



REPORT | SEPTEMBER 2024



BUILDING OUR FUTURE:

LESSONS LEARNED FROM PARTNERING WITH THE

POWERCORPSBOS BUILDING OPERATIONS TRAINING PROGRAM

REPORT TEAM

Written By:

[Yve Torrie](#), Director of Climate, Energy, & Resilience, A Better City

Editing Teams:

A Better City: Kate Dineen, CEO & President, and Isabella Gambill, Assistant Director of Climate, Energy, & Resilience

PowerCorps Boston: Davo Jefferson, Executive Director, Mujihad Muhammad, Program Manager, and Taylor Powers, Workforce Development Director

Design Team:

Leann Kosior, Membership & Business Development Manager, A Better City

Acknowledgements:

This lessons learned document would not have been possible without generous funding support from the Linde Family Foundation and the Barr Foundation. We would like to thank Mayor Michelle Wu, the PowerCorpsBOS team, and the Roxbury Community College Smart Building Technologies team for their leadership, partnership, and collaboration. Additionally, we would like to thank A Better City members who stepped up to provide in-service learning and employment opportunities over the last two years, as well as regular and insightful feedback on ways to continuously improve the program for all involved. Moreover, we are grateful for the time and insight from other equitable workforce development programs, including Action for Equity, Bloc Power, Browning the Green Space, Building Pathways, Local Initiatives Support Corporation, Massachusetts Clean Energy Center (MassCEC), the Northeast Clean Energy Council, and UMass Boston.



A Better City represents a multi-sector group of nearly 130 business leaders united around a common goal: to enhance the Greater Boston region's economic health, competitiveness, equitable growth, sustainability, and quality of life for all communities. By amplifying the voice of the business community through collaboration and consensus-building, A Better City develops solutions and influences policy in three critical areas: 1. transportation and infrastructure, 2. land use and development, and 3. energy and the environment. A Better City is committed to building an equitable and inclusive future for the region that benefits and uplifts residents, workers, and businesses in Greater Boston.

TABLE OF CONTENTS

Introduction	4
Making Building Operations an Attractive Career Path	7
Developing a Strong Partnership with In-Service Learning and Employment Providers	8
Gathering Employer Requirements Upfront for Successful Program Member Matches	10
Refining the Curriculum to Meet the Needs of Program Members and Building Partners	11
Creating a Building Operations Career Pathway	12
Defining Success	14
Next Steps	16

INTRODUCTION

Equitable workforce development opportunities have accelerated significantly in recent years, fueled by federal, state, and local funding sources aimed at developing the diverse and skilled workforce that will be needed to transition our economy to a decarbonized future, with clean energy-fueled homes, businesses, and transportation systems. These efforts are essential to ensuring that the City of Boston and Commonwealth meet both climate and environmental justice goals. As a [partner](#) with the PowerCorps Boston (PowerCorpsBOS) building operations program for the past two and a half years, A Better City has learned valuable, transferable lessons that may inform the development and expansion of other equitable workforce development programming.

In 2021, the City of Boston's Environment Department asked A Better City to partner on a new equitable workforce development program called [PowerCorpsBOS](#), which was on target to launch in early 2022. PowerCorpsBOS aimed to launch with two "Industry Academies": urban forestry modeled on the successful program out of PowerCorps Philadelphia ([PowerCorpsPHL](#)), and a new building operations cohort that needed to be created in Boston to train a workforce focused on reducing greenhouse gas (GHG) emissions in large existing buildings.

The focus on large existing building decarbonization in Boston resulted from a 2019 report, [Carbon Free Boston](#), which identified buildings as responsible for 71% of GHG emissions in Boston, with large existing buildings over 20,000 square feet (6,000 buildings or 5% of Boston's buildings) being responsible for 40% of Boston's GHGs. The City has therefore prioritized building decarbonization through policies like the 2021 [Building Emissions Reduction and Disclosure Ordinance](#) (BERDO 2.0) for existing buildings, which finalized regulations in December 2023, the adoption of the [Municipal Opt-In Specialized Stretch Energy Code](#) in January 2024 for new construction and major renovations, and Boston's [Zero Net Carbon Zoning](#) regulations for new construction and additions, currently awaiting approval.



*PowerCorpsBOS Graduation, June 2023
Source: City of Boston*

The PowerCorpsBOS team was looking for partners to create a building operations workforce development program that could become a pathway to reducing GHGs in Boston's existing large buildings. A Better City began hearing from its members seven years ago about the "next low-hanging fruit in energy efficiency" being the need to train a workforce to operate the "smart" and increasingly high-performance buildings of today and tomorrow, as many facility leaders were nearing retirement. A Better City then worked with Roxbury Community College to support the establishment of their [Center for Smart Building Technology](#) that launched in January 2020. A Better City also coordinated

a Building Operator Certification Training for A Better City member facilities staff in 2019 and researched ways to link underserved communities with building operator skills, internships, and employment. In 2021, A Better City launched an Equity in the Building Environment Action Plan that included a commitment to equitable workforce development. In addition, A Better City worked closely with the City throughout the development of BERDO 2.0 regulations and has engaged its approximately 130 business members throughout that process, many of whom own or operate large existing buildings in Boston that need to comply with BERDO 2.0 regulations. All these reasons made A Better City a strong PowerCorpsBOS partnership candidate.

As soon as PowerCorpsBOS staff were hired in early 2022, they asked A Better City to convene a focus group with A Better City members' facilities staff to gather recommendations for building operation training skills that could be included in a curriculum, and in-service learning opportunities that could be included in a building operations training program. This was the first of many focus groups with A Better City members, and kickstarted a year of building operations program development throughout 2022. In addition to the PowerCorpsBOS and A Better City teams, Roxbury Community College joined this program development phase because of its expertise in [smart building technologies](#). A Better City also began to recruit member companies and institutions (building partners) to provide in-service learning to employment opportunities within their buildings. Building partners' willingness to participate in this program has proved to be invaluable and is resulting in the long-term hiring of cohorts of newly trained, diverse building operators in large existing buildings. In addition, A Better City's role in recruitment and support of large buildings throughout the program's in-service learning to employment phases has also been vital to the success of the program

In January 2023, PowerCorpsBOS launched its first 6-month building operations pilot training program, Cohort #1, with 12 program members. Program members are 18 to 30-year-old Boston residents that have a high school diploma or HiSET/GED, are unemployed or underemployed and are not in college or on a career track and are able to commit to the program schedule of Monday through Friday from 8:30 AM to 3:30 PM for 6 months (and now 10 months). Priority is given to populations such as returning citizens, court-involved residents, youth who have experienced homelessness or housing instability, young people who have been in foster care, and other marginalized communities. Recruitment is focused on environmental justice neighborhoods with most members coming from Dorchester, Roxbury, Mattapan, and the South End. Over the course of the program, most members (95%+) have identified as Black or Latinx. Program members receive a \$550 weekly stipend from the City of Boston, a monthly T-pass, a program uniform, wrap-around support services to assist with issues like housing, childcare, and legal matters, professional certifications, career services, and job placement assistance.

In Cohort #1, the first month was dedicated to foundational training conducted by PowerCorpsBOS staff and consultants that included workforce-readiness skills, an introduction to green industry careers, and support services necessary to complete the program. Foundational training includes soft skills training like communications, customer service and professionalism, and environmental hard skills training that can be used for employment in the green industry and beyond. The remaining five months were divided between technical training (two days/week), in-service learning (two days/week), and reinforcement of soft skills training (one day/week). A Better City members who own or operate buildings in Boston partnered with PowerCorpsBOS to provide in-service learning and employment opportunities for program members. Eight of the twelve program members from Cohort #1 graduated; three of the graduates are now in full-time positions in A Better City member buildings, and one is continuing further education. Lessons learned from program members and in-service learning partners were applied to the second training program, Cohort #2.

Cohort #2 ran from July-December 2023 with 10 program members. A similar structure was followed in Cohort #2 with four weeks of foundational training followed by two days of technical training/week,

two days of in-service learning/week, and one day reinforcing soft skills training, site visits, and other activities internal to PowerCorpsBOS. Again, A Better City members partnered with PowerCorpsBOS to provide in-service learning and employment opportunities for program members. Six of the ten program members graduated; five of the six graduates from Cohort #2 were either offered extended and paid internships or employment.

Lessons learned from Cohort #2 are now being applied to Cohort #3, which is a 10-month program that began in May 2024 and will run until the end of February 2025. Around 60 members have been recruited to attend a four-month foundational training cycle from May-August where they will be exposed to many possible fields of future study/vocation, including Building Operations, and soft skills training that includes effective communication, customer service, conflict resolution, navigating change, and stress management. Toward the end of the foundational training, members are invited to apply to three Industry Academies. Those who are interested in Building Operations and have met the required criteria will be offered one of up to 15 slots for this Industry Academy. The last 6 months will be technical training including industry-specific certifications, and in-service learning. Again, A Better City will work with its members to provide building partners for in-service learning and employment opportunities.

Throughout the two cohorts, A Better City has spoken to program members, building partners, trainers, and the PowerCorpsBOS team, and has also been fortunate to speak to numerous partner organizations running established and new workforce development programs to share experiences and lessons learned. Each workforce development program is unique in its focus, program member pool, building partner requirements, training, and in-service learning and employment opportunities. As a PowerCorpsBOS building operator program partner over the last two and a half years that supports the program by working with its members to provide opportunities for in-service learning and employment within their large buildings, A Better City has learned several high-level lessons that we hope may be useful for other new or existing equitable workforce development programs, organized into the following themes:

- Making building operations an attractive career path
- Developing a strong partnership with in-service learning and employment providers
- Gathering employer requirements upfront for successful program member matches
- Refining the curriculum to meet the needs of program members and building partners
- Creating a building operations career pathway
- Defining success
- Next Steps

Making Building Operations an Attractive Career Path

Getting program members excited about a career in building operations is something we are still learning about. For a lot of program members, they have never been exposed to the facilities-side of a large building or had an interest in doing so. They may feel intimidated by the large equipment and systems, and the weight of responsibility in managing them. We heard from building partners and partner organizations that there is a numeracy and literacy skillset required for a building operations position so in Cohort #2 program members were asked to take assessments for entry into the building operations program. This provided certainty about the aptitude of building operation program members, but it also proved to be a barrier for others who do not like or do not perform well in standardized tests. It also excluded those who knew nothing about the field and its potential career path and therefore were unwilling to take the assessment. When both building operations and urban forestry program members took part in building tours midway through Cohort #2, some expressed regret that they had hesitated about the testing requirements once they had more understanding of the building operator role and career trajectory.

Making a career in building operations attractive to youth is a tall order. Cohort #3 will be provided with more resources upfront to give prospective program members a better understanding of a career in building operations, with the hope that some will be drawn to the building operator PowerCorpsBOS program offering. These resources include:

- Providing a class that connects the dots for program members between reducing GHGs from large buildings and the resulting better air quality, health, and climate in their communities.
- Providing large building tours so that program members can have exposure to potential work sites.
- Setting up meetings with large building facilities managers to understand the kind of work that program members would be doing in these buildings.
- Providing a “meet and greet” with building partners and program members.
- Meeting alumni of the PowerCorpsBOS building operations program to understand what a career in this field is like.
- Demonstrating the increasing demand for building trades, including building operations, as large buildings need to comply with GHG reduction policies, resulting in a career that can advance quickly.
- Providing a building operations career ladder that includes potential titles and associated salaries in building operations, and/or how the building operations training can be a foundation for other building trades.

Developing a Strong Partnership with In-Service Learning and Employment Providers

A Better City is in a unique position for the building operations training program, as most of its 130 members own, manage, or are tenants in large existing buildings in Greater Boston. A Better City has been able to work with its members to recruit them as building partners to the program, who then provide in-service and employment opportunities to program members. Importantly, A Better City works with building partners, the PowerCorpsBOS team, and program members throughout the in-service learning training to understand any challenges that arise, and to work together to find solutions to them. At the end of each cohort, A Better City also interviews building partners to gather feedback that can be used in future building operations cohorts.

The relationship that A Better City has with its members has helped building partners become more comfortable with the objective of the program, which is that program members are hired at the end of the program, beyond a typical internship. Initially, like most workforce development programs, building partners assumed the program was about providing temporary in-service learning/internship opportunities only. Understanding upfront that the goal of the program is for building partners to offer long-term employment once the program is finished has made building partners more likely to address challenges as they arise, and work with program members and the PowerCorpsBOS and A Better City teams, to find ways to support the program member so they can be successful in moving into full time employment.

Lessons learned from Cohort #1 highlighted the need to establish and maintain open lines of communication with building partners in the transition from in-service learning to longer-term employment. In Cohort #2, regular meetings were held with the PowerCorpsBOS and A Better City teams, program members, and building partners, to discuss the program member's progress, as well as potential employment opportunities. These discussions started early on and throughout the program to understand what opportunities would be available, how much the program member would be paid, and what their career trajectory would look like. These early and frequent conversations proved to be useful to the program members and building partners alike and allowed building partners to realize that this program can be a viable pathway into full time employment within their organization.

For Cohort #1, A Better City member building partners included Beacon Capital Partners, BXP (and their facilities company, C&W Services), Brigham and Women's Hospital, Dana-Farber Cancer Institute, JLL, Massachusetts General Hospital, and The Federal Reserve Bank of Boston. Three of the eight program graduates from Cohort #1 are now in full-time positions in A Better City member buildings, and one is continuing further education.

For Cohort #2, A Better City member building partners included BioMed Realty (and their facilities companies, C&W Services & ABM), Equity Residential, Northeastern University, Related Beal, and Schneider Electric. Five of the six program graduates from Cohort #2 were either offered extended and paid internships or employment with the building partner that they did their in-service learning with. Two building partners also offered to pay for additional training for program members.

Table 1: Building Partners by Cohort

Building Partners in Cohort #1	Building Partners in Cohort #2
Beacon Capital Partners	BioMed Realty (C&W Services & ABM)
BXP (C&W Services)	Equity Residential
Brigham and Women’s Hospital	Northeastern University
Dana-Farber Cancer Institute	Related Beal
JLL	Schneider Electric
Massachusetts General Hospital	
The Federal Reserve Bank of Boston	

Source: A Better City

At the end of Cohort #2, building partners expressed interest in having program members do in-service learning for a longer period of time—either more days/week or a longer program in total—to make longer-term employment commitments easier. As the onboarding process can take more time than anticipated, the two days/week that started after the foundational training was not proving to be enough time. For some program members, it was challenging to retain information week to week (while doing technical training concurrently), and difficult for building partners to assess the program member’s progress. For this reason, many building partners in Cohort #2 asked to move to an extended full-time and paid internship at the end of the program, so they and the program members had enough time to determine the right next steps. To remedy this, Cohort #3 has been designed as a 10-month program with additional time added for in-service learning.

For Cohort #3, there is expected to be 10-15 program members interested in the building operations program. At the time of publication, the recruitment of building partners for Cohort #3 is in progress, and all building partners from Cohort #2 have signed up to participate in addition to many from Cohort #1. Building partners are already recognizing the PowerCorpsBOS building operations program as a viable pathway into the operation of their large buildings.



*Launch of PowerCorpsBOS’s Building Operation Program, February 2023
Source: A Better City*

Gathering Employer Requirements Upfront for Successful Program Member Matches

To ensure PowerCorpsBOS can understand where they are placing their program members, and to establish integrity for program members, employers are asked a number of questions early on. All employers require information from interns and employees, but the amount and type of information differs by employer. Understanding the building partner's requirements makes it easier for the PowerCorpsBOS team to match building partners with program members. If a job requires a car to get to the location, for example, that limits the pool of candidates, as do requirements like drug testing or Massachusetts Criminal Offender Record Information (CORI) background checks. The more onboarding information asked of building partners, the easier it is for program members to match with a building partner from the get-go. For Cohort #1, insufficient onboarding information was gathered, resulting in some program members changing locations early-on in their in-service learning, impacting the amount of time that they had with potential employers. To reduce these disruptions, more onboarding information was gathered for Cohort #2, resulting in more effective program member and building partner matches. Additional information is also being gathered for Cohort #3.

Some of the information gathered from building partners includes:

- Building partner company name, and whether program members are working directly with the building partner, or with a property or facilities management company on the building partner's behalf
- Host building's location for in-service learning
- The number of program members the building partner would like to host in the cohort(s)
- Name and contact details of the person who approved the in-service learning opportunity, an HR contact, and the contact information for the program member's supervisor
- Whether the building partner pays program members for in-service learning and, if so, how much
- Whether any medical clearance is required (e.g., vaccinations)
- Whether a Massachusetts Criminal Offender Record Information (CORI) background check is required, and if so, whether there are incidents on the record that are disqualifiers from employment
- Whether a drug test is required and what results prohibit employment
- Whether an application is required for in-service learning
- Duration to complete onboarding process
- Whether there is onboarding support in-house
- Whether a car is required to get to the building
- What specific skillset(s) a building partner is looking for (e.g., building operations, Building Automation Systems, HVAC, electrical, etc.)
- Whether the building partner employees are part of a union
- Building partner's anticipated job openings for entry-level roles after the program member has graduated

Refining the Curriculum to Meet the Needs of Program Members and Building Partners

Unlike traditional trades like Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR), electrical, and plumbing, a career in building operations does not start with an established apprenticeship program, certifications, and licenses, nor an established career ladder. As the building operations program is a brand-new PowerCorps program unique to Boston, A Better City has been learning from building partners, program members, and trainers, which parts of the curriculum work and which parts need modification. Over the last two cohorts, building partners have identified the following training modules for the building operations program:

- Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR)
- Building Automation Systems (BAS) or Building Energy Management Systems (BEM)
- Fundamentals of Electricity
- Fundamentals of Plumbing
- Energy Efficiency

These core competencies will set a program member up for a career in building operations and can also be an entry into other building careers like HVAC technician, electrician, plumber, etc.

Finding trainers and/or academic institutions able to accommodate PowerCorpsBOS' day-time hours, especially those that have labs for hands-on learning, has been one of the biggest challenges that the program has faced. Although interactive online modules are readily available that can teach both a classroom curriculum and simulations, the hands-on lab training has been harder to secure. This makes it more challenging for program members to understand and practice on equipment or systems before they encounter them in the buildings where they are doing their in-service learning. One benefit of interactive online modules, on the other hand, is that it allows program members to customize the online program to skills needed in the buildings in which they have been placed.

In addition to technical skills, building partners suggested after Cohort #1 that more training be provided in communications, customer service, and employability skills to provide program members with the confidence required to adjust to a new work environment, interact with colleagues and supervisors, and communicate with contractors and tenants. As such, communications, customer service, and employability skills were included throughout the 6 months of foundational training in Cohort #2. Interviews with building partners during and after Cohort #2 ended confirmed that the training had been successful, with minimal feedback about a lack of these skills in the graduating program members. Therefore, the 4-month foundational period in Cohort #3 will focus heavily on soft skills and bring the group into the Industry Academies and in-service learning sites with an advanced comfort-level. This, in turn, is expected to result in a higher rate of employment after the in-service learning is completed.

In addition to the curriculum, A Better City is also learning what certifications would be most useful to program members and building partners alike. As mentioned above, building trade apprenticeships come with established licenses and certifications, earned over three to four years, which is not the case for building operations. In general, the certifications that PowerCorpsBOS building operations graduates receive are important for future employment, but in most cases these certifications were not recognized by building partners who are accustomed to the trade's established licenses and certifications. Although building partners may not recognize the certifications program members are graduating with, they nevertheless appreciate and credit the time taken, and skills earned in passing these certifications.



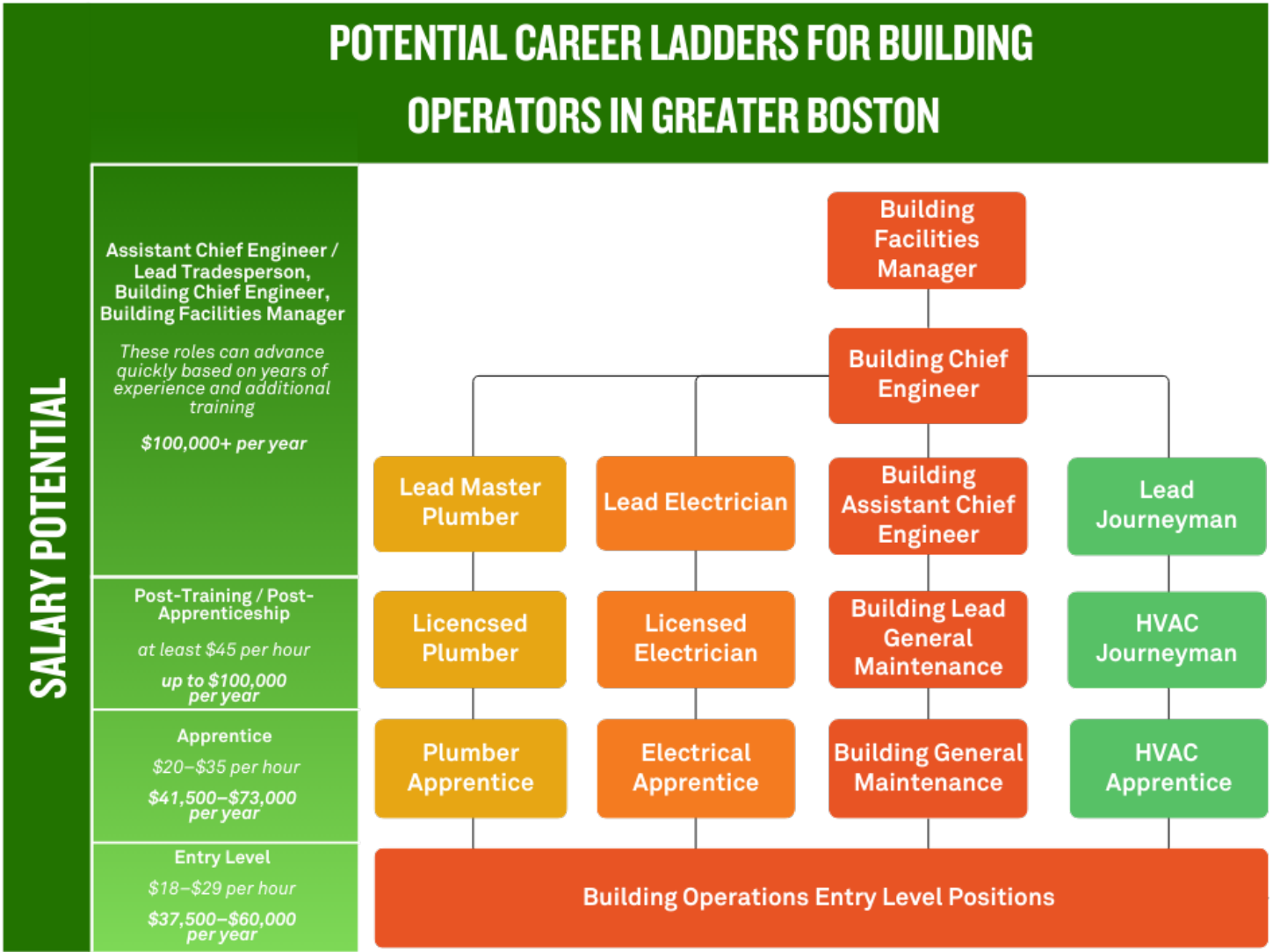
PowerCorpsBOS Site Visit, August 2023
Source: PowerCorps Boston

Creating a Building Operations Career Pathway

As mentioned above, a career in building operations does not have a clearly defined career path, unlike other building trades with established apprenticeships, certifications, licenses, and associated career ladders. For this reason, some schools, colleges, facility service providers, and employers have developed or are in the process of developing their own training programs to fit the needs of their unique building, sector, or industry. Recently, [Building Energy Efficiency for a Sustainable Tomorrow](#) developed a first of its kind certification that is recognized as a gold standard for Building Operators: [High Performance Building Operations Professional Certification](#). This credential, however, is intended to validate the knowledge, skills, and competencies of building technicians, engineers and operators who are already supporting high-performance commercial buildings.

For a program member, it is important to know what a potential building operator career and salary ladder looks like, what type of buildings these jobs are in, and what types of careers a PowerCorpsBOS training in building operations can be an entry into. With the help of building partners, and some in-house research, Figure 1 provides a high-level overview of a potential Greater Boston career ladder and associated salaries for building operators, in addition to other building trade career ladders that a building operations training can be an entry into.

Figure 1: Potential Career Ladders for Building Operators in Greater Boston



Source : A Better City

Based on building partner input, the approximate rates and salaries for building operator positions in Greater Boston are outlined below and in Figure 1:

- Entry-level positions can range from \$18-29 per hour or \$37,500-\$60,000 annually.
- Training positions or a building trade apprenticeship can range from \$20-35 per hour or \$41,500-\$73,000 annually.
- Post training or apprenticeship, assuming 5 years of schooling and on the job training, can be at least \$45 per hour and up to \$100,000 per year. Salaries advance from there with years of experience and additional training. See the [Green Building Career Map](#), detailed below, for national salary averages e.g. [Chief Engineer](#) is up to \$150,000 per year and [Facilities Manager](#) is up to \$175,000 per year.
- Higher salaries are paid for evening shifts and/or weekend shifts.

In addition, the U.S. Department of Energy has listed occupations available nationally on the [Green Building Career Map](#) under the category of Building Operations/Facility Management, and includes the following occupations: Energy Engineer; Senior Operations Manager; Chief Engineer, Facilities Manager, Energy Manager, Building Engineer, Building Operator; Building Automation Systems Technician; Building Maintenance Technician; Building Automation Systems Trainee; and Building Maintenance Worker. Scrolling through each of these occupations provides information about what the occupation entails, advancement routes, the national salary range, the occupation's sector, required and preferred education and training, work experience, and skills and requirements.

Those trained in the PowerCorpsBOS building operations program can gain employment in all large buildings that have onsite facilities staff like commercial real estate, universities, or health care facilities. They can also gain employment with building maintenance or facilities contractors, as well as with general contractors. Building partners have been very clear that building operators, building automation system technicians, and all positions in building trades are currently in high demand. Building partners are recognizing the benefit of engaging with this program as a pathway to finding skilled and diverse employees in this high-demand field. With more demand than supply, many companies are eager to take entry-level candidates and train them in-house, and to pay for their schooling, therefore providing huge opportunities for young people entering this field. Some have gone as far as to develop in-house apprenticeship-type programs complete with coursework and on the job training, specific to their requirements, that include ascending career job titles and salaries.

As building operation and building automation system positions do not yet have established apprenticeship programs for entry-level candidates, they are less likely to be union jobs. Building trades, on the other hand, have very established apprenticeship programs and are generally union jobs.

Although understanding potential career opportunities is crucial for program members to understand, it can also be difficult for them to grasp and visualize as an opportunity for themselves. The opportunities, therefore, need to be reiterated by all involved in the program —PowerCorpsBOS staff, building partners, and training partners alike—to ensure program members can truly understand the very real opportunities available to them. Additionally, as the program matures, alumni can be engaged to discuss their own unique paths.

Defining Success

Success is most often measured in numbers: how many people were trained; how many graduated; how many went into employment; and how long they stayed at their place of employment. These quantitative questions are important, but they are not the whole picture.

PowerCorpsBOS is providing this building operations opportunity within a field that pays well, that has rapid job and salary growth potential, and that will become increasingly important as GHG emission reduction strategies become commonplace. It is a field that most program members have not had an opportunity to participate in before, as most large building facilities staff traditionally went through engineering college programs, trade apprenticeship programs, or trade schools, with many barriers to entry for others that do not have the resources to attend these programs. PowerCorpsBOS and similar programs can significantly impact the diversity in these career fields and can be transformational in improving the lives and earning potential of marginalized youth that have been historically excluded from these opportunities.

Attending any of the PowerCorpsBOS graduation ceremonies—in [January 2023](#) (for the urban forestry pilot program), [July 2023](#) (for the building operations pilot program and Cohort #2 of the urban forestry program), and [December 2023](#) (for Cohort #2 of the building operations program, and Cohort #3 of the urban forestry program) —and listening to program member testimonies about their program experiences, in addition to PowerCorpsBOS staff, leaders, and partners—the transformational aspect of this program cannot be overstated. This has been echoed in program member surveys, interviews with building partners, and conversations with some of the collaborators involved in making this program a success. Program members speak of the program “having their back,” of finding confidence, of seeing a pathway forward that they did not know existed or could be attainable, of being part of a solution to climate change, and of training and employment opportunities they could not have imagined six months prior. They have also spoken about this training and career path not only having the potential to transform their lives but that of their whole family unit as well. This transformational power, although difficult to measure, can be missed if the focus of success is merely quantitative.

Another success that is difficult to measure is building partners’ willingness to move away from a traditional internship model to an in-service learning and longer-term employment model. From the get-go, building partners have understood that the goal of the program is not to simply provide an internship opportunity, but to provide in-house training that will lead to the program member’s employment at the end of the program. This willingness, often agreed to by the building owner or company executive, needs to be communicated to the staff and supervisor working directly with the program member. When this is the case, supervisors and staff have gone above and beyond with program members and PowerCorpsBOS staff alike, to make sure that the program member is on track to employment at the end of the program. In this way, employers have a buy-in to the success of the program and program member from the beginning.

Even though the building operations program is only on its third cohort, building partners are already recognizing this program as a viable pathway into their large buildings. As mentioned earlier, all building partners from Cohort #2 have signed up as building partners for Cohort #3, and many from Cohort #1 have signed up as well. They recognize that this program can fill crucial and widening employment gaps within their facilities staff.

Beginning a building operations cohort from scratch and applying lessons learned along the way takes time, dedicated staff, trust-building, and persistence. There is an urgency to scale-up, but that does not need to be limited to scaling the number of program members in each cohort. Once the building operations program’s kinks have been worked out—the best curriculum is selected, the certificates most recognized by employers are included, and the building partners most suited to in-service learning and employment opportunities are secured—then the program can be replicated in other PowerCorps cities and towns, and beyond. Scaling then moves from a program’s success in Boston, to one that can be replicated nationwide, with an emphasis on in-service learning to longer-term employment opportunities. Signs of growing momentum and scaling interest are already apparent.

Success, therefore, can be multi-faceted—limiting the measure of success to numbers alone takes away from the truly transformational opportunity that a program like this holds for all involved, and that can have ripple effects in improving career pathways and earning potential for program members, their families, and their broader community.

Next Steps

Time, patience, persistence, trust, and flexibility have all been required in the development of this program. Having a clear program focus, program member selection pools, and committed employer partners willing to provide in-service learning opportunities that lead to employment, have all been essential elements in creating this building operations program and the successful hiring of new building operations staff. Building on the lessons learned along the way, the next steps rising to the surface include:

- **Developing ways to enhance the curriculum.** As mentioned above, the PowerCorpsBOS and A Better City teams, with helpful insight from building partners, are continuing to work with training partners to find the best curriculum and set of certifications to serve program members. Although the teams have made significant strides in refining the best skills to be taught in the building operations curriculum, and have revised the certifications, finding available instructors and lab space for hands-on training continues to be a challenge. In addition to continuing to pursue hands on trainers and lab space, PowerCorpsBOS is exploring an online platform for program members to use that will help further refine their skillsets based on the requirements of the building hosting their in-service learning where they hope to gain employment. Some buildings may have more need for Building Automation Systems training, some may require more HVAC training, etc. The PowerCorpsBOS and A Better City teams are hopeful that this online platform will provide flexibility through classroom, simulation, and troubleshooting modules to supplement the hands-on training.
- **Developing a cultural competency training module.** The PowerCorpsBOS and A Better City teams are piloting a cultural competency training in Cohort #3 that will take place prior to program members starting their in-service learning. Currently in development, this training will be for all involved—building partners and supervisors (and their HR representative), program members, and staff—with the goal of training, hiring, and retaining a diverse workforce.
- **Working with building partners' HR to support onboarding.** Increasingly, onboarding is left in the hands of the potential employee, who is emailed many pages of onboarding paperwork to complete. This can be a barrier to entry because it assumes that the potential employee has access to a computer, to the internet, to email, and a printer. In addition, the paperwork often requires explanation and guidance, which is not provided. For those not well-versed in new employment paperwork, this can be very challenging, and program members must rely on PowerCorpsBOS staff for support, which can delay the in-service learning start time. By communicating directly with the HR departments about the challenges being encountered, PowerCorpsBOS hopes that the onboarding processes may go more smoothly. In addition, building partners will be encouraged to treat program members like potential employees in training and provide them with both hands-on hard skills training and soft skills support to make them better employment candidates.
- **Developing the program for use beyond Boston.** PowerCorpsBOS has received inquiries from other PowerCorps municipalities, other municipalities not in the PowerCorps network, and other workforce development programs, about replicating the building operations program in other jurisdictions beyond Boston. Those interested in the program recognize both the potential of this new career path, and the need to reduce GHG in large buildings. As PowerCorpsBOS continues to learn from each cohort and iron out the remaining kinks, the goal is to develop a program model that can be replicated by any municipality or workforce development program across the country. The key will be to find willing building partners committed to building decarbonization and to providing both in-service learning and employment opportunities to a community underrepresented in this field.

