


The Here and Now of Capital Construction in Your District and Across Vermont

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VSA/VSBA Fall Conference - October 26/27 2023

A growing body of research has found that school facilities can have a profound impact on both teacher and student outcomes. With respect to teachers, school facilities affect teacher recruitment, retention, commitment, and effort. With respect to students, school facilities affect health, behavior, engagement, learning, and growth in achievement. Thus, researchers generally conclude that without adequate facilities and resources, it is extremely difficult to serve large numbers of children with complex needs.

Penn State Center for Evaluation and Education Policy Analysis

A black and white photograph of a hand holding a small tree sapling. The hand is positioned palm-up, with the fingers gently cupping the base of the tree. The tree is small and has many leaves. The background is plain white.

It has been said that the best time to plant a tree was thirty years ago, the second best time is today - Chinese Proverb

High Level Update on Vermont's Efforts to Create a Renewed Interest in School Facilities Stewardship and Investment

- Act 72 of 2021
- Collaboration Among State Level Players
- Act 78 of 2023
- Related Initiatives

Act 72 of 2021

- In 2021, Vermont Legislators - principally from the House Education Committee - along with like the Vermont Superintendents Association, the Vermont School Boards Association and Vermont School Custodians and Maintenance Association and professional experts - worked to see [Act 72](#) introduced and enacted.
- Act 72 - which can be considered omnibus legislation was intended to re-boot Vermont's systematic investment in school facilities - which for all intents and purposes had laid dormant since 2008.
- The Act includes a wide array of significant provisions addressing condition analysis for school facilities statewide; renewal of standards and conditions for funding eligibility; determination of funding needs and sources; and requirements for facilities stewardship.

Major Components of Act 72

Component	Ownership	Purpose	Status or Deadline
Facilities Inventory	AOE	Initial, self-reported baseline data	COMPLETE
Facilities Assessment	AOE	Comprehensive assessment and prioritization	Oct-23
Facilities Standards	AOE/SBE/VSA	Update standards to reflect changes in educational delivery models and requirements for safe, healthy and efficient schools	Jan-23 (DQS will be implemented in July 2025)
Capital Outlay Formula	SBE/AOE	1) square footage allowance per student or program and 2) establish an allowable cost per square foot of construction	Draft completed, July 10, 2023. State Board next step.
School Construction Funding	AOE	Report on funding needs, recommendations for source of funding and analysis of other state approaches	July -23
School Facilities Management and Certification Program	AOE with partners	Update to 16 V.S.A. § 837 to Establish guidelines and certification for facilities management position; every district required to have a designated facilities manager	TBD
District Capital Improvement Plan	SU/SDs and AOE	5-year capital improvement plan, format developed by AOE, updated annually	TBD
Radon Testing	SU/SDs	Schools must complete radon testing and provide results to all students and employees	Jun-25
AGENCY OF EDUCATION			

School Facilities Inventory

- Statewide School Facilities Inventory has been completed with public facing Dashboard running on the AOE Website at [Agency of Education School Facility Inventory Dashboard](#)
 - The objective of this facilities inventory was to provide an assessment of the conditions of school facilities statewide
 - A **Facility Condition Index (FCI)** was calculated that provided an indication of a buildings overall amount of depleted life
 - The **FCI** of individual buildings comprising the district were aggregated to derive a **FCI** value for each SU/SD
 - The lower the **FCI**, the better the overall condition of a building
 - Vermont's education system has an overall average **FCI** of 71.4%
 - 24 SU/SDs or 44% have FCI's over 75%
 - 12 SU/SDs or 22% have FCI's over 80%
 - 5 SU/SDs or 9% have FCI's over 85%
 - The value of this inventory is an indication of the age and general condition of school buildings→ not a comprehensive assessment

School Facilities Assessment

- Comprehensive Statewide School Facilities Assessment currently in progress
 - The on-site assessment of each school building includes the following
 - A building description, address, gross square footage, number of floors, age, construction type
 - A site description as well as condition and adequacy report
 - A description of the exterior envelope and the condition of major components
 - A description of interior finishes and their condition
 - ADA compliance in checklist format
 - Comments regarding potential hazardous materials (lead, asbestos, mold, etc.)
 - Identification of any fire or life safety issues
 - Identification of any “risk” factors such as location in flood prone area, wetlands, earthquake zone, “emergency” facilities related conditions, snow/ice shedding hazards, tripping hazards, etc.
 - A description and assessment of the HVAC system
 - A description and assessment of the electrical system

School Facilities Assessment Cont'd

- A description and assessment of the plumbing system
 - A description and assessment of any conveying system (elevators and lifts)
 - A description and assessment of the security system
 - A description and assessment of the capacity and utilization
 - A description and assessment of the capacity to deliver STEAM programming
 - A Level III energy use assessment for the past three years
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- The deliverables due from the on-site assessment work include
 - A digital copy of each schools Building Condition Report
 - Lifetime access to Asset Calc, a data analysis platform that will allow for
 - Detailed views into each asset and observation in every facility
 - User configurable reporting options for financial forecasting

School Facilities Assessment – Next Steps

- Using the findings from the assessment to inform the path forward on creating safe and healthy schools
 - System Replacements/Upgrading Schools/Full building replacements
- Discussions around what the vision of education is for Vermont into the future
 - Consolidation
 - Regionalization
 - Community Schools
- Development of sustainable funding streams
- Development of a Construction Aid Funding Program

Capital Outlay Funding Formula

- The **Capital Outlay Financing Formula (COFF)** is a detailed facility specification and cost guide for school construction projects.
- The formula specifies the minimum allowable square footage for programs and services for each educational level (K-6, K-8, Middle School, High School).
- The formula specifies the maximum allowable square footage per student for each educational level (K-6, K-8, Middle School, High School).
- The formula specifies the allowable square footage costs for construction, demolition, site work and associated waste treatment facilities.
- The application of the formula to the project specifics determines the Maximum Eligible Building Costs for State Participation

State Level Collaboration

Vermont Superintendents Associations, Vermont School Custodians and Maintenance Association, the Vermont School Boards Insurance Trust and the Agency of Education collaborating closely on some/all of the following:

- Promoting and organizing professional learning for school facilities personnel
- Facilitating information sharing among facilities directors
- Supporting advancement toward facilities manager certification processes
- Policy and Legislative Analysis and Advocacy (VSA/VSCMA)
- Organizing and promoting the annual conference for school facilities personnel

Act 78 of 2023

Sec. E.131.1 School Construction Aid Task Force;

Powers and Duties:

- The Task Force shall review the results of the statewide school facilities inventory and conditions assessment and the school construction funding report required by 2021 Acts and Resolves No. 7 and study the following issues relating to school construction aid:
 - (1) the needs, both programmatic and health and safety, of statewide school construction projects;
 - (2) funding options for a statewide school construction program, including any incentive plans;
 - (3) a governance structure for the oversight and management of a school construction aid program;
 - (4) the appropriate state action level for response to polychlorinated biphenyl contamination in a school; and
 - (5) criteria for prioritizing school construction funding.
- Report. On or before January 15, 2024, the Task Force shall submit a written report to the House Committees on Corrections and Institutions, on Education, and on Ways and Means and the Senate Committees on Education, on Finance, and on Institutions with its findings and any recommendations for legislative action, including a recommendation on how the State should expend the funding in the Education Fund reserved for future school construction.

Membership of the Task Force

Mike Pieciak, State Treasurer - Co-chair

Heather Bouchey, Interim Secretary of Education - Co-chair

Bruce MacIntire, Vermont School Custodians and Maintenance Association

David Weeks, State Senator

David Epstein, Architect (GA)

Chris Young, Vermont Principals' Association

Peter Conlon, State Representative

Jon Wilkinson, Industrial Hygienist (GA)

Jeff Francis, Vermont Superintendents Association

Sue Ceglowski, Vermont School Boards Association

Martine Gulick, State Senator

Chris Taylor, State Representative

Michael Gaughan, Vermont Bond Bank

Jeff Fannon, Vermont NEA

Eric Lafayette, EEI Services (GA)

Ben Doyle, Preservation Trust (GA)

(GA) = Gubernatorial Appointee

The **ABC's** of Facility Planning

August 2023



Mt Abraham Middle High School

About **TruexCullins**

Architecture and Interior Design

Burlington, Vermont.

Founded 1968

Staff of 35

School design expertise

focusing on:

Vermont PK-12 Schools

American International

Schools

Colleges & Universities



Williston Central School

About TruexCullins



Winooski School District

145,000 sf existing

70,000 sf new construction

850 students

PK-12

new middle school addition

new elementary school addition

\$57.8m project budget







HEALTH

MIDDLE / HIGH 

CAFÉ 



STORE 



Mount Abraham Union Middle/High School

13,000 sf renovation

650 students

Grades 7-12

lobby and bathrooms





MOUNT ABRAHAM UNION
MIDDLE & HIGH SCHOOL

GAMEDAY
Thursday May 10th

Eagles	Thunderbirds
Varsity Baseball vs. Mississippi	1:45 PM
JV Baseball vs. Mississippi	4:30 PM
Eagles	Green Knights
Varsity Softball vs. Rice	4:30 PM

Williston Central School

145,000 sf renovation

950 students

Grades K-8

entry, library, and
community spaces,
plus systems upgrades





Phases

Educational
Programming

Facility Evaluation

Visioning

Concept Design



Winooski School District

Educational Programming

Enrollment Projections

Educational Specifications

Internal vs external
facilitation

Visioning Phase option



Vermont Day School

Facility Evaluation

Renovations/Additions only

Report

Description of existing
conditions

Recommendations for
modernization

Prioritization of needs

Costs for upgrades



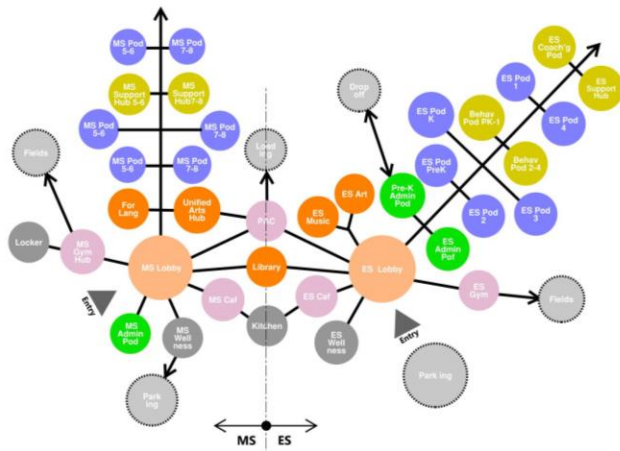
Visioning

Establish the basis for
design

Guiding Principles

Organizational Diagrams

Space Needs Program



Mount Abraham Middle High School

Concept Design



Site Feasibility
Site Selection
Concept Design
Cost Estimating
Project Budget



Milton Elementary Middle School

Owner Team

Project Leaders:

Superintendent
School Board Chair
Facility Committee Chair

Project Staff:

Internal or consultant

Executive Committee

+

Facility Committee

includes:
board members
admin
staff
community members

Owner's Project Manager



Winooski School District

Design Team

Architect-led

District/SU contracts with
Architect

Architect contracts with:

Engineers

Cost Estimator

Specialty Consultants
as needed



East Montpelier Elementary School

Public Outreach

Start with the **Why** - Then
with the **What**

Never Squander **Trust**

Political Capital

Communications Manager

Cultivate project friends,
neutralize project enemies



Thanks!

David Epstein

Managing Principal
TruexCullins

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Winooski School District



**Successfully Implementing
your Capital Project Plan**

Initial Project Planning - The Facilities Condition Assessment

- The first step is to complete a district wide facilities condition assessment.
 - The Facilities Condition Assessment provides a snapshot of the condition of all facilities.
- Once the assessment is complete, the district and it's partners will develop a Master Plan, prioritizing the needs throughout the district. It is important to capture a snapshot of the district as a whole, so the community understands the magnitude of need.

Facility Condition Assessment Summary

Example

Burlington School District: 10 Year Capital Needs Assessment	
BHS/BTC	\$27,017,179
Champlain	\$3,942,042
Edmund's	\$10,007,561
Flynn	\$844,036
IAA	\$1,269,772
SA	\$1,299,837
Smith	\$352,556
Hunt	\$6,103,505
IRA	\$3,239,601
Property Services	\$357,956
Contingency (20%)	\$10,886,809
Total:	\$65,320,854

PCI Partnered with Bureau Veritas to Conduct the Statewide School Facilities Condition Assessment



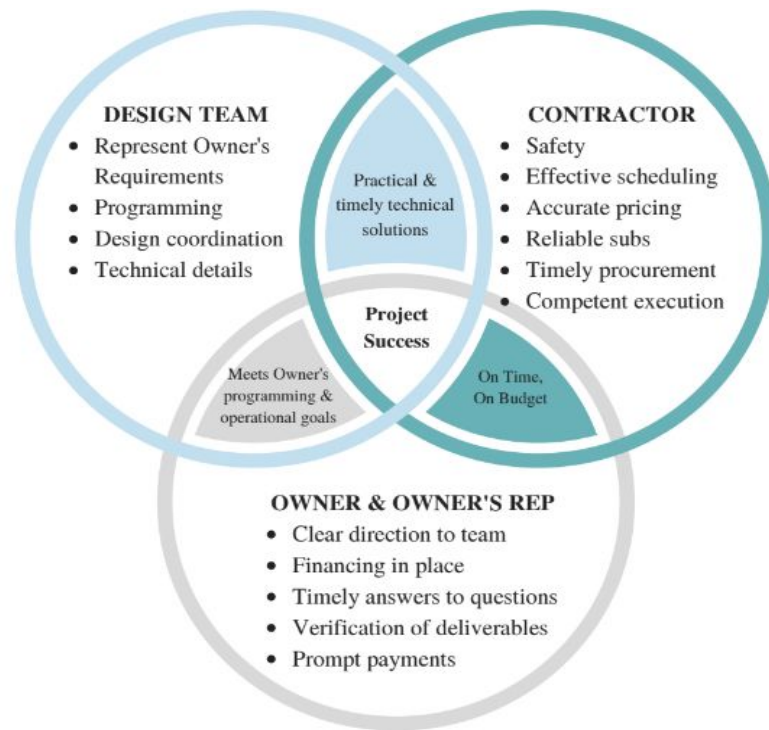
Many of you have probably heard from PCI and Bureau Veritas over the past year. Data we collected includes:

- Utility Data Collection
- Floor Plan Collection
- Square Footage Take Offs
- PCB Air Test Review
- Space Needs Assessment
- Project Coordination with BV & AOE



What are the benefits of using an Owner Project Manager's?

With school administrators and staff stretched thin, an OPM can help shed some of the burden off school resources by managing these complex and time consuming initiatives for the district.



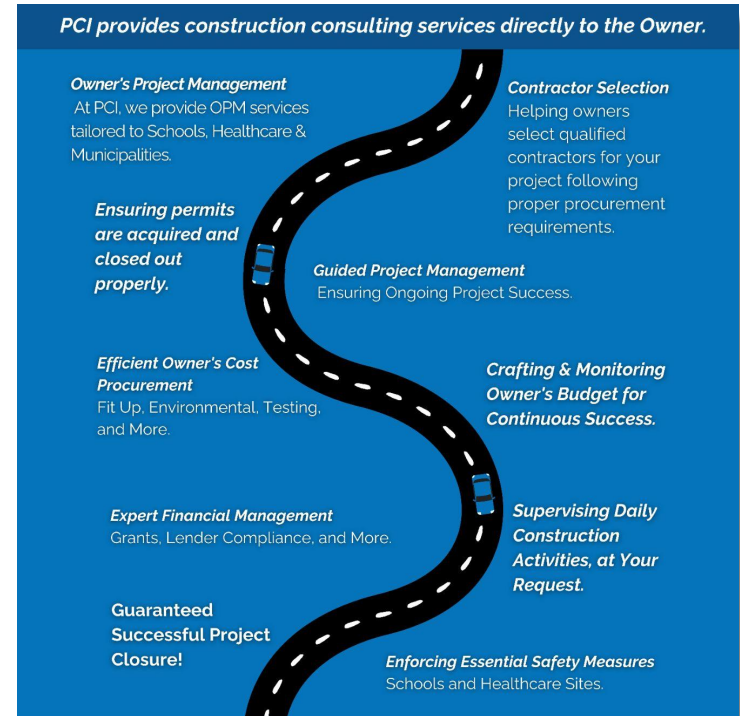
Owner Project Manager's (OPM) Role

Here are some key considerations on why OPM's should be on each project:

- An OPM is involved with the entire project including, site selection, design and contractor selection, permitting and move in. This allows a project-wide perspective to prevent costly delays and set realistic expectations to the owner as the project progresses.
- An OPM works on behalf of the Owner's interest, acts as the Owner's eyes and ears on the project, and can advise the owner on all aspects of a project. Bottom line, an OPM has no hidden agendas and protects the owner during all stages of the project.
- An OPM's primary goal is to protect the owner's time, budget and overall project performance. An OPM tracks the entire project schedule with special attention to owner related items.

When is the best time to bring on an OPM?

- The best time to bring on an OPM is during the planning stages of the project.
 - The OPM can lead the development of a district wide master plan
 - OPM can lead the procurement of A&E Services and Contractor Services



Ensure your OPM has extensive experience in the Education Sector

Burlington School District



Ensure your OPM has extensive experience in the Education Sector

Addison Central School District



Maple Run School District



Hannaford Career Center



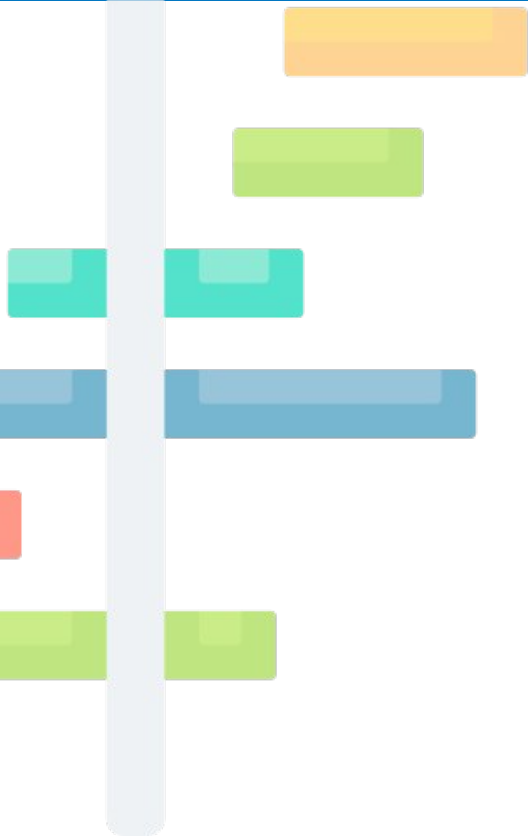
OPM should also have experience Managing Grant Project Requirements

ESSER, SHARE, EVT IAQ

PCI's recent experience includes

- **Central Vermont Supervisory Union #68**
 - Washington Village Elementary School
 - Williamstown Elementary School
- **Maple Run School District**
 - BFA St. Albans
 - Fairfield Elementary School
 - Saint Albans City School
- **Lyndon Institute**
- **North Country Supervisory Union**
 - Chester Elementary School
- **Orange East Supervisory Union**
 - Oxbow High School
- **Addison Central School District**
 - Mary Hogan Elementary School
- **Burlington School District**
 - Integrated Arts Academy

Understanding the Project Schedule



In your planning, appropriate time needs to be allocated for design time:

- Concept Plan
- Schematic Design (SD)
- Design Development (DD)
- Construction Documents (CD)

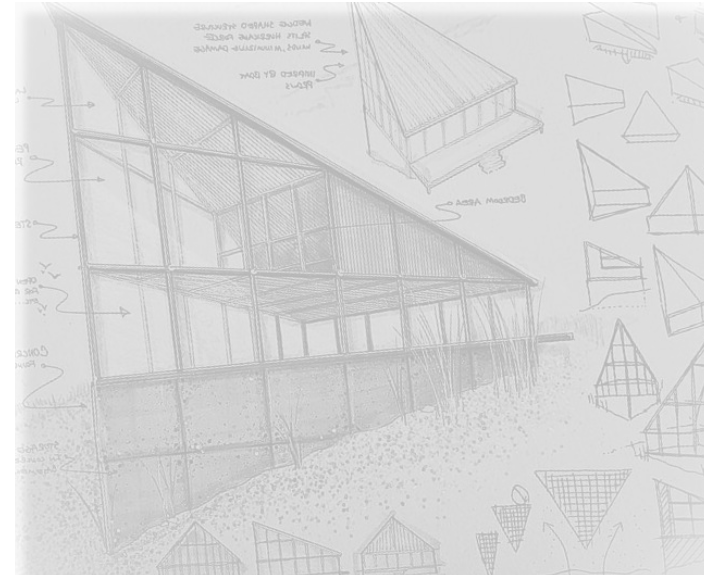
*Third party estimating should be conducted at every level of design

The design process could take 18-24 months to complete depending on the size and complexity of the project before construction can begin.

Most major construction projects take 12-24 months to complete.

Project Design - What level of design is needed to go to bond?

- Most school districts engage a design team to provide a concept plan and high level cost estimate in order to go to bond.
 - Why? Because there is less of an upfront investment if the bond fails.
- This approach puts the project at risk of uncovering costly impacts to your project during the Schematic Design process such as::
 - Geotech
 - Environmental
 - Scope creep during design development
 - Stormwater
- The farther along in the design process you are able to get the more accurate cost estimate you will have
- It is best to have completed at least Schematic Level Design before going to bond



Project Delivery - General Contractor vs. Construction Manager

- **Construction Manager (CM)**

- A CM is often brought onto the team early in the design process to assist in:
 - Development of the construction schedule
 - Cost estimating, providing vital 'reality check' early on
 - Provide input on constructability to the design team as the design develops
 - Identifying long lead items that may impact the project schedule
 - When bidding for a CM you are only bidding the CM fee and general conditions and not the total project costs.

- **General Contractor (GC)**

- Design Documents need to be 100% complete in order to bid out GC services
- Easier to compare overall project costs when receiving GC bids



How does a OPM role differ from a Clerk of the Works (COW) Role?

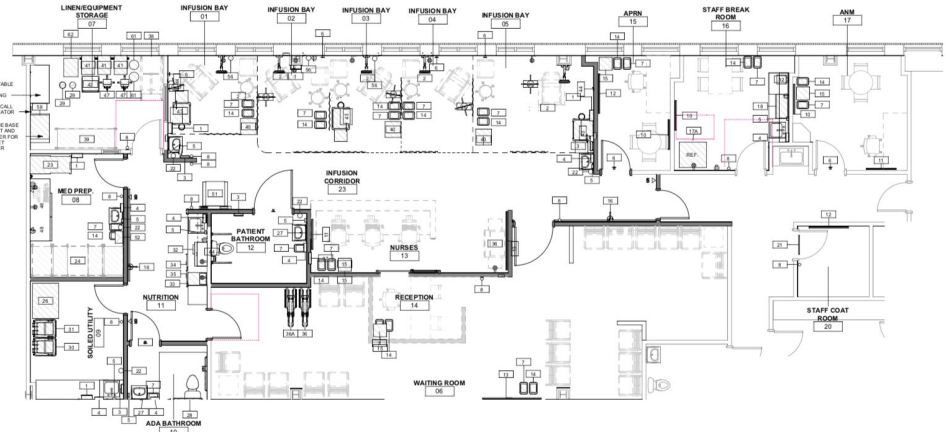
Like an OPM, the Clerk of the Works is contracted directly by the Owner and acts as their eyes and ears on the jobsite. The COW is onsite throughout the construction phase and is responsible for ensuring that the work meets all specifications of the design and and meets the quality standards of the Owner.

Depending on the size and complexity of your project, a full time clerk may not be required. On smaller projects the OPM may fulfill the level of oversight required, however, on large complex projects, a Clerk is strongly encouraged.

The Clerk provides the Owner with daily reports documenting work performed, testing results, safety incidents, or other activities as required. When the OPM and Clerk of the works have a good relationship, or are from the same firm, it helps ensure that the Owner is informed and advised of all the needs of a fast moving project.

OPM can also assist in Owner FF&E

PCI is experienced in developing a comprehensive FF&E plan and budget, and coordinating with Vendors. This ensures that your new building is ready for use upon completion



- Furniture
- Computers and telephones
- AV systems for education / Conference Rooms
- Security systems