

**Performing Arts Center
The Village of Farmingdale**

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Architectural Design IV - Spring 2025 26197

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Project Narrative:

The Village of Farmingdale is developing a state-of-the-art Performing Arts Center at 141 Division Street, adjacent to the vibrant Main Street district. Designed as a Black Box Theater, this facility will serve as a cultural and community hub, providing a dynamic venue for drama, music, dance, multimedia productions, and even seasonal events like a winter farmers' market. The theater's adaptable staging and seating, which accommodates 130 to 180 patrons, ensures flexibility to support diverse performances while optimizing acoustics and sightlines for an immersive audience experience.

The selected building codes were compiled with a primary focus on health and safety, ensuring that this creative space remains secure and accessible for all. The design fully complies with the New York State Building Code, Fire Code, Plumbing Code, and ANSI A117.1-2017 standards, reinforcing inclusivity and safety. Key considerations include Assembly Group A-1 occupancy classification, fully sprinklered fire protection systems, and strategically planned egress routes featuring clear signage, sufficient lighting, and appropriate pathway widths to facilitate safe evacuation. Furthermore, ADA-compliant restrooms and drinking fountains will accommodate both guests and staff, emphasizing comfort and accessibility.

Beyond compliance, the project embraces sustainability and efficiency by integrating energy-conscious systems and environmentally responsible materials. The incorporation of green building strategies aligns with Farmingdale's vision for long-term economic and environmental sustainability.

While the site's mixed-use zoning offers promising potential for future commercial or residential expansion, certain constraints, such as limited on-site parking and proximity to residential areas, require thoughtful planning. The project capitalizes on opportunities to enhance pedestrian connections to Main Street and the Long Island Railroad station, strengthening the area's accessibility and walkability.

More than just a venue, this Performing Arts Center will be a catalyst for economic and social engagement, fostering artistic expression, community participation, and downtown revitalization. By merging cultural vibrancy with urban enhancement, this project promises to be a transformative asset—a place where creativity flourishes, businesses thrive, and the community comes together to celebrate the arts.

To bring this vision to life, we also created a scaled model and developed templates for technical sheets, ensuring a well-documented and precise design process. These resources help illustrate how the facility will meet code requirements while maintaining flexibility and innovation in its architectural approach.

With its strategic location, forward-thinking design, and commitment to community engagement, the Farmingdale Performing Arts Center is set to become a cornerstone of the village's cultural and economic landscape, enriching both residents and visitors for years to come.

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Instructor: Eric Anderson, AIA **PROJECT BRIEF**

The Village of Farmingdale plans to develop a Performing Arts Center on a site adjacent to the Main Street district to provide a flexible community space to host community-based drama, music and cultural performances.



The village has identified the site at 141 Division Street, which is adjacent to the east parking area serving the Main St. district between Conklin St. and Front St. Review of the adapted Village Master Plan will be required to develop a strategy for the design and construction of the center.



A performing arts center can significantly enhance the quality of a downtown environment in the following ways:

- Cultural Destination: A performing arts center can establish the downtown as a cultural hub, attracting visitors and tourists, which contributes to the area's identity and prestige.

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Instructor: Eric Anderson, AIA **PROJECT BRIEF**

- Educational Opportunities: Many centers offer workshops, classes, and outreach programs that engage youth and adults, enriching the community's educational landscape.
- Community Engagement: By offering diverse programming, such as plays, concerts, and community performances, the center can foster a sense of community pride and belonging.
- Creative Placemaking: Public art installations, murals, or outdoor performances associated with the center enhance the visual and cultural appeal of the downtown area.
- Enhanced Nightlife: Evening performances extend downtown activity beyond standard business hours, creating a lively, safe atmosphere at night.

By combining cultural vibrancy, economic stimulation, and urban enhancement, a performing arts center can be a transformative asset for a downtown area, elevating its quality of life and fostering long-term growth.

The project program and design response will be developed using a black box theater concept that provides a flexible lobby/arrival area, flexible staging and seating for 130-180 people with performance support spaces and building support spaces.

A Black Box Theater (or experimental theater) consists of a simple, somewhat unadorned performance space, usually a large square room with black walls and a flat floor. It is a relatively recent innovation in theater. The concept of a building designed for flexible staging techniques can be attributed to Swiss designer Adolphe Appia and instigated a half century of innovations in the relationship between audience and performers. Such spaces are easily built and maintained and are usually home to plays or other performances with very basic technical arrangements such as limited set construction. Common floor plans include thrust stage, modified thrust stage and theater in the round. Colleges and other theater training programs employ the black box theater because the space is versatile and easy to change. Many theater training programs will have both a large proscenium theater, as well as a black box theater. Not only does this allow two productions to be mounted simultaneously, but they can also have a large extravagant production in the main stage while having a small experimental show in the black box.

Anticipated functional elements of the center will include:

Box Office	Common Areas/Circulation Areas
Reception Area	Toilet facilities
Customer Service	Storage Area
Auditorium/Theater Proper (Flexible) for 130-180 people, flexible arrangement	General Storage
Stage Area, flexible arrangement	Loading Dock
Flex-Multi function with dressing room	Fire escape/stairs
Laundry/wardrobe	Admin Office
Green Room with Vending Area	Passenger Elevator
Pantry	Service Elevator
	Utility areas and support facilities

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Instructor: Eric Anderson, AIA PROJECT BRIEF

The architectural design and construction of the black box theater/performing arts center should create a versatile, functional, and inclusive space that serves as a dynamic hub for cultural and artistic expression in the Village of Farmingdale. This design will provide a state-of-the-art performing arts center that celebrates creativity, supports the arts, and enhances the cultural vibrancy of the community it serves through

- Aesthetic Integration: Create an inviting, modern design that reflects the cultural and artistic aspirations of the community while harmonizing with the surrounding urban or suburban environment.
- Community Engagement: Establish the facility as a cultural landmark that encourages community participation, education, and collaboration, fostering a sense of pride and belonging.
- Flexibility and Functionality: Design a highly adaptable black box theater space that accommodates various performance configurations, including theater, music, dance, and multimedia productions, while ensuring optimal acoustics and sightlines for an audience of 130-180 seats.
- Supportive Facilities and User-Centered Design;
 - o Incorporate a well-equipped green room, dressing rooms, and storage areas to support performers and technical crews efficiently.
 - o Provide a welcoming lobby with the capacity to serve light refreshments, enhancing the audience experience and fostering social engagement.
 - o Prioritize the comfort, safety, and convenience of both performers and patrons, ensuring intuitive navigation, appropriate lighting, and well-planned adjacencies between functional spaces.
 - o Ensure that all spaces, including the theater, lobby, sanitary facilities, and circulation paths, meet or exceed the requirements of the Building Code of New York State and ANSI A117.1 2017 for accessibility, promoting inclusivity for individuals of all abilities.
- Sustainability and Efficiency: Integrate energy-efficient systems and sustainable materials where feasible to reduce the environmental impact and operational costs of the facility.

The project will be developed in two phases:

Phase 1: Groups will be organized to research the building type and program, existing conditions/site/zoning, building code requirements, SWOT analysis, and project presentation standards. Research will be presented to project stakeholders in the Village of Farmingdale.

Phase 2: Students will develop an individual design response using drawings (approximately 15 ARCH D sheets, a preliminary project description narrative (PPD) and a conceptual design budget.

- There are periodic submissions for project parti, parti/site plan alignment, and stakeholder feedback.

- Each student will develop and update a weekly report on project development for review by the course instructor during this phase. A spreadsheet template with key project requirements has been prepared and posted to the 5 assignments that have been created to accept your report.

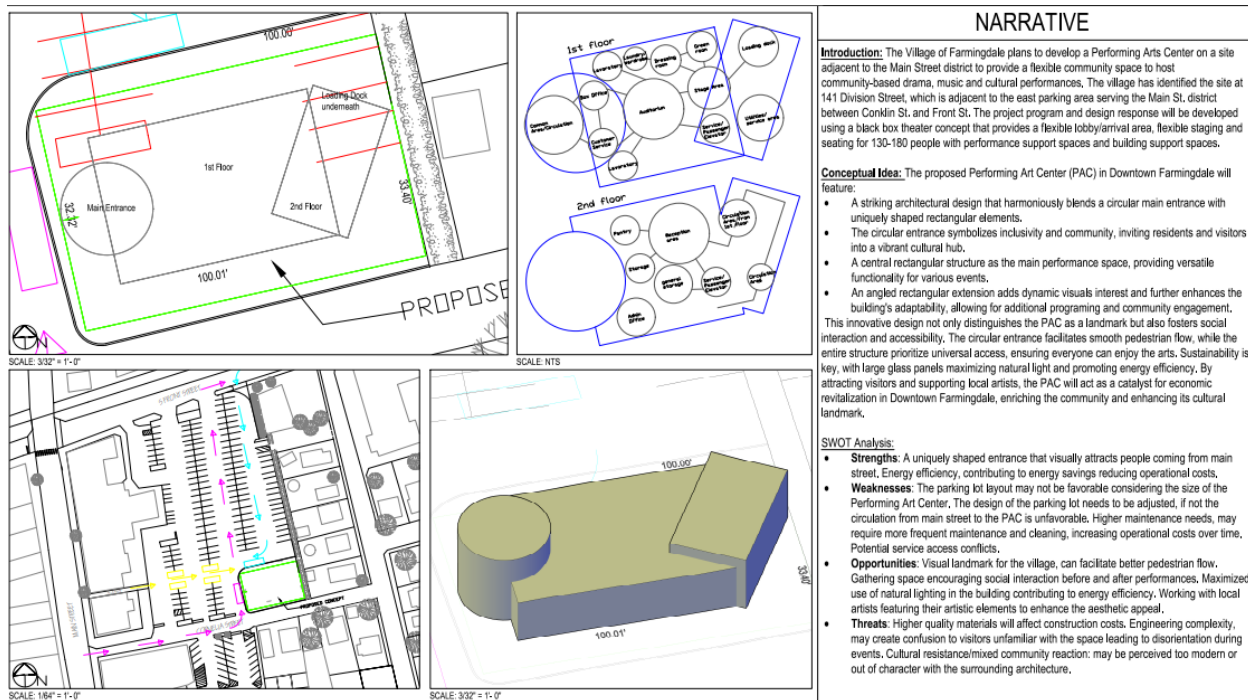
- A presentation to project stakeholders in the Village of Farmingdale will be scheduled during finals week.

Conceptual Idea:

The proposed Performing Art Center (PAC) in Downtown Farmingdale will feature:

- A striking architectural design that harmoniously blends a circular main entrance with uniquely shaped rectangular elements.
- The circular entrance symbolizes inclusivity and community, inviting residents and visitors into a vibrant cultural hub.
- A central rectangular structure as the main performance space, providing versatile functionality for various events.
- An angled rectangular extension adds dynamic visual interest and further enhances the building's adaptability, allowing for additional programming and community engagement.

This innovative design not only distinguishes the PAC as a landmark but also fosters social interaction and accessibility. The circular entrance facilitates smooth pedestrian flow, while the entire structure prioritizes universal access, ensuring everyone can enjoy the arts. Sustainability is key, with large glass panels maximizing natural light and promoting energy efficiency. By attracting visitors and supporting local artists, the PAC will act as a catalyst for economic revitalization in Downtown Farmingdale, enriching the community and enhancing its cultural landmark.



Site Context, Zoning Regulations and Existing Conditions:

Site Constraints

- The available size limits the ability to include on-site parking and green space, requiring reliance on municipal parking lots. Creative site planning will be needed to optimize the use of available space while ensuring accessibility and functionality.
- Adapting the theater for accessibility and pedestrian flow while maintaining zoning compliance presents design challenges. A balance must be struck between maximizing seating capacity and allowing for necessary back-of-house functions, such as storage and performer support areas.
- The adjacent properties may limit expansion options, requiring vertical construction or efficient spatial organization to accommodate all necessary program elements.

Zoning & Regulatory Hurdles

- **Downtown Mixed-Use (D-MU) Zoning Restrictions:** The site must comply with specific regulations related to height (max 36'), coverage (max 90%), and accessibility standards. Variances or special permits may be required for design elements that deviate from the zoning code.
- **Stormwater Management Requirements:** Compliance with village and county stormwater regulations must be incorporated into the site design. Strategies such as green roofs, permeable paving, and underground retention systems may be necessary.
- **Noise & Light Pollution Regulations:** Potential restrictions on sound levels and exterior lighting near residential properties could impact operational flexibility. An acoustical study may be required to ensure compliance with local ordinances.
- **Construction Disruptions:** Managing the impact of construction noise, dust, and road closures on local residents and businesses will require strategic phasing and mitigation planning.

Existing Conditions

- The current site consists primarily of hardscape (pavement, parking lots, and sidewalks), contributing to stormwater runoff and urban heat island effects.
- There is minimal existing green space, necessitating the inclusion of softscape elements to enhance sustainability and aesthetics. The lack of shade and permeable surfaces can negatively impact pedestrian comfort.
- Acre = 0.7
- GFA = 1466 SF
- *CURRENT LOT SIZE= 3,200 SF*
- *Section: 49, Block: 1, Lot #: 17*

Building Code Analysis:

The building code selected and compiled in this document was chosen specifically with the health and safety of the community in mind that will be attending this Performing Arts Center. This will allow for a creative and flexible design that takes both the Village of Farmingdale's goals into consideration and the necessary Building Code that will keep the community and site secure. The choice of a Black Box Theater allows for various performance configurations, including theater, music, dance, a winter farmer's market, and multimedia productions. The adaptable seating, accommodating between 130 and 180 guests, will be designed and optimized according to the code for acoustics and sightlines. Supportive facilities, such as a well-equipped green room, dressing rooms, and storage areas, will ensure seamless experience for performers and technical crews. Additionally, a waiting area/box office will open to a welcoming lobby with refreshment services that will enhance audience engagement.

Accessibility and safety are paramount in the design. The theater must meet or exceed the Building Code of New York State and ANSI A117.1-2017 standards, which will ensure inclusivity for individuals of all abilities. Key building code considerations include compliance with Assembly Group A-1 occupancy regulations, fire safety measures such as fully sprinklered systems, and strategic means of egress to facilitate safe evacuation. Egress pathways must be designed with clear signage, adequate lighting, and appropriate width to accommodate the anticipated occupant load.

Plumbing and sanitation requirements must be meticulously addressed, ensuring both ADA-compliant restrooms and drinking fountains to support guests and staff. The design must also prioritize sustainability and efficiency by integrating energy-efficient systems and environmentally responsible materials for the future of the building economically.

Located at 141 Division Street, adjacent to the Main Street district, this Performing Arts Center will significantly contribute to Farmingdale's cultural and economic landscape. It will serve as a destination for artistic and educational opportunities, enhancing nightlife, supporting local businesses, and acting as a catalyst for future development. By merging cultural vibrancy with urban enhancement, the Black Box Theater promises to be a transformative asset for the community.

Section Summaries of Requirements:

The specific requirements referred to in the summaries of the relevant building code compiled in this document were chosen based on practicality, cost, occupancy, classification, site, and the desired uses of the space in addition to the building code compliances for this Black Box Theater. The information selected in the summary is the most critical building code requirements for a Black Box Theater classified as an A-1 occupancy with an occupancy of 130-180 seats. Each component of the summary directly addresses essential regulatory requirements that ensure safety, accessibility, and functionality for both the audience and theater staff. It serves as a quick reference guide to the most critical building codes that influence the design and operation of the Black Box Theater.

1. New York State Building Code (NYSBC)

- **Occupancy Classification (Chapter 3):** A black box theater falls under **Assembly Group A-1** due to its use for performances and audience seating.
- **Building Height & Area (Chapter 5):** Maximum allowable height and area depend on construction type and sprinkler systems. A fully sprinklered Type II-A construction allows greater flexibility in height and area.
- **Construction Type (Chapter 6):** Type II-A (Protected Non-Combustible) is recommended for fire resistance.
- **Means of Egress (Chapter 10):** Egress requirements depend on the theater's occupant load (estimated at **2,500 persons**), requiring **four exits, stair widths of 62.5 feet total, and travel distances under 250 feet** in a sprinklered building.
- **Accessibility (Chapter 11):** The theater must provide **accessible seating, restrooms, drinking fountains, and an accessible means of access.**

2. New York State Fire Code (NYSFC)

- **Fire Protection Systems:** A fully sprinklered building enhances safety and may allow for code concessions.
- **Egress & Fire Alarms:** Requires **panic hardware on exit doors**, illuminated exit signs, areas of refuge, and emergency lighting.
- **Fire-Resistance Ratings:** Fire-rated walls, doors, and corridors must meet the minimum rating for **Group A-1 occupancies.**

3. New York State Plumbing Code (NYSPC)

- **Restroom Requirements:** The occupant load dictates the **number of water closets, lavatories, and drinking fountains.**
- **Accessibility Compliance:** Fixtures must be **ADA-compliant** and include **accessible water closet compartments.**

4. New York State Department of Labor - Part 36

- **Worker Safety:** Covers safety regulations for **stage crew, performers, and maintenance staff.**
- **Egress for Workers:** Additional emergency exit requirements for backstage and technical areas.
- **Fire Prevention:** Stage curtains, props, and scenery must meet **fire-retardant material standards.**

5. Nassau County 239f Form

- **Highway Design Review Form:** must be filled out for every project being done that falls under Nassau County Jurisdiction
- **Goal of Nassau County Department of Public Works (NCDPW):** is to prevent potential negative impacts to adjacent properties or on County owned right(s)-of-way, property or infrastructure

Summary of Key Building Code Requirements for a 10,700 SF Black Box Theater (A-1 Occupancy, 130-180 Seats)

1. Occupant Load & Seating Capacity

- **Fixed Seating:** Occupant load determined by the number of seats installed.
- **Standing Room:** 1 person per 3 SF.
- **Unconcentrated Seating (Tables & Chairs):** 1 person per 15 SF.
- **Maximum Occupancy Consideration:** The highest calculated occupancy classification must be used if the space has multiple uses.

2. Required Exits & Egress Requirements

- **Number of Exits:**
 - Minimum of **2 exits required** for buildings with 500 or fewer occupants.
 - Rooms **over 1,500 SF or with more than 75 people** must have at least **2 exits**.
- **Travel Distance:**
 - Maximum travel distance to an exit: **100 feet** (125 feet for existing buildings).
- **Exit Widths:**

To be ADA compliant MUST have a clear width of 32" MINIMUM.

Building Program and Summary:

Blackbox Theater Space Analysis: Layout, Functions, and Design Considerations

This analysis examines the layout, functions, and design considerations for an efficient and adaptable Black Box Theater. Key spaces, from audience areas like the box office and auditorium to backstage facilities such as dressing rooms and storage, are evaluated for functionality, adjacency, and potential challenges. Every room is accounted for with circulation as well, leading up to a total of 10,700 SF.

Space	Square Feet
Box Office	131 SF
Reception Area	1815 SF
Customer Service	131 SF
Auditorium/Theater Proper	4320 SF
Stage Area	W/AUDITORIUM
Flex-Multi Function with Dressing Room	147 SF
Green Room	169 SF
Laundry/Wardrobe	161 SF
Pantry	W/RECEPTION
Common Areas/Circulation Areas	1,570 SF
Toilet Facilities	360 SF
Storage Area	242 SF
General Storage	192 SF
Loading Dock	416 SF
Fire Escape/Stairs	232 SF
Admin Office	183 SF
Passenger Elevator	76 SF
Service Elevator	NONE
Utility Areas & Support Facilities	555 SF
total	10700 SF

Project Budget:

ARC476-Project Cost Planning			Farmingdale State College	
Performing Arts Center - Rising Portal			5/19/2025	
Allocations			Comments	
Project Total		\$ 11,511,651	cell D5 is linked to Worksheet 2	
	% Project			
Construction	75%	\$ 8,633,738	enter construction type and use group	
Design Contingency	5%	\$ 575,582.56		
Project Contingency	5%	\$ 575,582.56		
Architects Fees	7%	\$ 805,815.58		
Pre-Design Services	3%	\$ 345,349.54		
Building Permits	3%	\$ 345,349.54		
Reimbursable Expenses	2%	\$ 230,233.02		
	100%	\$ 11,511,651		
ENTER GROSS SQUARE AREA=	10700		cell B16 linked to Worksheet 2	
	GSF	cost per GSF		
Project construction cost per GSF	10,700	\$ 807		
Project costs per GSF	10,700	\$ 1,076		

Budgeting Cost Breakdown

The budget for the center was developed using the Cost Projection Model, estimating a total cost of \$11.68 million. This calculation is based on a Gross Floor Area (GFA) of 10,700 sq. ft., with a cost per square foot of \$428.37, as detailed in the Project Worksheet. The budget includes construction materials, labor, mechanical and electrical systems, theater equipment, and interior finishes. Additional allocations cover permit fees, contingency funds, and sustainability features, ensuring compliance with building codes and energy efficiency standards while maintaining high-quality design and functionality. There is also a 25% Tariff surcharge considering with the current economy. It upped the budget \$382,000 increase leading up to that \$11.68 million budget estimate for this Performing Art Center.

Budgeting Cost Breakdown Comparison

PHASE I PROGRAM BUDGET

ARC476-Project Cost Planning Performing Arts Center			
Allocations			
Project Total			\$12,802,113
	% Project		
Construction	75%	\$ 9,601,585	
Design Contingency	5%	\$640,105.65	
Project Contingency	5%	\$640,105.65	
Architects Fees	7%	\$896,147.91	
Pre-Design Services	3%	\$384,063.39	
Building Permits	3%	\$384,063.39	
Reimbursable Expenses	2%	\$256,042.26	
	100%		\$12,802,113
ENTER GROSS SQUARE AREA=			
	13400		
		cost per	
	GSF	GSF	
Project construction cost per GSF	13,400	\$ 717	
Project costs per GSF	13,400	\$ 955	

PHASE II DESIGN BUDGET

ARC476-Project Cost Planning Performing Arts Center - Rising Portal			
Allocations			
Project Total			\$11,511,651
	% Project		
Construction	75%	\$ 8,633,738	
Design Contingency	5%	\$575,582.56	
Project Contingency	5%	\$575,582.56	
Architects Fees	7%	\$805,815.58	
Pre-Design Services	3%	\$345,349.54	
Building Permits	3%	\$345,349.54	
Reimbursable Expenses	2%	\$230,233.02	
	100%		\$11,511,651
ENTER GROSS SQUARE AREA=			
	10700		
		cost per	
	GSF	GSF	
Project construction cost per GSF	10,700	\$ 807	
Project costs per GSF	10,700	\$1,076	

Overview of Total Costs:

- **Phase I Budget:** \$12,802,113
- **Phase II Budget:** \$11,511,651

Gross Square Footage:

- **Phase I:** 13,400 SF
- **Phase II:** 10,700 SF

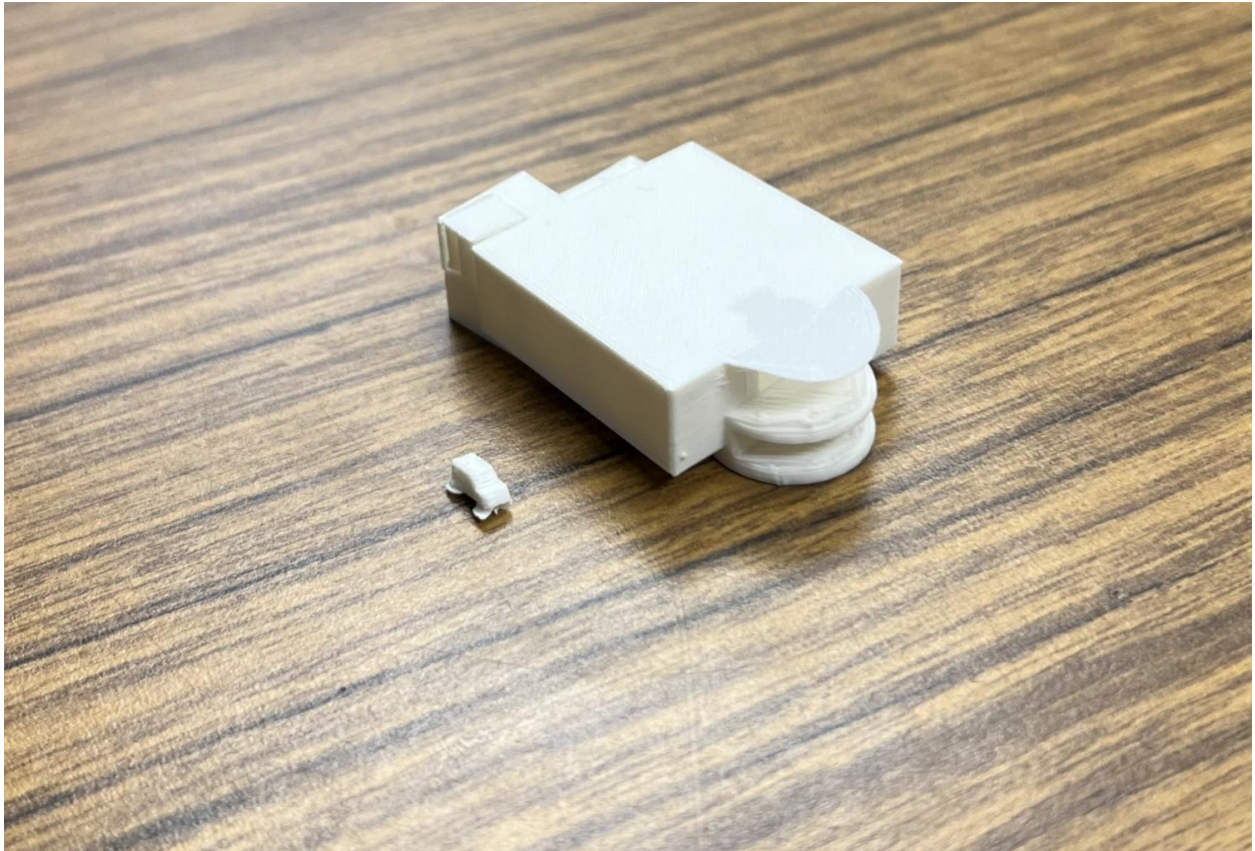
Cost per GSF:

- **Construction Cost per GSF:** \$717 (Phase I) vs. \$807 (Phase II)
- **Total Cost per GSF:** \$955 (Phase I) vs. \$1,076 (Phase II)

For the total cost for each phase, phase II reflects a reduction in total cost. There is a higher cost per GSF in Phase II due to the reduced total square footage compared to in Phase I, Phase II consists of 10,700 SF while Phase I consists of 13,400 SF. Despite the reduced total cost in Phase II, the cost per GSF is higher, suggesting a focus on higher-quality materials, finishes, or systems.

Physical Model:

For my physical model, it was 3D printed in the scale of 1" = 25' and then built my second physical model in the scale of 1" = 10'. The second model was created using cardboard as the base exterior shell and then used chipboard as a second wall to add texture and depth to the building. This approach provides a tangible and scaled visualization of the Black Box Theater's integration into its surroundings.



Technical Narrative:

The technical narrative for this project serves as a comprehensive guide to the design, construction, and operational aspects of the proposed building. This document compiles all necessary technical information, ensuring that the design aligns with the project's objectives, site constraints, and regulatory requirements. It provides a detailed framework for the execution of the building design, addressing critical components such as structural systems, environmental considerations, material specifications, and utility coordination. The narrative is structured to cater specifically to the unique requirements of the building design, integrating insights from architectural, engineering, and environmental disciplines. Key sections include:

1. **Foundation and Structural Systems:** Detailing the foundation type, load-bearing capacity, and superstructure design to ensure stability and durability.
2. **Building Envelope and Roofing:** Specifications for exterior enclosures, thermal insulation, and roofing systems to achieve energy efficiency and weather resistance.
3. **Interior Construction and Finishes:** Materials and layouts that enhance functionality, aesthetics, and user comfort.
4. **Mechanical, Electrical, and Plumbing (MEP) Systems:** Integration of HVAC, power distribution, plumbing, and fire protection systems to support building operations.
5. **Site Development and Civil Utilities:** Strategies for site preparation, landscaping, and utility connections to harmonize with the surrounding environment.
6. **Sustainability and Environmental Impact:** Measures to minimize the ecological footprint, including renewable energy systems, water conservation, and waste management.
7. **Compliance and Safety:** Adherence to building codes, safety standards, and accessibility requirements.

Project Construction System

The foundation system is designed to support and transfer all building loads to the ground effectively. It includes shallow or deep foundations based on subsurface conditions and project-specific needs. Geotechnical studies are critical to determine soil conditions, seismic factors, and frost protection requirements.

1. Construction Systems: Subsurface and Foundation Systems:

A10 Foundations

System Description:

Provide a foundation system capable of supporting and transmitting all building loads effectively to the ground. Includes shallow or deep foundations based on subsurface conditions.

Design Requirements

Comply with UFC 3-301-01 for structural safety and stability.

Consider geotechnical studies to address subsurface conditions.

Design for seismic resistance and frost protection.

Coordination

Ensure compatibility with adjacent systems, such as superstructure and site preparation.

Align with geotechnical engineers to address specific site conditions.

2. Shell and Structure:

B10 Superstructure

The structural framework includes columns, beams, floors, and other load-bearing components. Materials may include reinforced concrete, steel, or other options based on project needs.

Design Requirements: Comply with UFC 3-301-01 for load analysis, including dead, live, wind, and seismic loads.

Coordination: Integrate with foundations, roofing systems, and performance specifications.

B20 Exterior Enclosure

The exterior shell includes walls, windows, doors, and insulation systems.

Material Requirements: Use durable, moisture-resistant, and fire-resistant materials.

Ensure compatibility of materials for structural and aesthetic purposes.

Insulation and Barriers: Provide continuous insulation, vapor retarders, and air barriers.

Meet ASHRAE 90.1 energy efficiency standards.

Sustainability: Comply with UFC 1-200-02 for high-performance and sustainable buildings.

B30 Roofing

Roof systems must ensure durability, weather resistance, and thermal insulation.

Material Requirements: Use UV-resistant and water-resistant materials.

Coordination: Align with drainage and HVAC systems.

3. Interior Construction:

C10 Interior Construction

This includes fixed and demountable partitions, fire-rated assemblies, doors, frames, and hardware.

Material Requirements: Use durable materials with acoustic and fire-resistant properties.

Coordination: Ensure compatibility with interior finishes and mechanical systems.

C20 Stairs

Interior and exterior stairs include handrails, guardrails, and fire-rated enclosures.

Material Requirements: Use durable materials for treads, risers, and railings.

Coordination: Align with structural systems and interior finishes.

C30 Interior Finishes

Interior finishes include paint, tile, carpet, and acoustic ceiling systems for aesthetics and durability.

Material Requirements: Use sustainable materials compliant with UFC 1-200-02.

Coordination: Integrate with interior construction and mechanical systems.

4. Building Services (Vertical Transportation, Mechanical, Electrical, Plumbing):

D10 Conveying

Conveying systems include elevators, escalators, and dumbwaiters.

Design Requirements: Ensure compliance with accessibility and safety standards.

Coordination: Align with structural and electrical systems.

D20 Plumbing

The plumbing system includes water distribution, sanitary sewer, storm drainage, fixtures, and water treatment systems.

Design Requirements: Comply with energy conservation codes and UFC 1-200-02. Optimize for water efficiency and sustainability.

Coordination: Integrate with HVAC and electrical systems.

Mechanical, Electrical, and Fire Protection Systems

D30-D40-D50 Building services

Includes heating, ventilation, cooling, electrical systems, lighting, power distribution, and fire protection systems.

Design Requirements: Ensure compliance with ASHRAE 90.1 and UFC guidelines for energy efficiency and occupant comfort.

Coordination: Align with architectural and structural systems.

E10 Equipment

5. Site Improvements and Utilities:

F20 Selective Building Demolition

Covers demolition, hazardous waste remediation, and salvage.

Coordination: Align with waste management guidelines and sustainability goals.

G10 Site Preparation

Includes clearing, earthwork, and hazardous waste remediation. Focuses on site grading and utility preparation.

Coordination: Align with site improvements and utilities.

G20 Site Improvements

Landscaping, paving, and exterior features enhance aesthetics and functionality.

Coordination: Ensure compatibility with site preparation and utilities.

Site Utilities

Site utilities include water supply, sanitary sewer, storm drainage, and mechanical/electrical systems.

Design Requirements: Comply with UFC 1-200-02 for sustainability and efficiency.

Coordination: Integrate with site improvements and building services.

G30-G40 Site, Civil, Mech Utilities

Scope: Includes water supply, sanitary sewer, storm drainage, heating/cooling distribution, and fuel systems.

Requirements:

Comply with regulatory standards and sustainability goals (UFC 1-200-02, UFGS 01 33 29).

Obtain approvals from the Village of Farmingdale for utility connections.

Provide complete, operational systems with minimal construction impact.

Coordination: Align with local utility providers and ensure proper integration.

G40 - Site Electrical Utilities

Scope: Includes power distribution, fiber optics, and telecommunications systems.

Requirements:

Adhere to UFC 3-501-01 and local utility standards (PSEG Long Island Redbook).

Define connection points and ensure minimal modifications to existing systems.

Coordination: Work with utility owners for approvals and seamless connection.

Project Strength, Weaknesses, Opportunities and Threats Review:

SWOT ANALYSIS – Phase I

STRENGTHS

- Flexible Space Design
 - Black box theaters allow for various configurations for an extensive list of uses, maximizing versatility and longevity as the space can evolve with the community.
 - Flexible seating arrangements allow the space to efficiently accommodate small to mid-size assembly uses without unnecessary excess or unused space.
 - The inclusion of multi-functional spaces enhances usability for community programs beyond theatrical performances, vastly increasing the buildings significance for the community throughout the future.
- Efficient Program Layout
 - Proper layout of interior spaces based on use association promote efficient movement and workflow. (e.g. dressing rooms near the stage, storage near loading)
- Code-Aware Planning
 - Planning with code compliance in mind will help to mitigate future design conflicts. (e.g. accessibility, egress)
 - Compliance with code requirements enhances overall safety of the space for patrons and staff.
 - Accessibility requirements ensure inclusivity for all to use the space.
 - Defining the maximum occupancy load prevents overcrowding.
- Prime Downtown Location
 - The site's proximity to Main Street enhances accessibility, connectivity, and integration with the existing flow of people in downtown Farmingdale.
 - The site's proximity to public transit via the LIRR station and multiple bus routes provides convenient access for visitors
 - The site will utilize existing parking infrastructure, minimizing disturbance to the site and existing traffic patterns.

WEAKNESSES

- Space Constraints
 - The limited footprint and height restrictions of the site and need to accommodate all required spatial functions within said footprint may lead to compromises on room sizes and other design features.
- Budget Uncertainty
 - Estimating costs for specialized theater infrastructure such as the lighting, acoustics and stage rigging can be challenging without detailed vendor quotes.
- Code Compliance

- The need for ADA compliant spaces, multiple exits and egress paths, and other requirements impact spatial usage and budget.
- Shared Parking
 - Using existing parking infrastructure without our own dedicated parking can lead to incidents where the lots may not have the capacity for all patrons to our venue.
 - Overflow parking at the LIRR station exceeds standard distance for pedestrian comfort.
- Lack of Green Space
 - The site is located within municipal lot 3, and has extremely limited softscape environment. This contributes to stormwater runoff issues, urban heat effects, and creates a less inviting environment for patrons.
- Residential Sensitivity
 - The sites proximity to the residential properties along Elizabeth street create concern for raised traffic, noise, and light pollution into the residential area.

OPPORTUNITIES

- Sustainable Design Integration
 - Implementing energy efficient equipment and lighting along with water saving plumbing fixtures can reduce long term operational costs
- Funding
 - Grants, Sponsorships, and community partnerships can help offset the high costs associated with theater infrastructure.
- Advanced Digital Integration
 - Incorporating self-service ticketing systems, interactive lobby screens, and other digital capabilities can enhance the user experience of patrons.
- Innovative Seating Solutions
 - Retractable or removeable seating can maximize the useable floor space for various event types.
- Enhanced Safety
 - The safety benefits provided by current building codes can be marketed as a key benefit to the community.
- Flexibility
 - The ability to re-arrange seating allows for versatile space utilization.
- Urban Activation and Economic Growth
 - A performing arts center such as this can serve as a catalyst for downtown revitalization, attracting new business and fostering economic development.
- Enhanced Pedestrian Infrastructure
 - Improvements to lighting, crosswalks, and sidewalks can enhance safety and connectivity for our project site and surrounding areas.
- Parking Agreements
 - Collaboration with local businesses and municipal authorities could secure dedicated parking solutions for theatre patrons during events.

- Sustainability
 - Integration of green infrastructure including permeable pavement, rain gardens, and street trees can mitigate environmental impacts and improve site conditions.
- Spot Zoning
 - The Farmingdale Master Plan supports spot zoning considerations, which could allow for greater flexibility in site development and land use adjustments

THREATS

- Space Constraints
 - The limited footprint and height restrictions of the site and need to accommodate all required spatial functions within said footprint may lead to compromises on room sizes and other design features.
- Budget Overruns
 - The high cost of specialty theater equipment and compliance driven modifications can push costs beyond initial estimates.
- Limited Backstage Space
 - If not carefully planned, performers and crew could experience congestion and crowding in dressing rooms, prep areas, and other backstage areas.
- Construction Limitations
 - Size constraints and zoning regulations could affect construction feasibility and could lead to design compromises.
- Long Term Maintenance Costs
 - While the theater will be designed for flexibility, maintaining high performance technical equipment such as lighting, sound, and ventilation may require ongoing investments throughout the life of the building.
- Community Opposition
 - Local residents may object to the increased traffic, noise, and parking demand due to the site's adjacency to residential areas and shared use off municipal parking.
- Weather Related Challenges
 - Poor weather may limit accessibility to the site, particularly for visitors walking from public transport or overflow parking areas.
- Traffic Flow Disruptions
 - Event related congestion, road closures, and emergency vehicle access requirements could affect site circulation and connectivity.

Project Strength, Weaknesses, Opportunities and Threats Review:

SWOT ANALYSIS – Phase II

This SWOT analysis is for my design for the Performing Art Center

- **Strengths:** A uniquely shaped entrance that visually attracts people coming from main street. Energy efficiency, contributing to energy savings reducing operational costs.
- **Weaknesses:** The parking lot layout may not be favorable considering the size of the Performing Art Center. The design of the parking lot needs to be adjusted, if not the circulation from main street to the PAC is unfavorable. Higher maintenance needs, may require more frequent maintenance and cleaning, increasing operational costs over time. Potential service access conflicts.
- **Opportunities:** Visual landmark for the village, can facilitate better pedestrian flow. Gathering space encouraging social interaction before and after performances. Maximized use of natural lighting in the building contributing to energy efficiency. Working with local artists featuring their artistic elements to enhance the aesthetic appeal.
- **Threats:** Higher quality materials will affect construction costs. Engineering complexity, may create confusion to visitors unfamiliar with the space leading to disorientation during events. Cultural resistance/mixed community reaction: may be perceived too modern or out of character with the surrounding architecture.

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PPD Phase I compilations – all teams, edited by Team 4

Appendix 1 - Property Information

Property Information

Located on 141 Division Street in Downtown Farmingdale, right near Main Street, a hub of commercial activity. Main Street is the north-south roadway which runs through the commercial and retail corridor of the Village. Front Street and Fulton Street are 2-way undivided roadways. The curb-to-curb width is approximately 32 feet. A typical section consists of one travel lane about 10 feet wide in each direction with particularly narrow 6 ft wide curb parking areas available on both sides.

With such narrow travel and parking lanes it is common to see parked vehicles encroaching on the travel lanes, and trucks or buses using extreme caution when traveling along Main Street. At times, Main Street is used as a “cut-through” for traffic between Fulton Street and Conklin Avenue, as mentioned by the Village.

Existing Conditions

- The current site consists primarily of hardscape (pavement, parking lots, and sidewalks), contributing to stormwater runoff and urban heat island effects.
- There is minimal existing green space, necessitating the inclusion of softscape elements to enhance sustainability and aesthetics. The lack of shade and permeable surfaces can negatively impact pedestrian comfort.
- Acre = 0.7
- GFA = 1466 SF
- *CURRENT LOT SIZE= 3,200 SF*
- *Section: 49, Block: 1, Lot #: 17*

RESOURCES: PROPERTY INFORMATION

Project Address: 141 Division St., Farmingdale NY 11735

Nassau County: Section 49, Block 001, Land Parcel 17

Lot Size: 3200 square feet



Aerial View



3D view to NORTH - 1



3D view to NORTH - 2

BUILDING DETAILS

PROPERTY TYPE	Residential
PROPERTY SUBTYPE	Single Family
TOTAL BUILDING SIZE	1,421
STORIES	2



Land Records Viewer

(<http://lrn.nassaucountyny.gov>)

[Search \(/\)](#)

[Land Records Viewer ▾](#)

[ASIE \(https://apps.nassaucountyny.gov/ASIE/\)](https://apps.nassaucountyny.gov/ASIE/)

[Tax Map Verification \(/tmv/\)](/tmv/)

[Login \(/login/\)](/login/)



Date Taken: 04/28/2011

123

Address: 141 DIVISION ST. FARMINGDALE, 11735

Village: Incorporated Village of Farmingdale -

School: Farmingdale - 22

Town: Oyster Bay

For translation services of all documents, please contact LanguageLine Solutions at 1-800-752-6096 (tel:+1-800-752-6096) / www.language.com (<https://www.language.com>)

Section: 49

Block: 001

Lot: 17

Condo:

Unit:

Select Language ▾

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Values	General and School Taxes	Open and Paid Taxes Info	Property Description	Recent Sales
My Nassau Info	Tax Class 1 Res Prognose (2021 Only)			

Description

2026	2025	2024	2023	2022		
2026 Year Description						
Roll Year	2025-2026	Land Category	RESIDENTIAL		Liber / Page (Deed#)	12683 0117
Property Size Code		Land Title	ONE FAMILY YEAR-ROUND RESIDENCE			
Property Class Code	210.01	Land Description	A ONE FAMILY DWELLING CONSTRUCTED TO ACCOMMODATE YEAR-ROUND OCCUPANCY,I.E., ADEQUATE INSULATION, HEATING, ETC. INCLUDES DUPLEX TYPE ONE HALFLOWNERSHIP AND ROW TYPE INDIVIDUALLY OWNED. NOTE: IF NOT CONSTRUCTED TO ACCOMMODATE YEAR-ROUND OCCUPANCY, SEE PROPERTY CLASS CODE 260.			
Item Number		NYS School Code	282422		NYS SWIS Code	282409 Lot Grouping

Current Year Inventory

1

Property Card 1

Tax Year	2026
Card/Bldg	1
School District	FARMINGDALE UFSD - 22
Acres	.0735

Powered by Google Translate (<https://translate.google.com>)

Lot Square Footage (SQFT)	3200
Land Code	PRIMARY SITE
Location	COMMERCIAL INFLUENCE
Living Units	1
Style	COLONIAL
Story Height	2
CDU	AVERAGE
Grade	C-
Exterior Walls	BRICK
Year Built	1920
Fuel	GAS / OIL
Heat/AC	CNTRL HEAT
Total Living Area (SQFT)	1466
Full Bathrooms	2
Half Bathrooms	0
Number of Bedrooms	
Additional Fixtures	0
Attic	NONE
Basement Area	FULL
Finished Basement Living Area	
Pool	No
Recreation Room	
Basement Garage	
Attached Garage	No
Detached Garage	No
Decks/Porches	

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Empire Zone

Addition and Out-Building Structures

Card	Line	Area	Code	Description
1	1	192	2020	1SMAS MASONRY1SMAS MASONRY
1	2	16	20	1SMAS MASONRY

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Powered by [Google Translate](https://translate.google.com) (https://translate.google.com)

2nd # 8267

ACB 2393

141 DIVISION ST.

SURVEY OF PROPERTY
NASSAU CO. LAND TAX MAP
SECTION 49. BLOCK 1. TAX LOT 17
AT FARMINGDALE VILLAGE
TOWN OF OYSTER BAY
NASSAU CO. N.Y.

CORNELIA

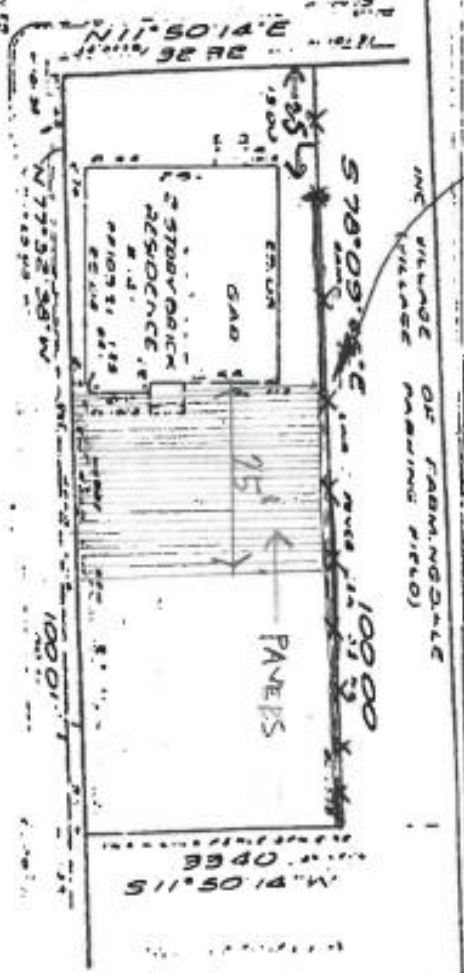
ST.

GUAR. TO: PHA
MABCHALL ASSOCIATES INC
METROPOLITAN ABSTRACT CORP
N 304639
GERARD TRIGLIA

SURVEYED JAN 8, 1981

VILLAGE OF FARMINGDALE, NY
BUILDING DEPARTMENT
These plans and specifications were
examined as to compliance with the
Village of Farmingdale Building
Code and are approved.
Permit No. 15414
Date 1/14/81
Building Inspector

JACK ALLISON HALL
LAND SURVEYOR N.Y.C. & S.
535 BARNUM ST. NEW YORK, N.Y.
10007-1036 N.E.S. 847-1111
669-1073-5343
SCALE 1"=15' N° 32578



Appendix 2 – Site and Zoning Analysis

Site and Zoning Analysis

MAIN STREET:

Main Street between Front Street and Fulton Street is occupied by commercial spaces with an appealing pedestrian friendly downtown area. Pedestrian crossings are painted across Main Street and emphasized with yield-to-pedestrian signs placed in the middle of the roadway.

Midblock crossings are located between Front Street and Conklin Avenue, and between Conklin Avenue and Prospect Street. *They are located leading to the one-way entrances to Municipal Parking Fields 3 (our site parking) and 4, on the east side of Main Street.*

Observations of traffic on Main St for weekdays & Saturdays:

**Data taken from master plan*

Observed at 12-1 PM, 3-4 PM, 5-6 PM, and 7-8 PM. 20-minute ample counts used to estimate hourly volumes.

Traffic volumes in both directions are consistent both on weekday and Saturday afternoons.

Weekdays: northbound & southbound volumes generally in the 300-350 vehicles per hour (vph) range at 12-1 PM, 3-4 PM, and 7-8 PM. Range from 350-450 vph per direction at 5-6 PM.

Saturday: volumes generally = 300-350 vph range per direction at 12-1 PM, in the 200 to 300 vph range per direction at 3-4 PM, and in the 150 to 250 vph range per direction at 7-8 PM.

Most heavily trafficked intersections are Main Street/Conklin Avenue, followed by Main Street/Fulton Street and Main Street/Front Street adjacent to the LIRR grade crossing.

PARKING:

Parallel parking is available on both sides along Main Street for most of its length between Front Street and Fulton Street, with 166 available spaces. Most spaces occupied are generally between Front Street and Prospect Street, with fewer spaces typically used between Prospect Street and Fulton Street. Parking occupancy was the highest between 12 PM-1 PM with 61% and 58% for the weekday and Saturday. All other time periods: average of 51% parking space along Main Street.

Time Period	Percent Occupied
Weekday 12-1 PM	61%
Weekday 3-4 PM	45%
Weekday 5-6 PM	48%
Friday 8-9 PM	59%
Saturday 12-1 PM	58%
Saturday 3-4 PM	50%
Saturday 8-9 PM	55%

**Data taken from Village of Farmingdale master plan*

Parking regulations: 2-hour parking. Regulations for the area near Main/Prospect St.

Municipal Parking Field 3:

Located east of Main Street north of Conklin Avenue with multiple points of entry. Access is available on the south side of Front Street, a one-way entrance on the east side of Main Street, and through a private parking lot on the north side of Conklin Avenue.

There are 235 parking spaces available, 7 are designated as handicapped spaces, 10 are reserved taxi spaces. An additional 15 spaces are located on the north side of Front Street, but only a couple of vehicles were observed occupying them throughout the day.

Most of the spaces are regulated as 12-hour parking Monday-Friday from 6 AM-6 PM with a Village Permit.

The row of spaces on the west side of the parking lot allows 3-hour parking for commercial and retail patrons.

During the weekday time periods, an average of 40% of the spaces were occupied.

During the Saturday time periods, an average of 28% of the spaces were occupied.

Location	Available Spaces	Weekday 12 - 1 PM Percent Occupied	Weekday 3 - 4 PM Percent Occupied	Weekday 5 - 6 PM Percent Occupied	Friday 8 - 9 PM Percent Occupied	Saturday 12 - 1 PM Percent Occupied	Saturday 3 - 4 PM Percent Occupied	Saturday 8 - 9 PM Percent Occupied
Field 1	126	77%	71%	57%	94%	76%	63%	79%
Field 2	140	75%	56%	46%	35%	38%	37%	27%
Field 3	250	34%	36%	38%	50%	29%	27%	27%
Field 4	330	47%	39%	44%	34%	34%	28%	60%

**Data taken from Village of Farmingdale master plan*

Long Island Railroad Parking Lots:

LIRR is located at the intersection of Secatogue Avenue & Front Street. It has 2 parking facilities, one on each side of the track, which provide commuter parking throughout the day.

-*The LIRR North parking* lot on the north side of the tracks.

Its only access is on Secatogue Avenue north of Front Street and has 254 parking spaces, which also includes 12 designated handicapped spaces.

Posted regulations: Allow 12-hour commuter parking with a Village Railroad Permit.

North parking lot was nearly full during the weekday morning and midday hours, then drops approaching the early evening hours. Normal weekday commuting hours occupancy rate: Averaged of 91% (including a large vacancy rate in handicapped spaces) Saturday occupancy rates are significantly lower.

-*The LIRR South parking* lot (village-owned) is located on the south side of the tracks. The entrance to the lot is on Eastern Parkway.

Within the parking lot, there is a taxi parking and waiting area on the north end closest to the ticket office, which leads to a one-way exit onto Front Street. There are approximately 268 spaces available in the facility which include 51 metered spaces inside the lot, and an additional 11 metered spaces along the north side of Eastern Parkway.

Parking regulations: Requiring a Village Railroad Permit, metered spaces allow a max of 12 hours.

Normal commuting hours average occupancy rate: 98% between 9AM-4 PM

*Data taken from Village of Farmingdale master plan

- *Pocket Parks:*
1. Farmingdale Village Green



Village Green- South of Site
Theater Site



Village Green West View



Village Green East View

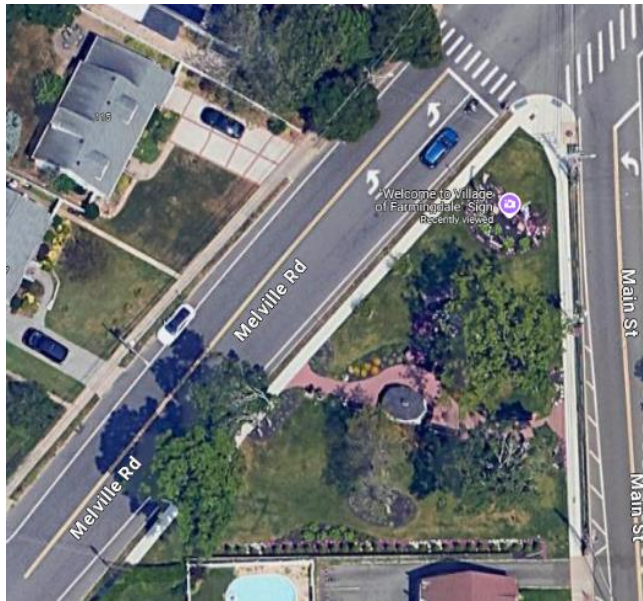


Village Green path to Theater

Key:

village green

theater



“Five Corners Park” in regards to Theater

Key:

village green

theater

LONG ISLAND BUS:

The MTA Long Island Bus System serves our study area with 4 routes: the N95, N70, N71, and N72.

- The N95 Bus route operates only on weekdays between the Farmingdale LIRR Station & SUNY Farmingdale.

About 3-4 buses *stop near downtown* each hour from 9-10 AM, 12-1 PM, 3-4 PM, and 5-6 PM.

- The N70 Bus route operates between the Hempstead Transit Center and Melville, with a *stop located at the intersection of Conklin Avenue and Main Street.*

Service on this route is available only on weekdays with a combined frequency in both directions of 5-6 buses stopping near downtown between 9-10 AM and 5-6 PM (2 stopping from 12-1 PM, and 4 stopping from 3- 4 PM)

- The N71 Bus route operates between the Hempstead Transit Center and Massapequa Park, with a *stop located at the intersection of Main Street and Fulton Street*. This route runs along Hempstead Turnpike, Fulton Street, and then south on Main Street.

Service on this route is available everyday. Frequency on weekdays is about 3 stops for each hour from 9-10 AM, 12-1 PM, 3-4 PM, and 5-6 PM, and Saturdays between 2-4 stops for the same hours.

- The N72 Bus route operates between Hempstead Transit Center and the Babylon LIRR Station, with a *stop located at the intersection of Main Street and Conklin Avenue*.

This bus operates along a similar route to the N70 Bus, but heads south on Route 110. Weekday frequency is 6-7 buses stopping near downtown between 9-10 AM & 12-1 PM, and 8 stops between 3-4 PM & 5-6 PM.

The Saturday frequency is 2-4 combined stops between 9-10 AM, 12-1 PM, 3-4 PM, and 5-6 PM.

STORM DRAINAGE:

The Village of Farmingdale utilizes infiltration basins for the stormwater runoff within the Village Dept of Public Works right-of-way.

The Village requires 5 inches of on-site stormwater storage for all properties fronting the Village right-of-way.

The existing drainage system within the Village DPW's jurisdiction has ample capacity. However, the *intersection of Secatogue Avenue and South Front Street has flooding issues*. The Village DPW and H2M are looking to solve the flooding problems.

Based on the storm drainage maps obtained from NCDPW, there is an *existing 15-inch, 18-inch, and 24-inch storm sewer main running along Main Street*.

The Nassau County DPW requires 8-inches of on-site stormwater storage for the properties fronting NCDPW right-of-way.

Based on maps obtained from New York State Department of Transportation (NYSDOT), there are *existing 15-inch, 18-inch and 24-inch storm sewer mains running along South Front Street* within the NYSDOT maintained roads.

RESIDENTIAL:

The site is directly adjacent to a residential district along Elizabeth Street, requiring careful integration to minimize disruption while fostering positive community interaction. Several key considerations must be addressed:

Integration Strategies

- **Buffer Zones:** Landscaping, fencing, and appropriate setbacks will provide a transition between the Performing Arts Center and nearby homes. Trees and hedges can serve as natural sound barriers while also enhancing the visual appeal of the transition area. According to prior research, the Village Master Plan does not explicitly address the transition between public facilities and residential areas, making this a key design challenge.
- **Sound Mitigation:** Acoustic barriers, green buffers, and operational policies (such as limiting outdoor performances late at night) will reduce noise disturbances. The use of sound-absorbing façade materials can further minimize noise pollution for adjacent residential areas. The Village's Design Guidelines also recommend the use of brick and wood siding to harmonize with the traditional aesthetic of neighboring structures.
- **Traffic & Parking Management:** Nearby residents may experience increased vehicle traffic and parking congestion. Potential solutions include designated theater-only parking, a potential shared parking agreement with local businesses, and incentivizing alternative transportation like shuttle services or bike-friendly infrastructure. This is particularly relevant given that the LIRR parking lot and municipal Parking Field 3 will serve as primary parking areas.
- **Lighting Considerations:** Outdoor lighting must balance security and visibility without creating excessive glare into residential properties. Shielded, downward-facing lighting fixtures can help prevent light spillover while maintaining a well-lit and safe environment. According to site observations, Front Street lacks sufficient lighting for pedestrians walking from parking lots, further emphasizing the need for enhanced street lighting.
- **Building Orientation & Privacy:** The placement of entrances, windows, and access points should consider nearby residences to prevent direct sightlines into private residential spaces and minimize disruption to neighbors. The proximity of

the residential zone to the east of the site means that special attention should be given to setback requirements.

Community Engagement

- Establishing open communication with residents can foster a positive relationship between the Performing Arts Center and the neighborhood. Regular meetings or feedback sessions can help address local concerns proactively.
- Hosting community events or offering discounted tickets to local residents may encourage support for the project. Additionally, opportunities for local artists to perform or exhibit within the space can create a sense of shared ownership.
- Incorporating a multi-functional outdoor space that serves both the theater and the neighborhood can enhance community engagement while reducing the feeling of commercial encroachment.

Residential Border Conflicts

- **Noise concerns:** The eastern edge of the site directly borders a residential neighborhood, which creates potential conflicts due to sound from performances, rehearsals, and late-night events. The black box theater must implement soundproofing measures such as acoustic barriers, insulated walls, and operational noise limits to ensure minimal disruption to nearby residents.
- **Light pollution:** The theater's outdoor lighting for security, signage, and wayfinding could negatively impact residential properties by causing unwanted glare and excessive brightness. To mitigate this, the design should incorporate shielded fixtures, motion-activated lighting, and warm-tone LEDs that direct light downward, ensuring a balance between visibility and residential comfort.
- **Privacy concerns:** The proximity of the project to residential properties may result in direct sightlines into neighboring homes, raising privacy concerns for residents. To address this, the design should include vegetative buffers, fencing, or frosted glass elements that create a sense of separation while maintaining an aesthetically pleasing and functional site layout.
- **Community opposition:** Residents may be resistant to the project due to fears of increased pedestrian and vehicle congestion, higher noise levels, and potential changes to the character of their neighborhood. Engaging with the community through public forums, transparent design presentations, and mitigation plans can help alleviate concerns and build local support for the project.

- **Parking and Vehicular Circulation:** The lack of on-site parking and reliance on municipal lots may lead to increased vehicle traffic and congestion near residential streets, especially during peak event hours. Proper traffic management strategies, such as designated drop-off zones, improved wayfinding for parking areas, and potential shared parking agreements, should be considered to minimize disruption to the surrounding neighborhood.

CHALLENGES:

Site Constraints

- The available lot size limits the ability to include on-site parking and green space, requiring reliance on municipal parking lots. Creative site planning will be needed to optimize the use of available space while ensuring accessibility and functionality.
- Adapting the theater for accessibility and pedestrian flow while maintaining zoning compliance presents design challenges. A balance must be struck between maximizing seating capacity and allowing for necessary back-of-house functions, such as storage and performer support areas.
- The adjacent properties may limit expansion options, requiring vertical construction or efficient spatial organization to accommodate all necessary program elements.

Traffic & Pedestrian Flow

- **High Congestion on Main Street & Cornelia Street:** Increased traffic, especially during performance times, may require enhanced drop-off zones and alternative parking arrangements. Signal timing adjustments or temporary traffic control measures during peak events may also be necessary.
- **Long Walking Distances:** The 1,700-foot walk from the LIRR parking lot to the theater is longer than the preferred 800-1,000 feet, necessitating better pedestrian pathways and wayfinding solutions. Signage, lighting, and rest areas could help mitigate the inconvenience.
- **Safety Concerns:** Poor lighting along walkways leading to the theater could deter visitors, especially at night. Implementing additional pedestrian crossings, protective barriers along high-traffic areas, and increased police or security presence during major events can enhance safety.

- **Emergency Vehicle Access:** Ensuring that fire lanes, ambulance access points, and emergency evacuation routes are incorporated into the site plan is a crucial challenge.

Zoning & Regulatory Hurdles

- **Downtown Mixed-Use (D-MU) Zoning Restrictions:** The site must comply with specific regulations related to height (max 36'), coverage (max 90%), and accessibility standards. Variances or special permits may be required for design elements that deviate from the zoning code.
- **Stormwater Management Requirements:** Compliance with village and county stormwater regulations must be incorporated into the site design. Strategies such as green roofs, permeable paving, and underground retention systems may be necessary.
- **Noise & Light Pollution Regulations:** Potential restrictions on sound levels and exterior lighting near residential properties could impact operational flexibility. An acoustical study may be required to ensure compliance with local ordinances.
- **Construction Disruptions:** Managing the impact of construction noise, dust, and road closures on local residents and businesses will require strategic phasing and mitigation planning.

BALANCING HARDSCAPE & SOFTSCAPE:

- **Pedestrian Comfort:** Shaded walkways, seating areas, and landscaping can improve visitor experience. Pocket parks or small landscaped rest areas could provide a buffer between the theater and adjacent residential zones while making the area more pedestrian-friendly.
- **Stormwater Management:** Permeable paving, bioswales, and rain gardens can help control runoff and enhance sustainability. Rainwater collection systems can also be used to irrigate planted areas.
- **Aesthetic & Environmental Benefits:** Increased greenery will improve air quality, provide habitat for urban wildlife, and contribute to a more inviting environment. Plant selection should include low-maintenance, native species to ensure sustainability.
- **Building Footprint Considerations:** We are waiting to meet with Team 1 to determine the required building size. It must be balanced with outdoor space to ensure an efficient layout while maintaining softscape integration. This may include

rooftop gardens or green walls as additional solutions for incorporating vegetation into a limited footprint.

- **Plaza & Gathering Spaces:** Open plazas with a mix of hard and soft surfaces can serve as event spaces while providing necessary circulation for large crowds. The inclusion of temporary or modular seating areas can allow for flexible use of outdoor areas.
- **Material Considerations:** The choice of hardscape materials should align with sustainability goals—high-albedo (light-colored) paving materials can reduce heat absorption, and recycled or locally sourced materials can lower the project's environmental impact.

Appendix 3 - Master Plan Documentation for analysis

1. Land Use & Economic Development

- Master Plan Reference: Land Use and Economic Development (Pages 23-29)
- Relevance to Team 2's Analysis:
- The plan emphasizes promoting mixed-use developments that integrate commercial, cultural, and residential uses.
- The Performing Arts Center (PAC) aligns with this vision, introducing a cultural anchor in Downtown Farmingdale that supports economic growth by attracting visitors and increasing foot traffic.

Land Use (Pages 23-29):

Previous Land Use Pattern

The 2011 Downtown Master Plan characterized Main Street as Farmingdale's commercial hub, primarily comprising retail, personal services, and restaurants. Other, less prevalent land uses included multi-family housing, professional offices, and recreational and institutional facilities. Mixed residential uses, where commercial spaces are on the ground floor and residential uses are on the upper floors were not explicitly permitted in this area, where they would be most appropriate along Main Street and near the LIRR station. The LIRR right-of-way near the train tracks was considered a land-use barrier. North of the tracks, the land was used for light industrial, commercial, utility, and residential purposes, but at a lower density than the areas south of the tracks along Main Street and South Front Street. The Farmingdale LIRR station, located two blocks from Main Street on South Front Street, felt isolated due to the absence of other developments in the area. Conklin Street and Fulton Street, which intersect with Main Street, are other significant roads in Downtown Farmingdale. Conklin Street was seen as an extension of Downtown with a similar mix of land uses as Main Street, but was slightly less pedestrian friendly. Fulton Street was considered car-oriented, with buildings of a different scale and use mix compared to Main Street. The rest of the Village, outside Downtown, was primarily single-family residential, with two-family residences and institutional uses scattered throughout the neighborhoods.

Recommended Land Use Pattern

The Downtown Master Plan vision for the future land use pattern in Downtown Farmingdale was to build upon the existing pattern described above, while encouraging development in specific areas. Specifically, the plan created 11 new land-use categories to guide future development in specific areas:

Main Street Core Mixed-Use

Largely located along Main Street between the LIRR right-of-way and just south of Prospect Street. Uses were envisioned to be mixed, with commercial uses on the ground floor and office and residential uses above.

TOD Mixed-Use

Located along South Front Street between Division Street and Depot Avenue. This area was to contain ground-floor retail, restaurant, and upper level residential, offices or a hotel use. An important difference in the vision between here and the Main Street Core Mixed-Use area is that uses in the TOD Mixed-Use area would provide on-site parking rather than relying on street or municipal parking.

North Gateway Mixed-Use

Located along Main Street between South Front Street and Melville Road, as well as parcels adjacent to the LIRR right-of-way between Elizabeth Street and Secatogue Avenue. Land uses were envisioned as welcoming people into the Downtown Area with mixed retail and office buildings.

Conklin Street Office-Retail

Includes small portions of Conklin Street that are outside the Main Street Core Mixed-Use Area, extending just past Wavery Place to the west and until St. Kilian Parish to the east. Changes were not recommended; this area was suggested to remain a mix of office and retail uses serving as a gateway to Main Street.

Automobile-Oriented Commercial

This area is primarily located around the intersection of Fulton Street and Main Street. No changes were recommended in this area.

General Commercial

This area contains parcels along the southern portion of Main Street, between Prospect Street and Richard Street. No significant changes were recommended; this area was suggested to continue to offer a general mix of office and retail uses.

Multi-Family Residential

Refers to areas along South Front Street/LIRR right-of-way, Secatogue Avenue, Eastern Parkway, Elizabeth Street, and Fulton Street. These areas already contained multi-family housing and were recommended to continue doing so.

Mixed Single-, Two-, and Multi-Family Residential

Located east of Main Street between Eastern Parkway, Conklin Street and Maple Street was a mix of single-, two-, and multi-family residences. It was recommended that the existing mix of residential uses remain. Any infill development that could occur within this area was recommended to be compatible with existing housing.

Single- and Two-Family Residential

At the time of the Downtown Master Plan single- and two-family residential was the most common land use outside the Downtown area. It was recommended that these neighborhoods be preserved, and future housing development in this area should be compatible with the existing neighborhoods.

Public/Quasi-Public

This includes areas with governmental facilities, schools and religious facilities. Notable parcels included Village Hall, the Fire Department, Howitt Middle School, and St. Kilian's. These areas were recommended to remain with such uses.

Open/Greenspace

The Downtown Master Plan included the Village Green, Five Corners Park, proposed greenspace near the LIRR station and proposed green areas along and behind Main Street.

Current Land Use Patterns in Downtown Farmingdale

Since the adoption of the Downtown Master Plan, Farmingdale has seen considerable new development and changes in land use patterns. The D-MU District and its three subdistricts have been instrumental in realizing the land use vision. The following is a description of the current land use pattern in Downtown Farmingdale, starting from Melville Road in the north and heading south to Fulton Street. Downtown Farmingdale begins at the northern gateway, Five Corners Park, at the intersection of Main Street and Melville Road. From this intersection to the LIRR right-of-way, land uses transition from single-family housing to more traditional downtown buildings. The presence of two municipal parking lots and a conventional commercial shopping center gives Main Street a lower density feel compared to the area south of the LIRR right-of-way. Properties such as 155 Main Street have undergone significant renovations, are no longer vacant, and now accommodate a mix of residential and commercial uses. This aligns with the Downtown Master Plan's vision for a transitional, northern gateway that extends Downtown activity north of the railroad. Blocks to the east, north of the railroad, were mostly recommended for multi-family residential housing. New multi-family housing was developed at 40 Elizabeth Street as part of the Fairfield Metro apartment complex. Other developments in the area pre-date the Downtown Master Plan, including Elizabeth Gardens, Fairfield Knolls, and Fardale Gardens. The northern LIRR commuter lot also remains in this area.

South of the LIRR right-of-way, adjacent to South Front Street, the Downtown Master Plan identified a need for mixed-use TOD to enhance the connection between the Farmingdale LIRR station and Main Street. This transformation has taken place, with significant redevelopment at 148 South Front Street and 121 Secatogue Avenue. These previously underutilized parcels now host mixed-use multi-family residential buildings featuring commercial spaces on the ground floor and apartments on the upper floors. These developments, along with improvements to Parking Field 3, have transformed South Front Street into a pedestrian-friendly link between the Farmingdale LIRR station and Main Street, fulfilling the vision of the Downtown Master Plan.

Moving east past the Train Station, Atlantic Avenue was recommended to preserve existing multi-family housing, which has been achieved with the continued presence of the Springdale Condominiums and several smaller Fairfield developments. An adaptive reuse conversion of a former warehouse to apartments has been completed at 285 Eastern Parkway.

The intersection of Conklin Street and Main Street serves as the entrance to Downtown Farmingdale from both the east and the west. The Downtown Master Plan recommended that Conklin Street continue to act as a gateway and transition into Downtown from these directions. Parcels along Conklin Street, within approximately 500 feet from the intersection, feature a mix of commercial and office buildings. The density here is less than that of Main Street, with some establishments offering off-street parking, as seen at the 399 Conklin Street office building. In general, the land uses here align with what the Downtown Master Plan described as Conklin Street Office-Retail, serving as a transition to Main Street. Further east along Conklin Street, there are several public/quasi-public spaces such as the St. Kilian Parish properties and Farmingdale School District property. In 2019, the Weldon E. Howitt Middle School opened Long Island's first community-focused public schools sports complex featuring softball and baseball stadiums, a multi-purpose field and an aquatics center with a \$36 million investment.⁷ Other uses in this area comprise a mix of single-, two-, and multi-family residences.

The Downtown Master Plan Identified Main Street, extending from South Front Street past Conklin Street to Prospect Street, as the Main Street Core MixedUse area. This is true today, with buildings ranging from one to three floors in height containing multi-family housing and commercial uses. This change was supported by the D-MU District and has resulted in residential occupancy on the upper floors of many buildings. New development has occurred such as The Lofts at 231 Main Street, an apartment building with commercial space on the ground floor. There is a wide variety of long-established and newer restaurants and specialty retail spaces on the ground floors of buildings in the Main Street Core Mixed-Use area. The remainder of Downtown Farmingdale, stretching from Prospect Street to Fulton Street continues to resemble a traditional downtown. Some properties including 450 Main Street, 725 Fulton Street and 385 Main Street feature on-site parking that fronts Main Street, resembling more traditional suburban commercial development. Aside from these properties, most still resemble a downtown environment, including Village Hall, the Village Green and the retail strip on the east

side of Main Street south of Grant Avenue. Multi-family housing is also present west of Main Street and along the south side of Fulton Street, which is consistent with the recommendations in the Downtown Master Plan.

2. Zoning & Bulk Requirements (D-MU District)

- Master Plan Reference: Zoning and Design Guidelines (Pages 16 - 22)
- Relevance to Team 2's Analysis:
- The FAR limit (2.0) and height restriction (3.5 stories or 36 feet) directly shape the scale and massing of the PAC.
- The 90% lot coverage restriction and 0' setbacks impact building placement and design efficiency.
- D-MU zoning permits cultural facilities, validating the site selection for the project.

Land Use and Zoning (Pages 16-22):

Places for people to live, work and shop are impacted by local zoning regulations. The 2011 Downtown Master Plan reviewed the Village's zoning code and how it was impacting land uses within the Village and determined whether changes needed to be made. This section reviews where zoning and land use policy was in 2011, what changes have been made since, and the results of these changes.

Zoning

The Village zoning ordinance can be found within Chapter 600 of the Farmingdale Village Code.⁴ In 2011, the Village had 13 total zoning districts, five of which were commercial and eight of which were residential. Both the Downtown area and a large portion of Fulton Street were within the Business D District (Figure 2). Given that Fulton Street and Main Street are contrasting types of roadways, the two corridors sharing a single zoning district was not appropriate. The Business D District allowed multi-family residential housing as a special use and was limited to the form of townhouses. These issues led to the recommendation that zoning

along Main Street be revised and tailored to the specific needs of a walkable downtown environment.

Today, there are still 13 total zoning districts within the Village. However, as shown on Figure 3, there is no longer a Business DD or Business H District. The Business DD District previously existed along portions of Fulton Street and Conklin Street and has since been replaced by the Business D District and the Senior Citizen Housing District (i.e., at 776-780 Fulton Street). The Senior Citizen Housing District has also expanded to encompass other areas of the Village including 262 Eastern Parkway, 689 Conklin Street, 625 Fulton Street and 461-481 Fulton Street. The Business H District only encompassed three parcels along the south side of Fulton Street, east of Main Street, and has since been rezoned to the Business D District.

The most significant change to zoning since 2011 was the addition of the Downtown Mixed-Use (D-MU) District, which now encompasses most of the Downtown area. The D-MU District contains all parcels adjacent to Main Street from just north of the railroad down to Richard Street. The D-MU District extends east along South Front Street/Atlantic Avenue as far as Oakview Avenue. The D-MU District also contains parcels in close proximity to Downtown intersections with Main Street, including North Front Street, Conklin Street, Prospect Street, and Grant Street. Previously, these areas were mostly within the Business D District with some areas also previously in the Residence B and Residence BB Districts.

Downtown Mixed-Use (D-MU) Zoning District

The rezoning of Downtown Farmingdale was the principal recommendation of the Downtown Master Plan.

The goal of the district was to remove barriers to revitalization, which the previous Business D zoning created through restrictive dimensional and use regulations. Before the rezoning, uses were limited to offices, hotels, retail stores, theaters, and personal services, while restaurants and residential townhouses were subject to a special use permit. These zoning restrictions were a barrier to the revitalization of Downtown Farmingdale with modern mixed-use TODs.

The D-MU District established three subdistricts, each intended to have different dimensional requirements for development. This results in the highest permitted density and scale in areas closest to the train station, with lower permitted densities and building heights moving south along Main Street. The three subdistricts are as follows:

- The Northern and Eastern Sub-Areas have the maximum permitted densities and building heights to encourage TODs and walkability given the proximity of the LIRR station. This includes Main Street between Conklin Street and Front Street, and South Front Street from Main Street to the Village line along the northern side of Eastern Parkway. The residential density allowed here is 40 units per acre, maximum building height of 36 feet and a floor area ratio (FAR) of 2.0.
- The Central Sub-Area, which includes Main Street between Prospect Street and Conklin Street, permits the same residential density and building heights as the Northern and Eastern Sub-Areas, with a lower maximum FAR of 1.5.
- The Southern Sub-Area, encompassing Main Street between Richard Street and Prospect Street, has the lowest permitted densities and building heights, with a residential density of 30 units per acre, building heights of 30 feet and a floor area ratio of 1.5.

The updated use regulations in the D-MU District allow for a wide range of commercial uses (e.g., retail stores, bakeries, pharmacies, health clubs and offices) on the ground floor of buildings. The upper floors of buildings are also permitted to have these commercial uses, in addition to multi-family dwellings, which require a special permit. Restaurants are allowed on the ground floor by special permit. Multi-family dwelling units are also allowed on the ground floor by special permit only when their entrances are provided at the rear of the building.

The D-MU District provides development incentives to encourage projects that offer extra amenities like parks, recreational facilities, streetscaping, landscaping or additional workforce or affordable housing units, among others. Incentives allow the Board of Trustees to alter dimensional requirements up to the following thresholds:

- Building heights to 40 feet (may be extended beyond architectural elements or building equipment)
- Densities in the Northern, Eastern, and Central Sub-Areas to 60 units per acre
- Density in the Southern Sub-Area to 45 units per acre
- Maximum building area coverage up to 90%
- Minimum dwelling unit size of 550 sf
- Any variance related to parking for residential components; or
- Greater floor area ratios

Understanding that the rezoning of Downtown Farmingdale to the D-MU district would likely stimulate interest in redevelopment, the Downtown Master Plan suggested the creation of a pattern book to direct architectural style and building form. As such, the Village adopted the Village of Farmingdale, New York Design Guidelines (the “Design Guidelines”). The Design Guidelines educate residents, developers, and design professionals about the community's vision for the built environment of Downtown Farmingdale. This document encompasses site and building design suggestions for mixed-use, multi-family, and corridor development, as well as preferred styles for commercial signage.

3. Parking & Transportation Improvements

- Master Plan Reference: Transportation and Parking (Pages 30-33)
- Relevance to Team 2’s Analysis:
- The PAC relies on shared municipal parking (Parking Field 3, LIRR lots, and street parking), aligning with the village’s transit-friendly vision.
- The project must address pedestrian connectivity from parking areas to ensure safe, well-lit walkways and clear wayfinding signage.

Transportation, Parking and Pedestrians (Pages 30-33):

Downtown areas on Long Island grapple with the challenge of balancing people, cars, and public transportation. The most successful downtowns strike a balance, creating a pedestrian-friendly environment that is easily accessible from surrounding areas. Achieving this balance was a key objective of the Downtown Master Plan. In the years since its adoption, numerous infrastructure improvements have been implemented, moving the Village closer to achieving this goal.

Transportation Issues Identified in the 2011 Downtown Master Plan

The successful revitalization of Downtown Farmingdale would inevitably attract new residents and visitors to the Village. While this is a positive development, concerns were raised about potential impacts on traffic volumes, particularly along Main Street. At the time the Downtown

Master Plan was prepared, Main Street, a two-way road with on-street parking, had a curb-to-curb width of 32 feet, posing challenges to improving traffic. The plan identified the intersections of Main Street with Conklin Street, South Front Street, and Fulton Street as crucial to downtown traffic conditions and most susceptible to potential congestion from revitalization efforts. The Downtown Master Plan also examined the four largest municipal parking lots and on-street parking, which is permitted along most of Main Street. Surveys conducted in these areas revealed that only about half of these parking spaces were occupied during weekdays and weekends, suggesting ample parking capacity for future demand. The situation was starkly different for LIRR parking lots, which were fully utilized during peak weekday times. These lots, located on both sides of the train tracks, require a Village of Farmingdale permit for weekday commuter use. Given that the Village's major appeal lies in its train station and proximity to New York City, accommodating additional LIRR parking demand was identified as a top priority.

Changes to Transportation Conditions

The Downtown Master Plan acknowledged that implementation would result in an increase in residential units, offices, retail spaces, restaurants, and community facilities. Each of these developments would generate additional vehicular trips at varying levels, thereby placing increased demand on the transportation infrastructure. As previously mentioned, the primary areas of concern were the intersections of Main Street at Conklin Street, South Front Street, and Fulton Street. In the years following the Downtown Master Plan, the Village has implemented several initiatives to enhance transportation infrastructure and traffic circulation.

Intersection of Main Street and Conklin Street

The most significant change implemented at this intersection was one that was recommended in the Downtown Master Plan. Previously, delays would occur in the northbound/southbound direction as the roadway width did not accommodate a dedicated left-turn lane, causing vehicles to wait until they could safely cross traffic. The solution, and the preferred one in the plan, involved the removal of on-street parking for approximately 100± feet on both sides of Conklin Street in the north-south direction to create enough room for two dedicated left-turn lanes. The Village implemented this solution in 2015, improving traffic flow at the intersection while minimizing impacts on parking and sidewalk space. Other recommendations in the plan included restricting commercial delivery hours along the curb lane of eastbound Conklin Street,

approaching Main Street, to create a right-turn lane during certain times of the day. A similar approach was recommended for the westbound lane approaching Main Street by removing some on-street parking. Neither of these recommendations have been implemented to-date.

Intersection of Main Street and South Front Street

The at-grade crossing of the LIRR is the most significant variable affecting traffic conditions at this intersection. Given the Village's limited control over this crossing, changes to traffic behavior during a train crossing were restricted. However, improvements were still made to enhance conditions when a train is not crossing. The development of Fairfield Metro led to a road widening along South Front Street between Elizabeth Street and Secatogue Avenue. This was a recommendation made in the Downtown Master Plan, as previously the width of South Front Street was different along its length, which caused traffic congestion.

Intersection of Main Street and Fulton Street

The Downtown Master Plan identified the intersection of Main Street and Fulton Street as having greater capacity to handle vehicular traffic as compared to other Downtown intersections. This is due to Main Street's width and its ability to accommodate more than one travel lane heading south. Consequently, the plan made no recommendations for this area, and little has changed besides routine maintenance such as repaving and striping.

Changes to Parking

The revitalization of Downtown Farmingdale anticipated not only an increase in vehicular traffic entering the Village, but also the need for these vehicles to find parking. Adequate and efficient parking also encourages people to leave their cars and explore downtown shops and restaurants. The Downtown Master Plan analyzed three types of parking: on-street parking, municipal parking lots, and the Farmingdale LIRR lots. Recommendations and improvements were proposed for each of these areas.

On-Street Parking

The Downtown Master Plan advised against eliminating on-street parking beyond the minimum necessary to enhance traffic conditions. It was deemed that on-street parking was too valuable to local stores and the pedestrian experience to be significantly reduced. Over the years, the

Village has successfully preserved most of its on-street parking. In areas where on-street parking has been removed, such as near the intersection of Main Street and Conklin Street, it has been limited and reserved for projects that yield significant beneficial impact, such as improving traffic flow.

Municipal Parking Lots

The Downtown Master Plan's recommendations for public parking lots were applicable to all seven municipal lots within the Village. The focus was on enhancing the aesthetics of these areas and improving wayfinding, both of which the Village has acted upon. To improve aesthetics and wayfinding, the Village has installed decorative entrances to parking lots, complete with plantings and signage indicating the parking field number. Over \$5 million has been invested in parking, with repairs carried out on Fields 1-4. These are the same lots highlighted in the Downtown Master Plan. Each of these lots received new paving, signage, lighting, and plantings. Additionally, parking meters have been installed in municipal lots, regulating approximately 850 spaces. Parking is free for residents and metering is enforced during peak hours, which are Mondays through Saturdays between 5:00 p.m. and 1:00 a.m. The Village has partnered with PayByPhone, an app allowing visitors to pay their parking fee from their mobile device and find the nearest lot on a map, thereby integrating technology into wayfinding efforts. While the Downtown Master Plan projected sufficient parking capacity, revitalization efforts have generated significant interest in the area, with many visitors flocking to the Village for dining and shopping opportunities. Peak parking demand occurs on Friday and Saturday, between 5:00 p.m. and midnight, and Sunday afternoon. To accommodate demand, the Village has added approximately 1,099 parking spaces for a total of 1,945 parking spaces in the Downtown area. 400 of these spaces were created through parking lot renovations, and lot acquisitions, including the purchase of a vacant property near 145 Main Street to create a new parking lot with approximately 50 spaces. An additional 699 spaces were created by residential housing developments which provide off-street parking for residents. With continued investment in parking infrastructure, it is anticipated that the Village will maintain an adequate supply of parking for both residents and visitors.

Farmingdale LIRR Parking

The Downtown Master Plan noted that the parking lots used for the LIRR, both north and south of the train tracks, were at full capacity. The plan recommended creating additional space by allowing 12-hour parking in Parking Field 3 and along nearby roadways, or by constructing a parking structure. However, in 2020, the Coronavirus pandemic caused a significant shift in commuting and work patterns, with many people shifting to full-time or hybrid work-from-home schedules. Recent estimates from Village officials suggest that the Farmingdale LIRR station has not yet returned to its pre-pandemic capacity. At present, peak parking in both lots occurs on Tuesday, Wednesday, and Thursday, with lots reaching approximately 80 percent capacity. To-date, few changes have been implemented, and parking in both of these lots remains restricted to permit holders during commuting hours. It is noted that recent TODs help position residents within walking distance of the Farmingdale LIRR, reducing the need to drive to the train station. These TODs also provide on-site parking for their residents, reducing the demand for municipal, on-street and private parking spaces across Downtown Farmingdale.

4. Pedestrian Connectivity & Public Space

- Master Plan Reference: Public Spaces and Streetscapes (Pages 33-35)
- Relevance to Team 2's Analysis:
- The PAC site is within a walkable radius of Main Street and the LIRR station, reinforcing the need for safe pedestrian corridors and wayfinding.
- The potential site expansion could allow for an outdoor gathering space, aligning with public space activation goals.

Changes to the Pedestrian Environment (Pages 33-35):

Successful downtowns are characterized by their ability to promote pedestrian activity and foster interactions with the built environment. When the Downtown Master Plan was drafted, the Village already had a strong foundation to build upon. Both sides of Main Street had sidewalks and on-street parking served as a buffer between the sidewalks and roadway. As such, the plan's recommendations were primarily focused on improving roadway crossing safety and enhancing connections between Main Street and the LIRR station.

While the narrow roads in Downtown Farmingdale do not pose a significant challenge to crossing in terms of distance, there was a need to enhance pedestrian visibility to motorists. Additionally, in 2011, most intersections were not adequately equipped to support individuals with visual or physical limitations. To address this, the Village has restriped all crosswalks along Main Street and installed high visibility "yield to pedestrian" signs at most intersections, and improved pedestrian ramps. The Village has replaced nearly all of the pedestrian ramps along Main Street with smooth concrete and tactile landing pads. This provides a textural transition to indicate where the sidewalk ends for those with vision impairments, while also creating a smooth grade transition for those with physical limitations (Photo 19). Replacements have been made at Main Street's intersections with Front Street, Cornelia Street, Conklin Street, Prospect Street, Grant Avenue, and Richard Street. Furthermore, while the Downtown Master Plan suggested the potential use of curb bump-outs, it acknowledged their limitations given the existing width of Main Street. To date, bump-outs have not been installed, and in areas such as Conklin Street, they are not feasible due to the need to maintain dedicated turn lanes to improve traffic flow.

Connectivity, particularly to the train station, was a major focus of the Downtown Master Plan. The most direct route between Main Street and the LIRR station is South Front Street, which runs parallel to the train tracks. In 2011, the width of South Front Street west of Elizabeth Street differed from that east of Elizabeth Street. This resulted in misaligned sidewalks and a poor physical condition of the roadway, creating an uninviting pedestrian experience. The development of the Fairfield Metro apartment complex led to the widening of South Front Street east of Elizabeth Street, allowing for a uniform roadway and sidewalk width between the LIRR station and Main Street. Furthermore, the design of the building, coupled with improvements to Parking Field 3, have enhanced the aesthetics of the area, making it more appealing to pedestrians.

In addition to the LIRR station, the Village has also focused on improving connectivity in other areas. Specifically, Village Parking Fields 1-4 are all located behind storefronts along Main Street. While this is good downtown design, it creates lengthy walking distances along roadways to reach Main Street. The solution has been to create attractive, pedestrian-only pathways. A significant acquisition by the Village was the purchase of 254 Main Street. The existing building was demolished and replaced with an attractive, landscaped alleyway providing a direct path

between Parking Field 1 and Main Street (Photo 20). Improvements have also been made to the Village Green, which provides a pedestrian path between Parking Field 4 and Main Street. Other infrastructure elements in Downtown Farmingdale, such as building facades, sidewalks, and utility lines, also impact the pedestrian experience. These are discussed further in the Public Infrastructure and Utilities section below.

5. Environmental & Stormwater Management

- Master Plan Reference: Environmental Sustainability (Pages 35-38)
- Relevance to Team 2's Analysis:
- The PAC must incorporate stormwater retention solutions due to the high lot coverage (90%) and impervious surfaces.
- Potential strategies include bioswales, permeable pavement, and rooftop drainage systems to comply with village environmental regulations.

Public Infrastructure and Utilities

Public infrastructure and utilities form the backbone of a thriving downtown. The Downtown Master Plan inventoried public infrastructure in Downtown Farmingdale, assessed their condition, and identified necessary improvements. This section outlines the implemented changes, their effects, and plans for further enhancements.

Water Supply System and Capacity

At the time of the Downtown Master Plan, the Village was responsible for water services, sourced from three wells. There were concerns about the system's limited capacity to support additional development and its ability to source water from nearby districts in emergencies. Additionally, several state and federal superfund sites north of the Village raised concerns about future water quality. As such, the capacity and safety of the Village's water system were identified as key issues in the Downtown Master Plan. According to the 2022 Village of Farmingdale Drinking Water Quality Report, 8 the

Village supplied water to 8,550 residents through three wells, pumping 382.12 million gallons of water annually. The quality of this water has been a growing concern, as the New York State Department of Health found all three wells highly susceptible to industrial solvents, and two wells highly susceptible to nitrates. Despite no violations from the Nassau County Department of Health in 2022, the Village has taken proactive measures to address water quality concerns. The Village is currently installing treatment systems for the removal of 1,4-Dioxane and PFAS9 compounds at municipal water plants. The Village is also investing \$20 million in filtration plants at municipal wells, supported by \$3 million in state water grants. In terms of water capacity, the Village has managed to support recent development, including several multi-family housing projects. The Village spent \$700,000 to install new booster pumps to improve service to areas with previously low pressure. The Village also recently replaced its 60-year-old water tower with a new, \$6 million glass-fused tank. The new tank requires less maintenance and ensures the same level of water storage as the old tank, which held 500,000 gallons.¹⁰ The Village also received a grant of \$124,727 from Nassau County to purchase a new generator for the Water Department, ensuring service continuity in emergency situations.

Sanitary Sewer System and Capacity

The Village remains under the service of Nassau County Sewer District No. 3. Sanitary waste is transported to the Cedar Creek Water Pollution Control Plant, operated by the Nassau County Department of Public Works (NCDPW). This facility, capable of handling 72 million gallons per day,¹¹ has managed the additional sanitary wastewater produced by new developments within the Village. It is anticipated that this facility will continue to serve the Village in the future.

Stormwater Drainage

Stormwater drainage in the Village is primarily managed by storm drains along the rights-of-way of the Village Department of Public Works, New York State Department of Transportation, and NCDPW. The Village operates under a municipal separate

stormwater sewer system (MS4) Permit, which allows stormwater to be conveyed and discharged into local waterways. As part of the MS4 permit, the Village maintains a Stormwater Management Plan (SMP) aimed at reducing pollutant discharge into waterways to the maximum extent practicable. The Downtown Master Plan and the DGEIS/BOA Nomination Study indicated that the Downtown Area, being largely built out, already has an existing stormwater management system to handle runoff. Therefore, no major improvements were recommended except for addressing isolated flooding during heavy rain events. Localized flooding issues in Downtown Farmingdale have been addressed as repairs and improvements are made to parking lots and roadways, which have resulted in the replacement of stormwater drainage structures.

Electricity and Natural Gas

Since the creation of the Downtown Master Plan, the Long Island Power Authority (LIPA) has entered a management contract with PSEG Long Island, which is now the primary provider of electrical service to the Village. National Grid continues to supply natural gas. The Downtown Master Plan did not recommend any changes to these systems, and new developments are required to provide availability letters from each service provider. The most significant change to these systems has been the burying of overhead power lines along Main Street, between Prospect Street and Conklin Street. This project, aimed at improving resilience and beautification, also facilitated an 18-inch widening of this section of Main Street and improvements to the sidewalk. This project was largely funded by federal Community Development Block Grant funds (CDBG) and State grants.¹² The next phase of this utility burial project will occur in 2024 for the portion of Main Street from Conklin Street to South Front Street.

Parks and Open Space

The Downtown Master Plan identified four open space parcels totaling 1.1 acres in the Downtown area. The plan recognized the need for better utilization of these spaces. The most significant improvement has been made to Five Corners Park, located at the corner of Main Street and Melville Road. This park serves as a northern gateway to the

Village's Downtown, and its appearance can significantly impact people's perception of the entire Village. A \$150,000 grant from Nassau County was used to install a new gazebo, lighting, landscaping, outdoor furniture, and new signage. Completed in 2022, this project has significantly enhanced the northern gateway to the Village. The Village Green has also been improved with added landscaping and new pathways, supporting various events. The Village Green hosts the local farmers' market, holiday celebrations, art shows, and movie nights, making it a vital community space.

Appendix 4 - Program Summary spreadsheet, net and gross areas

Program Summary spreadsheet, net and gross areas

Size estimation for average size for proposed performance center

(Black Box Theater) - Phase I

	Proposed/ Guesstima ting					
Space	Size Considerat ions (sq. ft.)	Theater1: Emerson College	Theater 2: (Hofstra Uni)	Suny standards	Theater 4- Tabler Center	Calculated Average Sizing
Box Office	100-150	N/A	N/A	60		
Reception Area	200-300	769 total	450	~750 total	1566 total	~885
Customer Service	100-150	*Check occupancy code for lobby	N/A			
Auditoriu m/Theater Proper	2500-3000	2307 total	3200 total	16 sq ft. per station	4000 total including other	~3380 total
Stage Area	1200-1800			4000	programs	
Flex-Multi Function with Dressing Room	500-1000	tot:632/2 drss.rooms = 316	2400 total	360 per location	tot: 359/2rms.=1 79 avg	~940
Green Room with Vending Area	300-400	N/A	200 total	600/12 sq.foot per station	128	~310
Laundry/W ardrobe	300-500	N/A	N/A	120	N/A	~N/A
Pantry	150-250	53	N/A	80	N/A	66.5
Common Areas/Circ ulation Areas	Varies (20- 30% of total floor area)	Varies	Varies	varies	4600	Varies
Toilet Facilities	Varies per occupancy count	tot: 861/8 bth = 106.3 average	Tot:1,240/ 4 bth =	varies	tot: ~361/4=90.2 5 avg.	Tot:820

			310 average			
Storage Area	200-400	tot:253/3 strg.rooms = 84.33 avg.	N/A	1200	1083	~850
General Storage	500-800	tot: 173/2 gen strg. =86.5 avg	N/A	750	186	~370
Loading Dock	500-1000	68	80	as required	N/A	As required
Fire Escape/Stairs	Per building code	N/A	As required	as required	N/A	As required
Admin Office	200-400	302	96	180 sq. foot per station	265	~210
Passenger Elevator	Per ADA requirements	29	80	as required	120	~80(as required)
Service Elevator	Per equipment needs	79	96	as required	N/A	As required
Utility Areas & Support Facilities	300-600	2,599	300	1200	tot: 1788/4rms = 420 avg.	1470
total	~ 8,000 - 11,000	~10211	~10,000	~11300	~20000* including other programs not listed	13,400 sq.ft

The calculation of the average square footage for the proposed Performing Arts Center was a systematic process that combined project requirements, industry benchmarks, and regulatory considerations. The Project Brief outlined the essential spaces, including the auditorium, stage, green room, and box office, etc., detailing their functions, adjacencies, and approximate size ranges. These requirements served as the foundation for the calculations.

Using the Space Analysis Spreadsheet (Table 1.2), size estimates were refined by referencing comparable facilities, such as Emerson College Theater, Hofstra University's Black Box Theater, Stony-brook's Tabler Center as well as SUNY standards. For spaces with multiple references, averages were calculated to determine reasonable sizes. For example, the total space was calculated by averaging 10,211 sq. ft. (Emerson), 11,300 sq. ft. (SUNY), and 20,000 sq.ft. (Tabler Center) resulting in 13,400 sq. ft. For spaces without direct references, estimations were made based on typical usage scenarios and adjacency needs.

The final estimated size for the Performing Arts Center was calculated to be approximately **13,400** square feet.

Justification of Gross Floor Area (GFA)

The GFA of 13,400 sq. ft. was determined based on spatial requirements outlined in the Black Box Theater Space Analysis (Space Considerations section). Key allocations include:

Theater/Auditorium: 2,500–3,000 sq. ft.

Box Office & Reception: 300–450 sq. ft.

Lobby & Customer Service: 100–150 sq. ft. (adjusted for occupancy requirements)

Backstage & Support Areas: Sized according to industry benchmarks from Emerson College, Tabler Center, and SUNY standards.

The final GFA reflects an optimized layout that balances functionality, industry best practices, and institutional guidelines to support an efficient and well-designed performance space.

Potential Conflicts and Challenges to be addressed

1. Occupancy & Exits

- a. Minimum two exits required for spaces over 1,500 sq ft or 75+ occupants (NYSBC 1006.2).
- b. The stairway width must be at least 48 inches (NYSBC 1009.3.2).
- c. Maximum travel distance to an exit: 100 feet (NYSBC 1006.2.1).

2. Seating & Accessibility

- a. Designated wheelchair seating required (NYSBC 1108.2.2).
- b. Aisle widths must be at least 36 inches for egress (NYSBC 1029.9).
- c. Ramps needed for raised stages (NYSBC 1012).

3. Restroom Fixtures

- a. Women's restrooms: 1 toilet per 200 occupants.
- b. Men's restrooms: 1 toilet + 1 urinal per 200 occupants.
- c. At least one ADA-compliant stall in each restroom.

4. Fire Safety & HVAC

- a. Sprinkler system required for Assembly Group A-1 (NYSBC 903.3.1.1).
- b. Fire-rated storage areas for equipment (NYSBC Chapter 7).
- c. HVAC ventilation required for dressing rooms and pantry (NYS Mechanical Code).

Appendix 5 - Program Attributes summary (by room)

Program Attributes summary (by room)

Blackbox Theater Space Analysis: Layout, Functions, and Design Considerations

Space	Location & Adjacency	Functionality	Potential Red Flag Issues	Equipment & Ancillary Needs
Box Office	Near main entrance, adjacent to reception	Ticket sales, information desk	High noise level	Computers, ticketing system
Reception Area	Near box office, entry vestibule	Greets visitors, directs traffic	Potential crowding	Seating, guest management tools
Customer Service	Adjacent to reception and box office	Handles inquiries, complaints	High noise from complaints	Phones, service desks
Auditorium /Theater Proper	Central location, connected to stage	Audience seating (130-180 people), flexible arrangement	Egress bottleneck	Sound system, stage lighting, retractable seating
Stage Area	Directly connected to auditorium, backstage access	Performance area, adaptable for different sets	Sound bleed to audience	Overhead rigging, curtain system, lighting grid
Flex-Multi Function w/ Dressing Room	Near stage & green room	Multi-use rehearsal, warm-up, dressing area	Limited space for activities	Mirrors, dance floor, adjustable lighting
Green Room	Close to stage and dressing rooms	Waiting area for performers	Insufficient waiting space	Lounge seating, vending machines
Laundry/Wardrobe	Near dressing rooms	Costume cleaning, repairs, storage	Ventilation issues	Industrial washer/dryer, storage racks
Pantry	Near green room and staff areas	Food and drink prep for staff	Limited space	Fridge, microwave, cabinets

Common Areas/Circulation Areas	Throughout, connecting public and backstage	Movement, waiting, gathering space	Potential congestion	Directional signage, digital screens
Toilet Facilities	Near public spaces & backstage	Restrooms for guests and performers	Not enough for peak usage	ADA-compliant stalls, hand dryers
Storage Area	Near stage & backstage	Quick-access storage for props and equipment	Lack of accessible quick-access storage	Shelving, mobile storage
General Storage	Separated but accessible	Large-item storage, set materials	Too far from main areas	Large shelving, pallet storage
Loading Dock	Backstage, separate from public areas	Set and equipment delivery	Interferes with emergency egress	Roll-up doors, pallet jacks
Fire Escape/Stairways	Throughout, per code	Emergency egress	Must meet fire code	Emergency lighting, stairway signage
Admin Office	Separated from stage/auditorium noise	Theater operations, management	May be too close to noise areas	Desks, computers, management software
Passenger Elevator	Public circulation areas	Audience accessibility	Elevator capacity limits	ADA-compliant controls
Service Elevator	Backstage/storage /loading dock	Equipment transport	Potentially limited load capacity	Large-capacity lift systems
Utility Areas & Support Facilities	Throughout	HVAC, electrical, mechanical, janitorial	HVAC system placement must be optimized	HVAC panels, mechanical access

Blackbox Theater: Accessibility, Activity, & Noise Level Rankings

By Accessibility (Most Public to Most Private)		By Level of Movement and Activity (Most to Least Active)		By Noise Level (Loudest to Quietest)	
1Box Office – Open to all patrons, first point of contact.	1Common Areas/Circulation – Constant movement of guests and staff.	1Auditorium/Theater Proper – Performances, audience reactions, sound effects.			
2Reception Area – Public-facing, where guests gather and ask for information.	2Auditorium/Theater Proper – Audience entering, exiting, and engaging with performances.	2Stage Area – Rehearsals, live performances, technical operations.			
3Customer Service – Open to the public, but slightly more controlled access.	3Stage Area – High energy during performances and rehearsals.	3Loading Dock – Trucks, heavy equipment, large set movements.			
4Common Areas/Circulation – Public and staff move freely through these spaces.	4Box Office – Frequent customer flow, high turnover.	4Flex-Multi Function with Dressing Room – Group rehearsals, vocal warmups, costume changes.			
5Auditorium/Theater Proper – Primarily for the audience, requires a ticket.	5Reception Area – Guest arrivals, ticket checks, general inquiries.	5Box Office – Constant customer interaction, ticketing.			
6Toilet Facilities – Publicly accessible but controlled.	6Customer Service – Busy with problem-solving and guest interactions.	6Customer Service – Phone calls, problem-solving discussions.			
7Passenger Elevator – Accessible to all, though limited in use.	7Loading Dock – High movement during set deliveries and stage changes.	7Reception Area – General guest interactions and crowd movement.			
8Green Room with Vending Area – Limited to performers and production staff.	8Flex-Multi Function with Dressing Room – Moderate movement from performers and staff.	8Green Room with Vending Area – Moderate noise from performer conversations.			
9Stage Area – Restricted to performers and crew.	9Green Room with Vending Area – Movement but at a relaxed pace.	9Common Areas/Circulation – Background noise from people moving and socializing.			
10Flex-Multi Function with Dressing Room – Backstage use only.	10Laundry/Wardrobe – Some movement, primarily staff.	10Pantry – Casual staff conversations and food preparation sounds.			
11Laundry/Wardrobe – Staff-only area for costume management.	11Toilet Facilities – Moderate but periodic activity.	11Laundry/Wardrobe – Machines running, moderate conversation.			
12Admin Office – Restricted	12Pantry – Small number of people in and out throughout the day.	12Toilet Facilities – Some noise from plumbing, but mostly quiet.			
13Pantry – Internal use, limited to staff and performers.	13Admin Office – Office work, minimal movement.	13Admin Office – Office chatter, phone calls, but relatively controlled.			
14Fire Escape/Stairs – Emergency use, restricted during normal operations.	14Storage Area – Periodic access for set and prop retrieval.	14Storage Area – Occasional movement of props and equipment.			
15Storage Area – Limited access, primarily crew and production staff.	15General Storage – Less frequent access.	15General Storage – Minimal noise, mostly passive.			
16General Storage – More restricted, usually for long-term storage.	16Utility Areas & Support Facilities – Minimal movement, mainly maintenance staff.	16Utility Areas & Support Facilities – Occasional mechanical sounds.			
17Utility Areas & Support Facilities – Limited to maintenance staff.	17Service Elevator – Used intermittently.	17Fire Escape/Stairs – Only used during emergencies or as an alternate route.			
18Service Elevator – Staff and logistics use only.	18Passenger Elevator – Moderate use, but mostly stationary.	18Service Elevator – Used for backstage logistics, occasional operation noise.			
19Loading Dock – Strictly operational, no public access.	19Fire Escape/Stairs – Only used in emergencies.	19Passenger Elevator – Quietest, used for general access.			

Appendix 6 - Program Cost Projection

Program Cost Projection – Phase II

Budgeting Cost Breakdown

ARC476-Project Cost Planning			Farmingdale State College	
Performing Arts Center - Rising Portal			5/19/2025	
Allocations			Comments	
Project Total		\$ 11,511,651	cell D5 is linked to Worksheet 2	
	% Project			
Construction	75%	\$ 8,633,738	enter construction type and use group	
Design Contingency	5%	\$ 575,582.56		
Project Contingency	5%	\$ 575,582.56		
Architects Fees	7%	\$ 805,815.58		
Pre-Design Services	3%	\$ 345,349.54		
Building Permits	3%	\$ 345,349.54		
Reimbursable Expenses	2%	\$ 230,233.02		
	100%	\$ 11,511,651		
ENTER GROSS SQUARE AREA=	10700		cell B16 linked to Worksheet 2	
	GSF	cost per GSF		
Project construction cost per GSF	10,700	\$ 807		
Project costs per GSF	10,700	\$ 1,076		

The budget for the Black Box Theater was developed using the Cost Projection Model, estimating a total cost of \$11.51 million. This calculation is based on a Gross Floor Area (GFA) of 10,700 sq. ft., with a project construction cost per GSF of \$807.00 and project cost of \$1,076.00, as detailed in the Project Worksheet.

ARC476-Project Cost Planning
Performing Arts Center - Rising Portal

Farmingdale State College
19-May-25

NEW CONSTRUCTION/RENOVATION		Gross Square Area	Cost per GSF	Cost by Task/Facility
New Construction for project Type IIA Use Group A-1		10700	\$ 452	\$ 4,839,566.52
Site Improvements - hardscape	Impervious Surfaces	4555	\$ 20	\$ 91,100.00
Site Improvements - landscape	Landscaped Areas	670	\$ 15	\$ 10,050.00
Tariff 25% increase materials = 10% increase costs		15930	\$ 24	\$ 382,320.00
Premium cost for unique circular structure		2392	\$ 542	\$ 1,297,420.80

Subtotal, Project Construction, Fees, and Contingency **\$ 6,620,457.32**

FACTORS- select and enter =F9 in selected cell	Subtotal	x Factor	
Project Costs - Less than \$1 million	\$ -	5%	\$ -
Project Costs - More than \$1 million	\$ 6,620,457.32	-3%	\$ (198,613.72)
Labor availability- Slow Market	\$ 6,620,457.32	-5%	\$ (331,022.87)
Labor availability - Tight Market		7%	\$ -
Labor availability - Union requirements	\$ 6,620,457.32	20%	\$ 1,324,091.46
Location - Incorporated Area	\$ 6,620,457.32	2%	\$ 132,409.15
Location - Unincorporated Area		-2%	\$ -
Job site - Business Area	\$ 6,620,457.32	-2%	\$ (132,409.15)
Job site - Residential Area	\$ 6,620,457.32	5%	\$ 331,022.87
Job site - Limited Staging	\$ -	5%	\$ -
Job site - Occupied by Owner		7%	\$ -
Renovation - No Intrusive Tests	\$ -	10%	\$ -
Renovation - Intrusive Exploration	\$ 6,620,457.32	-3%	\$ (198,613.72)
Project Fees - Simple Project		-1%	\$ -
Project Fees - Complex Project	\$ 6,620,457.32	5%	\$ 331,022.87
NYS Building Code Transition - simple project	\$ -	5%	\$ -
NYS Building Code Transition - complex project	\$ 6,620,457.32	7%	\$ 463,432.01

Subtotal, Factors **\$ 1,721,318.90**

Overhead and Profit 20% of subtotals **\$ 1,668,355.24**

SUBTOTAL, CONSTRUCTION+FEES+FACTORS+OVERHEAD/PROFIT **\$ 10,010,131.46**

Years to
Midpoint

Escalation Previous Subtotal x 5% x no. of years to midpoint construction 1.5 **\$ 1,501,519.72**

TOTAL PROJECT ESTIMATE= **\$ 11,511,651.18**

PROJECT COST PER GROSS SQUARE FOOT

Type of Project	Category	Cost per GSF	Factors		
			Professional Fees (see note 1)	Project Management Fees (cost per GSF x.02)	Project Cost per GSF
Residential-Type I	New Construction	\$ 414.95	\$ 29.05	\$ 8.30	\$ 452
Site Improvements - hardscape	Impervious Surfaces	\$ 15.00	\$ 1.05	\$ 0.30	\$ 16
Site Improvements - landscape	Landscaped Areas	\$ 10.00	\$ 0.70	\$ 0.20	\$ 11

note 1 : cost per GSF x .07 for new construction, cost per GSF x .1 for renovation

JOB FACTORS TO ADJUST TOTAL PROJECT COST

Description	Condition	Add/Subtract	Comments
Location	Incorporated Area	2%	More frequent inspection and oversight by
			Less frequency of inspection than in small
Location	Unincorporated Area	-2%	villages and municipalities
Job site	Business Area	-2%	Less conflict with commercial activities
Job site	Residential Area	5%	Constraints on operations due to noise,
Job site	Limited Staging	5%	No area or remote area for laydown,
Job site	Occupied by Owner	7%	Potential for owner generated changes
Labor availability	Slow Market	-5%	Aggressive bidding
Labor availability	Tight Market	7%	Lack of labor availability, especially
Labor - prevailing wage	Project labor agreement	15%	Prevailing wage - union scale
Renovation	No Intrusive Tests	10%	Potential for major unforeseen conditions
Renovation	Intrusive Exploration	-3%	More detail for bids
Project Costs (subtotal construction)	Less than \$1 million	5%	Overhead vs. volume
Project Costs (subtotal construction)	More than \$1 million	-3%	Overhead vs. volume
Project Fees	simple project	-1%	Overhead vs. volume
Project Fees	complex project	5%	Overhead vs. volume
NYS Building Code Transition	simple project	5%	Overhead vs. volume
NYS Building Code Transition	complex project	7%	Overhead vs. volume

Group (2024 International Building Code)

Use Groups	IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB
A-1 Assembly, theaters, with stage	337.41	325.40	315.80	303.35	283.46	275.24	292.98	264.14	254.04
A-1 Assembly, theaters, without stage	309.77	297.76	288.16	275.71	256.07	247.85	265.35	236.75	226.65
A-2 Assembly, nightclubs	269.42	261.52	253.31	243.65	228.21	222.01	235.29	207.53	199.66
A-2 Assembly, restaurants, bars, banquet halls	268.42	260.52	251.31	242.65	226.21	221.01	234.29	205.53	198.66
A-3 Assembly, churches	314.40	302.40	292.80	280.35	260.82	252.61	269.98	241.51	231.40
A-3 Assembly, general, community halls, libraries, museums	264.03	252.03	241.42	229.98	209.33	202.12	219.61	190.01	180.91
A-4 Assembly, arenas	308.77	296.76	286.16	274.71	254.07	246.85	264.35	234.75	225.65
B Business	298.43	287.83	277.50	265.76	242.70	234.06	255.55	216.90	206.96
E Educational	282.06	272.26	263.65	252.74	235.87	223.82	244.04	206.65	200.02
F-1 Factory and industrial, moderate hazard	164.17	156.25	146.41	140.89	125.45	119.36	134.33	104.02	96.87
F-2 Factory and industrial, low hazard	163.17	155.25	146.41	139.89	125.45	118.36	133.33	104.02	95.87
H-1 High Hazard, explosives	153.17	145.25	136.41	129.89	115.76	108.67	123.33	94.33	0.00
H234 High Hazard	153.17	145.25	136.41	129.89	115.76	108.67	123.33	94.33	86.17
H-5 HPM	298.43	287.83	277.50	265.76	242.70	234.06	255.55	216.90	206.96
I-1 Institutional, supervised environment	274.98	265.13	255.66	246.00	225.17	219.12	245.49	202.80	195.56
I-2 Institutional, hospitals	469.18	458.58	448.25	436.51	411.45	0.00	426.30	385.65	0.00
I-2 Institutional, nursing homes	323.68	313.08	302.75	291.01	269.45	0.00	280.80	243.65	0.00
I-3 Institutional, restrained	314.93	304.33	294.00	282.26	261.70	252.06	272.05	255.55	223.96
I-4 Institutional, day care facilities	274.98	265.13	255.66	246.00	225.17	219.12	245.49	202.80	195.56
M Mercantile	201.08	193.18	183.97	175.31	159.52	154.32	166.95	138.84	131.97
R-1 Residential, hotels	278.14	268.29	258.82	249.16	227.83	221.78	248.64	205.46	198.22
R-2 Residential, multiple family	232.26	222.41	212.94	203.28	183.19	177.15	202.77	160.82	153.58
R-3 Residential, one- and two-family	215.90	210.16	205.11	200.73	194.02	187.11	204.78	180.41	169.09
R-4 Residential, care/assisted living facilities	274.98	265.13	255.66	246.00	225.17	219.12	245.49	202.80	195.56
S-1 Storage, moderate hazard	152.17	144.25	134.41	128.89	113.76	107.67	122.33	92.33	85.17
S-2 Storage, low hazard	151.17	143.25	134.41	127.89	113.76	106.67	121.33	92.33	84.17
U Utility, miscellaneous	117.65	110.72	103.00	98.58	87.79	82.02	93.83	69.49	66.20

from Building Valuation Data, International Code Council FEB 2025

SELECT USE GROUP AND CONSTRUCTION TYPE; USE COST PER SF = \$ 288.16 Type

ENTER LOCATION FACTOR FROM TABLE = 1.44 See Metro Area Multiplier

THIS IS THE ADJUSTED SF COST FOR THE PROJECT TYPE = \$ 414.95 Type

Program Cost Projection – Phase I

Budgeting Cost Breakdown

ARC476-Project Cost Planning Black Box Theater		Farmingdale State College enter date	
Allocations		Comments	
Project Total			\$ 12,802,113
Construction	% Project 75%	\$ 9,601,584	A-1 Type IIB
Design Contingency	5%	\$ 640,105.63	
Project Contingency	5%	\$ 640,105.63	
Architects Fees	7%	\$ 896,147.88	
Pre-Design Services	3%	\$ 384,063.38	
Building Permits	3%	\$ 384,063.38	
Reimbursable Expenses	2%	\$ 256,042.25	
	100%	\$ 12,802,113	
ENTER GROSS SQUARE AREA=		13400	
	GSF	cost per GSF	
Project construction cost per GSF	13,400	\$ 717	
Project costs per GSF	13,400	\$ 955	

ARC476-Project Cost Planning Black Box Theater		Farmingdale State College enter date	
NEW CONSTRUCTION/RENOVATION			
	Gross Square Area	Cost per GSF	Cost by Task/Facility
Assembly Type IIB New Construction for project	13400	\$ 428	\$ 5,740,158.00
Assembly Type IIB New Construction for project		\$ -	\$ -
Site Improvements - hardscape	Impervious Surfaces 32600	\$ 20	\$ 652,000.00
Site Improvements - landscape	Landscaped Areas 14000	\$ 15	\$ 210,000.00
Subtotal, Project Construction, Fees, and Contingency			\$ 6,602,158.00
FACTORS- select and enter =F9 in selected cell		Subtotal	x Factor
Project Costs - Less than \$1 million		\$ -	5% \$ -
Project Costs - More than \$1 million		\$ 6,602,158.00	-3% \$ (198,064.74)
Labor availability- Slow Market		\$ -	-5% \$ -
Labor availability - Tight Market		\$ 6,602,158.00	7% \$ 462,151.06
Labor availability - Union requirements		\$ 6,602,158.00	20% \$ 1,320,431.60
Location - Incorporated Area		\$ 6,602,158.00	2% \$ 132,043.16
Location - Unincorporated Area		\$ -	-2% \$ -
Job site - Business Area		\$ 6,602,158.00	-2% \$ (132,043.16)
Job site - Residential Area		\$ 6,602,158.00	5% \$ 330,107.90
Job site - Limited Staging		\$ 6,602,158.00	5% \$ 330,107.90
Job site - Occupied by Owner		\$ -	7% \$ -
Renovation - No Intrusive Tests		\$ -	10% \$ -
Renovation - Intrusive Exploration		\$ 6,602,158.00	-3% \$ (198,064.74)
Project Fees - Simple Project		\$ -	-1% \$ -
Project Fees - Complex Project		\$ 6,602,158.00	5% \$ 330,107.90
NYS Building Code Transition - simple project		\$ -	5% \$ -
NYS Building Code Transition - complex project		\$ 6,602,158.00	7% \$ 462,151.06
Subtotal, Factors			\$ 2,838,927.94
Overhead and Profit			20% of subtotals \$ 1,888,217.19
SUBTOTAL, CONSTRUCTION+FEES+FACTORS+OVERHEAD/PROFIT			\$ 11,329,303.13
			Years to Midpoint
Escalation	Previous Subtotal x 5% x no. of years to midpoint construction	1.3	\$ 1,472,809.41
TOTAL PROJECT ESTIMATE=			\$ 12,802,112.53

The budget for the Black Box Theater was developed using the Cost Projection Model, estimating a total cost of \$12.80 million. This calculation is based on a Gross Floor Area (GFA) of 13,400 sq. ft., with a cost per square foot of \$428.37, as detailed in the Project Worksheet.

Appendix 7 - Building Code Analysis

Narrative of Building Code:

The building code selected and compiled in this document was chosen specifically with the health and safety of the community in mind that will be attending this Performing Arts Center. This will allow for a creative and flexible design that takes both the Village of Farmingdale's goals into consideration and the necessary Building Code that will keep the community and site secure.

The choice of a Black Box Theater allows for various performance configurations, including theater, music, dance, a winter farmer's market, and multimedia productions. The adaptable seating, accommodating between 130 and 180 guests, will be designed and optimized according to code for acoustics and sightlines. Supportive facilities, such as a well-equipped green room, dressing rooms, and storage areas, will ensure a seamless experience for performers and technical crews. Additionally, a waiting area/box office will open up to a welcoming lobby with refreshment services that will enhance audience engagement.

Accessibility and safety are paramount in the design. The theater must meet or exceed the Building Code of New York State and ANSI A117.1-2017 standards, which will ensure inclusivity for individuals of all abilities. Key building code considerations include compliance with Assembly Group A-1 occupancy regulations, fire safety measures such as fully sprinklered systems, and strategic means of egress to facilitate safe evacuation. Egress pathways must be designed with clear signage, adequate lighting, and appropriate width to accommodate the anticipated occupant load.

Plumbing and sanitation requirements must be meticulously addressed, ensuring both ADA-compliant restrooms and drinking fountains to support guests and staff. The design must also prioritize sustainability and efficiency by integrating energy-efficient systems and environmentally responsible materials for the future of the building economically.

Located at 141 Division Street, adjacent to the Main Street district, this Performing Arts Center will significantly contribute to Farmingdale's cultural and economic landscape. It will serve as a destination for artistic and educational opportunities, enhancing nightlife, supporting local businesses, and acting as a catalyst for future development. By merging cultural vibrancy with urban enhancement, the Black Box Theater promises to be a transformative asset for the community.

Section Summaries of Requirements:

The specific requirements referred to in the summaries of the relevant building code compiled in this document were chosen based on practicality, cost, occupancy, classification, site, and the desired uses of the space in addition to the building code compliances for this Black Box Theater. The information selected in the summary is the most critical building code requirements for a Black Box Theater classified as an A-1 occupancy with an occupancy of 130-180 seats. Each component of the summary directly addresses essential regulatory requirements that ensure safety, accessibility, and functionality for both the audience and theater staff. It serves as a quick reference guide to the most critical building codes that influence the design and operation of the Black Box Theater.

1. New York State Building Code (NYSBC)

- **Occupancy Classification (Chapter 3):** A black box theater falls under **Assembly Group A-1** due to its use for performances and audience seating.
- **Building Height & Area (Chapter 5):** Maximum allowable height and area depend on construction type and sprinkler systems. A fully sprinklered Type II-A construction allows greater flexibility in height and area.
- **Construction Type (Chapter 6):** Type II-A (Protected Non-Combustible) is recommended for fire resistance.
- **Means of Egress (Chapter 10):** Egress requirements depend on the theater's **occupant load (estimated at 2,500 persons)**, requiring **four exits, stair widths of 62.5 feet total, and travel distances under 250 feet** in a sprinklered building.
- **Accessibility (Chapter 11):** The theater must provide **accessible seating, restrooms, drinking fountains, and an accessible means of egress.**

2. New York State Fire Code (NYSFC)

- **Fire Protection Systems:** A fully sprinklered building enhances safety and may allow for code concessions.
- **Egress & Fire Alarms:** Requires **panic hardware on exit doors**, illuminated exit signs, areas of refuge, and emergency lighting.
- **Fire-Resistance Ratings:** Fire-rated walls, doors, and corridors must meet the minimum rating for **Group A-1 occupancies.**

3. New York State Plumbing Code (NYSPC)

- **Restroom Requirements:** The occupant load dictates the **number of water closets, lavatories, and drinking fountains.**
- **Accessibility Compliance:** Fixtures must be **ADA-compliant** and include **accessible water closet compartments.**

4. New York State Department of Labor - Part 36

- **Worker Safety:** Covers safety regulations for **stage crew, performers, and maintenance staff.**
- **Egress for Workers:** Additional emergency exit requirements for backstage and technical areas.
- **Fire Prevention:** Stage curtains, props, and scenery must meet **fire-retardant material standards.**

5. Nassau County 239f Form

- **Highway Design Review Form:** must be filled out for every project being done that falls under Nassau County Jurisdiction
- **Goal of Nassau County Department of Public Works (NCDPW):** is to prevent potential negative impacts to adjacent properties or on County owned right(s)-of-way, property or infrastructure

Summary of Key Building Code Requirements for a 13,000 SF Black Box Theater (A-1 Occupancy, 130-180 Seats)

1. Occupant Load & Seating Capacity

- **Fixed Seating:** Occupant load determined by the number of seats installed.
- **Standing Room:** 1 person per 3 SF.
- **Unconcentrated Seating (Tables & Chairs):** 1 person per 15 SF.
- **Maximum Occupancy Consideration:** The highest calculated occupancy classification must be used if the space has multiple uses.

2. Required Exits & Egress Requirements

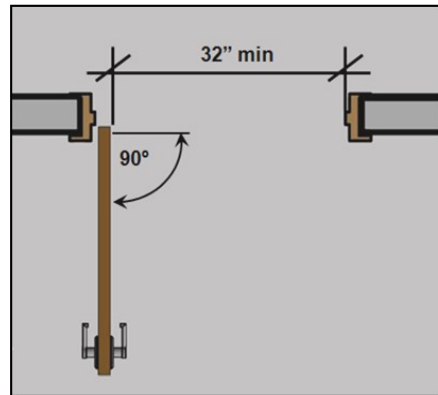
- **Number of Exits:**
 - Minimum of **2 exits required** for buildings with 500 or fewer occupants.
 - Rooms **over 1,500 SF or with more than 75 people** must have at least **2 exits**.
- **Travel Distance:**
 - Maximum travel distance to an exit: **100 feet** (125 feet for existing buildings).
- **Exit Widths:**

To be ADA compliant MUST have a clear width of 32" MINIMUM.

Clear Width

[§404.2.3]

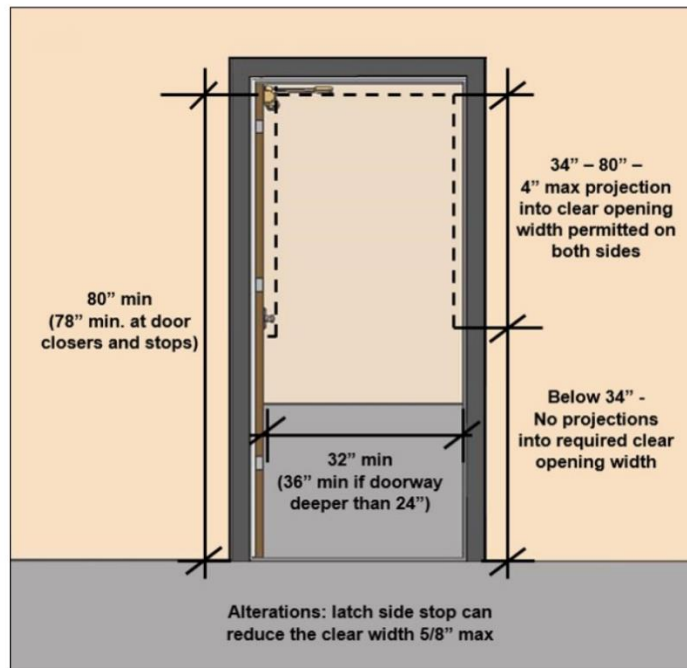
The clear width is measured from the stop to the face of doors or gates open 90° (or to the leading edge of sliding or folding doors). No projection into the clear width is permitted below 34".



<https://www.access-board.gov/ada/guides/chapter-4-entrances-doors-and-gates/>

Clear Width and Vertical Clearance of Doors and Gates

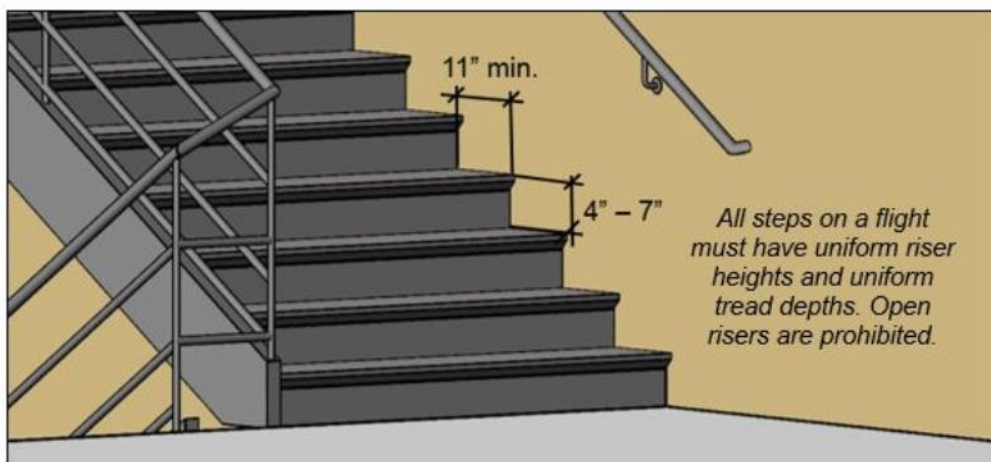
[§404.2.3]



<https://www.access-board.gov/ada/guides/chapter-4-entrances-doors-and-gates/>

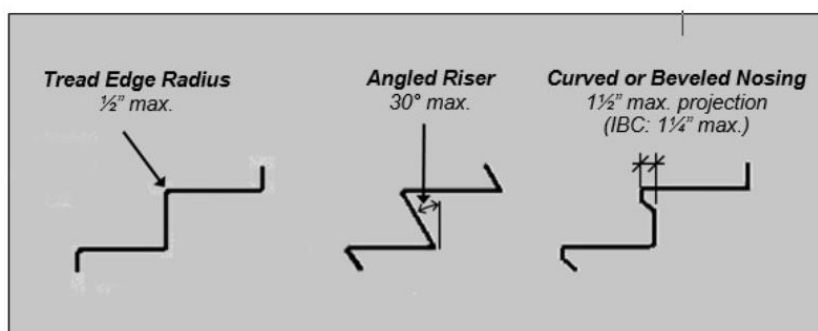
- **Doors:** Minimum 36 inches wide.

Treads and Riser Specifications in the ADA Standards (§504) [↗](#)



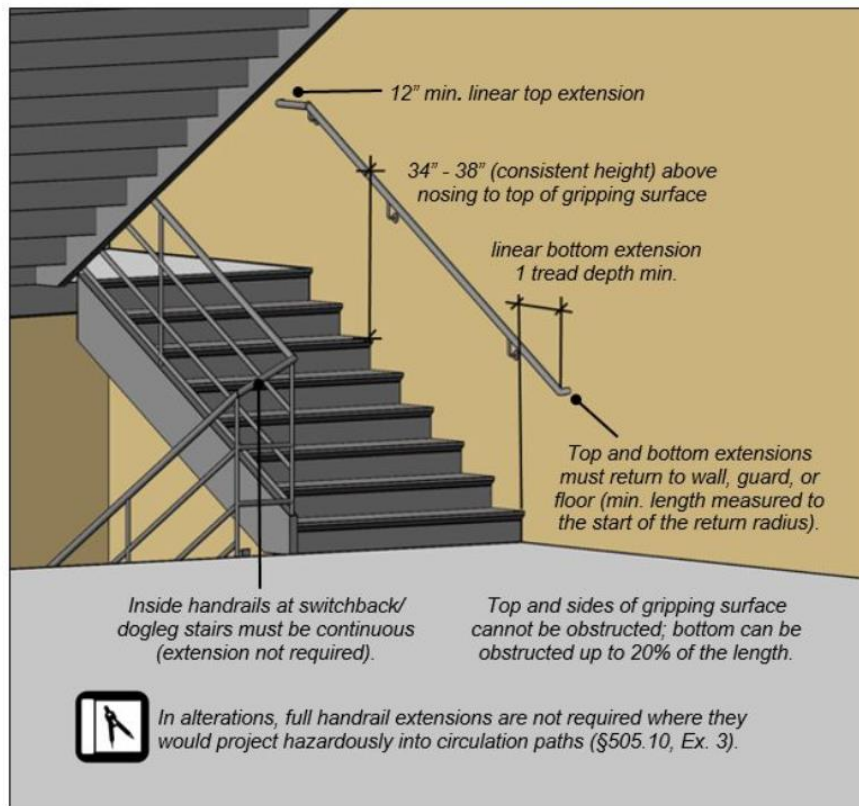
Treads and landings subject to wet conditions must be designed to prevent the accumulation of water. Visual contrast on tread nosings or the leading edges of treads is helpful for people with low vision but not required by the ADA Standards.

Nosing Specifications



Stairway Handrails Requirements in the ADA Standards (§504)

Handrails are required on both sides and must be continuous within the full length of each stair flight.



<https://www.access-board.gov/ada/guides/chapter-4-accessible-means-of-egress/>

- **Stairways:** Minimum **42 inches wide**.
- **Hallways:** Minimum **44 inches wide**.
- **Exit Signage & Lighting:**
 - Must be **clearly visible and illuminated** at all times.
 - Egress lighting must maintain **1 footcandle (11 lux)** illumination at the walking surface.

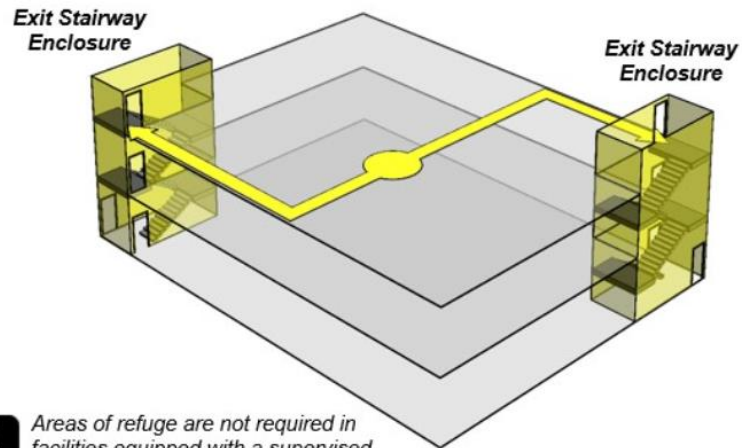
3. Fire Safety & Emergency Planning

- **Fire Safety Plan:**
 - Required for all **A-1 occupancies** and must be maintained on-site.
- **Fire Sprinkler & Alarm Systems:**
 - Required if occupancy exceeds **300 people**.
 - Smoke detectors and manual fire alarms are mandatory.

- **Area of Refuge:**

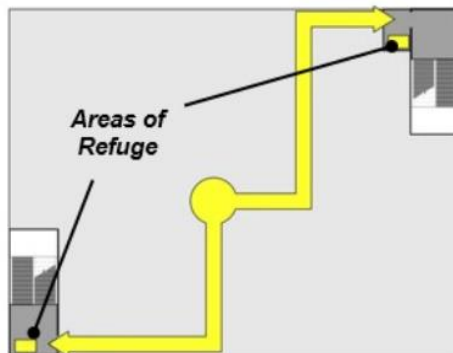
Accessible Means of Egress Leading to Exit Stairs 

On floors above or below the level of exit discharge, accessible means of egress typically lead to exit stairways.



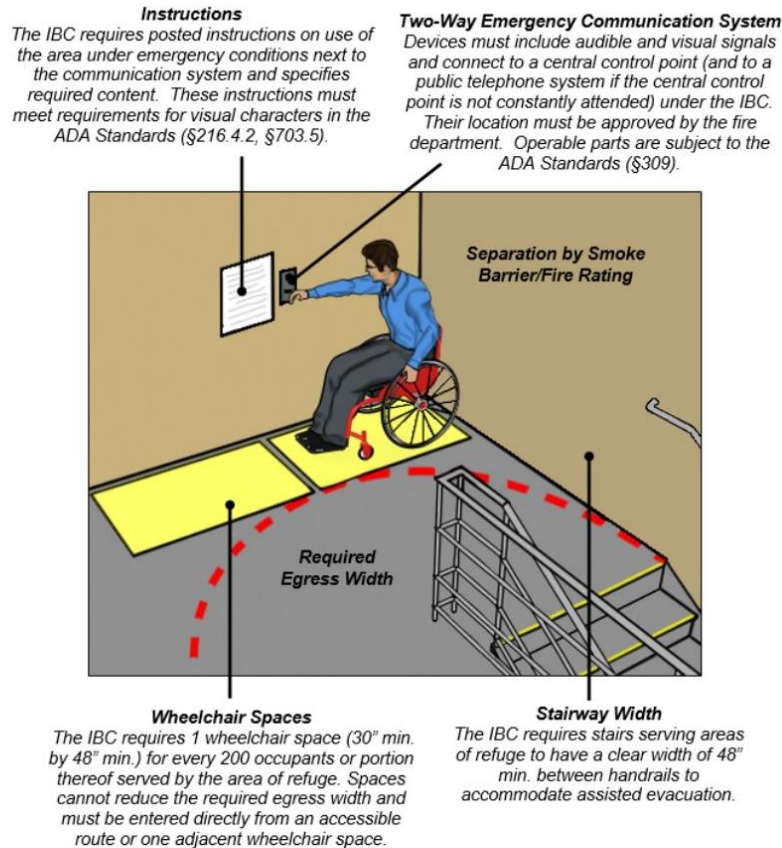
Areas of refuge are not required in facilities equipped with a supervised automated sprinkler system.

Areas of Refuge



Areas of refuge, which are required in buildings that are not equipped with sprinkler systems, provide fire and smoke protected areas where those unable to use stairs can register a call for help and await evacuation assistance. These areas must provide direct access to exit stairways and can be located adjacent to stairway enclosures or on stair landings outside the minimum exit width.

Features of Areas of Refuge



<https://www.access-board.gov/ada/guides/chapter-4-accessible-means-of-egress/>

- Must be sized to accommodate 1 wheelchair space 30 inches by 40 inches for every 200 occupants or portion thereof, based on the occupant load of the area of refuge and areas served by the area of refuge.
- Wheelchair spaces shall not reduce the means of egress minimum width or required capacity.
- **Emergency Vehicle Access:**
 - Driveways must be **at least 12 feet wide** with a **13'6" height clearance**.
 - Turnarounds are required if driveways exceed **500 feet** in length.

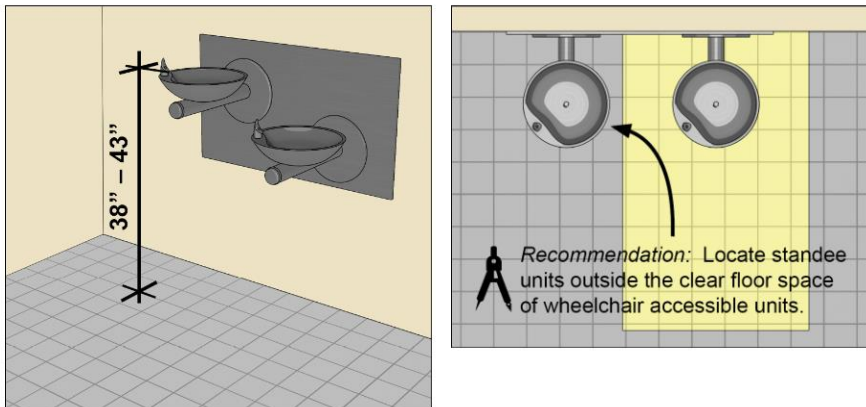
4. Plumbing & Sanitation Requirements

- **Toilet Facilities:**
 - **Women's Restroom:** 1 toilet per **200 female occupants**.
 - **Men's Restroom:** 1 toilet + 1 urinal per **200 male occupants**.
 - **Lavatories:** 1 per **2 toilets/urinals**.
- **Drinking Fountains:**

Drinking Fountains for Standing Persons [↗](#)

[§602.7]

Drinking fountains for standing persons must have spouts 38" to 43" high and compliant operable parts and be located on an accessible route. They cannot obstruct the forward approach clearance, including knee and toe space, required at wheelchair accessible units.

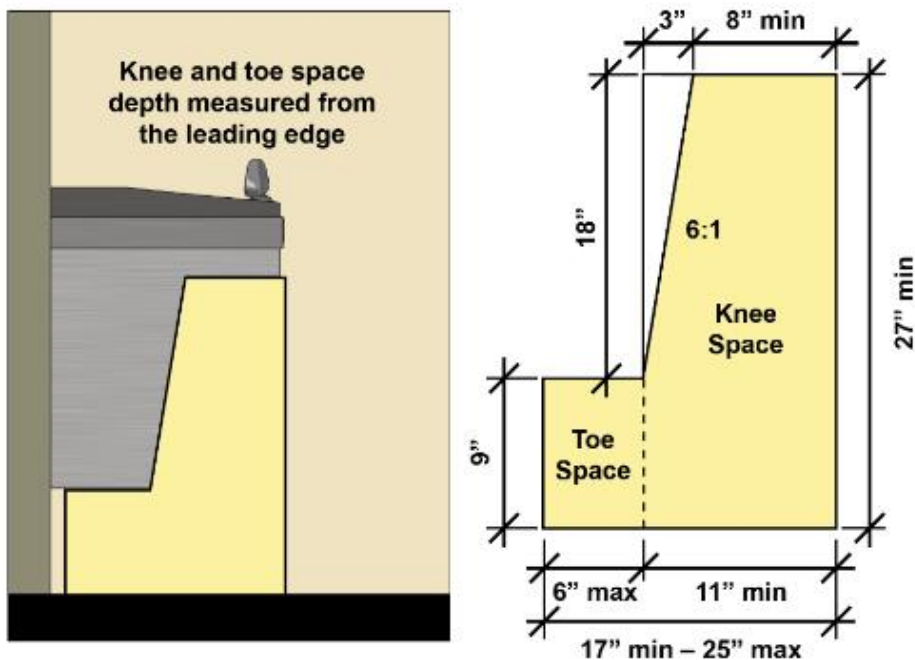


Wheelchair Accessible Drinking Fountains [↗](#)

[§602.1 to §602.6]

Provisions for wheelchair accessible units require access for a forward approach and address spouts, water flow, and operable parts. Units can be wall mounted or free-standing.

Knee and toe space is required below the unit. The combined depth of the knee and toe space must be at least 17" (and 25" maximum) measured from the leading edge of the unit, including bumpers.



<https://www.access-board.gov/ada/guides/chapter-6-drinking-fountains/>

- Required if occupancy exceeds **15 people**.
- Must include at least **one wheelchair-accessible unit**.

5. Accessibility & Ramps

- **Handrails & Ramps:**
 - Required on both sides for ramps over **6 inches high**.
 - Ramp slope **maximum 1:12 (8%)**.
- **Wheelchair Seating:**
 - Required and must provide **30" x 48" clear space per wheelchair**.

6. Stairway & Door Regulations

- **Exit Doors:**
 - Must **swing in the direction of egress** if serving **50+ people**.
 - Cannot have locks that prevent free egress (panic hardware required).
- **Stairway Requirements:**
 - **Minimum width:** 44 inches (36 inches for less than 50 people).
 - **Max riser height:** 7.75 inches; **Min tread depth:** 10 inches.

SWOT Analysis based on the Building Code:

Strengths:

- **Compliance with Safety Regulations:** The theater falls under Assembly Group A-1 and follows stringent fire and egress requirements, enhancing overall safety.
- **Fire Protection Measures:** A fully sprinklered system is required, reducing fire hazards and allowing some code concessions.
- **Accessibility Features:** The theater must provide accessible seating, restrooms, and egress routes, ensuring inclusivity.
- **Adequate Egress Capacity:** Requires at least two exits and wide stairways (minimum 42 inches), ensuring smooth evacuation.
- **Defined Occupant Load:** Clear guidelines on seating and standing capacity ensure a well-managed space without overcrowding.

Weaknesses:

- **Stringent Exit and Egress Requirements:** The need for multiple exits, illuminated signage, and wide hallways increases construction and operational costs.
- **Restroom and Plumbing Constraints:** The requirement for ADA-compliant restrooms and a minimum number of fixtures can add to space constraints and costs.
- **Height and Area Restrictions:** Depending on construction type, limitations on the maximum allowable area and height could impact design flexibility.

Opportunities:

- **Enhanced Safety Measures as a Selling Point:** Compliance with fire and building codes ensures a safer experience for patrons, which can be marketed as a key benefit.
- **Flexibility in Design within Regulations:** The ability to include different seating arrangements (fixed, standing, or table seating) allows for versatile space utilization.
- **Potential for Code Concessions:** Fully sprinklered systems allow for some leniency in fire safety regulations, possibly reducing costs in other areas.

Threats:

- **High Construction and Compliance Costs:** Meeting stringent fire safety, egress, and plumbing codes can drive up initial construction expenses.
- **Legal and Regulatory Challenges:** Failure to meet any aspect of the NYS building and fire codes can result in delays, fines, or project redesigns.
- **Maintenance and Inspections:** Continuous compliance with safety requirements, including regular inspections and fire safety plans, adds operational complexity and costs.

Building Code applicable to 141 Division Street, Farmingdale, NY

Unofficial New York Codes, Rules and Regulations from NYS Dept. of Labor:

36-2.2 Capacity:

(a) Capacity as determined by this section shall be used as the basis for computing the required width and number of exitways.

(b) The capacity of every place of public assembly shall be the sum of all component capacities listed below which are pertinent. Where capacity is determined on the basis of area, the area to be considered shall include those spaces generally used or occupied by the public for public assembly purposes and shall not include such spaces as toilets, utility or locker rooms.

(1) Seats secured or designed to be secured, to the floor—total of all.

(2) Benches—one person to each 18 inches of length unless arms are used between seats, in which case paragraph (1) shall apply.

(3) Portable seats—one person to each six square feet of floor area, aisles included.

(4) Standing room—one person to each three square feet of floor area permitted to be occupied as such.

(5) Waiting space—one person to each three square feet of floor area other than standing room, which is designated to be occupied by persons waiting for seats to become available.

(9) Indoor amphitheatres—the maximum occupancy permitted upon the floor of the arena at any time, plus standing room and seating capacity outside of the arena as set forth above.

(10) Any tier, floor or portion of a place of public assembly used as a dining room, lounge, smoking room, promenade, dance floor or for any similar purpose not specifically classified herein—one person for each 10 square feet of floor area so used.

(11) When a place of public assembly is intended for multiple use the classification yielding the greatest calculated occupancy shall be used to determine the capacity. When conditions of a particular use contemplate only partial occupancy of a place of public assembly the enforcing authority may fix a limited capacity for the particular type of occupancy intended and shall state this limit on the certificate of compliance.

12 CRR-NY 36-2.2

Current through March 15, 2022

36-2.3 Required exits:

(a) Number.

(1) *For building, tier or floor.* Each building containing a place of public assembly and each tier or floor of same shall be provided with required exits as follows: (Our site will be planned to have around 275 people)

Capacity with **500 or less** people: **2 minimum** exits required

(2) *For rooms.* Every room or group of connected rooms having an aggregate floor area of 1,000 square feet or more shall be provided with one or more exits opening onto an exitway. If the area of the room or group of connected rooms exceeds 1,500 square feet, or its occupancy exceeds 75 persons at least two exits shall be provided.

(b) Location.

(1) *Remoteness.* The required exits from any room, tier, or floor shall be remote from and independent of each other.

(2) *Distance of travel.* The distance of travel from any point on a tier or floor to the nearest required exit therefrom shall not exceed 100 feet except that in existing places such distance shall not exceed 125 feet. This distance shall be measured along normally travelled routes.

(c) Type.

Exits shall consist of grade exit doorways, interior or exterior stairways or ramps, or horizontal exits, except as may be otherwise specified herein.

(e) Individual widths of exitways.

(1) *Doorways.* No required exit doorway shall be less than 36 inches in width unless otherwise specifically permitted.

(2) *Stairways.* No required interior or exterior stairway shall be less than 42 inches nor more than 96 inches in width unless otherwise specifically permitted by this Part.

(3) *Sidewalk stairs.* Sidewalk stairs and any doorways leading to such stairs shall be not less than 30 inches wide.

(4) *Passageways and hallways.* All passageways and hallways shall have clear widths at least equal to that required for the exits they serve at the beginning but in no case less than 44 inches. If serving more than the beginning exits their widths shall be increased sufficiently to serve at least two thirds of the aggregate number of persons served by the tributary exits. No reduction in width of passageway or hallway in the direction of exit travel is permitted.

(9) *Balconies and bridges.* The width of any balcony or bridge used in connection with a horizontal exit shall be not less than the doorway serving it and in any case not less than 44 inches.

(10) *Aisles.* The minimum width of aisles leading to an exit shall be 36 inches except as may be otherwise provided in sections 36-3.2 and 36-3.3 herein as to theatres

(g) Terminals.

(1) *Final egress to street.* All exitways shall lead directly to a street or open area, passage or court leading to a street.

(2) *Outside landings for grade exit doors.* Every grade exit door shall have an approximately level floor, area or landing on the outside thereof, not less in depth than the swing of the door and extending at least 12 inches beyond each door jamb unless confined by walls. Such landings shall be not more than six inches below the level of the door sill.

(h) Doors in exitways.

(1) *Size and construction.*

(i) The nominal width of single doors hereafter installed shall be not less than 36 nor more than 44 inches except new doors fitted to existing doorways.

(ii) The nominal width of each leaf of double doors or doors in series shall be not less than 22 nor more than 38 inches.

(iii) The nominal height of doors hereafter installed shall be at least six feet eight inches except new doors fitted to existing doorways.

(2) *Swing of doors.*

(i) Every required exit door and every door serving a means of exit, shall swing in the direction of egress except doors from rooms having a capacity of less than 50 persons.

(ii) Every door opening on an exit court, passageway or stairway shall be so arranged by vestibuling or otherwise that when partially or completely opened, it does not encroach upon the required width of such court, passageway or stairway.

(iii) Main entrance doors shall open outwardly or may be double acting, but all exit doors from passageways shall swing only in the direction of exit travel. Screen, vestibule and storm doors shall comply with the requirements of this subdivision.

(3) *Fastenings of doors.*

(i) During the period of occupancy, no exit door from a place of public assembly shall be locked, bolted or otherwise fastened so that the door cannot be opened from the inside by pressure on the door or on an approved panic release device.

(ii) Draw or flush bolts may be used on the outer doors of the main public entrance provided that when hereafter installed they are of an approved type which can only be operated by a special key designed to prevent unauthorized, malicious or accidental locking and all such bolts shall be unlocked to allow the opening of the doors by pressure on the inside during occupancy of the place of public assembly.

(4) *Revolving doors.*

(i) Revolving doors may be installed in a place of public assembly only if one or more swinging doors are maintained in the same general exit opening, and there is at least one other required means of exit from the same floor. No revolving door constitutes a required means of exit or contributes to the required aggregate width of exits.

(ii) Revolving doors shall be of an approved type and so constructed with safety releases that simultaneous outward pressure exerted by persons of ordinary strength on both sides of the door pivot will cause the wings to fold back on themselves in the direction of exit travel and provide a clear passage at least 22 inches wide on each side.

(i) Interior stairways—construction and enclosure.

(1) *General construction.* Every required interior stairway shall be built of incombustible materials throughout, except for handrails. The clear headroom shall be at least seven feet measured vertically from the floor, landing or any tread nosing, to any projection below the general ceiling level. Every tread, landing or platform of slate, marble, stone or composition shall be supported for its entire area.

(2) *Stairway enclosure.* Interior stairways serving as required exits shall be enclosed in accordance with the requirements for shafts set forth in Part 7 of the Industrial Code unless such enclosure is waived herein for special cases.

(3) *Ventilation of stairway enclosures.* Every enclosed stairway shall be provided with ventilation according to the ventilation requirements for shafts and stairways set forth in Part 7 of the Industrial Code.

(4) *Treads and risers.*

(i) The treads and risers of interior stairways hereafter constructed shall be so proportioned that the product in inches of the tread, exclusive of the nosing, and the riser, shall be between 70 and 77½; but the height of the riser shall not be more than

seven and three-quarters inches and the width of the tread, exclusive of the nosing shall not be less than 10 inches.

(ii) The treads shall be maintained so as to prevent slipping and both treads and risers shall be without perforations.

(iii) Between any two landings, the treads shall be of uniform width and the risers of uniform height.

(iv) No flight of less than three risers shall be used except to overcome differences in floor level elsewhere than in exitways.

(v) Winders are not permitted and spiral stairs do not constitute required exit stairs.

(5) Landings.

(i) The vertical distance between landings of required interior stairways hereafter constructed shall not exceed 12 feet 6 inches. The length and width of terminal and intermediate landings shall be at least equal to the width of the stairway in which they occur except that intermediate landings on straight runs need not have a length exceeding 44 inches measured in the direction of the run.

(ii) The walls at the outer corners of landings hereafter constructed where there is a change in the direction of exit travel, shall be curved on a radius of at least two feet or have a 45 degree splay at least 20 inches wide.

(6) Handrails.

(i) Every required interior stairway shall have walls or well secured balustrades or guards on both sides. A handrail shall be provided on one side of every stair 48 inches or less in width and on both sides of every stair over 48 inches in width. Every stairway 96 inches or more in width shall be provided with a continuous intermediate central handrail.

(ii) Handrails shall extend for the full run of the stair and shall not be less than 30 inches nor more than 36 inches high from the tread to the top of the rail measured in line with the riser. Horizontal handrails shall be not less than 36 inches high.

(iii) Handrails shall have a finger clearance of not less than one inch and may project into the required width not more than three and one-half inches. The ends of handrails shall be turned back against walls or newels and finished without projections.

(7) Sidewalk stairs.

(i) Sidewalk stairs need not be enclosed. They shall be constructed with treads not less than six inches wide and risers not more than 12 inches high and a pitch not exceeding 60 degrees. Safety rails shall be provided on both sides of such stairs.

(ii) Every sidewalk stair shall terminate on a street or an open area leading to a street. Sidewalk doors may be installed over such stairs provided that such doors are

easily openable from the inside and are not obstructed on the outside. If no such doors are installed, a standard railing shall be provided at the top.

(r) Exit signs and exit directional signs.

(c) *Location of sign.* An exit sign shall be provided for each required exit doorway or equivalent opening forming part of an exit and shall be installed with the lower edge of the sign at a point not more than 8 feet above the floor level at the opening and on the vertical center line of the opening or group of openings.

(g) *Visibility.* The space within a distance of 25 feet from which any exit sign may be normally approached and a distance of six feet each side of such sign shall be maintained

12 CRR-NY 36-2.3

Current through March 15, 2022

36-2.8 Sanitation:

(b) Number of fixtures.

The minimum number of toilet fixtures for the general public to be installed in indoor places of public assembly hereafter constructed, shall be in accordance with the following:

(1) *In women's rooms.*

(i) One toilet bowl, minimum for the first 200 female occupants.

(2) *In men's rooms.*

(i) One toilet bowl and one urinal, minimum for the first 200 male occupants.

(3) In both men's and women's rooms. One lavatory for each two of the total fixtures as calculated above. Same to be divided approximately equally between the women's and the men's rooms with a minimum of one in each such room.

(c) Employees. The provisions of Industrial Code Part 9 regarding dressing rooms for female employees shall be observed where the number of such employees is 5 or more. The washing and toilet facilities provided for the general public shall be deemed adequate for the employees of a place of public assembly, except for the special requirements for projection booths and stage sections of theatres.

12 CRR-NY 36-2.8

Current through March 15, 2022

Plumbing Code NYS 2020 (<https://codes.iccsafe.org/content/NYSPC2020P1/index>):

Chapter 4: Fixtures, Faucets, & Fixture Fittings:

401.2 Prohibited fixtures and connections.

Water closets having a concealed trap seal or an unventilated space or having walls that are not thoroughly washed at each discharge in accordance with ASME A112.19.2/CSA B45.1 shall be prohibited. Any water closet that permits siphonage of the contents of the bowl back into the tank shall be prohibited. Through urinals shall be prohibited.

SECTION 402: FIXTURE MATERIALS

402.1 Quality of fixtures.

Plumbing fixtures shall be constructed of approved materials, with smooth, impervious surfaces, free from defects and concealed fouling surfaces, and shall conform to standards cited in this code. Porcelain enameled surfaces on plumbing fixtures shall be acid resistant.

402.3 Sheet copper.

Sheet copper for general applications shall conform to ASTM B152 and shall not weigh less than 12 ounces per square foot (3.7 kg/m²).

402.4 Sheet lead.

Sheet lead for pans shall not weigh less than 4 pounds per square foot (19.5 kg/m²) and shall be coated with an asphalt paint or other approved coating.

SECTION 403: MINIMUM PLUMBING FACILITIES

[NY] TABLE 403.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES^a (See Sections 403.1.1 and 403.2)

NO.	CLASSIFICATION	DESCRIPTION	WATER CLOSETS (URINALS: SEE SECTION 424.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN (SEE SECTION 410)	OTHER
			MALE	FEMALE	MALE	FEMALE			
		Theaters and other buildings for the performing arts and motion pictures ^d	1 per 125	1 per 65	1 per 200		—	1 per 500	1 service sink

[NY] 403.1.1 Fixture calculations.

To determine the occupant load of each sex, the total occupant load shall be divided in half. To determine the required number of fixtures for each sex, the fixture ratio or ratios for each fixture type shall be applied to the occupant load of that sex in accordance with **Table 403.1**. Fractional numbers resulting from applying the fixture ratios of **Table 403.1** shall be rounded up to the next whole number.

The plumbing fixtures located in single-user toilet facilities and bathing rooms, including family or assisted use toilet and bathing rooms, shall contribute toward the total number of required plumbing fixtures for a building or tenant space, and shall be deducted proportionately, from the required gender ratios of **Table 403.1**.

The total number of fixtures shall be permitted to be based on any combination of single-user, multi-user, and separate facilities.

For calculations involving multiple occupancies, such fractional numbers for each occupancy shall first be summed and then rounded up to the next whole number.

Exception: The total occupant load shall not be required to be divided in half where approved statistical data indicates a distribution of the sexes of other than 50 percent of each sex.

[NY] 403.1.2 Single-user toilet and bathing facilities.

Single-user toilet and bathing rooms, and family or assisted-use toilet rooms and bathing rooms, shall be identified as being available for use by all persons regardless of their sex.

[NY] 403.1.3 Multi-user toilet and bathing facilities.

Where multi-user facilities designed to serve all genders are provided, urinals shall be either located in stalls, or located in an area visually separated from the remainder of the facility. Privacy for water closets shall be installed in accordance with [Section 405.3.4](#).

[NY] 403.1.4 Lavatory distribution.

Where two or more toilet rooms are provided for each sex, the required number of lavatories shall be distributed proportionately to the required number of water closets.

[NY] 403.2 Separate facilities.

Where plumbing fixtures are required, separate facilities shall be provided for each sex.

403.3 Employee and public toilet facilities.

For structures and tenant spaces intended for public utilization, customers, patrons and visitors shall be provided with public toilet facilities. Employees associated with structures and tenant spaces shall be provided with toilet facilities. The number of plumbing fixtures located within the required toilet facilities shall be provided in accordance with [Section 403](#) for all users. Employee toilet facilities shall be either separate or combined employee and public toilet facilities.

403.3.1 Access.

The route to the public toilet facilities required by Section 403.3 shall not pass through kitchens, storage rooms or closets. Access to the required facilities shall be from within the building or from the exterior of the building. Routes shall comply with the accessibility requirements of the Building Code of New York State. The public shall have access to the required toilet facilities at all times that the building is occupied.

403.3.3 Location of toilet facilities in occupancies other than malls.

In occupancies other than covered and open mall buildings, the required public and employee toilet facilities shall be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities shall not exceed a distance of **500 feet** (152 m).

Exception: The location and maximum distances of travel to required employee facilities in factory and industrial occupancies are permitted to exceed that required by this section, provided that the location and maximum distance of travel are approved.

403.3.6 Door locking.

Where a toilet room is provided for the use of multiple occupants, the egress door for the room shall not be lockable from the inside of the room. This section does not apply to family or assisted-use toilet rooms.

[NY] 403.4 Signage.

Required public facilities shall be provided with signs that designate the sex, as required by [Section 403.2](#). Signs shall be readily visible and located near the entrance to each toilet facility. Signs for accessible toilet facilities shall comply with [Section 1111](#) of the Building Code of New York State.

Exceptions:

1. 1.Single-user facilities shall be designated as gender neutral.
2. 2.Multi-user facilities designed to serve all genders shall not be designated by sex.

403.4.1 Directional signage.

Directional signage indicating the route to the required public toilet facilities shall be posted in a lobby, corridor, aisle or similar space, such that the sign can be readily seen from the main entrance to the building or tenant space.

403.5 Drinking fountain location.

Drinking fountains shall not be required to be located in individual tenant spaces provided that public drinking fountains are located within a distance of travel of **500 feet** (152 m) of the most remote location in the tenant space and not more than one story above or below the tenant space. Where the tenant space is in a covered or open mall, such distance shall not exceed **300 feet** (91 m). Drinking fountains shall be located on an accessible route.

SECTION 404: ACCESSIBLE PLUMBING FACILITIES

404.1 Where required.

Accessible plumbing facilities and fixtures shall be provided in accordance with the [Building Code of New York State](#).

404.2 Accessible fixture requirements.

Accessible plumbing fixtures shall be installed with the clearances, heights, spacings and arrangements in accordance with [ICC A117.1](#).

404.3 Exposed pipes and surfaces.

Water supply and drain pipes under accessible lavatories and sinks shall be covered or otherwise configured to protect against contact. Pipe coverings shall comply with [ASME A112.18.9](#).

SECTION 405: INSTALLATION OF FIXTURES

405.3.1 Water closets, urinals, lavatories and bidets.

A water closet, urinal, lavatory or bidet shall not be set closer than 15 inches (381 mm) from its center to any side wall, partition, vanity or other obstruction. Where partitions or other obstructions do not separate adjacent fixtures, fixtures shall not be set closer than 30 inches (762 mm) center to center between adjacent fixtures. There shall be not less than a 21-inch (533 mm) clearance in front of a water closet, urinal, lavatory or bidet to any wall, fixture or door. Water closet compartments shall be not less than 30 inches (762 mm) in width and not less than 60 inches (1524 mm) in depth for floor-mounted water closets and not less than 30 inches (762 mm) in width and 56 inches (1422 mm) in depth for wall-hung water closets.

Exception: An accessible children's water closet shall be set not closer than 12 inches (305 mm) from its center to the required partition or to the wall on one side.

405.3.4 Water closet compartment.

Each water closet utilized by the public or employees shall occupy a separate compartment with walls or partitions and a door enclosing the fixtures to ensure privacy.

Exceptions:

1. 1. Water closet compartments shall not be required in a single-occupant toilet room with a lockable door.

405.3.5 Urinal partitions.

Each urinal utilized by the public or employees shall occupy a separate area with walls or partitions to provide privacy. The horizontal dimension between walls or partitions at each urinal shall be not less than 30 inches (762 mm). The walls or partitions shall begin at a height not greater than 12 inches (305 mm) from and extend not less than 60 inches (1524 mm) above the finished floor surface. The walls or partitions shall extend from the wall surface at each side of the urinal not less than 18 inches (457 mm) or to a point not less than 6 inches (152 mm) beyond the outermost front lip of the urinal measured from the finished backwall surface, whichever is greater.

Exceptions:

1. 1. Urinal partitions shall not be required in a single occupant or family/assisted-use toilet room with a lockable door.
2. 2. Toilet rooms located in child day care facilities and containing two or more urinals shall be permitted to have one urinal without partitions.

SECTION 410: DRINKING FOUNTAINS

410.1 Approval.

Drinking fountains shall conform to [ASME A112.19.1/CSA B45.2](#) or [ASME A112.19.2/CSA B45.1](#) and water coolers shall conform to [ASHRAE 18](#). Drinking fountains, water coolers and water dispensers shall conform to [NSF 61](#), Section 9. Electrically operated, refrigerated drinking water coolers and water dispensers shall be listed and labeled in accordance with [UL 399](#).

410.2 Small occupancies.

Drinking fountains shall not be required for an occupant load of 15 or fewer.

[BE] 410.3 High and low drinking fountains.

Where drinking fountains are required, not fewer than two drinking fountains shall be provided. One drinking fountain shall comply with the requirements for people who use a wheelchair and one drinking fountain shall comply with the requirements for standing persons.

Exceptions:

1. 1.A single drinking fountain with two separate spouts that complies with the requirements for people who use a wheelchair and standing persons shall be permitted to be substituted for two separate drinking fountains.
2. 2.Where drinking fountains are primarily for children's use, the drinking fountains for people using wheelchairs shall be permitted to comply with the children's provisions in [ICC A117.1](#) and drinking fountains for standing children shall be permitted to provide the spout at 30 inches (762 mm) minimum above the floor.

410.5 Prohibited location. Drinking fountains, water coolers and water dispensers shall not be installed in public restrooms.

NYS Fire Code <https://codes.iccsafe.org/content/NYSFC2020P1/chapter-10-means-of-egress>

CHAPTER 4: EMERGENCY PLANNING AND PREPAREDNESS

SECTION 403: EMERGENCY PREPAREDNESS REQUIREMENTS

[NY] 403.2 Group A occupancies.

An approved fire safety and evacuation plan in accordance with Section 404 shall be prepared and maintained for Group A occupancies, other than those occupancies used exclusively for purposes of religious worship with an occupant load less than 2,000, and for buildings containing both a Group A occupancy and an atrium. Group A occupancies shall comply with Sections 403.2.1 through 403.2.5.

403.3.2 Fire safety plan.

A copy of the plan shall be maintained at the facility at all times. The plan shall include all of the following in addition to the requirements of Section 404:

1. 1.Locations of patients who are rendered incapable of self-preservation.
2. 2.Maximum number of patients rendered incapable of self-preservation.

3. 3.Area and extent of each ambulatory care facility.
4. 4.Location of adjacent smoke compartments or refuge areas, where required.
5. 5.Path of travel to adjacent smoke compartments.
6. 6.Location of any special locking, delayed egress or access control arrangements.

403.4 Group B occupancies.

An approved fire safety and evacuation plan in accordance with Section 404 shall be prepared and maintained for buildings containing a Group B occupancy where the Group B occupancy has an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge and for buildings having an ambulatory care facility.

405.2 Frequency.

Required emergency evacuation drills shall be held at the intervals specified in Table 405.2 or more frequently where necessary to familiarize all occupants with the drill procedure.

[NY] TABLE 405.2 FIRE AND EVACUATION DRILL FREQUENCY AND PARTICIPATION

GROUP OR OCCUPANCY	FREQUENCY	PARTICIPATION
Group A	Quarterly	Employees
Group A (College and University Buildings)	Three annually	All occupants
Group B ^b	Annually	All occupants

CHAPTER 5: EMERGENCY VEHICLE ACCESS

[NY] SECTION 511: EMERGENCY VEHICLE ACCESS

[NY] 511.2.1 Dimensions.

Driveways shall provide a minimum unobstructed width of 12 feet (3658 mm) and a minimum unobstructed height of 13 feet, 6 inches (4115 mm).

[NY] 511.2.2 Turnaround.

When driveways are in excess of 500 feet (152 400 mm) in length and do not exit to another fire apparatus access road or public street, a turnaround shall be provided suitable for use by fire apparatus.

[NY] 511.2.3 Turnouts.

Driveways in excess of 500 feet (152 400 mm) in length and less than 20 feet (6096 mm) in width shall be provided with turnouts along the driveway that are a minimum 20 feet in width for a length of 50 feet (15 240 mm) in length. The turnouts shall be placed at intervals not to exceed 500 feet (152 400 mm) along the driveway.

CHAPTER 10: MEANS OF EGRESS

SECTION 1003: GENERAL MEANS OF EGRESS

[BE] 1003.2 Ceiling height.

The means of egress shall have a ceiling height of not less than 7 feet 6 inches (2286 mm) above the finished floor.

Exceptions:

1. Sloped ceilings in accordance with Section 1207.2 of the Building Code of New York State.
2. Ceilings of dwelling units and sleeping units within residential occupancies in accordance with Section 1207.2 of the Building Code of New York State.
3. Allowable projections in accordance with Section 1003.3.
4. Stair headroom in accordance with Section 1011.3.
5. Door height in accordance with Section 1010.1.1.
6. Ramp headroom in accordance with Section 1012.5.2.
7. The clear height of floor levels in vehicular and pedestrian traffic areas of public and private parking garages in accordance with Section 406.2.2 of the Building Code of New York State.
8. Areas above and below mezzanine floors in accordance with Section 505.2 of the Building Code of New York State.

[BE] 1003.3.1 Headroom.

Protruding objects are permitted to extend below the minimum ceiling height required by Section 1003.2 where a minimum headroom of 80 inches (2032 mm) is provided over any circulation paths, including walks, corridors, aisles and passageways. Not more than 50 percent of the ceiling area of a means of egress shall be reduced in height by protruding objects.

Exception: Door closers and stops shall not reduce headroom to less than 78 inches (1981 mm).

A barrier shall be provided where the vertical clearance above a circulation path is less than 80 inches (2032 mm) high above the finished floor. The leading edge of such a barrier shall be located 27 inches (686 mm) maximum above the finished floor.

[BE] 1003.3.2 Post-mounted objects.

A free-standing object mounted on a post or pylon shall not overhang that post or pylon more than 4 inches (102 mm) where the lowest point of the leading edge is more than 27 inches (686 mm) and less than 80 inches (2032 mm) above the finished floor. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (686 mm) maximum or 80 inches (2032 mm) minimum above the finished floor or ground.

Exception: These requirements shall not apply to sloping portions of handrails between the top and bottom riser of stairs and above the ramp run.

[BE] 1003.3.3 Horizontal projections.

Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the finished floor shall not project horizontally more than 4 inches (102 mm) into the circulation path.

Exception: Handrails are permitted to protrude 4½ inches (114 mm) from the wall or guard.

[BE] 1003.3.4 Clear width.

Protruding objects shall not reduce the minimum clear width of accessible routes.

[BE] 1003.5 Elevation change.

Where changes in elevation of less than 12 inches (305 mm) exist in the means of egress, sloped surfaces shall be used. Where the slope is greater than one unit vertical in 20

units horizontal (5-percent slope), ramps complying with Section 1012 shall be used. Where the difference in elevation is 6 inches (152 mm) or less, the ramp shall be equipped with either handrails or floor finish materials that contrast with adjacent floor finish materials.

Exceptions:

1. 2.A stair with a single riser or with two risers and a tread is permitted at locations not required to be accessible by Chapter 11 of the Building Code of New York State, where the risers and treads comply with Section 1011.5, the minimum depth of the tread is 13 inches (330 mm) and not less than one handrail complying with Section 1014 is provided within 30 inches (762 mm) of the centerline of the normal path of egress travel on the stair.
2. 3.A step is permitted in aisles serving seating that has a difference in elevation less than 12 inches (305 mm) at locations not required to be accessible by Chapter 11 of the Building Code of New York State, provided that the risers and treads comply with Section 1029.14 and the aisle is provided with a handrail complying with Section 1029.16.

[BE] 1003.6 Means of egress continuity.

The path of egress travel along a means of egress shall not be interrupted by a building element other than a means of egress component as specified in this chapter. Obstructions shall not be placed in the minimum width or required capacity of a means of egress component except projections permitted by this chapter. The minimum width or required capacity of a means of egress system shall not be diminished along the path of egress travel.

[BE] 1003.7 Elevators, escalators and moving walks.

Elevators, escalators and moving walks shall not be used as a component of a required means of egress from any other part of the building.

Exception: Elevators used as an accessible means of egress in accordance with Section 1009.4.

SECTION 1004: OCCUPANT LOAD

1004.5 Areas without fixed seating.

The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.5. For areas without fixed seating, the occupant load shall be not

less than that number determined by dividing the floor area under consideration by the occupant load factor assigned to the function of the space as set forth in Table 1004.5. Where an intended function is not listed in Table 1004.5, the fire code official shall establish a function based on a listed function that most nearly resembles the intended function.

Exception: Where approved by the fire code official, the actual number of occupants for whom each occupied space, floor or building is designed, although less than those determined by calculation, shall be permitted to be used in the determination of the design occupant load.

[BE] TABLE 1004.5 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR
Accessory storage areas, mechanical equipment room	300 gross
Waiting Areas	15 gross
Assembly	
Concentrated (chairs only - not fixed)	7 net
Standing Space	5 net
Unconcentrated (tables & chairs)	15 net
Locker Rooms	50 gross
Stages & Platforms	15 net

For SI: 1 square foot = 0.0929 m², 1 foot = 304.8 mm.

1. a. Floor area in square feet per occupant.

[BE] 1004.5.1 Increased occupant load.

The occupant load permitted in any building, or portion thereof, is permitted to be increased from that number established for the occupancies in Table 1004.5, provided that all other requirements of the code are met based on such modified number and the occupant load does not exceed one occupant per 7 square feet (0.65 m²) of occupiable floor space. Where required by the fire code official, an approved aisle, seating or fixed equipment diagram substantiating any increase in occupant load shall be submitted. Where required by the fire code official, such diagram shall be posted.

[BE] 1004.6 Fixed seating.

For areas having fixed seats and aisles, the occupant load shall be determined by the number of fixed seats installed therein. The occupant load for areas in which fixed seating is not installed, such as waiting spaces, shall be determined in accordance with Section 1004.5 and added to the number of fixed seats.

The occupant load of wheelchair spaces and the associated companion seat shall be based on one occupant for each wheelchair space and one occupant for the associated companion seat provided in accordance with Section 1108.2.3 of the Building Code of New York State.

For areas having fixed seating without dividing arms, the occupant load shall be not less than the number of seats based on one person for each 18 inches (457 mm) of seating length.

The occupant load of seating booths shall be based on one person for each 24 inches (610 mm) of booth seat length measured at the backrest of the seating booth.

SECTION 1005: MEANS OF EGRESS SIZING

[BE] 1005.3.1 Stairways.

The capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairways by a means of egress capacity factor of 0.3 inch (7.6 mm) per occupant. Where stairways serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required capacity of the stairways serving that story.

Exceptions:

1. Facilities with smoke-protected assembly seating shall be permitted to use the capacity factors in Table 1029.6.2 indicated for stepped aisles for exit access or exit stairways where the entire path for means of egress from the seating to the exit discharge is provided with a smoke control system complying with Section 909.
2. Facilities with open-air assembly seating shall be permitted to the capacity factors in Section 1029.6.3 indicated for stepped aisles for exit access or exit stairways where the entire path for means of egress from the seating to the exit discharge is open to the outdoors.

[BE] 1005.5 Distribution of minimum width and required capacity.

Where more than one exit, or access to more than one exit, is required, the means of egress shall be configured such that the loss of any one exit, or access to one exit, shall not reduce the available capacity or width to less than 50 % of the required capacity or width.

[BE] 1005.6 Egress convergence.

Where the means of egress from stories above and below converge at an intermediate level, the capacity of the means of egress from the point of convergence shall be not less than the largest minimum width or the sum of the required capacities for the stairways or ramps serving the two adjacent stories, whichever is larger.

[BE] 1005.7.1 Doors.

Doors, when fully opened, shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half.

Exceptions:

1. Surface-mounted latch release hardware shall be exempt from inclusion in the 7-inch maximum (178 mm) encroachment where both of the following conditions exist:
 - a. The hardware is mounted to the side of the door facing away from the adjacent wall where the door is in the open position.
 - b. The hardware is mounted not less than 34 inches (865 mm) nor more than 48 inches (1219 mm) above the finished floor.

[BE] 1005.7.2 Other projections.

Handrail projections shall be in accordance with the provisions of Section 1014.8. Other nonstructural projections such as trim and similar decorative features shall be permitted to project into the required width not more than 1½ inches (38 mm) on each side

SECTION 1006: NUMBERS OF EXITS AND EXIT ACCESS DOORWAYS

[BE] 1006.2.1 Egress based on occupant load and common path of egress travel distance.

Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1. The cumulative occupant load from adjacent rooms, areas or spaces shall be determined in accordance with Section 1004.2.

Exceptions:

1. The number of exits from foyers, lobbies, vestibules/similar spaces need not be based on cumulative occupant loads for areas discharging through such spaces, but the

capacity of the exits from such spaces shall be based on applicable cumulative occupant loads.

[BE] TABLE 1006.2.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

OCCUPANCY	MAXIMUM OCCUPANT LOAD OF SPACE	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)		
		Without Sprinkler System (feet)		With Sprinkler System (feet)
		Occupant Load		
		OL ≤ 30	OL > 30	
A ^c , E, M	49	75	75	75 ^a
B	49	100	75	100 ^a

[BE] 1006.2.2.1 Boiler, incinerator and furnace rooms.

Two exit access doorways are required in boiler, incinerator and furnace rooms where the area is over 500 square feet (46 m²) and any fuel-fired equipment exceeds 400,000 British thermal units (Btu) (422 000 KJ) input capacity. Where two exit access doorways are required, one is permitted to be a fixed ladder or an alternating tread device. Exit access doorways shall be separated by a horizontal distance equal to one half the length of the maximum overall diagonal dimension of the room.

[BE] 1006.2.2.2 Refrigeration machinery rooms.

Machinery rooms larger than 1,000 square feet (93 m²) shall have not less than two exits or exit access doorways. Where two exit access doorways are required, one such doorway is permitted to be served by a fixed ladder or an alternating tread device. Exit access doorways shall be separated by a horizontal distance equal to one-half the maximum horizontal dimension of the room.

All portions of machinery rooms shall be within 150 feet (45 720 mm) of an exit or exit access doorway. An increase in exit access travel distance is permitted in accordance with Section 1017.1.

Exit and exit access doorways shall swing in the direction of egress travel, regardless of the occupant load served. Exit and exit access doorways shall be tight fitting and self-closing.

[BE] 1006.2.2.3 Refrigerated rooms or spaces.

Rooms or spaces having a floor area larger than 1,000 square feet (93 m²), containing a refrigerant evaporator and maintained at a temperature below 68°F (20°C), shall have access to not less than two exits or exit access doorways.

Exit access travel distance shall be determined as specified in Section 1017.1, but all portions of a refrigerated room or space shall be within 150 feet (45 720 mm) of an exit or exit access doorway where such rooms are not protected by an approved automatic sprinkler system. Egress is allowed through adjoining refrigerated rooms or spaces.

Exception: Where using refrigerants in quantities limited to the amounts based on the volume set forth in the Mechanical Code of New York State.

[BE] 1006.3.2 Egress based on occupant load.

Each story and occupied roof shall have the minimum number of separate and distinct exits, or access to exits, as specified in Table 1006.3.2. A single exit or access to a single exit shall be permitted in accordance with Section 1006.3.3. The required number of exits, or exit access stairways or ramps providing access to exits, from any story or occupied roof shall be maintained until arrival at the exit discharge or public way.

[BE] TABLE 1006.3.2 MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS PER STORY

OCCUPANT LOAD PER STORY	MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS FROM STORY
1-500	2

[BE] 1006.3.3 Single exits.

A single exit or access to a single exit shall be permitted from any story or occupied roof, where one of the following conditions exists:

1. The occupant load, number of dwelling units and common path of egress travel distance do not exceed the values in Table 1006.3.3(1) or 1006.3.3(2).
2. Rooms, areas and spaces complying with Section 1006.2.1 with exits that discharge directly to the exterior at the level of exit discharge, are permitted to have one exit or access to a single exit.

[BE] TABLE 1006.3.3(2) STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

STORY	OCCUPANCY	MAXIMUM OCCUPANT LOAD PER STORY	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)
First story above or below grade plane	A, B ^b , E, F ^b , M, U	49	75
	H-2, H-3	3	25
	H-4, H-5, I, R-1, R-2 ^{a, c}	10	75
	S ^{b, d}	29	75
Second story above grade plane	B, F, M, S ^d	29	75
Third story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP = Not Permitted.

NA = Not Applicable.

- Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with [Section 903.3.1.1](#) or [903.3.1.2](#) and provided with emergency escape and rescue openings in accordance with [Section 1030](#).
- Group B, F and S occupancies in buildings equipped throughout with an automatic sprinkler system in accordance with [Section 903.3.1.1](#) shall have a maximum exit access travel distance of 100 feet.
- This table is used for R-2 occupancies consisting of sleeping units. For R-2 occupancies consisting of dwelling units, use [Table 1006.3.3\(1\)](#).
- The length of exit access travel distance in a Group S-2 open parking garage shall be not more than 100 feet.

SECTION 1007: EXIT AND EXIT ACCESS DOORWAY CONFIGURATION

[BE] 1007.1.1 Two exits or exit access doorways.

Where two exits, exit access doorways, exit access stairways or ramps, or any combination thereof, are required from any portion of the exit access, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between them. Interlocking or scissor stairways shall be counted as one exit stairway.

Exceptions:

- Where interior exit stairways or ramps are interconnected by a 1-hour fire-resistance-rated corridor conforming to the requirements of Section 1020, the required exit separation shall be measured along the shortest direct line of travel within the corridor.
- Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance shall be not less than one-third of the length of the maximum overall diagonal dimension of the area served.

SECTION 1008: MEANS OF EGRESS ILLUMINATION

[BE] 1008.2.1 Illumination level under normal power.

The means of egress illumination level shall be not less than 1 footcandle (11 lux) at the walking surface.

Exception: For auditoriums, theaters, concert or opera halls and similar assembly occupancies, the illumination at the walking surface is permitted to be reduced during performances by one of the following methods provided that the required illumination is automatically restored upon activation of a premises' fire alarm system:

1. 1.Externally illuminated walking surfaces shall be permitted to be illuminated to not less than 0.2 footcandle (2.15 lux).
2. 2.Steps, landings and the sides of ramps shall be permitted to be marked with self-luminous materials in accordance with Sections 1025.2.1, 1025.2.2 and 1025.2.4 by systems listed in accordance with UL 1994.

SECTION 1009: ACCESSIBLE MEANS OF EGRESS

[BE] 1009.1 Accessible means of egress required.

Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required by Section 1006.2 or 1006.3 from any accessible space, each accessible portion of the space shall be served by not less than two accessible means of egress.

Exceptions:

1. One accessible means of egress is required from an accessible mezzanine level in accordance with Section 1009.3, 1009.4 or 1009.5.
2. In assembly areas with ramped aisles or stepped aisles, one accessible means of egress is permitted where the common path of travel is accessible and meets the requirements in Section 1029.8.

BE] 1009.3.2 Stairway width.

Stairways shall have a clear width of 48 inches (1219 mm) minimum between handrails.

Exceptions:

1. The clear width of 48 inches (1219 mm) between handrails is not required in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
2. The clear width of 48 inches (1219 mm) between handrails is not required for stairways accessed from a refuge area in conjunction with a horizontal exit.

[BE] 1009.3.3 Area of refuge.

Stairways shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from an area of refuge complying with Section 1009.6.

Exceptions:

1. Areas of refuge are not required at exit access stairways where two-way communication is provided at the elevator landing in accordance with Section 1009.8.
2. Areas of refuge are not required at stairways in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
3. Areas of refuge are not required for smoke-protected or open-air assembly seating areas complying with Sections 1029.6.2 and 1029.6.3.
4. Areas of refuge are not required for stairways accessed from a refuge area in conjunction with a horizontal exit.

[BE] 1009.5 Platform lifts.

Platform lifts shall be permitted to serve as part of an accessible means of egress where allowed as part of a required accessible route in Section 1109.8 of the Building Code of New York State except for Item 10. Standby power for the platform lift shall be provided in accordance with Chapter 27 of the Building Code of New York State.

[BE] 1009.6.3 Size.

Each area of refuge shall be sized to accommodate one wheelchair space of 30 inches by 48 inches (762 mm by 1219 mm) for each 200 occupants or portion thereof, based on the occupant load of the area of refuge and areas served by the area of refuge. Such wheelchair spaces shall not reduce the means of egress minimum width or required capacity. Access to any of the required wheelchair spaces in an area of refuge shall not be obstructed by more than one adjoining wheelchair space.

[BE] 1009.6.5 Two-way communication.

Areas of refuge shall be provided with a two-way communication system complying with Sections 1009.8.1 and 1009.8.2.

[BE] 1009.7 Exterior areas for assisted rescue.

Exterior areas for assisted rescue shall be accessed by an accessible route from the area served.

Where the exit discharge does not include an accessible route from an exit located on the level of exit discharge to a public way, an exterior area of assisted rescue shall be provided on the exterior landing in accordance with Sections 1009.7.1 through 1009.7.4.

[BE] 1009.7.2 Separation.

Exterior walls separating the exterior area of assisted rescue from the interior of the building shall have a minimum fire-resistance rating of 1 hour, rated for exposure to fire from the inside. The fire-resistance-rated exterior wall construction shall extend horizontally not less than 10 feet (3048 mm) beyond the landing on either side of the landing or equivalent fire-resistance-rated construction is permitted to extend out perpendicular to the exterior wall not less than 4 feet (1220 mm) on the side of the landing. The fire-resistance-rated construction shall extend vertically from the ground to a point not less than 10 feet (3048 mm) above the floor level of the area for assisted rescue or to the roof line, whichever is lower. Openings within such fire-resistance-rated exterior walls shall be protected in accordance with Section 716 of the Building Code of New York State.

Exception: The fire-resistance rating and opening protectives are not required in the exterior wall where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

[BE] 1009.7.3 Openness.

The exterior area for assisted rescue shall be open to the outside air. The sides other than the separation walls shall be not less than 50 % open, and the open area shall be distributed so as to minimize the accumulation of smoke or toxic gases.

[BE] 1009.7.4 Stairways.

Stairways that are part of the means of egress for the exterior area for assisted rescue shall provide a minimum clear width of 48 inches (1220 mm) between handrails.

Exception: The minimum clear width of 48 inches (1220 mm) between handrails is not required at stairways serving buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

[BE] 1009.9 Signage.

Signage indicating special accessibility provisions shall be provided as shown:

1. Each door providing access to an area of refuge from an adjacent floor area shall be identified by a sign stating: AREA OF REFUGE.
2. Each door providing access to an exterior area for assisted rescue shall be identified by a sign stating: EXTERIOR AREA FOR ASSISTED RESCUE.

Signage shall comply with the [ICC A117.1](#) requirements for visual characters and include the International Symbol of Accessibility. Where exit sign illumination is required by Section 1013.3, the signs shall be illuminated. Additionally, visual characters, raised character and braille signage complying with [ICC A117.1](#) shall be located at each door to an area of refuge and exterior area for assisted rescue in accordance with Section 1013.4.

[BE] 1009.10 Directional signage.

Directional signage indicating the location of all other means of egress and which of those are accessible means of egress shall be provided at the following:

1. At exits serving a required accessible space but not providing an approved accessible means of egress.
2. At elevator landings.
3. Within areas of refuge.

[BE] 1009.11 Instructions.

In areas of refuge and exterior areas for assisted rescue, instructions on the use of the area under emergency conditions shall be posted. Signage shall comply with the [ICC A117.1](#) requirements for visual characters. The instructions shall include all of the following:

1. Persons able to use the exit stairway do so as soon as possible, unless they are assisting others.
2. Information on planned availability of assistance in the use of stairs or supervised operation of elevators and how to summon such assistance.
3. Directions for use of the two-way communication system where provided.

SECTION 1010: DOORS, GATES AND TURNSTILES

[BE] 1010.1.1 Size of doors.

The required capacity of each door opening shall be sufficient for the occupant load thereof and shall provide a minimum clear opening width of 32 inches (813 mm). The clear opening width of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear opening width of 32 inches (813 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a minimum clear opening width of 32 inches (813 mm). In Group I-2, doors serving as means of egress doors where used for the movement of beds shall provide a minimum clear opening width of 41½ inches (1054 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. The minimum clear opening height of doors shall be not less than 80 inches (2032 mm).

Exceptions:

1. In Type A unit or Type B unit the minimum and maximum width shall not apply to door openings that are not part of the required means of egress.
2. Door openings to storage closets less than 10 square feet (0.93 m²) in area shall not be limited by the minimum clear opening width.
3. The width of door leaves in revolving doors that comply with Section 1010.1.4.1 shall not be limited.
4. The maximum width of door leaves in power-operated doors that comply with Section 1010.1.4.2 shall not be limited.
5. In Type A or Type B units, exterior door openings, other than the required exit door, shall have a minimum clear opening height of 76 inches (1930 mm).
6. In Type A or Type B units the minimum clear opening widths shall not apply to interior egress doors.
7. Door openings required to be accessible within Type B units intended for user passage shall have a minimum clear opening width of 31.75 inches (806 mm).
8. The minimum clear opening width shall not apply to the doors for non accessible toilet stalls.

[BE] 1010.1.1.1 Projections into clear width.

There shall not be projections into the required clear opening width lower than 34 inches (864 mm) above the floor or ground. Projections into the clear opening width between 34 inches (864 mm) and 80 inches (2032 mm) above the floor or ground shall not exceed 4 inches (102 mm).

Exception: Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the floor.

[BE] 1010.1.1.1 Projections into clear width.

There shall not be projections into the required clear opening width lower than 34 inches (864 mm) above the floor or ground. Projections into the clear opening width between 34 inches (864 mm) and 80 inches (2032 mm) above the floor or ground shall not exceed 4 inches (102 mm).

Exception: Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the floor.

[BE] 1010.1.2.1 Direction of swing.

Pivot or side-hinged swinging doors shall swing in the direction of egress travel where serving a room or area containing an occupant load of 50 or more persons or a Group H occupancy.

[BE] 1010.1.3 Door opening force.

The force for pushing or pulling open interior swinging egress doors, other than fire doors, shall not exceed 5 pounds (22 N). These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position. For other swinging doors, as well as sliding and folding doors, the door latch shall release when subjected to a 15-pound (67 N) force. The door shall be set in motion when subjected to a 30-pound (133 N) force. The door shall swing to a full-open position when subjected to a 15-pound (67 N) force.

[BE] 1010.1.6 Landings at doors.

There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope). Landings shall have a width not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches (178 mm). Where a landing serves an occupant load of 50 or more, doors in any position shall not reduce the landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches (1118 mm).

[BE] 1010.1.8 Door arrangement.

Space between two doors in a series shall be 48 inches (1219 mm) minimum plus the width of a door swinging into the space. Doors in a series shall swing either in the same direction or away from the space between the doors.

Exceptions:

1. The minimum distance between horizontal sliding power-operated doors in a series shall be 48 inches (1219 mm).

[BE] 1010.1.9.2 Hardware height.

Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches (864 mm) minimum and 48 inches (1219 mm) maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height.

Exception: Access doors or gates in barrier walls and fences protecting pools, spas and hot tubs shall be permitted to have operable parts of the latch release on self-latching devices at 54 inches (1370 mm) maximum above the finished floor or ground, provided that the self-latching devices are not also self-locking devices operated by means of a key, electronic opener or integral combination lock.

[BE] 1010.1.9.4 Locks and latches.

Locks and latches shall be permitted to prevent operation of doors where any of the following exist:

1. In buildings in occupancy Group A having an occupant load of 300 or less & Group B the main door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
 - a. The locking device is readily distinguishable as locked.
 - b. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background.
 - c. The use of the key-operated locking device is revokable by the fire code official for due cause.
2. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts does not have a doorknob or surface-mounted hardware.
3. Fire doors after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures.

4. Doors serving roofs not intended to be occupied shall be permitted to be locked, preventing entry to the building from the roof.

SECTION 1011: STAIRWAYS

[BE] 1011.2 Width and capacity.

The required capacity of stairways shall be determined as specified in Section 1005.1, but the minimum width shall be not less than 44 inches (1118 mm). See Section 1009.3 for accessible means of egress stairways.

Exceptions:

1. Stairways serving an occupant load of less than 50 shall have a width of not less than 36 inches (914 mm).

[BE] 1011.3 Headroom.

Stairways shall have a headroom clearance of not less than 80 inches (2032 mm) measured vertically from a line connecting the edge of the nosings. Such headroom shall be continuous above the stairway to the point where the line intersects the landing below, one tread depth beyond the bottom riser. The minimum clearance shall be maintained the full width of the stairway and landing.

[BE] 1011.4 Walkline.

The walkline across winder treads shall be concentric to the direction of travel through the turn and located 12 inches (305 mm) from the side where the winders are narrower. The 12-inch (305 mm) dimension shall be measured from the widest point of the clear stair width at the walking surface of the winder. Where winders are adjacent within the flight, the point of the widest clear stair width of the adjacent winders shall be used.

[BE] 1011.5.2 Riser height and tread depth.

Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. The riser height shall be measured vertically between the nosings of adjacent treads. Rectangular tread depths shall be 11 inches (279 mm) minimum measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's nosing. Winder treads shall have a minimum tread depth of 11 inches (279 mm) between the vertical planes of the foremost projection of adjacent treads at the intersections

with the walkline and a minimum tread depth of 10 inches (254 mm) within the clear width of the stair.

Exceptions:

1. 2.Stairways connecting stepped aisles to cross aisles or concourses shall be permitted to use the riser/tread dimension in Section 1029.14.2.

[BE] 1011.5.3 Winder treads.

Winder treads are not permitted in means of egress stairways except within a dwelling unit.

Exceptions:

1. 1.Curved stairways in accordance with Section 1011.9.
2. 2.Spiral stairways in accordance with Section 1011.10.

[BE] 1011.5.4 Dimensional uniformity.

Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser height or between the largest and smallest tread depth shall not exceed $\frac{3}{8}$ inch (9.5 mm) in any flight of stairs. The greatest winder tread depth at the walkline within any flight of stairs shall not exceed the smallest by more than $\frac{3}{8}$ inch (9.5 mm).

Exceptions:

1. Stairways connecting stepped aisles to cross aisles or concourses shall be permitted to comply with the dimensional nonuniformity in Section 1029.14.2.
2. Consistently shaped winders, complying with Section 1011.5, differing from rectangular treads in the same flight of stairs.
3. Nonuniform riser dimension complying with Section 1011.5.4.1.

[BE] 1011.6 Stairway landings.

There shall be a floor or landing at the top and bottom of each stairway. The width of landings, measured perpendicularly to the direction of travel, shall be not less than the width of stairways served. Every landing shall have a minimum depth, measured parallel to the direction of travel, equal to the width of the stairway or 48 inches (1219 mm), whichever is less. Doors opening onto a landing shall not reduce the landing to less than one-half the required width. When fully open, the door shall not project more than 7 inches (178 mm) into a landing. Where wheelchair spaces are required on the stairway landing in accordance with Section 1009.6.3,

the wheelchair space shall not be located in the required width of the landing and doors shall not swing over the wheelchair spaces.

Exception: Where stairways connect stepped aisles to cross aisles or concourses, stairway landings are not required at the transition between stairways and stepped aisles constructed in accordance with Section 1029.

SECTION 1012: RAMPS

[BE] 1012.2 Slope.

Ramps used as part of a means of egress shall have a running slope not steeper than one unit vertical in 12 units horizontal (8-percent slope). The slope of other pedestrian ramps shall not be steeper than one unit vertical in eight units horizontal (12.5-percent slope).

[BE] 1012.3 Cross slope.

The slope measured perpendicular to the direction of travel of a ramp shall not be steeper than one unit vertical in 48 units horizontal (2-percent slope).

[BE] 1012.4 Vertical rise.

The rise for any ramp run shall be 30 inches (762 mm) maximum.

[BE] 1012.5.1 Width and capacity.

The minimum width and required capacity of a means of egress ramp shall be not less than that required for corridors by Section 1020.2. The clear width of a ramp between handrails, if provided, or other permissible projections shall be 36 inches (914 mm) minimum.

[BE] 1012.5.2 Headroom.

The minimum headroom in all parts of the means of egress ramp shall be not less than 80 inches (2032 mm) above the finished floor of the ramp run and any intermediate landings. The minimum clearance shall be maintained for the full width of the ramp and landing.

[BE] 1012.5.3 Restrictions.

Means of egress ramps shall not reduce in width in the direction of egress travel. Projections into the required ramp and landing width are prohibited. Doors opening onto a landing shall not reduce the clear width to less than 42 inches (1067 mm).

[BE] 1012.6.1 Landing Slope.

Landings shall have a slope not steeper than one unit vertical in 48 units horizontal (2-percent slope) in any direction. Changes in level are not permitted.

[BE] 1012.6.2 Landing Width.

The landing width shall be not less than the width of the widest ramp run adjoining the landing.

[BE] 1012.6.3 Length.

The landing length shall be 60 inches (1525 mm) minimum.

Exceptions:

1. In Type A units or Type B units in accordance with Section 1107 of the Building Code of New York State, landings are permitted to be 36 inches (914 mm) minimum.
2. Where the ramp is not a part of an accessible route, the length of the landing shall not be required to be more than 48 inches (1220 mm) in the direction of travel.

[BE] 1012.6.4 Change in direction.

Where changes in direction of travel occur at landings provided between ramp runs, the landing shall be 60 inches by 60 inches (1524 mm by 1524 mm) minimum.

Exception: In Type A units or Type B units in accordance with Section 1107 of the Building Code of New York State, landings are permitted to be 36 inches by 36 inches (914 mm by 914 mm) minimum.

[BE] 1012.8 Handrails.

Ramps with a rise greater than 6 inches (152 mm) shall have handrails on both sides. Handrails shall comply with Section 1014.

[BE] 1012.10.1 Curb, rail, wall or barrier.

A curb, rail, wall or barrier shall be provided to serve as edge protection. A curb shall be not less than 4 inches (102 mm) in height. Barriers shall be constructed so that the barrier prevents the passage of a 4-inch-diameter (102 mm) sphere, where any portion of the sphere is within 4 inches (102 mm) of the floor or ground surface.

[BE] 1012.10.2 Extended floor or ground surface.

The floor or ground surface of the ramp run or landing shall extend 12 inches (305 mm) minimum beyond the inside face of a handrail complying with Section 1014.

SECTION 1014: HANDRAILS

[BE] 1014.2 Height.

Handrail height, measured above stair tread nosings, or finish surface of ramp slope, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm). Handrail height of alternating tread devices and ship's ladders, measured above tread nosings, shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

Exceptions:

1. Where handrail fittings or bendings are used to provide continuous transition between flights, the fittings or bendings shall be permitted to exceed the maximum height.
2. Handrails on top of a guard where permitted along stepped aisles and ramped aisles in accordance with Section 1029.16.

[BE] 1014.3.1 Type I.

Handrails with a circular cross section shall have an outside diameter of not less than 1¹/₄ inches (32 mm) and not greater than 2 inches (51 mm). Where the handrail is not circular, it shall have a perimeter dimension of not less than 4 inches (102 mm) and not greater than 6¹/₄ inches (160 mm) with a maximum cross-sectional dimension of 2¹/₄ inches (57 mm) and minimum cross-sectional dimension of 1 inch (25 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

[BE] 1014.3.2 Type II.

Handrails with a perimeter greater than 6¹/₄ inches (160 mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of ³/₄

inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of not less than $\frac{5}{16}$ inch (8 mm) within $\frac{7}{8}$ inch (22 mm) below the widest portion of the profile. This required depth shall continue for not less than $\frac{3}{8}$ inch (10 mm) to a level that is not less than $1\frac{3}{4}$ inches (45 mm) below the tallest portion of the profile. The width of the handrail above the recess shall be not less than $1\frac{1}{4}$ inches (32 mm) to not greater than $2\frac{3}{4}$ inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

[BE] 1014.4 Continuity.

Handrail gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

1. Handrails within dwelling units are permitted to be interrupted by a newel post at a turn or landing.
2. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within $1\frac{1}{2}$ inches (38 mm) of the bottom of the handrail shall not be considered obstructions. For each $\frac{1}{2}$ inch (12.7 mm) of additional handrail perimeter dimension above 4 inches (102 mm), the vertical clearance dimension of $1\frac{1}{2}$ inches (38 mm) shall be permitted to be reduced by $\frac{1}{8}$ inch (3.2 mm).
3. Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of the handrail gripping surfaces shall be permitted to be obstructed along their entire length where they are integral to crash rails or bumper guards.
4. Handrails serving stepped aisles or ramped aisles are permitted to be discontinuous in accordance with Section 1029.16.1.

[BE] 1014.6 Handrail extensions.

Handrails shall return to a wall, guard or the walking surface or shall be continuous to the handrail of an adjacent flight of stairs or ramp run. Where handrails are not continuous between flights the handrails shall extend horizontally not less than 12 inches (305 mm) beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. At ramps where handrails are not continuous between runs, the handrails shall extend horizontally above the landing 12 inches (305 mm) minimum beyond the top and bottom of ramp runs. The extensions of handrails shall be in the same direction of the flights of stairs at stairways and the ramp runs at ramps.

Exceptions:

1. Handrails within a dwelling unit that is not required to be accessible need extend only from the top riser to the bottom riser.
2. Handrails serving aisles in rooms or spaces used for assembly purposes are permitted to comply with the handrail extensions in accordance with Section 1029.16.
3. Handrails for alternating tread devices and ship's ladders are permitted to terminate at a location vertically above the top and bottom risers. Handrails for alternating tread devices are not required to be continuous between flights or to extend beyond the top or bottom risers.

[BE] 1014.7 Clearance.

Clear space between a handrail and a wall or other surface shall be not less than 1½ inches (38 mm). A handrail and a wall or other surface adjacent to the handrail shall be free of any sharp or abrasive elements.

[BE] 1014.9 Intermediate handrails.

Stairways shall have intermediate handrails located in such a manner that all portions of the stairway minimum width or required capacity are within 30 inches (762 mm) of a handrail. On monumental stairs, handrails shall be located along the most direct path of egress travel.

SECTION 1015: GUARDS

[BE] 1015.1 General.

Guards shall comply with the provisions of Section 1015.2 through 1015.7. Operable windows with sills located more than 72 inches (1829 mm) above finished grade or other surface below shall comply with Section 1015.8.

[BE] 1015.2 Where required.

Guards shall be located along open-sided walking surfaces, including mezzanines, equipment platforms, aisles, stairs, ramps and landings that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Guards shall be adequate in strength and attachment in accordance with Section 1607.8 of the Building Code of New York State.

Exception: Guards are not required for the following locations:

1. On the loading side of loading docks or piers.

2. On the audience side of stages and raised platforms, including stairs leading up to the stage and raised platforms.
3. On raised stage and platform floor areas, such as runways, ramps and side stages used for entertainment or presentations.
4. At vertical openings in the performance area of stages and platforms.
5. At elevated walking surfaces appurtenant to stages and platforms for access to and utilization of special lighting or equipment.
6. Along vehicle service pits not accessible to the public.
7. In assembly seating areas at cross aisles in accordance with Section 1029.17.2.

[BE] 1015.3 Height.

Required guards shall be not less than 42 inches (1067 mm) high, measured vertically as follows:

1. 1.From the adjacent walking surfaces.
2. 2.On stairways and stepped aisles, from the line connecting the leading edges of the tread nosings.
3. 3.On ramps and ramped aisles, from the ramp surface at the guard.

Exceptions:

1. The guard height in assembly seating areas shall comply with Section 1029.17 as applicable.
2. Along alternating tread devices and ship's ladders, guards where the top rail serves as a handrail shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from the leading edge of the device tread nosing.

[BE] 1015.4 Opening limitations.

Required guards shall not have openings that allow passage of a sphere 4 inches (102 mm) in diameter from the walking surface to the required guard height.

Exceptions:

1. From a height of 36 inches (914 mm) to 42 inches (1067 mm), guards shall not have openings that allow passage of a sphere $4\frac{3}{8}$ inches (111 mm) in diameter.
2. The triangular openings at the open sides of a stair, formed by the riser, tread and bottom rail shall not allow passage of a sphere 6 inches (152 mm) in diameter.
3. At elevated walking surfaces for access to and use of electrical, mechanical or plumbing systems or equipment, guards shall not have openings that allow passage of a sphere 21 inches (533 mm) in diameter.

4. In areas that are not open to the public within occupancies in Group I-3, F, H or S, and for alternating tread devices and ship's ladders, guards shall not have openings that allow passage of a sphere 21 inches (533 mm) in diameter.
5. In assembly seating areas, guards required at the end of aisles in accordance with Section 1029.17.4 shall not have openings that allow passage of a sphere 4 inches (102 mm) in diameter up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, guards shall not have openings that allow passage of a sphere 8 inches (203 mm) in diameter.
6. Within individual dwelling units and sleeping units in Group R-2 and R-3 occupancies, guards on the open sides of stairs shall not have openings that allow passage of a sphere $4\frac{3}{8}$ (111 mm) inches in diameter.

[BE] 1015.6 Mechanical equipment, systems and devices.

Guards shall be provided where various components that require service are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of such components. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

Exception: Guards are not required where personal fall arrest anchorage connector devices that comply with ANSI/ASSE Z 359.1 are installed.

[BE] 1015.7 Roof access.

Guards shall be provided where the roof hatch opening is located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

Exception: Guards are not required where personal fall arrest anchorage connector devices that comply with ANSI/ASSE Z 359.1 are installed.

SECTION 1017: EXIT ACCESS TRAVEL DISTANCE

[BE] TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE^a

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)	WITH SPRINKLER SYSTEM (feet)
A, E, F-1, M, R, S-1	200	250 ^{b, e}
I-1	Not Permitted	250 ^b
B	200	300 ^c

SECTION 1024: EXIT PASSAGEWAYS

[BE] 1024.1 Exit passageways.

Exit passageways serving as an exit component in a means of egress system shall comply with the requirements of this section. An exit passageway shall not be used for any purpose other than as a means of egress and a circulation path.

[BE] 1024.2 Width and capacity.

The required capacity of exit passageways shall be determined as specified in Section 1005.1 but the minimum width shall be not less than 44 inches (1118 mm), except that exit passageways serving an occupant load of less than 50 shall be not less than 36 inches (914 mm) in width. The minimum width or required capacity of exit passageways shall be unobstructed.

Exception: Encroachments complying with Section 1005.7.

SECTION 1029: ASSEMBLY

[BE] 1029.1.1.1 Spaces under grandstands and bleachers.

Spaces under grandstands or bleachers shall be separated by fire barriers complying with Section 707 of the Building Code of New York State and horizontal assemblies complying with Section 711 of the Building Code of New York State with not less than 1-hour fire-resistance-rated construction.

Exceptions:

1. Ticket booths less than 100 square feet (9 m²) in area.
2. Toilet rooms.

3. Other accessory use areas 1,000 square feet (93 m²) or less in area and equipped with an automatic sprinkler system in accordance with Section 903.3.1.1.

[BE] 1029.2 Assembly main exit.

A building, room or space used for assembly purposes that has an occupant load of greater than 300 and is provided with a main exit, that main exit shall be of sufficient capacity to accommodate not less than one-half of the occupant load, but such capacity shall be not less than the total required capacity of all means of egress leading to the exit. Where the building is classified as a Group A occupancy, the main exit shall front on not less than one street or an unoccupied space of not less than 10 feet (3048 mm) in width that adjoins a street or public way. In a building, room or space used for assembly purposes where there is not a well-defined main exit or where multiple main exits are provided, exits shall be permitted to be distributed around the perimeter of the building provided that the total capacity of egress is not less than 100 percent of the required capacity.

[BE] 1029.4 Foyers and lobbies.

In Group A-1 occupancies, where persons are admitted to the building at times when seats are not available, such persons shall be allowed to wait in a lobby or similar space, provided that such lobby or similar space shall not encroach on the minimum width or required capacity of the means of egress. Such foyer, if not directly connected to a public street by all the main entrances or exits, shall have a straight and unobstructed corridor or path of travel to every such main entrance or exit.

[BE] 1029.5 Interior balcony and gallery means of egress.

For balconies, galleries or press boxes having a seating capacity of 50 or more located in a building, room or space used for assembly purposes, not less than two means of egress shall be provided, with one from each side of every balcony, gallery or press box.

[BE] 1029.6 Capacity of aisle for assembly.

The required capacity of aisles shall be not less than that determined in accordance with Section 1029.6.1 where smoke-protected assembly seating is not provided, with Section 1029.6.2 where smoke-protected assembly seating is provided, and with Section 1029.6.3 where open-air assembly seating is provided.

[BE] 1029.6.1 Without smoke protection.

The required capacity in inches (mm) of the aisles for assembly seating without smoke protection shall be not less than the occupant load served by the egress element in accordance with all of the following, as applicable:

1. 1. Not less than 0.3 inch (7.6 mm) of aisle capacity for each occupant served shall be provided on stepped aisles having riser heights 7 inches (178 mm) or less and tread depths 11 inches (279 mm) or greater, measured horizontally between tread nosings.
2. 2. Not less than 0.005 inch (0.127 mm) of additional aisle capacity for each occupant shall be provided for each 0.10 inch (2.5 mm) of riser height above 7 inches (178 mm).
3. 3. Where egress requires stepped aisle descent, not less than 0.075 inch (1.9 mm) of additional aisle capacity for each occupant shall be provided on those portions of aisle capacity that do not have a handrail within a horizontal distance of 30 inches (762 mm).
4. 4. Ramped aisles, where slopes are steeper than one unit vertical in 12 units horizontal (8-percent slope), shall have not less than 0.22 inch (5.6 mm) of clear aisle capacity for each occupant served. Level or ramped aisles, where slopes are not steeper than one unit vertical in 12 units horizontal (8-percent slope), shall have not less than 0.20 inch (5.1 mm) of clear aisle capacity for each occupant served.

[BE] 1029.6.2.2 Roof height.

A smoke-protected assembly seating area with a roof shall have the lowest portion of the roof deck not less than 15 feet (4572 mm) above the highest aisle or aisle accessway.

Exception: A roof canopy in an outdoor stadium shall be permitted to be less than 15 feet (4572 mm) above the highest aisle or aisle accessway provided that there are no objects less than 80 inches (2032 mm) above the highest aisle or aisle accessway.

[BE] 1029.7 Travel distance.

The exit access travel distance shall comply with Section 1017. Where aisles are provided for seating, the distance shall be measured along the aisles and aisle accessways without travel over or on the seats.

Exceptions:

1. In facilities with smoke-protected assembly seating the total exit access travel distance shall be not greater than 400 feet (122 m). That portion of the total permitted exit access travel distance from each seat to the nearest entrance to a vomitory or concourse shall not exceed 200 feet (60 960 mm). The portion of the total permitted exit access travel distance from the entrance to the vomitory or concourse to one of the following shall not exceed 200 feet (60 960 mm).

- a. The closest riser of an exit access stairway.
 - b. The closest slope of an exit access ramp.
 - c. An exit.
2. In facilities with open-air assembly seating of Type III, IV or V construction, the total exit access travel distance to one of the following shall not exceed 400 feet (122 m).
 - a. The closest riser of an exit access stairway.
 - b. The closest slope of an exit access ramp.
 - c. An exit.
3. In facilities with open-air assembly seating of Type I or II construction, the exit access travel distance shall not be limited.

[BE] 1029.8 Common path of egress travel.

The common path of egress travel shall not exceed 30 feet (9144 mm) from any seat to a point where an occupant has a choice of two paths of egress travel to two exits.

Exceptions:

1. For areas serving less than 50 occupants, the common path of egress travel shall not exceed 75 feet (22 860 mm).
2. For smoke-protected or open-air assembly seating, the common path of egress travel shall not exceed 50 feet (15 240 mm).

[BE] 1029.8.1 Path through adjacent row.

Where one of the two paths of travel is across the aisle through a row of seats to another aisle, there shall be not more than 24 seats between the two aisles, and the minimum clear width between rows for the row between the two aisles shall be 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat above seven in the row between aisles.

Exception: For smoke-protected or open-air assembly seating there shall be not more than 40 seats between the two aisles and the minimum clear width shall be 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat.

[BE] 1029.9.1 Minimum aisle width.

The minimum clear width for aisles shall comply with one of the following:

1. Forty-eight inches (1219 mm) for stepped aisles having seating on both sides.
Exception: Thirty-six inches (914 mm) where the stepped aisles serve less than 50 seats.

2. Thirty-six inches (914 mm) for stepped aisles having seating on only one side.
Exception: Twenty-three inches (584 mm) between a stepped aisle handrail and seating where a stepped aisle does not serve more than five rows on one side.
3. Twenty-three inches (584 mm) between a stepped aisle handrail or guard and seating where the stepped aisle is subdivided by a mid-aisle handrail.
4. Forty-two inches (1067 mm) for level or ramped aisles having seating on both sides.
Exceptions:
 - a. Thirty-six inches (914 mm) where the aisle serves less than 50 seats.
 - b. Thirty inches (762 mm) where the aisle serves fewer than 15 seats and does not serve as part of an accessible route.
5. Thirty-six inches (914 mm) for level or ramped aisles having seating on only one side.
Exception: Thirty inches (762 mm) where the aisle serves fewer than 15 seats and does not serve as part of an accessible route.

[BE] 1029.9.5 Dead-end aisles.

Each end of an aisle shall be continuous to a cross aisle, foyer, doorway, vomitory, concourse or stairway in accordance with Section 1029.9.7 having access to an exit.

Exceptions:

1. Dead-end aisles shall be not greater than 20 feet (6096 mm) in length.
2. Dead-end aisles longer than 16 rows are permitted where seats beyond the 16th row dead-end aisle are not more than 24 seats from another aisle, measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.
3. For smoke-protected or open-air assembly seating, the dead-end aisle length of vertical aisles shall not exceed a distance of 21 rows.
4. For smoke-protected or open-air assembly seating, a longer dead-end aisle is permitted where seats beyond the 21-row dead-end aisle are not more than 40 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.

[BE] 1029.10.2.1 Stairways and stepped aisles in a straight run.

Where stairways and stepped aisles are in a straight run, transitions shall have one of the following:

1. 1.A depth of not less than 22 inches (559 mm) where the treads on the descending side of the transition have greater depth.

2. 2.A depth of not less than 30 inches (762 mm) where the treads on the descending side of the transition have lesser depth.

NYS Building Code (<https://codes.iccsafe.org/content/NYSBC2020P1/chapter-3-occupancy-classification-and-use>) :

Chapter 3 Occupancy Classification and Use:

https://up.codes/viewer/new_york/ibc-2018/chapter/3/occupancy-classification-and-use#3

Pick Occupancy Group based on proposed use:

303.2 Assembly Group A-1

- Symphony and concert halls
- Theaters

303.3 Assembly Group A-2

- Banquet halls
- Restaurants
- Cafeterias and similar dining facilities (including associated commercial kitchens)

303.4 Assembly Group A-3

- Art galleries
- Community halls
- Exhibition halls

Chapter 5 General Building Heights and Areas:

https://up.codes/viewer/new_york/ibc-2018/chapter/5/general-building-heights-and-areas#5

504.3 Height in Feet

Max building height based on occupancy group, construction type and sprinkler.

TABLE 504.3

OCCUPANCY CLASSIFICATION	ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE ^a									
	SEE FOOTNOTES	TYPE OF CONSTRUCTION								
		TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
		A	B	A	B	A	B	HT	A	B
A, B, E, F, M, S, U	NS ^b	UL	160	65	55	65	55	65	50	40
	S	UL	180	85	75	85	75	85	70	60

504.4 Number of Stories

Max building stories based on occupancy group, construction type and sprinkler.

TABLE 504.4

OCCUPANCY CLASSIFICATION	ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE ^{a, b}									
	SEE FOOTNOTES	TYPE OF CONSTRUCTION								
		TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
		A	B	A	B	A	B	HT	A	B
A-1	NS	UL	5	3	2	3	2	3	2	1
	S	UL	6	4	3	4	3	4	3	2
A-2	NS	UL	11	3	2	3	2	3	2	1
	S	UL	12	4	3	4	3	4	3	2
A-3	NS	UL	11	3	2	3	2	3	2	1
	S	UL	12	4	3	4	3	4	3	2

UL = Unlimited; NP = Not Permitted; NS = Buildings not equipped throughout with an automatic sprinkler system; S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1; S13R = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.2; S13D = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.3.

506.2 Allowable Area Determination

Max allowable area based on occupancy group, construction type and sprinkler.

TABLE 506.2

ALLOWABLE AREA FACTOR (A_t = NS, S1, S13R, S13D or SM, as applicable) IN SQUARE FEET^{a, b}

OCCUPANCY CLASSIFICATION	SEE FOOTNOTES	TYPE OF CONSTRUCTION								
		TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
		A	B	A	B	A	B	HT	A	B
A-1	NS	UL	UL	15,500	8,500	14,000	8,500	15,000	11,500	5,500
	S1	UL	UL	62,000	34,000	56,000	34,000	60,000	46,000	22,000
	SM	UL	UL	46,500	25,500	42,000	25,500	45,000	34,500	16,500
A-2	NS	UL	UL	15,500	9,500	14,000	9,500	15,000	11,500	6,000
	S1	UL	UL	62,000	38,000	56,000	38,000	60,000	46,000	24,000
	SM	UL	UL	46,500	28,500	42,000	28,500	45,000	34,500	18,000
A-3	NS	UL	UL	15,500	9,500	14,000	9,500	15,000	11,500	6,000
	S1	UL	UL	62,000	38,000	56,000	38,000	60,000	46,000	24,000
	SM	UL	UL	46,500	28,500	42,000	28,500	45,000	34,500	18,000

UL = Unlimited; NP = Not Permitted; NS = Buildings not equipped throughout with an automatic sprinkler system; S1 = Buildings a maximum of one story above grade plane equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1; SM = Buildings two or more stories above grade plane equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1; S13R = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.2; S13D = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.3.

508.4 Separated Occupancies

Fire rating requirement between Occupancy groups

TABLE 508.4

REQUIRED SEPARATION OF OCCUPANCIES (HOURS)^f

OCCUPANCY	A, E		I-1 ^a , I-3, I-4		I-2		R ^a		F-2, S-2 ^b , U		B ^e , F-1, M, S-1		H-1		H-2		H-3, H-4		H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A, E	N	N	1	2	2	NP	1	2	N	1	1	2	NP	NP	3	4	2	3	2	NP
I-1 ^a , I-3, I-4	—	—	N	N	2	NP	1	NP	1	2	1	2	NP	NP	3	NP	2	NP	2	NP
I-2	—	—	—	—	N	N	2	NP	2	NP	2	NP	NP	NP	3	NP	2	NP	2	NP
R ^a	—	—	—	—	—	—	N	N	1 ^c	2 ^c	1	2	NP	NP	3	NP	2	NP	2	NP
F-2, S-2 ^b , U	—	—	—	—	—	—	—	—	N	N	1	2	NP	NP	3	4	2	3	2	NP
B ^e , F-1, M, S-1	—	—	—	—	—	—	—	—	—	—	N	N	NP	NP	2	3	1	2	1	NP
H-1	—	—	—	—	—	—	—	—	—	—	—	—	N	NP	NP	NP	NP	NP	NP	NP
H-2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	N	NP	1	NP	1	NP
H-3, H-4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1 ^d	NP	1	NP
H-5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	N	NP

S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

N = No separation requirement.

NP = Not Permitted

Chapter 6 Types of Construction:

https://up.codes/viewer/new_york/ibc-2018/chapter/6/types-of-construction#6

Section 601 General

Fire rating requirement per building element based on construction types

TABLE 601
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
	A	B	A	B	A	B	HT	A	B
Primary structural frame ^f (see Section 202)	3 ^{a, b}	2 ^{a, b}	1 ^b	0	1 ^b	0	HT	1 ^b	0
Bearing walls									
Exterior ^{e, f}	3	2	1	0	2	2	2	1	0
Interior	3 ^a	2 ^a	1	0	1	0	1/HT	1	0
Nonbearing walls and partitions	See Table 602								
Exterior									
Nonbearing walls and partitions	0	0	0	0	0	0	See Section 2304.11.2	0	0
Interior ^d									
Floor construction and associated secondary members (see Section 202)	2	2	1	0	1	0	HT	1	0
Roof construction and associated secondary members (see Section 202)	1½ ^b	1 ^{b, c}	1 ^{b, c}	0 ^c	1 ^{b, c}	0	HT	1 ^{b, c}	0

Section 602 Construction Classification

TABLE 602
FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION
DISTANCE^{a, d, g}

FIRE SEPARATION DISTANCE = X (feet)	TYPE OF CONSTRUCTION	OCCUPANCY GROUP H^e	OCCUPANCY GROUP F-1, M, S-1^f	OCCUPANCY GROUP A, B, E, F-2, I, Rⁱ, S-2, U^h
$X < 5^b$	All	3	2	1
$5 \leq X < 10$	IA	3	2	1
	Others	2	1	1
$10 \leq X < 30$	IA, IB	2	1	1 ^c
	IIB, VB	1	0	0
	Others	1	1	1 ^c
$X \geq 30$	All	0	0	0

602.2 Types I and II

Types I and II construction are those types of construction in which the building elements listed in Table 601 are of noncombustible materials, except as permitted in Section 603 and elsewhere in this code.

602.3 Type III

Type III construction is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code. Fire-retardant-treated wood framing and sheathing complying with Section 2303.2 shall be permitted within exterior wall assemblies of a 2-hour rating or less.

602.4 Type IV

Type IV construction is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of solid wood, laminated wood, heavy timber (HT) or structural composite lumber (SCL) without concealed spaces. The minimum dimensions for permitted materials including solid timber, glued-laminated timber, structural composite lumber (SCL), and cross-laminated timber and details of Type IV construction shall comply with the provisions of this section and Section 2304.11. Exterior walls complying with Section 602.4.1 or 602.4.2 shall be permitted. Interior walls and partitions not less than 1-hour fire-resistance rating or heavy timber complying with Section 2304.11.2.2 shall be permitted.

602.5 Type V

Type V construction is that type of construction in which the structural elements, exterior walls and interior walls are of any materials permitted by this code.

Chapter 10 - Means of Egress:

https://up.codes/viewer/new_york/ibc-2018/chapter/10/means-of-egress#10

1003.2 Ceiling Height

The means of egress shall have a ceiling height of not less than 7 feet 6 inches (2286 mm) above the finished floor.

Exceptions:

Sloped ceilings in accordance with Section 1207.2.

Ceilings of dwelling units and sleeping units within residential occupancies in accordance with Section 1207.2.

Allowable projections in accordance with Section 1003.3.

Stair headroom in accordance with Section 1011.3.

Door height in accordance with Section 1010.1.1.

Ramp headroom in accordance with Section 1012.5.2.

The clear height of floor levels in vehicular and pedestrian traffic areas of public and private parking garages in accordance with Section 406.2.2.

Areas above and below mezzanine floors in accordance with Section 505.2.

Business areas	150 gross
Concentrated business use areas	See Section 1004.8
Courtrooms—other than fixed seating areas	40 net
Day care	35 net
Dormitories	50 gross
Educational	
Classroom area	20 net
Shops and other vocational room areas	50 net
Exercise rooms	50 gross
Group H-5 fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas	
Inpatient treatment areas	240 gross
Outpatient areas	100 gross
Sleeping areas	120 gross
Kitchens, commercial	200 gross
Library	
Reading rooms	50 net
Stack area	100 gross
Locker rooms	50 gross
Mall buildings—covered and open	See Section 402.8.2

1004.1 Design Occupant Load

TABLE 1004.5
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR ^a		
Accessory storage areas, mechanical equipment room	300 gross		
Agricultural building	300 gross		
Aircraft hangars	500 gross		
Airport terminal			
Baggage claim	20 gross		
Baggage handling	300 gross		
Concourse	100 gross		
Waiting areas	15 gross		
Assembly			
Gaming floors (keno, slots, etc.)	11 gross	Mercantile	60 gross
Exhibit gallery and museum	30 net	Storage, stock, shipping areas	300 gross
Assembly with fixed seats	See Section 1004.6	Parking garages	200 gross
Assembly without fixed seats		Residential	200 gross
Concentrated (chairs only—not fixed)	7 net	Skating rinks, swimming pools	
Standing space	5 net	Rink and pool	50 gross
Unconcentrated (tables and chairs)	15 net	Decks	15 gross
Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for additional areas	7 net	Stages and platforms	15 net
		Warehouses	500 gross

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m².

1005.3 Required Capacity Based on Occupant Load

1005.3.1 Stairways

The capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairways by a means of an egress capacity factor of 0.3 inch (7.6 mm) per occupant. Where stairways serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required capacity of the stairways serving that story.

1005.3.2 Other Egress Components

The capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such components by a means of egress capacity factor of 0.2 inch (5.1 mm) per occupant.

1005.7.1 Doors

Doors, when fully opened, shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half.

1006.2.1 Egress Based on Occupant Load and Common Path of Egress Travel Distance

Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1. The cumulative occupant load from adjacent rooms, areas or spaces shall be determined in accordance with Section 1004.2.

**TABLE 1006.2.1
SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY**

OCCUPANCY	MAXIMUM OCCUPANT LOAD OF SPACE	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)		
		Without Sprinkler System (feet)		With Sprinkler System (feet)
		Occupant Load		
		OL ≤ 30	OL > 30	
A ^c , E, M	49	75	75	75 ^a
B	49	100	75	100 ^a
F	49	75	75	100 ^a
H-1, H-2, H-3	3	NP	NP	25 ^b
H-4, H-5	10	NP	NP	75 ^b
I-1, I-2 ^d , I-4	10	NP	NP	75 ^a
I-3	10	NP	NP	100 ^a
R-1	10	NP	NP	75 ^a
R-2	20	NP	NP	125 ^a
R-3 ^e	20	NP	NP	125 ^{a, g}
R-4 ^e	20	NP	NP	125 ^{a, g}
S ^f	29	100	75	100 ^a
U	49	100	75	75 ^a

1006.3.2 Egress Based on Occupant Load

Each story and occupied roof shall have the minimum number of separate and distinct exits, or access to exits, as specified in Table 1006.3.2. A single exit or access to a single exit shall be permitted in accordance with Section 1006.3.3. The required number of exits, or exit access stairways or ramps providing access to exits, from any story or occupied roof shall be maintained until arrival at the exit discharge or a public way.

**TABLE 1006.3.2
MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS PER
STORY**

OCCUPANT LOAD PER STORY	MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS FROM STORY
1-500	2
501-1,000	3
More than 1,000	4

**TABLE 1006.3.3(2)
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES**

STORY	OCCUPANCY	MAXIMUM OCCUPANT LOAD PER STORY	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)
First story above or below grade plane	A, B ^b , E F ^b , M, U	49	75
	H-2, H-3	3	25
	H-4, H-5, I, R-1, R-2 ^{a, c}	10	75
	S ^{b, d}	29	75
Second story above grade plane	B, F, M, S ^d	29	75
Third story above grade plane and higher	NP	NA	NA

1010.1.1 Size of Doors

The required capacity of each door opening shall be sufficient for the occupant load thereof and shall provide a minimum clear opening width of 32 inches (813 mm). The clear opening width of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear opening width of 32 inches (813 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a minimum clear opening width of 32 inches (813 mm). In Group I-2, doors serving as means of egress doors where used for the movement of beds shall provide a minimum clear opening width of 41 1/2 inches (1054 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. The minimum clear opening height of doors shall be not less than 80 inches (2032 mm).

1010.1.2.1 Direction of Swing

Pivot or side-hinged swinging doors shall swing in the direction of egress travel where serving a room or area containing an occupant load of 50 or more persons or a Group H occupancy.

1010.1.6 Landings at Doors

Landings shall have a width not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches (178 mm). Where a landing serves an occupant load of 50 or more, doors in any position shall not reduce the landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches (1118 mm).

1017.2 Limitations

TABLE 1017.2
EXIT ACCESS TRAVEL DISTANCE^a

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)	WITH SPRINKLER SYSTEM (feet)
A, E, F-1, M, R, S-1	200 ^e	250 ^b
I-1	Not Permitted	250 ^b
B	200	300 ^c
F-2, S-2, U	300	400 ^c
H-1	Not Permitted	75 ^d
H-2	Not Permitted	100 ^d
H-3	Not Permitted	150 ^d
H-4	Not Permitted	175 ^d
H-5	Not Permitted	200 ^c
I-2, I-3	Not Permitted	200 ^c
I-4	150	200 ^c

1020.1 Construction

TABLE 1020.1
CORRIDOR FIRE-RESISTANCE RATING

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRE-RESISTANCE RATING (hours)	
		Without sprinkler system	With sprinkler system
H-1, H-2, H-3	All	Not Permitted	1 ^c
H-4, H-5	Greater than 30	Not Permitted	1 ^c
A, B, E, F, M, S, U	Greater than 30	1	0
R	Greater than 10	Not Permitted	0.5 ^c /1 ^d
I-2 ^a	All	Not Permitted	0
I-1, I-3	All	Not Permitted	1 ^{b, c}
I-4	All	1	0

1020.2 Width and Capacity

**TABLE 1020.2
MINIMUM CORRIDOR WIDTH**

OCCUPANCY	MINIMUM WIDTH (inches)
Any facility not <i>listed</i> in this table	44
Access to and utilization of mechanical, plumbing or electrical systems or equipment	24
With an <i>occupant load</i> of less than 50	36
Within a <i>dwelling unit</i>	36
In Group E with a <i>corridor</i> having an <i>occupant load</i> of 100 or more	72
In <i>corridors</i> and areas serving stretcher traffic in <i>ambulatory care facilities</i>	72
Group I-2 in areas where required for bed movement	96

Chapter 11 - Accessibility:

https://up.codes/viewer/new_york/ibc-2018/chapter/11/accessibility#11

Section 1106 Parking and Passenger Loading Facilities

TABLE 1106.1

ACCESSIBLE PARKING SPACES

TOTAL PARKING SPACES PROVIDED IN PARKING FACILITIES	REQUIRED MINIMUM NUMBER OF ACCESSIBLE SPACES
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1,000	2% of total
1,001 and over	20, plus one for each 100, or fraction thereof, over 1,000

1108.2 Assembly Area Seating

A building, room or space used for assembly purposes with fixed seating shall comply with Sections 1108.2.1 through 1108.2.5. Lawn seating shall comply with Section 1108.2.6. Assistive listening systems shall comply with Section 1108.2.7. Performance areas viewed from assembly seating areas shall comply with Section 1108.2.8. Dining areas shall comply with Section 1108.2.9.

1108.2.2 Wheelchair Spaces

In rooms and spaces used for assembly purposes with fixed seating, accessible wheelchair spaces shall be provided in accordance with Sections 1108.2.2.1 through 1108.2.2.3.

1108.2.2.1 General Seating

TABLE 1108.2.2.1

ACCESSIBLE WHEELCHAIR SPACES

CAPACITY OF SEATING IN ASSEMBLY AREAS	MINIMUM REQUIRED NUMBER OF WHEELCHAIR SPACES
4 to 25	1
26 to 50	2
51 to 100	4
101 to 300	5
301 to 500	6
501 to 5,000	6, plus 1 for each 150, or fraction thereof, between 501 through 5,000
5,001 and over	36 plus 1 for each 200, or fraction thereof, over 5,000

1109.2 Toilet and Bathing Facilities

Each toilet room and bathing room shall be accessible. Where a floor level is not required to be connected by an accessible route, the only toilet rooms or bathing rooms provided within the facility shall not be located on the inaccessible floor. Except as provided for in Sections 1109.2.2 and 1109.2.3, at least one of each type of fixture, element, control or dispenser in each accessible toilet room and bathing room shall be accessible.

1109.2.2 Water Closet Compartment

Where water closet compartments are provided in a toilet room or bathing room, at least 5 percent of the total number of compartments shall be wheelchair accessible. Where the combined total water closet compartments and urinals provided in a toilet room or bathing room is six or more, at least 5 percent of the total number of compartments shall be ambulatory accessible, provided in addition to the wheelchair-accessible compartment.

1109.2.3 Lavatories

Where lavatories are provided, at least 5 percent, but not less than one, shall be accessible. Where an accessible lavatory is located within the accessible water closet compartment at least one additional accessible lavatory shall be provided in the multicompartment toilet room outside the water closet compartment. Where the total lavatories provided in a toilet room or bathing facility is six or more, at least one lavatory with enhanced reach ranges shall be provided.

1109.3 Sinks

Where sinks are provided, at least 5 percent but not less than one provided in accessible spaces shall be accessible.

1109.4 Kitchens and Kitchenettes

Where kitchens and kitchenettes are provided in accessible spaces or rooms, they shall be accessible.

1109.5 Drinking Fountains

Where drinking fountains are provided on an exterior site, on a floor or within a secured area, the drinking fountains shall be provided in accordance with Sections 1109.5.1 and 1109.5.2.

1109.5.1 Minimum Number

Not fewer than two drinking fountains shall be provided. One drinking fountain shall comply with the requirements for people who use a wheelchair and one drinking fountain shall comply with the requirements for standing persons.

1109.7 Elevators

Passenger elevators on an accessible route shall be accessible and comply with Chapter 30.

2017 ICC A117.1 with Supplement 1 Accessible and Usable Buildings and Facilities

<https://codes.iccsafe.org/content/ICCA117.12017P7>

NASSAU COUNTY DEPARTMENT OF PUBLIC WORKS DIVISION OF ENGINEERING –
CIVIL/SITE ENGINEERING UNIT

239f # _____

Date _____

To: Bldg. Dept. Mgr.: Town of _____, or Village
of _____

Location of Property: _____

The plan submitted for the above location under Section 239f of the General Municipal Law, is returned herewith, without approval, for the following reasons (circled/underlined/Bolded or noted below):

HIGHWAY DESIGN REVIEW

1. Show proposed grading of lot relative to street and abutting terrain. Proposed spot elevations on PL and/or contour lines are required. Showing flow arrows in place of elevations is not sufficient.
2. Show existing adjacent roadway features (pavement, curb, sidewalk, elevations, utilities, etc.).
3. Show proposed utility connections (water, gas, sewer, electric, etc.) Show limit of restoration on plan.
4. Supply Pavement Restoration detail: (For use in Nassau County ROW) Full depth sawcut, 2' from curb, varies for utilities. 1" Asphalt Concrete 1A top (Item 36DRA) 8" Asphalt Concrete Dense Base (Item 22C-2)
5. A dedication of _____ feet across the front of the parcel will be required. Details relative to that submission are attached.
6. Gradient of project site approaching County road is not acceptable. A high point must be created at the R.O.W. line and pitched from high point to the road and on-site drainage. Provide grades at/on PL and curb line. Trench Drains on the PL are not permitted. (Recommend 10' between trench drain and PL.)
7. Show distance from the corner of subject parcel to nearest intersection.
8. Add a north arrow to show orientation of parcel.

9. _add as Note: All work within the Nassau County Right-of-Way shall conform to 2009 County of Nassau Department of Public Works Standard Specifications and Detail Sheets for Civil Engineering and Site Development Construction.

- 10. _____
- 11. _____
- 12. _____
- 13. _____
- 14. _____
- 15. _____

William Bottenhofer Civil Engineer III, (516) 571-6916 1194 Prospect Ave., Westbury, N.Y.
11590-2723 Y:\H&GE\DESIGN\ProjectFolders\239F & Municipal Drain\239f Rejection
master1.doc

Appendix 8 - Building Systems Description (reserved for Phase II)

A10 FOUNDATIONS

SYSTEM DESCRIPTION

Provide the building foundation system. Design foundations to suit subsurface conditions, capable of transmitting all building loads to the ground.

In addition, design the structure in accordance with the following loading criteria:

Live Loads

Provide for live loads for occupancies as follows:

Occupancy or Use: **A1 ASSEMBLY**

Concentrated Live Load: 2000 lbs.

Importance Factors

Use Risk Category [I] **[II]** [III] [IV] [V] in Table 2-2 of UFC 3-301-01 for determining Importance Factors for seismic and snow design.

Wind Exposure: Base wind design on Exposure [A] **[B]** [C] [D] [E] [F].]

A10 GENERAL

Perform the soils investigation at the site for use in the design and construction of the new facilities. Perform, at Contractor's expense, subsurface exploration, investigation, testing, and analysis for the design and construction of features such as the building foundations, pavement section(s), stormwater management facility(ies), and utility structure foundations. Prepare a report including laboratory analysis of samples and recommendations for foundation and pavement design by a Professional Engineer.

A1010 STANDARD FOUNDATIONS

As determined by the Designer of Record to be applicable, provide a Standard foundation. "Standard Foundations" are shallow or deep foundations as specifically addressed in International Building Code (IBC) Chapter 18. Do not use masonry unit footings, steel grillage footings, timber footings or wood foundations. Treated timber piles may be used if determined acceptable by the Designer of Record.

A1030 GROUND FLOOR SLABS

As determined by the Designer of Record, provide soil supported concrete slab on ground. Where slab on ground is below the existing adjacent exterior grade, provide water/dampproofing and a perimeter drainage system to remove ground water from the area immediately adjacent to the buildings.

--End of Section--

B10 SUPERSTRUCTURE

SYSTEM DESCRIPTION

The superstructure consists of structural elements above the foundation that provide support for vertical loads and resistance to lateral loads.

This section includes the requirements for the superstructure of the building, including floor and roof framing, columns, interior load-bearing walls and the main lateral-force resisting system.

Provide the building framing system in accordance with the prevailing building code.

Occupancy or Use **Assembly A1**

Concentrated Live Load: 3000 lbs.

Importance Factors

Use Risk Category [I] **[II]** [III] [IV] [V] in Table 2-2 of UFC 3-301-01, *Structural Engineering* for determining Importance Factors for seismic, snow, and wind design.

Seismic Design Category

[The Seismic Design Category is [A] **[B]** [C] [D].]

Wind Exposure

Base wind on Exposure [A] **[B]** [C] [D] [E] [F].]

B1010 FLOOR CONSTRUCTION

The floor construction may include any structural framing system meeting the requirements of this section. On non-composite concrete slabs on form deck on steel joists. The floor deck must be supported on steel columns and steel beams, steel columns and joist girders.

B1020 ROOF CONSTRUCTION

The roof construction must include any structural framing system meeting the requirements of this section. steel roof deck on steel beams

The roof deck must be supported on steel columns and steel beams.

The roof finish shall be made of EPDM.

--End of Section--

B20 EXTERIOR ENCLOSURE

SYSTEM DESCRIPTION

This system consists of the exterior shell of the facility, which includes all vertical and horizontal exterior closure such as exterior walls, exterior windows, and exterior doors. This system excludes roofing (See System B30, *Roofing*). Include load bearing exterior walls here, and not in System B10, *Superstructure*. Structural frame elements at exterior such as columns, beams, and spandrels are included in Superstructure, with only the applied exterior finishes (e.g., paint, stucco) being included here. Finishes to the inside face of walls which are not an integral part of the wall construction will be included in System C30, *Interior finishes*.

GENERAL SYSTEMS REQUIREMENTS

B2010 EXTERIOR WALLS

Provide a ventilated, rain-screen, exterior wall system composed of the Exterior Closure and the Exterior Wall Backup Construction indicated below.

Provide cavity wall exterior wall systems composed of the Exterior Closure and Exterior Wall Backup Construction indicated below.

Provide a single thickness barrier wall composed of the Exterior Closure construction indicated below.

B201001 EXTERIOR CLOSURE

Provide an Exterior Closure system as described below.

Provide brick masonry veneer as a maximum of 90% of the Exterior Closure. Provide brick masonry details consistent with the existing adjacent buildings.

B201002 EXTERIOR WALL BACKUP CONSTRUCTION

Provide Exterior Wall Back-up Construction System (back-up systems for Exterior Closure) unit masonry with insulation when integral with shop fabricated wall systems, expansion control as described below:

Exterior bearing walls consisting of metal studs as the primary floor or roof supporting structural element are not permitted.

Provide load-bearing metal framing including top and bottom tracks, bracing, fastening, and other accessories necessary for complete installation. Framing members must have the structural properties indicated. Where physical structural properties are not indicated, provide as necessary to withstand all imposed loads. Design framing in accordance with American Iron and Steel Institute (AISI) SG-673. Install load-bearing metal framing in accordance with the Designer of Record (DOR)-approved shop drawings and manufacturer's installation instructions.

B201003 INSULATION & VAPOR RETARDER

Provide continuous insulation, vapor retarder, water-resistive barrier, and air barrier to meet or exceed requirements of project's energy savings requirements as indicated by applicable American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 90.1 calculations and meeting minimum building envelope insulation requirements of the prevailing energy conservation code.

Provide a continuous air barrier to control air leakage into, and out of conditioned spaces. The air barrier must encompass all elements of the facility that are exposed to the outside environment or outside environmental conditions such as roof, walls, floors, and compartmentalized unconditioned portions of the

facility such as garages, and negatively pressurized spaces. Permanently seal penetrations through the air barrier, joints in the air barrier, adjoining construction, and transitions to different air barrier materials.

Provide a continuous water resistive barrier. The water resistive barrier must resist liquid (bulk) water from being absorbed into the back-up wall assembly if water leaks, penetrates, or seeps past the exterior enclosure cladding system.

Include written and graphic descriptions of exterior enclosure barrier materials and location within the wall as a part of the Contractor provided design analysis. Identify in the analysis the continuous boundary limits of the air barrier and of the zone or zones to be field tested for building air tightness.

Provide contract drawings that indicate each exterior enclosure barrier location and the materials that make up the barriers. Detail the following barrier conditions.

1. Typical conditions at wall sections.
2. Barrier treatment at wall openings.
3. Intersections with other exterior enclosure assemblies and materials. Include intersections at roof and floors.
4. Intersections with counter flashing.
5. Inside and outside corners.
6. Preservation of air and water tightness at anchors for materials that cover the barrier.
7. Treatment to seal barrier penetrations such as conduits, pipes, electric boxes, and fixtures.
8. Indicate air barrier perimeter, if facility is segmented into areas that are not within the air barrier envelope.

B201004 PARAPETS

Provide parapets for exterior wall construction, where required for low-slope roofs.

B201009 EXTERIOR PAINTING AND COATINGS

Provide field applied exterior coatings for all items that are not prefinished, and to prefinished items when required to provide a color other than a standard prefinished color.

B201010 EXTERIOR JOINT SEALANTS

Provide exterior application of joint sealants to seal joints and prepare for finish material installation.

B201012 SCREEN WALL

Provide screen walls to screen mechanical units, electrical substations, loading docks, and trash receptacles. Provide screen walls compatible with the exterior architecture of the building. Design rooftop mechanical screens to minimize roofing penetrations.

B2020 EXTERIOR WINDOWS

Provide windows in each area of the building that is regularly occupied, to enhance the working environment, without compromising visual acuity and comfort. Natural daylighting is preferred, except at the entry and Black Box Theater area. Exterior windows must be prefinished aluminum. Windows must meet Antiterrorism requirements.

If approved by the DOR, the sample window may be installed in an opening in a framed wall, and the mock-up may be left during construction as a cut-away of the installation. For masonry walls, install the sample window in the masonry sample panel.

B202001 WINDOWS

Provide aluminum windows.

Provide integral insect screens for all operable windows.

B202002 STOREFRONTS

Provide aluminum storefronts.

B202004 EXTERIOR GLAZING

Provide glazing with a silver color.

Provide insulating glass units and tempered glass type glazing.

B202090 OTHER EXTERIOR WINDOWS

NOT USED

B2030 EXTERIOR DOORS

Provide solid door assemblies other than at the main entrance. Exterior doors and frames must be non-corroding prefinished stainless steel.

Provide Heavy Duty Doors - American National Standards Institute/Steel Door Institute (ANSI/SDI) A250.8, Level 2, physical performance Level B, Model 1.

B203001 SOLID DOORS

Provide solid steel door assemblies other than at main storefront/curtainwall entrances including galvanized heavy-duty, non-corroding, insulated doors with frames and hardware.

B203002 GLAZED DOORS

Glazed Doors - Provide Exterior Glazed Doors and Entrances System. including stainless steel framed door assemblies with glazing, frames, and hardware compatible with other buildings on the base and wall opening elements such as lintels, sills, through-wall flashings, and joint sealers.

B203004 OVERHEAD ROLL-UP AND OVERHEAD SECTIONAL DOORS

Design doors and opening for Loading Dock entrance. Provide lockable doors with automatic operation with protected pushbuttons electric controls.

Accomplish door operation by UL Listed electric motor operation with electric controller and an auxiliary hand chain operation. Provide panel profile to match existing overhead doors on the black box facility. Also provide counterbalance, heavy duty springs, wear strips, full perimeter weather-stripping, continuous button pressure safety operation, electric or infrared safety edge, galvanized hardware, and manufactured trims and closures pieces. Protect the wall door jamb opening with guards designed to resist abuse from the type of material and vehicles that are transported through the opening.

Provide overhead sectional doors that conform to Commercial American National Standards Institute/Door & Access Systems Manufacturers Association (ANSI/DASMA) requirements. Provide thermally broken, galvanized steel-clad insulated door panels with glazing. Provide anodized aluminum finish for the door and accessories to match facility color scheme. Design the overhead sectional door to withstanding the design wind loading of American Society of Civil Engineers (ASCE) 7 and operate normally.

B203008 EXTERIOR DOOR HARDWARE

Provide the services of a certified door hardware consultant to prepare the door hardware schedule.

Provide door hardware finish of stainless steel.

B203090 OTHER EXTERIOR SPECIALTY DOORS

Provide automatic sliding entrance doors at the main entrance to the building.

--End of Section--

B30 ROOFING

B30 GENERAL SYSTEM DESCRIPTION

This section outlines the roofing systems suitable for the building project, detailing installation, materials, performance attributes, and intended use. Roofing systems specified herein are appropriate for low-slope roof conditions.

Provide watertight roof systems compatible with the facility function, construction, and service conditions. Provide complete roof system design and construction services for the entire new facility roof system, including all ancillary and incidental work necessary for a complete, new, watertight roof system installation.

Roofing Type and Attribute:

Single-Ply Membrane Roofing: Types include Thermoplastic Polyolefin (TPO), Ethylene Propylene Diene Monomer (EPDM), and Polyvinyl Chloride (PVC). Installed as large sheets mechanically fastened, adhered, or ballasted.

Attributes: Lightweight, excellent flexibility, high reflectivity (energy efficiency), resistant to UV, punctures, chemicals.

Installation Methodology: Roof deck preparation, ensuring clean, dry, and smooth substrate conditions. Application method specific to roofing type selected (BUR layering, modified bitumen heat welding, single-ply sheet application, or SPF spray).

Flashings and penetrations sealed according to manufacturer's specifications to ensure watertight integrity.

Quality and Performance Requirements: Compliance with ASTM standards and applicable building codes.

Roof system warranty period to be defined by product selection and manufacturer's recommendations. (look up what a standard roof warranty is for public buildings)

Safety and Environmental Considerations: Installation procedures to adhere strictly to OSHA regulations for worker safety.

Completion:

Roofing completion includes verification of proper installation, testing for waterproof integrity, and establishment of a maintenance plan for ongoing performance.

--End of Section--

C10 INTERIOR CONSTRUCTION

SYSTEM DESCRIPTION

Interior construction includes interior partitions, interior doors, and fittings. Provide durable construction appropriate for the building function. Acoustic properties of materials, as well as durability, must be considered during material selection.

GENERAL SYSTEM REQUIREMENTS

C1010 PARTITIONS

Refer to Part 3 Section 5.0, Room Requirements for partition requirements for individual rooms. Where rooms with different partition requirements adjoin one another provide a combined wall type that meets the security and durability as well as finish requirements of both spaces.

All interior partitions must be either concrete masonry or metal studs with gypsum board each side.

Concrete mixture must provide an average compressive strength of 3000 PSI (20,680 kPa) and meet or exceed American Concrete Institute (ACI) 301/301M.

C101001 FIXED PARTITIONS

Provide fixed interior partitions that extend from finish floor to underside of structure above, except where floor-to-ceiling demountable or retractable partitions are specifically required by the "Room Requirements." Sound-rated partition assemblies must have a minimum Sound Transmission Coefficient (STC) of 42 in accordance with American Society for Testing and Materials (ASTM) E 90 or ASTM E 413 for frequency data.

Glass masonry units must transmit 75 percent light.

C101002 DEMOUNTABLE PARTITIONS

NOT USED

C101003 RETRACTABLE PARTITIONS

NOT USED

C101004 INTERIOR GUARDRAILS AND SCREENS

Provide balustrades where required by code. Provide screens where required to prohibit view of a particular area.

C101005 INTERIOR WINDOWS

Provide interior windows of hollow metal, fixed. Provide each window as a complete factory-assembled unit with glass factory or field installed.

C101006 GLAZED PARTITIONS & STOREFRONTS

Provide a glazed storefront system.

C101007 INTERIOR GLAZING

Provide clear glass, tempered glass, and interior glazing.

C1020 INTERIOR DOORS

C102001 STANDARD INTERIOR DOORS

All interior doors must be flushed.

All interior doors and frames must be hollow metal.

All interior door frames must be hollow metal.

All interior doors must be hollow metal in hollow metal frames.

Provide 50 STC sound rated door and standard hollow metal door frame with continuous sound/ weather seals around the door to create a sound control door. Provide sound/ weather seals at the top and both sides that are integral with the door frame and drop-down door bottom sound/ weather seals must rest on a metal threshold. After installation, test the doors with a flashlight to determine if any gaps in the sound seals allow light to be viewed on the opposite side of the door.

C102002 GLAZED INTERIOR DOORS

Provide vision glazing in doors where it is required by the "Room Requirements" portion of this RFP, or it is deemed advantageous to be able to see through the door, either for safety of pedestrian traffic, or other functional reason.

C102003 FIRE DOORS

Provide interior fire doors.

C102004 SLIDING AND FOLDING DOORS

NOT USED

C102005 INTERIOR OVERHEAD DOORS

NOT USED

C102006 INTERIOR GATES

NOT USED

C102007 INTERIOR DOOR HARDWARE

Provide stainless steel door hardware finish.

C1030 SPECIALTIES

NOT USED

C103001 COMPARTMENTS, CUBICLES, & TOILET PARTITIONS

Provide stainless steel toilet partitions in all toilet rooms with more than one water closet or urinal. Provide toilet accessories as indicated in Chapter 3, "Room Requirements" portion of this RFP.

C103002 TOILET ROOM ACCESSORIES

Provide toilet room accessories.

C103003 MARKER BOARDS AND TACK BOARDS

NOT USED

C103004 IDENTIFYING DEVICES

Provide interior room identification signs on each entrance to each interior room. Provide signage to identify each space by room number and name. Signage for general office areas must have changeable room name sections to accommodate personnel and functional changes. Signage will comply with the accessibility requirements of the prevailing building code.

C103005 LOCKERS

NOT USED

C103006 SHELVING

Provide steel utility shelving. Built-in fixed shelving is funded as part of the construction contract.

C103007 FIRE EXTINGUISHER CABINETS

NOT USED

C103008 COUNTERS

Provide tile counter tops and back splashes.

C103009 CABINETS

Provide cabinetry and millwork items with associated accessories. Cabinetry must be Architectural Woodwork Institute (AWI) [premium] [custom] grade and have concealed hinges with adjustable standards for shelves. All exposed surfaces must be [covered with high pressure plastic laminate clad] or [hardwood veneer with exposed edges of solid hardwood].

Provide specific cabinetry and storage as noted in Part 3, Chapter 5 Room Requirements.

C103010 CASEWORK

NOT USED

--End of Section--

C20 STAIRS

SYSTEM DESCRIPTION

Provide stairs, including stair construction and stair finishes as required by the building code to provide egress from the building from above or below grade level floors.

GENERAL SYSTEMS REQUIREMENTS

C2010 STAIR CONSTRUCTION

C201001 INTERIOR AND EXTERIOR STAIRS

Provide interior stairs constructed of steel with concrete filled pans

Concrete is an acceptable finish for exterior stairs. Provide cast aluminum treads with abrasive surface for all exterior concrete stairs.

Steel stairs must be primed and painted.

C201002 FIRE ESCAPE STAIRS

NOT USED

C201090 HANDRAILS, GUARDRAILS, AND ACCESSORIES

Provide prefinished steel handrails and guardrails. Handrails and guardrails must present a smooth, unbroken surface throughout the length of the stair.

Handrails and guardrails must be finished to withstand extreme wear conditions.

Metal ladders and railings complying with Occupational Safety and Health Administration (OSHA) requirements must be provided for access and protection to any mechanical mezzanines, lofts or other similar spaces.

--End of Section--

C30 INTERIOR FINISHES

SYSTEM DESCRIPTION

Interior finishes include wall finishes, floor finishes, wall base finishes, and ceiling finishes.

Provide aesthetically pleasing, functional, durable finishes appropriate to the buildings function. Consider acoustic properties of materials, as well as durability and ease of maintenance during material selection. Maximize the use of sustainable materials.

Color selections require the use of wall and floor finish material accents to enhance the color and appearance of the interior design. Provide a wall and floor color design that includes a minimum of two different accents colors throughout the facility. Submit pattern drawings of the accents design with the interior design submittal.

GENERAL SYSTEMS REQUIREMENTS

See Part 3 Chapter 5 "Room Requirements" Conceptual wall and floor finishes tables indicated below for specific requirements on "Interior Finishes."

C3010 WALL FINISHES

All interior wall finished materials must be concrete masonry. At public and occupied spaces, all interior wall finish materials must be concrete masonry with acrylic plaster coating.

[All interior wall finish materials must be gypsum board. Provide vinyl acoustic wallcovering in all conference rooms and entrance lobby and provide ceramic tile wainscot in all toilet rooms to a height of 12 feet.

Provide architectural feature walls consisting of mineral composites in key public locations; lobby.

Acoustical wrapped panels adhered to walls in the auditorium.

All interior wall finishes are indicated in the "Room Requirements" portion of this RFP.

Conceptual Wall Finish Schedule

SPACE	MINIMUM FINISH REQUIREMENT
Private Office	wallcovering
Reception	decorative panel accent
Kitchen/ Break Room	wallcovering
Restrooms	ceramic tile
Lobby/ Entrance	decorative panel accent
Corridors	wallcovering

C3020 FLOOR FINISHES

Provide floor finish materials to meet the following requirements;

a. Carpet Requirements

NOT USED

b. Concrete Floor Requirements

Finish concrete surface smooth enough to meet the minimum requirements of this RFP or the floor finish manufacturer's smoothness requirements, whichever is the most restrictive. Provide 3 coats of the manufacturer's approved sealer for exposed concrete floors that are not required to have an applied floor finish. Provide a reflective, chemical, and slip resistant floor coating in the maintenance bay. The reflective coating must be achieved by the thin film coating specified in RFP Part 4.

c. Raised Floor Requirements

NOT USED

d. Resilient Floor Finishes

Provide resilient floor finishes as identified in the Project Program, Room Requirements or as directed below. Include manufacturer's full line of color, texture and pattern selections, including multi-colored materials.

1) Resilient Sheet Flooring

None.

2) Resilient Tile Flooring

Provide resilient vinyl composition tile (VCT) flooring in corridors, offices, and other similar areas requiring flooring with moderate durability high maintenance and low cost VCT must be commercial grade, with pattern through thickness of tile VCT with biobased materials or recycled content must be used where practical.

Provide resilient solid vinyl tile, in bathrooms for floors with high durability, low maintenance, high slip-resistance requirements. Solid vinyl tile must be planks or square tiles with protective urethane finish for ease of maintenance a manufacturer's 10-year warranty is required.

Provide resilient rubber tile in elevators, ramps, and high traffic areas for floors with high durability, low maintenance, high slip-resistance requirements. Rubber tile must be 100% synthetic rubber with through color and slip resistant formulation and surface texture. Include all manufacturer's standard surface textures and patterns. The product must require no-wax maintenance.

Provide resilient static dissipative VCT (SDT) flooring in Black Box Theater with sensitive electronics for floors with high durability, low maintenance, high slip-resistance requirements to control static in the room. SDT must be of commercial grade with through pattern and an antistatic additive and must be installed according to manufacturer's instructions.

Provide resilient linoleum tile flooring in storage areas for floors with high durability, low to moderate maintenance, anti-static and antimicrobial requirements. This product is made from readily renewable, natural raw materials including linseed oil, flour and resin binders double calendared onto natural jute backing. Pattern and color must extend throughout thickness of material. Seal linoleum using manufacturer's recommended sealer for commercial application. A manufacturer's 5-year warranty is

required.

e. Tile Floor Finishes

Provide epoxy grout for all tile finishes

Glazed Ceramic Tile

f. Base

Wall base must be top set throughout.

All interior wall finishes are indicated in the "Room Requirements" portion of this RFP

Conceptual Floor Finish Schedule

SPACE	MINIMUM FINISH REQUIREMENT
Private Office	VCT
Reception	solid vinyl,
Reception Room w/bar	solid vinyl, VCT
Restrooms	solid vinyl
Lobby/ Entrance	solid vinyl [linoleum]
Corridors	solid vinyl, VCT
Storage	Linoleum

C3030 CEILING FINISHES

Select finished surface of ceiling tiles to address acoustical, maintenance, moisture or impact resistance requirements of the room.

Primary ceiling finish must be 24 inches by 24inch by 5/8 inch minimum thickness suspended acoustical panel ceiling system, except provide a suspended gypsum board ceiling in entrance lobby, restrooms. Provide acoustic panels with a square. Provide closed pore panel surface. Provide ceiling panels with no added urea-formaldehyde.

C3040 INTERIOR COATINGS AND SPECIAL FINISHES

NOT USED

--End of Section--

D10 CONVEYING

SYSTEM DESCRIPTION

Conveying System(s) include elevators.

D1010 ELEVATORS AND LIFTS

Design assembly and arrangement of elevator, accessories, and supporting systems in accordance with American Society of Mechanical Engineers/American National Standards Institute (ASME/ANSI) A17.1. Provide all materials and equipment, including but not limited to elevator cab and hoist equipment, operating and signal fixtures, doors, door and car frames, car enclosure, controllers, motors, guide rails, brackets, and testing.

D101001 GENERAL CONSTRUCTION ITEMS

D101002 PASSENGER ELEVATORS

Provide a minimum of one passenger hydraulic elevator designed to carry furniture/ equipment items. Locate elevator in Lobby area, within visual control of the lobby.

Provide a minimum of one elevator sized to comply with the International Building Code (IBC) medical stretcher requirement and also designed to vertically transport the largest movable equipment or furniture used on the project. Design the elevator to carry 2500lbs.

Derive finishes and fixtures from Manufacturer's selections. Coordinate finishes with the interior architectural design, and meet the User's needs and functions. Utilize stainless steel wall panels and hard finish ceiling. Coordinate the design of the elevator machine room with applicable codes and the elevator manufacturer's requirements.

Provide hydraulic elevators for elevator travel distances of 44 feet (13.41 meters) or less and electric traction elevators for travel distances greater than 44 feet (13.41 meters). Provide minimum hydraulic elevator car speed of 125 feet per minute (38.1 meters/ minute) for elevator travel distances of 15 feet (4.5 meters) or less and 150 feet/minute (45.7 meters/ minute) for hydraulic elevator travel distances greater than 15 feet (4.5 meters). Provide minimum electric traction elevator car speed of 350 feet per minute (106.6 meters/ minute).

D101003 FREIGHT ELEVATORS

NOT USED

D101090 OTHER VERTICAL TRANSPORTATION EQUIPMENT

NOT USED

--End of Section--

D20 PLUMBING

SYSTEM DESCRIPTION

The plumbing system for PAC consists of all fixtures, potable cold and hot water piping and equipment, piping insulation, water heating equipment, sanitary waste and vent piping systems, and other specialty piping and equipment within 5 foot (1.5 meter) of the building.

GENERAL SYSTEM REQUIREMENTS

Provide working space around all equipment. Provide concrete pads under all equipment. Provide all required fittings, connections and accessories required for a complete and usable system. Install all equipment in accordance with the criteria of PTS section D20 and the manufacturer's recommendations. Design and install in accordance with the prevailing Plumbing Code. Where the word "should" be used in the manufacturer's recommendations, substitute the word "must".

D2010 PLUMBING FIXTURES

Provide quantity and type of plumbing fixtures required for the occupancy, use, and functions described for this facility. Provide handicapped fixtures in accordance with the referenced criteria in the Project Program.

[2] ADA-compliant toilets (water closet)

[2] ADA-compliant sinks

D201001 WATER CLOSETS

Provide floor mounted dual function flush valve water closets with automatic flush control in all public restroom spaces.

D201002 URINALS

Provide flush valve urinals with automatic flush control in all public restroom spaces.

D201003 LAVATORIES

Provide wall mounted lavatories made of vitreous China, with automatic control] in each restroom space. Provide pop-up drain.

D201004 SINKS

Provide a countertop kitchen sink with two compartments in the reception bar space. Provide waste disposer unit.

Provide mop sink in the closet space, near the restrooms.

D201006 DRINKING FOUNTAINS AND COOLERS

Provide drinking fountains in the lobby spaces.

--End of Section--

D30-D40-D50 BLDG SERVICES

D30 HVAC

SYSTEM DESCRIPTION

Provide complete and usable heating, ventilating and air conditioning (HVAC) systems that attains the following objectives: Occupant comfort, Indoor air quality, Acceptable noise levels, Energy efficiency, Reliable operation, and Ease of maintenance. Design and install in accordance provisions of the International Code Council's International Mechanical Code (IMC) and ASHRAE design guidance with supplemental requirements. Provide BACnet Direct Digital Control for all HVAC system controls.

Provide HVAC system for PAC center with water source heat pumps, ground-coupled water loop, closed-circuit cooler, supplemental oil-fired boilers, and water source dedicated outdoor air system with hot gas reheat and full exhaust-air heat recovery. Deliver the conditioned outside air at a neutral temperature from the DOAS to the occupied spaces. DOAS must be a factory-packaged unit that delivers the required conditioned air over the full range of load

D40 FIRE PROTECTION

SYSTEM DESCRIPTION

Provide an integrated fire alarm and mass notification system, and suppression system capable of notifying building occupants and controlling any fire that may start inside the facility.

GENERAL SYSTEM REQUIREMENTS

Provide working space around all equipment. Provide concrete pads under all equipment. Provide all required fittings, connections and accessories required for a complete and usable system. Install equipment in accordance with the criteria of ordinances of the Nassau County Fire Marshal and the manufacturer's recommendations. Where the word "should" be used in the manufacturer's recommendations, substitute the word "must".

All Design Documents, (i.e. Building Code/Life Safety Analysis, plans, specifications, and calculations) developed for Section D40 must be prepared by, or under the supervision of the design/build contractor's Qualified Fire Protection Engineer, the Fire Protection Designer of Record (FPDOR).

D50 ELECTRICAL

SYSTEM DESCRIPTION

This project includes the construction of buildings and structures as listed below. Refer to site plans for building locations.

Provide an interior electrical system consisting of, Distribution and Lighting Panelboards, Conduits, Emergency Lighting and Power, including accessories and devices as necessary and required for a complete and usable system. This section covers installations out to the building 5-foot (1.5 meter) line.

Provide each building with a single utility service with radial power distribution. List the sections of the PSEG LONG ISLAND REDBOOK to identify the building connection requirements.

Select electrical characteristics of the power system to provide a safe, efficient and economical distribution of power based upon the size and types of electrical loads to be served. Use distribution and utilization voltages of the highest level that is practical for the load to be served.

Provide an interior distribution system consisting of insulated conductors in conduit.

--end of section--

E10 EQUIPMENT

GENERAL SYSTEMS REQUIREMENTS

E1010 COMMERCIAL EQUIPMENT

Obtain the services of equipment specialists to specify Food service equipment. Equipment specialists must not have any affiliation with the specified product.

All specialty equipment must be installed by qualified installers regularly engaged in installing the specialty equipment.

Provide energy-using equipment in accordance with criteria listed in Part 2 UFGS Section 01 33 29, *Sustainability Requirements and Reporting*.

E101003 VENDING EQUIPMENT

NOT USED

E1020 INSTITUTIONAL EQUIPMENT

E102009 AUDIOVISUAL EQUIPMENT

NOT USED

E1090 OTHER EQUIPMENT

E109002 FOOD SERVICE EQUIPMENT

Utilize the following information for planning the bar/kitchen:

- a) The bar/kitchen will serve 25 patrons.
- b) Hours of service will be from 10am to 12am.
- c) Type and style of meal service must be Cafeteria line.
- d) Menu will be lunch and/or dinner
- e) Type of cooking must be pre-prepared/cooked food (pre-made and wrapped sandwiches).
- f) Availability of food: the number of deliveries per week is 2.
- g) Amount/type of storage required: dry 20 cu feet, refrigerated 10 cu feet, frozen 10 cu feet.
- h) Local requirements of trash/garbage disposal areas follows, dumpster, trash dumpster 10 cu feet, with pickup every 3 days.

Provide food service equipment as required for a commercial kitchen to serve 25 persons with a menu to include lunch and dinner.

Provide the following food service equipment: service sink, small oven,

--End of Section--

F20 SELECTIVE BUILDING DEMOLITION

GENERAL SYSTEMS REQUIREMENTS

Perform all off-site work necessary to meet the requirements of the project, local codes, reference standards, technical specifications and performance criteria.

Identify and obtain permits to comply with federal, state, and local regulatory requirements associated with this work. Coordinate and obtain approval from the Village of Farmingdale for proposed haul route(s), work site access point(s), utility connections, employee parking location(s) and material laydown and storage area(s).

F2010 BUILDING ELEMENTS DEMOLITION

This project includes the demolition of the following: masonry Islands, sidewalks.

This project includes the complete demolition and removal of Building No. 141, a 1466 square foot, masonry structure. The existing structure is 25 feet in height.

F2010 1.1 GENERAL DEMOLITION

Remove indicated existing structure to new finished grade.

F2010 1.2 UTILITIES

Remove the existing water, fire protection water such as high pressure or non-potable, sanitary sewer] electrical natural gas utilities. Coordinate utility removal in accordance with Section 01 14 00 Work Restrictions.

F2010 1.3 DUST CONTROL

Prevent the spread of dust and debris to occupied portions of the building and avoid the creation of a nuisance or hazard in the surrounding area.

F2010 1.4 TRAFFIC CONTROL

F2010 1.5 WEATHER PROTECTION

F2010 1.6 BURNING

Burning will not be permitted.

F201001 SUBSTRUCTURE & SUPERSTRUCTURE

Concrete foundation and wood frame will be demolished.

F201002 EXTERIOR CLOSURE

Masonry brick structure will be demolished.

F201003 ROOFING

EPDM roofing system to be demolished.

F201004 INTERIOR CONSTRUCTION & FINISHES

Wood frame interior to be demolished.

F201005 CONVEYING SYSTEMS

None.

F201006 MECHANICAL SYSTEMS

None.

F201007 ELECTRICAL SYSTEMS

None.

F201008 EQUIPMENT & FURNISHINGS

Any interior equipment and furnishing equipment currently existing to be demolished.

F201090 OTHER NON-HAZARDOUS SELECTIVE BUILDING DEMOLITION

None.

--End of Section--

G10 SITE PREPARATION

SYSTEM DESCRIPTION

The site preparation activities consist of site clearing, demolition, salvage, relocation, earthwork, and hazardous waste remediation to ready the site for other work associated with the project.

Develop the project site and perform off-site work necessary to meet the requirements of the project, , local codes, reference standards, technical specifications and performance criteria.

Previous site plans of the existing site are being provided to the Contractor in lieu of a topographic survey. The existence, size, and location of the utilities are not guaranteed by the provided site plans. Verify the location of all utilities prior to construction.

Unless otherwise noted, provide new facilities at the locations indicated on the project drawings.

Minimize the impact of construction activity on operations and neighboring facilities.

Perform the soils investigation at the site for use in the design and construction of the new facilities. Perform, at Contractor's expense, subsurface exploration, investigation, testing, and analysis for the design and construction of features such as the building foundations, pavement section(s), stormwater management facility(ies), and utility structure foundations. Prepare a report including laboratory analysis of samples and recommendations for foundation and pavement design by a Professional Engineer as specified and in accordance with UFC 3-201-01, *Civil Engineering*.

G1010 SITE CLEARING

This section covers the clearing of vegetation, debris, and obstructions from the project site to prepare for subsequent construction activities. Clearing operations include removing trees, shrubs, stumps, roots, existing structures, and other surface impediments.

Scope of Work:

Removal of all designated vegetation including trees, shrubs, bushes, grass, and other plant materials within the project limits.

Clearing and removal of surface debris, refuse, and existing improvements or structures identified for demolition or disposal.

Grubbing activities, including extraction of roots and stumps to the specified depth.

Execution:

Mechanical clearing utilizing equipment such as bulldozers, excavators, loaders, and brush cutters.

Manual clearing techniques employed where machinery access is limited or for protection of adjacent sensitive areas.

Segregation and proper disposal or recycling of cleared materials according to local regulations and environmental requirements.

Environmental and Protection Measures:

Installation of erosion control measures such as silt fencing or temporary berms prior to clearing activities

to protect adjacent water bodies, wetlands, or sensitive areas.

Preservation of designated trees and landscape features as specified in project documentation.

Adherence to regulatory guidelines related to wildlife habitats and protected vegetation.

Quality Assurance: Inspection and verification of cleared areas to ensure completeness and adherence to specified limits. Confirmation of appropriate disposal practices and environmental compliance through regular monitoring and documentation.

Safety: Implementation of safety measures complying with OSHA standards, including proper protective gear, equipment operation training, and site access restrictions to ensure the safety of all personnel.

Completion: Completion of clearing operations involves certification that the site is free of designated vegetation, debris, and obstructions, and is ready for subsequent earthwork and construction activities.

G1020 SITE DEMOLITION & RELOCATIONS

The items to be reused or relocated include dumpsters, topsoil, trees, and plants.

The items to be salvaged include pumps, meters, valves.

G102001 BUILDING MASS DEMOLITION

Demolish the existing building.

Preserve the following building elements: none.

G102002 ABOVEGROUND SITE DEMOLITION

Preserve the following aboveground site elements: none.

--End of Section--

G20 IMPROVEMENTS

SYSTEM DESCRIPTION

The site improvements consist of pavements and pavement related features, landscaping and other exterior site development work related to this project. Provide a pavement design by a licensed Professional Engineer familiar with conditions local to the project site. Site design, including but not limited to design of parking and pedestrian circulation, will include coordination with the Civil Engineer and the Landscape Architect.

GENERAL SYSTEMS REQUIREMENTS

Provide site improvements as required to make a useable facility that meets functional and operational requirements, incorporates all applicable anti-terrorism, force protection and physical security requirements and blends into the existing environment.

Provide accessibility in conformance with requirements of the prevailing building code.

Minimize the impact of construction activity on operations and neighboring facilities.

Locate new site improvements at locations indicated on the project drawings.

Refer to Site Analysis and Building Requirements Sections for additional site improvement functional program information.

G2010 ROADWAYS AND PARKING FIELDS

Provide roadways and/or parking field improvements, as required, to allow for safe, convenient and logical circulation, while discouraging through traffic. Design pavements based on the anticipated daily traffic 135 cars, 5 single unit trucks, over the life of the project 25 years as well as the existing soil conditions at the site.

Provide roadways and/or parking field improvements of Portland cement concrete (PCC) pavement where indicated on the drawings in Part 6. Aggregate pavement may be used.

Provide new roadway and/or parking field improvements as required by soil conditions and determined by the Designer of Record. Design pavement sections in accordance with UFC 3-201-01 *Civil Engineering*. Provide pavement sections as indicated or specified in this RFP.

Provide other roadway and/or parking field improvements, improvements including traffic signalization markings, signage.

Where street or roads are adjacent to median planting, provide a minimum concrete maintenance walk adjacent to street or road to allow for landscape and irrigation maintenance.

Include adequate space for trees and other landscape material in the design for streets, roads, and parking lots in accordance with PTS G2050.

G201001 BASES & SUBBASES

Design bases and subbases in accordance with the standards of the NYS Dept. of Transportation

G201002 CURBS & GUTTERS

Provide curb and gutter to tie into adjacent facilities.

G201003 PAVED SURFACES

Provide Portland cement concrete with a minimum design flexural strength of 650 psi (4.48 MPa) in not more than 28 days.

G201004 MARKING & SIGNAGE

Provide pavement markings including crosswalks to match existing markings.

Provide signage to match existing.

Provide temporary pavement markings and signage throughout construction to meet phasing requirements indicated in the project program. Provide temporary signage in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

G201005 GUARDRAILS & BARRIERS

Provide bollards in accordance with UFC 3-201-01, *Civil Engineering*.

G201006 RESURFACING

NOT USED

G201090 OTHER ROADWAYS

NOT USED

G2030 PEDESTRIAN PAVING

Provide a network of brick pavers sidewalks, separated from, but connected to vehicular circulation systems, to allow for pedestrian circulation between various new and existing elements of the project. Interface new pedestrian circulation systems with existing pedestrian circulation systems and include input from the Civil Engineer, Architect, and Landscape Architect.

G2040 SITE DEVELOPMENT

NOT USED

G204001 FENCING & GATES

NOT USED

G204002 RETAINING AND FREESTANDING WALLS

NOT USED

G204003 EXTERIOR FURNISHINGS

Provide picnic tables, trash receptacles, benches, recycling receptacles and hot ash receptacles.

G2050 LANDSCAPING

Provide complete landscaping consisting of lawn, groundcover, trees, perennials, and organic mulches to provide a quality, cost-effective, functional and visually appealing landscape program that will enhance the development. Design the landscape to reinforce the facility entry and complement existing landscapes in the vicinity.

NOTE: You may want to refer to the planting standards of the Town of Oyster Bay, and list the specimens you are using in your site improvements

--End of Section--

G30 SITE CIVIL/MECHANICAL UTILITIES

G40 SITE ELECTRICAL UTILITIES

G30 SYSTEM DESCRIPTION

The site civil/mechanical utility systems include water supply systems, sanitary sewer systems, storm drainage systems, heating distribution systems, cooling distribution systems, fuel distribution systems and associated appurtenances which are more than 5 feet (1.5 meters) outside the building.

The site mechanical utility system consists of piping and appurtenances for steam and condensate, chilled water, hot water, natural gas, and including accessories and devices as required for a complete and usable system up to 5 feet (1.5 meters) outside buildings.

GENERAL SYSTEM REQUIREMENTS

Develop the site to provide water, fire protection, sanitary sewer, storm drainage, heating, cooling and fuel distribution services that meet the requirements of each regulatory agency that governs and issues permits for the construction and operation of these systems. Site design is required to comply with state or local stormwater management regulations and project sustainability goals.

Provide each system complete and ready for operation.

Minimize the impact of construction activity on facility operations and neighboring facilities.

Utility connection points are indicated on the site drawings provided by the Village of Farmingdale. Obtain final approvals from the Village of Farmingdale for utility connection points associated with this work.

Coordinate with the local utility providers and pay fees or charges required to connect to their utility.

G40 SYSTEM DESCRIPTION

The site electrical utility system consists of all power and telecommunications and fiber optic cabling from the existing distribution system point of connection including all connections, accessories and devices as necessary and required for a complete and usable system. This section covers installations up to within 5 feet of new (or existing) building location.

GENERAL SYSTEM REQUIREMENTS

Provide an Electrical System complete in place, tested and approved as needed for a complete, usable and proper installation conforming to the standards of the local utility.

NOTE: Use the PSEG LONG ISLAND REDBOOK to identify key conformance issues. Do not design the system

-- End of Section --


Appendix 9 - Summary and Images of Base Documents

Templates

Drafting templates are essential tools used in technical drawing, architecture, and engineering to create precise and standardized designs. They serve as pre-defined frameworks that streamline the drafting process, ensuring accuracy, consistency, and efficiency. These templates can include symbols, line types, title blocks, and standardized layouts that help drafters maintain uniformity across multiple drawings.

By using drafting templates, professionals can save time, reduce errors, and improve collaboration by adhering to industry standards. Whether working with hand-drawn sketches or computer-aided design (CAD) software, templates play a crucial role in producing clear and professional drawings.

<div>DESIGN 4 PROFESSOR ANDERSON FARMINGDALE STATE COLLEGE 2350 BROADHOLLOW ROAD FARMINGDALE NY 11735 Farmingdale State College <small>State University of New York</small></div>		<div>PROJECT ADDRESS: 141 DIVISION ST. FARMINGDALE NY, 11735 TAX MAP #: 49-001-17 DRAWN BY: NAME DATE: XXMAR2025 SCALE: NOT TO SCALE REVISIONS: # XXMAR2025 REASON FOR REVISION # XXMAR2025 REASON FOR REVISION # XXMAR2025 REASON FOR REVISION</div>	<div>SHEET TITLE A-100 PAGE: 00 OF XX</div>
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Appendix 10 - Images of Completed Physical Model







Presentation Feedback

- Focus on circulation to and from train station on Front St. instead of through residential area.
- There is currently poor lighting on this walk on the corner of Front St. and Elizabeth St.
- Main St. will be modified to widen sidewalk and roadway by removing 16 parking spots along the east side of the street
- While we will have to do some level of soundproofing, residents in the area are used to nighttime noise from the railway. The crossing gate bells are 110 decibels and the train horn that sounds for the whole quarter mile with four gates is 70 decibels.
- In regard to overflow parking, this could potentially be set up with a valet service from the drop-off location. Waiting 8 minutes for your car is unideal but it is better than walking those 8 minutes.
- There are an additional 150 spots at the middle school aquatic center that the village also has use of after 4pm that could be used for overflow or valet. Both lots are about the same walking distance, however the aquatic lot requires pedestrian traffic to cross Conklin St.
- The pedestrian path to site from the train station is wide enough to fit a stroller on either side of telephone pole pictured in the slide (With snow). The sidewalk here was expanded at a time not long ago.
- Desired capacity off the theater ranges from 180-250. 250 is pushing it but if possible, it would be great.
- Theater max height 2.5 story.
- Basement/Underground construction will drive the cost of the project up significantly and likely go over budget (Planned budget of \$10M)
- Most other villages have a performing arts center, except Farmingdale, so this is like a 'missing piece' among everything else the village has to offer.

Appendix 11 – Phase I Presentation – March 12

Proposal Description Presentation

The Village of
Farmingdale, NY



1

Introduction



2

Project Goals

Aesthetic Integration: Create an inviting, modern design that reflects the cultural and artistic aspirations of the community while harmonizing with the surrounding urban or suburban environment.

Community Engagement: Establish the facility as a cultural landmark that encourages community participation, education, and collaboration, fostering a sense of pride and belonging.

Flexibility and Functionality: Design a highly adaptable black box theater space that accommodates various performance configurations, including theater, music, dance, and multimedia productions, while ensuring optimal acoustics and sightlines for an audience of 130-180 seats.

Supportive Facilities and User-Centered Design::

- Provide a welcoming lobby with the capacity to serve light refreshments, enhancing the audience experience and fostering social engagement.
- Prioritize the comfort, safety, and convenience of both performers and patrons, ensuring intuitive navigation, appropriate lighting, and well-planned adjacencies between functional spaces.
- Incorporate a well-equipped green room, dressing rooms, and storage areas to support performers and technical crews efficiently.

Sustainability and Efficiency: Integrate energy-efficient systems and sustainable materials where feasible to reduce the environmental impact and operational costs of the facility.

3



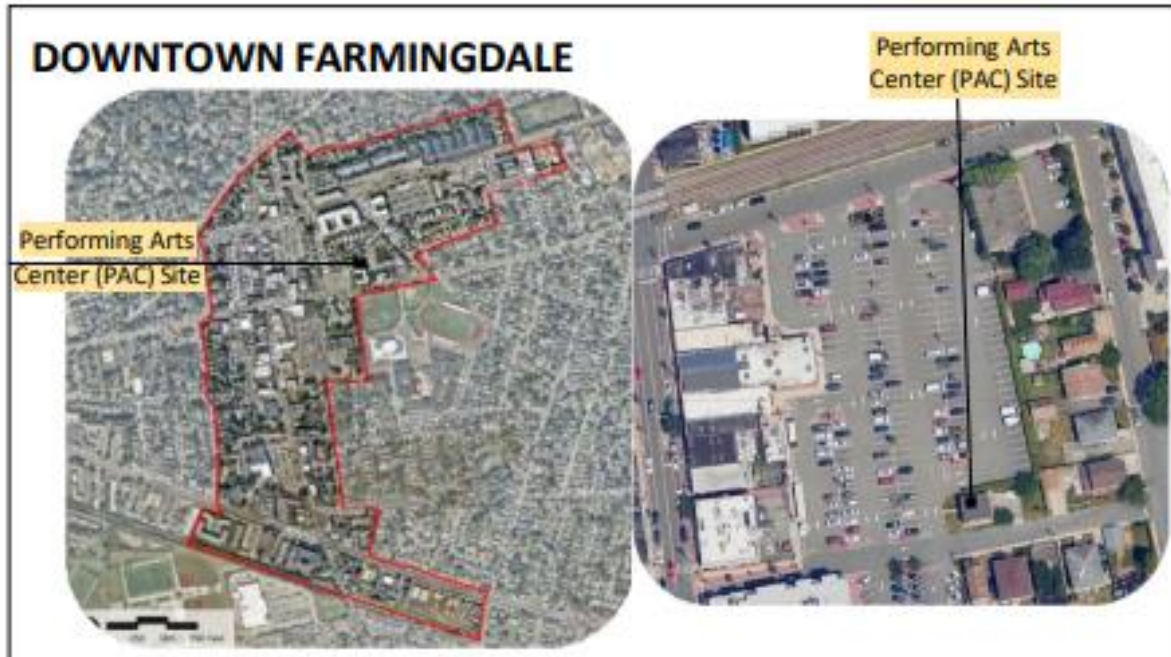
4



5



6



7

Site Extension

PROS	CONS
<ul style="list-style-type: none"> - LARGER BUILDABLE AREA - IMPROVED PEDESTRIAN CIRCULATION - INCREASED DESIGN POTENTIAL 	<ul style="list-style-type: none"> - OBSTRUCTION OF VEHICULAR CIRCULATION - INCREASED DEVELOPMENT COST - IMPACT ON RESIDENTIAL PROPERTIES

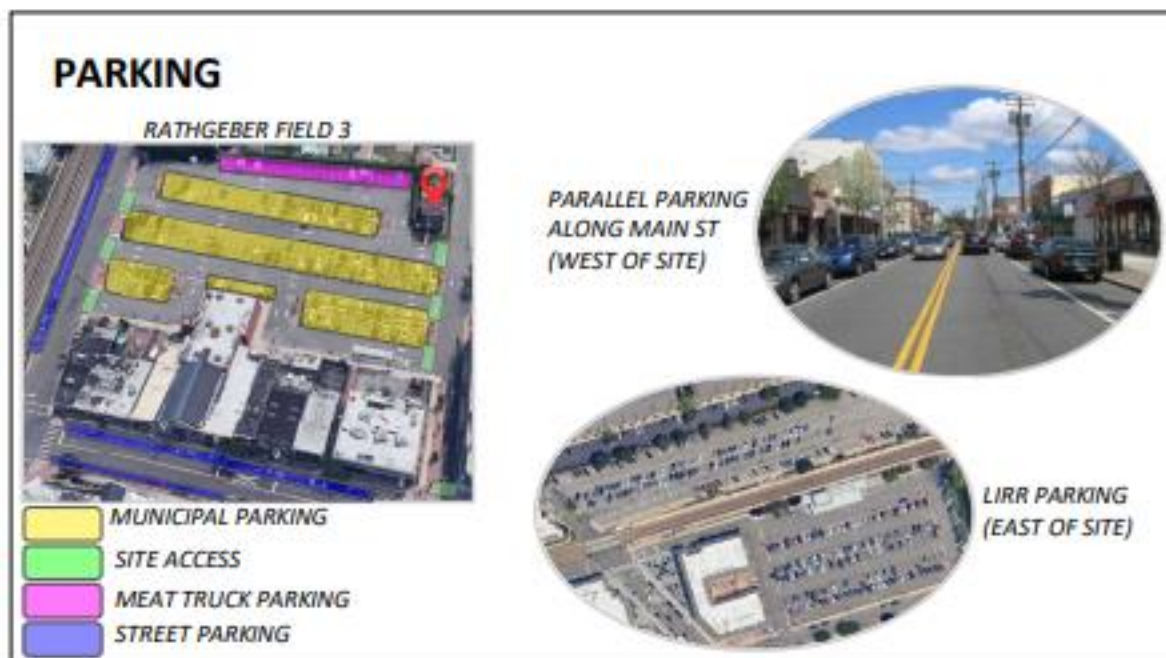
EXISTING SITE

ALLOWABLE EXTENSION

8



9



10

Site Relation to Train Station

AVERAGE WALKING TIME
TO SITE: 6.5 MINUTES



Performing Arts Center

Site Visit
Parking Spot

◆ INTERSECTION OF
FRONT STREET &
SECATOQUE AVE



◆ INTERSECTION OF
FRONT STREET &
ELIZABETH STREET



11

Pedestrian Path to Site



1. ATLANTIC AVE
(LEAVING LIRR)



2. FRONT STREET AND
SECATOQUE AVE INTERSECTION



3. WALKING PATH ALONG FRONT
STREET



4. NARROW PATH AT NORTH END OF PARKING LOT



5. RESIDENTIAL CUTTHROUGH

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Programming

SPACE	ADJECENCY	ISSUES TO RESOLVE
Box Office	Near main entrance, adjacent to reception	High noise level
Reception Area	Near box office, entry vestibule	Potential crowding
Customer Service	Adjacent to reception and box office	High noise from complaints
Auditorium/Theater Proper	Central location, connected to stage	Egress bottleneck
Stage Area	Directly connected to auditorium, backstage access	Sound bleed to audience
Flex-Multi Function with Dressing Room	Near stage & green room	Limited space for activities
Green Room with Vending Area	Close to stage and dressing rooms	Insufficient waiting space
Laundry/Wardrobe	Near dressing rooms	Ventilation issues
Pantry	Near green room and staff areas	Limited space
Common Areas/Circulation Areas	Throughout, connecting public and backstage	Potential congestion
Toilet Facilities	Near public spaces & backstage	Not enough for peak usage
Storage Area	Near stage & backstage	Lack of accessible quick-access storage
General Storage	Separated but accessible	Too far from main areas
Loading Dock	Backstage, separate from public areas	Interferes with emergency egress
Fire Escape/Stairs	Throughout, per code	Must meet fire code
Admin Office	Separated from stage/auditorium noise	May be too close to noise areas
Passenger Elevator	Public circulation areas	Elevator capacity limits
Service Elevator	Backstage/storage/loading dock	Potentially limited load capacity
Utility Areas & Support Facilities	Throughout	HVAC system placement must be optimized

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Lobby/Reception



14

Backstage



15

Lighting, Sound, and Equipment



16

Size avg. estimation for proposed performance center (Black Box Theater)

Space	Size Considerations (sq. ft.)	Theater 1: Emerson College	Theater 2: Helms University	Industry standards	Theater A: Tabler Center	Calculated Avg. Size
Box Office	100-150	N/A	N/A	50		
Reception Area	200-300	N/A	450	750 total		
Customer Service	100-150	*check occupancy code for lobby	N/A	750 total	1500 total	~800
Auditorium/Theater Proper	2500-3000			35 sq ft. per station	4000 total including other	~3300 total
Stage Area	1500-1800	2300 total	3200 total	4000		
Free Multi Function w/Drinking Room	500-1000	315 avg.	3400 total	350 per location	175 avg.	~940
Green Room with Vending Area	300-400	N/A	200 total	500/12 sq. foot per station	125	~310
Laundry/Warehouse	500-600	N/A	N/A	120	N/A	~410
Pantry	150-250	53	N/A	80	N/A	68.5
Common Areas/Circulation Areas	Varies (20-30% of total floor area)	Varies	Varies	varies	4000	Varies
Restroom Facilities	Varies/occupancy count	186.5 average tot 234/3 shop rooms = 84.33 avg.	310 average	varies	90-25 avg.	tot 320 avg.
Storage Area	200-300		N/A	1200	1000	~450
General Storage	500-800	900 173/2 gen mfg. ~85.5 avg.	N/A	750	186	~370
Loading Dock	500-1000	68	80	as required	N/A	As required
Fire Escape/Stairs	Per building code	N/A	As required	as required	N/A	As required
Admin Office	200-400	303	66	180 sq ft./station	300	~270
Passenger Elevator	Per ADA requirements	29	66	as required	120	~80 (as required)
Service Elevator	Per equipment needs	79	98	as required	N/A	As required
Utility Areas & Support Facilities	100-500	2,509	300	1200	tot: 1700 Areas = 430	1470
total	~8,000 -11,000	~10,013	~30,080	~11,306	~20,000*	13,400 sq. ft.

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Potential Costs and Estimates

Black Box Theater Cost Projection Per sq. foot - Theater		Black Box Theater Cost Projection Per sq. foot - Theater	
NEW CONSTRUCTION/RENOVATION		RENOVATION/REPAIR/REMODELING	
Foundation, Lvl. 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000			
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NYS Building Code

303.2 Assembly Group A-1

Diagram

Group A-1 occupancy includes assembly uses, usually with fixed seating, intended for the production and viewing of the performing arts or motion pictures including, but not limited to:

Motion picture theaters

Symphony and concert halls

Television and radio studios admitting an audience

Theaters

UpCodes Diagrams



TABLE 504.3

ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE*

OCCUPANCY CLASSIFICATION	SEE FOOTNOTES	TYPE OF CONSTRUCTION					
		TYPE I		TYPE II		TYPE III	
		A	B	A	B	A	B
A, B, E, F, M, S, U	NS ²	UL	160	65	55	65	55
	5	UL	180	85	75	85	75

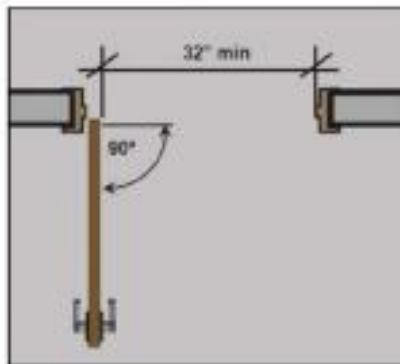
19

NYS Department of Labor Code (Part 36)

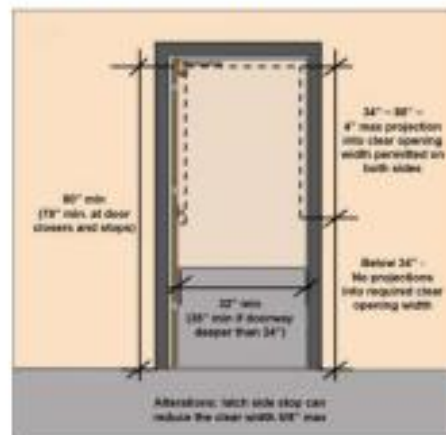
Clear Width

504.3.2

The clear width is measured from the stop to the face of doors or gates open 90° (or to the leading edge of sliding or folding doors). No projection into the clear width is permitted below 34".



36" doorway width will be used for our project to satisfy both NYS Labor Code & NYS Building Code

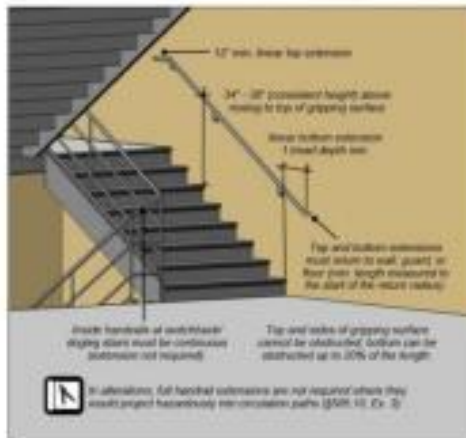


20

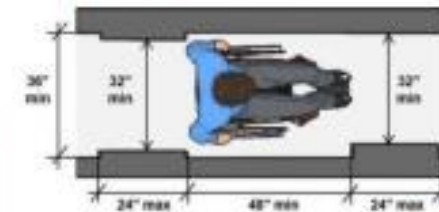
ADA Requirements

Stairway Handrail Requirements in the ADA Standards (§504)

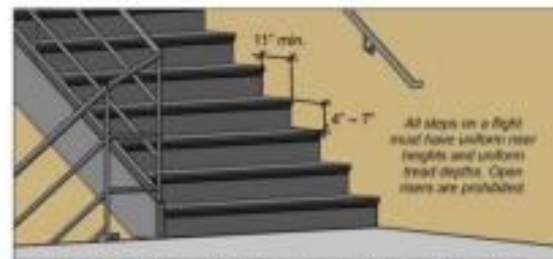
Handrails are required on both sides and must be continuous within the full length of each stair flight.



Accessible Route Clearances:



Treads and Riser Specifications in the ADA Standards (§504)



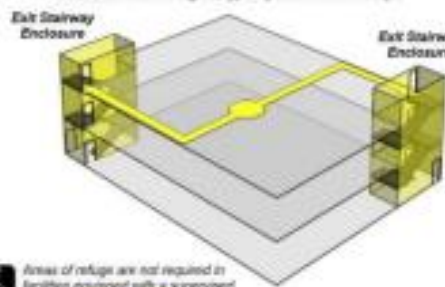
Treads and landings subject to wet conditions must be designed to prevent the accumulation of water. Visual contrast on tread nosings or the leading edges of treads is helpful for people with low vision but not required by the ADA Standards.

21

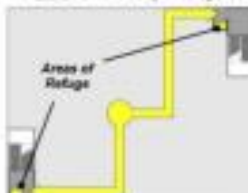
NYS Fire Code and Egress

Accessible Means of Egress Leading to Exit Stairs §7

On floors above or below the level of exit discharge, accessible means of egress typically lead to exit stairways.



Areas of refuge are not required in facilities equipped with a supervised automated sprinkler system.



Areas of refuge, which are required in buildings that are not equipped with sprinkler systems, provide fire and smoke protected areas where those unable to use stairs can register a call for help and await evacuation assistance. These areas must provide direct access to exit stairways and can be located adjacent to stairway enclosures or on stair landings outside the minimum exit width.

Features of Areas of Refuge

Instructions

The IBC requires posted instructions on use of the area under emergency conditions next to the communication system and specifies required content. These instructions must meet requirements for visual characters in the ADA Standards (§216.4.2, §503.3).

Two-Way Emergency Communication System
Devices must include audible and visual signals and connect to a central control panel (and to a public telephone system if the central control panel is not constantly attended) under the IBC. Their location must be approved by the fire department. Operable parts are subject to the ADA Standards (§308).



Wheelchair Spaces

The IBC requires 1 wheelchair space (30" min. by 48" min.) for every 200 occupants or portion thereof served by the area of refuge. Spaces cannot reduce the required egress width and must be entered directly from an accessible route or one adjacent wheelchair space.

Stairway Width

The IBC requires stairs serving areas of refuge to have a clear width of 48" min. between handrails to accommodate assisted evacuation.

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- Budget Uncertainty:
- Limited On-Site Parking:
- Service Access Limitations:
- Long Walking Distances from Off-Site Parking:
- Residential Sensitivity:

Weaknesses

25

Opportunities

- Advanced Digital Integratio6n:
- Flexibility in Design within Regulations:
- Urban Activation & Economic Growth:
- Enhanced Pedestrian & Wayfinding Infrastructure:
- Spot Zoning Application:

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Threats

- Budget Overruns:
- Limited Backstage Space:
- Construction Limitations:
- Community Opposition:
- Traffic Flow Disruptions:

27

In Conclusion and Next Steps

- Send Preliminary Project Description to village stakeholders for review and comments
- Develop concepts plans for site and building
- Send concepts to village stakeholders for review, feedback and ranking
- Review, revise and resubmit - get additional feedback
- Develop schematic plans, sections, elevations, and 3-Dimensional view
- Write preliminary project description for the design proposal
- Project cost of concept, compare to program budget
- Build model
- Present final proposal to village stakeholders

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Appendix 12 – Phase II Presentation – May 19

WORK IN PROGRESS



DESIGN 4
PROFESSOR ANDERSON
FARMINGDALE STATE COLLEGE
2350 BROADHOLLOW ROAD
FARMINGDALE NY 11735

3D VIEW

PROJECT ADDRESS: 141 DIVISION ST.
FARMINGDALE NY, 11735
TAX MAP #: 49-201-17
DRAWN BY: STEPHANIE CAMPOS
DATE: 12MAY2025
REVISIONS:

PAGE:

1 OF 5



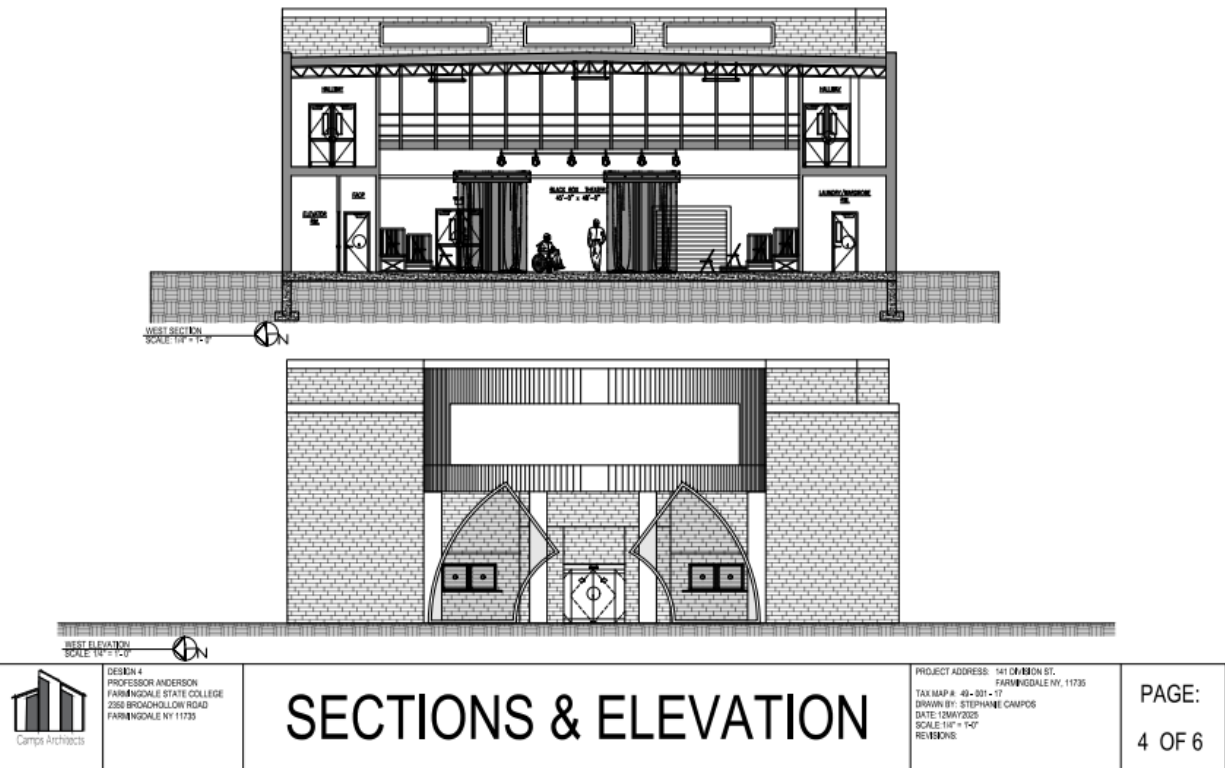
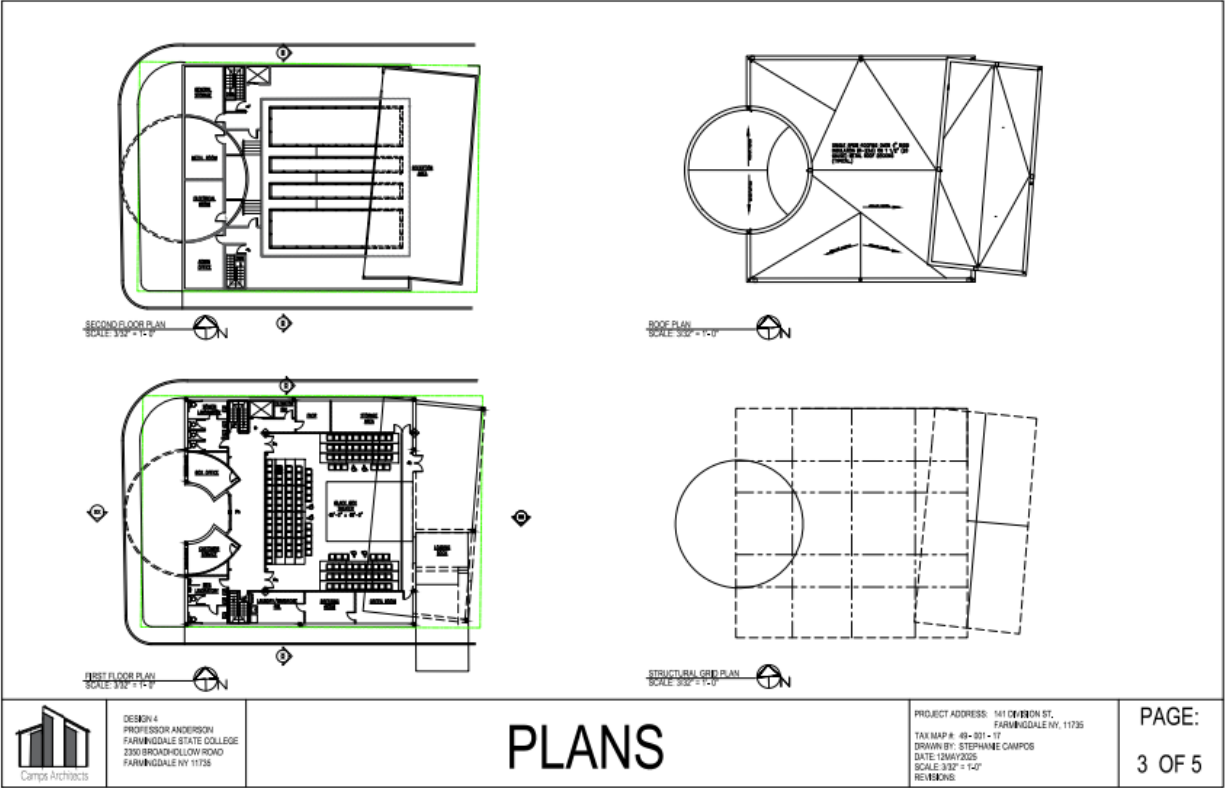
DESIGN 4
PROFESSOR ANDERSON
FARMINGDALE STATE COLLEGE
2350 BROADHOLLOW ROAD
FARMINGDALE NY 11735

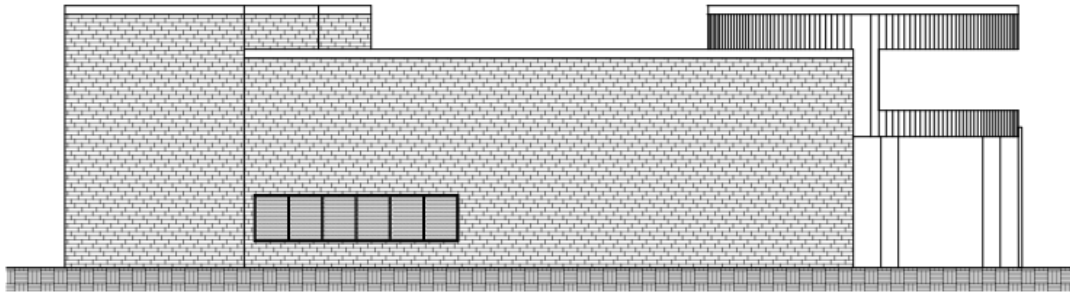
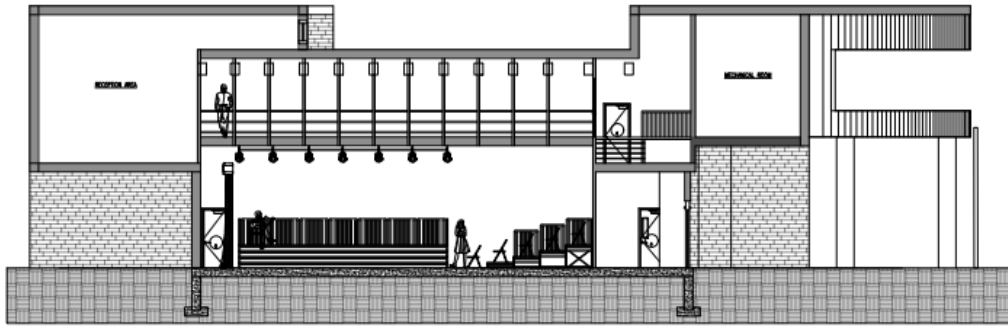
SITE PLAN

PROJECT ADDRESS: 141 DIVISION ST.
FARMINGDALE NY, 11735
TAX MAP #: 49-201-17
DRAWN BY: STEPHANIE CAMPOS
DATE: 09MAY2025
SCALE: 1/8" = 1'-0"
REVISIONS:

PAGE:

2 OF 6





DESIGN 4
PROFESSOR ANDERSON
FARMINGDALE STATE COLLEGE
2350 BROADHOLLOW ROAD
FARMINGDALE NY 11735

SECTIONS & ELEVATION

PROJECT ADDRESS: 141 DIMICK ST.
FARMINGDALE NY, 11735
TAX MAP #: 48-001-17
DRAWN BY: STEPHANIE CAMPOS
DATE: 12 MAY 2025
SCALE: 1/4" = 1'-0"
REVISIONS:

PAGE:
5 OF 6

WORK IN PROGRESS



DESIGN 4
PROFESSOR ANDERSON
FARMINGDALE STATE COLLEGE
2350 BROADHOLLOW ROAD
FARMINGDALE NY 11735

Budget & Program

PROJECT ADDRESS: 141 DIMICK ST.
FARMINGDALE NY, 11735
TAX MAP #: 48-001-17
DRAWN BY: STEPHANIE CAMPOS
DATE: 09 MAY 2025
SCALE: 1/8" = 1'-0"
REVISIONS:

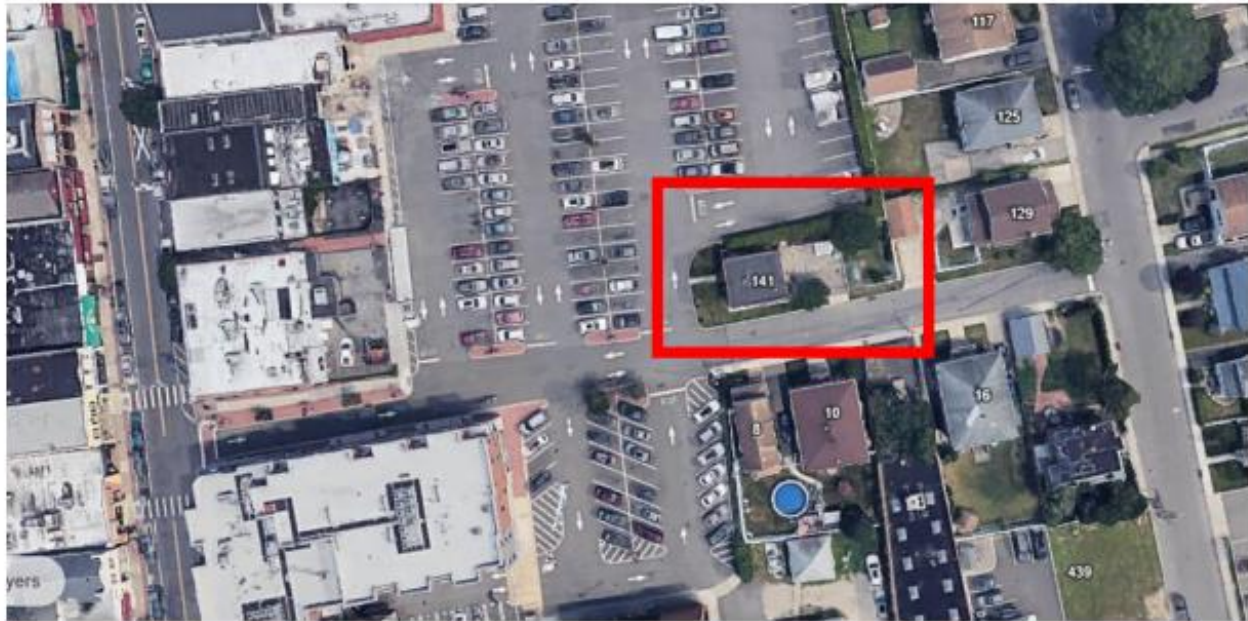
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Appendix 13 – Course Project Brief and Phase I and II Submission Requirement

ARC476|91256-24 SEMESTER PROJECT - Farmingdale State College

Instructor: Eric Anderson, AIA PROJECT BRIEF

The Village of Farmingdale plans to develop a Performing Arts Center on a site adjacent to the Main Street district to provide a flexible community space to host community-based drama, music and cultural performances.



The village has identified the site at **141 Division Street**, which is adjacent to the east parking area serving the Main St. district between Conklin St. and Front St. **Review of the adapted Village Master Plan** will be required to develop a strategy for the design and construction of the center.



A performing arts center can significantly enhance the quality of a downtown environment in the following ways:

- Cultural Destination: A performing arts center can establish the downtown as a cultural hub, attracting visitors and tourists, which contributes to the area's identity and prestige.

ARC476|91256-24 SEMESTER PROJECT - Farmingdale State College

Instructor: Eric Anderson, AIA **PROJECT BRIEF**

- Educational Opportunities: Many centers offer workshops, classes, and outreach programs that engage youth and adults, enriching the community's educational landscape.
- Community Engagement: By offering diverse programming, such as plays, concerts, and community performances, the center can foster a sense of community pride and belonging.
- Creative Placemaking: Public art installations, murals, or outdoor performances associated with the center enhance the visual and cultural appeal of the downtown area.
- Enhanced Nightlife: Evening performances extend downtown activity beyond standard business hours, creating a lively, safe atmosphere at night.

By combining cultural vibrancy, economic stimulation, and urban enhancement, a performing arts center can be a transformative asset for a downtown area, elevating its quality of life and fostering long-term growth.

The project program and design response will be developed using a black box theater concept that provides a flexible lobby/arrival area, flexible staging and seating for 130-180 people with performance support spaces and building support spaces.

A Black Box Theater (or experimental theater) consists of a simple, somewhat unadorned performance space, usually a large square room with black walls and a flat floor. It is a relatively recent innovation in theater. The concept of a building designed for flexible staging techniques can be attributed to Swiss designer Adolphe Appia, and instigated a half century of innovations in the relationship between audience and performers. Such spaces are easily built and maintained and are usually home to plays or other performances with very basic technical arrangements such as limited set construction. Common floor plans include thrust stage, modified thrust stage and theater in the round. Colleges and other theater training programs employ the black box theater because the space is versatile and easy to change. Many theater training programs will have both a large proscenium theater, as well as a black box theater. Not only does this allow two productions to be mounted simultaneously, but they can also have a large extravagant production in the main stage while having a small experimental show in the black box.

Anticipated functional elements of the center will include:

Box Office	Common Areas/Circulation Areas
Reception Area	Toilet facilities
Customer Service	Storage Area
Auditorium/Theater Proper (Flexible) for 130-180 people, flexible arrangement	General Storage
Stage Area, flexible arrangement	Loading Dock
Flex-Multi function with dressing room	Fire escape/stairs
Laundry/wardrobe	Admin Office
Green Room with Vending Area	Passenger Elevator
Pantry	Service Elevator
	Utility areas and support facilities

ARC476|91256-24 SEMESTER PROJECT - Farmingdale State College

Instructor: Eric Anderson, AIA **PROJECT BRIEF**

The architectural design and construction of the black box theater/performing arts center should create a versatile, functional, and inclusive space that serves as a dynamic hub for cultural and artistic expression in the Village of Farmingdale. This design will provide a state-of-the-art performing arts center that celebrates creativity, supports the arts, and enhances the cultural vibrancy of the community it serves through

- **Aesthetic Integration:** Create an inviting, modern design that reflects the cultural and artistic aspirations of the community while harmonizing with the surrounding urban or suburban environment.
- **Community Engagement:** Establish the facility as a cultural landmark that encourages community participation, education, and collaboration, fostering a sense of pride and belonging.
- **Flexibility and Functionality:** Design a highly adaptable black box theater space that accommodates various performance configurations, including theater, music, dance, and multimedia productions, while ensuring optimal acoustics and sightlines for an audience of 130-180 seats.
- **Supportive Facilities and User-Centered Design;**
 - Incorporate a well-equipped green room, dressing rooms, and storage areas to support performers and technical crews efficiently.
 - Provide a welcoming lobby with the capacity to serve light refreshments, enhancing the audience experience and fostering social engagement.
 - Prioritize the comfort, safety, and convenience of both performers and patrons, ensuring intuitive navigation, appropriate lighting, and well-planned adjacencies between functional spaces.
 - Ensure that all spaces, including the theater, lobby, sanitary facilities, and circulation paths, meet or exceed the requirements of the Building Code of New York State and ANSI A117.1 2017 for accessibility, promoting inclusivity for individuals of all abilities.
- **Sustainability and Efficiency:** Integrate energy-efficient systems and sustainable materials where feasible to reduce the environmental impact and operational costs of the facility.

The project will be developed in two phases:

Phase 1: Groups will be organized to research the building type and program, existing conditions/site/zoning, building code requirements, SWOT analysis, and project presentation standards. Research will be presented to project stakeholders in the Village of Farmingdale.

Phase 2: Students will develop an individual design response using drawings (approximately 15 ARCH D sheets, a preliminary project description narrative (PPD) and a conceptual design budget.

- There are periodic submissions for project parti, parti/site plan alignment, and stakeholder feedback.
- Each student will develop and update a weekly report on project development for review by the course instructor during this phase. A spreadsheet template with key project requirements has been prepared and posted to the 5 assignments that have been created to accept your report.
- A presentation to project stakeholders in the Village of Farmingdale will be scheduled during finals week.

ARC476|26197-25 SEMESTER PROJECT - Farmingdale State College

Instructor: Eric Anderson, AIA **PHASE I PRESENTATION AND SUBMISSION**

The semester project is divided into two phases. Phase I activities are team-based investigations of client activities and precedence, building program definition, existing conditions review and summary, code and zoning analysis, and development of base data to be used by the class in Phase II. Each team will complete the requirements as noted in the specific team activity.

The presentation of each team's work and their submission to the Preliminary Project Description template is due MARCH 12 (WEDNESDAY) at 5:55 PM. Please refer to page 4 of the course policies on late submission or absence from the presentation.

TEAM 1: BUILDING PROGRAM AND BUDGET

- **Develop Program Verification:**
 - Verify room locations, functionality, size, and adjacencies.
 - Define the building code requirements specific to the proposed use group, occupancy, and accessibility requirements.
 - Identify and resolve potential "red flag" issues and inconsistencies.
 - Collect data on equipment and ancillary requirements.
- **Requirements for Interior Space (Include but not limited to):**
 - Box Office
 - Reception Area
 - Customer Service
 - Auditorium/Theater Proper (Flexible) for 130-180 people, flexible arrangement
 - Stage Area, flexible arrangement
 - Flex-Multi function with dressing room
 - Laundry/wardrobe
 - Green Room with Vending Area
 - Pantry
 - Common Areas/Circulation Areas
 - Toilet facilities
 - Storage Area
 - General Storage
 - Loading Dock
 - Fire escape/stairs
 - Admin Office
 - Passenger Elevator
 - Service Elevator
 - Utility areas and support facilities

ARC476|26197-25 SEMESTER PROJECT - Farmingdale State College

Instructor: Eric Anderson, AIA **PHASE I PRESENTATION AND SUBMISSION**

- **Create and Confirm Project Budget:**
 - Prepare and confirm a detailed project budget.
 - Include costs for construction, fixtures, and signage.
- **Develop section for Preliminary Project Description (PPD) template.**

TEAM 2: SITE AND ZONING

- **Site Evaluation:**
 - Review adapted Downtown Master Plan and identify project impacts.
 - Assess parking opportunities and constraints.
 - Evaluate driveway egress and pick-up/drop-off areas.
 - Explore the option to adapt small outdoor rear areas as flexible deck space.
- **Zoning Analysis:**
 - Identify local zoning regulations.
 - Develop a list of issues for review with town officials and neighboring property owners.
- **Requirements for Exterior Space (including but not limited to):**
 - Landscape design, including fencing
 - Parking
 - Driveway egress pick-up/drop-off area for youth participants and merchandise/cookies
 - Option to adapt small outdoor rear area as flexible deck space.
 - Outdoor signage compliant with village requirements
- **Develop section for Preliminary Project Description (PPD) template.**

TEAM 3: BUILDING CODE OVERVIEW

- **Code Compliance issues**
 - Review village ordinances (master plan, architectural review) to confirm prevailing codes for design
 - Review county ordinances (fire marshal, 239F) to identify compliance issues
 - Review chapter 11 of the Building Code of NYS and ANSI 117.1 2017 to determine the specific requirements for accessibility
- **Construction types appropriate for project design**
 - Identify potential construction types for project using definitions from NFPA 220 that will meet code requirements
- **Develop section for Preliminary Project Description (PPD) template.**

ARC476|26197-25 SEMESTER PROJECT - Farmingdale State College

Instructor: Eric Anderson, AIA PHASE I PRESENTATION AND SUBMISSION

TEAM 4: BASE DOCUMENT TEMPLATES, PHASE I PPD, AND MODEL

- **Drawing Templates**

- Review the owner-provided drawings and surveys. Develop draft based drawings in an electronic format identified by the class for the site, building for review and comment by the other teams. Drawings will include site plan, building plan, building elevations, building section and structural grid at a scale appropriate to the presentation format, and key wall section at a minimum scale of ½-inch = 1-foot.
- Research suitable formats for presentation drawings and develop a base format for use by individual students.
- Research suitable formats for schematic design drawings and develop a base format for use by individual students.

- **Base Model**

- Propose a model scope to the class that will present neighborhood context and permit each student to insert a model of their Phase II design response. Using comments, develop a final scope for the model and build it for use in Phase II. Estimate the quantities of materials and cost for the model for assessing contributions by all students.

- **Develop comprehensive Preliminary Project Description (PPD) template.**

Team 4 shall incorporate each team's Preliminary Project Description (PPD) into a course template that will be used by each student to develop a narrative description to accompany their final design drawings. The format will be based upon the following outline:

- Report Cover
- Title Page
- Table of Contents
- Site And Zoning - Site And Parking Opportunities And Constraints
- Building Program And Budget
- Drawing Templates And Model
- Project Strength, Weaknesses, Opportunities and Threats Review (*all teams contribute to one response*)
- Next Steps(*all teams contribute to one response*)
- Reference List - IEEE format https://journals.ieeeauthorcenter.ieee.org/wp-content/uploads/sites/7/IEEE_Reference_Guide.pdf)

Appendix

- Appendix 1 - Property Information (*Team 2*)
- Appendix 2 – Site and Zoning Analysis (*Team 2*)
- Appendix 3 - *Master Plan Documentation for analysis*
- Appendix 4 - Program Summary spreadsheet, net and gross areas (*Team 1*)
- Appendix 5 - Program Attributes summary (by room) (*Team 1*)
- Appendix 6 - Program Cost Projection (xlsx workbook) (*Team 1*)
- Appendix 7 - Building Code Analysis (*Team 3*)
- Appendix 8 - Building Systems Description (reserved for Phase II)
- Appendix 9 - Summary and Images of Base Documents (*Team 4*)
- Appendix 10 - Images of Completed Physical Model(*Team 4*)

ARC476|26197-25 SEMESTER PROJECT - Farmingdale State College

Instructor: Eric Anderson, AIA PHASE I PRESENTATION AND SUBMISSION

PROJECT GRADING

SCORING			87-100	70-86	60-70	less than 60
Team	% of GRADE	Criteria	Exceeds Standard	Meets Standard	Approaches Standard	No Evaluation
Team 1	70%	BUILDING PROGRAM AND BUDGET	Thorough program verification with innovative solutions. Budget is highly detailed, including clear room descriptions and costs.	Program verification meets requirements, and the budget includes necessary costs for rooms and equipment.	Program verification is incomplete or lacks detail, and the budget is missing critical elements or clarity.	No submission.
	20%	Preliminary Project Description (PPD)	Full, well-organized PPD that includes all required sections: Building Program and Budget, Program Summary, and Cost Projection.	Complete PPD with all required sections, though some minor details may be missing.	PPD lacks clarity or completeness in all reviews assigned to this team.	No submission.
	10%	Project Strengths, Weaknesses, Opportunities, and Threats (SWOT)	Comprehensive SWOT analysis that thoroughly evaluates all project aspects and presents innovative next steps.	Complete SWOT analysis, identifying strengths, weaknesses, opportunities, and threats with actionable next steps.	SWOT analysis is basic or lacks depth in identifying project challenges or opportunities for improvement.	No submission.
Team 2	70%	SITE AND ZONING ANALYSIS	Thorough site and zoning analysis with innovative solutions for parking constraints and exterior opportunities.	Adequate zoning and site analysis, meeting project requirements, with feasible parking solutions.	Analysis is incomplete or lacks creative solutions to zoning and parking issues.	No submission.
	20%	Preliminary Project Description (PPD)	Well-organized PPD with detailed zoning analysis, parking constraints, and SEQRA form submission.	PPD includes zoning analysis, parking opportunities, and site evaluation, but may lack some detail.	PPD lacks clarity or completeness in all reviews assigned to this team.	No submission.
	10%	Project Strengths, Weaknesses, Opportunities, and Threats (SWOT)	Comprehensive SWOT analysis that thoroughly evaluates all project aspects and presents innovative next steps.	Complete SWOT analysis, identifying strengths, weaknesses, opportunities, and threats with actionable next steps.	SWOT analysis is basic or lacks depth in identifying project challenges or opportunities for improvement.	No submission.
Team 3	70%	BUILDING CODE ANALYSIS	Comprehensive evaluation of building codes and ordinances for impact on building systems.	Satisfactory evaluation of building codes and ordinances for impact on building systems.	Evaluation lacks depth or omits important code assessments.	No submission.
	20%	Preliminary Project Description (PPD)	Detailed PPD that includes all relevant sections: Building Code Analysis, Accessibility review	PPD meets requirements but may lack depth in the Building Code or Accessibility sections.	PPD lacks clarity or completeness in all reviews assigned to this team.	No submission.
	10%	Project Strengths, Weaknesses, Opportunities, and Threats (SWOT)	Comprehensive SWOT analysis that thoroughly evaluates all project aspects and presents innovative next steps.	Complete SWOT analysis, identifying strengths, weaknesses, opportunities, and threats with actionable next steps.	SWOT analysis is basic or lacks depth in identifying project challenges or opportunities for improvement.	No submission.
Team 4	70%	DOCUMENT TEMPLATES AND PHASE 1 PPD	Highly detailed base model and drawing templates, including images of the completed model, presented innovatively.	Complete base model and drawing templates that meet project requirements and include necessary detail.	Base model and drawings lack completeness or necessary details for Phase II integration.	No submission.
	20%	Preliminary Project Description (PPD)	Full PPD submission, including Base Documents Summary, physical model images, and model file attachments (RVT/.SKP).	PPD meets submission standards with all base documents and model images but lacks innovation or completeness.	PPD lacks clarity or completeness in all reviews assigned to this team.	No submission.
	10%	Strengths, Weaknesses, Opportunities, and Threats (SWOT)	Comprehensive SWOT analysis that thoroughly evaluates all project aspects and presents innovative next steps.	Complete SWOT analysis, identifying strengths, weaknesses, opportunities, and threats with actionable next steps.	SWOT analysis is basic or lacks depth in identifying project challenges or opportunities for improvement.	No submission.

ARC476|26197-25 SEMESTER PROJECT - Farmingdale State College

Instructor: Eric Anderson, AIA **PHASE II PRESENTATION AND SUBMISSION**

The semester project is divided into two phases. Phase II will encompass the development of individual schematic design proposals that will be reviewed by project stakeholders from the Village of Farmingdale. Drawings and a specific Preliminary Program Description (PPD) guide will be developed and submitted.

The presentation of each student design response (drawings, handout, PPD) is due May 12 (MONDAY) at 1:00 PM. Presentation to the project stakeholders will be scheduled during the final exam period, location TBA. Please refer to page 4 of the course syllabus for policies on late submission or absence from the presentation.

SUBMISSION REQUIREMENTS

ALL STUDENTS – PHASE II SUBMISSION AND PRESENTATION (Individual)

→ Coordination and Presentation:

- Participate in project design and coordination meetings as required.
- Prepare presentation materials to convey design concepts to the client. Materials include drawings, a Preliminary Project Description (PPD), budget comparing the initial analysis to the design analysis and scale model that fits into the base model.
- Present a complete design proposal for client review on the designated date during finals week. Record feedback from project stakeholders and include in PPD appendix in revised submission.

→ Design Concept and Strategy Narrative (5 page, max)

Narrative should focus on strategy for proposed design, constructability, consideration of owner project goals, and summarize the projected budget for the project. Structural design calculations are not required.

→ Schematic Drawings of the proposed site plan and facility (15 sheet maximum)

Present the site and building design – include schematic design elements noted in submittal requirements. Use ARCH D size sheets with ½-inch margin and 2-inch title block at bottom portion of sheet (along 36-inch edge).

- Provide schematic drawings (plans, elevations, renderings) for all interior and exterior spaces. Drawings will include site plan, building plan, building elevations, building section and structural grid at a scale appropriate to the presentation format, and key wall section at a minimum scale of ½-inch = 1-foot.
- Include details like the layout of premises, accurate sizes of columns, and building features.
- Finishes plan showing locations of flooring materials including carpet, flooring and base treatments, and any other associated finishes for presentation.
- Schematic furniture layout, ensuring appropriate scale and proportion of furnishings. Provide design for miscellaneous furniture as required to accommodate the space.
- Ensure all designs comply with ADA requirements both on-site and within the building.
- Create a revised budget aligned to the design response based upon the format for the initial program budget.

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Instructor: Eric Anderson, AIA **PHASE II PRESENTATION AND SUBMISSION**

→ Preliminary Project Description (PPD)

The PPD shall provide a technical overview of the project proposal, using the template developed in Phase I. The project vision and goals, space program information, site and zoning analysis, environmental analysis, overview of code requirements, use group and construction type, description of each of the design systems (SUBSURFACE, SHELL, INTERIOR CONSTRUCTION, BUILDING SERVICES, SITE IMPROVEMENTS), project management and project budget with reference list and appendices.

Each student shall use the Preliminary Project Description (PPD) course template to develop a narrative description to accompany their final design drawings. The format will be based upon the following outline:

- Report Cover
- Title Page
- Table of Contents
- Existing Conditions - Building And Site Evaluation
- Building Program And Budget – compare initial budget to design budget
- Site And Zoning - Site Opportunities And Constraints
- Project Strength, Weaknesses, Opportunities and Threats Review
- Final Recommendations
- Reference List - IEEE format (https://journals.ieeeauthorcenter.ieee.org/wp-content/uploads/sites/7/IEEE_Reference_Guide.pdf)
- Appendix
 - Appendix 1 - Property Information
 - Appendix 2 - Existing Conditions Assessment
 - Appendix 3 - Program Summary spreadsheet, net and gross areas
 - Appendix 4 - Program Cost Projection (xlsx workbook)
 - Appendix 5 - Program Attributes summary (by room)
 - Appendix 6 - Building Code Analysis
 - Appendix 7 - Zoning Analysis
 - Appendix 8 - Building Systems Description (SUBSURFACE, SHELL, INTERIOR CONSTRUCTION, BUILDING SERVICES, SITE IMPROVEMENTS)
 - Appendix 9 - Set of reduced drawings, 11 x 17

ARC476|26197-25 SEMESTER PROJECT - Farmingdale State College

Instructor: Eric Anderson, AIA PHASE II PRESENTATION AND SUBMISSION

PROJECT GRADING

The final grade for the Phase II Submission will be weighted as follows

10% Stakeholder Set Review (incorporates 3 parti assignment, parti/narrative, and site plan concept submissions)

70% Drawings based on conformance to requirements

10% Preliminary Project Description

10% Weekly Reports - all five reports. Extra credit for analysis of planned vs. actual.

GRADING RUBRIC

Student Score	STRONG Base grade x 4	VERY GOOD Base grade x 3.5	AVERAGE Base grade x 3	WEAK Base grade x 2.5	FAIL Base grade x 0
	STRONG: The submission included all elements, and content was accurate and clear. VERY GOOD: The submission included <i>most</i> elements and content had minor omissions. AVERAGE: The submission included <i>most</i> elements and content was somewhat accurate WEAK: The submission left out key elements; was inaccurate and/or unclear in a number of places FAIL: Major omissions or no submission				
	(10%) PRECEDENTS AND CONCEPT (Stakeholder Set Review)				
	(70%) DRAWING SET				
	DRAWING SET/CLARITY AND ORGANIZATION OF DRAWING SET: (base grade 5pts) Drawings conform to requirements of project brief. Plan and section view convey proportional development of space and structure. Line-weight conforms to professional standards; labels and dimensions are proportional to images; understands and uses drawing standards and conventions to convey design ideas.				
	DRAWING SET/FUNCTIONAL & ARCHITECTURAL ATTRIBUTES: (base grade 5 pts) Addressed basic space requirements. Presented comparative space summary. Functional adjacencies and relationship are consistent with proposed concept. Project design respond to context using architectural precedence, local architectural vernacular or organizational icons. Project design integrated function, form, circulation, and structure.				
	DRAWING SET/PRESENTATION OF DRAWING SET TO PROJECT STAKEHOLDERS & EXTERNAL REVIEWERS (use Presentation Rubric for this category; grade from presentation evaluation adjusted to be 1/3 of Drawing Set grade)				
	(10%) PRELIMINARY PROJECT DESCRIPTION: (base grade 5pts) PPD provided program, technical and budget information with appendices to describe design goals and intent, design response, and phase I review of existing conditions, regulatory analysis and SWOT (strength, weaknesses, opportunities and threats) identified and responses. The program budget and design budget are compared in the Preliminary Project Description and a narrative to explain conformance or difference to program budgets is described				
	(10%) WEEKLY REPORTS				
	SCORE				
COMMENTS					

ARC476|26197-25 SEMESTER PROJECT - Farmingdale State CollegeInstructor: Eric Anderson, AIA **PHASE II PRESENTATION AND SUBMISSION****PRESENTATION RUBRIC**

STUDENT SCORE	STRONG 2 points	VERY GOOD 1.7 points	AVERAGE 1.5 points	WEAK 1.25	FAIL 0 points Not Addressed	CATEGORY
	The type of presentation is appropriate for the project scope and audience.					ORGANIZATION
	Information is presented in a logical sequence. Visual aids are well prepared, informative, effective, and not distracting					
	Material included is relevant to the overall message/purpose.					
	Introduction is attention-getting, lays out the problem well, and establishes a framework for the rest of the presentation.					CONTENT
	Appropriate amount of material is prepared, and points made reflect well their relative importance.					
	There is an obvious conclusion summarizing the presentation.					
	Speaker uses a clear, audible voice and eye contact with the audience. Good language skills and pronunciation are used.					PRESENTATION
	The length of presentation is within the assigned time limits (20 MINUTES).					
	Delivery is poised, controlled, and smooth.					
	Handout provided key project information supported by overall presentation.					
	PRESENTATION SCORE					

COMMENTS – ORGANIZATION

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COMMENTS – CONTENT

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COMMENTS – PRESENTATION

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