100% FINAL SUBMISSION

ROCHESTER COMMUNITY AND TECHNICAL COLLEGE

RENOVATION TO SUPPORT EQUITY IN INDUSTRY AND PUBLIC SAFETY

November 10, 2022
Provide this form at the beginning of Predesign Section 1.

### Basic Information: 2024 State Appropriation Request

<table>
<thead>
<tr>
<th>Project Title:</th>
<th>Renovation to Support Equity in Industry and Public Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street address(es) of the building(s) affected by project, including county name:</td>
<td>1926 Collegeview Rd E Rochester, MN 55904 Olmsted County</td>
</tr>
</tbody>
</table>

### Project Scope

| New GSF: | 0 |
| Renewed GSF: | 14,100 |
| Renovated GSF: | 38,850 |
| Demolished GSF: | 0 |

### Project Timeline (all dates are approximate and subject to change)

| Proposed design start date: | September 2024 |
| Proposed bid/procurement date: | September 2025 |
| Proposed construction start date: | November 2025 |
| Proposed occupancy date: | August 2026 |

### Facilities Data

| Current Replacement Value (CRV) of the building(s) affected by project: | $75,935,662 |
| Backlog ($) removed by project: | $2,000,000 |
| Current FCI of building(s)/area(s) affected by project: | Heintz Center Overall: .08, Good |
| | Heintz Center Project Area: .10, Good |
| Anticipated FCI resulting from this project: | Heintz Center Project Area: .04, Excellent |
| Anticipated campus-wide FCI resulting from this project: | Heintz Center Overall: .03, Excellent |
| Number of classrooms and/or labs directly affected by this project: | 17 |
October 14, 2022

Mr. Brian Yolitz  
Associate Vice Chancellor - Facilities  
Minnesota State  
30 7th Street E.  
St. Paul, MN  55101

Dear Mr. Yolitz:

The enclosed pre-design document supports a request for capital funding for pre-design, design and construction at the Rochester Community and Technical College’s Heintz Center, which primarily houses the career and technical education programs of the College. The proposal was prepared in accordance with the State of Minnesota guidelines from the Minnesota State Facilities Planning Office and aligns with our College’s mission and the system’s strategic goals for life, safety, asset preservation, and facility revitalization or replacement.

Career and technical education programs are more important today than ever before. They are the producers of tomorrow’s workforce and a pathway to connect graduates with high-skill, high-demand jobs in such fields as Law Enforcement, Welding, and mechanical careers in plumbing, heating and electrical for both residential and commercial work. In addition, the proposal will significantly improve energy consumption, largely due to new LED lighting and improvements in ventilation and operational efficiencies. In addition, the plan includes establishing flexible instructional areas for active learning and physical training, as well as small informal gathering space to encourage interaction outside the classroom. The cost of the project is anticipated to be under $15 million, but the return on investment will be significantly greater in fulfilling the business and industry needs post-pandemic.

On behalf of the students, faculty and staff of RCTC, I am proud to recommend the Heintz Center Predesign proposal for your consideration.

Sincerely,

Jeffery S. Boyd, Ed.D.
President
November 10, 2022

Jeffery S. Boyd, Ed.D, President  
Rochester Community and Technical College  
851 30th Ave SE  
Rochester, MN 55904-4999

ROCHESTER COMMUNITY AND TECHNICAL COLLEGE  
RENOVATION TO SUPPORT EQUITY IN INDUSTRY AND PUBLIC SAFETY

President Boyd,

We are pleased to submit this predesign for the Renovation to Support Equity in Industry and Public Safety at Rochester Community and Technical College’s Heintz Center campus. The attached document has been prepared in accordance with the Minnesota State Predesign Guidelines and in collaboration with you, your staff, and the Predesign Committee.

The scope of our work has been to provide the professional expertise and analysis required to establish the project rationale and space requirements, determine the relative complexity of the project, develop probable construction and capital costs, and establish a probable project schedule for the final design and construction phases of the project. We believe this project will significantly improve the academic environment at Heintz Center by consolidating instructional labs in key Career and Technical Education programs. By providing organized and updated spaces, all students, particularly first-generation ones, will be able to better navigate through their program’s courses, graduate, and enter the workforce.

We would like to thank you, your staff, and administration for your input and feedback throughout the predesign process. We look forward to working with you in the future.

LHB, INC.

SARA G. PHILLIPS, AIA

MN REGISTRATION NO. 43551

I certify that this report was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the state of Minnesota.

c:  LHB Project No. 220930
m:\22proj\220930\200 communication\letters\220930 20221110 cover letter rctc predesign.docx
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Comprehensive Facilities Plan Sections
## Scoring Checklist

<table>
<thead>
<tr>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Integrated Planning</strong></td>
<td></td>
</tr>
<tr>
<td><strong>1.1</strong> Academic priorities: Targets institutional, regional, and state academic and facilities planning priorities.</td>
<td>2-7, 3-2, 3-3 This project is reflected in the Comprehensive Facilities Plan and aligns with the College’s priorities from the Strategic and Academic Plans.</td>
</tr>
<tr>
<td><strong>1.2</strong> Addresses specific community or campus cultural needs.</td>
<td>2-8 Rochester was recently one of fifteen cities to win the Bloomberg Global Mayors Challenge after identifying the need to increase the presence of women of color into high-paying construction jobs. Renovating spaces for Facility and Service Technology (FAST) and Welding support this city-wide initiative.</td>
</tr>
<tr>
<td><strong>1.3</strong> Includes space(s) to deliver programs that address continuing or emerging high demand fields.</td>
<td>2-10 to 2-12 The project will impact a number of Career and Technical Education programs. While enrollment decreased during the pandemic, several are rebounding in enrollment. In addition, renovations are needed to expand into new instructional areas, such as renovating Automotive Technology space to allow for offerings on alternative fuel vehicles.</td>
</tr>
<tr>
<td><strong>Enrollment, demographics, and academic program considerations</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2.1a For projects impacting Student Services programs:</strong> Documents at least one of the required criteria and uses the data to document how the Student Services related program has been successful and needs a facilities project to continue/grow that success.</td>
<td>This project focuses on academic spaces in the Heintz Center.</td>
</tr>
<tr>
<td><strong>2.1b For projects impacting specific academic programs:</strong> Project Documentation provides the required criteria, at a minimum, and uses the data and narrative to demonstrate academic program strength and success, as well as facilities needs, for those programs directly impacted by this project.</td>
<td>2-8 Updating and right-sizing program spaces for critical programs like Law Enforcement, FAST, and Welding will allow for better instruction to students.</td>
</tr>
<tr>
<td><strong>2.2 Demonstrates need for in person campus facilities</strong></td>
<td>2-10 to 2-12 The programs impacted by this project are hands-on in nature: learning how to repair HVAC equipment, weld, or service automobiles cannot be done through online classes.</td>
</tr>
<tr>
<td><strong>2.3 Provides evidence of specialized program or student needs that support the need for renovation.</strong></td>
<td>2-12 One example of a specialized program supported by this renovation is modifying the automotive lab to shift instruction to include alternative fuel vehicles rather than solely combustion engines.</td>
</tr>
<tr>
<td><strong>2.4 Project demonstrates potential to improve enrollment and eliminates opportunity gaps.</strong></td>
<td>1-2, 2-12 One of the greatest challenges for these programs is outdated and disjointed lab space. Organizing the career and technical education trade labs into distinct areas reflects the academic pathways and will better support BIPOC students.</td>
</tr>
<tr>
<td>Page</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td><strong>Flexibility, adaptability, and accessibility</strong></td>
</tr>
<tr>
<td>3.1</td>
<td>Includes features that yield active learning spaces and help the campus transition from traditional classroom learning to collaborative, group learning methods.</td>
</tr>
<tr>
<td>3-6 to 3-9</td>
<td>The project does not include traditional general purpose classrooms. Rather, it focuses on trade labs or specialized classrooms where students often work together on training activities and projects.</td>
</tr>
<tr>
<td>3.2</td>
<td>Project includes flexible and adaptable features, including room types and furnishings, that allow for cost effective adaptability for future programs.</td>
</tr>
<tr>
<td>3-6 to 3-9</td>
<td>As most of the areas are large labs, once program-specific equipment is removed, it could be repurposed for another program.</td>
</tr>
<tr>
<td>3.3</td>
<td>Project uses alternative approaches to providing traditional, enclosed offices for faculty or staff.</td>
</tr>
<tr>
<td></td>
<td>Traditional offices are provided to provide acoustical separation, particularly when offices are adjacent to trade labs.</td>
</tr>
<tr>
<td>3.4</td>
<td>Campus follows a written academic scheduling policy and uses it to maximize current space utilization and ease of class scheduling for students.</td>
</tr>
<tr>
<td>2-24</td>
<td>The campus uses EMS reports to identify class size and room capacities to ensure efficient scheduling and space utilization.</td>
</tr>
<tr>
<td></td>
<td><strong>Infrastructure, sustainability, and energy efficiency</strong></td>
</tr>
<tr>
<td>4.1</td>
<td>Project addresses “adjacent needs” in, or near to, the project area, such as HEAPR-like work or COPE issues, and demonstrates how the campus will use these improvements to reduce overall operating expenses.</td>
</tr>
<tr>
<td>2-12</td>
<td>The project will address existing issues with interior finishes, mechanical and electrical systems,</td>
</tr>
<tr>
<td></td>
<td><strong>Financial impact</strong></td>
</tr>
<tr>
<td>5.1</td>
<td>Project accounts for special expenses relating to operations of new equipment or technology.</td>
</tr>
<tr>
<td>5-2</td>
<td>The construction budget includes new equipment and infrastructure upgrades noted as part of the project.</td>
</tr>
</tbody>
</table>
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Executive Summary

Heintz Center Predesign
1926 Collegeview Rd E, Rochester, MN 55904

Project Scope
This project will transform portions of the 1100 and 1200 Suites at the Heintz Center to reflect 21st century teaching methods and pedagogy by creating safe and modern lab environments for hands-on instruction. By consolidating now disparate program spaces, the renovation will create an inclusive and equitable environment that facilitates collaboration, recruitment, a sense of community, and will be welcoming to all.
The project addresses shortcomings in the physical space used by the following programs:
+ Facility and Service Technology (FAST)
+ Criminal Justice Transfer Pathway
+ Law Enforcement
+ Welding
+ Automotive Technician

Statement of Need
Students matriculating in RCTC trade programs do not demographically reflect the community at large. Black, indigenous, and people of color (BIPOC) and immigrant students are under-represented in the trade programs, and the current physical environment creates challenges in attempting to attract a broad student population. Lab spaces are visually isolated from corridors limiting prospective students’ ability to informally observe and understand what these programs entail.
Over the years, the programs have not been able to maintain critical adjacencies nor maintain direct access to the exterior to receive/send materials essential to executing their work. In some cases, department spaces are spread throughout the building affecting efficiency, a sense of departmental identity and continuity.

Project Alternatives
This predesign represents a narrowing of the project scope defined in the “Heintz Center Renovation: Re-imaging Education for a Diverse Workforce” predesign report by HGA, dated February 2021. After the Legislature did not pass a bonding bill in 2022, Rochester Community and Technical College reevaluated priorities in light of the Minnesota State Strategic Guidelines for 2024, enrollment trends, and the two-tiered system for small versus large projects. These factors resulted in the proposed concept plan included in this document.
While other schemes were discussed, mainly use of the 1300 Suite for Law Enforcement and the pros and cons of demolishing the greenhouse (1200 Suite). After consideration, it was determined that demolition
of the greenhouse would be premature based on the recent closure of the Horticulture program (unanswered questions about its reuse) and the use of the 1300 Suite for Law Enforcement created programmatic and circulation challenges.

**Participants & Stakeholders**

**Rochester Community and Technical College**
Steve Schmall, VP Finance and Facilities
Michelle Pyfferoen, VP Academic Affairs
Matt Bissonette, Dean of Career and Technical Education
Shayn Jensson, Project Manager
Alan Blake, FAST Faculty
Vincent Scheckel, LAWE Faculty
Paul Titus, Welding Faculty

**LHB, Inc.**
Sara Phillips, Principal, Project Manager
Anna Danielson, Architectural Designer
Laura Heck, Project Coordinator
Project Background
Heintz Center was constructed in phases from 1969 - 2002 through a series of additions. The diagram below overlays the building names (indicated by color) used in facility data with the naming conventions (boundary lines) used by the campus for wayfinding.
# Existing Building Summaries

## Heintz Center Main Building (Part of 1200 and 1400 Suites)

Note: Some information was sourced from the 2020 Predesign prepared by HGA.

### Code Information

<table>
<thead>
<tr>
<th>Occupancy Group(s) (existing):</th>
<th>B (offices and education above the 12th grade)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupancy Group(s) (proposed):</td>
<td>No Change</td>
</tr>
<tr>
<td>Primary Space Types:</td>
<td>Classrooms, labs, offices, student support, food service, gathering</td>
</tr>
<tr>
<td>Type of Construction:</td>
<td>Type IIB</td>
</tr>
<tr>
<td>Building Size (GSF):</td>
<td>Allowable Height: 75' Actual Height: 26'-8&quot;</td>
</tr>
<tr>
<td></td>
<td>Allowable area / floors: B-Unlimited Actual area / floor: 78,234 SF</td>
</tr>
<tr>
<td></td>
<td>Total Building Area: 78,234 GSF Space Efficiency (%): 65%</td>
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</tbody>
</table>

### Existing Building Systems

<table>
<thead>
<tr>
<th>Roofing Type(s):</th>
<th>4 Ply Built-up Asphalt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural System Type(s):</td>
<td>Load bearing masonry, steel columns / beams, bar joists</td>
</tr>
<tr>
<td>Mechanical System Type(s):</td>
<td>Low pressure steam system feeds steam to hot water heat exchangers, rooftop AHUs and 3 chillers.</td>
</tr>
<tr>
<td>Electrical System Type(s):</td>
<td>2000A, 480V, 3-Phase service, emergency generator</td>
</tr>
<tr>
<td>Fire Protection Type(s):</td>
<td>Fully sprinklered</td>
</tr>
<tr>
<td>Exterior Wall Type(s):</td>
<td>Masonry with brick veneer</td>
</tr>
<tr>
<td>Interior Wall Type(s):</td>
<td>Masonry, gyp board on metal studs</td>
</tr>
<tr>
<td>Conveying Systems:</td>
<td>None</td>
</tr>
<tr>
<td>Life Expectancy of Building and Systems:</td>
<td>Building: 50 Years; Roof: 28 Years; Systems: Varies by type.</td>
</tr>
<tr>
<td>Technology Systems:</td>
<td>Hardwired and wireless</td>
</tr>
<tr>
<td>Sustainability/Alternative Energy Systems:</td>
<td>None existing.</td>
</tr>
<tr>
<td>Notes on Existing FF&amp;E:</td>
<td>FF&amp;E generally dated. CTE labs include specialized equipment.</td>
</tr>
</tbody>
</table>

## Metrics

<table>
<thead>
<tr>
<th>Current Backlog (000's):</th>
<th>$2,584</th>
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<tbody>
<tr>
<td>Current Renewal (000's):</td>
<td>$5,682</td>
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<tr>
<td>Current Space Utilization:</td>
<td>34.5% (C), 39.8% (L)</td>
</tr>
<tr>
<td>Proposed Space Utilization:</td>
<td>41.5% overall</td>
</tr>
<tr>
<td>Current FCI:</td>
<td>.08, Good</td>
</tr>
<tr>
<td>Proposed FCI:</td>
<td>.05, Excellent</td>
</tr>
<tr>
<td>Current CRV (000's):</td>
<td>$33,029</td>
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</table>
## Code Information

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<thead>
<tr>
<th>Code Information</th>
<th></th>
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<tbody>
<tr>
<td><strong>Occupancy Group(s) (existing):</strong></td>
<td>B (offices and education above the 12th grade)</td>
</tr>
<tr>
<td><strong>Occupancy Group(s) (proposed):</strong></td>
<td>No change</td>
</tr>
<tr>
<td><strong>Primary Space Types:</strong></td>
<td>Career labs, general classrooms</td>
</tr>
<tr>
<td><strong>Type of Construction:</strong></td>
<td>Type IIB</td>
</tr>
<tr>
<td><strong>Building Size (GSF):</strong></td>
<td></td>
</tr>
<tr>
<td>Allowable Height:</td>
<td>75’</td>
</tr>
<tr>
<td>Actual Height:</td>
<td>approx 18’</td>
</tr>
<tr>
<td>Allowable area / floors:</td>
<td>B - Unlimited</td>
</tr>
<tr>
<td>Actual area / floor:</td>
<td>8,280 SF</td>
</tr>
<tr>
<td><strong>Total Building Area:</strong></td>
<td>8,280 GSF</td>
</tr>
<tr>
<td><strong>Space Efficiency (%):</strong></td>
<td>93%</td>
</tr>
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</table>

## Existing Building Systems

<table>
<thead>
<tr>
<th>Existing Building Systems</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Roofing Type(s):</strong></td>
<td>Minnesota State standard 4-ply Asphalt</td>
</tr>
<tr>
<td><strong>Structural System Type(s):</strong></td>
<td>Load bearing masonry, steel columns / beams, bar joists</td>
</tr>
<tr>
<td><strong>Mechanical System Type(s):</strong></td>
<td>Low pressure steam keeps steam to hot water heat exchangers, rooftop AHUs</td>
</tr>
<tr>
<td><strong>Electrical System Type(s):</strong></td>
<td>2000A, 480V. 3-Phase service, emergency power</td>
</tr>
<tr>
<td><strong>Fire Protection Type(s):</strong></td>
<td>Fully Sprinklered</td>
</tr>
<tr>
<td><strong>Exterior Wall Type(s):</strong></td>
<td>CMU with masonry veneer.</td>
</tr>
<tr>
<td><strong>Interior Wall Type(s):</strong></td>
<td>Masonry, gyp board on metal studs</td>
</tr>
<tr>
<td><strong>Conveying Systems:</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Life Expectancy of Building and Systems:</strong></td>
<td>Building: 50 Years; Roof: 20 Years; Systems: Varies by type.</td>
</tr>
<tr>
<td><strong>Technology Systems:</strong></td>
<td>Hardwired and wireless</td>
</tr>
<tr>
<td><strong>Sustainability/Alternative Energy Systems:</strong></td>
<td>None existing.</td>
</tr>
<tr>
<td><strong>Notes on Existing FF&amp;E:</strong></td>
<td>FF&amp;E is generally dated. CTE Labs include specialized equipment.</td>
</tr>
</tbody>
</table>

## Metrics

<table>
<thead>
<tr>
<th>Metrics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Backlog (000’s):</strong></td>
<td>$148</td>
</tr>
<tr>
<td><strong>Current Renewal (000’s):</strong></td>
<td>$ 238</td>
</tr>
<tr>
<td><strong>Current Space Utilization:</strong></td>
<td>24.2% (C) 43.9% (L)</td>
</tr>
<tr>
<td><strong>Proposed Space Utilization:</strong></td>
<td>41.5% overall</td>
</tr>
<tr>
<td><strong>Current FCI:</strong></td>
<td>0.12, Good</td>
</tr>
<tr>
<td><strong>Proposed FCI:</strong></td>
<td>.06, Good</td>
</tr>
<tr>
<td><strong>Current CRV (000’s):</strong></td>
<td>$1,270</td>
</tr>
</tbody>
</table>

*Note: The building name is based on facility data related to its original use. No Diesel Truck program exists at RCTC.*
# Heintz Center Horticulture (1200 Suite)

Note: Some information was sourced from the 2020 Predesign prepared by HGA.

## Code Information

<table>
<thead>
<tr>
<th>Code Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupancy Group(s) (existing):</strong></td>
<td>B (offices and education above the 12th grade)</td>
</tr>
<tr>
<td><strong>Occupancy Group(s) (proposed):</strong></td>
<td>No change</td>
</tr>
<tr>
<td><strong>Primary Space Types:</strong></td>
<td>Career labs, general classrooms</td>
</tr>
<tr>
<td><strong>Type of Construction:</strong></td>
<td>Type IIB, Type VB (Greenhouse)</td>
</tr>
<tr>
<td><strong>Building Size (GSF):</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Allowable Height:</strong></td>
<td>IIB: 55’</td>
</tr>
<tr>
<td><strong>Allowable area / floors:</strong></td>
<td>IIB: 69,000</td>
</tr>
<tr>
<td><strong>Total Building Area:</strong></td>
<td>19,800 GSF</td>
</tr>
</tbody>
</table>

## Existing Building Systems

<table>
<thead>
<tr>
<th>Existing Building Systems</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Roofing Type(s):</strong></td>
<td>4-ply Built-up Asphalt; Glass roof panels (greenhouse)</td>
</tr>
<tr>
<td><strong>Structural System Type(s):</strong></td>
<td>Load bearing masonry, steel columns / beams, bar joists, pre-manufactured greenhouse with galvanized steel frame.</td>
</tr>
<tr>
<td><strong>Mechanical System Type(s):</strong></td>
<td>Low pressure steam feeds steam to hot water heat exchangers, rooftop AHUs and 3 chillers</td>
</tr>
<tr>
<td><strong>Electrical System Type(s):</strong></td>
<td>2000A, 480V, 3-Phase service, emergency power</td>
</tr>
<tr>
<td><strong>Fire Protection Type(s):</strong></td>
<td>Fully sprinklered in Type IIB; Type VB un-sprinklered.</td>
</tr>
<tr>
<td><strong>Exterior Wall Type(s):</strong></td>
<td>CMU with masonry veneer; greenhouse</td>
</tr>
<tr>
<td><strong>Interior Wall Type(s):</strong></td>
<td>Masonry, gyp board on metal studs</td>
</tr>
<tr>
<td><strong>Conveying Systems:</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Life Expectancy of Building and Systems:</strong></td>
<td>Building: 50 Years; Roof: 12 Years remaining on built-up asphalt, glass roof panels are beyond life expectancy; Other Systems: Varies by type.</td>
</tr>
<tr>
<td><strong>Technology Systems:</strong></td>
<td>Hardwired and wireless</td>
</tr>
<tr>
<td><strong>Sustainability/Alternative Energy Systems:</strong></td>
<td>None existing.</td>
</tr>
<tr>
<td><strong>Notes on Existing FF&amp;E:</strong></td>
<td>FF&amp;E generally dated. Building includes equipment from previous horticulture program.</td>
</tr>
</tbody>
</table>

## Metrics

<table>
<thead>
<tr>
<th>Metrics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Backlog (000’s):</strong></td>
<td>$313</td>
</tr>
<tr>
<td><strong>Current Space Utilization:</strong></td>
<td>30.7% (C)</td>
</tr>
<tr>
<td><strong>Current FCI:</strong></td>
<td>0.06, Good</td>
</tr>
<tr>
<td><strong>Current CRV (000’s):</strong></td>
<td>$11,390</td>
</tr>
<tr>
<td><strong>Current Renewal (000’s):</strong></td>
<td>$3,451</td>
</tr>
<tr>
<td><strong>Proposed Space Utilization:</strong></td>
<td>53% overall</td>
</tr>
<tr>
<td><strong>Proposed FCI:</strong></td>
<td>.05, Excellent</td>
</tr>
</tbody>
</table>
**Heintz Center Phase I Addition (1300 Suite and Part of 1200 Suite)**

### Code Information

<table>
<thead>
<tr>
<th>Code Information</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupancy Group(s) (existing):</strong></td>
<td>B (offices and education above the 12th grade)</td>
</tr>
<tr>
<td><strong>Occupancy Group(s) (proposed):</strong></td>
<td>No change</td>
</tr>
<tr>
<td><strong>Primary Space Types:</strong></td>
<td>Classrooms, labs, community dental hygiene clinic, offices</td>
</tr>
<tr>
<td><strong>Type of Construction:</strong></td>
<td>Type IIB</td>
</tr>
<tr>
<td><strong>Building Size (GSF):</strong></td>
<td>70,000 GSF</td>
</tr>
<tr>
<td><strong>Allowable Height:</strong></td>
<td>75’</td>
</tr>
<tr>
<td><strong>Actual Height:</strong></td>
<td>28’</td>
</tr>
<tr>
<td><strong>Allowable area / floors:</strong></td>
<td>Unlimited</td>
</tr>
<tr>
<td><strong>Actual area / floor:</strong></td>
<td>Main: 41,000 SF, 2nd Flr: 29,000 SF</td>
</tr>
<tr>
<td><strong>Total Building Area:</strong></td>
<td>70,000 GSF</td>
</tr>
<tr>
<td><strong>Space Efficiency (%):</strong></td>
<td>58%</td>
</tr>
</tbody>
</table>

### Existing Building Systems

<table>
<thead>
<tr>
<th>Existing Building Systems</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Roofing Type(s):</strong></td>
<td>4-ply Built-up Asphalt; EPDM</td>
</tr>
<tr>
<td><strong>Structural System Type(s):</strong></td>
<td>Load bearing masonry, steel columns / beams, bar joists</td>
</tr>
<tr>
<td><strong>Mechanical System Type(s):</strong></td>
<td>Low pressure steam feeds steam to hot water heat exchangers, rooftop AHUS, and 3 chillers</td>
</tr>
<tr>
<td><strong>Electrical System Type(s):</strong></td>
<td>2000A, 480V, 3-Phase service, emergency power</td>
</tr>
<tr>
<td><strong>Fire Protection Type(s):</strong></td>
<td>Fully sprinklered</td>
</tr>
<tr>
<td><strong>Exterior Wall Type(s):</strong></td>
<td>CMU with brick veneer</td>
</tr>
<tr>
<td><strong>Interior Wall Type(s):</strong></td>
<td>Masonry, gyp board on metal studs</td>
</tr>
<tr>
<td><strong>Conveying Systems:</strong></td>
<td>Elevator</td>
</tr>
<tr>
<td><strong>Life Expectancy of Building and Systems:</strong></td>
<td>Building: 50 Years; Built-up Asphalt Roof: 28 Years; EPDM Roof (7,200 SF): Poor condition, needs replacing</td>
</tr>
<tr>
<td><strong>Technology Systems:</strong></td>
<td>Hardwired and wireless</td>
</tr>
<tr>
<td><strong>Sustainability/Alternative Energy Systems:</strong></td>
<td>None existing</td>
</tr>
<tr>
<td><strong>Notes on Existing FF&amp;E:</strong></td>
<td>FF&amp;E is generally dated. CTE Labs include specialized equipment</td>
</tr>
</tbody>
</table>

### Metrics

<table>
<thead>
<tr>
<th>Metrics</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Backlog (000’s):</strong></td>
<td>$1,729</td>
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<tr>
<td><strong>Current Renewal (000’s):</strong></td>
<td>$7,772</td>
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<td><strong>Current Space Utilization:</strong></td>
<td>21.3% (C) 35.9% (L)</td>
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<tr>
<td><strong>Proposed Space Utilization:</strong></td>
<td>44%</td>
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<tr>
<td><strong>Current FCI:</strong></td>
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<td><strong>Proposed FCI:</strong></td>
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<tr>
<td><strong>Current CRV (000’s):</strong></td>
<td>$30,247</td>
</tr>
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</table>
Planning

Mission, Vision & Values

Mission
Rochester Community and Technical College provides accessible, affordable, quality learning opportunities to serve a diverse and growing community.

Vision
Rochester Community and Technical College will be a universal gateway to world class learning opportunities.

Value Proposition
Improving Student Lives

College Values and Service Attributes
+ Learner-Centered: Be approachable and attentive to students’ and others’ needs
+ Excellence: Anticipate, create and recognize engaging experiences
+ Respect: Demonstrate understanding and sensitivity when serving
+ Teamwork: Collaborate and engage each other to better serve
+ Innovation: Explore, empower and implement creative ideas to better serve
+ Fun: Foster a pleasant, personable and enjoyable environment

Core Outcomes
+ Communication: Students will communicate appropriately for their respective audiences.
+ Critical Thinking: Student will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.
+ Personal and Professional Accountability: Student will take responsibility as active learners for achieving their educational and personal goals.
+ Global Awareness and Diversity: Students will demonstrate an understanding of and respect for human diversity through their words and actions.

Comprehensive Facilities Plan

RCTC’s current Comprehensive Facilities Plan (CFP) is in process and the 65% submittal was recently completed. The 95% draft submission is expected by the end of 2022.

The number one priority project at the start of the comprehensive planning process was Heintz Center: Re-imagining Education for a Diverse Workforce, which included renovating career and technical education spaces in the Heintz Center building to promote interest, align with workforce needs, address deferred maintenance items, and create safe and modern learning spaces. As there was no bonding bill in 2022, the current draft CFP reflects this predesign as the top priority capital bonding project.

Strategic Planning

The college strategic plan outlines four priorities, for which strategic committees were established to carry out specific initiatives within each priority.

Student Success: A Guided Learning Pathway plan was created to prioritize efforts to improve the student experience and student success.

Institutional Effectiveness: Focusing on strategic plan alignment across all college divisions includes a planning and review process for all academic and service units. This review of academic programs provides information to better plan for space improvements and renovations that effectively service students, staff and the community.

Equity and Inclusion: The college supports the Minnesota State Equity 2030 goal. The Equity and Inclusion committee is responsible for coordinating recommending policies and guidelines related to increasing academic success for underrepresented students and eliminating success gaps, creating, and maintaining a welcoming climate, building a diverse workforce and student body, and incorporating equity by design principles in curricular and co-curricular activities.

Campus and Community Engagement: Through fostering collaborative relationships with students and partners,
the college has developed an understanding of workforce demand in the region to inform facilities planning.

**Academic Planning**

A comprehensive Academic Master Plan was completed in 2016 which included an environmental scan of labor market data as well as internal and external factors that impacted academic program prioritization. In 2020, Academic Affairs evaluated progress on the 2016 plan. It was identified that with the strong labor market and workforce shortage, it was becoming increasingly difficult to retain students through to completion. Evaluating data on student success patterns, the college adopted a Guided Learning Pathway framework based on well-established national best practices.

Academic Planning was launched in Spring of 2021 with the creation of academic work plans developed within specific pathways and strategies created to improve student success during every phase of the college experience. Improving the student experience and success throughout their journey would lead to improved retention and ultimately increased enrollment in key programs, and better plan for facilities needs.

**System Planning**

**Capital Budget Guidelines** - Minnesota State’s overall capital investment strategy should prioritize:

*Adapting and modernizing academic and support spaces critical to student success.*

This predesign acknowledges the importance of physical campus spaces to our students by modernizing and adapting existing career and technical education labs and classrooms, and its ability to directly contribute to student and faculty recruitment, retention, and success. By creating flexible spaces that support changing teaching methodologies, learning strategies, and demographic needs, this project will ensure the spaces will remain vital for the workforce programs included in this predesign.

**Regional Initiatives**

The City of Rochester was one of fifteen cities to win the Bloomberg 2021-2022 Global Mayors Challenge, a one year competition launched in 2021. The purpose of the competition is to elevate promising urban innovations to help us to emerge from the pandemic. The City’s initiative funded by this challenge is to “bring more women of color into high paying construction jobs by coordinating with contractors and facilitating trainings.”

Renovated spaces that support the FAST and Welding programs at RCTC could further support this city-wide initiative.

**Basis for Need**

**Campus Enrollment**

Headcount and FYE have experienced a slight decline for the past five years. Since the pandemic, online FYE has increased and is projected to level out over the next five years.

While the number of online students has increased for some programs, others, including Welding and FAST, require updated and right-sized spaces to support hands on instruction and program growth to respond to industry needs. Likewise, the lab space for Automotive Technology does not allow for instruction on electric vehicles. This key growth area requires the space configuration included in this predesign.

**Campus Demographics**

Students at RCTC are primarily female and white. Just under one-third are students of color.

**Workforce and Economic Profile**

RCTC is located in Economic Development Region 10 (EDR 10) in southeast Minnesota. While the top growing industries are healthcare related due to the nearby Mayo Clinic, occupations in demand data from the Minnesota Department of Employment and Economic Development
In general, EDR10 is expected to add over 11,500 jobs between 2018 and 2028, an increase of 4.2%. 122,755 replacement jobs are expected to be available due to retirements in the region.

**Educational Requirements**

The affected programs for this project primarily prepare students for specific certifications or transfers to a bachelor's program (justice-related careers). Job openings for Automotive Service Technicians and Mechanics generally require vocational training and is recognized as an in-demand occupation in the southeast Minnesota region.

Refer to the Affected Academic Programs for detailed information from DEED.
Affected Academic Programs

Facility and Service Technology (FAST)

The FAST program is designed to prepare students for careers requiring skills in the operation, maintenance, troubleshooting, and repair of electrical and mechanical equipment found in residential and commercial buildings. Students are prepared to take the state examination for a special steam engineer’s license and qualified students may take the State examination for Second class “A” steam engineer’s license and/or refrigeration certifications.

Completion Rate: On average the completion rate for the FAST program has been 64% in the past five years. The highest completion rate was from 2020 to 2021.

Criminal Justice Transfer Pathway

The Criminal Justice program is designed to better facilitate transfer to Bachelor’s degree programs in justice-related careers. The program provides instruction in several fields including corrections, juvenile delinquency, security, and law enforcement.

Note: 2nd year students that experienced COVID disruption did not return to complete the program in Fall 2022.

Criminal Justice FYE & Seat Count

Workforce

Refer to the Law Enforcement workforce information.

Note: General Maintenance and Repair Workers in the southeast region rank 20th in the list of current in demand occupations. It is expected to grow by 5.8% over a ten year period with a projected 2,227 job openings by 2030. Heating, Air Conditioning, and Refrigeration Mechanics and Installation is projected to experience a 5% job growth with approximately 300 job openings by 2030.
**Law Enforcement**

The Law Enforcement program is designed to satisfy all pre-license requirements of the Minnesota Board of Peace Officer Standards and Training (POST). Graduates are prepared for careers as police officers, deputy sheriff’s, corrections officers, security, and other law enforcement positions. An additional career path includes training toward a conservation officer, which would include a two-year program such as Environmental Science at RCTC.

Program options include a Law Enforcement Certificate, Professional Peace Officer Education (PPOE) Skills Certificate, Law Enforcement AAS, and a Law Enforcement Transfer Pathway.

The program is accredited by the Minnesota Board of Peace Officer Standards and Training.

**Workforce**

Police and sheriff’s patrol officer openings are expected to grow by 9.3% over the next ten years. Detectives and Criminal Investigator openings are expected to increase at the same rate. Security guards, police and sheriff’s patrol officers, detectives, criminal investigators, correctional officers, and jailers are projected to have a total 2,119 job openings by 2030 in the southeast region.

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**Welding**

RCTC’s Welding Technology program provides an overview of the basic principles and practical application of the most commonly utilized welding processes including welding terminology, weld design, blueprint reading, safety, electrical theory, the weldability of metals, and quality control.

**Workforce**

Welders, Cutters, Solderers, and Brazers is the 38th most in demand occupation in the southeast region. Job openings are expected to increase by 8% over the next ten years with a total of 1,340 jobs.
Automotive Technician

RCTC’s Automobile Technician major is designed to prepare students for careers in the automotive industry. Once earning the Automotive Technician Diploma, students are prepared to inspect, maintain, diagnose, and repair automobiles and light trucks. The intent is for the program to expand its offerings to include instruction on electric vehicles to respond to the changing marketplace. This project will allow that expansion to happen through renovated space for the program.

Completion Rate: Forthcoming.

Student Success Outcomes: Forthcoming.

Workforce

Automotive Technicians and Mechanics are the 46th most in demand occupation in the southeast region. Over the next ten years it is projected to decline by 5.2%, however the projected openings in the region is estimated to be 1,285.

Existing Conditions

Note: Portions of the following Existing Conditions narrative is from the Heintz Center Renovation: Re-Imagining Education for a Diverse Workforce predesign by HGA.

Facilities Needs

Facility Condition Index

Current campus data identifies the finishes and systems in the Heintz Center building as outdated. Five-year renewal for interior finishes and systems for the Diesel Truck, Horticulture and Phase I Addition buildings totals $9.75 million and includes:

- Interior Finishes $1.42 million
- Plumbing, HVAC, and Fire Protection $5.35 million
- Electrical and Fire Alarm Systems $1.65 million
- Equipment and Furnishings $1.33 million
- TOTAL $9.75 million

The Facilities Condition Index (FCI) for the project area as of 2021 is .05 which falls in the “Good” category. The 5 year FCI falls in the “Fair” category at .27.

Facility Issues

- Currently, the program spaces are disjointed, without an logic to academic labs. This is a confusing and inefficient layout for students, particularly those unfamiliar with the building.
- The building is largely comprised of concrete block walls, without “nodes” for wayfinding or informal collaboration spaces. While recent signage upgrades have helped, modifying the corridor layout would add value.
- The electrical and technology systems within the labs are dated and need to be modernized to support today’s educational needs, particularly for CTE programs.
- The building not only lacks daylighting, but what few skylights exist need to be replaced as the translucent panels have yellowed with age.
1100 Suite
The 1100 Suite includes the original building from 1969 plus smaller additions. The central volume is the heart of the technical trade classes that use the shops for hands-on learning, labs, and classrooms. Current programs in this area include:

+ Automotive Technician
+ Facility and Service Technology (FAST)
+ CAD Technology
+ Law Enforcement
+ Welding Technology
+ Carpentry

1200 Suite
This building addition was opened in 2002 and includes the greenhouse and its support spaces and labs for the former horticulture program which closed in 2020. While no academic program is using it, RCTC is currently looking for ways to utilize the greenhouse moving forward.

Spatial Issues and User Needs
As identified in the 2021 predesign completed by HGA, the current configuration of spaces in the 1100 suite results in a number of significant issues for students:

1. Students matriculating in RCTC trade programs do not demographically reflect the community at large. Black, Indigenous, and people of color (BIPOC) and immigrant students are under-represented in the trade programs, and the current physical environment creates challenges in attempting to attract a broad student population to these programs. Lab spaces are visually isolated from corridors limiting prospective student’s ability to observe and understand what these programs entail.

2. As these programs have evolved over time, they have not been able to maintain critical adjacencies nor maintain direct access to the exterior to receive / send materials essential to executing their work. In some cases, department spaces are dispersed throughout the building with poor adjacencies, affecting efficiency, a sense of departmental identity, and continuity.

3. Wayfinding in this large sprawling facility is challenging. It would not be surprising for a person visiting this facility for the first time to feel lost or unsure of where they are going, and this may disproportionately affect underserved immigrant or other populations. Aside from the Commons, there are few significant landmarks for students to get a sense of direction.

4. Most shops and laboratory spaces are behind solid walls and doors in the current facility. When the only way to observe the work being completed is to enter the space, the chance to show prospective students, visitors, or those wishing to satisfy their curiosity is lost.

5. Student informal learning and collaboration is hindered by a lack of open, student-oriented spaces dispersed throughout the building. Currently, the Commons is the main space for students to occupy between classes. Collaboration spaces serve multiple purposes - study, networking with other students, and providing a sense of identity for adjacent programs.

Existing MEP & Fire Suppression Systems
Mechanical Infrastructure
Heating System
The Olmsted County Waste-to-Energy facility provides high pressure steam service from the Olmsted County Waste-to-Energy to the building. Steam pressure is reduced from 60 psi to 10 psi with pressure-reducing stations where the steam service enters the building. The low pressure steam feeds steam-to-hot water heat exchangers, which feed glycol hydronic loops for space heating. The several existing rooftop units currently providing HVAC service to the B-Wing and various other areas utilize the circulated glycol as their heat source.

A gas-fired boiler (4,500,000 btu per hour input) serves as a back-up to the County steam system. The boiler does not have an adequate combustion air source when it is firing. There is a duplex condensate receiver to pump condensate back to the County steam system.
Cooling System

The facility’s chiller plant consists of two 350-ton variable-speed water-cooled chillers and one 76-ton air-cooled chiller. The respective cooling towers and air-cooled condenser are located on grade, adjacent to the chiller room. The chilled water system is relatively new (approximately five years old). The plant was sized to accommodate the entire building once the existing rooftop units are replaced, of which two remain. The chilled water system configuration consists of three primary and three secondary pumps, all variable speed. 44 degree chilled water is distributed to the building’s air handling units, with a 56 degree chilled water return design temperature. The condenser water pumps are also variable speed.

Air Handling Systems

Over the past several years the original rooftop units with refrigerant-based cooling systems have been replaced with modular air handling units that are served by the chilled water and hot water central plant. Air handling units AHU-9A, AHU-9B and AHU-15 still utilize refrigerant-based DX cooling with a condensing unit located on the room above Mechanical Room H-1102. Valved and capped take-offs are located outside the Mechanical Room for future conversion of the air handling units to chilled water cooling.

All of the indoor air handling units are variable air volume (VAV) that feed VAV terminal units with hot water reheat coils to provide individual temperature control.

Existing rooftop units RTU-4 and RTU-5 are still in service and are well past their useful service life. The heating and cooling central plants are sized to accommodate this additional load when the rooftop units are replaced with indoor air handling units.

The existing Welding Lab is served by a direct-fired gas heating-only make-up air unit. The make-up air unit sizing is based on the various exhaust hoods and outlets located through-out the Welding Lab. When there are no welding operations that initiate the exhaust and make-up air systems, there are issues with maintaining adequate space temperature during colder ambient temperatures.

Building Automation System (BAS)

The existing BAS is a combination of Uhl and Honeywell controls systems. There is currently work being done to convert the Honeywell controls to Uhl for some of the older air handling units in order to have consistency across the HVAC systems.

Electrical Infrastructure

Normal Power Distribution System in the Building. The existing power distribution system consist of 2000A, 480V, 3-phase service to the Heintz Center building. The existing switchboard is original to the building. The existing main switchboard is manufactured by ITE and is rated for 2000A. There are (2) other older ITE and GE switchboard sections that are fed from the main switchboard. There have been upgrades to branch panels, step down transformers, distribution panels over the years. There are additional branch panels providing 480V and 120/208V power throughout the Heintz Center.

Emergency Power

The building has an existing 480/277V 85kw Cummins emergency generator. The existing generator has the required NEC 700 life safety and optional standby systems separated. The existing transfer switches were installed 2012 to meet the requirements of separating the life safety and optional equipment.

Communication and Security Systems

Existing IT room/closets will be evaluated and modified to meet the new building configurations being proposed and recommended. Most of the existing MDF and IDF rooms shall be reused.

Fire Alarm System

The existing fire alarm system is a Notifiers system. The existing system will be utilized and expanded as required for the building modifications.
2.5 C EXISTING FLOOR PLANS

Existing floor plans for buildings/spaces affected by the project; indicate current space use (departments/academic units, circulation, mechanical spaces, etc.)

Existing floor plan diagram from previous predesign (HGA)

DEPARTMENT LEGEND

AUTOMOTIVE
BUILDING SUPPORT
ELECOMM
FAST
GEN OFFICES
HISTORY
LAW ENFORCEMENT
LEEDS
Lecture
Lecture Support
MME
OSH
PLANNING
STUDENT SUCCESS CENTER
shared
UNASSIGNED
WELDING
WELDING SUPPORT

Existing floor plan diagram from previous predesign (HGA)
Heintz Center Main Building

Space Use

- Classroom
- Classroom Support
- Lab
- Lab Support
- Office
- Restroom
- Gathering
- Student Support
- Building Support
- Circulation
- Vertical Circulation

First Floor
Heintz Center Diesel Truck

Overhead Doors for Automotive Technology

Hallway

Automotive Technology Lab

Instruction Area inside Lab

General Classroom

Automotive Technology Lab

Welding Area

Instructional Lab

PROJECt BACKGROUND
Heintz Center Horticulture

Space Use
- Classroom
- Classroom Support
- Lab
- Lab Support
- Office
- Restroom
- Gathering
- Student Support
- Building Support
- Circulation
- Vertical Circulation

PROJECT BACKGROUND

2-20 RCTC RENOVATION TO SUPPORT EQUITY IN INDUSTRY AND PUBLIC SAFETY
Heintz Center Phase I Add.

First Floor

Space Use
- Classroom
- Classroom Support
- Lab
- Lab Support
- Office
- Restroom
- Gathering
- Student Support
- Building Support
- Circulation
- Vertical Circulation

PROJECT BACKGROUND
RRTC RENOVATION TO SUPPORT EQUITY IN INDUSTRY AND PUBLIC SAFETY
Space Utilization & Scheduling

Utilization Challenges

The overall utilization for the Heintz Center in Fall of 2022 was 38.84%. This utilization number does not take into account leased spaces. Some classrooms and labs are either leased to or shared with partner organizations, which affects availability of rooms and utilization for RCTC courses. In Fall of 2021 Rochester Public Schools, WSU, and other organizations used 58 out of 64 available classrooms and 5 out of 42 labs. Overall partner utilization was roughly 32% of total hours booked.

With the increased use of the Blended / Hybrid course delivery, it is apparent that not all classrooms and labs will fit the technology requirements needed to effectively engage with students on site and abroad. Technology updates in select classrooms and labs may increase utilization.

Scheduling Policy Impact

The college does not have a scheduling policy specific to academic program space use. The campus room scheduler utilizes EMS reports to identify class size and room capacities to ensure efficient scheduling.

An online portal is used to schedule non-academic meetings and events.
Current Space Utilization: Heintz Center Main Building

Space Utilization

<table>
<thead>
<tr>
<th>Lab</th>
<th>Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>100+</td>
<td>85-99%</td>
</tr>
<tr>
<td>60-84%</td>
<td>0-59%</td>
</tr>
</tbody>
</table>

Note: percent based on a 32 hour week using Fall 2022 data
Current Space Utilization: Heintz Center Phase I Addition

Space Utilization

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<th>Lab</th>
<th>Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Green]</td>
<td>100+</td>
</tr>
<tr>
<td>[Yellow]</td>
<td>85-99%</td>
</tr>
<tr>
<td>[Blue]</td>
<td>60-84%</td>
</tr>
<tr>
<td>[Light Blue]</td>
<td>0-59%</td>
</tr>
</tbody>
</table>

Note: percent based on a 32 hour week using Fall 2022 data
Current Space Utilization: Heintz Center Phase I Addition

Space Utilization

<table>
<thead>
<tr>
<th>Lab</th>
<th>Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>100+</td>
<td></td>
</tr>
<tr>
<td>85-99%</td>
<td></td>
</tr>
<tr>
<td>60-84%</td>
<td></td>
</tr>
<tr>
<td>0-59%</td>
<td></td>
</tr>
</tbody>
</table>

Note: percent based on a 32 hour week using Fall 2022 data
Current Space Utilization: Heintz Center Diesel Truck

Space Utilization

<table>
<thead>
<tr>
<th></th>
<th>Lab</th>
<th>Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>100+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85-99%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-84%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-59%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: percent based on a 32 hour week using Fall 2022 data
Current Space Utilization: Heintz Center Horticulture

Space Utilization

<table>
<thead>
<tr>
<th>Lab</th>
<th>Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>100+</td>
<td></td>
</tr>
<tr>
<td>85-99%</td>
<td></td>
</tr>
<tr>
<td>60-84%</td>
<td></td>
</tr>
<tr>
<td>0-59%</td>
<td></td>
</tr>
</tbody>
</table>

Note: percent based on a 32 hour week using Fall 2022 data
Stakeholders

Campus Stakeholder Meetings

Predesign Committee

+ The predesign should be a modified scope from the 2020 effort by HGA (Heintz Center Renovation: Re-imagining Education for a Diverse Workforce)
+ CAD Technology is now a one-year program. A computer lab is still needed, and possibly some fabrication space.
+ Law enforcement enrollment is trending up after recent declines.
+ Welding enrollment is trending upwards.
+ Priorities based on enrollment and workforce demand are for FAST (Facility and Service Technology, formerly Building Utility Mechanic), Welding, and Law Enforcement
+ Demolition of the greenhouse might be possible with the closure of the Horticultural program, but needs additional input.

Facilities and IT

+ Solar panels should be considered in the parking lots and double as shading for parked vehicles
+ H1206B is a communications closet and should remain.
+ Communications closets should be at least 8’ by 6’, with a minimum ceiling height of 8’-6”.
+ IT and Facilities indicated they would share information on communications closets and other feedback on the draft plan prior to the submission of the 100% document.

Welding, CAD, Automotive

+ Remodeling of the welding lab is needed
+ Welding storage is lacking, especially for donated materials. It was noted that most of the raw materials for a semester are delivered at once.
+ The CAD program is being reconfigured to shorten it.
+ Automotive is trying to move into instruction in alternative fuels (flex fuel, hybrid, electric), but space for equipment limits expansion.
+ Automotive noted that having a “state-of-the-art” facility would attract students to the program.
+ The welding area within the automotive lab is not needed and could be re-purposed.
+ Lab space should be prioritized over lounge space in Heintz due to how students use the building.

Law Enforcement and Public Safety

+ Parking lots around the campus are used for training activities, such as traffic stops. This is not ideal during athletic events or high-traffic times.
+ Off site areas, including abandoned buildings, are used for building searches and active shooter scenarios. The location tends to change frequently which is problematic.
+ Heintz Center is primarily used for lectures and lab programs, with some skills training.
+ Faculty would prefer an external garage for storage of equipment (vests, stop signs, traffic cones, impact bags, vehicle storage, etc)
+ Up to six lab rooms are needed to allow for concurrent use.
+ Enrollment has declined largely due to the current public view of law enforcement.
+ The program needs to comply with Minnesota POST board standards.
Project Intent

Strategic Plan Alignment

The Renovation to Support Equity in Industry and Public Safety project continues the work Rochester Community and Technical College has made in realizing their mission of providing accessible, affordable, quality learning opportunities to serve a diverse and growing community. The project is directly tied to each of the three goals of their Strategic Plan 2024: Pathways to Success.

Goal One: Student Success

*Improve student retention and completion by increasing access to learning opportunities, leveraging educational technology, enhancing support services and resources, and strengthening pedagogy and curriculum.*

A weakness of Heintz Center is the piecemeal approach to academic spaces. As space was needed for program growth, underutilized rooms were repurposed, without an overall look at disjointed spaces. This has resulted in a confusing arrangement of program areas, with labs spaces for FAST, CAD, and Law Enforcement spread out across the building (refer to diagram in Section 2). By consolidating areas, grouping spaces by program, and improving the quality of the educational environment, students will have an easier time navigating the physical space in order to complete their degree and enter the workforce.

Goal Two: Institutional Sustainability

*Ensure the College’s offerings, functions, and processes are sustainable and responsive to the evolving needs of internal and external stakeholders*

This project takes a realistic approach to addressing program needs. Rather than expand the campus to address space shortcomings, underutilized space will be renovated for the financial stability of Rochester Community and Technical College. Likewise, the programs impacted by the improvements are ones that are critical in the workforce where highly trained individuals are in demand:

- Facility and Service Technology (FAST): Prepares students for careers in the operation, maintenance, troubleshooting, and repair of electrical and mechanical equipment found in residential and commercial buildings
- Law Enforcement and Public Safety: Students are prepared for careers as police officers, deputy sheriffs, corrections officers, security, and other law enforcement positions.
- Welding Technology: Students learn valuable skills and knowledge in the most commonly utilized welding processes including welding technology, weld design, blueprint reading, safety, electrical theory, the weldability of metals, and quality control. These skills are applicable across a wide-range of industries.
- Automotive Technology: Students learn to inspect, maintain, diagnose, and repair automobiles and light trucks. After this project, the program will expand its offerings to include instruction on alternative fuel vehicles (non-combustion engines.)

Goal Three: Diversity, Equity, & Inclusion

*Promote equity and inclusion across the institution by increasing cultural competency, culturally responsive pedagogy and service, and partnering with community organizations*

Students matriculating in RCTC trade programs do not demographically reflect the community at large. Black, Indigenous, and People of Color (BIPOC) and immigrant students are under-represented in the trade programs, and the current physical environment creates challenges in attempting to attract a broad student population. Reorganizing program spaces for improved wayfinding and creating visual connections to adjacent corridors will highlight the exciting work occurring in the labs.

Goal Four: Campus and Community Engagement

*Promote campus and community engagement that fosters collaborative relationships which mutually benefit the College, our students, partnering organizations, and the economic vitality of the region.*
When the Main Building was renovated as part of the last Capital Bonding project, collaborative spaces were created to encourage student-to-student and student-to-faculty interaction outside of the classroom setting. However, Heintz Center still is comprised of long building corridors and an outdated common area. A small but significant component of this project is to create informal gathering areas and improve the commons to foster connections that lead to student success.

**Academic Plan Alignment**

A comprehensive Academic Master Plan was completed in 2016 which included an environmental scan of labor market data as well as internal and external factors that impacted academic program prioritization. Priorities were identified in each of the academic divisions including Career and Technical, Health Professions and Transfer. Academic priorities included programming within computer science, nursing and allied health, transfer pathways and trade programs.

In 2020, Academic Affairs evaluated progress on the 2016 plan which informed the next planning cycle. Aligning with the college strategic planning priorities of student success. With the strong labor market and workforce shortage, it was becoming increasingly difficult to retain students through to completion. Evaluating data on student success patterns, the college adopted a Guided Learning Pathway framework based on well-established national best practices. Modeled from national best practices the framework focuses on improving the student experience from pre-entry to completion.

- Clarify paths to student end goals
- Help students choose and enter a pathway
- Help students stay on the path
- Ensure that students are learning

Academic Planning was launched in Spring of 2021 with the creation of academic work plans developed within specific pathways and strategies created to improve student success during every phase of the college experience. Improving the student experience and success throughout their journey would lead to improved retention and ultimately increased enrollment.

Part of the strategy for a pathways approach is to provide well-defined areas for each program or focus area. This project directly supports the Academic Master Plan by reconfiguring space so instruction labs are grouped together and organized by program, reinforcing a sense of “this is my place” for students.

**Workforce & Economic Development**

Rochester was recently one of 15 international cities to win the 2021-2022 Bloomberg Philanthropies Global Mayors Challenge, a worldwide innovation competition that supports and spreads cities’ most promising ideas. The city focused its project on the economic mobility of Black, Indigenous, and People of Color (BIPOC) women through careers in all-phases of the built environment and construction. The grant will provide scholarships for enrollment in the Facility and Service Technician (FAST) and other building-related programs.

**Program & Enrollment Goals**

Anticipated enrollment stabilization and growth for CTE programs affected by this renovation will be realized through the following efforts:

- Return to in-person instruction
- Engaging lab and classroom spaces
- Student success initiatives to improve retention
- Targeted outreach efforts through Perkins IV funding
- Academic program modification including increased simulation, state of the art technology training and focused short term programs

Coordination of the efforts listed above will result in full program enrollment and improved retention and completion outcomes.
## Space Program Summary

<table>
<thead>
<tr>
<th>Space Name</th>
<th>Program Name</th>
<th>QTY</th>
<th>Renovated Area</th>
<th>Renewed Area</th>
<th>TOTAL</th>
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<tr>
<td>Armory</td>
<td>LE/CJ</td>
<td>1</td>
<td>300 SF</td>
<td>300 SF</td>
<td>300 SF</td>
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<td>Firearms Simulator</td>
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<td>1,300 SF</td>
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<tr>
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<td>Refrigeration Lab</td>
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<td>Welding Lab</td>
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<td>CAD Lab</td>
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<td>1</td>
<td>1,000 SF</td>
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<td>500 SF</td>
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<td>Automotive Lab</td>
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<td>7,500 SF</td>
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<td>Commons / Collaboration</td>
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<td>Mult</td>
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<td>2,400 SF</td>
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<td><strong>TOTALS</strong></td>
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<td><strong>38,850 SF</strong></td>
<td><strong>14,100 SF</strong></td>
<td><strong>52,950 SF</strong></td>
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</tbody>
</table>

### Program Name Key
- **LE/CJ**  Law Enforcement Criminal Justice
- **FAST**  Facility and Service Technology
- **W**  Welding
- **CAD**  Computer Aided Drafting Technology
- **Auto**  Automotive
- **Mult**  Space shared by multiple programs
- **V**  Varies - refer to plan diagram

3-4  RRTC RENOVATION TO SUPPORT EQUITY IN INDUSTRY AND PUBLIC SAFETY
Conceptual Site Plan

Indicates area for solar panels
Overall Conceptual Floor Plan

Key
- Facility and Service Technology (FAST)
- Law Enforcement and Public Safety
- Welding Technology
- Collaboration Space
- Automotive
- Toilets, Building Support
- Faculty Offices
- Commons
Partial Enlarged Conceptual Floor Plan

Key

A Armory
B Fingerprinting Lab
C Clean Lab
D Janitor Closet
E Active Lab
F Firearms Simulator
G CTE Classroom
H Storage
I IT Comm
J Boiler Storage
K Boiler Lab
L B/P/P Lab
M B/P/P Storage
N Furnace Shop
O Refrigeration Lab
P Welding Lab
Q Office
R Update Finishes In Commons
S Toilet Room
T Collaboration Space
U CAD Lab/ Support
V Prototype Lab
X Automotive Lab

Conceptual Floor Plan Diagram

See Page 3-7
Project Impact

Space Utilization & Use

Space utilization is based on Fall 2022 data.

<table>
<thead>
<tr>
<th></th>
<th>Class</th>
<th>Lab</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heintz Campus Utilization</td>
<td>30.37%</td>
<td>47.32%</td>
<td>38.84%</td>
</tr>
<tr>
<td>Project Area</td>
<td>30.37%</td>
<td>47.32%</td>
<td>38.84%</td>
</tr>
<tr>
<td>Proposed Project Area</td>
<td>40%</td>
<td>48%</td>
<td>44%</td>
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</table>

Asset Preservation and Backlog Reduction

Based on the scope of the project, the following backlogged maintenance items will be addressed as part of this project:

+ Updating existing electrical equipment
+ Addressing HVAC control and Fire Protection issues
+ Updating interior finishes

Utilities & Infrastructure

No significant changes to the site utilities or infrastructure are anticipated.

Sustainability & Resilience

The most sustainable project is one that avoids new construction. By making use of underutilized areas of campus, the College has the opportunity to align the physical environment with the Academic Pathways while improving the campus resilience and respond to environmental concerns.

As a best practice, the following principles should be followed to promote a sustainable approach to the project:

+ Avoid Red List products. Refer to https://living-future.org/lbc/red-list/
+ Assess the life cycle costs of materials during Design Development to balance first costs versus long-term replacement costs.
+ Specific products that have recycled content (25% minimum), with a mixture of pre-consumer and post-consumer recovered materials, and be recyclable.
+ Evaluate bio-based products, including the maintenance procedures.
+ Focus on regional materials, targeting a 500-mile radius, to minimize the impacts of shipping.
+ Specific low-flow plumbing fixtures where doing so does not negatively impact instruction to students.

Site

Based on Minnesota State's standards and unknown structural capacities of existing roofs, solar panels as required by applicable state statutes are anticipated to be ground mounted.

The recommended location is south of Heintz Center, between the parking lot and College Parkway SE in an existing green space. While some stakeholders suggested roof mounted or installation over existing parking, those options have the following drawbacks:

+ Roof mounted would requiring new roof penetrations and significant investment for the Minnesota State mounting configuration to allow for future re-roofing.
+ Creating a structure to mount over available parking would be expensive. It would also create challenges in parking lot maintenance.

Operations & Maintenance

Beyond the benefits to students resulting from significant improvements in academic spaces, there area a number of "HEAPR like" elements to the project, with benefits to not only students but also the College’s operations and maintenance budgets. These include:

+ Replacing all lighting in renewal and renovated areas with LED fixtures with dimmable lighting controls were required
+ Providing new ductwork from existing mechanical systems to renovated spaces and rebalancing the system after completion
Alternatives Considered

2020 Alternative

This project was originally identified in the 2017 Comprehensive Facilities Plan, with a predesign developed by HGA in 2020. That project envisioned a larger renovation project:

+ Larger area dedicated to Law Enforcement
+ Renovation of the Center for Business and Workforce Education
+ Additional collaboration spaces
+ Renovations to the Carpenter shop
+ Additional renovations to the Automotive shops
+ Expanded CAD labs
+ Inclusion of new skylights or light monitors

As there was no bonding bill in 2020 and with updated Strategic Guidelines for 2024 from Minnesota State, RCTC re-evaluated their priorities and needs in order to meet the requirements for a “small project”. This significantly reduced the area and cost of the project.

1300 Suite Alternative

The early concept for this predesign looked at relocating programs to underutilized areas of the campus, including the 1300 Suite. This area, also identified in the 2020 predesign, has several areas of unused space. However, given corridor arrangements and the space needs of targeted academic programs, it was determined that utilizing the space for Law Enforcement, CAD, or Welding was not feasible.

Past Actions that Affect the Project

Recently, the College has used a number of funding sources to improve the Heintz Center. These projects include:

RCTC-15-Heintz Center Phase I HVAC Improvements
+ Connecting central chiller plant to existing Heintz Center - Phase I
+ Cost $1,300,137
+ HEAPR Project

RCTC-18-Heintz Center HVAC Upgrades - Phase 2
+ Cost $1,676,066
+ HEAPR Project
+ Project consists of replacing rooftop air handling units with indoor units, and associated architectural, mechanical, and electrical work. Chilled water and hot water piping will be connected to the new units

RCTC-20-HC205 Carpet Renovation
+ Cost $38,386
+ Install carpet in Heintz Center in second floor dental area
+ General funds

RCTC-18-Heintz Ctr West Parking Lot-Improvements & Repairs
+ Major upgrade of Heintz Center West Parking Lot and related lighting/technology
+ Cost $642,063
+ Parking fee was funding source

Private Use

Private use of the space is not anticipated.
Reference

Applicable Statutes

The following statutory requirements apply. See https://www.revisor.leg.state.mn.us/pubs for current requirements.

+ §16B.32, Subd 2 Energy Conservation Goals
+ §16B.323 Solar Energy in State Buildings: Predesign to contain cost benefit of up to 5% of appropriation to be used on solar energy system when doing substantial reconfiguration or replacement of energy systems.
+ §16B.326 Written plan with predesign to consider providing Geothermal & Solar Energy Heating & Cooling Systems on new or replacement HVAC systems
+ §16B.327 Recycle 50% of Construction and Demolition Waste (B3-MSBG requires 75%)
+ §16B.33 State Designer Selection Board
+ §16B.335
  • Subd 1, Notification to House & Senate
  • Subd 3, Predesign Submittal—See Statute for exempted projects
  • Subd 3c, consider the use of MINNCOR products
    www.minncor.com
+ §16B.35 % for Art: When considered in original legislative request & when construction is $500K or greater
+ §177.42-44 Prevailing Wages Rates: Contractor must pay prevailing wages (https://www.revisor.mn.gov/statutes/?id=177)
+ Laws 2014, Chapt 294, Sec 22 and Chapt 295, Sec 21 American Made Steel
+ §16A.633 Jobs Reporting. Must report to legislature on jobs created or retained as a result of capital project funding by the state.
+ 16C.285 Laws 2014, Chapt 253 Responsible Contractor
+ Appropriation Language: Regarding requirement for matching funds.

Refer to Section 4 for Statutory Requirements for Energy.

Applicable Codes

The editions current at the time of design and construction should be used of the following codes and standards:

+ International Building Code (IBC) and State of Minnesota Amendments
+ Minnesota Accessibility Code
+ International Mechanical Code and State of Minnesota Amendments
+ National Electrical Code and State of Minnesota Amendments
+ International Fire Code and State of Minnesota Amendments
+ Minnesota Plumbing Code
+ Applicable State of Minnesota Statutory Requirements
+ Minnesota Energy Code

Minnesota State Standards

The following documents are available from the facilities department at Minnesota State and should be referenced and followed throughout the project:

+ Facilities Design Standards
+ Project Management Manual for Design and Construction
+ Space Planning Guidelines
+ Signage Handbook
**Specialty Requirements**

The following documents are available on the Construction Services website of the Department of Administration (formerly the State Architect’s Office) website and should be referenced and followed throughout the project:

- Design Guidelines
- Space Guidelines
- B3 Minnesota Sustainable Building Guidelines (B3-MSBG)
- In 2008, the legislature expanded the scope of the sustainable building guidelines to include not only new construction, but also major renovations. Major renovations are defined as any renovation greater than or equal to 10,000 GSF and the complete replacement of the mechanical, ventilation, or cooling system of a building or a section of a building. This expanded applicability applies to all major renovations receiving funding from the bond proceeds fund after January 1, 2009.
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Sustainability & Energy
Project Sustainability Measures

Energy Efficiency & Consumption

Significant improvements in energy consumption are expected after the project is completed, largely due to new LED lighting.

Waste Management and Recycling Program Plan

The selected architectural and engineering team shall comply with Minnesota State guidelines current at the time of project funding. The intent of waste management and recycling strategies is to minimize use of resources and negative environmental impacts through design decisions and careful reduction and management of waste generated during the construction process and building occupancy.

While B3 likely will not be required for this project, the required performance criteria of the B3 Guideline M.3 includes the following and should be followed as a best practice:

+ Material Conservation Plan – The design team shall create the following during the design phase:

  • A plan to adaptively reuse an existing structure or salvage and reuse materials from an existing structure being demolished or deconstructed on site.
  • A plan to select materials with appropriate durability for service life. In many cases, state-funded buildings are intended to have a 50–100 year service life for the structure and envelope.
  • A plan to specify the use of prefabricated products, pre-assembled products, and/or modular building units to minimize construction waste on site.
  • A plan that addresses both partial deconstruction (for renovations) and total deconstruction (for end-of-life removal) of the building to maximize the reuse and recycling of building components and materials. Indicate specific strategies to facilitate disassembly.
  • Specify materials that can be diverted from disposal by efficient usage, recycling, reuse, manufacturer's reclamation, or salvage for future use, donation or sale.

+ Waste Management Plan – The design team shall require the selected contractor to comply with the following:

  • Specify the percentage of materials to be diverted, calculated by weight or volume, but not both. Include separate average percentages for those materials collected by construction and demolition materials processing facilities that end up as alternative daily cover and incineration.
  • At least 75% of nonhazardous construction and demolition waste must be diverted from landfill. The percentage of materials diverted can be calculated by weight or volume, but not both.
  • Construction materials and waste include, but are not limited to:
    » All materials delivered to the site and intended for installation prior to the issuance of the certificate of occupancy, including related packaging:
    » Construction materials and waste removal during demolition or razing.
    » For the purposes of this requirement, construction and waste materials do not include land-clearing debris (including trees, rocks, and vegetation), excavated soils, and fill and base materials such as topsoil, sand, and gravel. Waste used as alternative daily cover or in waste-to-energy incineration will not be counted as diverted materials.
Statutory Requirements for Energy

MN §16B.32

Subd 1a: Energy Use

New building or renovation of 50% of a building or its energy systems require at least 2% of the building energy needs to be sourced from renewable energy, specifically wind and sun.

As this project impacts less than 50% of an existing building, the requirement does not apply.

Subd 2: Energy Conservation Goals

This statute sets forth the following goals relating to energy efficiency and conservation:

+ Energy efficiency improvements shall be used when the payback period is within ten years.
+ The goal is to demonstrate that through effective energy conservation the total energy consumption per square foot of state-owned and wholly state-leased buildings could exceed existing energy code by at least 30 percent.

The campus may participate in this program, however it is not mandatory for the project.

MN §16B.323 Solar Energy in State Buildings: Cost Benefit Analysis

Minnesota State strongly encourages the use of solar energy systems. State statute MN §16B.323 Solar Energy in State Buildings specifies that after a cost-benefit analysis, solar panels may be installed as part of the project as long as the capacity is less than 300 kilowatts or sized to match the electrical load of the building, with a maximum cost of 5% of the project. Use of this statute makes the project ineligible for rebates associated with solar panels.

Using the PVWatts Model tool found at https://pvwatts.nrel.gov, the expected system output for a solar array related to the Renovation to Support Equity in Industry and Public Safety is 5,333 kWh/Year. Inserting this value into Appendix E-2b: Levelized Cost of Energy Calculator, Design Phase - PV of Version 3.0 of the B3 Guidelines shows a total installation cost of $15,999. Comparing the total cost/kWh for renewable energy versus a utility-delivered system, shows a net savings over the expected life-expectancy of the panels and therefore solar panels would be required by the current version of B3.

An area to the south of Heintz Center should be reviewed as the possible location for solar panels as indicated on the site plan included in Section 2. Note that the cost for installation above does not include the infrastructure from the suggested location back to the building. This cost has been included in the overall cost estimate.

MN §16B.325: Sustainable Guidelines (B3)

Required for new building, major renovation with the replacement of a primary HVAC system, or where the project adds/replaces a stand-alone mechanical system.

The project will impact more than 10,000 GSF, but the replacement of the campus’ heating or cooling system is not anticipated at this time. Therefore, use of the B3 tracking tool will not be required under the current guidelines. This should be reviewed at the time of final design to confirm any updated requirements.

MN §16B.326 Heating and Cooling Systems for State Funded Buildings

In order to reduce the impact on the environment, reduce the carbon footprint of the Campus, and meet the requirements of Minnesota State Statute 16B.32, the feasibility of using alternate energy sources should be considered. Additional information on the following systems and technologies can be found at the U.S. Department of Energy website for Energy Efficiency and Renewable Energy (http://www.energy.gov/eere).
**Geothermal Energy**

A geothermal heat pump system is a heating and/or an air conditioning system that uses the Earth’s ability to store heat in the ground and water thermal masses. These systems operate based on the stability of underground temperatures: the ground a few feet below surface has a very stable temperature throughout the year, depending upon location’s annual climate. A geothermal heat pump uses that available heat in the winter and puts heat back into the ground in the summer. The two main types of systems include wells and horizontal loop systems. Wells are more compact, but tend to be less efficient and more costly than a loop system.

As the project does not include a full replacement of the heating or cooling system, the analysis of geothermal systems is not required.

**Solar Thermal Energy**

"Solar Thermal" refers to a flat plate or evacuated tube with a fixed orientation that collects the sun's radiant energy and transfers it to a storage medium for distribution as energy for heating and cooling.

As the project does not include a full replacement of the heating or cooling system, the analysis of solar thermal systems is not required.
Capital Expenditures
Estimate of Project Costs

Cost Breakdown

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<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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</thead>
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<td>Design Fees</td>
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<td>Project Management</td>
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<td>Demolition</td>
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<td>Construction</td>
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<td>Art Allowance</td>
<td>$62,000</td>
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<td>Occupancy</td>
<td>$627,000</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$8,638,000</strong></td>
</tr>
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</table>

Funding Sources

This project will primarily be funded through General Obligation Bonds.

The College also anticipates alternative funding sources in the range of $1 million will be available to supplement this project, largely to fund non-bondable elements of the work. These sources include advisory groups sponsorships (Automotive, FAST, Law Enforcement), College designated fund balance for facility improvements, potential grants (as the College is pursuing a full-time grant writer) and student enrollment growth via the Minnesota Future together Grants that provides eligible Minnesotans with a tuition-free pathway for earning a certificate, diploma, associates degree, or bachelor’s degree at any public institution in the state. The grants are available starting spring 2022 through 2024 and are geared toward high-need programs including law enforcement officers.

Quality Control Measures

The materials and procedures required by the Minnesota State Facilities Design Standards have been accounted for when developing the project budget, including quality assurance requirements, waste and recycling procedures, product requirements, and installation procedures. Note at the time of this predesign, B3 would not be required based on current State statutes.

Costs Narrative

Basis and Assumptions

The following assumptions were made when developing the cost estimate:

+ Construction occurs in a single phase with the Contractor having control of the construction area. However, adjacent spaces not impacted by the scope of this project will remain in use.
+ Construction activities occur during the workday, with the Contractor making use of days where classes are not in session for disruptive work.
+ The final design and construction shall comply with the Minnesota State Facilities Design Standards.
+ Where required, infill of existing walls shall match adjacent materials. For instance, infilling a former opening in a concrete block wall will be accomplished with toothed-in block (not gypsum board).
+ Interior glazing will be added between instructional labs or classrooms and adjacent building corridors.
+ Finishes shall be of a quality and type suitable for the space. Refer to the Space Use Diagrams for additional information
+ New lab equipment has not been included in the construction cost estimate.
+ Exterior work is limited to scope related to the installation of solar panels. No other site improvements are expected.

Cost Histories and Estimations

The following square footage costs are based upon recent projects that LHB has completed at Minnesota State campuses or other higher education institutions.

<table>
<thead>
<tr>
<th></th>
<th>Renewal</th>
<th>Renovation</th>
<th>Addition</th>
</tr>
</thead>
<tbody>
<tr>
<td>$50 - $70 / SF</td>
<td>$160-$215 / SF</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

These campuses include:

+ Lake Superior College
+ St. Cloud Technical & Community College
**Project Delivery Method**

Based on the scope of the renovations, we recommend a design-bid-build delivery method to take advantage of competitive bidding. A Construction Manager would bring limited value to the design phase due to the “interior only” scope of work with traditional construction materials.

**Hazardous Material Removal Costs**

In 2009, the College hired Kane and Johnson Architects, Inc to complete a Comprehensive Asbestos Site Survey. This effort included the review of previous survey and abatement efforts, sampling and testing of bulk materials, and recommendations for the removal of hazardous materials. In the report, applicable areas include Horticulture Building (HH) and Heintz Center Building B (HB).

The presence of asbestos containing materials is relatively limited within the project area. In Horticulture (1200 Suite), there are sink coatings and a limited amount of floor tile mastic that contain greater than 1% asbestos. Likewise, sink coatings exist in HB (1100 Suite).

Because of the limited scope of removals, $40,000 has been included for budget purposes.

**Mitigating Risk**

**Risks Identified**

As the project maintains the existing footprint, the risks for increased costs are limited to external factors and unknowns of the existing building.

- Building Codes. Minnesota adopted new building codes in 2020, and no new code should become effective until after the completion of this project. While no significant code issues are expected based on the scope of the predesign, the AHJ should be consulted during Schematic Design to identify any concerns early in the design process.

- Bidding Climate. Recent unprecedented inflation and material supply issues have increased costs and construction timelines in the past 12 - 18 months. Moving forward, these elements should be closely monitored during design to mitigate any negative impacts on bid day.

- Labor / trades availability. Presently, there is a lack of people entering the construction trades to replace retiring workers. At the time of final design and during construction, the design team and the selected General Contractor should work to identify potential issues and consider alternate products and sequencing to avoid significant cost and schedule impacts.

**Budget and Schedule Impacts**

The greatest impact to the project would be a delay of funding impacting the intended scope due to the rising costs of construction.

**Contingencies**

Based on the scope of the project and recent challenges in the construction market, it is recommended that an 8% contingency be held to address any issues that arise during construction. As known hazardous materials are limited and no addition is planned, this should cover any incidental costs.
Operating Expenses

Impacts on Campus Operating Costs

The renovation to support equity industry and public safety will have the following impacts on the College’s operating budget:

**Budget Savings / Cost Reductions**

- All existing lighting within the project area will be replaced with LED with dimmable controls as applicable
- Existing mechanical systems will have new ducting, where required, improving ventilation and operational efficiencies. This will reduce utility costs for spaces in the project

**Cost Neutral**

- Project will make extensive use of existing equipment, with no added costs
- Project will make extensive use of existing mechanical systems, with no added costs
- Project will renovate existing spaces
- Anticipate no added costs in labor, supplies, maintenance services or equipment aside from inflationary increases
- Modernization will update A/V and IT technology for classrooms and labs with funding from HEERF (not operating budget) and thereby increase flexibility and adaptability to accommodate both active and traditional learning with effective, acoustically supportive environments

Operational Improvements to Enhance Revenue

- Moving Law Enforcement will free up space for FAST Labs to improve adjacencies, to right-size for better learning experiences and to offer increased class sizes
- Project revenue from new FYE’s of approximately $15,000 each year

Debt Service and Campus Finances

**Total Debt Service & Financial Status**

- Project an increase in debt service for the project of approximately $160,000 per year (amount for the five years of FY2025 to FY2029 are $198,725; $158,615; $154,969; $151,323 and $147,676, respectively)
- During the same time frame, existing annual debt decreases from $537,630 in FY2024 to $356,877 in FY2029

**Financial Recovery Plan**

Rochester Community and Technical College is not currently on a financial recovery plan.

Life Expectancy of Project Components

**Mechanical and Fire Protection Systems**

The mechanical system replacements included as part of this project have the following life expectancies:

- 20 - 25 years for water heaters.
- 35 years for plumbing systems
- 35 years for the reconfiguration of the fire protection system to accommodate the work

**Electrical Systems**

The electrical system replacement included as part of this project have the following life expectancies.

- 30-40 years for switchboard, panelboards, and fuse bucket equipment
- 25-30 years for molded case circuit breakers and power cabling
- 15-20 years for communication equipment room equipment and communication cabling infrastructure
- 5-7 years for network electronics and associated components, based on the pace of industry change
+ 15-20 years for fire alarm cabling and components
+ 15-20 years for security system cabling infrastructure and intrusion detection components
+ 10-15 years for access control components

**Furniture, Fixtures & Equipment**

Furniture, fixtures, and equipment tend to have variable life expectancies based on the specific item and location of use.

+ Collaboration spaces / student lounges, 10-15 years
+ Classrooms, 15-20 years
+ Offices 20-25 years
+ Equipment, 5-10 years
1. Predesign
2. Design & Constr. Funding
3. Consultant Team Selection
4. Schematic Design
5. Legislative Approval
6. Design Development
7. Construction Documentation
8. Bidding
9. Bid Review/Contract Award
10. Construction
11. Midpoint of Construction
12. Commissioning
13. FF&E
14. Occupancy

- Fall 2026 Semester
- March 1, 2026
- November 10, 2022
Schedule Details

Proposed Funding Sequence

Based on the project size meeting the requirements of a small project, the funding sequence should be straightforward with design and construction funding received in the same year (2024).

If designer selection is delayed through scheduling challenges with the State Designer Selection Board, the selected consultant shall work to streamline the project schedule in order to maintain occupancy in Fall 2026.

Temporary Relocation Strategy

Within the proposed project area, there exists space referred to as the horticulture center. This is Suite 1200 and covers approximately 19,800 square feet. The horticulture programs no longer exists at the College. The Suite 1200 space includes two classrooms (H1203/H1205) with utilization below 15%. With current limited utilization of this space, the area would be renovated without any major disruption to academic scheduling or services. There would be minimal to no budget impacts with this strategy.

Although not part of this project, the College possesses additional office/meeting space previously occupied by University of Minnesota Extension that is not currently in use (Suite 1300 area). The area is approximately 5,500 square feet. This area would be utilized as “swing space” for faculty offices and some academic classes / meetings. The budget impacts may entail minor relocation costs for academic classrooms, such as tables and chairs. The minimal budget impacts for faculty offices would be relocation of technology, which would be performed by the College’s personnel.
7 Core Information Technology (IT) Strategies

1. Increase Organizational Alignment: Expand integrative technology governance, collaboration, buy-in across all areas of the College, from requesters to managers and the Cabinet to ensure that what is being asked for is planned, resourced, funded, and aligned to College goals, and is not reactive or a distraction for both the staff and the institution.

2. Improve Customer Service: Improve customer service through increased agility/speed and responsiveness to priorities. Also, promote an environment of increased self-service capabilities for staff. Establish key customer service principles and live by them.

3. Evolve to Service Management: Clearly define IT service offerings aligned to institution customers’ demanded needs (through a Service Catalog) and IT resources capacity. Make service management process consistent, complete, and transparent.

4. Transform IT: Shift, as much as possible, IT services and staff from operations and commodity-type activities (basic, interchangeable goods) towards higher valued capabilities, projects, and management of platforms (e.g., Cloud, Office365, SharePoint, etc.). Develop increased utilization of Student Workers to cover “Level 1” support needs (see Appendix D1 for more information on the IT Operational Support Model).

5. Manage Architecture and Assets: Identify, understand, document, and manage IT architecture and $6.5 million+ current assets across the institution to ensure sustainability (funded) and responsiveness (to users). Improve efficiencies through elimination of manual and outdated services, removal of duplications, simplification and re-engineering, automation, delegation or outsourcing to third parties. Manage true costs of services and maintain a modernized infrastructure.

6. Roadmap the Future: Define the key IT Roadmaps for the core College functions (Academic, Student, Administrative) and key IT Infrastructure that defines current capabilities against 1, 3, and 5-year timetables,
to constantly innovate and modernize the technology environments in support of the College’s mission.

7. Enhance Organization Decision-Making: Increase effective, simple means to use data and business intelligence capabilities to support organization-wide modeling, forecasting and decision-making.

**Technology Training Plan**

The 2021–2025 RCTC Technology master plan includes several items related to the need for initial and ongoing training for faculty in staff. In fact, the document notes that a campus survey indicated that “Technology Literacy / Training” was a major need identified by the community. For this project, the training should be a multiple stage process.

Any new equipment provided under the Contractor’s scope of work should require training for faculty and/or staff. The training should be taped, with key steps documented in the O&M manuals. Furthermore, a second training should be conducted after 3-6 months of use, so there is the opportunity to ask additional questions or gain clarifications on its operation.

Once those milestones have past, the campus should work to designate ongoing training to capture new faculty/staff. This cost should be reflected in the College’s budget, with funds dedicated to its implementation.

**Furniture, Fixtures & Equipment**

It is anticipated that a majority of lab equipment will be reused. However, in the case of new equipment is required, if it is not considered a bondable expense, the campus should seek donations from industry partners to supplement any campus dollars used for this purpose.
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