



PUBLIC FACILITIES DEPARTMENT DESIGN STANDARDS

Issued January 2025



Mayor Michelle Wu



City of Boston
Public Facilities

City Hall Plaza
Photo courtesy of: Sasaki
Architect: Sasaki

A WORD FROM THE EXECUTIVE DIRECTOR

I am pleased to share the new City of Boston Public Facilities Department Design Standards.

I would like to thank all PFD and Operations staff and those across several City departments who provided time and input to make these Design Standards a true collaboration. I would especially like to thank Evan Brinkman, Assistant Director for Design at PFD and Patricia Cafferky, Deputy Chief of Operations, for their tremendous contributions to this effort. These Design Standards represent both a history of learnings from decades of capital projects and goals for the future of Boston's built environment.

This document serves as a resource for both PFD project managers and project consultants and is designed to be a living reference which can evolve as technology evolves and best practices change. By establishing and following these standards, we aim to consistently achieve design excellence and contribute to the enhancement of Boston's built environment.

Carleton W. Jones



Executive Director
City of Boston Public Facilities Department

CITY of BOSTON PUBLIC FACILITIES DEPARTMENT

The Public Facilities Department supports other City of Boston departments in the planning, design, construction, and major renovations of City-owned buildings.

INFORMATION

Visit us at boston.gov/departments/public-facilities for more information.



publicfacilities@boston.gov



617-635-0412

CONTENTS

01 Introduction	07	09 Mechanicals + Utilities	51
Using these Standards	08		
Design Approach	09		
02 PFD Processes - GUIDANCE FOR PFD PMs	11	10 Finish Elements	53
Coordinating with the PFD Design Team	11	Lighting	53
Design Meetings	14	Exterior Signage	54
Coordinating with Other City Departments	14	Interior Signage	56
		Furniture, Fixtures, + Equipment (FF&E)	57
		Public Art	59
03 Site	19	11 Sustainability + Resilience	61
Massing	19		
Landscape	20	12 City of Boston References + Standards	64
Connectivity	23		
04 Existing Buildings + Preservation	29		
05 Building Exteriors	33		
06 Building Interiors	37		
07 Openings	43		
Curtainwalls	43		
Windows	43		
Window Treatments	44		
Doors	44		
08 Vertical Circulation	47		
Ramps	47		
Elevators	47		
Stairs + Guards	48		

ACKNOWLEDGMENTS

CITY OF BOSTON

OPERATIONS CABINET

Dion Irish
Patricia Cafferky

PUBLIC FACILITIES DEPARTMENT

Carleton W. Jones
J. Rohn MacNulty
Ellen McDonough
Evan Brinkman
Nereyda Santos-Pina
Whitney Hansley
Angela Chan
Alistair Lucks
Brian Melia
Greg Rideout
Michael Soucy

AGE STRONG COMMISSION

Emily Shea
Andrea Burns
Corinne White

BOSTON TRANSPORTATION DEPARTMENT

Nick Gove
Charlotte Fleetwood
Kim Foltz
William Moose
Michael Tormey

DISABILITIES COMMISSION

Kristen McCosh
Sarah Leung
Andrea Patton
Sierra Tilton

ENVIRONMENT DEPARTMENT

Oliver Sellers-Garcia
Zoe Davis
Christopher Kramer
Catherine McCandless
Nayeli Rodriguez

MAYOR'S OFFICE OF ARTS AND CULTURE

Kenny Mascary
Karin Goodfellow
Amber Torres
Birgit Wurster
Alexandra Paul Zotov

OFFICE OF EQUITY AND INCLUSION

Mariangely Solis-Cevera
Natalia Espinosa Tokuhama

OFFICE OF HISTORIC PRESERVATION

Kathy Kottaridis
Chelsea Blanchard
Joseph Cornish

OFFICE OF LANGUAGE AND COMMUNICATIONS ACCESS

Jeniffer Vivar Wong

OFFICE OF LGBTQ+ ADVANCEMENT

Jullianne Lee
Kimberly Rhoten
Daunasia Yancey

OFFICE OF GREEN INFRASTRUCTURE

Kate England
Allie Rowe

PLANNING DEPARTMENT

Kairos Shen
Travis Anderson
Eric Boatright
John Fishback
James Fitzgerald
Jill Zick

PROPERTY MANAGEMENT DEPARTMENT

Eamon Shelton
Sam Lovison
Junior Tatis-Zapata

PUBLIC WORKS DEPARTMENT

Jasha Franklin-Hodge
Lydia Hausle
Nathaniel Fink
John Monacelli



City Hall Plaza
Photo courtesy of: Sasaki
Architect: Sasaki



East Boston Senior Center
Photo courtesy of: Horner Visual
Architect: Fennick McCredie Architects

INTRODUCTION

The City of Boston's Public Facilities Department (PFD) supports other City departments by managing capital projects for City-owned buildings in the planning, design, and construction phases. This includes new construction, additions, and major renovations. PFD advances equitable and people-centered projects that meet the needs of both residents and City-employees.

The User Groups referred to in this document are the City departments that occupy and/or oversee the capital projects that PFD manages. This includes, but is not limited to: Boston Children Youth and Families (BCYF), Boston Fire Department (BFD), Boston Police Department (BPD), Boston Public Health Commission (BPHC), Boston Public Library (BPL), Boston Public Schools (BPS), Emergency Medical Services (EMS), Property Management Department (PMD), and the Parks Department.

Design Standards add transparency to what the City expects from its capital projects while allowing design teams to retain flexibility. As a result, projects may pursue a variety of design approaches to arrive at contextual solutions that meet the needs of the individual User Groups. Designers are encouraged and, in some cases, mandated, to work within the parameters of these standards.

These Design Standards are for use by PFD project managers and by consultants on PFD projects, including architects, landscape architects, engineers, and

contractors. The standards should be used to inform decisions from the beginning of projects (site design, building orientation and massing, etc) through the end of design, including material selection and detailing. The standards are also used by PFD Design Reviewers to ensure conformance and consistency across projects.

Some User Groups, such as BPL and BPS, have their own design standards such as the BPS K-12 Standards. Similarly, several City departments have their own guidelines, such as the Boston Transportation Department's (BTD) Bike Parking Guidelines. In some cases, a User Group or department may choose to adopt specific guidelines created by external organizations (e.g., ISD adheres to the Pest Prevention by Design document published by the San Francisco Department of the Environment and the International Code Council). The PFD Design Standards are meant to be complementary, not contradictory, while having a wider applicability to all the various City departments that PFD serves. Refer to additional standards and guidelines linked at the end of this document.

Using These Standards

1. These standards are meant to guide PFD and consulting design teams to realize successful projects. Key PFD project goals are:

- Creating a welcoming, high quality, site specific, and inclusive environment that will last generations
- Meeting the program requirements and needs of the User Group
- Achieving the desired schedule
- Building within the required budget
- Meeting all ADA and physical accessibility needs through universal design strategies
- Delivering a sustainable, resilient and healthy project
- Improving the public realm and embracing unique cultural expressions

2. Thoroughly read this document and familiarize yourself with its contents. Identify the criteria that may be new to you or unique to PFD projects you

may not have otherwise included in the design to ensure your team is aware. Contact the PFD Assistant Director (“AD”) for Design or Senior Design Reviewers if you have questions or need clarification. Every design team hired by PFD should raise any questions about these standards and how they might apply to their project at the beginning of the design process.

3. As the design process progresses, review these guidelines periodically to verify all criteria have been addressed.

4. These Design Standards are intended to set broad guidelines for what is typically expected across all PFD projects, from firehouses to schools, without restricting designers’ creativity to realize successful and contextual projects. Where designers believe they need to deviate from these Standards to do so, they should identify how and why in conversation with the PFD Project Manager and Senior Design Reviewer assigned to the project.



Design Approach

1. Public buildings should have a civic presence through welcoming and clearly identified entries. Entry lobbies and adjacent circulation (stairs, corridors, etc.) should reinforce the building's programmatic organization, communicating physically and visually that these spaces are the 'front'.
2. Accessibility, including [Universal Design](#) for all ages, must be an integral part of the design of both the building and the site from the beginning, not an afterthought (e.g. wheelchair side entrances or metal ramps attached to the building should be avoided).
3. Designs should be forward-looking, reflect the intent of applicable community input, and reinforce what the neighborhood wants to be.
4. The project program drives building form, siting, fenestration, etc. Each User Group has specific programmatic and adjacency needs that should be satisfied by the conceptual building design.
5. Every project should carefully evaluate any impacts to the public realm, including those to circulation networks, streetscape, existing trees, and stormwater runoff. While the scope of each project may vary, the design should consider the overall project site, not just the building itself.
6. Natural light and transparency are highly valued but must be balanced against heat gain, privacy, safety, and programmatic requirements.
7. Material concepts and design complexity need to be balanced against cost. Using high-priced materials in minimal, strategic locations can achieve the desired outcome at a lower cost.





Rivermoor EMS Training Facility
Photo courtesy of: Jane Messinger
Architect: Merge Architects

PFD PROCESS - GUIDANCE FOR PFD PROJECT MANAGERS

This Chapter of the Design Standards is directed to internal PFD staff. City staff, stakeholders, and designers may wish to read it to familiarize themselves with some of PFD's internal goals and expectations. Some linked documents may be for internal use only and may not be accessible to non-City accounts.

Coordination with the PFD Design Team

1. **Designer Selection:** It is recommended that designers selected during the M.G.L. Chapter 7C Designer Selection process be experienced, qualified, offer the highest level of design ability, and most comprehensive services. Highly qualified, experienced, and comprehensive teams are best equipped to avoid and manage scope creep, change orders, and project delays.
2. **Past Project-Specific Design Work and Studies:** When a project is initiated through a study, the consultants and PFD Project Manager should familiarize themselves with the content of any feasibility, site selection, visioning, programming, or other study final reports that were completed for the project. The study PM shall stay with the project into the schematic design phase, supporting the PFD Construction PM by conveying relevant information gleaned from the previous process.
3. **Project-Specific Design Goals:** Early in each project, ideally during the kick-off meeting, the PFD team, design team, and User Group should collectively write project-specific design goals. The PFD Design Review staff person oversees this process.
 - Example Project Specific Design Goals: [South End Public Library: Engine 17; IQUS](#)
4. **Design Review:** On more complex projects or projects needing increased design attention, internal PFD design reviewers should be treated as integral project team members. They should be engaged to support the design process from initiation, designer selection, scope confirmation, and the creation of project design goals, commenting on the design schedule, and weighing in on big and small design ideas. The PFD design reviewer should be invited to all design meetings and receive all pertinent project communications and deliverables. They should be able to participate in systems selection, sustainability targeting, material and color selection in design and construction, and VE exercises.

5. **External Design Review:** Where the expertise of the PFD design reviewers is insufficient, or PFD does not have internal design review capacity, external technical reviewers should be hired to review at least two phases of a design and construction project, starting no later than 60% CDs. Refer to this [Design Review Basics](#) presentation for more information.

6. **Permitting:** Public Facilities Department projects are exempt from the City of Boston's Zoning Code and several other City reviews. For more information, see this [permitting overview](#).

7. **Visual and Performance Building Mock-Ups:** During early design (before 60% CDs), the PFD and design team should review and confirm the need for standalone, visual or performance mock-ups. Consider:

- Location: where to locate the mock-up(s), as often there is no space on site
- Time: schedule for procuring actual materials or if stand-ins need to be used
- Cost: The added cost to the budget for the mock-ups.
- Type: Standalone mock-ups are preferred and have the correct materials and systems. Visual mock-ups give the appearance of the final design, but may not use final materials. Benchmarking mock-ups are when part of the material is installed on the building and is approved prior to proceeding. In-place performance testing is when the mock-up is installed as part of the building and then tested.

8. **Construction Submittals:**

- It can be beneficial for the PFD

Design Reviewer or AD for Design to have access to project construction management software (e.g., Procore) and receive transmittals for submittals related to visible materials (interior and exterior) and complex architectural systems (curtain wall, exterior cladding). It can also be useful for the PFD design reviewer to receive bulletins, PCOs, ASIs and RFIs as required by the project - any item that may change or alter previously reviewed and approved designs.

- In coordination with the PFD PM, design reviewer, designer, and User Group representative, review and select all materials and colors during design. Revisit material and color selections as a group (e.g., exterior materials) once the contractor has submitted them all to ensure color coordination (e.g., between metal siding, metal flashing, storefront, and brick). Specify custom colors as necessary to achieve alignment across systems and manufacturers.

9. **3d Visualizations:** Aerial views can help with understanding a project's overall concept and its impact on the urban fabric, but in general, rendered three-dimensional images of projects should be taken from eye level, close to the building, such that an actual user experience is visualized. When prepared for public consumption, renderings should include a diverse entourage that matches the demographic makeup of the building's users and relevant city constituent groups. Always include renderings of the main public spaces, such as the main entrance/arrival from the exterior of the building, the lobby, and any main amenities the project offers. In addition to daytime views, include night views to illustrate any proposed exterior and building lighting.

10. Value Engineering:

- PFD design review staff should participate in value engineering exercises to contribute VE/VM ideas and help evaluate what ideas should be selected moving forward. The general process includes gathering ideas from all parties (PFD, consultants, OPM, User Group), the designer, and/or CM estimator providing actual costs for the proposals, and reviewing them as a team for acceptance.
- Program is valued over almost every other aspect of the project. When there are cost overages, efficiencies, systems, and materials should be

considered for price reductions before cutting the program; however, the User Group's future growth, excessive storage and parking needs should be scrutinized. Resist the urge to VE out durability and prioritize retaining the best design and materials in entries and public-facing areas.

- The designer should consider the lifecycle cost of materials and system selection, including maintenance needs and impact on operating budgets. To minimize operating costs, passive lighting, heating, and cooling should be considered.



Boston Engagement Center
Photo courtesy of: Christian Phillips
Architect: SAAM Architecture

Design Meetings

1. Certain design meetings should be hosted in person, such as schematic design meetings, meetings where design options are presented and discussed, new design information is shared, design review comments are intended to be given, and material selection meetings. PFD Project Managers should work with the PFD Design Reviewer to determine which meetings should be held in person.
2. Sample boards from material review meetings should be left behind for PFD and User Group retention for the duration of the project. Material information should be clearly labeled with key product specifications (color, manufacturer, pattern, etc) and location information. Sample boards do not need to be retained after the project has been completed; they may be returned to the design team at the end of the project, though PFD may choose to keep materials or samples for future reference. If materials change, the design team should update the sample board kept by PFD and the User Group.
3. At the initiation of FF&E, the designer should bring full pieces of proposed furniture in-person for approval by PFD, such as sample tables and chairs. Prior to this, FF&E material samples should be provided. Optionally, host a 'chair fair' so the User Group may be part of the furniture selection process. See this [presentation](#) on FF&E procurement.
4. Energy incentive meetings with utility companies and sustainability charrettes (LEED/ZNC) must occur early in Schematic Design to achieve integrated design solutions.
5. PFD Project Managers should ensure design teams provide presentations in advance of design meetings so they can be reviewed by the PFD Design Reviewer prior to the meeting.
6. When site visits to the existing space/building are necessary they should be done early in the design process to understand how space is used and what works or does not work.

Coordination with Other City Departments that have Planning/Design Review

Public Facilities Department projects which touch the public realm, open space, include artwork, have tree removal, etc. require coordination with other City departments. Some of that coordination occurs prior to the permitting process, such as a review by the Public Improvements Commission (PIC) staff for projects that add curb cuts or improve the sidewalk. Other review is less formal and dependent on project scope, such as by the Streets Cabinet team when

a project includes bike infrastructure.

PFD projects should consult with other departments early in the design process as several City departments may have ongoing planning efforts or specific requirements. For example, BTD, Public Works (PWD), and Office of Green Infrastructure (OGI) plan for sidewalks and street improvements; the Parks Department has priority zones for new street trees; the Planning Department

plans for public space and social infrastructure, etc. Without reaching out to these other departments, there may be missed opportunities to combine capital improvement projects, or PFD projects may be asked to incorporate changes late in the design process, adding expense to the project. It is critical to include the end User Group in all meetings with these City departments doing design review as the user group can best explain their needs.

This table presents the City departments that may be relevant for PFD projects to coordinate with, and when in the process coordination is recommended. In general, it is recommended that PMs and their internal and external design team invite

the relevant parties below to a meeting/s to review and discuss the project scope and provide input rather than sending large deliverables to them for review.

- Follow this link for the latest [City Department contact list](#).

It should be noted that there are non-design and planning related departments with which PFD PMs must coordinate that are not listed in the table. These include the Office of Neighborhood Services (“ONS”) for community engagement, and Intergovernmental Relations (“IGR”) for communications with City Councilors and other Elected Representatives, among others.

City Cabinet Department	Contact	PFD Project Scope Item Needing Coordination	Coordination Moment
Arts and Culture Mayor’s Office of Arts and Culture (MOAC)	Director of Public Art Senior Public Art Project Manager	• Inclusion of artwork • Inclusion of cultural infrastructure	• Study (Concept Design) Phase to determine interest • End of Schematic Design • End of Design Development • Ongoing if selected
Boston Water and Sewer Commission (BWSC)	Deputy Chief Engineer Site Plan Review Engineer	• Projects needing site plan review (permitting)	• End of Schematic Design
Energy, Environment, and Open Space Climate Resilience	Climate Resilience Planner	• Flood zone	• Concept Design Phase
Energy, Environment, and Open Space Energy	Director of Municipal Energy	• Utility Account Data • Utility Rebates • Solar PVs	• Concept Design Phase
Energy, Environment, and Open Space Green New Deal Team	Green New Deal Director	• Any new or major renovation project intended to go fossil fuel free	• Concept Design Phase (pre-project budget)

City Cabinet Department	Contact	PFD Project Scope Item Needing Coordination	Coordination Moment
Energy, Environment, and Open Space Historic Preservation	BLC Staff Architect	Affecting a building with landmark status, in a landmark district, or over 50 years old	- Concept Design Phase - End of Schematic Design - End of Design Development
Energy, Environment, and Open Space Historic Preservation	City Archaeologist	- Any project with excavation in areas previously undisturbed - Projects in areas with indigenous ties	- Concept Design Phase or - End of Schematic Design (when the building location is set)
Energy, Environment, and Open Space Parks & Rec	Chief Landscape Architect	- Proximity to a park - Street trees	- Concept Design Phase - End of Schematic Design - End of Design Development
Energy, Environment, and Open Space Parks & Rec	Tree Warden	Trees	Tree removal or when seeking to preserve mature trees
Equity and Inclusion Disabilities Commission	Architectural Access Specialist	- Interior and site accessibility - Variances	- End of Schematic Design - End of Design Development - Mid-Construction Documents
Equity and Inclusion Language Access	Language Access Manager	Community centers and libraries (for signage)	End of Design Development
Fire Boston Fire Department (BFD)	Fire Marshal	All projects	- End of Schematic Design - When fire code related questions arise
Human Services Age Strong	Director, Age-Friendly Boston	- Any senior centers, community centers, and libraries - Universal Design	- End of Schematic Design - End of Design Development
Innovation and Technology (DoIT)	Director of Network and Telecommunications Services	Technology infrastructure	During Design Development Phase
Mayor's Office	Deputy Chief of Operations	Replacement of a grass sports field with artificial grass	Concept Design Phase
Operations Inspectional Services	Dept. Building Commissioner	All projects	- End of Schematic Design - When code questions arise - Permitting

City Cabinet Department	Contact	PFD Project Scope Item Needing Coordination	Coordination Moment
Planning Planning and Zoning	Director of Planning Deputy Director of Comprehensive Planning Deputy Director for Planning Review	Any exterior improvements touching the sidewalk or street	- End of Schematic Design - End of Design Development
Planning Urban Design	Deputy Director for Design Review Assistant Deputy Director of Public Realm	Any public realm improvements (plaza, sidewalks, street trees)	- End of Schematic Design - End of Design Development
Streets Boston Transportation Department (BTD)	Neighborhood Planning Director	- Any exterior improvements touching the sidewalk or street - Projects with parking, including any changes to curbside parking	- End of Schematic Design - End of Design Development - PIC Application
Streets BTD - Safe Routes to School (SRTS)	Planner for SRTS	Exterior improvements around schools	- Concept Design Phase - End of Schematic Design - End of Design Development
Streets BTD New Mobility	Director of New Mobility	New Mobility options, such as EV Charging, Car Share, Mobility Hubs, etc.	- End of Schematic Design - End of Design Development
Streets Office of Green Infrastructure (OGI)	Director of Green Infrastructure Principal Engineer of OGI	Any exterior ground improvements	- Study Phase to determine interest/review budget - End of Schematic Design - End of Design Development - PIC Application
Streets Public Improvement Commission (PIC)	Chief Engineer PIC	- Any exterior improvements touching or overhanging the sidewalk or street - Edits to easements	- End of Schematic Design - End of Design Development - PIC Application
Streets PWD - Infrastructure & Design	Capital Projects Design Director Deputy Director of Engineering Senior ADA Program Manager	- Any exterior improvements touching the sidewalk or street - To determine bike parking needs	- Concept Design Phase - Programming stage - End of Schematic Design - End of Design Development - PIC Application



Dearborn STEM Academy
Boston Public Schools
Photo courtesy of: Peter Vanderwarker
Architect: Jonathan Levi Architects

Massing

1. **Main Entry:** Entries should be easily identifiable through location, scale, transparency, signage, and canopies. Access to the main entrance must be direct and ADA accessible. Entrances should be covered by either an awning or an overhang designed as an integral part of the building facade. Ramps and elevated entries are not preferred in new construction except where required for resiliency.
2. **Street Frontage:** Create visual interest and a human scale on street-level facades. Design strategies may include: modulated projections and recesses, varied color and material palettes, increased facade transparency, and the introduction of vegetation. Avoid uninterrupted street frontages longer than 150 feet.
3. **Neighborhood Context:** If a proposed building is larger or bulkier than typical buildings in the area, its massing should complement its neighbors. Consider setbacks, step-backs, similar modules, and projections.
4. **Building Projections:** Avoid building over the public right-of-way. Projections over the sidewalk should be limited to bays, canopies, or situations where program spaces exceed the available site area. Large projections and cantilevers that overhang the first floor should be limited, take height-to-depth ratios and sun angles into

account, and, in general, be composed as special building features that relate to building elements found in the area. Any projections over the public right-of-way, including sidewalks, must go to the Public Improvements Commission (PIC) for air rights approval.



Landscape

1. **Public Realm:** Projects should improve the public realm by providing active public and semi-public spaces. Encouraged features include ample sidewalks or plazas and enhanced landscaping, green infrastructure, furnishings, lighting, and artwork. Site furnishings include bike racks, trash cans, and benches.

- Include rest areas. Seating should typically be provided near the building entry.

2. **Historic Districts:** Projects located within historic districts must take into account any related design requirements.

3. **Utilities:** The overall site design should integrate exterior transformer, switchgear, generator, and other visible utility infrastructure. Similarly, utility covers should be considered in the landscape design.

4. **Site Design:** All open spaces and their programming should accommodate users of all ages and abilities when

planning for site accessibility, circulation and furnishings. It should also integrate signage and wayfinding as an integral part of exterior design.

- Solar studies should be performed to confirm that enough shade is being provided by the building design and tree canopy.
- Design open spaces with clear and safe physical access from surrounding streets and sidewalks. Maintain visual access and security from public ways.
- All open spaces should include vegetation and tree canopy that provides comfort (such as shade and windbreaks), visual interest, stormwater management, and biodiversity in all seasons.
- Open space should be buffered from high-traffic roadways.
- Skate guards should be included on horizontal exterior elements, such as benches or other horizontal elements that skateboarders might use to prevent damage to corners and edges. Skate Guards should be designed to be integral



City Hall Plaza
Photo courtesy of: Sasaki
Architect: Sasaki

to the material (i.e. slots/rabbetts in stone) and not mechanically attached items, which are more likely to be damaged or detached. Skate guards should be designed to avoid hostile design, for example, not preventing bench users from lying down.

- All site curbs should be granite. Rolled asphalt curbs are not permitted, and concrete curbs are discouraged, though may be appropriate further from salted areas. Reuse of existing granite curbing, where possible, is strongly encouraged.

- Sports fields should be grass to the greatest extent possible. Projects proposing artificial turf may require coordination with/approval from the Mayor's office. Mitigations must be proposed for the impacts, such as heat islands, and maintenance planning must be included.

5. **Pavement in Pedestrian Zones:** Small-sized, loose-lay pavement (permeable or otherwise) must be avoided at public entrances and in primary entry pathways to ensure accessibility, ease of maintenance, and avoid creating trip hazards. Smooth, stable, and firm materials, such as poured concrete, poured-in-place porous paving materials, or large-scale paving units set on a concrete sub-base, are preferred.

6. **On-site Trees:**

- Existing trees, especially mature trees, should be retained wherever possible. For information on tree removal, refer to the City's [Public Tree Protection Ordinance](#). Consult with the City's Tree Warden if trees must be removed or when seeking to preserve mature trees.

- On-site trees shall have a **2" minimum and 4" maximum caliper, to maximize establishment success**. Caliper is the diameter of the primary

tree trunk in inches, typically measured at **4.5 feet above the ground**.

- When planning to plant larger, mature trees, consider the steps necessary to replace and replant new trees, such as the use of cranes, street closures, surface replacement (concrete, pavers, sidewalk, etc.), and subsurface systems (sand-based structural soils, aeration, soil cells, etc.).

7. **Street trees:** Plant as many street trees as comfortably fit around the site, taking into account the necessary space between trees, curb cuts, and utility and lighting poles. Refer to the most current versions of Boston Complete Streets, the City of Boston Guidelines for the Issuance of a Curb Cut Permit, and the MBTA Bus Stop Planning & Design Guide. Space trees as appropriate based on tree species to create a connected canopy at maturity, where possible.

- New street trees shall have a **2.5" minimum and 4" maximum caliper**

- Tree pits should be included in all newly created sidewalks and must meet or exceed the minimum dimensions recommended by City standards. **Best practice is for each street tree to have 2 cubic feet of soil per every 1 square foot of expected mature tree canopy and 3 feet of soil depth.** The ideal condition is a stormwater tree trench connecting the street trees. Stormwater tree trenches should be surfaced with, in order of preference: native vegetation, poured-in-place paving material (e.g., resin-bound stone or rubber paving), organic or stone mulch, or permeable pavers. In areas where pedestrian mobility is required between trees, a poured-in-place porous material is preferred for accessibility.

- To maximize tree survival rates, consider systems that expand space for root growth. Options include

suspended pavement systems, soil cells, or sand-based structural soil, in order of preference.

- Refer to [Boston Complete Streets](#) and Boston Parks and Recreation for recommended tree species and locations in relation to sidewalk width. Where sufficient sidewalk width does not exist, and the site allows, sidewalks should be widened onto the property by setting buildings back to accommodate trees, green infrastructure, and other Complete Streets requirements.

8. Stormwater Management: Wherever site conditions allow, employ vegetated green infrastructure to manage stormwater, allowing it to infiltrate, recharge groundwater, and be treated by soils and vegetation. This includes constructed wetlands, bioretention areas, bioswales, vegetated swales, stormwater planters, rain gardens, stormwater tree pits/trenches, and green roofs.

- Soil levels should be recessed at least 1" below the surrounding grade and any planters should include breaks, allowing stormwater to enter the planted area.
- Designs should prioritize removing paving that is not required for accessibility or specific program uses to minimize stormwater runoff and urban heat island effect.
- Where project designers provide documentation demonstrating that vegetated green infrastructure is not feasible, employ stormwater management strategies such as porous pavement, cisterns, or rain barrels, which provide some co-benefits.
- Where project designers provide documentation demonstrating that the above retention strategies are insufficient, employ subsurface

infiltration areas or dry wells to manage stormwater.

- Include passive water infiltration and retention opportunities where possible.
- For green infrastructure standards and resources, refer to the OGI's [Green Infrastructure Right-of-Way Details & Specifications](#) and [Right-of-Way Green Infrastructure Policy Guidelines](#).

9. Plant Selection: Follow landscape planting strategies to minimize rodent habitats.

- Prioritize deciduous shrubs and broadleaf evergreens over needled evergreens, and plant varieties that allow an unobstructed view of the ground such as those that grow in a vase-shape or upright fashion.
- Space shrubbery to avoid creating dense, contiguous stands.
- Keep shrubbery at least 3 feet from walls and prevent limbs from touching walls.
- Select plant varieties that produce minimal fruit or seed. Consider species such as 'Shademaster' honeylocust, 'Spring Snow' crabapple, 'Snowball' cranberrybush, etc.

10. Ground Treatment: Follow methods to help limit rodent habitats

- Break up ground cover distribution with crushed stone, and use crushed stone extending 10" from walls and 6" deep, using stone diameters between 6mm and 19mm. In plant-free soil areas, spread a 6" deep stone layer to limit rat infestation.
- Utilize bark or stone mulch in areas without sod, with landscape fabric underneath.
- Use a 3-4" deep layer of crushed stone beneath shrubbery to deter burrowing but ensure the depth does not cause oxygen stress to roots.
- Grade landscapes to prevent water

ponding, particularly near faucets, sprinkler systems, fountains, and runoff areas. Where surface water pooling is difficult to avoid, use crushed stone.

- Use permeable materials like polypropylene landscape fabric or perforated polyethylene underneath the crushed stone for drainage.
- Consider the use of rodent-resistant exclusion landscape fabrics in especially active rodent areas.
- Where crushed stone is used, provide metal edging to contain the crushed stone and prevent lawn equipment from moving it.

11. Planter Bed Design: Install hardware cloth beneath the soil surface to deter burrowing, while allowing ground cover to grow through. Shrubs may be accommodated by cutting X's into the hardware cloth at root ball insertion locations.

12. Outdoor Refuse Containers: A key to controlling rodent populations is to limit their access to food supply. When integrating trash containers into a landscape, consider the following:

- Trash cans should have smooth exterior surfaces with a hole on the top. There should be no lower openings other than small drain holes, which should be flashed with sheet metal or screened with hardware cloth.
- Trash cans should be a minimum 2'-6" high.
- Containers should be secured to prevent tipping.
- Trash cans should not be placed within 3' of trees with low branches, benches, or any surfaces that rodents can climb to gain access to trash.

13. Fences: Select fence designs that are not climbable for rodents, such as those with radiused top profiles.



Connectivity (Sidewalks, Bikes, Parking)

1. **Streets:** All street designs should utilize the [Right-of-Way Green Infrastructure Policy Guidelines](#) to enhance the health and wellness of the environment, manage stormwater, and reduce the urban heat island effect.

- Where projects touch existing, unsafe intersections, work with the Streets Cabinet to resolve these through design improvements while also improving the project's amenities. Methods can include curb extensions, raised crosswalks, tightening corner radii, or other geometric improvements.

- **The standard width for vehicle travel lanes on all new streets is 10' wide. If bus routes are present on the street, the preferred width is 11' wide.**

- On-street parking is not permitted within 20' of any intersection; thus, where on-street parking is present, curb extensions are encouraged to enforce no-parking zones near intersections and improve visibility between all travelers. Projects should confirm with the Streets Cabinet that no bus or bike facilities are planned for a street before installing new curb extensions, as these could reduce future design flexibility.

2. **Sidewalks and Curb Ramps:** All sidewalks should be in conformance with the Boston Complete Streets Guidelines and should meet the Boston Transportation Department and Public Works Department standards and specifications, including the GI Right-of-Way Policy and the Disabilities Commission/OGI memo, "[Poured in Place Porous Paving Materials within the Sidewalk](#)".

- Any project that includes

modifications to an intersection must ensure that curb ramps are ADA compliant.

- Sidewalks and entry plazas should be designed to accommodate the expected peak pedestrian volumes.

- Along existing streets, meeting the required dimensions for sidewalks, separated bike lanes, green infrastructure, landscape, and furniture zones, and vehicle travel lanes discussed below may require setbacks and pedestrian easements on City property.

- Sidewalk design (including materials, furnishings, slopes, and ramps) should follow all City of Boston accessibility guidelines, including requirements set by 521 CMR and the proposed Public Rights-of-Way Accessibility Guidelines (PROWAG). Depending on street typology, this includes a **minimum of a 5' clear zone with no vertical obstructions with an accessible surface (typically standard concrete) and 8' curb ramp with cast-iron tactile warning pads.** All curb ramps on new streets must be directional (not "apex"). Design the accessible path of travel to be direct. Relocate existing obstructions to avoid creating circuitous paths.

- All street furniture must be located outside of the **5' minimum (8' preferred) clear width.** Utilities and street furniture should be aligned within the furnishing zone.

- Protect existing, historic stone sidewalk panels and corner stone pieces, while ensuring accessibility. If that is not possible, work with BLC staff to relocate them to an appropriate location on-site.

Boston Arts Academy
Boston Public Schools
Photo courtesy of: Robert Benson Photography
Architect: Perkins Eastman



3. **Curb Cuts:** Driveway curb cuts should comply with Boston Public Works Department standards and may require approval by the Boston Public Improvement Commission. Driveway and curb cut widths should be minimized to prioritize pedestrian accessibility and safety.

- Unless it is not physically possible, driveway curb cuts should be located at service streets or alleys.
- Curb cuts for lower-traffic parking lots (50 and under spaces) should be 10-12' wide, and higher-traffic lots (50+ spaces) should be 20-24' wide. The accessible path of travel must continue at sidewalk grade across the driveway.
- High-use driveway curb cuts should not be located within 100' of the nearest intersection.
- Motor-courts (off-street parking turn-arounds and drop-off areas) should not be allowed unless the use demands it. Where they occur, vehicular overlap with pedestrian paths must be carefully designed for safety,

using raised crossings, clear markings, etc.

4. **Multimodal Transit Coordination:** In concept design, plan arrival and departure strategies for each mode of travel. Include pedestrians, cyclists, buses (school, MBTA, shuttles), and vehicles. Consider where to properly locate rideshare drop-off and pick-up. Rideshare pick up/drop off locations must be coordinated with BTDC New Mobility and the Office of the Parking Clerk.

- Streets should be multi-modal, designed to support transit and non-motorized vehicles, and not dominated by cars.

5. **Bus Stops:** Where projects touch existing bus or shuttle stops, consider updating these facilities, which may require working with the shelter owner to update them. All bus and shuttle stops should be designed to be safe, comfortable, and dignified. All bus stops should include basic amenities, including a shelter, bench, lighting, and trash and recycling receptacles. Also, heating lamps for the winter season and green roofs for heat and stormwater

mitigation should be considered. All bus stop dimensions must comply with the MBTA Bus Stop Design Guidelines.

6. **Bike Lanes:** All projects should consider updating sidewalks and streets they touch to include bike facilities that support biking by people of all ages and abilities. Consult with Streets Cabinet staff to determine if bike lanes are needed and, if so, if there are any unique design needs. All separated bike lanes, shared use paths, and traffic calming elements should comply with Boston Transportation Department, Boston Public Works Department, and Boston Disability Commission standards.

- A typical dimension of **7.5' clear** should be maintained for separated bike lanes to allow for routine maintenance and snow clearance, while the preferred width for a **bi-directional bike lane is 10 feet**. Consult with Streets Cabinet where these widths are not possible.

- Where ADA parking spaces are adjacent to bike lanes, consider the accessible route. All separated bike lanes must have a detectable edge separating them from the sidewalk and meet accessibility design requirements at crossings.

- Wider buffers are preferred to support vegetation and green infrastructure within the street buffer.

7. **Bike parking:** New projects must comply with the City of Boston's [Bike Parking Guidelines](#). This includes space for public bike share stations, short-term bike parking for visitors, long-term bike parking for staff, an interior bike room, and exterior post-and-ring bike racks.

- Long-term bike parking facilities should be secure and include power for charging e-bikes, changing space, and, often, showers for employees who commute via bike.

- The bike parking guidelines are

less specific regarding municipal project requirements than private developments, but the goals are the same. PFD projects seeking clarity regarding the number of bike parking spaces and supporting program spaces should meet with Streets Cabinet staff to help define project needs. Where square footage as a basis of bike parking spaces is in question, employee and occupancy counts should be used.

8. **Off-Street Vehicle Parking:** Minimize vehicular parking, especially surface parking lots. Car share spaces should be encouraged. Work with the Streets Cabinet to identify and accommodate bus stops, bike-share parking, bike lanes, and accessible parking prior to accommodating personal vehicles. If there is programmatically required parking on a project, it should be integrated into the overall design early on and utilize techniques that lessen its impact, including the following:

- Employ vegetated green infrastructure and porous pavement to manage stormwater runoff and reduce thermal water pollution within the parking lot. Grade the surface to drain to landscaped areas.

- Utilize tree canopies in surface parking lots to provide shade over the majority of the lot, **aiming for 1 tree per 4 parking spaces**. Trees should be located in islands and medians within the parking lot as well as at the edges.

- In areas where vehicles may travel or park, ensure the assembly is rated for the heaviest anticipated vehicle. If an area is not vehicularly rated, it should be designed so that vehicles cannot park there: bollards, walls, plantings, etc. Otherwise, emergency vehicles, event vehicles, delivery vehicles, etc., may drive over areas that are not vehicularly rated, causing damaged surfaces, uneven settling, and tripping hazards. Curbs are not sufficient to

prevent this.

- Consider incorporating PV arrays and solar canopies over any lot as an alternative for providing shade and as a means to achieve NZE/E+ projects.
- Coordinate with the Disabilities Commission where on-street accessible parking spaces are needed. Coordinate with the Streets Cabinet on necessary signage.
- Where sites slope and it is possible to have a ground floor exposed on one side of the site while submerged on the other, consider using this lowest level for parking to avoid surface parking where it would otherwise be required.
- Screen above-ground and surface parking with landscape or facade treatments that use materials, colors, patterns, and scales to improve visual interest and complement the surrounding urban context.
- Use high albedo materials for paved areas to reduce the urban heat island effect.
- Tandem parking is not allowed except where programmatically required.

- Do not use parking curb stops (i.e., precast concrete bars connected to the pavement with rebar) in parking lots, as they inhibit or are damaged by plowing. Continuous curbing with raised walking surfaces is preferred.

- EV Charging: All projects will comply with the City of Boston's EV Readiness Policy, currently requiring 25% of parking spaces be equipped with EV Charging Stations, and the remaining parking being EV ready. For more information see the City of Boston's [EV Readiness Policy](#).

- Any project that will impact on-street parking, including any change to a metered space, elimination of on-street parking, proposed new on-street parking, or proposed changes to existing curbside regulations must be coordinated and reviewed by the Streets Cabinet via the BTM New Mobility Team and Office of the Parking Clerk.

9. Loading and delivery: Loading and delivery areas must also be considered to minimize the impact on the ROW. Where possible, these areas should be placed off service drives and alleys, screened and buffered from public areas, and designed efficiently to minimize impermeable areas and reduce conflicts with pedestrian crossings.



Roxbury Branch Library
Boston Public Library
Photo courtesy of: Anton Grassl
Architect: Utile



Jamaica Plain Branch Library
Boston Public Library
Photos courtesy of: Anton Grassl
Architect: Utile

EXISTING BUILDINGS + PRESERVATION

1. **Adaptive Reuse:** Adaptive reuse should be prioritized where existing buildings are historically significant, have positive aesthetic character, or are important to the community. Where renovation is possible even on non-significant buildings, adaptive reuse should be studied; a reused building is also a sustainable one.
 - For more information about best practices for adaptive reuse, refer to the [Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preservation, Rehabilitation, Restoration & Reconstruction of Historic Buildings](#).
2. **Neighborhood Context:** Respect the scale, massing, and street presence of historic buildings. Building additions and alterations should be designed to complement and foreground historic elements and be reversible. Additions should work with historic elements rather than demolishing and replacing them. Consider how the historical elements can be preserved and enhanced.
 - Additions should not conceal or alter historically significant building elements.
 - Additions should avoid changes to street-facing elevations and should minimize new openings in historic
- facades in order to retain as much of the historic material as possible.
3. **Historic Character:** Use high-quality materials compatible with the building's historic character. If demolition of any portion of the historic building's interior or exterior is necessary, historic materials and architectural elements should be salvaged and reused as much as possible.
 - For any buildings that are landmarked or in landmark districts, refer to the landmarks study report for additional standards and criteria.
 - If the existing structure is historically significant, delineate between the old and new through changes in plane, material, color, and/or height. When the addition is an extension of the existing, consider how it could be considered a modern-day 'interpretation' of the historic building techniques and materials rather than a replication. Where an addition is distinct in the program from the existing, such as a new accessible entry pavilion, utilizing distinct and contemporary architectural treatments may be appropriate.
 - Historic brick and mortar patterns are difficult to replicate or align with using modern building materials. Approach additions clad in brick

carefully, or choose an alternate, complementary material, such as terracotta.

- In historical contexts, only structural (true) muntins that are integral to the sash are appropriate. Exterior snap-in muntins should not be used. Simulated divided lites (muntins inserted between the panes of glass) can be considered on a case-by-case basis but are discouraged. Muntins must replicate the original muntin dimension and profile or have a raised trapezoidal profile and include an anodized spacer bar between the panes of glass. Their configuration should replicate the original pattern, which varies by architectural style/period. Historic muntins and single-pane windows may not meet energy code requirements, in which case interior storm windows may also be required.
- Ensure that the historic building is accessible to all users by incorporating design features such as ramps, elevators, and accessible restrooms. Accessibility features should be integrated into the overall design as much as possible and should complement the historic character of the original building.

- Any MAAB variances should be coordinated with the Disabilities Commission.

4. Sustainability and Resilience:

Incorporate sustainable design features that enhance the historic building's performance. For example, outdated and inefficient HVAC, plumbing, and electrical systems may be retrofitted or replaced with new components that help conserve energy and water, improve building safety, and enhance indoor environmental quality. Visible fixtures and other mechanical components should be high-quality, complement the existing historic architecture, and be thoughtfully integrated into the overall building design.

- Within the Coastal Flood Resilience Overlay District, refer to the [Coastal Flood Resilience Design Guidelines](#) for guidance on retrofitting existing buildings. Balance accessibility and civic treatments with elevated floor planes and points of access. If deployables are a resilience strategy, consider that sidewalks must remain passable.





Roslindate Branch Library
Boston Public Library
Photos courtesy of: Jane Messinger
Architect: Leers Weinzapfel Associates



Roslindate Branch Library
Boston Public Library
Photos courtesy of: Jane Messinger
Architect: Leers Weinzapfel Associates



Bruce C. Bolling Municipal Building
Boston Schools Department
Photo courtesy of: Sasaki
Architect: Sasaki

BUILDING EXTERIORS

1. **Building Material:** Consider the vernacular and character of architecture unique to the neighborhood, keeping in mind that municipal buildings may have a character distinct from other uses, e.g., residential.

- Stone, brick, terracotta, and metal panels are the preferred low-maintenance, durable exterior cladding materials. When evaluating heavier systems, consider cost increases for structural upsizing.
- Avoid dark, monolithic colors or materials, especially at entries.
- Several material and color options and palettes are to be provided during the early design phases.
- Natural wood or composite wood should not be used as building exterior cladding material except as soffits. To achieve the warmth sought by using real or composite wood, more durable materials, treatments, or factory-painted finishes should be used.
- Stucco or direct-applied finish systems (DFS/EIFS) should not be used as exterior building cladding except for soffits.
- CMU should not be used as an exterior finish material except in alleyways or hidden facades. When used, groundface or polished finishes are preferred. Anti-graffiti coatings are not recommended as they are

high-cost, high-maintenance, and low-durability.

- Building exterior colors should not be overtly themed to specific User Groups, e.g., blue for police or red for fire.

2. **Roofing Systems:** Roofing systems should be designed and installed to meet FM Global Standards, where applicable. If designers are unfamiliar with these requirements, they should hire an expert.

- In order of preference, the roofing systems are 4-ply SBS BUR, 60 mil single-ply TPO, and 80 mil single-ply PVC. EPDM roofing may only be used in temporary or patching conditions. In historic contexts and where appropriate, slate or terracotta roofing is preferred over synthetic slate, concrete, or asphalt shingles. Metal roofing systems are allowable where appropriate. Aluminum is preferred over galvanized steel.

- The FM Global standards for roofing generally include:

- » Meet required design wind speed per ASCE 7, ground roughness coefficient (B, C, etc.), and use of a 1.15 “building importance factor”; design of entire roof assembly per FM Data Sheet 1-28
- » Meet uplift and fastening requirements for different roof areas (e.g., perimeter, field,

corner, and penthouse)

- » Meet requirements for FM RoofNav numbers (FM approved roof assemblies)
- » Meet requirements for FM Approved perimeter flashing systems per FM Data Sheet 1-49
- » Meet requirements for securing roof-mounted equipment per ASCE 7-16
- » Meet requirements for uplift testing or a full-time roof observer per FM Data Sheet 1-52 (Uplift testing is recommended in lieu of a full-time construction observer.)
- » Meet requirement that the contractor submit FM form 2688 for each roof area

- Always include a generous layout of protective walk pads to and around all primary rooftop equipment. Provide walk pad specifications, details, and locations on roof plans.

- Green roofs should be considered if the roof is accessible for routine maintenance.

- Roofs should have SRI values of **75 or higher**.

- Pitch pocket details for roof penetrations should not be used.

3. Ground Level Considerations: Material finish bands at grade (plinth/base) should be of the most durable material possible. Granite or a similar non-porous stone should be used from grade up to **12"-18" minimum** to protect the base from salt and chemical exposure, as well as vehicle and machine impact. Precast, brick or CMU are susceptible to spalling and other forms of damage.

4. Fenestration: Controlling strong summer sun needs to be balanced against admitting low winter light. Too

much shade or too few openings leads to dark spaces; overglazing leads to glare or added costs to control sun/heat gain. Sun path diagrams should be part of the initial design phase to understand the site and how to use passive cooling and heating to optimize building efficiency and sustainability.

- Ground-floor street facades are encouraged to be at least 50% transparent. When programming the ground floor of projects, incorporate high-visibility public programs along the street to achieve this goal.

5. Sealant-Dependent Exteriors:

Avoid designing exteriors that are heavily sealant-dependent. Sealant locations must be easily accessible after construction for repairs and/or replacement. The Massachusetts Energy Code also prohibits non-accessible sealant joints.

6. Overhangs: Consider snow and ice accumulation to ensure that neither fall over pedestrian paths. Overhangs should also deter birds and pests from occupying the building.





East Boston Police Station
Boston Police Department
Photo courtesy of: Robert Benson Photography
Architect: Leers Weinzapfel Associates

BUILDING INTERIORS

1. **Ceiling:** Interior wood ceilings or wall paneling should be limited according to budget or need. Success is often found by emphasizing special, higher end materials in strategic locations.
2. **Walls:**
 - **Wall Protection:** Provide a coordinated wall and corner protection approach to all back-of-house areas, typically not seen by the public. Wall and corner protection in public areas should be carefully considered at heavy circulation paths.
 - **Wall Base:** Always have a wall base between 4 and 6 inches in height. Exposed gypsum partitions terminating at floor level are unacceptable, and flush-set wall protection may not provide adequate wall protection.
 - **Drywall Reveals:** Drywall reveals, either as decorative elements or as a separation of a wall base from a wall plane, should be avoided. They are rarely executed properly and never look as good as the crisp double lines shown on a drawing.
 - **Painted CMU** should not be used as an interior finish except in back-of-house locations (kitchens, loading, mechanical areas, locker rooms). Glazed CMU can be used where durability is paramount. Any CMU used where there is frequent access (e.g., locker rooms) should have bullnose corners.
3. **Full height and monolithic glass conditions:** Any glazing, whether floor to ceiling or with an opaque base condition of less than 12" A.F.F. must have some form of glass safety markers running the length of the glass assembly. It may be in the form of a continuous or interrupted film or frit, or as a custom pattern designed by the designer. These markers should be taken into account during the early design process.
4. **Sealant-Dependent Interiors:** Avoid designing interiors that are heavily sealant-dependent. Any sealant locations must be easily accessible post-construction for repairs and/or replacement. For example, do not return drywall at window openings to cover the sealant bead at the window perimeter.
5. **Window Sills:** Wood sills are preferred to drywall sills, which should never be used due to their ease of damage; however, solid surface or stone sills should be used when budgets allow as they are the highest quality. PFD may make exceptions in more industrial applications such as warehouses, storage facilities, and back-of-house spaces where there is little to no access by the general public.
6. **Color:** In general, color palettes should remain neutral and the use of bold colors should be limited. When accent colors are used they should be incorporated into elements that are not permanent and may be easily

replaced such as paint or upholstery. Black on interiors should be reserved for dramatic spaces (galleries, Auditorium, etc.) or where needed for specific reasons (blackbox, black-out bunk rooms).

7. Furniture and Millwork: Consider incorporating integrated seating in building lobbies/entries.

- Avoid complex millwork designs that require collaboration between multiple trades, such as benches with built-in ductwork.

8. Countertops & Backsplashes:

- Color: Avoid using polished, very dark colors, such as charcoal gray and black, except for standard science lab tables and science counters.
- Accessibility: Countertops should be accessible to users in wheelchairs.
- Material: Plastic laminate should not be used in wet areas, such as countertops or base cabinets adjacent to sinks.

9. Flooring: Avoid flooring materials that need to be polished or buffed as part of a regular maintenance regimen, such as VCT. VCT is not preferred due to lack of sustainability.

- Floor finish transition strips must be mechanically fastened. Adhered transition strips are not desired and will not hold up under general use.
- Using colored flooring as a wayfinding device is discouraged. Flooring for paths of travel should be non-reflective and have colors that contrast with walls and doors. Consider subtle patterns for floors, as patterns using strongly contrasting colors can cause perceptual problems.
- Polished Concrete Floors in public-facing areas are acceptable, preferably on the ground level, and it should be a decision made early on in the design due to the care and protection

it needs during construction. Some considerations when using polished concrete are:

- » The cost, as it is not a cheaper option than other finishes;
 - » Off-site samples are required (4'x4' minimum, with 20'x20' better), especially when using colored stains, sealers, or hardeners;
 - » It must be protected during construction from damage, scraping, or staining, as all imperfections will show in the final product;
 - » The location of joints for crack control must be designed, especially around columns
 - » The expectation setting of the User Group is needed to explain that cracking of the concrete over time is normal and should be considered part of the material's character;
 - » During design, decide with the User Group whether saw-cut joints and cracks should be filled or left as they are.
- Carpet tile, especially washable types, is preferred over rolled carpets. For BPS projects, refer to the BPS standards for acceptable carpet locations.
 - Sheet or linoleum tiles are acceptable, depending on location. Where sheet linoleum is used, the seams should be welded. Sheet goods are commonly used in hallways or where a monolithic appearance is required; tile is appropriate where color or variation is to be introduced, and the added maintenance of additional seams can be tolerated.
 - Tile or seamless epoxy flooring is acceptable in toilet rooms, depending on User Groups preferences. Smaller, 2x2 tiles should be used where slip resistance is required in tiled areas.



10. Restrooms: New buildings should include single-user, gender-neutral restrooms labeled clearly as such. [Link to preferred graphic here.](#)

- In most conditions, toilet partitions should be floor-mounted and overhead-braced. Where hung partitions are desired, misc. metal steel supports within the ceiling cavity must be accounted for. Pilasters should be a minimum $\frac{3}{4}$ " thick. Partition doors on accessible bathroom stalls should be self-closing.
- Where Multi-User/Gender Neutral Toilet Rooms are contemplated, refer to [248 CMR 10](#) for all requirements, including partitions that extend from floor to ceiling. These multi-user gender-neutral toilet rooms should be clearly labeled as such.
- For conversions of existing gender specific toilet rooms to Multi-User/Gender Neutral Toilet Rooms, existing partitions that are not floor to ceiling may remain so long as they have functional locking mechanisms.

11. Municipal Offices:

- Open office areas should have low (42" h + 12" h glass partition) workstations that are 6' x 8'. Provide a mobile pedestal file, tackable/acoustic wall surface, and additional below-counter storage. There should be two usable work surfaces, and one of them should be a sit-to-stand table.
- Typical private offices are approximately 120 sq. ft. and have a desk, 2 guest chairs, and a small 2-seat table, but no conference tables. Monitors should back up to a wall rather than towards the entry/guest seating for a more functional and welcoming design.
- An executive office is approximately 250 sq. ft., has a small conference table (4-6 ppl.), wall-mounted monitor, storage furniture, wardrobe, and would also be part of a suite that includes a larger conference room. Depending on the User Group, some may include conjoined toilets with showers.

- Coordinate project audiovisual requirements and furniture layout with DoIT, User Groups, and vendors. Where feasible, incorporate wall niches to reduce wall protrusions and maintain a streamlined appearance. Install access panels to ensure easy accessibility for future maintenance. Where appropriate, integrate audiovisual controls with lighting controls to enhance functionality. Focus on designs that promote efficient and concealed cable management to support both aesthetic and practical needs.

- A range of different sized and multi-use conference rooms (6-20 ppl.), break-out/Huddle rooms (4-8 ppl.), and phone rooms or phone booths (1-2 ppl.) should be dispersed throughout the building, floor or “neighborhood”, depending on the scale of the floorplates, to facilitate meetings, collaboration, and private conversations. “Neighborhoods” should include (3) offices, (18) desks, (1) huddle, (1) phone room, and at least (1) collaboration space. Huddle rooms and conference rooms should have monitors and audio-visual infrastructure for remote or hybrid meetings. Conference rooms and huddles should be shared and bookable via an online reservation system. “Resource Rooms” should be provided where programmatically required to allow project-based work to occur. These are equipped with additional storage and would not be cross-department shared to allow in-progress work to remain until complete. Provide a movable screen/whiteboard for informal meetings and work sessions. Typical conference rooms would be furnished with either fixed and powered conference tables or mobile flip tables that can be rearranged into meeting, lecture, or classroom designs. Provide storage benches along a wall or under windows when space permits

for extra storage and seating capacity. Coordinate with the User Group on operational procedures.

- Open workstations should be arranged along the perimeter of the building to allow natural light into the rest of the building and into the private offices, which should be located closer to the core and outfitted with screened glass panels that bring in daylighting while also providing privacy.

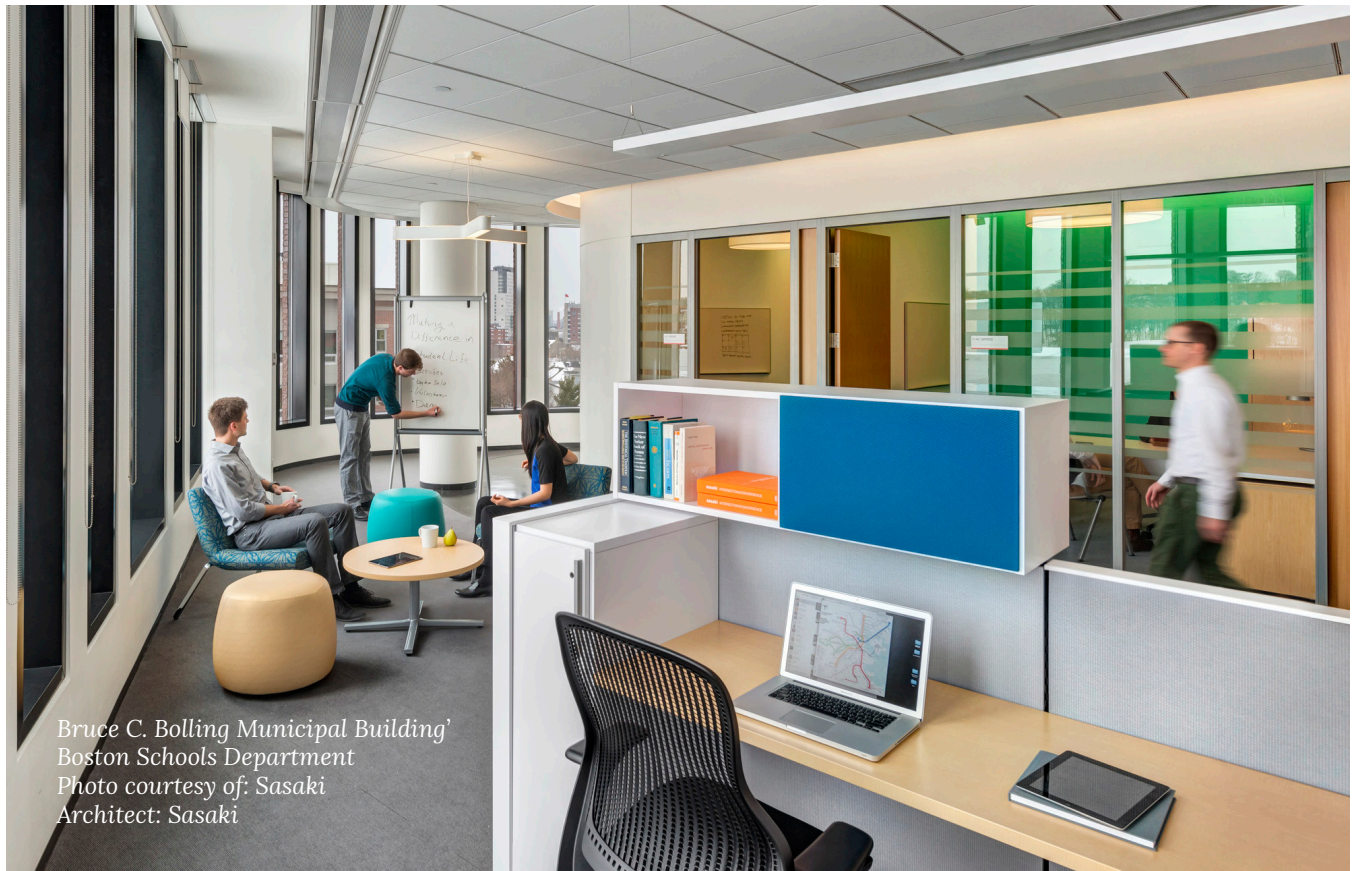
- Consider soft surfaces and fabric areas in offices to help with sound absorption in open offices.

- Sit-to-stand desks should be offered throughout, as well as adjustable dual monitor arms.

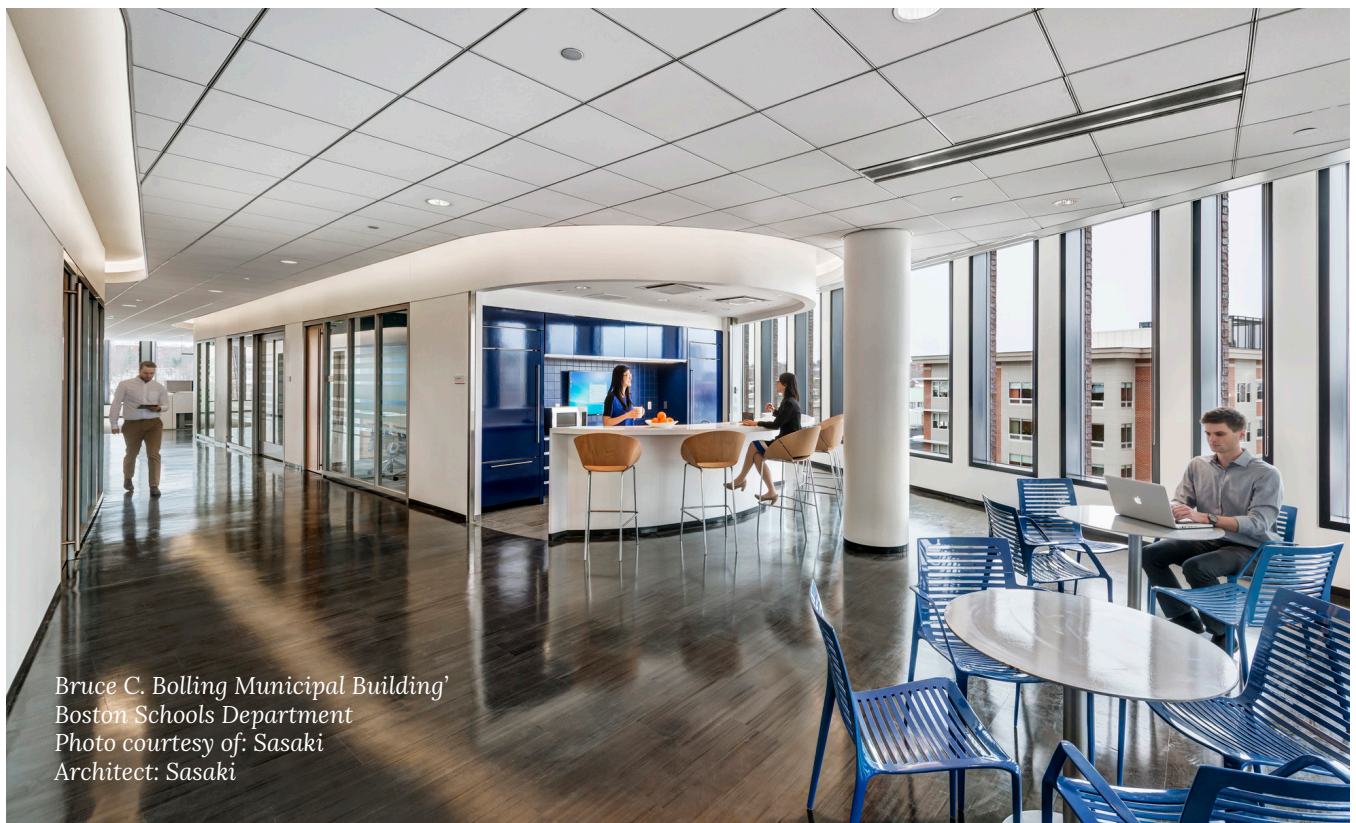
- At least one kitchen with seating should be provided. Depending on the building’s configuration, additional kitchens or kitchenettes may be required for 60 or more staff members.

- In new construction, Lactation Rooms equipped with an under-counter fridge and sink should be provided for 1:100 female occupants, minimum, or more depending on the configuration of the building or make up of the staff served. The room should also have good lighting (natural light preferred), comfortable seating, and a small table or a working surface, a locking door, and provide a sense of privacy. During renovations or reuse projects, a sufficiently sized space to meet accessibility requirements should be identified and reserved for such purposes. See AIA guidelines [here](#).

- Other amenities to consider in a new construction project include a gym or wellness center, meditation/prayer room, cafeteria or space for a food vendor, sensory rooms, and breakroom/game room.



Bruce C. Bolling Municipal Building'
Boston Schools Department
Photo courtesy of: Sasaki
Architect: Sasaki



Bruce C. Bolling Municipal Building'
Boston Schools Department
Photo courtesy of: Sasaki
Architect: Sasaki



Jamaica Plain Branch Library
Boston Public Library
Photo courtesy of: Anton Grassl
Architect: Utile

Curtainwalls

1. **Curtainwall vs Storefront:** Where financially feasible, curtainwall is preferred over storefront and metal windows because of the high-quality construction, finishes, and increased water and air tightness. The window system, not the shape of the window (e.g., “punched opening”), determines whether something must be filed sub-bid as “Metal Windows”.
2. **Shadow Boxes:** Non-vision areas of curtainwalls are preferred to be shadow box style (e.g., Dearborn, BAA, JQUS) rather than spandrel glass. Shadow boxes provide more depth, overall continuity, and possible color coordination to the appearance of the window, rather than spandrel, which is shallow and limited in color options. In general, shadow boxes should be painted a warm gray or similar color which most matches with the glass. It is not preferred to be white to match potentially white window shades. Shadow boxes must be appropriately ventilated to avoid condensation.
3. **Water and Air Barriers:** Silicone sheet flashings tied into the window pocket and surrounding AVB are preferred.

Windows

1. **Security:** Bullet-resistant glazing is recommended for transaction windows in schools, fire, and police projects. The wall surrounding the window must offer a similar level of security.
 - Attack glass or school guard glass is recommended for sensitive ground-floor areas of school buildings. For more information, refer to school design guidelines and the latest security requirements.
 - When required, rock guards (durable window screens) should be located on the ground floor and on windows accessible from low roofs. They should have color-matched frames and be as open/transparent as possible while maintaining security. In no project should rock guards be over an entire building’s windows. As an alternative to rock guards, laminated glass should be considered for increased transparency, a similar level of security, and less of a “prison” look.
2. **Window Replacement:** In window replacement projects, the color of the window sash and muntins must be carefully considered. Bone white or other very light colors are almost always inappropriate. Warmer colors, especially on the City’s red brick buildings, are generally more

compatible, such as “sea wolf” or “champagne”. Color samples should be reviewed in-person against individual buildings. Using window colors similar to the mortar can be appropriate, as can Mica and metallic paints. Custom colors should be considered so that colors across systems/manufacturers (windows, sheet metal, storefront, louvers) can be specified to match, and in historic projects to match existing. Black should be limited to where it would have occurred historically, such as on pre-20th Century designs. Avoid reducing the existing daylight openings. Removing all frame and trim materials may be required.

3. **Sill Pan:** Watertight, welded sill pans are preferred over sheet membranes alone; however, due to the need to measure each opening before fabrication, they may not be appropriate for “summer slammers” or other projects with short turn-around times.
4. **Operable Window:** Utilize operable windows where allowable by programmatic use and exterior air quality as a way to give occupants some level of thermal comfort control and passive ventilation.

Window Treatments

1. **Shade Opacity:** Provide **3% openness manual roller shades on all exterior windows (5% can be provided on north facing windows)**. Shade color is preferred to be off-white or gray, or double sided such that ease of viewing out is maintained while limiting heat gain and glare. Black or charcoal shade cloth is not preferred except in blackout conditions.

- In light sensitive spaces (black box, auditorium, bunk rooms), provide dual roller blackout shades (0%) on tracks.

- Provide 1-3% openness roller shades on interior sidelights for security.

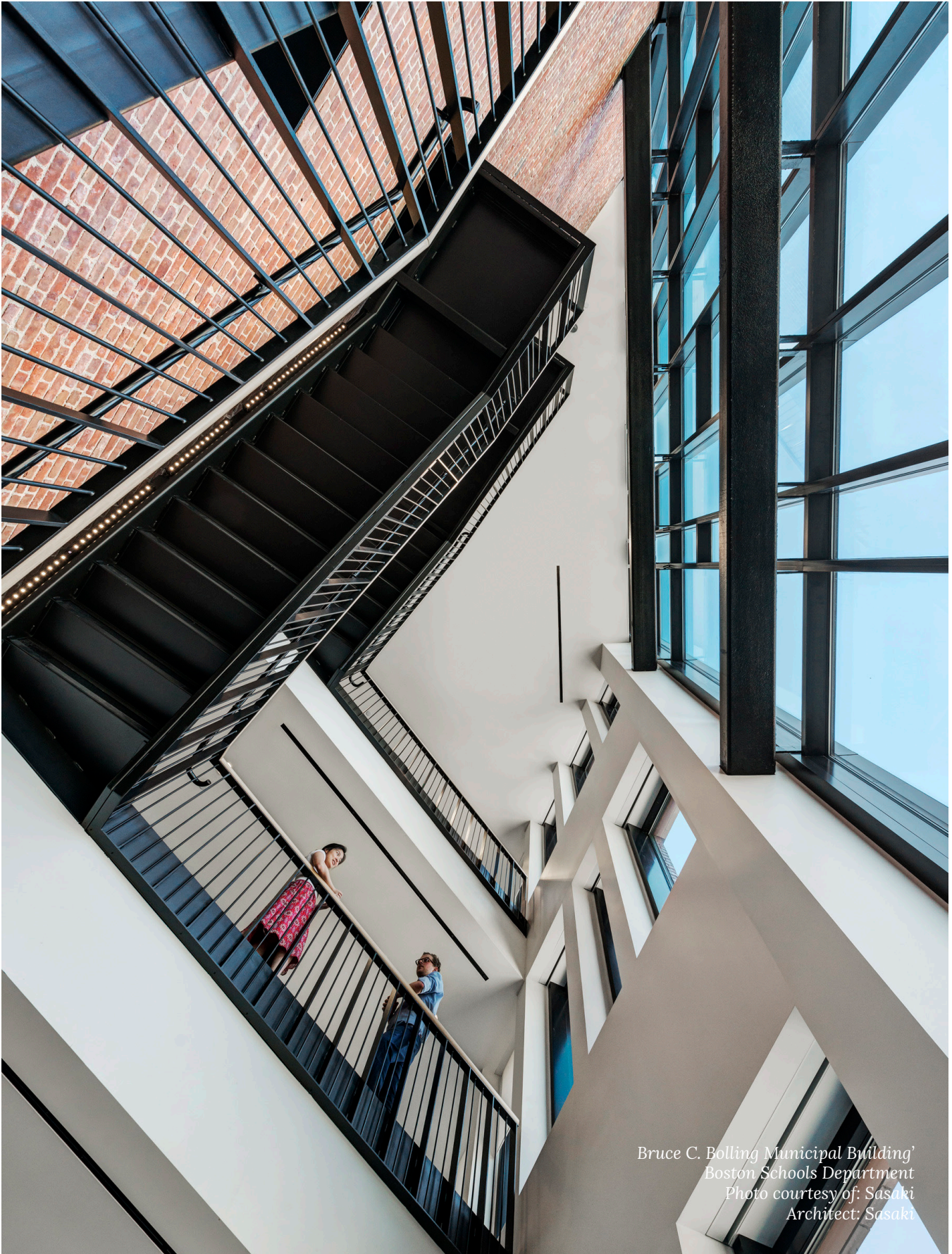
2. **Shade Location:** Limit the use of motorized shades, but on windows in double height spaces and where desired for uniformity, motorized shades may be appropriate. Program them so they retract daily.

Doors

1. **Interior Public Areas:** Clear-finish, solid wood doors are preferred (in conjunction with 18”-30” sidelights), including in public stairwells, with appropriate glazing, fire ratings, pest-proofing, and wall-mounted hold-opens.
2. **Retrofits:** Where sidelights are not provided, especially in schools, consider half or fully-glazed wood doors into classrooms, meeting rooms, and offices.
3. **Back-of-house:** Painted hollow metal doors should be reserved for back-of-house areas. Grouted frames are not recommended except as required in detention areas.
4. **New Building Entries:** Entry doors are generally fully glazed, aluminum storefront or curtain wall. They can be of exterior-appropriate wood if they are under cover, creating a warm and welcoming entry. Even when not required by code, consider the inclusion of push-buttons and automatic exterior entry doors. Automatic horizontal sliding doors can offer additional reliability and universal access.



East Boston Police Station
Boston Police Department
Photo courtesy of: Robert Benson Photography
Architect: Leers Weinzapfel Associates
Unus Mundus, Suspended glass mobiles and glass
wall mosaics, Monika Bravo, 2022



Bruce C. Bolling Municipal Building
Boston Schools Department
Photo courtesy of: Sasaki
Architect: Sasaki

VERTICAL CIRCULATION

Ramps

1. **Ramp Preferred:** Ramps and sloped walkway designs should be explored prior to opting for a design with a wheelchair lift.
 - Where first floors are elevated, as occurs in flood zones, provide ramps from the sidewalk to the lobby. Only providing elevators and stairs is not preferred.
2. **Path of Travel:** When used as the accessible path of travel where stairs are also available, ramps should begin and end at the same location as the stairs.
3. **Ramp Material:** Ramps should have a slip-resistant surface or integrated grit strips. Adhesive grit strips should not be used.

Elevators

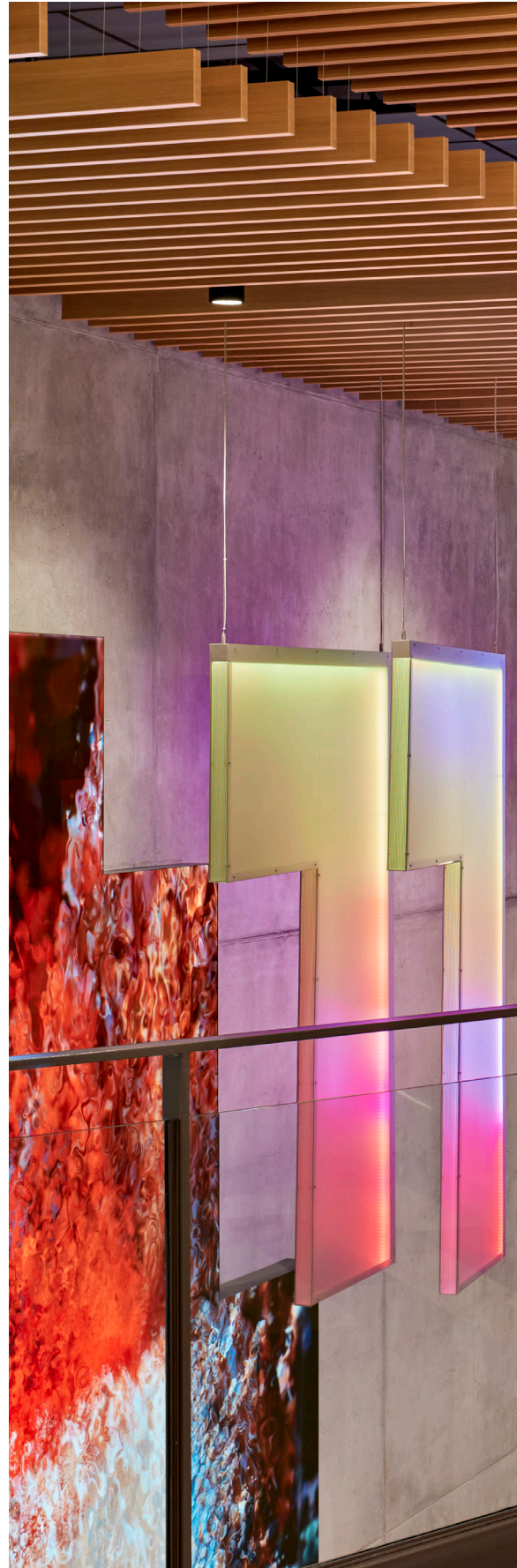
1. **Cab Design:** Cabs should be designed and drawn as part of the design phases of a project, including plans, RCPs, and elevations. Cab designs should not be solely a spec item. Durable interior finishes (e.g., stainless, not PLAM), recessed perimeter uplighting, and concealed ventilation are preferred.
2. **Universal Access:** Even when not

required by code, budget for and include elevators in all multi-story buildings in order to provide universal access to all floors and services. Public safety buildings and able-bodied employees are not an exemption to providing elevators.

- In new construction or in elevator replacement projects, elevators should provide audio wayfinding announcements of the floors for people who are blind or have low vision.
 - Where feasible, redundant elevators should be provided.
 - LULA (Limited Use, Limited Occupancy) elevators are preferred over wheelchair lifts.
 - Inclined lifts are not allowable in new construction. If there is an existing inclined lift, it should be replaced with a better form of vertical access (elevator, LULA, etc.).
3. **Performance:** Elevator speeds should be 150 feet per minute or greater where possible.
 - Elevators should have regenerative braking systems.

Stairs + Guards

- 1. Materials:** Unpainted materials, such as stainless steel or factory-finished wood, are preferred for handrails and other touch surfaces. Where reflective markers are needed on handrails, consider alternatives to adhesive products.
 - Forum stairs are a popular design element for creating communal circulation spaces and are welcome on many projects; however, they must use durable materials and details, distinguish between walking and sitting surfaces, and include access for physically disabled persons, including those in wheelchairs. To the greatest extent possible, include ramp and/or elevator access to the top and mid-levels. Maximize inclusion for people of all ages and abilities.
 - Include contrasting stair nosings with integral grip at the front edge of stairs.
- 2. Exterior stairs:** Exterior stairs should utilize a durable material that coordinates with a building's base, such as granite or bluestone. Concrete is not durable enough and should be avoided.
- 3. Guardrails:** Where guards exist at multi-story spaces or atria, guard heights should consider the building's population. 54 to 60 inches has been appropriate for some school projects; sometimes even higher guardrails are appropriate depending on the potential fall height.
 - Any vertical changes in level (steps) should include handrails.
- 4. Handrails:** Any vertical change in level (steps) should include handrails.





Boston Arts Academy
Boston Public Schools
Photo courtesy of: Robert Benson Photography
Architect: Perkins Eastman
Memory/Diffusion, New media installation,
Masary Studios, 2022



East Boston Senior Center
Photo courtesy of: Horner Visual
Architect: Fennick McCredie Architects

MECHANICALS + UTILITIES

1. Rooftop Mechanical Equipment:

Mechanical elements of buildings, including rooftop and facade elements, should be visually integrated into the design of the building. Visible penthouses and screening elements should use materials, finishes, colors, and other architectural elements that match or complement the rest of the building.

- To the greatest extent possible, rooftop mechanical elements should be consolidated, low-height, and set back from the edges of the building.
- Mechanical equipment should be screened from view. Use parapet walls or architectural screening elements.
- Consider on a project-by-project basis the merit of including the installation of a roof-mounted davit/hoist to avoid costly rigging operations and the need to shut down surrounding streets when replacing rooftop equipment.
- Rooftop mechanicals should be organized and allow for the incorporation of photovoltaics where possible.

2. Location:

When selecting mechanical equipment, prioritize low-noise and high-efficiency options. Locate equipment in areas that are away from sensitive uses, such as residential units or outdoor amenities. Utilize acoustic barriers, silencers, attenuators, etc., to limit and control noise and vibration that

may impact building users or neighbors.

- Ground-level mechanical areas and trash collection areas should be visually screened with fencing, landscaping, and/or green infrastructure.
- Mechanical and utility systems for projects located within the Coastal Flood Resilience Overlay District should be protected from flood risk and raised above the design flood elevation.
- HVAC, sprinklers, pipes, and conduits must be coordinated and laid out in an organized and visually pleasing way wherever they are visible (e.g.; exposed ceiling designs). Ductwork may be oval duct; cable trays are preferred over j-hooks; everything should be painted to coordinate with the interior design.
- The necessity of lightning protection should be evaluated on a project-by-project basis. Prioritize it for building types where it is best practice due to height or in specific needed locations. When used, copper is preferred to aluminum.

3. Stair and Elevator Pressurization:

When designing high rise buildings, the project team shall utilize elevator lobbies to meet the code requirements for stair and elevator pressurization. Alternative design approaches shall be carefully reviewed by both PFD and the relevant user group to ensure that they can meet minimum code requirements.



East Boston Senior Center
Photo courtesy of: Horner Visual
Architect: Fennick McCredie Architects

FINISH ELEMENTS

Lighting

1. **Access and Maintenance:** Difficult to access lights should be avoided. If they cannot be avoided, lifts, and a place to store the lifts, should be provided as part of the project.

- Lighted handrails, benches, or feature furnishings should be used sparingly in prominent projects and omitted entirely from typical projects, as they tend to break when not maintained.
- Utilize as few fixture types as possible to lessen the burden on attic stock and facility maintenance. Prioritize domestic products to minimize downtime due to replacement or restocking.

2. **Exterior Lighting:**

- All exterior lighting should either be surface mounted to the face of the building or be easily accessed for repair and replacement without needing to replace conduit and wiring below grade or under a planter or other similar element.
- In-ground lighting should be avoided because it tends to take on water or be ruined by salting or snow plows. Downlighting is better for a dark sky and avoids maintenance issues.

- Flags should be illuminated with building lights or top-mounted pole lights. Coordinate specifications such that lights are provided and are compatible.

3. **Security:** Consider the location of floodlights when added to a public-facing facade. Floodlights should look like an integral part of the facade design and not an afterthought. Avoid their placement where they may be a nuisance to residential neighbors. In general, use dark sky compliant fixtures and avoid light trespass.

- Lighting design for parking lots and underground parking should be well considered for security.

4. **Lighting Control:** Interior lighting should be controlled automatically with occupancy or vacancy sensors, as appropriate for the project. In most instances other than occupancy or security, lighting should be off or modulated to available daylight.

- Review requirements for dimming on a program and project by project basis. Avoid complex controls where “scenes” meet most requirements; individual controls are often less preferred.

Exterior Signage

1. **Visibility:** Consider how signage appears on key view corridors. The building's name or purpose should be immediately apparent and recognizable on approach and from different angles. Signs should be legible from a distance, proportional to the building. Present multiple options through eye-level renderings.

- Signs should not obstruct cornice lines, windows, or architectural features, and no support for a sign shall extend above the cornice line of a building to which it is attached.
- Wayfinding signage must be coordinated on projects with multiple buildings, e.g., in "campus" or "complex" arrangements.

2. **Encouraged sign types include:**

- Wall signs: These should attach parallel to a building and project no more than fifteen inches from the building face, and the top of the sign should be no higher than whichever is lowest:
 - » Twenty-five feet above grade;
 - » The top of the sills of the second story windows;
 - » The lowest point of the roof surface or, in the case of a one-story building, the top of any horizontal parapet.
- Window signs: should not exceed thirty percent of the window area.
- Blade signs: should have no more than two faces and should not project more than six feet (plus fastening) from the building, and the bottom of the sign should be at least ten feet from grade.
- A sign painted on or attached to an awning, canopy, or marquee.

3. **Discouraged sign types include:** Free standing signs, billboards, back-lit box signs, waterfall awnings, and electronic signs.

- Electronic Signs:

- » Electronic signs are rarely appropriate and may only be considered in certain contextual entertainment districts (ex. the Theater District).
- » Electronic signs should adhere to the other guidance in the 'Encouraged Sign Types' section applying to non-lighted signs.
- » Luminance at night may not exceed 500 cd/m², and
- » Illuminated signs shall not face residential buildings or districts.
- » Animation and motion of images and messages may not move too fast or be distracting, compromising public safety.
- » The design of electronic signs and their content and messages should be innovative and not resemble a conventional static billboard.

4. **Design and Fabrication:**

- Follow the [City of Boston branding guidelines](#) for color, typography, and graphics.
- Signs should have no exposed guy wires or turnbuckles.
- Signs shall be lighted only by continuous light, except for warning signs.
- Signs shall remain stationary.

5. **Parking Garages:** There shall not be signs in Parking Lots or on Parking

Garages, except:

- One sign per parking lot/garage entrance, which shall bear a blue rectangle with a white letter “P” in sans serif gothic typeface.
- For parking garages, at each vehicular entrance there may also be one optional sign directly above, and the exact full width of, that entrance.
- Signs should only be located where necessary to navigate the parking area and only include the directional information needed.



Interior Signage

Note: These comments may be superseded by the specific requirements of a User Group:

1. **Wayfinding:** Signage and wayfinding should be an integral part of interior design.

- Color can be useful in wayfinding strategies, especially on signage. However, the wayfinding colors should not become overly thematic in the project (becoming floors, wall, door colors, etc.).
- Consider that if digital displays are used for wayfinding, there should be another, non-digital, non-electric wayfinding strategy in case they are not working.
- All signs to meet ADA/MAAB accessibility requirements, including providing braille and use of the International Sign of Accessibility (ISA).

2. **Design and Fabrication:**

- All signs to be durably fixed with structural double-sided tape or tamper-resistant fasteners.
- All signs to have integral lettering that cannot be picked off.
- All exposed sides of a three-dimensional sign must be well-finished.
- All signs should be of high quality, durable, and lasting materials.
- For flexibility, slots or sleeves for replaceable information are recommended, e.g., if a room occupant or use may change.
- The ISA should be included on all accessible toilet rooms, even if they are all accessible.

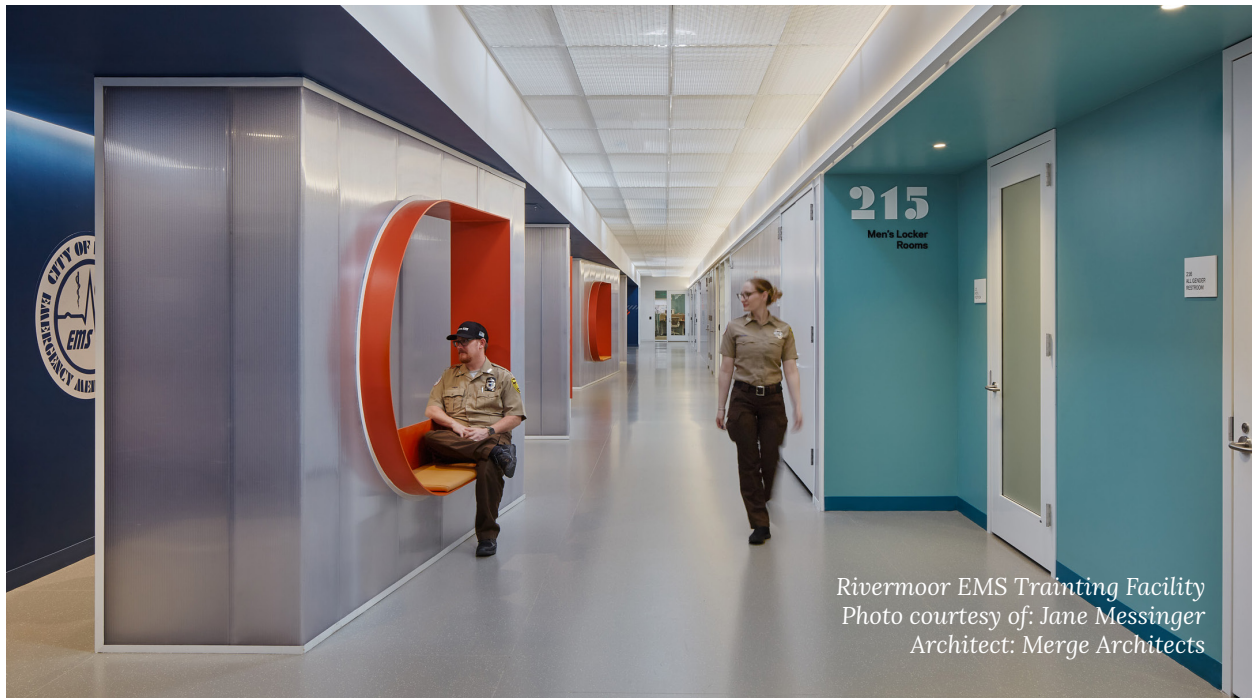
- Signs on glass shall have a color-coordinated back panel adhered to the opposite side.

- All new or major renovation projects should accommodate a 18x18 or 24x24 dedication plaque within the vestibule or near the building entry. This plaque should be bronze unless otherwise requested by the User Group or is in coordination with the building's design. PFD can provide standard information.

- Hung signs with internal lighting or backlit must have no exposed guy wires or turnbuckles.

3. **Graphics and Naming:**

- Follow the [City of Boston branding guidelines](#) for color, typography, and graphics.
- The “toilet” symbol is preferred when designing gender-neutral bathrooms. Reach out to the Mayor's Office of LGBTQ+ Advancement for any questions regarding the signage.
- “Lactation Room” is the preferred signage title for lactation/nursing rooms.
- Room numbers typically start with xx0 and proceed counterclockwise around the floor, with similar rooms having the same number on floors above. Numbers must be coordinated with the Fire Alarm panel and with User Group standards.
- Use icons and words for all signage in all public areas. Use common, recognizable symbols and graphics that are color contrasted against background, non-reflective, affixed at eye level to areas they represent. Refer to the [City of Boston's archive of icons](#) for examples.



Rivermoor EMS Training Facility
Photo courtesy of: Jane Messinger
Architect: Merge Architects

Furnishings, Fixtures, + Equipment (FF+E)

1. **User Group Standards:** BPS and BPL have their own furniture standards. Check with the User Group early in the project to see what additional FF&E standards they may have.
 - Some User Groups, such as BFD, BPD, and EMS, need specialty chairs, providing more back support due to bodily wear and tear, and extended work hours.
2. **Furniture Layout:** Furniture layout must be part of the Schematic Design phase in order to understand the space and how it will be used. This will help start the conversation about the type of furniture needed in each space.
 - Furnishings for many spaces should be considered with flexibility and multifunction in mind. Large, bulky, difficult to move furniture can limit options for the User Group in the future as program or space use changes.
3. **Flame Certificates:** Flame certificates are needed for fabric and plastics (California Bureau of Home Furnishings, Technical Bulletin 117-2013, and Technical Bulletin 133) and for some woods.
 - Include convenience outlets on tables and near seating as appropriate.
 - Include both certificates;
 - Exception for very specialized furnishings where there are no options that meet the fire burn ratings;
 - Flame certificates are not required for non-upholstered equipment;
 - Difficult to get flame certificates for orange and red plastics;
 - Some wood requires flame certificates - in the GC's spec.
4. **Universal Design:** Promote equity and accessibility by following universal

design principles in furniture design and selection, which includes but is not limited to:

- Tables and counters at the standard height in order to provides access for people of all ages and abilities;
- High top tables may be used as an additional feature but should not be the primary seating option
- Built-in tables that are wheelchair accessible and have knee-space clearance.
- Seating options that include armrests and backrests.
- Avoid glossy materials on work surfaces to minimize glare

5. Durability and Maintenance: Select products that are durable and easy to clean, considering the populations expected to use the space. There should be minimal maintenance needed, beyond standard practice.

- Seat fabrics to be commercial grade, non-woven, easily cleanable, materials that achieve 50-100,000 double rubs.
- Wood or other non-fabric arms are preferred.
- Low-back furniture is preferred to avoid hair staining
- Couches and ottomans are not preferred.
- Avoid movable furniture that goes all the way to the floor on all sides, such as ottomans or chairs with a solid base instead of legs, as it is difficult to clean under.
- All exterior furniture should be weatherproof and durable.

6. Color:

- Consider light levels when selecting FFE colors. I.e. avoid dark/muted colors in dark spaces

- Avoid light colored upholstery for seating

- Select colors cohesively, which coordinate with the interior design, and avoid more than 4 colors

7. Delivery:

- Consider the delivery schedule and which items must arrive first. For example, assembly products must be purchased and delivered first (theaters/cafeteria, classrooms) so Boston Fire can grant a Certificate of Occupancy.
- Consider the path of delivery to ensure doorway width and elevators are sized to allow passage of larger items.

8. Specifications:

- User Groups, Project managers, and PFD design review should assess the FF&E specifications to make sure they meet the User Groups' needs.

- Cut sheets must have:

- » Description
- » Finishes
- » Dimensions
- » Manufacturer
- » Warranty
- » Identify if it passes the 133 or 117 burn tests

ix. Quantity + Locations

- Includes delivery dates and times of delivery - determined working back from when the space is expected to be delivered (need two weeks after delivery before occupancy).

- Special requirements, such as delivery phasing, must go into the Special Conditions spec.

Public Art

1. If there is an interest in having public art on site (including what might be considered “graphic design”), the PFD PM must coordinate with MOAC liaison as early as possible in the design process. The art design and procurement must be fully coordinated with the overall construction project, be included in the construction documents and schedule, and be completed by project opening, otherwise delays and additional costs may be incurred.
 - For this process to run simultaneously and cohesively, the PFD PM must request the final artist contract from MOAC with the proposed schedule, installation date, and requirements such as lighting, conduit, AV, misc. metals, and other infrastructure that may be required and expected to be paid out of the Project’s Budget. Use of lifts, access to sites, union and non-union sub-contractors sharing space, etc. should be coordinated as early as possible to avoid cost or schedule challenges.
2. Where custom graphics, artistic elements, or other works of art are suggested by designers, community stakeholders, or User Groups, the Project should defer to the Mayor’s Office of Arts and Culture (MOAC). MOAC manages the review and care of all artworks on City property and the City’s % for Art program, which issues calls for artists and manages the creation, installation, and acquisition of art in municipal buildings and sites ([MOAC art policies and procedures](#)).
 - The Mayor’s Office of Arts and Culture (MOAC) strives to enrich the urban landscape and public buildings with unique cultural expressions. It commissions and approves innovative and transformative artworks that engage our community and enhance the diversity of the existing collection.
3. Should a delay to the overall project schedule and budget arise in this process, PFD and MOAC must swiftly meet to resolve how to proceed in order to maintain the project schedule.





Dearborn STEM Academy
Boston Public Schools
Photo courtesy of: Peter Vanderwarker
Architect: Jonathan Leni Architects

SUSTAINABILITY + RESILIENCE

1. Sustainability Goals: Refer to the requirements of various City ordinances, regulations, executive orders, and initiatives, such as [BERDO](#), [LEED Silver](#), [Zero Net Carbon](#), [Fossil Fuel Free](#), and utility incentive processes, as a means to establish project-by-project sustainability goals. Projects should target zero carbon or positive energy performance. New buildings should be designed as low-energy structures with an enhanced envelope and efficient systems that may include on-site renewable energy. Refer to related executive orders on sustainability, and coordinate sustainability goals with the User Group.

- Sustainability strategies shall incorporate energy conservation measures that decrease energy cost burdens and promote health and wellness strategies for residents. Such measures include; all electric buildings, geothermal, photovoltaics, energy recovery/heat exchange, battery energy storage, and grid interactive technologies.

- New projects should look for creative ways to preserve any existing structures as a means to retain embodied carbon. The construction of new buildings depletes limited natural resources, contributes to pollution, and uses excessive amounts of energy.

- All roofs are to be solar-ready, with space and pathways planned for inverters and other relevant systems. Work with the Environment Department to incorporate solar panels on new or replaced roofs through their PPA process. Exemptions may apply on a case-by-case basis. For example, for small sloped roof buildings such as the Boston Public Gardens tool shed, or historic sloped roof buildings.

2. Heat Resilience: Refer to [Heat Resilient Solutions](#) for Boston. Resiliency efforts should pursue opportunities to reduce heat exposure and heat retention in and around buildings. Strategies should include the use of higher albedo building and paving materials and increased shade areas through landscaping, expanded tree canopy, fabric canopies, and green roofs.

- Utilize cool roofs or green roofs to help reduce urban heat. Cool roofs employ materials on the roof with high solar reflectance (often using white or other light colors) to reflect heat thereby reducing roof temperatures. Green roofs are encouraged, contingent on structural capacity, maintenance and irrigation requirements.

- Refer to the [Boston Urban Forest Plan](#) for recommendations on

priority zones for tree planting, species selection, and installation recommendations.

3. **Green Infrastructure:** Prioritize incorporating green infrastructure into each project. The City of Boston aims to distribute green infrastructure throughout the city. Refer to the Green Infrastructure Site Assessment and Prioritization (in progress) for key locations identified to receive green infrastructure, and to the [Right-of-Way Green Infrastructure Policy Guidelines](#). These include bioretention, bioswales, stormwater planters, rain gardens, vegetated swales, stormwater tree pits, and tree infiltration trenches. Focus especially within open space, parking lots, driveways, and the public right-of-way, such as sidewalks.

- For paved areas, use light-colored and/or porous surfaces such as resin-bound stone and permeable pavers where appropriate. Reduce/remove paving not required for accessibility or programmatic uses and maximize permeable surfaces throughout the site through the inclusion of green infrastructure, ground-level plantings, and other pervious surfaces.
- Permeable pavers should not be used within egress paths of travel, including those in courtyard or patio surfaces.
- Irrigate landscape elements with collected storm or greywater, where possible, to reduce strain on the municipal water supply as well as maintenance costs.
- Incorporate cisterns for roof water collection at roof downspouts where the User Group is able to commit to their ongoing maintenance.
- In areas subject to chronic urban rodent invasions, cave-shaped shrubs and plantings that extend to the

ground such as Yews and Boxwoods should be avoided or kept pruned up 12-16 inches. Plant varieties that are vase-shaped (e.g., beauty-bush, witch hazel, viburnum, etc.), are do not attract rodents. Similarly, caution is due when considering any carpet-style ground covers such as pachysandra, ground ivy, creeping liriope, sedge, etc., because these plantings are problematic towards providing ideal cover and harborage for city rodents.

4. **Coastal Flood Resilience:** Areas of Boston within the Coastal Flood Resilience Overlay District may be subject to future coastal flooding until key flood pathways are cut off. Refer to the [Coastal Flood Resilience Design Guidelines](#) for design guidance on all projects located within the overlay district. Where possible, architecturally integrated resilience strategies should be prioritized.
 - Should deployables in the public way be required, ensure the ADA accessibility is maintained for pedestrians in event of deployment.
5. **Exterior Lighting:** Utilize dark sky exterior lighting fixtures, as the alternative can adversely affect marine life, flora, and fauna, and human circadian rhythms.



CITY OF BOSTON

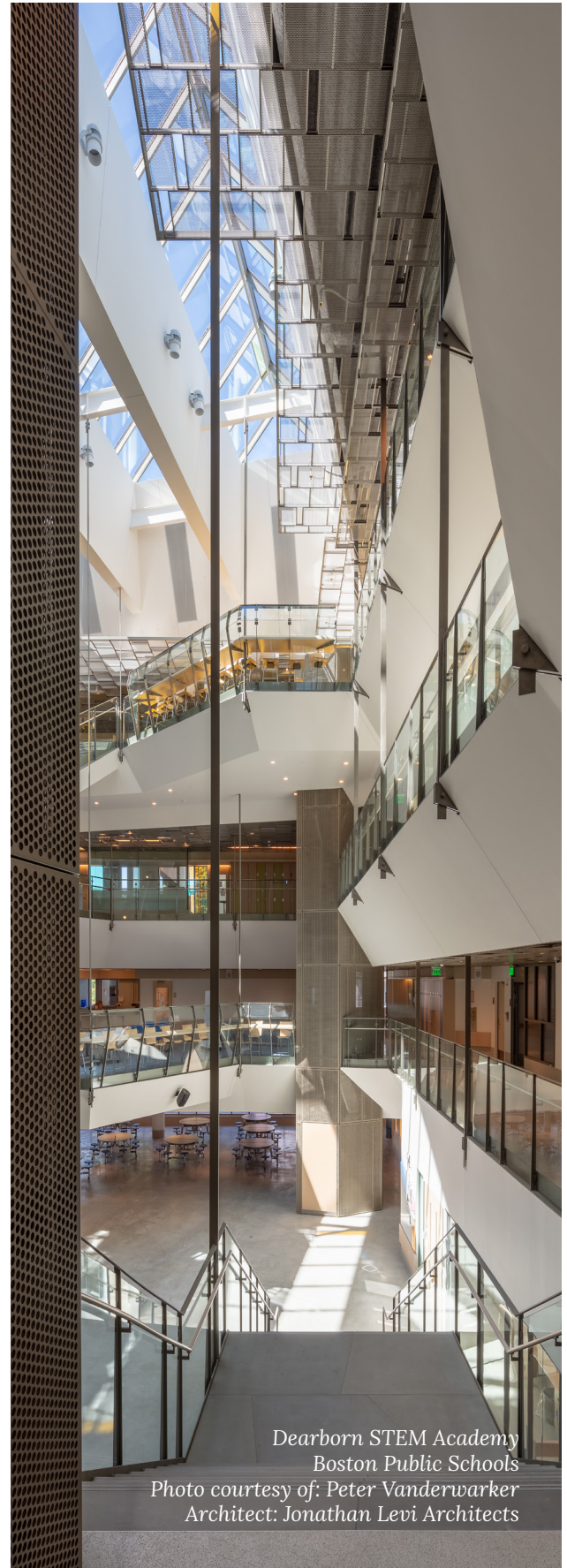
REFERENCES & STANDARDS

1. Cover Sheet and drawing templates located in eBuilder. Request from PFD project PM- 2024
 - [PFD MEP Filed Sub-bid spec template](#)
2. [Fossil Fuel Free Executive Order](#) - 2023
3. [Zero Net Carbon Executive Order](#) - 2019
4. [LEED Silver Executive Order](#) - 2007 (Minimum Standard)
5. [Boston Bike Parking Guidelines](#) - 2021
6. [Boston Complete Streets](#) - 2013
7. [ReThink City Hall](#) - 2017
8. [City Hall Conservation Management Plan](#) - 2021
9. [Boston Urban Forest Plan](#) - 2022
10. [Coastal Flood Resilience Design Guidelines](#) - 2019
11. [Boston Public Works Department Design Standards and Guidelines](#)
12. [Boston Public Works Department Climate Resilient Design Standards & Guidelines for Protection of Public Rights-of-Way](#) - 2018
13. [Heat Resilience Solutions for Boston](#) - 2022
14. [Boston's EV Readiness Policy](#) - 2020
15. [Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preservation, Rehabilitation, Restoration & Reconstruction of Historic Buildings](#)
16. Safe Routes to Schools Standards - In development
17. [Boston Conservation Commission's Wetlands Protection Ordinance](#)
18. [Green Infrastructure Right-of-Way Details & Specifications](#)
19. [Right-of-Way Green Infrastructure Policy Guidelines](#)
20. [Green Infrastructure Policy - Curb Extensions](#)
21. [Poured in Place Porous Paving Materials within the Sidewalk](#)
22. [Age Strong Commission Universal Design Guidelines](#)
23. [Building Emission Reduction and Disclosure Ordinance](#)

24. [Mobility Hubs Guide](#)
25. [TDM requirements](#)
26. [Tactical Public Realm guide](#)
27. Curb Use Guide and Action Plan - In development
28. [Traffic Engineering Design Guides and Standards](#)
29. [Street Safety Design Toolkit](#)
30. [PWD Standards](#)
31. [Pest Prevention by Design: Authoritative guidelines for designing pests out of structures](#)
32. [City of Boston Public Art Policy](#)

User Group Standards

1. [Boston Public Schools K-12 Standards](#) - 2024
2. [Boston Public Schools Preservation Plan and Survey](#) - 2020
3. [Boston Fire Department Standards](#) - 2019
4. [Boston Public Library](#) - 2024





City Hall Plaza
Photo courtesy of: Sasaki
Architect: Sasaki



Mayor Michelle Wu



**PUBLIC FACILITIES DEPARTMENT
DESIGN STANDARDS**