

CAPITAL PROGRAMS EXPANSION

Schedule and Budget

September 24-25, 2024



PROJECT OVERVIEW

How We Got Here

- At the beginning of FY24, evaluated improvement opportunities (systems, processes, etc) in our End-To-End management of Capital Projects.
- Based on that analysis, prioritized a set of improvement areas to be implemented in Phase 1:
 - Improve Budget Tracking
 - Improve Schedule Tracking
 - Simplify Status Reporting
- Additional areas around Project Templates/ Checklists, Phase Changes, Risk Management, Change Orders would occur in future phases.

Success Criteria

- Improved Transparency
- Don't increase burden on PM's
- Extend ability to reflect potential risk/ events in projects

Project Mechanics

- May 2024 to Aug 2024
- Joint Effort With Facilities, NUIT and Llama
- Capital Programs SMEs:
 - Larry
 - Dave
 - Bonnie
 - Dan
 - Hiro



BENEFITS

New Features Enable:

- Improved Transparency
 - Provides the ability to see a summary level of budget and schedule risk across the capital programs portfolio (140+ projects)
 - Drives consistency of process / tools across the portfolio (vs different ways of doing this by PM)
- Extended ability to reflect potential risk/ events in projects
 - Evaluating forecasted expenses against a baseline allows quick identification of risk and allows questions to be asked early in the project
 - Sets the foundation for more advanced system tracking (Actuals vs Baseline, etc)
- Minimizing burden on PM's
 - Accountability doesn't change in terms of schedule/ budget. This just allows everyone a better way to see where potential problems may arise
 - Reusing existing processes and reports in the system. Simplified them to reduce the effort to complete.
 - Most effort happens at new project set up, then leverage updating against the baseline during existing check in process.
 - Work to do budgets/ progress reports, offset by simplification of phase checklists/ templates. (Upcoming Phase)



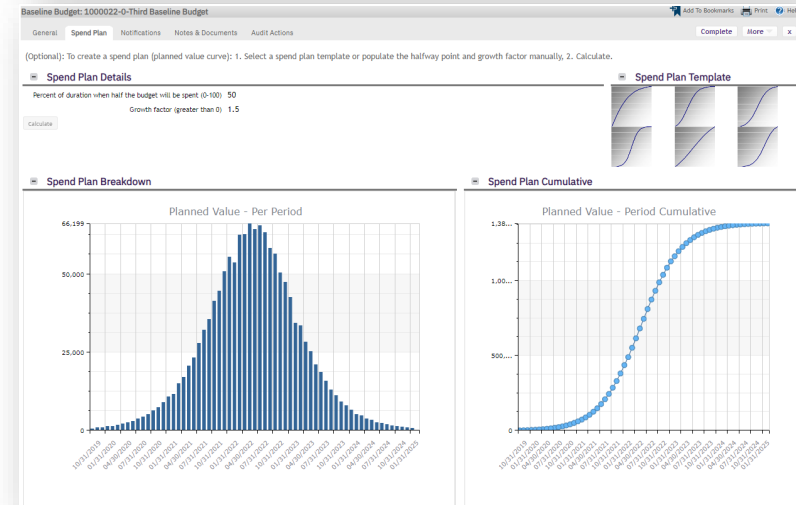
EXPANDED FUNCTIONS

We decided to:

- Relabeled fields to clarify difference between Funding and Budgets (existing fields)
- Establish a Baseline Budget with Spend Plans (new form)
- Enable Budget Forecasting (new form)
- Set Project Dates
 - Substantial Completion Date (renamed existing field)
 - Anticipated Financial End Date (new field)
- Streamline Project/Progress Reports to focus on Budget and Schedule Metrics (existing form, simplified fields)
- Established Performance Metrics and Develop a Project Status Dashboard (new report, fed on progress reports)

FUNDING & BUDGET

a. Original Funding	\$1,722,470.00	US Dollars
b. Funding Changes	\$-299,550.00	US Dollars
c. Current Funding (a+b)	\$1,422,920.00	US Dollars
Baseline Budget	\$1,382,612.00	US Dollars
Budget Delta	\$40,308.00	US Dollars



Projects Dashboard

Group	Project Man...	Percentage ...	Cost Perfor...	Schedule P...	Phase	Planned End	Current Pro...	Budget Hea...	Schedule H...
> Crown Elev 1-3 Fire Svc/Door Upgra... (1)	Abrams, Jessica S	75	0.954	0.642	5.0 Operational	3/1/2025	2024-12	Proceeding as Exp...	Proceeding as Ex...
> Cook 3rd Fl - Chazot Lab FY22 (5)	Horikoshi, Hirokaz...	100	1.589	0.736	5.0 Operational	2/1/2024	2024-12		
> Tech L318-M382-D112 Lab Reno F... (2)	Horikoshi, Hirokaz...	20	2.537	0.546	3.0 Construction P...	8/30/2024	2024-11	Proceeding as Exp...	Proceeding as Ex...
> PR001635 - 3201 Davis Exterior Sig... (1)	Ziegelmaier, Ann T	2	0	0	7.0 Closed		2024-11		
> Ward 4 East AHU FY24 (1)	Bleck, Dan	0.35	0.330	0.318	2.0 Design	8/31/2026	2024-08	Proceeding as Exp...	Proceeding as Ex...
> Jacobs Center Reno FY22 (57)	Burkhart, Deborah ...	52	1.056	0	2.1 Schematic De...	12/31/2027	2024-04	Proceeding as Exp...	Not Proceeding as...
> Pick Staiger Main Hall Lighting IC F... (77)	Burkhart, Deborah ...	90	0.304	0	4.0 Construction ...	12/31/2024	2024-04	Proceeding as Exp...	Proceeding as Ex...



TRAINING AGENDA

- Updated Budget Summary
- Adjusting Schedule Dates
- Creating a Baseline Budget
- Creating a Budget Forecast
- Creating Project Reports
- Project Health Dashboards





UPDATED BUDGET TAB



BUDGET TAB

Capital Project: 1002000-M... 24

General Scope Sched **Budget** Payment Contacts Notes & Documents

[Optional]: Summary of the budget and commitments for the project.

Summary

FUNDING & BUDGET		
a. Original Funding	\$450,000.00	US Dollars
b. Funding Changes	\$.00	US Dollars
c. Current Funding (a+b)	\$450,000.00	US Dollars
Baseline Budget	\$.00	US Dollars
Budget Delta	\$.00	US Dollars

COMMITMENTS		
d. Commitments	\$23,200.00	US Dollars
e. Invoices Paid	\$.00	US Dollars
INCURRED		
e. Invoices Paid	\$.00	US Dollars
g. Journals/Job Cost	\$.00	US Dollars
h. Total Incurred (e+g)	\$.00	US Dollars
i. Allowance for Pll Fee (%)	\$1,160.00	US Dollars
j. Uncommitted Budget (i-f-h-l)	\$425,640.00	US Dollars
p. Forecast To Complete	\$492,000.00	US Dollars
q. Forecast Final (h+p)	\$515,200.00	US Dollars

Last Update: 11/16/2018
Updated By:

Job Cost Billing: ● IM Markup: 5.00%

Current Budget Balance

Account	Account Description	c. Current Budget	f. Encumbrance Balance	h. Total Incurred	j. Uncommitted Budget
Contains	Contains	More Than or Equ	More Than or Equals	More Than or Equ	More Than or Equals
<input type="checkbox"/> 75533	Art Installation Services	\$.00	\$.00	\$.00	\$.00
<input type="checkbox"/> 75610	Internal - FMO Services	\$.00	\$.00	\$.00	\$.00
<input type="checkbox"/> 75750	Contractor Services	\$.00	\$.00	\$.00	\$.00
<input type="checkbox"/> 75780	Self Insurance Claims Paym...	\$.00	\$.00	\$.00	\$.00
<input type="checkbox"/> 75800	Surveys, Borings, Testing	\$.00	\$.00	\$.00	\$.00

Funding and Budget Grouping

- **Original Budget** is the original budgeted amount for the project, established during the creation of the project's capital chartstring.
- **Funding Changes** represents the net change to project budget (i.e. sum of budget increases and decreases) following the creation of the original project budget.
- **Current Funding (a+b)** is the project's current budget; it represents the sum of the Original Budget and Budget Changes line items.
- **Baseline Budget** represents the amount project leadership thinks the project is going to be, so that performance can be based on that actual thought rather than the initial amount that was funded.
- **Baseline Delta (c-Baseline Budget)** represents the delta of the Current Funding and Baseline Budget.



BUDGET TAB

Capital Project: 1002000-M... Y24

General Scope Sched **Budget** Payment Contacts Notes & Documents

[Optional]: Summary of the budget and commitments for the project.

Summary

FUNDING & BUDGET			COMMITMENTS		
a. Original Funding	\$450,000.00	US Dollars	d. Commitments	\$23,200.00	US Dollars
b. Funding Changes	\$.00	US Dollars	e. Invoices Paid	\$.00	US Dollars
c. Current Funding (a+b)	\$450,000.00	US Dollars			
Baseline Budget	\$.00	US Dollars			
Budget Delta	\$.00	US Dollars			

INCURRED		
e. Invoices Paid	\$.00	US Dollars
g. Journals/Job Cost	\$.00	US Dollars
h. Total Incurred (e+g)	\$.00	US Dollars

i. Allowance for PII Fee (1%)	\$1,160.00	US Dollars
j. Uncommitted Budget (i-f-h-l)	\$425,640.00	US Dollars
p. Forecast To Complete	\$492,000.00	US Dollars
q. Forecast Final (h+p)	\$515,200.00	US Dollars

Last Update: 11/16/2018
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Job Cost Billing: • PM Markup: 5.00%

Current Budget Balance

Account	Account Description	c. Current Budget	f. Encumbrance Balance	h. Total Incurred	j. Uncommitted Budget
Contains	Contains	More Than or Equ	More Than or Equals	More Than or Equ	More Than or Equals
<input type="checkbox"/> 75533	Art Installation Services	\$.00	\$.00	\$.00	\$.00
<input type="checkbox"/> 75610	Internal - FMO Services	\$.00	\$.00	\$.00	\$.00
<input type="checkbox"/> 75750	Contractor Services	\$.00	\$.00	\$.00	\$.00
<input type="checkbox"/> 75780	Self Insurance Claims Paym...	\$.00	\$.00	\$.00	\$.00
<input type="checkbox"/> 75800	Surveys, Borings, Testing	\$.00	\$.00	\$.00	\$.00

Incurred Grouping

- **Invoices Paid** represents the sum of all vendor invoice payments that have been released for the project.
- **Journal/Job Cost** represents the sum of all NU Facilities internal costs (e.g. shop time, PM Fees, etc.) billed to the project.
- **Total Incurred (e+g)** represents the combined total of internal and external costs that has been spent on the project.



ADJUSTING SCHEDULE DATES



SCHEDULE TAB

Capital Project: 1002000-Morton CREPS Feeder FY24

General Scope **Schedule** Budget Procurement Contacts Notes & Documents

(Optional): Provide general information concerning the project schedule, project tasks and assumptions.

Summary

★ Plan Start **09/21/2023**

★ Substantial Completion **05/31/2024**

★ Anticipated Financial End **05/31/2024**

Actual Start 09/21/2023

Calculated Start 09/21/2023

★ Time Zone (GMT -6) Central Time (US, Canada) [US/Central]

Calculated End 05/29/2024

★ Calculate Project From Start

Project Tasks Gantt

Project Tasks Critical Path Tasks Task Hierarchy Dependencies

Project Tasks

Refresh Add Find Remove Baseline

Apply Filters Clear Filters

#	Type	ID	Task Name	Planned Start	Planned End	Percent Complete	Actual Cost
0	Schedule Task	118057593	Phase 0.0 Initial Request	09/21/2023 11:42:18	10/09/2023 11:42:18	0 percent	\$.00
0	Schedule Task	118057594	Phase 1.0 Feasibility & Pre-D...	10/09/2023 11:42:18	11/27/2023 11:42:17	0 percent	\$.00
0	Schedule Task	118057595	Phase 1.1 Feasibility	10/09/2023 11:42:18	10/23/2023 11:42:18	0 percent	\$.00
0	Schedule Task	118057597	Phase 1.2 Planning/Pre-Desi...	10/23/2023 11:42:18	11/12/2023 11:42:18	0 percent	\$.00
0	Schedule Task	118057598	Phase 6.2 FM Closeout	04/30/2024 11:42:16	05/15/2024 11:42:16	0 percent	\$.00

Summary Section

- The **Plan Start** date represents the initiation of the project.
- The **Substantial Completion** date represents the date construction is to be completed.
- The **Anticipated Financial End** date represents the when all financial transactions should be completed and processed for the project.



CREATING A BASELINE BUDGET



CREATING A BUDGET FORECAST



CREATING PROJECT REPORTS



PROJECT HEALTH DASHBOARDS



HEALTH DASHBOARD

Northwestern | FACILITIES CONNECT

Home / Projects Dashboard

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Group	Project ...	Percenta...	Cost Perf...	Schedul...	Phase	Planned ...	Current ...	Budget ...	Schedul...
> Crown Elev 1-3 Fire Svc/Door Upgra... (1)	Abrams,Jessic...	75	0.954	0.642	5.0 Operational	3/1/2025	2024 - 12	Proceeding as ...	Proceeding as ...
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> Tech L318-M382-D112 Lab Reno F... (2)	Horikoshi,Hirok...	20	2.537	0.546	3.0 Constructio...	8/30/2024	2024 - 11	Proceeding as ...	Proceeding as ...
> PR001635 - 1201 Davis Exterior Sig... (1)	Ziegelmaier,An...	2	0	0	7.0 Closed		2024 - 11		
> Ward 4 East AHU FY24 (1)	Block,Dan	0.35	0.330	0.318	2.0 Design	8/31/2026	2024 - 08	Proceeding as ...	Proceeding as ...
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> Pick Staiger Main Hall Lighting IC F... (77)	Burkhart,Debor...	90	0.304	0	4.0 Constructio...	12/31/2024	2024 - 04	Proceeding as ...	Proceeding as ...
> CHW Vault at Jacobs FY24 (9)	Culcasi,David	2	0	0	2.0 Design	11/30/2024	2024 - 04	Not Proceeding...	At Risk
> Cook 2014 David Barton Lab FY24 (11)	Culcasi,David	20	3.325	0	2.0 Design	6/1/2024	2024 - 04	Proceeding as ...	Proceeding as ...
> Cook Hall AHU Replacement FY23 (9)	Culcasi,David	1	0	0	2.0 Design	12/31/2024	2024 - 04	Proceeding as ...	Proceeding as ...

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Project Data

Self Selection

Red – Not Proceeding as Expected
CPI and SPI .5 and below

Yellow - At Risk
CPI and SPI .75 to .5

Green – Proceeding as Expected
CPI and SPI 1 to .75

Black spaces indicate projects that do not have enough information to conclude their health status.



BEST PRACTICE REMINDERS

- **ACTIVATE THE PROJECT RECORD**
- Save the Project Record frequently when updating
- Don't navigate away from a Project Record if it is a large project
- Project Reports and Percent Complete:
 - Prioritize schedule over billing
 - Focus on work complete
 - Utilize comments for context



IMPORTANT FIELDS

Field	Description
Actual Percent Complete As of Period End Date	Manual entry by PM, with estimated completion percentage
Budgeted Cost of Work Performed	Baseline Budget * % Complete
Actual Cost Period End	Invoices Paid as of Report End Date
Cost Performance Index (CPI)	Budgeted Cost of Work Performed / Actual Cost Period End
Schedule Performance Index (SPI(t))	Earned Schedule Duration / Planned Days
Earned Schedule Duration	Utilizes: Planned Duration, Budgeted Cost of Work Performed, Baseline Budget Spend Plan Curve, Baseline Budget
Estimated Final Cost	(Forecast Final – Paid Invoices)/CPI + Paid Invoices ELSE Forecast Final/CPI
Forecast Final	Current Commitment + Potential Change Orders + Forecast to Complete
Estimated Final End Date	Project Plan Start + Estimated Final Duration
Estimated Final Duration	Planned Duration / SPI
Planned Duration	Duration of Project Plan Start to Project Anticipated Financial End