump sum allocation)⁸, or
- B. Create a new project with funding language designating money for land acquisition, base allocation and design contingency; or
- C. Create a new project with funding language separated into base allocation and design contingency; or
- D. Create a new project with ‘lump sum’ language.

Setting up the funding in the e-Builder Cost Module differs, depending upon the type of legislative language used to create the project. For purposes of this memo, the following guidelines will be used to create all new capital projects:

- All projects in the FY 17/18 Capital Plan (and all future Capital Plans) will have funding set up as described in this memo, depending upon the legislative language creating the project.



HARDSTOP – If the project needs additional funding (PIP or GGO) during the Capital Planning, Selections, design or construction phase, the project must be suspended until such time as funding becomes available.

If, for any reason (Agency program changes, price escalation, *etc.*) the project encounters funding issues at any stage, the Agency must select between these three options:

- provide additional GGO funds for all design and construction costs (with no ability to be ‘reimbursed’ once PIP funds are available); or
- request release of existing legislatively authorized PIP funds that have not been released to date on the project (subject to revising the Agency’s Capital Plan); or
- suspend the project until the next Capital Budget Act passes that adds funding.



REMEMBER: PW may not allow design to proceed on a project that we do not have sufficient funds in the Construction line item to award.

⁷ Section V A-D in this memo may appear to duplicate IV A-D, which is true. Section IV of this memo has a short shelf life; once we convert all the projects in our existing design portfolio, IV becomes obsolete. Section V will be used going forward with new projects not currently in the design portfolio.

⁸ Scenario A will not apply to many projects moving forward; should only apply to projects that had original legislation that did not have lump sum language that also gets additional funding in a subsequent lump sum language bill. Admittedly unlikely to happen, but if it does happen, the situation is addressed under Scenario A. New projects don’t get ‘additional’ funding, so Scenario A should never apply to ‘new’ projects.

VI. Creating or Re-adjusting Project Budget Scenarios

The method and formulas described in this memo to be used to create a new project or to adjust projects already in the Public Works design portfolio are set forth below. Only one of the following scenarios applies to a project. To begin, find the legislative language for the project (in the Project Detail page in e-Builder) and then determine which of the following scenarios applies based upon that language.

A. Legislative Language Adding Additional Funds to an Existing Project

This scenario involves a project that needs additional funds for the original scope. The original legislative language does not establish a lump sum amount for a facility. If the original language does have lump sum authorization, proceed to Scenario D. The language in a Capital Budget Act providing additional funding for the project typically contains a lump sum amount and might even include an explicit reference to the existing DGS project number. Enactment of a Capital Budget Act by itself does not mean the project can immediately proceed in design. Until the project is re-evaluated with the new additional costs to determine where it fits within the Agency's annual Capital Plan allowance, the project remains suspended and the professional (if there is one) is prohibited from taking any action or incurring any costs. The Capital Planning Coordinator will review the plan with the Agency to determine what, if any, other projects will be delayed to allow the Agency to absorb the increased costs within their annual Capital Plan allowance.

When the Director of Pre-Construction receives written notice from the Capital Planning Coordinator that the project is approved within the Agency's Capital Plan, PW Fiscal will be requested to distribute the additional funding into the project based upon the following default formula:

1. 75% of total additional funds allocated to Construction
2. Sufficient funds (from original and additional) to create total Construction Contingency of 10% of the Construction line item
3. 10% of the Construction Contingency for Professional Change Order fee (adjustable later when fee % finalized)
4. Remaining additional funds allocated to Design Contingency

PW Fiscal has no option or ability to deviate from this formula.⁹ The funds in the Construction, Construction Contingency and Professional Change Order fee line items are 'locked down' and unavailable at any time or any reason during the design process. Basic Services, all work orders and amendments must be completed within the budget established for Design and Design Contingency.

⁹ If using this formula creates concerns regarding sufficient funds in design and design contingency, the Director of Pre-Construction may request permission from the Deputy Secretary to alter the calculations. The project may only proceed if the Deputy approves the calculations and instructs the Fiscal Unit to adjust the line items.

For any existing project in design prior to the effective date of this memo, any previously unreleased PIP funds may be used to supplement the project budget subject to Capital Planning adjustment.

Once PW Fiscal has allocated the additional funds, the project may proceed in the current phase. If the project was stopped during Capital Planning, the project shall proceed to Selections. If the design professional was selected but the project was suspended during negotiations, the negotiations may proceed. If the professional is no longer interested in the project, Public Works Selections may ask the other 2 short listed firms if they are interested and if so, the Secretary will appoint the new professional; if neither of the original short listed firms agrees to accept, the project would be sent back to the beginning of the Selections process.¹⁰

The following actual project example is provided for guidance. DGS' project to renovate the elevators in the Finance Building (948-85) was originally authorized in Act 85 of 2013 with this language:

Upgrade and renovate all existing elevators, including upgrading motors and remodeling cabs, in Finance Building

Project Allocation \$1,820,000

Base Project Allocation - \$1,638,000

Design & Contingencies - \$ 182,000

Exhibit A-1. Existing e-Builder Cost Page @ Original Legislative Language

Description	Beginning Budget	Changes	Ending Budget
Land			
Land Acquisition Fees			
Studies			
Other PreDesign			
Basic Services			
Budgeted Work Orders			
Anticipated 3rd Party Costs			
General Construction	\$ 1,638,000.00		\$ 1,638,000.00
HVAC			
Plumbing			
Electrical			
Other Constr.			
Project Savings			
Design Contingency	\$ 182,000.00		\$ 182,000.00
Construction Conting.			
Prof. CO Fee Conting.			
Totals:	\$ 1,820,000.00	\$ -	\$ 1,820,000.00

¹⁰ Adding funds usually triggers an amendment to the Professional Agreement, depending upon the terms of the applicable Agreement for that project.

Although this project has legislative authorization, and was included in DGS' Capital Plan, the \$1,820,000 was deemed insufficient to complete the project after completion of the Selections process. We suspended the project indefinitely, pending receipt of additional funding. The project was 'flipped' into e-Builder with the approved funding, showing \$1,638,000 in construction and \$182,000 in D&C.¹¹

The newest Capital Budget bill (Act 52 of 2017) authorizes the following additional money:

Provide additional funding to renovate elevators in the Finance Building, including motors and remodeling \$5,000,000

So, what will this funding scenario look like in e-Builder? (Assume for this example that DGS made room in their annual Capital Plan to absorb the additional funding and that we have no Professional.)

PW Fiscal applies the formula to these funds based upon a lump sum additional \$5,000,000:

1. 75% of total additional funds allocated to Construction
2. Create total Construction Contingency of 10% of the Construction line item
3. 10% for Professional Change Order fee (adjustable later when fee % finalized)
4. Remaining funds allocated to Design Contingency

Exhibit A-2. New e-Builder Cost Page Adding \$5,000,000 Steps 1-3 of Formula

Description	Beginning Budget	Changes	Ending Budget
Land			
Land Acquisition Fees			
Studies			
Other PreDesign			
Basic Services			
Budgeted Work Orders		(1) 75% of \$5m	
Anticipated 3rd Party Costs			
General Construction	\$ 1,638,000.00	\$ 3,750,000.00	\$ 5,388,000.00
HVAC			
Plumbing			
Electrical			
Other Constr.			
Project Savings			
Design Contingency	\$ 182,000.00	(2) 10% of Construction	
Construction Conting.		\$ 538,800.00	\$ 538,800.00
Prof. CO Fee Conting.		\$ 53,880.00	\$ 53,880.00
Totals:	\$ 1,820,000.00	(3) 10% of Constr. Contingency	

¹¹ During design, the Construction line item in the e-Builder Cost Module serves as a placeholder for all construction funds. These funds will be formally allocated to the appropriate prime contractor line item during the Post-Bid Hardstop.

The fourth step in the funding allocation is to take the \$657,320 balance (\$5,000,000-\$3,750,000-\$538,800-\$53,880) that remains unallocated and place it in the Design Contingency line item.

Exhibit A-3. New e-Builder Cost Page Adding \$5,000,000 Step 4 of Formula

Description	Beginning Budget	Changes	Ending Budget
Land			
Land Acquisition Fees			
Studies			
Other PreDesign			
Basic Services			
Budgeted Work Orders			
Anticipated 3rd Party Costs			
General Construction	\$ 1,638,000.00	\$ 3,750,000.00	\$ 5,388,000.00
HVAC			
Plumbing			
Electrical			
Other Constr.			
Project Savings		(4) Remain to Design Contingency	
Design Contingency	\$ 182,000.00	\$ 657,320.00	\$ 839,320.00
Construction Conting.		\$ 538,800.00	\$ 538,800.00
Prof. CO Fee Conting.		\$ 53,880.00	\$ 53,880.00
Totals:	\$ 1,820,000.00	\$ 5,000,000.00	\$ 6,820,000.00

The project proceeds through the Selections process and Exhibit A-4 shows the changes that will be made to the Cost Module Basic Services and Construction Contingency line items based upon the final negotiated 8% fee and an 8% fee on change orders. (Savings from 10% CO fee down to 8% CO fee goes back into Construction Contingency where it came from.)

Exhibit A-4. New e-Builder Cost Page Adjusting for Final Design of 8% not 10%

Description	Beginning Budget	Changes	Ending Budget
Land			
Land Acquisition Fees			
Studies			
Other PreDesign		8% Fee on \$5,388,000 Construction	
Basic Services		\$ 431,040.00	\$ 431,040.00
Budgeted Work Orders			
Anticipated 3rd Party Costs			
General Construction	\$ 5,388,000.00		\$ 5,388,000.00
HVAC			
Plumbing			
Electrical			
Other Constr.			
Project Savings		10%-8%= 2% savings from CO fee	
Design Contingency	\$ 839,320.00	\$ (431,040.00)	\$ 408,280.00
Construction Conting.	\$ 538,800.00	\$ 9,977.78	\$ 548,777.78
Prof. CO Fee Conting.	\$ 53,880.00	\$ (9,977.78)	\$ 43,902.22
Totals:	\$ 6,820,000.00	-	\$ 6,820,000.00



REMEMBER: The Basic Services line item is the negotiated fee to be paid the design professional by contract. All Basic Services are paid from that line item and only that line item.



REMEMBER: The Budgeted Work Order line item encompasses all work orders to the design professional that are anticipated to occur throughout the entire duration of the project. The costs for each of these work orders must be set up/budgeted as early as possible. Failure to identify or simply ‘postponing’ these work order costs in hopes of avoiding a Letter of Commitment or other hardstop to the project represents a risk to the project. Reducing scope, postponing, or eliminating any of the work in order to protect design contingency and ‘kicking the can down the road’ to pay for this work as a construction change order is an unacceptable approach to design management.

Fee negotiations after the Selections Process must also identify estimates for anticipated work orders to be performed by the design professional during the design and construction phases of the project. Design Managers can use the PW Excel project budget spreadsheet to create draft funding scenarios. Once the Design Manager is comfortable that work orders have been identified and estimated, each Design Manager must input the work orders from the spreadsheet into the e-Builder Forecast tool as shown in *Exhibit A-5*. The Forecast tool in e-Builder is found in the menu on the left side of the project-specific Cost Module. The initial Forecast snap shot will establish a Cost Baseline, which should be captured as a snapshot immediately after final negotiations. Design Managers should save each change to the Forecast tool as a snapshot. Design Managers should capture and save snapshots as needed during design to monitor and control project costs. During the bid prep process, the Design Project Manager must update the Cost Forecasting snapshot.

Exhibit A-5 Forecast Snapshot in e-Builder Cost Module

Forecasts

Forecast	Budget	Current Commitments	Projected Commitments	Actuals Approved	Forecasted Commitments	Unallocated Reserve	Estimate At Completion	Forecasted Over/ (Under)
Current Forecast	1,050,000.00	571,897.10	571,897.10	119,997.10	350,000.00	128,102.90	1,050,000.00	0.00

Forecast Snapshots

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Name	Date	Budget	Current Commitments	Projected Commitments	Actuals Approved	Forecasted Commitments	Unallocated Reserve	Estimate At Completion	Forecasted Over/ (Under)
VOID	10.30.2017	1,050,000.00	571,897.10	571,897.10	119,997.10	350,000.00	128,102.90	1,050,000.00	0.00
VOID	08.21.2017	1,050,000.00	129,170.00	129,170.00	119,997.10	750,000.00	189,945.00	1,019,115.00	(30,885.00)
VOID	08.21.2017	1,050,000.00	129,170.00	129,170.00	119,997.10	675,000.00	245,830.00	1,050,000.00	0.00
VOID	08.21.2017	1,050,000.00	129,170.00	129,170.00	119,997.10	100,000.00	920,830.00	1,150,000.00	100,000.00

The Budgeted Work Order line item in the e-Builder Cost Module will be the total lump sum of all Work Orders identified by the Design Manager in the Forecast snapshot. The Fiscal Unit will set up the initial lump sum amount for this line item based upon the dollar value provided to them by the Design Manager. If any Budgeted Work Order exceeds the original estimate, the work may continue and may be paid from the Budgeted Work Order line item (select that line item during the payment process in e-Builder) so long as the total funds remaining in the Budgeted Work Order line item are deemed acceptable by the Design Manager. There is no pre-established formula or percentage for this amount; this represents part of the skill inherent in managing the project. The Assistant Director for Pre-Con and each Portfolio Manager are expected to review reports created in e-Builder to monitor this line item and to discuss potential issues to minimize the risk to the project due to budget issues arising between necessary Work Orders and available Design Contingency. Depletion of the Budgeted Work Order line item will require additional money (a) from the Design Contingency if there are sufficient funds or (b) from an LOC be added to the Budgeted Work Order line item.



REMEMBER: The individual estimated costs for each Budgeted Work Order must be created and maintained by the Design Manager in the e-Builder Forecast tool, not in the Cost Module of e-Builder.



REMEMBER: Identifying anticipated work orders and setting up the costs in the Budgeted Work Order line item as early as possible is a critical part of project management. This list represents typical/possible work orders but should not be considered exhaustive and should not be used as a checklist for every project. Design Managers are responsible to identify these typical Budgeted Work Orders costs for each of their projects, based upon the specific scope of their projects, including but not limited to:

- * Topographic Survey
- * Archaeological Survey
- * Wetlands Survey
- * Haz. Mat. Investigations
- * Geotechnical Investigation
- * Environmental Survey
- * Endangered Species Investigation
- * Quality Assurance

Once the original Budgeted Work Orders are identified and set up in the Cost Module, any additional/unanticipated work orders that become necessary during any stage of design or construction will be paid from the Design Contingency, not from the Budgeted Work Orders line item. (No funds are moved from DC to BWO; payments directly from DC line item.) Upon discovering the need for an unanticipated work order, the Design Manager will notify the Portfolio Manager and the Assistant Director to discuss and verify the scope and cost of the work. If the Unanticipated Work Order either depletes or reduces the Design Contingency line item to a value deemed too low by the Design Manager, the Design Manager will notify the Fiscal Unit to request additional funds through an LOC from the Client Agency. The additional funds should be sufficient to replenish the contingency to 5% of the original Basic Services line item or some other amount deemed acceptable to the Design Manager. Additional funds will be added to either the Budgeted

Work Order line item (if the original lump sum amount was budgeted but has been depleted) and/or the Design Contingency line item if unanticipated work orders become necessary.



REMEMBER: Unanticipated work orders arising after the finalization of the Budgeted Work Orders can only be paid from the remaining Design Contingency line item funds.

The original Cost Module line item designated as “Other Design” has been renamed “Anticipated 3rd Party Costs”. Costs to be paid from this line item include non-land costs that occur during any stage of the project that are not paid directly to the professional. Such costs include, but are not limited to:

- * Construction Management
- * Commissioning Agent
- * Utility Agreements
- * Local fees

These costs are identified as early in the design phase as possible and itemized in the spreadsheet and Forecast Module. Admittedly, the costs will be estimates until such time as the design develops sufficiently to allow for firm costs. The Fiscal Unit will set up the initial lump sum amount for this line item based upon the dollar value provided to them by the Design Manager. If any Anticipated 3rd Party Costs exceed the original estimate, the work may continue and may be paid from the Anticipated 3rd Party Costs line item (select that line item during the payment process in e-Builder) so long as the total funds remaining in the Anticipated 3rd Party Costs line item are deemed acceptable by the Design Manager. There is no pre-established formula or percentage for this amount; this represents part of the skill inherent in managing the project. The Assistant Director for Pre-Con and each Portfolio Manager are expected to review reports created in e-Builder to monitor this line item and to discuss potential issues to minimize the risk to the project due to budget issues arising between necessary 3rd Party Costs and available Design Contingency. Depletion of the Anticipated 3rd Party Costs line item will require additional money (a) from the Design Contingency if the 3rd Party Costs was identified initially but needs additional funds or (b) from an LOC to be added to the Anticipated 3rd Party Cost line item.



REMEMBER: The Construction line item funds, the Construction Contingency line item funds and the Prof CO Fee Contingency line item funds may not be touched, edited, re-allocated or used to fund an LOC during the design phase.



REMEMBER: To see the actual, real time available Design Contingency in e-Builder, navigate to Cost Module, Cost Summary, make sure you are in Summary Layout and look in Column G, “Remaining Budget.”

Exhibit A-6 Where to Find Real Time Design Contingency on Project Summary Cost Screen

Line Item	Description	Original Budget *	Projected Budget *	Original Commitments	Projected Commitments	Actuals Received *	Percent Cost Complete	Remaining Budget *
10-1010-x000000000x	Land	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
10-1020-x000000000x	Studies	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
10-1030-x000000000x	Other PreDesign	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
20-2010-3000313415	Basic Services	0.00	405,000.00	405,000.00	405,000.00	303,750.00	75.00%	0.00
20-2020-x000000000x	Budgeted Work Orders	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
20-2030-x000000000x	Anticipated 3rd Party Costs	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
30-3010-3000313415	General Construction	4,500,000.00	4,500,000.00	0.00	0.00	0.00	0.00%	4,500,000.00
30-3020-x000000000x	HVAC	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
30-3030-x000000000x	Plumbing	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
30-3040-x000000000x	Electrical	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
30-3050-x000000000x	Other Constr.	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
40-4010-x000000000x	Project Savings	0.00	0.00	0.00	0.00	0.00	0.00%	0.00
40-4020-3000313415	Design Contingency	1,125,000.00	229,500.00	7,578.19	7,578.19	2,375.19	31.34%	221,921.81
40-4030-3000313415	Construction Conting.	0.00	450,000.00	0.00	0.00	0.00	0.00%	450,000.00
40-4040-3000313415	Prof. CO Fee Conting.	0.00	40,500.00	0.00	0.00	0.00	0.00%	40,500.00
Totals		5,625,000.00	5,625,000.00	412,578.19	412,578.19	306,125.19		5,212,421.81



HARDSTOP – The Design Contingency line item funding (Remaining Budget column) should ideally be at least 5% of the Basic Services Original Commitment line item.

- **If Remaining Budget amount in the Design Contingency line item is less than 5%, the project may proceed if the Design Manager deems the % acceptable.**
- **If Remaining Budget amount in the Design Contingency reaches \$0, then:**
 - **If there are no Work Orders or Anticipated Costs that need to be funded, design may continue to the next design submission but approval of the design submission will require a discussion of how to fund Design Contingency moving forward.**
 - **If there are Work Orders or Anticipated Costs that need to be funded, then consider both Opportunity A and B to liquidate funds:**
 - **Opportunity A – When a Work Order or Anticipated 3rd Party cost is fully performed and completed, any remaining funds should have been reallocated to Design Contingency by Fiscal. Verify that funds have been liquidated.**
 - **Opportunity B – When a Work Order or Anticipated 3rd Party cost becomes actual and not merely estimated, then the Design**

Manager has the option to request the Fiscal Unit to reallocate the difference between the estimated amount and the actual amount from that line item down into Design Contingency. (This is NOT a preferred action.)

- **If exhausting both A and B fails to produce sufficient funds, then all design work on the project shall stop until the Client Agency provides additional money from their GGO through an LOC with sufficient funds to replenish the 5% or other amount deemed acceptable by the Design Manager. These funds must be actually provided, not simply ‘promised’ and transferred at a later date.**
- **The Construction, Construction Contingency and Prof. CO fee line item funding is not available to be re-allocated to design.**
- **Design, which was suspended awaiting the GGO funds, may not resume until the Agency actually provides the additional funding and the Fiscal Unit posts the additional funds in e-Builder.**

So, let’s see how e-Builder would show scope that was identified during the Basic Services fee negotiation discussion on the DGS Elevator project. The Design Manager identified a need for \$25,000 for soil tests, \$20,000 for commissioning during construction and \$25,000 for new electrical service. The Forecast snapshot shows \$25,000 for a Budgeted Work Order for soils testing, \$20,000 for Anticipated 3rd Party Costs for Commissioning and \$25,000 in Anticipated 3rd Party Costs for the Utility Agreement for bringing new electricity to the site.

Exhibit A-7-1 Forecast Tool Identifying Budgeted Work Orders and 3rd Party Costs

Forecast Details Save Draft Save Final Cancel

Project: Nanticoke Readiness Center, Renovations
 Project Number: C-0961-0028
 As Of Period Ending: Live
 * Name: Cost Baseline
 Description:
 Instructions:

Forecast Documents (0) Forms (0) Processes (0)

Forecast Data Expand All Collapse All Group By: Line Item Switch to Adjustment Mode

Account Code	Description	Calculate Unallocated Reserve	Budget	Current Commitments	Projected Commitments	Actuals Approved	Forecasted Commitments	Unallocated Reserve	Estimate at Completion	Forecasted Over/(Under)
10-1010-xxxxxx	Land	<input checked="" type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-1020-xxxxxx	Studies	<input checked="" type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-1030-xxxxxx	Other PreDesign	<input checked="" type="checkbox"/>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-2010-xxxxxx	Basic Services	<input checked="" type="checkbox"/>	0.00	0.00	0.00	0.00	200,000.00	0.00	200,000.00	200,000.00
20-2020-xxxxxx	Budgeted Work Orders	<input checked="" type="checkbox"/>	0.00	0.00	0.00	0.00	39,900.00	0.00	39,900.00	39,900.00
20-2030-xxxxxx	Anticipated 3rd Party Costs	<input checked="" type="checkbox"/>	0.00	0.00	0.00	0.00	65,000.00	0.00	65,000.00	65,000.00

Description: Commissioning Services (Design) Assumption: Forecasted Commitment: 20,000.00 Budgeted: Committed: Delete Go to Adj. Mode

Once the Design Manager is comfortable with the Forecast numbers, they notify the Fiscal Unit to set up/adjust/reallocate funds in the e-Builder Cost Module for the project.



REMEMBER: The time period at the onset of the design phase is the only time to identify and create Budgeted Work Orders and Anticipated 3rd Party Costs. Once the Design Manager provides the Fiscal Unit with the lump sum amounts for these line items, any subsequent work orders or 3rd Party Costs have to be paid from the remaining design contingency funds.

Exhibit A-7-2 shows the results in the e-builder Cost Module once the Fiscal Unit reallocates funds (see Exhibit A-4 cleaned up to show changes) from the Design Contingency to fund Budgeted Work Orders and Anticipated 3rd Party Costs. The Design Contingency line item was reduced by \$70,000 (\$419,056-\$25,000-\$20,000-\$25,000 = \$349,056). When the professional initiates the soils testing invoice process, the Budgeted Work Order line item is selected to pay the invoice, not the Design Contingency line item. When the professional initiates either the commissioning or electrical service invoice process, the Anticipated 3rd Party Cost line item is selected to pay the invoice, not the Design Contingency line item. The three invoices, when properly budgeted, leave a very comfortable cushion above the 5% of basic services (\$21,550) discussed as bare minimum design contingency. Once project budget has been finalized to reflect the identified work, the project proceeds through the design phase until reaching the Post-Bid Hardstop.

Exhibit A-7-2 Fiscal Adjusts Cost Module to fund Budgeted Work Orders and 3rd Party Costs

Description	Beginning Budget	Changes	Ending Budget
Land			
Land Acquisition Fees			
Studies			
Other PreDesign			
Basic Services	\$ 431,040.00		\$ 431,040.00
Budgeted Work Orders		\$ 25,000.00	\$ 25,000.00
Anticipated 3rd Party Costs		\$ 45,000.00	\$ 45,000.00
General Construction	\$ 5,388,000.00		\$ 5,388,000.00
HVAC			
Plumbing			
Electrical			
Other Constr.			
Project Savings			
Design Contingency	\$ 408,280.00	\$ (70,000.00)	\$ 338,280.00
Construction Conting.	\$ 549,576.00		\$ 549,576.00
Prof. CO Fee Conting.	\$ 43,104.00		\$ 43,104.00
Totals:	\$ 6,820,000.00	\$ -	\$ 6,820,000.00

After bids come in, the Post-Bid Hardstop establishes the final opportunity to update anticipated work orders (estimated costs should become final costs) and to confirm 3rd party costs. Before Public Works issues any Notice To Proceed, we will conduct a final evaluation of the construction award costs and design work orders. Additional work orders identified at Post-Bid are not to be

included or funded from Budgeted Work Orders; they must be paid from Design Contingency. Any remaining design contingency funds above the 5% of Basic Services will be combined with construction project savings and returned to Office of Budget as Project Savings after the Post-Bid Hardstop. No funds are removed from the project and returned until the Post-Bid Hardstop. Once removed, funds are no longer available to use on the project.

B. Legislation Creates a New Project with Itemized Language including Land

The language in a Capital Budget Act providing funding for a new project varies from Act to Act. This portion of the memo discusses legislation that contains three specific line items, allocating money to “Land Acquisition,” “Base Allocation”, and “Design & Contingency”. Remember, Public Works cannot ‘reallocate’ funds as we deem necessary; the Legislative branch allocates the amount and category of the funds, which establishes the project budget. “Base Allocation” establishes the funds available to award construction contracts. “Design & Contingency” has usually, although not always, been set up as 20% of Base Allocation. Prior to the new approach established in this memo, Public Works and OB split design and contingency 50/50, meaning Design gets 50% of the D&C amount, leaving the remaining 50% of D&C for contingency. Under this old approach, the full amount of this ‘contingency’ has been available during the design phase to pay additional design fees, work orders, and amendments through the design phase. Any contingency funds remaining before the construction contract award (which happened sporadically) were the only funds available for construction contingency. This haphazard approach relied upon remaining design contingency to provide sufficient construction contingency funds. The new approach to project funding established in this memo changes how Public Works will calculate new and existing project funds, based upon where they are in the design phase. One critical improvement of updating the funding as described in this memo will be minimizing (if not actually eliminating) the need for Client Agencies to spend GGO money on a Capital project. The new approach establishes reasonable design funds, design contingency funds and ensures adequate construction and construction contingency costs using only PIP funds.



REMEMBER: If the project needs land acquisition, there must be specific legislative authorization to acquire land. Without authorization, DGS may not acquire land.

As an example from actual legislative language, this DOT project was included in the itemized Capital Budget Act in this format:

Construct new maintenance garage, including salt storage buildings, auxiliary buildings, site work and land acquisition

<i>Project Allocation \$15,000,000</i>	
<i>Land Allocation</i>	<i>\$ 1,000,000</i>
<i>Base Project Allocation</i>	<i>\$11,750,000</i>
<i>Design & Contingencies</i>	<i>\$ 2,250,000</i>

Under the old method of setting up a project budget, the funding would look like this:

Land Acquisition	\$ 1,000,000
Base Project Allocation	\$11,750,000
Design	\$ 1,125,000
Contingency	\$ 1,125,000

This set up provided no construction contingency, and no funds to pay the design professional any fee on any change order, essentially setting the project up for failure if there was any need for even a single change order. To improve transparency and predictability, PW will implement a funding allocation that sets every project up for success, finishing within the original allocation with no need for any additional agency funds.

The “Base Project Allocation” amount will be interpreted to be funds needed for construction, namely to award construction contracts, establish a reasonable construction contingency of 10%, and for the design professional’s fee on the construction change order work, calculated at the initial stage of 10%, subject to adjustment for the actual contractual rate. The formula to be used to adjust funds looks like this: **Base Allocation = X + .1X +.01X** where X equals General Construction line item funds. Using this formula (for new projects and all projects in design without an approved DD submission), the funding will be allocated or re-allocated as the case may be, in e-Builder as follows:

Exhibit B-1 Capital Project with Land Acquisition Language

Description	Beginning Budget	Changes	Ending Budget
Land	\$ 1,000,000.00		\$ 1,000,000.00
Land Acquisition Fees			
Studies			
Other PreDesign			
Basic Services	\$ 1,125,000.00		\$ 1,125,000.00
Budgeted Work Orders			
Anticipated 3rd Party Costs			
General Construction	\$ 11,750,000.00	\$ (1,164,414.00)	\$ 10,585,586.00
HVAC			
Plumbing			
Electrical			
Other Constr.			
Project Savings			
Design Contingency	\$ 1,125,000.00		\$ 1,125,000.00
Construction Conting.		\$ 1,058,558.00	\$ 1,058,558.00
Prof. CO Fee Conting.		\$ 105,856.00	\$ 105,856.00
Totals:	\$ 15,000,000.00	\$ -	\$ 15,000,000.00



REMEMBER: The re-allocation means the professional agreement must be amended to reflect the revised Base Construction Amount of \$10,585,586.¹² The \$10,585,586 placed in Construction, the \$1,058,558 in Construction Contingency and the \$105,856 in Prof CO Fee Contingency may not be touched, edited, re-allocated or used to fund an LOC during the design phase.

¹² The design professional needs to have Base Bid 1 between 90% - 95% of the base construction amount.

The Client Agency receives a capital project valued at \$15,000,000 which includes an adequate construction and design contingency, therefore minimizing the risk of needing GGO funds to award or complete the project.

Scenario B includes specific line item legislation authorizing DGS' Bureau of Real Estate to acquire land for the project. Since there has been inconsistent use of funds relating to land, this memo will set forth permissible use of Land Acquisition line item funds.



REMEMBER: As a matter of policy, the only permissible cost to be paid from the Land line item is the actual purchase price of the land. All other costs associated with purchasing the property are to be paid from the Land Acquisition fees line item, namely:

- *closing costs
- *title insurance
- *appraisal
- *site survey
- *Phase 1 environmental costs.

The PW Fiscal Unit will not process any other costs for payment from the Land Acquisition fees line item.

All other costs incurred prior to purchasing the property to assist in determining the acceptability of the site are to be performed through a Budgeted Work Order to the design professional paid from Design Contingency line item funds. These costs include any type of:

- * site analysis
- *soil borings
- * structural analysis
- *feasibility studies
- * wetland analysis
- *test pits
- * zoning/land use reviews
- * local hearings or meetings
- * any other engineering costs.

Any Land and Land Acquisition fee line item funds remaining after land acquisition is complete shall be temporarily moved to the Project Savings line item long enough to allow PW Fiscal Unit to log the amount and then delete the funds from the project and return them back to Office of Budget to unallocated reserves.¹³ These excess funds will no longer be available for use on the project; they will be calculated and reported as Client Agency contributions to Project Savings and for reference in future Capital Planning sessions.



HARDSTOP: If Land or Land Acquisition costs exceed the funds allocated for Land or Land Acquisition, the project must be suspended until such time as additional funds can be added, either from Agency GGO (with no 'reimbursement' later from additional PIP) or from additional funding in an existing Capital Budget Project Itemized Act. (If PIP is added, the project must be reviewed by Capital Planning Coordinator.) Basic Services funds may not be used at any time for any reason for land or land acquisition fees. Funds may not be taken from Construction, Construction Contingency or

¹³ The line item "Project Savings" represents a temporary resting place for funds on their way out of the project. This line item is a book mark for funds before they are returned to Office of Budget as Project Savings. Funds should not stay in Project Savings for more than 10 days. Funds in Project Savings may not be re-allocated to any other line item within the project.

Professional CO Fee line item funds. The Commonwealth should not be considering or purchasing land that requires additional costs so as to prevent construction of the building the Client Agency needs or expects.

So, what would the DOT project look like after processing payments for land and site-related costs? *Exhibit B-1* was a good start, adjusted construction-related line items; *Exhibit B-2* is a much better, more realistic example of what a land acquisition project will look like. Every project that involves land has some known costs that should be budgeted and anticipated during the initial funding setup. The Design Manager should include a Budgeted Work Order for site analysis. For this example, let’s assume the estimated cost from the Forecast tool is \$10,000 for the site analysis. The Design Manager should discuss anticipated costs for Land Acquisition and Land Acquisition fees with DGS’ Bureau of Real Estate during the initial project funding set up. For this sample, the funding should anticipate costs for Title Insurance (\$1,000 in Forecast tool), an appraisal (\$5,000) and Phase I Environmental (\$3,000). This is what the e-Builder Cost Module would show in the Land Acquisition Fees line item, leaving \$991,000 to purchase the land.

Exhibit B-2 Land Purchase with Anticipated Expenses

Description	Beginning Budget	Changes	Ending Budget
Land	\$ 1,000,000.00	\$ (9,000.00)	\$ 991,000.00
Land Acquisition Fees		\$ 9,000.00	\$ 9,000.00
Studies			
Other PreDesign			
Basic Services	\$ 1,125,000.00		\$ 1,125,000.00
Budgeted Work Orders	\$ -	\$ 10,000.00	\$ 10,000.00
Anticipated 3rd Party Costs			
General Construction	\$ 10,585,586.00		\$ 10,585,586.00
HVAC			
Plumbing			
Electrical			
Other Constr.			
Project Savings			
Design Contingency	\$ 1,125,000.00	\$ (10,000.00)	\$ 1,115,000.00
Construction Conting.	\$ 1,058,558.00		\$ 1,058,558.00
Prof. CO Fee Conting.	\$ 105,856.00		\$ 105,856.00
Totals:	\$ 15,000,000.00	\$ -	\$ 15,000,000.00

As we all know, land projects come with unexpected items. How do we handle those? Imagine that the selected site presents topography challenges included severe elevation changes and very soggy soil. So, months into the project, well past the initial funding set up, the Design Manager encounters the need for a wetlands study and a structural analysis of a retaining wall. First step is to recognize that these costs have to be paid from the Design Contingency line item. Second step is to obtain hard costs for the work. (In this case, wetland will cost \$8,000 and Structural Analysis will cost \$4,000.) Third step is to compare costs with remaining design contingency. If there is

sufficient funds, work orders are processed, performed, invoiced and paid from design contingency line item.

Exhibit B-3 Payment of Unanticipated Work From Design Contingency

Description	Beginning Budget	Changes	Ending Budget
Land	\$ 991,000.00		\$ 991,000.00
Land Acquisition Fees	\$ 9,000.00		\$ 9,000.00
Studies			
Other PreDesign			
Basic Services	\$ 1,125,000.00		\$ 1,125,000.00
Budgeted Work Orders	\$ 10,000.00		\$ 10,000.00
Anticipated 3rd Party Costs			
General Construction	\$ 10,585,586.00		\$ 10,585,586.00
HVAC			
Plumbing			
Electrical			
Other Constr.			
Project Savings			
Design Contingency	\$ 1,115,000.00	\$ (12,000.00)	\$ 1,103,000.00
Construction Conting.	\$ 1,058,558.00		\$ 1,058,558.00
Prof. CO Fee Conting.	\$ 105,856.00		\$ 105,856.00
Totals:	\$ 15,000,000.00	\$ (12,000.00)	\$ 14,988,000.00

The two unanticipated Work Orders for the \$12,000 in work is paid from Design Contingency, not Budgeted Work Orders. Once project funding has been created, adjusted or supplemented (as often as necessary during the land acquisition phase), the project can proceed through the design phase until reaching the Post-Bid Hardstop.

C. Legislation Creates a New Project with Itemized Funding Language without Land

The analysis and formula under this scenario mirror Scenario B with the exception of the Land Acquisition language. The funding analysis for this type of legislation looks like this, which is taken from the Pa. State Police HQ language in Act 40 of 2004:

Renovate department headquarters building \$8,322,000

Base Project Allocation - \$7,490,000

Design and Contingencies - \$832,000

Under the old method,, the funding in e-Builder looks like this:

Exhibit C-1 Base Allocation with D&C, No Land

Description	Beginning Budget	Changes	Ending Budget
Land			
Land Acquisition Fees			
Studies			
Other PreDesign			
Basic Services			
Budgeted Work Orders			
Anticipated 3rd Party Costs			
General Construction	\$ 7,490,000.00		
HVAC			
Plumbing			
Electrical			
Other Constr.			
Project Savings			
Design Contingency	\$ 832,000.00		
Construction Conting.			
Prof. CO Fee Conting.			
Totals:	\$ 8,322,000.00	\$ -	\$ -

As stated previously, PW will attempt to minimize impact upon existing design funds while creating a construction contingency and Professional CO fee Contingency from Base Allocation. The formula looks like this: **Base Allocation = X + .1X +.01X** where X equals Construction line item funds. Using the formula effective with this memo (for new projects and all projects in design without an approved DD submission), the funding will be allocated or re-allocated as the case may be, in e-Builder as follows:

Exhibit C-2 Base Allocation Reallocated with D&C, No Land

Description	Beginning Budget	Changes	Ending Budget
Land			
Land Acquisition Fees			
Studies			
Other PreDesign			
Basic Services		\$ 416,000.00	\$ 416,000.00
Budgeted Work Orders			
Anticipated 3rd Party Costs			
General Construction	\$ 7,490,000.00	\$ (742,252.00)	\$ 6,747,748.00
HVAC			
Plumbing			
Electrical			
Other Constr.			
Project Savings			
Design Contingency	\$ 832,000.00	\$ (416,000.00)	\$ 416,000.00
Construction Conting.		\$ 674,775.00	\$ 674,775.00
Prof. CO Fee Conting.		\$ 67,477.00	\$ 67,477.00
Totals:	\$ 8,322,000.00	\$ -	\$ 8,322,000.00



REMEMBER: The re-allocation means the professional agreement must be amended to reflect the revised Base Construction Amount of \$6,747,748.¹⁴ The \$6,747,748 placed in Construction, the \$674,775 in Construction Contingency and the \$67,477 in Prof CO Fee Contingency may not be touched, edited, re-allocated or used to fund an LOC during design.

The Client Agency still receives a capital project valued at \$8,322,000 which includes an adequate construction and design contingency, minimizing the risk of needing GGO funds to award or complete the project.

Public Works will negotiate fee payments and design based upon both the negotiated project scope and the General Construction line item amount. (“**Base Construction**” amount equals the General Construction line item.) If the Client Agency deems the General Construction Line item amount to be insufficient, they may increase the line item amount (and all other line items that increase) through an LOC. The funds from the LOC must be transferred to Public Works Fiscal during design; the Client Agency may not direct (and Public Works shall not allow) the design professional to design to any unfunded amount. Once project funding has been created or adjusted to reflect this fiscal set up, the project can proceed through the design phase until reaching the Post-Bid Hardstop.

D. Legislation Creates a New Project with Lump Sum Funding Language

This scenario only applies to new projects that have never been released and never proceeded past Capital Planning.

The language in a Capital Budget Act providing funding may in certain instances contain only a lump sum dollar value with no reference to Base Allocation, Land Acquisition or Design & Contingency.¹⁵ This “Lump Sum” language creates opportunities for the Client Agency to request only a portion of the funding for the project, leaving funding in the line item for future projects at the facility or specific building, depending upon the legislative language. Public Works Capital Planning and Design Managers will collaborate with Client Agencies during the planning phase of each project to create an accurate estimate of the funds that should be requested for the project based upon scope and priority, which may impact escalation calculations.

The funding analysis for this type of legislation varies, but might look like this, which is taken from the pending Capital Budget bill for the Department of Agriculture:

*Provide for renovation and upgrades to various sections of the Farm Show
Complex facilities and grounds: Project Allocation \$14,000,000*

¹⁴ The design professional needs to have Base Bid 1 that equals 90% -95% of the construction line item amount.

¹⁵ Legislation referencing only “Base Allocation” will be adjusted according to the formula discussed in steps 1-4 of Scenario A.

Assume that Public Works' Capital Planning Coordinator and Portfolio Manager have collaborated with Agriculture personnel and determined the Small Arena in the Farm Show Complex needs a new concrete floor. (Both the scope and the estimate are complete fabrications.)

- Step 1.** As part of the Capital Planning stage, Public Works (Capital Planner and Portfolio Manager) and Agriculture collaborate to create an estimated construction cost. The Public Works Capital Planning Coordinator and the Client Agency (Agriculture) must prioritize the project in the appropriate 3-year Capital Plan, which will impact escalation costs. Public Works and Agriculture agree that the floor construction contract awards should total \$3,000,000.
- Step 2.** Setting the Construction value triggers a 10% **Construction Contingency** of \$300,000.
- Step 3.** Setting the Construction value triggers a 10% **Prof. CO Fee** of \$30,000. (Standard Formula assumes 10% fee; adjust when final; excess to Construction Contingency.)
- Step 4.** Standard Formula assumes a 10% Professional Design fee (calculated using Construction line item amount) for **Basic Services** which can be adjusted upon final fee negotiation. Any fee less than 10% results in the delta going to Design Contingency. Any fee exceeding 10% comes out of Design Contingency.
- Step 5.** Standard Formula to allocate the **Design Contingency** should range generally between 5% to 10% (calculated using Basic Services line item). In this example, using 5% calculates to \$15,000.
- Step 6.** Identify Budgeted Work Orders and Anticipated 3rd Party Costs in the e-Builder Forecast tool. Finalize these to a lump sum cost and provide Fiscal with the lump sum totals for these 2 line items so they can input these into the e-Builder Cost Module.

Using these six steps produces funding in e-Builder as follows:

Exhibit D-1 Lump Sum Allocation Broken into Stand Alone Project

Description	Beginning Budget	Changes	Ending Budget
Land			
Land Acquisition Fees			
Studies			
Other PreDesign			
Basic Services	\$ 300,000.00		\$ 300,000.00
Budgeted Work Orders	\$ 45,000.00		\$ 45,000.00
Anticipated 3rd Party Costs	\$ 62,000.00		\$ 62,000.00
General Construction	\$ 3,000,000.00		\$ 3,000,000.00
HVAC			
Plumbing			
Electrical			
Other Constr.			
Project Savings			
Design Contingency	\$ 15,000.00		\$ 15,000.00
Construction Conting.	\$ 300,000.00		\$ 300,000.00
Prof. CO Fee Conting.	\$ 30,000.00		\$ 30,000.00
Totals:	\$ 3,752,000.00		\$ 3,752,000.00



REMEMBER: This represents a stand-alone \$3,752,000 project. The designer will design to a \$3,000,000 construction contract award amount. Keep in mind the designer must have a Base Bid 1 that does not exceed 90%-95% of this \$3,000,000 Construction line item. The \$3,000,000 placed in Construction, the \$300,000 in Construction Contingency and the \$30,000 in Prof CO Fee Contingency may not be touched, edited, re-allocated or used to fund an LOC during design.



HARDSTOP: On Lump Sum projects, a Client Agency has 2 opportunities to ‘go back’ and add additional PIP funding to the project:

- Prior to Public Works’ approval of the DD Submission, the PIP funds may be adjusted/increased with concurrent reduction in the Agency’s other Capital Plan projects. There will be no changes to scope or cost once the project starts the CD submission stage.
- When bids come in (Post-Bid Hardstop), an Agency may request release of additional PIP funding to provide money to satisfy the Funding Analysis shortfall on any base bid in lieu of providing a Letter of Commitment. This additional funding must be offset within the Agency’s Capital Plan projects.
- The Post-Bid Hardstop is the last time an Agency can ‘go back’ for additional release of PIP funds. Any additional funds necessary during the construction phase must be provided by an LOC using GGO funds.



REMEMBER: Any changes to scope must remain within the legislative language authorizing the project.

Once project funding has been created or adjusted to reflect this fiscal set up, the project can proceed through the design phase until reaching the Post-Bid Hardstop.

VII. Agency projects exceeding \$300,000

Although most of PW’s projects are bond funded Capital projects, designated in e-Builder as “C” projects, we occasionally manage agency funded projects, designated in e-Builder as “A” projects. There are minimal differences between A and C projects. “C” projects are always funded with PIP money (additional money comes from the Client Agency through an LOC) and have an outside design professional procured through the Selections process. “A” projects exceed the typical JOC agency project \$300,000 threshold but they do have legislative authority and the funds are provided entirely from the Client Agency utilizing their funds, be it GGO or another source. “A” projects may have an outside professional or they may be designed by the Client Agency. As discussed under Scenario C, these “A” projects may not exceed the scope of the legislative authority in the Capital Budget Act. As with every project, “A” projects undergo a Post-Bid Hardstop to ensure funding is in place before construction contracts are awarded to any prime.

VIII. Project Funding Pre-Bid Requirements

There is no official hardstop before a project transitions from the design phase to the bidding phase. There are, however, a number of steps that should, as a matter of standard operating procedure, be conducted and completed before the project is forwarded to the Bidding Gatekeeper for bids. These items are by no means a complete list of what must be done before clearing the project to the bidding stage.

- **Liquidate Work Orders**

Money will become critical when we get the bids so the Design Manager should review all Work Orders issued and performed during the design phase. Any work that is complete should have been designated a 'final invoice' in e-Builder. Upon receipt of a final invoice, Fiscal will liquidate any remaining work order funds and re-allocate them, until post-bid hardstop, into design contingency.

- **Finalize Construction Phase Work Orders**

The Design Manager is responsible to update the Budgeted Work Orders line item to ensure that any work to be done during the construction phase has an estimated work order scope and cost from the Professional. (Don't actually process them until after contract award; if we don't award contracts, there is no need to have fully approved Work Orders.) The itemized work orders shall be provided to the Fiscal Unit prior to bidding so that they have the line items and costs needed to prepare the Fiscal Analysis spreadsheet upon receipt of the bids. The Work Orders to be performed during construction should have been identified, discussed with the Professional, Client Agency and Public Works Bureau of Construction personnel before the project is proceeds from design to bid prep. (Client should not be learning of these costs right before bid.)



HARDSTOP:

- **On all projects that don't have Lump Sum legislation if the project has insufficient funds in design-related line items (Budgeted Work Orders, Anticipated 3rd Party Costs, Design Contingency) prior to releasing the project to bid, the Client Agency must provide the necessary funds through an Letter of Commitment before the project will be released to bidders. Recognizing this may require 2 Letters of Commitment (pre-bid to provide additional funds for design-related line items and post-bid for construction-related line items) but if the Client Agency is unable to provide additional design-related funds, proceeding to bid will waste Commonwealth and contractor time and money.**
- **On Lump Sum legislation projects, the project may proceed to bid; funding shortfalls will be addressed post-bid in the Funding Analysis. Allowing the project to proceed to bidding will not waste time or money; shortfalls will be addressed going 'back to' unreleased PIP funds.**

- **Verify Permits**

The design manager is responsible to verify all permits are active and have not expired.

- **Verify Construction Duration**

The Design Manager should verify the construction duration, particularly with regard to the time of year the bids are expected and how that may impact ‘coming out of the ground’. The responsibility for this duration rests primarily with the Design Manager, not with the Bureau of Construction. Ideally, BoC will have had input on duration during design submission reviews. Managing client agency expectations includes discussing difficult topics, including a realistic delivery date. As with Work Orders, the Client should not be learning of the construction duration right before the project proceeds to bid prep.

- **Verify Estimate**

The Design Manager should verify the age of all project estimates. No estimate should be **older than 6 months** and should include escalating costs to the midpoint of construction. If the estimate is older than 6 months, it must be updated prior to proceeding to bid. If the updated estimate alters available funding, the project should not proceed to bid. If the construction duration has been altered, the estimate must be updated to reflect any changes to the duration.



REMEMBER: The Bidding Gatekeeper will send the process back to the Design Manager as not ready to bid if Fiscal does not have Work Order costs updated in e-Builder prior to sending the project to the Gatekeeper to bid.

IX. Project Funding – Post-Bid Hardstop



HARDSTOP: Every project, regardless of legislative language, design phase, or “C” or “A” status will always encounter a Post-Bid Hardstop after the bids/proposals are opened before the project proceeds to any Notice of Award. This Hardstop provides Public Works and the Client Agency the opportunity to review award options and ensure that the project is fully funded before proceeding into the construction phase. This Hardstop also provides an opportunity to calculate and return Project Savings based upon bid results.

After the bids are opened, Public Works posts the bid tab and waits three calendar days to see if any bidders request to withdraw their bids and then DGS Office of Chief Counsel reviews bids. At this point in time, the PW Fiscal Unit will perform a **Funding Analysis** of every base bid using the lowest total bid costs to provide the Client Agency a full picture of potential project costs and options.¹⁶ The following page provides an example of the template spreadsheet showing two base

¹⁶ If procured using Best Value RFP, then Fiscal Unit waits to perform the fiscal analysis on the successful proposers determined by final total scores.

bids. Basic Services do not appear on the spreadsheet since the funds to pay for the design professional to be on site during construction, which is the only basic service occurring during construction, is already accounted for in the project and does not figure in to calculations needed to award the construction contracts. As further set forth in this example, if additional funds are needed to award, the first line item that can be reduced is the design contingency needed during construction. The Design Contingency amount must be no less than 5% of the original Basic Services line item to pay for unknown/unanticipated work orders during construction. (If the Design Manager accurately assessed potential work orders and the potential design fees on change orders are accounted for, then the risk of needing an additional 10% contingency should be reduced, allowing reduction of the design contingency for committed items to be reduced to 5% of the original Basic Service line item.)



REMEMBER: Once project funds are allocated to the appropriate line items, remaining funds are deemed to be Project Savings, which are removed from the project and returned to unallocated reserves. These funds are no longer available for any reason on the project. (On Lump Sum projects, Projects Savings do not ‘go back’ into the Lump Sum funds available for future projects; the funds are removed from the project and returned to unallocated reserves. Agencies with Project Savings will be considered a good return on Investment. Public Works will track and report Project Savings by Agency as part of the Capital Planning Process. Agencies with Project Savings may be eligible for more Capital Planning funds than Agencies with minimal or no Project Savings during the annual Capital Planning discussion.



HARDSTOP: Design Contingency must be at least 5% of the original Basic Services line item in order to allow the project to proceed to award. If an LOC is required to award, the LOC amount must cover Construction, 10% Construction Contingency, X% of Professional CO fee, all Work Orders anticipated during construction and at least a 5% Design Contingency.

The Funding Analysis Spreadsheet is color-coded to assist in understanding the source and calculations for the various line items. Design Managers, Design Professionals and Client Agencies should review this spreadsheet and be comfortable with understanding the calculations. The PW Fiscal Unit will allocate funds based upon this template. They do not have authority to alter the calculations; any alterations must be submitted in writing to the PW Director of Pre-Construction who will review and make a recommendation to the Deputy Secretary for Public Works. Only the Deputy can authorize the PW Fiscal Unit to alter the template calculations.

Once funding has been adjusted to allow Public Works to issue Notices of Award and obtain executed contracts, the project proceeds to the construction phase. Based upon the formulas used at the Post-Bid Hardstop, the project should be on track to finish with minimal risk of the Client Agency needing to provide any GGO funding.

Funding Analysis Spreadsheet

Prof CO Fee %	7.50%	Construction Allocation	5,000,000.00	
Legislative Funding:		Act 3 of 20XX	\$ 15,000,000	
		Approved Base Construction Allocation:	\$5,000,000	
		Approved Design and Contingency:	\$1,450,000	
Project Budget:		Construction:	\$5,000,000	
		Construction Contingency	\$500,000	
		Basic Services:	\$500,000	
		Prof CO fees:	\$50,000	
		Design Contingencies:	\$400,000	
		TOTAL PROJECT BUDGET:	\$6,450,000	
Analysis of Funds Required to Award Bids				
			Base Bid # 1	Base Bid # 2
		Total Low Bids All Primes	4,000,000.00	5,150,000.00
		+10% Construction Contingency	400,000.00	515,000.00
		+ Prof CO Fee Contingency	40,000.00	51,500.00
		Sub-Total	4,440,000.00	5,716,500.00
		+ Anticipated Work Orders	175,000.00	175,000.00
		+ Design Contingency During Constr.	40,000.00	40,000.00
		Total Funds Required to Award Bids	4,655,000.00	5,931,500.00
Analysis Of Funds Available to Award Bids				
			Base Bid # 1	Base Bid # 2
		CONSTRUCTION:		
		Total Low Bids & 10% Construction Contingency:	4,440,000.00	5,716,500.00
		Base Construction Budget:	5,000,000.00	5,000,000.00
		Construction Contingency Budget:	500,000.00	500,000.00
		Prof CO Fee Contingency:	50,000.00	50,000.00
		Total Construction Budget:	5,500,000.00	5,500,000.00
		Available Construction Funds (lesser of bid amount or budget):	4,440,000.00	5,500,000.00
		DESIGN CONTINGENCY:		
		Remaining Design Contingency Budget:	400,000.00	398,500.00
		<i>Estimated Contingency Costs:</i>		
		Anticipated Work Orders:	175,000.00	175,000.00
		Design Contingency Allowance (10% of Orig. Design Cont.):	40,000.00	40,000.00
		Total Estimated Design Contingency Required:	215,000.00	215,000.00
		Available Design Contingency Funds (lesser of estimate or budget):	215,000.00	215,000.00
		Prof CO Fee Rate Adjustment:	10,000.00	0.00
		Adjusted Available Design Contingency Funds:	225,000.00	215,000.00
		Analysis of Design Contingency		
		Original Design Contingency	400,000.00	400,000.00
		Total Design Contingency Spend & Committed	0.00	1,500.00
		Remaining Design Contingency Budget	400,000.00	398,500.00
		Anticipated Work Orders During Constr.		
		Commissioning	100,000.00	100,000.00
		QA	75,000.00	75,000.00
			0.00	0.00
			0.00	0.00
			0.00	0.00
			175,000.00	175,000.00
		Design Contingency During Construction (10% Orig. Des. Contgy)	40,000.00	40,000.00
		Excess Design Contingency Funds GO-TIME Savings	185,000.00	183,500.00
		Construction Funds Available	4,440,000.00	5,500,000.00
		Design Contingency Funds Available:	225,000.00	215,000.00
		Act 45 Funds Available	0.00	0.00
		Total Funds Available	4,665,000.00	5,715,000.00
		Total Funds Needed to Award	4,655,000.00	5,931,500.00
		Additional Funds Required To Award	0.00	216,500.00
		Reduce Design Contgy to 5%		20,000.00
				196,500.00
		Keep GO-TIME to reduce LOC		(183,500.00)
		Funds Required in LOC		13,000.00
		GO-TIME SAVINGS:	185,000.00	-

X. Project Funding – During Construction

The project should proceed through construction with contractors paid from their distinct line items set up in the e-Builder cost module.¹⁷ Change orders are paid from the collective Construction contingency line item. Bureau of Construction personnel will monitor the Construction contingency line item to ensure no change orders are approved that would deplete or result in a negative construction contingency balance. If the Construction contingency line item drops below 5%, the APM and PM should discuss this fact in the Job Conference and notify the Client Agency that change orders will be impacted if funds are depleted. If the change orders are proposed that will deplete the contingency, they cannot be approved or otherwise processed until such time as the Client Agency provides additional funding through a LOC.



REMEMBER: Funds must be provided (approved by the Client Agency Comptroller and allocated to Construction Contingency by the PW Fiscal Unit) before work can happen on the change order. Bureau of Construction personnel may NOT direct a contractor to proceed with any change order work if there is no funding in place at the time of the directive.

Design professionals receive fees on change orders pursuant to the particular language in their Professional Agreement. These fees are paid from the Professional CO Fee Contingency line item. Any work orders issued or performed during the construction phase (and identified in the Forecast Tool during project setup) are paid to the design professional from the Budgeted Work Order line item. Services such as Commissioning, Construction Management or Utility Agreement Costs identified in the Forecast Too during project setup) are paid from Anticipated 3rd Party Costs. Any unanticipated Work Orders or 3rd Party Costs can only be paid from Design Contingency.

Funds for construction shall be maintained in the construction invoice process pursuant to the applicable version of the General Conditions to pay for punch-list items as they are completed by each prime contractor. Retainage and punch-list items are paid from the specific prime contractor's line item.



REMEMBER: If the Construction Contingency is depleted, the Client Agency must provide sufficient funds in the LOC to replenish not only the Construction Contingency but also to replenish the Professional CO Fee Contingency line item. The Construction Contingency should be 10% of the remaining unfinished total construction (all Primes) balance. The Professional Fee CO should be the appropriate percentage of the Construction Contingency.

¹⁷ There is no specific line item in e-Builder to retain or bookmark liquidated damages.



REMEMBER: If the Design Contingency line item is depleted during construction, the Client Agency must provide sufficient funds to pay for services and to replenish the contingency to at least 5% of the original Basic Services line item. Depending upon the nature of the service that cannot be performed due to lack of funding, the project may have to be suspended until such time as funds are in place in e-Builder to resume service.

XI. Project Funding – Post-Final Inspection

Payments to the prime contractors based upon satisfactory completion of punch-list work shall be paid from the prime contractor's specific line item. If one prime requests that PW withhold funds from another prime in accordance with the language of the General Conditions, the funds remain in the prime contractor's line item and may not be used to pay any invoice until the dispute/claim is resolved or settled.

Funds for the professional's 5% retainage are paid from the Basic Services line item. Depending upon the language of the applicable Professional Agreement, the professional may be entitled to request reduction of the 5% down to 2.5% after Final Inspection. Only the Deputy Secretary can approve any request for reduction in the professional's final payment.

Upon completion of the last punch-list item, the contractor may submit a final invoice and the project enters the final close-out phase. Based upon the language in both the General Conditions and the Commonwealth Procurement Code, a contractor has 6 months after a claim accrues to request a claim conference. Typically, this means the contractor would have 6 months from receipt of the Bureau of Construction's final decision on the 100% FDR meeting. The Close-Out Process in e-Builder accounts for the last day of final inspection and freezes any activity on the project for 6 months from that last date. If no activity occurs and no claims are filed, the project proceeds to close-out.



REMEMBER: Any funds remaining in any line item on the Cost Module after the Final Invoice is paid are 'frozen' and unavailable to spend on anything except to settle construction contractor claims. Once the 6 months have expired and no claims are filed, any funds remaining from an LOC will be returned to the Client Agency. After those funds are returned, all remaining funds are returned to the Office of Budget as Project Savings. These funds are not available for additional phases of the project nor are they available for post-final inspection change orders.