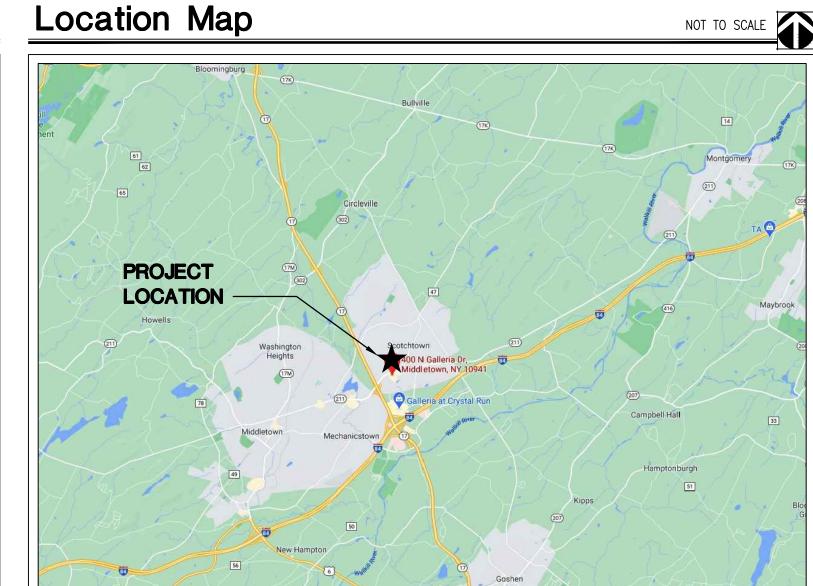
ASPIRE BREWING

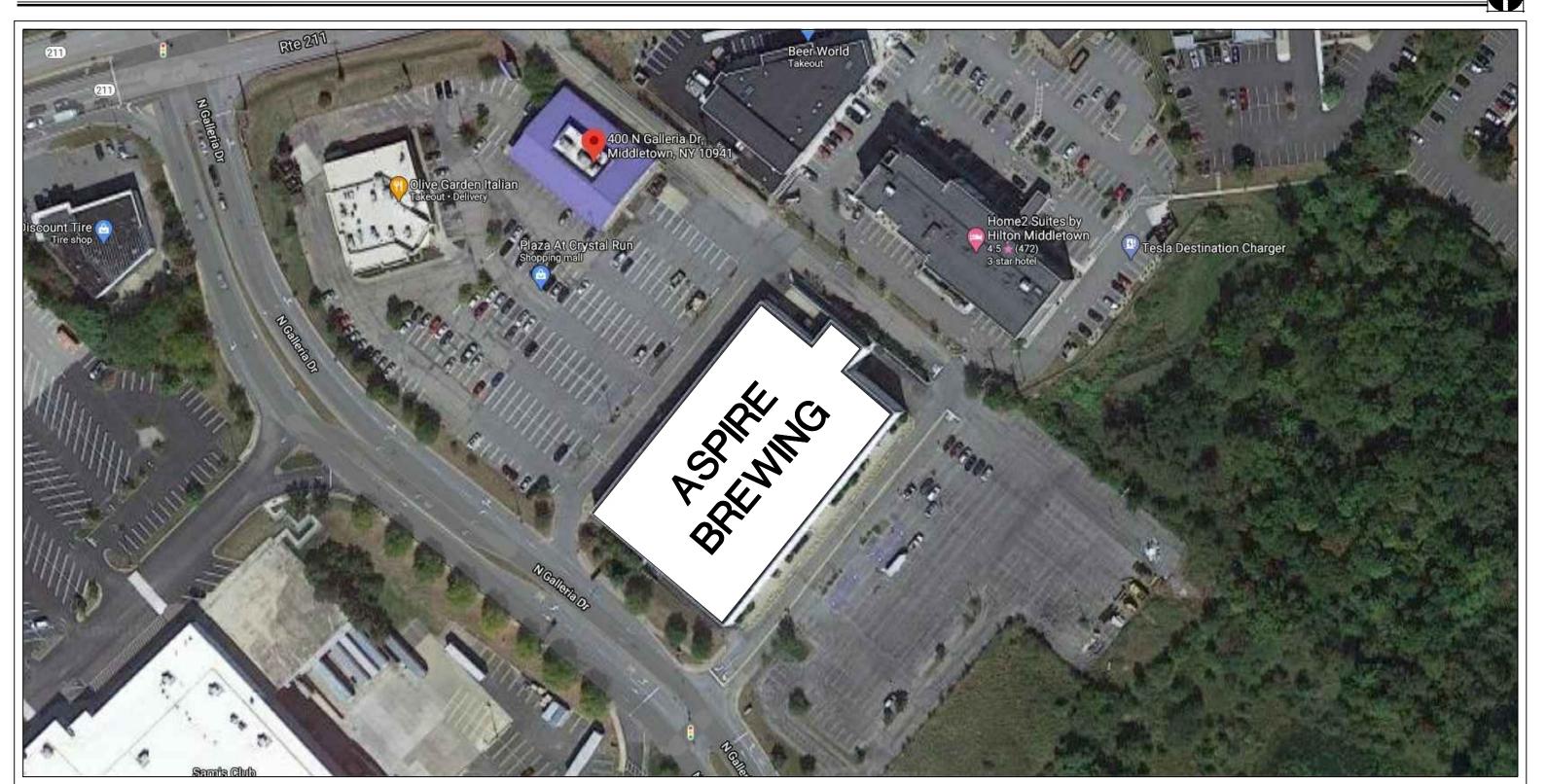
PROPOSED TAP ROOM & BREWERY SONNY PATEL BREWING COMPANY, INC. 400 North Galleria Drive Town of Wallkill, NY 10941

Symbols

DOOR TAG WINDOW TAG **REVISION CLOUD W/ TAG** PLUMBING TAG P-1 **OBJECT LINE** EQUIPMENT TAG (E11) DESIGNATION **ELEVATION LINE** MATCH LINE BLOW UP PLAN 4 HIDDEN LINE DESIGNATION DEMOLITION DEMOLITION **BREAK LINE** CONSTRUCTION ELEVATION DESIGNATIONS DESIGNATION **DIMENSION LINE COLUMN LINE** Drawing Label



Aerial View



General Notes

- 1. ALL WORK SHALL CONFORM TO THE 2020 INTERNATIONAL BUILDING CODE AND ALL OTHER APPLICABLE CODES, ORDINANCES, ETC. FOR NEW YORK STATE AND THE LOCAL AUTHORITY HAVING JURISDICTION.
- PRIOR TO SUBMITTING BIDS AND COMMENCING WORK.
- 3. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL REVIEW DRAWINGS AND FIELD VERIFY ALL DIMENSIONS, CONDITIONS AND ELEVATIONS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES AND ADDRESS ALL QUESTIONS TO ARCHITECT PRIOR TO COMMENCING WORK
- 4. THE CONTRACTOR SHALL NOT SCALE DRAWINGS FOR DIMENSIONS. ALL NOTES OR DIMENSIONED INFORMATION TAKES PRECEDENCE OVER THE DRAWING.
- 5. IN ALL CASES WHERE A CONFLICT MAY OCCUR SUCH AS BETWEEN NOTES ON THE DRAWINGS, OR BETWEEN GENERAL NOTES AND SPECIFIC DETAILS, ARCHITECT SHALL BE NOTIFIED AND WILL INTERPRET THE INTENT OF THE CONTRACT DOCUMENTS
- 6. DETAILS NOTED AS "TYPICAL" (TYP.) SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWIS
- 7. WHERE NO SPECIFIC DETAIL IS SHOWN, THE FRAMING OR CONSTRUCTION SHALL BE IDENTICAL AND SIMILAR TO THAT INDICATED FOR LIKE CASES O
- 8. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL SAFE WORKING CONDITIONS AND SHALL OBSERVE ALL SAFETY REQUIREMENTS ESTABLISHE
 JURISDICTIONAL AGENCIES AND THE OWNER. WHERE CONFLICTS EXIST, THE MORE STRINGENT REQUIREMENT SHALL APPLY. CARE SHALL BE EXERC
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION METHODS, PROCEDURES AND JOB SITE CONDITIONS INCLUDING SAFETY.
 CONSTRUCTION SHALL BE PERFORMED IN SUCH A MANNER TO PROTECT WORKMEN, OCCUPANTS AND THE PUBLIC TO BE PROTECTED FROM INJURY AI
 ADJOINING PROPERTY SHALL BE PROTECTED FROM DAMAGE BY USE OF SCAFFOLDING, UNDERPINNING OR OTHER APPROVED METHOD. THE
 CONTRACTOR SHALL REPAIR ANY AND ALL DAMAGE CAUSED DURING OR RESULTING FROM HIS OPERATIONS IN KIND TO THE SATISFACTION OF THE
 OWNER AT NO ADDITIONAL COST TO THE OWNER.
- 10. THE CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A CLEAN, DEBRIS FREE CONDITION. THE DUST RESULTING FROM REMOVALS SHALL BE CONTROLLED SO AS TO PREVENT ITS SPREAD TO OCCUPIED PORTIONS OF THE BUILDING AND TO AVOID CREATION OF A NUISANCE IN THE SURROUNDING AREA.
- 1. CONTRACTOR SHALL REPAIR ANY AND ALL DAMAGE CAUSED DURING OR RESULTING FROM THEIR OPERATIONS IN KIND TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE TO DISPOSE OF ALL DEMOLISHED MATERIAL OFF SITE IN AN APPROVED MANNER UPON COMPLETION OF WORK. ANY EXTRA BUILDING MATERIALS SHALL BE DISPOSED OF OR TURNED OVER TO THE OWNER AS DIRECTED. THE OWNER SHALL BE CONSULTED PRIOR TO DISPOSAL OF SALVAGED OR EXCESS MATERIALS AT PROJECT COMPLETION. THE WORK AREA SHALL BE LEFT CLEAN TO THE OWNER'S SATISFACTION.
- ALL EXCESS MATERIAL, DEBRIS, ETC. SHALL BE REMOVED AND THE WORK AREA SHALL BE LEFT CLEAN TO THE OWNER'S SATISFACTION.
- COMPLY WITH LOCAL NOISE ORDINANCES REQUIREMENTS.
- CONTRACTOR SHALL FURNISH ALL EQUIPMENT THAT MAY BE REQUIRED TO PERFORM THE WORK INDICATED IN A SAFE AND ORDERLY MANNE
- 16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RELOCATION AND TEMPORARY SUPPORT OF ANY UTILITIES ENCOUNTERED DURING THE COURSE OF THEIR WORK AND TO ENSURE THE OWNER'S FACILITY TO BE OPERATIONAL. IF REQUIRED, THE CONTRACTOR SHALL MAINTAIN UNOBSTRUCTED ACCESS TO ALL UTILITIES AND PUBLIC FACILITIES INCLUDING FIRE HYDRANTS, FIRE ALARM BOXES, POLICE CALL BOXES, STREET LIGHTS, MANHOLES, AMONG OTHERS DURING DEMOLITION AND CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING, PATCHING, FILLING AND CLEANING UPON COMPLETION OF WORK.
- 8. THE CONTRACTOR SHALL SUBMIT WHERE REQUIRED, SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL PRIOR TO THE START OF FABRICATION OR PURCHASE OF THOSE ITEMS.
- THE CONTRACTOR SHALL PROVIDE THE OWNER AND ARCHITECT WITH CERTIFICATES OF INSURANCE PRIOR TO STARTING THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SHORING AND BRACING OF EXISTING STRUCTURES AS NEEDED TO COMPLETE THE NEW WORK
- MANUFACTURER'S SPECIFIC INSTRUCTIONS AND RECOMMENDATIONS. WHERE BRAND NAMES AND MANUFACTURED PRODUCTS ARE CALLED FOR, APPROVED EQUALS WHICH MEET APPLICABLE STANDARDS AND SPECIFICATIONS MAY BE SUBSTITUTED WITH WRITTEN PERMISSION OF THE ARCHITECT AND THE OWNER. WHENEVER BRAND NAMES OR SPECIFIC PRODUCT SYSTEMS ARE INDICATED IT SHALL BE CLEARLY UNDERSTOOD THAT SUCH IDENTIFICATION IS FOR THE PURPOSE OF ILLUSTRATING THE TYPE OF PRODUCT AND DEGREE OF QUALITY DESIRED. SUCH IDENTIFICATION IN NO WAY PRECLUDES THE CONTRACTOR FROM USING PRODUCTS OF OTHER MANUFACTURERS WHICH CAN BE SHOWN IN ADVANCE TO BE OF LIKE KIND AND EQUAL QUALITY.
- 22. ALL CHANGES SHALL BE REQUESTED IN WRITING AND MAY ONLY BE APPROVED IN WRITING BY THE ARCHITECT AND THE OWNER PRIOR TO ANY CHANGE
- THE ARCHITECT AND THE OWNER HAVE THE RIGHT TO REJECT ANY PORTION OF WORK THAT IS POORLY INSTALLED, DOES NOT MEET INDUSTRY STANDARD, UNAUTHORIZED OR WORK DONE CONTRARY TO THE THE INTENT OF THE CONTRACT DOCUMENTS. SUCH WORK SHALL BE REPLACED, REPAIRED OR REMOVED AT THE CONTRACTOR'S EXPENSE.
- 24. THE CONTRACTOR SHALL GUARANTEE ALL OF THEIR WORK AND THE WORK OF THEIR SUBCONTRACTORS FOR A PERIOD ONE YEAR AFTER RECEIVING FINAL ACCEPTANCE AND DO ALL REPAIR WORK AND REPLACEMENT AS NECESSARY DURING THAT PERIOD AT THE CONTRACTOR'S EXPENSE.
- 5. IN NO EVENT SHALL STRUCTURAL MEMBERS BE CUT OR DRILLED WITHOUT THE WRITTEN APPROVAL OF A LICENSED STRUCTURAL ENGINEER.
- 5. THE CONTRACTOR SHALL PROVIDE SAFE AND SANITARY CONDITIONS WHERE DEMOLITION AND WRECKING OPERATIONS ARE BEING CARRIED ON. WORK SHALL BE EXECUTED IN SUCH A MANNER THAT HAZARD FROM FIRE, POSSIBILITY OF INJURY, DANGER TO HEALTH AND CONDITIONS WHICH MAY CONSTITUTE A PUBLIC NUISANCE SHALL BE MINIMIZED.
- 7. THE ARCHITECT WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS AS WELL AS FAILURE TO OBTAIN AND/OR FOLLOW THE ARCHITECT'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.
- 28. COLOR, FINISHING & TEXTURE OF ALL FINISH MATERIALS, WHERE NOT INDICATED ON THE DRAWINGS, SHALL BE SELECTED BY OWNER.
- 2. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE AND THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE. AND NFPA 70.
- 0. CONTRACTORS OR ANY SUBCONTRACTORS PERFORMING WORK UNDER THIS CONTRACT SHALL CARRY LIABILITY AND PROPERTY DAMAGE INSURANCE AGAINST ACCIDENTS OF ALL KINDS AND SHALL FURNISH OWNER WITH CERTIFICATE OF INSURANCE.
- 31. ALL WORK IN THESE DRAWINGS SHALL BE CONSIDERED NEW WORK WHETHER STATED OR NOT EXCEPT WHERE SPECIFICALLY NOTED AS EXISTING.
- 32. WHERE SPECIFIC PRODUCTS OR MANUFACTURERS ARE INDICATED, IT IS TO BE UNDERSTOOD THAT THIS IS CONSIDERED THE BASIS OF DESIGN, AND "EQUALS" WILL BE APPROVED BY THE ARCHITECT OR ENGINEER UPON SATISFACTORY EVIDENCE THAT THE SUBSTITUTION MEETS OR EXCEEDS THE BASIS

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		A9.10	FIRST FLOOR FURNISHING PLAN
CA0.01	CODE ANALYSIS	A9.11	FIRST FLOOR FURNISHING DETAILS
CA0.02	CODE ANALYSIS	A9.12	FIRST FLOOR FURNISHING DETAILS
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CA0.10	FIRST FLOOR EGRESS PLAN	FS1.01	FOOD SERVICE EQUIPMENT PLAN
		FS1.02	FOOD SERVICE EXHAUST HOOD DETAILS
SP1.01	SITE PLAN	FS1.03	FOOD SERVICE EXHAUST HOOD DETAILS
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Revisions:

PERMIT SET 10/15/21

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engineering • plannir

REWING TAP ROOM & BREWERY

PATEL BREWING COMPANY, INC.

PRTH GALLERIA DRIVE LOWER LEVEL

NO F WALLKILL NY 10941

Job No. 4.1552.01

T0.0

File No. 4155201T001

2020 Plumbing Code of NYS - Adopts with Amendments: International Plumbing Code 2018 (IPC 2018) 2020 Energy Conservation Code of NYS - Adopts with Amendments: International Energy Conservation Code 2018 (IECC 2018) 2020 Fire Code of NYS - Adopts with Amendments: International Fire Code 2018 (IFC 2018)

National Electric Code (NEC) National Fire Protection Association (NFPA)

2010 ADA Standards Town of Wallkill Building Code

2020 Existing Building Code of NYS

Chapter 6 Classification of Work

Section 603 Alteration--Level 2

Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment.

Level 2 alterations shall comply with the provisions of Chapter 7 for Level 1 alterations as well as the provisions of Chapter 8.

Chapter 7 Alterations -- Level 1

Section 701 General

An existing building or portion thereof shall not be altered such that the building becomes less safe than its existing condition.

Section 703 Fire Protection

703.1 General Alterations shall be done in a manner that maintains the level of fire protection provided.

Section 704 Means of Egress

Alterations shall be done in a manner that maintains the level of protection provided for the means of egress

Chapter 8 Alterations -- Level 2

Section 801 General

New construction elements, components, systems, and spaces shall comply with the requirements of the Building Code of New York Exceptions:

1. Where windows are added they are not required to comply with the light and ventilation requirements of the Building Code of New

Newly installed electrical equipment shall comply with the requirements of Section 807.

. The length of dead-end corridors in newly constructed spaces shall only be required to comply with the provisions of Section 805.6. 4. The minimum ceiling height of the newly created habitable and occupiable spaces and corridors shall be 7 feet (2134 mm).

Section 802 Building Elements and Materials

The interior finish of walls and ceilings in exits and corridors in any work area shall comply with the requirements of the Building Code of New York State.

Section 805 Means of Egress

Every story utilized for human occupancy on which there is a work area that includes exits or corridors shared by more than one tenant within the work area shall be provided with the minimum number of exits based on the occupancy and the occupant load in accordance with the Building Code of New York State. In addition, the exits shall comply with Sections 805.3.1.1 and 805.3.1.2.

805.3.3 Main Entrance--Group A

805.4.1.1 Occupant Load and Travel Distance

Buildings of Group A with an occupant load of 300 or more shall be provided with a main entrance capable of serving as the main exit with an egress capacity of not less than one-half of the total occupant load. The remaining exits shall be capable of providing one-half of the total required exit capacity.

In any work area, all rooms and spaces having an occupant load greater than 50 or in which the travel distance to an exit exceeds 75 feet (22860 mm) shall have not fewer than two egress doorways.

805.4.2 Door Swing

In the work area and in the egress path from any work area to the exit discharge, all egress doors serving an occupant load greater than 50 shall swing in the direction of exit travel.

805.4.3 Door Closing

In any work area, all doors opening onto an exit passageway at grade or an exit stairway shall be self-closing or automatic-closing by

2. Means of egress within or serving only a tenant space that is entirely outside the work area.

805.4.4 Panic Hardware

In any work area, and in the egress path from any work area to the exit discharge, in buildings or portions thereof of Group A assembly occupancies with an occupant load greater than 100, all required exit doors equipped with latching devices shall be equipped with approved panic hardware.

805.6 Dead-End Corridors

Dead-end corridors in any work area shall not exceed 35 feet (10 670 mm).

4. In other than Group A and H occupancies, the maximum length of an existing, newly constructed, or extended dead-end corridor shall not exceed 50 feet (15 240 mm) on floors equipped with an automatic sprinkler system installed in accordance with the Building Code of New York State.

Section 810 Energy Conservation

810.1 Minimum Requirements

Level 2 alterations to existing buildings or structures are permitted without requiring the entire building or structure to comply with the energy requirements of the Energy Conservation Construction Code of New York State or Residential Code of New York State. The alterations shall conform to the energy requirements of the Energy Conservation Construction Code of New York State or Residential Code of New York State as they relate to new construction only.

Chapter 10 Change of Occupancy

Section 1009 Plumbing

1009.1 Increased Demand

Where the occupancy of an existing building or part of an existing building is changed such that the new occupancy is subject to increased or different plumbing fixture requirements or to increased water supply requirements in accordance with the Plumbing Code of New York State, the new occupancy shall comply with the intent of the respective Plumbing Code of New York State provisions.

n areas of the building undergoing the change of occupancy classification, the interior finish of walls and ceilings shall comply with the requirements of the Building Code of New York State for the new occupancy classification.

Code of New York State.

Table 1011.4

Means Of Egress Hazard Categories Original Occupancy: M - Relative hazard 3

Change of Occupancy: A - Relative hazard 3 (Equal), B; S-1 - Relative hazard 4 (Lower-hazard), S-2 - Relative hazard 5 (Lower-hazard)

Original Occupancy: A - Relative hazard 3

Change of Occupancy: B - Relative hazard 4 (Lower-hazard), F-2; S-2 - Relative hazard 5 (Lower-hazard)

1011.4.2 Means of Egress for Change of Use to an Equal or Lower-Hazard Category

Where a change of occupancy classification is made to an equal or lesser-hazard category (higher number) as shown in Table 1011.4, existing elements of the means of egress shall comply with the requirements of Section 905 for the new occupancy classification. Newly constructed or configured means of egress shall comply with the requirements of Chapter 10 of the Building

1011.4.3 Egress Capacity Egress capacity shall meet or exceed the occupant load as specified in the Building Code of New York State for the new occupancy

1011.5 Heights and Areas

Heights And Areas Hazard Categories

Original Occupancy: M - Relative hazard 3 Change of Occupancy: A-2; A-3 - Relative hazard 2 (Higher-hazard), S-1 - Relative hazard 3 (Equal), B; S-2 - Relative hazard 4 (Lower-hazard)

Original Occupancy: A-2 - Relative hazard 2 Change of Occupancy: A-3 - Relative hazard 2 (Equal), B; F-2; S-2 - Relative hazard 4 (Lower-hazard)

1011.5.1 Height and Area for Change to a Higher-Hazard Category Where a change of occupancy classification is made to a higher-hazard category as shown in Table 1011.5, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the Building Code of New York State for the new occupancy classification.

Chapter 15 Construction Safeguards

Section 1501 General

[BG] 1501.3 Alterations, Repairs and Additions

Required exits, existing structural elements, fire protection devices and sanitary safeguards shall be maintained at all times during alterations, repairs or additions to any building or structure.

1. Where such required elements or devices are being altered or repaired, adequate substitute provisions shall be made.

2020 Building Code of New York State

Chapter 3 Occupancy Classification and Use

303.3 Assembly Group A-2

Group A-2 occupancy includes assembly uses intended for food and/or drink consumption including, but not limited to: **Restaurants**, cafeterias and similar dining facilities (including associated commercial kitchens) Taverns and bars

303.4 Assembly Group A-3 Group A-3 occupancy includes assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A including, but not limited to: Amusement arcades

Gymnasiums (without spectator seating) Lecture halls

Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts.

306.3 Low-Hazard Factory Industrial, Group **F-2**

Factory industrial uses that involve the fabrication or manufacturing of noncombustible materials that during finishing, packing or processing do not involve a significant fire hazard shall be classified as F-2 occupancies and shall include, but not be limited to, the

Beverages: up to and including 16-percent alcohol content

Retail or wholesale stores

Mercantile Group M occupancy includes, among others, the use of a building or structure or a portion thereof for the display and sale of merchandise, and involves stocks of goods, wares or merchandise incidental to such purposes and accessible to the public. Mercantile occupancies shall include, but not be limited to, the following:

311.2 Moderate-Hazard Storage, Group S-1

Storage Group S-1 occupancies are buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following: Furniture

311.3 Low-Hazard Storage, Group **S-2**

Storage Group S-2 occupancies include, among others, buildings used for the storage of noncombustible materials such as products on wood pallets or in paper cartons with or without single thickness divisions; or in paper wrappings. Such products are permitted to have a negligible amount of plastic trim, such as knobs, handles or film wrapping. Group S-2 storage uses shall include, but not be limited to, storage of the following: Beverages up to and including 16-percent alcohol in metal, glass or ceramic containers

Chapter 5 General Building Heights and Areas

506.2.4 Mixed-Occupancy, Multistory Buildings

Each story of a mixed-occupancy building with more than one story above grade plane shall individually comply with the applicable requirements of Section 508.1. (Note: remainder does not apply)

Section 506 Building Area

Every building shall adjoin or have access to a public way to receive an area factor increase based on frontage. Area factor increase shall be determined in accordance with Sections 506.3.1 through 506.3.3.

The area factor increase based on frontage shall be determined in accordance with Equation 5-5:

If = [F/P - 0.25]W/30If = [936'/936' - 0.25]30/30

If = **0.75**

(Note: Frontage increase per occupancy, see 508.4.2)

A-2	A-3	B
Aa = [At + (NS x lf)]	Aa = [At + (NS x If)]	Aa = [At + (NS x If)]
Aa = [28,500 + (9,500 x 0.75)]	Aa = [28,500 + (9,500 x 0.75)]	Aa = [69,000 + (23,000 x 0.75)]
Aa = 35,625	Aa = 35,625	Aa = 86,250
F-2	M	S-1
Aa = [At + (NS x lf)]	Aa = [At + (NS x lf)]	Aa = [At + (NS x If)]
Aa = [69,000 + (23,000 x 0.75)]	Aa = [37,500 + (12,500 x 0.75)]	Aa = [52,500 + (17,500 x 0.75)]
Aa = 86,250	Aa = 46,875	Aa = 65,625

$Aa = [At + (NS \times If)]$ $Aa = [78,000 + (26,000 \times 0.75)]$ Aa = 97,500

Section 508 Mixed Use and Occupancy

508.1 General

Each portion of a building shall be individually classified in accordance with Section 302.1. Where a building contains more than one occupancy group, the building or portion thereof shall comply with the applicable provisions of Section 508.2, 508.3 or 508.4, or a combination of these sections.

508.2 Accessory Occupancies

Accessory occupancies are those occupancies that are ancillary to the main occupancy of the building or portion thereof. Accessory occupancies shall comply with the provisions of Sections 508.2.1 through 508.2.4.

508.2.3 Allowable Building Area

The allowable area of the building shall be based on the applicable provisions of Section 506 for the main occupancy of the building Aggregate accessory occupancies shall not occupy more than 10 percent of the floor area of the story in which they are located and shall not exceed the tabular values for nonsprinklered buildings in Table 506.2 for each such accessory occupancy.

508.2.4 Separation of Occupancies No separation is required between accessory occupancies and the main occupancy.

Occupancy B, M, S-1 - A, F-2, S-2: (S) 1-hour

508.4 Separated Occupancies

Buildings or portions of buildings that comply with the provisions of this section shall be considered as separated occupancies. Table 508.4 required separation of occupancies (hours) Occupancy A - F-2, S-2: (S) No separation requirement; B, M, S-1: (S) 1-hour

Occupancy F-2, S-2 - A: (S) No separation requirement; B, M, S-1: (S) 1-hour

508.4.2 Allowable Building Area

In each story, the building area shall be such that the sum of the ratios of the actual building area of each separated occupancy divided by the allowable building area of each separated occupancy shall not exceed 1.

(Note: Occupancies at first story, see 506.3.3 for frontage increase for allowable building area)								
A-2	12,101	(actual building area) / 35,625 (allowable building area) = 0.340						
A-3	9,857	(actual building area) / 35,625 (allowable building area) = 0.277						
В	3,676	(actual building area) / 86,250 (allowable building area) = 0.043						
F-2	6,541	(actual building area) / 86,250 (allowable building area) = 0.076						
M	8,741	(actual building area) / 46,875 (allowable building area) = 0.186						
S-1	561	(actual building area) / 65,625 (allowable building area) = 0.009						
S-2	1,888	(actual building area) / 97,500 (allowable building area) = 0.019						

Total = 0.949 (Allowable: 1)

508.4.4 Separation Individual occupancies shall be separated from adjacent occupancies in accordance with Table 508.4.

508.4.4.1 Construction

Required separations shall be fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both, so as to completely separate adjacent occupancies.

Chapter 6 Types of Construction

Table 601 Fire-resistance Rating Requirements For Building Elements (Hours) Type of Construction: IIB(S) Primary structural frame: 0 Bearing walls (Exterior): 0

Bearing walls (Interior): 0 Nonbearing walls and partitions (Exterior) (Per Table 602):

Occupancy group: A, B, F-2 X < 5': 5' < X < 10': 1 10' < X < 30': 0 X > 30': 0 Occupancy group: M 5' < X < 10': 1

10' < X < 30': 0

X > 30': 0 Nonbearing walls and partitions (Interior): 0 Floor construction and associated secondary members: 0

Roof construction and associated secondary members: 0

Section 603 Combustible Material in Types I and II Construction

603.1 Allowable Materials Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with

Sections 603.1.1 through 603.1.3:

Chapter 7 Fire and Smoke Protection Features

Section 703 Fire-Resistance Ratings and Fire Tests

703.6 Fire-Resistance-Rated Glazing

Fire-resistance-rated glazing, when tested in accordance with ASTM E119 or UL 263 and complying with the requirements of Section 707, shall be permitted. Fire-resistance-rated glazing shall bear a label marked in accordance with Table 716.1(1) issued by an agency and shall be permanently identified on the glazing

Section 707 Fire Barriers

The fire-resistance rating of the fire barrier separating building areas from a shaft shall comply with Section 713.4.

707.3.4 Exit Passageway The fire-resistance rating of the fire barrier separating building areas from an exit passageway shall comply with Section 1024.3.

Where the provisions of Section 508.4 are applicable, the fire barrier separating mixed occupancies shall have a fire-resistance rating

of not less than that indicated in Table 508.4 based on the occupancies being separated.

Fire barriers shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above and shall be securely attached thereto. Such fire barriers shall be continuous through concealed space, such as

the space above a suspended ceiling. Joints and voids at intersections shall comply with Sections 707.8 and 707.9

Openings in a fire barrier shall be protected in accordance with Section 716. Openings shall be limited to a maximum aggregate width of 25 percent of the length of the wall, and the maximum area of any single opening shall not exceed 156 square feet (15 m2). Openings in enclosures for exit access stairways and ramps, interior exit stairways and ramps and exit passageways shall also comply with Sections 1019, 1023.4 and 1024.5, respectively.

Exceptions: 1. Openings shall not be limited to 156 square feet (15 m2) where adjoining floor areas are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

3. Openings shall not be limited to 156 square feet (15 m2) or an aggregate width of 25 percent of the length of the wall where the opening protective has been tested in accordance with ASTM E119 or UL 263 and has a minimum fire-resistance rating not less than the fire-resistance rating of the wall.

Section 708 Fire Partitions

708.1 General The following wall assemblies shall comply with this section

3. Corridor walls as required by Section 1020.1. (Note: **0** hours required. See 1020.1) Section 713 Shaft Enclosures

713.2 Construction

Shaft enclosures shall be constructed as fire barriers in accordance with Section 707 or horizontal assemblies in accordance with Section 711, or both.

713.4 Fire-Resistance Rating

Shaft enclosures shall have a fire-resistance rating of not less than 2 hours where connecting four stories or more, and not less than 1 hour where connecting less than four stories. The number of stories connected by the shaft enclosure shall include any basements but not any mezzanines. Shaft enclosures shall have a fire-resistance rating not less than the floor assembly penetrated, but need not exceed 2 hours. Shaft enclosures shall meet the requirements of Section 703.2.1.

713.8 Penetrations Penetrations in a shaft enclosure shall be protected in accordance with Section 714 as required for fire barriers. Structural elements, such as beams or joists, where protected in accordance with Section 714 shall be permitted to penetrate a shaft enclosure.

713.10 Duct and Air Transfer Openings Penetrations of a shaft enclosure by ducts and air transfer openings shall comply with Section 717.

713.11 Enclosure at the Bottom Shafts that do not extend to the bottom of the building or structure shall comply with one of the following: 1. They shall be enclosed at the lowest level with construction of the same fire-resistance rating as the lowest floor through which the

shaft passes, but not less than the rating required for the shaft enclosure. 2. They shall terminate in a room having a use related to the purpose of the shaft. The room shall be separated from the remainder of the building by fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both. The fire-resistance rating and opening protectives shall be not less than the protection required for the shaft

3. They shall be protected by approved fire dampers installed in accordance with their listing at the lowest floor level within the shaft enclosure.

A shaft enclosure that does not extend to the underside of the roof sheathing, deck or slab of the building shall be enclosed at the top with construction of the same fire-resistance rating as the topmost floor penetrated by the shaft, but not less than the fire-resistance rating required for the shaft enclosure.

Section 716 Opening Protectives

Table 716.1(2) Opening Fire Protection Assemblies, Ratings And Markings

Type of Assembly: Fire barriers having a required fire-resistance rating of 1 hour: Enclosures for **shafts**, exit access stairways, exit access ramps, interior exit stairways and interior exit ramps; and exit passageway walls

Combustible materials shall be permitted to be used as finish for walls, ceilings, floors and other interior surfaces of buildings.

Required Wall Assembly Rating (hours): 1 Minimum Fire Door and Fire Shutter Assembly Rating (hours): 1

Door Vision Panel Size: 100 sq. in. Fire Rated Glazing Marking Door Vision Panel:

<100 sq. in. = D-H-60; > 100 sq. in.= D-H-T-W-60 Minimum Sidelight/Transom Assembly Rating (hours): Fire-resistance 1 Fire-Rated Glazing Marking Sidelight/Transom Panel: Fire-resistance W-60

Type of Assembly: Other fire barriers

Required Wall Assembly Rating (hours): 1 Minimum Fire Door and Fire Shutter Assembly Rating (hours): 3/4 Door Vision Panel Size: Maximum size tested Fire Rated Glazing Marking Door Vision Panel: D-H Minimum Sidelight/Transom Assembly Rating (hours): 3/4

Fire-Rated Glazing Marking Sidelight/Transom Panel: D-H

Chapter 8 Interior Finishes

802.5 Application

Section 802 General

Section 803 Wall and Ceiling Finishes

Interior Wall And Ceiling Finish Requirements By Occupancy Group: A-2 (Sprinklered) Interior exit stairways and ramps and exit passageways: B

Corridors and enclosure for exit access stairways and ramps: B

Corridors and enclosure for exit access stairways and ramps: B

Rooms and enclosed spaces: C Group: A-3 (Sprinklered) Interior exit stairways and ramps and exit passageways: B

Group: B, M (Sprinklered)

Rooms and enclosed spaces: C

Interior exit stairways and ramps and exit passageways: B Corridors and enclosure for exit access stairways and ramps: C Rooms and enclosed spaces: C

Corridors and enclosure for exit access stairways and ramps: C Rooms and enclosed spaces: C

Group: F (Sprinklered)

Group: S (Sprinklered) Interior exit stairways and ramps and exit passageways: C Corridors and enclosure for exit access stairways and ramps: C

Interior exit stairways and ramps and exit passageways: C

Section 804 Interior Floor Finish

Section 806 Decorative Materials and Trim

Rooms and enclosed spaces: C

Exception: Floor finishes and coverings of a traditional type, such as wood, vinyl, linoleum or terrazzo, and resilient floor covering materials that are not comprised of fibers.

The following requirements shall apply to all occupancies:

Interior floor finish and floor covering materials shall comply with Sections 804.2 through 804.4.2.

1. Furnishings or decorative materials of an explosive or highly flammable character shall not be used. 2. Fire-retardant coatings in existing buildings shall be maintained so as to retain the effectiveness of the treatment under service conditions encountered in actual use. 3. Furnishings or other objects shall not be placed to obstruct exits, access thereto, egress therefrom or visibility thereof.

4. The permissible amount of decorative vegetation and noncombustible decorative materials shall not be limited.

(Note: See MEP drawings for information regarding this chapter)

Chapter 9 Fire Protection and Life Safety Systems

Chapter 10 Means of Egress Section 1003 General Means of Egress

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

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

7 net

60 gross

300 gross

Section 1004 Occupant Load

Concentrated (chairs only--not fixed)

1004.5 Areas Without Fixed Seating TABLE 1004.5MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT Accessory storage areas, mechanical equipment room 300 gross Assembly without fixed seats

project horizontally more than 4 inches (102 mm) into the circulation path.

percent of the ceiling area of a means of egress shall be reduced in height by protruding objects.

5 net Standing space Unconcentrated (tables and chairs) 15 net 150 gross Business areas Exercise rooms 50 gross Industrial areas 100 gross Kitchens, commercial 200 gross Locker rooms 50 gross

1004.9 Posting of Occupant Load

Storage, stock, shipping areas

Mercantile

Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place, near the main exit or exit access doorway from the room or space, for the intended configurations. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or the owner's authorized agent.

Section 1005 Means of Egress Sizing 1005.3.2 Other Egress Components

path of egress travel until arrival at the public way.

served by such component by a means of egress capacity factor of 0.2 inch (5.1 mm) per occupant. The minimum width or required capacity of the means of egress required from any story of a building shall not be reduced along the

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

The capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load

1005.5 Distribution of Minimum Width and Required Capacity

any one exit, or access to one exit, shall not reduce the available capacity or width to less than 50 percent of the required capacity or

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.

Revisions: PERMIT SET 1 10/15/21

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Job No. 4.1552.01

File No. 4155201CA00

Exceptions: . The number of exits from foyers, lobbies, vestibules or 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

Table 1006.2.1 Spaces With One Exit Or Exit Access Doorway

Occupancy: A, M

Maximum occupant load of space: 49 Maximum common path of egress travel distance: with sprinkler system: 75'

Occupancy: B

Maximum occupant load of space: 49

Maximum common path of egress travel distance: with sprinkler system: 100'

Occupancy: F

Maximum occupant load of space: 49 Maximum common path of egress travel distance: with sprinkler system: 100'

Occupancy: S

Maximum occupant load of space: 29 Maximum common path of egress travel distance: with sprinkler system: 100'

Section 1007 Exit and Exit Access Doorway Configuration

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:

2. 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 1009 Accessible Means of Egress

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.

Section 1010 Doors, Gates and Turnstiles

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 411/2 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).

10. Doors to walk-in freezers and coolers less than 1,000 square feet (93 m2) in area shall have a maximum width of 60 inches (1524 mm) nominal.

12. The minimum clear opening width shall not apply to the doors for nonaccessible toilet stalls.

1010.1.2 Door Swing

Egress doors shall be of the pivoted or side-hinged swinging type.

. Private garages, office areas, factory and storage areas with an occupant load of 10 or less. 9. In other than Group H occupancies, manually operated horizontal sliding doors are permitted in a means of egress from spaces

with an occupant load of 10 or less.

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.

1010.1.10 Panic and Fire Exit Hardware

Swinging doors serving a Group H occupancy and swinging doors serving rooms or spaces with an occupant load of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than panic hardware or fire exit hardware.

Section 1016 Exit Access

1016.2 Egress Through Intervening Spaces Egress through intervening spaces shall comply with this section.

2. Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas and the area served are accessory to one or the other, are not a Group H occupancy and provide a discernible path of egress

Exception: Means of egress are not prohibited through adjoining or intervening rooms or spaces in a Group H, S or F occupancy where the adjoining or intervening rooms or spaces are the same or a lesser hazard occupancy group.

Section 1017 Exit Access Travel Distance

Table 1017.2 Exit Access Travel Distance

Occupancy: A, M, S-1 With Sprinkler System (feet): 250

Occupancy: B

With Sprinkler System (feet): 300

Occupancy: F-2, S-2 With Sprinkler System (feet): 400

1017.3 Measurement

Exit access travel distance shall be measured from the most remote point of each room, area or space along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit. (Note: "exit" includes exit passageways per

Section 1020 Corridors

Table 1020.1 Corridor Fire-Resistance Rating

Occupancy: A, B, F, M, S Occupant load served by corridor: Greater than 30

Required Fire-Resistance Rating (hours) With sprinkler system: 0

1020.2 Width and Capacity

The required capacity of corridors shall be determined as specified in Section 1005.1, but the minimum width shall be not less than that specified in Table 1020.2.

Any facility not listed in this table With an occupant load of less than 50

Table 1020.2 Minimum Corridor Width

Section 1024 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.

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.

Exit passageway enclosures shall have walls, floors and ceilings of not less than a 1-hour fire-resistance rating, and not less than that required for any connecting interior exit stairway or ramp. Exit passageways shall be constructed as fire barriers in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both.

Exit passageways on the level of exit discharge shall terminate at an exit discharge. Exit passageways on other levels shall terminate at an exit.

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.

1029.3 Assembly Other Exits

In addition to having access to a main exit, each level in a building used for assembly purposes having an occupant load greater than 300 and provided with a main exit, shall be provided with additional means of egress that shall provide an egress capacity for not less than one-half of the total occupant load served by that level and shall comply with Section 1007.1. In a building used for assembly purposes where there is not a well-defined main exit or where multiple main exits are provided, exits for each level shall be permitted to be distributed around the perimeter of the building, provided that the total width of egress is not less than 100 percent of the required width.

1029.9 Assembly Aisles Are Required

Every occupied portion of any building, room or space used for assembly purposes that contains seats, tables, displays, similar fixtures or equipment shall be provided with aisles leading to exits or exit access doorways in accordance with this section.

1029.9.1 Minimum Aisle Width

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

4. Forty-two inches (1067 mm) for level or ramped aisles having seating on both sides

1. Thirty-six inches (914 mm) where the aisle serves less than 50 seats. 2. Thirty inches (762 mm) where the aisle serves less 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.

1029.9.3 Converging Aisles

Where aisles converge to form a single path of egress travel, the required capacity of that path shall be not less than the combined required capacity of the converging aisles.

1029.9.4 Uniform Width and Capacity Those portions of aisles, where egress is possible in either of two directions, shall be uniform in minimum width or required capacity.

1029.9.7 having access to an exit.

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

1. Dead-end aisles shall be not greater than 20 feet (6096 mm) in length.

1029.9.6 Aisle Measurement

The clear width for aisles shall be measured to walls, edges of seating and tread edges except for permitted projections. Exception: The clear width of aisles adjacent to seating at tables shall be permitted to be measured in accordance with Section 1029.13.1.

1029.13.1 Seating at Tables

Where seating is located at a table or counter and is adjacent to an aisle or aisle accessway, the measurement of required clear width of the aisle or aisle accessway shall be made to a line 19 inches (483 mm) away from and parallel to the edge of the table or counter. The 19-inch (483 mm) distance shall be measured perpendicular to the side of the table or counter. In the case of other side boundaries for aisles or aisle accessways, the clear width shall be measured to walls, edges of seating and tread edges. Exception: Where tables or counters are served by fixed seats, the width of the aisle or aisle accessway shall be measured from the back of the seat.

1029.13.1.1 Aisle Accessway Capacity and Width for Seating at Tables

Aisle accessways serving arrangements of seating at tables or counters shall comply with the capacity requirements of Section 1005.1 but shall not have less than 12 inches (305 mm) of width plus 1/2 inch (12.7 mm) of width for each additional 1 foot (305 mm), or fraction thereof, beyond 12 feet (3658 mm) of aisle accessway length measured from the center of the seat farthest from an aisle. Exception: Portions of an aisle accessway having a length not exceeding 6 feet (1829 mm) and used by a total of not more than four persons.

1029.13.1.2 Seating at Table Aisle Accessway Length

The length of travel along the aisle accessway shall not exceed 30 feet (9144 mm) from any seat to the point where a person has a choice of two or more paths of egress travel to separate exits.

Chapter 11 Accessibility

Section 1103 Scoping Requirements

1103.2.2 Employee Work Areas Spaces and elements within employee work areas shall only be required to comply with Sections 907.5.2.3.1, 1009 and 1104.3.1 and shall be designed and constructed so that individuals with disabilities can approach, enter and exit the work area. Work areas, or portions of work areas, other than raised courtroom stations in accordance with Section 1108.4.1.4, that are less than 300 square feet (30 m2) in area and located 7 inches (178 mm) or more above or below the ground or finished floor where the change in elevation is essential to the function of the space shall be exempt from all requirements.

1103.2.9 Equipment Spaces Spaces frequented only by service personnel for maintenance, repair or occasional monitoring of equipment are not required to

Walk-in cooler and freezer equipment accessed only from employee work areas is not required to comply with this chapter.

1103.2.14 Walk-In Coolers and Freezers

Section 1104 Accessible Route

1104.3 Connected Spaces

Where a building or portion of a building is required to be accessible, at least one accessible route shall be provided to each portion of the building, to accessible building entrances connecting accessible pedestrian walkways and to the public way.

1104.3.1 Employee Work Areas

Common use circulation paths within employee work areas shall be accessible routes. Exceptions:

1. Common use circulation paths, located within employee work areas that are less than 1,000 square feet (93 m2) in size and defined by permanently installed partitions, counters, casework or furnishings, shall not be required to be accessible routes. 2. Common use circulation paths, located within employee work areas, that are an integral component of equipment, shall not be required to be accessible routes.

1104.5 Location

Accessible routes shall coincide with or be located in the same area as a general circulation path. Where the circulation path is interior, the accessible route shall be interior. Where only one accessible route is provided, the accessible route shall not pass through 411.1 Approval kitchens, storage rooms, restrooms, closets or similar spaces.

Section 1105 Accessible Entrances 1105.1 Public Entrances

In addition to accessible entrances required by Sections 1105.1.1 through 1105.1.7, at least 60 percent of all public entrances shall be accessible. Exceptions:

1. An accessible entrance is not required to areas not required to be accessible. 2. Loading and service entrances that are not the only entrance to a tenant space.

Section 1108 Special Occupancies

1108.2.9 Dining and Drinking Areas In dining and drinking areas, all interior and exterior floor areas shall be accessible and be on an accessible route. Exceptions:

4. Employee-only work areas shall comply with Sections 1103.2.2 and 1104.3.1.

Where dining surfaces for the consumption of food or drink are provided, at least 5 percent, but not less than one, of the dining surfaces for the seating and standing spaces shall be accessible and be distributed throughout the facility and located on a level accessed by an accessible route.

Section 1109 Other Features and Facilities

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.

1109.2.1 Family or Assisted-Use Toilet and Bathing Rooms

In assembly and mercantile occupancies, an accessible family or assisted-use toilet room shall be provided where an aggregate of six Skylight curbs shall be insulated to the level of roofs with insulation entirely above the deck or R-5, whichever is less. or more male and female water closets is required. In buildings of mixed occupancy, only those water closets required for the assembly or mercantile occupancy shall be used to determine the family or assisted-use toilet room requirement. In recreational facilities where separate-sex bathing rooms are provided, an accessible family or assisted-use bathing room shall be provided. Fixtures located within family or assisted-use toilet and bathing rooms shall be included in determining the number of fixtures provided in an occupancy

1109.2.1.2 Family or Assisted-Use Toilet Rooms

Family or assisted-use toilet rooms shall include only one water closet and only one lavatory. A family or assisted-use bathing room in accordance with Section 1109.2.1.3 shall be considered to be a family or assisted-use toilet room.

1109.2.1.6 Clear Floor Space

Where doors swing into a family or assisted-use toilet or bathing room, a clear floor space not less than 30 inches by 48 inches (762 mm by 1219 mm) shall be provided, within the room, beyond the area of the door swing.

1109.4 Kitchens and Kitchenettes Where kitchens and kitchenettes are provided in accessible spaces or rooms, they shall be accessible.

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. 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.

1109.5.1 Minimum Number (Drinking Fountains)

Where fixed or built-in storage elements such as cabinets, coat hooks, shelves, medicine cabinets, lockers, closets and drawers are provided in required accessible spaces, at least 5 percent, but not less than one of each type shall be accessible.

1109.11 Seating at Tables, Counters and Work Surfaces

Where seating or standing space at fixed or built-in tables, counters or work surfaces is provided in accessible spaces, at least 5 percent of the seating and standing spaces, but not less than one, shall be accessible.

2020 Mechanical Code of NYS

(Note: See Mechanical drawings for information regarding this code)

2020 Plumbing Code of NYS

Chapter 4 Fixtures, Faucets and Fixture Fittings

Section 403 Minimum Plumbing Facilities

[NY] Table 403.1minimum Number Of Required Plumbing Fixtures

Assembly - Nightcl	lubs, bars, taverns, dance	halls and buildings for sim	nilar purposes		
638	1 per 40	1 per 40	1 per 75	1 per 75	1 per 500
	Req.: 7.98	Req.: 7.98	Req.: 4.25	Req.: 4.25	Req.: 1.28
Assembly - Auditor	riums without permanent s	seating, art galleries, exhib	ition halls, museum	ıs, lecture halls, libra	aries, arcades and gyms
360	1 per 125	1 per 65	1 per 200	1 per 200	1 per 500
	Req.: 1.44	Req.: 2.77	Req.: 0.90	Req.: 0.90	Req.: 0.72
Business					
36	1 per 25 (1 st 50)	1 per 25 (1 st 50)	1 per 40 (1 st 80)		1 per 100
	1 per 50 (remain.)	1 per 50 (remain.)	1 per 80 (remain.)	1 per 80 (remain.)	
	Req.: 0.72	Req.: 0.72	Req.: 0.45	Req.: 0.45	Req.: 0.36
Factory and indust	rial				
66	1 per 100	1 per 100	1 per 100	1 per 100	1 per 400
	Req.: 0.33	Req.: 0.33	Req.: 0.33	Req.: 0.33	Req.: 0.17
Mercantile					
16	1 per 500	1 per 500	1 per 750	1 per 750	1 per 1,000
	Req.: 0.02	Req.: 0.02	Req.: 0.01	Req.: 0.01	Req.: 0.02

Occupant Load Water Closets (M) Water Closets (F) Lav. (M) Lav. (F) Drinking Fountains

16	1 per 500	1 per 500	1 per 750	1 per 750	1 per 1,000
	Req.: 0.02	Req.: 0.02	Req.: 0.01	Req.: 0.01	Req.: 0.02
Storage					
11	1 per 100	1 per 100	1 per 100	1 per 100	1 per 1,000
	Req.: 0.06	Req.: 0.06	Req.: 0.06	Req.: 0.06	Req.: 0.01
Total required:	11 (10.55)	12 (11.88)	6 (6.00)	7 (6.00)	3 (2.56)
Total Provided:	13 (8 Sep. 5 Single)	13 (8 Sep. 5 Single)	13	13	2 (See 410.4)

[NY] 403.2 Separate Facilities

Where plumbing fixtures are required, separate facilities shall be provided for each sex. Exceptions: 5. Single-user toilet and bathing rooms provided in accordance with Section 403.1.2 shall be designated as gender neutral.

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).

Section 410 Drinking Fountains

410.4 Substitution

Where restaurants provide drinking water in a container free of charge, drinking fountains shall not be required in those restaurants. In other occupancies where drinking fountains are required, water dispensers shall be permitted to be substituted for not more than 50 percent of the required number of drinking fountains. (Note: Drinking water in a container free of charge to be provided in restaurant areas)

Section 411 Emergency Showers and Eyewash Stations

Emergency showers and eyewash stations shall conform to ISEA Z358.1. Section 420 Manual Food and Beverage Dispensing Equipment

Manual food and beverage dispensing equipment shall conform to the requirements of NSF 18.

Chapter 3 [CE] General Requirements [NY] Table C301.1 New York State Climate Zones By County: **Zone 5A** (Orange)

2020 Energy Conservation Code of NYS

Chapter 4 [CE] Commercial Energy Efficiency

[NY] C401.2 Application Commercial buildings shall comply with one of the following:

2. Prescriptive Compliance Path: The requirements of Sections C402 through C405 and C408. In addition, commercial buildings shall comply with Section C406 and tenant spaces shall comply with Section C406.1.1.

[NY] Table C402.1.3 Opaque Thermal Envelope Insulation Component Minimum Requirements, R-Value Method

Section C402 Building Envelope Requirements

Walls, above grade: R-13 + R-7.5ci (Metal framed) R-30 (Joist/framing)

Climate Zone: 5 And Marine 4 (All other)

C402.2.1.1 Skylight Curbs

[NY] Table C402.4 Building Envelope Fenestration Maximum U-Factor And SHGC Requirements Climate Zone: 5

Vertical fenestration U-factor Fixed fenestration: Operable fenestration: 0.45 Entrance doors: Vertical fenestration SHGC PF < 0.2: 0.2 ≤ PF < 0.5: 0.46 0.61 $PF \ge 0.5$: 0.50 Skylights U-factor:

Skylights SHGC:

C402.4.1 Maximum Area The vertical fenestration area, not including opaque doors and opaque spandrel panels, shall be not greater than 30 percent of the gross above-grade wall area. The skylight area shall be not greater than 3 percent of the gross roof area.

C402.4.1.2 Increased Skylight Area With Daylight Responsive Controls The skylight area shall be not more than 6 percent of the roof area provided that daylight responsive controls complying with Section

0.40

C402.4.3.1 Increased Skylight SHGC In Climate Zones 1 through 6, skylights shall be permitted a maximum SHGC of 0.60 where located above daylight zones provided

requirements or to be on an accessible route.

with daylight responsive controls.

Chapter 2 Scoping Requirements

C405.2.3.1 are installed in toplit zones.

C402.4.3.2 Increased Skylight U- Factor Where skylights are installed above daylight zones provided with daylight responsive controls, a maximum U-factor of 0.9 shall be permitted in Climate Zones 1 through 3 and a maximum U-factor of 0.75 shall be permitted in Climate Zones 4 through 8.

2010 ADA Standards

203 General Exceptions 203.4 Limited Access Spaces

203.5 Machinery Spaces

Spaces frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment shall not be required to comply with these requirements or to be on an accessible route. Machinery spaces include, but are not limited to, elevator pits or elevator penthouses; mechanical, electrical or communications equipment rooms; piping or equipment catwalks; water or sewage treatment pump rooms and stations; electric substations and transformer vaults; and highway and tunnel utility facilities.

Spaces accessed only by ladders, catwalks, crawl spaces, or very narrow passageways shall not be required to comply with these

Spaces and elements within employee work areas shall only be required to comply with 206.2.8, 207.1, and 215.3 and shall be designed and constructed so that individuals with disabilities can approach, enter, and exit the employee work area. Employee work

outdoor dining areas.

203.9 Employee Work Areas

206 Accessible Routes 206.2.5 Restaurants and Cafeterias In restaurants and cafeterias, an accessible route shall be provided to all dining areas, including raised or sunken dining areas, and

areas, or portions of employee work areas, other than raised courtroom stations, that are less than 300 square feet (28 m2) and

elevated 7 inches (180 mm) or more above the finish floor or ground where the elevation is essential to the function of the space shall

206.2.8 Employee Work Areas Common use circulation paths within employee work areas shall comply with 402

not be required to comply with these requirements or to be on an accessible route.

1. Common use circulation paths located within employee work areas that are less than 1000 square feet (93 m2) and defined by permanently installed partitions, counters, casework, or furnishings shall not be required to comply with 402. 2. Common use circulation paths located within employee work areas that are an integral component of work area equipment shall not be required to comply with 402. 3. Common use circulation paths located within exterior employee work areas that are fully exposed to the weather shall not be

226 Dining Surfaces and Work Surfaces

226.1 General Where dining surfaces are provided for the consumption of food or drink, at least 5 percent of the seating spaces and standing spaces at the dining surfaces shall comply with 902. In addition, where work surfaces are provided for use by other than employees, at least 5 percent shall comply with 902. **EXCEPTIONS:**

226.2 Dispersion Dining surfaces and work surfaces required to comply with 902 shall be dispersed throughout the space or facility containing dining

surfaces and work surfaces. Chapter 6 Plumbing Elements and Facilities

603 Toilet and Bathing Rooms

Turning space complying with 304 shall be provided within the room.

1. Sales counters and service counters shall not be required to comply with 902.

Required clear floor spaces, clearance at fixtures, and turning space shall be permitted to overlap. 603.2.3 Door Swing Doors shall not swing into the clear floor space or clearance required for any fixture. Doors shall be permitted to swing into the

603.2.2 Overlap

603.2.1 Turning Space

required turning space. **EXCEPTIONS:** 2. Where the toilet room or bathing room is for individual use and a clear floor space complying with 305.3 is provided within the room

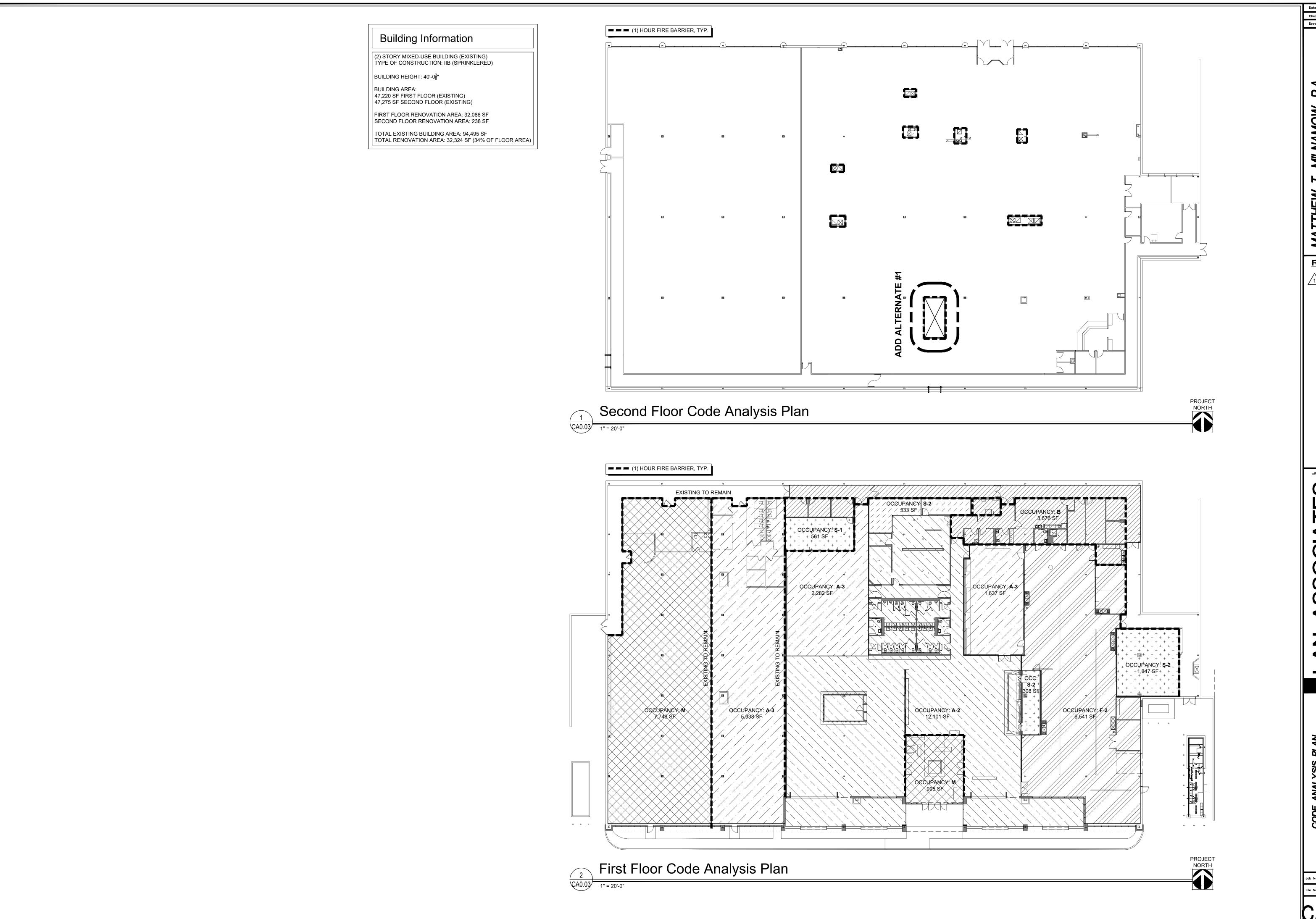
beyond the arc of the door swing, doors shall be permitted to swing into the clear floor space or clearance required for any fixture.

Revisions: PERMIT SET

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Job No. 4.1552.01 File No. 4155201CA00



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N T. MILNAMOW, R.A.
HITECT LICENSE NO. 32407

Revisions:

PERMIT SET
10/15/21

ASSOCIATES :

ANALYSIS PLAN

NG TAP ROOM & BREWERY

TEL BREWING COMPANY, INC.

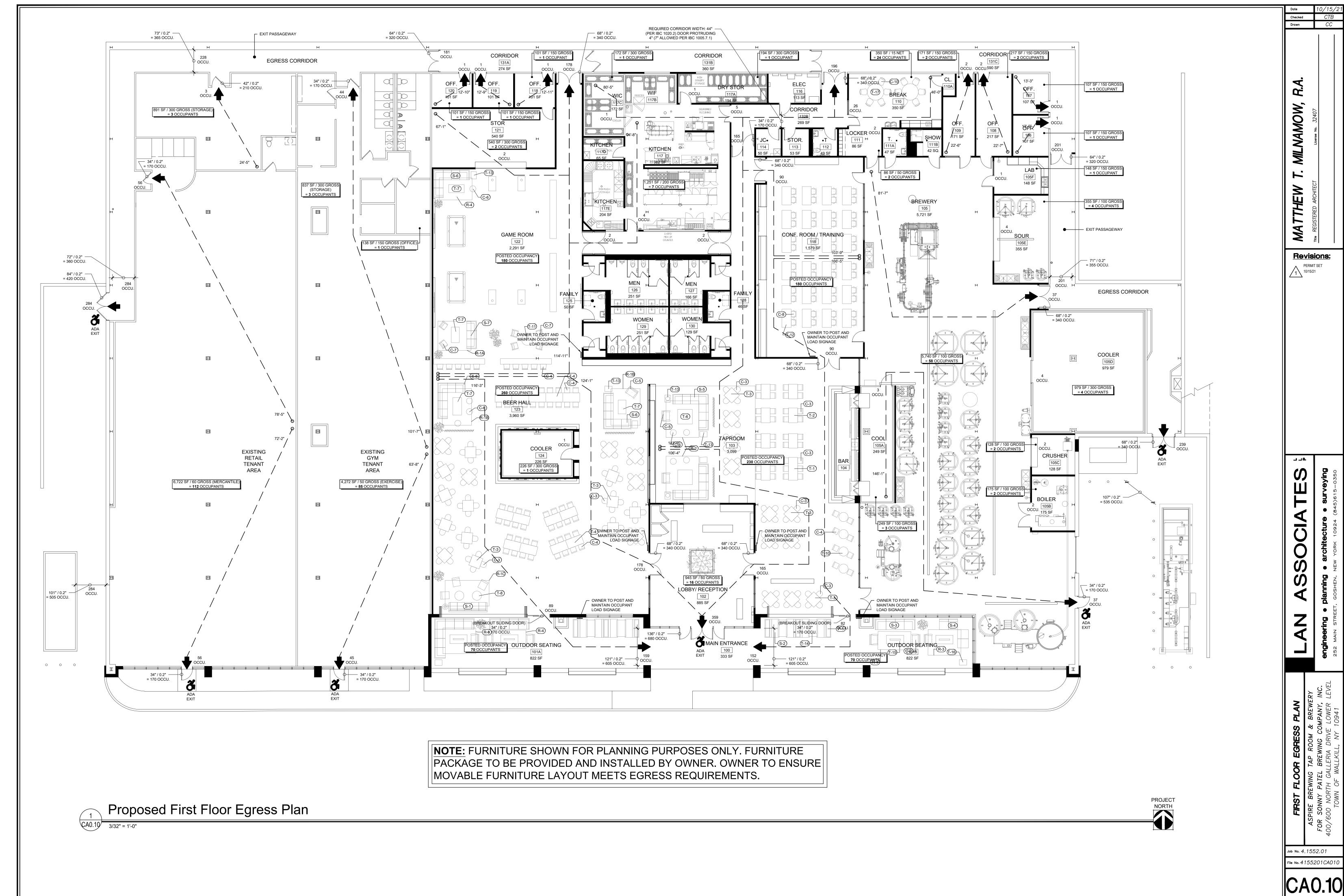
GALLERIA DRIVE LOWER LEVEL

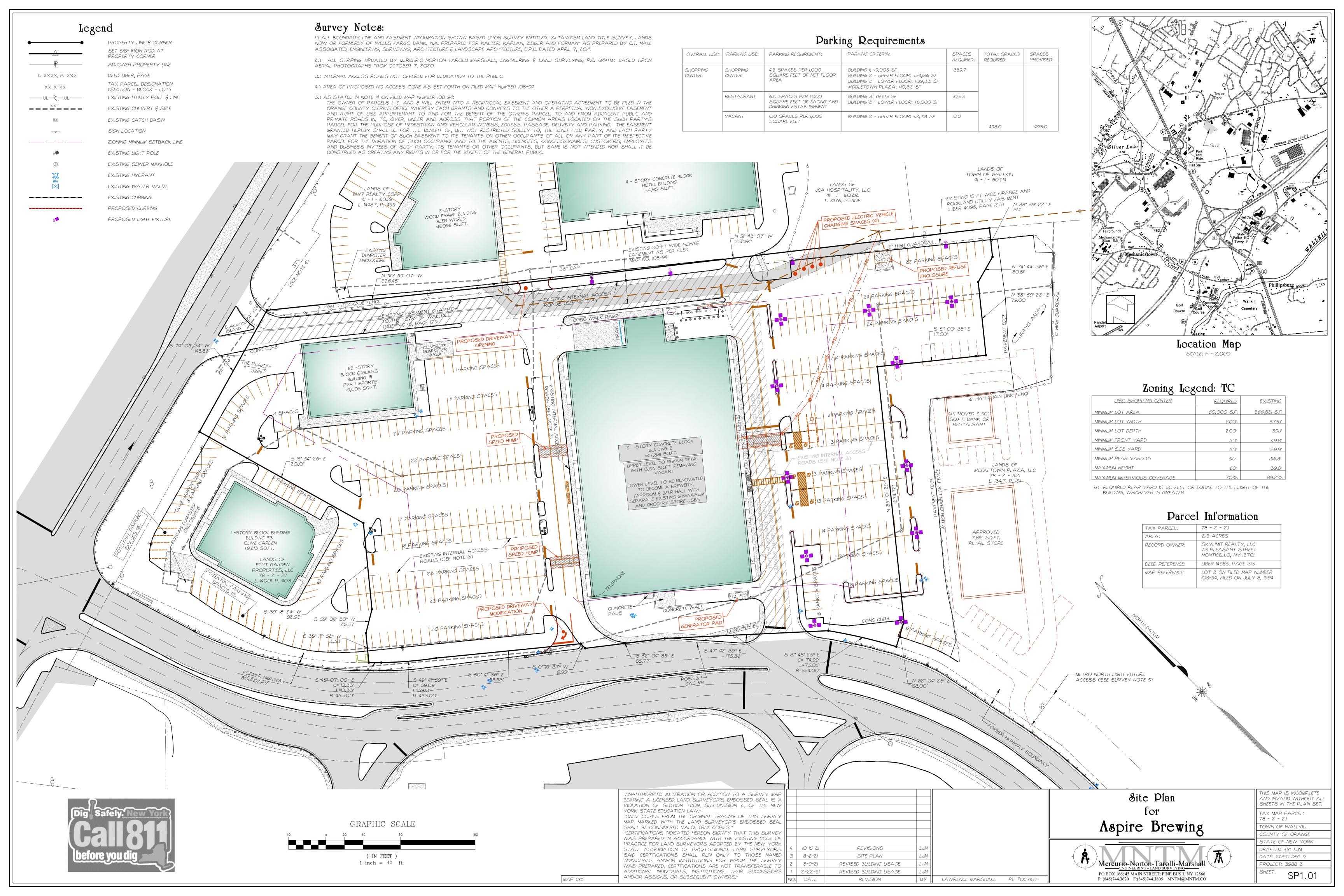
ASPIRE BREWING TAP R FOR SONNY PATEL BREWI 00/600 NORTH GALLERIA TOWN OF WALLKILL

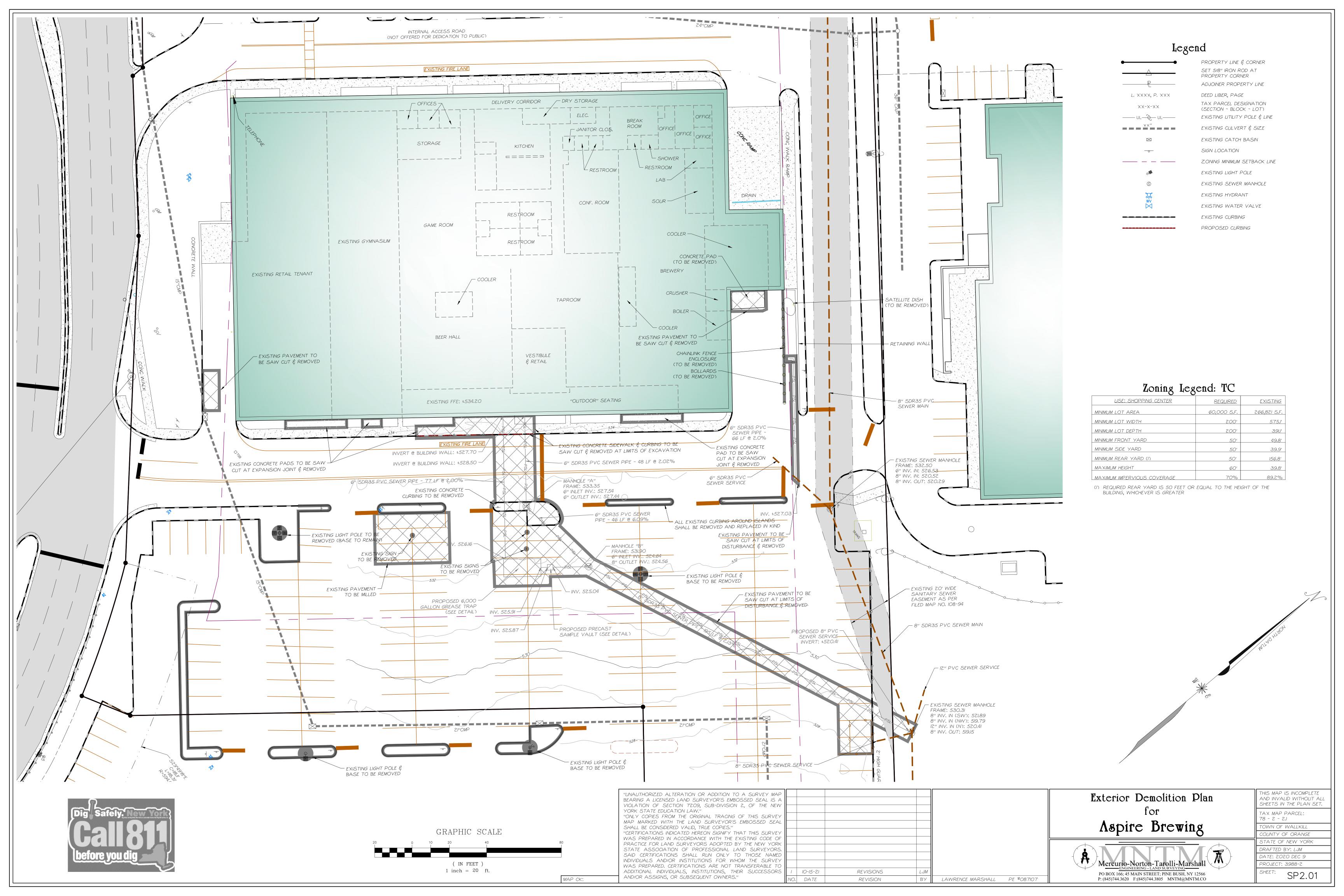
Job No. 4.1552.01

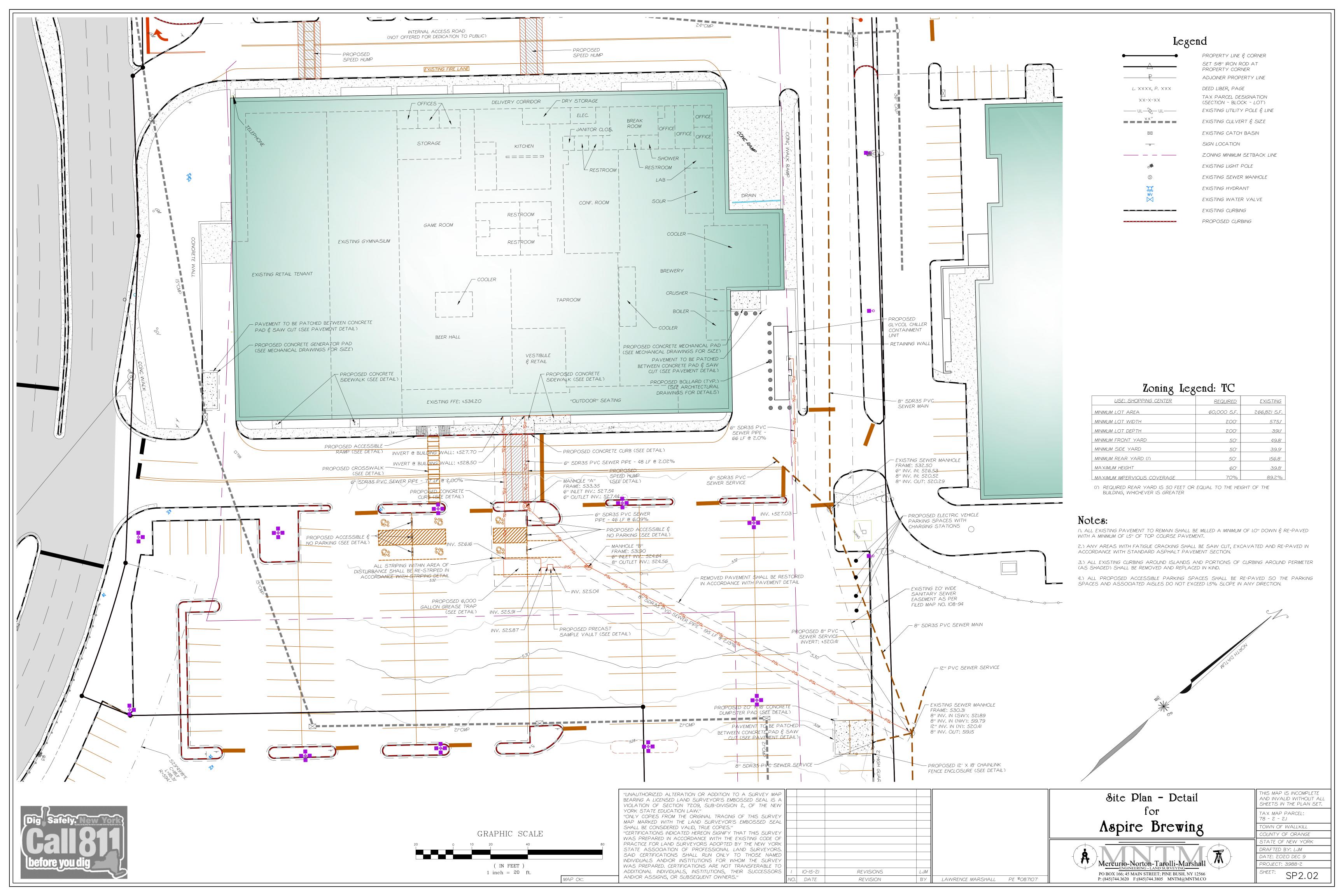
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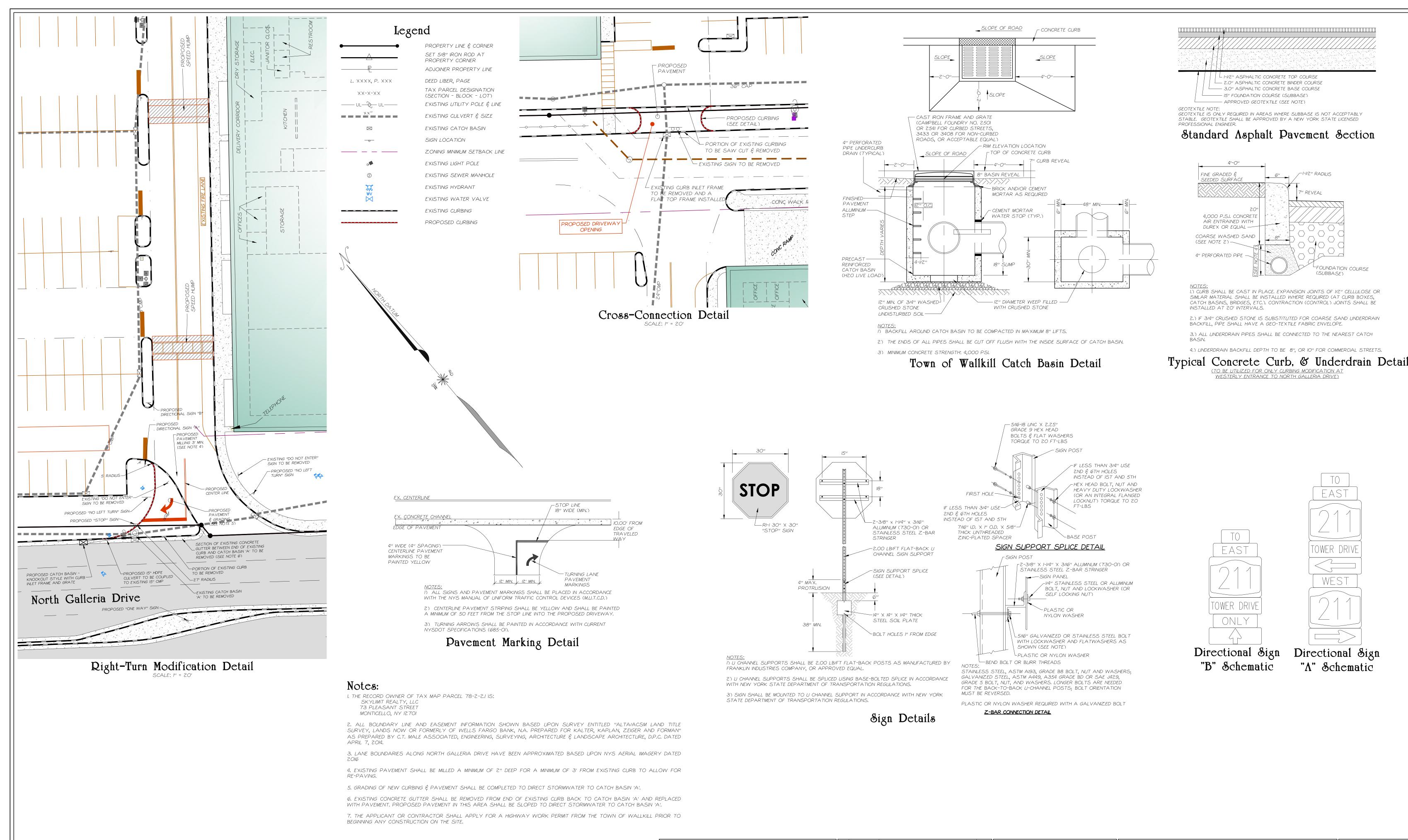
CA0.03











UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP

BEARING A LICENSED LAND SURVEYOR'S EMBOSSED SEAL IS A

VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW

"ONLY COPIES FROM THE ORIGINAL TRACING OF THIS SURVEY

MAP MARKED WITH THE LAND SURVEYOR'S EMBOSSED SEAL

"CERTIFICATIONS INDICATED HEREON SIGNIFY THAT THIS SURVEY

WAS PREPARED IN ACCORDANCE WITH THE EXISTING CODE OF

PRACTICE FOR LAND SURVEYORS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS.

SAID CERTIFICATIONS SHALL RUN ONLY TO THOSE NAMED

10-15-21

VO. DATE

REVISIONS

REVISION

LAWRENCE MARSHALL PE #087107

INDIVIDUALS AND/OR INSTITUTIONS FOR WHOM THE SURVEY

WAS PREPARED. CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INDIVIDUALS, INSTITUTIONS, THEIR SUCCESSORS

YORK STATE EDUCATION LAW."

GRAPHIC SCALE

(IN FEET)

1 inch = 20 ft.

MAP CK:

SHALL BE CONSIDERED VALID, TRUE COPIES."

AND/OR ASSIGNS, OR SUBSEQUENT OWNERS."

Entrance Modification Details Aspire Brewing

PO BOX 166; 45 MAIN STREET; PINE BUSH, NY 12566

P: (845)744.3620 F:(845)744.3805 MNTM@MNTM.CO

THIS MAP IS INCOMPLETE AND INVALID WITHOUT ALL SHEETS IN THE PLAN SET. TAX MAP PARCEL: 78 - 2 - 2.1 TOWN OF WALLKILL COUNTY OF ORANGE STATE OF NEW YORK DRAFTED BY: LJM DATE: 2020 DEC 9 PROJECT: 3988-2 SP2.03

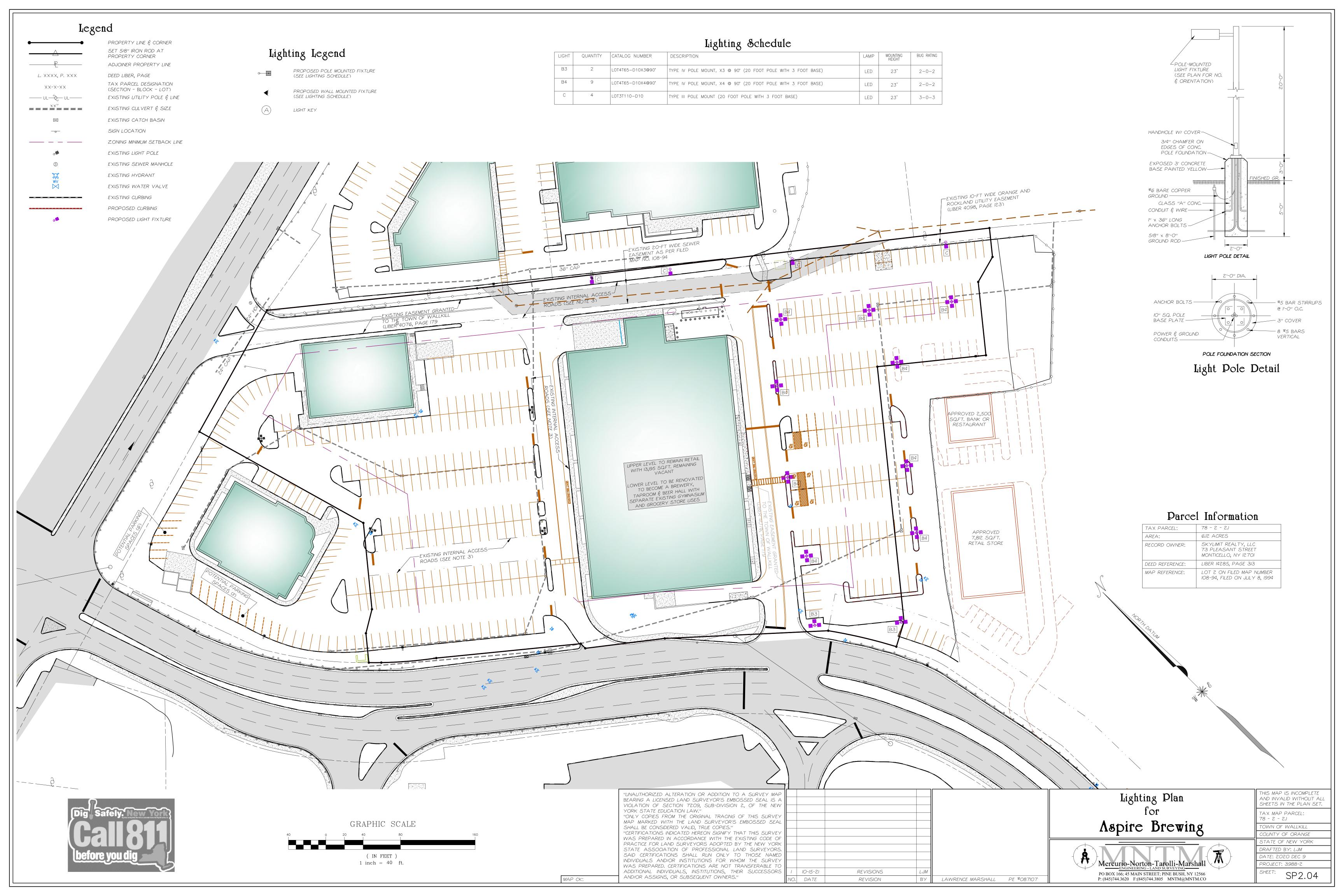
/-I-I/2" RADIUS

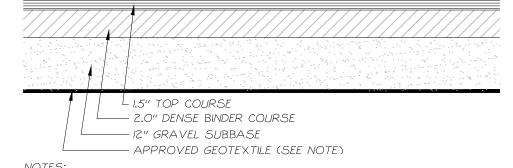
FOUNDATION COURSE

(SUBBASE)

Directional Sign

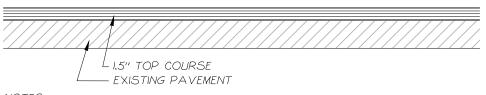
"A" Schematic





NOTES:
I.) GEOTEXTILE IS ONLY REQUIRED IN AREAS WHERE SUBBASE IS NOT ACCEPTABLY
STABLE. GEOTEXTILE SHALL BE APPROVED BY A NEW YORK STATE LICENSED
PROFESSIONAL ENGINEER.

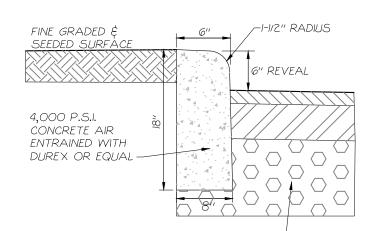
Standard Asphalt Pavement Section



I.) ALL EXISTING PAVEMENT TO REMAIN SHALL BE MILLED A MINIMUM OF I.O" DOWN \$\xi\$ RE-PAVED WITH A MINIMUM OF I.5" OF TOP COURSE PAVEMENT.

2.) ANY AREAS WITH FATIGUE CRACKING SHALL BE SAW CUT, EXCAVATED AND RE-PAVED IN ACCORDANCE WITH STANDARD ASPHALT PAVEMENT SECTION.

Re-Surface Asphalt Pavement Section



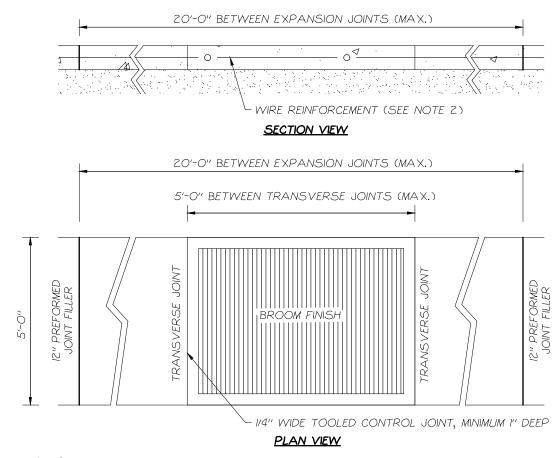
LFOUNDATION COURSE (SUBBASE)

NOTES:

I.) CURB SHALL BE CAST IN PLACE. EXPANSION JOINTS OF 1/2" CELLULOSE OR SIMLAR MATERIAL SHALL BE INSTALLED WHERE REQUIRED (AT CURB BOXES, CATCH BASINS, BRIDGES, ETC.). CONTRACTION (CONTROL) JOINTS SHALL BE INSTALLED AT 20' INTERVALS.

2.) THIS DETAIL SHALL BE UTILIZED FOR INSTALLATION OF CURBING WITHIN PROJECT SITE (CURBED ISLANDS, ETC.).

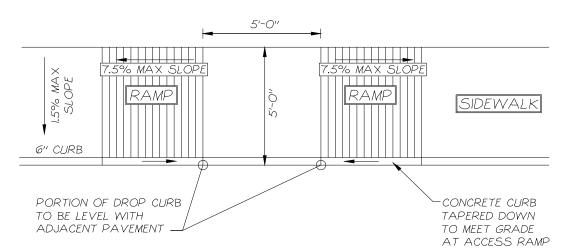
Standard Curb Detail



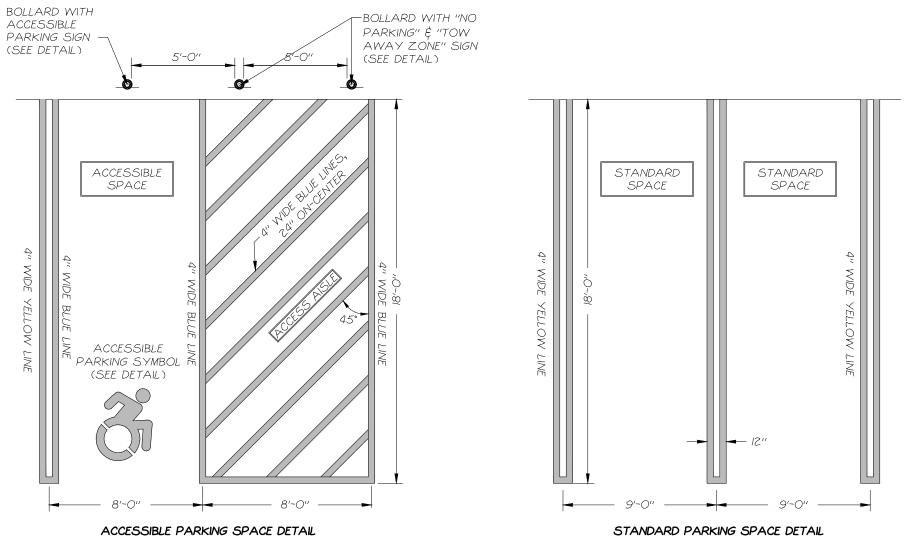
NOTES:
I.) SEE STANDARD CONCRETE PAVEMENT DETAIL FOR MATERIAL SPECIFICATIONS.

2.) SIDEWALK REINFORCEMENT SHALL CONSIST OF 6"x6" W2.9xW2.9 WELDED WIRE FABRIC.

Typical Sidewalk Detail



Typical Accessible Drop Curb Detail



NOTES:
I.) ALL ACCESSIBLE RAMP AND ACCESS AISLES SHALL MEET ALL CURRENT CODES AND ADAAG REGULATIONS.

2.) PROPOSED ACCESS RAMP SHALL CONSIST OF COLORED TOOLED/SERRATE SLIP RESISTANT SURFACING AND/OR TACTILE WARNING DEVICE AS REQUIRED BY AMERICANS WITH DISABILITIES ACT ACCESSBILITY GUIDELINES AND CODE REGULATIONS.

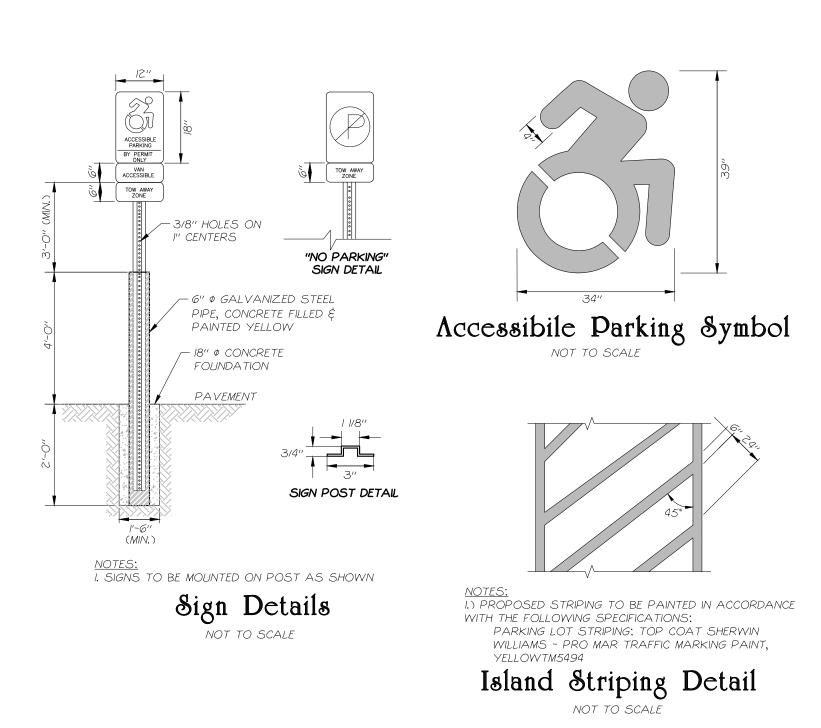
- 3.) PROPOSED STRIPING TO BE PAINTED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

 CURBING & BOLLARDS: TWO (2) COATS SHERWIN WILLIAMS KEM 4000 ACRYLIC ALKYD ENAMEL, SAFETY

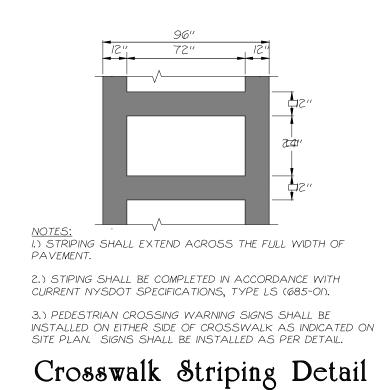
 YELLOW B55Y300

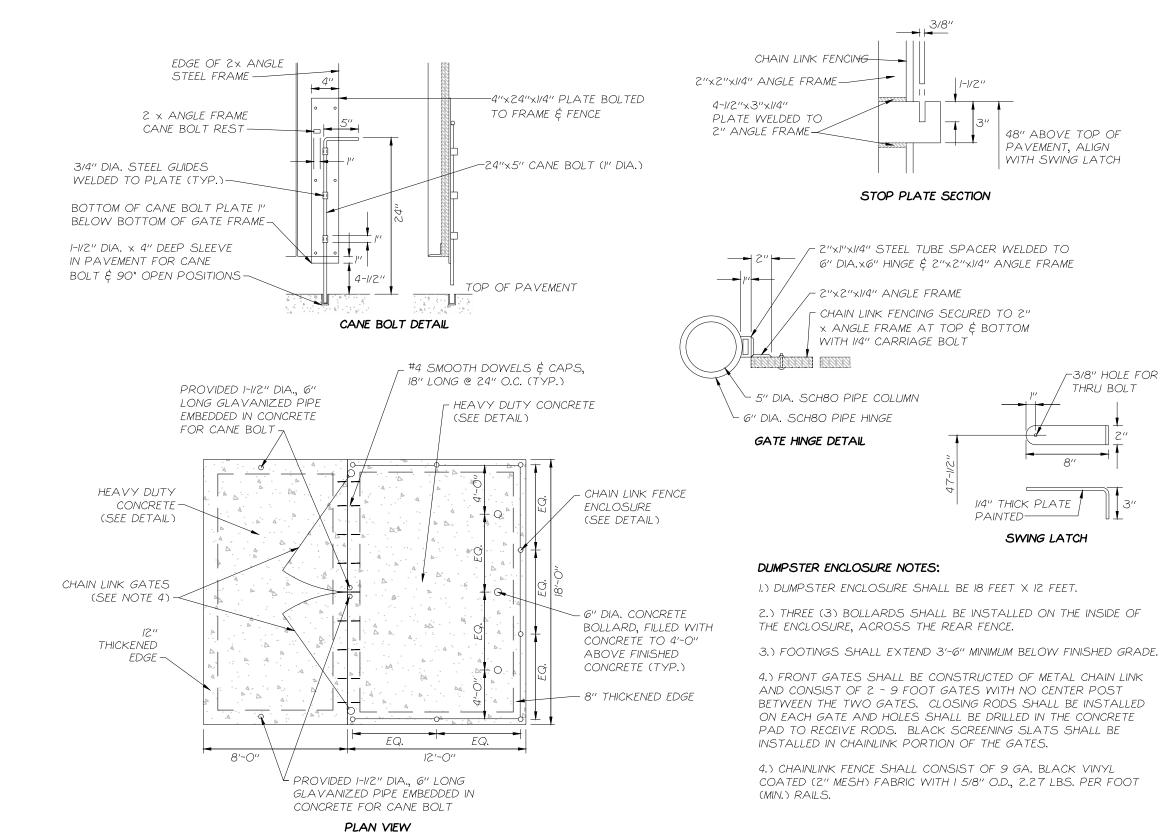
 PARKING LOT STRIPING & WHEELSTOPS: TOP COAT SHERWIN WILLIAMS PRO MAR TRAFFIC MARKING PAINT,
- YELLOWTM5494 ACCESSIBLE STRIPING & DETAIL: TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT, "H.C." BLUE
- 4.) ALL CURBING LESS THAN 6" HIGH SHALL BE PAINTED IN KIND WITH THE BOLLARDS.
- 5.) THE MAXIMUM SLOPE ACROSS THE ACCESIBLE SPACES AND ACCESS AISLES SHALL BE 2.0%.

Typical Parking Space Details

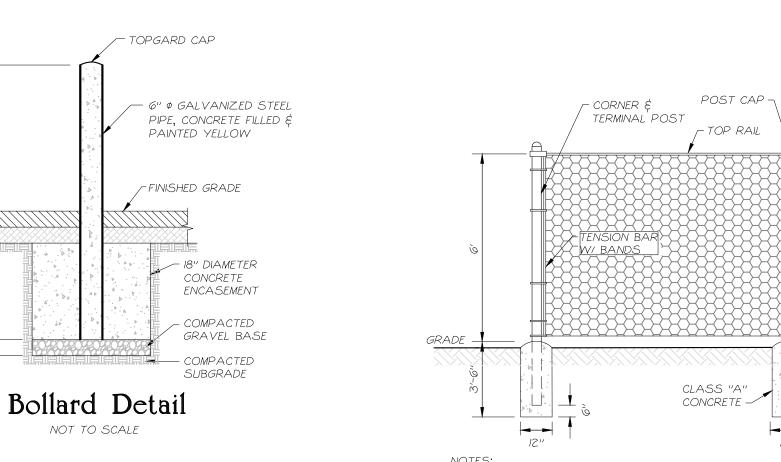


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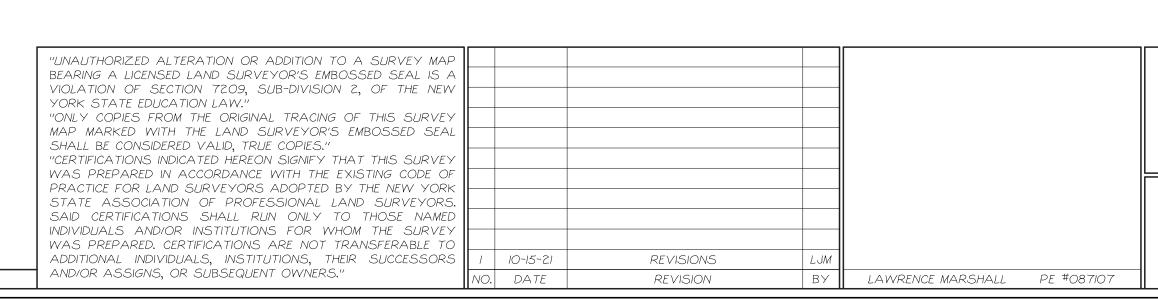
Dumpster Enclosure Details



NOTES:

I.) CHAIN LINK FENCE SPECIFICATIONS: FABRIC: 72" 9 GA. BLACK VINYL COATED (2" MESH) CHAIN LINK FABRIC. TOP RAIL: 1-5/8" O.D. FULL WEIGHT PIPE, 2.27 LBS PER FOOT (MIN.), TO BE JOINED WITH 1-5/8" SLEEVE. LINE POST: 2-1/2" O.D. FULL WEIGHT PIPE, 3.65 LBS PER FOOT (MIN.), 10' O.C. MAX SPACING. TERMINAL POST: 3" O.D. FULL WEIGHT PIPE, 5.79 LBS PER FOOT (MIN.). TENSION WIRE: 7 GA. COIL SPRING GALVANIZED TENSION WIRE ATTACHED TO BOTTOM OF FENCE. FITTINGS: HEAVY BRACED BAND AND CARRIAGE BOLT, PRESSED STEEL RAIL-END. PRESSED STEEL LOOP CAP. PRESSED STEEL CAP. 1/4" X 3/4" TENSION BAR, HEAVY TENSION BAND AND CARRIAGE BOLT. TIE WIRE: 8-1/4" 12 GA. STEEL TIE WIRE AND 6-1/2" 12 GA. STEEL WIRE SPACED 15" O.C. FOR LINE POST AND 24" O.C. FOR RAILS. GATE POST: 4" O.D. FULL WEIGHT PIPE, 9.10 LBS PER FOOT (MIN.). GATES: 1-5/8" FULL WEIGHT PIPE FRAMEWORK, 2.27 LBS PER FOOT (MIN.). GATES BRACED AND TRUSSED AS NECESSARY.

Typical Chain Link Fence Detail

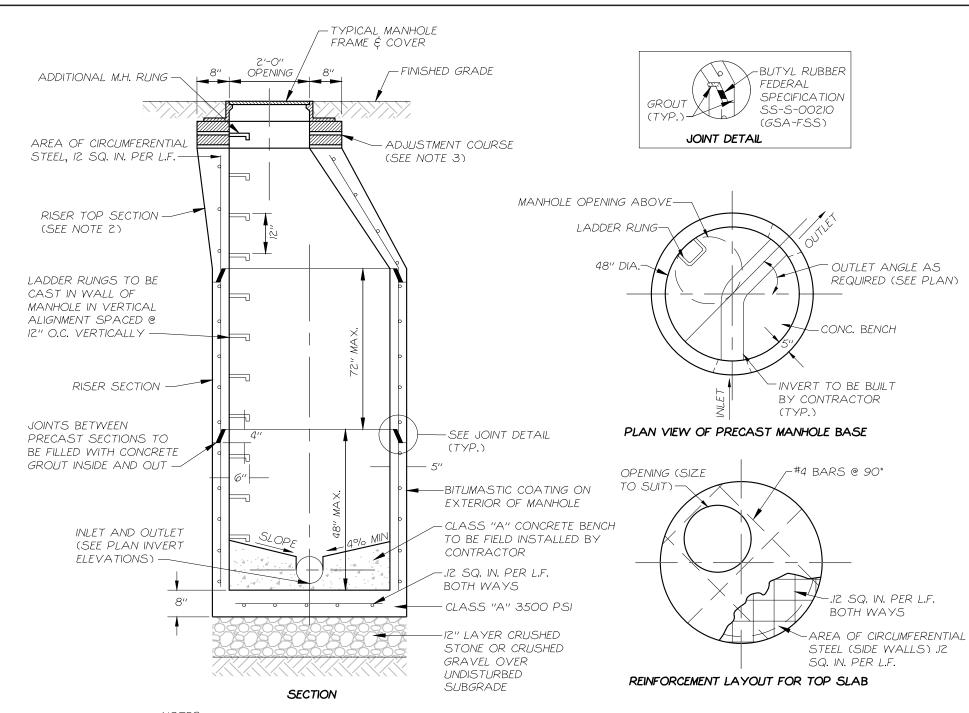


Construction Details THIS MAP IS INCOMPLETE AND INVALID WITHOUT ALL SHEETS IN THE PLAN SET. TAX MAP PARCEL: 78 - 2 - 2.1 Aspire Brewing TOWN OF WALLKILL COUNTY OF ORANGE STATE OF NEW YORK DRAFTED BY: LJM DATE: 2020 DEC 9 PROJECT: 3988-2 (SHEET: CD2.01 PO BOX 166; 45 MAIN STREET; PINE BUSH, NY 12566 P: (845)744.3620 F:(845)744.3805 MNTM@MNTM.CO

WIRE CLIPS

LINE POST

-TENSION WIRE

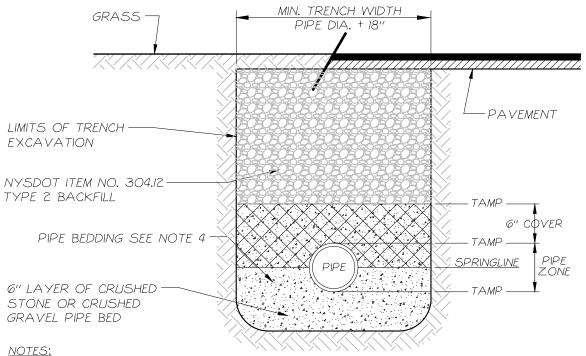


NOTES: I.) SANITARY SEWER MANHOLES SHALL HAVE AN INTERIOR DIAMETER OF 48".

2.) FOR DEPTHS LESS THAN 84", UTILIZE A FLAT SLAB TOP SECTION. A CONE SECTION TOP SHALL BE UTILIZED WHEN FRAME TO INVERT ELEVATION EXCEEDS 84".

3.) UTILIZE CONCRETE BRICK COURSE TO ADJUST FRAME TO FINAL GRADE AND SLOPE (NOT TO EXCEED 12").

Sanitary Sewer Manhole Details



NOTES: 1) ALL BACKFILL SHALL BE NYSDOT ITEM NO. 304,12 TYPE 2.

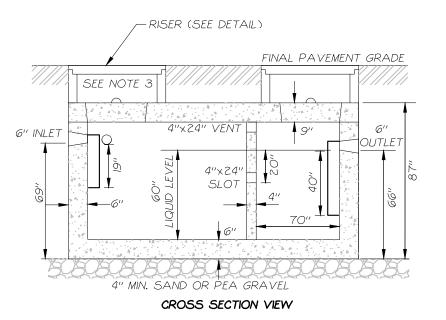
2) IN LAWN AREAS, A MINIMUM OF 6 INCHES OF TOPSOIL SHALL BE PLACED ON TOP OF THE NYSDOT ITEM 4 BACKFILL AND SHALL BE SEEDED AND MULCHED WITH SEED IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS.

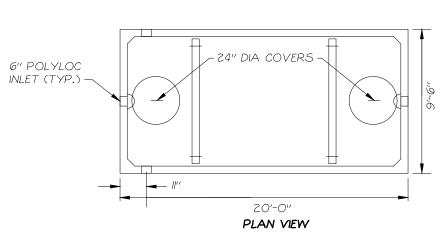
3) IN PAVED AREAS, THE EXISTING PAVEMENT SHALL BE SAW CUT PRIOR TO REMOVAL. REPLACEMENT OF THE PAVEMENT SHALL BE COMPLETED WITH A MINIMUM OF 4" NYSDOT ITEM 4 LEVELING COURSE, 5" ASPHALT BINDER COURSE (PLACED IN 2" LIFTS), AND 2" ASPHALT TOP COURSE. EXISTING PAVEMENT SHALL BE MILLED TO A 2" DEPTH AT LEAST 2 FEET BEYOND TRENCH WIDTH, IN ALL DIRECTIONS, PRIOR TO PLACEMENT OF FINAL TOP COURSE. TOP COURSE SHALL EXTEND THE ENTIRE WIDTH OF THE TRENCH AND MILLED SECTION OF PAVEMENT.

4. PIPE BEDDING MATERIAL SHALL BE COMPOSED OF CRUSHED STONE OR GRAVEL FREE OF SOFT NON-DURABLE PARTICLES, ORGANIC MATERIALS AND THIN OR ELONGATED PARTICLES WITH THE FOLLOWING GRADATION REQUIREMENTS



Typical Trench Detail





NOTES:
1.) SEPTIC TANK SHALL BE A PRECAST HEAVY DUTY 6,000 GALLON TANK, OR APPROVED EQUAL, AS MANUFACTURED BY: WOODARDS CONCRETE PRODUCTS, INC 629 LYBOLT ROAD BULLVILLE, NY 10915

2.) ALL PIPE JOINTS (INLET \$ OUTLET PIPES) SHALL BE SEALED WITH ASPHALTIC MATERIAL OR EQUIVALENT.

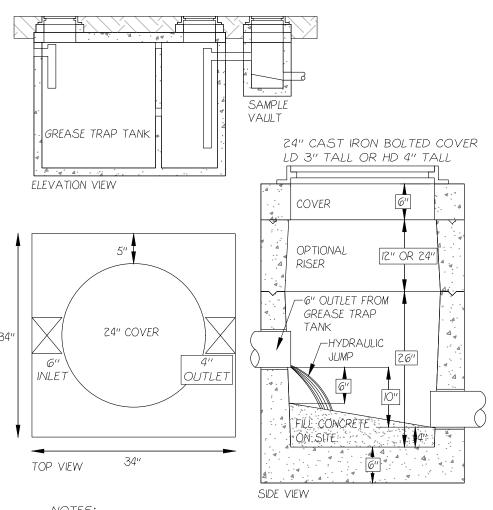
3.) INLET BAFFLE CAN BE RELOCATED TO THE SIDE.

(845) 361-3471

4.) IF COVER EXCEEDS 12" A RISER MUST BE USED TO ALLOW ACCESS.

CONCRETE MINIMUM STRENGTH: 4,000 P.S.I. AT 28 DAYS STEEL REINFORCEMENT: #4 \$ #5 REBAR (ASTM A615) AIR ENTRAINMENT: 5% CONSTRUCTION JOINT: SEALED WITH BUTYL RUBBER CEMENT PIPE CONNECTION: POLYLOK SEAL (PATENTED) LOAD RATING: HS20-44 + 30% IMPACT (ASTM C857)

Typical Precast Heavy Duty 6,000-Gallon Concrete Grease Trap Tank NOT TO SCALE



I.) SEPTIC TANK SHALL BE A PRECAST OUTLET SAMPLE VAULT FOR COMMERCIAL GREASE TRAPS, OR APPROVED EQUAL, AS

MANUFACTURED BY: WOODARDS CONCRETE PRODUCTS, INC 629 LYBOLT ROAD BULLVILLE, NY 10915

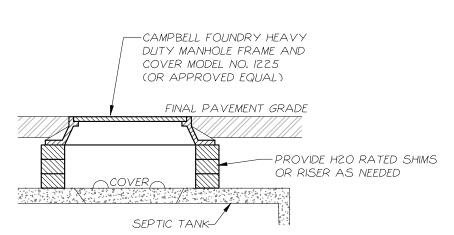
(845) 361-3471 2.) ALL PIPE JOINTS (INLET & OUTLET PIPES) SHALL BE SEALED WITH ASPHALTIC MATERIAL OR EQUIVALENT.

3.) OUTLET BAFFLE INSTALLED BY OTHERS.

4.) IF COVER EXCEEDS 12", A RISER MUST BE USED TO ALLOW ACCESS.

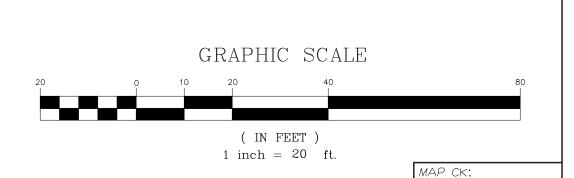
CONCRETE MIN. STRENGTH: 4,000 PSI AT 28 DAYS REINFORCEMENT: #4 BAR / ASTM A615 AIR ENTRAINMENT: 6% CONSTRUCTION JOINT: BUTYL RUBBER SEALANT PIPE CONNECTION: MORTAR WEIGHT = 2,200 LBS LOAD RATING: HS20-44 / ASTM C857

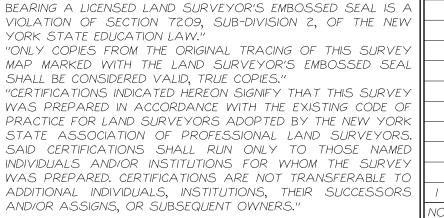
Typical Precast Sample Vault NOT TO SCALE



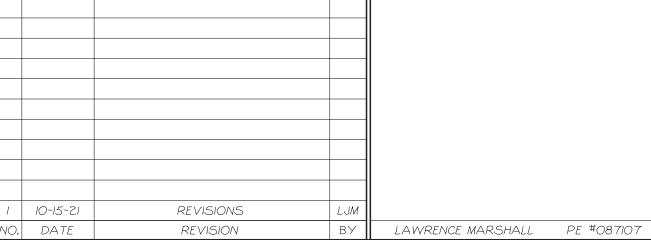
Typical Riser Detail







"UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP



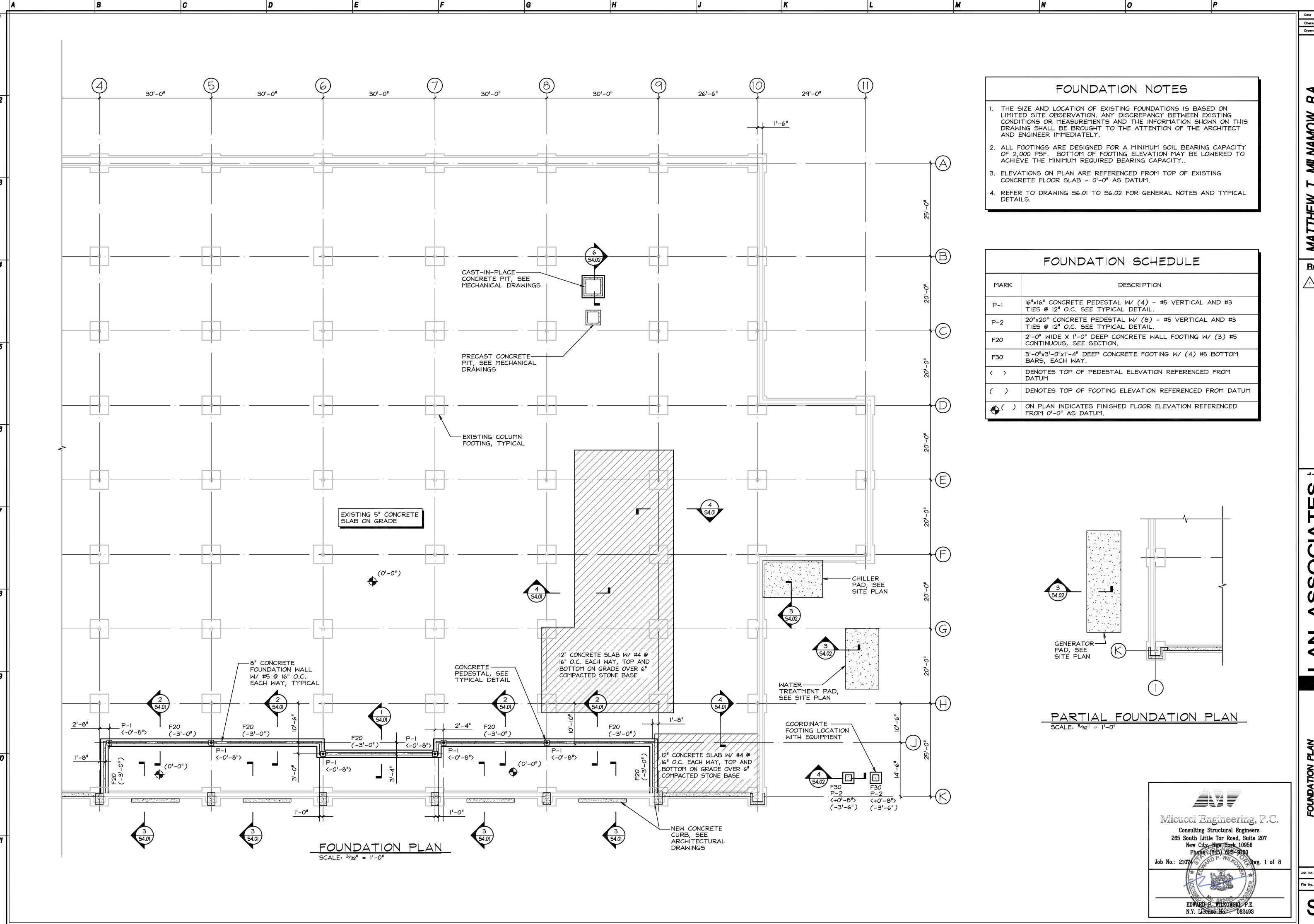
Sewer Details Aspire Brewing



SHEETS IN THE PLAN SET. TAX MAP PARCEL: 78 - 2 - 2.1 TOWN OF WALLKILL COUNTY OF ORANGE STATE OF NEW YORK DRAFTED BY: LJM DATE: 2020 DEC 9 PROJECT: 3988-2 SHEET: CD2.02

THIS MAP IS INCOMPLETE

AND INVALID WITHOUT ALL



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MILNAMOW, R.A.
LICENSE NO. 32407

ATTHEW T. MIL REGISTERED ARCHITECT

Revisions:

PERMIT SET
10/15/21

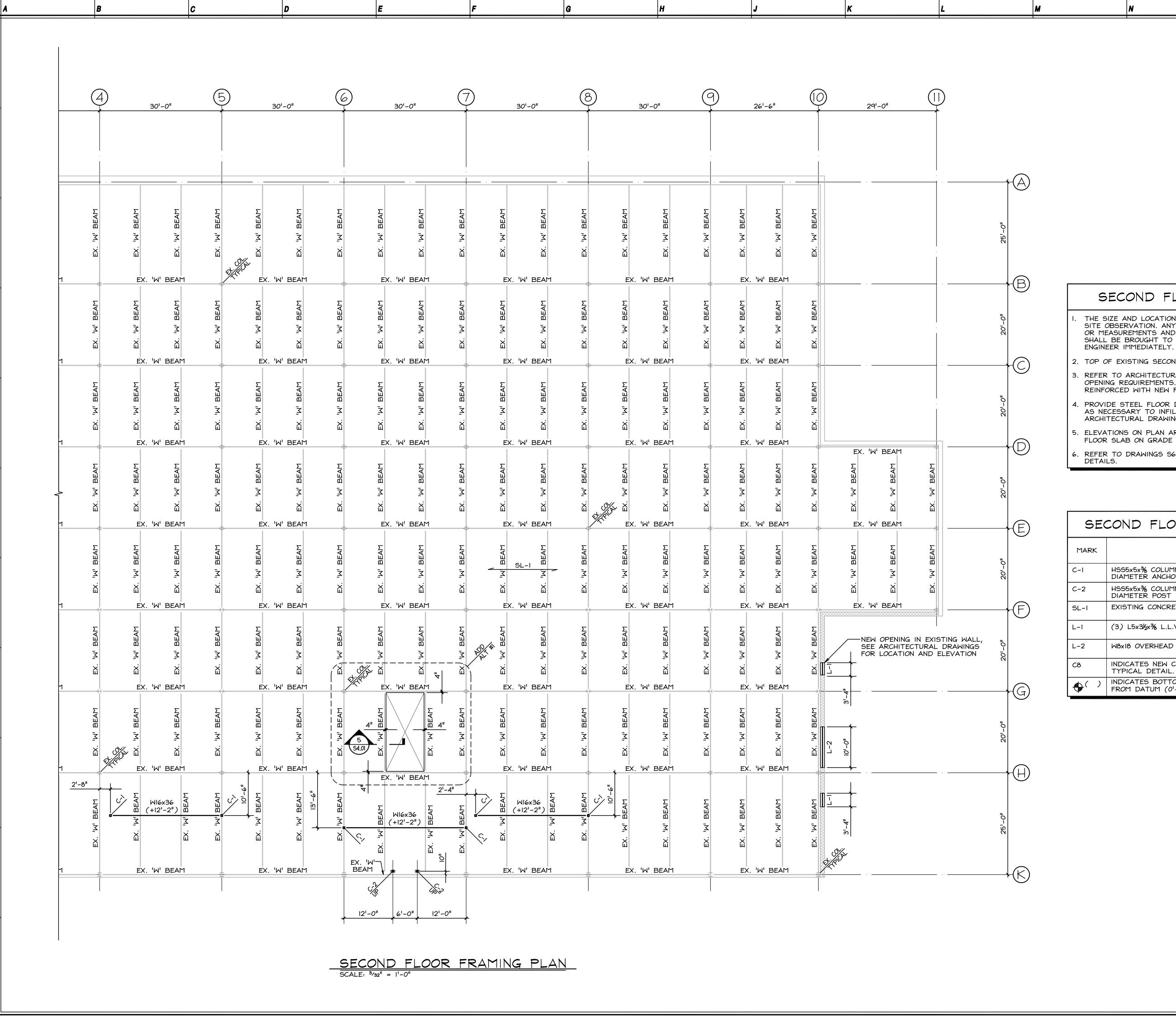
ASSOCIATES

3 • planning • architecture • surveying

WING TAP ROOM & BREWERY
PATEL BREWING COMPANY, INC.
H GALLERIA DRIVE LOWER LEVEL
OF WALLKILL, NY 10941

ASPIRE BREWING
FOR SONNY PATEL
400/600 NORTH GA
TOWN OF V

Job No. 4.1552.01
File No. 21074S2.01



SECOND FLOOR FRAMING NOTES

THE SIZE AND LOCATION OF EXISTING FRAMING IS BASED ON LIMITED SITE OBSERVATION. ANY DISCREPANCY BETWEEN EXISTING CONDITIONS OR MEASUREMENTS AND THE INFORMATION SHOWN ON THIS DRAWING SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER IMMEDIATELY

- 2. TOP OF EXISTING SECOND FLOOR SLAB ELEVATION = +17'-5" +/-.
- 3. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SLAB OPENING REQUIREMENTS. OPENINGS LARGER THAN 12" SHALL BE REINFORCED WITH NEW FRAMING, SEE TYPICAL DETAIL.
- 4. PROVIDE STEEL FLOOR DECK (TO MATCH EXISTING) AND STEEL FRAMING AS NECESSARY TO INFILL EXISTING OPENINGS. REFER TO ARCHITECTURAL DRAWINGS FOR SIZES AND LOCATIONS.
- 5. ELEVATIONS ON PLAN ARE REFERENCED FROM TOP OF EXISTING GROUND FLOOR SLAB ON GRADE = 0^1-0^{11} AS DATUM.
- 6. REFER TO DRAWINGS S6.01 TO S6.02 FOR GENERAL NOTES AND TYPICAL

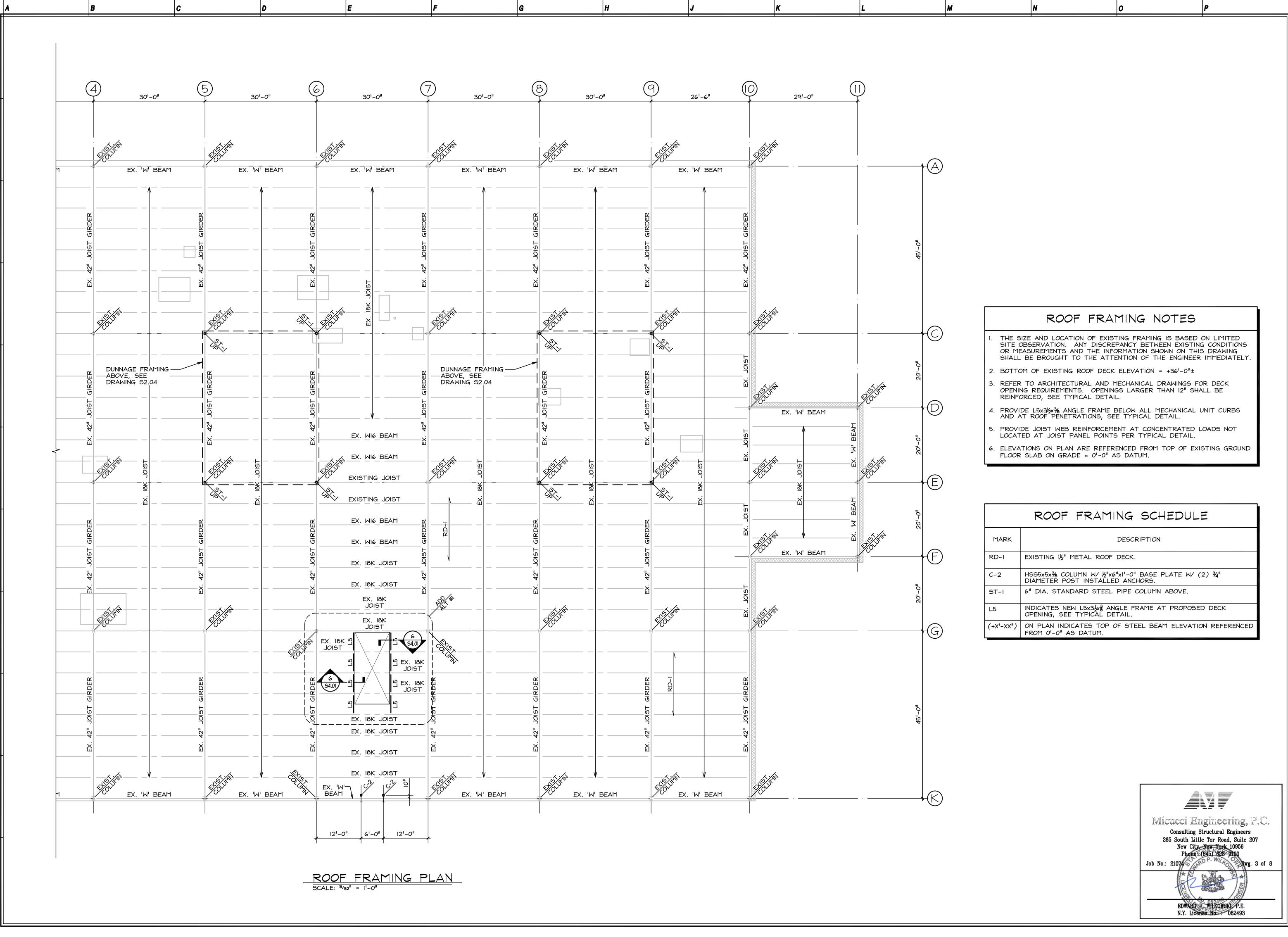
SE	COND FLOOR FRAMING SCHEDULE					
MARK	DESCRIPTION					
C-I	HSS5x5x¾ COLUMN W/ ¾"x12"x1'-0" BASE PLATE W/ (4) ¾" DIAMETER ANCHOR RODS, SEE TYPICAL DETAIL.					
C-2	HSS5x5x% COLUMN W/ ½"x6"x1'-0" BASE PLATE W/ (2) ¾" DIAMETER POST INSTALLED ANCHORS.					
SL-I	EXISTING CONCRETE SLAB ON METAL DECK TO REMAIN					
L-1	(3) L5x3½x¾ L.L.V. LOOSE LINTEL, SEE TYPICAL DETAIL.					
L-2	W8x18 OVERHEAD DOOR LINTEL, SEE TYPICAL DETAIL.					
C8	INDICATES NEW C8xII.5 BEAM AT PROPOSED SLAB OPENING, SEE TYPICAL DETAIL.					
• ()	INDICATES BOTTOM OF STEEL ELEVATION AS MEASURED FROM DATUM (0'-0").					



Job No. 4.1552.01

Revisions:

PERMIT SET 10/15/21



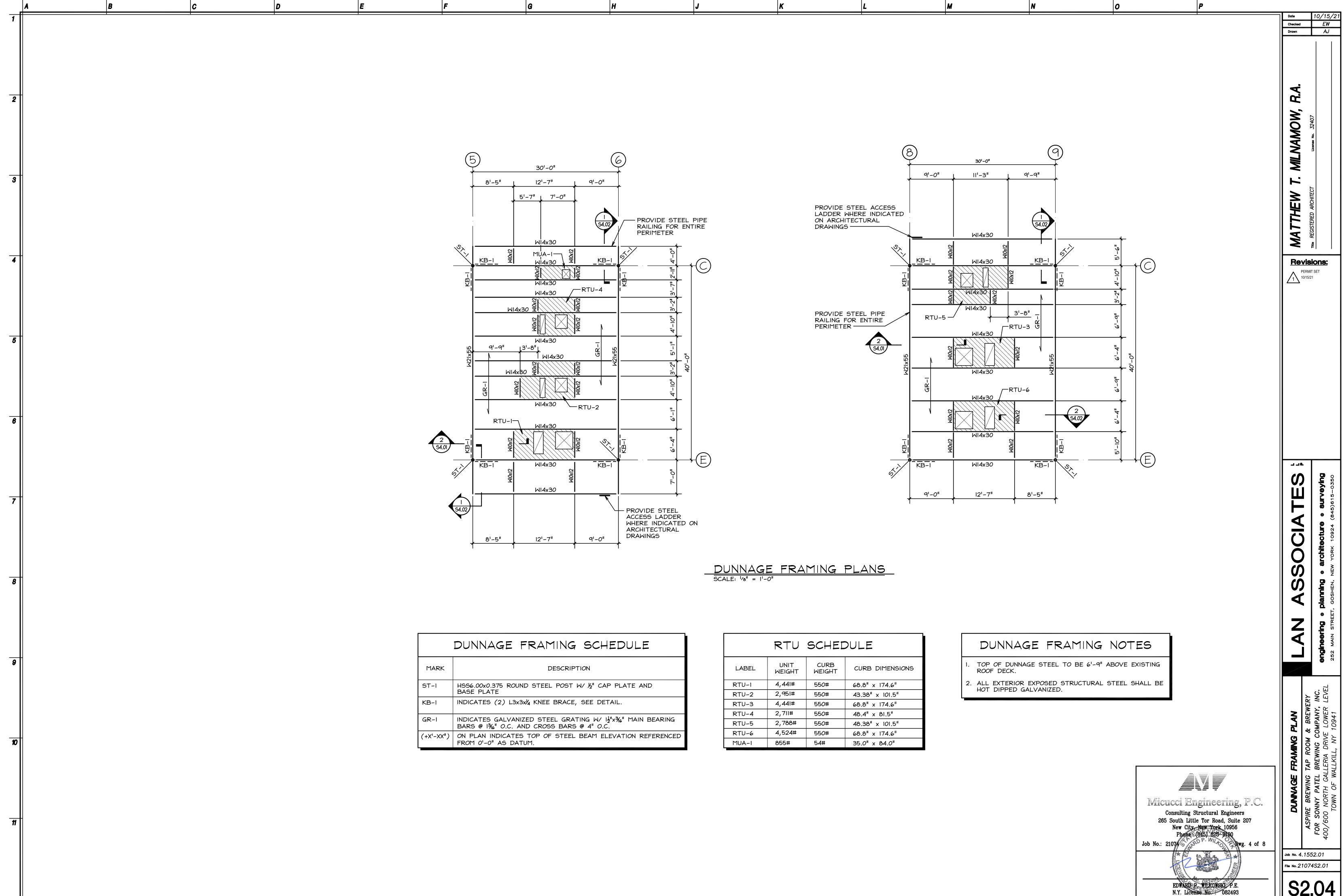
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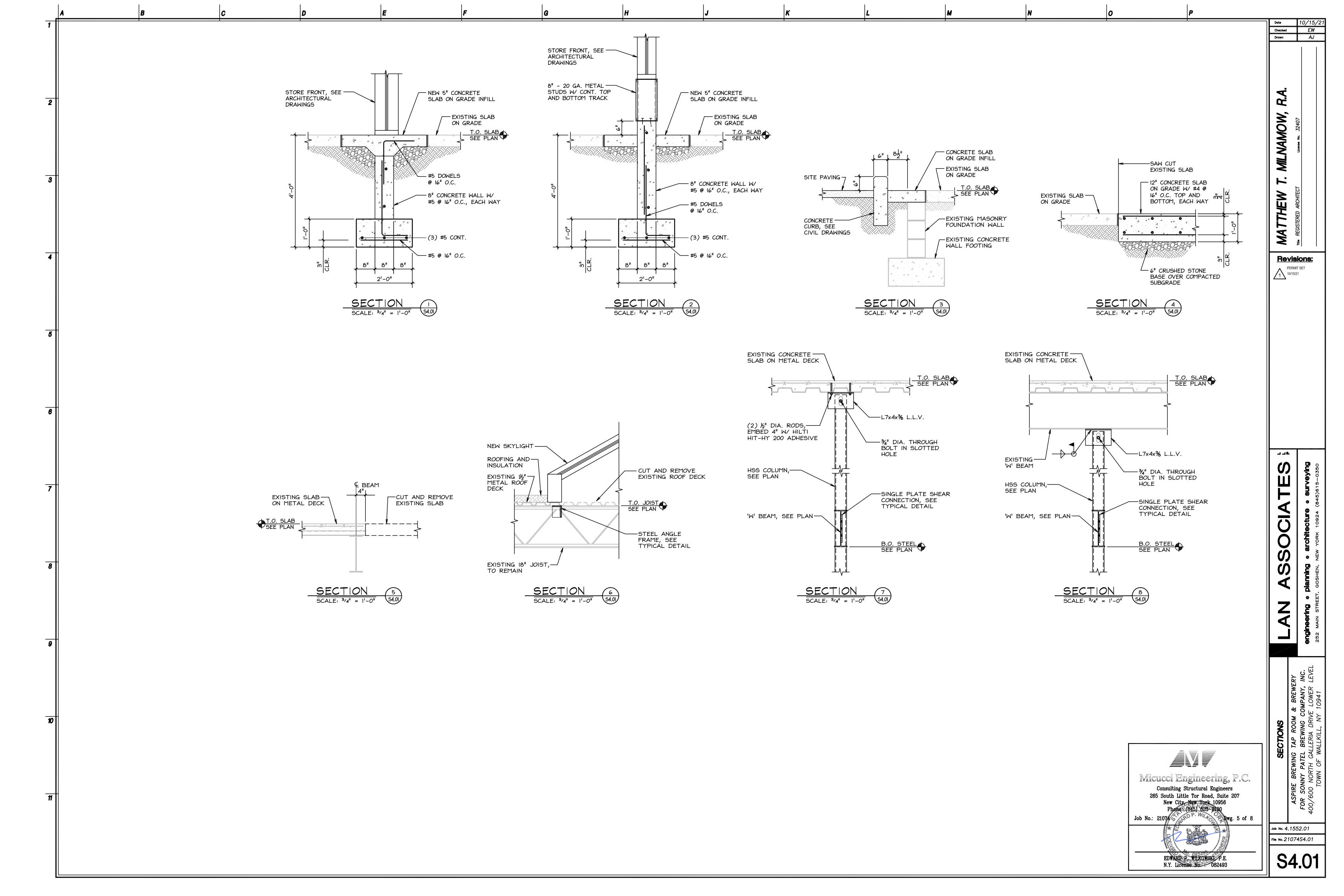
Revisions: PERMIT SET 10/15/21

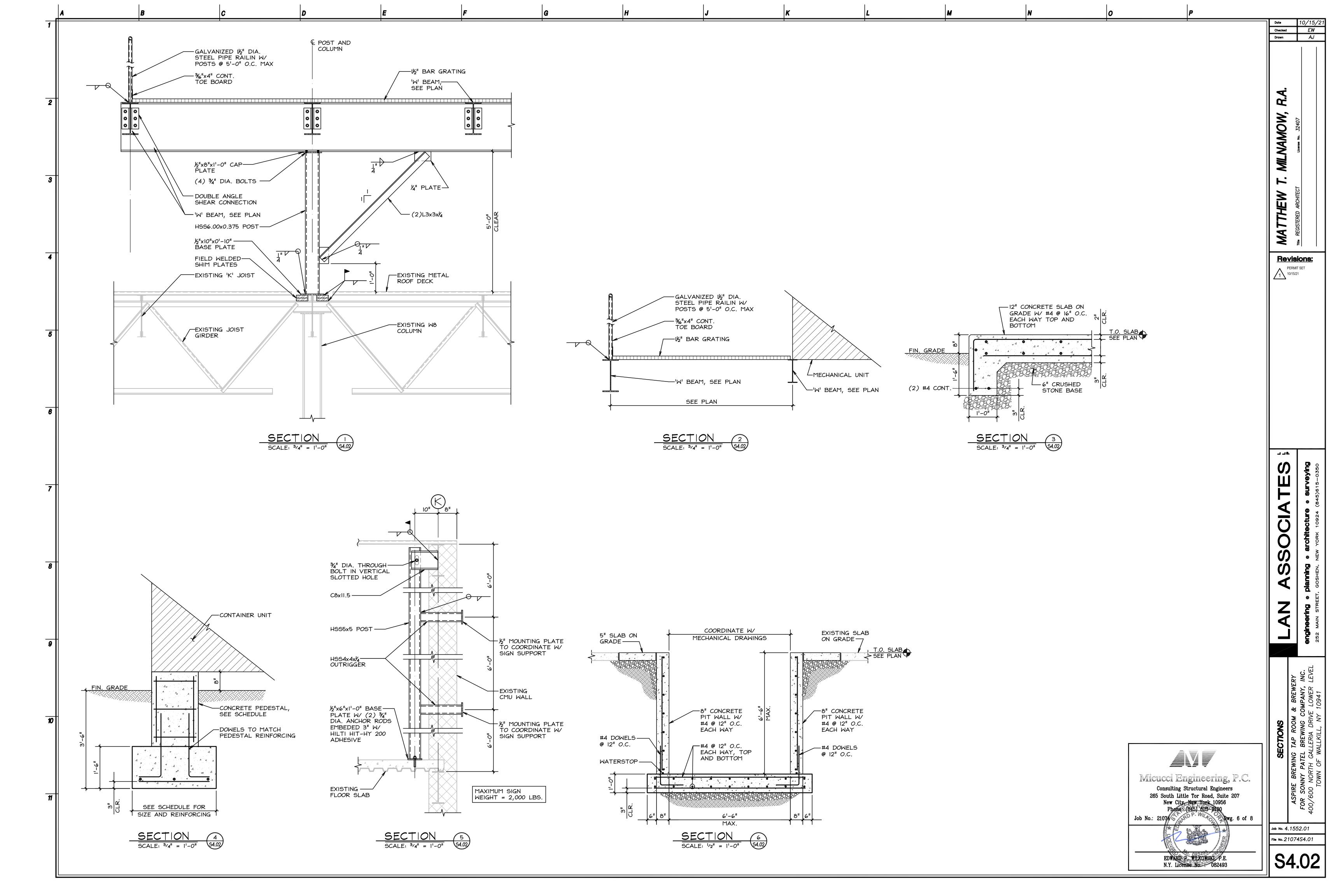
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Job No. 4.1552.01 File No. 21074S2.01







NEW YORK STATE BUILDING CODE," AND LOCAL ORDINANCES.

WORK THESE DRAWING IN CONJUNCTION WITH ARCHITECTURAL AND MECHANICAL

THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS IN THE FIELD BEFORE COMMENCING WORK. ANY DISCREPANCY BETWEEN EXISTING CONDITIONS OR MEASUREMENTS AND THE INFORMATION SHOWN ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER IMMEDIATELY. NO WORK SHALL CONTINUE UNTIL THE DISCREPANCY IS RESOLVED.

THE CONTRACTOR SHALL PROVIDE THE NECESSARY COORDINATION BETWEEN ALL TRADES WITH REGARD TO THE DRAWINGS. LOCATE BOLTS, SLEEVES, AND TRENCHES AS REQUIRED FOR MECHANICAL TRADES, AND PROVIDE AND INSTALL VARIOUS ITEMS NOT SHOWN ON THESE DRAWINGS BUT AS REQUIRED FOR VARIOUS TRADES.

DO NOT SCALE THE STRUCTURAL DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE STRUCTURAL ENGINEER.

THE STRUCTURAL INTEGRITY OF THE BUILDING IS DEPENDENT ON COMPLETED CONSTRUCTION IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE STRUCTURAL ENGINEER ASSUMES NO LIABILITY FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL SUPPLY ANY TEMPORARY BRACING REQUIRED UNTIL BUILDING CONSTRUCTION IS COMPLETE.

DURING CONSTRUCTION THE CONTRACTOR SHALL KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN LOADS. CONSTRUCTION MATERIAL PLACED ON FRAMED FLOORS AND ROOFS SHALL BE SPREAD OUT AS REQUIRED.

THE CONTRACTOR IS RESPONSIBLE FOR SAFETY WITHIN THE JOB SITE AND FOR MEETING ALL APPLICABLE OSHA REQUIREMENTS DURING CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR ANY REQUIRED EXCAVATION SHORING AND THE EVALUATION AND PROTECTION OF ADJACENT STRUCTURES.

FOUNDATIONS AND SLABS ON GRADE

AN INSTALLED FOOTING OR FOUNDATION.

DRAWINGS.

ALL EXCAVATION, SUBGRADE PREPARATION, AND OTHER EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.

ALL FOOTINGS ARE DESIGNED FOR A MINIMUM SOIL BEARING CAPACITY OF 2 KIPS PER SQUARE FOOT.

ALL FOOTINGS ARE TO BEAR ON UNDISTURBED VIRGIN SOIL OR CONTROLLED COMPACTED FILL.

THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL EXTEND 4'-0" MINIMUM BELOW FINISHED GRADE.

ALL EXCAVATIONS SHALL BE FREE OF WATER BEFORE POURING CONCRETE.

HAND TRIM SIDES AND BOTTOM OF EARTH FORMS AND REMOVE LOOSE DIRT.

NO SUBSEQUENT EXCAVATION SHALL BE NEARER THAN 2:1 (HORIZONTAL:VERTICAL) TO

CONCRETE FOUNDATION WALLS SHALL BE PLACED IN ALTERNATE SECTIONS, NOT MORE THAN 60 FEET IN LENGTH. HORIZONTAL CONSTRUCTION JOINTS ARE NOT PERMITTED EXCEPT WHERE SHOWN.

PLACE SLABS ON GROUND PER THICKNESS SHOWN ON DRAWINGS WITH TOP OF SLAB SET TO ACCOMMODATE ARCHITECTURAL FINISHES.

PROVIDE SAW CUT CONTROL JOINTS AT AN OPTIMUM TIME AFTER FINISHING. CUT SLABS WITH A 3/16 INCH THICK BLADE TO 1 INCH DEPTH. LOCATE CONTROL JOINTS AT A MAXIMUM SPACING OF 36 TIMES THE SLAB DEPTH AND AT EACH CORNER, COLUMN AND PLAN IRREGULARITY.

THE CONTRACTOR SHALL SUBMIT POUR SEQUENCE AND JOINT LAYOUT TO THE ARCHITECT FOR APPROVAL PRIOR TO POURING CONCRETE SLABS.

SEPARATE SLABS ON GRADE FROM VERTICAL SURFACES WITH JOINT FILLER. EXTEND JOINT FILLER FROM BOTTOM OF SLAB TO WITHIN 1/4 INCH OF FINISHED SLAB SURFACE.

WHERE COMPACTED FILL IS REQUIRED, WELL GRADED GRANULAR MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 12 INCHES AND COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY AS PER ASTM D-1557.

VERIFICATION OF BEARING CAPACITY AND INSPECTION OF COMPACTED FILL SHALL BE COMPLETED BY A QUALIFIED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW

ANY UNEXPECTED SUBGRADE CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER AND GEOTECHNICAL ENGINEER.

CONCRETE

ADMIXTURES.

ALL CONCRETE MATERIALS AND CONSTRUCTION PROCEDURES SHALL BE IN ACCORDANCE WITH ACI 318. EVALUATION AND ACCEPTANCE OF CONCRETE STRUCTURES SHALL BE IN ACCORDANCE WITH ACI 301.

SPECIFIED COMPRESSIVE STRENGTH F'C AT 28 DAYS:

FOUNDATIONS AND FOOTINGS: 4000 PSI.
WALLS, COLUMNS, ELEVATED SLABS, AND BEAMS: 4000 PSI.
FLOOR SLABS ON GRADE: 3000 PSI
INTERIOR PADS: 3000 PSI.

SUBMIT PROPOSED MIX DESIGNS AND TEST DATA BEFORE CONCRETE OPERATIONS BEGIN. ESTABLISH THE REQUIRED AVERAGE STRENGTH OF EACH DESIGN MIX ON THE BASIS OF EITHER FIELD EXPERIENCE OR TRIAL MIXTURES AS SPECIFIED IN ACI 301, AND PROPORTION MIXES PER THE RECOMMENDATIONS OF ACI 211.1. EACH MIX SHALL BE IDENTIFIED AS IT WILL APPEAR ON BATCH TICKETS DELIVERED TO PROJECT SITE.

CONCRETE MIX DESIGN SHALL PROVIDE FOR A CONCRETE SLUMP APPROPRIATE FOR PROJECT CONDITIONS. THE CONCRETE SHALL BE SUFFICIENTLY FLUID TO ALLOW FOR EASE OF PLACEMENT AND SUFFICIENTLY STIFF TO PREVENT SEGREGATION.

AGGREGATE SHALL CONFORM TO ASTM C33.

WATER-TO-CEMENT RATIO SHALL NOT EXCEED 0.45 BY WEIGHT. WEIGHT OF WATER SHALL INCLUDE ALL FREE MOISTURE, INCLUDING LIQUID ADMIXTURES.

AIR-ENTRAINING ADMIXTURE SHALL BE ADDED TO ACHIEVE TOTAL AIR CONTENT OF 6 PERCENT FOR EXTERIOR EXPOSED CONCRETE AND 3 PERCENT FOR CONCRETE NOT EXPOSED TO EXTERIOR WITH A TOLERANCE OF I PERCENT.

PROVIDE WATER-REDUCING ADMIXTURES CONFORMING TO ASTM C494 AS REQUIRED FOR PLACEMENT AND WORKABILITY AT THE MAXIMUM WATER TO CEMENT RATIO SPECIFIED.

INDICATE TYPE AND QUANTITY OF ADMIXTURES PROPOSED OR REQUIRED. ADMIXTURES CONTAINING MORE THAN O.I PERCENT CHLORIDE IONS ARE NOT PERMITTED. WHERE MIX CONTAINS MORE THAN ONE ADMIXTURE, ALL ADMIXTURES SHALL BE SUPPLIED BY ONE MANUFACTURER. MANUFACTURER SHALL CERTIFY THAT ADMIXTURES ARE COMPATIBLE SUCH THAT DESIRABLE EFFECTS OF EACH ADMIXTURE WILL BE REALIZED. LIQUID ADMIXTURES SHALL BE CONSIDERED PART OF THE TOTAL WATER.

WATER SHALL BE CLEAN, POTABLE AND FREE FROM DELETERIOUS MATERIAL.

PROVIDE DATA FOR PROPRIETARY MATERIALS, INCLUDING ADMIXTURES, CURING MATERIALS, AND FINISH MATERIALS.

SUBMIT MATERIAL CERTIFICATIONS FOR CEMENTITIOUS MATERIALS, AGGREGATES AND

PROVIDE DEFORMED REINFORCING BARS COMPLYING WITH ASTM A615, GRADE 60, EXCEPT WHERE OTHERWISE INDICATED. ALL DETAILING OF REINFORCING SHALL BE IN ACCORDANCE WITH ACI STANDARD 315.

WELDED WIRE FABRIC SHALL BE ASTM A1064, COLD-DRAWN STEEL, PLAIN.

SUBMIT BAR PLACEMENT SHOP DRAWINGS SHOWING THE LOCATION OF REINFORCING AND CONSTRUCTION JOINTS. DELIVER REINFORCEMENT TO PROJECT SITE BUNDLED AND TAGGED INDICATING BAR SIZES, LENGTHS, AND OTHER DATA CORRESPONDING TO INFORMATION SHOWN ON PLACEMENT DRAWINGS.

PLACE REINFORCEMENT TO ACHIEVE NOT LESS THAN MINIMUM CONCRETE COVERAGE AS REQUIRED FOR PROTECTION. ACCURATELY POSITION, SUPPORT, AND SECURE REINFORCEMENT TO PREVENT DISPLACEMENT.

CONCRETE PROTECTION FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

ELEVATED SLABS: 3/4"
BEAMS AND COLUMNS (PEDESTALS): 1 1/2"
INSIDE FACE OF WALLS: 1"

CONCRETE POURED ON GROUND: 3"
EXTERIOR FACE OF WALLS (AGAINST EARTH): 2"

FIBROUS REINFORCEMENT FOR SLABS SHALL BE FIBRILLATED POLYPROPYLENE FIBERS ENGINEERED AND DESIGNED FOR USE IN CONCRETE COMPLYING WITH ASTM C III6 TYPE III, 1/2" TO I 1/2". UNIFORMLY DISPERSE FIBERS IN THE CONCRETE MIX AT THE MANUFACTURER'S RECOMMENDED RATE BUT NOT LESS THAN 1.5 POUNDS PER CUBIC YARD.

PROVIDE CLASS B TENSION LAP SPLICES COMPLYING WITH ACI 318 UNLESS OTHERWISE INDICATED.

SURVEY ANCHOR BOLTS FOR PLACEMENT AND ALIGNMENT PRIOR TO CASTING CONCRETE.

INSTALLATION TOLERANCES FOR ANCHOR BOLTS FOR STRUCTURAL STEEL COLUMNS SHALL COMPLY WITH THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.

GROUT SHALL CONFORM TO ASTM CIIO7, GRADE B NON-SHRINK, NON-METALLIC, PREPACKAGED GROUT WITH A COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS.

THE CONTRACTOR IS RESPONSIBLE FOR DESIGN, ENGINEERING, AND CONSTRUCTION OF FORMWORK, CAPABLE OF SUPPORTING ALL APPLIED LOADS UNTIL THE CONCRETE IS ADEQUATELY CURED, WITHIN ALLOWABLE TOLERANCES AND DEFLECTION LIMITS.

LOCATE AND INSTALL CONSTRUCTION JOINTS AS INDICATED ON DRAWINGS. IF CONSTRUCTION JOINTS ARE NOT INDICATED, LOCATE IN A MANNER WHICH WILL NOT IMPAIR STRENGTH AND WILL HAVE LEAST IMPACT ON APPEARANCE.

PREPARE PREVIOUSLY PLACED CONCRETE BY CLEANING AND APPLYING BONDING AGENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION.

IN LOCATIONS WHERE NEW CONCRETE IS DOWELED TO EXISTING WORK, DRILL HOLES IN EXISTING CONCRETE, INSERT STEEL DOWELS AND PACK SOLID WITH EPOXY GROUT.

FOUNDATION SURFACES AGAINST WHICH CONCRETE IS TO BE PLACED MUST BE FREE FROM STANDING WATER, MUD AND DEBRIS. SURFACES SHALL BE CLEAN AND FREE FROM OIL, OBJECTIONABLE COATINGS, AND LOOSE OR UNSOUND MATERIAL.

ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4" X 3/4" CHAMFER, UNLESS SPECIFICALLY INDICATED OTHERWISE ON THE DRAWINGS.

CONSOLIDATE CONCRETE BY MEANS OF MECHANICAL VIBRATORS TO ACHIEVE CONSISTENT CONSOLIDATION WITHOUT SEGREGATION OF COARSE AGGREGATES.

REPAIR SURFACE DEFECTS, INCLUDING TIE HOLES, IMMEDIATELY AFTER REMOVING FORMWORK.

PROTECT CONCRETE FROM SUN AND RAIN. DO NOT PERMIT CONCRETE TO BECOME DRY DURING CURING PERIOD. CONCRETE SHALL NOT BE SUBJECTED TO ANY LOADS UNTIL CONCRETE IS COMPLETELY CURED, AND UNTIL CONCRETE HAS ATTAINED ITS 28 DAY STRENGTH AND 14 DAYS MINIMUM.

UPON COMPLETION OF FINISHING OPERATION, THE SURFACE OF SLABS SHALL BE SEALED AGAINST MOISTURE LOSS FOR 7 DAYS BY THE APPLICATION OF A CURING MEMBRANE OR BLANKET.

CONCRETE IN FORMS SHALL BE KEPT MOIST UNTIL REMOVAL. IMMEDIATELY UPON REMOVAL OF FORMS, AN APPROVED SPRAYED-ON CURING COMPOUND SHALL BE APPLIED TO THE CONCRETE SURFACES IN STRICT COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CURING SHALL BE MAINTAINED FOR 7 DAYS.

FORMED SURFACES SHALL COMPLY WITH MINIMUM TOLERANCES ESTABLISHED IN ACI 117, UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED ON THE DRAWINGS.

FINISH EXPOSED CONCRETE TO OFFER SMOOTH, STAIN-FREE FINAL APPEARANCE AND MINIMUM NUMBER OF JOINTS. PROVIDE FORMING MATERIALS WITH SUFFICIENT STRENGTH TO RESIST HYDROSTATIC HEAD WITHOUT BOW OR DEFLECTION IN EXCESS OF ALLOWABLE TOLERANCES.

PROVIDE CONCRETE FILL FOR STEEL PAN STAIR TREADS, LANDINGS, AND ASSOCIATED ITEMS. SCREED, TAMP, AND FINISH CONCRETE SURFACES AS SCHEDULED.

COMPLY FULLY WITH RECOMMENDATIONS OF ACI 306 WHEN AIR TEMPERATURES ARE EXPECTED TO DROP BELOW 40°F EITHER DURING CONCRETE PLACEMENT OPERATIONS OR BEFORE CONCRETE HAS CURED. PROTECTIVE MEASURES INCLUDE BUT ARE NOT LIMITED TO HEATING OF MATERIALS, HEATED ENCLOSURES, AND INSULATING BLANKETS.

COMPLY FULLY WITH RECOMMENDATIONS OF ACI 305 WHEN AMBIENT TEMPERATURE BEFORE, DURING, OR AFTER CONCRETE PLACEMENT IS EXPECTED TO EXCEED 90°F OR WHEN COMBINATIONS OF HIGH AIR TEMPERATURE, LOW RELATIVE HUMIDITY, AND WIND SPEED ARE SUCH THAT THE RATE OF EVAPORATION FROM FRESHLY POURED CONCRETE WOULD OTHERWISE EXCEED 0.2 POUNDS PER SQUARE FOOT PER HOUR. PROTECTIVE MEASURES INCLUDE BUT ARE NOT LIMITED TO COOLING OF MATERIALS BEFORE OR DURING MIXING, PLACEMENT DURING EVENING TO DAWN HOURS, FOGGING DURING FINISHING AND CURING, SHADING, AND WINDBREAKS

SAMPLE CONCRETE AND MAKE SPECIMENS FOR TESTING PER ASTM C172 AND ASTM C31. TAKE SAMPLES AT POINT OF DISCHARGE AND REPORT RESULTS OF ALL TESTS.

TEST SLUMP OF THE FIRST 2 LOADS OF CONCRETE DELIVERED FOR EACH POUR AND ONCE PER STRENGTH TEST PERFORMED PER ASTM CI43 WITH ADDITIONAL TESTS IF CONCRETE CONSISTENCY CHANGES.

TEST AIR CONTENT OF THE FIRST 2 LOADS OF CONCRETE DELIVERED FOR EACH POUR AND ONCE FOR EACH STRENGTH TEST PERFORMED PER ASTM C173 OR ASTM C231.

WHEN AIR TEMPERATURE IS BELOW 40°F OR ABOVE 90°F.

PROVIDE ONE COMPRESSIVE STRENGTH TEST PER ASTM C39 FOR EVERY 50 CUBIC

TEST CONCRETE TEMPERATURE FOR EACH STRENGTH TEST PERFORMED AND HOURLY

YARDS OR FRACTION THEREOF FOR EACH DAY'S POUR OF EACH CONCRETE CLASS.

MOLD AND CURE ONE SET OF 4 STANDARD CYLINDERS FOR EACH COMPRESSIVE STRENGTH TEST REQUIRED. TEST ONE SPECIMEN PER SET AT 7 DAYS FOR INFORMATION AND TEST 2 SPECIMENS PER SET FOR ACCEPTANCE OF STRENGTH POTENTIAL AT 28 DAYS. RETAIN ONE SPECIMEN FROM EACH SET FOR LATER TESTING, IF REQUIRED.

EVALUATE CONSTRUCTION AND CURING PROCEDURES AND IMPLEMENT CORRECTIVE ACTION WHEN STRENGTH RESULTS FOR FIELD-CURED SPECIMENS ARE LESS THAN 85 PERCENT OF TEST VALUES FOR COMPANION LABORATORY-CURED SPECIMENS.

COST OF ADDITIONAL TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WHEN UNACCEPTABLE CONCRETE HAS BEEN VERIFIED.

STRUCTURAL STEEL

ALL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE REQUIREMENTS OF AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," LATEST EDITION.

ALL WELDERS SHALL BE QUALIFIED IN ACCORDANCE WITH AWS DI.I "STRUCTURAL WELDING CODE - STEEL" FOR EACH PROCESS, POSITION AND JOINT CONFIGURATION.

STRUCTURAL STEEL WIDE FLANGE MEMBERS SHALL CONFORM WITH ASTM A992.

STEEL PLATE, BARS AND CHANNELS SHALL CONFORM WITH ASTM A36 UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL TUBING SHALL CONFORM WITH ASTM A500, GRADE B

STRUCTURAL STEEL PIPE SHALL CONFORM WITH ASTM A53, GRADE B.

BOLTS FOR STRUCTURAL STEEL CONNECTIONS SHALL BE MINIMUM 3/4" DIAMETER ASTM A325-N UNLESS DESIGNATED AS A490 ON THE DRAWINGS. NUTS SHALL BE ASTM A563 GRADE C OR DH. TENSION CONTROL BOLTS SHALL BE ASTM F1852 OR ASTM F2280.

WASHERS SHALL BE FLAT CONFORMING TO ASTM F436 TYPE I. THE FINISH OF WASHERS IS TO MATCH THE NUT. A325 BOLTS SHALL HAVE WASHERS UNDER THE HEAD AND A490 BOLTS SHALL HAVE HARDENED WASHERS UNDER THE HEAD AND THE NUT.

ANCHOR BOLTS SHALL BE ASTM F1554 55 KSI YIELD STRENGTH, UNLESS OTHERWISE NOTED

SHEAR STUD CONNECTORS CONFORMING TO ASTM A108 ARE TO BE FIELD INSTALLED. AFTER WELDING, STUDS ARE TO BE THE LENGTH SHOWN ON THE DRAWINGS. SHOP WELDING OF STUDS IS NOT PERMITTED.

CONNECTIONS SHALL BE BOLTED OR WELDED WITH A MINIMUM OF TWO BOLTS OR

ALL WELDS SHALL UTILIZE E70XX ELECTRODES AND SHALL BE A MINIMUM OF 3/16 INCH IN SIZE UNLESS NOTED OTHERWISE.

EQUIVALENT WELD.

UNLESS CONNECTIONS ARE DETAILED ON THE DRAWINGS, THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF CONNECTIONS. CONNECTION DESIGN SHALL BE UNDER

THE DIRECT SUPERVISION OF AN ENGINEER EXPERIENCED IN CONNECTION DESIGN.

BEAM CONNECTIONS SHALL BE IN ACCORDANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION. STANDARD WEB CONNECTIONS SHALL BE PROVIDED WHERE POSSIBLE.

BEAM CONNECTIONS ARE TO BE DESIGNED TO RESIST ONE HALF THE ALLOWABLE LOAD FOR THE APPROPRIATE SPAN GIVEN IN THE MAXIMUM TOTAL UNIFORM LOAD TABLE OF THE AISC MANUAL OF STEEL CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR THE ADEQUACY OF ANY CONNECTIONS DESIGNED BY THE CONTRACTOR. APPROVAL OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THIS RESPONSIBILITY

SHOP DRAWINGS FOR STRUCTURAL STEEL SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION OR ORDERING OF STEEL.

SHOP DRAWINGS SHALL INCLUDE ERECTION PLANS AND PIECE DETAILS INDICATING SIZE,

SHOP DRAWINGS SHALL INCLUDE ERECTION PLANS AND PIECE DETAILS INDICATING SIZE, SPACING, LOCATION AND ATTACHMENT OF STRUCTURAL MEMBERS INCLUDING SIZE AND SPACING OF BOLTS AND WELDS. SUBMITTAL MUST ALSO INCLUDE A THREE DIMENSIONAL RENDERING OF THE STEEL FRAMING.

THE CONTRACTOR SHALL SURVEY, REVIEW AND CONFIRM EXISTING CONDITIONS PRIOR TO DEVELOPING SHOP DRAWINGS.

NO PORTION OF THE CONTRACT DRAWINGS SHALL BE REPRODUCED FOR USE AS SHOP DRAWINGS.

SHOP PRIME ALL STRUCTURAL STEEL MEMBERS WITH FAST-CURING, LEAD AND CHROMATE-FREE, VOC-COMPLIANT, UNIVERSAL MODIFIED-ALKYD PRIMER WITH GOOD RESISTANCE TO NORMAL ATMOSPHERIC CORROSION, COMPLYING WITH PERFORMANCE REQUIREMENTS OF FS TT-P-664, OR EQUIVALENT.

DO NOT PRIME SURFACES THAT WILL BE FIREPROOFED, IN CONTACT WITH CONCRETE, WITHIN 3 INCHES OF FIELD WELDS, OR ON THE FAYING SURFACE OF HIGH STRENGTH BOLTED FRICTION CONNECTIONS.

GALVANIZE STRUCTURAL STEEL MEMBERS AS INDICATED ON THE DRAWINGS IN ACCORDANCE WITH ASTM A123 AND A385 AFTER FABRICATION. PREPARE GALVANIZED SURFACES TO BE PAINTED IN ACCORDANCE WITH ASTM D2092 AND SHOP COAT WITH A COMPATIBLE PRIMER. REPAIR DAMAGED GALVANIZING IN ACCORDANCE WITH ASTM A780.

FURNISH AND INSTALL TEMPORARY SUPPORTS AND INTERNAL BRACES NECESSARY TO

SUPPORT STRUCTURAL STEEL DURING ERECTION. TEMPORARY SUPPORTS AND BRACES

SHALL BE ADEQUATE FOR ANTICIPATED WIND, SEISMIC, EQUIPMENT AND ERECTION LOADS. REMOVE TEMPORARY SHORING AFTER THE STEEL ERECTION IS COMPLETE.

THE OWNER WILL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY

TO PERFORM FIELD TESTS AND INSPECTIONS AND PREPARE TEST REPORTS.

FIELD WELDING AND HIGH STRENGTH BOLTS WILL BE SUBJECT TO INSPECTION.

THE CONTRACTOR WILL REMOVE AND REPLACE WORK THAT DOES NOT COMPLY WITH SPECIFIED REQUIREMENTS AND BE RESPONSIBLE FOR THE COST OF ADDITIONAL INSPECTING TO DETERMINE COMPLIANCE OF CORRECTED WORK WITH SPECIFIED

POST-INSTALLED ANCHORS

REQUIREMENTS.

ANCHORS.

ALL-POST INSTALLED ANCHORS SHALL BE PROVIDED BY HILTI, INC. AS NOTED BELOW OR APPROVED EQUAL.

ADHESIVE ANCHORS TO CONCRETE SHALL BE HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HAS-E THREADED ROD.

MECHANICAL SCREW ANCHORS TO CONCRETE SHALL BE HILTI HUS EZ SCREW ANCHORS MECHANICAL EXPANSION ANCHORS TO CONCRETE SHALL BE HILTI HSL-3 EXPANSION

REBAR DOWELING TO CONCRETE SHALL BE HILTI HI-HY 200 SAFE SET SYSTEM.

REBAR DOWELING TO ROCK SHALL BE HILTI HIT-RE 500-SD EPOXY ADHESIVE SYSTEM.

ADHESIVE ANCHORS TO MASONRY SHALL BE HILTI HIT-HY 70 ANCHORING SYSTEM WITH HILTI HAS-E THREADED ROD AND SCREEN TUBE.

ANCHORS SHALL BE INSTALLED PER MANUFACTURER INSTRUCTIONS AND RECOMMENDATIONS.

ANCHOR DIAMETER, EMBEDMENT AND SPACING SHALL BE AS NOTED ON THE DRAWINGS.

ANCHOR CAPACITY IS DEPENDENT ON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE DISTANCE INDICATED ON THE DRAWINGS AND THE MANUFACTURER RECOMMENDATIONS.

SPECIAL INSPECTIONS

THE OWNER SHALL EMPLOY A SPECIAL INSPECTION AGENCY TO PERFORM INSPECTIONS

AND TESTING DURING CONSTRUCTION.

SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN

APPROVED INDEPENDENT AGENCY MEETING THE REQUIREMENTS OF ASTM E329 -

MATERIALS, ASTM D3740 - SOILS, ASTM C1077 - CONCRETE, ASTM A880 - STEEL, AND ASTM E543 - NON-DESTRUCTIVE TESTING.

THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING CODE OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION.

THE SPECIAL INSPECTOR SHALL OBSERVE CONSTRUCTION PROGRESS FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF NOT CORRECTED DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER AND BUILDING OFFICIAL.

THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE BUILDING OFFICIAL, STRUCTURAL ENGINEER, CONTRACTOR, AND OWNER.

THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A FINAL REPORT INDICATING THAT THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED AND IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

INSPECTIONS SHALL BE CONDUCTED FOR THE MATERIALS AND OPERATIONS LISTED PER THE FOLLOWING STATEMENT OF SPECIAL INSPECTIONS:

GEOTECHNICAL INSPECTIONS:

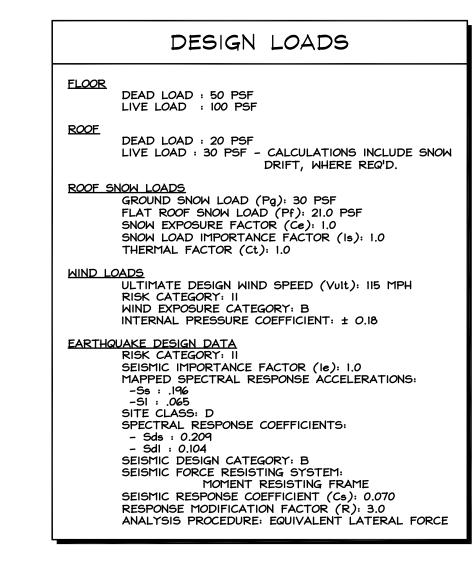
BEARING CAPACITY BELOW SHALLOW FOUNDATIONS
DEPTH OF FOOTING
CLASSIFICATION AND TESTING OF FILL MATERIALS
MATERIAL, DENSITY AND LIFT THICKNESS OF COMPACTED FILL

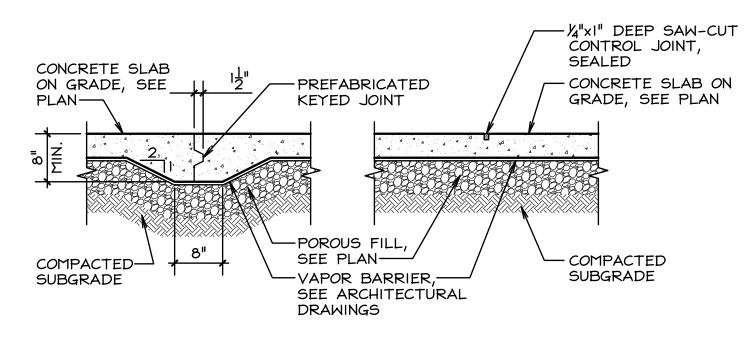
CONCRETE INSPECTIONS:

PLACEMENT OF REINFORCING STEEL
ANCHOR BOLT LOCATION
VERIFY USE OF REQUIRED MIX DESIGN
SAMPLE CONCRETE FOR STRENGTH TESTS
MEASURE AIR CONTENT, TEMPERATURE, AND SLUMP
FORMWORK FOR SIZE, SHAPE AND LOCATION

STEEL INSPECTIONS:

BOLT QUANTITY AND TENSIONING WELD SIZE AND TYPE MEMBER LOCATIONS AND JOINT DETAILS



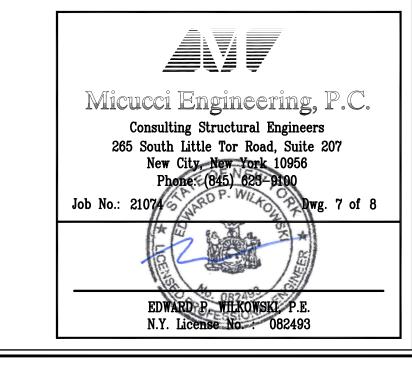


CONTROL JOINT

TYPICAL CONCRETE

SLAB ON GRADE JOINTS

CONSTRUCTION JOINT



AJ

. MILNAMOW, R.. Ucense No. 32407

AATTHEW T. M. REGISTERED ARCHITECT

Revisions:

PERMIT SET
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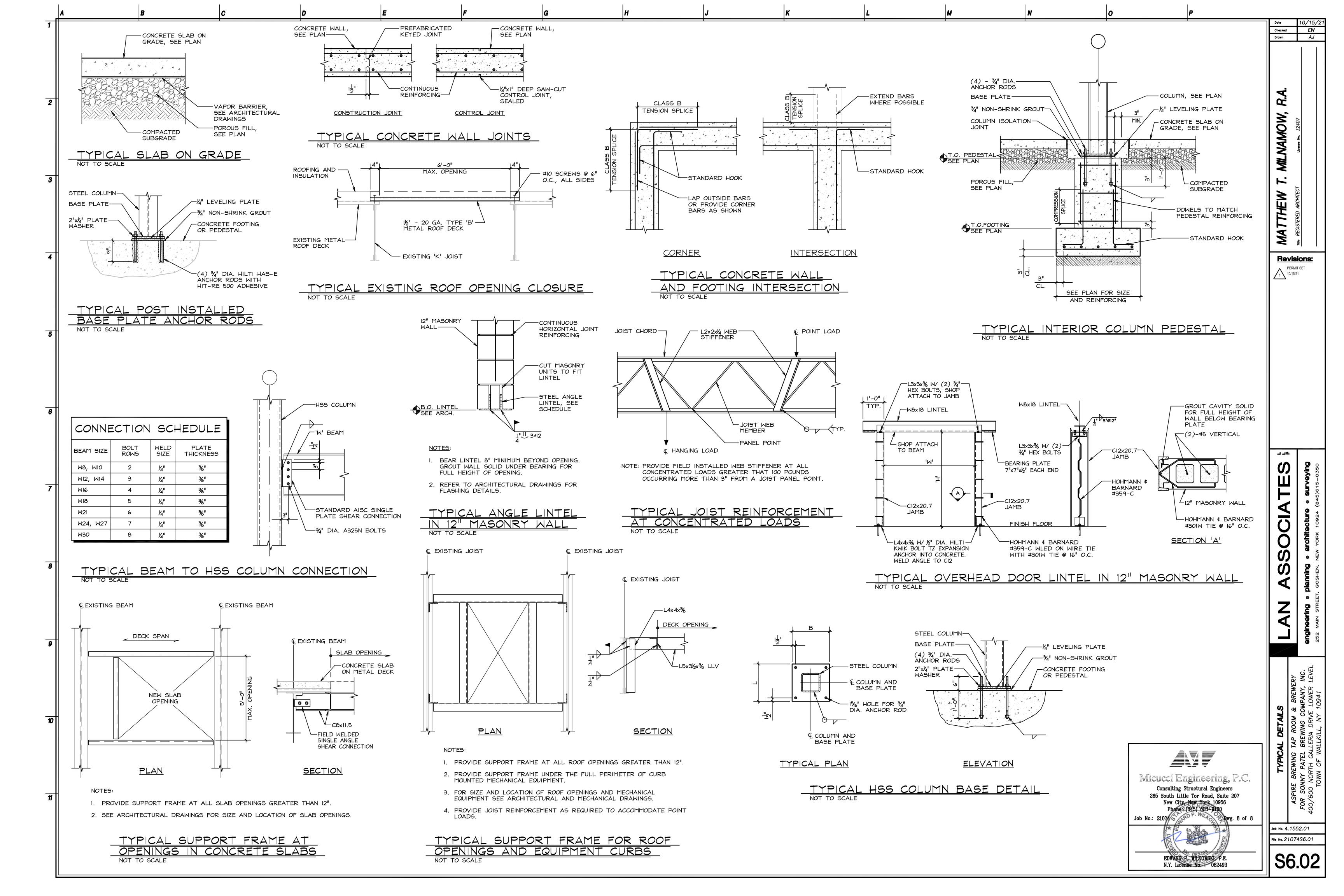
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D TYPICAL DETAILS
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EWING COMPANY, INC.

NERAL NOTES AN ASPIRE BREWING TAI OR SONNY PATEL BR

Job No. 4.1552.01
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					Legend (REFER TO DEMOLITION FLOOR PLANS)	Demolition Key Notes
					SYMBOL DESCRIPTION	
					EXISTING PARTITION TO REMAIN	INTERIOR PARTITION DEMOLITION: C STUDS, ELECTRICAL OUTLETS, SWITE ACCORDANCE WITH NEC REQUIREMI
					EZISTING PARTITION TO BE REMOVED/ DEMOLISHED	FLOORS, AND CEILINGS AS REQUIRE 2. DOOR REMOVAL: CONTRACTOR TO F
						OWNER FOR SALVAGE PRIOR TO DIS 3. FLOOR FINISH: CONTRACTOR TO REI
					REMOVE PORTION OF EXISTING PARTITION TO DIMENSION SHOWN.	SUB-FLOOR & DISPOSE OF IN AN APF 4. CASEWORK: CONTRACTOR TO REMO
					EXISTING DOOR/FRAME TO BE REMOVED	BLOCKING, SINKS, ETC. CONFER WIT 5. ACOUSTICAL CEILING TILE & GRID D
					EXISTING SUSPENDED CEILING TO BE REMOVED	SUSPENDED CEILING, TILE AND SOFI 6. <u>LIGHTING DEMOLITION:</u> EC TO DEMO PER NEC REQUIREMENTS. SEE ELEC
					General Notes	FOR SALVAGE PRIOR TO DEMOLITION 7. HVAC DIFFUSERS & RETURN AIR GRI LOUVERS IN THEIR ENTIRETY. SEE M
					1. DIMENSIONS SHOWN ARE FROM FACE OF FINISH MATERIALS (+/-) UNLESS OTHERWISE NOTED.	8. FIRE PROTECTION: EC TO REMOVE E INFORMATION.
					CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS. PROVIDE INTERIOR AND EXTERIOR SHORING, BRACING OR SUPPORT TO PREVENT MOVEMENT,	CONTRACTOR TO REMOVE SMOKE D PROTECTION DRAWINGS FOR ADDITI
					SETTLEMENT OR COLLAPSE OF AREAS TO BE DEMOLISHED AND ADJACENT FACILITIES TO REMAIN. 4. THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES ONLY WITHIN THE ALLOWABLE HOURS OF	10. EXISTING ELECTRICAL PANELS TO RE11. CONTRACTOR TO DEMOLISH EXISTING
					OPERATION ON WEEKDAYS AND WEEKENDS IN ACCORDANCE WITH THE LOCAL NOISE ORDINANCE. THE CONTRACTOR SHALL CONSULT THE LOCAL MUNICIPALITY FOR ACCEPTABLE HOURS.	REQUIRED. REFER TO PLUMBING DR. 12. CONTRACTOR TO DEMOLISH EXISTIN
					5. CONTRACTOR IS REQUIRED TO PATCH (TO MATCH EXISTING), IMMEDIATELY AFTER REMOVAL, ALL WALL, FLOOR & CEILING OPENINGS WHERE EXISTING PIPE, DUCT, CONVECTORS, ETC. ARE BEING REMOVED. SEAL OPENING WITH 3 HOUR BARRIER CAULK. REFER TO FIRESTOPPING DETAILS FOR ADDITIONAL	13. CONTRACTOR TO DEMOLISH EXISTIN14. CONTRACTOR TO DEMOLISH EXISTIN ENTIRETY.
					INFORMATION.	15. CONTRACTOR TO DEMOLISH EXISTIN 16. EXISTING TENANT SPACE TO REMAIN
						17. CONTRACTOR SHALL SAW-CUT AND CONTRACTOR SHALL TEMPORARILY
						DRAWINGS FOR SHORING AND BRAC 18. CONTRACTOR TO REMOVE EXISTING
						SWITCHES, ETC. CONTRACTOR TO TE CONTRACTOR TO TEMPORARILY BRA
						DEMOLITION. 19. CONTRACTOR TO REMOVE EXISTING
						20. CONTRACTOR TO SAW-CUT AND REM MATERIAL UNDER THE SLAB AS REQU DRAWINGS FOR ADDITIONAL INFORM
						21. CONTRACTOR TO DEMOLISH EXISTIN 22. CONTRACTOR TO DEMOLISH PORTIO
						23. CONTRACTOR TO DEMOLISH EXISTIN CONFER WITH OWNER FOR SALVAGE
						24. EXISTING WALL SYSTEM TO REMAIN. 25. CONTRACTOR TO DEMO EXISTING EX
						26. CONTRACTOR TO DEMOLISH EXISTIN ASSOCIATED PIPING, WIRING, AND PI
						INFORMATION. PATCH AND REPAIR A 27. EXISTING MECHANICAL EQUIPMENT
						28. EXISTING ROOF ACCESS HATCH TO F 29. CONTRACTOR TO DEMOLISH PORTIC PROPOSED ROOF PLAN & STRUCTUF
						30. EXISTING ROOF SYSTEM TO REMAIN 31. CONTRACTOR TO DEMOLISH EXISTIN
						REMOVE EXISTING ROOF DECK AND STRUCTURAL DRAWINGS FOR ADDIT
						32. EXISTING CONCRETE CURB TO REMA 33. EXISTING COLUMN FOOTINGS TO RE
						34. CONTRACTOR TO DEMOLISH EXISTIN 35. CONTRACTOR TO DEMOLISH PORTIC
						36. CONTRACTOR TO DEMOLISH PORTIC EQUIPMENT. SEE MEP AND CIVIL DRA
						37. EXISTING DOOR TO REMAIN. PREPAR 38. EXISTING FREE STANDING WALL TO R 39. EXISTING LOUVER TO REMAIN. PREPART
						40. CONTRACTOR TO DEMOLISH EXISTIN
						41. CONTRACTOR TO DEMOLISH EXISTIN
						42. CONTRACTOR TO DEMOLISH AREA C 43. EXISTING LOADING DOORS TO REMA
						44. CONTRACTOR DEMOLISH EXISTING (45. CONTRACTOR TO DEMOLISH EXISTIN
						ELECTRICAL DRAWINGS 46. EXISTING COLUMN COVERS TO REMARK PROCESS
						47. EXISTING SIGNAGE TO REMAIN. PRO 48. EXISTING EXHAUST TO REMAIN U.O.N 49. EXISTING EXTERIOR LIGHT FIXTURE
						50. EXISTING METAL RAILING TO REMAIN 51. CONTRACTOR TO DEMOLISH EXISTIN
						NEW DOOR. PREPARE FRAME FOR N 52. EXISTING COPING TO REMAIN. PREPARE
						53. CONTRACTOR TO DEMOLISH PORTIC AND PLUMBING WORK. COORDINATE
						FLOOR STRUCTURE AS REQUIRED, S 54. CONTRACTOR TO REMOVE PORTION
						ACCOMMODATE INSTALLATION OF N ELEVATIONS 55. CONTRACTOR TO DEMOLISH EXISTIN
						AND CIVIL DRAWINGS. 56. EXISTING ROOF DRAIN LEADER TO R
						57. CONTRACTOR TO PROVIDE NEW PIT WITH EQUIPMENT AND STRUCTURAL
						58. CONTRACTOR TO REMOVE PORTION ACCOMMODATE INSTALLATION OF N TYPICAL OF (2) LOCATIONS
						59. CONTRACTOR TO MAKE NEW OPENII FRAMING PLAN AND SECTION, TYPIC
						60. CONTRACTOR TO DEMOLISH PORTIC COORDINATE SIZES AND LOCATIONS
						REQUIRED, SEE STRUCTURAL DRAW

CONTRACTOR TO REMOVE EXISTING INTERIOR PARTITION, INCLUDING WALL BASE, GWB, TCHES, ETC. CONTRACTOR TO TERMINATE ALL ELECTRICAL COMPONENTS IN

MENTS. CONTRACTOR TO TEMPORARILY BRACE AND SHORE ALL REMAINING WALLS, ED PRIOR TO DEMOLITION. REMOVE EXISTING DOOR, HINGES, FRAME, HARDWARE, CLOSER, ETC. CONFER WITH

MOVE EXISTING FLOOR FINISH IN ITS ENTIRETY TO EXPOSE EXISTING CONCRETE PROVED MANNER.

OVE AND DISCARD OF EXISTING CASEWORK INCLUDING COUNTERS, DOORS, HINGES, TH OWNER FOR SALVAGE PRIOR TO DEMOLITION.

EMOLITION: ENTIRE SPACE U.O.N. CONTRACTOR TO REMOVE AND DISCARD EXISTING FIT INCLUDING CEILING GRID, WALL ANGLES, SUPPORT WIRES, CLIPS, TIES, ETC. D EXISTING LIGHTING IN ITS ENTIRETY. EC TO TERMINATE ALL ELECTRICAL CONNECTIONS CTRICAL DEMOLITION DRAWINGS FOR ADDITIONAL INFORMATION. CONFER WITH OWNER

ILLES: MC TO REMOVE EXISTING SUPPLY DIFFUSERS, RETURN AIR GRILLES, AND/OR IECHANICAL DEMOLITION DRAWINGS FOR ADDITIONAL INFORMATION.

EXISTING FIRE ALARM DEVICE. SEE FIRE ALARM DRAWINGS FOR ADDITIONAL

DETECTOR, EMERGENCY LIGHT, EXIT SIGN, HORN STROBE OR RELATED DEVICE. SEE FIRE

TIONAL INFORMATION.

REMAIN. REFER TO ELECTRICAL DRAWINGS. NG PLUMBING FIXTURES IN THEIR ENTIRETY. DISCONNECT & REMOVE EXISTING PIPING AS

NG TOILET PARTITIONS, DOORS & HARDWARE IN THEIR ENTIRETY.

NG COLUMN WRAP FROM FLOOR SURFACE TO UNDERSIDE OF STRUCTURE ABOVE. NG STOREFRONT SYSTEM INCLUDING FRAMING, GLAZING, HARDWARE, ETC. IN ITS

NG EXTERIOR COLUMN WRAPS TO EXPOSE STRUCTURAL STEEL.

N. NOT IN CONTRACT. REMOVE EXISTING CONCRETE SLAB FLOOR & ASSOCIATED STRUCTURE BELOW. ' SHORE AND BRACE FLOOR STRUCTURE FROM LEVEL BELOW. REFER TO STRUCTURAL CING INFORMATION.

G EXTERIOR PARTITION, INCLUDING WALL BASE, GWB, STUDS, ELECTRICAL OUTLETS, TERMINATE ALL ELECTRICAL COMPONENTS IN ACCORDANCE WITH NEC REQUIREMENTS. ACE AND SHORE ALL REMAINING WALLS, FLOORS, AND CEILINGS AS REQUIRED PRIOR TO

S STOREFRONT GLAZING SYSTEM.

MOVE PORTION OF EXISTING CONCRETE SLAB. CONTRACTOR TO EXCAVATE EXISTING QUIRED. REFER TO PROPOSED FLOOR PLAN, MECHANICAL, ELECTRICAL & PLUMBING

NG COLUMN COVERS IN THEIR ENTIRETY. PREPARE FOR NEW PAINT.

ON OF EXISTING MASONRY WALL SYSTEM. NG BUILDING MOUNTED SIGNAGE WITH LIGHTING AND ALL ASSOCIATED CONDUIT.

E PRIOR TO DISPOSAL. SEE ELECTRICAL DRAWINGS

I. PREPARE FOR NEW PAINT. EXTERIOR DOOR INCLUDING HARDWARE AND EXISTING FRAME TO REMAIN.

NG MECHANICAL / PLUMBING EQUIPMENT IN ITS ENTIRETY INCLUDING EXISTING PITCH POCKET. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR ADDITIONAL AS REQUIRED

TO REMAIN. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

ON OF EXISTING ROOF SYSTEM & DECKING TO EXPOSE EXISTING STRUCTURE. REFER TO RAL DRAWINGS FOR ADDITIONAL INFORMATION.

NG ROOF SYSTEM AND INSULATION TO EXPOSE EXISTING ROOF DECK. CONTRACTOR TO STRUCTURE AS REQUIRED FOR NEW SKYLIGHT. REFER TO PROPOSED ROOF PLAN AND

TIONAL INFORMATION. AIN, TYPICAL.

NG GLASS BLOCK PARTITION IN ITS ENTIRETY

ON OF EXISTING SIDEWALK. SEE CIVIL DRAWINGS ON OF PAVEMENT FOR INSTALLATION OF NEW REINFORCED CONCRETE SLAB FOR NEW

RE FOR NEW PAINT

REMAIN. PREPARE FOR NEW PAINT ALL SIDES

NG FENCE IN ITS ENTIRETY. PATCH AND REPAIR AREAS OF PAVEMENT AS REQUIRED. SEE

NG BOLLARD IN ITS ENTIRETY. PATCH AND REPAIR PAVEMENT AS REQUIRED. SEE CIVIL

OF FRAMED PLATFORM IN ITS ENTIRETY

AIN. PREPARE FOR NEW PAINT CONCRETE PAD. SEE CIVIL DRAWINGS

NG EXTERIOR MOUNTED ELECTRICAL DEVICE AND ALL ASSOCIATED CONDUIT. SEE

IAIN. PREPARE FOR NEW PAINT

TECT DURING CONSTRUCTION

N. PROTECT DURING CONSTRUCTION

TO REMAIN U.O.N. PROTECT DURING CONSTRUCTION N. PREPARE FOR NEW PAINT

NG EXTERIOR DOOR. EXISTING FRAME TO REMAIN. MODIFY AS REQUIRED TO RECEIVE

NEW PAINT PARE FOR NEW PAINT ON OF EXISTING CONCRETE FLOOR STRUCTURE TO ACCOMMODATE NEW MECHANICAL

E SIZES AND LOCATIONS WITH MECHANICAL AND PLUMBING DRAWINGS, TYP. REINFORCE SEE STRUCTURAL DRAWINGS OF EXISTING COPING AND ANY ASSOCIATED ROOFING AND BLOCKING AS REQUIRED TO

NEW COPING. COORDINATE EXACT LOCATION WITH PROPOSED PLANS AND BUILDING

NG PAVEMENT AND EXCAVATE AS REQUIRED TO INSTALL NEW CONDUIT. SEE ELECTRICAL

FOR NEW EQUIPMENT. COORDINATE ACTUAL OPENING SIZE, LOCATION, AND DEPTH L REQUIREMENTS. SEE STRUCTURAL AND MEP DRAWINGS FOR ADDITIONAL INFORMATION \mid N OF EXISTING GWB AND FRAMED WALL FURRING BACK TO EXISTING CMU TO NEW SIGN SUPPORT. SEE STRUCTURAL DRAWINGS FOR FRAMING PLAN AND SECTION,

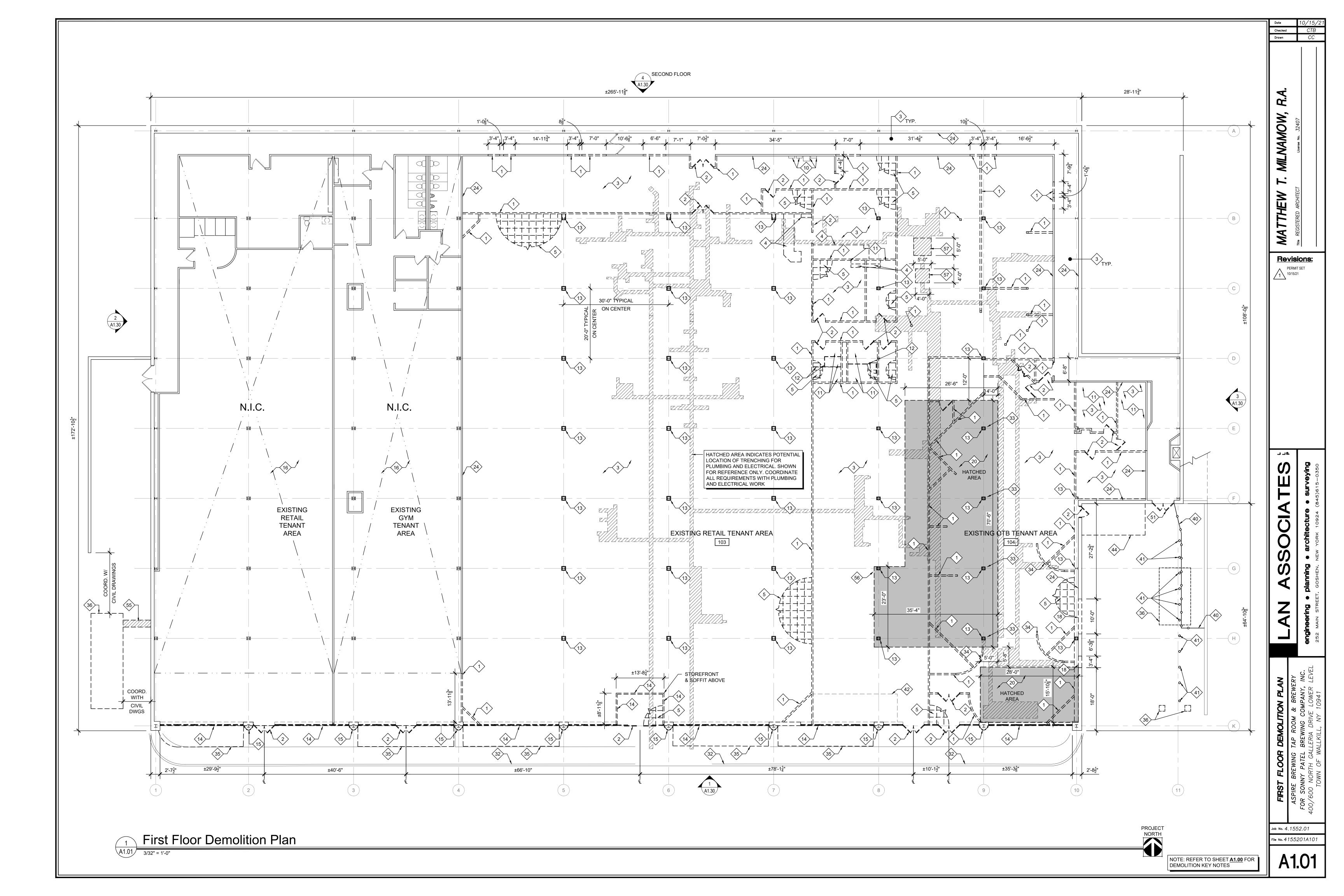
NGS IN EXISTING CMU WALL FOR NEW SIGN SUPPORT. SEE STRUCTURAL DRAWINGS FOR

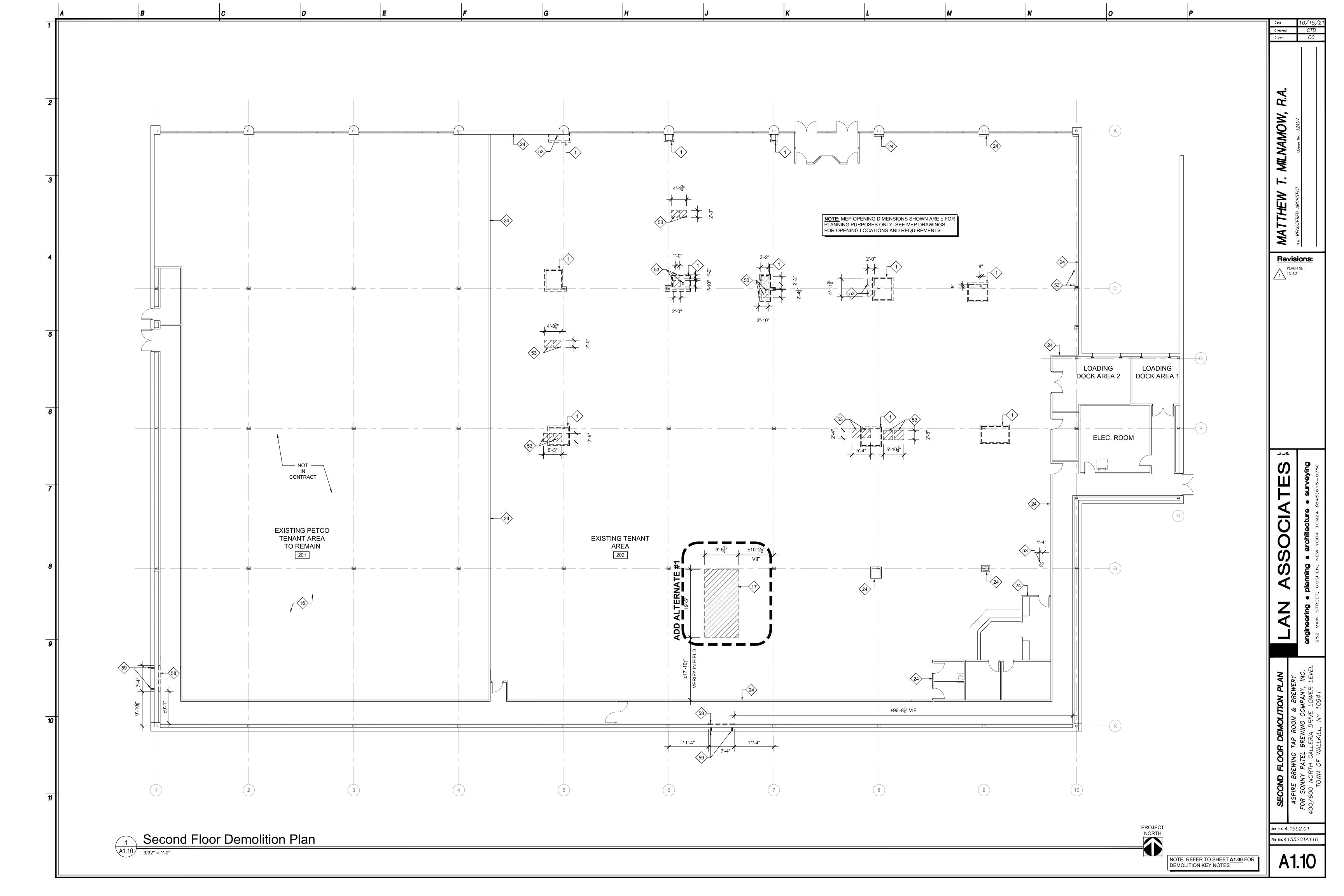
CAL OF (2) LOCATIONS ON OF EXISTING ROOF TO ACCOMMODATE NEW MECHANICAL AND PLUMBING WORK.

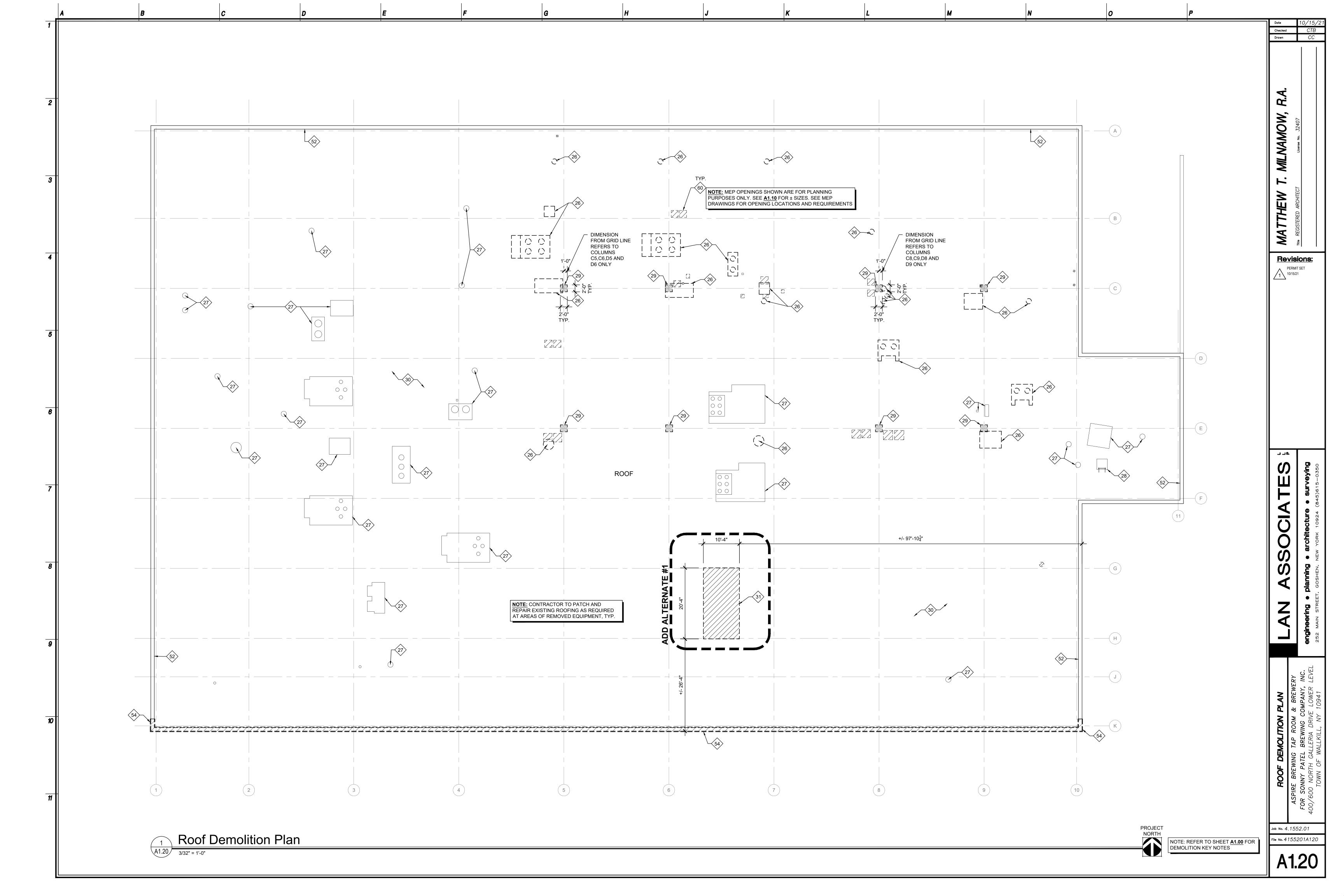
S WITH MECHANICAL AND PLUMBING DRAWINGS, TYP. REINFORCE ROOF STRUCTURE AS

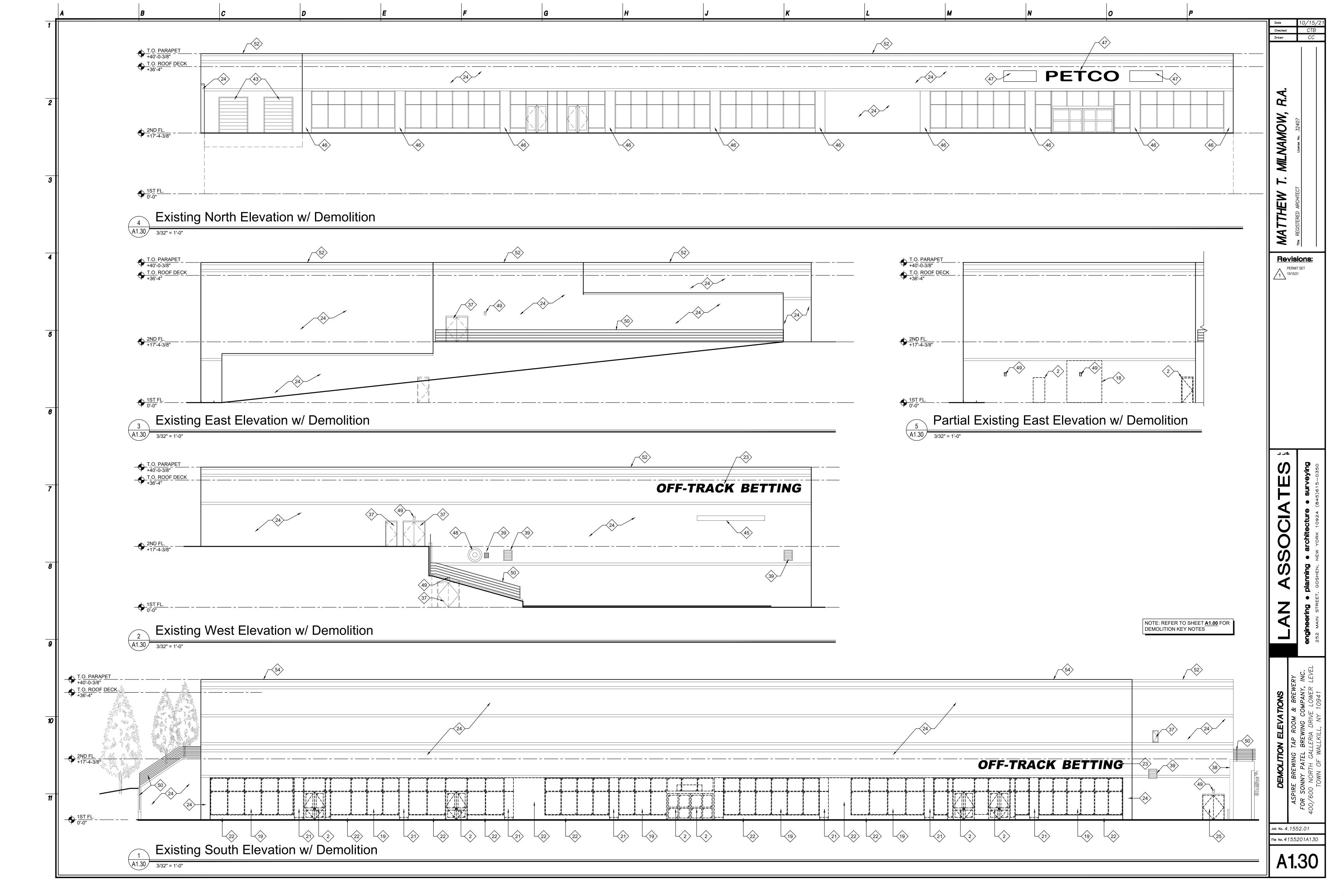
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SYMBOL INDICATES CONSTRUCTION KEY NOTE

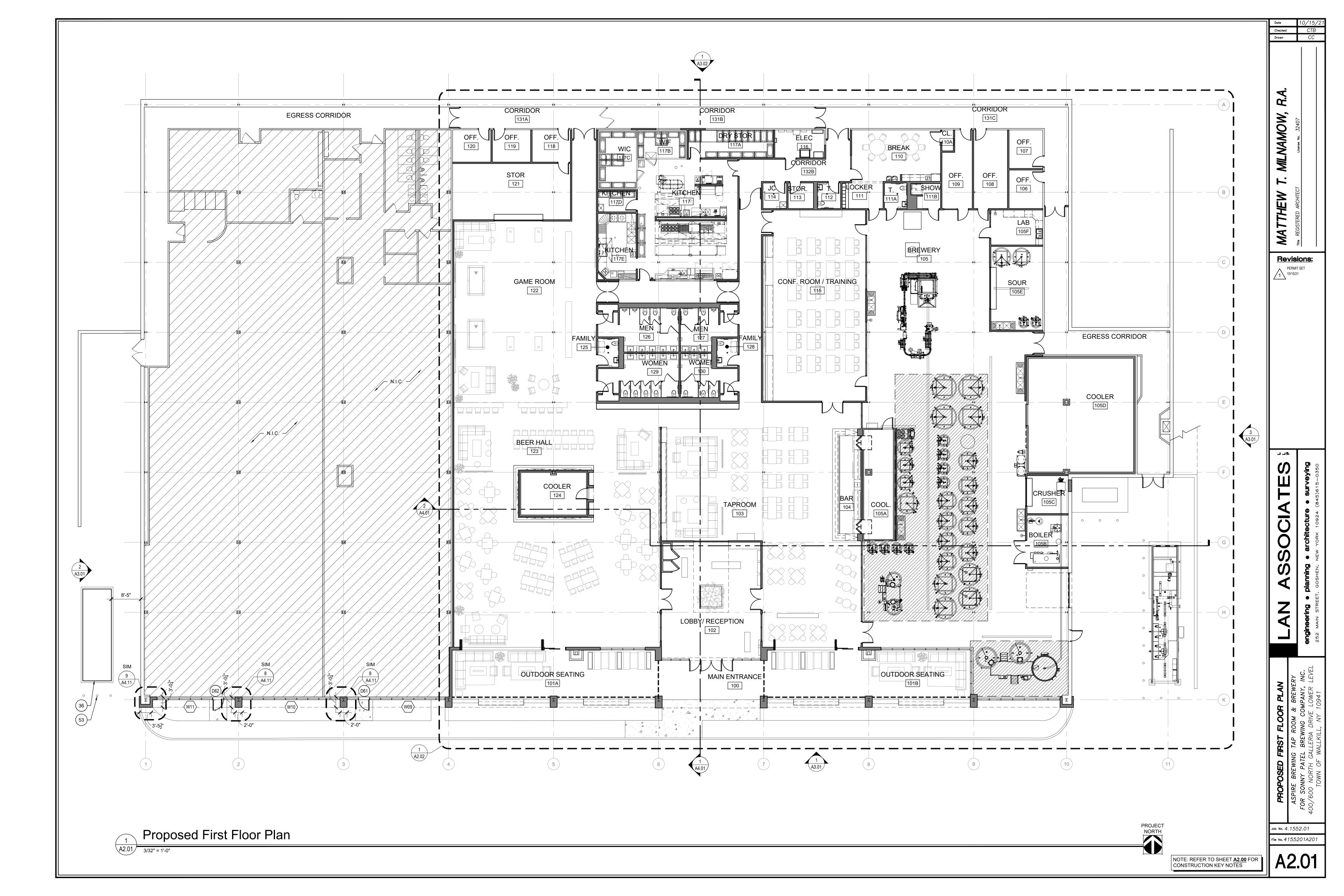
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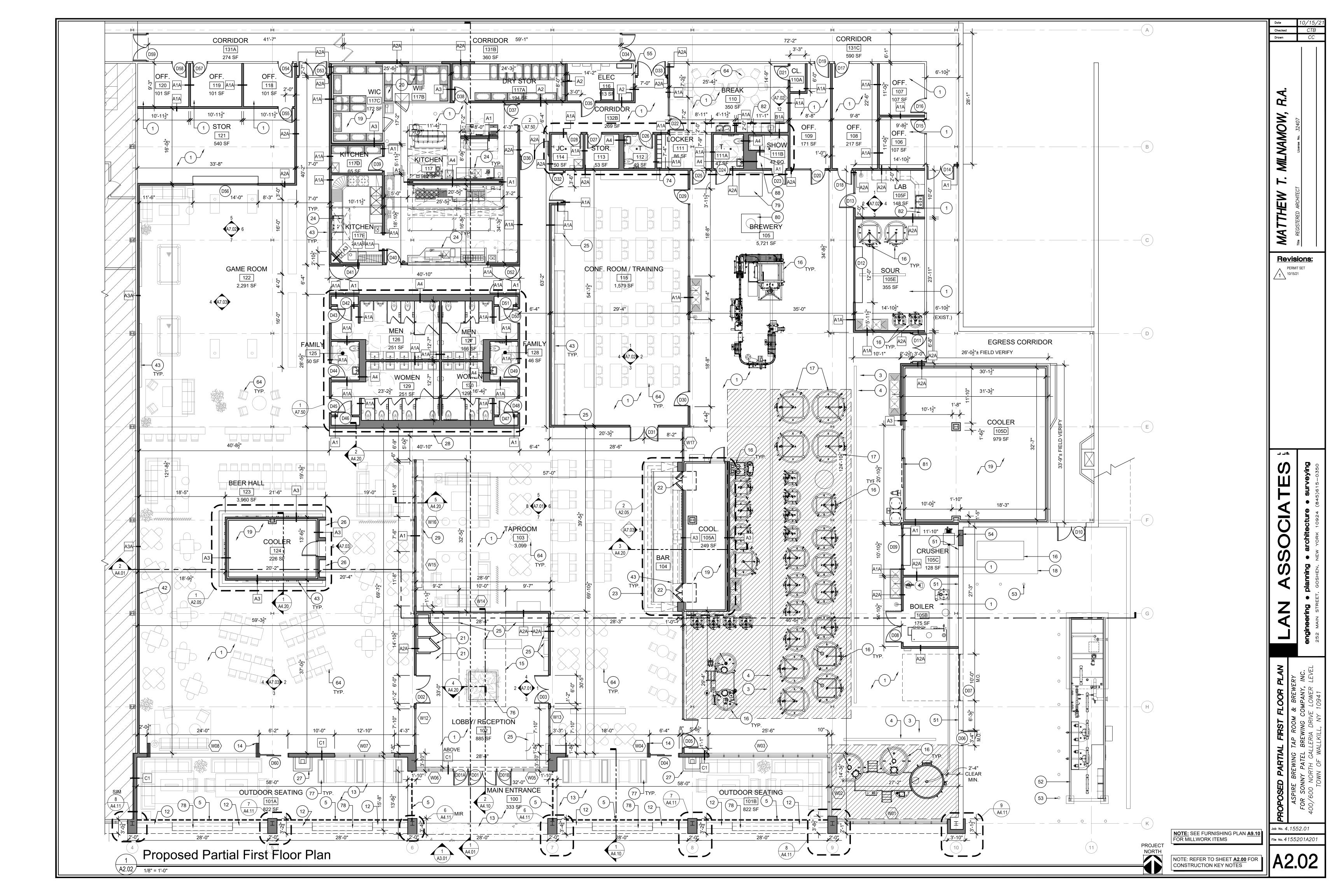
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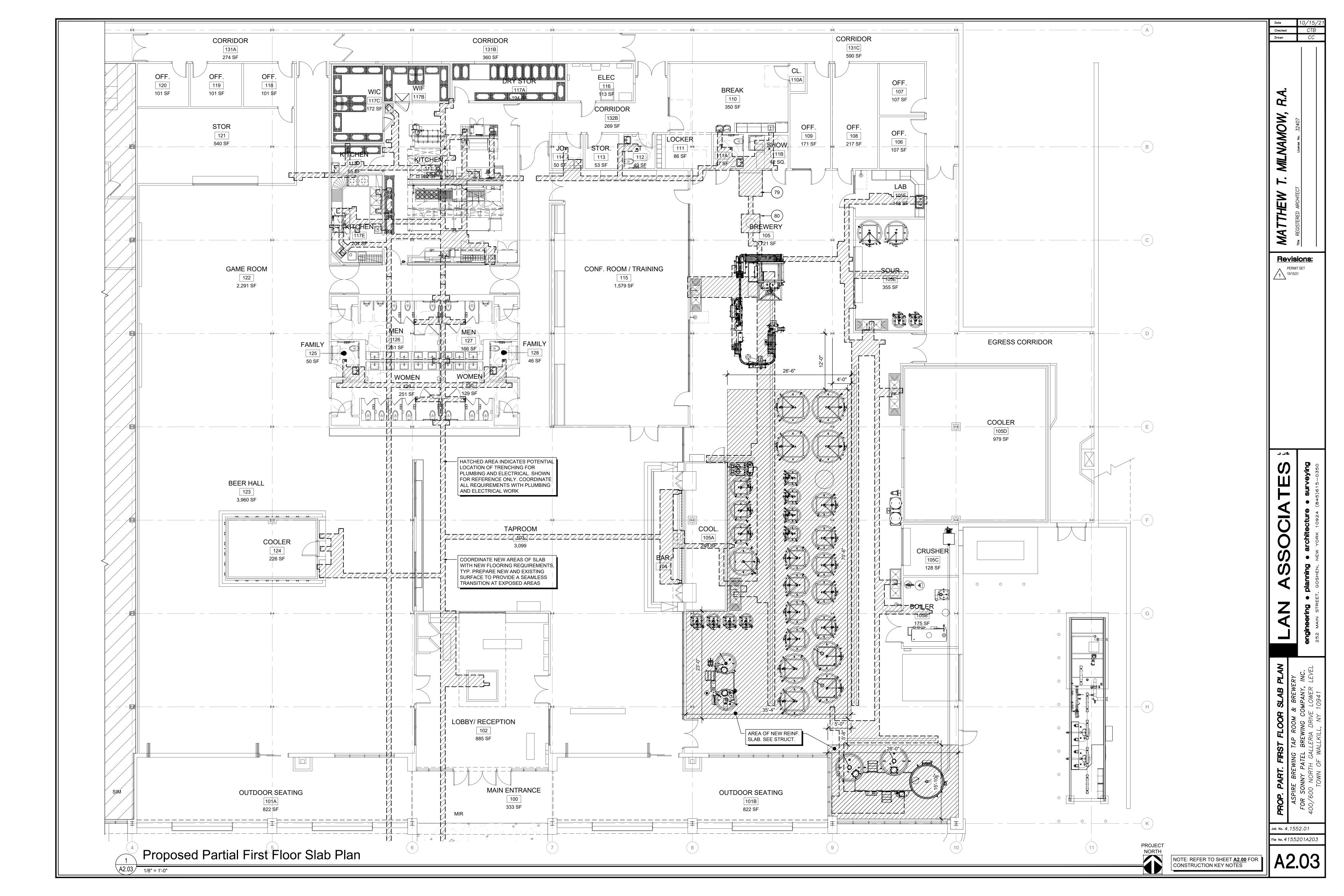
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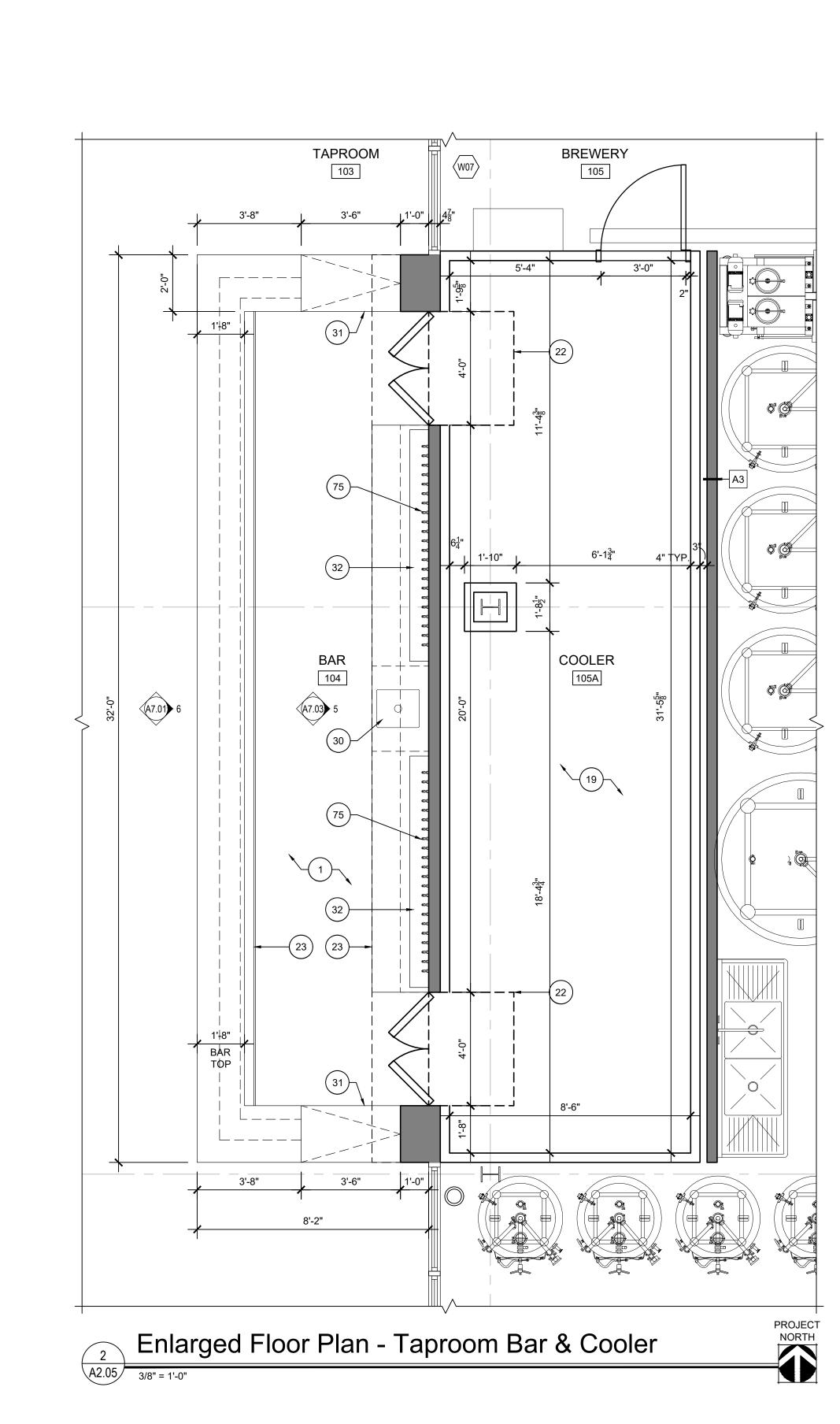
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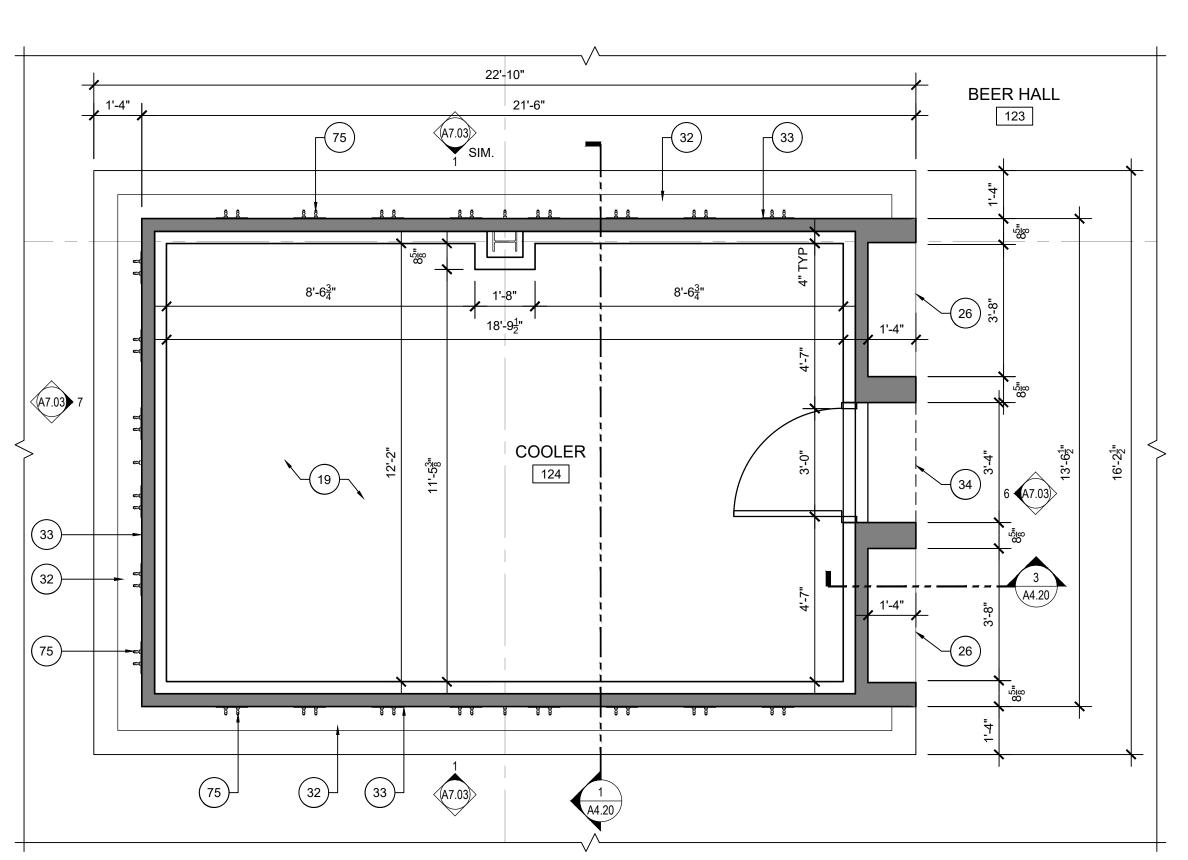
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Enlarged Floor Plan - Self-Serve Tap Cooler

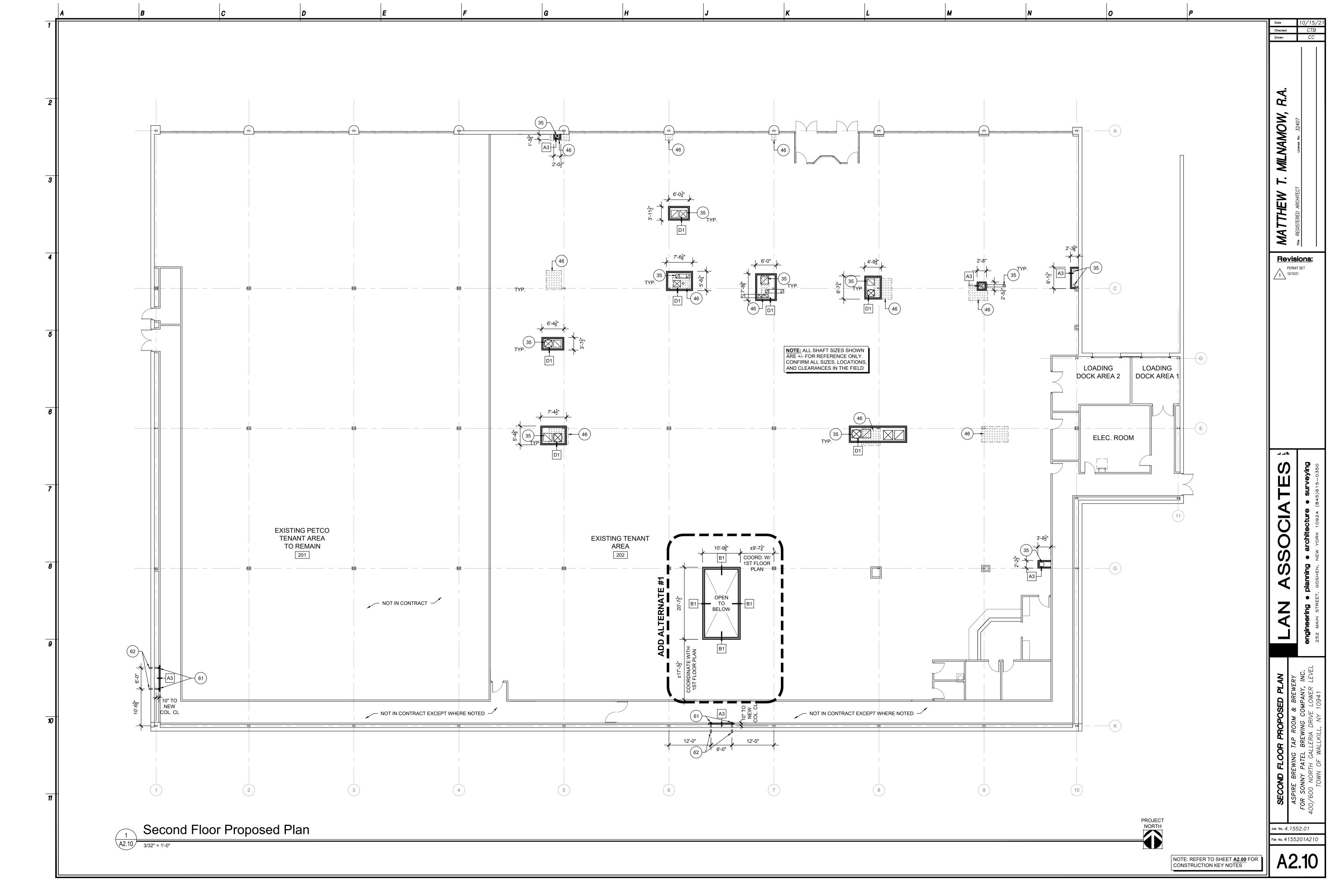
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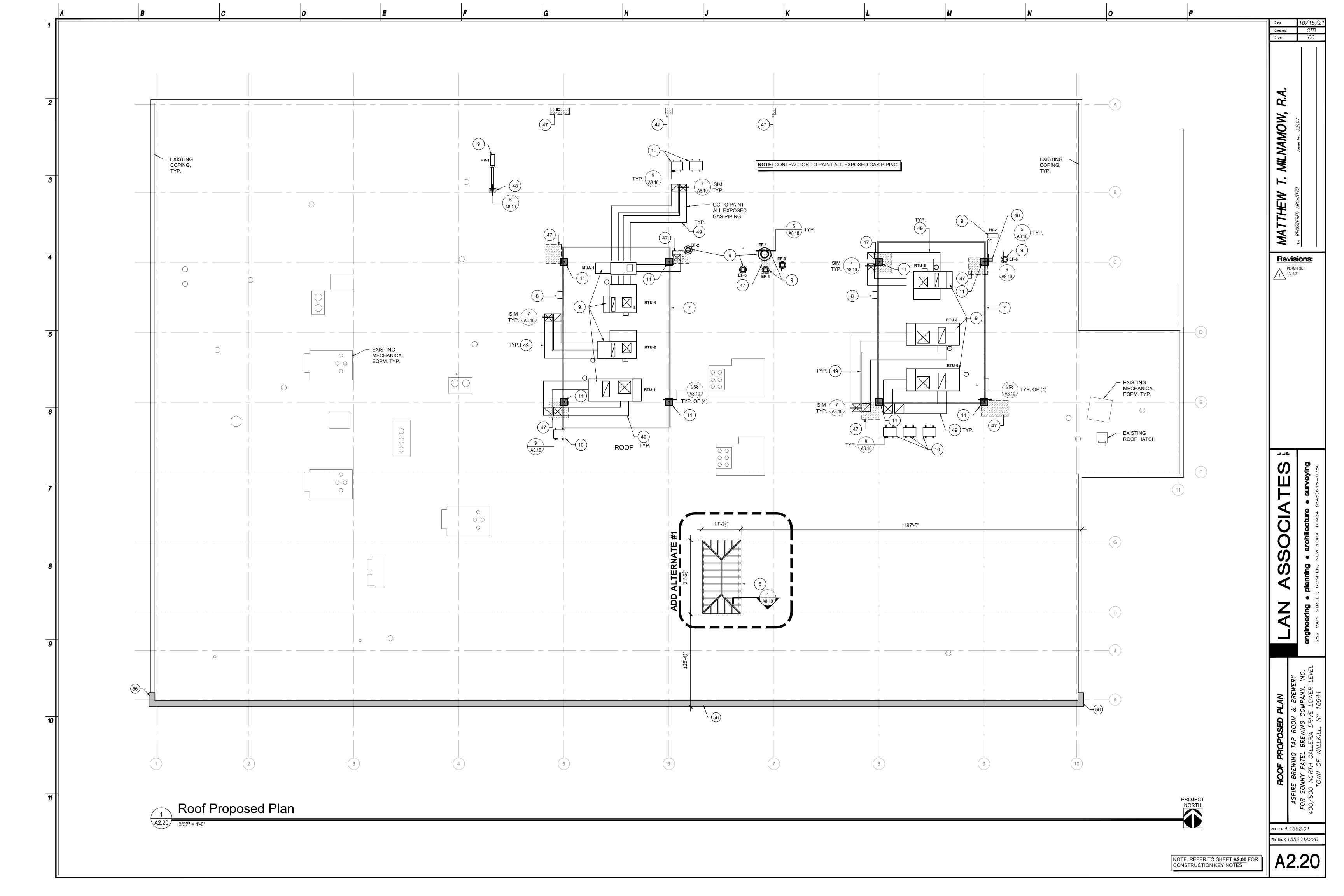
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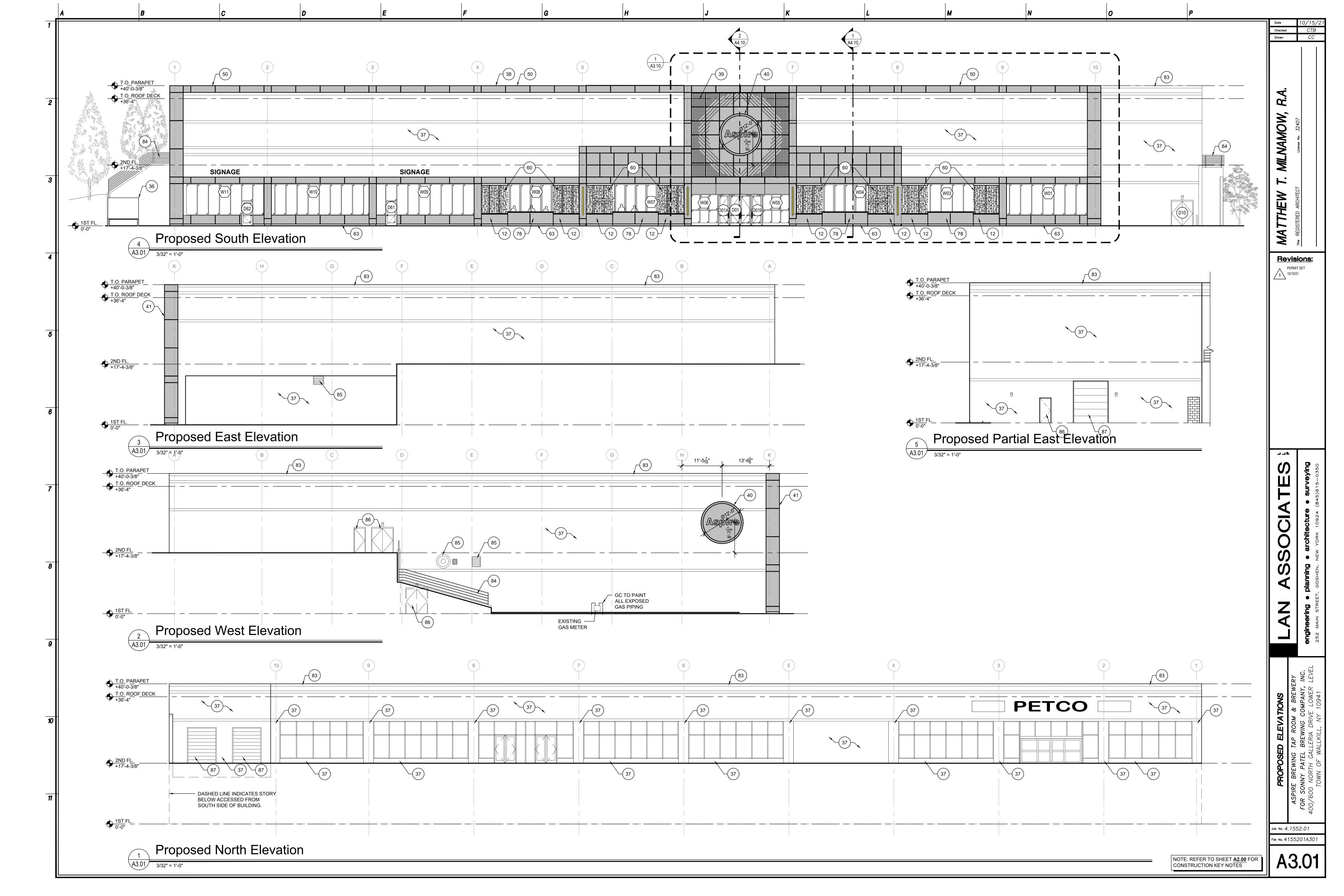
ASSOCIATES LA Sanning • architecture • surveying

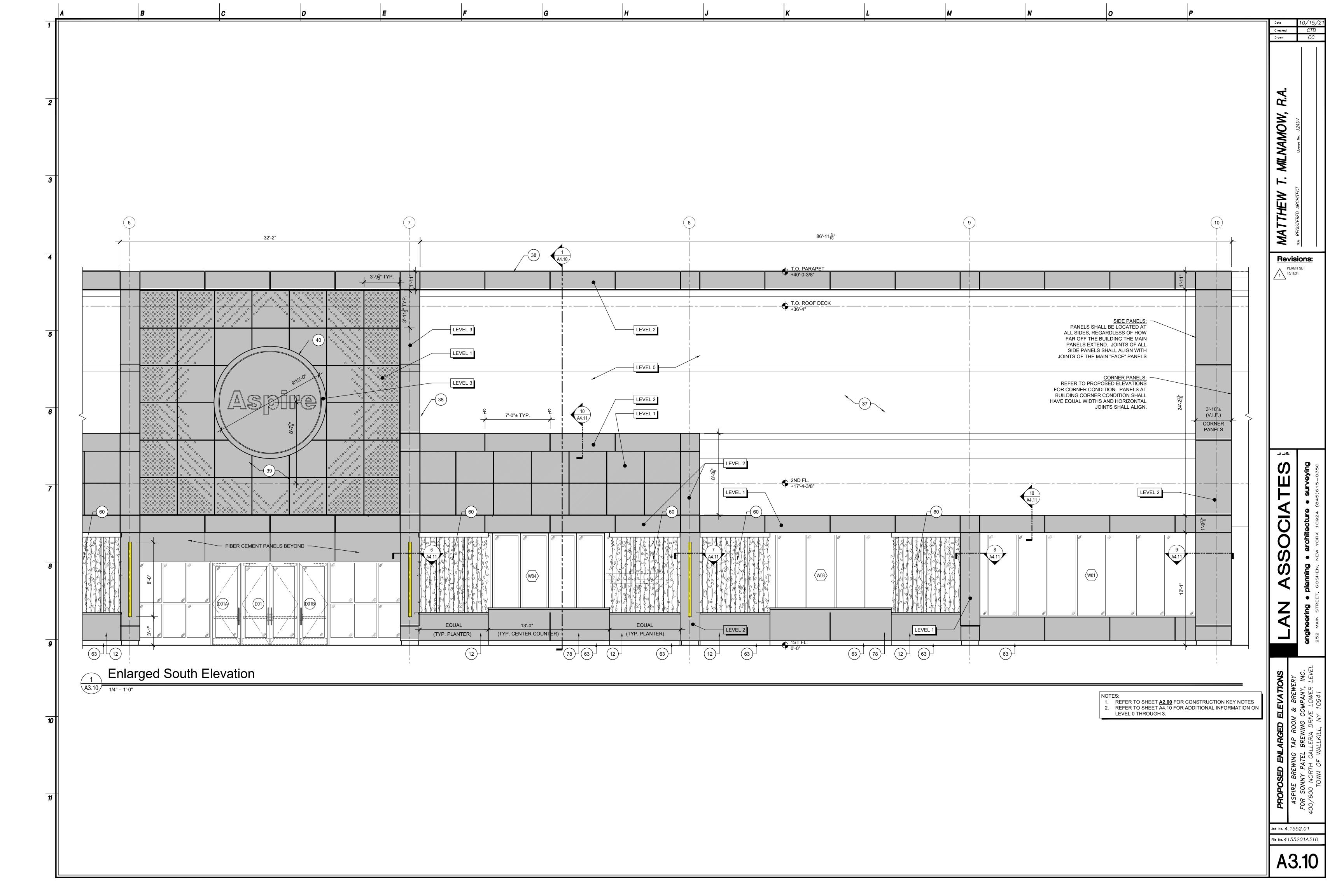
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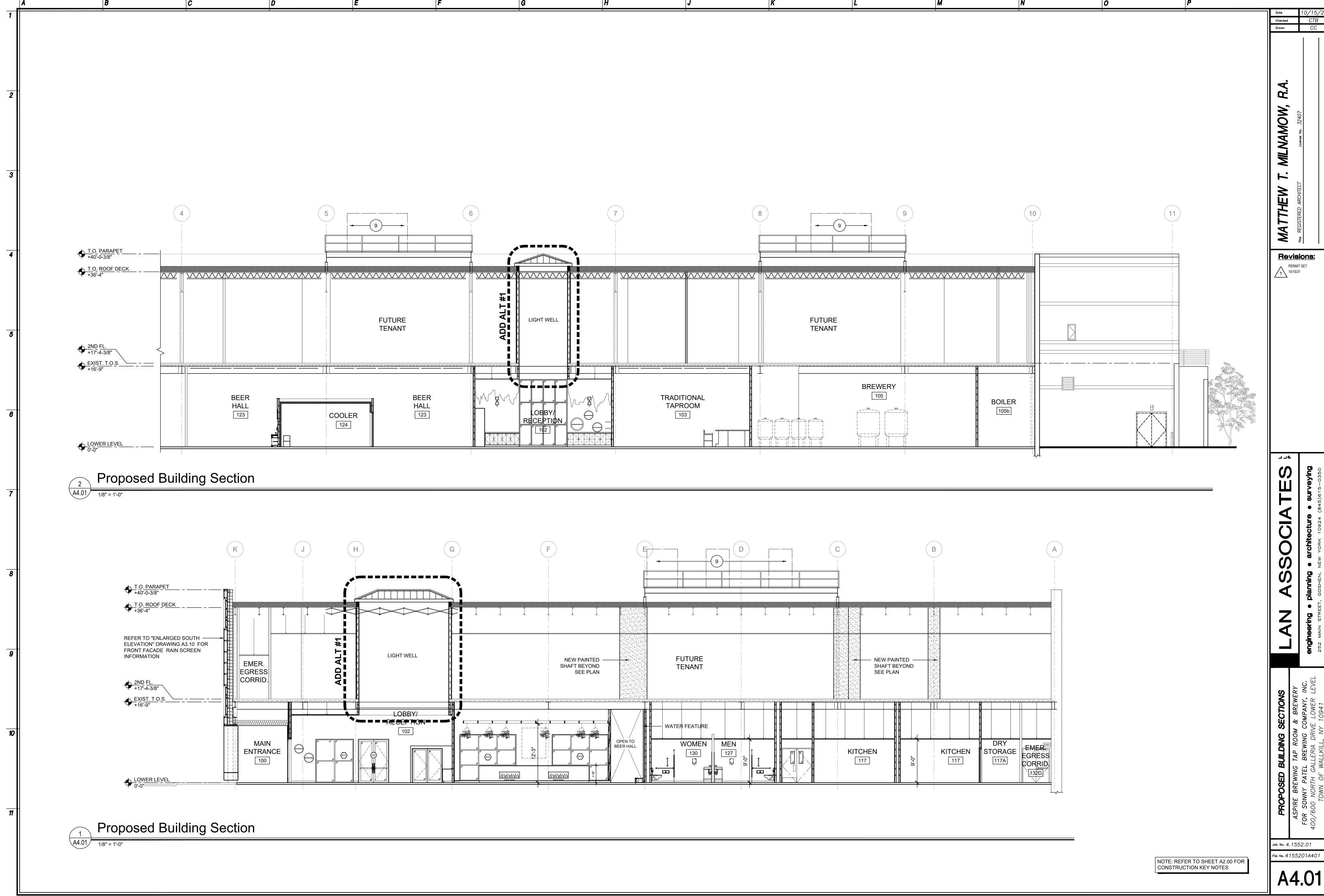
NOTE: REFER TO SHEET <u>A2.00</u> FOR CONSTRUCTION KEY NOTES









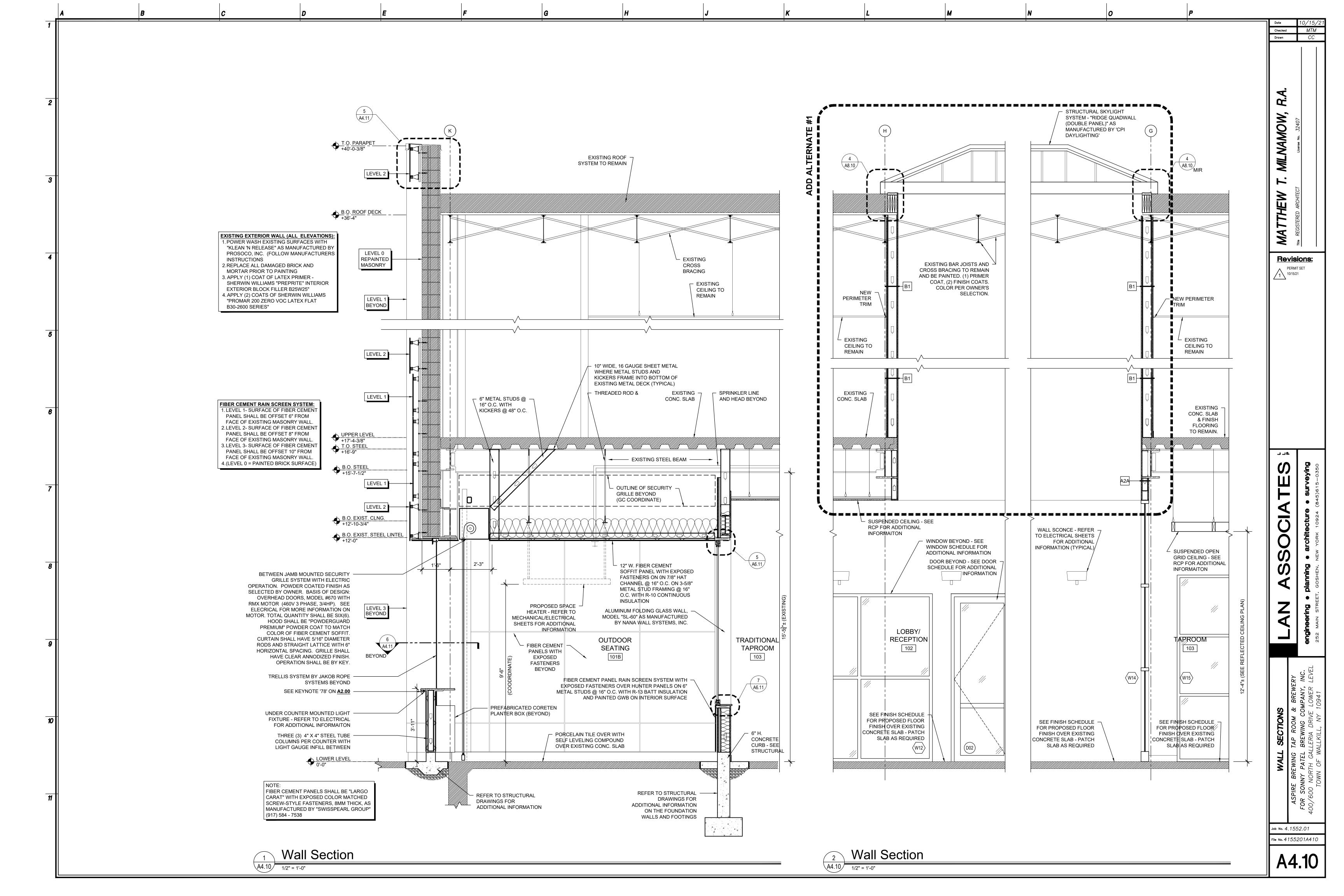


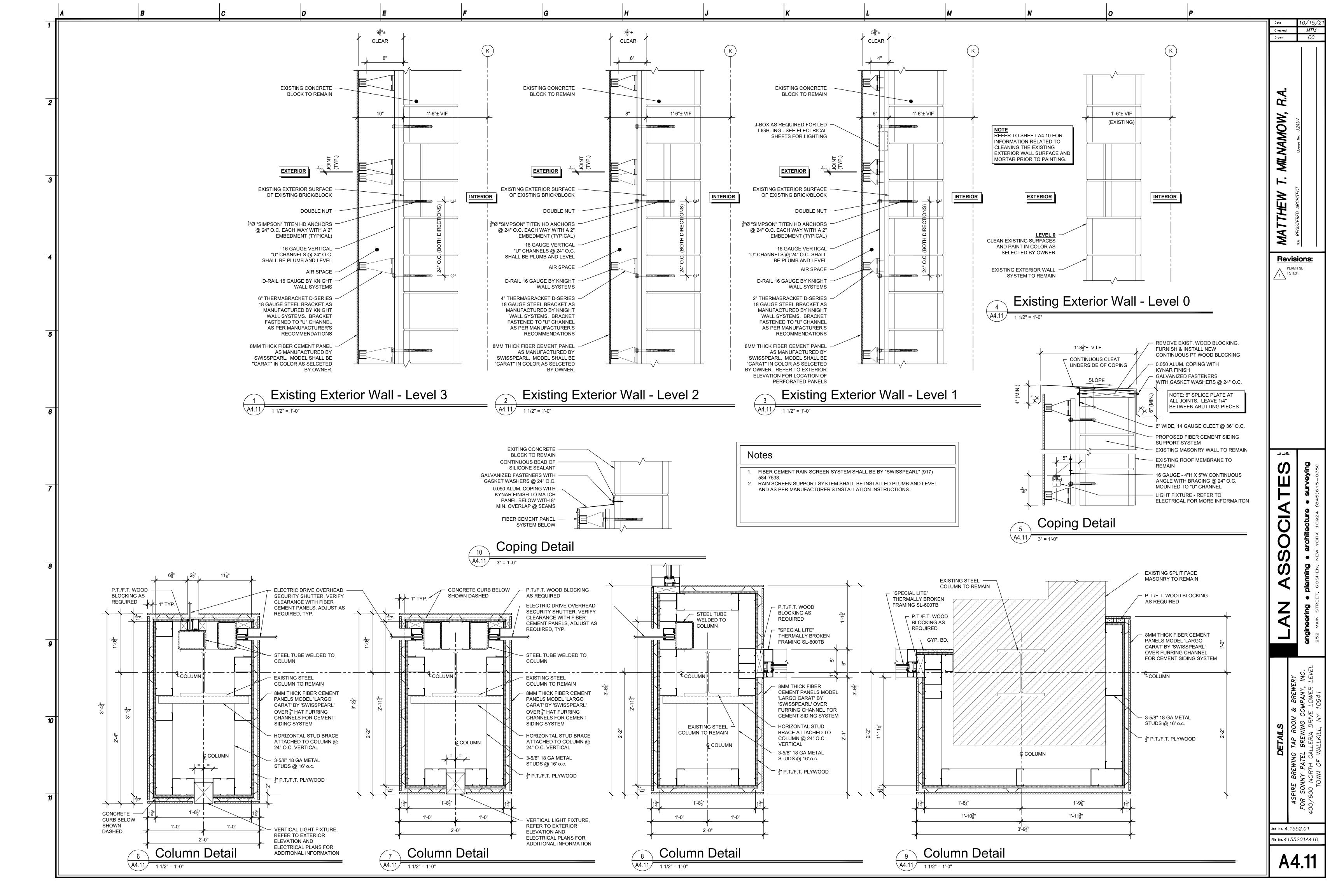
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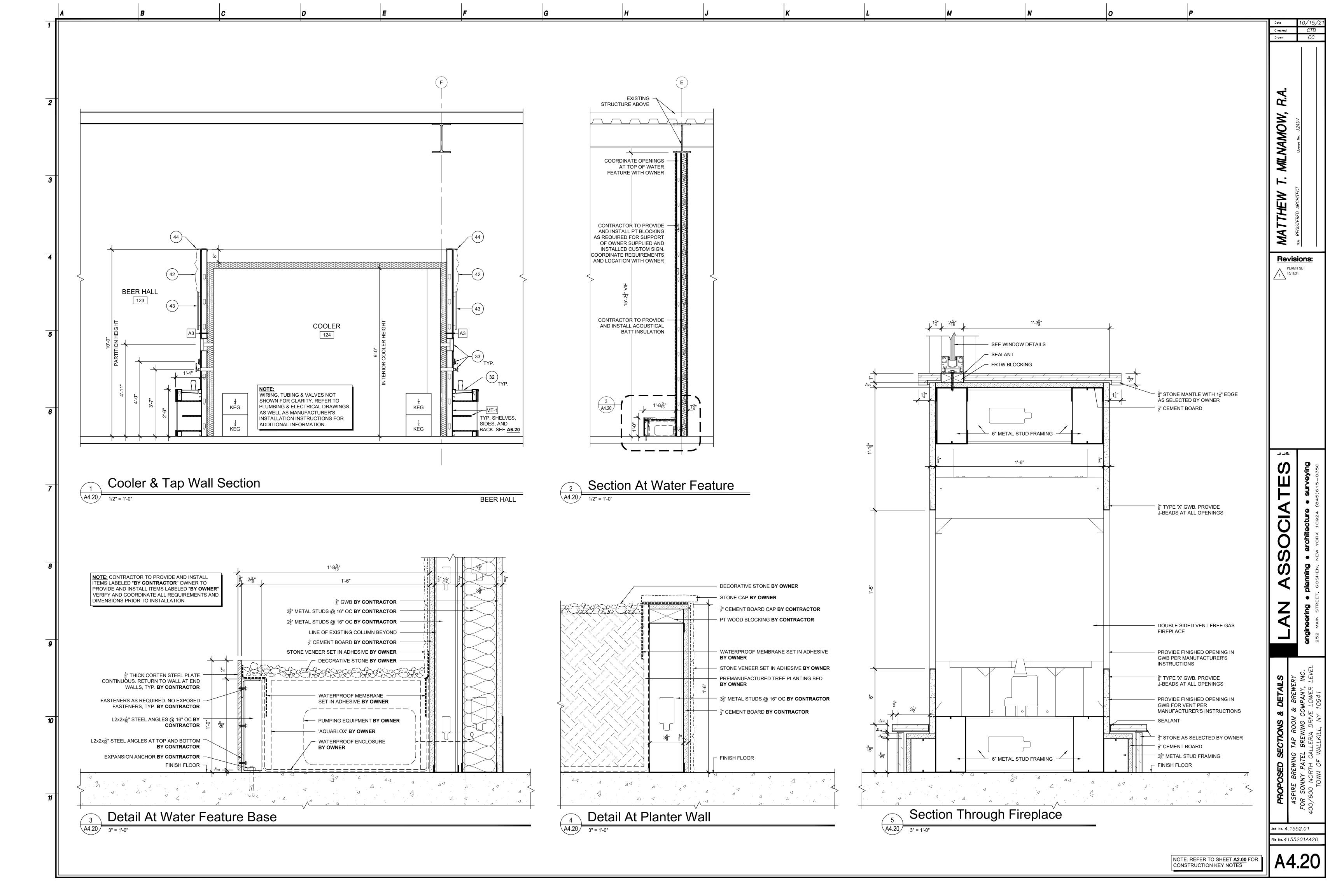
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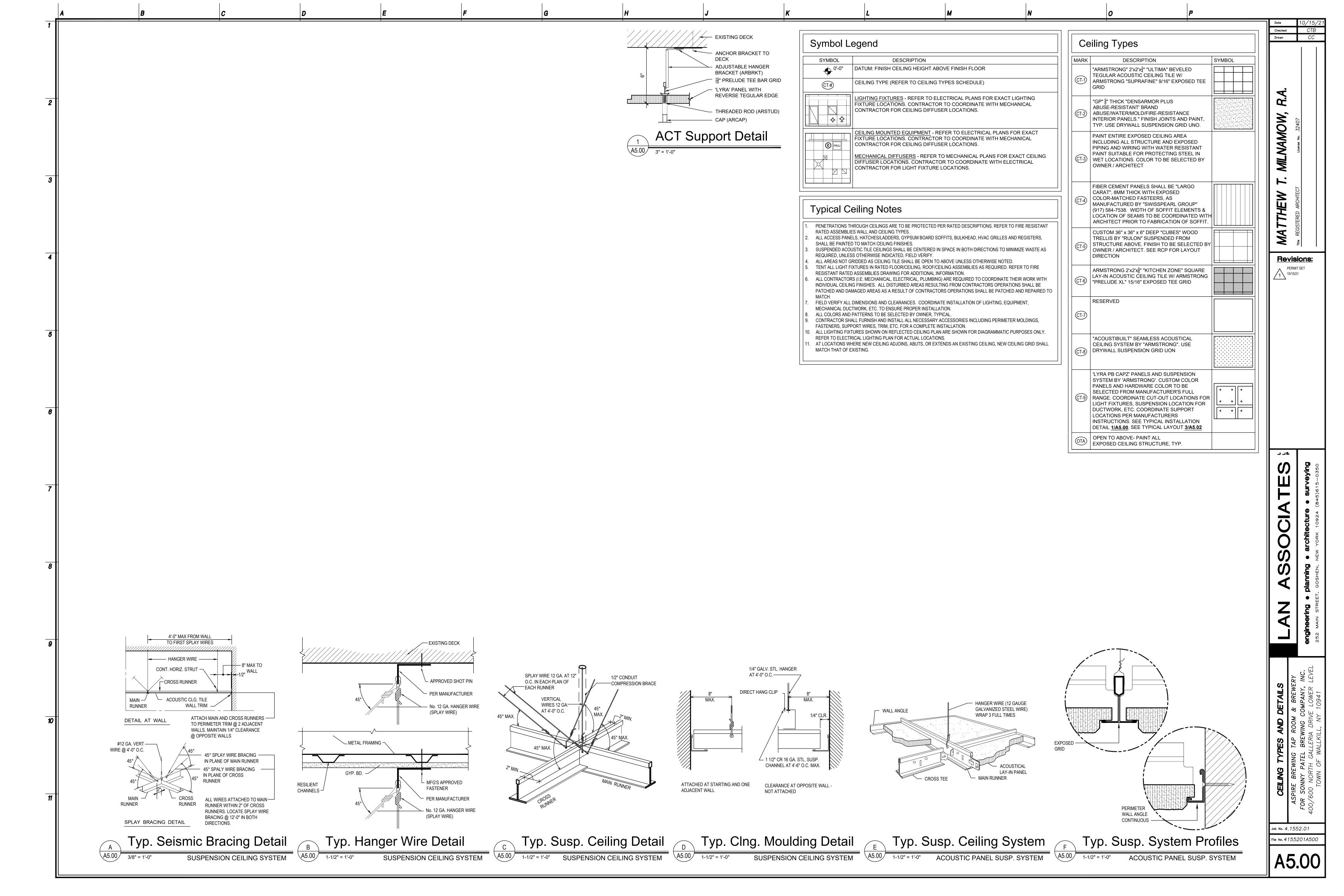
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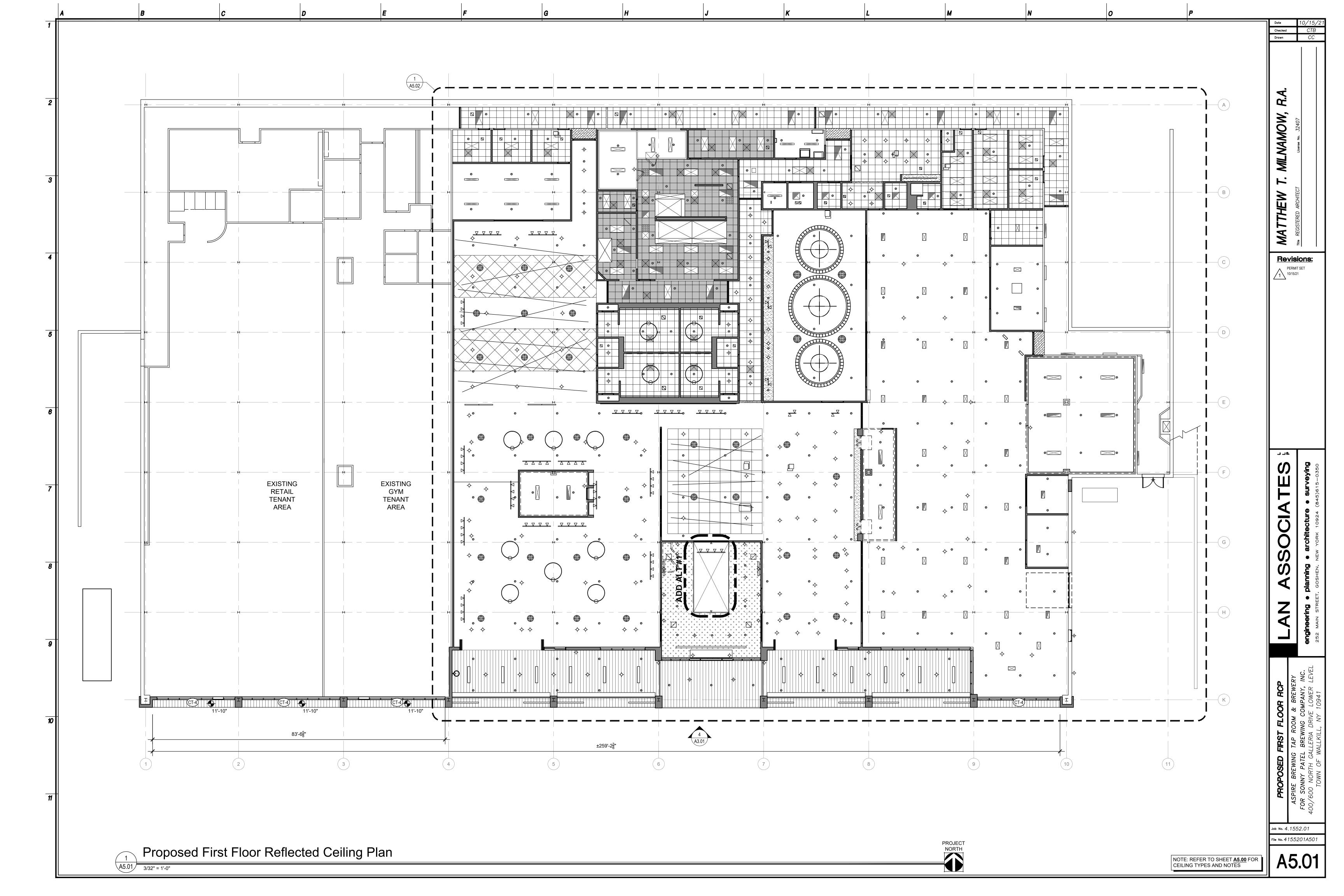
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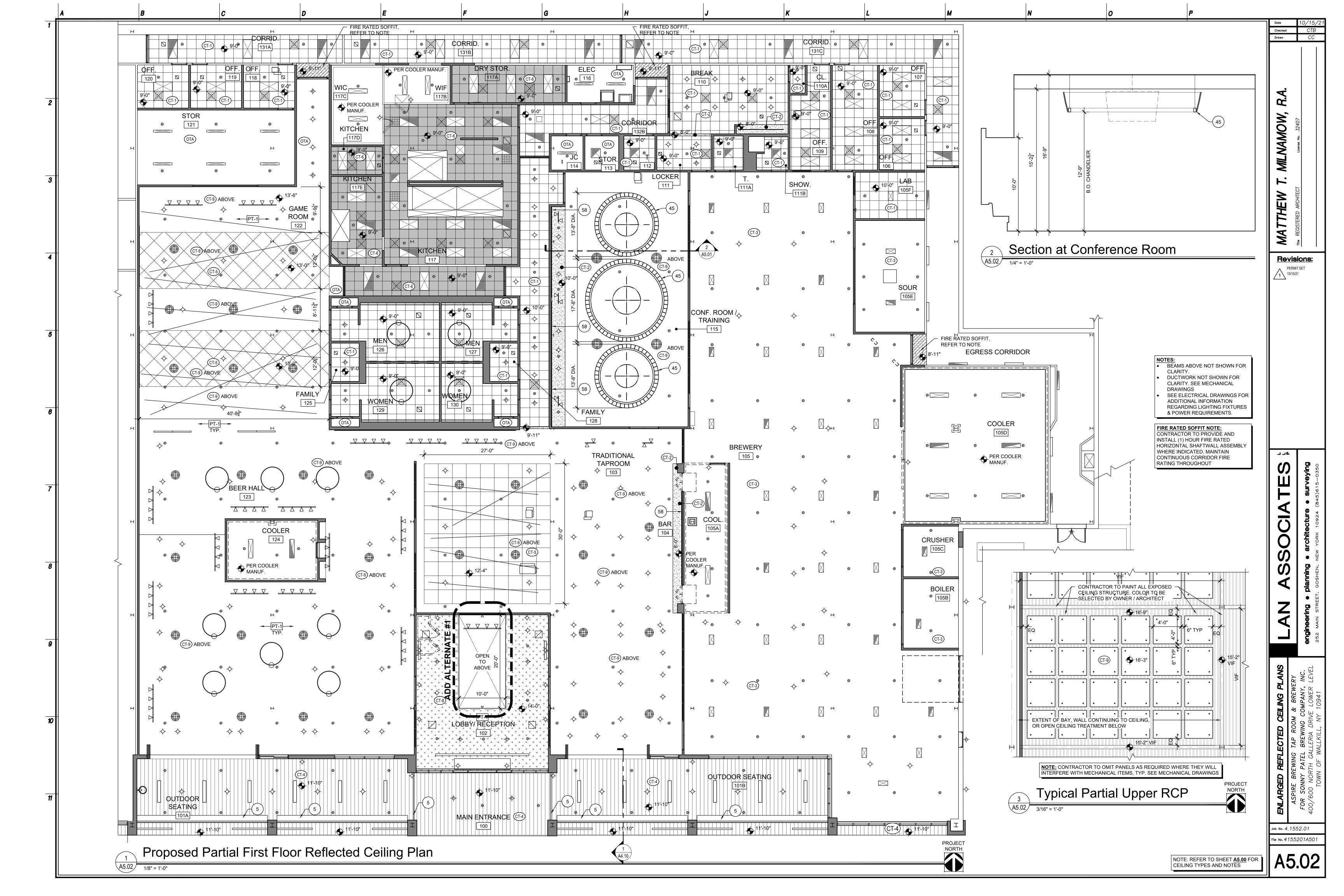


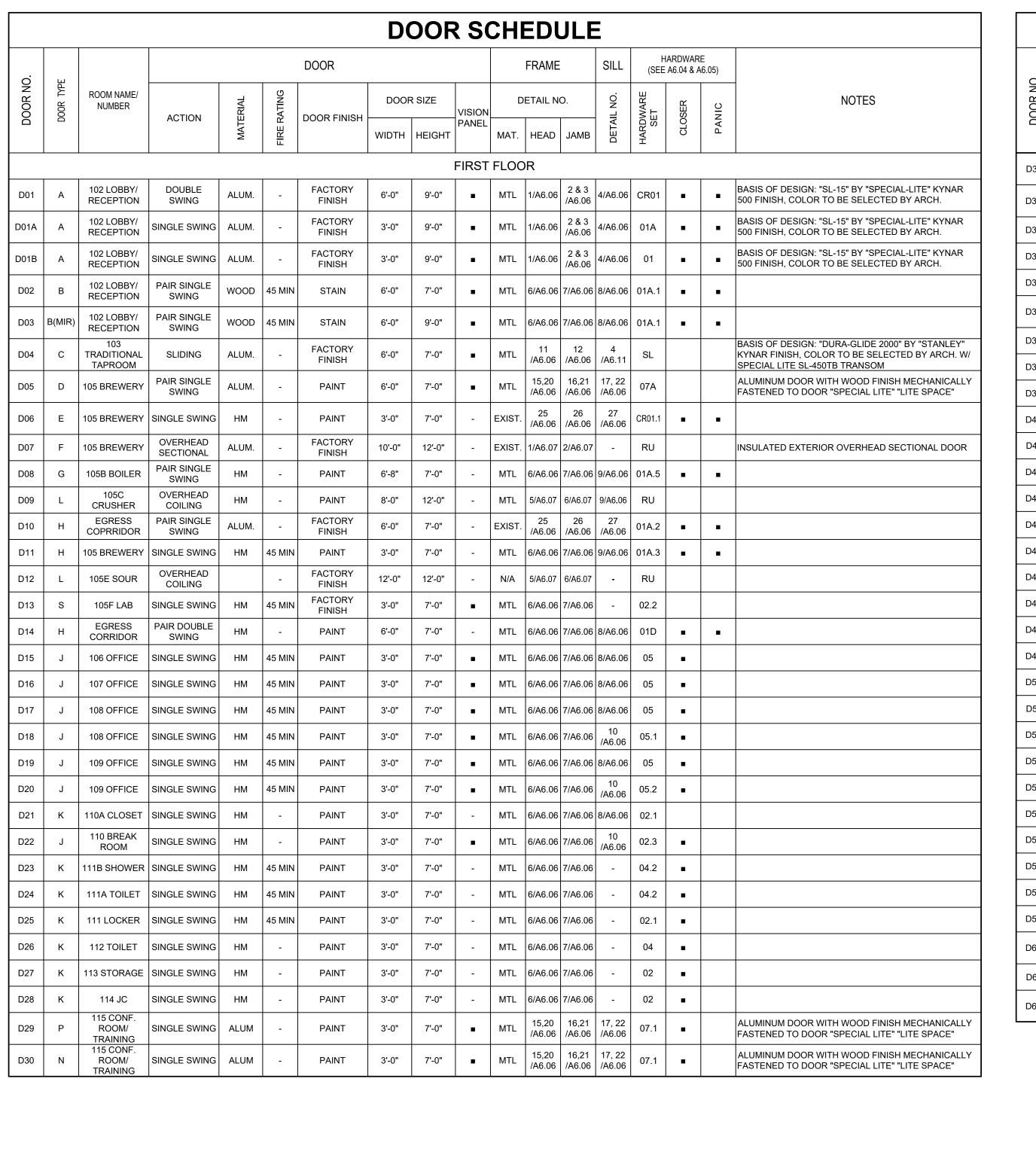






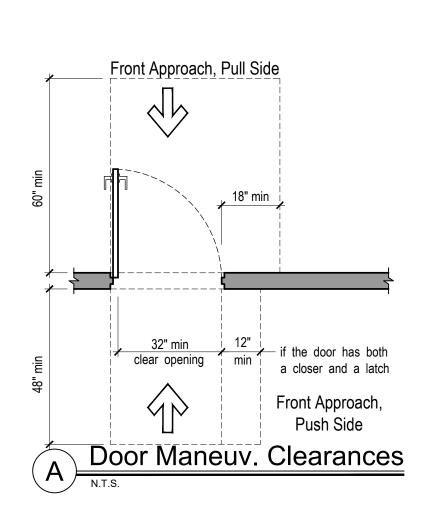


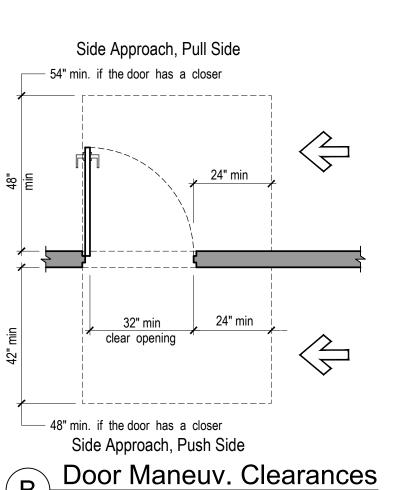


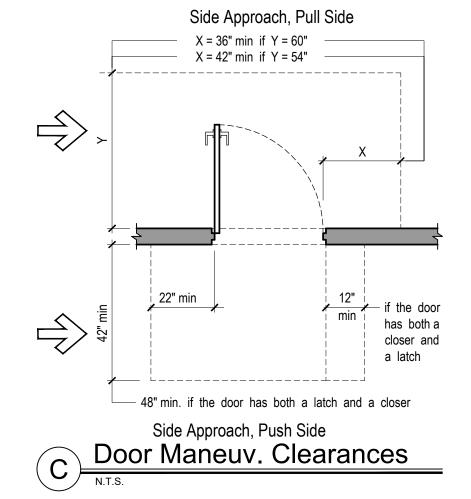


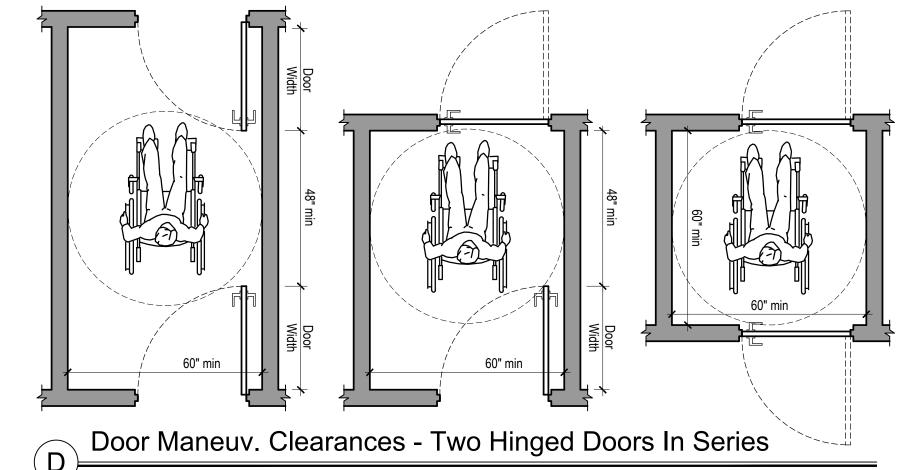
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	1.1	ROOM NAME/ NUMBER		FRAME					SILL		A6.04 & A						
DOOR NO	DOOR TYPE		1071511	RIAL	ATING	D005 51111011	DOOR SIZE		VISION	DETAIL NO.		L NO.	VARE	ЖЖ	<u> </u>	NOTES	
Ŏ	ă		ACTION	MATERIAL	FIRE RATING	DOOR FINISH	WIDTH	HEIGHT	PANEL	MAT.	HEAD	JAMB	DETAIL NO.	HARDWARE SET	CLOSER	PANIC	
D31	Т	115 CONF. ROOM/ TRAINING	PAIR SINGLE SWING	WOOD	-	STAIN	6'-0"	7'-0"		MTL	20 /A6.06	21 /A6.06	13 /A6.06	07A.2	•	•	
D32	М	115 CONF. ROOM/ TRAINING	PAIR SINGLE SWING	WOOD	-	STAIN	6'-0"	7'-0"	•	MTL	6/A6.06	7/A6.06	13 /A6.06	07A.1	•	•	
D33	Н	132B CORRIDOR	PAIR SINGLE SWING	НМ	45 MIN	PAINT	6'-0"	7'-0"	•	MTL	6/A6.06	7/A6.06	14 /A6.06	01A.4	•		
D34	Н	EGRESS CORRIDOR	PAIR DOUBLE SWING	НМ	-	PAINT	6'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	01D	•	•	
D35	К	116 ELECTRIC ROOM	SINGLE SWING	НМ	45 MIN	PAINT	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	19 /A6.06	02.4	•	•	
D36	Н	132B CORRIDOR	PAIR OPPOSING SWING	НМ	45 MIN	PAINT	6'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	01C	-	-	
D37	Q	117 KITCHEN	PAIR SINGLE SWING	НМ	45 MIN	PAINT	6'-0"	7'-0"	•	MTL	6/A6.06	7/A6.06	23 /A6.06	02B			(1)4'-0" LEAF & (1) 2'-0" LEAF
D38	К	117A DRY STORAGE	SINGLE SWING	НМ	-	PAINT	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	02	•		
D39	К	117D KITCHEN	SINGLE SWING	НМ	-	PAINT	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	07			
D40	К	117 KITCHEN	SINGLE SWING	НМ	-	PAINT	3'-0"	7'-0"	•	MTL	6/A6.06	7/A6.06	-	02	•		
D41	Н	117F SERVICE	PAIR DOUBLE SWING	WOOD	-	STAIN	6'-0"	7'-0"		MTL	6/A6.06	7/A6.06	10 /A6.06	01B			
D42	К	CLOSET	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	-	03			
D43	К	126 MEN	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	8/A6.06	07.3	•		
D44	К	125 FAMILY ROOM	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	8/A6.06	04	•		
D45	К	129 WOMEN	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	8/A6.06	07.3	•		
D46	K	CLOSET	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	ı	03			
D47	K	CLOSET	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	ı	03			
D48	K	130 WOMEN	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	10 /A6.06	07.3	•		
D49	K	128 FAMILY ROOM	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	10 /A6.06	04	•		
D50	K	127 MEN	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	10 /A6.06	07.3	•		
D51	K	CLOSET	SINGLE SWING	WOOD	-	STAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	ı	03			
D52	Н	117F SERVICE	PAIR DOUBLE SWING	WOOD	-	STAIN	6'-0"	7'-0"	•	MTL	6/A6.06	7/A6.06	-	01B			
D53	Н	131 CORRIDOR	PAIR SINGLE SWING	WOOD	45 MIN	STAIN	6'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	10 /A6.06	01A.4	•	•	
D54	К	118 OFFICE	SINGLE SWING	НМ	45 MIN	PAINT	3'-0"	7'-0"	•	MTL	6/A6.06	7/A6.06	14 /A6.06	05			
D55	К	121 STORAGE	SINGLE SWING	НМ	-	PAIN	3'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	14 /A6.06	02			
D56	L	121 STORAGE	OVERHEAD COILING	METAL	45 MIN	FACTORY FINISH	14'-0"	10'-0"	-	MTL	5/A6.07	6/A6.07	10 /A6.06	RU			
D57	J	119 OFFICE	SINGLE SWING	НМ	45 MIN	PAINT	3'-0"	7'-0"	•	MTL	6/A6.06	7/A6.06	14 /A6.06	05	•		
D58	J	120 OFFICE	SINGLE SWING	НМ	45 MIN	PAINT	3'-0"	7'-0"	•	MTL	6/A6.06	7/A6.06	14 /A6.06	05	•		
D59	Н	131A CORRIDOR	PAIR DOUBLE SWING	НМ	-	PAINT	6'-0"	7'-0"	-	MTL	6/A6.06	7/A6.06	8/A6.06	01D	•	•	DASIS OF DESIGNA UDA OLIDE COCCUENT USTANIE EN
D60	С	123 BEER HALL	SLIDING	ALUM.	-	FACTORY FINISH	6'-0"	7'-0"	•	MTL	11 /A6.06	12 /A6.06	4 /A6.11	SL			BASIS OF DESIGN: "DURA-GLIDE 2000" BY "STANLEY KYNAR FINISH, COLOR TO BE SELECTED BY ARCH. \ SPECIAL LITE SL-450TB TRANSOM
D61	R	EXISTING GYM TENANT	SINGLE SWING	ALUM	-	FACTORY FINISH	3'-0"	7'-0"	•	MTL	6/A6.06	7/A6.06	8/A6.06	01.1	•	•	BASIS OF DESIGN: "SL-15" BY "SPECIAL-LITE" KYNAR 500 FINISH, COLOR TO BE SELECTED BY ARCH.
D62	R	EXISTING RETAIL TENANT	SINGLE SWING	ALUM	-	FACTORY FINISH	3'-0"	7'-0"	•	MTL	6/A6.06	7/A6.06	8/A6.06	01.1	•	•	BASIS OF DESIGN: "SL-15" BY "SPECIAL-LITE" KYNAR 500 FINISH, COLOR TO BE SELECTED BY ARCH.

NOTE: SEE SHEETS A6.04 & A6.05 FOR HARDWARE SETS.









FIRE TEST STANDARD	MARK	DEFINITION OF MARKING
ASTM E119 <u>OR</u> UL 263	W	MEETS WALL ASSEMBLY CRITERIA
NFPA 257 <u>OR</u> UL 9	ОН	MEETS FIRE WINDOW ASSEMBLY CRITERIA INCLUDING THE HOSE STREAM TEST.
NFPA 252 <u>OR</u> UL 10B <u>OR</u> UL 10C	D H T	MEETS FIRE DOOR ASSEMBLY CRITERIA. MEETS FIRE DOOR ASSEMBLY HOSE STREAM TEST. MEETS 450°F TEMPERATURE RISE CRITERIA FOR 30 MINUTE.
	xxx	THE TIME IN MINUTES OF FIRE-RESISTANCE OR FIRE PROTECTION RATING OF THE GLAZING ASSEMBLY.

2020 ECC OF N.Y Table C	C402.4
Climate Zone: 5	
Vertical Fenestration - U-fa	ctor
Fixed fenestration:	0.38
Operable fenestration:	0.45
Entrance doors:	0.77
Vertical Fenestration - SHG	GC C
PF < 0.2:	0.38
0.2 ≤ PF < 0.5:	0.46
PF ≥ 0.5:	0.61
Skylight U-factor	0.50
Skylight SHGC	0.40

SPIRE BREWING TAP ROOM & BREWERY
R SONNY PATEL BREWING COMPANY, IN
7600 NORTH GALLERIA DRIVE LOWER LE
TOWN OF WALLKILL, NY 10941

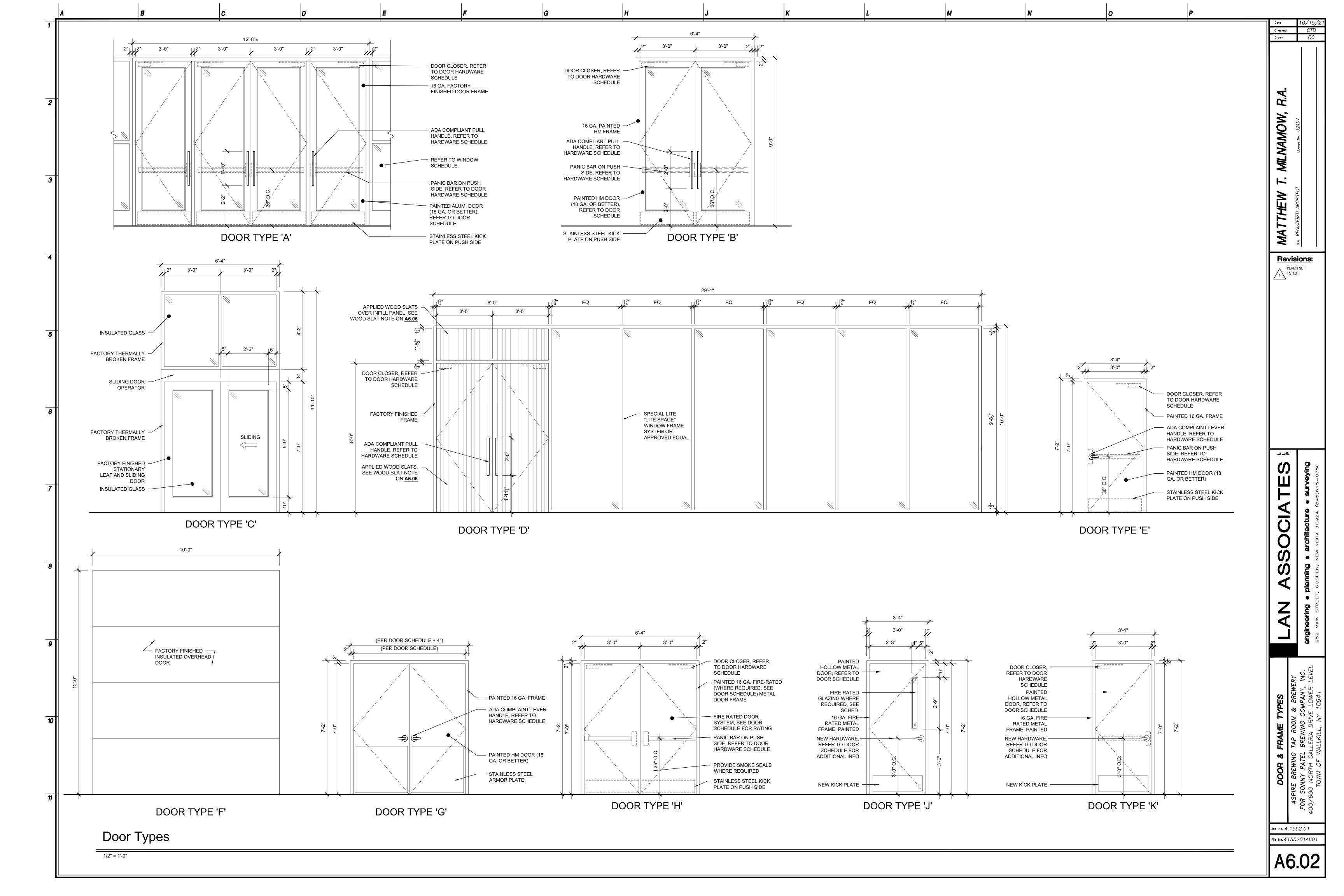
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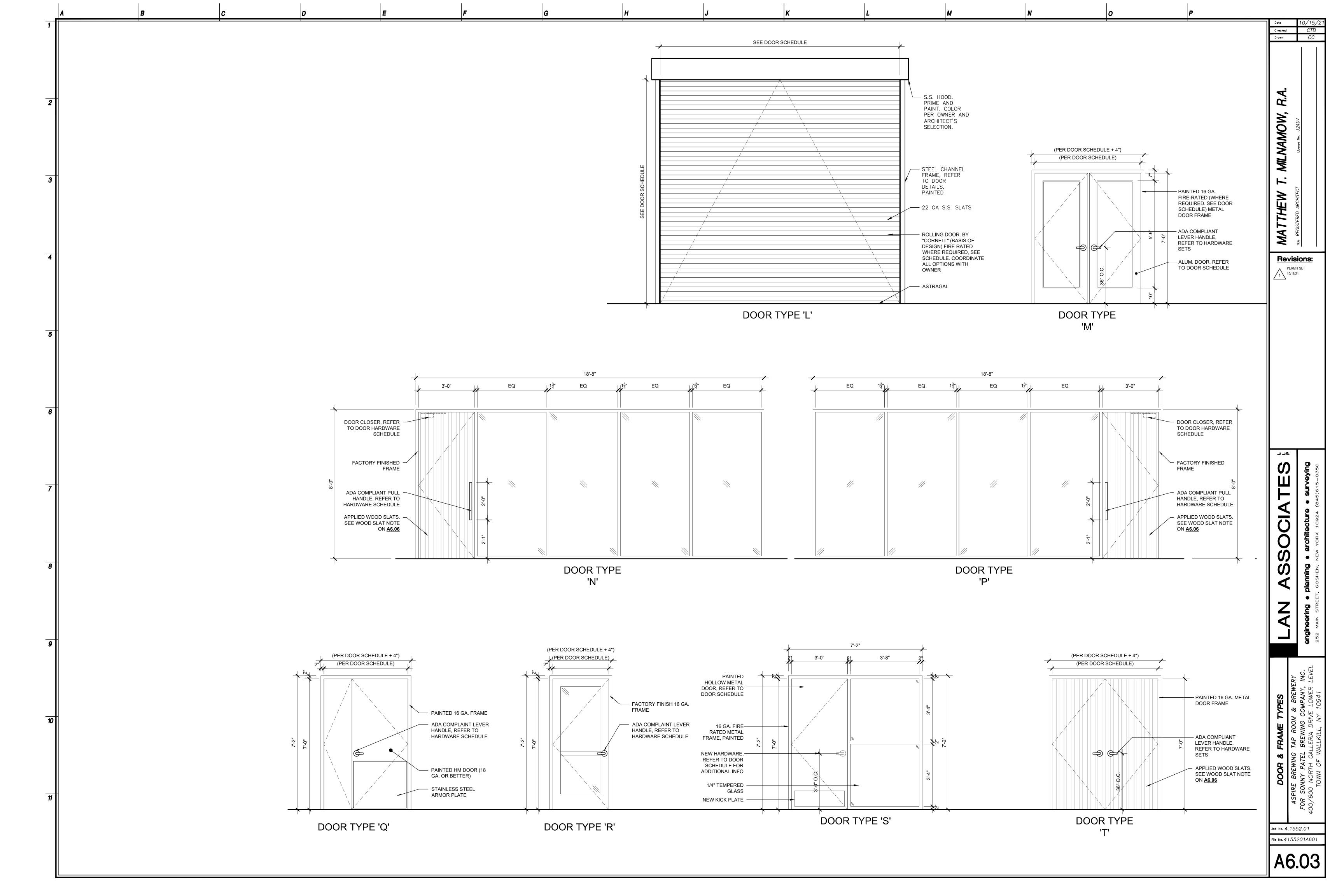
Revisions:

PERMIT SET 10/15/21

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Job No. 4.1552.01
File No. 4155201A601





Abbreviation Name		U 1 0 N 044 0			[U. J. 0. N. 040			[U		
Adama Dita Magneta aturin n Os		Hardware Group No. 01A.2 Provide each PR door(s) with the following:			Hardware Group No. 01C Provide each DE door(s) with the following:			Hardware Group No. 02.3 Provide each SGL door(s) with the following:		
ADA Adams Rite Manufacturing Co		QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR	QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR	QTY DESCRIPTION	CATALOG NUMBER	FINISH N
GLY Glynn-Johnson Corp		6 EA HINGE	5BB1 4.5 X 4.5 NRP	630 IVE	6 EA HINGE	5BB1 4.5 X 4.5	652 IVE	3 EA HINGE	5BB1 4.5 X 4.5	652 I
ILC IIco IVE H.B. Ives		2 EA PANIC HARDWARE	LD-9827-EO-LBR	630 VON	1 EA FIRE EXIT HARDWARE	9827-EO-F-LBR-499F	630 VON	1 EA STOREROOM LOCK	L9080T M51A	630
LCN Lcn Commercial Division		2 EA SURFACE CLOSER	4050A CUSH	689 LCN	1 EA FIRE EXIT HARDWARE	9827-EO-F-LBRAFL-499F	630 VON	1 EA FSIC CORE	23-030 CKC EV29 T	626 S
SCH Schlage Lock Company		2 EA KICK PLATE 2 SET MEETING STILE	8400 10" B-CS 328AA-S	630 IVE AA ZER	2 EA SURFACE CLOSER 2 EA WALL STOP	4011T DE WS406/407CVX	689 LCN 630 IVE	1 EA OH STOP 1 EA SURFACE CLOSER	410S 4050A RW/PA ST-5003	630 C 689 L
VON Von Duprin		1 SET GASKETING	328AA-S	AA ZER	2 LA WALLSTOP	488SBK PSA	030 17	1 EA MOUNTING PLATE	4050A RW/FA 31-5003 4050A-18 ST-5003	689 L
ZER Zero International Inc		2 EA DOOR SWEEP	39A	A ZER	1 EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE	BK ZER	1 EA KICK PLATE	8400 10" B-CS	630 I
		4 EA MOUNTING BRACKET	328SPB	ZER		RATED DOORS)			488FSBK PSA	
		NOTE:			2 EA SILENCER	SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE	GRY IVE	1 EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS)	BK Z
Hardware Group No. 01		1. THRESHOLD PER SILL DETAIL			2 EX SIEERSER	PROVIDED)			SR64	
Provide each SGL door(s) with the following:					NOTES:			3 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS ARE	E GRY I
QTY DESCRIPTION CATALOG NUMBER	FINISH MFR	Hardware Group No. 01A.3				OVIDED BY DOOR/FRAME MANUFACTURER			PROVIDED)	
1 EA CONT. HINGE 112XY TWP CON 1 EA ELEC PANIC HARDWARE LD-RX-35A-NL-OP-388-299-CON	628 IVE 626 VON	Provide each PR door(s) with the following:			2. THRESHOLD PER SILL DETAIL	L		NOTE: 1. THRESHOLD PER SILL DETAIL		
1 EA RIM CYLINDER 20-057 ICX	626 SCH	QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR				1. THRESHOLD I ER SILL DETAIL		
1 EA FSIC CORE 23-030 CKC EV29 T	626 SCH	6 EA HINGE	5BB1 4.5 X 4.5 NRP	652 IVE	Hardware Group No. 01D					
1 EA LONG DOOR PULL 9264F 36" O	630 IVE	1 EA FIRE EXIT HARDWARE	9827-EO-F-LBR-499F	630 VON	Provide each PR door(s) with the following:			Hardware Group No. 02.4		
1 EA SURFACE CLOSER 4050A CUSH	689 LCN	1 EA FIRE EXIT HARDWARE 2 EA SURFACE CLOSER	9827-EO-F-LBRAFL-499F 4050A EDA	630 VON 689 LCN	QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR	Provide each SGL door(s) with the following:		
1 EA PA MOUNTING PLATE 4050A-18PA CON-LENGTH TO SUIT	689 LCN	2 EA KICK PLATE	8400 10" B-CS	630 IVE	6 EA HINGE	5BB1 4.5 X 4.5	652 IVE	QTY DESCRIPTION	CATALOG NUMBER	FINISH N
1 EA WIRE HARNESS (CONNECT POWER TRANSFER	O SCH	2 EA WALL STOP	WS406/407CVX	630 IVE	2 EA PANIC HARDWARE	LD-9827-L-BE-LBR-06	630 VON	3 EA HINGE	5BB1 4.5 X 4.5	652 I
ELECTRIFIED LOCKING DEVICE)			488FSBK PSA		2 EA SURFACE CLOSER 2 EA WALL STOP	4050A EDA WS406/407CVX	689 LCN 630 IVE	1 EA FIRE EXIT HARDWARE 1 EA RIM CYLINDER	98-L-NL-F-06 20-057 ICX	630 V 626 S
CON-6W		1 EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE	BK ZER	2 LA WALLSTOP	WS406/407CVX SR64	USU IVE	1 EA RIM CYLINDER 1 EA FSIC CORE	20-057 ICX 23-030 CKC EV29 T	626 S
1 EA WIRE HARNESS (WIRE LEADS FOR CONNECTION POWER)	TO SCH		RATED DOORS) SR64		2 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS ARE	GRY IVE	1 EA SURFACE CLOSER	4050A EDA	689 L
NOTES:		2 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS ARE	GRY IVE		PROVIDED)		1 EA KICK PLATE	8400 10" B-CS	630 I
1. DOOR CONTACT(S) - WORK OF DIVISION 28			PROVIDED)		NOTES:			1 EA WALL STOP	WS406/407CVX	630 I
2. SEALS BY DOOR/FRAME MANUFACTURER		NOTE:			1. THRESHOLD PER SILL DETAIL	L		1	488FSBK PSA	DIZ
3. THRESHOLD PER SILL DETAIL		1. THRESHOLD PER SILL DETAIL	-					1 EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS)	BK Z
					Hardware Group No. 02			NOTE:	,	
		Hardware Group No. 01A.4			Provide each SGL door(s) with the following:	:		1. THRESHOLD PER SILL DETAIL		
Hardware Group No. 01.1		Provide each PR door(s) with the following:			QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR			
Provide each SGL door(s) with the following:		QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR	3 EA HINGE	5BB1 4.5 X 4.5	652 IVE	[U. J. 00 N. 000		
QTY DESCRIPTION CATALOG NUMBER 1 EA CONT. HINGE 112XY	FINISH MFR 628 IVE	6 EA HINGE	5BB1 4.5 X 4.5 NRP	652 IVE	1 EA STOREROOM LOCK 1 EA FSIC CORE	L9080T M51A	630 SCH 626 SCH	Hardware Group No. 02B Provide each UEP door(s) with the following:		
1 EA PANIC HARDWARE LD-35A-L-M51-299	626 VON	1 EA FIRE EXIT HARDWARE	9827-EO-F-LBR-499F	630 VON	1 EA FSIC CORE 1 EA SURFACE CLOSER	23-030 CKC EV29 T 4050A RW/PA	689 LCN	QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR
1 EA MORTISE CYLINDER 20-061 ICX 36-083	626 SCH	1 EA FIRE EXIT HARDWARE 1 EA RIM CYLINDER	9827-L-NL-F-LBRAFL-M51-499F 20-057 ICX	630 VON 626 SCH	1 EA KICK PLATE	8400 10" B-CS	630 IVE	6 EA HINGE	5BB1 5 X 4.5	652 IVE
1 EA FSIC CORE 23-030 CKC EV29 T	626 SCH	1 EA FSIC CORE	23-030 CKC EV29 T	626 SCH	1 EA WALL STOP	WS406/407CVX	630 IVE	1 SET AUTO FLUSH BOLT	FB32	630 IVE
1 EA SURFACE CLOSER 4050A CUSH 1 EA PA MOUNTING PLATE 4050A-18PA	689 LCN 689 LCN	2 EA SURFACE CLOSER	4050A EDA	689 LCN		488FSBK PSA		1 EA STOREROOM LOCK	L9080T M51A	630 SCH
NOTES:	009 LCIN	2 EA KICK PLATE	8400 10" B-CS	630 IVE	1 EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS)	BK ZER	1 EA FSIC CORE	23-030 CKC EV29 T	626 SCH
1. SEALS BY DOOR/FRAME MANUFACTURER		2 EA WALL STOP	WS406/407CVX	630 IVE		SR64		1 EA COORDINATOR 2 EA SURFACE CLOSER	COR X FL 4050A RW/PA	628 IVE 689 LCN
2. THRESHOLD PER SILL DETAIL		1 EA GASKETING	488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE	BK ZER	3 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS ARE	GRY IVE	2 EA ARMOR PLATE	8400 32" B-CS	630 IVE
		I LA GAGRETING	RATED DOORS)	DN ZLIN	NOTE	PROVIDED)		2 EA WALL STOP	WS406/407CVX	630 IVE
Hardware Group No. 01A			SR64		NOTE: 1. THRESHOLD PER SILL DETAIL				488FSBK PSA	
Provide each PR door(s) with the following:		2 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS ARE	GRY IVE	1. THRESHOLD PER SILL DETAIL	L		1 EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE	BK ZER
QTY DESCRIPTION CATALOG NUMBER	FINISH MFR	NOTE:	PROVIDED)						RATED DOORS) SR64	
2 EA CONT. HINGE 112XY TWP CON	628 IVE	1. THRESHOLD PER SILL DETAIL			Hardware Group No. 02.1			2 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS	GRY IVE
2 EA ELEC PANIC HARDWARE LD-RX-3527A-NL-OP-LBR-388-CC	N 626 VON		•		Provide each SGL door(s) with the following:	:			ARE PROVIDED)	
2 EA RIM CYLINDER 20-057 ICX	626 SCH				QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR	NOTE:		
2 EA FSIC CORE 23-030 CKC EV29 T	626 SCH	Hardware Group No. 01A.5			3 EA HINGE	5BB1 4.5 X 4.5 NRP	652 IVE	1. THRESHOLD PER SILL DETAIL		
2 EA LONG DOOR PULL 9264F 36" O 2 EA SURFACE CLOSER 4050A CUSH	630 IVE 689 LCN	Provide each PR door(s) with the following:			1 EA STOREROOM LOCK 1 EA FSIC CORE	L9080T M51A 23-030 CKC EV29 T	630 SCH 626 SCH			
2 EA PA MOUNTING PLATE 4050A-18PA	689 LCN	QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR	1 EA FSIC CORE 1 EA SURFACE CLOSER	4050A EDA	689 LCN	Hardware Group No. 03		
CON-LENGTH TO SUIT	200	6 EA HINGE 1 EA FIRE EXIT HARDWARE	5BB1 4.5 X 4.5 NRP 9827-EO-F-LBR-499F	652 IVE 630 VON	1 EA KICK PLATE	8400 10" B-CS	630 IVE	Provide each SGL door(s) with the following:		
2 EA WIRE HARNESS (CONNECT POWER TRANSFER		1 EA FIRE EXIT HARDWARE	9827-L-NL-F-LBRAFL-M51-499F	630 VON	1 EA WALL STOP	WS406/407CVX	630 IVE	QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR
ELECTRIFIED LOCKING DEVICE)		1 EA RIM CYLINDER	20-057 ICX	626 SCH		488FSBK PSA		3 EA HINGE	5BB1 4.5 X 4.5	652 IVE
CON-6W 2 EA WIRE HARNESS (WIRE LEADS FOR CONNECTION	TO SCH	1 EA FSIC CORE	23-030 CKC EV29 T	626 SCH	1 EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS)	BK ZER	1 EA PASSAGE SET	L9010 M51A	630 SCH
POWER)		2 EA SURFACE CLOSER	4050A CUSH	689 LCN		SR64		1 EA KICK PLATE	8400 10" B-CS	630 IVE
NOTES:		2 EA KICK PLATE	8400 10" B-CS	630 IVE	3 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS ARE	GRY IVE	1 EA WALL STOP	WS406/407CVX SR64	630 IVE
1. DOOR CONTACT(S) - WORK OF DIVISION 28		1 EA GASKETING	488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE	BK ZER		PROVIDED)		3 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS	GRY IVE
2. SEALS BY DOOR/FRAME MANUFACTURER 3. THEESHOLD BED SILL DETAIL		, LA GAGNETING	RATED DOORS)	DI ZEK	NOTE:				ARE PROVIDED)	
3. THRESHOLD PER SILL DETAIL			SR64		1. THRESHOLD PER SILL DETAIL	L		NOTE:		
		2 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	GRY IVE				1. THRESHOLD PER SILL DETAIL		
Hardware Group No. 01A.1		NOTE:	PROVIDED)		Hardware Group No. 02.2					
Provide each PR door(s) with the following:		1. THRESHOLD PER SILL DETAIL	_		Provide each SGL door(s) with the following:	:				
Trevide each Tre decree with the following.	FINISH MFR				QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR	Hardware Group No. 04		
QTY DESCRIPTION CATALOG NUMBER	652 IVE				3 EA HINGE	5BB1 4.5 X 4.5 NRP	652 IVE	Provide each SGL door(s) with the following:		
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP		Hardware Group No. 01B			1 EA STOREROOM LOCK	L9080T M51A	630 SCH	QTY DESCRIPTION	CATALOG NUMBER	FINISH N
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD	630 VON	Provide each DE door(s) with the following:			1 EA FSIC CORE 1 EA SURFACE CLOSER	23-030 CKC EV29 T 4050A CUSH	626 SCH	3 EA HINGE	5BB1 4.5 X 4.5	652 I
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD 2 EA RIM CYLINDER 20-057 ICX	626 SCH			FINISH MFR	1 EA KICK PLATE	8400 10" B-CS	689 LCN 630 IVE	1 EA PRIVACY LOCK	L9040 M51A L583-363 L283-722	630 S
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD		QTY DESCRIPTION	CATALOG NUMBER	CEO "."				1 EA SURFACE CLOSER	4050A RW/PA	689 L
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD 2 EA RIM CYLINDER 20-057 ICX 2 EA MORTISE CYLINDER 20-061 ICX XQ11-948 36-083	626 SCH 626 SCH	QTY DESCRIPTION 6 EA HINGE	5BB1 4.5 X 4.5	652 IVE 630 VON		488FSBK PSA		1 FA KICK PLATE	8400 10" B-CS	63U <i>.</i>
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD 2 EA RIM CYLINDER 20-057 ICX 2 EA MORTISE CYLINDER 20-061 ICX XQ11-948 36-083 4 EA FSIC CORE 23-030 CKC EV29 T 2 EA LONG DOOR PULL 9264F 36" O 2 EA SURFACE CLOSER 4050A CUSH	626 SCH 626 SCH 626 SCH 630 IVE 689 LCN	QTY DESCRIPTION		652 IVE 630 VON 689 LCN	1 EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE	BK ZER	1 EA KICK PLATE 1 EA WALL STOP	8400 10" B-CS WS406/407CVX	630 I 630 I
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD 2 EA RIM CYLINDER 20-057 ICX 2 EA MORTISE CYLINDER 20-061 ICX XQ11-948 36-083 4 EA FSIC CORE 23-030 CKC EV29 T 2 EA LONG DOOR PULL 9264F 36" O 2 EA SURFACE CLOSER 4050A CUSH 2 EA KICK PLATE 8400 10" B-CS	626 SCH 626 SCH 626 SCH 630 IVE	QTY DESCRIPTION 6 EA HINGE 2 EA PANIC HARDWARE	5BB1 4.5 X 4.5 LD-9827-EO-LBR	630 VON	1 EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS)	BK ZER			
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD 2 EA RIM CYLINDER 20-057 ICX 2 EA MORTISE CYLINDER 20-061 ICX XQ11-948 36-083 4 EA FSIC CORE 23-030 CKC EV29 T 2 EA LONG DOOR PULL 9264F 36" O 2 EA SURFACE CLOSER 4050A CUSH 2 EA KICK PLATE 8400 10" B-CS SR64 SR64	626 SCH 626 SCH 626 SCH 630 IVE 689 LCN 630 IVE	QTY DESCRIPTION 6 EA HINGE 2 EA PANIC HARDWARE 2 EA SURFACE CLOSER 2 EA WALL STOP	5BB1 4.5 X 4.5 LD-9827-EO-LBR 4011T DE WS406/407CVX SR64	630 VON 689 LCN 630 IVE		(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64			WS406/407CVX 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE	
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD 2 EA RIM CYLINDER 20-057 ICX 2 EA MORTISE CYLINDER 20-061 ICX XQ11-948 36-083 4 EA FSIC CORE 23-030 CKC EV29 T 2 EA LONG DOOR PULL 9264F 36" O 2 EA SURFACE CLOSER 4050A CUSH 2 EA KICK PLATE 8400 10" B-CS	626 SCH 626 SCH 626 SCH 630 IVE 689 LCN 630 IVE	QTY DESCRIPTION 6 EA HINGE 2 EA PANIC HARDWARE 2 EA SURFACE CLOSER	5BB1 4.5 X 4.5 LD-9827-EO-LBR 4011T DE WS406/407CVX SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE	630 VON 689 LCN 630 IVE	1 EA GASKETING 3 EA SILENCER	(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS)		1 EA WALL STOP	WS406/407CVX 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS)	630 I
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD 2 EA RIM CYLINDER 20-057 ICX 2 EA MORTISE CYLINDER 20-061 ICX XQ11-948 36-083 4 EA FSIC CORE 23-030 CKC EV29 T 2 EA LONG DOOR PULL 9264F 36" O 2 EA SURFACE CLOSER 4050A CUSH 2 EA KICK PLATE 8400 10" B-CS SR64 2 EA SILENCER (OMIT WHERE SMOKE/FIRE SEA	626 SCH 626 SCH 626 SCH 630 IVE 689 LCN 630 IVE	QTY DESCRIPTION 6 EA HINGE 2 EA PANIC HARDWARE 2 EA SURFACE CLOSER 2 EA WALL STOP 2 EA SILENCER	5BB1 4.5 X 4.5 LD-9827-EO-LBR 4011T DE WS406/407CVX SR64	630 VON 689 LCN 630 IVE		(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE		1 EA WALL STOP 1 EA GASKETING	WS406/407CVX 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64	630 I BK Z
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD 2 EA RIM CYLINDER 20-057 ICX 2 EA MORTISE CYLINDER 20-061 ICX XQ11-948 36-083 4 EA FSIC CORE 23-030 CKC EV29 T 2 EA LONG DOOR PULL 9264F 36" O 2 EA SURFACE CLOSER 4050A CUSH 2 EA KICK PLATE 8400 10" B-CS SR64 2 EA SILENCER (OMIT WHERE SMOKE/FIRE SEA PROVIDED)	626 SCH 626 SCH 626 SCH 630 IVE 689 LCN 630 IVE	QTY DESCRIPTION 6 EA HINGE 2 EA PANIC HARDWARE 2 EA SURFACE CLOSER 2 EA WALL STOP 2 EA SILENCER NOTE:	5BB1 4.5 X 4.5 LD-9827-EO-LBR 4011T DE WS406/407CVX SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	630 VON 689 LCN 630 IVE	3 EA SILENCER	(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)		1 EA WALL STOP	WS406/407CVX 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS)	630 I BK Z
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD 2 EA RIM CYLINDER 20-057 ICX 2 EA MORTISE CYLINDER 20-061 ICX XQ11-948 36-083 4 EA FSIC CORE 23-030 CKC EV29 T 2 EA LONG DOOR PULL 9264F 36" O 2 EA SURFACE CLOSER 4050A CUSH 2 EA KICK PLATE 8400 10" B-CS SR64 2 EA SILENCER (OMIT WHERE SMOKE/FIRE SEA PROVIDED)	626 SCH 626 SCH 626 SCH 630 IVE 689 LCN 630 IVE	QTY DESCRIPTION 6 EA HINGE 2 EA PANIC HARDWARE 2 EA SURFACE CLOSER 2 EA WALL STOP 2 EA SILENCER	5BB1 4.5 X 4.5 LD-9827-EO-LBR 4011T DE WS406/407CVX SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	630 VON 689 LCN 630 IVE	3 EA SILENCER NOTE:	(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)		1 EA WALL STOP 1 EA GASKETING	WS406/407CVX 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE	630 I BK Z
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD 2 EA RIM CYLINDER 20-057 ICX 2 EA MORTISE CYLINDER 20-061 ICX XQ11-948 36-083 4 EA FSIC CORE 23-030 CKC EV29 T 2 EA LONG DOOR PULL 9264F 36" O 2 EA SURFACE CLOSER 4050A CUSH 2 EA KICK PLATE 8400 10" B-CS SR64 2 EA SILENCER (OMIT WHERE SMOKE/FIRE SEA PROVIDED)	626 SCH 626 SCH 626 SCH 630 IVE 689 LCN 630 IVE	QTY DESCRIPTION 6 EA HINGE 2 EA PANIC HARDWARE 2 EA SURFACE CLOSER 2 EA WALL STOP 2 EA SILENCER NOTE:	5BB1 4.5 X 4.5 LD-9827-EO-LBR 4011T DE WS406/407CVX SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	630 VON 689 LCN 630 IVE	3 EA SILENCER NOTE:	(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)		1 EA WALL STOP 1 EA GASKETING 3 EA SILENCER	WS406/407CVX 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	630 I BK Z
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD 2 EA RIM CYLINDER 20-057 ICX 2 EA MORTISE CYLINDER 20-061 ICX XQ11-948 36-083 4 EA FSIC CORE 23-030 CKC EV29 T 2 EA LONG DOOR PULL 9264F 36" O 2 EA SURFACE CLOSER 4050A CUSH 2 EA KICK PLATE 8400 10" B-CS SR64 2 EA SILENCER (OMIT WHERE SMOKE/FIRE SEA PROVIDED)	626 SCH 626 SCH 626 SCH 630 IVE 689 LCN 630 IVE	QTY DESCRIPTION 6 EA HINGE 2 EA PANIC HARDWARE 2 EA SURFACE CLOSER 2 EA WALL STOP 2 EA SILENCER NOTE:	5BB1 4.5 X 4.5 LD-9827-EO-LBR 4011T DE WS406/407CVX SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	630 VON 689 LCN 630 IVE	3 EA SILENCER NOTE:	(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)		1 EA WALL STOP 1 EA GASKETING 3 EA SILENCER NOTE:	WS406/407CVX 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	630 I BK Z
QTY DESCRIPTION CATALOG NUMBER 6 EA HINGE 5BB1 4.5 X 4.5 NRP 2 EA PANIC HARDWARE CD-9827-NL-OP-LBR-110MD 2 EA RIM CYLINDER 20-057 ICX 2 EA MORTISE CYLINDER 20-061 ICX XQ11-948 36-083 4 EA FSIC CORE 23-030 CKC EV29 T 2 EA LONG DOOR PULL 9264F 36" O 2 EA SURFACE CLOSER 4050A CUSH 2 EA KICK PLATE 8400 10" B-CS SR64 2 EA SILENCER (OMIT WHERE SMOKE/FIRE SEA PROVIDED)	626 SCH 626 SCH 626 SCH 630 IVE 689 LCN 630 IVE	QTY DESCRIPTION 6 EA HINGE 2 EA PANIC HARDWARE 2 EA SURFACE CLOSER 2 EA WALL STOP 2 EA SILENCER NOTE:	5BB1 4.5 X 4.5 LD-9827-EO-LBR 4011T DE WS406/407CVX SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	630 VON 689 LCN 630 IVE	3 EA SILENCER NOTE:	(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)		1 EA WALL STOP 1 EA GASKETING 3 EA SILENCER NOTE:	WS406/407CVX 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	630 I BK Z
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NNNY PATEL BREWING COMPANY, INC.
NORTH GALLERIA DRIVE LOWER LEVE

Job No. 4.1552.01 File No. 4155201A601

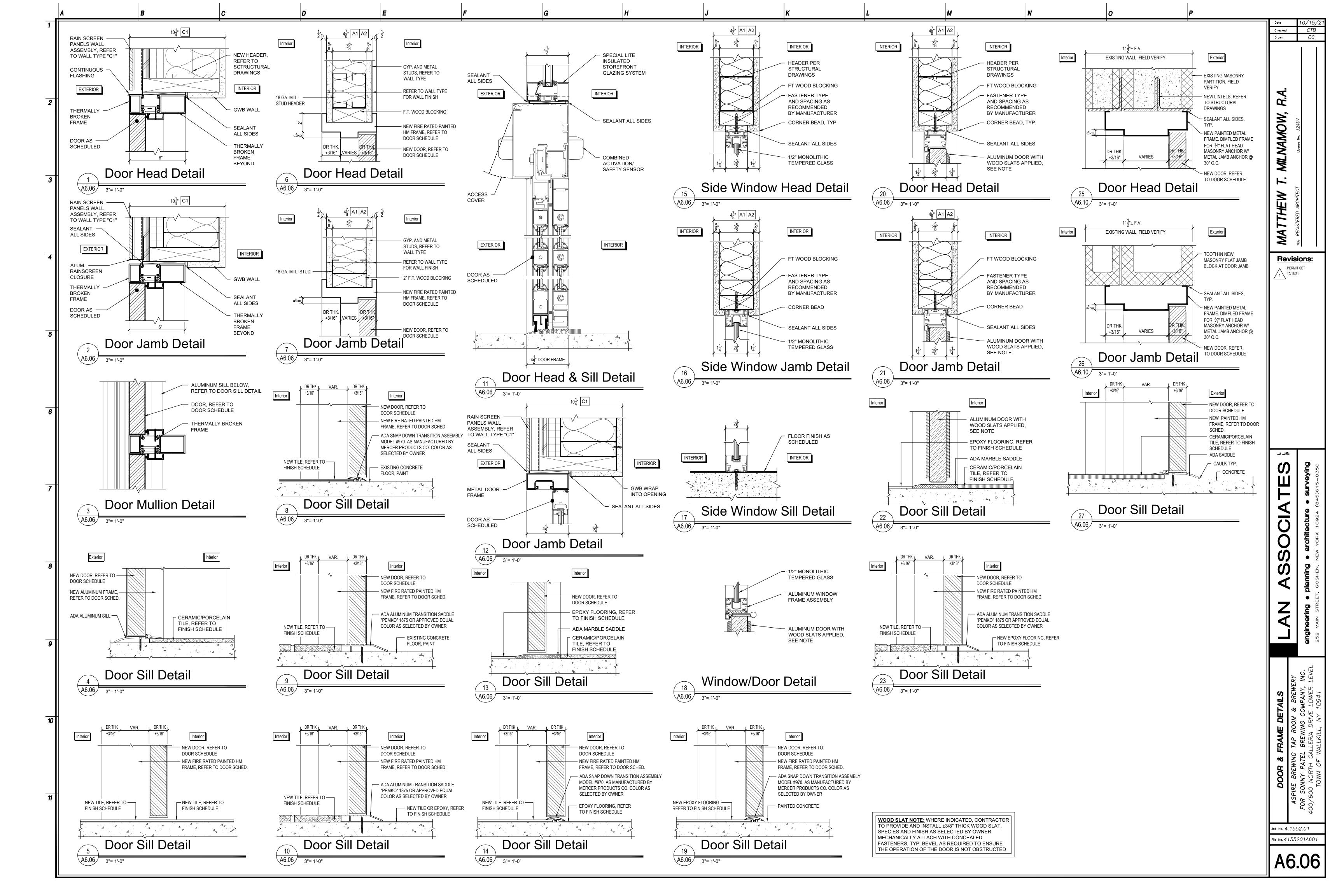
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	Hardware Group No. 04.2		Hardware Group No. 07.1			Hardware Group No. CR01			
	Provide each SGL door(s) with the following:		Provide each SGL door(s) with the following	:		Provide each SGL door(s) with the following:			
	QTY DESCRIPTION	CATALOG NUMBER FINISH M	R QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR	QTY DESCRIPTION	CATALOG NUMBER	FINISH MFI	̃R
	3 EA HINGE		/E 3 EA HINGE	5BB1 4.5 X 4.5 NRP	652 IVE	1 EA CONT. HINGE	112XY TWP CON	628 IVE	
	1 EA PRIVACY LOCK		CH 1 EA CYL X TURN DEAD LOCK		626 SCH	1 EA ELEC PANIC HARDWARE			
	1 EA SURFACE CLOSER	4050A CUSH 689 L		23-030 CKC EV29 T	626 SCH				
	1 EA KICK PLATE	8400 10" B-CS 630 IN		PR 9264F 36" N	630 IVE	1 EA RIM CYLINDER	20-057 ICX	626 SC	
2		488FSBK PSA	1 EA SURFACE CLOSER	4050A CUSH	689 LCN	1 EA FSIC CORE	23-030 CKC EV29 T	626 SC	СН
	1 EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE BK Z		SR64		1 EA LONG DOOR PULL	9264F 36" O	630 IVE	/E
		RATED DOORS)	3 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS ARE	GRY IVE	1 EA SURFACE CLOSER	4050A CUSH	689 LCI	CN
		SR64		PROVIDED)		1 EA PA MOUNTING PLATE	4050A-18PA	689 LCI	N N
	3 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS ARE GRY IV	/E NOTE:	,			CON-LENGTH TO SUIT		CN
		PROVIDED)	1. THRESHOLD PER SILL DETAI	I		1 EA WIRE HARNESS	(CONNECT POWER TRANSFER TO	SC	CH HC
	NOTE:	·	1. THINESHOLD I EN SILE DE IAI	L			ELECTRIFIED LOCKING DEVICE)		
	1. THRESHOLD PER SILL DETAIL						CON-6W		
	1. THILEOHOLD I LIK OILL DE I'ALL					1 EA WIRE HARNESS	(WIRE LEADS FOR CONNECTION TO	SC	СН
			Hardware Group No. 07.3				POWER)		
<u>3 </u>			Provide each SGL door(s) with the following	:		1 EA POWER SUPPLY	PS902 900-2RS 120/240 VAC	VO	NC
	Hardware Group No. 05		QTY DESCRIPTION	CATALOG NUMBER	FINISH MFR	NOTES:			
	Provide each SGL door(s) with the following:		3 EA HINGE	5BB1 4.5 X 4.5	652 IVE	1. CARD READER(S) - WORK OF	DIVISION 28		
	QTY DESCRIPTION	CATALOG NUMBER FINISH MF	1 EA CLASSROOM LOCK	L9070T M51A	630 SCH	2. DOOR CONTACT(S) - WORK O			
	3 EA HINGE	5BB1 4.5 X 4.5 652 IV	^{'E} 1 EA FSIC CORE	23-030 CKC EV29 T	626 SCH	3. SEALS BY DOOR/FRAME MAN			
	1 EA OFFICE/ENTRY LOCK	L9050T M51A 09-544 630 S		450S	20				
	1 EA FSIC CORE		CH 1 EA OH STOP	(USE WHERE DOOR DOES NOT OPEN	630 GLY	4. THRESHOLD PER SILL DETAIL	-		
	1 EA SURFACE CLOSER	4050A RW/PA 689 L		AGAINST A WALL))				
	1 EA KICK PLATE	8400 10" B-CS 630 IN		4050A RW/PA ST-5003	689 LCN				
	1 EA WALL STOP		/E 1 EA MOUNTING PLATE	4050A-18 ST-5003	689 LCN	Hardware Group No. CR01.1			
4	I EA WALLSTOP	488FSBK PSA	1 EA KICK PLATE	8400 10" B-CS		Provide each SGL door(s) with the following:			
	1 EA GASKETING	488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE BK Z			630 IVE	QTY DESCRIPTION	CATALOG NUMBER	FINISH MFI	-R
	I EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE BK Z RATED DOORS)		488FSBK PSA	DV 755	2 EA HINGE	5BB1 4.5 X 4.5 NRP	630 IVE	
		SR64	1 EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE RATED DOORS)	BK ZER	1 EA ELECTRIC HINGE	5BB1 4.5 X 4.5 CON TW8	630 IVE	
	3 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS ARE GRY IV	/F	·		1 EA ELEC PANIC HARDWARE	LD-RX-98-L-M996-M51-FSE-CON	630 VO	
	J EA SILENCER	PROVIDED)		SR64	CDV IVE		20-057 ICX		
	NOTE:	· · - · · ,	3 EA SILENCER	(OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	GRY IVE	1 EA RIM CYLINDER		626 SC	
			NOTE:	i novided)		1 EA FSIC CORE	23-030 CKC EV29 T	626 SC	
	1. THRESHOLD PER SILL DETAIL		NOTE:			1 EA SURFACE CLOSER	4050A CUSH	689 LCI	
_ 			1. THRESHOLD PER SILL DETAI	L		1 SET GASKETING	328AA-S	AA ZEI	
5	<u> </u>					1 EA DOOR SWEEP	39A	A ZEI	
	Hardware Group No. 05.1					2 EA MOUNTING BRACKET	328SPB	ZEI	≟R
	Provide each SGL door(s) with the following:		Hardware Group No. 07A				CON-LENGTH TO SUIT		
	QTY DESCRIPTION	CATALOG NUMBER FINISH M	•			1 EA WIRE HARNESS	(CONNECT POWER TRANSFER TO	SC	ЭН
	3 EA HINGE	5BB1 4.5 X 4.5 NRP 652 IV		CATALOG NUMBER	FINISH MFR		ELECTRIFIED LOCKING DEVICE)		
	1 EA OFFICE/ENTRY LOCK	L9050T M51A 09-544 630 S		112XY	628 IVE		CON-6W		
	1 EA FSIC CORE		CH 1 EA MANUAL FLUSH BOLT	FB458	626 IVE	1 EA WIRE HARNESS	(WIRE LEADS FOR CONNECTION TO	SC	CH HC
	1 EA SURFACE CLOSER						POWER)		
			CN 1 EA DUST PROOF STRIKE	DP2	626 IVE	NOTES:			
6	1 EA KICK PLATE		/E 1 EA DEADBOLT	MS1850, TO SUIT DOOR	628 ADA	1. CARD READER(S) - WORK OF	DIVISION 28		
"	1 EA WALL STOP	WS406/407CVX 630 IN		20-062 ICX X K510-711 36-083	626 SCH	2. DOOR CONTACT(S) - WORK O			
		488FSBK PSA	1 EA MORTISE ADA THUMBTURN	ADA7181 863A	626 ILC	3. POWER SUPPLY) - WORK OF I			
	1 EA GASKETING	(PROVIDE AT SMOKE AND/OR FIRE BK Z	-10	22 020 OKO EV20 T		4. THRESHOLD PER SILL DETAIL			
		RATED DOORS)	1 EA FSIC CORE	23-030 CKC EV29 T	626 SCH	4. THRESHOLD I ER SILL BETALL	-		
		SR64	2 EA LONG DOOR PULL	PR 9266F 36" N	630 IVE				 -
		(014) T. 14 (1) EDE 01401/E/E/E/E 0E 41 0 4 DE 01/1/2	/E 2 EA OH STOP	410S	CO CLV				
	3 EA SILENCER	1 -			630 GLY				•
		PROVIDED)	2 EA SURFACE CLOSER	4050A RW/PA ST-5003	630 GLY 689 LCN	Hardware Group No. RU			
	3 EA SILENCER <u>NOTE:</u>	1 -		4050A RW/PA ST-5003 4050A-18 ST-5003		Hardware Group No. RU Provide each RU door(s) with the following:			
		1 -	2 EA SURFACE CLOSER		689 LCN	Provide each RU door(s) with the following:	CATALOG NUMBER	FINISH MFI	FR
7	NOTE:	1 -	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES:	4050A-18 ST-5003	689 LCN	Provide each RU door(s) with the following: QTY DESCRIPTION	CATALOG NUMBER	FINISH MFI	
7	NOTE:	1 -	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN	4050A-18 ST-5003 NUFACTURER	689 LCN	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE:		FINISH MFI	
7	NOTE: 1. THRESHOLD PER SILL DETAIL	1 -	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES:	4050A-18 ST-5003 NUFACTURER	689 LCN	Provide each RU door(s) with the following: QTY DESCRIPTION		FINISH MFI	<u>-R</u>
7	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2	1 -	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN	4050A-18 ST-5003 NUFACTURER	689 LCN	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE:		FINISH MFI	₹R
7	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following:	PROVIDED)	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAI	4050A-18 ST-5003 NUFACTURER	689 LCN	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M		FINISH MFI	
7	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION	PROVIDED) CATALOG NUMBER FINISH M	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAIL FR Hardware Group No. 07A.1	4050A-18 ST-5003 NUFACTURER	689 LCN	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL		FINISH MFI	=R
7	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE	CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 NRP 652	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAIL FR Hardware Group No. 07A.1 Provide each PR door(s) with the following:	4050A-18 ST-5003 NUFACTURER IL	689 LCN 689 LCN	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following:	IANUFACTURER		FR
7	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK	CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 NRP 652 IN L9050T M51A 09-544 630 S	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAIL FR Hardware Group No. 07A.1 Provide each PR door(s) with the following: QTY DESCRIPTION	4050A-18 ST-5003 NUFACTURER IL CATALOG NUMBER	689 LCN 689 LCN	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following: QTY DESCRIPTION	IANUFACTURER CATALOG NUMBER	FINISH MFI	FR
7	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK 1 EA FSIC CORE	CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 NRP 652 IN L9050T M51A 09-544 630 S 23-030 CKC EV29 T 626 S	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAIL FR Hardware Group No. 07A.1 Provide each PR door(s) with the following:	4050A-18 ST-5003 NUFACTURER IL	689 LCN 689 LCN	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following:	IANUFACTURER		FR
	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK 1 EA FSIC CORE 1 EA SURFACE CLOSER	CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 NRP 652 IV L9050T M51A 09-544 630 S 23-030 CKC EV29 T 626 S 4050A CUSH 689 L	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAIL FR Hardware Group No. 07A.1 Provide each PR door(s) with the following: CH CH CH CH CH CH CH CH CH C	4050A-18 ST-5003 NUFACTURER IL CATALOG NUMBER 5BB1 4.5 X 4.5 NRP 9827-L-LBR-M51	689 LCN 689 LCN FINISH MFR 652 IVE 630 VON	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following: QTY DESCRIPTION 1 EA MORTISE CYLINDER 1 EA FSIC CORE	IANUFACTURER CATALOG NUMBER	FINISH MFI	FR CH
7	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK 1 EA FSIC CORE	CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 NRP 652 IN L9050T M51A 09-544 630 S 23-030 CKC EV29 T 626 S 4050A CUSH 689 L6 8400 10" B-CS 630 IN	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAIL FR Hardware Group No. 07A.1 Provide each PR door(s) with the following: CH CH CH CH CH CH CH CH CH C	4050A-18 ST-5003 NUFACTURER IL CATALOG NUMBER 5BB1 4.5 X 4.5 NRP	689 LCN 689 LCN FINISH MFR 652 IVE	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following: QTY DESCRIPTION 1 EA MORTISE CYLINDER	CATALOG NUMBER 20-062 ICX X K510-711 36-083	FINISH MFI 626 SCI	FR CH
	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK 1 EA FSIC CORE 1 EA SURFACE CLOSER 1 EA KICK PLATE	CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 NRP 652 IN L9050T M51A 09-544 630 S 23-030 CKC EV29 T 626 S 4050A CUSH 689 L4 8400 10" B-CS 630 IN	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAIL FR Hardware Group No. 07A.1 Provide each PR door(s) with the following: QTY DESCRIPTION CH QTY DESCRIPTION CH 6 EA HINGE CN 2 EA PANIC HARDWARE ZE A FSIC CORE	4050A-18 ST-5003 NUFACTURER IL CATALOG NUMBER 5BB1 4.5 X 4.5 NRP 9827-L-LBR-M51	689 LCN 689 LCN FINISH MFR 652 IVE 630 VON	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following: QTY DESCRIPTION 1 EA MORTISE CYLINDER 1 EA FSIC CORE	CATALOG NUMBER 20-062 ICX X K510-711 36-083 23-030 CKC EV29 T	FINISH MFI 626 SCI	FR CH
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8	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK 1 EA SURFACE CLOSER 1 EA KICK PLATE 1 EA GASKETING 3 EA SILENCER NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 07 Provide each SGL door(s) with the following: QTY DESCRIPTION	CATALOG NUMBER 5BB1 4.5 X 4.5 NRP L9050T M51A 09-544 23-030 CKC EV29 T 4050A CUSH 8400 10" B-CS 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED) CATALOG NUMBER FINISH M	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAI FR Hardware Group No. 07A.1 Provide each PR door(s) with the following: QTY DESCRIPTION 6 EA HINGE CN 2 EA PANIC HARDWARE 7E 2 EA FSIC CORE 2 EA SURFACE CLOSER 2 EA SURFACE CLOSER 2 EA WALL STOP 1 EA GASKETING NOTE: 1. THRESHOLD PER SILL DETAI	AUFACTURER IL CATALOG NUMBER 5BB1 4.5 X 4.5 NRP 9827-L-LBR-M51 20-057 ICX 23-030 CKC EV29 T 4050A EDA WS406/407CVX 488SBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	689 LCN 689 LCN FINISH MFR 652 IVE 630 VON 626 SCH 626 SCH 626 SCH 630 IVE BK ZER	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following: QTY DESCRIPTION 1 EA MORTISE CYLINDER 1 EA FSIC CORE NOTE:	CATALOG NUMBER 20-062 ICX X K510-711 36-083 23-030 CKC EV29 T	FINISH MFI 626 SCI	FR CH
8	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK 1 EA FSIC CORE 1 EA SURFACE CLOSER 1 EA KICK PLATE 1 EA GASKETING 3 EA SILENCER NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 07 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE	CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 NRP 652 N L9050T M51A 09-544 630 S 23-030 CKC EV29 T 626 S 4050A CUSH 689 L 8400 10" B-CS 630 N 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED) CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 652 N	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAIL FR. Hardware Group No. 07A.1 Provide each PR door(s) with the following: QTY DESCRIPTION 6 EA HINGE CN 2 EA PANIC HARDWARE 7 E 2 EA FSIC CORE 2 EA SURFACE CLOSER 2 EA WALL STOP 1 EA GASKETING NOTE: 1. THRESHOLD PER SILL DETAIL 1. THRESHOLD PER SILL DETAI	AUFACTURER IL CATALOG NUMBER 5BB1 4.5 X 4.5 NRP 9827-L-LBR-M51 20-057 ICX 23-030 CKC EV29 T 4050A EDA WS406/407CVX 488SBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	689 LCN 689 LCN FINISH MFR 652 IVE 630 VON 626 SCH 626 SCH 626 SCH 630 IVE BK ZER	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following: QTY DESCRIPTION 1 EA MORTISE CYLINDER 1 EA FSIC CORE NOTE:	CATALOG NUMBER 20-062 ICX X K510-711 36-083 23-030 CKC EV29 T	FINISH MFI 626 SCI	FR CH
8	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK 1 EA FSIC CORE 1 EA SURFACE CLOSER 1 EA KICK PLATE 1 EA GASKETING 3 EA SILENCER NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 07 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA CLASSROOM LOCK	CATALOG NUMBER 5BB1 4.5 X 4.5 NRP L9050T M51A 09-544 23-030 CKC EV29 T 4050A CUSH 8400 10" B-CS 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED) CATALOG NUMBER 5BB1 4.5 X 4.5 L9070T M51A FINISH M 630 S	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAI FR Hardware Group No. 07A.1 Provide each PR door(s) with the following: QTY DESCRIPTION 6 EA HINGE CN 2 EA PANIC HARDWARE 7 E 2 EA RIM CYLINDER 2 EA FSIC CORE 2 EA SURFACE CLOSER 2 EA WALL STOP 1 EA GASKETING PR FR	AUFACTURER IL CATALOG NUMBER 5BB1 4.5 X 4.5 NRP 9827-L-LBR-M51 20-057 ICX 23-030 CKC EV29 T 4050A EDA WS406/407CVX 488SBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	689 LCN 689 LCN FINISH MFR 652 IVE 630 VON 626 SCH 626 SCH 626 SCH 630 IVE BK ZER	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following: QTY DESCRIPTION 1 EA MORTISE CYLINDER 1 EA FSIC CORE NOTE:	CATALOG NUMBER 20-062 ICX X K510-711 36-083 23-030 CKC EV29 T	FINISH MFI 626 SCI	FR CH
8	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK 1 EA FSIC CORE 1 EA SURFACE CLOSER 1 EA KICK PLATE 1 EA GASKETING 3 EA SILENCER NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 07 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA CLASSROOM LOCK 1 EA FSIC CORE	CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 NRP 652 IV L9050T M51A 09-544 630 S 23-030 CKC EV29 T 626 S 4050A CUSH 689 LI 8400 10" B-CS 630 IV 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED) CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 652 IV L9070T M51A 630 S 23-030 CKC EV29 T 626 S	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAI FR Hardware Group No. 07A.1 Provide each PR door(s) with the following: QTY DESCRIPTION 6 EA HINGE CN 2 EA PANIC HARDWARE 2 EA RIM CYLINDER 2 EA FSIC CORE 2 EA SURFACE CLOSER 2 EA WALL STOP 1 EA GASKETING PR TE NOTE: 1. THRESHOLD PER SILL DETAI	AUFACTURER IL CATALOG NUMBER 5BB1 4.5 X 4.5 NRP 9827-L-LBR-M51 20-057 ICX 23-030 CKC EV29 T 4050A EDA WS406/407CVX 488SBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	689 LCN 689 LCN FINISH MFR 652 IVE 630 VON 626 SCH 626 SCH 626 SCH 630 IVE BK ZER	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following: QTY DESCRIPTION 1 EA MORTISE CYLINDER 1 EA FSIC CORE NOTE:	CATALOG NUMBER 20-062 ICX X K510-711 36-083 23-030 CKC EV29 T	FINISH MFI 626 SCI	FR CH
8	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK 1 EA FSIC CORE 1 EA SURFACE CLOSER 1 EA KICK PLATE 1 EA GASKETING NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 07 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA CLASSROOM LOCK 1 EA FSIC CORE 1 EA SURFACE CLOSER	CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 NRP 652 N L9050T M51A 09-544 630 S 23-030 CKC EV29 T 626 S 4050A CUSH 689 L 8400 10" B-CS 630 N 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED) CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 652 N L9070T M51A 630 S 23-030 CKC EV29 T 626 S 4050A RW/PA 689 L	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAI FR Hardware Group No. 07A.1 Provide each PR door(s) with the following: QTY DESCRIPTION 6 EA HINGE CN 2 EA PANIC HARDWARE 7E 2 EA RIM CYLINDER 2 EA FSIC CORE 2 EA SURFACE CLOSER 2 EA WALL STOP 1 EA GASKETING FR 7E 1 THRESHOLD PER SILL DETAI FR 7E 1 Hardware Group No. 07A.2 Provide each PR door(s) with the following: QTY DESCRIPTION	AUFACTURER IL CATALOG NUMBER 5BB1 4.5 X 4.5 NRP 9827-L-LBR-M51 20-057 ICX 23-030 CKC EV29 T 4050A EDA WS406/407CVX 488SBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	689 LCN 689 LCN FINISH MFR 652 IVE 630 VON 626 SCH 626 SCH 626 SCH 630 IVE BK ZER	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following: QTY DESCRIPTION 1 EA MORTISE CYLINDER 1 EA FSIC CORE NOTE:	CATALOG NUMBER 20-062 ICX X K510-711 36-083 23-030 CKC EV29 T	FINISH MFI 626 SCI	FR CH
8	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK 1 EA FSIC CORE 1 EA SURFACE CLOSER 1 EA KICK PLATE 1 EA GASKETING 3 EA SILENCER NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 07 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA CLASSROOM LOCK 1 EA FSIC CORE	CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 NRP 652 IV L9050T M51A 09-544 630 S 23-030 CKC EV29 T 626 S 4050A CUSH 689 LI 8400 10" B-CS 630 IV 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED) CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 652 IV L9070T M51A 630 S 23-030 CKC EV29 T 626 S 4050A RW/PA 689 LI	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAI FR (E) CH	AUFACTURER IL CATALOG NUMBER 5BB1 4.5 X 4.5 NRP 9827-L-LBR-M51 20-057 ICX 23-030 CKC EV29 T 4050A EDA WS406/407CVX 488SBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED)	689 LCN 689 LCN FINISH MFR 652 IVE 630 VON 626 SCH 626 SCH 630 IVE BK ZER GRY IVE	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following: QTY DESCRIPTION 1 EA MORTISE CYLINDER 1 EA FSIC CORE NOTE:	CATALOG NUMBER 20-062 ICX X K510-711 36-083 23-030 CKC EV29 T	FINISH MFI 626 SCI	FR CH
9	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK 1 EA FSIC CORE 1 EA SURFACE CLOSER 1 EA KICK PLATE 1 EA GASKETING NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 07 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA CLASSROOM LOCK 1 EA FSIC CORE 1 EA SURFACE CLOSER	CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 NRP 652 N L9050T M51A 09-544 630 S 23-030 CKC EV29 T 626 S 4050A CUSH 689 L 8400 10" B-CS 630 N 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED) CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 652 N L9070T M51A 630 S 23-030 CKC EV29 T 626 S 4050A RW/PA 689 L	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAI FR Hardware Group No. 07A.1 Provide each PR door(s) with the following: QTY DESCRIPTION 6 EA HINGE 2 EA PANIC HARDWARE 6 PA PANIC HARDWARE 7 PA PANIC HARDWARE 8 PA PANIC HARDWARE 9 PA PANIC HARDWARE 1 PANIC HARDWARE 1 PA PANIC HARDWARE 1	AUFACTURER IL CATALOG NUMBER 5BB1 4.5 X 4.5 NRP 9827-L-LBR-M51 20-057 ICX 23-030 CKC EV29 T 4050A EDA WS406/407CVX 488SBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED) L CATALOG NUMBER	689 LCN 689 LCN FINISH MFR 652 IVE 630 VON 626 SCH 626 SCH 630 IVE BK ZER GRY IVE FINISH MFR 652 IVE	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following: QTY DESCRIPTION 1 EA MORTISE CYLINDER 1 EA FSIC CORE NOTE:	CATALOG NUMBER 20-062 ICX X K510-711 36-083 23-030 CKC EV29 T	FINISH MFI 626 SCI	FR CH
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8	NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 05.2 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA OFFICE/ENTRY LOCK 1 EA FSIC CORE 1 EA SURFACE CLOSER 1 EA KICK PLATE 1 EA GASKETING 3 EA SILENCER NOTE: 1. THRESHOLD PER SILL DETAIL Hardware Group No. 07 Provide each SGL door(s) with the following: QTY DESCRIPTION 3 EA HINGE 1 EA CLASSROOM LOCK 1 EA FSIC CORE 1 EA SURFACE CLOSER 1 EA SURFACE CLOSER 1 EA SURFACE CLOSER 1 EA KICK PLATE 1 EA WALL STOP	CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 NRP 652 N L9050T M51A 09-544 630 S 23-030 CKC EV29 T 626 S 4050A CUSH 689 L 8400 10" B-CS 630 N 488FSBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED) CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 652 N PROVIDED) CATALOG NUMBER FINISH M 5BB1 4.5 X 4.5 652 N L9070T M51A 630 S 23-030 CKC EV29 T 626 S 4050A RW/PA 689 L 8400 10" B-CS 630 N W\$406/407CVX 630 N	2 EA SURFACE CLOSER 2 EA MOUNTING PLATE NOTES: 1. SEALS BY DOOR/FRAME MAN 2. THRESHOLD PER SILL DETAI FR Hardware Group No. 07A.1 Provide each PR door(s) with the following: QTY DESCRIPTION 6 EA HINGE 2 EA PANIC HARDWARE 2 EA SURFACE CLOSER 2 EA WALL STOP 1 EA GASKETING FR Hardware Group No. 07A.2 Provide each PR door(s) with the following: QTY DESCRIPTION 6 EA HINGE CH HARDWARE CH HARDWARE GROUP No. 07A.2 Provide each PR door(s) with the following: QTY DESCRIPTION 6 EA HINGE 2 EA PANIC HARDWARE 2 EA PANIC HARDWARE 2 EA RIM CYLINDER 2 EA RIM CYLINDER 2 EA FSIC CORE	A050A-18 ST-5003 NUFACTURER IL CATALOG NUMBER 5BB1 4.5 X 4.5 NRP 9827-L-LBR-M51 20-057 ICX 23-030 CKC EV29 T 4050A EDA WS406/407CVX 488SBK PSA (PROVIDE AT SMOKE AND/OR FIRE RATED DOORS) SR64 (OMIT WHERE SMOKE/FIRE SEALS ARE PROVIDED) L CATALOG NUMBER 5BB1 4.5 X 4.5 NRP 9827-L-LBR-M51 20-057 ICX 23-030 CKC EV29 T	689 LCN 689 LCN 689 LCN FINISH MFR 652 IVE 630 VON 626 SCH 689 LCN 630 IVE BK ZER GRY IVE FINISH MFR 652 IVE 630 VON 626 SCH 626 SCH 626 SCH	Provide each RU door(s) with the following: QTY DESCRIPTION NOTE: HARDWARE BY DOOR/FRAME M Hardware Group No. SL Provide each SL door(s) with the following: QTY DESCRIPTION 1 EA MORTISE CYLINDER 1 EA FSIC CORE NOTE:	CATALOG NUMBER 20-062 ICX X K510-711 36-083 23-030 CKC EV29 T	FINISH MFI 626 SCI	FR CH
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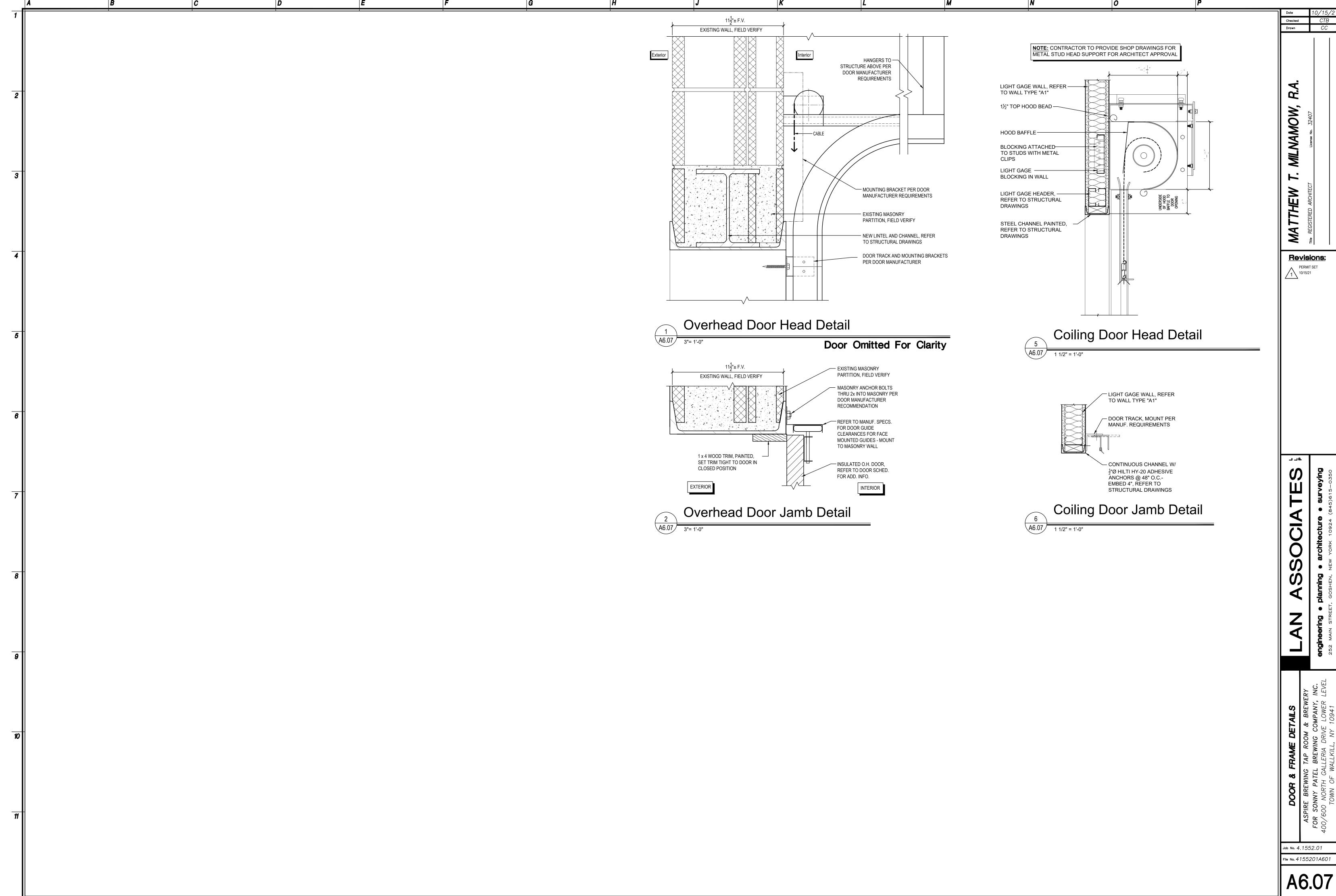
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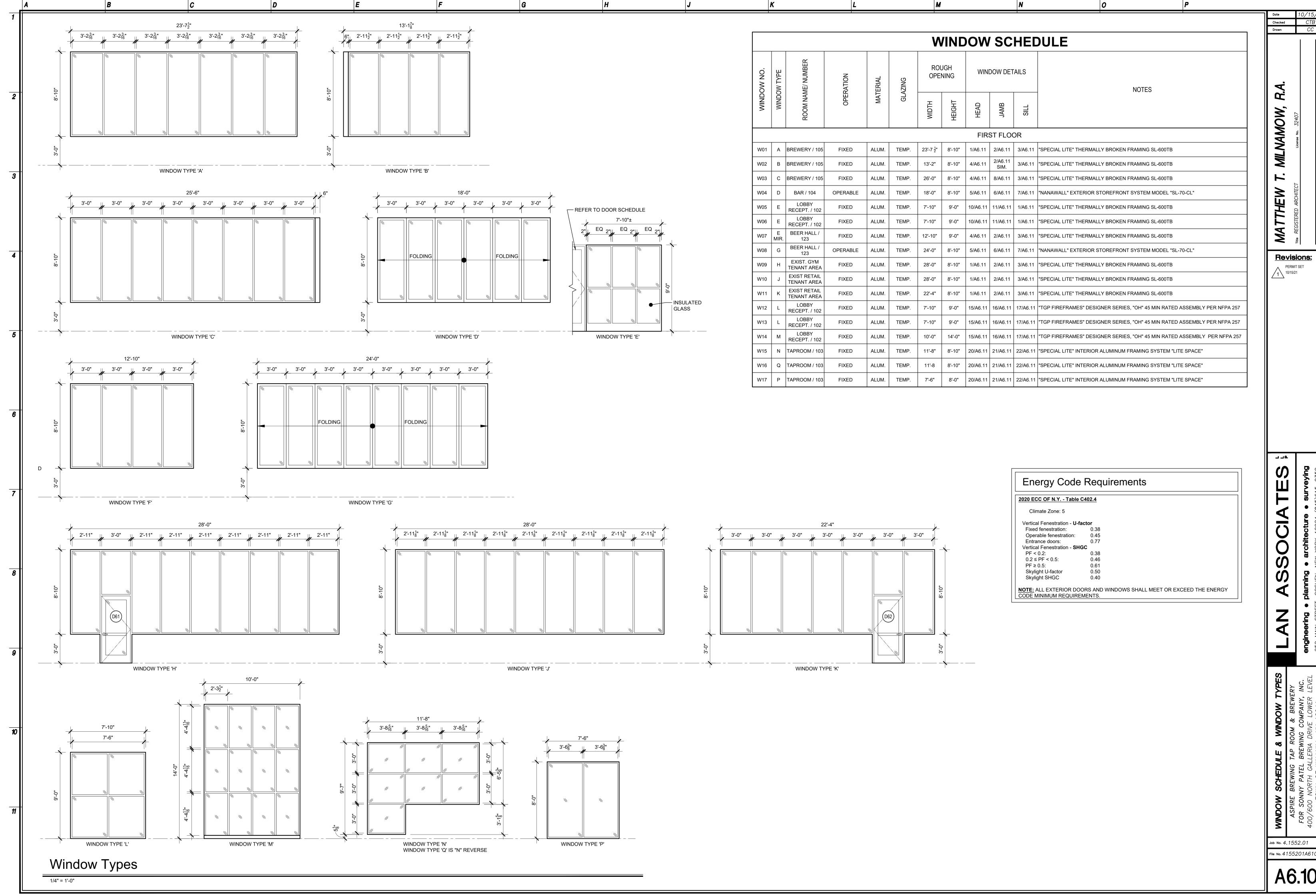
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TES L surveying

Job No. 4.1552.01 File No. 4155201A601

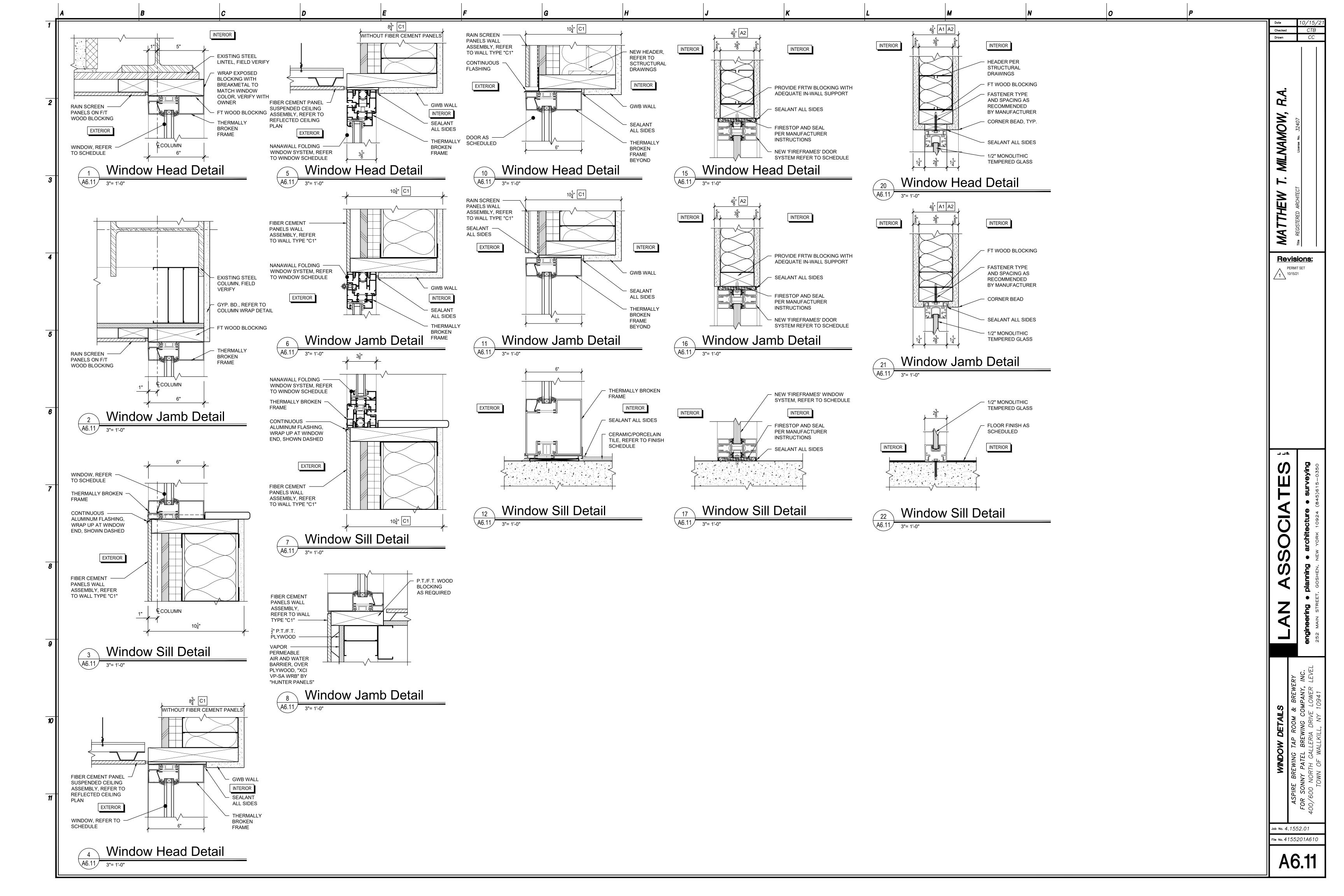


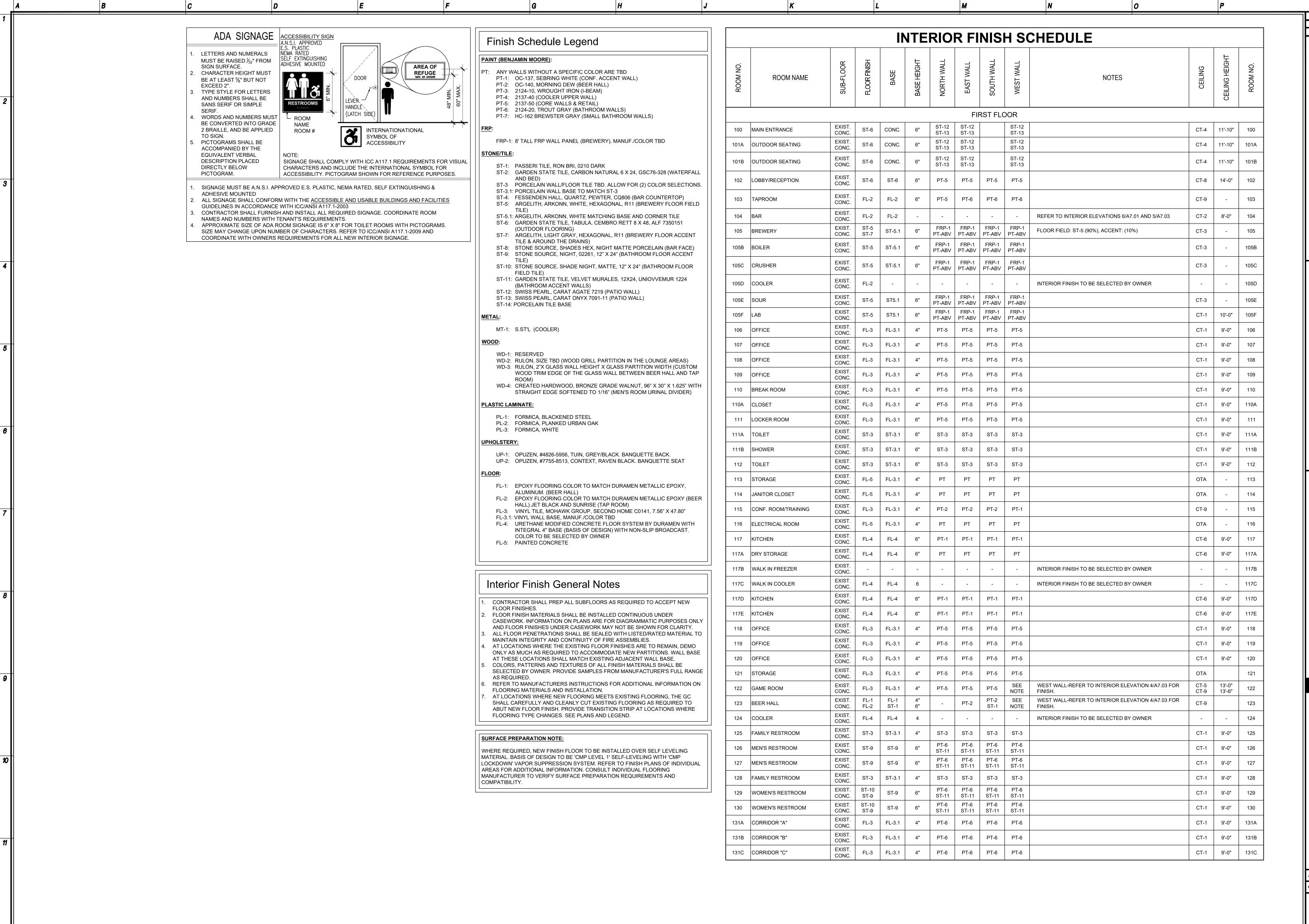




Revisions:

Job No. 4.1552.01





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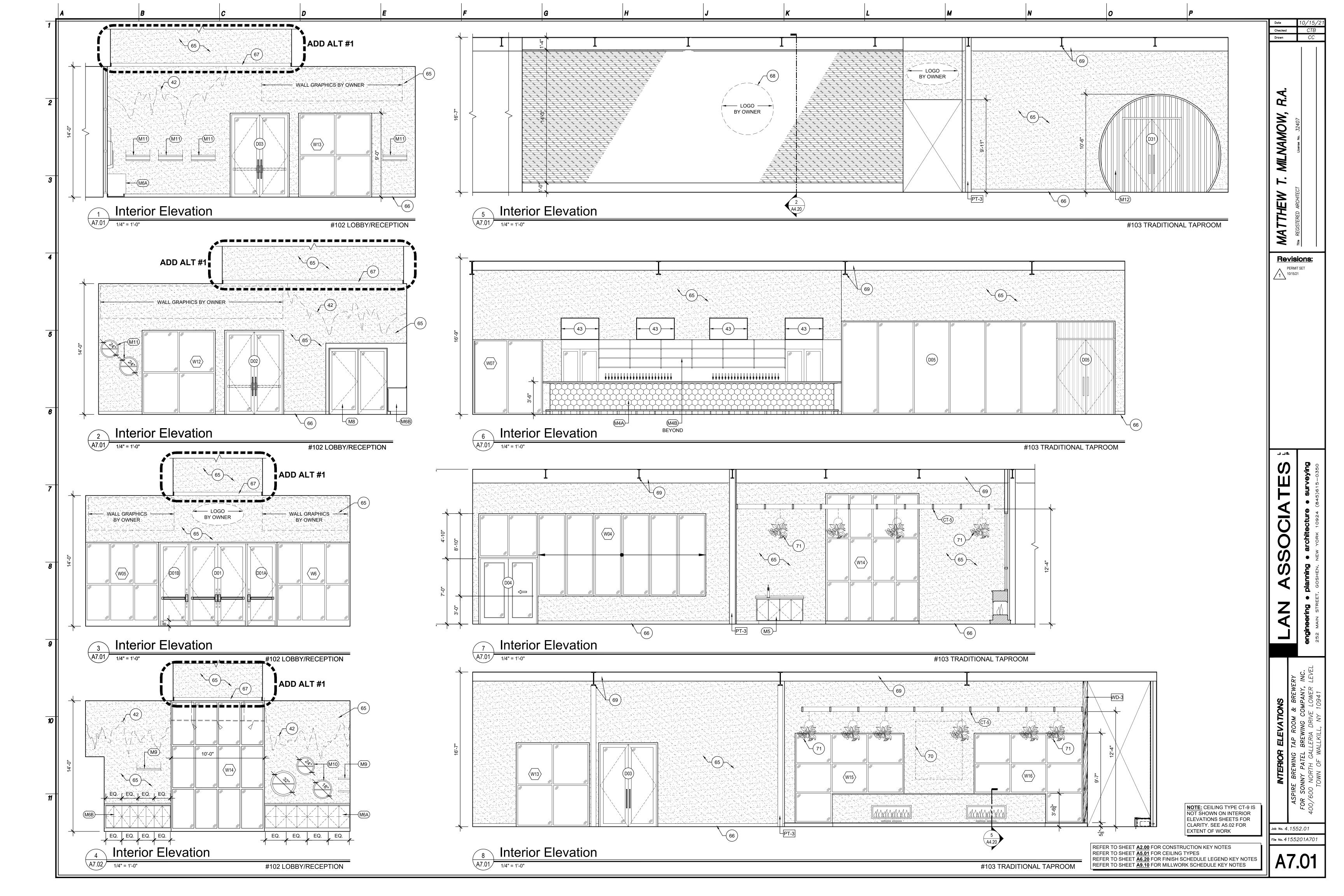
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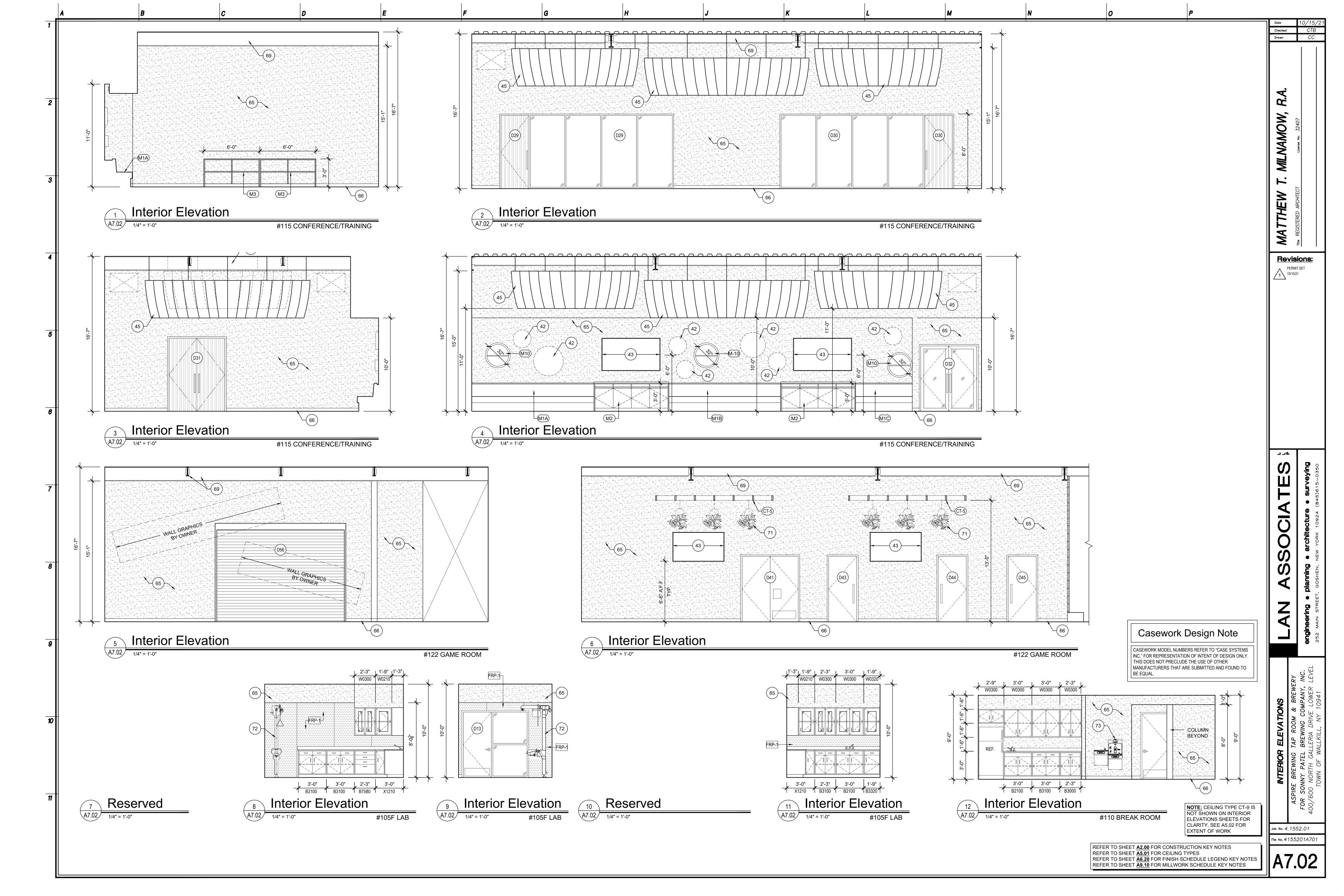
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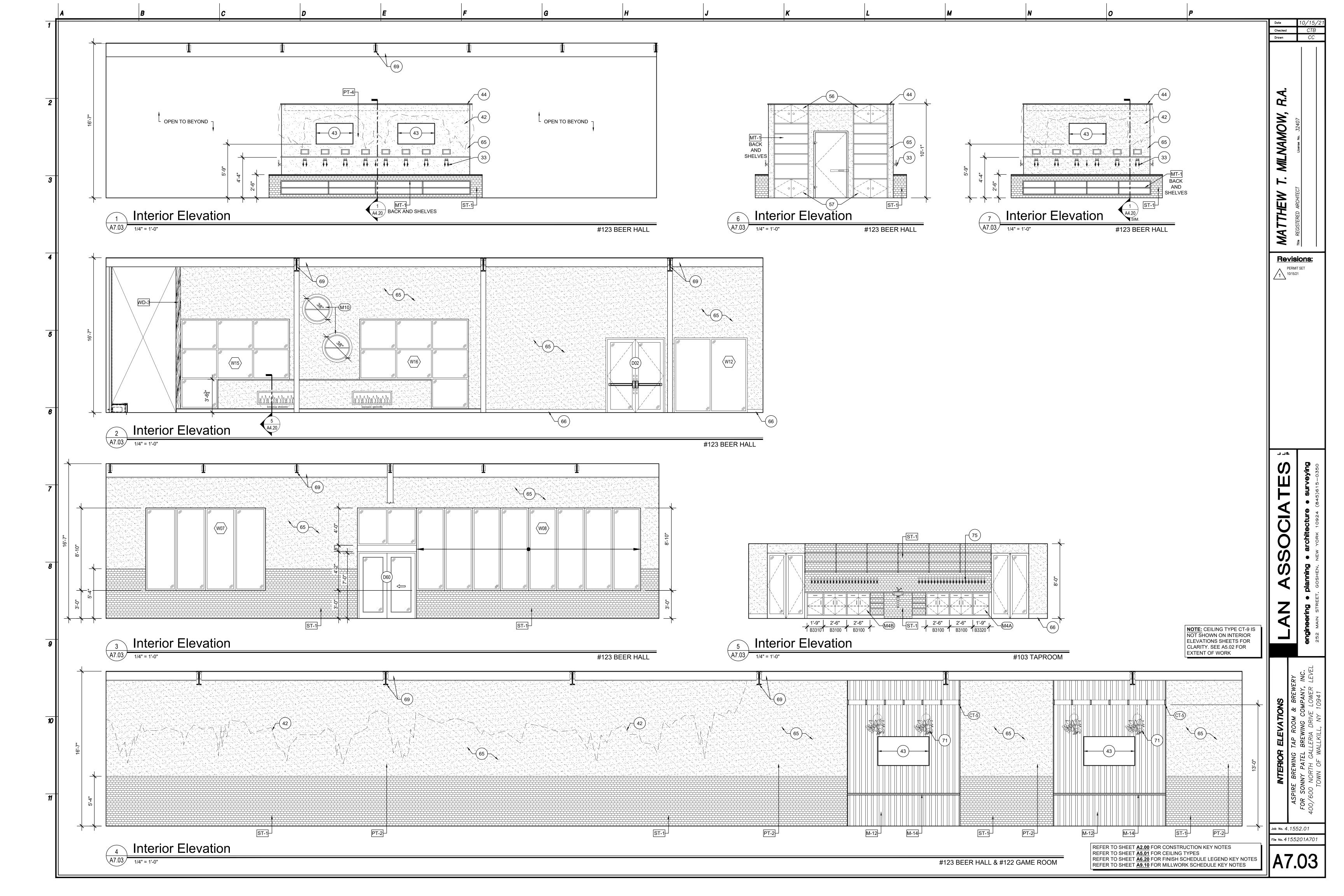
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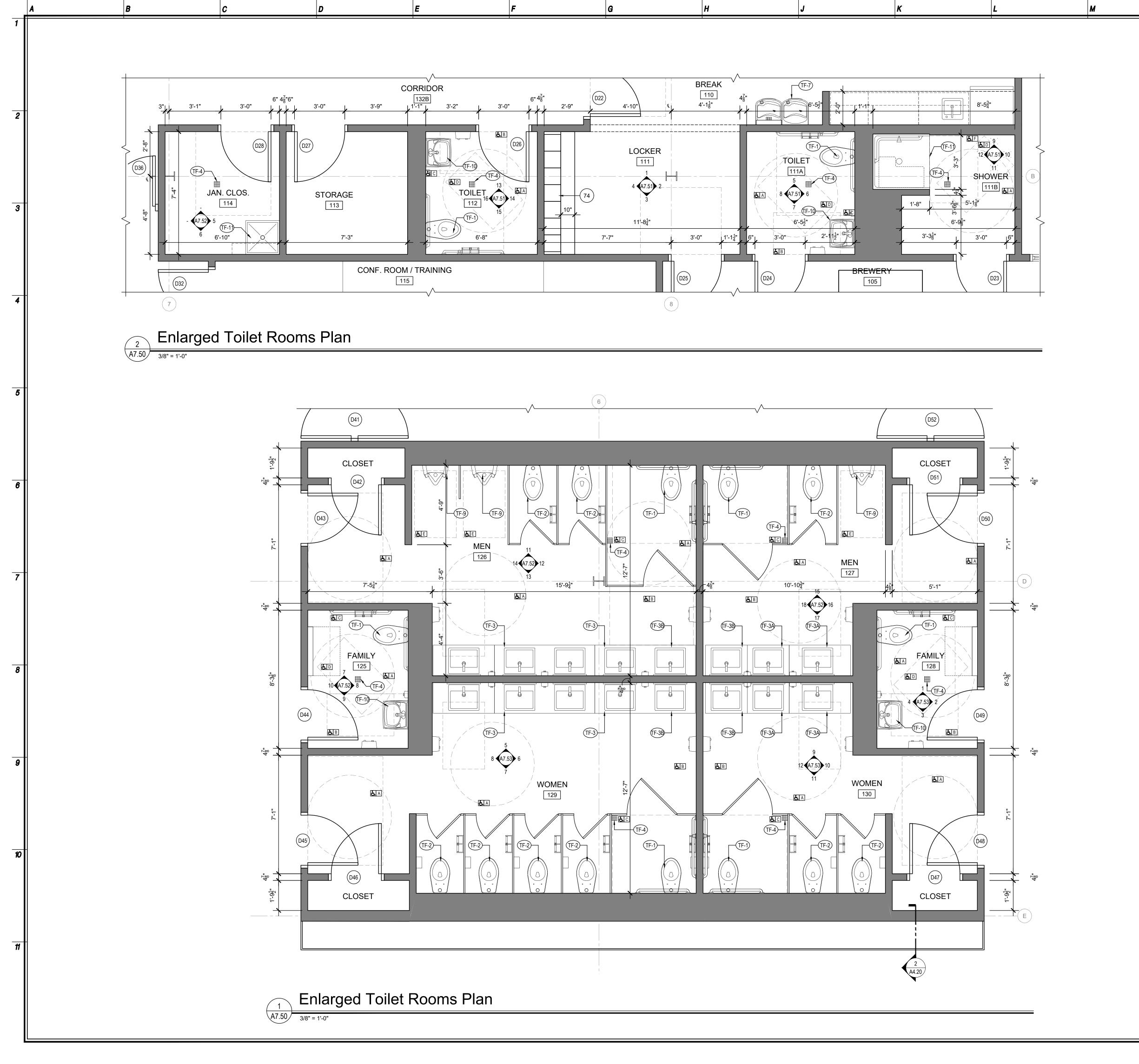
IRE BREWING TAP ROOM & BREWERY
SONNY PATEL BREWING COMPANY, INC.
TOWN OF WALLERIA DRIVE LOWER LEVEL

Job No. 4.1552.01 File No. 4155201A620









Toilet Room Key Notes

SYMBOL INDICATES
TOILET ROOM KEY NOTE

- FLOOR FINISH, REFER TO INTERIOR FINISH SCHEDULE ON DRAWING A6.20.
- WALL BASE, REFER TO INTERIOR FINISH SCHEDULE ON DRAWING A6.20. WALL FINISH, REFER TO INTERIOR FINISH SCHEDULE ON DRAWING A6.20.
- CEILING FINISH, REFER TO REFLECTED CEILING PLAN ON DRAWING A5.02. ACCESS DOOR, COORDINATE WITH PLUMBING DRAWINGS.

Typical Toilet Room Notes

- CONTRACTOR TO COORDINATE EXACT LOCATIONS OF ALL TOILET ROOM ACCESSORIES WITH OWNER PRIOR TO
- THE CONTRACTOR SHALL SECURELY FASTEN ALL FIXTURES AND ACCESSORIES AT PROPER MOUNTING HEIGHTS. CONTRACTOR SHALL PROVIDE ADEQUATE BLOCKING AT APPROPRIATE MOUNTING HEIGHTS AS REQUIRED FOR ALL ACCESSORIES INCLUDED IN THIS CONTRACT INCLUDING ACCESSORIES SUPPLIED BY OWNER. CONTRACTOR SHALL PROVIDE ALL FASTENERS, ANCHORS, PLATES, ETC. REQ'D. FOR COMPLETE INSTALLATION. ALL FASTENERS SHALL BE STAINLESS STEEL, CORROSION AND VANDAL RESISTANT
- WHENEVER BRAND NAMES OR SPECIFIC PRODUCT SYSTEMS ARE INDICATED IT SHALL BE CLEARLY UNDERSTOOD THAT SUCH IDENTIFICATION IS FOR THE PURPOSE OF ILLUSTRATING THE TYPE OF PRODUCT AND DEGREE OF QUALITY DESIRED. SUCH IDENTIFICATION IN NO WAY PRECLUDES THE CONTRACTOR FROM USING PRODUCTS OF
- OTHER MANUFACTURERS WHICH CAN BE SHOWN IN ADVANCE TO BE OF LIKE KIND AND OF EQUAL QUALITY. REFER TO PLUMBING FIXTURE SCHEDULE FOR SPECIFIC PLUMBING FIXTURE SPECIFICATIONS. REFER TO PLUMBING DRAWINGS FOR PIPING LAYOUT.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL ADA SIGNAGE AS REQUIRED.
- DIMENSIONS ARE FROM FACE OF FINISH MATERIALS, AND REPRESENT CLEAR AREA. CONTRACTOR TO PROVIDE GRAB BAR ANCHORS FOR SOLID WALL CONSTRUCTION AND CONCEALED ANCHOR PLATE
- FOR STUD WALL CONSTRUCTION. REFER TO TYPICAL GRAB BAR DETAIL C/A7.53
- ALL TOILET ROOM ACCESSORIES SHALL BE STAINLESS STEEL. COLOR OF ALL PLUMBING FIXTURES SHALL BE SELECTED BY OWNER

Toilet Accessory Key Notes

SYMBOL INDICATES TOILET ACCESSORY KEY NOTE

FRAMELESS MIRROR: "BOBRICK" MODEL #B-164 24"X36"

- SOAP DISPENSER: "BOBRICK" MODEL #B-2111 SURFACE MOUNTED SOAP DISPENSER
- HAND DRYER: "DYSON" AIRBLADE V. SPRAYED NICKEL
- TOILET TISSUE DISPENSER: "BOBRICK" MODEL #B-27460 DOUBLE ROLL TOILET TISSUE DISPENSER. PROVIDE IN EVERY
- TOILET PARTITIONS: FLOOR MOUNTED OVERHEAD-BRACED SOLID PLASTIC BY "SCRANTON PRODUCTS". 1" THICK DOORS, PANELS AND PILASTERS. 1" THICK POST-MOUNTED URINAL SCREENS (FLOOR MOUNTED). HEAVY-DUTY ALUMINUM HARDWARE AND ACCESSORIES. MANUFACTURER'S STANDARD HINGES, LATCH & KEEPERS, DOOR BUMPER AND DOOR PULL
- 42" HORIZONTAL GRAB BAR: "BOBRICK", MODEL #B-5806 x 42, STAINLESS STEEL 1-1/4" DIAMETER PEENED NON-SLIP GRIPPING SURFACE WITH SNAP FLANGE.
- 36" HORIZONTAL GRAB BAR: "BOBRICK", MODEL #B-5806 x36, STAINLESS STEEL 1-1/4" DIAMETER PEENED NON-SLIP
- GRIPPING SURFACE WITH SNAP FLANGE 18" VERTICAL GRAB BAR: "BOBRICK", MODEL #B-5806 x 18, STAINLESS STEEL 1-1/4" DIAMETER PEENED NON-SLIP
- GRIPPING SURFACE WITH SNAP FLANGE.
- LAVATORY PROTECTIVE ENCLOSURE: "LAV SHIELD" BY "TRUEBRO INC." MODEL #2018-AS-C AT TOILET 111A, 112, 113 AND FAMILY 125, 128. "LAVGUARD EZ-2" BY "TRUEBRO INC." AT MEN 126, 127 AND WOMEN 129, 130 SANITARY NAPKIN DISPOSAL: "BOBRICK" MODEL #B-254 SURFACE MOUNTED SANITARY NAPKIN DISPOSAL. PROVIDE IN
- EVERY STALL, WOMEN'S ROOMS ONLY COAT HOOK: "BOBRICK" MODEL #B-542 STAINLESS STEEL COAT HOOK. PROVIDE IN EVERY STALL.
- MOP/BROOM HOLDER: "BOBRICK" SURFACE MOUNTED MOP/BROOM HOLDER MODEL #B-239 HORIZONTAL WALL MOUNTED BABY CHANGING STATION: "KOALA KARE PRODUCTS" MODEL #KB200-SS

MIRROR: "BOBRICK" TILT MIRROR WITH STAINLESS STEEL FRAME MODEL #B-293 1830

Toilet Fixture Key Notes

SYMBOL INDICATES TOILET FIXTURE KEY NOTE

NOTE: CONTRACTOR TO PROVIDE ALL CONCEALED ARM CHAIR SUPPORTS FOR ALL PLUMBING FIXTURES REQUIRED.

- TF-1 WALL MOUNTED ADA WATER CLOSET: SEE PLUMBING SCHEDULE FOR ADDITIONAL INFO.
- TF-2 WALL MOUNTED WATER CLOSET: SEE PLUMBING SCHEDULE FOR ADDITIONAL INFO. TF-3 **DOUBLE COUNTER MOUNTED LAVATORY:** SEE PLUMBING SCHEDULE FOR ADDITIONAL INFO.
- TF-3A SINGLE COUNTER MOUNTED LAVATORY: SEE PLUMBING SCHEDULE FOR ADDITIONAL INFO.
- TF-3B ADA COUNTER MOUNTED LAVATORY: SEE PLUMBING SCHEDULE FOR ADDITIONAL INFO. TF-4 FLOOR DRAIN: SEE PLUMBING SCHEDULE FOR ADDITIONAL INFO.
 - HOSE BIB: SEE PLUMBING SCHEDULE FOR ADDITIONAL INFO.
- **DRINKING FOUNTAIN:** SEE PLUMBING SCHEDULE FOR ADDITIONAL INFO TF-8 MOP SINK: SEE PLUMBING SCHEDULE FOR ADDITIONAL INFO.
- TF-9 **URINAL:** SEE PLUMBING SCHEDULE FOR ADDITIONAL INFO.
- TF-10 ADA LAVATORY (WALL HUNG): SEE PLUMBING SCHEDULE FOR ADDITIONAL INFO. TF-11 SHOWER: SEE PLUMBING SCHEDULE FOR ADDITIONAL INFO.

A 60" CLR. WHEELCHAIR TURNING RADIUS

B 30"x48" CLEAR AT LAVATORY

Accessibility Notes

C 56"x60" CLEAR AT WATER CLOSET

D 30"x48" CLEAR FLOOR SPACE

E 30"x48" CLEAR AT URINAL

MANEUVERING CLEARANCES

F 36"x48" CLEAR AT SHOWER ACCESS * SEE DETAILS A, B, C ON A6.01 FOR DOOR

1. REFER TO SHEET A2.01 AND A2.02 FOR PROPOSED FLOOR

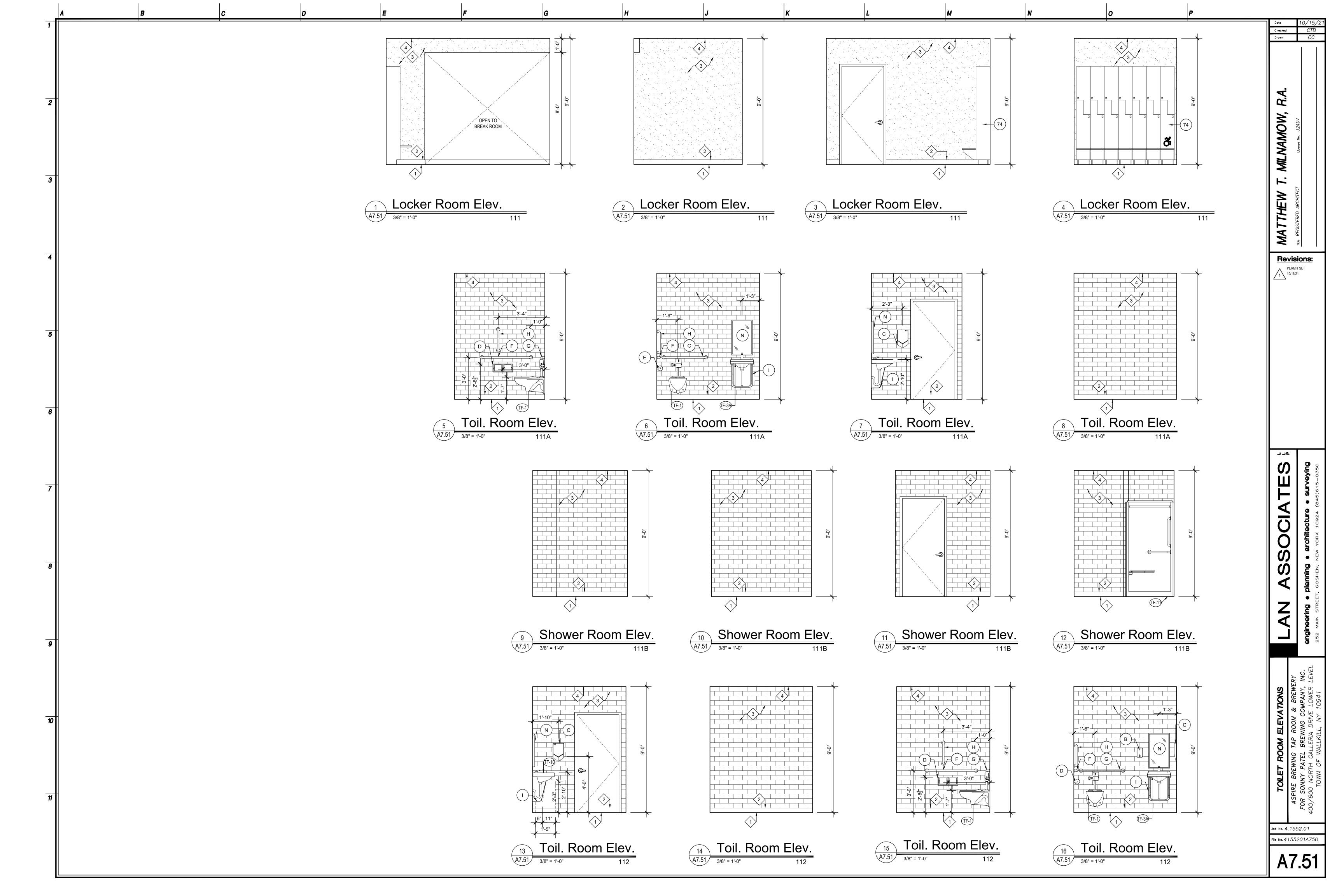
- REFER TO SHEET A5.01 FOR TOILET ROOM REFLECTED CEILING
- REFER TO SHEET <u>A7.51</u> FOR TOILET ROOM INTERIOR ELEVATIONS.

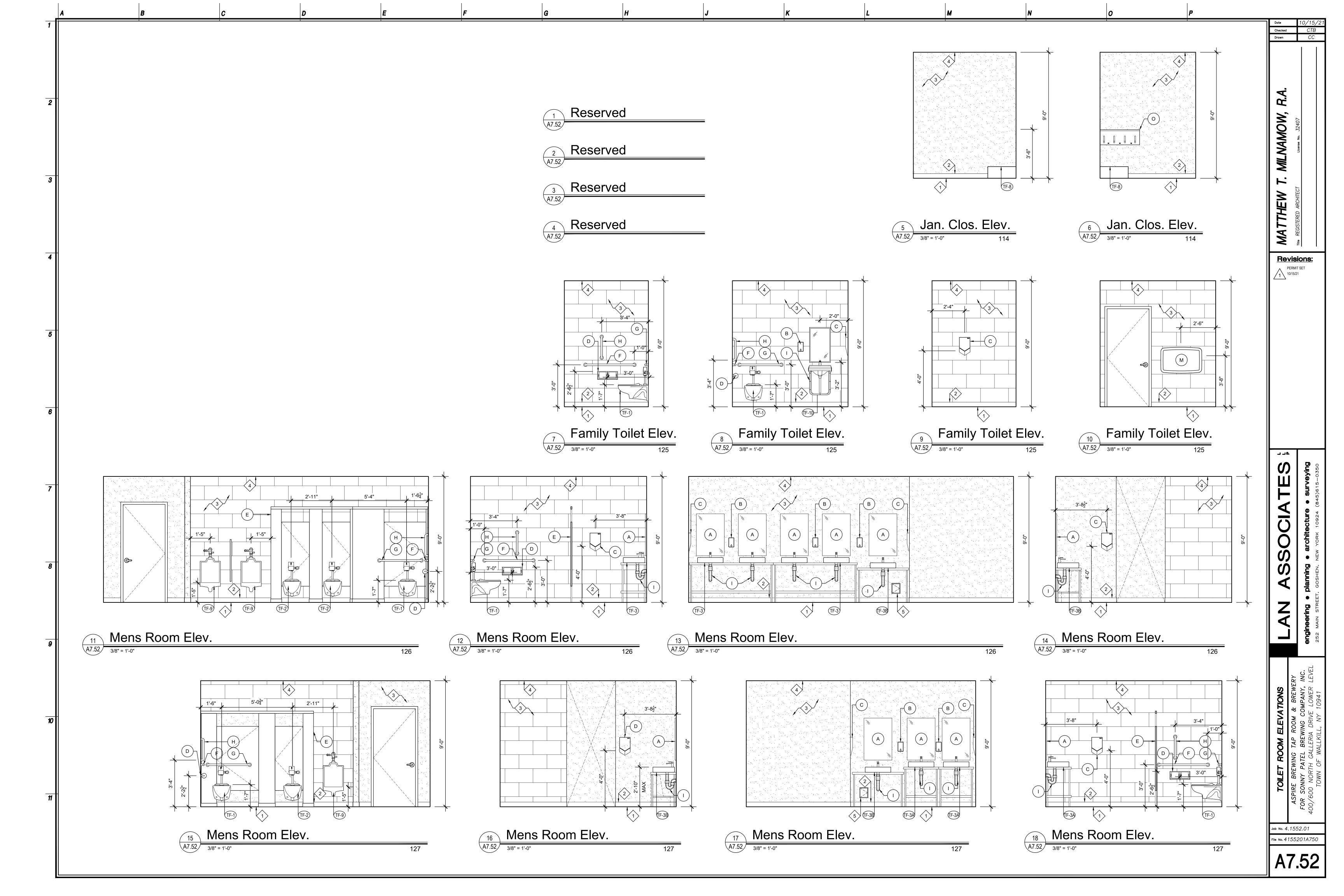
A7.50

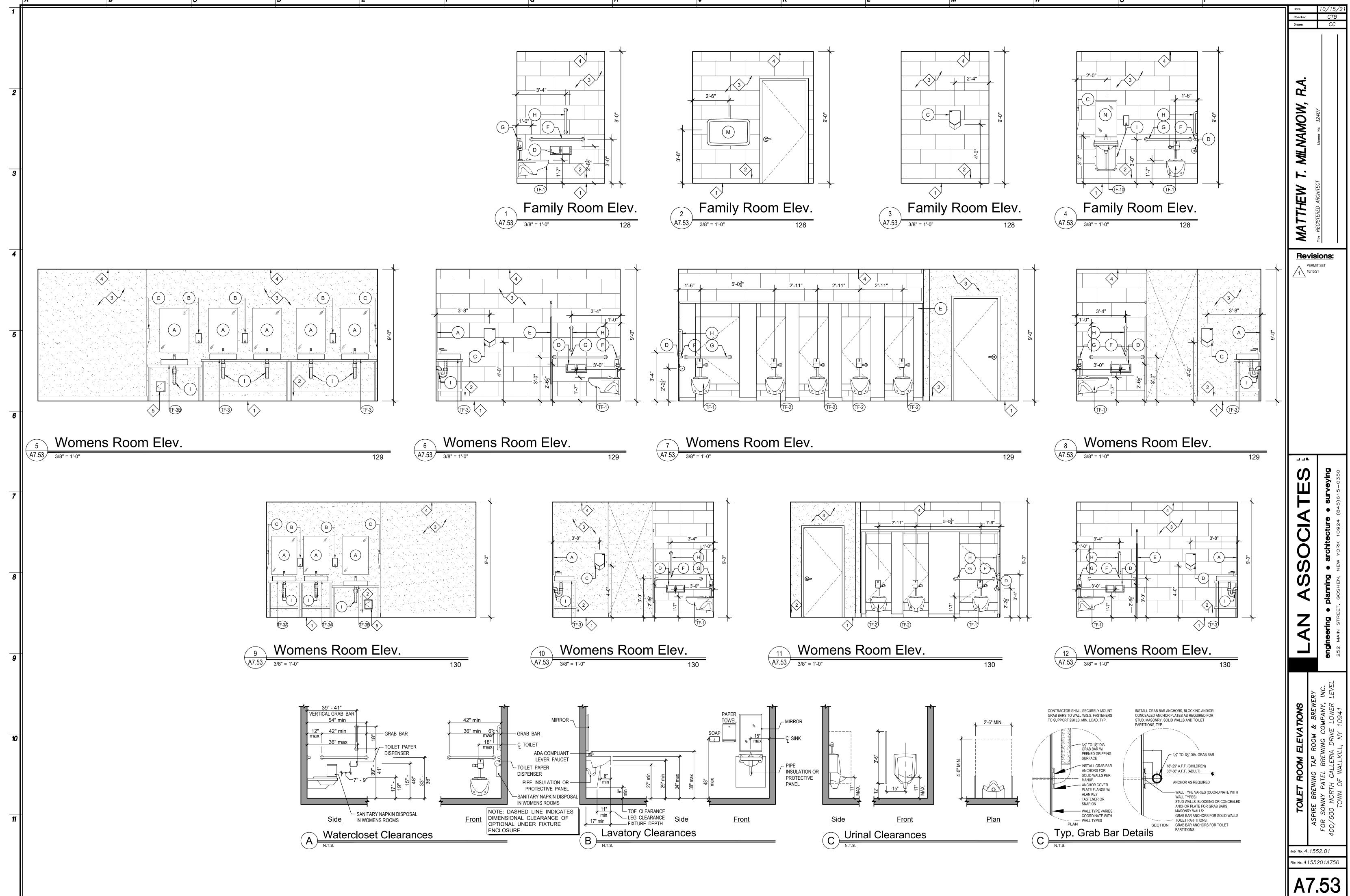
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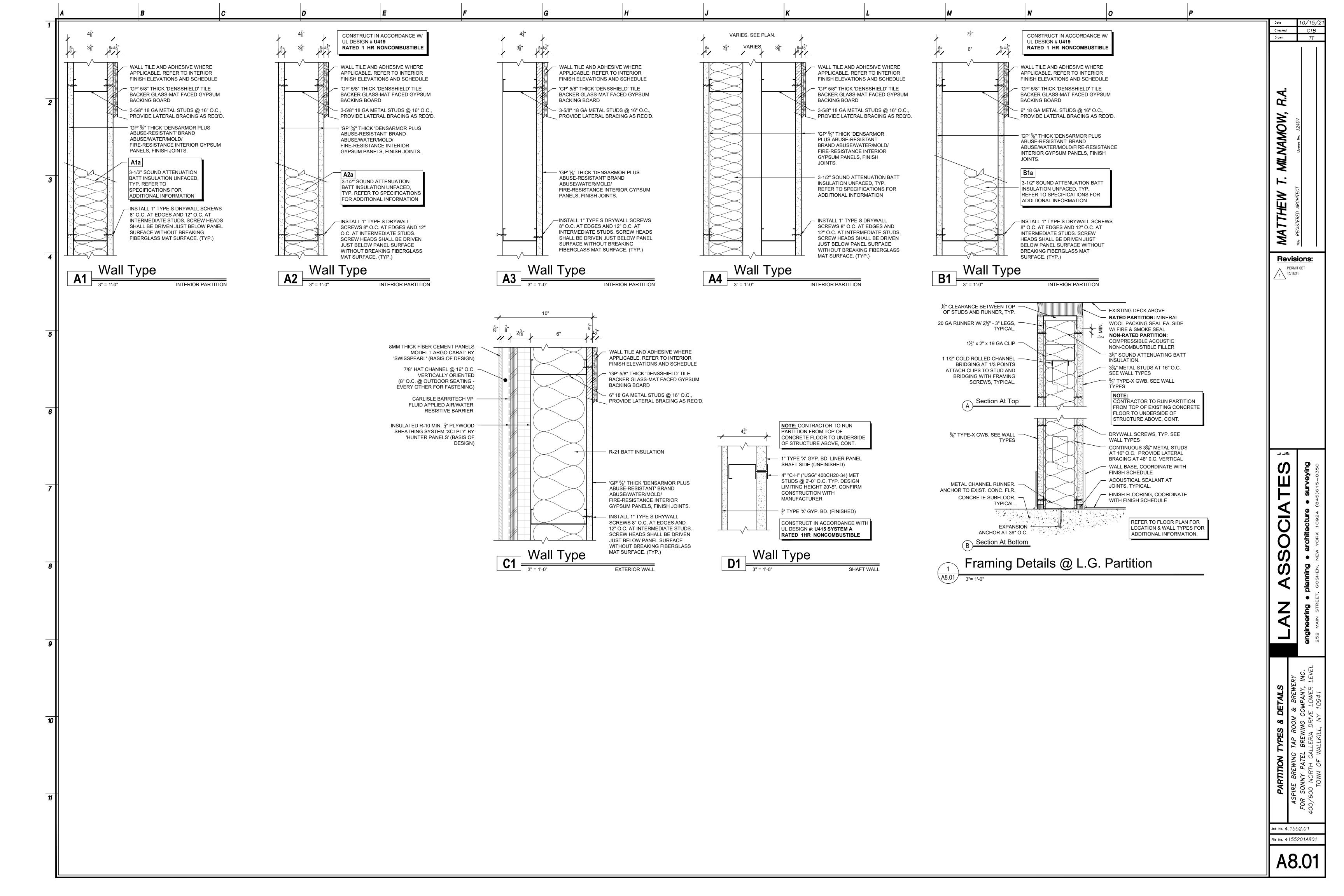
Revisions:

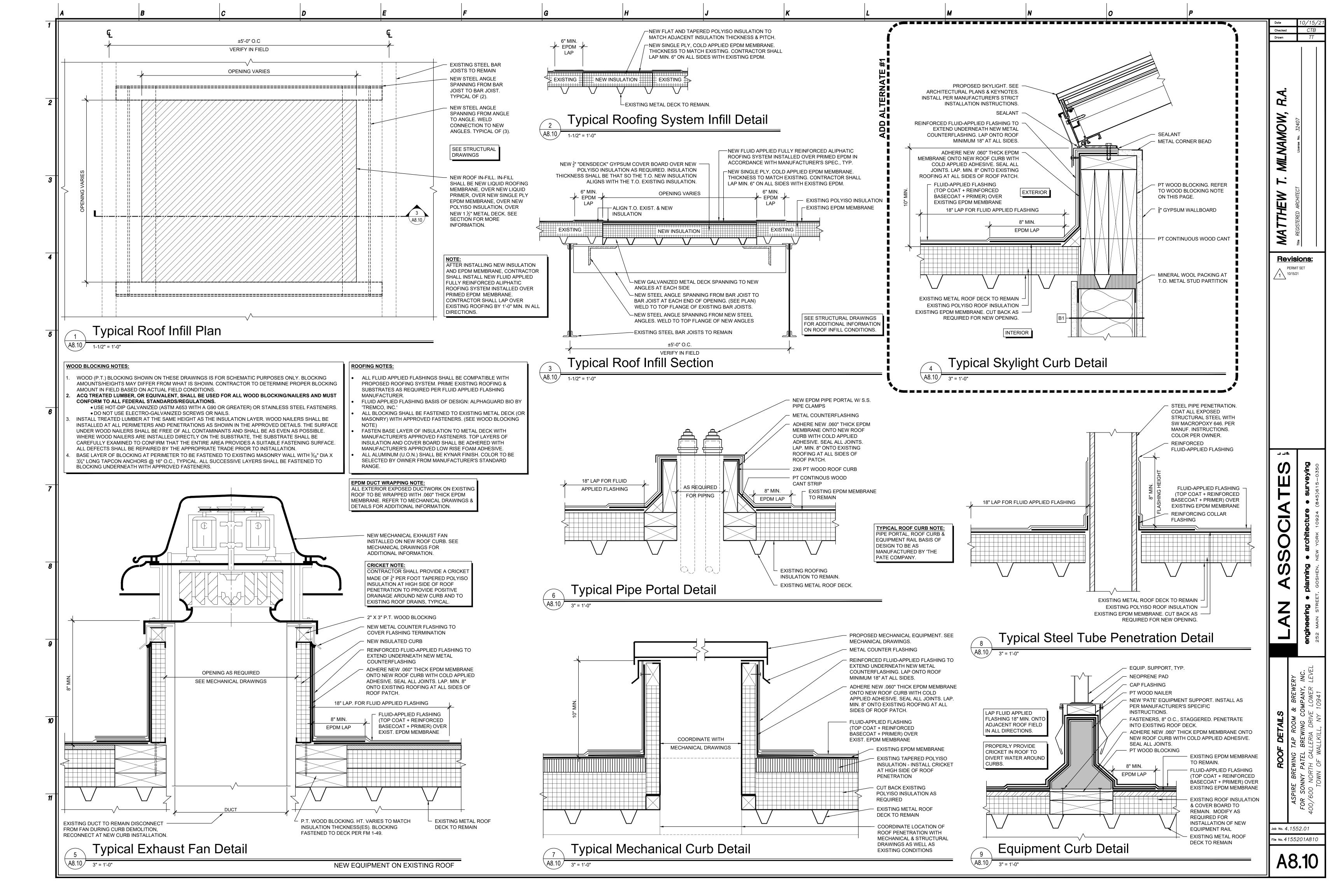
Job No. 4.1552.01 File No. 4155201A750











Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600 2400 kg/m3) concrete floor or min 4-3/4 in. (121 mm) thick reinforced lightweight or normal weight concrete wall. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 6 in.(152 mm).

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers. Steel Sleeve — (Optional) — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe cast or grouted into floor or wall assembly, flush with floor or wall surfaces.

3. Cables — Aggregate cross-sectional area of cables in opening to be max 45 percent of the aggregate cross-sectional area of the opening Cables to be rigidly supported on both sides of floor or wall assembly. Any combination of the following types and sizes of metallic conductor or fiber optic cable may be used:

A. Max 500 kcmil single copper connector power cable with thermoplastic insulation and polyvinyl chloride (PVC) jacket. B. Max 300 pair No. 24 AWG copper conductor telecommunication cables with polyvinyl chloride (PVC) insulation and jacket material. C. Max 7/C copper conductor No. 12 AWG multiconductor power and control cables with polyvinyl chloride (PVC) or cross-linked polyethylene (XLPE) insulation and PVC jacket. D. Multiple fiber optical communication cables jacketed with PVC and having a max outside diam of 1/2 in. (13 mm).

E. Max 3/C copper conductor No. 12 AWG with bare aluminum ground, polyvinyl chloride (PVC) insulated steel, Metal-clad cable. F. Max 3/C with ground 2/0 AWG copper conductor SER cable with cross-linked polyethylene (XLPE) insulation and polyvinyl chloride

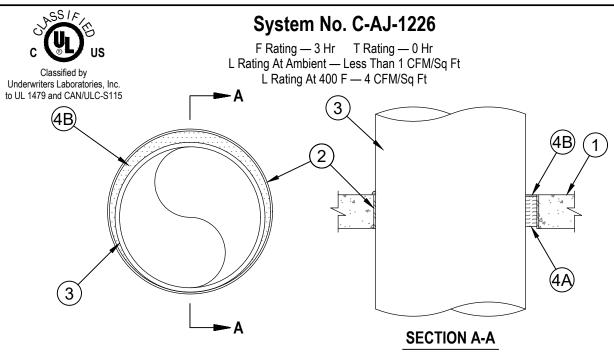
G. RG/U coaxial cable with polyethylene (PE) insulation and polyvinyl chloride (PVC) jacket having a max outside diameter of ½ in. (13 mm H. Fire Resistive Cables* - Max 1-1/4 in. (32 mm) diam single conductor or multi conductor Type MI cable. A min 1/8 in. (3 mm) separation shall be maintained between MI cables and any other types of cable.

4. Packing Material — Min 4-1/4 in. (108 mm) thickness of min 4 pcf (64 kg/m3) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor to accommodate the required thickness of fill material. 5. Fill, Void or Cavity Material* — Sealant — Min 1/4 in. (6.4 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant.

*Bearing the UL Classification Mark

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1. Floor or Wall Assembly — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 32 in.

2. Metallic Sleeve — (Optional) Nom 32 in. diam (or smaller) Schedule 40 (or heavier) steel sleeve cast or grouted into floor or wall assembly, flush with floor or wall surfaces or extending a max of 3 in. above floor or beyond both surfaces of wall. 2A. Sheet Metal Sleeve — (Optional) Max 6 in. diam, min 26 ga galv steel provided with a 26 ga galv steel square flange spot welded to the

sleeve at approx mid-height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. larger than the sleeve diam. The sleeve is to be cast in place and may extend a max of 4 in. below the bottom of the deck and a max of 1 in. above the top surface of the concrete floor. 2B. Sheet Metal Sleeve — (Optional) - Max 12 in. diam, min 24 ga galv steel provided with a 24 ga galv steel square flange spot welded to the sleeve at approx mid-height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. larger than the sleeve diam. The sleeve is to be cast in place and may extend a max of 4 in. below the bottom of the deck and a max of 1 in. above the top surface of the concrete floor. 3. Through-Penetrant — One metallic pipe, tube or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between penetrant and periphery of opening shall be min 0 in. (point contact) to max 1-7/8 in. Penetrant may be installed with continuous point contact. Penetrant to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic

A. Steel Pipe — Nom 30 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe — Nom 30 in. diam (or smaller) cast or ductile iron pipe. C. Copper Pipe — Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe. D. Copper Tubing — Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.

E. Conduit — Nom 6 in. diam (or smaller) steel conduit. F. Conduit — Nom 4 in. diam (or smaller) steel electrical metallic tubing (EMT). I. Firestop System — The firestop system shall consist of the following:

A. Packing Material — Min 4 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or sleeve or from both surfaces of wall or sleeve as required to accommodate the required thickness of fill material.

B. Fill, Void or Cavity Material* — Sealant — Min 1/4 in. thickness of fill material applied within the annulus, flush with top surface of floor or sleeve or with both surfaces of wall or sleeve. At the point or continuous contact locations between penetrant and concrete or sleeve, a min 1/4 in. diam bead of fill material shall be applied at the concrete or sleeve/ pipe penetrant interface on the top surface of floor and on both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant *Bearing the UL Classification Mark

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System No. C-AJ-5091 F Rating — 2 Hr T Ratings — 0 and 1 Hr (See Items 2 and 4) L Rating At Ambient — 4 CFM/Sg Ft Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115 L Rating At 400 F — Less Than 1 CFM/Sq Ft **SECTION A-A**

. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 29 in. (737 mm). See Concrete Blocks (CAZT) category in the Fire Resistance directory for names of manufacturers.

. Metallic Sleeve — (Optional) — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe sleeve cast or grouted into floor or wall assembly, flush with floor or wall surfaces or extending a max of 3 in. (76 mm) above floor or beyond both surfaces of wall. If the steel sleeve extends beyond the top surface of the floor or both surfaces of the wall, the T Rating of the firestop system is 0

2A. Sheet Metal Sleeve — (Optional) - Max 6 in. (152 mm) diam, min 26 ga galv steel provided with a 26 ga galv steel square flange spot

welded to the sleeve at approximately mid- height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. (51 mm) larger than the sleeve diam. The sleeve is to be cast in place flush with bottom surface of floor and may extend a max of 1 in. (25 mm) above the top surface of the floor. 2B. Sheet Metal Sleeve — (Optional) - Max 12 in. (305 mm) diam, min 24 ga galv steel provided with a 24 ga galv steel square flange

spot welded to the sleeve at approximately mid- height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. (51 mm) larger than the sleeve diam. The sleeve is to be cast in place flush with bottom surface of floor and may extend a max of 1 in. (25 mm)

3. Through Penetrants — One metallic pipe or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or tubing may

A. Steel Pipe — Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe — Nom 12 in. (305 mm) diam (or smaller) cast or ductile iron pipe.

C. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe. D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.

4. Pipe Covering — Min 1/2 in. (13 mm) to max 2 in. (51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m³) glass fiber units jacketed on the outside with an all-service jacket. Longitudinal joints sealed with metal fasteners or factory-applied, self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. The annular space between the insulated pipe and the edge of the periphery of the opening shall be min 1/2 in. (13 mm) to max 12 in. (305 mm). When thickness of

pipe covering is less than 2 in. (51 mm), the T Rating for the firestop system is 0 hr. See Pipe Equipment Covering — Materials — (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

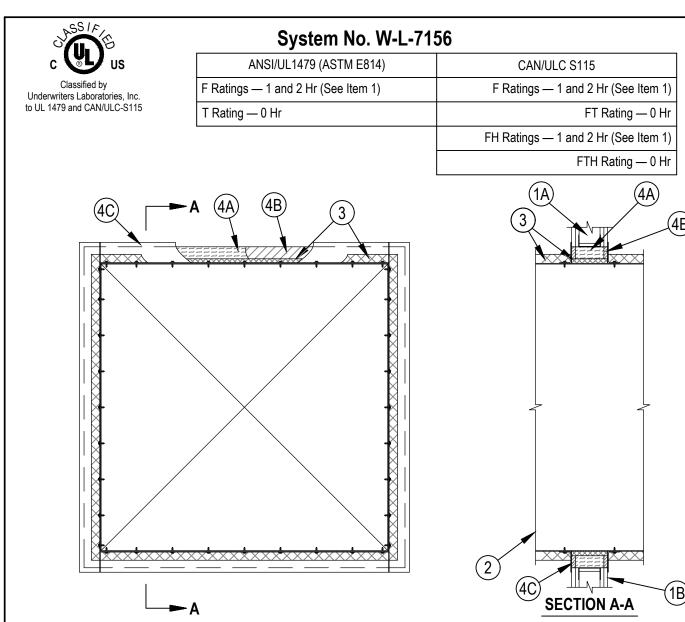
4A. Pipe Covering — (Not Shown) — As an alternate to Item 4, max 2 in. (51 mm) thick cylindrical calcium silicate (min 14 pcf or 224 kg/m³) units sized to the outside diam of the pipe or tube may be used. Pipe insulation secured with stainless steel bands or min 18 AWG stainless steel wire spaced max 12 in. (305 mm) OC. The annular space shall be min 1/2 in. (13 mm) to max 12 in. (305 mm). 5. Firestop System — The firestop system shall consist of the following:

A. Packing Material — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.

B. Fill, Void or Cavity Material* — Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.

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Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced max 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC. Additional framing members shall be used to completely frame around opening.

B. Gypsum Board* — Min 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers and orientation shall be as specified in the individual U300, U400 or V400 Wall and Partition Design. Max size of opening is 210 sq in. (1355 cm²) with a max width of 14-1/2 in. (368 mm) for wood studs. Max size of opening is 76.2 sq ft. (7 m²) with a max width of 105-1/2 in. (2.7 m) for steel studs.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall in which it is installed.

Steel Duct — Max 100 by 100 in. (2.5 by 2.5 m) steel duct to be installed within the framed opening. The duct shall be constructed and reinforced in accordance with SMACNA construction standards. Steel duct to be rigidly supported on both sides of wall assembly. Batts and Blankets* — Nom 1-1/2 or 2 in. (38 or 51 mm) thick glass fiber batt or blanket (min 3/4 pcf or 12 kg/m³) jacketed on the outside with a foil-scrim-kraft facing. Longitudinal and transverse joints sealed with aluminum foil tape. During the installation of the fill material, the

batt or blanket shall be compressed minimum 50% such that the annular space within the firestop system shall be min 1/2 in. (13 mm) to

max 2 in. (51 mm). See Batts and Blankets (BKNV) category in the Building Materials Directory for names of manufacturers. Any batt or blanket meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index 50

or less may be used. Firestop System — The firestop system shall consist of the following:

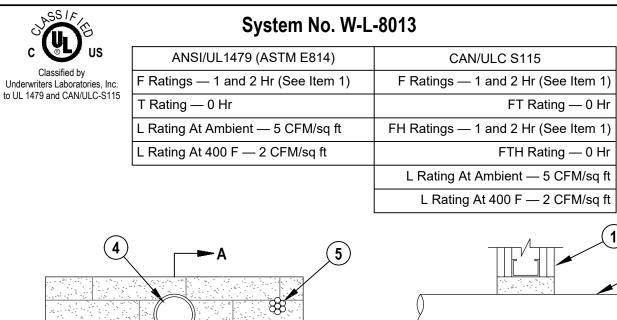
A. Packing Material — Min 3-5/8 (92 mm) or 4-7/8 in. (124 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form for 1 or 2 hr fire-rated walls, respectively. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material.

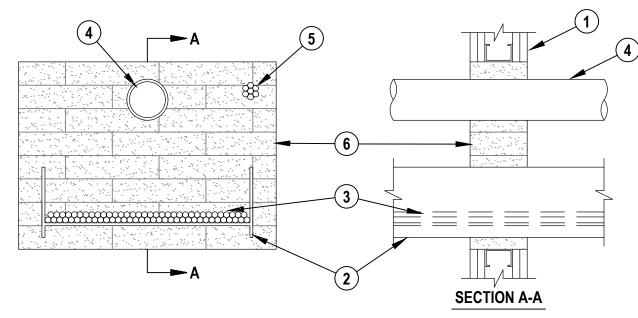
B. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant

C. Steel Retaining Angles — Min No. 16 gauge (0.059 in. or 1.5 mm) galv steel angles sized to lap steel duct a min of 2 in. 51 mm) and lap wall surfaces a min of 1 in. (25 mm). Angles attached to steel duct on both sides of wall with min No. 10 steel sheet metal screws spaced a max of 1 in. (25 mm) from each end of steel duct and spaced a max of 6 in. (152 mm) OC. When max duct dimension does not exceed 48 in. (122 cm) and duct area does not exceed 1300 in² (8387 cm²), angles may be min No. 18 gauge galv steel. Angles attached to steel duct on both sides of wall with min No. 10 by 1/2 in. (13 mm) long steel sheet metal screws located a max of 1 in. (25 mm) from each end of steel duct and spaced a max of 6 in. (152 mm) OC. When max 1-1/2 in. (38 mm) thick insulation is used, steel angles are optional for those sides of duct that do not exceed the dimension specified in Table below, dependent on packing material

and annular space as specified.					
Bearing the UL Classification Mark	Max Duct Dimension	Duct Thickness	Annular Space	Packing Material	Angle (Item 3C) Required
	24 in.	24 ga or	1/2 in. min to 1 in. max	Item 3A1	No
	(610 mm)	heavier	(13 to 25 mm)		





System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed

1. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 in. (51 mm) by 4 in. (102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. Additional studs installed to completely frame the opening.

B. Gypsum Board* — 5/8 in. (16 mm) thick, 4 ft (1219 mm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max area of opening is 352 sq in. (2271 sq cm) with max dimension of 22 in. (559 mm) wide The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

Cable Tray* — Max 18 in. (457 mm) wide by max 6 in. (152 mm) deep open-ladder or solid-back cable tray with channel-shaped side rails formed of 0.065 in. (1.65 mm) thick aluminum or 0.060 in. (1.52 mm) thick steel and with 1-1/2 in. (38 mm) wide by 1 in. (25 mm) channel shape rungs spaced 9 in. (229 mm) OC or a 0.029 in. (0.74 mm) thick steel solid back, respectively. One cable tray to be installed in the opening. The max annular space between the cable tray and the periphery of the opening shall be min 1 in. (25 mm) to max 7 in. (178 mm) Cable tray to be rigidly supported on both sides of floor or wall assembly.

3. Cables — Aggregate cross-sectional area of cables in cable tray to be max 30 percent of the cross-sectional area of the cable tray. Any combination of the following types and sizes of copper conductor cables may be used:

A. 7/C No. 12 AWG with polyvinyl chloride (PVC) insulation and PVC jacket.

B. 100 pair - No. 24 AWG cable with PVC insulation and jacket.

C. 1/C, 750 kcmil (or smaller) with PVC insulation and jacket.

Through-Penetrants — One or more pipe or tube to be installed within the opening. The total number of through-penetrants is dependent on the size of the opening and types and sizes of the penetrants. Any combination of the penetrants described below may be used provided that the following parameters relative to the annular spaces and the spacings between the pipes are maintained. The space between the pipe or tube and the periphery of the opening shall be min 1-1/2 in. (38 mm) to max 9-1/4 in. (235 mm). Pipe or tube to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of non-metallic or metallic pipes, or tubes may be used:

A. Polyvinyl Chloride (PVC) Pipe — Max 3 in. (76 mm) diam Schedule 40 solid core PVC pipe (or smaller) for use in closed (process or supply) or vented (drain, waste or vent) piping system.

B. Steel Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe. C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or 6 in. (152 mm) diam steel conduit.

D. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe. E. Copper Tube — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tube.

4A. Pipe Covering — (Not Shown) Nom 1-1/2 in. (38 mm) thick hollow cylindrical heavy density (min 3.5 pcf) (56kg/m3) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. See Pipe and Equipment Covering and Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe

overing material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 may be used.

5. Cables — Max 1-1/2 in. (38 mm) diam tight bundle of cables installed within the opening and rigidly supported on both surfaces of wall. The space between the cables and periphery of the opening shall range from 1-3/16 in. (30.2 mm) min to a max of 1-1/2 in. (38 mm). Any

combination of the following types and sizes of cables may be used: A. 7/C No. 12 AWG with polyvinyl chloride (PVC) insulation and jacket.

B. 25 pair — No. 24 AWG cable with PVC insulation and jacket.

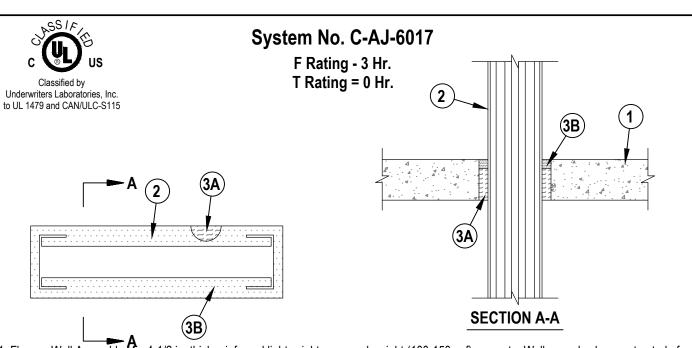
C. Type R GU/59 coaxial cable with PVC outer jacket. D. 24 fiber optic cable with PVC sub unit and outer jacket.

Firestop System — The firestop system shall consist of the following: A. Fill, Void or Cavity Material* — Fire Blocks For walls incorporating max 3-5/8 in. (92 mm) steel studs or max 2 (51 mm) by 4 in. (102 mm) wood studs, fire block installed with 5 in. (127 mm) dimension projecting through and centered in opening. For walls constructed of larger steel or wood studs, fire block installed with long dimension passing through and centered in opening. Blocks may or may not be cut flush with both surfaces of wall. When multiple layers of gypsum board are used, blocks may be recessed 1/2 in. (13 mm) from surface of wall. Blocks to be firmly packed in opening. Either one or a combination of the block types specified below may be used.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS 657 Fire Block or CFS-BL Firestop Block B. Fill, Void or Cavity Material* — Sealant or Putty - Fill material to be forced into interstices of cables, between cables and cable trays, around each penetrant and where obvious voids are observed to max extent possible on both surfaces of the penetration.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant, FS-ONE MAX Intumescent Sealant, CP 618 Putty Stick or CP620 Fire Foam

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Floor or Wall Assembly Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max area of opening is 224 square in. with max dimension of 28 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

Busway+ Nominal 26 in. wide (or smaller) by 6 in. deep "I" shaped steel enclosure containing factory mounted aluminum bars rated for 600 V, 4000 A. One busway to be installed within the opening. the annular space between the flange tip of the busway and the periphery of the opening shall be 1 in. The annular space between the web of the busway and the periphery of the opening shall be 2 in. Busway to be ridged supported on both sides of floor and wall assembly. The busway shall bear the UL Listing Mark and shall be installed in accordance with all provisions of Article 364 of the National Electrical Code, NFPA No. 70.

A. Packing Material Min 3-1/2 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness

B. Fill, Void or Cavity Material* -- Sealant Min 1 in. thickness of fill material applied within the annulus, flush with top surface of floor or with HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC -- FS-ONE Sealant

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Firestop System The firestop system shall consist of the following:

Bearing the UL Listing Mark *Bearing UL Classification Mark

System No. C-AJ-8143 F Rating -- 2 Hr T Rating -- 0 Hr Classified by to UL 1479 and CAN/ULC-S115

Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete floor. Min 5 in. (127 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete wall. Wall may also be constructed of any UL Classified Concrete Blocks*. Max size of opening is 1440 in.2 (9,290 cm2) with a max dimension of 48 in. (1219 mm). See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

Through-Penetrant — One cable tray and one or more pipes, tubes or cable bundles may be installed within the opening. The total number of through-penetrants is dependent on the size of the opening and the types and sizes of the penetrants. Any combination of the penetrants described below may be used provided that the following parameters relative to the annular spaces are maintained. The annular space between cable tray and all other penetrants shall be min 3 in. (76 mm). The annular space between individual cables and cable bundles shall be a min 1/2 in. (13 mm). The annular space between individual cables and cable bundles and other penetrants shall be a min 1/2 in. (13 mm) except that a min 2 in. (51 mm) shall be maintained between the cables and copper pipes and tubes greater than a nom 3 in. (76 mm) diam and steel and iron pipes and conduits greater than a nom 4 in. (102 mm) diam. The annular space between metallic pipes,

conduit and tubes and insulated pipes and tubes shall be a min 2 in. (51 mm). The annular space between nom 3 in (76mm) diam (and smaller) copper pipes and tubes and between nom 4 in (102mm) diam (and smaller) steel and iron pipes and conduits shall be min 1/2 in. (13 mm). The annular space between nom 2 in. (51 mm) diam (and smaller) metallic pipes and conduits shall be min 0 in. (point contact). The annular space between insulated penetrants or the cable tray and the periphery of opening shall be min 1/2 in. (13 mm). The annular space between all other penetrants and the periphery of opening shall be min 0 in. (point contact). A max annular space in the system shall be 12 in. (305 mm). Penetrants to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of penetrants may be used.

A. Metallic Pipes — The following types of metallic pipes, tubes or conduits may be used:

1. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tube. 2. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. Steel Pipe — Nom 24 in. (610 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe. 4. Iron Pipe — Nom 24 in. (610 mm) diam (or smaller) cast or ductile iron pipe.

5. Conduit — Nom 4 in. (102 mm) diam (or smaller) electric metallic tubing (EMT) or nom 6 in. (152 mm) diam (or smaller) rigid steel

B. Cables Bundles — Max 4 in. (102 mm) diam tightly bundled cables. Any combination of the following types and sizes of cables may be

1. Max 500 kcmil single copper or aluminum conductor power cable with thermoplastic insulation and polyvinyl chloride (PVC) jacket. 2. Max 300 pair No. 24 AWG copper conductor telecommunication cables with PVC insulation and jacket material.

3. Max 7/C copper conductor No. 12 AWG multi-conductor power and control cables with PVC or cross-linked polyethylene (XLPE)

4. Multiple fiber optical communication cables jacketed with PVC and having a max outside diam of 1/2 in. 5. Max 3/C No. 12 AWG steel clad cable with copper conductors and PVC insulation material.

C. Individual Cables — Any of the following types and sizes of individual (non-bundled) cables may be used: 1. Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TECK 90 cable.

2. Through Penetrating Product* — Any cables, Armored Cable+ or Metal Clad Cable+ currently Classified under the Through Penetrating Product category.

See Through Penetrating Product (XHLY) category in the Fire Resistance Directory for names of manufacturers. 3. Max 500 kcmil single copper or aluminum conductor power cable with thermoplastic insulation and polyvinyl chloride (PVC) jacket.

4. Max 300 pair No. 24 AWG copper conductor telecommunication cables with PVC insulation and jacket material. 5. Max 7/C copper conductor No. 12 AWG multi-conductor power and control cables with PVC or cross-linked polyethylene (XLPE)

insulation and PVC jacket. 6. Multiple fiber optical communication cables jacketed with PVC and having a max outside diam of 1/2 in.

7. Max 3/C No. 12 AWG steel clad cable with copper conductors and PVC insulation material. 8. Max 4C/750 kcmil (or smaller) aluminum or copper conductor metal clad cable with aluminum or steel armor, with or without PVC

D. Cable Tray* — (Not Shown) — Max 24 in. (610 mm) wide by 6 in. (152 mm) deep open-ladder steel or aluminum cable tray. Aggregate cross-sectional area of cable tray to be max 40 percent of the cross-sectional area of the cable tray based on a max 3 in. cable loading depth. Any combination of the types and sizes of cables described in Item 2B may be used. Cable tray to be rigidly supported on both

sides of floor or wall assembly. Pipe Insulation — (Optional) - Pipes and tubes of the sizes noted below may be provided with one of the following types of pipe insulations:: A. Pipe Covering* — Nom 1-1/2 in. (38 mm) thick (or thinner) hollow cylindrical heavy density glass fiber units jacketed on the outside with an all service jacket for pipes with a nom diam of 8 in. (203 mm) (or smaller) or tubes with a nom diam of 4 in. (102 mm) (or smaller). Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or

with butt tape supplied with the product. See Pipe and Equipment Covering - Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

B. Pipe Covering* — Nom 2 in. (51 mm) thick (or thinner) hollow cylindrical heavy density glass fiber units jacketed on the outside with an all service jacket for pipes or tubes with a nom diam of 2 in. (51 mm) (or smaller). Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product.

See Pipe and Equipment Covering - Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe

covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used. C. Tube Insulation-Plastics+ — Nom 1 in. (25 mm) thick (or thinner) acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam

furnished in the form of tubing for pipes or tubes with a nom diam of 2 in. (51 mm) (or smaller). See Plastics (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be

Firestop System — The firestop system shall consist of the following: A. Packing Material — Min 4 in. (102 mm) thickness of 4 pcf (64 kg/m³) mineral wool batt insulation tightly packed into the opening as a permanent form. Packing material to be recessed from top surface of floor or both surfaces of wall to accommodate the required

B. Fill, Void or Cavity Material - Sealant* — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus flush with the top surface of the floor or both surfaces of the wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant

Bearing the UL Classification Mark

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc.

FIRESTOPPING NOTES:

MANUFACTURER FOR ADDITIONAL ASSEMBLY TYPES.

FIRESTOPPING ASSEMBLIES SHOWN ON THIS SHEET REPRESENT VARIOUS RATED ASSEMBLIES THAT MAY BE REQUIRED FOR THIS PROJECT. ADDITIONAL CONDITIONS AND ASSEMBLIES MAY EXIST AND THE CONTRACTOR SHALL REFER TO THE SELECTED

FIRESTOPPING DETAILS WERE OBTAINED FROM AND REPRODUCED BY HILTI, INC. COURTESY OF UNDERWRITERS LABORATORIES, INC. (UL) AND ARE SHOW AS THE BASIS OF DESIGN. USE OF THESE DETAILS AND REFERENCE TO HILTI, INC. PRODUCTS OR SYSTEMS DOES NOT PRECLUDE THE USE OF OTHER PRODUCTS THAT ARE SUBMITTED AND APPROVED AS EQUAL.

REFER TO CODE REVIEW PLANS FOR REQUIRED FIRE RATINGS. PROVIDE APPROPRIATE FIRESTOPPING FOR FIRE RATING AS PER FIRESTOPPING DETAILS.

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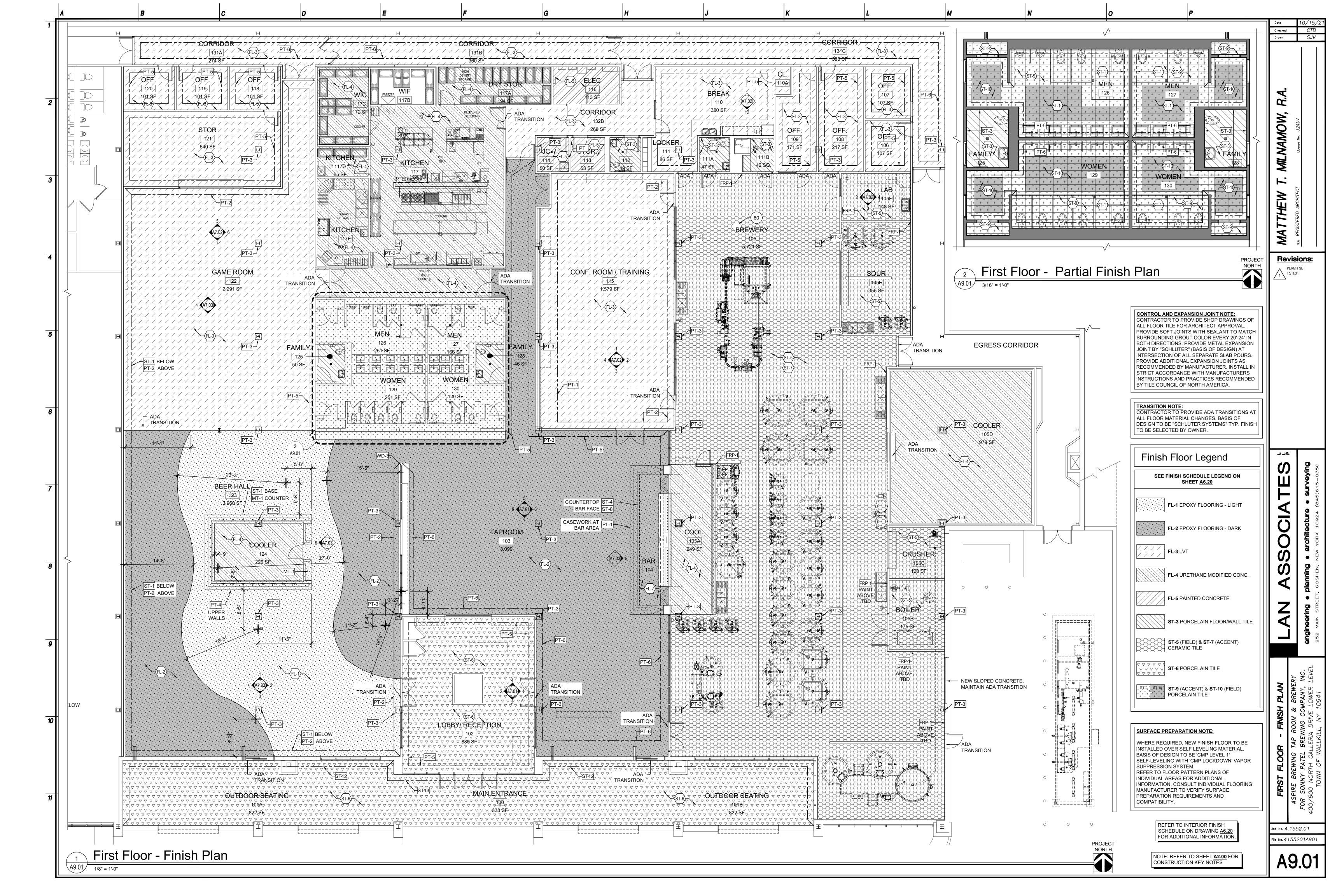
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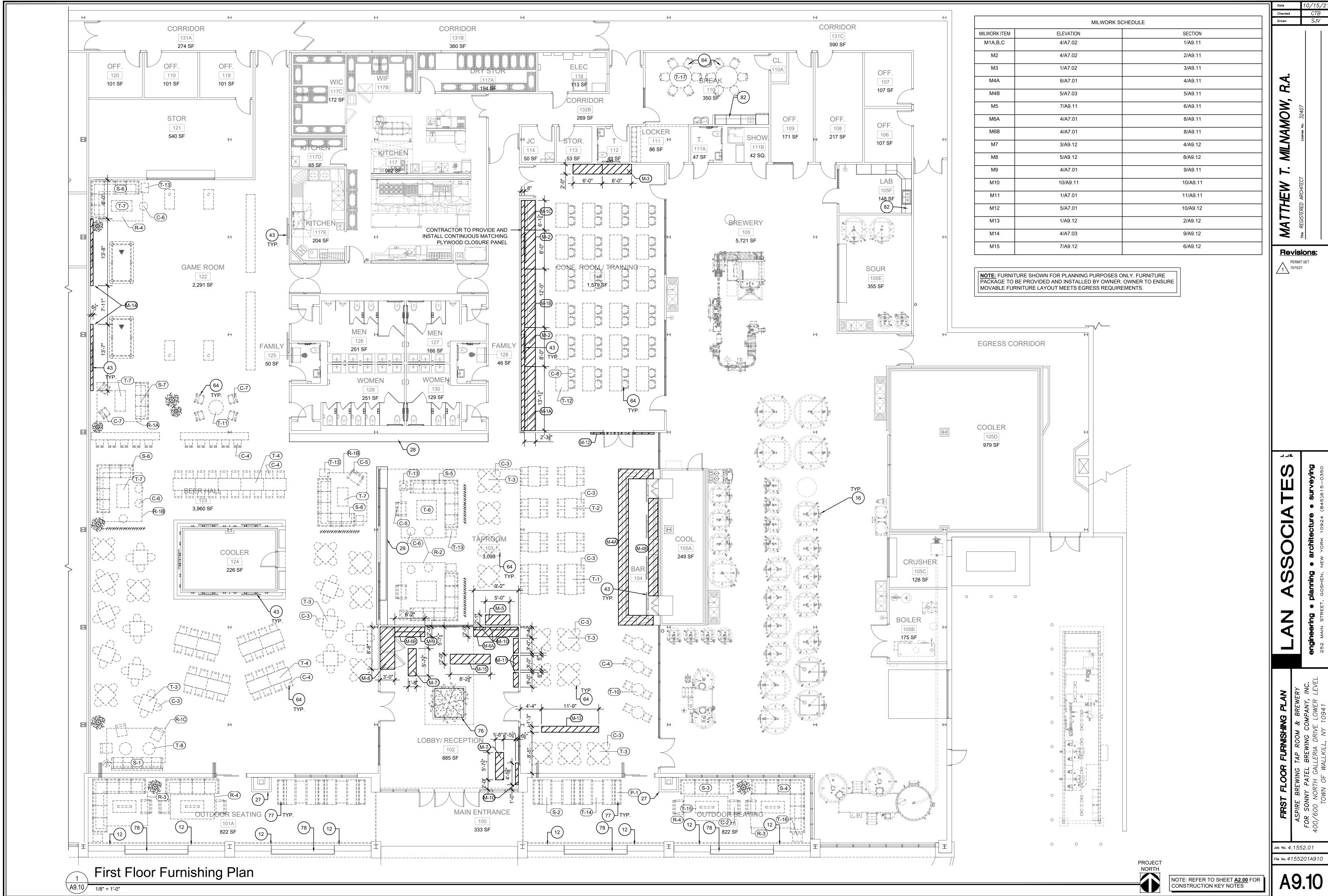
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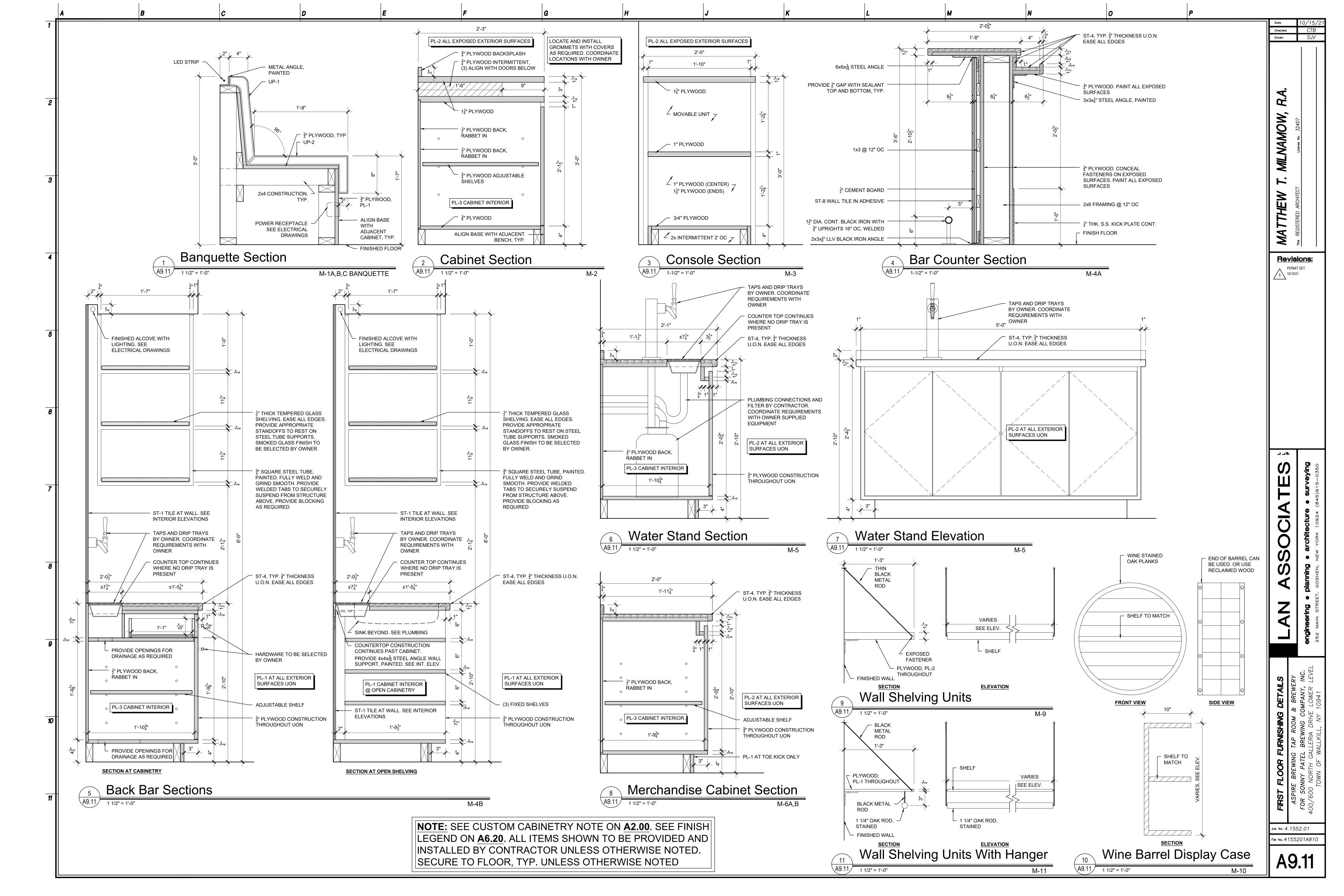
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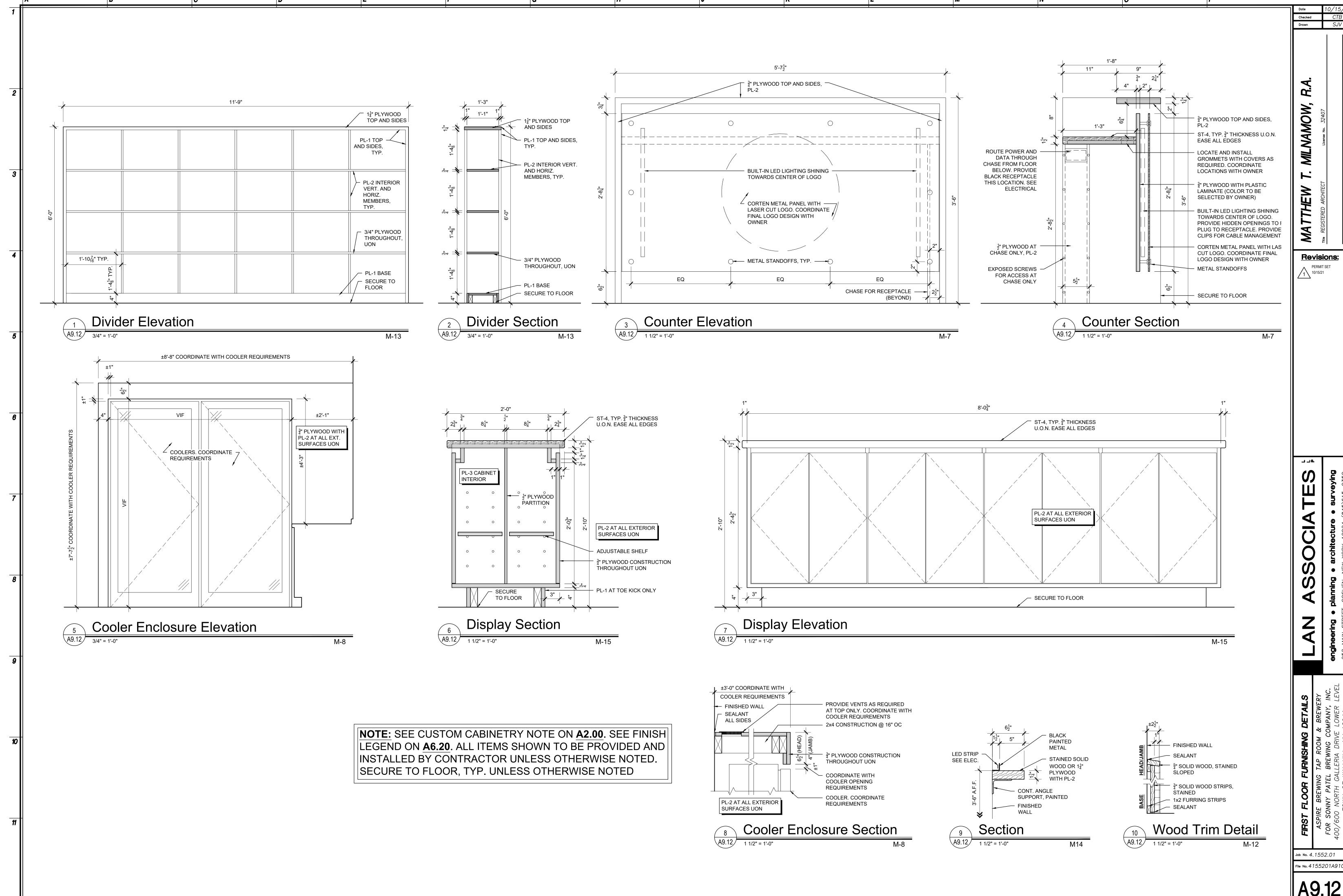
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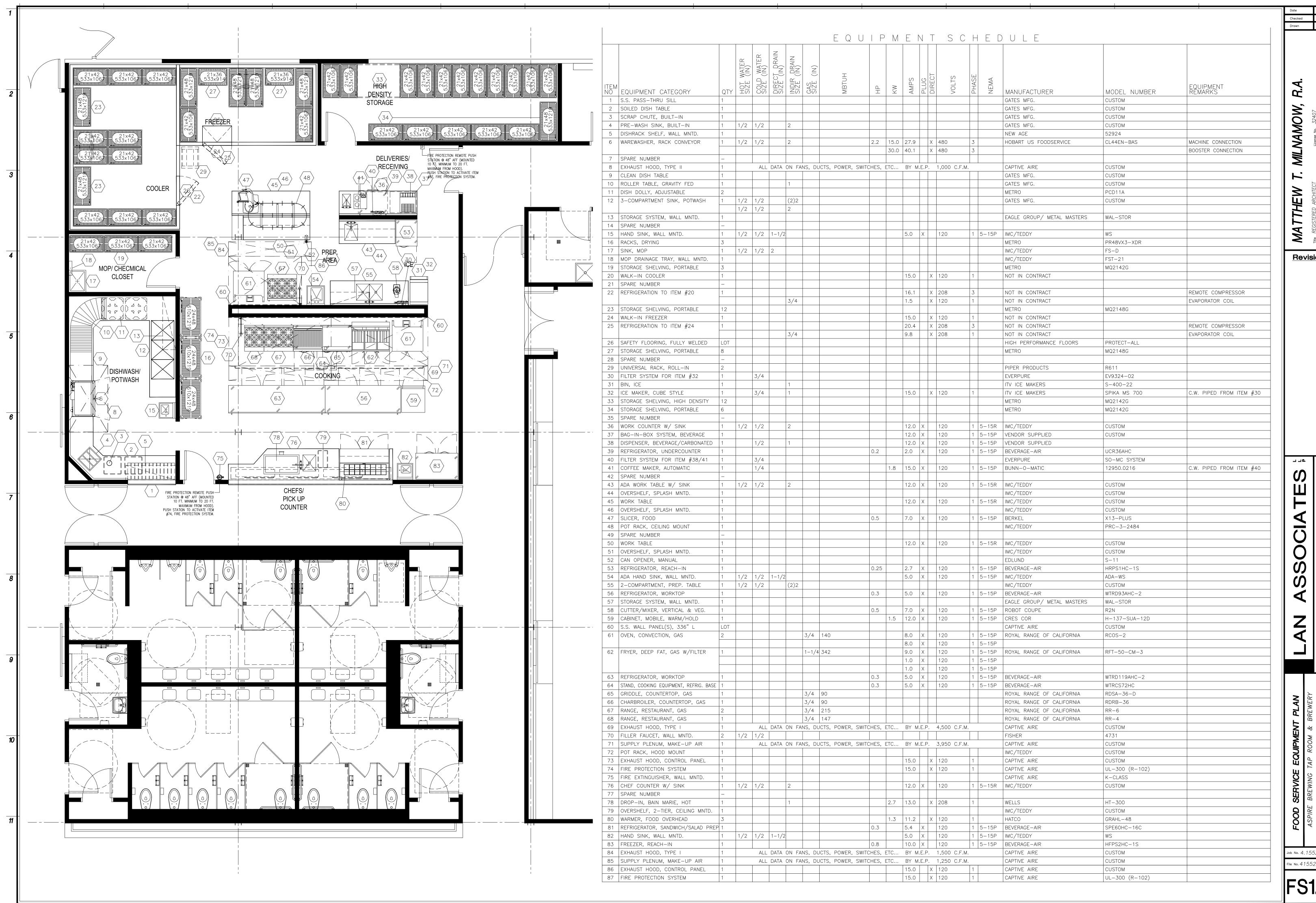






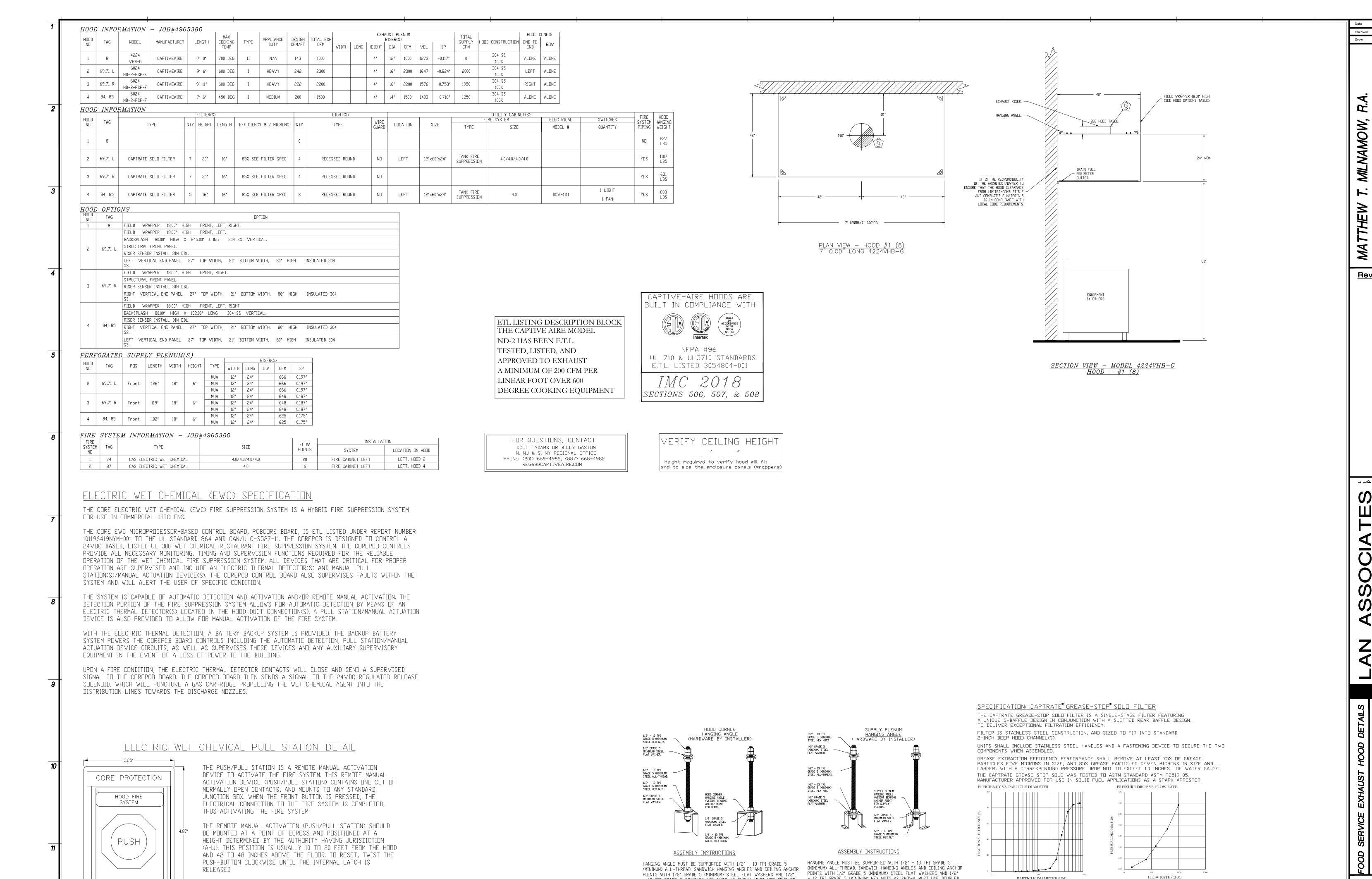
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Job No. 4.1552.01 File No. 4155201A701



- 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED

HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE

CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH

BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

THE CLEAR PROTECTIVE COVER MUST BE INSTALLED TO PROTECT

THE DEVICE FROM ACCIDENTAL ACTIVATIONS, THE COVER IS

PROVIDED AS PART OF THE MANUAL ACTIVATION DEVICE.

LIFT HERE

- 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN, MUST USE DOUBLED

MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE

HEX NUT CONFIGURATION ABOVE CEILING ANCHORS, SINGLE HEX NUT

BENEATH HANGING ANGLE IS ACCEPTABLE FOR PSP HANGING ANGLES.

PARTICLE DIAMETER (UM)

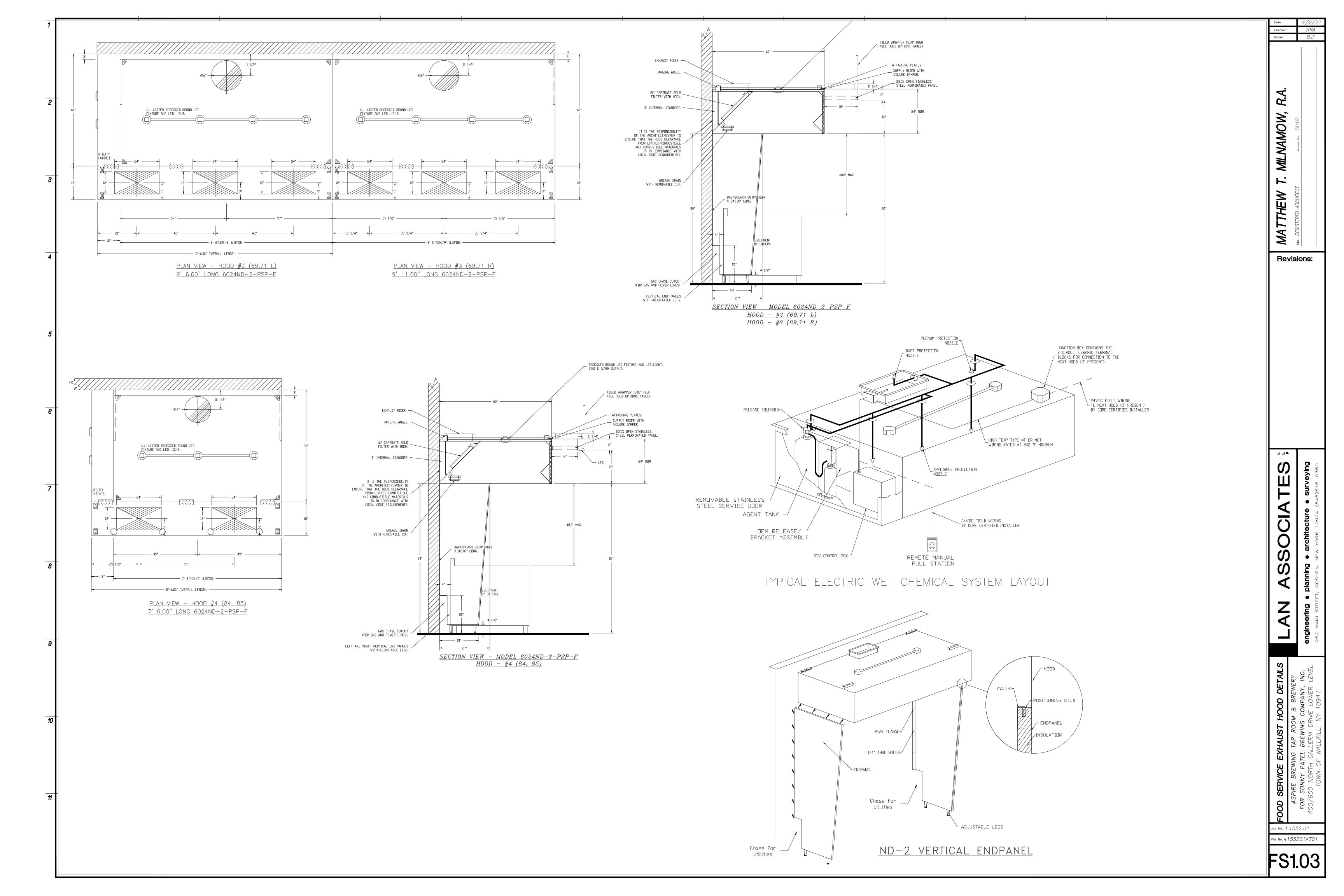
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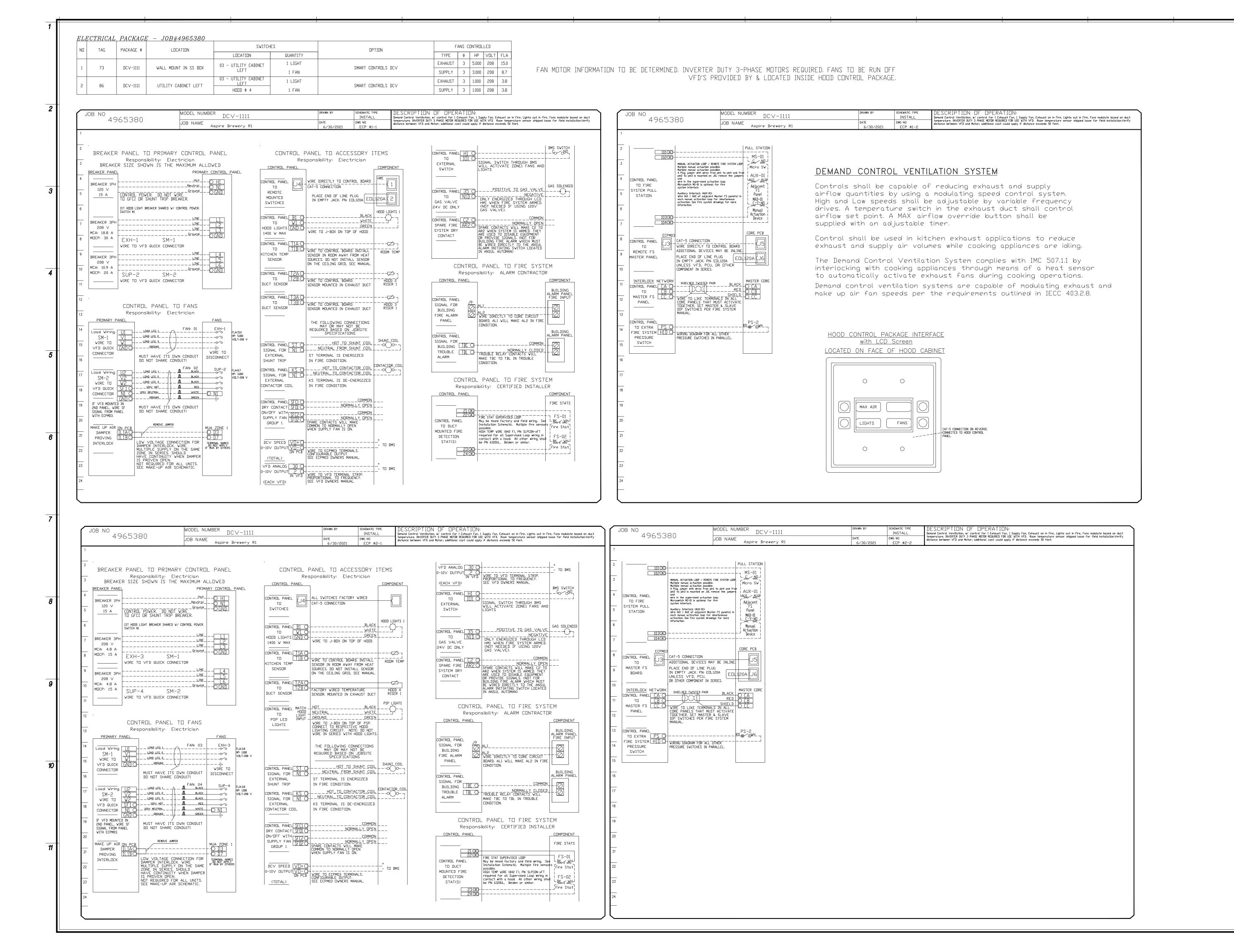
NSF STANDARD #2.

ULC-S649.

UL STANDARD #1046. INT. MECH. CODE (IMC). Job No. 4.1552.01 File No. 4155201A701

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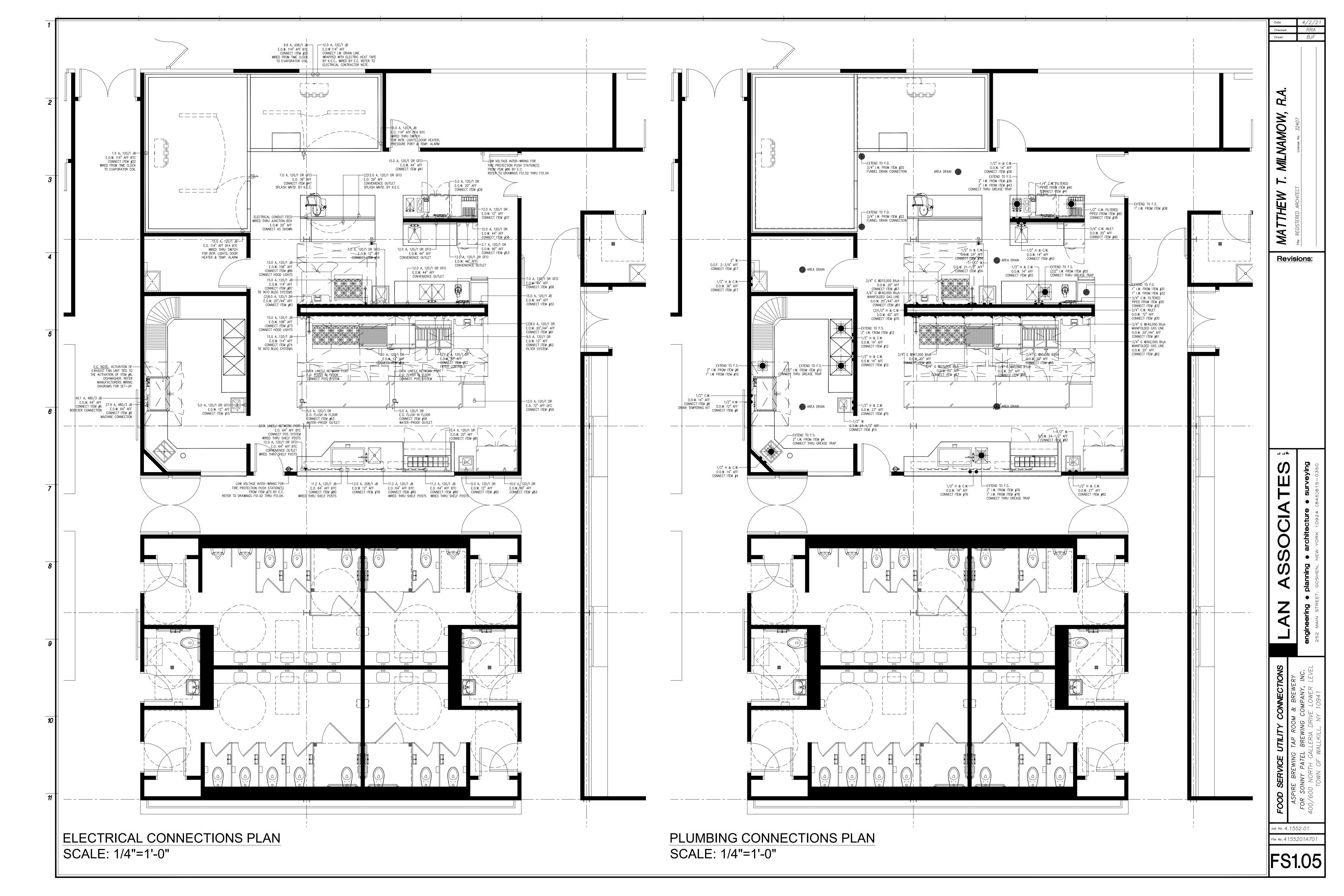
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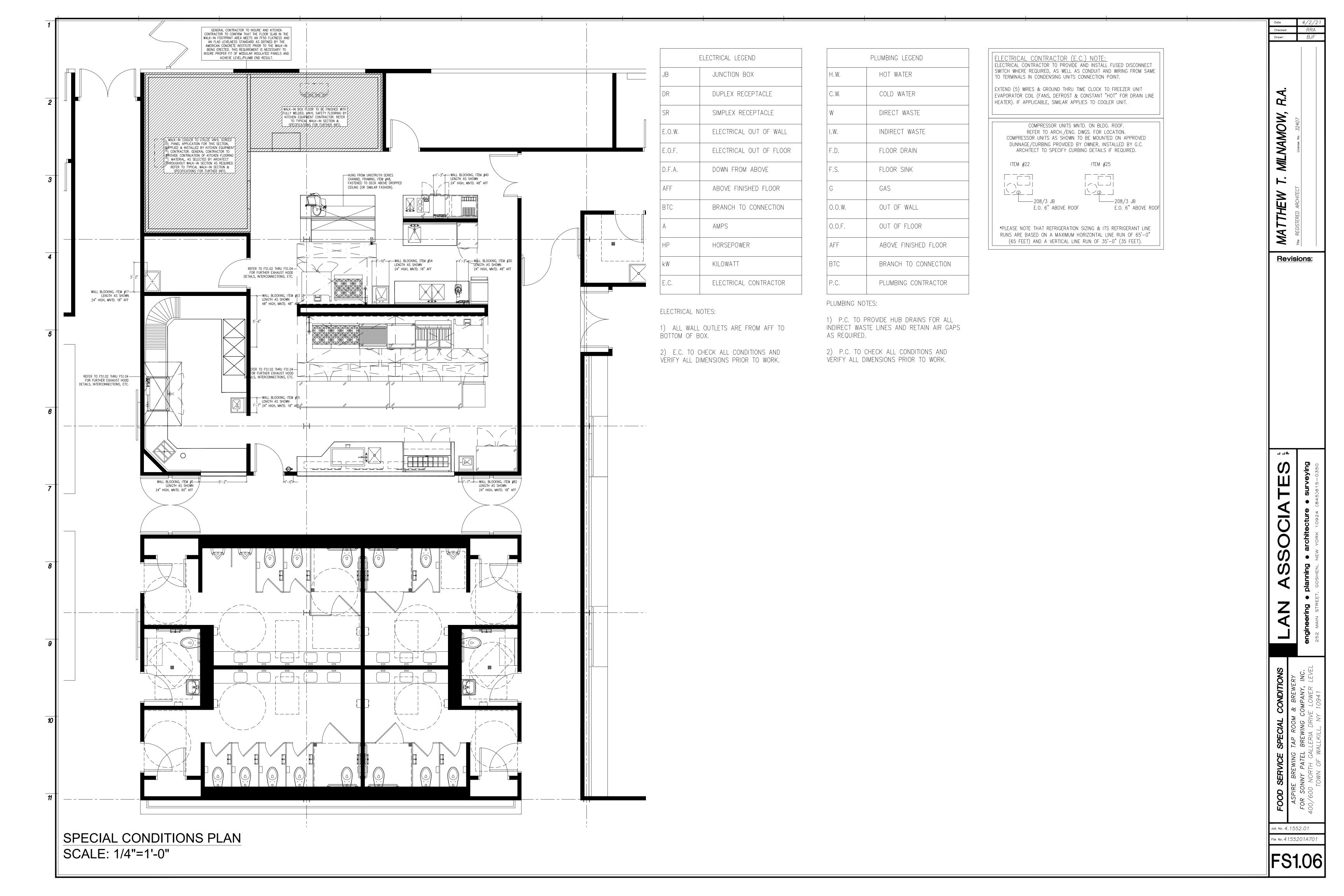
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PIRE BREWING TAP ROOM & BREWERY
SONNY PATEL BREWING COMPANY, INC.
OO NORTH GALLERIA DRIVE LOWER LEVEL
TOWN OF WALLKILL, NY 10941

Job No. 4.1552.01 File No. 4155201A701

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GENERAL CONTRACTOR NOTES:

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- 1. UNLESS OTHERWISE INDICATED, KITCHEN EQUIPMENT CONTRACTOR (K.E.C.) IS A SUBCONTRACTOR TO THE GENERAL CONTRACTOR.
- 2. GENERAL CONTRACTOR TO COORDINATE FINAL LOCATION OF CONDENSING UNITS WITH KITCHEN EQUIPMENT CONTRACTOR, ARCHITECT AND OWNER.
- 3. GENERAL CONTRACTOR TO VERIFY WITH ARCHITECT AND STRUCTURAL ENGINEER THAT THE ROOF WILL SUPPORT THE CONDENSING UNITS IN THE FINAL LOCATIONS.
- 4. REFRIGERATION SIZING & ITS REFRIGERANT LINE RUNS ARE BASED ON A MAXIMUM HORIZONTAL LINE RUN OF 65'-0" (65 FEET) AND A VERTICAL LINE RUN OF 35'-0" (35 FEET).
- 5. IF THE CONDENSING UNITS ARE LOCATED MORE THAN 100'-0" AWAY FROM THE WALK-IN BOX, GENERAL CONTRACTOR TO NOTIFY KITCHEN EQUIPMENT CONTRACTOR PRIOR TO INSTALLATION OF ROOF CURBS, PITCH POCKETS AND CONDENSING UNITS.
- 6. IF WALLS ARE FIRE RATED, GENERAL CONTRACTOR TO USE METAL STUDS FOR WALL BLOCKING IN PLACE OF PLYWOOD.

GENERAL MECHANICAL NOTES:

- 1. ROUGH-INS SHOWN ON THE FOOD SERVICE DRAWINGS ARE FOR EQUIPMENT BEING SUPPLIED BY KITCHEN EQUIPMENT CONTRACTOR ONLY. ADDITIONAL ROUGH-INS SHOWN OR NOT SHOWN ON THESE DRAWINGS FOR EQUIPMENT BEING RELOCATED, RE-USED OR SUPPLIED BY OTHERS WILL HAVE TO BE VERIFIED BY GENERAL CONTRACTOR PRIOR TO ROUGH-INS BEING INSTALLED.
- 2. THE MECHANICAL PLANS, IF APPLICABLE, ARE PREPARED AS AN ACCOMMODATION AND GUIDE ONLY, TO INDICATE MECHANICAL REQUIREMENTS NECESSARY TO OPERATE THE EQUIPMENT. DEVIATIONS FROM THE MECHANICAL WORK SHOWN ON THESE PLANS AND EXECUTION OF SUCH WORK IS WITHOUT RESPONSIBILITY OF RAYMOND/ RAYMOND ASSOCIATES. DATA ON THIS SHEET IS TO BE REVIEWED BY OWNER AND/OR ARCHITECT AND IS TO BE INCORPORATED INTO THE BUILDING MECHANICAL PLANS IN ACCORDANCE WITH LOCAL CODES AT THE SITE.
- 3. OWNER AND/OR ARCHITECT IS TO SUBMIT THIS PLAN SET TO LOCAL HEALTH DEPARTMENT FOR APPROVAL UNLESS OTHERWISE SPECIFIED.
- 4. ALL EQUIPMENT DESIGNED AND SPECIFIED, PER THIS SET OF PLANS, BY RAYMOND / RAYMOND ASSOCIATES, HAS THE UNDERWRITERS' LABORATORIES AND NATIONAL SANITATION FOUNDATION SEALS OF APPROVAL. AND IS TO BE FURNISHED AS SUCH BY THE KITCHEN EQUIPMENT CONTRACTOR.
- 5. KITCHEN EQUIPMENT CONTRACTOR TO SET IN PLACE, EQUIPMENT AT THE SITE IN ACCORDANCE WITH THESE PLANS AND TERMS OF CONTRACT WITH OWNER.
- 6. ALL PLUMBING, ELECTRICAL AND VENTILATION WORK, INCLUDING "ROUGH-INS, INTERCONNECTIONS BETWEEN COUNTERS, CONTROLS, SWITCHES, ETC..." AND "FINAL CONNECTIONS" TO THE EQUIPMENT, IS TO BE PERFORMED BY APPROPRIATE TRADES. IT IS NOT PART OF THE KITCHEN EQUIPMENT CONTRACTORS SCOPE OF WORK UNLESS OTHERWISE SPECIFIED.
- 7. TO EXPEDITE AND INSURE PROPER INSTALLATION OF COOKING EQUIPMENT, IT IS RECOMMENDED THAT "ALL FINAL CONNECTIONS" ARE TO BE PERFORMED BY APPROPRIATE TRADES AT THE SAME TIME THE KITCHEN EQUIPMENT CONTRACTOR IS SETTING THE EQUIPMENT IN PLACE.

PLUMBING CONTRACTOR NOTES:

- 1. PLUMBING ROUGH-INS SHOWN ON THE FOOD SERVICE DRAWINGS ARE "POINT OF CONNECTION" OR "CONNECTED LOAD" DRAWINGS ONLY. REFER TO ENGINEERING DRAWINGS FOR FURTHER DETAILS & INFORMATION.
- 2. FURNISH & INSTALL SHUT-OFF VALVES ON THE INLET SIDE OF THE COLD & HOT WATER LINES SERVING EACH PIECE OF EQUIPMENT.
- 3. IF WATER PRESSURE AT THE EQUIPMENT AREA EXCEEDS 50 POUNDS FLOW PRESSURE OWNER OR HIS CONTRACTOR MUST INSTALL A PRESSURE REDUCING VALVE ON BOTH THE MAIN HOT WATER & COLD WATER SUPPLY LINES SERVICING THE AREA.
- 4. FLOW PRESSURE TO DISHWASHER (OR ITS AUXILIARY HOT WATER BOOSTER HEATER IF ONE IS USED) MUST NOT EXCEED 20 POUNDS.
- 5. OWNER OR THEIR CONTRACTOR MUST PROVIDE AN ADEQUATE SUPPLY OF 110° F HOT WATER, MINIMUM, TO ALL COOKING EQUIPMENT, DISHWASHER, BOOSTER HEATER, WORK SINKS, HAND SINKS, ETC.
- 6. IF WATER EXCEEDS TEN GRAINS OF HARDNESS, EXCESSIVE LIME, IRON, ALKALINE, ETC... CONDITIONS ARE PRESENT, PROPER WATER CONDITIONING EQUIPMENT MUST BE INSTALLED ON THE MAIN WATER LINES SERVING THIS FOOD SERVICE FACILITY. ALL WATER CONDITIONING EQUIPMENT SHALL BE FURNISHED, INSTALLED & MAINTAINED BY OTHERS.
- 7. USING PVC PIPING FOR DRAIN LINES FROM EQUIPMENT THAT DISCHARGES HOT WATER SUCH AS STEAMERS & DISHWASHERS MAY CAUSE THE P.V.C. PIPING TO SOFTEN OR CRACK. IT IS RECOMMENDED THAT METAL (COPPER OR GALVANIZED) PIPING BE USED.
- 8. CHECK WITH LOCAL CODES TO DETERMINE WHAT EQUIPMENT IS TO BE PIPED THROUGH A GREASE TRAP. EQUIPMENT NOTED ON FOOD SERVICE CONTRACT DRAWINGS ARE REQUIRED / RECOMMENDED AND SHOULD BE VERIFIED FOR COMPLIANCE.
- 9. FURNISH & INSTALL GREASE TRAP(S) AS REQUIRED OR AS INDICATED ON ENGINEERING CONTRACT DOCUMENTS.
- 10. FURNISH & INSTALL MECHANICAL GAS SHUT-OFF VALVE IN GAS MAIN FEEDING ALL COOKING EQUIPMENT PRIOR TO ANY TEES OR GAS LOOP FEEDING COOKING EQUIPMENT. MECHANICAL SHUT-OFF VALVE IS RECOMMENDED TO BE INSTALLED IN ACCESSIBLE CEILING SPACE OR BELOW FLOOR WITH ACCESS TO VALVE.
- 11. FURNISH & INSTALL FLOOR DRAINS AND/OR FLOOR SINKS AS PER LOCAL CODE HAVING JURISDICTION AND OWNERS REQUEST.
- 12. REVIEW ALL CATALOG DATA PROVIDED AS PART OF THE FOOD SERVICE CONTRACT DOCUMENTS TO ESTABLISH THE NECESSARY GAS PRESSURE TO THE KITCHEN EQUIPMENT.
- 13. IF GAS PRESSURE ON MAIN LINE FEEDING KITCHEN EQUIPMENT EXCEEDS 14" W.C. FURNISH & INSTALL GAS PRESSURE REDUCING VALVE ON MAIN GAS LINE, SO THAT THE PRESSURE IS EQUAL TO 14" W.C. EXCESSIVE GAS PRESSURE TO THE EQUIPMENT CAN DAMAGE THE EQUIPMENT AND CAUSE PERSONAL INJURY.
- 14. FURNISH & INSTALL ALL WATER LINES, DRAIN LINES, GAS LINES, MANIFOLDS, SHUT-OFF/GATE VALVES, PRESSURE REDUCING VALVES, BACKFLOW PREVENTERS, VACUUM BREAKERS, ETC. OR ANY OTHER PLUMBING DEVICE REQUIRED TO MAKE EQUIPMENT OPERATIONAL. THIS IS NOT PART OF THE KITCHEN EQUIPMENT CONTRACTORS SCOPE OF WORK UNLESS OTHERWISE SPECIFIED.
- 15. EXTEND ALL WATER LINES, DRAIN LINES & ASSOCIATED VALVES FOR DROP-IN OR BUILT-IN EQUIPMENT WITHIN COUNTERS TO WORKING SIDE FOR EASE OF ACCESSIBILITY & USE.
- 16. FURNISH & INSTALL INTERCONNECTIONS BETWEEN BOOSTER HEATER & DISHWASHER AS WELL AS GENERATOR & STEAM EQUIPMENT.
- 17. VERIFY, FURNISH & INSTALL REQUIRED PLUMBING ROUGH-INS FOR ALL EQUIPMENT BEING SUPPLIED.

ELECTRICAL CONTRACTOR NOTES:

- 1. ELECTRICAL ROUGH-INS SHOWN ON THE FOOD SERVICE DRAWINGS ARE "POINT OF CONNECTION" OR "CONNECTED LOAD" DRAWINGS ONLY. REFER TO ENGINEERING DRAWINGS FOR FURTHER DETAILS & INFORMATION.
- 2. FURNISH & INSTALL REQUIRED CONVENIENCE RECEPTACLES AS PER LOCAL CODE HAVING JURISDICTION AND PER OWNERS REQUESTS/
- 3. VERIFY IF CONVENIENCE RECEPTACLES ARE TO BE GFCI PER LOCAL CODE HAVING JURISDICTION.
- 4. MOUNTING HEIGHTS GIVEN ARE TO CENTERLINE OF DEVICE UNLESS OTHERWISE NOTED.
- 5. FLOOR MOUNTED DEVICES ARE TO BE MOUNTED WITH A 5 3/4" MAXIMUM HEIGHT TO TOP OF BOX.
- 6. FURNISH & INSTALL ALL RECEPTACLES, J-BOXES, SWITCHES, INTER-WIRING, DISCONNECT SWITCHES, MOTOR STARTERS AND/OR TRANSFORMERS OR ANY OTHER ELECTRICAL DEVICE REQUIRED TO MAKE EQUIPMENT OPERATIONAL. THIS IS NOT PART OF THE KITCHEN EQUIPMENT CONTRACTORS SCOPE OF WORK UNLESS OTHERWISE SPECIFIED.
- 7. ALL POWER CONNECTION POINTS UNDER EXHAUST HOODS ARE TO BE SHUT DOWN UPON FIRE SUPPRESSION SYSTEM ACTIVATION PER NFPA 96. FURNISH & INSTALL SHUNT-TRIP BREAKERS FOR THESE CIRCUITS.
- 8. VERIFY, FURNISH AND INSTALL REQUIRED ELECTRICAL ROUGH-INS FOR ALL EQUIPMENT BEING SUPPLIED.

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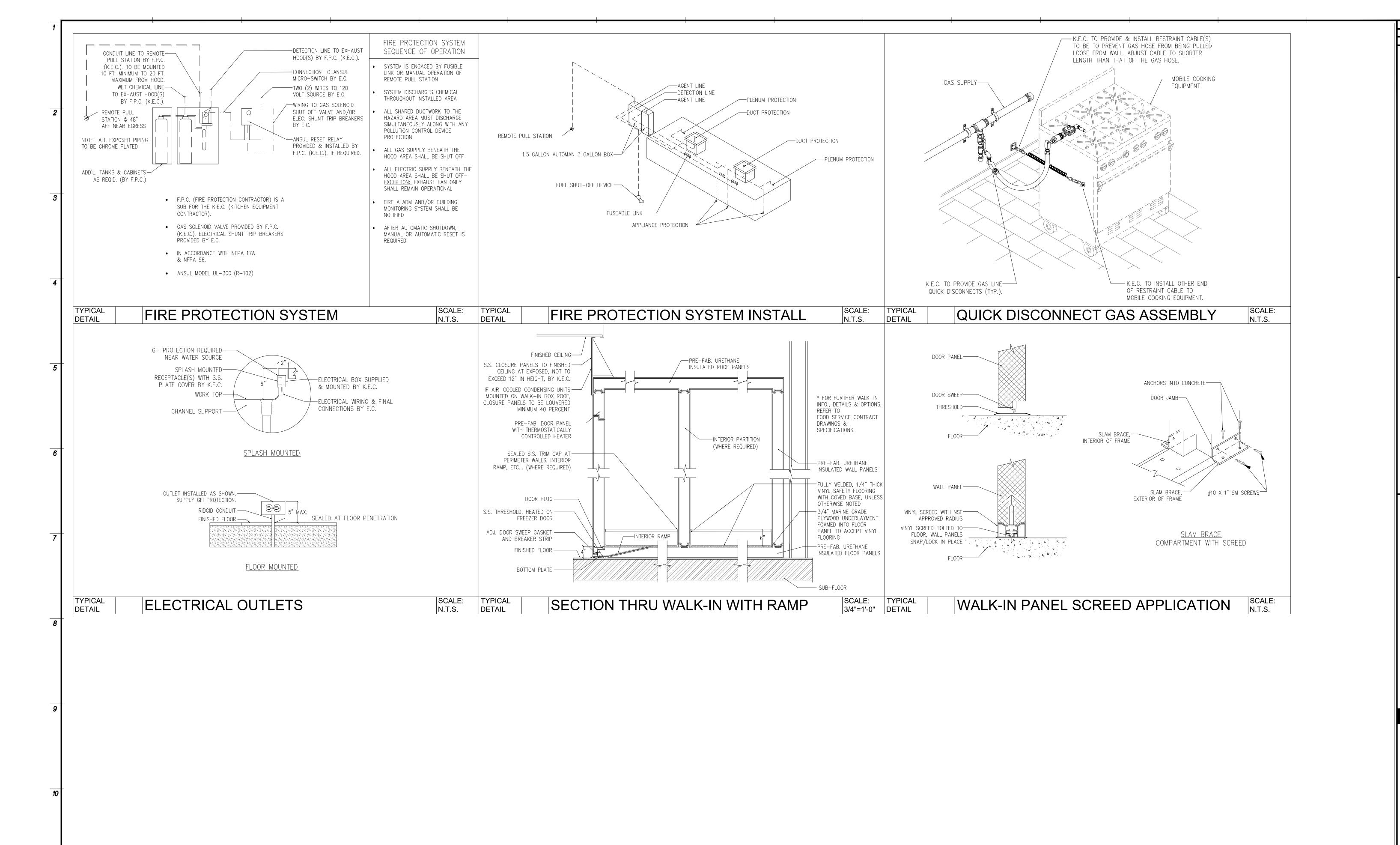
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MILNAMOW, R.A.

License No. 32407

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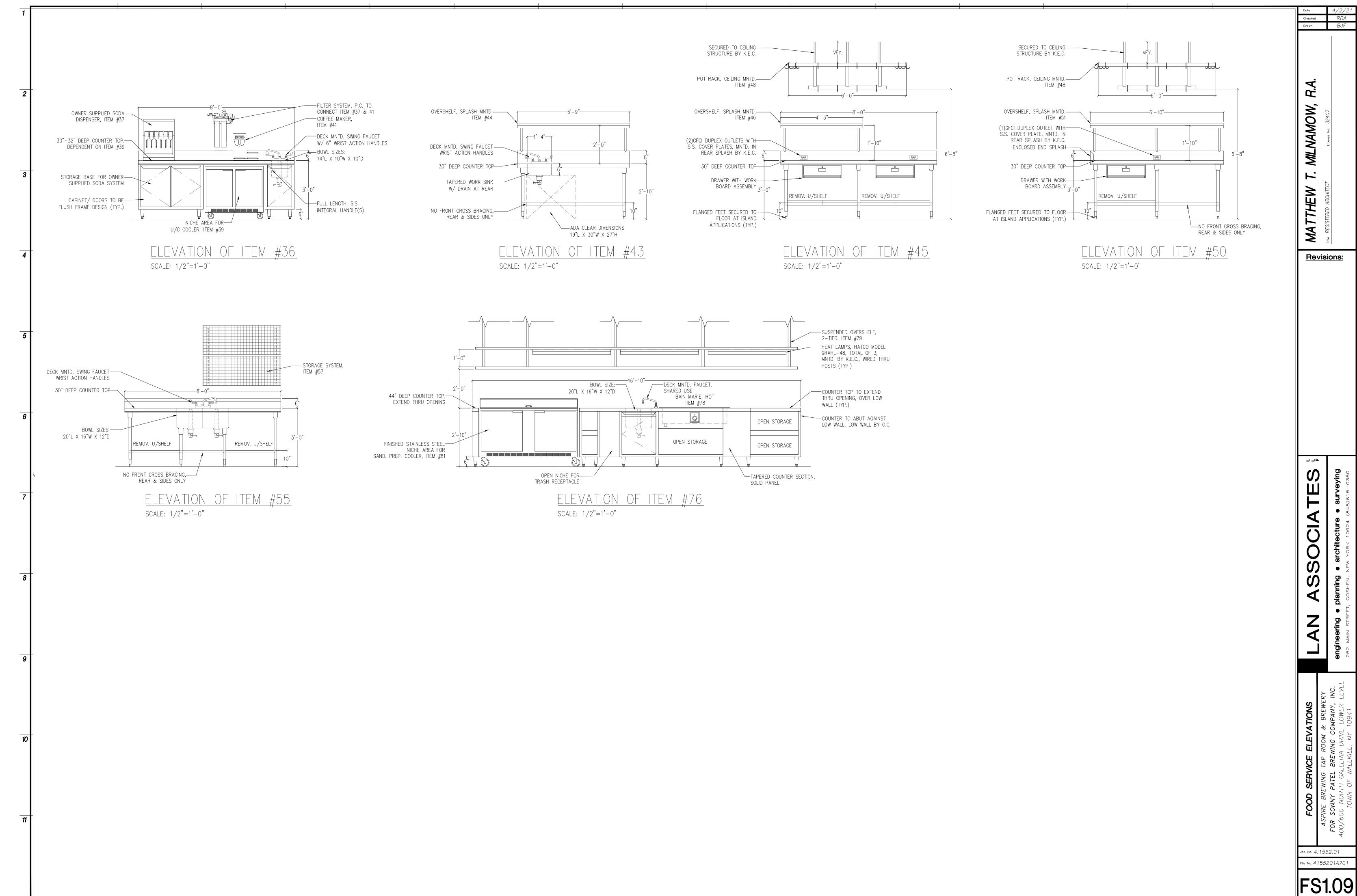
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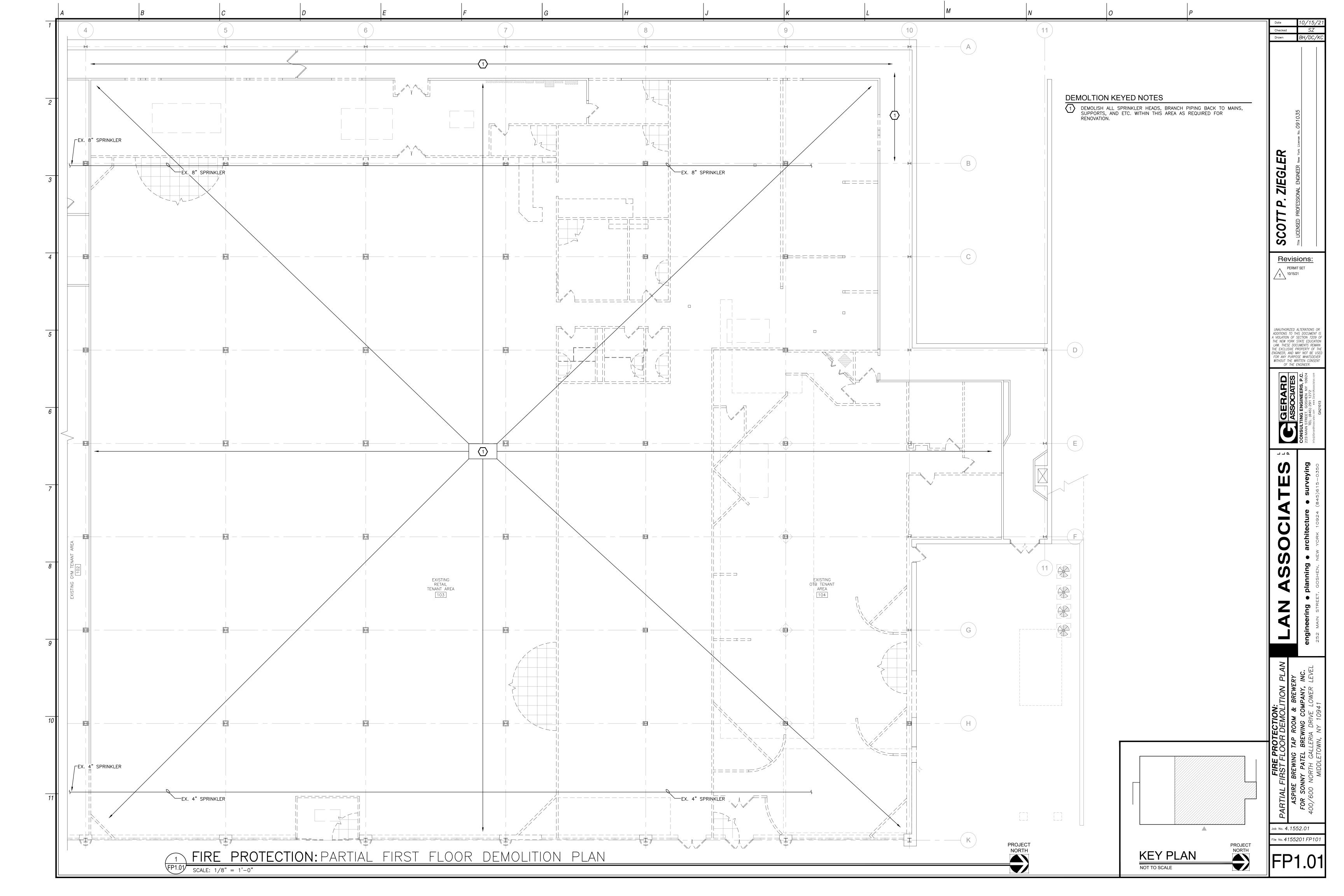
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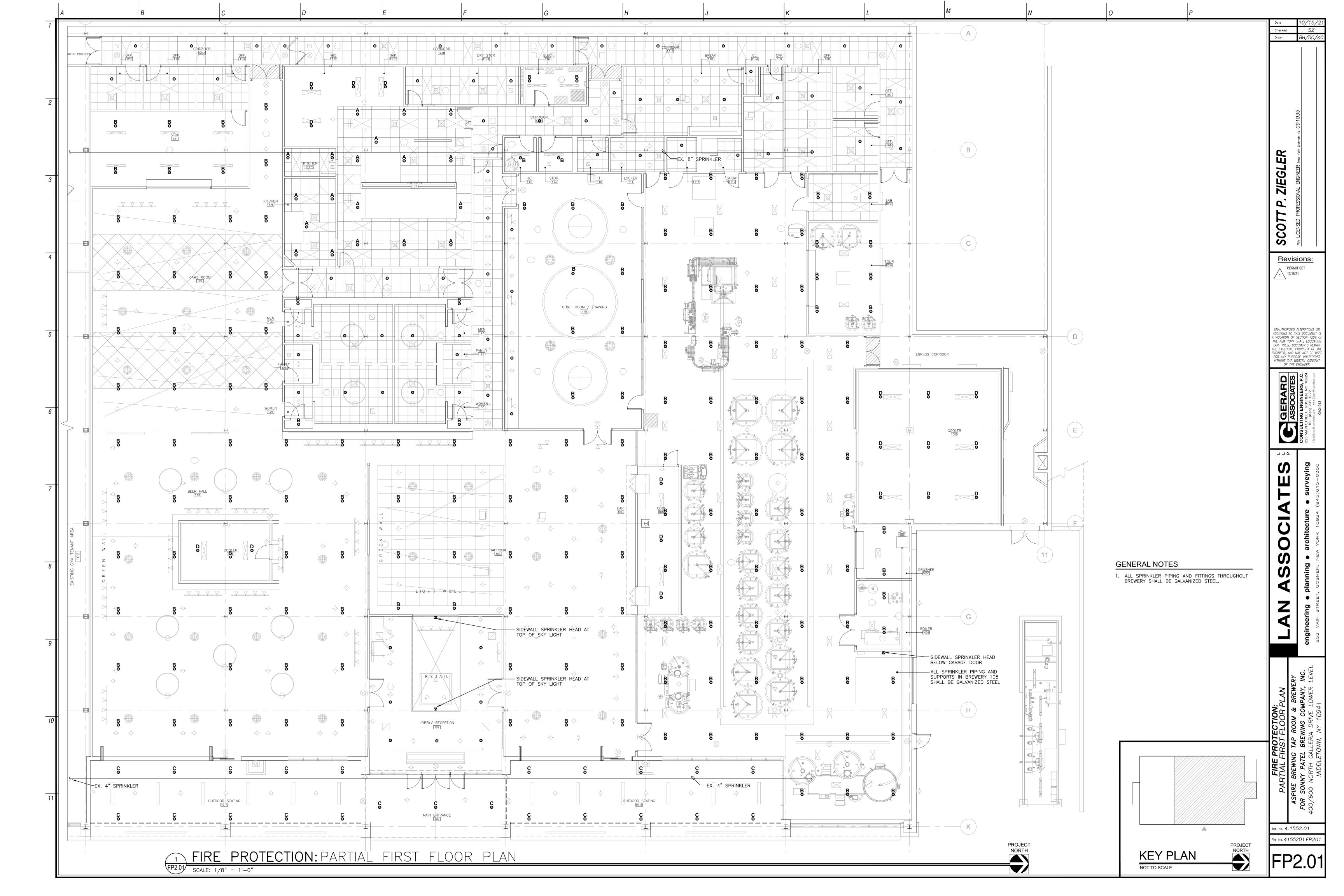
SPIRE BREWING TAP ROOM & BREWERY
SONNY PATEL BREWING COMPANY, INC.
600 NORTH GALLERIA DRIVE LOWER LEVEL
TOWN OF WALLKILL NY 10941

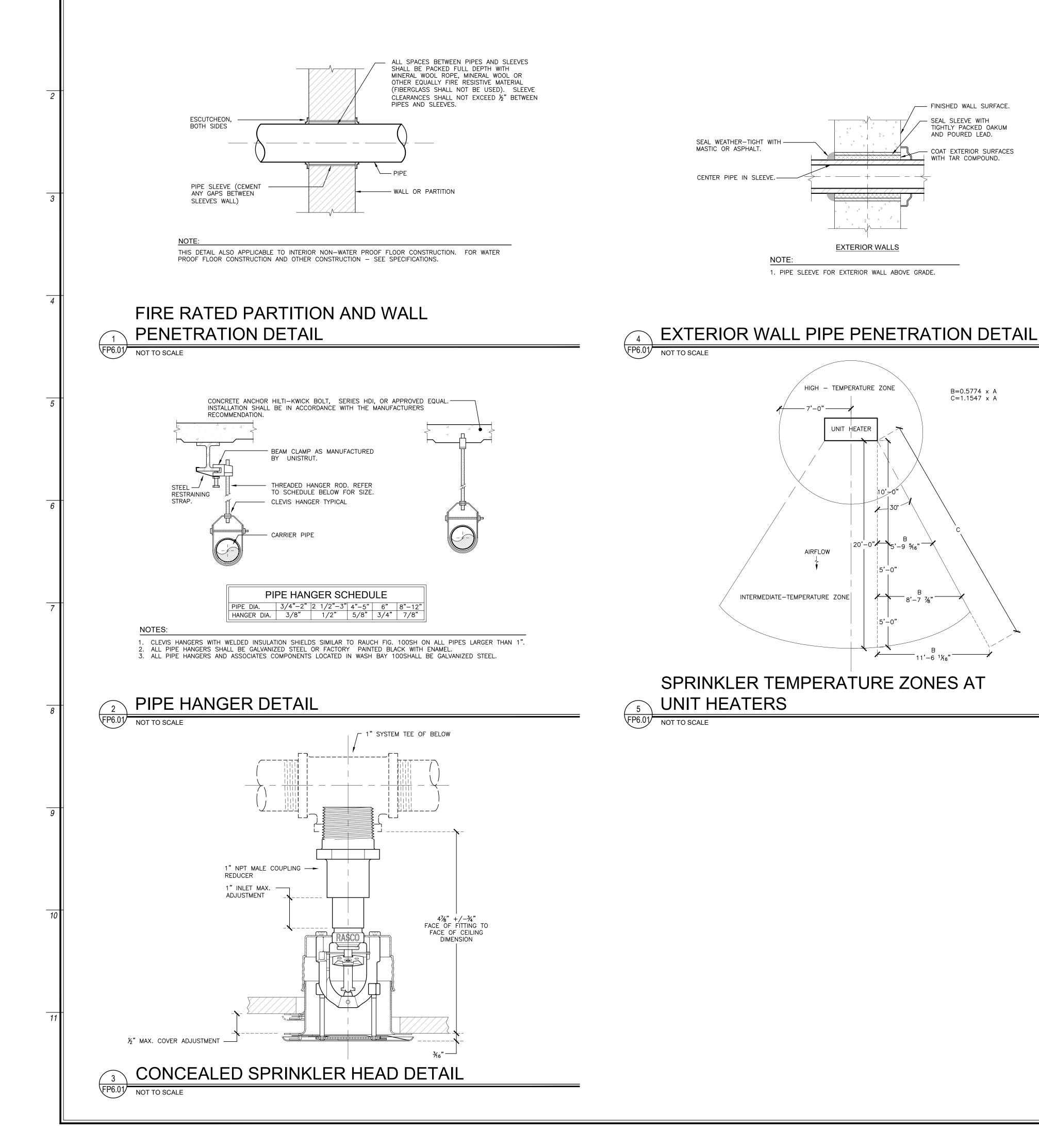
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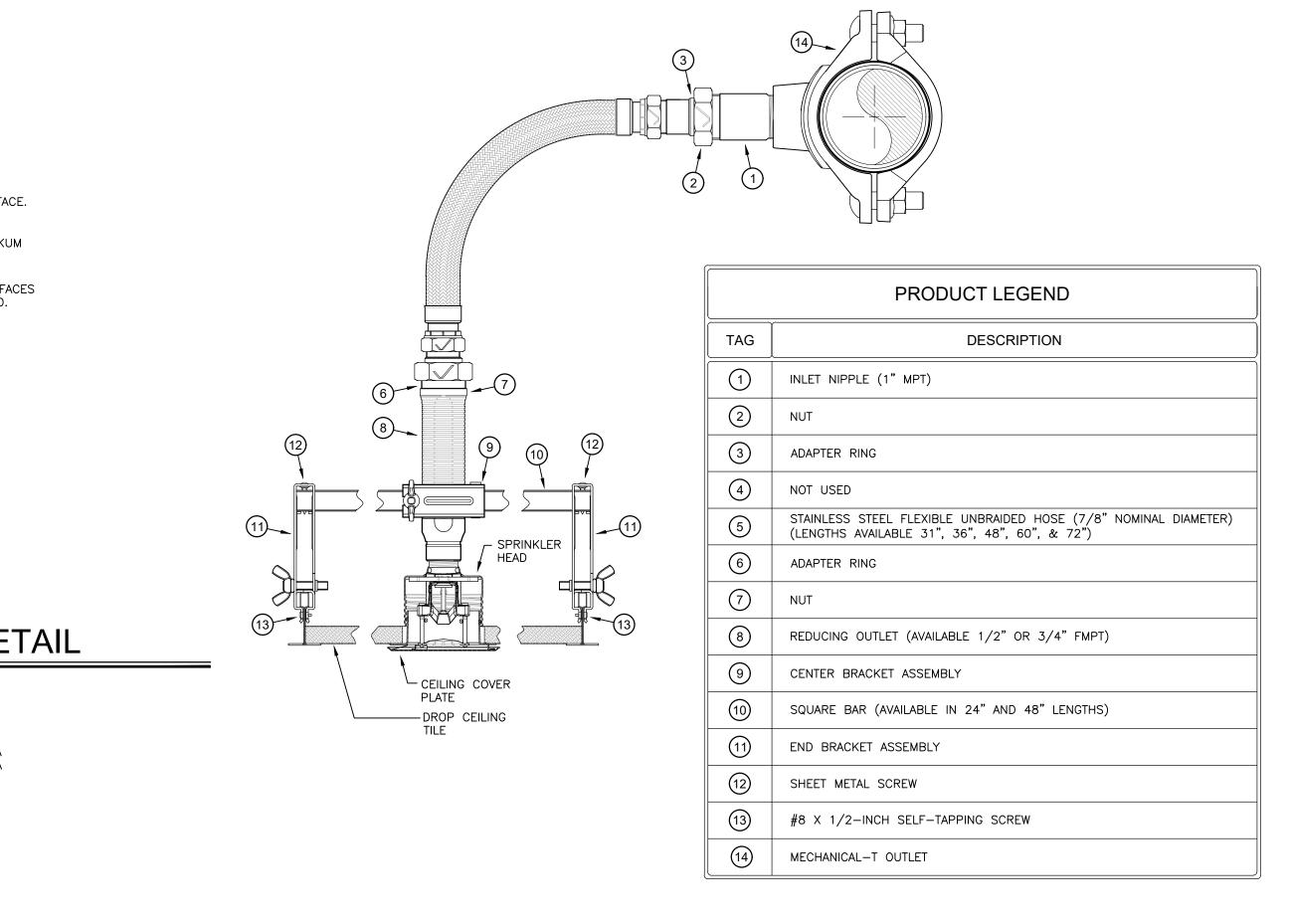
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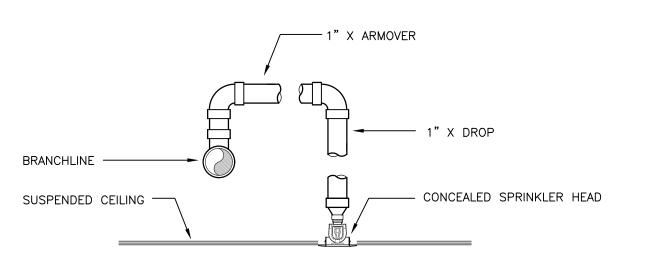








TYPICAL FLEXIBLE HOSE SPRINKLER ASSEMBLIES FOR CONCEALED PENDANT SPRINKLERS



X TYPICAL ARM OVER DETAIL

FP6.01 NOT TO SCALE

License No. 091035

SCOTT P. ZIEGLER

Revisions:

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10/15/21

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ELAN ASSOCIAT

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252 MAIN STREET, GOSHEN, NEW YORK 10924 (845)6

WING TAP ROOM & BREWERY

ATEL BREWING COMPANY, INC.

H GALLERIA DRIVE LOWER LEVEL

DLETOWN, NY 10941

Job No. 4.1552.01

File No. 4155201 FP601

FP6.01

- 1. ALL SPRINKLER SYSTEM WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE 2020 FIRE CODE OF NEW YORK STATE, BUILDING CODE OF NEW YORK STATE, NFPA 13, NFPA 20, AND ALL LOCAL CODES AND GENERALLY ACCEPTED STANDARDS.
- 2. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL PIPING, SPRINKLER HEADS, PUMPS, TESTS, HANGERS, FITTINGS AND MISCELLANEOUS COMPONENTS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER THE SPRINKLER SYSTEM COMPLETE, OPERABLE, AND IN ACCORDANCE WITH APPLICABLE CODES AND GENERALLY ACCEPTED INDUSTRY STANDARDS. WHERE NECESSARY ALL MATERIALS, EQUIPMENT, AND ETC. SHALL BE UL LISTED AND FM APPROVED.
- 3. PLUMBING CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL PIPING, SPRINKLER HEADS AND EQUIPMENT WITH OTHER CONTRACTORS TO AVOID CONFLICTS. FURNISH TO OTHER AFFECTED TRADES ALL NECESSARY INFORMATION, WORKING DRAWINGS OR MATERIALS REQUIRED FOR INSTALLATION AND COMPLETION OF ALL WORK.
- 4. PLUMBING CONTRACTOR SHALL SEAL AROUND ALL PIPE PENETRATIONS THROUGH WALLS, FLOORS AND CEILINGS WITH. FOR PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SEAL WITH FIRE-STOPPING MATERIAL SIMILAR TO HILTI INTUMESCENT FIRE STOP MATERIAL TO MAINTAIN FIRE AND SMOKE RATINGS.
- 5. PLUMBING CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIAL INSTALLED UNDER THIS CONTRACT FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION AND ACCEPTANCE BY THE OWNER, AND AGREES TO REPLACE DEFECTIVE WORK (INCLUDING ALL REQUIRED LABOR AND MATERIALS) AT NO ADDITIONAL COST TO OWNER DURING THE GUARANTEE PERIOD.
- 6. PLUMBING CONTRACTOR SHALL DEMONSTRATE NEW FIRE PROTECTION SYSTEM TO OWNER AND REVIEW MAINTENANCE PROCEDURES.
- 7. PLUMBING CONTRACTOR SHALL PERFORM ALL REQUIRED TESTS BY NFPA, ENGINEER, BUILDING DEPARTMENT AND FIRE DEPARTMENT TO THEIR SATISFACTION.
- 8. PLUMBING CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL PIPING IN FINISHED AREAS TO ENSURE CONCEALMENT OF ALL PIPING. NOTIFY ARCHITECT WHEN CONFLICTS EXIST PRIOR TO INSTALLING PIPING.
- 9. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL WIRING (24V) & (120V) FOR SYSTEMS SHOWN ON THE DRAWINGS, INCLUDING ALL RELAYS, TRANSFORMERS, CONDUIT, JUNCTION BOXES, CONDUCTORS, APPURTENANCES AND ALL NECESSARY EQUIPMENT TO MAKE SYSTEMS COMPLETE AND OPERABLE.
- 10. PLUMBING CONTRACTOR SHALL PAY FOR ALL PERMITS AND INSPECTION FEES REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.
- 11. PLUMBING CONTRACTOR SHALL INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OBSERVE ALL CLEARANCES.
- 12. ALL CONTROL WIRING SHALL BE IN ACCORDANCE WITH N.E.C. ELECTRICAL CODE AND ALL LOCAL CODES. ALL CONDUCTORS SHALL BE COPPER WITH THHN INSULATION IN EMT CONDUIT. 120V/1 - MINIMUM CONDUCTOR SIZE #12. 24V - MINIMUM CONDUCTOR SIZE #18. MINIMUM CONDUIT SIZE SHALL BE ¾". CONDUIT INSTALLED OUTDOORS SHALL BE GÁLVANIZED. SEE ELECTRICAL DRAWÎNGS AND SPECIFICATIONS FOR APPROVED MATERIALS AND METHODS OF INSTALLATION.
- 13. PLUMBING CONTRACTOR SHALL NOT DRILL OR CUT ANY STRUCTURAL MEMBERS WITHOUT PERMISSION OF ARCHITECT OR STRUCTURAL ENGINEER.
- 14. PLUMBING CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CUTTING, PATCHING, AND PAINTING ASSOCIATED WITH PLUMBING WORK WITH THE GENERAL CONTRACTOR, WHO SHALL PERFORM THE WORK. PLUMBING CONTRACTOR SHALL PROVIDE ACCESS DOORS, WHERE REQUIRED, FOR ALL CONCEALED SYSTEM COMPONENTS. ACCESS DOORS SHALL HAVE APPROPRIATE FIRE RATING TO MAINTAIN FIRE RATING OF WALL ON CEILING. ACCESS DOORS TO BE TURNED OVER TO GENERAL CONTRACTOR FOR INSTALLATION.
- 15. PLUMBING CONTRACTOR SHALL OBSERVE CLEARANCES TO OBSTRUCTIONS.
- 16. PLUMBING CONTRACTOR SHALL PROVIDE METAL VALVE TAGS FOR ALL VALVES INSTALLED ON THE FIRE PROTECTION SYSTEM AND ALL OTHER REQUIRED IDENTIFICATION
- LABELS AND SIGNAGE. PROVIDE (2) MANUALS LISTING TAG NUMBER, LOCATIONS OF VALVE AND EQUIPMENT/PIPING SERVED BY VALVE.
- 17. PLUMBING CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING ALL FIRE PROTECTION SYSTEM PIPING, EQUIPMENT AND HEAD LOCATIONS WITH HYDRAULIC CALCULATIONS. COORDINATE SPRINKLER HEAD LOCATIONS WITH OTHER CONTRACTORS TO AVOID CONFLICTS. RELOCATE SPRINKLER HEADS TO MEET FIELD CONDITIONS. SHOP DRAWINGS SHALL SHOW SPRINKLER PIPE SIZES, PIPE HANGER REQUIREMENTS, FIRESTOPPING AND NECESSARY DETAILS REQUIRED FOR BUILDING DEPARTMENT AND INSURANCE CARRIER APPROVAL. HYDRAULIC CALCULATIONS SHALL BE BASED ON HYDRANT FLOW TEST PERFORMED BY THIS CONTRACTOR. SUBMIT SHOP DRAWINGS WITH HYDRAULIC CALCULATION TO ENGINEER FOR APPROVAL. SHOP DRAWINGS AN HYDRAULIC CALCULATIONS SHALL BE SIGNED BY A NYS PROFESSIONAL ENGINEER.
- 18. PLUMBING CONTRACTOR SHALL FURNISH & INSTALL NEW SPRINKLER CABINET WITH MINIMUM SIX SPARE SPRINKLER HEADS AND WRENCH. INCLUDE SEPARATE CABINET WITH SPRINKLERS AND WRENCH FOR EACH TYPE OF HEAD ON PROJECTION IN ACCORDANCE WITH NFPA 13.
- 19. WHEN INSTALLING SPRINKLER HEADS, THE PLUMBING CONTRACTOR SHALL PROVIDE THE SHORTEST HYDRAULIC PIPE LENGTH BETWEEN THE FINAL SPRINKLER HEAD LOCATION AND THE BRANCH LINE CONNECTION.
- 20. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING AND FILLING THE NEW SYSTEM AS REQUIRED FOR COMPLETION OF WORK. PROVISIONS SHALL BE MADE FOR COMPLETE DRAINAGE OF THE SYSTEM.
- 21. PROVIDE (2) 21/2 GALLON PRESSURIZED WATER AND (1) 10 POUND ABC DRY CHEMICAL EXTINGUISHERS FOR EMERGENCY USE DURING CONSTRUCTION.
- 22. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE AND OPERATING AUTOMATIC FIRE PROTECTION SYSTEM TO COMPLY WITH NFPA 13 AND NFPA 20.
- 23. PROVIDE CHROME PLATED ESCUTCHEON PLATES WHERE PIPES PASS THROUGH WALL, FLOORS, AND CEILING IN FINISHED AREAS.
- 24. SPRINKLER SYSTEM PIPING SHALL BE ALTERED AS NEEDED TO ACCOMMODATE CEILING HEIGHTS, DUCTWORK, LIGHTS AND OTHER PIPING. PROVIDE ALL REQUIRED PIPING AND FITTINGS AS NEEDED TO OFFSET SPRINKLER SYSTEM TO AVOID STRUCTURAL, ARCHITECTURAL, MECHANICAL AND ELECTRICAL INTERFERENCES, WHETHER SHOWN ON THE DRAWINGS OR NOT.
- 25. SPRINKLER HEADS INSTALLED IN HUNG CEILING WILL BE POSITIONED WITH TOLERANCE OF ±1/2" OF THE CENTERLINE OF THE TILES. INSTALL SPRINKLER HEADS TIGHT TO THE BOTTOM OF THE HUNG CEILING, WITH CARE THAT THE FINISH IS NOT DAMAGED. WHEN CONCEALED TYPE SPRINKLER HEADS ARE USED, THE COVER PLATES SHALL BE FLUSH WITH THE CEILING PLANE, TOLERANCE GREATER THAN ±1/8" IS UNACCEPTABLE.
- 26. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING START-UP OF ALL NEW EQUIPMENT, CONTROLS, AND ETC. TO ENSURE CORRECT OPERATION OF INSTALLED DEVICES. FACTORY AUTHORIZED REPRESENTATIVES SHALL PROVIDE START-UP FOR FIRE PUMP SYSTEM.
- 27. PLUMBING CONTRACTOR SHALL PROVIDE OWNER WITH CATALOG DATA, OPERATING INSTRUCTIONS, MAINTENANCE INSTRUCTIONS, AND RECORD (AS-BUILT) DRAWINGS OF ALL COMPLETED WORK.
- 28. PLUMBING CONTRACTOR SHALL PROVIDE ADDITIONAL SPRINKLER HEADS AROUND ALL OBSTRUCTIONS SUCH AS LIGHTS, EQUIPMENT, COLUMNS, AND ETC. AS REQUIRED TO PROVIDE COMPLETE COVERAGE IN ACCORDANCE WITH NFPA 13.
- 29. ALL FLOW. TAMPER AND ALARM DEVICES MUST BE TIED INTO THE BUILDING'S FIRE ALARM SYSTEM. THIS CONTRACTOR SHALL COORDINATE WITH THE FIRE ALARM CONTRACTOR. THIS CONTRACTOR SHALL FURNISH AND INSTALL TAMPER-SWITCHES ON ALL SHUT-OFF VALVES.
- 30. ALL PRESSURE GAUGES SHALL BE LOCATED SO THEY ARE EASILY READABLE FROM THE FLOOR. MINIMUM ¼" GAUGE COCKS SHALL BE PROVIDED BETWEEN PIPING AND ALL GAUGES. INSTRUMENTS SHALL BE SELECTED SO THAT THE NORMAL RANGE OF OPERATING PRESSURE FALLS WITHIN THE MIDDLE-THIRD OF THE INSTRUMENT
- 31. ALL VALVES SHALL BE FULL LINE SIZE UNLESS OTHERWISE NOTED. SCREWED VALVES SHALL BE OF BRONZE CONSTRUCTION AND FLANGED VALVES OF CAST IRON CONSTRUCTION WITH BRONZE TRIM.

FIRE PROTECTION SYSTEM REQUIREMENTS
THE THOTEOTION OF CHEMICACH NEW PROPERTY.

HYDROSTATIC TEST: ALL PIPING AND APPURTENANCES SHALL BE HYDROSTATICALLY TESTED AT MINIMUM OF 200 PSI OR AT 50 PSI IN EXCESS OF THE MAXIMUM PRESSURE TO BE MAINTAINED IN THE SYSTEM, WHICHEVER IS GREATER, AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR 2 HOURS.

FIRE PROTECTION SYSTEM TESTS

- 2. SYSTEM OPERATIONAL TESTS WATER FLOW DETECTING DEVICES.
- 3. MAIN DRAIN VALVE STATIC AND RESIDUAL PRESSURES.
- 4. PLUMBING CONTRACTOR SHALL PERFORM ALL FIRE PROTECTION SYSTEM TESTS REQUIRED BY NFPA 13, AND LOCAL FIRE INSPECTOR, OR AUTHORITY HAVING JURISDICTION.
- 5. ALL TESTS SHALL BE WITNESSED BY LOCAL FIRE INSPECTOR OR AUTHORITY HAVING JURISDICTION. SUBMIT REPORT ON ALL TESTS TO LOCAL FIRE INSPECTOR AND ENGINEER FOR APPROVAL.

FIRE PROTECTION SYSTEM REQUIREMENTS

- NFPA 13 LIGHT HAZARD:
- A. MINIMUM WATER SUPPLY (1500 SQFT. X 0.10 GPM/SQFT) B. MAXIMUM SPRINKLER HEAD PROTECTION AREA: 225 SQFT.
- NFPA 13 ORDINARY HAZARD II: (BREWERY 105A, BOILER 105B, CRUSHER 105C, COOLER 105D, AND SOUR
- A. MÁXIMUM SPINKLER HEAD PROECTION AREA = 130 SQFT. B. MINIMUM WATER SUPPLY (1500 SQFT. X 0.20 GPM/SQFT.)
- 3. FLOW VELOCITY IN PIPING SHALL NOT EXCEED 20 FPS.
- 4. EQUIVALENT FITTING LENGTHS USED IN HYDRAULIC CALCULATIONS SHALL BE IN ACCORDANCE WITH NFPA 13.
- 5. FINAL FLOW REQUIREMENTS BASED ON APPROVED HYDRAULIC CALCULATIONS.

	FIRE PROTECTION EQUIPMENT SCHEDULE									
SYMBOL	MANUFACTURER	CATALOG#	DESCRIPTION							
И	TYCO	SERIES TY-FRB	SIDEWALL SPRINKLER, QUICK RESPONSE, K=5.6 - "ORDINARY" TEMPERATURE CLASSIFICATION (135°F). RECESSED WHITE ESCUTCHEON PLATE.							
•	TYCO	SERIES RFII	CONCEALED PENDENT SPRINKLER, QUICK RESPONSE, K=5.6 -"ORDINARY" TEMPERATURE CLASSIFICATION (155°F). COLOR WHITE.							
⊕ _A	TYCO	SERIES RFII	CONCEALED PENDENT SPRINKLER, QUICK RESPONSE, K=5.6 —"INTERMEDIATE" TEMPERATURE CLASSIFICATION (200°F). COLOR WHITE.							
⊕ _B	TYCO	SERIES TY-FRB	UPRIGHT/PENDANT SPRINKLER, QUICK RESPONSE, K=5.6 -"ORDINARY" TEMPERATURE CLASSIFICATION (135°F). NATURAL BRASS, CHROME OR COLOR AS DIRECTED BY ARCHITECT. WITH METAL WIRE GUARD							
⊕c	TYCO	SERIES DS-1	DRY-TYPE, PENDANT SPRINKLER, WITH RECESSED ESCHUTCHEON, STANDARD RESPONSE, STANDARD COVERAGE, K=5.6 -"ORDINARY" TEMPERATURE CLASSIFICATION (135°F). SPRINKLER AND ESCUTCHEON FINISH: NATURAL BRASS, CHROME OR COLOR AS DIRECTED BY ARCHITECT.							
⊗ _D	TYCO	SERIES DS-1	DRY-TYPE, PENDANT SPRINKLER, WITH STANDARD ESCHUTCHEON, DSB-2 BOOT, STANDARD RESPONSE, STANDARD COVERAGE, K=5.6 -"ORDINARY" TEMPERATURE CLASSIFICATION (135°F). SPRINKLER AND ESCUTCHEON FINISH: NATURAL BRASS, CHROME OR COLOR AS DIRECTED BY ARCHITECT.							
			SPRINKLER PIPING ABOVEGROUND, SCHEDULE 40 STEEL WITH SCREWED JOINTS UP TO 2" AND SCHEDULE 10 ABOVE 2" USE MECHANICAL GROOVE COUPLING.							

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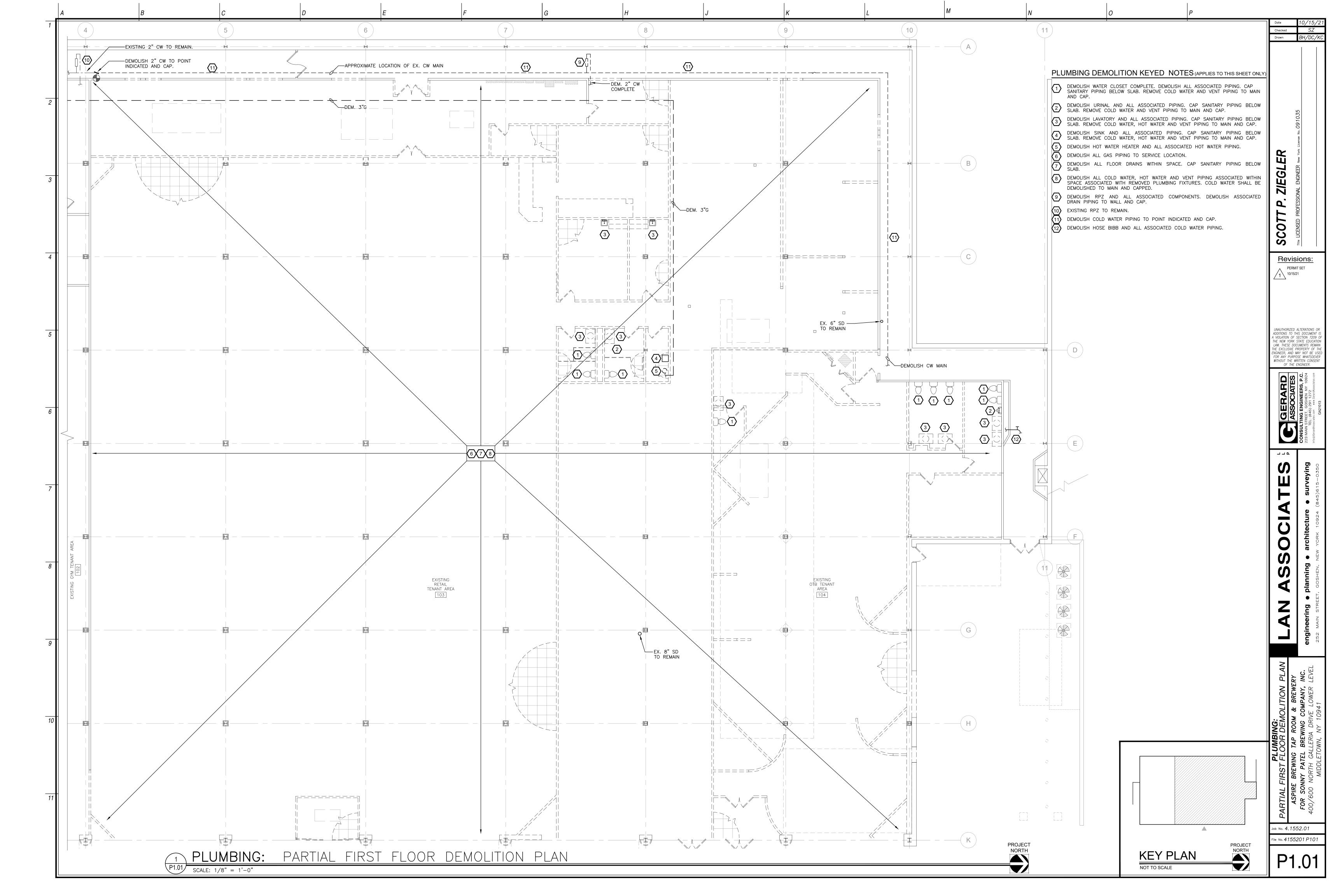
1. SPRINKLER HEADS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

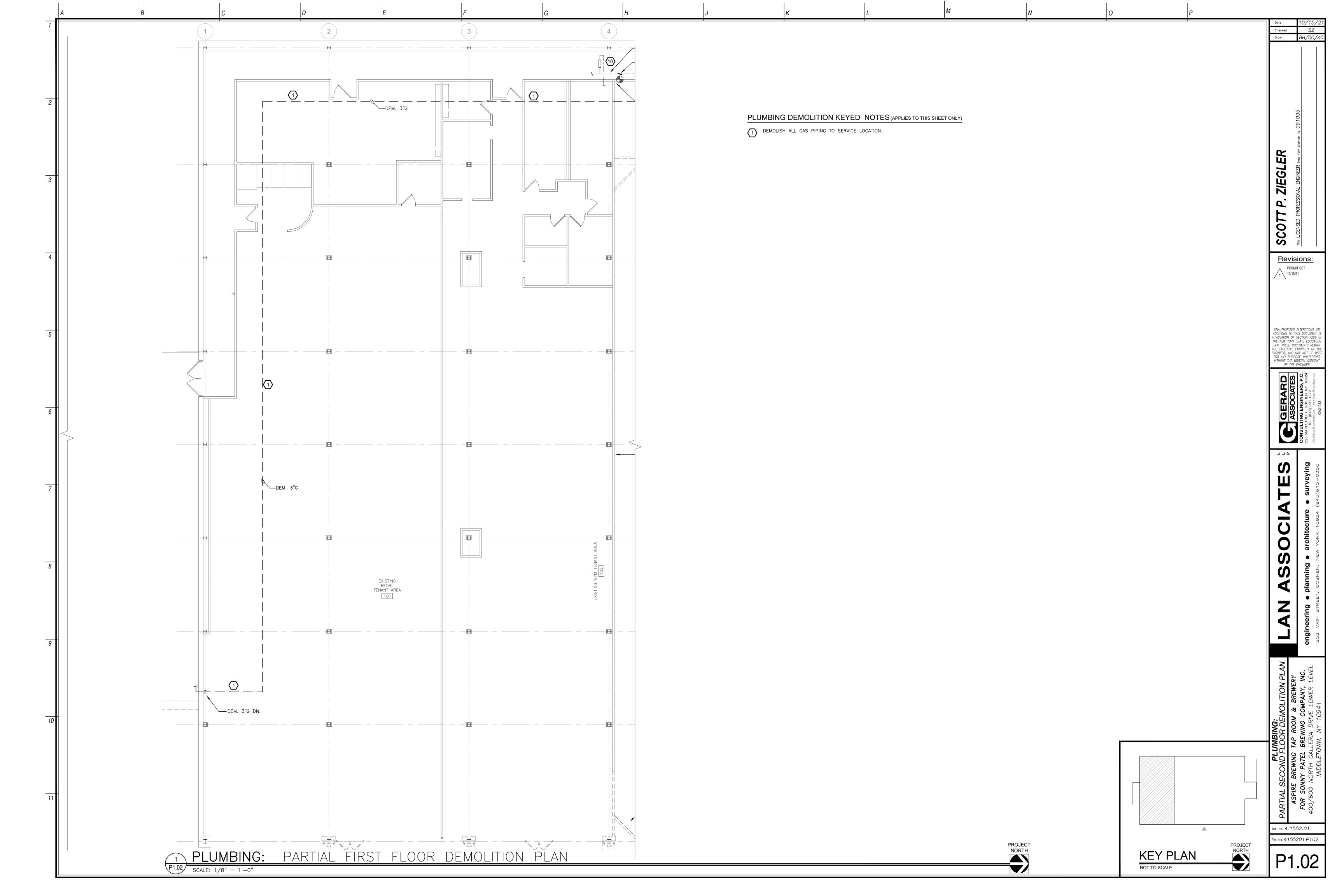
5. FINAL K-FACTOR OF SPRINKLER HEADS BASED UPON HYDRAULIC CALCULATION REQUIREMENTS.

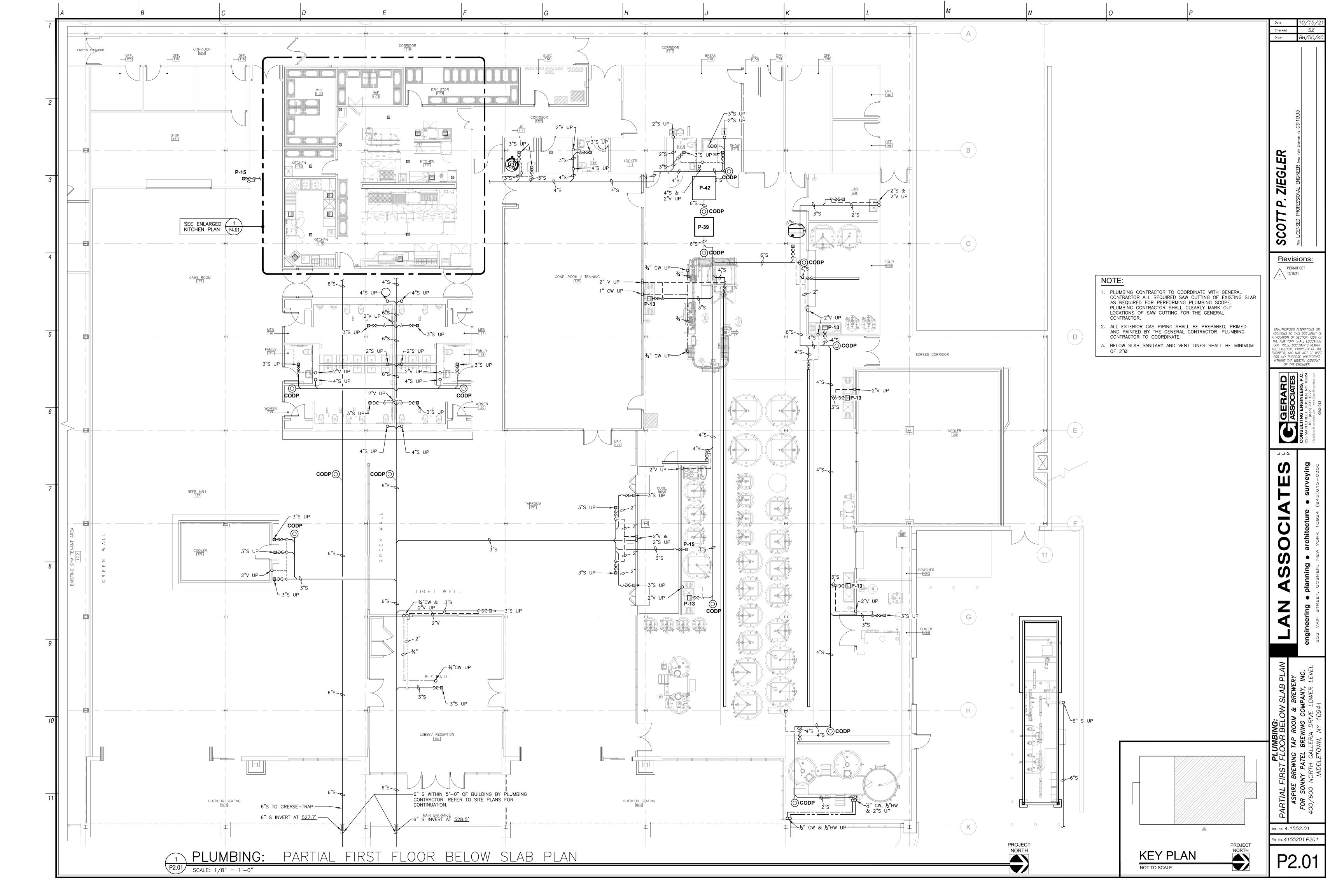
- 2. PROVIDE METAL WIRE GUARDS WHERE SPRINKLERS ARE SUBJECT TO DAMAGE
- 3. ALL HEAT GENERATING EQUIPMENT WHICH CAN AFFECT THE TEMPERATURE RATING OF THE SPRINKLER HEADS SHALL BE CLEARLY IDENTIFIED ON THE SHOP DRAWINGS. COORDINATE HEATING EQUIPMENT LOCATIONS WITH MECHANICAL PLANS.
- 4. SPRINKLER CONTRACTOR SHALL FURNISH & INSTALL SHIELDS ON SPRINKLERS THAT CANNOT BE SUFFICIENTLY SPACED TO AVOID DISCHARGE INTERACTION.

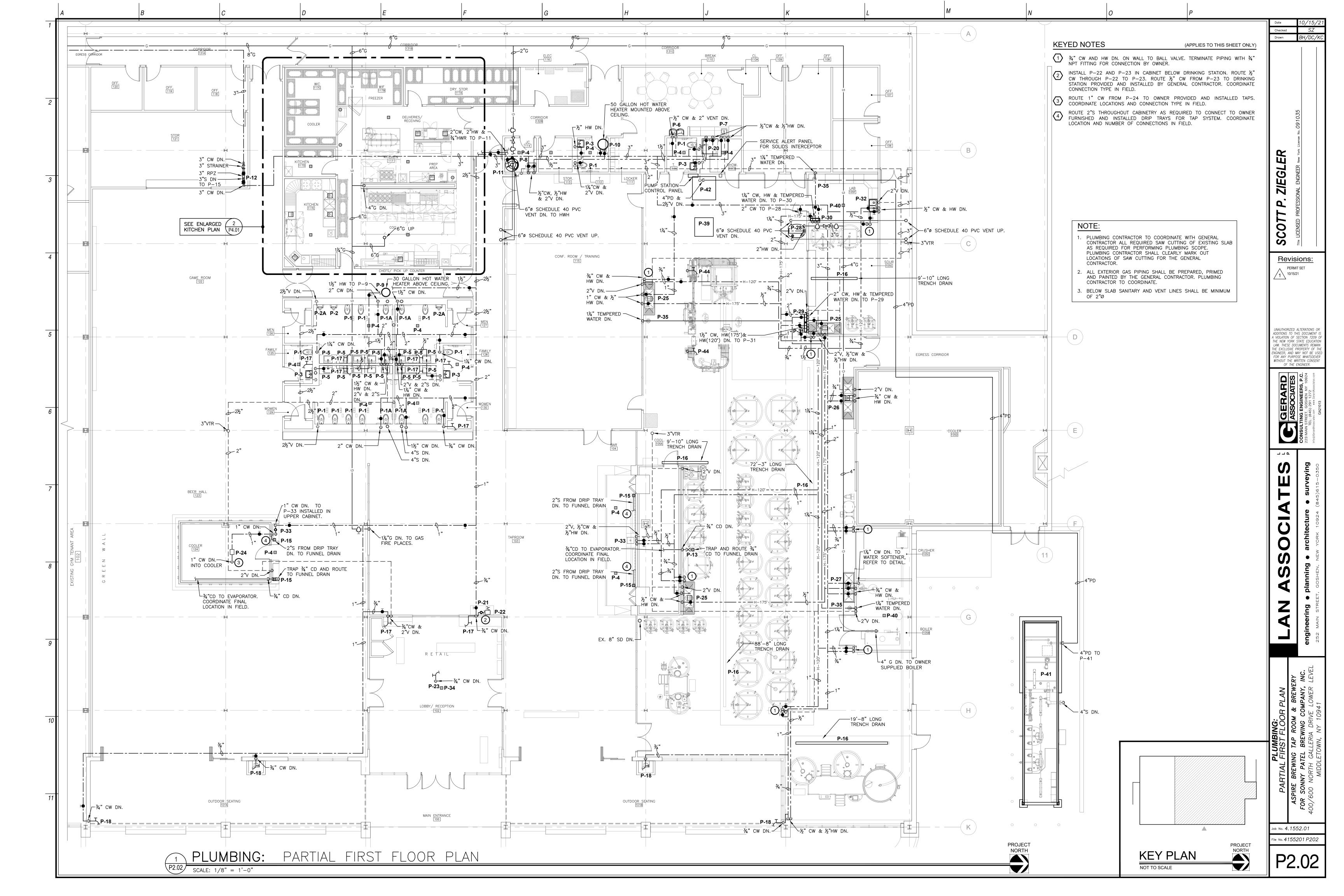
SYMBOLS AND ABBREVIATIONS									
SYMBOL	ABBREVIATION	DESCRIPTION							
•	-	POINT OF DISCONNECT/CONNECT							
	NEW	NEW WORK							
•	_	PENDENT OR UPRIGHT SPRINKLER HEAD							
	GPM	GALLONS PER MINUTE							
	MAX.	MAXIMUM							
	MIN.	MINIMUM							
	BFP	BACK FLOW PREVENTION DEVICE							
Î	-	BUTTERFLY VALVE							
FS	FS	FLOW SWITCH							
Т	TS	TAMPER SWICTH							
	PSI	POUNDS PER SQUARE INCH							
_	SQ.FT.	SQUARE FEET							
c—	-	ELBOW DOWN							
<u></u>	-	ELBOW UP							
	V	VOLTS							
Ø	_	PUMP							
>		TWO-WAY FIRE DEPARTMENT CONNECTION							
		THREE-WAY FIRE PUMP TEST CONNECTION							
\triangle	_	OS&Y GATE VALVE							
\searrow		CHECK VALVE							

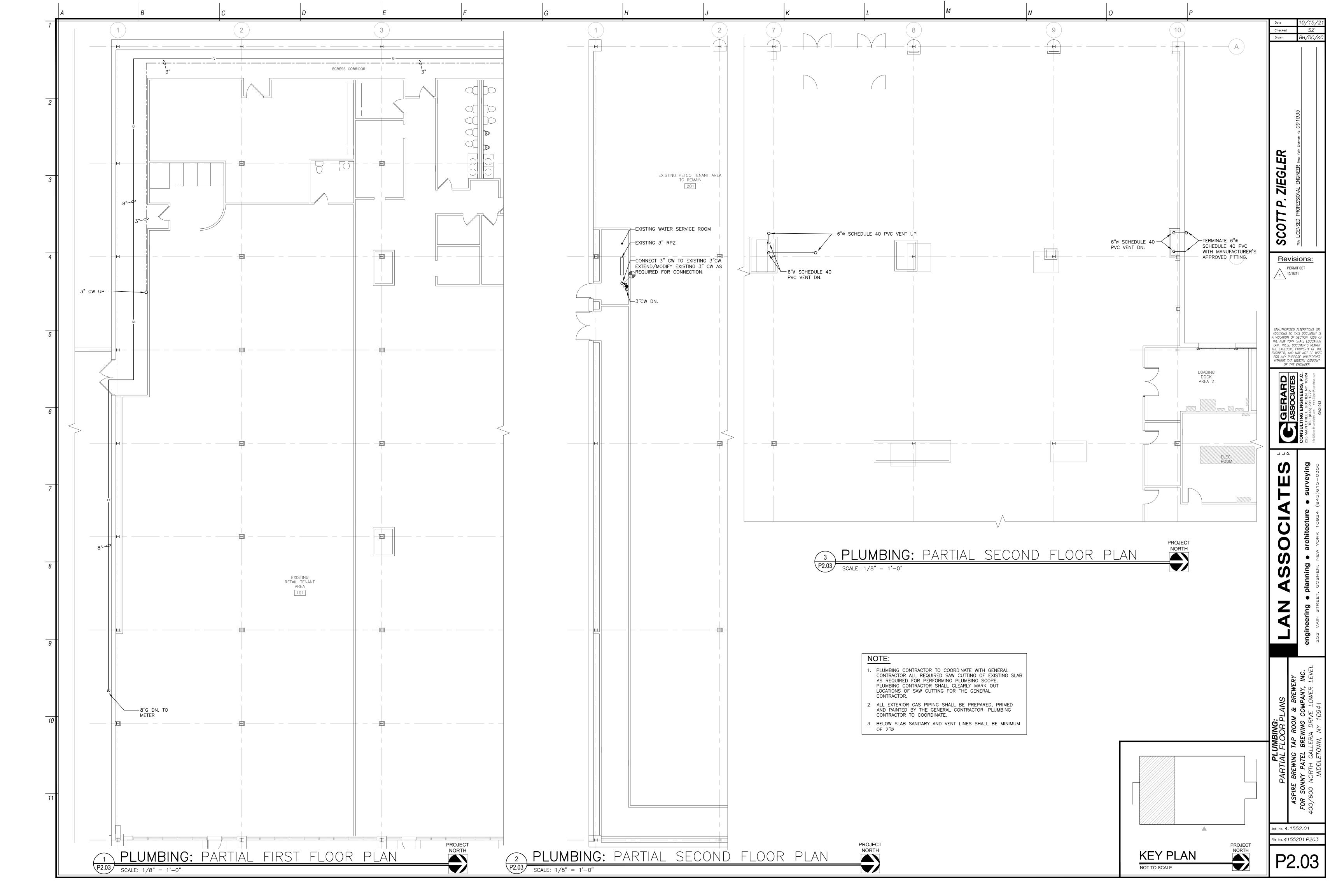
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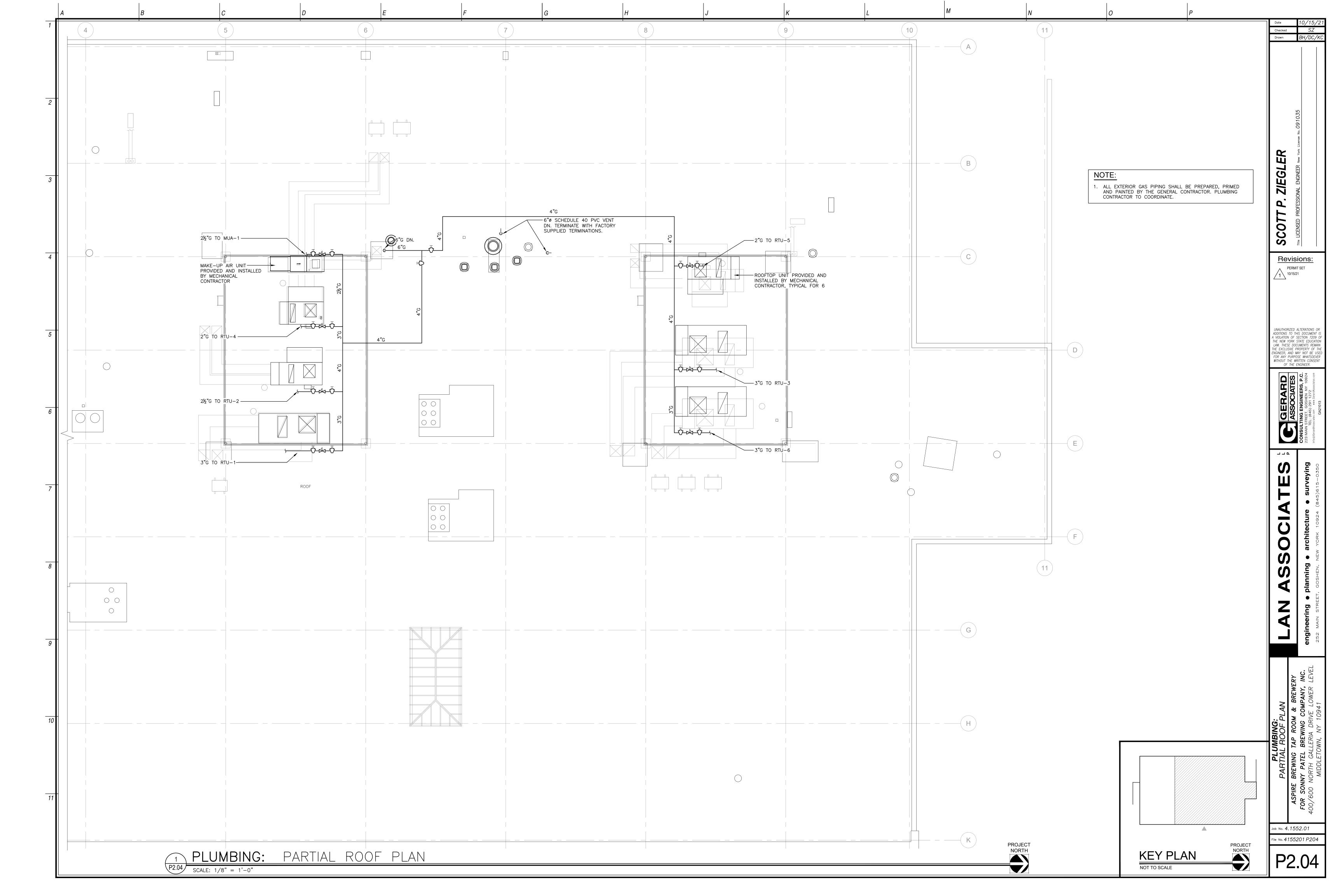


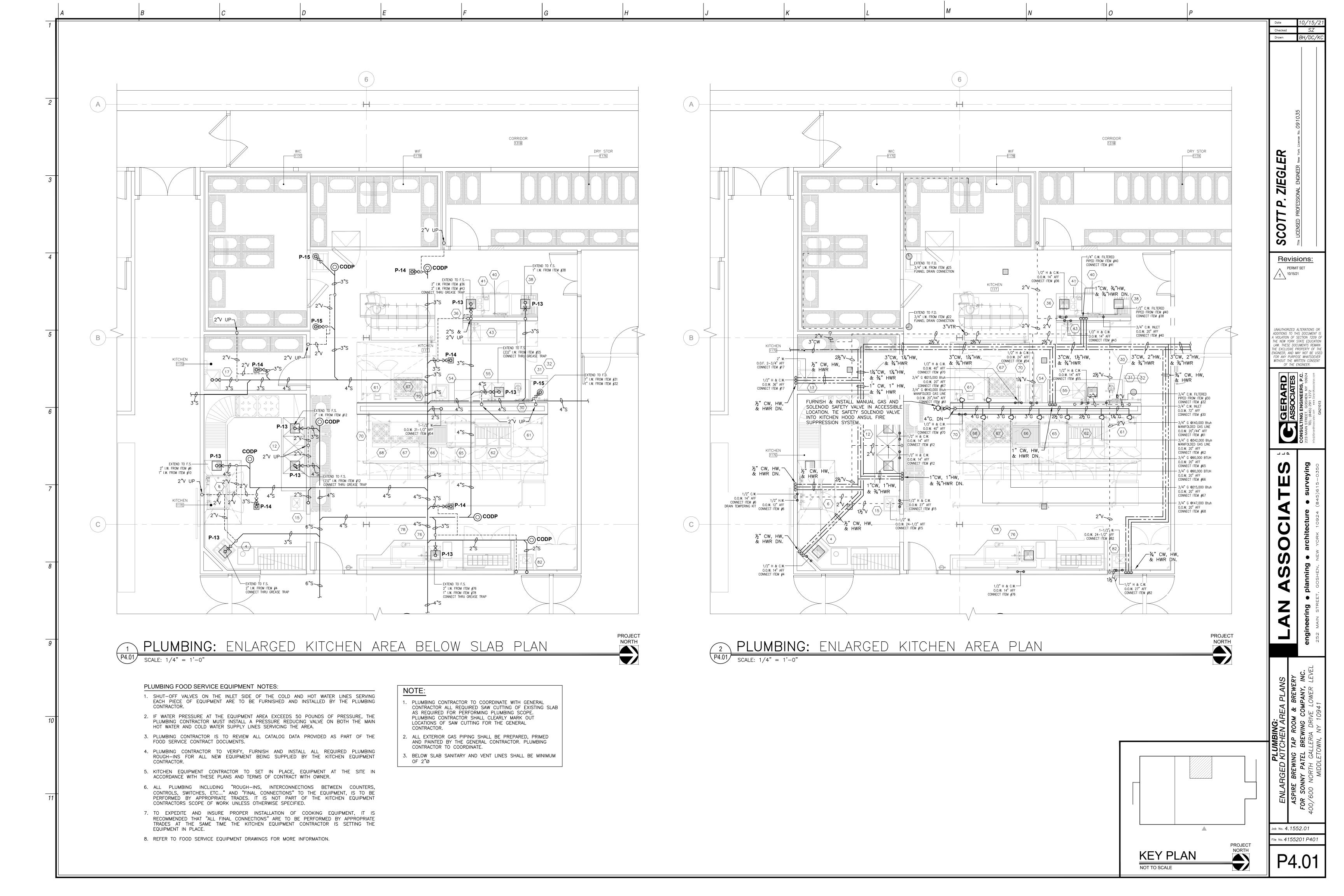


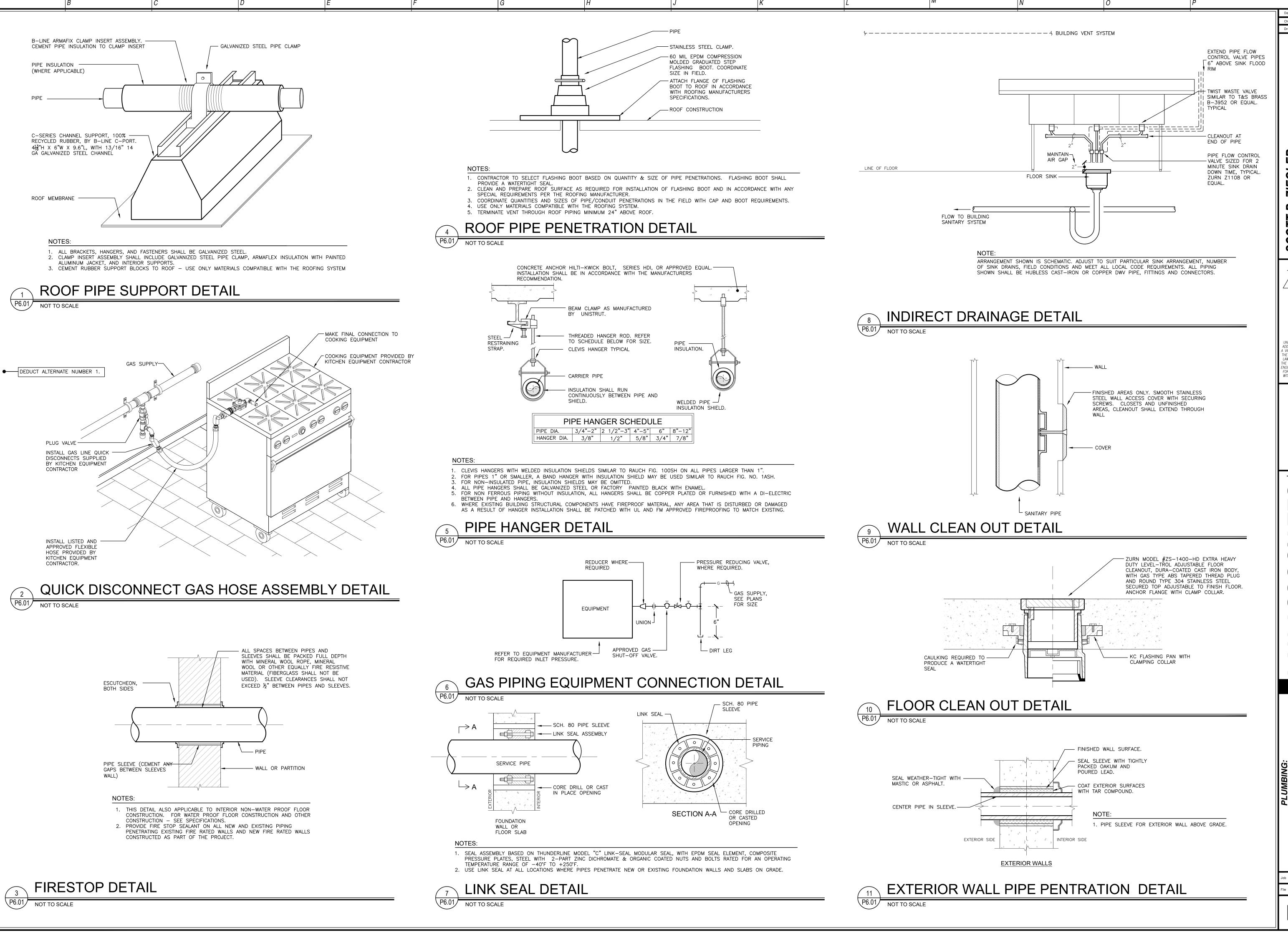












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SCOTT P. ZIEGI

Revisions:
PERMIT SET
10/15/21

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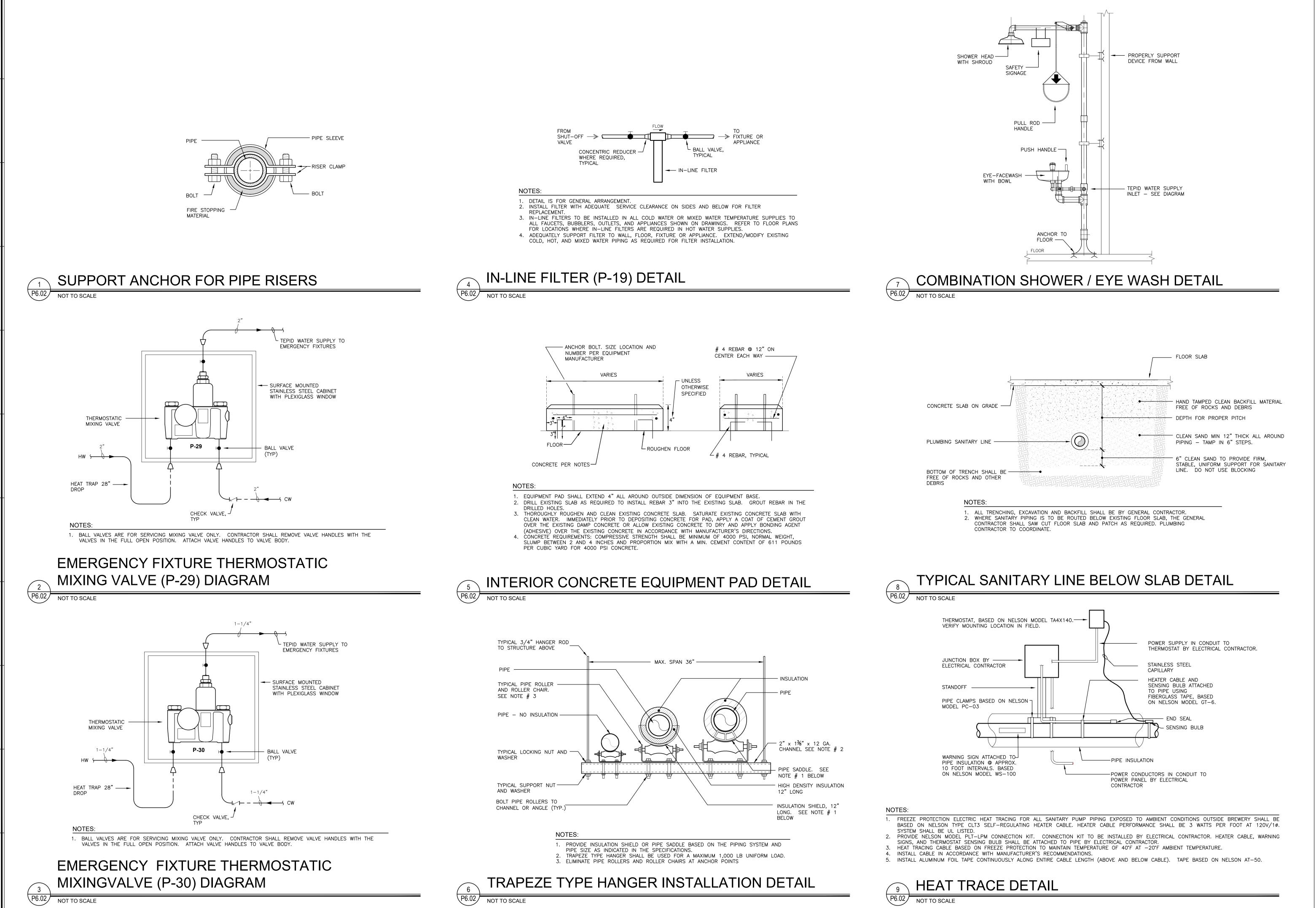
TAP ROOM & BREWERY
BREWING COMPANY, INC.
LLERIA DRIVE LOWER LEVEL
DWN, NY 10941

ASPIRE BREWING TAP
FOR SONNY PATEL BREW
400/600 NORTH GALLERIA

Job No. 4.1552.01

File No. 4155201 P60

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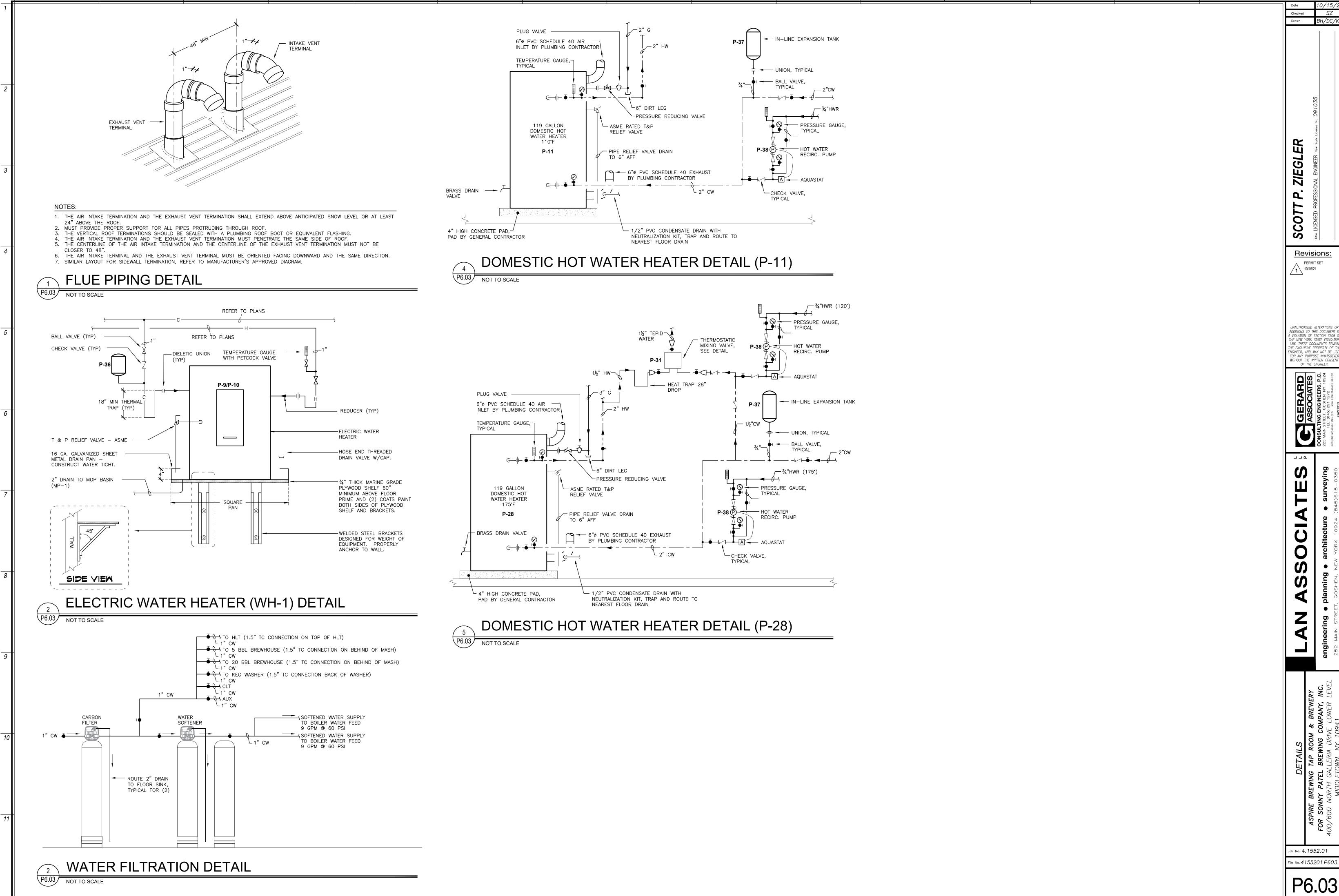
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Job No. **4**.1552.01 File No. **4155201 P60**2

P6.02



Job No. **4.**1552.01 File No. **4155201 P603**

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P6.03

PLUMBING PIPING FITTING SCHEDULE									
SERVICE	SIZE (IN)	MATERIAL	TYPE/WEIGHT	STANDARD					
WATER PIPE (ABOVE GROUND)	3" AND LESS	COPPER	LEAD-FREE SOLDER ASTM B828	ASTM B 16.22					
WATER PIPE (ABOVE GROUND)	4" AND UP	DUCTILE IRON	MECHANICAL OR PUSH-ON	AWWA C110					
WATER PIPE (BELOW GROUND)	2½" AND LESS	COPPPER	LEAD FREE SOLDER ASTM B828	ASTM B 16.22					
SANITARY AND VENT (ABOVE GROUND)	ALL	SERVICE WEIGHT CAST IRON	NO-HUB ASTM C1277 ASTM C564	ASTM A 74					
SANITARY AND VENT (BELOW GROUND)	ALL	EXTRA—HEAVY CAST IRON	HUB AND SPIGOT ASTM C564	ASTM A 74					
SANITARY AND VENT (BELOW GROUND SERVING BREWERY)	ALL	TYPE 316L STAINLESS STEEL	PUSH-ON	ASME A 112.3.1					
PUMP DISCHARGE	ALL	DUCTILE IRON	THREADED	AWWA C110					
GAS PIPING (ABOVE GROUND)	4" AND LESS	MALLEABLE IRON	THREADED OR WELDED	ASTM B 16.3					
GAS PIPING (ABOVE GROUND)	6" AND UP	MALLEABLE IRON	WELDED	ASTM B 16.3					

PLUMBING PIPING MATERIAL SCHEDULE										
SERVICE	SIZE (IN)	MATERIAL	TYPE/WEIGHT	STANDARD						
WATER PIPE (ABOVE GROUND)	3" AND LESS	COPPER	TYPE L TUBE	ASTM B 88						
WATER PIPE (ABOVE GROUND)	4" AND UP	DUCTILE IRON	MECHANICAL OR PUSH-ON	AWWA C151						
WATER PIPE (BELOW GROUND)	2½" AND LESS	COPPER	TYPE K SOFT	ASTM B 88						
SANITARY AND VENT (ABOVE GROUND)	ALL	CAST IRON	SERVICE WEIGHT	ASTM A 74						
SANITARY AND VENT (BELOW GROUND)	ALL	CAST IRON	EXTRA-HEAVY WEIGHT	ASTM A 74						
SANITARY AND VENT (BELOW GROUND SERVING BREWERY)	ALL	STAINLESS STEEL	TYPE 316L	ASME A 112.3.1						
PUMP DISCHARGE	ALL	DUCTILE IRON	THREADED	AWWA C110						
GAS PIPING (ABOVE GROUND)	ALL	BLACK STEEL	SCHEDULE 40	ASTM A 53						

PLUMBING PIPE INSULATION SCHEDULE								
	INSULATION THIC	CKNESS (INCHES)						
SERVICE	PIPE SIZE	(INCHES)						
	BELOW 11/2"	1½" AND OVER						
COLD WATER	1/2"	1"						
HOT WATER	1"	1½"						
HOT WATER RECIRCULATION	1"	1½"						
EXTERIOR PUMP DISCHARGE	1"	1"						
1. PIPE COVERING SHALL B	E FIBERGLASS PIF	PE INSULATION						

- WITH: FIRE RETARDANT VAPOR BARRIER JACKET, 0.23 K-FACTOR AT 75'F MEAN TEMPERATURE, FLAME SPREAD = | 25, SMOKE DEVELOPED = 50.
- FITTINGS AND VALVES SHALL BE PROVIDED WITH PREMOLDED FITTING COVERS WITH PVC JACKETING OVAL IN THICKNESS AND MATERIAL TO ADJOINING PIPE INSULATION.

WATTS WATER HAMMER ARRESTORS									
NO. 15 SIZE	FIXTURE UNITS	CROSS REF. PDI STANDARD							
1/2" M1	1-11	A							
3/4" M1	12-32	В							
1" M1	33-60	С							
1-1/4" M1	61-113	D							
1-1/2" M1	114-154	E							
2" M1	155-330	F							

		SYMBOLS AND A	ABBREVIA	TIONS	
SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION
	DN.	DOWN		-	HOSE-BIBB
	GPH	GALLONS PER HOUR	+	_	WALL HYDRANT
_	GPM	GALLONS PER MINUTE		FD	FLOOR DRAIN
_	TYP.	TYPICAL	Å	PRV	PRESSURE REDUCING VALVE
	V	VOLTS	_	°F	DEGREES FAHRENHEIT
	VTR	VENT THROUGH ROOF	_	IN	INCHES
	CW	DOMESTIC COLD WATER	_	PSIG	POUNDS PER SQUARE INCH
	HW	DOMESTIC HOT WATER	_	Н	HEIGHT
	HWR	DOMESTIC HOT WATER RETURN	_	W	WIDTH
—— LP ——	G	PROPANE	_	L	LENGTH
s	S	SANITARY	Ø	DIA	DIAMETER
v	V	VENT		_	PIPE CAP
─ ▽		PLUG VALVE	_	MIN	MINIMUM
•		BALL VALVE	_	MAX	MAXIMUM
<u></u>	_	MANUAL AIR VENT	_	FT²	SQUARE FEET
	_	THERMOMETER	—	СО	CLEAN OUT
<u> </u>	_	PRESSURE GAUGE	—	wco	WALL CLEAN OUT
	_	UNION		SD	STORM DRAIN
0	CODP	CLEANOUT DECK PLATE		_	TEE UP
	NEW	NEW WORK		-	TEE DN
o—	_	ELBOW UP	_	BFP	BACK FLOW PREVENTION DEVICE
c	_	ELBOW DOWN	_	DCDA	DOUBLE CHECK DETECTOR ASSEMBLY
—∋c—	_	TRAP	_	RPZ	REDUCED PRESSURE ZONE
	•				•

				PIP	E HANGE	ER SCHE	DULE				
PIPE SIZE			ORIZOI G (FEET		SINGLE S	TEEL ROD ZE (INCHES)	HANGER TYPE			VERTIC G (FEET	
(INCHES)	COPPER TUBE	CAST IRON	STEEL PIPE	PVC PIPE	TUBING	PIPING	STEEL	COPPER TUBE	CAST IRON	STEEL PIPE	PVC PIPE
1/2"	6	5	8 (5)	3	1/4"	3/8"	BAND	10	15	15	10
3/4"	6	5	8 (5)	3	1/4"	3/8"	BAND	10	15	15	10
1"	6	5	8 (5)	3	1/4"	3/8"	BAND	10	15	15	10
11/4"	6	5	9 (5)	4	1/4"	3/8"	CLEVIS	10	15	15	10
1½"	6	5	9 (5)	4	1/4"	3/8"	CLEVIS	10	15	15	10
2"	10	5	10(5)	4	1/4"	3/8"	CLEVIS	10	15	15	10
2½"	10	5	12(5)	4	3/8"	1/2"	CLEVIS	10	15	15	10
3"	10	5	12(5)	4	3/8"	1/2"	CLEVIS	10	15	15	10
4"	10	5	12(5)	4	1/2"	5%"	CLEVIS	10	15	15	10
5"	10	5	12(5)	4	1/2"	5%"	CLEVIS	10	15	15	10
6"	10	5	12(5)	4	1/2"	3/4"	CLEVIS	10	15	15	10
8"	10	5	12(5)	4	5/8"	7⁄8"	CLEVIS	10	15	15	10
10"	10	5	12(5)	4	5/8"	<i>7</i> %"	CLEVIS	10	15	15	10
12"	10	5		4	5/8"	<i>7</i> %"	CLEVIS	10	15	15	10
10"	10	5		4	5%"	7⁄8"	CLEVIS	10	15	15	•

MAXIMUM HORIZONTAL SPACING OF CAST-IRON PIPE HANGERS SHALL BE INCREASED TO 10 FEET WHERE 10 FOOT LENGTHS OF PIPE ARE INSTALLED.

- 2. INSTALL HANGER OR SUPPORT CLOSE TO THE POINT OF CHANGE OF DIRECTION IN ALL PIPE
- 3. INSTALL ADDITIONAL HANGERS ON SUPPORTS AT CONCENTRATED LOADS.
- 4. SUPPORT ALL BRANCH PIPING OVER 5'-0" IN LENGTH.
- 5. $\frac{1}{2}$ " PROPANE PIPING SHALL BE SUPPORTED EVERY 6'-0". $\frac{3}{4}$ " AND 1" PROPANE PIPING SHALL BE SUPPORTED EVERY 8'-0". $1\frac{1}{4}"$ AND LARGER PROPANE PIPING SHALL BE SUPPORTED EVERY
- 6. SUPPORT VERTICAL PIPING AT EVERY FLOOR.

PLUMBING NOTES:

MAINTENANCE PROCEDURES.

- 1. ALL PLUMBING WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE 2020 NEW YORK STATE PLUMBING CODE, NEW YORK STATE FIRE CODE, NEW YORK STATE FUEL GAS CODE, AND NEW YORK STATE BUILDING CODE, NEW YORK STATE ENERGY
- CONSERVATION CONSTRUCTION CODE, ALL LOCAL CODES AND GENERALLY ACCEPTED STANDARDS. 2. PLUMBING CONTRACTOR SHALL PROVIDE ALL FIXTURES, PIPING, VALVES, ACCESS DOORS, HANGERS, FITTINGS AND MISCELLANEOUS COMPONENTS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER THE PLUMBING SYSTEMS
- COMPLETE, OPERABLE, AND IN ACCORDANCE WITH APPLICABLE CODES AND GENERALLY ACCEPTED INDUSTRY STANDARDS. 3. PLUMBING CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL PIPING AND EQUIPMENT WITH OTHER TRADES TO AVOID CONFLICTS. ROUGHING-IN DIMENSIONS OF FIXTURES MUST BE COORDINATED WITH GENERAL CONTRACTOR. SEE
- ARCHITECT'S DRAWINGS FOR EXACT LOCATIONS AND ELEVATIONS OF PLUMBING FIXTURES. 4. ALL PIPE OPENINGS THROUGH PARTITIONS, FLOORS AND CEILINGS SHALL HAVE PIPE SLEEVES. FOR PIPE PENETRATING FIRE RATED PARTITIONS. CEILINGS AND FLOORS THE CONTRACTOR SHALL SEAL AROUND ALL PIPE PENETRATIONS WITH HILTI INTUMESCENT FIRE STOP MATERIAL BETWEEN THE PIPE AND SLEEVE TO MAINTAIN FIRE AND SMOKE RATINGS. CT.
- 5. PLUMBING CONTRACTOR SHALL PITCH ALL SANITARY PIPING UNDER 3" A MINIMUM OF 1/4" PER FOOT. SANITARY PIPING 3" AND ABOVE MAY BE PITCHED A MINIMUM OF 1/8" PER FOOT. ALL SANITARY PIPING UPSTREAM OF A GREASE INTERCEPTOR SHALL BE PITCHED A MINIMUM OF 4" PER FOOT.
- 6. PLUMBING CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIAL INSTALLED UNDER THIS CONTRACT FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION AND ACCEPTANCE BY THE OWNER AND AGREES TO REPLACE DEFECTIVE WORK (INCLUDING ALL REQUIRED LABOR AND MATERIAL) AT NO ADDITIONAL COST TO
- OWNER DURING THE GUARANTEE PERIOD. 7. PLUMBING CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL EQUIPMENT, PIPING, INSULATION, VALVES AND PLUMBING

FIXTURES TO OWNER AND ARCHITECT FOR APPROVAL. DEMONSTRATE NEW PLUMBING SYSTEMS TO OWNERS AND REVIEW

- 8. PROVIDE CHROME PLATED ESCUTCHEON PLATES WHERE PIPES PASS THROUGH WALLS, FLOORS AND CEILINGS IN FINISHED
- 9. PLUMBING CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL PIPING IN FINISHED AREAS WITH GENERAL
- CONTRACTOR TO ENSURE CONCEALMENT OF ALL PIPING IN WALLS, FLOORS, CEILINGS AND UNDER VANITIES. 10. PLUMBING CONTRACTOR SHALL LOCATE ALL PIPING ON THE WARM SIDE OF BUILDING INSULATION ENVELOPE.
- 11. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL WIRING (24V) AND (120V) FOR SYSTEMS SHOWN ON PLUMBING DRAWINGS AND TRANSFORMERS, CONDUIT, JUNCTION BOXES, CONDUCTORS, THERMOSTATS, APPURTENANCES AND ALL NECESSARY EQUIPMENT TO MAKE SYSTEMS COMPLETE AND OPERABLE. 12. ALL CONTROL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (LATEST ADOPTED ADDITION) AND
- ALL LOCAL CODES. ALL CONDUCTORS SHALL BE COPPER WITH THHN INSULATION. 120V/1 MINIMUM CONDUCTOR SIZE # 12. 24V - MINIMUM CONDUCTOR SIZE # 18.
- 14. WHERE REQUIRED PLUMBING CONTRACTOR SHALL PROVIDE ACCESS DOORS FOR ALL VALVES CONCEALED IN WALLS/CEILINGS. ACCESS DOORS SHALL HAVE APPROPRIATE FIRE RATING TO MAINTAIN INTEGRITY OF WALL/CEILING. ACCESS DOORS TO BE
- INSTALLED BY GENERAL CONTRACTOR. 15. PLUMBING CONTRACTOR SHALL NOT DRILL OR CUT ANY STRUCTURAL MEMBERS WITHOUT PERMISSION OF ARCHITECT, OR
- STRUCTURAL ENGINEER. 16. PLUMBING CONTRACTOR IS RESPONSIBLE FOR INSULATING ALL DOMESTIC HOT, COLD, AND HOT WATER RECIRCULATION
- 17. ALL DOMESTIC WATER PIPING CONNECTIONS TO PLUMBING EQUIPMENT SHALL BE COPPER TYPE "L".
- 18. ALL PIPES ARE TO BE SUPPORTED FROM STRUCTURE, NOT FROM EXISTING PIPING OR DUCTWORK.
- 20. PROVIDE DIELECTRIC FITTINGS OR COUPLINGS WHEREVER DISSIMILAR METALS ARE JOINED.
- 22. PROVIDE SHUTOFF VALVES AT ALL FIXTURES AND EQUIPMENT ON COLD WATER, HOT WATER, COMPRESSED AIR, LUBRICATION
- LINES, AND PROPANE SUPPLY PIPES. 23. ALL WORK SHALL BE PROPERLY TESTED, BALANCED, AND CLEANED AND DISINFECTED.
- 24. A CLEANOUT SHALL BE LOCATED AT ALL CHANGES IN DIRECTION AND AT THE BASE OF EACH STACK AND LEADER.
- 25. ALL MOTOR STARTERS AND DISCONNECT SWITCHES FOR PLUMBING EQUIPMENT SHALL BE FURNISHED BY THE PLUMBING CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED. DISCONNECT SWITCHES FURNISHED BY THE PLUMBING CONTRACTOR FOR PLUMBING EQUIPMENT SHALL BE HEAVY DUTY TYPE.
- 26. FIXTURE (GENERAL): A. FIXTURE SHALL BE COMPLETE WITH REQUIRED TRIM, INCLUDING BUT NOT LIMITED TO: SUPPORTS, FAUCETS, SUPPLIES, STOP VALVES. 17 GAUGE WASTE TAILPIECES, TRAPS, SEATS, FLUSHOMETER, VACUUM BREAKER, BOLTS, GASKETS CHROME PLATED ESCUTCHEONS, CAST BRASS FLOOR FLANGE AND BOLT CAPS. ALL SCREWS SHALL BE VANDLEPROOF.
- B. EXPOSED METAL TRIM AND ROUGHING SHALL BE CHROME PLATED NICKEL BRASS. CHROME PLATED CAST BRASS 'P' TRAPS WITH SCREW PLUG CLEANOUT, SLIP-JOINT INLET AND FEMALE CAST SWIVEL THREADED ELBOW OUTLET. CHROME PLATED BRASS NIPPLE AT WALL WITH CHROME PLATED ESCUTCHEON. SWING SPOUTS SHALL HAVE 140° SWING LIMIT
- C. SUPPORT WALL FIXTURES SECURELY ON APPROVED COMMERCIAL GRADE CARRIERS AS MANUFACTURED BY JAY R. SMITH, JOSAM, OR ZURN.
- A. UPON COMPLETION OF THE ENTIRE SANITARY DRAIN, STORM DRAIN, AND VENT SYSTEM, THE CONTRACTOR SHALL PERFORM AN AIR TEST WITNESSED BY AUTHORITY HAVING JURISDICTION. AIR SHALL BE FORCED INTO THE SYSTEM UNTIL THERE IS A UNIFORM GAUGE PRESSURE OF 5 PSI OR SUFFICIENT TO BALANCE A 10 INCH COLUMN OF MERCURY. THIS TEST SHALL BE HELD FOR A PERIOD OF AT LEAST 15 MINUTES.
- B. WATER SUPPLY SYSTEM TEST SHALL BE DONE ON COMPLETION OF A SECTION OF OR THE ENTIRE WATER SUPPLY SYSTEM, THE SYSTEM, OR THE PORTION COMPLETED, SHALL BE TESTED AND PROVED TIGHT UNDER A WATER PRESSURE NOT LESS THAN THE WORKING PRESSURE OF THE SYSTEM: OR, BY AN AIR TEST OF NOT LESS THAN 50 PSI. TEST PRESSURE SHALL BE HELD FOR A MINIMUM OF 15 MINUTES. THE WATER UTILIZED FOR TESTS SHALL BE OBTAINED FROM A POTABLE SOURCE OF SUPPLY.
- C. PROPANE DISTRIBUTION PIPING SHALL COMPLY WITH THE FOLLOWING:
- 1. TEST MEDIUM SHALL BE AIR, NITROGEN, CARBON DIOXIDE, OR AN INERT GAS. OXYGEN SHALL NOT BE USED. 2. ABOVE GROUND PIPING SYSTEMS WITH WORKING PRESSURE UP TO ½ PSIG SHALL BE TESTED AT A PRESSURE OF 3 PSIG FOR A DURATION OF ½ HOUR FOR EACH 500 CUBIC FEET OF PIPE VOLUME BUT SHALL NOT BE LESS THAN 30
- D. REFER TO SPECIFICATIONS AND DRAWINGS FOR ADDITIONAL TESTING REQUIREMENTS.
- 28. DOMESTIC WATER PIPING DISINFECTION:
- A. ALL OPEN ENDS OF PIPING, VALVES AND EQUIPMENT SHALL BE PLUGGED EXCEPT WHEN ACTUAL WORK IS BEING PERFORMED, TO MINIMIZE ACCUMULATION OF DIRT AND DEBRIS.
- B. THE PLUMBING CONTRACTOR SHALL DISINFECT WATER PIPING BEFORE IT IS PLACED IN SERVICE.
- C. THE PLUMBING CONTRACTOR SHALL FURNISH ALL EQUIPMENT AND MATERIALS NECESSARY TO DO THE WORK OF DISINFECTING, AND SHALL PERFORM THE WORK IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN THE AWWA C651 OR AWWA C652 OR AS DESCRIBED BELOW.
- D. SYSTEM OR PART THEREOF SHALL BE FILLED WITH A WATER/CHLORINE SOLUTION CONTAINING AT LEAST 50 PARTS PER MILLION OF CHLORINE AND THE SYSTEM OR PART THEREOF SHALL BE ALLOWED TO STAND FOR 24 HOURS.
- E. DURING THE DISINFECTION PERIOD, CARE SHALL BE EXERCISED TO PREVENT CONTAMINATION OF WATER IN THE STREET MAIN OR THE ACTIVE WATER PIPING WITHIN THE BUILDING.
- F. FOLLOWING REQUIRED STANDING TIME, THE SYSTEM SHALL BE FLUSHED WITH CLEAN POTABLE WATER UNTIL THE CHLORINE IS PURGED FROM THE SYSTEM. 29. PIPING AND EQUIPMENT IDENTIFICATION:
- A. PLUMBING CONTRACTOR TO PROVIDE OPTI-CODE LABELS FOR ALL NEW PIPING. LABELS SHALL INDICATE SERVICE AND FLOW DIRECTION. LETTERS AND ARROWS INDICATING FLOW SHALL BE 2 1/2" HIGH, PLACED EVERY 10' AND SHALL BE WHITE ON A GREEN BACKGROUND AND SHALL CONFORM TO ANSI AND OSHA STANDARDS. LABELS SHALL BE APPLIED
- B. VALVE SERVICE IDENTIFICATION TAGS: NUMBER 19 B&S GAGE BRASS, WITH 1/4" HIGH VALVE SERVICE ABBREVIATED LETTERING ON ONE LINE OVER 1/2" HIGH VALVE SERVICE CHART NUMBER, BOTH DEEP STAMPED AND BLACK FILLED; AND WITH 3/16" TOP HOLE FOR BRASS "S" HOOK OR BRASS JACK CHAIN FASTENER.
- C. PROVIDE VALVE SERVICE IDENTIFICATION CHART MOUNTED IN LOCATION COORDINATED WITH OWNER'S REPRESENTATIVE. FRAME SHALL BE SATIN FINISHED EXTRUDED ALUMINUM WITH RIGID CLEAR PLASTIC GLAZING, SIZE TO FIT 8-1/2" x 11"
- D. EQUIPMENT SHALL HAVE 3" HIGH BLACK LAMACOID NAME PLATES WITH WHITE ENGRAVED LETTERS PERMANENTLY FASTENED TO ALL NEW EQUIPMENT.
- 30. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING START-UP OF ALL EQUIPMENT, CONTROLS, AND ETC. TO
- ENSURE CORRECT OPERATION OF INSTALLED DEVICES. 31. PLUMBING CONTRACTOR SHALL PROVIDE OWNER WITH CATALOG DATA, OPERATING INSTRUCTIONS, MAINTENANCE INSTRUCTIONS,
- AND RECORD (AS-BUILT) DRAWINGS OF ALL COMPLETED WORK. 32. PLUMBING CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CUTTING, PATCHING, AND PAINTING ASSOCIATED WITH
- PLUMBING WORK WITH THE GENERAL CONTRACTOR, WHO SHALL PERFORM THE WORK. 33. ALL HOLES IN WALLS AND FLOORS SHALL BE CORE DRILLED BY THIS CONTRACTOR. USE CAUTION WHEN CORE DRILLING TO AVOID DAMAGE TO EQUIPMENT, SYSTEMS, STRUCTURE AND ETC. ANY ITEMS DAMAGED AS A RESULT OF CORE DRILLING
- SHALL BE REPAIRED BY THIS CONTRACTOR AT NO ADDITIONAL COST TO OWNER. 34. ALL EXTERIOR GAS PIPING SHALL BE PREPARED, PRIMED AND PAINTED BY THE GENERAL CONTRACTOR, THIS CONTRACTOR
- SHALL COORDINATE.

b No. 4.1552.01

e No. 4155201 P70

S Revisions: 13. PLUMBING CONTRACTOR SHALL PAY FOR ALL PERMITS AND INSPECTIONS FEES REQUIRED BY LOCAL AUTHORITY HAVING PERMIT SET 1 10/15/21 19. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING AND REFILLING SYSTEMS AS REQUIRED FOR COMPLETION OF DDITIONS TO THIS DOCUMENT . VIOLATION OF SECTION 7209 THE NEW YORK STATE EDUCATION W. THESE DOCUMENTS REMA 21. ALL PROPANE PIPING AND EQUIPMENT INSTALLATIONS SHALL BE AS PER THE NEW YORK STATE FUEL GAS CODE AND NFPA IGINEER, AND MAY NOT BE FOR ANY PURPOSE WHATSO. WITHOUT THE WRITTEN CONSEN OF THE ENGINEER.

	PLUMBING EQUIPMENT SCHEDULE										
TAG	SYME	BOLS	I	PLUMBING C	ONNECTIONS	S		MANUFACTURER	CATALOG#	DESCRIPTION	
P-1 P-1A	PLAN	ELEVATION	SAN./STORM 3"	VENT	COLD 1"	HOT -	GAS -	AMERICAN STANDARD	2257.101	WALL-MOUNTED, VITREOUS CHINA, ELONGATED BOWL, FLUSHOMETER TOILET WITH CONCEALED TRAPWAY, DIRECT-FED SIPHON JET ACTION, AND 1-1/2" TOP SPUD. FIXTURE COLOR SHALL BE WHITE. PROVIDE COMMERCIAL HEAVY DUTY PLASTIC TOILET SEAT, CHURCH MODEL 2155CT AND FLOOR MOUNTED VERTICAL ADJUSTABLE CLOSET CARRIERS. FIXTURE, P-1A, IS TO BE ADA ACCESSIBLE, REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS.	
P-2			2"	1½"	3/4"	_	_	SLOAN AMERICAN STANDARD	8111-1.28 6561.017	EXPOSED, BATTERY POWERED, SENSOR OPERATED WATER CLOSET FLUSHOMETER. HIGH EFFICIENCY, 1.28 GALLONS PER FLUSH. WALL-MOUNTED, VITREOUS CHINA, LOW CONSUMPTION, SIPHON JET ACTION URINAL WITH FLUSHING RIM, EXTENDED SIDES FOR PRIVACY AND ₹ TOP SPUD INLET. FIXTURE COLOR SHALL BE WHITE. PROVIDE FLOOR MOUNTED URINAL CARRIER WITH BEARING PLATE. URINAL SHALL BE ADA COMPLIANT. FIXTURE, P-2A, IS TO BE ADA ACCESSIBLE, REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS.	
1 -2		<u></u>	2	1/2	74			SLOAN	8186-0.5	EXPOSED, BATTERY POWERED, SENSOR OPERATED URINAL FLUSHOMETER. LOW CONSUMPTION, 0.5 GALLONS PER FLUSH. FLISHOMETER SHALL BE ADA COMPLIANT.	
P-3	0		1½"	11/4"	1/2"	½"	_	AMERICAN STANDARD	0355.012	WALL-HUNG, VITREOUS CHINA, D-SHAPED BOWL LAVATORY WITH FRONT OVERFLOW, CONCEALED ARM SUPPORTS, FAUCET LEDGE, AND SELF-DRAINING DECK AREA. FIXTURE COLOR SHALL BE WHITE. PROVIDE CONCEALED ARM SUPPORTS, OFFSET LAVATORY GRID STRAINER (MCGUIRE MANUFACTURING PART NUMBER 155WC) AND TRUEBRO MODEL 103 E-Z LAV GUARD. FIXTURE, P-3A, IS TO BE ADA ACCESSIBLE, REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS.	
								T&S BRASS	EC-3104-VF5-TMV	BATTERY POWERED, POLISHED CHROME PLATED, LEAD FREE, SENSOR FAUCET WITH: 0.5 GPM VANDAL—RESISTANT LAMINAR FLOW, THERMOSTATIC MIXING VALVE WITH INTEGRAL CHECK VALVES, 18" FLEXIBLE STAINLESS STEEL SUPPLY HOSES WITH COMPRESSION CONNECTIONS, LOW BATTERY LED INDICATOR LIGHT, AND WATER RESISTANT CONTROL MODULE WITH INTERNAL FLOW CONTROL SWITCHES FOR ADJUSTING AUTO TIME OUT AND SHUT—OFF DELAY SETTINGS.	
P-4		lacksquare	3"	1½"	-	_	_	JAY R SMITH	2005Y(B)	FLOOR DRAIN WITH DUCO CAST IRON BODY, FLASHING COLLAR, VANDAL PROOF SCREWS AND 6"x6" SQUARE ADJUSTABLE STRAINER HEAD. FLOOR DRAINS SHALL BE PROVIDED WITH TRAP SEALS.	
P-5			11/4"	11/4"	1/2"	½"	_	AMERICAN STANDARD	0552.000	ABOVE COUNTER, FIRE CLAY, RECTANGULAR—SHAPED BOWL LAVATORY. FIXTURE COLOR SHALL BE WHITE. PROVIDE OFFSET LAVATORY GRID STRAINER (MCGUIRE MANUFACTURING PART NUMBER 155WC) AND TRUEBRO MODEL 103 E-Z LAV GUARD. FIXTURE IS TO BE ADA ACCESSIBLE, REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS.	
								KOHLER	T-23475-4N	SINGLE-HANDLE BATHROOM FAUCET WITH MATTE BLACK FINISH. FAUCET SHALL BE ADA COMPLIANT. HAVE 8" SPOUT HEIGHT WITH 5%" SPOUT REACH AND HAVE CERAMIC DISC VALVES. 0.5 GPM MAX FLOWRATE.	
P-6			1½"	1½"	1/2"	_	_	ELKAY	LZSTL8WSLP	BOTTLE FILLING STATION WITH BI-LEVEL FILTERED ELECTRIC WATER COOLER. CHILLING CAPACITY OF 8 GALLONS PER HOUR OF 50°F DRINKING WATER AT 90°F AMBIENT. ELECTRICAL: 115V/60Hz., 5.0 FULL LOAD AMPS, 370 WATTS. ADA COMPLIANT, NSF 61 AND 372 CERTIFIED. UNIT SHALL MEET FEDERAL AND STATE LOW-LEAD REQUIREMENTS.	
P-7			1½"	1½"	½"	½"	_	ELKAY	LRAD252155	TYPE 304 STAINLESS STEEL, TOP MOUNT, SINGLE BOWL, ADA COMPLIANT SINK. OVERALL DIMENSIONS 25"Lx21-1/4"W BY 5-1/2"DEEP. 3 FAUCET HOLES ON 4" CENTERS, OFF-CENTERED READ DRAIN OPENING LOCATION. EXPOSED SURFACES SHALL HAVE SATIN FINISH. FULLY UNDERCOATED TO DAMPEN SOUND AND PREVENT CONDENSATION. PROVIDE ELKAY LKVR18B STAINLESS STEEL VANDAL-RESISTANT GRID STRAINER AND TRUEBRO MODEL 103 E-Z LAV GUARD IN ADA LOCATIONS STAINLESS STEEL WIDESPREAD FAUCET, 8" CENTERS, WITH 8" SWING SPOUT AND 4" WRIST BLADE HANDLES. FAUCET	
								FISHER	59331	SHALL BE LEAD FREE, ADA COMPLIANT AND NSF-61 LISTED AND APPROVED. FLOW RATE 2.2 GPM. MOLDED STONE MOP SERVICE BASIN, 24"x24"x10", WITH INTEGRAL DRAIN. FIXTURE SHALL BE COMPLETE WITH: STAINLESS	
P-8	S		3"	1½"	1/2"	1/2"	_	FIAT	MSBID2424 830-AA	STEEL STRAINER, HOSE AND HOSE BRACKET, MOP HANGER, VINYL BUMPERGUARD, AND STAINLESS STEEL WALL GUARDS. CHROME PLATED SERVICE SINK FAUCET WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOK	
P-9			_	_	1"	1"	_	AO SMITH	DEL-30	AND ¾" HOSE THREAD ON SPOUT. ELECTRIC WATER HEATER, DUAL 6000 WATT ELEMENTS NON—SIMULTANEOUS OPERATION, STORAGE CAPACITY 30 GALLONS, RECOVERY 34 GPH @ 72°F RISE WITH METAL DRAIN PAN 1½" DEEP MINIMUM. 6—YEAR TANK & PARTS WARRANTY ENERGY FACTOR .95 — 208V/1. PROVIDE DRAIN VALVE AND ASME RATED TEMPERATURE AND PRESSURE RELIEF VALVE.	
P-10			_	_	1"	1"	_	AO SMITH	DEL-50	ELECTRIC WATER HEATER, DUAL 6000 WATT ELEMENTS NON—SIMULTANEOUS OPERATION, STORAGE CAPACITY 50 GALLONS, RECOVERY 34 GPH @ 72°F RISE WITH METAL DRAIN PAN 1 ½" DEEP MINIMUM. 6—YEAR TANK & PARTS WARRANTY ENERGY FACTOR .95 — 208V/1. PROVIDE DRAIN VALVE AND ASME RATED TEMPERATURE AND PRESSURE RELIEF VALVE.	
P-11			1/2"	_	2"	2"	2"	AO SMITH	BTH-300A	ASME CONSTRUCTED, POWER DIRECT VENTING, NATURAL GAS HOT WATER HEATER WITH 96% THERMAL EFFICIENCY WITH STORAGE CAPACITY OF 119 GALLONS; AN INPUT RATING OF 300,000 BTUH, A RECOVERY RATING OF 436 GALLONS PER HOUR AT 80°F RISE AND A MAXIMUM HYDROSTATIC WORKING PRESSURE OF 160 PSI. WATER HEATER SHALL HAVE: MODULATING GAS BURNER, NON—SACRIFICIAL, MAINTENANCE FREE POWERED ANODES, SEAMLESS GLASS—LINED STEEL TANK CONSTRUCTION, FOAM INSULATION, AND DOWN—FIRED POWER BURNER. CONTROL SHALL BE AN INTEGRATED SOLID—STATE TEMPERATURE AND IGNITION CONTROL DEVICE WITH INTEGRAL DIAGNOSTICS, GRAPHIC USER INTERFACE, FAULT HISTORY DISPLAY, AND SHALL HAVE DIGITAL TEMPERATURE READOUT. WATER HEATER SHALL BE COMPLETE WITH: ASME RATED T&P RELIEF VALVE, BRASS DRAIN VALVE, CONCENTRIC VENT KIT, AND CONDENSATE NEUTRALIZATION KIT. ELECTRICAL: 120V/1ø/60Hz., 5.0 AMPS.	
P-12			6"	-	3"	-	_	WATTS	9570SY	LEAD FREE REDUCED PRESSURE ZONE ASSEMBLY BACKFLOW PREVENTER WITH UL/FM OUTSIDE STEM AND YOKE RESILIENT SEATED GATE VALVES. ASSEMBLY SHALL CONSIST OF TWO INDEPENDENT TORSION SPRING CHECK MODULES, A DIFFERENTIAL PRESSURE RELIEF VALVE, AND TWO DRIP TIGHT SHUT—OFF VALVES. SHUT—OFF VALVES, CHECK MODULES, AND RELIEF VALVE SHALL BE CONTAINED WITH A SLEEVE ACCESSIBLE SINGLE HOUSING WITH GROOVE END CONNECTIONS. TYPE 304 STAINLESS STEEL HOUSING AND SLEEVE. EPDM, SILICONE AND BUNA—N ELASTOMERS. NORYL AND STAINLESS STEEL TORSION SPRING CHECKS WITH REVERSIBLE SILICONE OR EPDM CHECK DISCS. BRONZE BODY NICKEL PLATED TEST COCKS. STAINLESS STEEL PINS, FASTENERS, AND SPRINGS. TEMPERATURE RANGE: 33°F TO 140°F. 175 PSI MAXIMUM WORKING PRESSURE. THE DEVICE SHALL BE APPROVED BY THE FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH AT THE UNIVERSITY OF SOUTHERN CALIFORNIA. SANI—FLOR RECEPTOR, 12" x 12" x 8" DEEP CAST IRON BODY AND SQUARE SLOTTED MEDIUM—DUTY ½ GRATE, WHITE ACID	
P-13		_	4"	2"	_	_	_	ZURN	Z-1901	RESISTING PORCELAIN ENAMEL INTERIOR AND TOP, 3" OUTLET. SANI—FLOR RECEPTOR, 12" x 12" x 8" DEEP CAST IRON BODY AND SQUARE SLOTTED MEDIUM—DUTY GRATE, WHITE ACID	
P-14 P-15		_	3"	2" 1½"	1/2"	_	_	ZURN	Z-1901 Z-415	RESISTING PORCELAIN ENAMEL INTERIOR AND TOP, 3" OUTLET, AND TRAP SEAL. FLOOR DRAIN, DURA COATED, 7" ROUND NICKEL BRONZE TYPE "I" STRAINER WITH RAISED FLANGE, 3" OUTLET.	
P-16			4"	-	_	_	_	JAY R SMITH	9660	6" WIDE STAINLESS STEEL TRENCH DRAIN WITH A BUILT-IN SLOPE OF 0.6%. CHANNEL HAS AN INTEGRAL METAL RAIL AND 4" WIDE THROAT WITH BOLTING END PLATES. TRENCH DRAIN SYSTEM SHALL BE COMPLETE WITH ALL REQUIRED END CAPS AND CHANNEL CHAIRS FOR A COMPLETE INSTALLATION. PROVIDE WITH EXTRA HEAVY DUTY SLOTTED STAINLESS STEEL GRATE MODEL 9660-490-SSHDE. GRATE SHALL HAVE 3-1/4"x3/8" SLOTTED OPENINGS WITH 42.6 SQUARE INCH OPEN AREA, CLASS E 135,000 POUNDS. REFER TO FLOOR PLANS FOR LENGTH.	
P-17	+	├	_	_	1/2"	_	_	ZURN	Z1350	ENCASED WALL HYDRANT FOR FLUSH INSTALLATION WITH 3" MALE HOSE CONNECTION, TYPE 304 STAINLESS STEEL HOUSING WITH LOCKING HINGED COVER, OPERATING KEY AND WALL CLAMP.	
P-18	+	├ - <u>\</u>	_	_	3/4"	_	_	ZURN	Z1320XL	ENCASED, LEAD FREE, NON-FREEZE, ANTI-SIPHON, AUTOMATIC DRAINING WALL HYDRANT FOR FLUSH INSTALLATION WITH \(\frac{3}{4} \) MALE HOSE CONNECTION, TYPE 304 STAINLESS STEEL HOUSING WITH LOCKING HINGED COVER, OPERATING KEY AND WALL CLAMP.	
P-19	+	├ ─ <u></u>	_	_	3⁄4"	_	_	WATTS	ES-HB-1	CAST BRASS HOSE BIB, BUILT—IN BACKFLOW PROTECTION, INTEGRAL VACUUM BREAKER, DRAINABLE IN COLD WEATHER, BACKSIPHONAGE PROTECTION.	
								STERLING	OC-SS-39	MODULAR SHOWER WITH DURABLE SWIRL GLOSS FINISH, FOLDING TRANSFER SEAT WITH STAINLESS STEEL GRAB BAR, AND FACTORY INSTALLED STAINLESS STEEL GRAB BARS. SHOWER SHALL BE COMPRESSION MOLDED FROM VIKRELL. COLOR SHALL BE WHITE. UNIT DIMENSIONS: 39-3/8"x39-3/8"x72". UNIT SHALL BE SUPPLIED WITH 2" PVC SOLVENT WELD DRAIN WITH STAINLESS STEEL STRAINER, OATEY SERIES 101PS. UNIT SHALL COMPLY WITH THE FOLLOWING: IAPMO LISTED AND ANSI Z 124.2. SHOWER SHALL BE ADA COMPLIANT.	
P-20		5	2"	1½"	½"	½"	_	SYMMONS	C-96-300-B30- V-X-CHKS	COMMERCIAL HAND SHOWER SYSTEM WITH SYMMONS TEMPTROL PRESSURE BALANCING MIXING VALVE AND LEVER STYLE HANDLE. VALVE SHALL INCLUDE ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN, INTEGRAL SERVICE STOPS, AND INTEGRAL CHECK STOPS. T-300-V WALL/HAND SHOWER WITH 5-FOOT FLEXIBLE METAL HOSE, IN-LINE VACUUM BREAKER, WALL CONNECTION AND CRADLE FOR HAND SHOWER MOUNTING. 30 INCH SLIDE BAR. FOR MOUNTING HAND SHOWER. STANDARD FLOW RATE OF 2.5 GPM. POLISHED CHROME FINISH. LEVER HANDLE SHALL BE ADA COMPLIANT.	
P-21	_	П	_	_	3/4"	_	_	PENTEK	#10 BB — ¾"	FILTER HOUSING AND LEAD, CYST, CHLORINE TASTE, AND ODOR REDUCTION FILTER. LARGE CAPACITY POLYPROPYLENE HOUSING AND CAP SUITABLE FOR HIGH FLOW APPLICATIONS, CERTIFIED BY NSF TO STANDARD 42, AND 10" HOUSING LENGTH WITH ACCEPTANCE OF 4-1/2" DIAMETER FILTER CARTRIDGES. FILTER LEAD REDUCTION CAPACITY OF 8,000	
r-41	_		_	_	5/ +	_	_	KX TECHNOLOGIES	PB1 06-425-200-975	GALLONS, 2.5 GPM MAXIMUM FLOW RATE AND INITIAL PRESSURE DROP OF 7.0 PSI. FILTER IS TO HAVE BEEN TESTED TO NSF 42 AND NSF 53. LEAD REDUCTION SHALL BE BELOW 15 PART PER BILLION. TO BE USED FOR COLD SUPPLIES ONLY.	
P-22			_	_	1/2"	_	_	ELKAY	ECH8GRN	REMOTE CHILLER WITH HERMETICALLY—SEALED COMPRESSOR, FAN COOLED CONDENSER, COMBINATION TUBE—TANK TYPE COOLING UNIT AND TEMPERATURE CONTROL. CHILLER SHALL HAVE CAPACITY OF 8.0 GPH, ELECTRICAL: 115V/60Hz., 2.3 FULL LOAD AMPS, 260 WATTS. PROVIDE CHILLER WITH CHILLER SHELF, MODEL PM3, LOUVERED GRILL, MODEL EG—1 AND DISCONNECT SWITCH.	
P-23	+	├	-	_	3/4"	_	_	ZURN	Z1395XL	EXPOSED HEAD, LEAD FREE, NON-FREEZE YARD HYDRANT WITH \(\frac{3}{4}\)" MALE HOSE CONNECTION, DURA-COATED CAST IRON HEAD AND LIFT HANDLE, GALVANIZED STEEL CASING, BRONZE AND STAINLESS STEEL INTERIOR COMPONENTS.	
P-24			_	_	1"	_	_	ELKAY	ER301	REMOTE CHILLER WITH HERMETICALLY—SEALED COMPRESSOR, FAN COOLED CONDENSER, COMBINATION TUBE—TANK TYPE COOLING UNIT AND TEMPERATURE CONTROL. CHILLER SHALL HAVE CAPACITY OF 32.0 GPH, ELECTRICAL: 115V/60Hz., 16 FULL LOAD AMPS, 1290 WATTS. PROVIDE CHILLER WITH DISCONNECT SWITCH.	

 Date
 10/15/21

 Checked
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 Drawn
 BH/DC/KC

SCOTT P. ZIEGLER

Revisions:

PERMIT SET
10/15/21

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PLUMBING:
EQUIPMENT SCHEDULES

ASPIRE BREWING TAP ROOM & BREWERY
OR SONNY PATEL BREWING COMPANY, INC.

0/600 NORTH GALLERIA DRIVE LOWER LEVEL
MIDDLETOWN, NY 10941

Job No. 4.1552.01
File No. 4155201 P702

P7.02

								PLUMBIN	IG EQUIPMENT	T SCHEDULE
TAG		BOLS			CONNECTIONS	T		MANUFACTURER	CATALOG#	DESCRIPTION
	PLAN	ELEVATION	SAN./STORM	VENT	COLD	НОТ	GAS	ADVANCE TABCO	FC-2-2424-18RL	STAINLESS STEEL FOOD SERVICE SINK WITH TWO 24"Lx24"Wx14"H COMPARTMENTS, 18" LONG LEFT AND RIGHT DRAINBOARDS, 8½" BACKSPLASH, 16 GAUGE, 304 STAINLESS STEEL CONSTRUCTION AND ADJUSTABLE FEET, RAISED 1 1/2"
P-25	0 0		(2) 2"	-	1/2"	½"	_	T & S	B-0231-CR	ROLLED EDGE WITH 3 1/2" DRAIN WITH BASKET STRAINER. SINK SHALL HAVE 1 1/8" FAUCET HOLES ON 8" CENTERS. OVERALL DIMENSIONS OF SINK SHALL BE 84"Lx30"Wx43"H. CHROME, WALL MOUNT, 8" CENTERSET, COMMERCIAL FAUCET WITH 12" SWING NOZZLE SPOUT, SOLID BRASS CONSTRUCTION, CERAMIC CARTRIDGES WITH CHECK VALVES, 1.5 GPM VANDAL—RESISTANT AERATOR WITH LEVER HANDLES. FAUCET SHALL BE ADA COMPLIANT. FAUCET SHALL BE RATED FOR UP TO 180°F WATER.
								ADVANCE TABCO	FC-3-2424-18RL	STAINLESS STEEL FOOD SERVICE SINK WITH THREE 24"Lx24"Wx14"H COMPARTMENTS, 18" LONG LEFT AND RIGHT DRAINBOARDS, 8½" BACKSPLASH, 16 GAUGE, 304 STAINLESS STEEL CONSTRUCTION AND ADJUSTABLE FEET, RAISED 1 1/2" ROLLED EDGE WITH 3 1/2" DRAIN WITH BASKET STRAINER. SINK SHALL HAVE 1 1/8" FAUCET HOLES ON 8" CENTERS.
P-26	0 0 0		(3) 2"	_	(2) ½"	(2) ½"	_	KROWNE	DX-109	OVERALL DIMENSIONS OF SINK SHALL BE 108"Lx30"Wx43"H. CHROME, WALL MOUNT, 8" CENTERSET, COMMERCIAL PRE RINSE FAUCET WITH 12" SWING NOZZLE SPOUT AND 1.15 GPM DUAL SPRAY HEAD VALVE, SOLID BRASS CONSTRUCTION, CERAMIC CARTRIDGES WITH CHECK VALVES, 1.8 GPM VANDAL—RESISTANT AERATOR WITH LEVER HANDLES. FAUCET SHALL BE ADA COMPLIANT. FAUCET SHALL BE RATED FOR
								T & S	B-0231-CR	180°F WATER. FAUCET SHALL BE MOUNTED ON LEFT HAND SIDE OF SINK. FAUCET SHALL BE SUPPLIED WITH ADJUSTABLE WALL BRACKET AND MOUNTING KIT. CHROME, WALL MOUNT, 8" CENTERSET, COMMERCIAL FAUCET WITH 12" SWING NOZZLE SPOUT, SOLID BRASS CONSTRUCTION, CERAMIC CARTRIDGES WITH CHECK VALVES, 1.5 GPM VANDAL—HESITANT AERATOR WITH LEVER HANDLES. FAUCET SHALL BE ADA COMPLIANT. FAUCET SHALL BE RATED FOR 180°F WATER. FAUCET SHALL BE MOUNTED ON RIGHT
								ADVANCE TABCO	FC-3-2424	HAND SIDE OF SINK. STAINLESS STEEL FOOD SERVICE SINK WITH THREE 24"Lx24"Wx14"H COMPARTMENTS, 8½" BACKSPLASH, 16 GAUGE, 304 STAINLESS STEEL CONSTRUCTION AND ADJUSTABLE FEET, RAISED 1 1/2" ROLLED EDGE WITH 3 1/2" DRAIN WITH BASKET STRAINER. SINK SHALL HAVE 1 1/8" FAUCET HOLES ON 8" CENTERS. OVERALL DIMENSIONS OF SINK SHALL BE
P-27	0 0 0		(3) 2"	-	(2) ½"	(2) ½"	_	KROWNE	DX-109	77"Lx30"Wx43"H. CHROME, WALL MOUNT, 8" CENTERSET, COMMERCIAL PRE RINSE FAUCET WITH 12" SWING NOZZLE SPOUT AND 1.15 GPM DUAL SPRAY HEAD VALVE, SOLID BRASS CONSTRUCTION, CERAMIC CARTRIDGES WITH CHECK VALVES, 1.8 GPM VANDAL—RESISTANT AERATOR WITH LEVER HANDLES. FAUCET SHALL BE ADA COMPLIANT. FAUCET SHALL BE RATED FOR 180°F WATER. FAUCET SHALL BE MOUNTED ON LEFT HAND SIDE OF SINK. FAUCET SHALL BE SUPPLIED WITH ADJUSTABLE
								T & S	B-0231-CR	WALL BRACKET AND MOUNTING KIT. CHROME, WALL MOUNT, 8" CENTERSET, COMMERCIAL FAUCET WITH 12" SWING NOZZLE SPOUT, SOLID BRASS CONSTRUCTION, CERAMIC CARTRIDGES WITH CHECK VALVES, 1.5 GPM VANDAL—HESITANT AERATOR WITH LEVER HANDLES. FAUCET SHALL BE ADA COMPLIANT. FAUCET SHALL BE RATED FOR 180°F WATER. FAUCET SHALL BE MOUNTED ON RIGHT
P-28			½"	-	2"	2"	3"	AO SMITH	BTHS-1000A	HAND SIDE OF SINK. ASME CONSTRUCTED, POWER DIRECT VENTING, NATURAL GAS HOT WATER HEATER WITH 97% THERMAL EFFICIENCY WITH STORAGE CAPACITY OF 120 GALLONS; AN INPUT RATING OF 1,000,000 BTUH, A RECOVERY RATING OF 905 GALLONS PER HOUR AT 130°F RISE AND A MAXIMUM HYDROSTATIC WORKING PRESSURE OF 160 PSI. WATER HEATER SHALL HAVE: MODULATING GAS BURNER, NON—SACRIFICIAL, MAINTENANCE FREE POWERED ANODES, INTELLIGENT DEMAND RESPONSE, SEAMLESS GLASS—LINED STEEL TANK CONSTRUCTION, FOAM INSULATION, AND DOWN—FIRED POWER BURNER. CONTROL SHALL BE AN INTEGRATED SOLID—STATE TEMPERATURE AND IGNITION CONTROL DEVICE WITH INTEGRAL DIAGNOSTICS, GRAPHIC USER INTERFACE, FAULT HISTORY DISPLAY, AND SHALL HAVE DIGITAL TEMPERATURE READOUT. WATER HEATER SHALL BE COMPLETE WITH: ASME RATED T&P RELIEF VALVE, BRASS DRAIN VALVE, AND CONDENSATE NEUTRALIZATION KIT. ELECTRICAL: 120V/10/60Hz., 5.0 AMPS.
P-29	-	_	-	-	1½"	1½"	_	BRADLEY	S19-2350 (EFX120RB000)	EMERGENCY FIXTURE THERMOSTATIC MIXING VALVE WITH INTEGRAL STRAINER CHECKSTOPS ON INLETS, ADJUSTABLE SET POINT TEMPERATURE, BUILT—IN COLD WATER BYPASS, POSITIVE SHUTOFF OF HOT SUPPLY WHEN COLD SUPPLY IS LOST. TEMPERATURE RANGE OF 65°F — 90°F, SET POINT OF 80°F, MAXIMUM WORKING PRESSURE OF 125 PSI, MAXIMUM INLET TEMPERATURE OF 180°F. VALVE SHALL MEET ANSI Z358.1—2009 STANDARD. MIXING VALVE SHALL BE COMPLETE WITH ROUGH BRASS VALVES, AND SURFACE MOUNTED STAINLESS STEEL CABINET WITH PLEXI—GLASS WINDOW IN DOOR. VALVE
P-30	-	_	-	-	2"	2"	_	BRADLEY	S19-2200 (EFX60RBOSSW)	SHALL HAVE 13 PSI PRESSURE DROP AT 54 GPM. EMERGENCY FIXTURE THERMOSTATIC MIXING VALVE WITH INTEGRAL STRAINER CHECKSTOPS ON INLETS, ADJUSTABLE SET POINT TEMPERATURE, BUILT—IN COLD WATER BYPASS, POSITIVE SHUTOFF OF HOT SUPPLY WHEN COLD SUPPLY IS LOST. TEMPERATURE RANGE OF 65°F — 90°F, SET POINT OF 80°F, MAXIMUM WORKING PRESSURE OF 125 PSI, MAXIMUM INLET TEMPERATURE OF 180°F. VALVE SHALL MEET ANSI Z358.1—2009 STANDARD. MIXING VALVE SHALL BE COMPLETE WITH ROUGH BRASS VALVES, AND SURFACE MOUNTED STAINLESS STEEL CABINET WITH PLEXI—GLASS WINDOW IN DOOR. VALVE SHALL HAVE 8 PSI PRESSURE DROP AT 27 GPM.
P-31	_	_	-	-	1½"	1½"	_	BRADLEY	S59-3045 (HL45RSB000)	LEAD-FREE THERMOSTATIC MIXING VALVE WITH INTEGRAL STRAINER CHECKSTOPS ON INLETS, ADJUSTABLE SET POINT TEMPERATURE, POSITIVE SHUTOFF OF HOT SUPPLY WHEN COLD SUPPLY IS LOST OR THERMOSTAT FAILURE. TEMPERATURE RANGE OF 65°F — 90°F, SET POINT OF 80°F, MAXIMUM WORKING PRESSURE OF 125 PSI, MAXIMUM INLET TEMPERATURE OF 180°F. MIXING VALVE SHALL BE COMPLETE WITH ROUGH BRASS VALVES, WALL MOUNTING BRACKET. VALVE SHALL HAVE 14 PSI PRESSURE DROP AT 24 GPM.
P-32			(2) 1½"	1½"	1/2"	1/2"	-	ELKAY	LRAD332155	TYPE 304 STAINLESS STEEL, TOP MOUNT, DOUBLE BOWL, ADA COMPLIANT SINK. OVERALL DIMENSIONS 33"Lx21-1/4"W BY 5-1/2"DEEP. 3 FAUCET HOLES ON 4" CENTERS, OFF-CENTERED READ DRAIN OPENING LOCATION. EXPOSED SURFACES SHALL HAVE SATIN FINISH. FULLY UNDERCOATED TO DAMPEN SOUND AND PREVENT CONDENSATION. PROVIDE ELKAY LKVR18B STAINLESS STEEL VANDAL-RESISTANT GRID STRAINER AND TRUEBRO MODEL 103 E-Z LAV GUARD IN ADA LOCATIONS
								MOEN	8244	TWO-HANDLE KITCHEN FAUCET WITH SIDE SPRAY. BRASS CONSTRUCTION WITH CHROME PLATED FINISH. FAUCET SHALL BE ADA COMPLIANT. HANDLES SHALL BE WRIST BLADE STYLE WITH HOT AND COLD COLOR INDICATORS AND VANDAL RESISTANT TORX HEAD SCREWS. 1.5 GPM MAX FLOWRATE.
P-33			1½"	1½"	1/2"	1/2"	_	KOHLER	K-8223	NEOROC, UNDER MOUNT, SINGLE BOWL, ADA COMPLIANT BAR SINK. OVERALL DIMENSIONS 15-1/2"Lx15-1/2"W BY 10-1/8"DEEP. CENTER DRAIN OPENING LOCATION. PROVIDE ELKAY LKVR18B STAINLESS STEEL VANDAL-RESISTANT GRID STRAINER AND TRUEBRO MODEL 103 E-Z LAV GUARD IN ADA LOCATIONS. SINK SHALL BE MATTE BLACK.
								DELTA	9159-DST-BL	MATTE BLACK, SINGLE HANDLE, DECK MOUNT FAUCET, WITH 2-FUNCTION PULL-DOWN SPRAYER. FAUCET SHALL BE LEAD FREE, ADA COMPLIANT AND NSF-61 LISTED AND APPROVED. FLOW RATE 1.8 GPM.
P-34	•	_	3"	1½"	_	_	_	THUNDERBIRD	BDPB3NH	PLANTER BOX DRAIN, 6" ROUND PLASTIC GRATE WITH 316 STAINLESS STEEL CLAMPING RING, PERFORATED PVC STAND PIPE, 3" OUTLET.
P-35			11/4"	-	-	1¼" (TEPID)	_	BRADLEY	S19314	BARRIER-FREE COMBINATION DRENCH SHOWER AND HALO EYE/FACE WASH. SHOWER VALVE OPERATED BY PULL ROD WITH TRIANGULAR HANDLE. HALO EYE/FACE WASH OPERATED BY PUSH HANDLE. UNIT SHALL BE UL CLASSIFIED AND MEET ANSI STANDARD Z358.1. 1-1/4" GALVANIZED STEEL PIPING ASSEMBLY WITH SAFETY YELLOW COATING. 1" STAY OPEN SHOWER AND ½" STAY OPEN EYE/FACE WASH CHROME-PLATED BRASS BALL VALVES. SHOWER HEAD SHALL DELIVER 22 GPM. EYE/FACE WASH SHALL DELIVER 5.1 GPM. YELLOW IMPACT RESISTANT PLASTIC SHOWER HEAD, BOWL AND DUST COVER. TYPE 304 STAINLESS STEEL ACTIVATION HANDLE AND DRENCH HOSE KIT WITH VACUUM BREAKER. FIXTURE SHALL BE COMPLETE WITH UNIVERSAL IDENTIFICATION SIGN AND INSPECTION TAG.
P-36			-	-	-	3/4"	_	AMTROL	ST-5C-DD	EXPANSION TANK WITH TANK VOLUME OF 2.0 GALLONS AND AN ACCEPTANCE VOLUME OF 0.9 GALLONS. TANK SHALL BE ANSI/NSF 61 FOR POTABLE WATER USE AND SHALL BE ASME RATED. MAXIMUM OPERATING TEMPERATURE 200°F AND MAXIMUM WORKING PRESSURE 150 PSI.
P-37			-	-	-	₹,"	_	AMTROL	ST-12C-DD	EXPANSION TANK WITH TANK VOLUME OF 6.4 GALLONS AND AN ACCEPTANCE VOLUME OF 3.2 GALLONS. TANK SHALL BE ANSI/NSF 61 FOR POTABLE WATER USE AND SHALL BE ASME RATED. MAXIMUM OPERATING TEMPERATURE 200°F AND MAXIMUM WORKING PRESSURE 150 PSI.
P-38	Ó	Ø	_	_	_	3/4"	_	TACO	003-B4	LOW-LEAD COMPLIANT, NSF 61, BRONZE, SELF-LUBRICATING, HOT WATER RECIRCULATION PUMP. FLOW RANGE: 0-7 GPM. HEAD RANGE: 0-4.5 FEET. PUMP MAXIMUM WORKING PRESSURE 125 PSI AND MAXIMUM OPERATING TEMPERATURE 220°F. PROVIDE TACO 563-2 TEMPERATURE AQUASTAT. PROVIDE DISCONNECT SWITCH. ELECTRICAL: 120V/1ø/60Hz., 0.43 AMPS, 3250 RPM, AND 1/40 HP.
P-39			6"	-	-	-	_	PARK	SSB-150	CONCRETE SOLIDS INTERCEPTOR AND EXTENSION RINGS WITH STAINLESS STEEL FINISH. SOLIDS INTERCEPTOR SHALL BE COMPLETE WITH 24" DIA. DUCTILE IRON RING WITH COVER, SOLIDS SCREEN, BASIN SECTION, BITUMASTIC EXTERIOR LINER, BASKET FRAME STAINLESS STEEL LIFTING HANDLES, PLASTIC FLEXIBLE GASKET, HIGH LEVEL ALARM FLOAT SWITCH AND SERVICE ALERT PANEL WITH AUDIBLE AND VISUAL ALARM AND NO HUB CONNECTION. 150 GPM FLOW RATE AND 40 LBS SOLIDS CAPACITY. EXTENSION HEIGHT TO BE VERIFIED BY PLUMBING CONTRACTOR PRIOR TO ORDERING BASED ON FINAL LAYOUT OF PIPING SYSTEM.
P-40		$\overline{}$	3"	1½"	-	-	_	JAY R SMITH	2005Y(B)	FLOOR DRAIN WITH DUCO CAST IRON BODY, FLASHING COLLAR, SEDIMENT BUCKET, VANDAL PROOF SCREWS AND 6"x6" SQUARE ADJUSTABLE STRAINER HEAD. FLOOR DRAINS SHALL BE PROVIDED WITH TRAP SEALS.
P-41			4"	6"	_	_	_	BURT	BPBDN-1000	BATCH PH NEUTRALIZATION SYSTEM WITHIN SHIPPING CONTAINER. SYSTEM SHALL CONSIST OF (2) AVS—1000 BATH NEUTRALIZATION TANKS WITH HOMOPOLYMER POLYPROPYLENE CONSTRUCTION, (2) TANK MIXERS ANGLE MOUNTED ON TANK RAILS WITH A SINGLE HYDROFOIL STYLE IMPELLER AND T316 SS SHAFT WITH A MINIMUM DIAMTER OF ¾", (2) pH SENSORS LOCATED WITHIN REACTION TANK AND EFFLUENT DISCHARGE, REAGENT LIQUID LEVEL CONTROLS, (2) 70—GALLON REAGENT TANKS CONSTRUCTED HIGH DENSITY POLYETHYLENE WITH UV INHIBITOR, (2) CHEMICAL METERING PUMPS, NEMA 12 TYPE CONTROL ENCLOSURE WITH FUSED DISCONNECT SWITCH, EMERGENCY STOP BUTTON, SIEMENS PLC/HMI FOR AUTOMATIC BATCH CONTROL, COMMON ALARM HORN AND SILENCE BUTTON, COMMON ALARM BEACON, ALL REQUIRED INTERNAL WIRING FOR ALL MOTORS/CIRCUIT PROTECTION, PH CONTROLLERS AND RECORD, (2) PH ANALYZERS/CONTROLLERS WITHIN NEMA 4X ENCLOSURE, EFFLUENT MONITORING WET WELL AND FLOW SENSOR. ENTIRE SYSTEM SHALL BE INSTALLED WITHIN A MODIFIED SHIPPING CONTAINER. CONTAINER SHALL HAVE HEAVY—GAUGE STEEL DOUBLE PERSONNEL DOORS, SINGLE BORE DOOR, 2" CIRCULAR FLOOR DRAIN, R—21 CLOSED CELL SPRAY—APPLIED FOAM INSULATION, OPERABLE CARGO DOORS AR END OF CONTAINER, 3TON BARD HVAC UNIT WITH 10KW ELECTRIC HEAT(@ 460V), 120V POWER DISTRIBUTION CENTER FEED FROM THE MAIN 460V DROP TO CONTROL PANEL WILL BE USED FOR CONTAINER LIGHTING AND CONVENIENCE OUTLETS. CONTAINER ELECTRICAL: 460/3ø/60, 30 AMP BREAKER. HVAC UNIT SHALL HAVE SEPARATE POWER FEED. CONTACT MARK GIRGENTI AT BURT PROCESS EQUIPMENT AT 1(203)—508—1244 / MARKGIRGENTI@BURTPROCESS.COM FOR ADDITIONAL INFORMATION.
P-42			6"IN/4"OUT	2½"	_	_	_	BURT	PPS-500JXD34	DUPLEX TRANSFER PUMP LIFT STATION CONSISTING OF: TWO 316SS SUBMERSIBLE SUMP PUMPS RATED FOR 180'F, AUTOMATIC LIQUID LEVEL CONTROL, COPOLYMER POLYPROPYLENE BASIN WITH EXTRUSION WELDED EXTERIOR AND TRIPLE BEAD WELDED INTERIOR, REINFORCED COVER, STRUCTURAL SUPPORT GIRTHS, REDUNDANT HIGH LEVEL ALARM, GUIDED WAVE RADAR LEVEL CONTROL, CONTROL PANEL AND ALL NECESSARY APPURTENANCES REQUIRED FOR A PROPERLY OPERATING PUMPING SYSTEM. PUMPS SHALL PUMP MOTORS SHALL HAVE A MAXIMUM SIZE OF 5 HORSEPOWER AND SHALL OPERATE AT A MAXIMUM SPEED OF 3450 RPM, AND BE SUITABLE FOR OPERATION WITH 460 VOLTS, 3 PHASE, 60HZ. MOTORS SHALL BE OIL—FILLED, CONTINUOUS—DUTY RATED, MECHANICALLY SEALED WITH CLASS R INSULATION, STAINLESS STEEL CONSTRUCTION, THERMAL SENSORS, SEAL MINDER MOISTURE SENSING PROBE FOR LEAK DETECTION AND RATED FOR 200'F LIQUID. PUMP SHALL BE 5HP, 460/3ø/60HZ AND DESIGNED FOR 100 GPM AT 40' TOTAL DYNAMIC HEAD. SYSTEM SHALL HAVE 4" DISCHARGE CONNECTION AND 2½" VENT CONNECTION. PUMP SHALL BE REMOVABLE FROM SUMP PIT WITHOUT NEED FOR PERSONNEL ENTERING THE PIT OR THE REMOVAL OF ANY FASTENERS. MECHANICAL SEAL SHALL BE VITON ELASTOMERS. PUMPS TO HAVE CURVE CHARACTERISTIC SO AS NOT TO OVERLOAD THE MOTOR AT ANY POINT THROUGHOUT ITS ENTIRE RANGE. PROVIDE AND INSTALL A CHECK AND GATE VALVE SPECIFICALLY DESIGNED FOR SEWAGE EJECTOR PUMP SERVICE IN EACH DISCHARGE LINE. PUMP MANUFACTURER SHALL WARRANT THE PUMPS AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF (5) YEARS. BASIN SHALL HAVE A 6" INLET AT A HEIGHT OF 68" BELOW FINISHED FLOOR, CONTRACTOR SHALL COORDINATE FINAL HEIGHT BASED ON APPROVED SANITARY LAYOUT. CONTACT MARK GIRGENTI AT BURT PROCESS EQUIPMENT AT 1(203)—508—1244 / MARKGIRGENTI@BURTPROCESS.COM FOR ADDITIONAL INFORMATION.

Date 10/15/21
Checked SZ
Drawn BH/DC/KC

SCOTT P. Z

Revisions:

PERMIT SET
10/15/21

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EQUIPMENT SCHEDULES

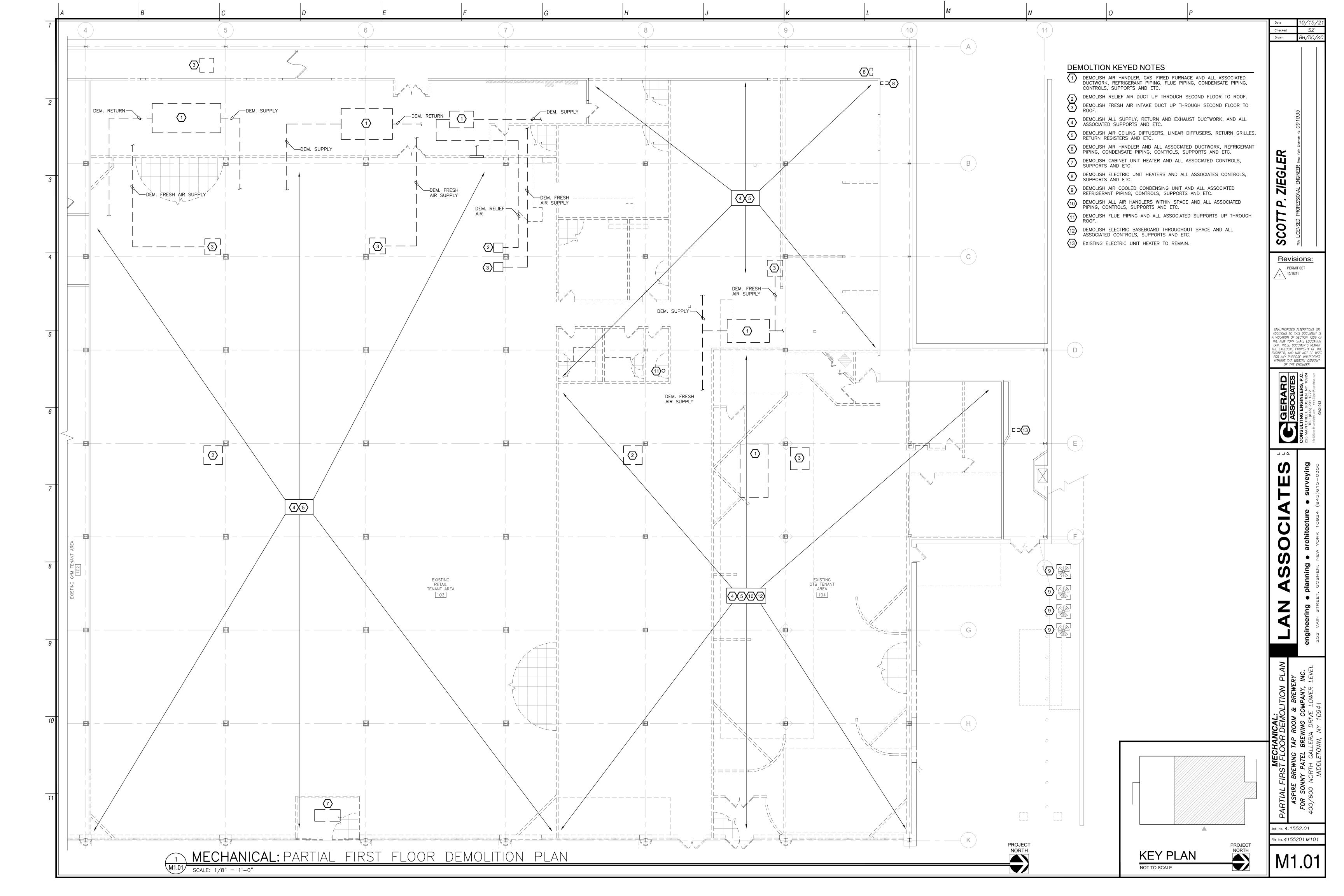
E BREWING TAP ROOM & BREWERY

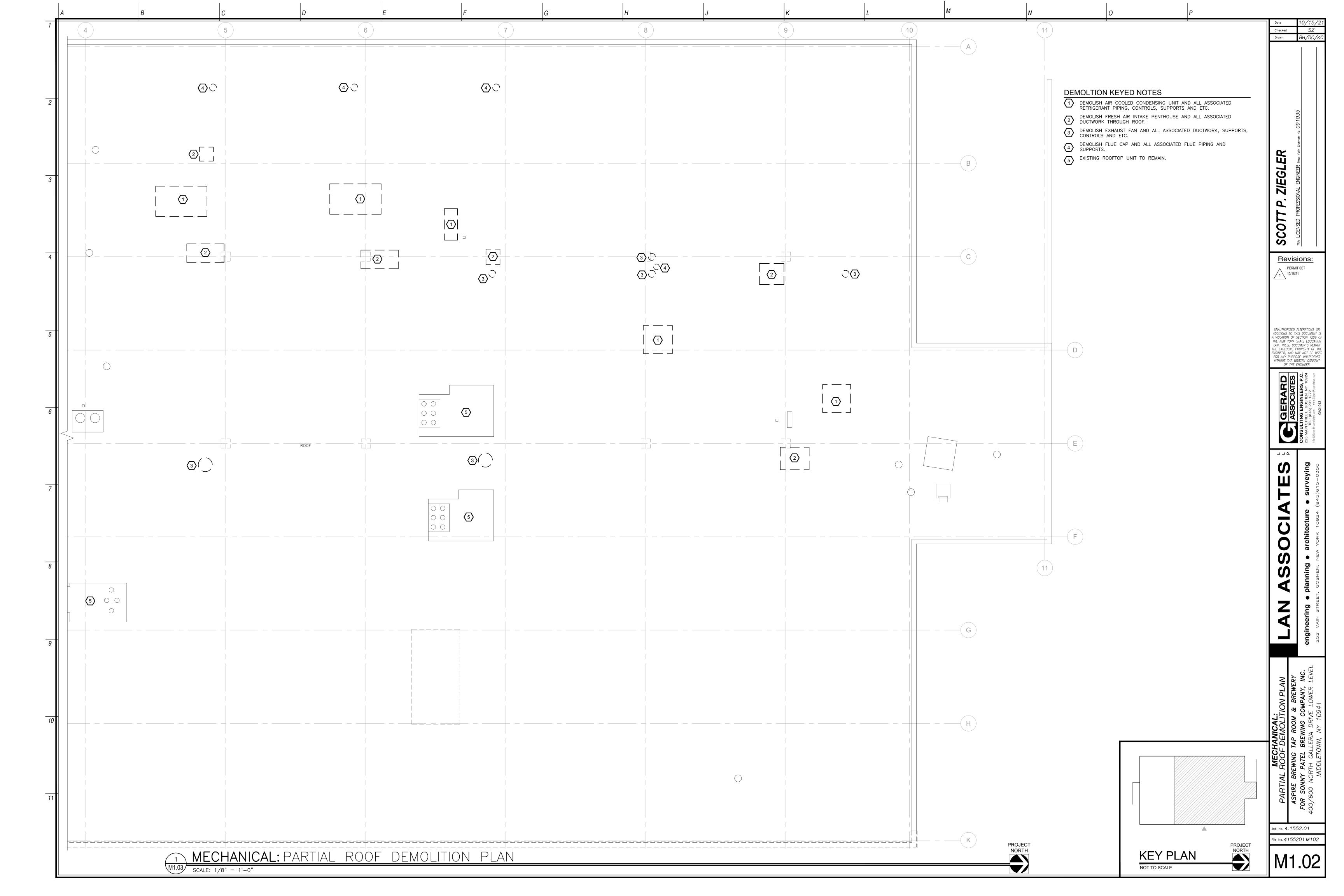
INNY PATEL BREWING COMPANY, INC.

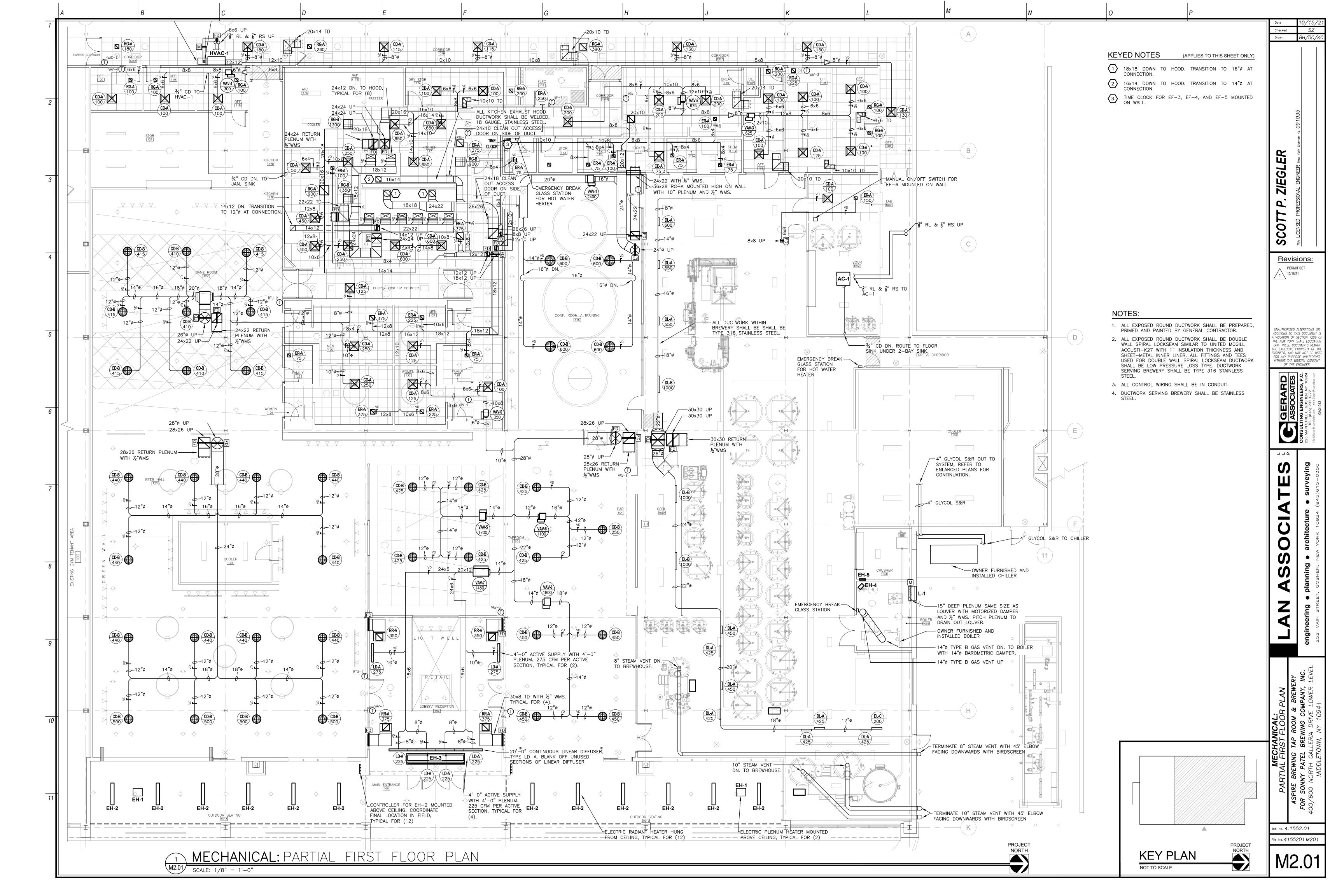
NORTH GALLERIA DRIVE LOWER LEVEL

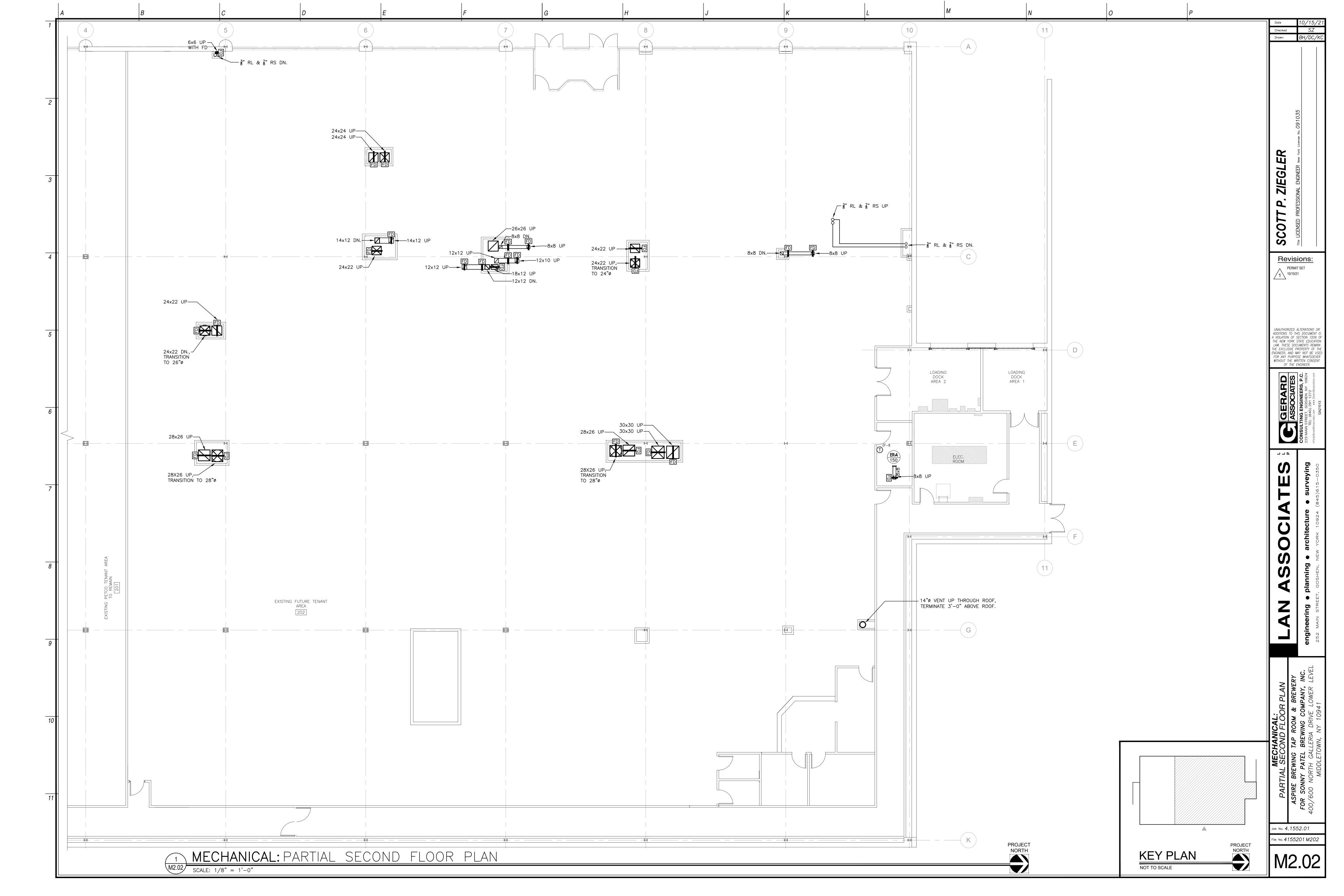
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File No. 4155201 P703

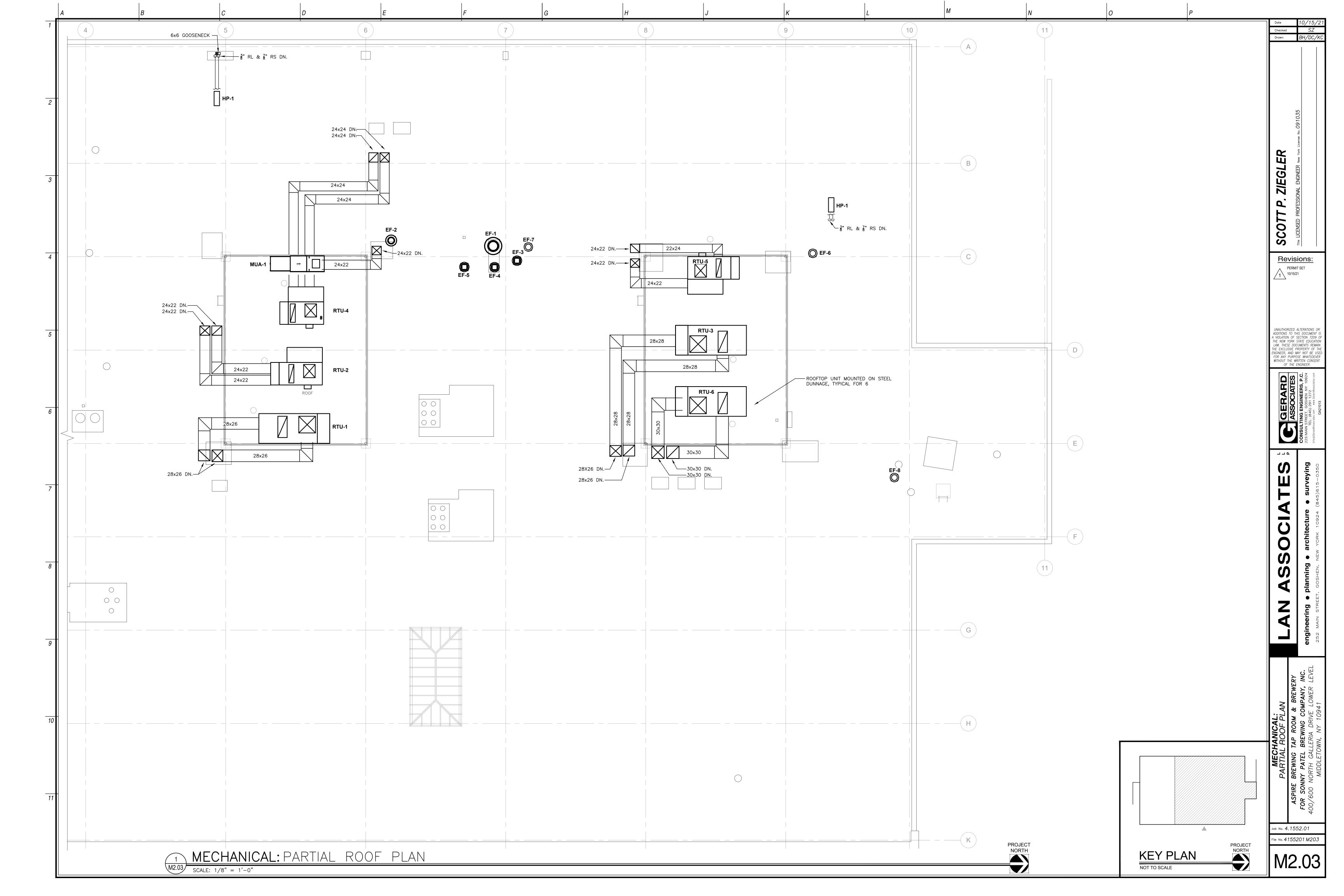
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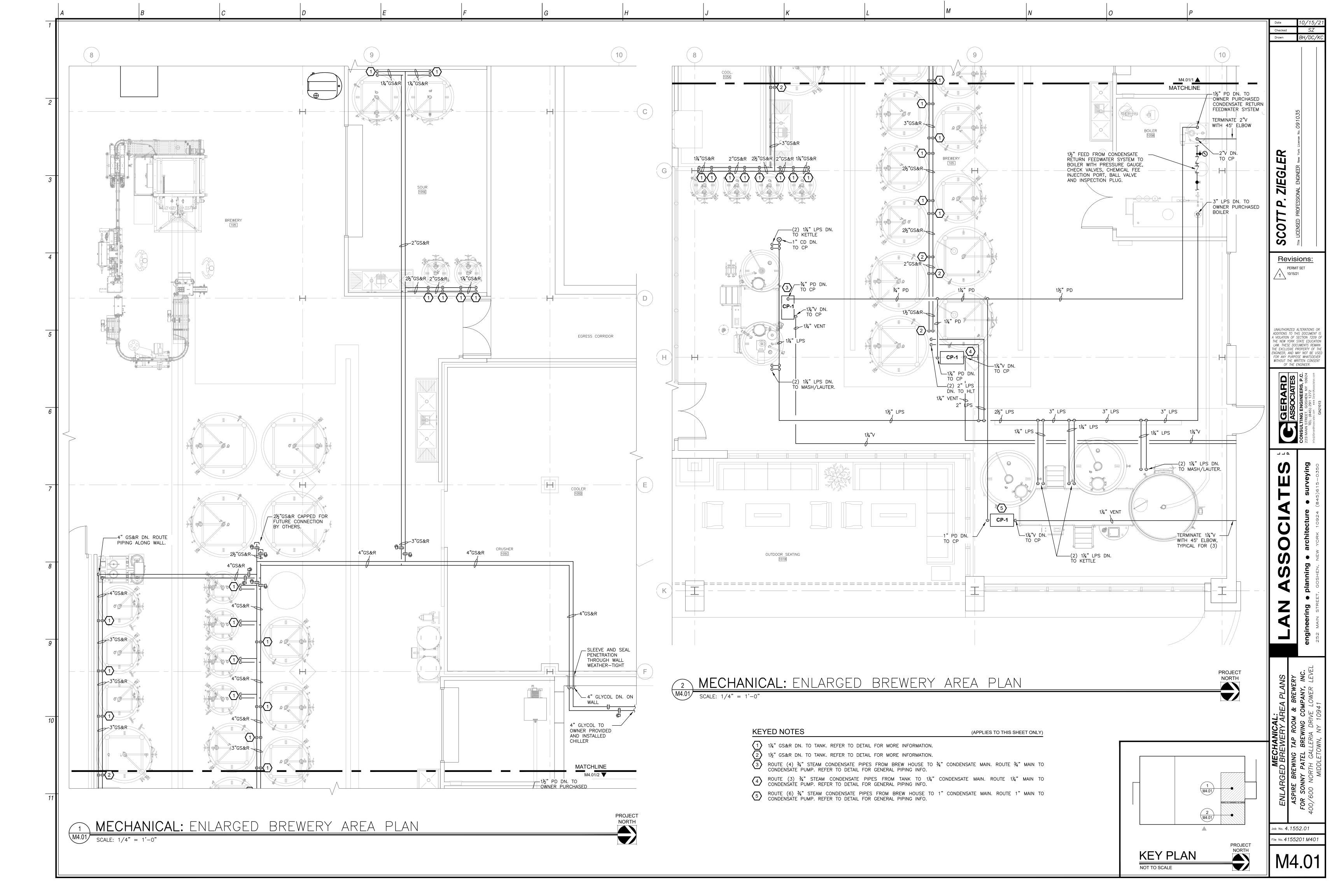


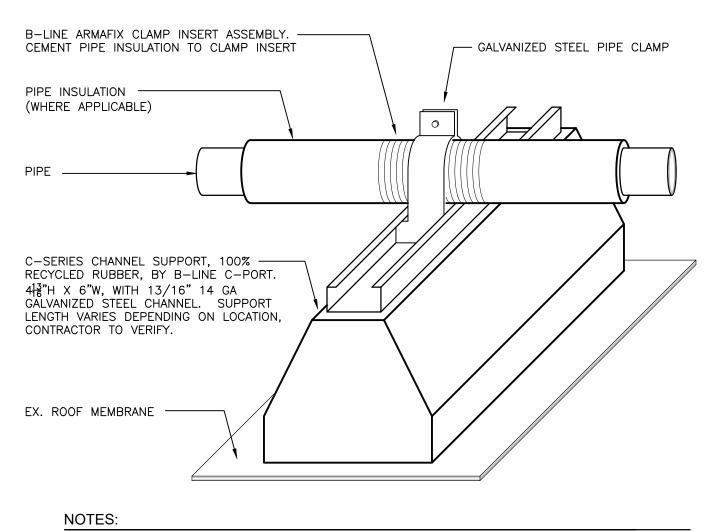












- ALL BRACKETS, HANGERS, AND FASTENERS SHALL BE GALVANIZED STEEL.
 CLAMP INSERT ASSEMBLY SHALL INCLUDE GALVANIZED STEEL PIPE CLAMP, ARMAFLEX INSULATION
- WITH PAINTED ALUMINUM JACKET, AND INTERIOR SUPPORTS. 3. CEMENT RUBBER SUPPORT BLOCKS TO ROOF - USE ONLY MATERIALS COMPATIBLE WITH THE

ROOF PIPE SUPPORT DETAIL

CONCRETE ANCHOR HILTI-KWICK BOLT, SERIES HDI, OR APPROVED EQUAL. -INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION. BEAM CLAMP AS MANUFACTURED BY UNISTRUT. THREADED HANGER ROD. REFER TO SCHEDULE BELOW FOR SIZE. RESTRAINING STRAP. INSULATION. CLEVIS HANGER TYPICAL CARRIER PIPE INSULATION SHALL RUN CONTINUOUSLY BETWEEN PIPE AND INSULATION SHIELD.

> PIPE HANGER SCHEDULE
> PIPE DIA.
> 3/4"-2"
> 2 1/2"-3"
> 4"-5"
> 6"
> 8"-12"
>
>
> HANGER DIA.
> 3/8"
> 1/2"
> 5/8"
> 3/4"
> 7/8"

NOTES:

- 1. CLEVIS HANGERS WITH WELDED INSULATION SHIELDS SIMILAR TO RAUCH FIG. 100SH ON ALL PIPES LARGER THAN 1".
- 2. FOR PIPES 1" OR SMALLER, A BAND HANGER WITH INSULATION SHIELD MAY BE USED SIMILAR TO RAUCH FIG. NO. 1ASH. . FOR NON-INSULATED PIPE, INSULATION SHIELDS MAY BE OMITTED. 4. ALL PIPE HANGERS SHALL BE GALVANIZED STEEL OR FACTORY PAINTED BLACK WITH ENAMEL.
- 5. FOR NON FERROUS PIPING WITHOUT INSULATION, ALL HANGERS SHALL BE COPPER PLATED OR FURNISHED WITH A DI-ELECTRIC BETWEEN PIPE AND HANGERS.

BRANCH DUCT RIGID STEEL

FLEXIBLE DUCT FOR FINAL

FLEXMASTER USA -TYPE 1 M

CONNECTION SHALL NOT EXCEED 4'

-- INSULATE BACK OF SUPPLY DIFFUSERS

- SUPPLY DIFFUSER SHALL BE

SUPPORTED INDEPENDENT OF THE

PROOF JACKET

WITH 1" THICK INSULATION WITH VAPOR

6. WHERE EXISTING BUILDING STRUCTURAL COMPONENTS HAVE FIREPROOF MATERIAL, ANY AREA THAT IS DISTURBED OR DAMAGED AS A RESULT OF HANGER INSTALLATION SHALL BE PATCHED WITH UL AND FM APPROVED FIREPROOFING TO MATCH EXISTING.

PIPE HANGER DETAIL

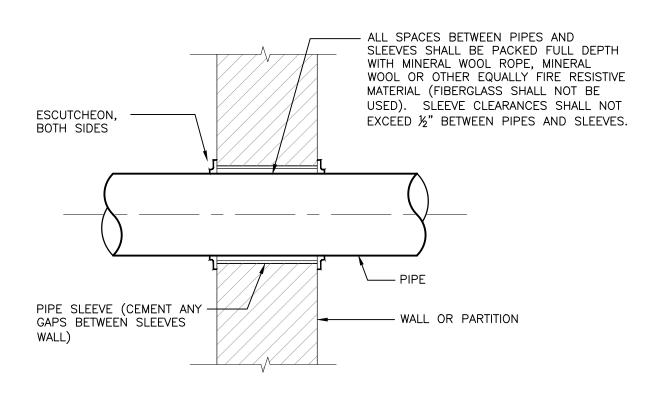
VOLUMETRIC

DUCT RIGID

DAMPER

NOT TO SCALE

NOT TO SCALE

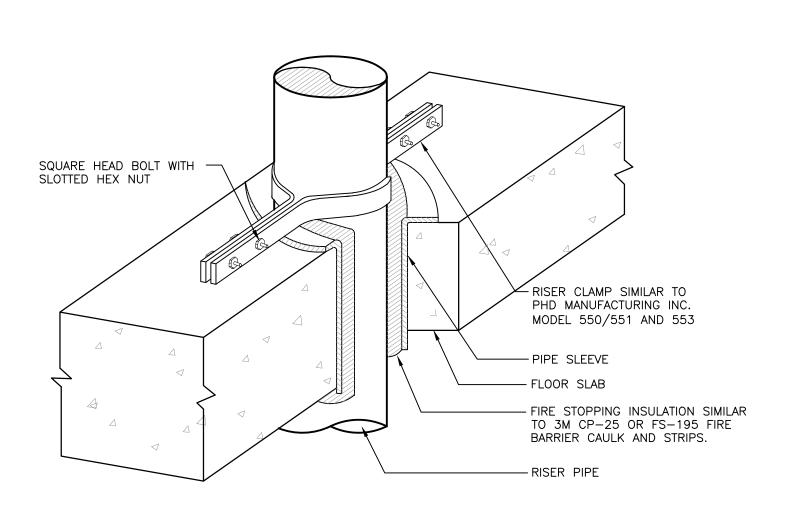


1. THIS DETAIL ALSO APPLICABLE TO INTERIOR NON-WATER PROOF FLOOR CONSTRUCTION. FOR WATER PROOF FLOOR CONSTRUCTION AND OTHER CONSTRUCTION - SEE SPECIFICATIONS.

2. PROVIDE FIRE STOP SEALANT ON ALL NEW AND EXISTING PIPING PENETRATING EXISTING FIRE RATED WALLS AND NEW FIRE RATED WALLS CONSTRUCTED AS PART OF THE PROJECT.

FIRE RATED PARTITION AND WALL PIPE

PENETRATION DETAIL



PIPE PENETRATION THROUGH FLOOR DETAIL

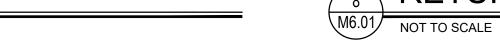
- BRANCH DUCT RIGID STEEL VOLUMETRIC -_\ FLEXMASTER USA -TYPE 1 M FLEXIBLE DUCT FOR FINAL CONNECTION SHALL NOT EXCEED 4' - ACOUSTICALLY LINE INTERIOR AND PAINT BLACK ALL METAL SURFACES MAIN RETURN DUCT CEILING RIGID STEEL

1. FLEXIBLE AIR DUCT SHALL BE TESTED AND APPROVED IN ACCORDANCE WITH UL 181. ALL SUCH CONNECTORS AND FLEXIBLE AIR DUCTS SHALL BE LISTED AND LABELED AS CLASS O OR CLASS 1, IN ACCORDANCE WITH INTERNATIONAL MECHANICAL CODE.

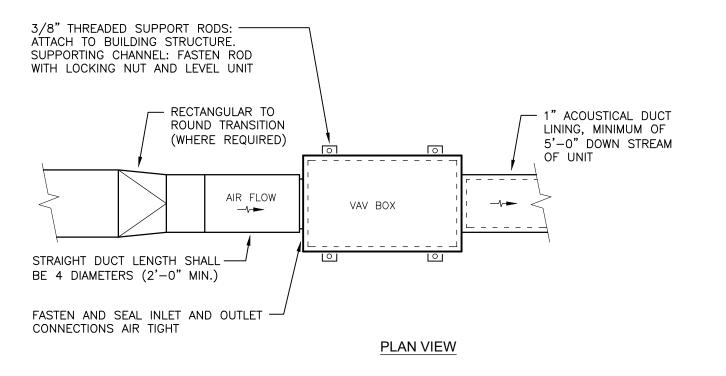
- SUPPORT REGISTER AND PLENUM

BOX INDEPENDENT OF CEILING.

SUPPLY DIFFUSER LAY-IN DETAIL



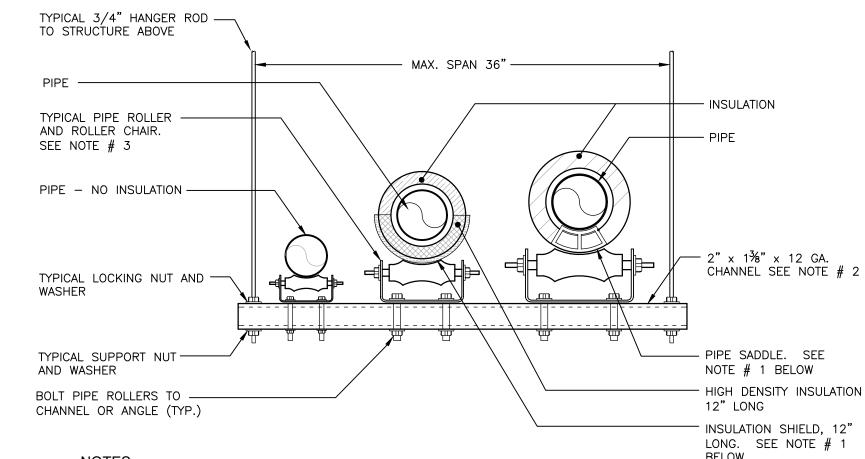
RETURN REGISTER DETAIL



NOTES:

- 1. THE OPERATION OF VARIABLE VOLUME TERMINAL UNITS ARE AFFECTED BY EXCESSIVE TURBULENCE ON THE ENTERING SIDE OF EACH TERMINAL UNIT. THEREFORE, TERMINAL UNITS MUST NOT BE INSTALLED
- TO CLOSE TO MAIN DUCTS, ELBOWS AND FITTINGS. 2. WHEN MINIMUM UPSTREAM STRAIGHT DUCT CONNECTION TO TERMINALS AS INDICATED ABOVE CANNOT BE MAINTAINED, PROVIDE ORIFICE PLATE, STRAIGHTENING VANES OR OTHER DEVICE AS RECOMMENDED
- BY TERMINAL UNIT MANUFACTURER AND SUBMIT TO ENGINEER FOR REVIEW PRIOR TO INSTALLATION. 3. TERMINAL UNITS SHALL BE PROVIDED WITH CONTROLS ON LEFT OR RIGHT SIDE AS REQUIRED BY FIELD CONDITIONS. FOR UNITS WITH ELECTRONIC CONTROLS FURNISH NEMA 1 RATED ENCLOSURE AND U.L. II
- TRANSFORMER AND DISCONNECT SWITCH. 4. ARRANGE ACCESS TO PERMIT EASY FIELD BALANCING AND MAINTENANCE.

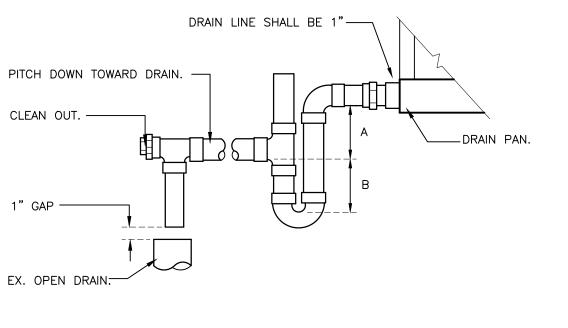
VAV BOX INSTALLATION DETAIL



NOTES:

- PROVIDE INSULATION SHIELD OR PIPE SADDLE BASED ON THE PIPING SYSTEM AND
- PIPE SIZE AS INDICATED IN THE SPECIFICATIONS. TRAPEZE TYPE HANGER SHALL BE USED FOR A MAXIMUM 1,000 LB UNIFORM LOAD.
- 3. ELIMINATE PIPE ROLLERS AND ROLLER CHAIRS AT ANCHOR POINTS

TRAPEZE TYPE HANGER INSTALLATION DETAIL NOT TO SCALE



1. DRAW THRU UNITS; DIMENSION A (DEPTH OF SEAL) SHALL BE 2" MINIMUM AND DIMENSION B SHALL BE 1.2 x THE STATIC PRESSURE OF THE UNIT.

CONDENSATE DRAIN DETAIL

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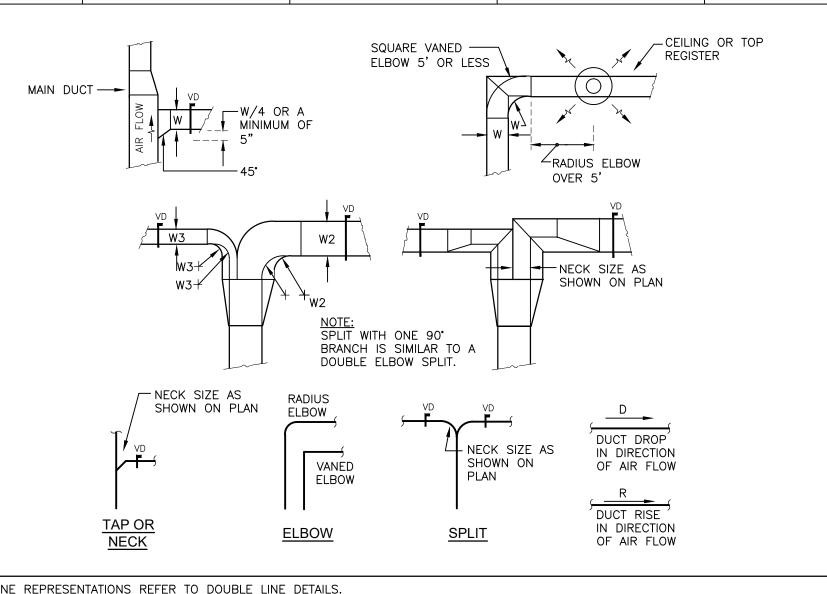
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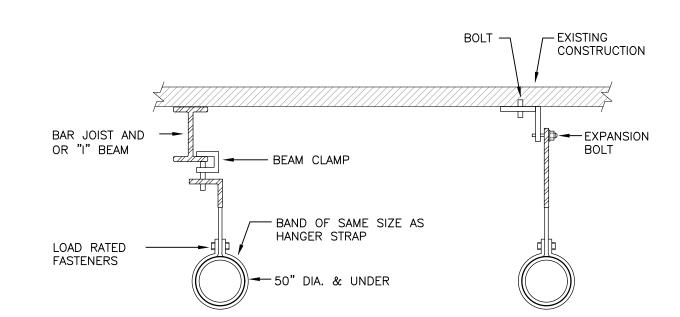
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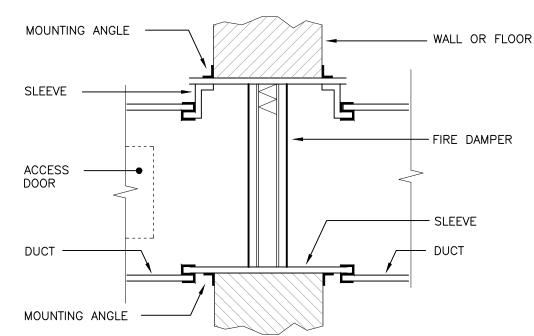
NOTES:

- SINGLE LINE REPRESENTATIONS REFER TO DOUBLE LINE DETAILS. USE RADIUS OR SQUARE VANED BENDS FOR BOTH ELBOWS AND SPLITS AS DETERMINED BY SPACE LIMITATIONS, AND THE DISTANCE FROM AIR OUTLETS. ALL SQUARE ELBOWS SHALL HAVE FACTORY TURNING VANES, AND MAINTAIN A CONSTANT WIDTH. 4. WHERE DUCTS SPLIT, THE SOLID LINE REPRESENTATION IS PREFERRED, UNLESS PRECLUDED BY SPACE, OR OTHERWISE INDICATED
- 5. USE ELBOW SPLIT FOR BRANCH CONNECTIONS ONLY WHERE NECK SIZE IS GIVEN.

DUCT BRANCH TAKE-OFF DETAIL



ROUND DUCT HANGER DETAIL

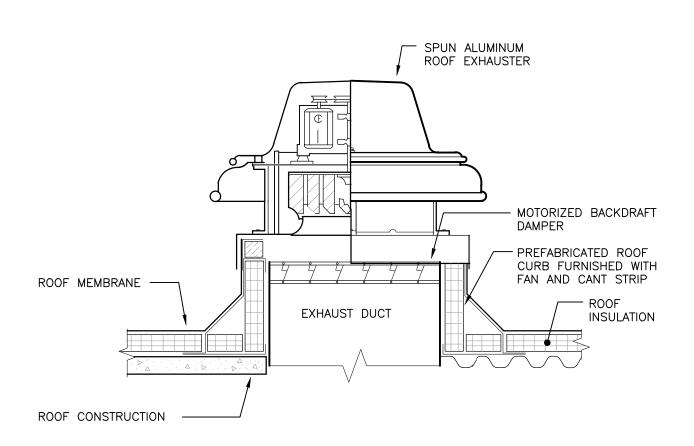


INSTALLATION REQUIREMENTS

- 1. REQUIREMENTS FOR AN APPROVED INSTALLATION INCLUDE THE FOLLOWING: OPENINGS IN THE FLOOR OR WALL SHALL BE ½" PER FOOT LARGER THAN DAMPER DIMENSIONS (¾6" LARGER PER FOOT FOR STAINLESS). MINIMUM CLEARANCE OF ¼" REQUIRED FOR ANY INSTALLATION.
- 2. SLEEVE GAGE SHALL BE AT LEAST EQUAL TO THE GAGE OF THE DUCT AS DEFINED BY THE APPROPRIATE SMACNA DUCT CONSTRUCTION STANDARD, AS DESCRIBED IN NFPA90A. WHEN ONE OR MORE OF THE FOLLOWING DUCT CONNECTIONS ARE USED, PLAIN S SLIP, HEMMED S SLIP, STANDING S SLIP, REINFORCED STANDING S SLIP, INSIDE SLIP JOINT, OR DOUBLE S
- 3. IF ANY OTHER DUCT SLEEVE CONNECTIONS ARE USED, THE SLEEVE SHALL BE MINIMUM 16 GAGE FOR DAMPERS UP TO 36" (W) x 24" (H) AND 14 GAGE IF WIDTH EXCEEDS 36" OR HEIGHT EXCEEDS 24".
- 4. MOUNTING ANGLES SHALL BE MINIMUM OF 11/2" x 11/2" x 14" GAGE AND BOLTED. TACK WELDED PR SCREWED TO SLEEVE AT MAXIMUM SPACING OF 12" AND WITH MINIMUM OF TWO CONNECTIONS IN EACH SIDE, TOP AND BOTTOM. MOUNTING
- ANGLES SHALL OVERLAP WALL A MINIMUM OF ONE INCH ON ALL FOUR SIDES. 5. DAMPER SHALL BE BOLTED, TACK WELDED, OR SCREWED TO SLEEVE ON SAME SPACING AS ANGLES. SLEEVES SHALL NOT EXTEND MORE THAN 6" OUTSIDE OF WALL.
- 6. IF GAP BETWEEN DUCT/SLEEVE AND CONSTRUCTION IS 1" OR LESS, PACK SPACE WITH FIREPROOF FIBROUS MATERIAL AND SEAL BOTH SIDES WITH NON-HARDENING FIREPROOF SEALER. IF GAP EXCEEDS 1", WRAP DUCT WITH 1" THICK FIREPROOF
- FIBROUS MATERIAL AND FILL REMAINING SPACE WITH GROUT. 7. ALL FIRE DAMPERS IN DUCTWORK SERVING AUDITORIUM SHALL HAVE BLADES OUT OF AIRSTREAM.

FIRE DAMPER DETAIL

NOT TO SCALE



NOTES:

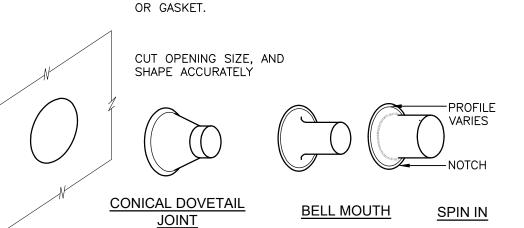
. ROOF CURB TO BE PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED BY GENERAL CONTRACTOR. REFER TO ARCHITECTURAL ROOF DETAILS FOR MORE INFORMATION. COORDINATE ROOF OPENINGS AS REQUIRED FOR MECHANICAL WORK WITH GENERAL CONTRACTOR. DETAIL SIMILAR FOR UPBLAST TYPE EXHAUST FANS.

ROOFTOP EXHAUST FAN DETAIL

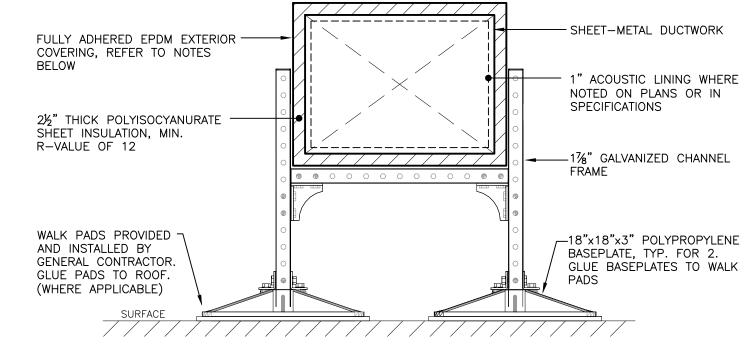
CLINCH LOCK CONNECTION CORNER FILLER OR GASKET L= 1/4 W, 4" MINIMUM ACOUSTIC LINING, TYPICAL CLINCH LOCK

> CONNECTIONS USE BULL NOSE ON ALL EXPOSED LINING EDGES. CLOSE ALL OPENINGS AT CORNERS WITH FILLER PIECE

TYPICAL FOR LINED OR UNLINED DUCT -



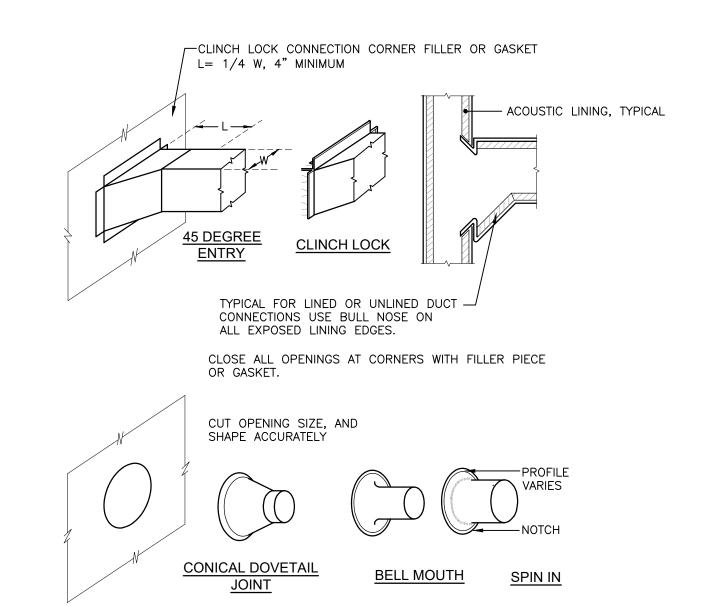
DUCT BRANCH CONNECTION DETAIL



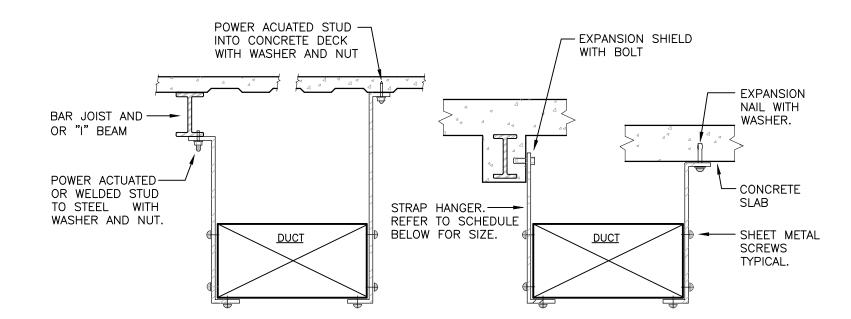
NOT TO SCALE

- 1. ROOF DUCT SUPPORT SHALL BE BASED ON PHP SYSTEMS/DESIGN MODEL NUMBER PHP-D. 2. ALL BRACKETS, HANGERS, FASTENERS AND SUPPORTS LOCATED OUTDOORS SHALL BE GALVANIZED OR NICKEL PLATED 5. USE ONLY THOSE MATERIALS COMPATIBLE WITH THE ROOFING SYSTEM, REFER TO ARCHITECTURAL DRAWINGS. 4. SEAL ALL EXTERIOR DUCTWORK IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE-SEAL
- CLASS A. SEAL ALL DUCT JOINTS AND MAKE WATER-TIGHT. 5. DUCT SUPPORTS ON ROOF SHALL SIT ON WALK PADS PROVIDED AND INSTALLED BY GENERAL CONTRACTOR. 6. INSULATION INSTALLED ON THE TOP OF THE DUCTWORK SHALL BE SLOPED 1/2" PER FOOT.
- 7. INSULATION SHALL BE FASTENED TO THE DUCTWORK WITH SCREWS AND PLATES INSTALLED 12" ON CENTER IN ALL DIRECTIONS.
- 8. INSULATION SHALL BE COVERED WITH 60 MIL THICK, FIRE RATED, FULLY ADHERED EPDM BY THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL APPLY TWO ROLLER COATS OF WHITE ACRYLIC LATEX COATING TO EXTERIOR.

INSULATED EXTERIOR DUCT SUPPORT DETAIL



DUCT BRANCH CONNECTION DETAIL



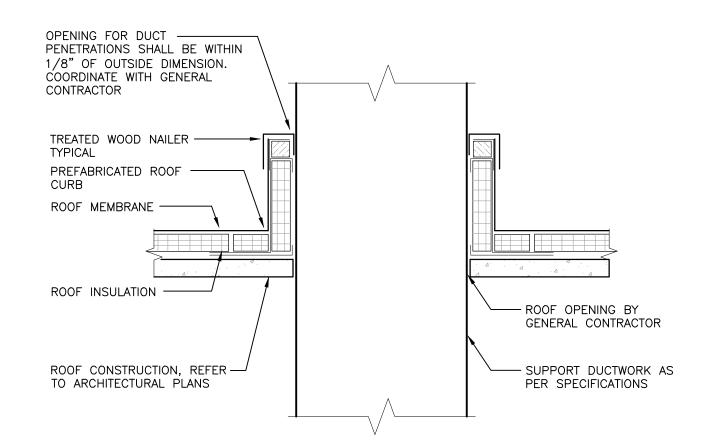
HANGER	STRAP SCHEDU	JLE
DUCT SIZE	HANGER SIZE	MAXIMUM SPACING
UP TO 2 SQ.FT.	1" X 1/16"	8'-0"
2 SQ.FT. TO 4 SQ.FT.	1" X 1/8"	8'-0"
4 SQ.FT. TO 10 SQ.FT.	1" X 1/8"	6'-0"
OVER 10 SQ.FT.	1" X 1/8"	4'-0"

NOTES:

1. FOR DUCTS OVER 49" WIDE, THE STRAP HANGER SHALL BE TURNED UNDER THE BOTTOM OF THE DUCT. WHERE BUILDING STRUCTURAL COMPONENTS HAVE FIREPROOF MATERIAL, ANY AREA THAT IS DISTURBED OR DAMAGED AS A

RESULT OF HANGER INSTALLATION SHALL BE PATCHED WITH UL AND FM APPROVED FIREPROOFING TO MATCH EXISTING.

DUCT HANGER DETAIL



1. INSULATED PREFABRICATED ROOF CURB SHALL BE BASED ON THYCURB MODEL TC-3. ROOF CURB SHALL BE CONSTRUCTED OF 18 GAUGE GALVANIZED STEEL WITH FULLY WELDED CORNERS, FACTORY INSTALLED WOOD NAILERS, REINFORCED SIDES, GASKETING, AND 1½" THICK 3-POUND DENSITY RIGID INSULATION. CURB HEIGHT SHALL BE 24" MINIMUM. ROOF CURB SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR. . GENERAL CONTRACTOR SHALL MAKE PENETRATION WEATHER—TIGHT, REFER TO ARCHITECTURAL AND ROOFING DRAWINGS. 3. THIS DETAIL SHALL BE USED FOR ALL DUCT PENETRATIONS THROUGH ROOF.

ROOF DUCT PENETRATION DETAIL

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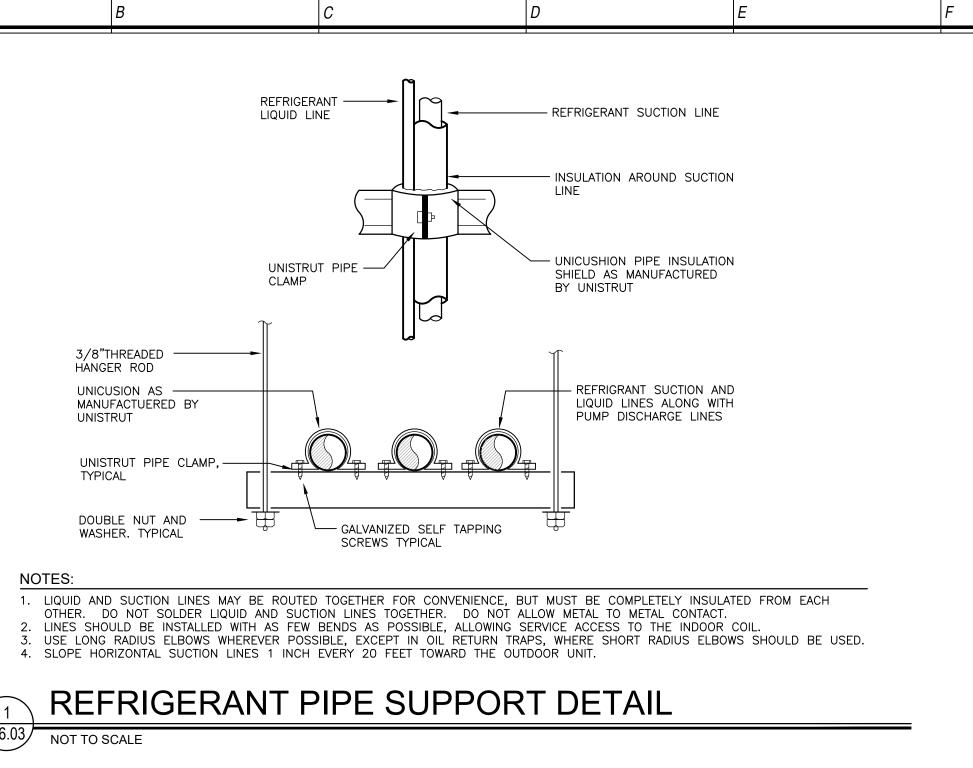
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TRANSFER DUCT DETAIL

ELBOW WITH TURNING VANES.

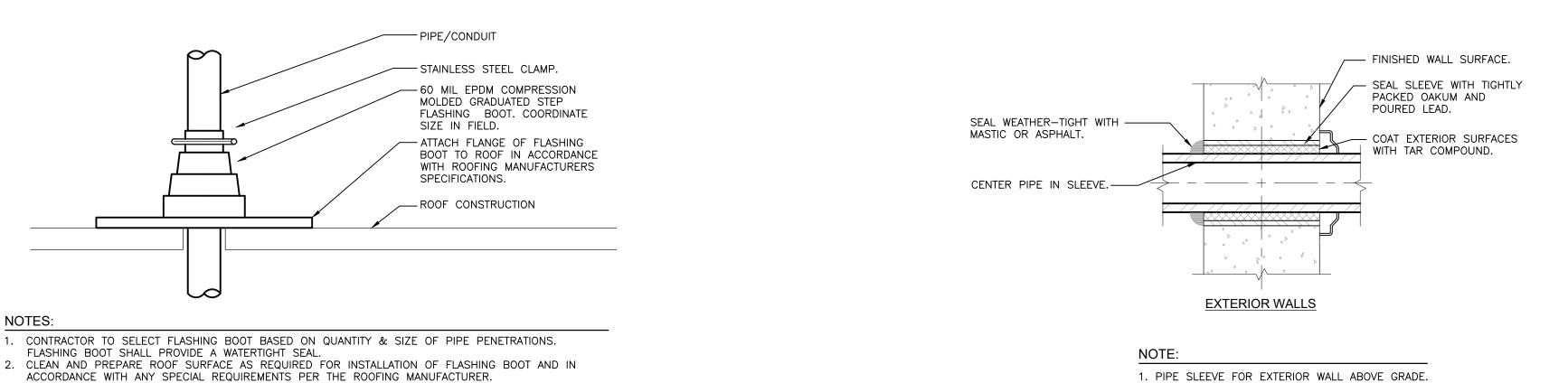
TYPICAL FOR (2).

SIZE AS INDICATED ON

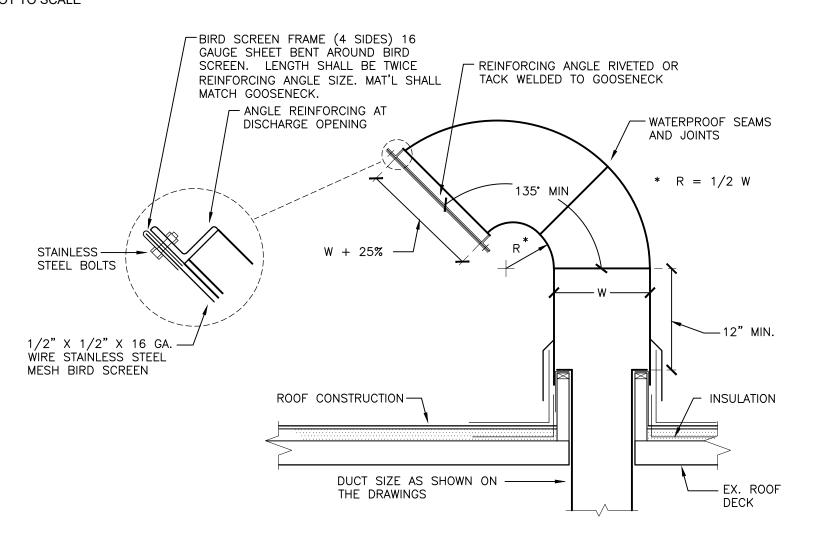
½"WMS -

- 1" ACOUSTIC LINING.

- - - - - - -



EXTERIOR WALL PIPE PENETRATION DETAIL



REFER TO ROOF DUCT PENETRATION DETAIL FOR ROOF CURB INFORMATION. 2. GENERAL CONTRACTOR SHALL MAKE PENETRATION WEATHER-TIGHT, REFER TO ARCHITECTURAL AND ROOFING DRAWINGS. REFER TO ARCHITECTURAL ROOF DETAILS FOR MORE INFORMATION. 3. EXPOSED DUCTWORK SHALL BE PREPARED, PRIMED AND PAINTED BY GENERAL CONTRACTOR. COLOR SHALL BE AS SELECTED BY THE ARCHITECT. 4. SEAL ALL EXTERIOR DUCTWORK IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE SEAL CLASS A. SEAL ALL DUCT JOINTS AND MAKE WATER-TIGHT.

GOOSENECK DETAIL

CLEVIS HANGER, TYPICAL — THREADED HANGER ROD. REFER TO SCHEDULE BELOW FOR SIZE CARRIER PIPE ---PIPE INSULATION. -INSULATION SHALL RUN CONTINUOUSLY - 17" TELESCOPING GALVANIZED BETWEEN PIPE AND SHIELD CHANNEL FRAME WHERE APPLICABLE-WELDED PIPE INSULATION SHIELD. --18"x18"x3" POLYPROPYLENE WALK PAD, TYPICAL. GLUE PADS — BASEPLATE, TYPICAL TO SURFACE PIPE HANGER SCHEDULE
 PIPE DIA.
 1/2"-1"
 1 1/4"-3"
 4"-5"
 6"
 8"-12"

 HANGER DIA.
 3/8"
 1/2"
 5/8"
 3/4"
 7/8"

NOTES:

1. PIPE SUPPORT SYSTEM SHALL BE BASED ON PHP SYSTEMS/DESIGN MODEL NUMBER PSE-CUSTOM OR PSE-2-2 DEPENDING ON NUMBER

- 2. CLEVIS HANGERS WITH WELDED INSULATION SHIELDS SIMILAR TO RAUCH FIG. 100SH ON ALL PIPES R4 LARGER THAN 1". BOTTOM OF PIPE ELEVATION SHALL BE MIN. OF 2'-0" ABOVE GRADE. PIPING SHALL BE INSTALLED AS TO ELIMINATE ANY UNNECESSARY OFFSETS UP OR DOWN.
- 4. FOR PIPES 1" OR SMALLER, A BAND HANGER WITH INSULATION SHIELD MAY BE USED SIMILAR TO RAUCH FIG. NO. 1ASH. 5. FOR NON-INSULATED PIPE, INSULATION SHIELDS MAY BE OMITTED. FOR NON FERROUS PIPING WITHOUT INSULATION, ALL HANGERS SHALL BE COPPER PLATED OR FURNISHED WITH A DI-ELECTRIC BETWEEN PIPE AND HANGERS.
- ALL PIPE SUPPORT COMPONENTS SHALL BE GALVANIZED STEEL OR FACTORY PAINTED BLACK WITH ENAMEL. THIS CONTRACTOR SHALL VERIFY SIZE AND NUMBER OF PIPES TO BE SUPPORTED BASED ON FINAL LAYOUT.

8. THIS DETAIL TO BE USED FOR STANDARD PIPE SUPPORT LOCATIONS. FOR PIPE GUIDES AND ANCHORS USE DETAIL ON M-4.

EXTERIOR PIPE SUPPORT DETAIL

NOT TO SCALE — CHARGING VALVE. FILTER DRYER WITH -VALVED BYPASS. GLASS - OUTDOOR UNIT MOUNTED ON EQUIPMENT SUPPORT RAILS. PROVIDE NEOPRENE VIBRATION ISOLATION PADS. FASTEN UNIT TO SUPPORT SYSTEM. SHUT-OFF -VALVES, TYPICAL. - DX COOLING COIL, WITH INTERTWINED CIRCUITING. - PITCH RS LINE SHUT-OFF VALVES, TYPICAL. 1"/10' TOWARD THE COIL. GLASS. — TEMPERATURE SENSING VALVES.

PITCH THE RL LINE -1"/10' TOWARD THE

CHECK -

TXV.

1. PROVIDE (1) ONE TRAP AT THE BOTTOM OF SUCTION LINE FOR RISES UP TO 50'-0". FOR RISERS BETWEEN 50'-0" AND 100'-0" PROVIDE A SECOND RISER HALF WAY UP.

2. PIPING SHALL BE INSTALLED SO NOT TO OBSTRUCT SERVICE ACCESS TO EITHER THE INDOOR OR OUTDOOR UNIT. 3. ALL FASTENERS LOCATED OUTDOORS SHALL BE GALVANIZED.

4. SLOPE HORIZONTAL SUCTION LINES APPROXIMATELY 1" EVERY 20 FEET TOWARD OUTDOOR UNIT TO FACILITATE OIL RETURN. 5. NUMBER OF REFRIGERANT LINE SETS VARY BASED ON SYSTEM, ONE SET SHOWN FOR CLARITY.

RS LINE SIZE AS PER PLAN, PITCH 1"/10"

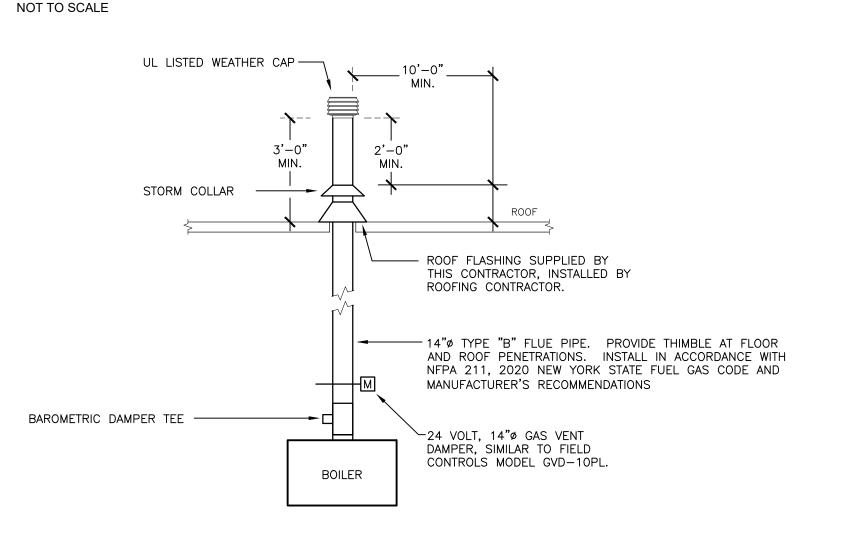
(1) LINE SIZE SMALLER THAN RISER.

AWAY FROM COIL. BRANCH LINES SHALL BE

BELOW THE LOWEST GAS HEADER OUTLET.

ARRANGE THE RS LINE SO THAT IT DROPS DOWN

DX SPLIT-SYSTEM AC UNIT PIPING SCHEMATIC



NOT TO SCALE

1. BREECHING AND FLUE PIPING SHALL BE INSTALLED AND SUPPORTED IN ACCORDANCE WITH NFPA 211, 2020 NEW YORK STATE FUEL GAS CODE AND MANUFACTURER'S RECOMMENDATIONS. OBSERVE ALL CLEARANCES TO COMBUSTIBLES. 2. COMBUSTION AIR DAMPER AND GAS VENT DAMPER OPERATION SHALL BE TIED TO HEATER OPERATION. WHEN HEATER IS CALLED TO OPERATE THE GAS VENT DAMPER AND COMBUSTION AIR DAMPER SHALL OPEN. ONCE DAMPER HAS BEEN PROVEN TO BE IN FULL OPEN POSITION THE HEATER SHALL TURN ON. WHEN THE HEATER TURNS OFF THE COMBUSTION AIR DAMPER AND GAS VENT DAMPER SHALL CLOSE. PROVIDE ALL REQUIRED

WIRING, RELAYS, SWITCHES, TRANSFORMERS, SENSORS, AND ETC. AS REQUIRED TO ACHIEVE SEQUENCE OF OPERATION SPECIFIED.



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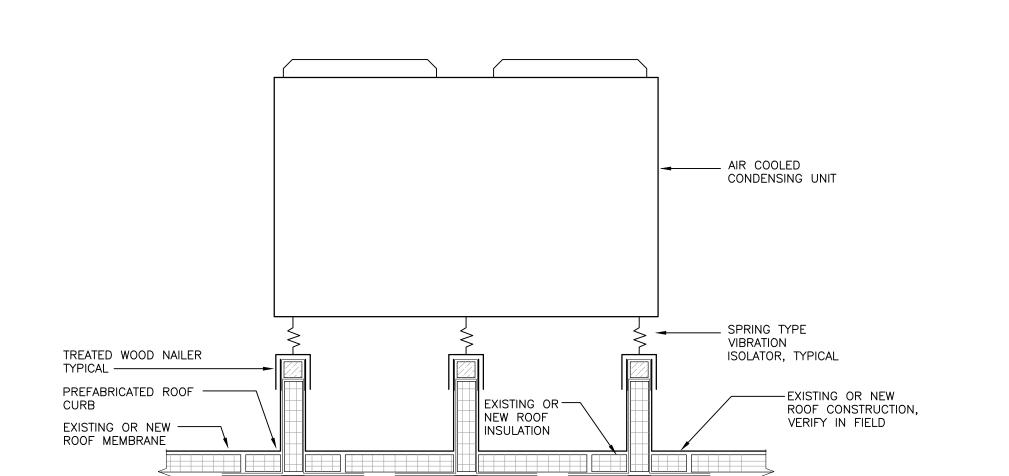
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File No. **4155201 M60**.

M6.03



3. COORDINATE QUANTITIES AND SIZES OF PIPE/CONDUIT PENETRATIONS IN THE FIELD WITH CAP AND

ROOF PIPE/CONDUIT PENETRATION DETAIL

4. USE ONLY MATERIALS COMPATIBLE WITH THE ROOFING SYSTEM.

BOOT REQUIREMENTS.

NOT TO SCALE

NOTES

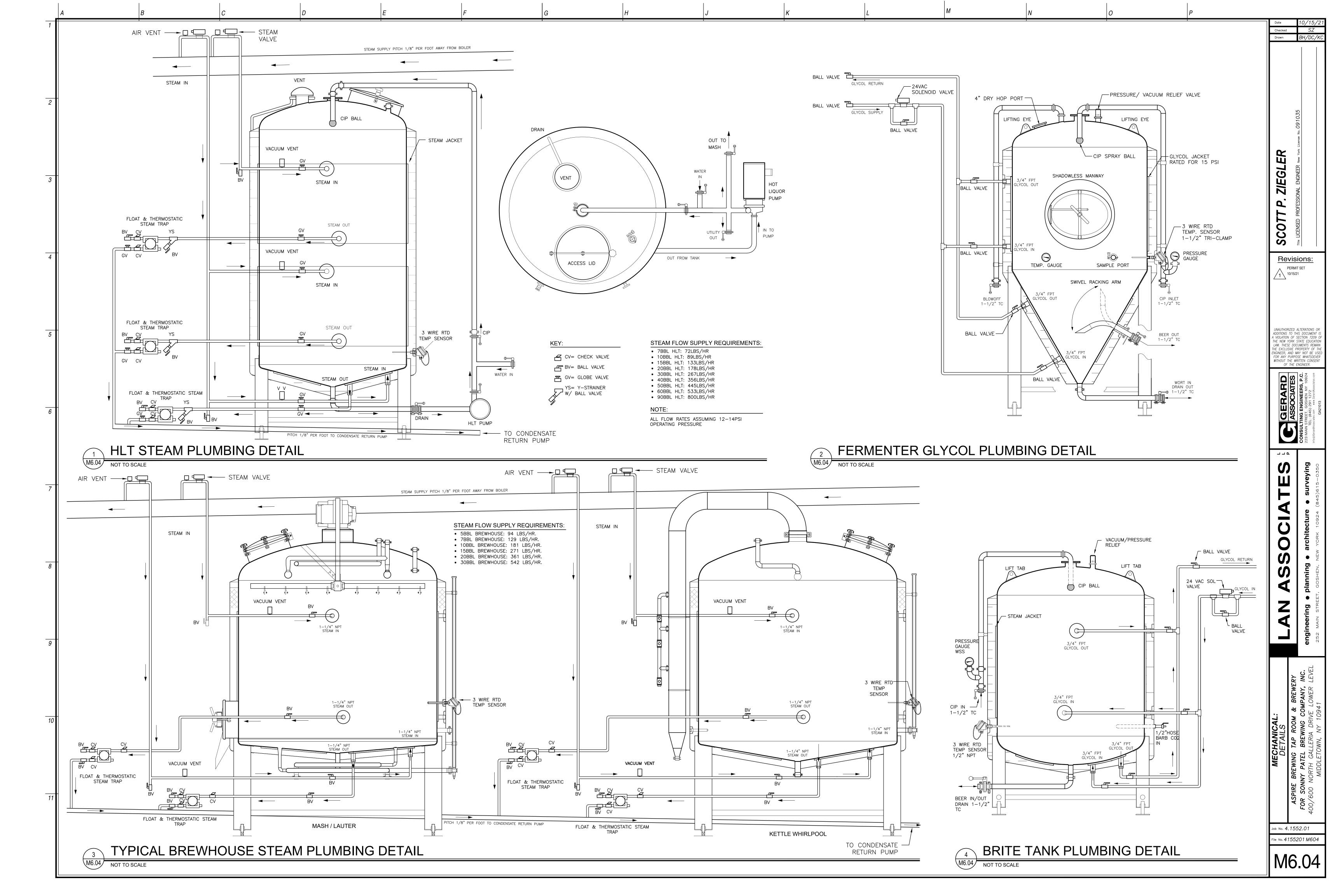
1. GENERAL CONTRACTOR SHALL MAKE PENETRATION WEATHER-TIGHT, REFER TO ARCHITECTURAL AND ROOFING DRAWINGS.

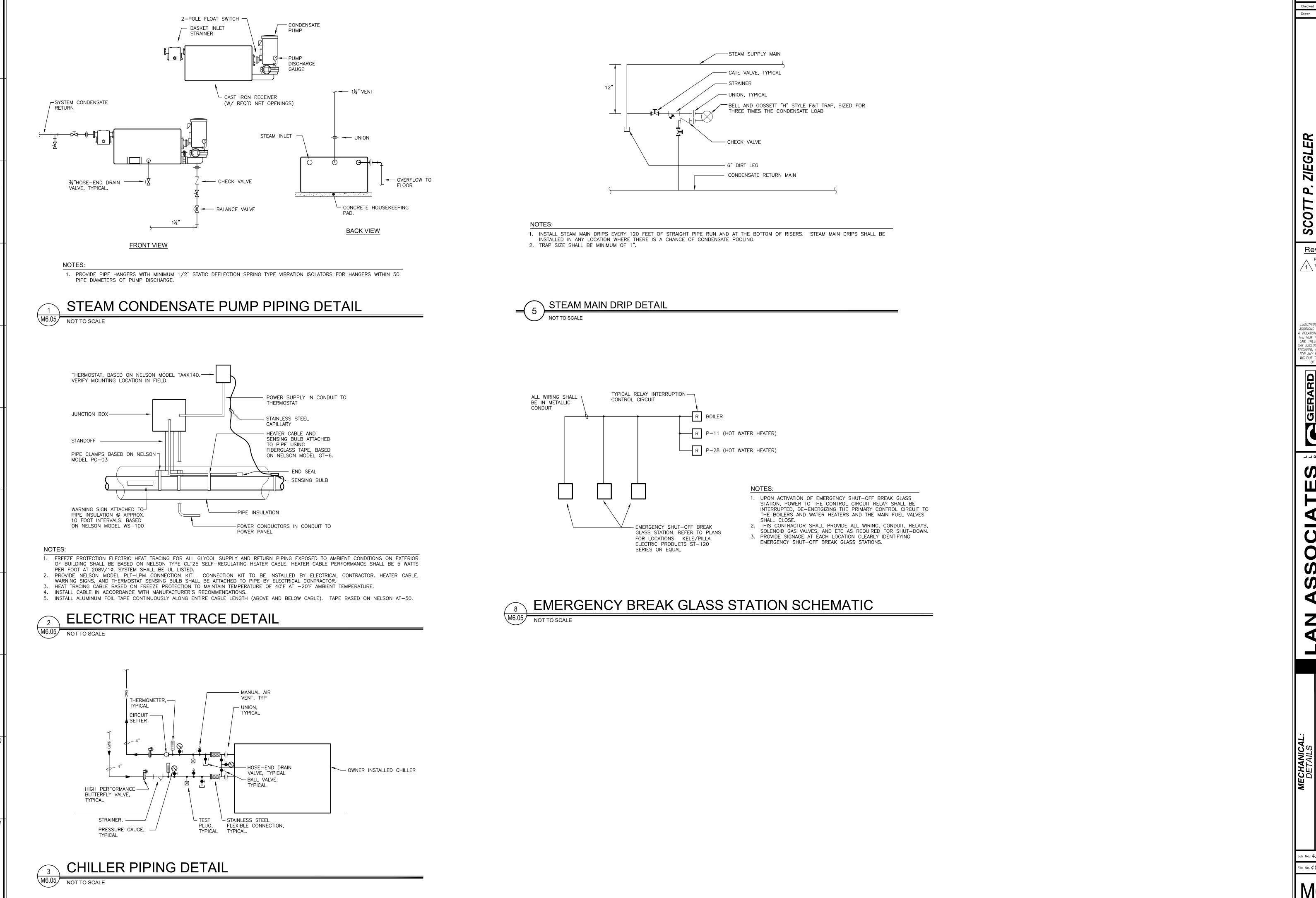
2. THIS DETAIL SHALL BE USED FOR ACCU-A, ACCU-B, ACCU-C, ACCU-D, ACCU-4, ACCU-5, AND ACCU-6. PROVIDE (2) RAILS.

EQUIPMENT SUPPORT RAIL DETAIL

NOT TO SCALE

NOTES





BH/DC/KC

COTT P. ZIEGLER
LICENSED PROFESSIONAL ENGINEER New York License No. 091035

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10/15/21

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MIDDLETOWN, NY 1094

Job No. 4.1552.01
File No. 4155201 M605

M6.05

GENERAL HVAC NOTES

- 1. ALL MECHANICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE 2020 MECHANICAL CODE, FIRE CODE, PLUMBING CODE, FUEL GAS CODE, BUILDING CODE, AND ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE, ALL LOCAL CODES AND GENERALLY ACCEPTED STANDARDS.
- 2. MECHANICAL CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, PIPING, VALVES, ACCESS DOORS, HANGERS, FITTINGS AND MISCELLANEOUS COMPONENTS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER THE MECHANICAL SYSTEMS COMPLETE, OPERABLE, AND IN ACCORDANCE WITH APPLICABLE CODES AND GENERALLY ACCEPTED INDUSTRY STANDARDS.
- 3. MECHANICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL EQUIPMENT TO OWNER'S REPRESENTATIVE FOR APPROVAL. DEMONSTRATE NEW MECHANICAL SYSTEMS TO OWNER'S REPRESENTATIVES AND REVIEW MAINTENANCE PROCEDURES.
- 4. MECHANICAL CONTRACTOR SHALL SEAL AROUND ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED WALLS, FLOORS AND CEILINGS WITH HILTI INTUMESCENT FIRE STOP MATERIALS TO MAINTAIN FIRE AND SMOKE RATINGS. DUCTS PENETRATING FIRE RATED WALLS, FLOORS AND CEILINGS SHALL BE INSTALLED WITH FIRE DAMPER AND ACCESS DOORS WHETHER SPECIFICALLY SHOWN ON THE DRAWINGS OR NOT.
- 5. MECHANICAL CONTRACTOR SHALL NOT DRILL OR CUT ANY STRUCTURAL MEMBERS WITHOUT PERMISSION OF ARCHITECT.
- 6. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
- 7. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL WIRING (120V AND 24V) FOR SYSTEMS SHOWN ON MECHANICAL DRAWINGS AND DESCRIBED IN MECHANICAL SPECIFICATIONS, INCLUDING ALL RELAYS, TRANSFORMERS, CONDUIT, JUNCTION BOXES, CONDUCTORS, THERMOSTATS, APPURTENANCES AND ALL NECESSARY EQUIPMENT TO MAKE SYSTEMS COMPLETE
- 8. MECHANICAL CONTRACTOR SHALL PAY FOR ALL PERMITS AND INSPECTION FEES REQUIRED BY LOCAL AUTHORITY HAVING
- 9. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CUTTING, PATCHING, AND PAINTING ASSOCIATED WITH PLUMBING WORK WITH THE GENERAL CONTRACTOR, WHO SHALL PERFORM THE WORK.
- 10. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SHEET METAL AND AIR CONDITIONING MECHANICAL CONTRACTORS NATIONAL ASSOCIATION (SMACNA) DUCT STANDARDS. PROVIDE RADIUS TURNS OR TURNING VANES ON ALL CHANGES IN DIRECTION IN ACCORDANCE WITH SMACNA STANDARDS.
- 11. ALL CONTROL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (N.E.C.) AND ALL LOCAL CODES. ALL CONDUCTORS SHALL BE COPPER WITH THHN INSULATION IN EMT CONDUIT. 120V/1 - MINIMUM CONDUCTOR SIZE #12. 24V -MINIMUM CONDUCTOR SIZE #18. MINIMUM CONDUIT SIZE SHALL BE 34". CONDUIT INSTALLED OUTDOORS SHALL BE GALVANIZED.
- 12. ALL DUCTWORK SHALL BE FABRICATED WITH MINIMUM 26 GAGE GALVANIZED STEEL INCLUDING ROUND DUCTS. 13. FINAL LOCATIONS OF ALL THERMOSTATS AND SENSORS SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION, COORDINATE IN FIELD. THERMOSTATS AND SENSORS SHALL BE LOCATED 4'-0" ABOVE FINISHED FLOOR.
- 14. MECHANICAL CONTRACTOR SHALL PROVIDE ACCESS DOORS FOR ALL VALVES AND DUCT ACCESSORIES CONCEALED IN WALLS/CEILINGS. ACCESS DOORS SHALL HAVE APPROPRIATE FIRE RATING TO MAINTAIN INTEGRITY OF WALL/CEILING. ACCESS DOORS TO BE INSTALLED BY GENERAL CONTRACTOR.
- 15. MECHANICAL CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL PIPING IN FINISHED AREAS WITH GENERAL CONTRACTOR TO ENSURE CONCEALMENT OF ALL PIPING IN WALLS, FLOORS AND CEILINGS.
- 16. MECHANICAL CONTRACTOR SHALL PROVIDE ALL AIR BALANCING FOR ALL NEW MECHANICAL SYSTEMS. PROVIDE ALL NECESSARY MOTOR, DRIVE, BELT CHANGES AND ETC. SEE SPECIFICATIONS FOR BALANCE PROCEDURES AND ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL COMFORT BALANCE ALL MECHANICAL SYSTEMS TO THE SATISFACTION OF ENGINEER/ARCHITECT.
- 17. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SUPPLEMENTAL STRUCTURAL STEEL SUPPORT ASSOCIATED WITH NEW MECHANICAL EQUIPMENT HUNG OR SUPPORTED FROM OR ON THE BUILDING STRUCTURE. MECHANICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO STEEL FABRICATION AND INSTALLATION OF
- 18. MECHANICAL CONTRACTOR SHALL SUBMIT PIPING AND DUCTWORK FULLY COORDINATED SHOP DRAWINGS FOR OWNER'S REPRESENTATIVE REVIEW.
- 19. MECHANICAL CONTRACTOR SHALL INCLUDE IN BID ALL MATERIALS, RIGGING AND LABOR REQUIRED FOR THE COMPLETE AND PROPER INSTALLATION OF THE MECHANICAL SYSTEM.
- 20. MECHANICAL CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK, AND COORDINATE WORK WITH ALL OTHER TRADES.
- 21. PROVIDE ALL PIPE OPENINGS THROUGH PARTITIONS WITH PIPE SLEEVES.
- 22. PROVIDE VOLUME DAMPERS ON ALL EXHAUST, SUPPLY AND RETURN BRANCH DUCTWORK, WHETHER SPECIFICALLY INDICATED ON
- 23. PROVIDE 1" ACOUSTIC LINING IN DUCTWORK A MINIMUM OF 25'-0" FROM INLET AND OUTLET OF ALL FANS. THE FIRST FIGURE OF DUCT SIZE INDICATE DIMENSION OF FACE SHOWN OR INDICATED. DUCT DIMENSIONS SHOWN ON DRAWINGS REFER TO INSIDE CLEAR DIMENSIONS. WHERE DUCTWORK IS LINED, THE CONTRACTOR SHALL INCREASE THE SIZE OF DUCT TO COMPENSATE FOR LINING.
- 24. ALL MOTOR STARTERS AND DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED. DISCONNECT SWITCHES FURNISHED BY THE MECHANICAL CONTRACTOR FOR MECHANICAL EQUIPMENT SHALL BE HEAVY DUTY TYPE AND SHALL BE NEMA 3R WHEN
- 25. MECHANICAL CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIAL INSTALLED UNDER THIS CONTRACT FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION AND ACCEPTANCE BY THE OWNER AND AGREES TO REPLACE DEFECTIVE WORK (INCLUDING ALL REQUIRED LABOR AND MATERIAL) AT NO ADDITIONAL COST TO OWNER DURING THE GUARANTEE PERIOD.
- 26. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING START-UP OF ALL NEW EQUIPMENT, CONTROLS, AND ETC. TO ENSURE CORRECT OPERATION OF INSTALLED DEVICES.
- 27. MECHANICAL CONTRACTOR SHALL PROVIDE OWNER WITH CATALOG DATA, OPERATING INSTRUCTIONS, MAINTENANCE INSTRUCTIONS, AND RECORD (AS-BUILT) DRAWINGS OF ALL COMPLETED WORK. MECHANICAL CONTRACTOR SHALL ENGAGE A FACTORY AUTHORIZED REPRESENTATIVE TO PERFORM START-UP PROCEDURES.
- 28. ALL PIPING SHALL BE TESTED AS HEREINAFTER SPECIFIED. TESTS SHALL BE MADE AFTER ERECTION AND BEFORE COVERING IS APPLIED OR PIPING PAINTED OR CONCEALED AND AS SECTIONS OF MAINS AND GROUPS OR RISERS ARE COMPLETED. WHERE CONTROLS AND ACCESSORIES ARE NOT DESIGNED TO WITHSTAND PIPE TEST PRESSURES, THEY SHALL BE PROPERLY PROTECTED
- AGAINST DAMAGE DURING SUCH TESTS. A. REFRIGERANT PIPING — TESTS SHALL INCLUDE BOTH HIGH AND LOW PRESSURE SIDES OF EACH SYSTEM AT NOT LESS THAN THE LOWER OF THE DESIGN PRESSURE OR THE SETTING OF THE PRESSURE RELIEF DEVICES. DESIGN PRESSURES FOR TESTING SHALL BE THOSE LISTED ON THE CONDENSING UNITS, COMPRESSORS OR COMPRESSOR UNIT NAMEPLATE, AS REQUIRED BY ASHRAE 15-1994. TESTS SHALL BE PERFORMED WITH AN INERT DRIED GAS. PROVIDE CERTIFICATE OF TEST INDICATING NAME OF REFRIGERANT AND FIELD TEST PRESSURE.
- 29. MECHANICAL CONTRACTOR SHALL TRAIN STAFF ON USE OF MECHANICAL SYSTEMS. THE MECHANICAL CONTRACTOR SHALL ENGAGE A FACTORY AUTHORIZED REPRESENTATIVE TO PERFORM THE TRAINING.
- 30. ALL MECHANICAL SYSTEMS INDICATED ON DRAWINGS SHALL BE COMMISSIONED. MECHANICAL CONTRACTOR SHALL PROVIDE ALL SERVICES REQUIRED BY THE OWNER'S COMMISSIONING AGENT AS REQUIRED.
- 31. INSTALL ALL STEAM SUPPLY, RETURN AND PUMP DISCHARGE PIPING TO PERMIT COMPLETE DRAINAGE.
- PITCH HORIZONTAL STEAM MAINS, RETURN MAINS, AND BRANCHES DOWNWARD, 1/2" PER 10 FEET IN DIRECTION OF FLOW. • PITCH STEAM RUNOUTS UPWARD, $\frac{3}{16}$ " PER FOOT IN DIRECTION OF FLOW.
- PITCH RETURN BRANCHES AND RUNOUTS DOWNWARD, ¼" PER 10 FEET IN DIRECTION OF FLOW.

MININ	1UM HAN	GER SIZE	S FOR RO	UND DUCT
DIAMETER	MAXIMUM SPACING	WIRE DIAMETER	ROD	STRAP
<u>≤</u> 10" 11" − 18"	12' 12'		1/4" 1/4"	1" X 22 ga. 1" X 22 ga.
19" - 24"	12'	<u> </u>	1/4"	1" X 22 ga.
25" - 36" 37" - 50"	12' 12'		3/8" TWO 3/8"	1" X 20 ga. TWO 1" X 20 ga.
51" - 60"	12'		TWO 3/8"	TWO 1" X 18 ga.
61" - 84"	12'		TWO 3/8"	TWO 1" X 16 ga.

- I. STRAPS AND RODS ARE GALVANIZED STEEL
- 2. TABLE ALLOWS FOR CONVENTIONAL WALL THICKNESS, AND JOINT SYSTEMS PLUS ONE Ib/sf OF INSULATION WEIGHT. IF HEAVIER DUCTS ARE TO BE INSTALLED, ADJUST HANGER SIZES TO BE WITHIN THEIR LOAD LIMITS.

PIPE SIZE	PIPE MAXIMUM HORIZONTAL SPACING (FEET)		· · · · · -	_	TEEL ROD ZE (INCHES)	HANGER TYPE	MAXIMUM VERTICAL SPACING (FEET)			
(INCHES)	COPPER TUBE	STEEL PIPE	PVC PIPE	TUBING	PIPING	STEEL	COPPER TUBE	STEEL PIPE	PVC PIPE	
1/2"	6	8	4	1/4"	3%"	BAND	10	15	10	
3/4"	6	8	4	1/4"	3/8"	BAND	10	15	10	
1"	6	8	4	1/4"	3/8"	BAND	10	15	10	
11/4"	6	9	4	1/4"	3/8"	CLEVIS	10	15	10	
1½"	6	9	4	1/4"	3%"	CLEVIS	10	15	10	
2"	10	10	4	1/4"	3%"	CLEVIS	10	15	10	
2½"	10	12	4	3/8"	1/2"	CLEVIS	10	15	10	
3"	10	12	4	3/8"	1/2"	CLEVIS	10	15	10	
4"		12	4	1/2"	5/8"	CLEVIS OR ROLLER		15	10	
6"		12			3/4"	CLEVIS OR ROLLER		15		

- INSTALL HANGER OR SUPPORT CLOSE TO THE POINT OF CHANGE OF DIRECTION IN ALL PIPE RUNS.
- 2. INSTALL ADDITIONAL HANGERS ON SUPPORTS AT CONCENTRATED LOADS.
- 3. SUPPORT ALL BRANCH PIPING OVER 5'-0" IN LENGTH.
- 4. USE ROLLER TYPE HANGERS (MSS TYPE 41) WHERE PIPING IS SUBJECT TO MOVEMENT CAUSED BY EXPANSION AND CONTRACTION.
- 5. HANGERS AND ANCHORS SHALL BE ATTACHED TO THE BUILDING CONSTRUCTION IN AN APPROVED
- 6. PIPING SHALL BE SUPPORTED AT DISTANCES NOT EXCEEDING THE SPACING SPECIFIED IN SCHEDULE OR IN ACCORDANCE WITH MSS SP-69.

		MII	NIMUM H. RECTAI	_		_	₹		
MINIMUM HALF OF	PAIR 10Ft SP		PAIF 8Ft SPA			PAIF 5Ft SP		PAIF 4Ft SP	
DUCT PERIMETER	STRAP	ROD	STRAP	ROD		STRAP	ROD	STRAP	ROD
P/2 = 30"	1" x 22ga	<i>1</i> /4"	1" x 22ga	1/4"	1	" x 22ga	1/4"	1" x 22ga	1/4"
P/2 = 72"	1" x 18ga	3/8"	1" x 20ga	1/4"	1	" x 22ga	1/4"	1" x 22ga	<i>1</i> /4"
P/2 = 96"	1" x 16ga	3/8"	1" x 18ga	¾"	1	" x 20ga	3/8"	1" x 22ga	3⁄8"
P/2 = 120"	1½" x 16ga	1/2"	1" x 16ga	3⁄8"	1	" x 18ga	3∕8"	1" x 20ga	¾"
P/2 = 168"	1½" x 16ga	1/2"	1" x 16ga	½"	1	" x 16ga	3∕8 "	1" x 18ga	¾"
P/2 = 192"	_	_	1" x 16ga	<i>1</i> /2"	1	" x 16ga	3∕8"	1" x 18ga	¾ "
					SIN	GLE HANG	ER MAXIMU	M ALLOWABLE	LOAD
WHEN STRAPS FASTENERS:	ARE LAP JO	INED USE TH	ESE MINIMUM			STRAP		ROD (D	Dia.)
1" × 18, 20,	22ga — O	N ¼" BOLT				22ga — 26	OLbs.	½" – 27	OLbs.

1" X 16ga

1" X 16ga

1. DIMENSIONS OTHER THAN GAUGE ARE IN INCHES.

PLACE FASTENERS IN SERIES, NOT SIDE BY SIDE.

− TWO ¼" Dia.

− TWO ¾" Dia.

2. TABLES ALLOW FOR DUCT WEIGHT, 1 LB./SF. INSULATION WEIGHT AND NORMAL REINFORCEMENT AND TRAPEZE WEIGHT, BUT NO EXTERNAL LOADS.

1" x 20ga — 32Lbs.

1" x 18ga — 420Lbs.

1" x 16ga — 700Lbs.

1½" x 16ga — 1100Lbs.

¾" − 680Lbs.

½" − 1250Lbs.

%" − 2000Lbs.

 $\frac{3}{4}$ " - 3000Lbs.

- 3. STRAPS ARE GALVANIZED STEEL.
- 4. ALLOWABLE LOADS FOR P/2 ASSUME THAT DUCTS ARE 16 GA. MAXIMUM, EXCEPT WHEN MAXIMUM DUCT DIMENSION (W) IS OVER 60" THEN P/2 MAXIMUM IS 1.25 W.

	LING MINIMU COMMERCIA THICKNESS IN INCHE	\L	JLATION	
		NOMINAL PIPE DIA	METER	
FLUID	< 1-1/2"	1-1/2" < 4.0"	4.0" to 8.0"	≤ 8.0"
REFRIGERANT	1.0	1.0	1.0	1.0
CONDENSATE	1.0	1.0	1.0	1.0
GLYCOL WATER	1.5	1.5	1.5	1.5
STEAM	2.5	2.5	3.0	3.0
STEAM CONDENSATE	2.5	2.5	3.0	3.0

INSTALLED WITH PVC JACKETING.

- 1. PIPE COVERING SHALL BE FIBERGLASS PREFORMED PIPE AND PREMOLDED FITTING INSULATION WITH: FIRE RETARDANT VAPOR BARRIER JACKET, 0.23 K-FACTOR AT 75°F
- MEAN TEMPERATURE, FLAME SPREAD = 25, SMOKE DEVELOPED = 50. ALL INTERIOR AND EXTERIOR PIPING, FITTINGS, AND VALVES SHALL BE INSTALLED WITH 20 MIL THICK, WHITE PVC JACKETING. PVC JACKETING SHALL BE HIGH IMPACT RESISTANT,
- UV RESISTANT COMPLYING WITH ASTM D 1784, CLASS 16354-C. PROVIDE FACTORY FABRICATED FITTING AND VALVE COVERS WHERE AVAILABLE. REFRIGERANT AND CONDENSATE PIPE INSULATION SHALL BE FLEXIBLE ELASTOMERIC FOAM SIMILAR TO ARMAFLEX. EXTERIOR INSULATIONS TO BE COATED WITH ARMAFLEX WB OR BE

		SYMBOLS AN		ATIONO	
SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION
CD -	— DESIGNATION	OFILING DIFFLICED	_	МВН	1000 BRITISH THERMAL UNITS PER HOUR
CFM -	— AIRFLOW	CEILING DIFFUSER		MCA	MINIMUM CIRCUIT AMPACITY
(RR) -	— DESIGNATION	RETURN/EXHAUST REGISTER		MOCP	MAXIMUM OVERCURRENT PROTECTION
CFM -	— AIRFLOW	RETORNY EXTINOST REGISTER	_	NC	NOISE CRITERIA
	AC	AIR CONDITIONING UNIT		MIN.	MINIMUM
	ВНР	BRAKE HORSE POWER		WB	WET BULB TEMPERATURE
	CFM	CUBIC FEET PER MINUTE	_	V	VOLT
	DB	DRY BULB TEMPERATURE	_	AHU	AIR HANDLING UNIT
	dBA	DECIBELS AMBIENT	RR/ER	RR/ER	RETURN/EXHAUST REGISTER
Ø	DIA	DIAMETER OR PHASE	∑ CD	CD	CEILING DIFFUSER
	EAT	ENTERING AIR TEMPERATURE		-	SUPPLY/OUTSIDE AIR INTAKE DUCT UP
	EER	ENERGY EFFICIENT RATING		_	SUPPLY/OUTSIDE AIR INTAKE DUCT DOWN
	HVAC	HEATING VENTILATING AND AIR CONDITIONING UNIT		-	RETURN/EXHAUST AIR DUCT UP
	ESP	EXTERNAL STATIC PRESSURE	[-	RETURN/EXHAUST AIR DUCT DOWN
	°F	FAHRENHEIT	6 x 8	-	DUCT SIZE
	FLA	FULL LOAD AMPS	<u> </u>	-	ACOUSTIC LINING
	FPM	FEET PER MINUTE	VD T	VD	VOLUME DAMPER
	HP	HORSE POWER	Ū	-	THERMOSTAT/TEMPERATURE SENSOR
	Hz	HERTZ		_	SQUARE VANED ELBOW
	IEER	INTEGRATED ENERGY EFFICIENT RATIO	FD-	FD	FIRE DAMPER WITH ACCESS DOOR
	LAT	LEAVING AIR TEMPERATURE		NEW	NEW WORK
	TSP	TOTAL STATIC PRESSURE		_	DUCT TRANSITION FROM RECTANGLE TO ROUND
	RPM	REVOLUTIONS PER MINUTE		_	FLEXIBLE DUCTWORK
	ACCU	AIR COOLED CONDENSING/ HEAT PUMP UNIT	_	SEER	SEASONAL ENERGY EFFICIENT RATING
	MAX.	MAXIMUM	_	А	AMPS
	BTUH	BRITISH THERMAL UNITS		DX	DIRECT EXPANSION
	GS&R	GLYCOL WATER SUPPLY & RETURN		LPS	LOW PRESSURE STEAM

MECHAN	NICAL PI	PING MATER	RIAL SCHEDULE	
SERVICE	SIZE (IN)	MATERIAL	TYPE/WEIGHT	STANDARD
CONDENSATE DRAIN	ALL	PVC	SCHEDULE 40 DWV	ASTM D 2665
REFRIGERANT	ALL	COPPER	HARD OR ANNEALED TYPE ACR	ASTM B 280
STEAM	ALL	BLACK STEEL	SCHEDULE 40	ASTM A 53
STEAM CONDENSATE & STEAM VENT	ALL	BLACK STEEL	SCHEDULE 80	ASTM A 53
GLYCOL WATER	4" AND UP	BLACK STEEL	SCHED 40	ASTM A 53
GLYCOL WATER	3" & DOWN	COPPER	HARD DRAWN TYPE L TUBING	ASTM B 88

MECHA	NICAL F	PIPING FITTIN	NG SCHEDULE	
SERVICE	SIZE (IN)	MATERIAL	TYPE/WEIGHT	STANDARD
CONDENSATE DRAIN	ALL	PVC	SCHEDULE 40 DWV SOLVENT CEMENT	ASTM D 3034 ASTM D 2855
REFRIGERANT	ALL	COPPER	SILVER SOLDER 300 PSI	ANSI B 16.22
STEAM	ALL	CARBON STEEL	STANDARD WEIGHT WELDING TYPE	ASME B 16.9
STEAM CONDENSATE & STEAM VENT	ALL	CAST IRON	EXTRA HEAVY WEIGHT SCREWED ENDS	ASME B 16.4
GLYCOL WATER	4" & UP	CARBON STEEL	BUTT WELDED OR FLANGED	ASME ASME B 16.9 234
GLYCOL WATER	3" & DOWN	WROUGHT COPPER	SOLDER	ASME B 16.22

				SING	LE DU	ICT V	AV BO	ox sc	HEDU	JLE				
TA 0	ADEA 05D\(5D	MODEL	SI	ZE	DESIG	N CFM	CFM F	RANGE			ELECTRI	C HEATIN	NG COIL	
TAG	AREA SERVED	MODEL	UNIT	INLET	MAX.	MIN.	MIN.	MAX.	KW	EAT/LAT	MAX. COIL AIR PD.	VOLTS	PHASE	NUMBER OF STEPS
VAV-1	CONFERENCE ROOM 115	DESV	16	16	2400	1600	300	3000	N/A	N/A	N/A	N/A	N/A	N/A
VAV-2	REFER TO PLANS	DESV	08	08	675	350	90	900	N/A	N/A	N/A	N/A	N/A	N/A
VAV-3	REFER TO PLANS	DESV	08	08	600	300	90	900	N/A	N/A	N/A	N/A	N/A	N/A
VAV-4	REFER TO PLANS	DESV	06	06	300	150	45	500	N/A	N/A	N/A	N/A	N/A	N/A
VAV-5	TAPROOM 103	DESV	14	14	1700	1700	300	3000	N/A	N/A	N/A	N/A	N/A	N/A
VAV-6	TAPROOM 103	DESV	12	12	1100	1100	190	2000	N/A	N/A	N/A	N/A	N/A	N/A
VAV-7	LOBBY 102	DESV	14	14	1450	950	300	3000	13	55/98	0.38"	480	3	2
VAV-8	TAPROOM 103	DESV	14	14	1800	150	300	3000	N/A	N/A	N/A	N/A	N/A	N/A
VAV-9	MEN 127 & WOMEN 130	DESV	06	06	350	150	45	500	N/A	N/A	N/A	N/A	N/A	N/A

- VAV BOXES BASED ON TITUS.
- ALL VAV BOXES SHALL BE COMPLETE WITH FACTORY MOUNTED SHEET-METAL CONTROL ENCLOSURE, 24 VOLT CONTROL TRANSFORMER, DISCONNECT SWITCH, HANGER BRACKETS, AND FIBER-FREE CLOSED-CELL POLYMER FOAM INSULATION.
- AUTOMATIC TEMPERATURE CONTROLS CONTRACTOR SHALL FURNISH AND INSTALL ALL VAV BOX CONTROLS WITHIN FACTORY CONTROL ENCLOSURE.
- 4. CONTRACTOR SHALL VERIFY LEFT OR RIGHT HAND CONTROL ENCLOSURE MOUNTING AND PIPING CONNECTIONS PRIOR TO ORDERING.
- MAXIMUM ALLOWANCE STATIC PRESSURE DROP FOR BOX SHALL BE 0.5".
- MAXIMUM DISCHARGE NC<28 AND MAXIMUM RATED NC<30.
- VAV BOXES WITH ELECTRIC REHEAT COILS SHALL BE COMPLETE WITH: INTEGRAL CONTROL PANEL HOUSED IN NEMA 1 ENCLOSURE, PRIMARY AUTOMATIC RESET
- THERMAL CUT-OUT, SECONDARY MANUAL RESET THERMAL CUT-OUT, DIFFERENTIAL PRESSURE AIRFLOW SWITCH, LINE TERMINAL BLOCK, INTEGRAL DOOR INTERLOCK DISCONNECT SWITCH, AND MERCURY CONTACTORS.

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Revisions:

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NGINEER, AND MAY NOT BE

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OF THE ENGINEER.

W. THESE DOCUMENTS REMAII

SYMBOL	MANUFACTURER	CATALOG#	MECHANICAL EQUIPMENT SCHEDULE DESCRIPTION
o i ivibUL	IVIANUFACTUKEK	CATALUG#	CFM RANGE: NECK SIZE:
CD-A	KRUEGER	1400	STEEL HIGH PERFORMANCE CEILING DIFFUSER. MAXIMUM CORE VELOCITY: 550 FPM. MAXIMUM NOISE CRITERIA: 30 NC. SURFACE MOUNTED WITH FRAMES AND BORDERS SUITABLE FOR THE CONSTRUCTION IN WHICH THEY WILL BE INSTALLED, CONTRACTOR TO COORDINATE. BAKED ENAMEL FINISH, COLOR SELECTED BY ARCHITECT. 4-WAY DEFLECTION UNLESS OTHERWISE NOTED ON PLANS. 24" x 24" MODULE SIZE. ALL DIFFUSERS SHALL BE EQUIPPED WITH OPPOSED BLADE VOLUME DAMPER. 0-100
RR-A ER-A ER-B RG-A	KRUEGER	S80H/S580	STEEL RETURN/EXHAUST REGISTER WITH ¾" FIXED BLADE SPACING. MAXIMUM CORE VELOCITY: 500 FPM. MAXIMUM NOISE CRITERIA: 25 NC. SURFACE MOUNTED 35' FIXED DEFLECTION BLADES. BLADES PARALLEL TO LONG DIMENSION UNLESS OTHERWISE NOTED. BAKED ENAMEL FINISH, COLOR SELECTED BY ARCHITECT. REGISTERS SHALL HAVE FRAMES AND BORDERS SUITABLE FOR THE CONSTRUCTION IN WHICH THEY WILL BE INSTALLED, CONTRACTOR TO COORDINATE. REGISTERS SHALL BE PROVIDED WITH OPPOSED BLADE VOLUME DAMPERS. UNLESS OTHERWISE NOTED ON PLANS REGISTERS AND GRILLES SHALL BE SIZED PER SCHEDULE. ER—B ONLY, SHALL BE S580 (ALUMINUM CONSTRUCTION). CFM RANGE: 0-150 → 8"x8" 151-250 → 10"x10" 251-350 → 12"x12" 351-725 → 18"x18" 726-1125 → 24"x24"
RG-B	KRUEGER	EGC5	EGGCRATE RETURN GRILLE WITH ALUMINUM BORDER AND CORE. 24" x 24" MODULE SIZE. EXTRUDED ALUMINUM 1½" WIDE BORDER WITH ½"½"½" ALUMINUM GRID. BAKED ENAMEL FINISH, COLOR SELECTED BY ARCHITECT. MAXIMUM NOISE CRITERIA = 20 NC. MAXIMUM CORE VELOCITY = 700 FPM. GRILLE SHALL HAVE FRAMES AND BORDERS SUITABLE FOR THE CONSTRUCTION IN WHICH THEY WILL BE INSTALLED, CONTRACTOR TO COORDINATE.
FD	RUSKIN	DIBD2	1-1/2 HOUR UL555 RATED, SUITABLE FOR INSTALLATION IN WALL AND FLOOR PARTITIONS WITH FIRE RATINGS OF LESS THAN 3 HOURS. DAMPER SHALL BE A COMPLETE FACTORY PACKAGE INCLUDING UL APPROVED ANGLES, WALL SLEEVE, AND BREAKAWAY CONNECTIONS. DAMPER SHALL BE RATED FOR DYNAMIC AIRFLOW CONDITIONS OF 2,000 FPM AND 4.0" ESP. 165°F FUSIBLE LINK. ALL FIRE DAMPERS IN DUCTWORK SERVING AUDITORIUM SHALL HAVE BLADES OUT OF AIRSTREAM.
CD-B	KRUEGER	RM1	STEEL, ROUND CEILING DIFFUSER WITH (3) CONES AND 360° DISCHARGE PATTERN. DIFFUSERS SHALL HAVE ROUND NECK INLETS AND (2) HORIZONTAL DISCHARGE SETTINGS. BAKED ENAMEL FINISH, COLOR SELECTED BY ARCHITECT. MAXIMUM NECK VELOCITY: 600 FPM. MAXIMUM NOISE CRITERIA: 25 NC. PROVIDE NECK MOUNTED OPPOSED BLADE VOLUME DAMPER. CFM RANGE: 0-100
DL-A DL-B DL-C	KRUEGER	DMD	ALUMINUM DIRECT SPIRAL DUCT MOUNTED ADJUSTABLE DOUBLE DEFLECTION DRUM LOUVER WITH ROTATING DRUM. MAXIMUM CORE VELOCITY: 550 MAXIMUM NOISE CRITERIA: 30 NC. SURFACE MOUNTED WITH FRAMES AND BORDERS SUITABLE FOR THE CONSTRUCTION IN WHICH THEY WILL BE INSTALLED, CONTRACTOR TO COORDINATE. COLOR SELECTED BY ARCHITECT. PROVIDE WITH FLOW EXTRACTOR. DL—A SHALL HAVE NOMINAL 24"X6" DUCT SIZE, DL—B SHALL HAVE 48"x6" DUCT SIZE AND DL—C SHALL HAVE 12"x6" NOMINAL DUCT SIZE.
VFD	ABB	_	UNLESS PROVIDED AS PART OF EQUIPMENT BY MANUFACTURER, VARIABLE FREQUENCY DRIVES SHALL BE BASED ON ABB WITH BACNET IP—MS/TP COMMUNICATION FACTORY INSTALLED. THE VFD SHALL BE IN A NEMA 1 TYPE ENCLOSURE WITH A CIRCUIT BREAKER DISCONNNECT SWITCH, INDUSTRIAL RATED OPERATOR CONTROLS, USER TERMINAL STRIP CONNECTIONS AND BYPASS CONTROLS. POWER CIRCUIT CONFIGURATION SHALL BE "POWER Y CIRCUIT". VFD SHALL BE COMPLETE WITH: HAND—OFF—AUTO SWITCH AND MANUAL SPEED POTENTIOMETER, IEC—RATED ISOLATION AND BYPASS CONTACTORS WITH MECHANICAL AND ELECTRICAL INTERLOCKING AND A CLASS 20 OVERLOAD RELAY, 120 V FUSED CONTROL TRANSFORMER AND CIRCUIT BREAKER WITH LOCKOUT/TAG CAPABILITY, AFC—OFF—BYPASS SWITCH, TEST—NORMAL SWITCH, PILOT LIGHT CLUSTER "BO8" (POWER ON, AFC RUN, BYPASS RUN AND AFC FAULT), LINE ISOLATION CONTACTOR AND "HO9" ANALOG OUTPUT. PROVIDE AUXILIARY CONTACTS FOR "STATUS/RUN", "FAULT", AND ANALOG OUTPUT FOR "SPEED".
M	RUSKIN	CD40	UNLESS PROVIDED WITH A SPECIFIC PIECE OF EQUIPMENT MOTORIZED DAMPERS SHALL BE CONSTRUCTED OF 4" DEEP EXTRUDED ALUMINUM AIRFOIL DAMPER BLADES. DAMPER SHALL HAVE OPPOSED BLADES, MOTOR AND LINKAGE. PROPORTIONAL DAMPER ACTUATORS SHALL BE 24VAC/60Hz., MAXIMUM 6 WATTS RUNNING AND 2 WATTS HOLDING POWER CONSUMPTION, COMPLETE WITH DISCONNECT SWITCH AND END SWITCH KITS, SIMILAR TO BELIMO NF24-SR. PROVIDE 120V TO 24V TRANSFORMER. MOTORIZED DAMPER FOR L-1 SHALL BE TIED TO OWNER PROVIDED BOILER TO ONLY ALLOW BOILER TO OPERATE ONCE DAMPER HAS BEEN PROVEN OPEN.
EQUIPMENT SUPPORT RAILS	THYBAR	TEMS-3	24" HIGH EQUIPMENT SUPPORT RAIL CONSTRUCTED OF WELDED 18 GAUGE GALVANIZED STEEL SHELL, BASE PLATE AND COUNTER FLASHING WITH FACTORY INSTALLED 2"x4" WOOD NAILERS AND INTERNAL BULKHEAD REINFORCEMENT. RAIL LENGTH TO EXTEND 6" ON BOTH ENDS OF EQUIPMENT. EQUIPMENT SUPPORT RAILS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR.
TIME CLOCK	TORK	7100	24 HOUR, SKIP—A—DAY, ELECTROMECHANICAL TIME CLOCK WITH MANUAL OVERRIDE. 120 VOLT, 40 AMP, SPST GENERAL PURPOSE CONTACTS. METAL, INDOOR, NEMA 1 ENCLOSURE. 3 WATTS POWER CONSUMPTION.
EH-1	QMARK	MSPH154324L	PLENUM HEATER. CAPACITY: 5,000 WATTS, 17,060 BTUH, 1000 CFM. ELECTRICAL: 480V/3Ø, 6.51 AMPS. HEATER SHALL HAVE: DIRECT DRIVE MOTOR, ACOUSTICALLY INSULATED WITH FIBERGLASS, ACCESS PANELS ON FRONT OF UNIT, DISCONNECT SWITCH, FILTER RACK ON INLET, INLET AND OUTLET SCREENS, THERMAL SAFETY CUTOUTS, FAN DELAY CONTROL AND CONCEALED TAMPER—PROOF SINGLE STAGE THERMOSTAT. HEATER SHALL HAVE ZERO CLEARANCE TO COMBUSTIBLE MATERIALS. PROVIDE PERMANENT WASHABLE FILTER.
EH-2	BROMIC HEATING	BH0420035	TUNGSTEN SMART HEAT, CEILING HUNG ELECTRIC INFRARED HEATER. CAPACITY: 6,000 WATTS, 20,470 BTUH. ELECTRICAL: 277V/1ø, 21.7 AMPS. HEATER SHALL HAVE: DOUBLE HEATING ELEMENTS, STAINLESS STEEL CONSTRUCTION, SPECTRAL REFLECTOR, 36" LONG TUBE SUSPENSION KIT, WIRELESS ON/OFF CONTROLLER WITH BUILT—IN TIMER AND REMOTE. REMOTE SHALL BE PAIRED TO CONTROL (3) HEATERS FROM EACH REMOTE AND CREATE (4) ZONES OF HEATING. CONTRACTOR SHALL CONTACT BROMIC HEATING TECHNICAL SUPPORT TO COORDINATE THE SET—UP OF THE TIMER FUNCTION OF THE CONTROLLER. EACH ZONE OF HEATERS SHALL OPERATE FOR A SET AMOUNT OF TIME. CONTRACTOR SHALL COORDINATE DESIRED TIME WITH OWNER. REMOTES SHALL BE INSTALLED TO WALL WITH LOCKDOWN BRACKET. REFER TO ARCHITECTURAL
EH-3	BERNER	ARD12-4144E	PLANS FOR MOUNTING HEIGHT. CEILING MOUNTED, ELECTRIC HEATED AIR CURTAIN. CURTAIN SHALL HAVE (4) 1/2 HP DIRECT-DRIVE, CONTINUOUS-DUTY, TEN SPEED MOTORS, ADJUSTABLE AIR DIRECTIONAL VANES, CUSTOM COLOR POWDER COATING FINISH AND BE 149" IN LENGTH. HEATER CAPACITY: 56,000 WATTS, 28" TEMPERATURE RISE AND 6,348 CFM. ELECTRICAL: DUAL CIRCUIT 480V/3ø, 44.2/33.7 AMPS. FINISH SHALL BE SELECTED BY OWNER. HEATER SHALL HAVE: INTELLISWITCH DIGITAL CONTROLLER, THERMAL CUT-OUT, POWER ON/OFF SWITCH, TEMPERATURE PROBE, HANDHELD REMOTE CONTROLLER WITH LOCKDOWN BRAKCET, DISCONNECT SWITCHES, AND (4) MAGNETIC REED DOOR SWITCHES.
EH-4	BERKO	HUHAA324	HORIZONTAL/VERTICAL UNIT HEATER. CAPACITY: 3,000 WATTS, 10,230 BTUH, 350 CFM. ELECTRICAL: 240V/1ø, 12.5 AMPS. HEATER SHALL HAVE: CONCEALED TAMPER—PROOF THERMOSTAT, MANUAL RESET, TWO—STAGE ELEMENT CONTROL, BIRD SCREEN, INDIVIDUAL ADJUSTABLE LOUVERS WITH 30° DOWNWARD STOPS 18 CALIGE CARINET WALL SWIVEL MOUNTING BRACKETS AND DISCONNECT SWITCH
EH-5	BERKO	FRC4027FNW	STOPS, 18 GAUGE CABINET, WALL SWIVEL MOUNTING BRACKETS, AND DISCONNECT SWITCH. ARCHITECTURAL, HEAVY-DUTY, FAN FORCED WALL HEATER. CAPACITY: 1500 WATTS, 5120 BTUH, 100 CFM. ELECTRICAL: 277V/1ø, 6.3 AMPS. FINISH SHALL BE NORTHERN WHITE. HEATER SHALL HAVE: CONCEALED TAMPER-PROOF THERMOSTAT, MANUAL RESET THERMAL CUT-OUT, CONCEALED POWER ON/OFF SWITCH, BACK BOX, SURFACE MOUNTING FRAME, DISCONNECT SWITCH, AND 14 GAUGE SECURITY FRONT COVER.
MUA-1	CAPTIVE AIRE	A3-D.500-24D	DIRECT GAS FIRED MAKE-UP AIR UNIT WITH 24" DIRECT DRIVE FAN. MOTOR CHARACTERISTICS: 7.5HP, 460V/3\$\(\phi/60\text{Hz}\), 9.6 FLA, PREMIUM EFFICIENCY. SUPPLY PERFORMANCE: MAXIMUM CFM 5250, MINIMUM CFM 3500, 1426 RPM, 1.2" ESP, 5.3 BHP, 9°F EAT, 66°F TEMPERATURE RISE, GAS INPUT 387.9 MBH, AND GAS OUTPUT 356.9 MBH. UNIT SHALL BE COMPLETE WITH: 0°-150°F DISCHARGE TEMPERATURE CONTROL, SLOPED FILTERED INTAKE WITH METAL MESH FILTERS, 24" HIGH INSULATED ROOF CURB, MOTORIZED BACKDRAFT DAMPER, LOW FIRE START, INLET AND MANIFOLD GAS PRESSURE GAUGES, AND SEPARATE 120V WIRING PACKAGE.
HVAC-1	DAIKIN	FTQ24TAVJDU	HEAT PUMP AIR HANDLER UNIT. NOMINAL COOLING 2 TON (24,000 BTUH), HEATING 27,000 BTUH @ 5° OAT, HIGH EFFICIENT MULTI-SPEED BLOWER MOTOR, DISCONNECT SWITCH, DRAIN PAN LEVEL SENSOR, AND FILTER. 800 CFM @ .9" W.C. (10.3 EER). REFRIGERANT R-410A - 208V/1, 4.9 MCA, AND 15 MOCP.
HP-1	DAIKIN	RZQ24TAVJUA	COMPRESSOR/CONDENSER HEAT PUMP UNIT WITH INVERTER COMPRESSOR. NOMINAL COOLING 2 TON, HEATING 27,000 BTUH @ 5° OAT. PROVIDE WITH NEMA 3-R DISCONNECT SWITCH AND EEV VALVE. (15.2 SEER)/(10.7 HSPF). REFRIGERANT R-410A - 208V/1, 16.5 MCA AND 20 MOCP.
L-1	RUSKIN	ELF6375DX	EXTRUDED ALUMINUM, DRAINABLE STATIONARY LOUVER. FRAME: 6" DEEP, EXTRUDED ALUMINUM WITH 0.081" NOMINAL WALL THICKNESS. BLADES: EXTRUDED ALUMINUM, DRAINABLE, 0.081" NOMINAL WALL THICKNESS, AND 37.5" BLADE ANGLE. LOUVER SHALL HAVE 54% FREE AREA. LOUVER SHALL HAVE MILL FINISH, BIRD SCREEN, EXTENDED SILL AND INSTALLATION ANGLE. LOUVER SIZE: 36"x30" WITH 3.97 FT ² FREE AREA. LOUVER SHALL BEAR THE AMCA SEAL.
AC-1	DAIKIN	FCQ24TAVJU	CEILING CASSETTE, 4-WAY AIRFLOW PATTERN, INDOOR UNIT WITH BUILT-IN CONDENSATE PUMP. UNIT SHALL BE COMPLETE WITH DISCONNECT SWITCH, AND BRC1E73 REMOTE CONTROLLER. PERFORMANCE: 777 CFM, 24,000 BTUH COOLING CAPACITY AT 80°F DB/67°F WB EAT AND 95°F AMBIENT, 27,000 BTUH HEATING CAPACITY AT 70°F DB/60°F WB EAT AND 47° AMBIENT. ELECTRICAL: 208V/1¢/60Hz.
CP-1	BELL & GOSSETT	WC6-20B	SIMPLEX CONDENSATE PUMP SET. CAPACITY 6,000 EDR, PUMPING 9 GPM AT 22 PSI DISCHARGE PRESSURE. CAST IRON RECEIVER WITH 6 GALLON CAPACITY. MOTORS SHALL BE ½ HP, 3500 RPM, 120V/1ø/60Hz. SYSTEM SHALL BE COMPLETE WITH: BASKET INLET STRAINER, CLOSE COUPLED BRONZE FITTED PUMP, RENEWABLE BRONZE WEAR RING, STAINLESS STEEL MOTOR SHAFT, CARBON SEAL FACES, DOUBLE POLE

FAN SCHEDULE										
DESIGNATION	EF-1	EF-2	EF-3	EF-4	EF-5	EF-6	EF-7	EF-8		
LOCATION	ROOF									
AREA SERVED	KITCHEN EXHAUST HOOD	DISHWASHER EXHAUST HOOD	REFER TO PLANS	REFER TO PLANS	KITCHEN 117	LAB 105F00M	ELEC. 116	IT ROOM		
MODEL	DU240HFA	DU50HFA	G-100-VG	G-120-VG	G-100-VG	G-09-VG	G-095-VG	G-080-VG		
CFM (MAX./MIN.)	6,000/-	1,000/-	500/-	1,350/-	850/-	150/-	250/-	150/-		
ВНР	2.85	.13	0.15	0.37	0.23	0.05	0.1	0.03		
HP	5	1/2	1/4	1/2	1/4	1/4	1/6	1/10		
RPM (MAX./MIN.)	994/-	1081-	1535/-	1595/-	1574/-	1404/-	1671/-	1319/-		
ESP (IN H₂O)	1.3"	.5"	0.88"	1.0"	0.91"	0.56"	0.78"	0.39		
VOLTS/Ø	460/3	115/1	115/1	115/1	115/1	115/1	115/1	115/1		
STARTER TYPE	NEMA 3R DISCONNECT SWITCH									
SOUND DATA (dBA/SONES)	-/21	-/8.6	52/6.4	65/13.2	57/8.4	52/6.1	60/11.1	51/6.1		

- ANS EXCEPT EF-1 AND EF-2 BASED ON GREENHECK. EXHAUST FANS EF-1 AND EF-2 BASED ON CAPTIVE AIRE. ALL MOTORS 1 HP AND LARGER SHALL BE PREMIUM EFFICIENCY. FANS PROVIDED WITH VARIABLE FREQUENCY DRIVES WITH DISCONNECT SWITCHES, SHALL HAVE INVERTER RATED PREMIUM EFFICIENCY MOTORS SUITABLE FOR VARIABLE SPEED AND ORQUE APPLICATIONS. VARIABLE FREQUENCY DRIVES SHALL BE CAPABLE OF BY-PASS OPERATION. TURN DOWN RATIO OF 10:1. VFD TO BE PURCHASED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
- ALL MOTORS TO INCLUDE THERMAL OVERLOAD. ROVIDE ONE EXTRA SET OF BELTS FOR EACH BELT DRIVEN FAN. ALL BELT DRIVEN FANS SHALL HAVE VARIABLE PITCH
- ALL FANS SHALL BE PROVIDED WITH MOTORIZED BACKDRAFT DAMPERS CONSTRUCTED OF A GALVANIZED STEEL FRAME AND LUMINUM BLADES WITH SEALS. MOTORIZED DAMPER VOLTAGE SHALL BE 120 VOLTS. NOT REQUIRED FOR EF-1.
- XHAUST FANS 3,4,5,6,7 AND 8 SHALL BE PROVIDED WITH THE FOLLOWING: VARI-GREEN EC MOTOR WITH MOUNTED POTENTIOMETER DIAL, BIRDSCREEN, CURB SEAL AND 24" HIGH ROOF CURB WITH DAMPER TRAY.
- XHAUST FAN EF-1 SHALL BE PROVIDED WITH THE FOLLOWING: GREASE CLASSIFICATION TESTING, UL 705 AND UL 762. 24" HIGH VENTED AND HINGED ROOF CURB, AND GREASE CUP. XHAUST FAN EF-2 SHALL BE PROVIDED WITH THE FOLLOWING: BIRDSCREEN, 24" HIGH VENTED AND HINGED ROOF CURB
- WITH DAMPER TRAY, AND ECM EXHAUST WIRING PACKAGE. PROVIDE MANUAL ON/OFF LOCAL SWITCH FOR EF-6 CONTROL.
- ALL FANS SHALL BE PROVIDED WITH DISCONNECT SWITCH AT UNIT FOR SERVICE. OUTDOOR DISCONNECT SWITCHES SHALL BE F-7 AND EF-8 SHALL BE CONTROLLED BY ROOM MOUNTED LINE VOLTAGE THERMOSTAT.
- ROOF CURBS AND EQUIPMENT SUPPORT RAILS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED BY ENERAL CONTRACTOR.

MINIMUM DUCT INSULATION

COMMERCIAL

ALL SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHEN LOCATED IN UNCONDITIONED SPACES AND WITH A MINIMUM OF R-12 INSULATION WHEN LOCATED OUTSIDE THE BUILDING ENVELOPE. WHEN LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY A MINIMUM OF R-12 INSULATION.

EXCEPTIONS:

1. WHEN LOCATED WITHIN EQUIPMENT. . WHEN THE DESIGN TEMPERATURE DIFFERENCE BETWEEN THE INTERIOR AND EXTERIOR OF THE DUCT OR PLENUM DOES NOT EXCEED 15°F

ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK, SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC-PLUS- EMBEDDED FABRIC SYSTEMS OR TAPES. TAPES AND MASTICS USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. <u>UNLISTED</u> DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS.

NOTE:

DUCT INSULATION, COVERINGS AND LINING MATERIALS AND ADHESIVES SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25, AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50, IN ACCORDANCE WITH 2020 MECHANICAL CODE OF NEW YORK STATE SECTION 604.3.

NOTE:

1. ARCHITECT SHALL SELECT FINISH COLORS FOR ALL MECHANICAL EQUIPMENT VISIBLE WITHIN FINISHED SPACES OR ON EXTERIOR OF BUILDING. COLOR CHOICES FOR SELECTION SHALL BE MANUFACTURER'S FULL RANGE OF BOTH STANDARD AND CUSTOM COLOR/FINISHES UNLESS OTHERWISE NOTES.

•FIELD POWERED 115 VOLT GFI OUTLET

• COMPARATIVE ENTHALPY ECONOMIZER. • STAINLESS STEEL DRAIN PANS.

•5 YEAR COMPRESSOR PARTS WARRANTY.

•10 YEAR GAS HEAT EXCHANGER PARTS WARRANTY.

•INTELLIGENT EQUIPMENT MODULE FOR REMOTE WEB ACCESS.

• INVERTER RATED PREMIUM EFFICIENCY MOTORS SUITABLE FOR VARIABLE SPEED AND TORQUE APPLICATIONS.

5. ALL UNITS SHALL BE PROVIDED WITH VARIABLE FREQUENCY DRIVES AND POWERED, MODULATING EXHAUST FANS.

6. RTU-1, RTU-2, RTU-3, RTU-5 AND RTU-6 SHALL BE PROVIDED WITH BY-PASS DAMPER FOR ENERGY RECOVERY WHEEL. 7. RTU-3 AND RTU-5 SHALL BE SUPPLIED WITH OUTDOOR AIR MONITORING STATION.

• COMBO DIGITAL TEMP AND HUMIDITY SENSOR W/ADJ SETPOINT AND TENENT OVERRIDE

4. ROOF CURBS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR FOR INSTALLATION.

NON-FUSED DISCONNECT SWITCH

•LOW AMBIENT CONTROL. • 24" HIGH ROOF CURB.

DESIGNATION	RTU-1	RTU-2	RTU-3	RTU-4	RTU-5	RTU-6
AREA SERVED	REFER TO	REFER TO	REFER TO	REFER TO	REFER TO	REFER TO
MODEL NUMBER	PLANS DPS020A	PLANS DPS015A	PLANS DPS016A	PLANS DPS015A	PLANS DPS012A	PLANS DPS020A
NOMINAL CAPACITY (TONS)	20	15	16	15	12	20
WEIGHT OF UNIT (POUNDS)	4441	2951	4441	2711	2788	4524
EER/IEER	11.0/19.6	10.8/17.5	11.9/20.1	10.8/17.5	11.2/17.6	11.0/19.6
·	11.0/19.6	10.6/17.5	11.9/20.1	10.6/17.5	11.2/17.0	11.0/19.6
DESIGN DATA:	Т				Γ	
SUPPLY AIR (CFM)	6,400	4,350	6,400	4,800	4,000	8,000
OUTDOOR AIR (CFM)	3,510	2,400	3,040	1,800	2,400	3,000
CONDENSER DATA:						
COMPRESSOR No./TYPE	1/SCROLL	2/SCROLL	1/SCROLL	2/SCROLL	2/SCROLL	1/SCROLL
CAPACITY CONTROL	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING
REFRIGERANT TYPE	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
COMPRESSOR (AMPS) EACH	30.1	7.9/12.8	22.9	7.9/12.8	6.8/7.9	30.1
No. OF FANS/No. OF MOTORS	1/1	2/2	1/1	2/2	2/2	1/1
FAN FLA (AMPS) EACH	,	1.8	,	1.8	1.8	3.5
· · · · · · · · · · · · · · · · · · ·	3.5		3.5			
No. OF ROWS/FPI	1/23	1/21	1/23	1/21	1/23	1/23
AMBIENT TEMPERATURE (°F)	95	95	95	95	95	95
FILTER DATA:						
TYPE	2" MERV 8 &	2" MERV 8 & 4" MERV 14	2" MERV 8 & 4" MERV 14	2" MERV 8 & 4" MERV 14	2" MERV 8 & 4" MERV 14	2" MERV 8 & 4" MERV 14
FACE AREA (SQ.FT.)	4" MERV 14 27.0	4 MERV 14 18.0	4 MERV 14 27.0	4 MERV 14 18.0	4 MERV 14 18.0	4 MERV 14 27.0
QUANTITY/SIZE (In.)	9/18x24x2	6/18x24x2	9/18x24x2	6/18x24x2	6/18x24x2	9/18x24x2
	9/18x24x4	6/18×24×4	9/18×24×4	6/18×24×4	6/18x24x4	9/18x24x4
EVAPORATOR COIL DATA: FACE AREA (SQ. FT.)	21.4	15.4	18.9	15.4	15.4	21.4
· ,						21.4
No. OF ROWS/FPI	4/15	6/15	4/15	6/15	4/15	4/15
EAT (°F) DB/WB	79.0/66.2	79.8/66.4	77.4/64.6	81.4/67.1	79.8/66.6	77.4/64.8
LAT (°F) DB/WB	53.1/53.1	53.4/53.4	55.0/54.9	55.2/55.2	54.5/54.5	54.4/54.2
FACE VELOCITY (FPM)	299.1	281.9	338.6	311.1	259.2	373.8
TOTAL/SENSIBLE CAP. (MBH)	252.1/180.5	172.4/125.6	185.9/156.4	176.9/137.2	148.7/110.7	255.3/202.0
GAS HEATING DATA:						
INPUT (MBH)	600	400	600	300	400	600
CAPACITY (MBH)	480	320	480	240	320	480
EAT/LAT (*F) DB	29.4/98.5	29.1/96.9	33.8/102.9	40.6/86.7	26.0/99.7	40.6/95.9
CAPACITY CONTROL	MODULATING 12:1	MODULATING 10:1	MODULATING 12:1	MODULATING 10:1	MODULATING 10:1	MODULATING 12:1
EFFICIENCY	80%	80%	80%	80%	80%	80%
HOT GAS REHEAT COIL DATA	A:				ı	ı
FACE AREA (SQ. FT.)	21.6	14.6	21.6	14.6	14.6	21.6
TOTAL CAPACITY (MBH)	116.8	78.3	103.8	76.8	67.1	135.8
LAT (°F) DB/WB	70.0/59.5	70.0/59.6	70.0/60.4	70.0/60.6	70.0/60.2	70.0/60.1
ENERGY RECOVERY WHEEL	DATA:					,
EXHAUST AIR (CFM)	3,510	1,575	1,520	_	1.750	3,100
OUTDOOR AIR (CFM)	3,510	2,400	3,040	_	2,400	3,000
PRESSURE DROP (IN H ₂ O)	0.67	0.57	0.58	_	0.57	0.57
:						
MOTOR HP	0.17	0.17	0.17	_	0.17	0.17
MOTOR FLA (AMPS)	0.4	0.4	0.4	_	0.4	0.4
ENERGY RECOVERY WHEEL	FILTER DATA:					
TYPE	2" MERV 8	2" MERV 8	2" MERV 8	_	2" MERV 8	2" MERV 8
FACE AREA (SQ.FT.)	6.0	6.0	6.0	_	6.0	6.0
QUANTITY/SIZE (In.)	2/18x24x2	2/18x24x2	2/18x24x2	_	2/18x24x2	2/18x24x2
ENERGY RECOVERY WHEEL	SUMMER DATA:			,	,	,
		92.0/74.0	92.0/74.0	_	92.0/74.0	92.0/74.0
OUTDOOR AIR EAT (°F) DB/WR	92.0/74.0	32.0777.0	-, · ··•		·	75.0/62.5
. , ,	,		75.0 /62.5	_	75 0 /62 5	, 0.0, 02.0
RETURN AIR EAT (*F) DB/WB	75.0/62.5	75.0/62.5	75.0/62.5 85.1/70.0	_	75.0/62.5 83.1/69.1	91 5 /69 F
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB	75.0/62.5 82.3/69.0	75.0/62.5 83.7/69.4	85.1/70.0	_	83.1/69.1	81.5/68.5
RETURN AIR EAT (°F) DB/WB WHEEL LEAVING T (°F) DB/WB MIXED AIR T (°F) DB/WB	75.0/62.5 82.3/69.0 79.0/66.2	75.0/62.5 83.7/69.4 79.8/66.4	85.1/70.0 79.8/66.2	-	83.1/69.1 79.8/66.6	77.4/64.8
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH)	75.0/62.5 82.3/69.0 79.0/66.2 68.7	75.0/62.5 83.7/69.4 79.8/66.4 43.3	85.1/70.0 79.8/66.2 47.7	_	83.1/69.1 79.8/66.6 45.7	77.4/64.8 63.6
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH)	75.0/62.5 82.3/69.0 79.0/66.2	75.0/62.5 83.7/69.4 79.8/66.4	85.1/70.0 79.8/66.2	-	83.1/69.1 79.8/66.6	77.4/64.8
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.)	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57	75.0/62.5 83.7/69.4 79.8/66.4 43.3	85.1/70.0 79.8/66.2 47.7	- - -	83.1/69.1 79.8/66.6 45.7	77.4/64.8 63.6
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57	75.0/62.5 83.7/69.4 79.8/66.4 43.3	85.1/70.0 79.8/66.2 47.7	- - -	83.1/69.1 79.8/66.6 45.7	77.4/64.8 63.6
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA:	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74	85.1/70.0 79.8/66.2 47.7 0.78/0.81	- - -	83.1/69.1 79.8/66.6 45.7 0.64/0.72	77.4/64.8 63.6 0.51/0.62
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5	- - - -	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4	- - - - -	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1 55.4/44.1	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8 50.8/41.5	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4 50.5/41.4	- - - - - -	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7 50.8/41.4	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8 61.0/47.4
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH)	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1 55.4/44.1 199.4	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8 50.8/41.5 112.7	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4 50.5/41.4 119.2	- - - - - - -	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7 50.8/41.4 121.3	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8 61.0/47.4 180.5
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.)	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1 55.4/44.1	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8 50.8/41.5	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4 50.5/41.4	- - - - - -	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7 50.8/41.4	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8 61.0/47.4
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.)	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1 55.4/44.1 199.4	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8 50.8/41.5 112.7	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4 50.5/41.4 119.2	- - - - - - -	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7 50.8/41.4 121.3	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8 61.0/47.4 180.5
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) SUPPLY FAN DATA:	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1 55.4/44.1 199.4	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8 50.8/41.5 112.7	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4 50.5/41.4 119.2	- - - - - - -	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7 50.8/41.4 121.3	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8 61.0/47.4 180.5
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) SUPPLY FAN DATA: SUPPLY AIRFLOW (CFM)	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1 55.4/44.1 199.4 0.59/0.62	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8 50.8/41.5 112.7 0.76/0.76	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4 50.5/41.4 119.2 0.84/0.83	- - - - - - - - -	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7 50.8/41.4 121.3 0.73/0.74	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8 61.0/47.4 180.5 0.63/0.66
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) SUPPLY FAN DATA: SUPPLY AIRFLOW (CFM) ESP/TSP (IN H2O)	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1 55.4/44.1 199.4 0.59/0.62	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8 50.8/41.5 112.7 0.76/0.76	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4 50.5/41.4 119.2 0.84/0.83	- - - - - - - - - - - - - -	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7 50.8/41.4 121.3 0.73/0.74	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8 61.0/47.4 180.5 0.63/0.66
OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) SUPPLY FAN DATA: SUPPLY AIRFLOW (CFM) ESP/TSP (IN H2O) BHP/HP RPM	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1 55.4/44.1 199.4 0.59/0.62 6,400 1.7/4.0 6.4/10.0	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8 50.8/41.5 112.7 0.76/0.76 4,350 1.75/3.8 4.2/8.0	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4 50.5/41.4 119.2 0.84/0.83 6,400 2.5/4.8 7.75/10.0	- - - - - - - - - - - - 4,800 2.1/3.2 3.9/8.0	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7 50.8/41.4 121.3 0.73/0.74 4,000 2.4/4.3 4.5/8.0	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8 61.0/47.4 180.5 0.63/0.66 8,000 2.1/4.6 8.9/15
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) SUPPLY FAN DATA: SUPPLY AIRFLOW (CFM) ESP/TSP (IN H2O) BHP/HP RPM	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1 55.4/44.1 199.4 0.59/0.62 6,400 1.7/4.0 6.4/10.0 1527	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8 50.8/41.5 112.7 0.76/0.76 4,350 1.75/3.8 4.2/8.0 1599	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4 50.5/41.4 119.2 0.84/0.83 6,400 2.5/4.8 7.75/10.0 1646	- - - - - - - - - - - - - - 4,800 2.1/3.2 3.9/8.0 1539	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7 50.8/41.4 121.3 0.73/0.74 4,000 2.4/4.3 4.5/8.0 1660	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8 61.0/47.4 180.5 0.63/0.66 8,000 2.1/4.6 8.9/15 1699
RETURN AIR EAT ('F) DB/WB WHEEL LEAVING T ('F) DB/WB MIXED AIR T ('F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT ('F) DB/WB RETURN AIR EAT ('F) DB/WB WHEEL LEAVING T ('F) DB/WB MIXED AIR T ('F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) SUPPLY FAN DATA: SUPPLY AIRFLOW (CFM) ESP/TSP (IN H2O) BHP/HP RPM FLA (AMPS)	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1 55.4/44.1 199.4 0.59/0.62 6,400 1.7/4.0 6.4/10.0 1527 12.5	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8 50.8/41.5 112.7 0.76/0.76 4,350 1.75/3.8 4.2/8.0 1599 6.1	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4 50.5/41.4 119.2 0.84/0.83 6,400 2.5/4.8 7.75/10.0	- - - - - - - - - - - - 4,800 2.1/3.2 3.9/8.0	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7 50.8/41.4 121.3 0.73/0.74 4,000 2.4/4.3 4.5/8.0	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8 61.0/47.4 180.5 0.63/0.66 8,000 2.1/4.6 8.9/15
RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT (*F) DB/WB RETURN AIR EAT (*F) DB/WB WHEEL LEAVING T (*F) DB/WB MIXED AIR T (*F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) SUPPLY FAN DATA: SUPPLY AIRFLOW (CFM) ESP/TSP (IN H2O) BHP/HP RPM FLA (AMPS) SINGLE POINT POWER CONI	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1 55.4/44.1 199.4 0.59/0.62 6,400 1.7/4.0 6.4/10.0 1527 12.5 NECTION ELECTRICA	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8 50.8/41.5 112.7 0.76/0.76 4,350 1.75/3.8 4.2/8.0 1599 6.1 AL DATA:	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4 50.5/41.4 119.2 0.84/0.83 6,400 2.5/4.8 7.75/10.0 1646 12.5		83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7 50.8/41.4 121.3 0.73/0.74 4,000 2.4/4.3 4.5/8.0 1660 6.1	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8 61.0/47.4 180.5 0.63/0.66 8,000 2.1/4.6 8.9/15 1699 17.7
RETURN AIR EAT ('F) DB/WB WHEEL LEAVING T ('F) DB/WB MIXED AIR T ('F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) ENERGY RECOVERY WHEEL OUTDOOR AIR EAT ('F) DB/WB RETURN AIR EAT ('F) DB/WB WHEEL LEAVING T ('F) DB/WB MIXED AIR T ('F) DB/WB CAPACITY RECOVERED (MBH) EFFECTIVENESS (TOTAL/SENS.) SUPPLY FAN DATA: SUPPLY AIRFLOW (CFM) ESP/TSP (IN H2O) BHP/HP RPM FLA (AMPS)	75.0/62.5 82.3/69.0 79.0/66.2 68.7 0.47/0.57 WINTER DATA: 0.0/0.0 70.0/52.5 43.3/36.1 55.4/44.1 199.4 0.59/0.62 6,400 1.7/4.0 6.4/10.0 1527 12.5	75.0/62.5 83.7/69.4 79.8/66.4 43.3 0.67/0.74 0.0/0.0 70.0/52.5 35.1/30.8 50.8/41.5 112.7 0.76/0.76 4,350 1.75/3.8 4.2/8.0 1599 6.1	85.1/70.0 79.8/66.2 47.7 0.78/0.81 0.0/0.0 70.0/52.5 28.9/26.4 50.5/41.4 119.2 0.84/0.83 6,400 2.5/4.8 7.75/10.0 1646	- - - - - - - - - - - - - - 4,800 2.1/3.2 3.9/8.0 1539	83.1/69.1 79.8/66.6 45.7 0.64/0.72 0.0/0.0 70.0/52.5 38.0/32.7 50.8/41.4 121.3 0.73/0.74 4,000 2.4/4.3 4.5/8.0 1660	77.4/64.8 63.6 0.51/0.62 0.0/0.0 70.0/52.5 45.9/37.8 61.0/47.4 180.5 0.63/0.66 8,000 2.1/4.6 8.9/15 1699

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S Revisions: PERMIT SET 1 10/15/21

UNAUTHORIZED ALTERATIONS OF ADDITIONS TO THIS DOCUMENT I A VIOLATION OF SECTION 7209 THE NEW YORK STATE EDUCATION LAW. THESE DOCUMENTS REMAIL THE EXCLUSIVE PROPERTY OF TH ENGINEER, AND MAY NOT BE U FOR ANY PURPOSE WHATSOEV WITHOUT THE WRITTEN CONSEN OF THE ENGINEER.

Job No. **4.1552.01**

File No. 4155201 M702

SEQUENCE OF OPERATIONS: 1. <u>GENERAL</u>: A. THIS CONTRACTOR SHALL PROVIDE ALL REQUIRED CONTROL ELEMENTS AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM INCLUDING BUT NOT LIMITED TO CONTACTS, RELAYS, WIRING (24V AND 120V), CONDUIT, CONTROL PANELS, TRANSFORMERS, THERMOSTATS, SENSORS, ACTUATORS, DAMPERS, TIME CLOCKS, SPEED 2. <u>DISHWASHER EXHAUST FAN (EF-2)</u>: A. EXHAUST FAN SHALL OPERATE WHEN THE DISHWASHER IS ACTIVATED. LOCAL CONTROLS WITHIN THE DISHWASHER ASSEMBLY SHALL TURN ON/OFF THE EXHAUST FAN. WHEN THE EXHAUST FAN IS CALLED TO RUN. THE ASSOCIATED MOTORIZED BACKDRAFT DAMPER SHALL OPEN AND THEN THE FAN SHALL TURN ON. WHENEVER THE EXHAUST FAN IS SHUT-DOWN THE ASSOCIATED MOTORIZED DAMPER SHALL CLOSE. PROVIDE ALL CONTROLS REQUIRED TO INTERLOCK EXHAUST FAN OPERATION WITH DISHWASHER ASSEMBLY. 3. TOILET AND GENERAL EXHAUST FANS (EF-3, EF-4 AND EF-5): A. THE EXHAUST FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS AS PROGRAMMED THROUGH A 24-HOUR TIME CLOCK. COORDINATE OCCUPIED HOURS WITH OWNER'S REPRESENTATIVE. WHEN THE EXHAUST FAN IS CALLED TO RUN, THE ASSOCIATED MOTORIZED BACKDRAFT DAMPER SHALL OPEN AND THEN THE FAN SHALL TURN ON. WHENEVER THE EXHAUST FAN IS SHUT-DOWN THE ASSOCIATED MOTORIZED DAMPER SHALL CLOSE. 4. <u>LAB EXHAUST FAN (EF-6)</u>: A. A MANUAL WALL MOUNTED SWITCH, LOCATED IN THE SPACE, SHALL TURN THE FAN ON AND OFF. WHEN THE EXHAUST FAN IS CALLED TO RUN, THE ASSOCIATED MOTORIZED BACKDRAFT DAMPER SHALL OPEN AND THEN THE FAN SHALL TURN ON. WHENEVER THE EXHAUST FAN IS SHUT-DOWN THE ASSOCIATED MOTORIZED DAMPER SHALL CLOSE. 5. <u>EXHAUST FANS (EF-7 AND EF-8)</u>: A. EXHAUST SHALL BE COMMANDED ON/OFF BASED ON SPACE TEMPERATURE. ON A RISE IN SPACE TEMPERATURE ABOVE SET-POINT THE MOTORIZED DAMPER ASSOCIATED WITH THE EXHAUST FAN SHALL OPEN AND THEN THE EXHAUST FAN SHALL TURN ON. THE EXHAUST FAN SHALL CONTINUE TO RUN UNTIL THE SPACE TEMPERATURE DROPS BELOW SET-POINT, AT WHICH POINT THE FAN SHALL STOP AND THE MOTORIZED DAMPER SHALL CLOSE. WHENEVER THE EXHAUST FAN IS SHUT-DOWN THE ASSOCIATED MOTORIZED DAMPER SHALL CLOSE. 6. <u>KITCHEN EXHAUST HOOD EXHAUST FAN AND MAKE-UP AIR UNIT (EF-1 AND MUA-1:</u> A. THE EXHAUST FAN AND MAKE-UP AIR UNIT OPERATION SHALL BE OPERATED BY A FACTORY CONTROL PANEL MOUNTED WITHIN THE KITCHEN EXHAUST HOOD ASSEMBLY. WHENEVER THE HOOD PANEL IS INDEXED ON THE EXHAUST FAN AND THE MAKE-UP AIR UNIT SHALL OPERATE. THE GAS BURNER IN THE MAKE-UP AIR UNIT SHALL FIRE TO MAINTAIN DISCHARGE AIR SET-POINT. WHEN THE MAKE-UP AIR UNIT IS ON, ITS ASSOCIATED INTAKE MOTORIZED DAMPER SHALL BE OPEN. WHEN THE MAKE-UP AIR UNIT IS OFF, ITS ASSOCIATED INTAKE MOTORIZED DAMPER SHALL BE CLOSED. WHENEVER THE SYSTEM IS SHUT-DOWN THE OUTSIDE AIR INTAKE DAMPER SHALL REMAIN CLOSED. PROVIDE ALL CONTROLS REQUIRED TO INTERLOCK EXHAUST FAN AND MAKE-UP AIR UNIT OPERATION TO THE EXHAUST HOOD OPERATION. B. PROVIDE A LOW LIMIT SENSOR IN THE MAKE-UP AIR UNIT DISCHARGE ARRANGED TO PREVENT WINTER DISCHARGE TEMPERATURE FROM DROPPING BELOW 50°F (ADJUSTABLE). C. PROVIDE A HIGH LIMIT SENSOR IN THE MAKE-UP AIR UNIT DISCHARGE ARRANGED TO PREVENT WINTER DISCHARGE TEMPERATURE FROM RISING ABOVE 120°F (ADJUSTABLE). 7. ELECTRIC HEATERS (EH-1, EH-3, EH-4 AND EH-5): A. ELECTRIC HEATERS SHALL BE OPERATED THROUGH FACTORY CONTROLS. A FACTORY THERMOSTAT SHALL ENERGIZE THE ELECTRIC HEATING ELEMENT AS REQUIRED TO MAINTAIN SPACE SET-POINT. WHENEVER ELECTRIC HEATING ELEMENT IS ENERGIZED THE UNIT FAN SHALL BE OPERATIONAL. 8. <u>ELECTRIC HEATER (EH-2)</u>: A. ELECTRIC HEATER SHALL BE MANUALLY CONTROLLED VIA LOCAL CONTROLS PROVIDED WITH ELECTRIC HEATERS. 9. CONSTANT VOLUME GAS FIRED PACKAGED ROOFTOP UNITS (RTU-1, RTU-2, RTU-4 AND RTU-6): GENERAL: UNIT SHALL BE PROVIDED WITH, AND OPERATED THROUGH, A 24-7 PROGRAMMABLE THERMOSTAT WITH NIGHT SET-BACK AND UNIT MOUNTED CONTROLS CAPABLE OF PROVIDING AUTOMATIC OPERATION, SET-POINT ADJUSTMENT AND ALL SEQUENCES INDICATED BELOW. SUMMER OCCUPIED OPERATION: UPON START-UP, THE CONTROL CIRCUITS SHALL BE ENERGIZED. DURING OCCUPIED MODE THE SUPPLY FAN SHALL RUN CONTINUOUSLY. THE OUTSIDE AIR AND RELIEF AIR DAMPERS SHALL OPEN TO THE MINIMUM POSITION AND THE RETURN DAMPER SHALL BE OPEN. A TEMPERATURE SENSOR LOCATED IN THE SUPPLY AIR DUCTWORK SHALL BE ARRANGED TO CYCLE DX COOLING ON/OFF IN STAGES AS REQUIRED TO MAINTAIN A CONSTANT DISCHARGE SFT-POINT WINTER OCCUPIED OPERATION: UPON START-UP, THE CONTROL CIRCUITS SHALL BE ENERGIZED. DURING OCCUPIED MODE THE SUPPLY FAN SHALL RUN CONTINUOUSLY. THE OUTSIDE AIR AND RELIEF AIR DAMPERS SHALL OPEN TO THE MINIMUM POSITION AND THE RETURN DAMPER SHALL BE OPEN. A TEMPERATURE SENSOR LOCATED IN THE SUPPLY AIR DUCTWORK SHALL BE ARRANGED TO MODULATE GAS HEAT AS REQUIRED TO MAINTAIN A CONSTANT DISCHARGE AIR TEMPERATURE. D. <u>ECONOMIZER OPERATION</u>: ON A CALL FOR COOLING WHEN THE AMBIENT OUTDOOR AIR CONDITIONS PERMIT (AS DETERMINED BY DIFFERENTIAL ENTHALPY CONTROLS) THE UNIT CONTROLS SHALL MODULATE THE OUTSIDE AIR, RELIEF AIR AND RETURN AS REQUIRED TO PROVIDE "FREE COOLING" AND MAINTAIN DISCHARGE SET-POINT. DURING ECONOMIZER OPERATION THE DX COOLING AND GAS HEATING SHALL NOT BE OPERATIONAL. CONTROL ACTION SHALL BE THAT AN INCREASE IN SUPPLY AIR TEMPERATURE WILL CAUSE THE OUTSIDE AIR AND RELIEF AIR DAMPERS TO MODULATE TOWARDS THE OPEN POSITION AND THE RETURN AIR DAMPER TO MODULATE TOWARDS THE CLOSED POSITION. A DROP IN TEMPERATURE BELOW SET-POINT WILL CAUSE THE REVERSE TO OCCUR. WHEN THE OUTSIDE AIR AND RELIEF AIR DAMPER OPEN TO FULL POSITION AND A FURTHER CALL FOR COOLING OCCURS THE DX COOLING SYSTEM SHALL OPERATE. WHEN AMBIENT AIR CONDITIONS ARE NO LONGER SUITABLE FOR ECONOMIZER OPERATION THE UNIT CONTROLS SHALL REVERT TO NORMAL OPERATION. MORNING WARM-UP OPERATION: THE UNIT SHALL START AND OPERATE FOR A PREDETERMINED PERIOD AS PROGRAMMED INTO THE UNIT CONTROLLER. DURING THIS CYCLE, THE JTSIDE AIR AND RELIEF AIR DAMPER SHALL BE CLOSED AND THE RETURN AIR DAMPER SHALL BE FULL OPEN. THE GAS HEATING SHALL MODULATE TO MAINTAIN SET—POINT. WHEN ZONE TEMPERATURES ARE WITHIN 2 DEGREES OF SET-POINT THE UNIT SHALL OPERATE IN OCCUPIED MODE. MORNING COOL-DOWN OPERATION: UNIT SHALL START AND OPERATE FOR A PREDETERMINED PERIOD AS PROGRAMMED INTO THE UNIT CONTROLLER. DURING THIS CYCLE, THE OUTSIDE AIR AND RELIEF AIR DAMPER SHALL BE CLOSED AND THE RETURN AIR DAMPER SHALL BE FULL OPEN. DX COOLING SHALL CYCLE TO MAINTAIN SET-POINT. WHEN ZONE TEMPERATURES ARE WITHIN 2 DEGREES OF SET-POINT THE UNIT SHALL OPERATE IN OCCUPIED MODE. UNOCCUPIED OPERATION: UNIT SUPPLY FAN, GAS HEATING AND DX COOLING SHALL CYCLE AS REQUIRED ON A CALL FOR HEATING OR COOLING. DURING THIS MODE, THE OUTSIDE AIR AND RELIEF AIR DAMPERS SHALL BE FULL CLOSED AND THE RETURN AIR DAMPER SHALL BE FULL OPEN. H. LIMIT CONTROLS: PROVIDE HIGH/LOW LIMIT CONTROL SENSORS IN THE SUPPLY FAN DISCHARGE ARRANGED TO OVERRIDE TEMPERATURE CONTROLS AND PREVENT DISCHARGE TEMPERATURE FROM DROPPING BELOW 50 DEGREES F OR RISING ABOVE 110 DEGREES F (ADJUSTABLE). I. <u>MISCELLANEOUS</u>: • WHENEVER THE UNITS ARE SHUT-DOWN THE OUTSIDE AIR AND RELIEF AIR DAMPERS SHALL BE CLOSED AND THE RETURN AIR DAMPER SHALL BE FULL OPEN. UNIT SHALL SHUT-DOWN UPON DETECTION OF SMOKE AS SENSED BY DUCT MOUNTED SMOKE DETECTOR. PROVIDE A FIRESTAT MOUNTED IN THE SUPPLY AIR DUCTWORK ARRANGED TO SHUT-DOWN THE UNIT WHEN SUPPLY AIR TEMPERATURE EXCEEDS 140° (ADJUSTABLE). FIRESTAT SHALL BE MANUALLY RESET TYPE. 10. <u>DUCTLESS SPLIT SYSTEM CEILING CASSETTE UNIT AND HEAT PUMP (AC-1 AND HP-1)</u>: A. SYSTEM SHALL BE OPERATED THROUGH A FACTORY PROVIDED WIRED REMOTE CONTROLLER, CAPABLE OF PROVIDING SET-POINT ADJUSTMENTS AND ALL PROGRAMMING FOR CONTROL SEQUENCES. THE SYSTEM SHALL CYCLE ON/OFF AS REQUIRED TO MAINTAIN SPACE SET-POINT. THE FACTORY INSTALLED CONTROLS SHALL BE CONFIGURED SUCH THAT A LEAK DETECTOR MOUNTED IN THE INDOOR UNIT DRAIN PAN SHALL BE ARRANGED TO SHUT-DOWN THE SYSTEM WHEN WATER IS DETECTED. 11. VARIABLE AIR VOLUME GAS FIRED PACKAGED ROOFTOP UNITS (RTU-3 AND RTU-5): A. GENERAL: UNIT SHALL BE PROVIDED WITH, AND OPERATED THROUGH, A 24-7 PROGRAMMABLE THERMOSTAT WITH NIGHT SET-BACK AND UNIT MOUNTED CONTROLS CAPABLE OF PROVIDING AUTOMATIC OPERATION, SET-POINT ADJUSTMENT AND ALL SEQUENCES INDICATED BELOW. SUMMER OCCUPIED OPERATION: UPON START-UP, THE CONTROL CIRCUITS SHALL BE ENERGIZED. DURING OCCUPIED MODE THE SUPPLY FAN SHALL RUN CONTINUOUSLY. THE OUTSIDE AIR AND RELIEF AIR DAMPERS SHALL OPEN TO THE MINIMUM POSITION AND THE RETURN DAMPER SHALL BE OPEN. A TEMPERATURE SENSOR LOCATED IN THE SUPPLY AIR DUCTWORK SHALL BE ARRANGED TO CYCLE DX COOLING ON/OFF IN STAGES AS REQUIRED TO MAINTAIN A CONSTANT DISCHARGE SET-POINT. WINTER OCCUPIED OPERATION: UPON START-UP, THE CONTROL CIRCUITS SHALL BE ENERGIZED. DURING OCCUPIED MODE THE SUPPLY FAN SHALL RUN CONTINUOUSLY. THE OUTSIDE AIR AND RELIEF AIR DAMPERS SHALL OPEN TO THE MINIMUM POSITION AND THE RETURN DAMPER SHALL BE OPEN. A TEMPERATURE SENSOR LOCATED IN THE SUPPLY AIR DUCTWORK SHALL BE ARRANGED TO MODULATE GAS HEAT AS REQUIRED TO MAINTAIN A CONSTANT DISCHARGE AIR TEMPERATURE D. <u>ECONOMIZER OPERATION</u>: ON A CALL FOR COOLING WHEN THE AMBIENT OUTDOOR AIR CONDITIONS PERMIT (AS DETERMINED BY DIFFERENTIAL ENTHALPY CONTROLS) THE UNIT CONTROLS SHALL MODULATE THE OUTSIDE AIR, RELIEF AIR AND RETURN AS REQUIRED TO PROVIDE "FREE COOLING" AND MAINTAIN DISCHARGE SET-POINT. DURING ECONOMIZER OPERATION THE DX COOLING AND GAS HEATING SHALL NOT BE OPERATIONAL. CONTROL ACTION SHALL BE THAT AN INCREASE IN SUPPLY AIR TEMPERATURE WILL CAUSE THE OUTSIDE AIR AND RELIEF AIR DAMPERS TO MODULATE TOWARDS THE OPEN POSITION AND THE RETURN AIR DAMPER TO MODULATE TOWARDS THE CLOSED POSITION. A DROP IN TEMPERATURE BELOW SET-POINT WILL CAUSE THE REVERSE TO OCCUR. WHEN THE OUTSIDE AIR AND RELIEF AIR DAMPER OPEN TO FULL POSITION AND A FURTHER CALL FOR COOLING OCCURS THE DX COOLING SYSTEM SHALL OPERATE. WHEN AMBIENT AIR CONDITIONS ARE NO LONGER SUITABLE FOR ECONOMIZER OPERATION THE UNIT CONTROLS SHALL REVERT TO NORMAL OPERATION. MORNING WARM-UP OPERATION: THE UNIT SHALL START AND OPERATE FOR A PREDETERMINED PERIOD AS PROGRAMMED INTO THE UNIT CONTROLLER. DURING THIS CYCLE. THE OUTSIDE AIR AND RELIEF AIR DAMPER SHALL BE CLOSED AND THE RETURN AIR DAMPER SHALL BE FULL OPEN. THE GAS HEATING SHALL MODULATE TO MAINTAIN SET-POINT. VARIABLE AIR VOLUME BOXES SHALL BE OPEN. WHEN ZONE TEMPERATURES ARE WITHIN 2 DEGREES OF SET-POINT THE UNIT SHALL OPERATE IN OCCUPIED MODE. MORNING COOL-DOWN OPERATION: UNIT SHALL START AND OPERATE FOR A PREDETERMINED PERIOD AS PROGRAMMED INTO THE UNIT CONTROLLER. DURING THIS CYCLE, THE OUTSIDE AIR AND RELIEF AIR DAMPER SHALL BE CLOSED AND THE RETURN AIR DAMPER SHALL BE FULL OPEN. DX COOLING SHALL CYCLE TO MAINTAIN SET-POINT. VARIABLE AIR VOLUME BOXES SHALL BE OPEN. WHEN ZONE TEMPERATURES ARE WITHIN 2 DEGREES OF SET-POINT THE UNIT SHALL OPERATE IN OCCUPIED MODE. UNOCCUPIED OPERATION: UNIT SUPPLY FAN, GAS HEATING AND DX COOLING SHALL CYCLE AS REQUIRED ON A CALL FOR HEATING OR COOLING. DURING THIS MODE, THE OUTSIDE AIR AND RELIEF AIR DAMPERS SHALL BE FULL CLOSED AND THE RETURN AIR DAMPER SHALL BE FULL OPEN. DURING UNOCCUPIED MODE VARIABLE AIR VOLUME BOXES SHALL BE OPEN. STATIC PRESSURE CONTROLS: PROVIDE A STATIC PRESSURE SENSOR LOCATED IN THE MAIN SUPPLY DUCT APPROXIMATELY TWO-THIRDS (%) DOWNSTREAM ALONG THE LONGEST RUN. CONTROLS SHALL BE ARRANGED TO MODULATE THE UNIT VARIABLE FREQUENCY DRIVE ON THE SUPPLY FAN TO MAINTAIN A CONSTANT STATIC PRESSURE. A RISE IN PRESSURE SHALL CAUSE THE VARIABLE FREQUENCY DRIVE TO REDUCE FAN SPEED. A DROP IN STATIC PRESSURE SHALL CAUSE THE REVERSE TO TAKE PLACE. LIMIT CONTROLS: PROVIDE HIGH/LOW LIMIT CONTROL SENSORS IN THE SUPPLY FAN DISCHARGE ARRANGED TO OVERRIDE TEMPERATURE CONTROLS AND PREVENT DISCHARGE TEMPERATURE FROM DROPPING BELOW 50 DEGREES F OR RISING ABOVE 110 DEGREES F (ADJUSTABLE). MISCELLANEOUS: WHENEVER THE UNITS ARE SHUT-DOWN THE OUTSIDE AIR AND RELIEF AIR DAMPERS SHALL BE CLOSED AND THE RETURN AIR DAMPER SHALL BE FULL OPEN. UNIT SHALL SHUT-DOWN UPON DETECTION OF SMOKE AS SENSED BY DUCT MOUNTED SMOKE DETECTOR. PROVIDE A FIRESTAT MOUNTED IN THE SUPPLY AIR DUCTWORK ARRANGED TO SHUT-DOWN THE UNIT WHEN SUPPLY AIR TEMPERATURE EXCEEDS 140° (ADJUSTABLE). FIRESTAT SHALL BE MANUALLY RESET TYPE. 12. <u>VARIABLE AIR VOLUME BOXES:</u> A. IN OCCUPIED MODE THE SPACE SENSOR SHALL MODULATE THE VAV BOX DAMPER ASSEMBLY TO MAINTAIN SET-POINT. IN SUMMER MODE A RISE IN SPACE TEMPERATURE SHALL CAUSE THE VAV DAMPER TO MODULATE OPEN, AS THE SPACE APPROACHES SET-POINT, THE DAMPER SHALL MODULATE TO THE MINIMUM POSITION. IN THE WINTER MODE A DROP IN SPACE TEMPERATURE SHALL CAUSE THE VAV DAMPER TO MODULATE OPEN, AS THE SPACE APPROACHES SET-POINT, THE DAMPER SHALL MODULATE TO THE MINIMUM POSITION. THE DDC CONTROLLER IN THE ROOFTOP UNIT SHALL RESET THE SUPPLY AIR TEMPERATURE BASED ON SATISFYING THE VAV ZONE THAT IS EITHER FURTHEST FROM SET-POINT OR THE VAV ZONE THAT HAS THE HIGHEST AIR-FLOW WHILE MAINTAINING SET-POINT. WHEN THE ROOFTOP UNIT IS OPERATING IN THE UNOCCUPIED, MORNING COOL-DOWN OR MORNING WARM-UP MODE THE VAV BOXES SHALL REMAIN IN THE FULL OPEN D. FOR VAV-7 ONLY WITH ELECTRIC REHEAT COIL, UPON A FURTHER CALL FOR SPACE HEATING THE ELECTRIC REHEAT COIL SHALL BE ENERGIZED IN STAGES AS REQUIRED TO MAINTAIN SPACE TEMPERATURE SET-POINT. 13. AIR HANDLER UNIT AND HEAT PUMP (HVAC-1 AND HP-1): A. SYSTEM SHALL BE OPERATED THROUGH A FACTORY PROVIDED WIRED REMOTE CONTROLLER, CAPABLE OF PROVIDING SET-POINT ADJUSTMENTS AND ALL PROGRAMMING FOR CONTROL SEQUENCES. THE SYSTEM SHALL CYCLE ON/OFF AS REQUIRED TO MAINTAIN SPACE SET-POINT. THE FACTORY INSTALLED CONTROLS SHALL BE CONFIGURED SUCH THAT A LEAK DETECTOR MOUNTED IN THE INDOOR UNIT DRAIN PAN SHALL BE ARRANGED TO SHUT-DOWN THE SYSTEM WHEN WATER IS DETECTED. B. WHENEVER THE SYSTEM IS OPERATING IN THE OCCUPIED MODE THE MOTORIZED OUTSIDE AIR INTAKE DAMPER SHALL BE OPEN. WHENEVER THE SYSTEM IS OPERATING IN THE UNOCCUPIED MODE THE MOTORIZED OUTSIDE AIR INTAKE DAMPER SHALL BE CLOSED.

Revisions:

10/15/21

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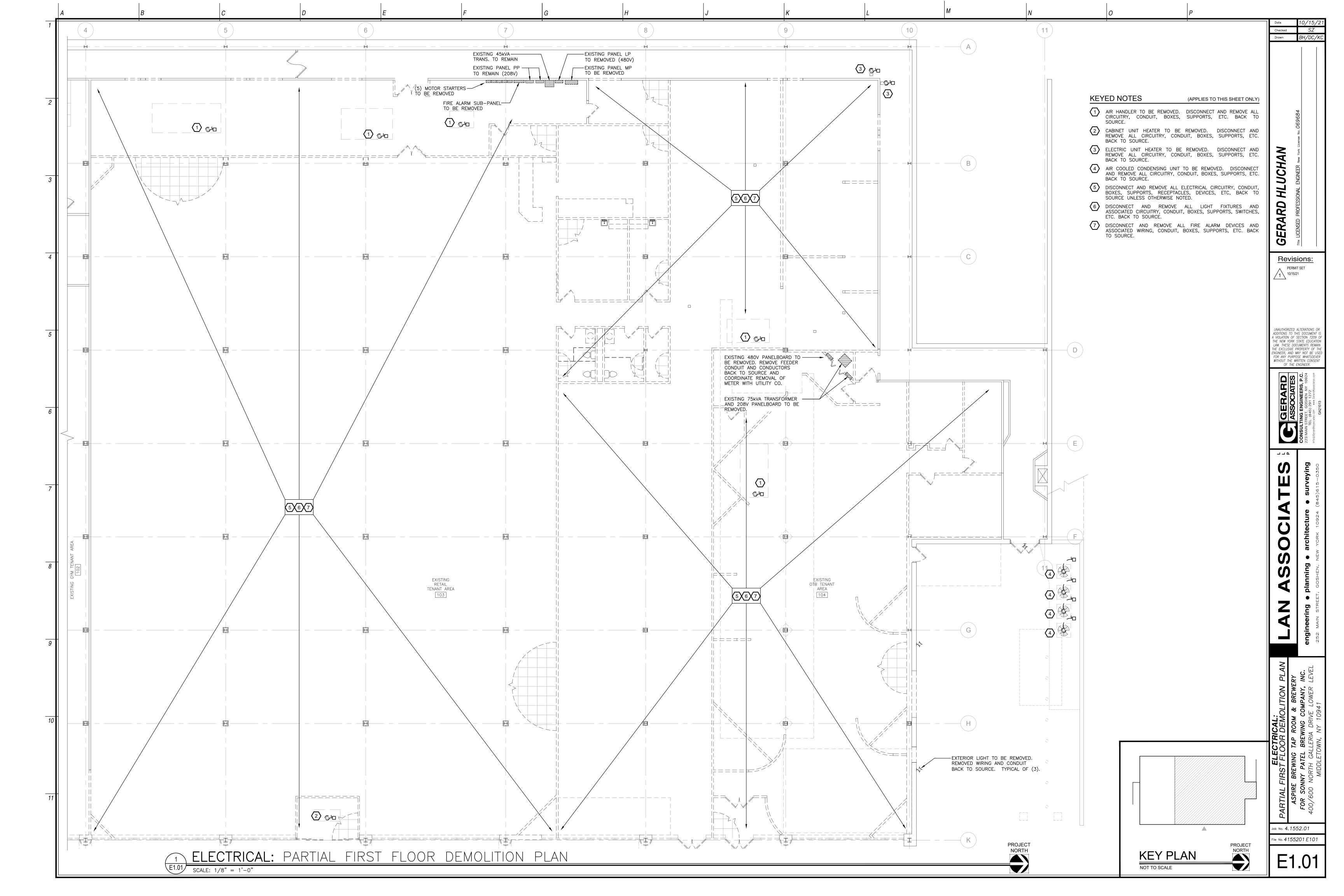
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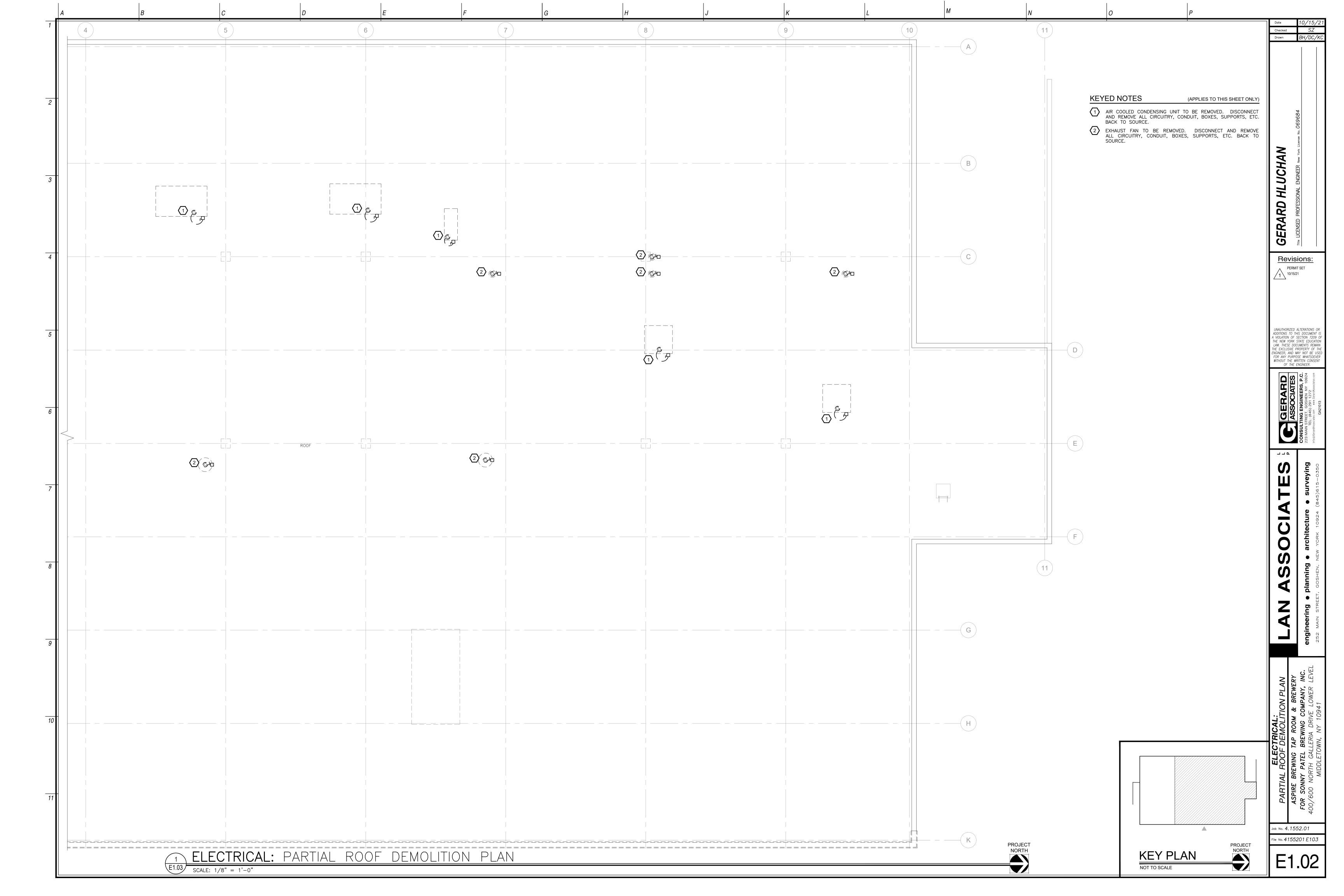
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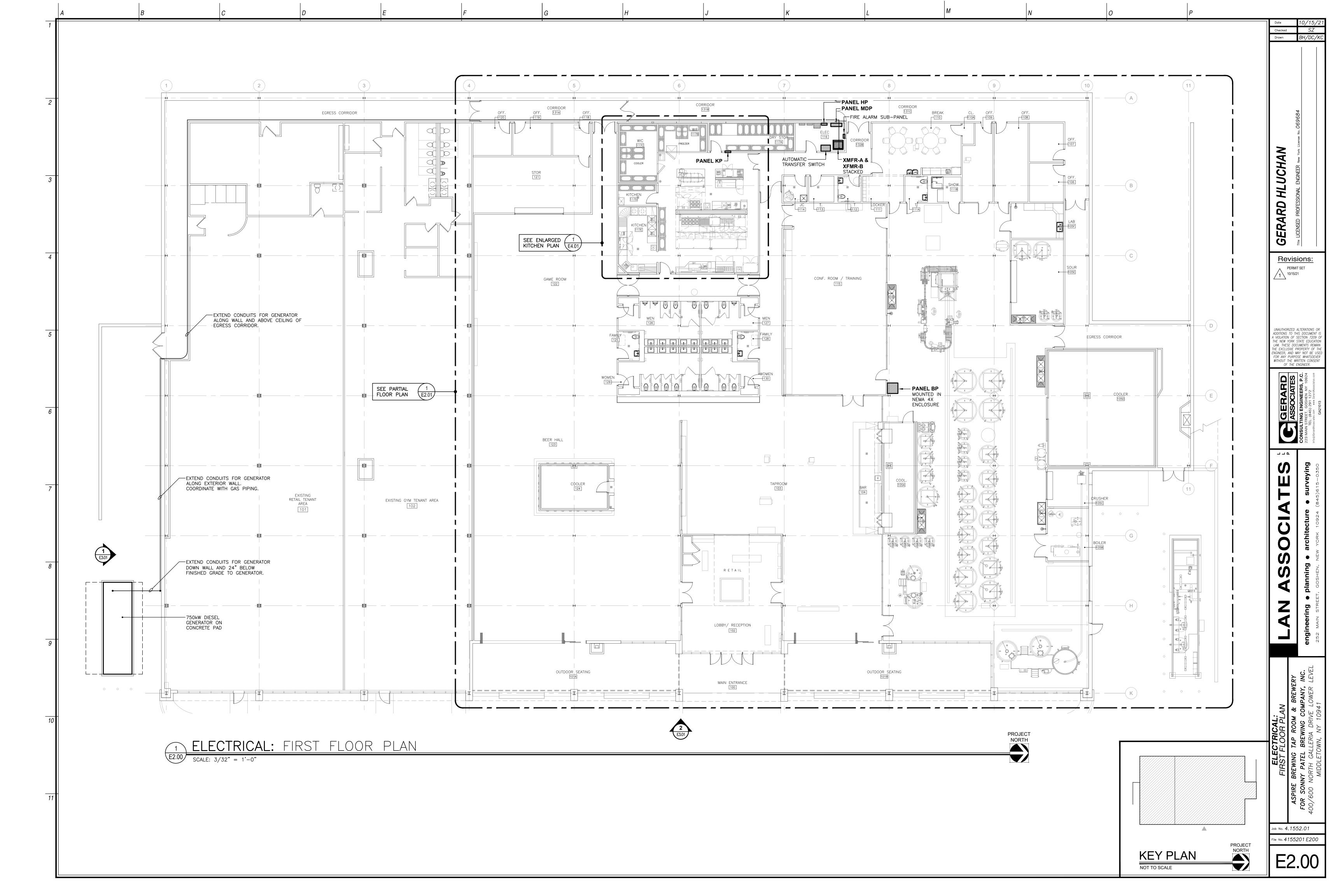
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INY PATEL BREWING COMPANY, INC.
NORTH GALLERIA DRIVE LOWER LEVEL

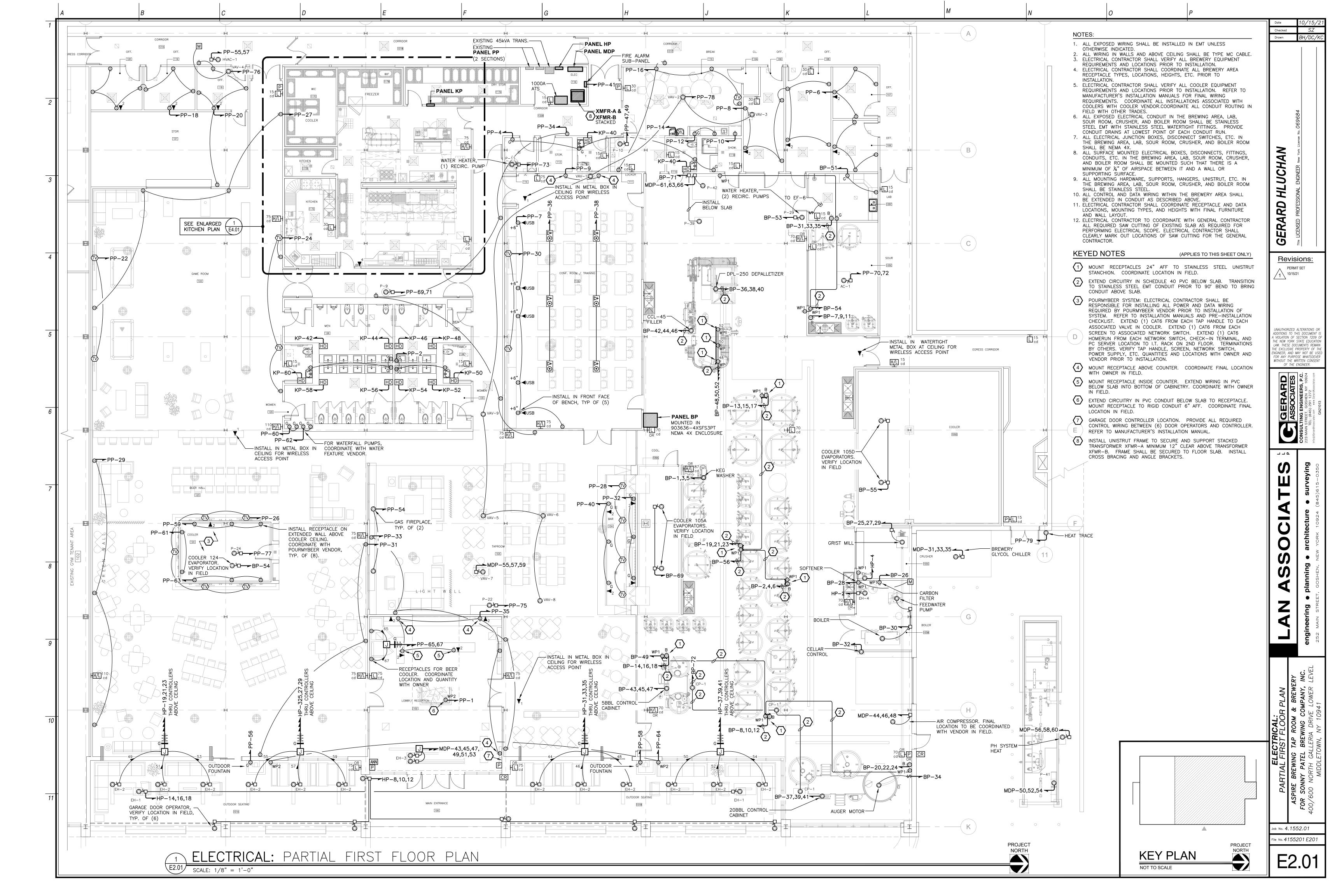
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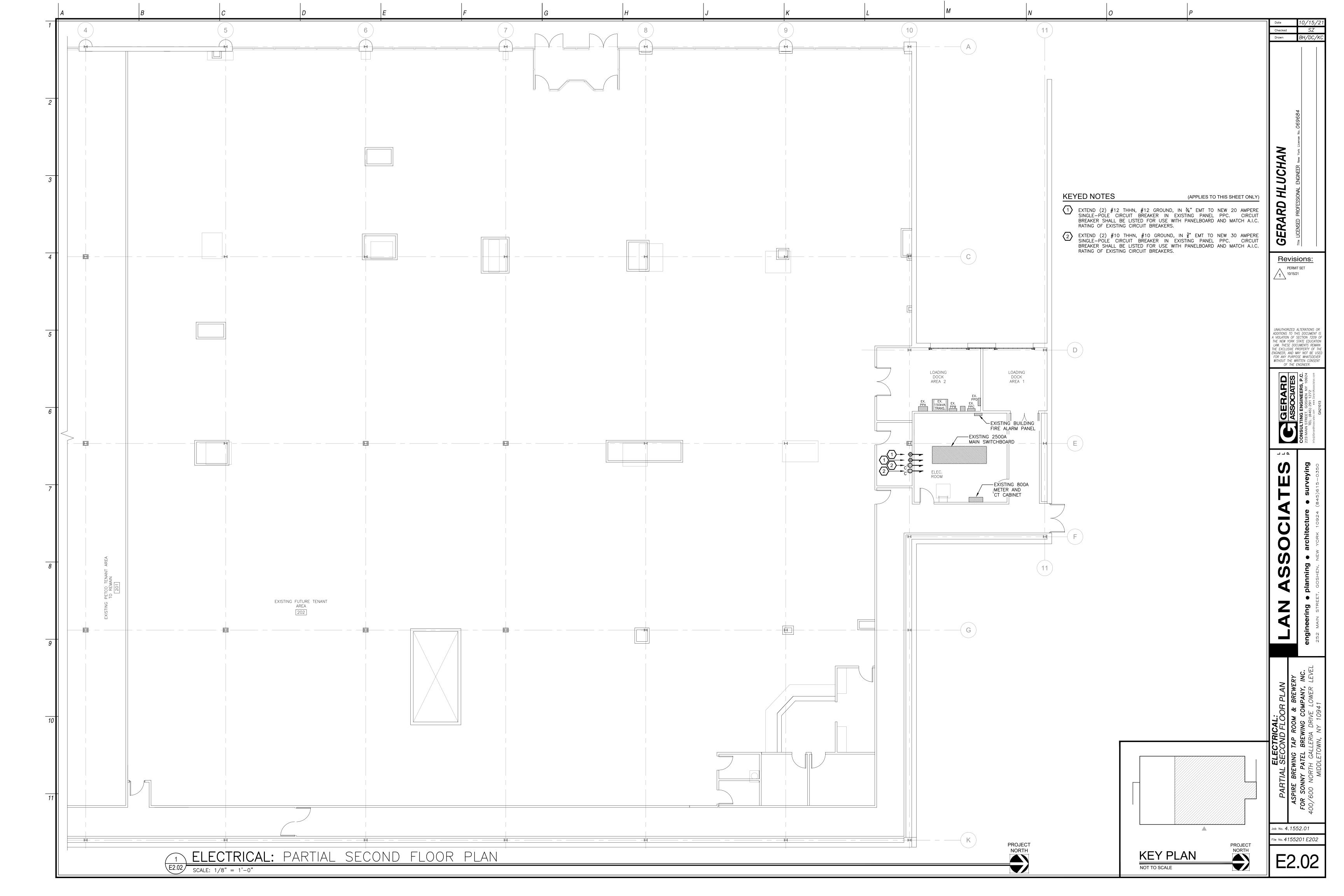
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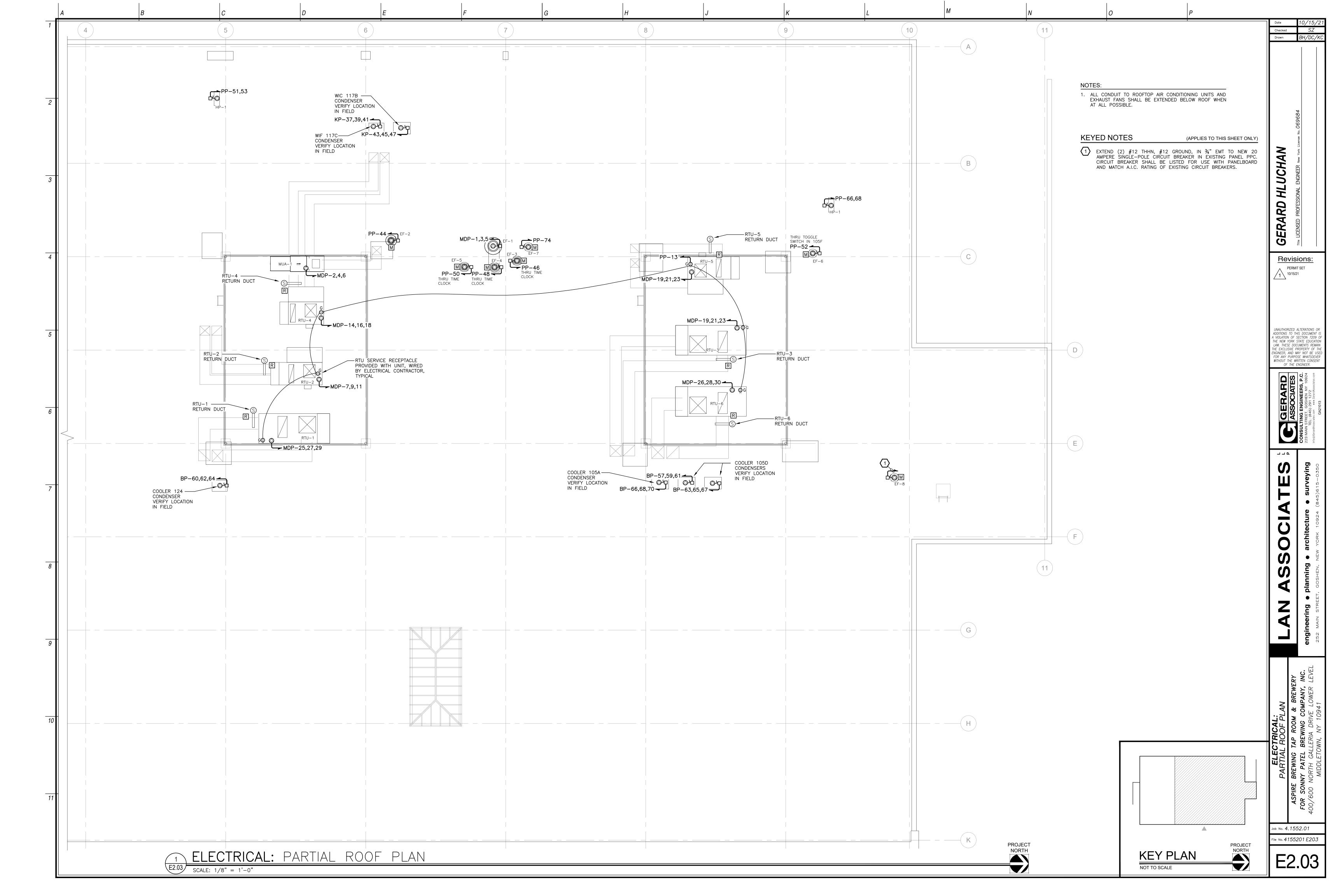


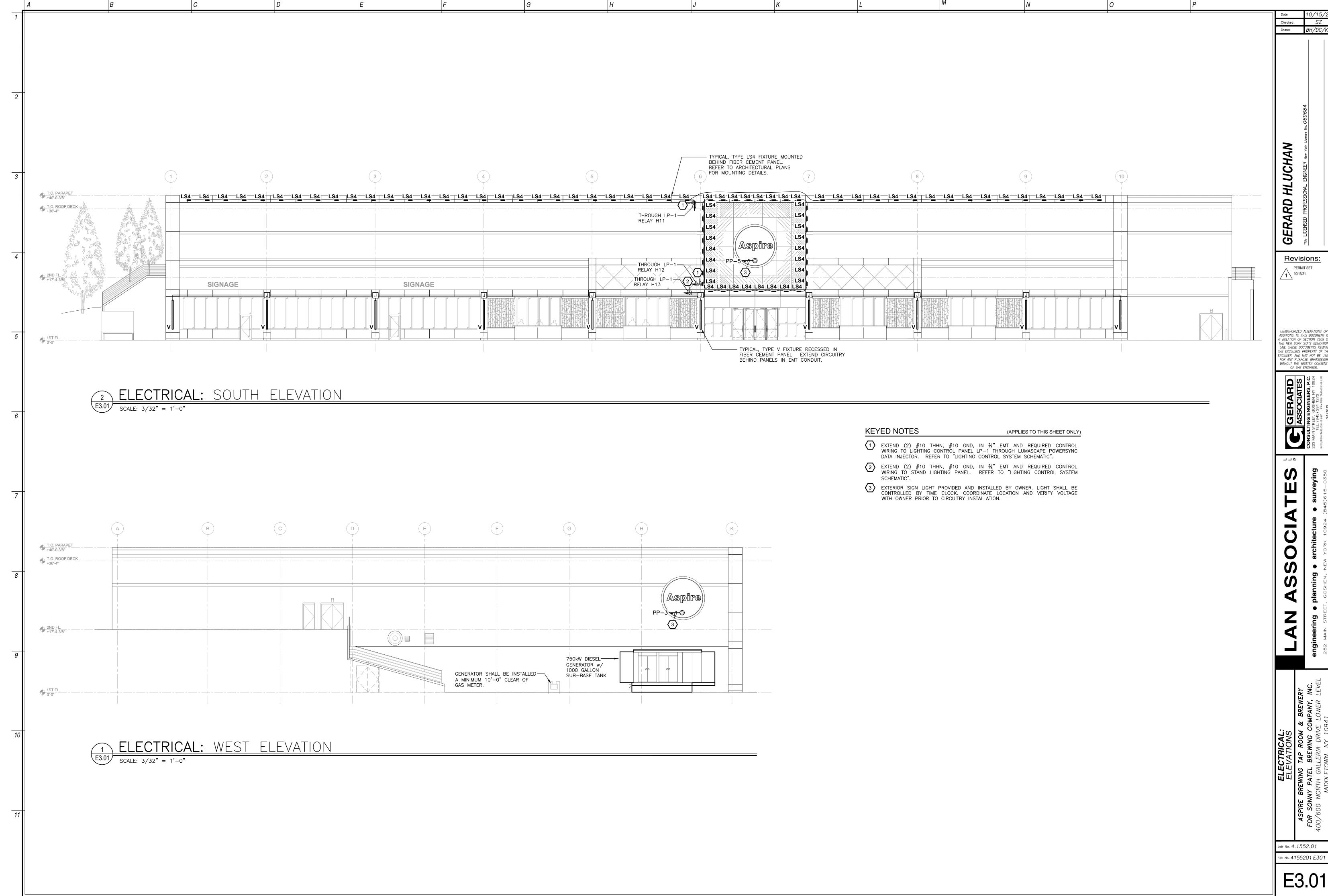


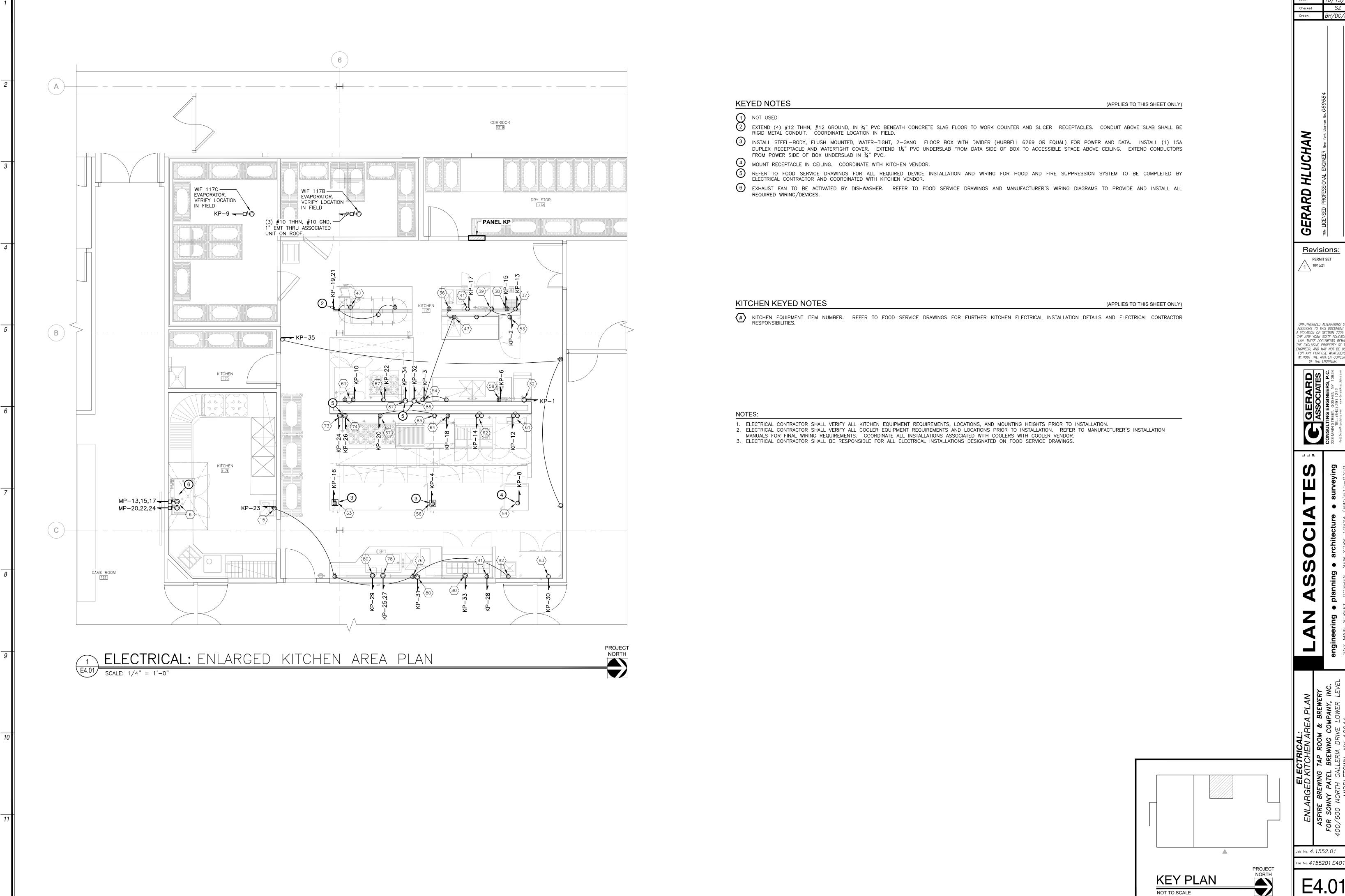






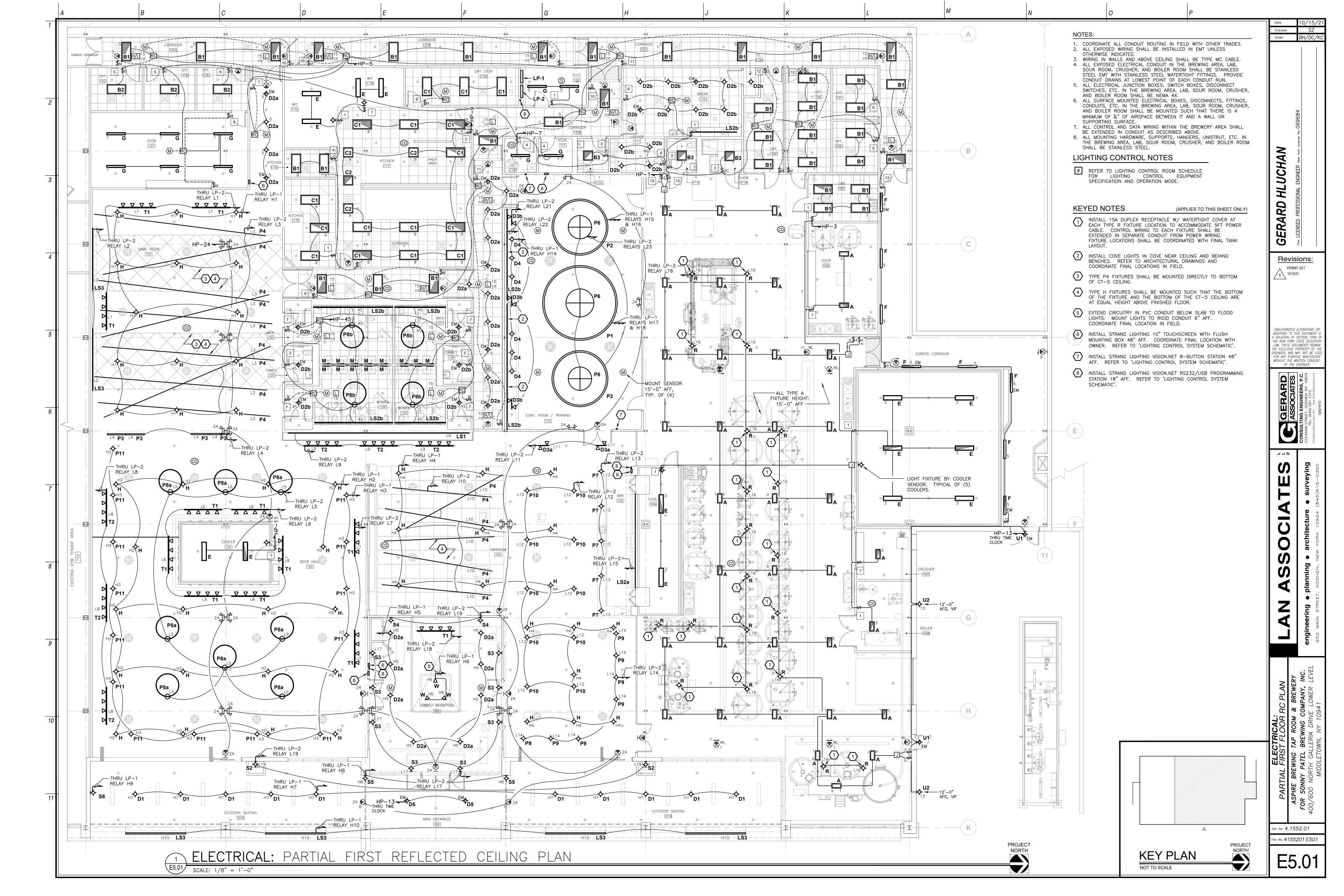


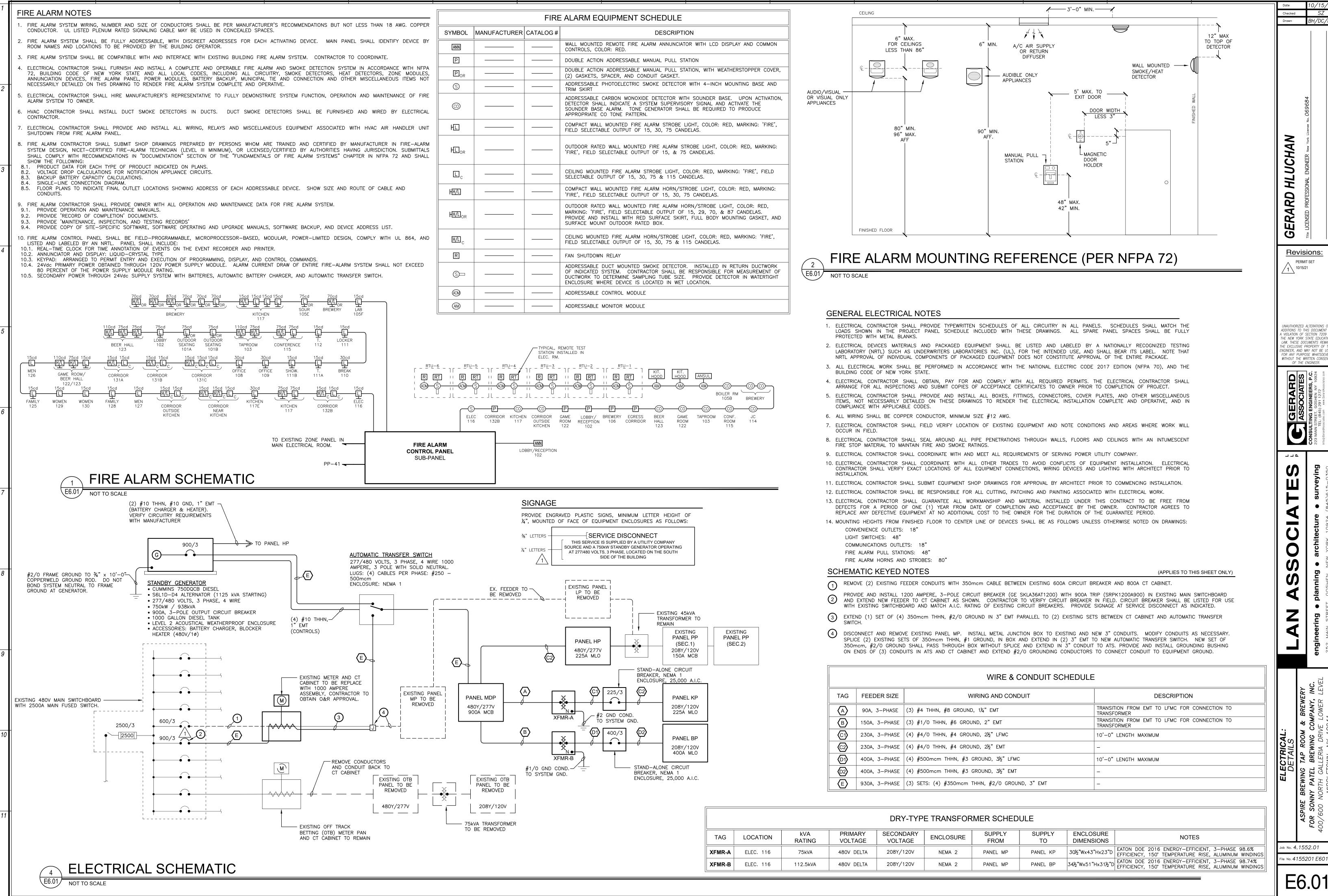




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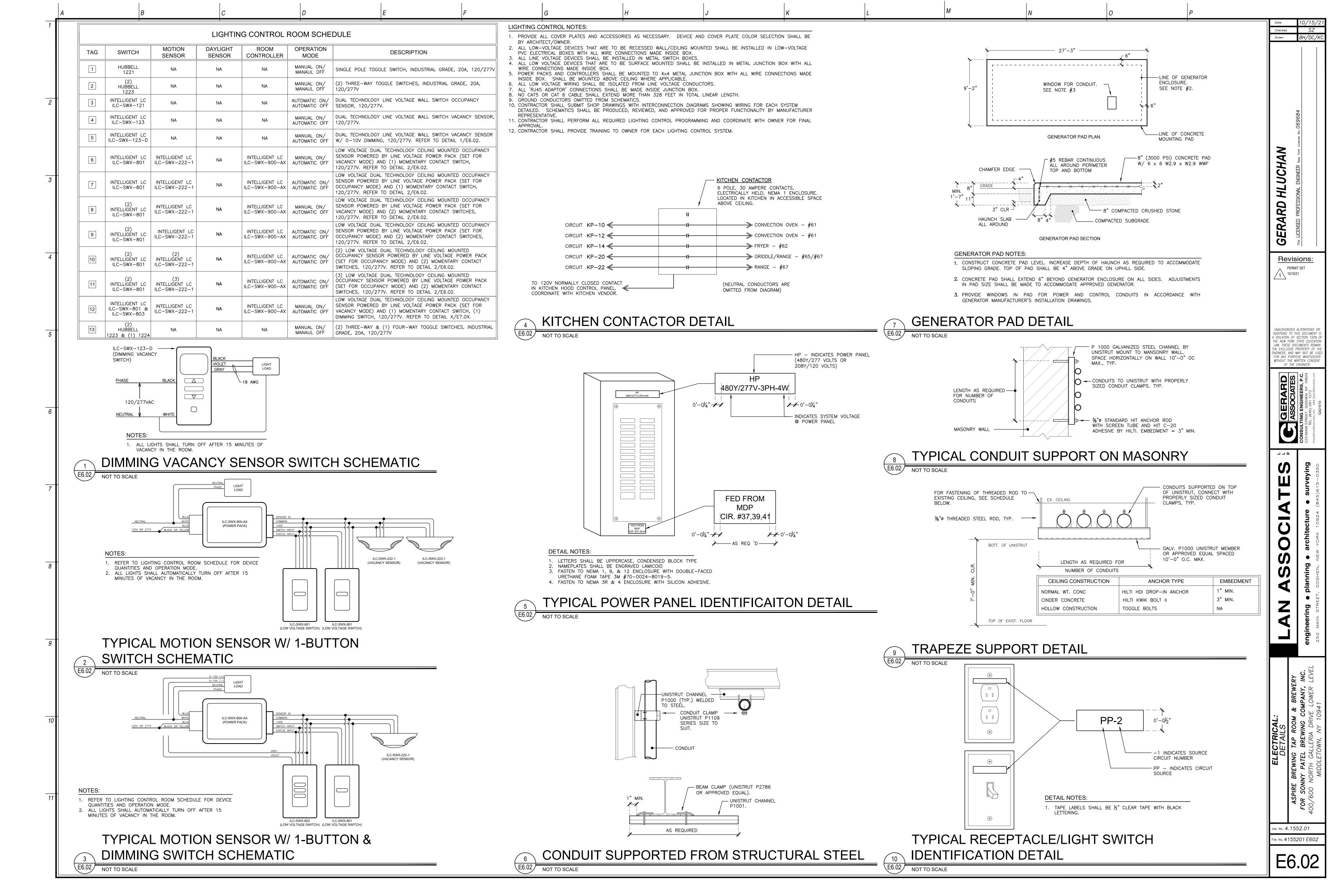




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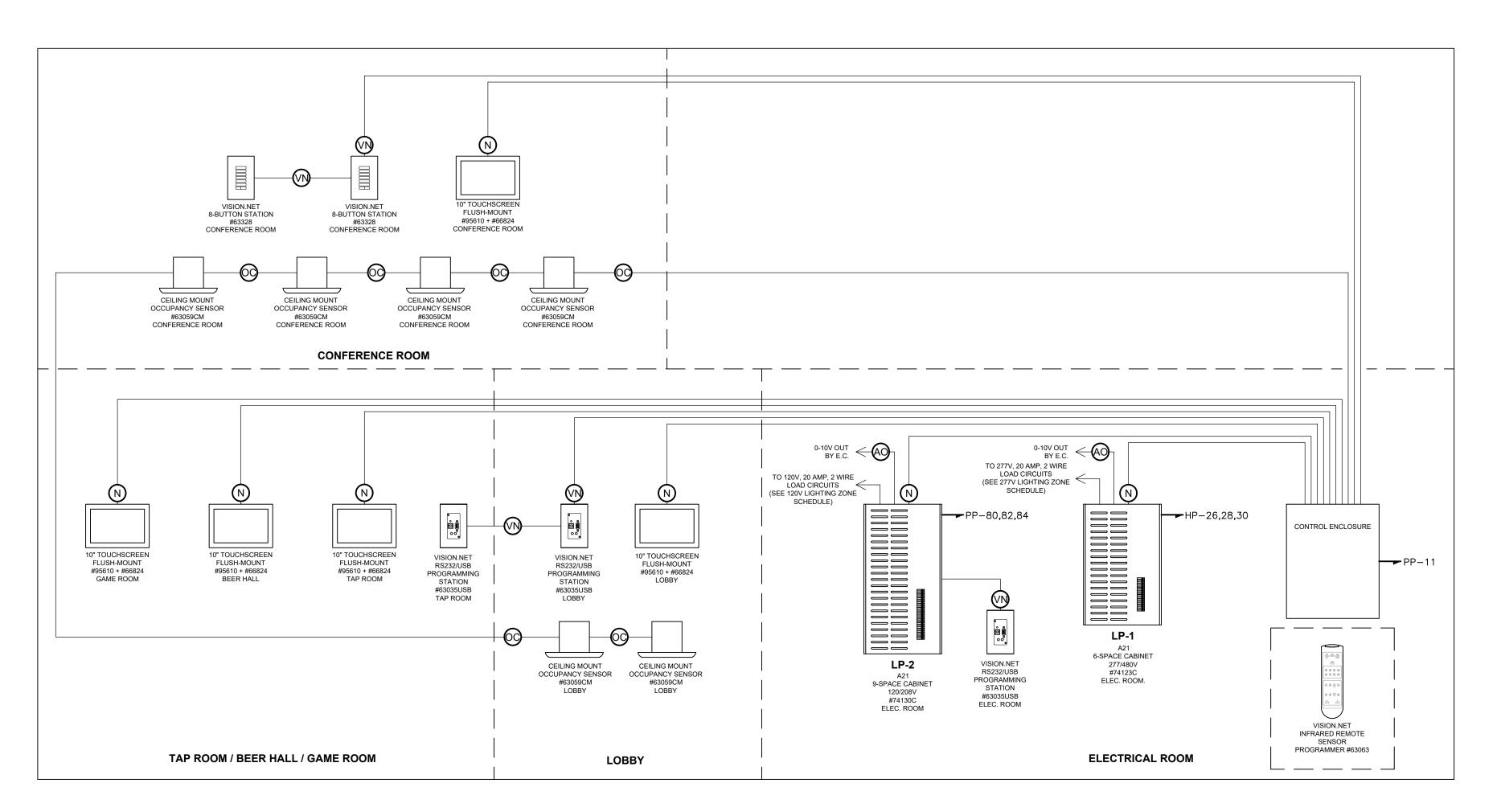
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OF THE ENGINEER.



	PANEL LP-1	- 277V LI	GHTING Z	ONE SCHED	ULE
ZONE/RELAY #	FIXTURE DESIGNATIONS	APPROX. LOAD	LOCATION	DIMMING TYPE	POWER CONDUCTORS
H1	TYPE H	490W	GAME ROOM 122	0-10V	(2) #12 THHN, #12 GND, ¾" EMT
H2	TYPE H	630W	BEER HALL 123	0-10V	(6) #12 THHN,
НЗ	TYPE P11	126W	BEER HALL 123	0-10V	#12 GND, #34" EMT
H4	TYPE H	560W	TAPROOM 103	0-10V	74
H5	TYPE D2a	96W	LOBBY 102	0-10V	(4) #12 THHN, #12 GND,
Н6	TYPE W	60W	LOBBY 102	_	3/4" EMT
H7	TYPE D1	78W	OUTDOOR 101	0-10V	
Н8	TYPE S5	27W	OUTDOOR 101	0-10V	(8) #12 THHN, #12 GND,
Н9	TYPE S6	14W	OUTDOOR 101	0-10V	3/4" EMT
H10	TYPE LS3	260W	OUTDOOR 101	0-10V	
H11	TYPE LS4	528W	FRONT FACADE	0-10V	(6) #10 THHN,
H12	TYPE LS4	384W	FRONT FACADE	0-10V	#10 GND, - 1" EMT
H13	TYPE V	760W	FRONT FACADE	0-10V	
H14	TYPE D4	47W	CONFERENCE 115	0-10V	(2) #12 THHN, #12 GND, ¾" EMT
H15	TYPE P2 DIRECT LIGHT	225W	CONFERENCE 115	0-10V	
H16	TYPE P2 INDIRECT LIGHT	225W	CONFERENCE 115	0-10V	(8) #12 THHN, #12 GND,
H17	TYPE P1 DIRECT LIGHT	168W	CONFERENCE 115	0-10V	#12 GND, 34" EMT
H18	TYPE P1 INDIRECT LIGHT	168W	CONFERENCE 115	0-10V	
	TOTAL:	4,846W	_		

	PANEL LP-2	- 120V LI	GHTING Z	ONE SCHED	ULE					
ZONE/RELAY #	FIXTURE DESIGNATIONS	APPROX. LOAD	LOCATION	DIMMING TYPE	POWER CONDUCTORS					
L1	TYPE T1	150W	GAME ROOM 122	ELV						
L2	TYPE LS3	133W	GAME ROOM 122	0-10V	(8) #12 THHN, #12 GND,					
L3	TYPE P4	270W	GAME ROOM 122	ELV	#12 GND, 34" EMT					
L4	TYPE P3	100W	GAME ROOM 122	ELV						
L5	TYPE P8a	1040W	BEER HALL 123	ELV						
L6	TYPE T1	300W	BEER HALL 123	ELV	(8) #12 THHN, #12 GND,					
L7	TYPE T1	100W	BEER HALL 123	ELV	34" EMT					
L8	TYPE T2	240W	BEER HALL 123	DMX						
L9	TYPE LS1 & T2	474W	TAPROOM 103	DMX						
L10	TYPE P4	117W	TAPROOM 103	ELV	(8) #12 THHN,					
L11	TYPE D3a	14W	TAPROOM 103	ELV	(8) #12 THHN, #12 GND, ¾" EMT					
L12	TYPE P10	250W	TAPROOM 103	0-10V						
L13	TYPE P7	44W	TAPROOM 103	ELV	(6) #12 THIN					
L14	TYPE P9	21W	TAPROOM 103	ELV	─ (6) #12 THHN, #12 GND, — ¾" EMT					
L15	TYPE LS2a	160W	TAPROOM 103	ELV	74 LIVII					
L16	TYPE R	524W	BREWERY	DMX	(2) #12 THHN, #12 GND, ¾" EMT					
L17	TYPE S3	128W	LOBBY 102	ELV	(6) #12 THHN,					
L18	TYPE T1	50W	LOBBY 102	ELV	→ (6) #12 THHN, #12 GND, → ¾" EMT					
L19	TYPE S4	12W	LOBBY 102	ELV						
L20	TYPE S2	14W	OUTDOOR 101	ELV	(2) #12 THHN, #12 GND, ¾" EMT					
L21	TYPE D3b	21W	CONFERENCE 115	ELV	(6) #40 THIN					
L22	TYPE LS2b	736W	CONFERENCE 115	ELV	─ (6) #12 THHN, #12 GND, — ¾" EMT					
L23	TYPE P6	300W	CONFERENCE 115	ELV	/4 LIVII					
	TOTAL:	5,198W								



WIRES AND CABLES BY E.C.:

- (2) #16 AWG CONTROL WIRES (V+, COM): 0-10V OUT (DO NOT EXCEED 300 FT.)
- (1) BELDEN #1583A CABLE VISION.NET OCCUPANCY SENSOR (DO NOT EXCEED 500 FT.)
- (1) BELDEN #1583A (BLUE JACKET) CABLE: NETWORK
- (DO NOT EXCEED 300 FT.)

(1) BELDEN #1583A (GREEN JACKET) CABLE: VISION.NET (DO NOT EXCEED 1000 FT.)

CATEGORY 5 ETHERNET NOTES:

USE ONLY CERTIFIED CATEGORY 5 CABLE, BELDEN #1583A (BLUE JACKET RECOMMENDED). NO DAISY CHAINING, SUBSTITUTIONS, OR SPLICING ALLOWED. TOTAL LENGTH OF ANY CABLE NOT TO EXCEED 300 FT. CABLE MUST BE INSTALLED AND TERMINATED IN COMPLIANCE WITH TIA/EIA-568 STANDARDS FOR CATEGORY 5 CABLING. TERMINATIONS ARE TO BE MADE USING THE 568B COLOR CODE. ELECTRICAL CONTRACTOR TO CERTIFY ALL CATEGORY 5 CABLES AND TERMINATIONS.

CONTROL NOTES:

- 1. SYSTEM SHALL BE PROGRAMMED SUCH THAT (2) OCCUPANCY SENSORS IN
- LOBBY CONTROL ONLY D2a AND S4 FIXTURES WITHIN LOBBY. SHALL BE SET FOR OCCUPANCY MODE (AUTOMATIC ON/AUTOMATIC OFF).
- 2. SYSTEM SHALL BE PROGRAMMED SUCH THAT (4) OCCUPANCY SENSORS IN CONFERENCE ROOM CONTROL ALL LIGHT FIXTURES WITHIN CONFERENCE ROOM. SHALL BE SET FOR VACANCY MODE (MANUAL ON/AUTOMATIC OFF).
- SHALL BE SET FOR VACANCY MODE (MANUAL ON/AUTOMATIC OFF).

 3. CONTRACTOR SHALL PROGRAM EACH TOUCHSCREEN DISPLAY TO THE SPECIFICATION OF THE OWNER. SHALL INCLUDE BUT NOT BE LIMITED TO

INDIVIDUAL ZONE/RELAY CONTROL AND SCENE SELECTION.

- 1. ALL POWER WIRING SHALL BE EXTENDED IN EMT CONDUIT WHEN IN EXPOSED SPACES. TYPE MC CABLE SHALL BE ACCEPTABLE IN FINISHED WALL OR ABOVE
- 2. CONTRACTOR SHALL PROVIDE ALL CONTROL PANELS, MODULES, CONTROL WIRING, ETC. AS NECESSARY TO INSTALL COMPLETE SYSTEM.
- ETC. AS NECESSARY TO INSTALL COMPLETE SYSTEM.

 3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING INTERCONNECTION
 DIAGRAM THAT INDICATES ALL ZONES SHOWN IN LIGHTING ZONE SCHEDULES AND
 ALL CORRESPONDING MODULES, WIRING, ETC. REQUIRE TO INSTALL COMPLETE
- SYSTEM WITH PROPER DIMMING PROTOCOLS.
 4. CONTRACTOR SHALL CONFIRM DIMMING PROTOCOLS WITH FIXTURE
- MANUFACTURER'S.
 5. CONTRACTOR SHALL PROVIDE MANUFACTURER REPRESENTATIVE TO PROGRAM SYSTEM AND TOUCHSREENS TO OWNER'S SPECIFICATION AND PROVIDE TRAINING TO OWNER.
- 6. ALL CONTROL WIRING SHALL BE EXTENDED IN EMT CONDUIT. CONTROL WIRING SHALL BE KEPT SEPARATE FROM ALL POWER WIRING.
- 7. BACK BOXES OF CONTROL STATIONS MUST BE GROUNDED.

 8. SEPARATE NEUTRAL IS REQUIRED FOR EACH CIRCUIT.
- 9. ALL CONTROL CABLES MUST BE INSTALLED AS DEPICTED IN THE TOPOLOGY SHOWN IN THE SYSTEM RISER DRAWING. IT IS NOT PERMISSIBLE TO HAVE
- BRANCHING RUNS, STUB RUNS OR "WYE" CABLE TOPOLOGIES.
- 10. DMX CABLING UTILIZING BELDEN 1583A/1592A FOLLOWS ANSI E1.27-2: STANDARD WIRING PRACTICE FOR PERMANENTLY INSTALLED CONTROL CABLES FOR USE WITH ANSI E1.11 DMX512-A.

LIGHTING CONTROL SYSTEM SCHEMATIC

E6.03 NOT TO SCALE

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Revisions:

PERMIT SET
10/15/21

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Job No. 4.1552.01
File No. 4155201 E603

E6.03

			ELE	CTRICAL FIXT	URE SCHEDU	JLE			
DESIGNATION	MANUFACTURER	CATALOG #	SOURCE	LUMENS	WATTS	COLOR TEMPERATURE	VOLTAGE	TYPE	DESIGNATIO
A	LUX DYNAMICS	E-2-S-A-840- 2-U10-CA-B- 3/10-10Y-OC-WET	LED	12,938	78	4000K	277	1'x2' PENDANT, IP56 RATED, W/ INTEGRAL MOTION SENSOR	ф ₋
<u>B1</u>	COLUMBIA LIGHTING	CBT24-LSCS	LED	3595	28	3500K	277	2'x4' EDGE LIT FLAT PANEL WITH SWITCHABLE OUTPUT, 0-10V DIMMING	ф ₋ 83
B2	COLUMBIA LIGHTING	CBT24-LSCS	LED	4951	38	3500K	277	2'x4' EDGE LIT FLAT PANEL WITH SWITCHABLE OUTPUT, 0-10V DIMMING	ф _{S4}
B3	COLUMBIA LIGHTING	CBT22-LSCS	LED	3044	24	3500K	277	2'x2' EDGE LIT FLAT PANEL WITH SWITCHABLE OUTPUT, 0-10V DIMMING, DAMP	ф _.
C1	CERTOLUX	SAF-35182×4- LED840K052LUNV	LED	5200	47	4000K	277	LOCATION 2'x4' TROFFER, IP65 RATED	ф _.
C2	CERTOLUX	SAF-35182x2- LED840K052LUNV	LED	5200	47	4000K	277	2'x2' TROFFER, IP65 RATED	Δ Δ Δ Δ T1
ф _{D1}	PRESCOLITE	LTC-6RD-S-06L- 27K-8-XW-DM1	LED	665	7.8	2700K	120-277	6"øx14" CEILING MOUNTED CYLINDER, WET LOCATION LISTED,	
ф _{D2a}	PRESCOLITE	LTR-4RD-H-SL- 10L-DM1-LTR- 4RD-T-SL27K8XW	LED	1030	12	2700K	120-277	0-10V DIMMING 4"Ø RECESSED DOWNLIGHT 0-10V DIMMING	т2
- ộ - D2b	PRESCOLITE	LTR-4RD-H-ML- 20L-DM1-LTR- 4RD-T-ML35K8WD	LED	2059	22.5	3500K	120-277	4"ø RECESSED DOWNLIGHT 0-10V DIMMING	
D3a	KUZCO	SF15002-BK	LED	356	7	2700K	120	CEILING MOUNTED W/ (2) ADJUSTABLE CYLINDER LAMPS,	φ ₋ _{U2}
$\frac{\nabla}{\nabla}$	KUZCO	SF15002-BK	LED	356	7	3500K	120	ELV DIMMING CEILING MOUNTED W/ (2) ADJUSTABLE CYLINDER LAMPS,	v ∆w
ф _{D4}	PRESCOLITE	LTR-3RD-H-SL- 06L-DM1-LTR- 3RD-T-SL35K8MD	LED	641	7.8	3500K	277	ELV DIMMING 3"Ø RECESSED DOWNLIGHT. 0-10V DIMMING	
-ф ₋	KIRLIN	LSR-12483- 2500L-277- D1-27K	LED	2753	35	2700K	277	12"øx20" CEILING MOUNTED CYLINDER, WET LOCATION LISTED,	
E	COLUMBIA LIGHTING	LXEN-4-40LW- RFA-ED-U	LED	4195	34	4000K	277	0-10V DIMMING 1'x4' SURFACE MOUNTED GASKETED FIBERGLASS FIXTURE	SYMBOL
	COLUMBIA LIGHTING	MPS4-35VWHE-C- W-ED-U-NXS	LED	3279	26.7	3500K	277	4' WALL MOUNTED W/ INTEGRAL OCCUPANCY SENSOR	OR S
F	COLUMBIA LIGHTING	MPS4-35VWHE-C- W-ED-U-CSHC	LED	3279	26.7	3500K	277	4' CHAIN HUNG	WL WL
ф _н	BEACON	SRT1-35-35K8- 5QW-UNV-BLT	LED	4574	35	3500K	277	12"ø EDGE-LIT PENDANT, 0-10V DIMMING, SUSPENDED	4_4
LS1	TEMPO ARCHITECTURAL	C3DR-FL-0-6- RGBW27LG-xx	LED	472/FT	6/FT	RGBW	120	BY 3/4" THREADED CONDUIT. 1"x1" COLOR-CHANGING COVE LIGHT, DMX DIMMING	0
LS1 LS2a	TEMPO ARCHITECTURAL	pFXC-CW-0- 120E8-27-WH-xx	LED	688/FT	8/FT	2700K	120	1"x2" TILTABLE COVE LIGHT,	⊕ _G
LS2a	TEMPO ARCHITECTURAL	pFXC-CW-0- 277E8-35-WH-xx	LED	688/FT	8/FT	3500K	277	1"x2" TILTABLE COVE LIGHT,	•
	TEMPO ARCHITECTURAL	C4X-24DC-WH- 0-5-27WH-xx; PWR-UNV-EM-	LED	578/FT	5/FT	2700K	120-277	1"x1" IP67 RATED COVE LIGHT, REMOTE POWER SUPPLY,	⊕ WP1
LS3	LUMASCAPE	100-Z-JB LS9030-12D-827- 73-NM-1-A-	LED	1275	12	2700K	277	0-10V DIMMING 12" IP67 RATED LINEAR FACADE LIGHT, 0-10V DIMMING.	⊕ WP2
LS4	BOBRICK	09-PS B-164	LED	2500	36	3500K	120	24"x36" BACKLIT MIRROR, HARDWIRED	•
M P1	CAMMAN	P1063-192-LN- 35-CLV-2-WM-	LED	25000	335	3500K	277	CUSTOM 16'Ø PENDANT RING FIXTURE, 2—CIRCUIT WIRING FOR DIRECT AND INDIRECT.	⊕- ∢ USB
P2	CAMMAN	xxx-ACM-2C P1063-144-LN- 35-CLV-2-WM-	LED	15000	225	3500K	277	0-10V DIMMING CUSTOM 12'Ø PENDANT RING FIXTURE, 2-CIRCUIT WIRING	⊕ ^
	KUZCO	xxx-ACM-2C LP19947-BK	LED	1250	25	2700K	120	FOR DIRECT AND INDIRECT. 0-10V DIMMING CEILING MOUNTED W/ (2) ADJUSTABLE	B B
P3	PRIMUS	DSD-24-120-	LED	150/LAMP	1.5/LAMP	2700K	120	CYLINDER LAMPS, ELV DIMMING STRING LIGHT, 24" LAMP SPACING, SUPPORTED BY	c ⊕
P4	LIGHTING KIRLIN	S14-27/150 LSR-12483- 2500L-120-D1-	LED	2753	34.7	2700K	120	HEAVY-DUTY STEEL CABLE, HARDWIRED, ELV DIMMING 12"ø×20" PENDANT MOUNTED CYLINDER,	○ ₹
Ŷ _{P5}		27K-87-89-PM				3500K	120	WET LOCATION LISTED, 0-10V DIMMING 48"Ø PENDANT, ELV DIMMING, PROVIDED BY	M
A	BARN	BLE-C-SBD12-E26	LED, E26 BASE, ST19 SHAPE	800	8.8	2700K	120	OWNER, INSTALLED BY CONTRACTOR 12"ø CORD HUNG PENDANT	RC
• P7 P8a	LIGHT	PD986160-BK	EDISON BULB	5326	130	2700K	120	5'ø RING PENDANT, ELV	\$
P8b								DIMMING 5'ø RING PENDANT, ELV	\$ 3
	KUZCO	PD986160-BK	LED	5326	130	3500K	120	DIMMING 5½"ø GLASS GLOBE PENDANT,	\$4
- ∳ _{P9}	KUZCO	PD3106 P8800-36LN-27K-	LED	175	3	2700K	120	ELV DIMMING 4"øx36" STEM HUNG PENDANT,	\$p
♦ _{P10}	CAMMAN	CLV-1-WM- STBD-PTBD-ST P87105-16LN-27K-		2300	25	2700K	120	0-10V DIMMING 12"ø GLOBE STEM HUNG	\$\Partial \Partial \Parti
♦ _{P11}	CAMMAN	CLV-2-WP- STBD-ST	LED	825	9	2700K	277	PENDANT, 0-10V DIMMING RGBW WASHER, SUSPENDED FROM STRUCTURE, DMX	
♦ _R	PROFESSIONAL	1QS	LED	407	26.2	RGBW		DIMMING, INSTALL 15A RECEPTACLE AT EACH FIXTURE NTEGRAL EMERGENCY BATTERY AND	\$0C
OR -¢EM							OF ILLUMINATION W AND CHARGER SHA PHASE LEG OF IND	WITH FIXTURE FOR 90 MINUTES ITHOUT UTILITY POWER. BATTERY LL BE WIRED TO UNSWITCHED ICATED CIRCUIT. PROVIDE AND	\$ M
					<u> </u>		INSTALL TEST SWITC	CH AND INDICATOR LIGHT.	

			ELECTRIC	AL FIXTURE S	CHEDULE CON	NTINUED		
DESIGNATION	MANUFACTURER	CATALOG#	SOURCE	LUMENS	WATTS	COLOR TEMPERATURE	VOLTAGE	TYPE
ф _.	KUZCO	EW17805-BK	LED	107	7	2700K	120	WALL MOUNTED, WET LOCATION, ELV DIMMING
ф ₈₃	BARN LIGHT	BLE-G-BDSL- 100-W18-P14- NAS-LED8-2700K- MED-CLR-120	LED	1362	16	2700К	120	WALL MOUNTED SIGN LIGHT W/ (2) HEADS, ELV DIMMING
ю- S4	KUZCO	WS19914-BK	LED	438	6	2700K	120	WALL MOUNTED, ELV DIMMING
ф. S5	SISTEMALUX	S.L9202-xx-REM; 4549-0024- 075-UNV-D10	LED	389	13.5	2700K	120-277	WALL MOUNTED, WET LOCATION, 2700K CUSTOM DRIVER, 0-10V DIMMING
ф- S6	SISTEMALUX	S3952-827- NF-UNV-D10	LED	1105	14	2700K	120-277	WALL MOUNTED 5½"Ø CYLINDER, WET LOCATION, UP/DOWN. 0-10V DIMMING
Δ Δ Δ Δ T1	SISTEMALUX	1770S1-B0-927- 40-120; 8008-S1-02-8023	LED	5140	50	2700K	120	PENDANT MOUNTED 8FT TRACK LIGHT W/ (4) 12.5W HEADS, ELV DIMMING, PROVIDE ALL REQUIRED ACCESSORIES
Δ Δ Δ Δ T2	CHAUVET	COLORdash ACCENT 3	LED	1572	80	RGBA	120	(4) RGBA WASHERS, MOUNTED TO 8' SUSPENDED UNISTRUT, DMX DIMMING, INSTALL 15A RECEPTACLE FOR EVERY (2) FIXTURES
ю _{- U1}	HUBBELL	RWL1-48L-15- 4K7-3-UNV- xxx-EH	LED	1962	14.5	4000K	277	EXTERIOR WALL PACK W/ EM BACKUP, MOUNTED DIRECTLY ABOUT EXTERIOR DOOR
ю _{U2}	HUBBELL	RWL2-160L-45- 4K7-3-UNV-xxx	LED	6668	46.1	4000K	277	EXTERIOR WALL PACK
v	FORUM LIGHTING	AQR-F-34- 95LED27-WOLx8- UNV-xx-D10V	LED	7106	76	2700K	277	8'-0" RECESSED LINEAR, WET LOCATION, 0-10V DIMMING
Δw	HUBBELL	LBUL-20-3K	LED	2639	20	3000K	120	4"ø LANDSCAPE FLOOD LIGHT

THREE WAY SWITCH, SPECIFICATION GRADE, 15 AMPERES, 120/277 VOLTS. REFER TO LIGHTING CONTROL ROOM SCHEDULE FOR DEVICE SPECIFICATION AND

FOUR WAY SWITCH, SPECIFICATION GRADE, 15 AMPERES, 120/277 VOLTS. REFER TO LIGHTING CONTROL ROOM SCHEDULE FOR DEVICE SPECIFICATION AND

DIMMING LIGHTING CONTROL SWITCH. REFER TO LIGHTING CONTROL ROOM

SINGLE POLE VACANCY WALL SWITCH. SET FOR MANUAL ON/AUTO OFF (VACANCY) OPERATION. REFER TO LIGHTING CONTROL ROOM SCHEDULE FOR

SINGLE POLE OCCUPANCY WALL SWITCH. SET FOR AUTO ON/AUTO OFF

ROOM SCHEDULE FOR DEVICE SPECIFICATION AND OPERATION MODE.

(OCCUPANCY) OPERATION. REFER TO LIGHTING CONTROL ROOM SCHEDULE FOR

MOMENTARY CONTACT LIGHTING CONTROL SWITCH. REFER TO LIGHTING CONTROL

SCHEDULE FOR DEVICE SPECIFICATION AND OPERATION MODE.

DEVICE SPECIFICATION AND OPERATION MODE.

DEVICE SPECIFICATION AND OPERATION MODE.

OPERATION MODE.

OPERATION MODE.

ELECTRICAL EQUIPMENT SCHEDULE

MANUFACTURER

DUAL-LITE

DUAL-LITE

DUAL-LITE

HUBBELL

HUBBELL

HUBBELL

HUBBELL

HUBBELL

HUBBELL

LEVITON

HUBBELL

HUBBELL

HUBBELL

CATALOG#

SEWLxRWE

EZ-2LB

5362

(2) 5362

BRY60W33D

GF5362

(2) 5362

T5833

2030AP

2030AP

2610

IGHT FIXTURE NOTES:

SECTION 012100.

CONTRACTOR SHALL COORDINATE ALL LIGHT FIXTURE QUANTITIES, LOCATIONS, AND MOUNTING HEIGHTS AND TYPES IN FIELD WITH OWNER.

CONTRACTOR SHALL COORDINATE ALL LIGHT FIXTURE COLOR AND FINISH SELECTIONS WITH OWNER. COLOR CHOICES SHALL BE FROM MANUFACTURER'S FULL RANGE OF STANDARD AND CUSTOM COLORS/FINISHES UNLESS OTHERWISE NOTED. TYPE P4 FIXTURE: CONTRACTOR SHALL COORDINATE FINAL LOCATION, LENGTH, AND

LAMP QUANTITIES IN FIELD WITH OWNER AND ARCHITECT. PROVIDE ALL REQUIRED TERMINATION KITS, CABLE, AND HARDWARE NECESSARY FOR INSTALLATION. TYPE LS1, LS2a, LS2b, LS3, & LS4 FIXTURES: CONTRACTOR SHALL DETERMINE FINAL LOCATION, LENGTH, AND CONFIGURATION IN FIELD WITH OWNER AND ARCHITECT. PROVIDE ALL REQUIRED MOUNTING HARDWARE, POWER SUPPLIES, POWER/JUMPER FEED CABLES, SURGE SUPPRESSION DEVICES, ETC. TO PROVIDE AND INSTALL

COMPLETE AND OPERABLE SYSTEM. TYPE P1 & P2: 5.1. <u>BASE BID:</u> DESIGN AS SHOWN 5.2. <u>ALLOWANCE #1:</u> CONTRACTOR SHALL PROVIDE CUSTOM LIGHT FIXTURES AS PART

OF ALLOWANCE #1. PROVIDE CREDIT FOR BASE BID DESIGN. SEE SPEC

HLUCHAI

BH/DC/K

ERARD G

Revisions: PERMIT SET 1 10/15/21

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Job No. **4.1552.01** File No. **4155201 E701**

2000	120	T P ENIVESORIE TEO	SB LIGHT	
CAL EQUIPMENT SCHEDULE		El	_ECTRICAL EC	QUIPMENT SCHEDULE CONTINUED
DESCRIPTION	SYMBOL	MANUFACTURER	CATALOG#	DESCRIPTION
WALL OR CEILING MOUNTED L.E.D. EXIT SIGN WITH INTEGRAL BATTERY AND CHARGER FOR 90 MINUTE ILLUMINATION IN CASE OF POWER LOSS. SIGN SHALL BE WIRED TO UNSWITCHED PHASE LEG OF INDICATED CIRCUIT. 120/277 VOLTS. CONTRACTOR TO CONFIRM MOUNTING TYPE IN FIELD PRIOR TO PURCHASE. WALL OR CEILING MOUNTED NEMA 4X L.E.D. EXIT SIGN WITH INTEGRAL BATTERY AND CHARGER FOR 90 MINUTE ILLUMINATION IN CASE OF POWER LOSS. SIGN	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ 			DATA OUTLET. PROVIDE 1—GANG BACKLESS PVC OUTLET BOX WITH RESI—RINGS TO ACCEPT CONDUIT. PROVIDE AND INSTALL 1" EMT WITH PLASTIC END IN WALL FROM BOX TO ACCESSIBLE SPACE ABOVE FINISHED CEILING. PROVIDE CAT6 CABLE HOMERUNS TO I.T. ROOM ON 2ND FLOOR. NUMBER NEXT TO SYMBOL SHALL INDICATE DESIRED NUMBER OF HOMERUNS AT LOCATION. PROVIDE 10'—0" SERVICE LOOP ON EACH END OF CABLE. TERMINATIONS BY OTHERS. COORDINATE FINAL LOCATIONS, HEIGHTS AND LOW VOLTAGE/CABLING REQUIREMENTS IN FIELD WITH
SHALL BE WIRED TO UNSWITCHED PHASE LEG OF INDICATED CIRCUIT. 120/277 VOLTS. CONTRACTOR TO CONFIRM MOUNTING TYPE IN FIELD PRIOR TO PURCHASE. L.E.D. EMERGENCY LIGHT FIXTURE WITH INTEGRAL BATTERY AND CHARGER FOR 90 MINUTE ILLUMINATION IN CASE OF POWER LOSS. FIXTURE SHALL BE WIRED TO UNSWITCHES PHASE LEG OF INDICATED CIRCUIT. 120/277 VOLTS.		ARLINGTON	TVBS505	OWNER PRIOR TO INSTALLATION. TELEVISION LOCATION. INSTALL 2-GANG RECESSED STEEL TV BOX WITH TRIM PLATE, (1) DUPLEX RECEPTACLE AND (1) LOW VOLTAGE BOX. EXTEND (1) 1" EMT WITH PLASTIC BUSHING END FROM LOW VOLTAGE SIDE TO ACCESSIBLE LOCATION ABOVE CEILING. EXTEND (1) CAT6 CABLE AND (1) RG6 FROM LOW VOLTAGE BOX TO I.T. RACK ON 2ND FLOOR. PROVIDE 10'-0" SERVICE LOOP ON EACH END OF CABLE. TERMINATIONS BY OTHERS. COORDINATE FINAL HEIGHTS AND LOW VOLTAGE/CABLING REQUIREMENTS IN FIELD WITH OWNER PRIOR TO
DUPLEX RECEPTACLE, INDUSTRIAL GRADE, 20 AMPERES, 125 VOLTS. ALL RECEPTACLES SHALL BE LABELED WITH SOURCE AND CIRCUIT NUMBER.	HD			INSTALLATION. 1000W, 120V DYSON HAND DRYER PROVIDED BY GENERAL CONTRACTOR. INSTALLED AND WIRE BY ELECTRICAL CONTRACTOR.
DUPLEX RECEPTACLE WITH GFCI PROTECTION, INDUSTRIAL GRADE, 20 AMPERES, 125 VOLTS. ALL RECEPTACLES SHALL BE LABELED WITH SOURCE AND CIRCUIT NUMBER. (2) DUPLEX RECEPTACLES IN COMMON BOX, INDUSTRIAL GRADE, 20 AMPERES, 125 VOLTS. ALL RECEPTACLES SHALL BE LABELED WITH SOURCE AND CIRCUIT	CR			SECURITY ACCESS READER LOCATION. PROVIDE AND INSTALL 1—GANG RECESSED BOX AT LOCATION. EXTEND 1" EMT WITH DRAGLINE FROM BOX TO ACCESSIBLE SPACE ABOVE CEILING. VERIFY LOCATION WITH OWNER'S SECURITY VENDOR.
NUMBER. WATERTIGHT DUPLEX RECEPTACLE WITH LIFT COVERS, 20 AMPERES, 125 VOLTS.	M			MOTORIZED DAMPER PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR. POWER WIRING BY ELECTRICAL CONTRACTOR.
ALL RECEPTACLES SHALL BE LABELED WITH SOURCE AND CIRCUIT NUMBER. DUPLEX RECEPTACLE WITH GFCI PROTECTION AND WEATHERPROOF COVER, INDUSTRIAL GRADE, 20 AMPERES, 125 VOLTS. ALL RECEPTACLES SHALL BE	- O			HARD WIRED CONNECTION — WHERE EQUIPMENT OR APPLIANCE DOES NOT HAVE INTEGRAL DISCONNECTING MEANS, ELECTRICAL CONTRACTOR SHALL PROVIDE INDEPENDENT DISCONNECT SWITCH.
LABELED WITH SOURCE AND CIRCUIT NUMBER. (2) DUPLEX OUTLETS IN COMMON BOX (QUAD), INDUSTRIAL GRADE, 20 AMPERES, 125 VOLTS. ALL RECEPTACLES SHALL BE LABELED WITH SOURCE				UNFUSED DISCONNECT SWITCH. ALL DISCONNECT SWITCHES SHALL BE LABELED WITH CIRCUIT NUMBER AND SOURCE.
AND CIRCUIT NUMBER. DUPLEX RECEPTACLE TYPE A & TYPE C USB OUTLET CHARGERS, TAMPER RESISTANT, 20 AMPERES, 125 VOLTS. ALL RECEPTACLES SHALL BE LABELED				JUNCTION BOX.
WITH SOURCE AND CIRCUIT NUMBER. L6-30 RECEPTACLE MOUNTED IN WATERTIGHT, NEMA 4X, 2-GANG JUNCTION BOX, 30 AMPERES, 10, 250 VOLTS. ALL RECEPTACLES SHALL				BRANCH CIRCUIT OR HOMERUN: EMT CONDUIT (REFER TO PANEL SCHEDULES FOR TYPE) WITH TYPE THHN INSULATED COPPER CONDUCTORS. ALL WIRING SHALL BE CONCEALED IN WALLS AND ABOVE FINISHED CEILINGS UNLESS OTHERWISE NOTED.
BE LABELED WITH SOURCE AND CIRCUIT NUMBER. L15-30 RECEPTACLE MOUNTED IN WATERTIGHT, NEMA 4X, 2-GANG JUNCTION BOX, 30 AMPERES, 30, 250 VOLTS. ALL RECEPTACLES SHALL BE LABELED WITH SOURCE AND CIRCUIT NUMBER.				BRANCH CIRCUIT: TYPE MC (METAL CLAD) CABLE WITH COPPER CONDUCTORS AND FULL SIZED GROUND (WITHIN WALLS AND ABOVE CEILINGS). ALL WIRING SHALL BE CONCEALED IN WALLS AND ABOVE FINISHED CEILINGS UNLESS OTHERWISE NOTED. IN EXPOSED SPACES, EMT CONDUIT (REFER TO PANEL SCHEDULES FOR TYPE) WITH TYPE THHN INSULATED COPPER CONDUCTORS.
L5-30 TWIST-LOCK RECEPTACLE, 30 AMPERES, 125 VOLTS. ALL RECEPTACLES SHALL BE LABELED WITH SOURCE AND CIRCUIT NUMBER.	~~~y			LOW VOLTAGE (12-24VDC) LIGHTING CONTROL WIRING PER MANUFACTURER'S REQUIREMENTS. ALL WIRING SHALL BE CONCEALED IN WALLS AND ABOVE FINISHED CEILINGS UNLESS OTHERWISE NOTED.
STEEL FLOOR BOX WITH COVER, DUPLEX RECEPTACLE, AND DATA OUTLET. EXTEN (1) 1¼" EMT WITH PLASTIC BUSHING END AND DRAGLINE FROM LOW VOLTAGE SID OF BOX TO ACCESSIBLE SPACE ABOVE CEILING FOR FUTURE DATA/AV CABLING.				BRANCH CIRCUIT: ELECTRICAL METALLIC TUBING (EMT) CONDUIT (UNLESS OTHERWISE SPECIFIED) WITH COPPER CONDUCTORS AND FULL SIZED GROUND. ALL WIRING SHALL BE CONCEALED IN WALLS AND ABOVE FINISHED CEILINGS UNLESS OTHERWISE NOTED OR APPROVED.
CEILING MOUNTED LIGHTING CONTROL MOTION SENSOR. REFER TO LIGHTING CONTROL ROOM SCHEDULE OR 'LIGHTING CONTROL SYSTEM SCHEMATIC' FOR DEVICE SPECIFICATION AND OPERATION MODE.	5			LOW VOLTAGE (12-24VDC) LIGHTING CONTROL WIRING PER MANUFACTURER'S REQUIREMENTS EXTENDED IN ½" (MINIMUM) EMT CONDUIT. ALL WIRING SHALL BE CONCEALED IN WALLS AND ABOVE FINISHED CEILINGS UNLESS OTHERWISE NOTED.
LIGHTING CONTROL ROOM CONTROLLER OR POWER PACK. REFER TO LIGHTING CONTROL ROOM SCHEDULE FOR DEVICE SPECIFICATION AND OPERATION MODE.				<u> </u>
SINGLE POLE SWITCH, SPECIFICATION GRADE, 15 AMPERES, 120/277 VOLTS. REFER TO LIGHTING CONTROL ROOM SCHEDULE FOR DEVICE SPECIFICATION AND OPERATION MODE.				

	EATON PRL4 LOAD	CONDUCTORS	, , , , , , , , , , , , , , , , , , ,		AD	225 AMPERES, MAI		C.B.	LOSURE: RECESSED C.B. C	ONDUCTORS	LOAD									400 AMPERES, MA	CONDUCTORS	C.B.	NEMA 4X	CE MOUNTED IN 96 ENCLOSURE CONDUCTORS	LOAD	
	:F-1	(3) #12 THHN,	15 1 15 (3) #	2 THHN,		ICE MAKER - #32	(2) #12 THHN, #12 GND, ¾" EMT		2 20 (2)	#12 THHN, GND, ¾" EMT	REACH-IN FRIDGE -										(3) #10 THHN,	25 1	2 30	(3) #10 THHN,	L15-30	
Column C	KITCHEN HOOD	#12 GND, 34" EMT	15 <u>5</u> <u>6</u> 15	ND, MUA-1			#12 GND, 3/4" EMT		$\frac{4}{6}$ $\frac{20}{20}$ $\frac{\#12}{\#12}$	GND, ¾" EMT #12 THHN, GND, ¾" EMT	#56 CUTTER/MIXER - #58	1							(1)	KEG WASHER	#10 GND, 34" EMT	25 5	6 30	#TO GND,	RECEPTACLE	
	RTU-2 GAME ROOM)	#10 GND,		RTU-5 ND, (CONFERE	NCE ROOM)	WIF 117C	(2) #12 THHN,		15 #12 10 20 #12	GND, ¾" EMT #12 THHN, GND, ¾" EMT	#59 CONVECTION OVENS 	1 2							1	L15-30 RECEPTACLE	(3) #10 THHN, #10 GND, 34" EMT	70 0	10 70	#10 GND.	L15-30 RECEPTACLE	1
		(3) #0 TUUN	35 <u>11</u> <u>12</u> 35 40 <u>13</u> <u>14</u> 45			BAG-IN-BOX /FRIDGE	(2) #12 THHN, #12 GND, ¾" EMT	20 11 20 13	14 20 #12 20 #12 20 #12	#12 THHN, GND, ¾"EMT	FRYER - #62	1\(2\)									(3) #10 THHN	30 <u>11</u> \	<u> </u>			
	SHWASHER	#10 GND,	40 15 16 45 #10 0 40 17 18 45	ND, RTU-4 (KITCHEN)		DISPENSER - #38	#12 GND, ¾" EMT (2) #12 THHN,	00 17	16 20 #12	GND, ¾" EMT #12 THHN,	Γ #63 BASE FRIDGE —	1		REFER TO 'k	ITCHEN CONTACT	CTOR DETAIL'.		ANEL.	1	L15–30 RECEPTACLE	#10 GND,	30 <u>15</u> 30 <u>17</u>	16 30 18 30	#10 GND	L15-30 RECEPTACLE	1
	「U−3 AP ROOM)	#8 GND,	80 19 20 50	THHN, ND, DISHWASH BOOSTER	IR		$\neg \pi$ 12 GND,		$\frac{1}{12}$ $\frac{12}{12}$	GND, ¾" EMT	Г #65, 67	⊣ I		PROVIDE AND CONTROL OF TURN LIGHTS	INSTALL ASTRO EXTERIOR LIGHT ON AT DUSK A	ONOMIC 7-DAY I HTS. TIME CLOC AND OFF AT DAY	DIGITAL TIME CLOCK CK SHALL BE PROGR WN. TIME CLOCK S	RAMMED TO SHALL BE	1	L15-30 RECEPTACLE	(3) #10 THHN, #10 GND,	30 19	20 30	#10 GND,	L15-30 RECEPTACLE	
	,	1" EMI	80 <u>23</u> <u>24</u> 50 90 <u>25</u> <u>026</u> 90				#12 GND, ¾" EMT	20 23	24 20 (2) #12	#12 THHN, GND, ¾" EMT #12 THHN	HOOD CONTROL PANEL - #73			PERIOD OF A VERIFY AIR (CONTRACTOR	T LEAST 10 HO COMPRESSOR LO	OURS. OCATION IN FIELE	D WITH INSTALLING	R FOR A				30 23	24 30	(0) #40 THIN	CARBON FILTER	
The content of the	U-I FFR HΔII)	#8 GND,	90 <u>27</u> <u>28</u> 90 #8 GN 1¼" E	S THHN, D, MT RTU-6 (BREWERY	,	- #78 OVERHEAD FOOD	#12 GND, 3/4" EMT	20 27	28 20 (2) #12	#12 THHN, GND, ¾" EMT #12 THHN,	FRIDGE - #81 REACH-IN FRIDGE -	1		NOTES:				COMPLICTOR		GRIST MILL	#10 GND,			(2) #12 THHN		1
	REWERY GLYCOL	1 \ "	90 31 32 90 (3) #	75kVA		OVERHEAD FOOD WARMER - #80 OVERHEAD FOOD	(2) #12 THHN, #12 GND, ¾" EMT (2) #12 THHN,	20 31	$32 \ 20 \ \#12$	#12 THHN, GND, ¾" EMT #12 THHN,	HOOD CONTROL PANEL - #86 FIRE SUPPRESSION			UNLESS OTHER 2. CONTRACTOR S 3. ALL CHANGES	WISE NOTED. HALL VERIFY EQ TO WIRE SIZE, (QUIPMENT CIRCUI	UTRY REQUIREMENTS	IN FIELD.	(1)	L15-30		30 31		(2) #12 THHN, #12 GND, ¾" EM	CELLAR CONTROL CABINET	
	HILLER		90 <u>35</u> 36 90 1¼" E		P)		(2) #12 THHN	20 35	<u>√36</u> 20	#12 THHN	SPARE									RECEPTACLE	3/4" EMT	30 35	36 20	(3) #12 THHN,		
The content of the	ANEL HP	#4 GND,	225 <u>39</u> 40 150 #6 GN	D, 112.5kVA TRANSFOF		CONDENSER	#10 GND,	20 39	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	GND, ¾" EMT #12 THHN, GND, ¾" EMT	HAND DRYER									20bbi BREWHOUSE CONTROL CABINET	#8 GND,	75 39	40 20	#12 GND, 34" EMT	DEPALLETIZER	
			60 43 14 30	O THHN,		WIF 117B	(3) #8 THHN,	40 43	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	GND, ¾" EMT #12 THHN, GND, ¾" EMT										5kki DDEWHOUSE		60 43	44 30	#10 GND,	CCL-45 FILLER	U AL A TH LA
The content of the	ATER EH-3	(3) #8 THHN	60 <u>45</u> <u>46</u> 30 #10 0 34" EN	ND, AIR COMF	RESSOR 6		#10 GND,		48 20 #12 20 #12	GND, ¾" EMT #12 THHN, GND, ¾" EMT											34" EMT	60 47	<u>48</u> 20	(6) #12 THHN		1 THE ENG. FG. W
Second	ATER EH-3	#8 GND, 1¼" EMT	45 <u>49</u> <u>50</u> 40 (3) #8	ND, SYSTEM	ALIZATION			20 51	$\frac{52}{20}$ $\frac{20}{412}$ $\frac{52}{412}$	GND, ¾" EMT #12 THHN, GND ¾" FMT	HAND DRYER										#12 GND, 3/4" EM	T 20 49	<u>50</u> 20	#12 GND.	RECEPTACLE CANNING LINE	1
Second S			45 <u>53</u> <u>54</u> 40 20 <u>55</u> <u>56</u> 20					20 53	<u>54</u> 20 (2) #12	#12 THHN, GND, ¾" EMT #12 THHN,	HAND DRYER									P-29 COOLER 105D	(2) #12 THHN, #12 GND, ¾" EM (2) #12 THHN,	T 20 <u>53</u>	<u>54</u> 20	#12 GND, 34" EM		1
Column C	V-7	#12 GND,	20 <u>57</u> <u>58</u> 20 <u>4</u> #12 0 34" EN	ND, PH SYSTE	И			20 57		#12 THHN, GND, ¾" EMT	HAND DRYER									COOLER 105D CONDENSER	(3) #8 THHN, #10 GND,	40 57	<u>58</u> 20	(2) #12 THHN, #12 GND, ¾" EM	000LED 104	
Section Process Proc	MP	(3) #12 THHN,	20 61 62	100 FRAN	<u> </u>		ON 1) (EXISTING)						LOAD	CONDUCTORS	СВ	СВ	3 CONDUCTORS	LOAD		(ON ROOF)	¾" EMT	40 61	62 25	(3) #10 THHN, #10 GND,	CONDENSER	
State Property of the Control of	-42	%" EMT		SPACE		208Y/120V, 3 PH/	ASE, 4-WIRE		MATCH A.I.C. F BREAKERS	RATING OF EXIS				(2) #12 THHN	43	44 15	5	EF-2	$\sqrt{2}$	CONDENSER	#10 GND,	40 65	66 30	(3) #10 THHN,		
Company Comp	PANEL HP	IASE 4 WIDE	BRANCH: 35,000 A.I.C. TH CIRCUIT BREAKE	ERMAL MAGNETIC BOLT—		RECEPTACLE AROUND TREE	(2) #12 THHN, #12 GND, ¾" EMT		2 20 (2)	#12 THHN, GND, ¾" EMT				(2) #8 THHN, #10 GND,	40 47	48 15	#10 GND, 5 1" EMT		৺	EVAPORATORS	#12 GND, ¾" EM	T 20 69	70 30	/4" EMT (2) #12 THHN	(ON ROOF)	
	225 AMPERES, MAI	NIN LUG ONLY	ENCLOSURE: SURFACE NEM	IA 1	(5		#10 GND, ¾" EMT (2) #10 THHN, #10 GND, ¾" EMT		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	GND, ¾" EMT #12 THHN, GND, ¾" EMT		4		(2) #12 THHN, #12 GND,	20 51	<u>√52</u> 15	(2) #10 THHN, #10 GND, 3/4" EN	MT EF-6			#12 GND, 34" EM		17/2 20	#12 GND, 34" EM	CP-1	
Companies Comp	HTING EWING AREA	#12 GND, 3/4" EM	20 10 20 #10 0	ND, 34" EMT HEATER E	1-4		#12 GND, ¾" EMT	20 9	10 20 #12 20 #12	GND, ¾" EMT #12 THHN, GND ¾" FMT		I	HVAC-1	(2) #12 THHN,	15 <u>55</u>	<u>√56</u> 20	#12 GND, ¾" EN (2) #10 THHN, #10 GND, ¾" EN	MT FIREPLACES OUTDOOR FOUNTA MT RECEPTACLE	1N 4	SPACE ONLY		77			SPACE ONLY	
## Control of the con	DRRIDOR LIGHTING	(2) #12 THHN, #12 GND, ¾" EM	- 20 <u>5</u> <u>6</u> 20 —	SPARE		ENCLOSURE ROOFTOP SERVICE	(2) #12 THHN, #12 GND, ¾" EMT	20 11	<u>12</u> 20 (2) #12	#12 THHN, GND, 3/4" EMT #12 THHN	RECEPTACLES	4		¾" EMT (2) #12 THHN, #12 GND, ¾" E	00 50		(2) #12 THHN,	WATERFALL	1N 4 3	0,7,62 0,12,		81	<u></u>		GITTEE GIVE	
Property	STRÓOM LIGHTING	#12 GND, ¾" EM (2) #12 THHN, #12 GND, ¾" EM	34" EN	2 THHN, ND, IT (6) ¾ HF	GARAGE RATORS	EXISTING SPARE	#TO GND, %4 EMT	20 15	<u>16</u> 20 (2) #12	#12 THHN, GND, 3/4" EMT	RECEPTACLES	4 4		#12 GND, ¾" E			#12 GND, ¾" EN	MT RECEPTACLES	4							
## Common Part 10 10 10 10 10 10 10 1	HTING ADING AREA/	#12 GND, ¾" EM (2) #12 THHN,	- 20 13					20 19	20 20 (2) #12	#12 THHN, GND, ¾" EMT	RECEPTACLES	4 4	LOBBY BEER COOLER	(2) #10 THHN, #10 GND,	20 65	66 20	(2) #12 THHN, #12 GND,	HP-1	3							
2	ND DRYERS	(2) #12 THHN, #12 GND, ¾" EM	- 20 <u>15</u> 16 20 <u>#12 0</u> 34" EN	2 THHN, ND, IT (2) HEATI EH-1	R			20 21	22 20 #12 20 20 20 20 20 20 20 20	GND, ¾" EMT #12 THHN, GND, ¾" EMT		$\dashv \supseteq$		(2) #8 THIN	40 69	70 15	(2) #12 THHN, #12 GND,	AC-1	(3)							
## A PACE OF THE P	ATER -2		30 19 20 20 (2) #	ND OE11E10110	R BATTERY		(2) #12 THHN,	20 25	26 20 (2) #12	#12 THHN, GND, 3/4" EMT	TV RECEPTACLES	4		94 EMI	40 71	72 15	3/4" EMT	AT EF-7	(3)							
## AANN CONTROL FOR THE CONTRO	−2 ATER	GND,	30 <u>21</u> <u>22</u> 20 1" EM	O THUM			(2) #12 THHN		(2)	#12 THHN		(4) (3)	WATER COOLER CHILLER P-22	(2) #12 THHN, #12 GND, ¾" E	_{MT} 20 <u>75</u> ∩		(2) #12 THHN, #10 GND, ¾" EN	VAV. 4 (MOTORIZE	4							
TEMT 10 10 10 10 10 10 10 1	ATER	(2) //2 = 1, // //	30 25 70		Y LIGHTING	RECEPTACLES REFER HALL	(2) #12 THHN, #12 GND 3/" FMT	20 31	$32 \ 20 \ 412$	#12 THHN, GND 3/4" FMT	RECEPTACLES	4 4	WATER COOLER CHILLER P-24	#12 GND, 34" E	ит ²⁰ //	 	#10 GND, 34" EN	VAV BOXES	4							
Section Sect	ATER -2 ATER	(6) #8 THHN, #1 GND, 1" EMT		ND, LIGHTING PANEL LF	- I	TAPROOM RECEPTACLES LORBY	#12 GND, ¾" EMT (2) #12 THHN, #12 GND, ¾" FMT	20 <u>33</u>	34 20 $#12$ (2) 36 20 $#12$	#12 THHN, GND, ¾" EMT	RECEPTACLES FLOOR RECEPTACLES	$\begin{pmatrix} 3 \end{pmatrix}$	EXISTING SPARE	#10 GND, ¾" E	MT 20 79/1	82 70	(4) #6 THHN,) #10 GND, — 1" FMT		-							
NITE	-2 ATER		30 31 32 20 (2) #	2 THHN, EXIT SIGN	ll ll		# 12 GND, 74 EM1	37	<u>38</u> 20 (2)	#12 THHN, GND. ¾" EMT	FLOOR RECEPTACLES	4	EXISTING SPARE	E	83	84 70)									
ATER	-2	│ (6) #8 THHN, #1 │ GND, │ 1" EMT					(2) #12 THHN,		<u>40</u> 20 (2) #12	GND, 3/4" EMT																FCT
TER 1" EMT 30 32 1 42 70 1" EMT TRANSFORMER 30 41 42 70 1" EMT TRANSFORMER 30 41 42 70 42 70 30 41 42 70 30 41 42 70 30 41 42 70 30 41 42 70 30 41 42 70 30 41 42 70 70 42 70 70 70 70 70 70 70 7	ATED					CONTROL PANEL	#12 GND, ¾" EMT	-~ **	+ ' \'-		ZAISTING SFARE															
ATER 30 41 42 70 de 70	EATER 1–2 EATER	(6) #8 THHN, #1 GND, 1" FMT	30 <u>39</u> 40 70 #8 GN	THHN, EXISTING TRANSFOR	H5kVA MER																					
	1-2	_ ı ⊑ıVI I																								
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	H-2 EATER H-2 EATER H-2 EATER H-2 EATER																									