



# Application for Public Hearing SPECIAL USE PERMITS

YOU MUST PROVIDE THE FOLLOWING INFORMATION: IF ADDITIONAL SPACE IS NEEDED, ATTACH EXTRA PAGES TO THE PETITION.

Name of Business (If applicable): \_\_\_\_\_

Address/Location of Property in Question: 6136 ROOSEVELT RD, OAK PARK IL 60304

Property Identification Number(s)(PIN): 16-17-328-034-0000

Name of Property Owner(s): ROBERTO QUINONES, NELIDA QUINONES

Address of Property Owner(s): [REDACTED]

E-Mail of Property Owner(s): [REDACTED] Phone: [REDACTED]

If Land Trust, name(s) of all beneficial owners: (A Certificate of Trust must be filed.) \_\_\_\_\_

Name of Applicant(s): NELIDA QUINONES

Applicant's Address: [REDACTED]

Applicant's Phone Number [REDACTED] E-Mail [REDACTED]

Other: [REDACTED]

Project Contact: (if Different than Applicant) \_\_\_\_\_

Contact's Address: \_\_\_\_\_

Contact's Phone Number: \_\_\_\_\_ E-Mail \_\_\_\_\_

Other: \_\_\_\_\_

Property Interest of Applicant:  Owner  Legal Representative  Contract Purchaser  Other

(If Other - Describe): \_\_\_\_\_

Existing Zoning: RR Describe Proposal: SEE ATTACHEMENT

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



I (we) certify that all the above statements and the statements contained in any papers or plans submitted herewith are true to the best of my (our) knowledge and belief.

I (we) consent to the entry in or upon the premises described in this application by any authorized official of the Village of Oak Park for the purpose of securing information, posting, maintaining and removing such notices as may be required by law.

NEIDA QUINONES  
(Printed Name) Applicant

  
(Signature) Applicant

FEB 26, 2026  
Date

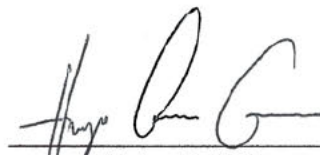
NEIDA QUINONES  
(Printed Name) Owner

  
(Signature) Owner

FEB 26, 2026  
Date

**Owner's Signature must be notarized**

SUBSCRIBED AND SWORN TO BEFORE ME THIS  
26<sup>th</sup> DAY OF February, 2026

  
(Notary Public)



DESCRIBE THE PROPOSAL: 6136 Roosevelt Rd.

## **Proposal for Private Event Space**

### **Executive Summary**

This proposal outlines the concept and operational plan for a private event space available for rent to individuals and organizations. The venue will serve as a flexible, professional environment for conferences, workshops, training sessions, art displays, meetings, and private gatherings.

The space will operate exclusively for private bookings and will not function as a public venue, nightclub, or club-affiliated location. Events will not involve public ticket sales or payments at the door. Access will be limited to invited guests of the renting client.

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### **Vision and Purpose**

The purpose of this event space is to provide a versatile, well-equipped, and professionally managed environment for private use. The goal is to create a welcoming and adaptable setting that supports:

- Corporate and professional development events
- Educational workshops and training sessions
- Creative exhibitions and art displays
- Private celebrations and gatherings
- Small conferences and networking meetings (by invitation only)

The space is designed to meet the growing demand for high-quality, flexible venues that prioritize privacy, professionalism, and convenience.

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### **Concept Overview**

#### **1. Private-Use Model**

The event space will operate strictly as a rental venue for private clients. Key principles include:

- No public events or open-admission gatherings
  - No club affiliation or nightlife operations
-

- No door-based ticket sales or public solicitation
- Events are invitation-only and organized by the renting party

This model ensures a controlled, professional atmosphere and reduces noise, security, and crowd-control concerns associated with public venues.

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### **Facility Features**

The event space will include:

#### **Flexible Layout**

- Open floor plan adaptable for multiple configurations:
  - Theater-style seating (conferences, lectures)
  - Classroom setup (training sessions)
  - Workshop layout (tables and collaborative areas)
  - Gallery format (art displays)
  - Banquet or reception setup (private gatherings)

#### **Amenities**

- Audio/visual equipment (projector, screen, sound system, microphones)
- High-speed internet access
- Adjustable lighting suitable for presentations or exhibitions
- Climate control
- Restroom facilities
- Prep area for catering
- ADA accessibility (where applicable)

#### **Optional Add-Ons**

- Tables and chairs
- Presentation equipment
- Event setup and breakdown services

- Cleaning services
  - On-site event support staff
- 

### **Target Market**

The space will serve:

- Small to mid-sized businesses
  - Corporate teams
  - Consultants and trainers
  - Nonprofits (for private meetings and workshops)
  - Artists and curators
  - Community organizations (private events only)
  - Individuals hosting private celebrations
- 

### **Operational Plan**

#### **Booking Process**

- Reservation by contract only
- Clear rental agreement outlining permitted use
- Defined event hours
- Security deposit and liability coverage requirements

#### **Usage Policies**

- No public advertising of events as open-entry
- No cash collection at the door
- Compliance with occupancy limits
- Adherence to local noise ordinances
- Responsible alcohol service policies (if permitted under local law)

#### **Staffing**

- On-site manager or representative during events (as needed)
  - Cleaning and maintenance personnel
  - Optional security for larger private gatherings
- 

### **Revenue Model**

Revenue will be generated through:

- Hourly or daily rental fees
  - Tiered pricing based on event type and duration
  - Equipment rental fees
  - Service add-ons (setup, staffing, cleaning)
  - Long-term or recurring booking discounts
- 

### **Benefits to the Community**

- Supports professional development and education
  - Encourages local creative expression through art displays
  - Provides safe, controlled gathering space
  - Attracts small business and organizational activity
  - Maintains a low-impact, private-use operational model
- 

### **Conclusion**

This private event space is designed to meet the needs of individuals and organizations seeking a professional, adaptable venue without the complexity or risks of public event operations. By focusing on private rentals, structured agreements, and flexible functionality, the space will provide a reliable, high-quality environment for conferences, workshops, training sessions, art exhibits, and private gatherings.

The model prioritizes professionalism, privacy, and community value while maintaining compliance with local regulations and responsible venue management.

6136 Roosevelt Rd

EXPLAIN WHY IN YOUR OPINION, THE GRANT OF THIS REQUEST WILL BE IN HARMONY WITH THE NEIGHBORHOOD AND NOT CONTRARY TO THE INTENT AND PURPOSE OF THE ZONING ORDINANCE OR COPREHENSIVE PLAN:

### **Statement of Zoning Justification**

#### **Private Event Space – RR District**

Village of Oak Park, Illinois

The proposed private event space is consistent with and supportive of the intent and purpose of the RR (Roosevelt Road) Zoning District and the Village of Oak Park Comprehensive Plan. The request will not be contrary to the public interest and will remain in harmony with the surrounding neighborhood for the following reasons:

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#### **1. Consistency with the Intent of the RR District**

The RR District is intended to support commercial, service, office, and mixed-use activities along the Roosevelt Road corridor while promoting pedestrian engagement and neighborhood-serving businesses.

The proposed event space:

- Operates as a **commercial rental venue**, consistent with business and service-oriented uses contemplated within the RR District.
- Functions in a manner similar to meeting halls, training centers, cultural spaces, and assembly uses typically found in commercial corridors.
- Activates commercial space without introducing retail congestion, heavy traffic turnover, or daily high-volume operations.

The use supports the RR District's goal of maintaining viable commercial activity while allowing flexible occupancy models that respond to evolving business needs.

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#### **2. Harmony with the Neighborhood**

The proposed event space is designed to operate in a controlled and low-impact manner:

- Events are **private and invitation-only**.
- No public ticket sales or cash collection at the door.
- No club, nightclub, or late-night entertainment operations.
- Defined hours of operation.
- Compliance with occupancy limits and life-safety codes.
- Adherence to local noise ordinances.

Because the space is rented by appointment rather than operating as a continuous public venue, the intensity of use is moderated and predictable. This controlled structure reduces impacts related to parking, noise, and pedestrian congestion.

Additionally:

- Events such as workshops, conferences, trainings, art exhibits, and private gatherings are inherently structured and time-limited.
- The use does not generate outdoor amplification, loitering, or open-entry traffic patterns.
- The operational model aligns more closely with a professional office or community meeting facility than an entertainment venue.

As such, the proposed use will not adversely affect adjacent properties.

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### **3. Alignment with the Comprehensive Plan**

The Village of Oak Park Comprehensive Plan emphasizes:

- Strengthening commercial corridors
- Supporting small business and entrepreneurial activity
- Encouraging adaptive reuse of commercial space
- Promoting walkability and economic vitality

The proposed event space directly supports these objectives by:

- Activating underutilized commercial property.
- Providing a flexible business model that serves local organizations, small businesses, and community groups.

- Supporting professional development, educational programming, and creative arts.
- Encouraging pedestrian activity without introducing incompatible land uses.

The use contributes to economic vitality while maintaining compatibility with surrounding residential areas.

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#### **4. No Adverse Impact on Public Health, Safety, or Welfare**

The proposed operation includes:

- Formal rental agreements for all events.
- Clear use restrictions prohibiting public open-entry events.
- Compliance with building, fire, and occupancy regulations.
- Responsible alcohol policies (if applicable and permitted).
- Optional event oversight or management presence.

Because the venue does not function as a nightclub, bar, or public entertainment facility, it avoids the operational characteristics typically associated with higher-intensity assembly uses.

The use is structured, scheduled, and contract-based, ensuring accountability and compliance.

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#### **5. Compatibility with Roosevelt Road Corridor Character**

The Roosevelt Road corridor includes a mix of retail, service, office, and commercial uses. A private event space complements this character by:

- Serving as a flexible commercial service use.
- Drawing patrons who support nearby restaurants and businesses.
- Enhancing corridor activity without creating daily retail competition.
- Maintaining a professional and community-oriented identity.

The space will contribute positively to the commercial vitality of the corridor while respecting its mixed-use context.

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## **Conclusion**

The proposed private event space is:

- Consistent with the commercial intent of the RR Zoning District.
- Compatible with surrounding properties.
- Supportive of the Oak Park Comprehensive Plan goals.
- Structured to minimize neighborhood impact.
- Not contrary to public health, safety, or welfare.

For these reasons, granting approval for this request will be in harmony with the neighborhood and fully aligned with the intent and purpose of the RR Zoning Ordinance and the broader planning objectives of the Village of Oak Park.

March 23, 2026

## Operation Guidelines for Q6 Events (intended name for event space)

**Staffing-** There will be staff on-site. They will be responsible for the logistical execution and guest experience of an event. Their roles typically fall into three phases: setup, live operation, and teardown.

**Days and Hours-** The operating days consist of peak days and non-peak days. Peak days are Friday- Sunday. Non-peak days are Monday-Thursday. The hours will be set up in time blocks.

- **Standard Live Event Time:**
  - **Non-Wedding Events:** Typically **4 hours** of live time with **2 hours** for setup.
  - **Weddings:** Typically **5–6 hours** of live time with **2–4 hours** for setup.
- **Rental Windows:**
  - **Full-Day Rentals:** Often cover a 10–12 hour window, such as **8:00 AM – 8:00 PM** or **12:00 PM – 12:00 AM**. Music is down at 11 pm and clean-up until 12am.
  - **Time Slots:** specific shifts will be **10:00 AM – 2:00 PM** (showers/ceremonies) or **3:00 PM – 11:00 PM** (receptions).

**Safety and Security-** A security guard's primary duty at an event space is to ensure the safety of all attendees, staff, and performers while protecting the venue's property and assets. Their role is a mix of surveillance, preventative screening, and active crowd management to maintain a secure environment. They will manage entry points, monitor the flow of people to prevent overcrowding, conduct regular physical of the grounds, intervene in disputes to calm rowdy guests, act as a first line of defense during crises such as fires or medical emergencies, and safeguarding valuable equipment. The number of security guards will depend on the number of attendees. There will be one guard for 50- 100 guests.

March 23, 2026

**Guest Compliance-** While guests are there to enjoy themselves, they have a "code of conduct" to ensure the event runs smoothly and safely. Most venues and hosts expect guests to follow these basic responsibilities:

### 1. Safety & Compliance

- **Following Rules:** Adhering to venue policies, such as staying out of "Staff Only" and respecting "No Smoking" or "No Vaping" signs.
- **Prohibited Items:** Refraining from bringing restricted items like outside alcohol, weapons, or professional recording equipment if banned.
- **Emergency Cooperation:** Following instructions from **security or staff** immediately during an evacuation or medical emergency.

### 2. Behavioral Expectations

- **Responsible Consumption:** If alcohol is served, guests are expected to drink responsibly. Security may remove guests who become a danger to themselves or others.
- **Respectful Interaction:** Treating event staff, security, and other attendees with courtesy. Harassment or physical altercations are usually grounds for immediate removal.
- **Noise Levels:** Respecting the volume expectations of the venue, especially when entering or leaving the space late at night in residential areas.

### 3. Logistical Responsibilities

- **RSVP & Check-in:** Arriving within the designated window
- **Property Respect:** Avoiding the "intentional" damage of venue property (furniture, decor, or restrooms). Hosts are liable for damages caused by their guests.
- **Personal Belongings:** Keeping track of their own items. Q6 Events is **not responsible** for lost or stolen coats, bags, or phones.

### 4. Space Maintenance

- **Waste Disposal:** Using provided trash and recycling bins rather than leaving cups or plates on tables or the floor.
- **Clear Walkways:** Keeping personal items (like large bags or strollers) out of main aisles to prevent tripping hazards.

**Pricing - TBD**

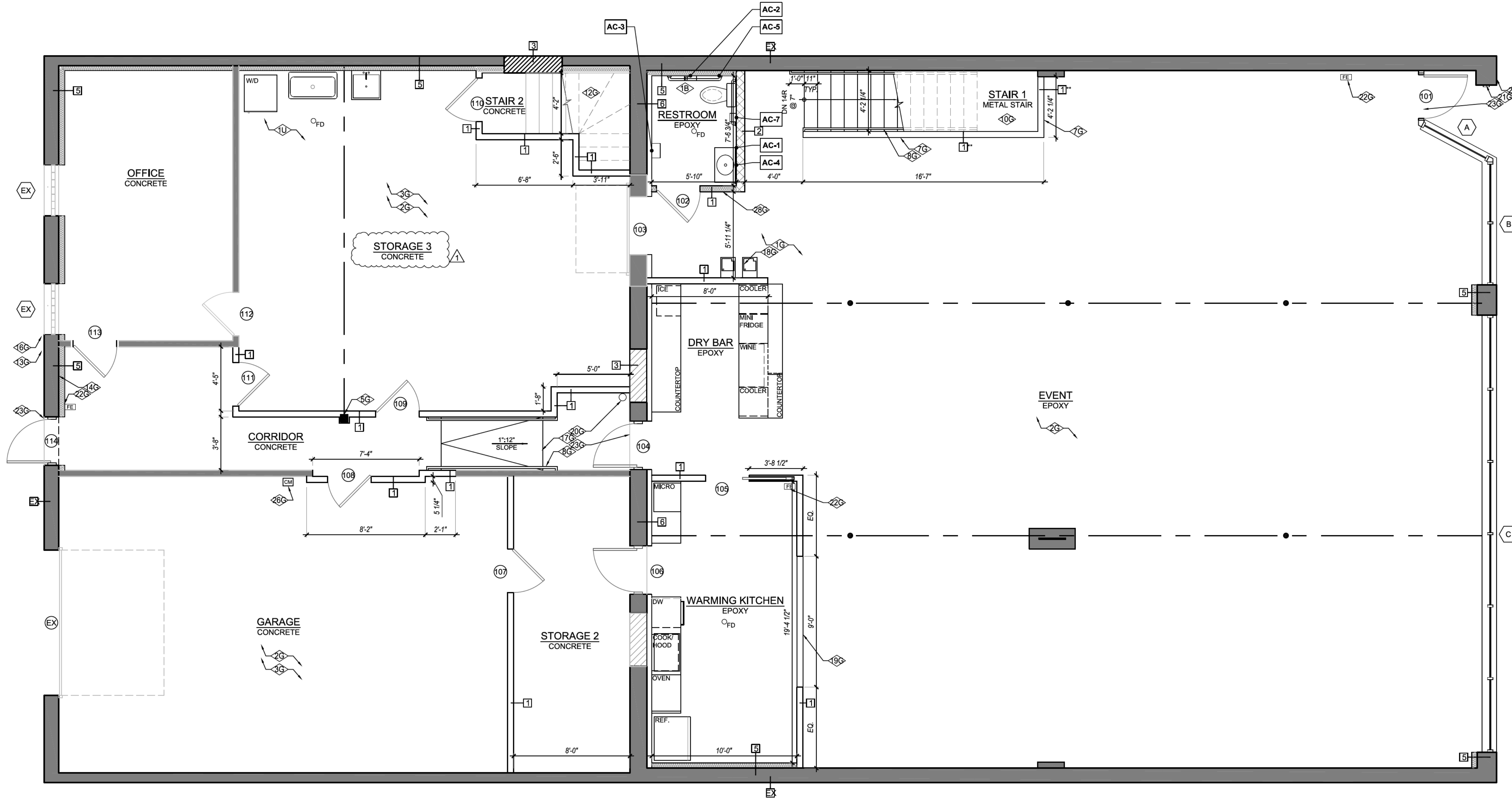
**GENERAL NOTES:**

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS AT JOB SITE, AND IS TO NOTIFY ARCHITECT OF ANY DISCREPANCIES, OMISSIONS AND / OR CONFLICTS PRIOR TO PROCEEDING WITH WORK.
- ALL WORK SHALL CONFORM TO LATEST EDITION OF "VILLAGE OF OAK PARK" BUILDING AND ZONING CODES.
- DO NOT SCALE DRAWINGS.
- DO NOT RUN ANY PLUMBING ON EXTERIOR WALLS.
- ALL DIMENSIONS ARE TO FINISHED FACE UNLESS NOTED OTHERWISE.
- PROVIDE JOINTS BETWEEN ALL WINDOWS AND DOORS AND ADJACENT DISSIMILAR METALS.
- PROVIDE VAPOR BARRIER FACED BATT INSULATION AT ALL EXTERIOR WALLS, DEMISING WALLS AND BETWEEN GARAGE AND LIVING SPACES.
- PROVIDE ACOUSTIC INSULATION AT ALL WALLS AT BATHROOMS.
- ALL INTERIOR FINISHES TO BE CLASS 1 OR BETTER W/ FLAME SPREAD 0 - 25 - U.N.O.
- ALL OPENINGS BETWEEN PIPES, DUCTS AND FLUES WHICH PENETRATE FLOORS SHALL BE FIRE STOPPED BY FILLING OPENINGS W/ NON-COMBUSTIBLE MATERIALS HELD IN PLACE TO PREVENT THE PASSAGE OF FIRE.
- PROVIDE WALL CONDENSATE DRAIN AT ALL FURNACE LOCATIONS WHERE NO FLOOR DRAIN EXISTS.
- PROVIDE GUARDRAILS AT ALL OPERABLE WINDOWS W/ SILL LESS THAN 2'-0" ABOVE FLOOR AND W/ MINIMUM 2'-0" DROP AS REQUIRED.
- PROVIDE FLOOR DRAINS AT ALL HWYS, BOILERS, W/D'S, FURNACES, STORAGE TANKS, ETC.
- REFER TO GENERAL SPECIFICATIONS FOR ADDITIONAL NOTES.
- TUCKPOINT, CLEAN AND SEAL ALL INTERIOR EXPOSED BRICK. FOR ALL BRICK CLEANING, USE HOT WATER WITH PRESSURE, NOT TO EXCEED 400 PSI. NO CHEMICALS TO BE USED. CONTRACTOR TO BE LICENSED IN LEAD PAINT ABATEMENT - TYP.
- ALL NEW FLOOR MATERIAL SHALL COMPLY WITH DOC FF-1 "PILL TEST" OR ASTM 02859. MANUFACTURERS CUT SHEETS WILL BE PROVIDED ON SITE AT TIME OF FINAL INSPECTION.
- NO CARPET TILE TO BE USED AS FLOOR FINISH.

**ACCESSORY SCHEDULE**

MARK	TYPE	MANUFACTURER	SIZE (WxDxH)	MOUNTING (MEASURED FROM BOTTOM OF ACCESSORY)
AC-1	SOAP DISPENSER	PER G.C.	PER PLANS / ELEVATIONS	MOUNTED 40" A.F.F. (ADA)
AC-2	TOILET TISSUE DISPENSER	PER G.C.	PER PLANS / ELEVATIONS	MOUNTED 17-19" MIN. A.F.F. (ADA)
AC-3	WALL MOUNTED HAND DRYER	PER G.C.	PER PLANS / ELEVATIONS	MOUNTED AT 36" A.F.F.
AC-4	WALL MOUNTED MIRROR	PER G.C.	PER ELEVATIONS	MOUNTED PER ELEVATIONS
AC-5	GRAB BARS	PER G.C.	PER PLANS / ELEVATIONS	MOUNTED AT 36" A.F.F.
AC-6	STALL PARTITIONS	PER G.C.	PER PLANS / ELEVATIONS	MOUNTED PER ELEVATIONS
AC-7	SANITARY NAPKIN DISPOSAL	PER G.C.	PER PLANS / ELEVATIONS	MOUNTED 15" MIN. A.F.F. (ADA)

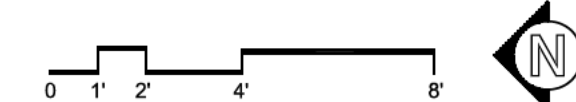
NOTE: TOILET AND RESTROOM FLOORS SHALL HAVE A SMOOTH HARD NON-ABSORBENT SURFACE TO AT LEAST 4". WALLS WITHIN 2'-0" OF TOILETS SHALL HAVE A SMOOTH HARD NON-ABSORBENT SURFACE TO A HEIGHT OF 4'-0" ABOVE THE FLOOR.  
 NOTE: G.C. TO VERIFY SELECTIONS WITH OWNER PRIOR TO PURCHASE  
 NOTE: SUSPENDED ACOUSTICAL SYSTEMS TO BE INSTALLED IN ACCORDANCE W/ ASTM C635, ONLY IF SUSPENDED CEILING WILL BE INSTALLED.



- GENERAL KEYNOTES:**
- EXIST. FLOOR / CEILING ASSEMBLY TO REMAIN. SEE ROOM TAG FOR FLOOR FINISH - SEE A0.50 FOR DETAILS
  - EXIST. ROOF ABOVE. REPAIR AS REQUIRED - SEE A0.50 FOR DETAILS
  - EXIST. CONCRETE FLOOR TO REMAIN
  - NEW SLAB ON GRADE - SEE STRUCTURAL & A0.50 FOR DETAILS
  - 1 HR. RATED COLUMN PROTECTION - GA FILE NO. 1600 - SEE A0.50 FOR DETAILS.
  - EXIST. VENT TO REMAIN
  - PARTIAL WALL MIN 42" A.F.F.
  - 36" WALL MOUNTED HANDRAIL. SEE ADA SHEET 3/A5.00 FOR EXTENSIONS DETAILS.
  - NEW BEAM ABOVE. SEE STRUCTURAL DWGS FOR DETAILS.
  - NEW METAL STAIRS W/ CONTINUOUS 36" WOOD HANDRAIL - SEE ADA SHEET 3/A5.00 FOR HANDRAIL EXTENSION DETAIL.
  - EXIST. CONCRETE STEP TO REMAIN
  - EXIST. NON-EGRESS STAIR TO REMAIN
  - EXIST. WATER SERVICE - REFER TO MEP DWGS FOR DETAILS.
  - EXIST. ELECTRICAL PANEL - REFER TO MEP DWGS FOR DETAILS.
  - NOT IN USE
  - EXIST. GAS METER
  - NEW CONCRETE RAMP AT 1":12"
  - NEW DRINKING HIGH-LOW FOUNTAINS - REFER TO A5.00 FOR DETAILS
  - OPENING IN WALL
  - RELOCATED ROOF DRAIN - FOR DOOR CLEARANCE. COORDINATE IN FIELD.
  - ADA PUSH BUTTON AT FRONT DOOR - PROVIDE ELECT. PER ELECT. DWGS
  - TYPE "ABC" FIRE EXTINGUISHER PER NFPA 10 REGULATIONS
  - 1/2" MAX THRESHOLD AT ENTRY - REFER TO DETAIL 4/A5.00
  - ROOF DRAIN TO REMAIN. COORDINATE TO REROUTE PIPING PER EGRESS DOOR BELOW.
  - VILLAGE KNOX BOX - COORDINATE LOCATION W/ FIRE MARSHALL
  - CARBON MONOXIDE DETECTORS REQUIRED IN BUILDING W/ ATTAINED GARAGE
  - NEW RTU - SEE MEP DWGS FOR DETAILS
  - NEW TOILET ROOM SIGNAGE TO INCLUDE ALL-GENDER SIGN
- BATHROOM KEYNOTES:**
- VANITY PER OWNER SELECTION - TYP.
  - PLUMBING FIXTURES PER OWNER SELECTION - TYP.
  - INSULATE PLUMBING ON EXTERIOR WALLS W/ 1" PIPE INSULATION & CLOSED CELL SPRAY FOAM BEHIND
- UTILITY KEYNOTES:**
- PROVIDE DRIP PANS @ WASHER, TANKLESS HWH, FURN. TYP.
  - PROVIDE F.D. @ UTILITIES
  - PROVIDE GREYBOX @ SIDE OF WASHER - TYP.
  - NEW MOP SINK

**1 FIRST FLOOR PLAN**

SCALE: 1'-0" = 1/4"



**SPACE**  
 ARCHITECTS + PLANNERS  
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 312.829.6666  
 www.spacearchplan.com

**SP Engineers**  
 Consulting Structural Engineers  
 134 N. LaSalle, Suite 1930 Chicago, IL 60602  
 Phone: 312.332.2800  
 Fax: 312.332.2820

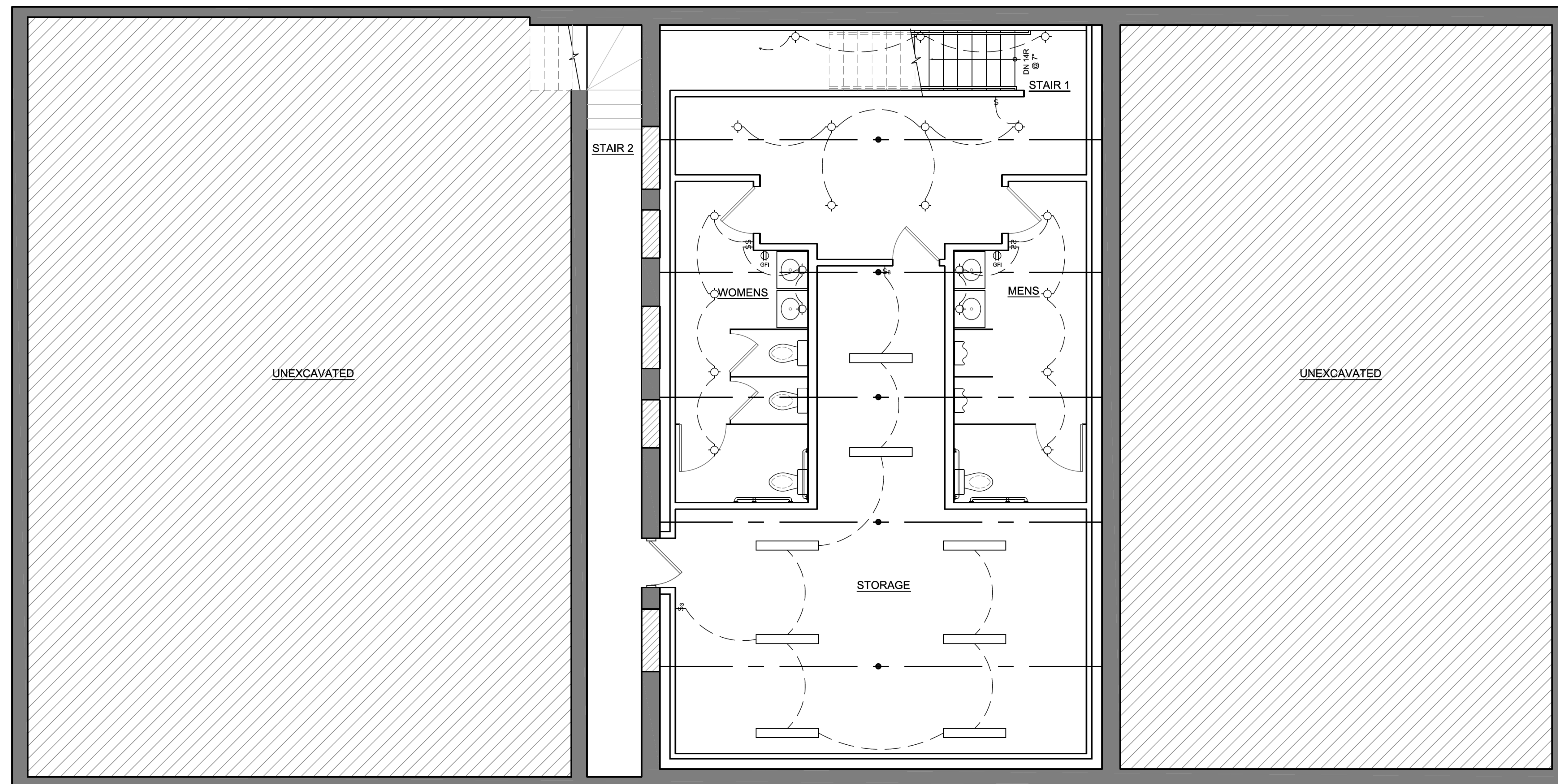
**REGULAR CHERRY FARM**  
 271 91ST STREET  
 BURR RIDGE, IL 60527  
 P. (630) 936-7733

PROJECT NAME:  
**6136 W. ROOSEVELT RD**  
 PROJECT ADDRESS:  
**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

**BUILDING TO BE SPRINKLERED**

PROJECT INFO	ISSUE	CERTIFICATION	SHEET TITLE	SHEET #
PROJECT NO. 251020 PROJECT TEAM: JK, BB, GV	12.30.25 - ISSUED FOR PERMIT 03.23.26 - ISSUE FOR ZONING COMMENTS		<b>FIRST FLOOR PLAN</b>	<b>A1.21</b>

PRELIMINARY - NOT FOR CONSTRUCTION



**GENERAL ELECTRICAL NOTES:**

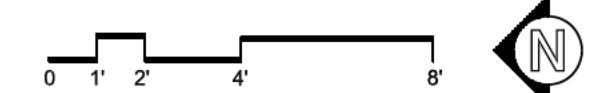
- WIRE ALL FLOORS WITH DUAL SHIELDED CATSE, OR BETTER, CABLES AT BUILDING PERIMETER AT 16" AFF. ALL CABLES TO BE HOME RUN WHENEVER POSSIBLE. COORDINATE W/ OWNER FOR HOME RUN LOCATION. COORDINATE WITH OWNER FOR SPECIFICS.
- ALL NEW LIGHT FIXTURES TO BE SELECTED BY OWNER OR OWNERS AGENT AND PURCHASED BY CONTRACTOR. - U.N.O.
- ALL CEILING MOUNTED JUNCTION BOXES TO BE FAN READY. ADEQUATE BRACING TO BE PROVIDED WHERE REQUIRED.
- ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE PHASE, 15 AND 20 AMPERE RECEPTACLE OUTLETS INSTALLED IN DWELLING UNIT BEDROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER. CBC (18-27-550.5E) P. 432, VOL. 2
- ALL SPEAKERS AND MEDIA EQUIPMENT TO BE HOME RUN TO LOCATION. COORDINATE WITH OWNER FOR HOME RUN LOCATION.
- ALL POWER OUTLETS, SWITCHES AND LOW VOLTAGE OUTLETS TO BE WHITE WITH WHITE FACE PLATES. - U.N.O.
- ALL CIRCUITS / BREAKERS IN ELECTRICAL PANEL TO BE PROPERLY AND NEATLY LABELED.
- SEE GENERAL SPECIFICATIONS FOR ADDITIONAL ELECTRICAL NOTES.

**ELECTRICAL LEGEND**

SYMBOL	DESCRIPTION
[Symbol]	SWITCH
[Symbol]	3 WAY SWITCH
[Symbol]	WATER PROOF RECEPTACLE
[Symbol]	WATER PROOF RECEPTACLE W/ GROUNDING FAULT INTERRUPTER
[Symbol]	120V CEILING MOUNTED LIGHT FIXTURE
[Symbol]	ELECTRICAL PANEL - RECESSED
[Symbol]	EXHAUST FAN - CEILING MOUNT
[Symbol]	WALL MOUNTED LIGHT FIXTURE
[Symbol]	CEILING MOUNTED LIGHT FIXTURE
[Symbol]	RECESSED DOWNLIGHT
[Symbol]	SMOKE DETECTOR - CEILING MOUNT
[Symbol]	CARBON MONOXIDE DETECTOR
[Symbol]	THERMOSTAT
[Symbol]	MOTION SENSOR LIGHT FIXTURE

NOTES:  
 1. ALL DIMENSIONS TO CENTERLINE UNLESS NOTED OTHERWISE.  
 2. ALL DIMENSIONS TO FACE UNLESS NOTED OTHERWISE.  
 3. ALL DIMENSIONS TO CENTERLINE UNLESS NOTED OTHERWISE.  
 4. ALL DIMENSIONS TO FACE UNLESS NOTED OTHERWISE.  
 5. ALL DIMENSIONS TO CENTERLINE UNLESS NOTED OTHERWISE.

**1 BASEMENT ELECTRICAL PLAN**  
 SCALE: 1'-0" = 1/4"



**SPACE**  
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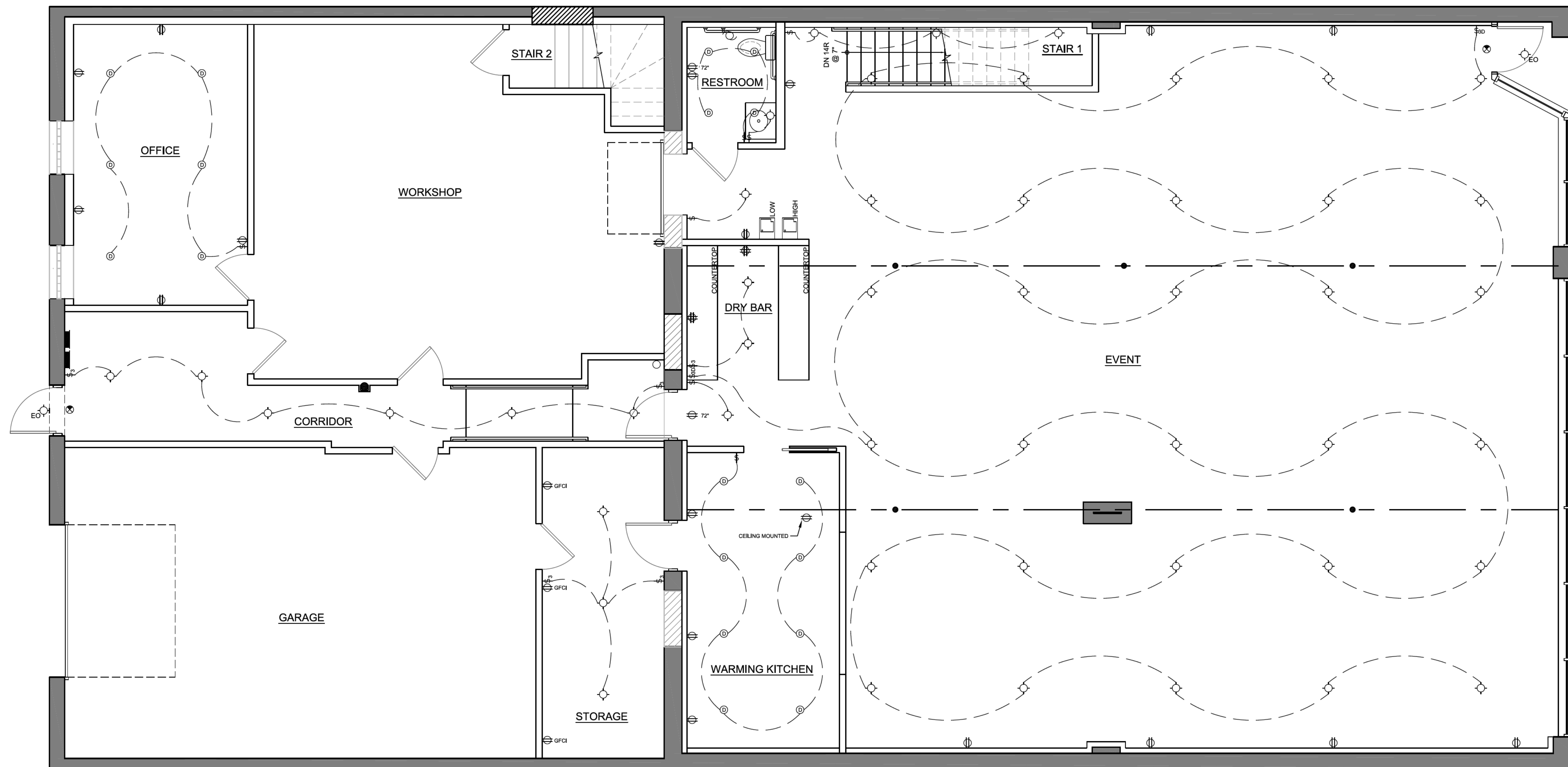
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 Fax: 312.332.2820

**BECDULAR ENERGY FARM**  
 15W 271 91ST STREET  
 BURR RIDGE, IL 60527  
 P. (630) 936-7733

PROJECT NAME:  
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**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

PROJECT INFO	ISSUE	CERTIFICATION	SHEET TITLE	SHEET #
PROJECT NO. 251020 PROJECT TEAM: JK BB GV	00.00.00 - ISSUED FOR PERMIT		<b>BASEMENT ELECTRICAL PLAN</b>	<b>E1.0</b>

**PRELIMINARY - NOT FOR CONSTRUCTION**



**GENERAL ELECTRICAL NOTES:**

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- SEE GENERAL SPECIFICATIONS FOR ADDITIONAL ELECTRICAL NOTES.

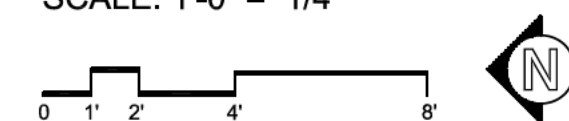
**ELECTRICAL LEGEND**

SYMBOL	DESCRIPTION
	SWITCH
	3 WAY SWITCH
	DIMMER SWITCH
	WATER PROOF RECEPTACLE
	DUPLEX RECEPTACLE W/ GROUND FAULT INTERRUPTER
	JUNCTION BOX
	ELECTRIC PANEL - RECESSED
	EXHAUST FAN - CEILING MOUNT
	WALL MOUNTED LIGHT FIXTURE
	CEILING MOUNTED LIGHT FIXTURE
	RECESSED DOME LIGHT
	SMOKE DETECTOR - CEILING MOUNT
	CARBON MONOXIDE DETECTOR
	THERMOSTAT
	EXIT LIGHT FIXTURE
	EXIT SIGNAGE

NOTES:  
ALL SYMBOLS TO BE INSTALLED AS SHOWN UNLESS OTHERWISE NOTED.  
ALL DIMENSIONS TO BE AS SHOWN UNLESS OTHERWISE NOTED.  
ALL DIMENSIONS TO BE AS SHOWN UNLESS OTHERWISE NOTED.  
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**1 FIRST FLOOR ELECTRICAL PLAN**

SCALE: 1'-0" = 1/4"



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134 N. LaSalle, Suite 1930 Chicago, IL 60602  
Phone: 312.332.2800  
Fax: 312.332.2820

**REGULAR ENERGY FIRM**  
15W 271 91ST STREET  
BURR RIDGE, IL 60527  
P. (630) 936-7733

PROJECT NAME:  
**6136 W. ROOSEVELT RD**  
PROJECT ADDRESS:  
**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

**PROJECT INFO**

PROJECT NO.  
251020  
PROJECT TEAM:  
JK  
BB  
GV

**ISSUE**

00.00.00 - ISSUED FOR PERMIT

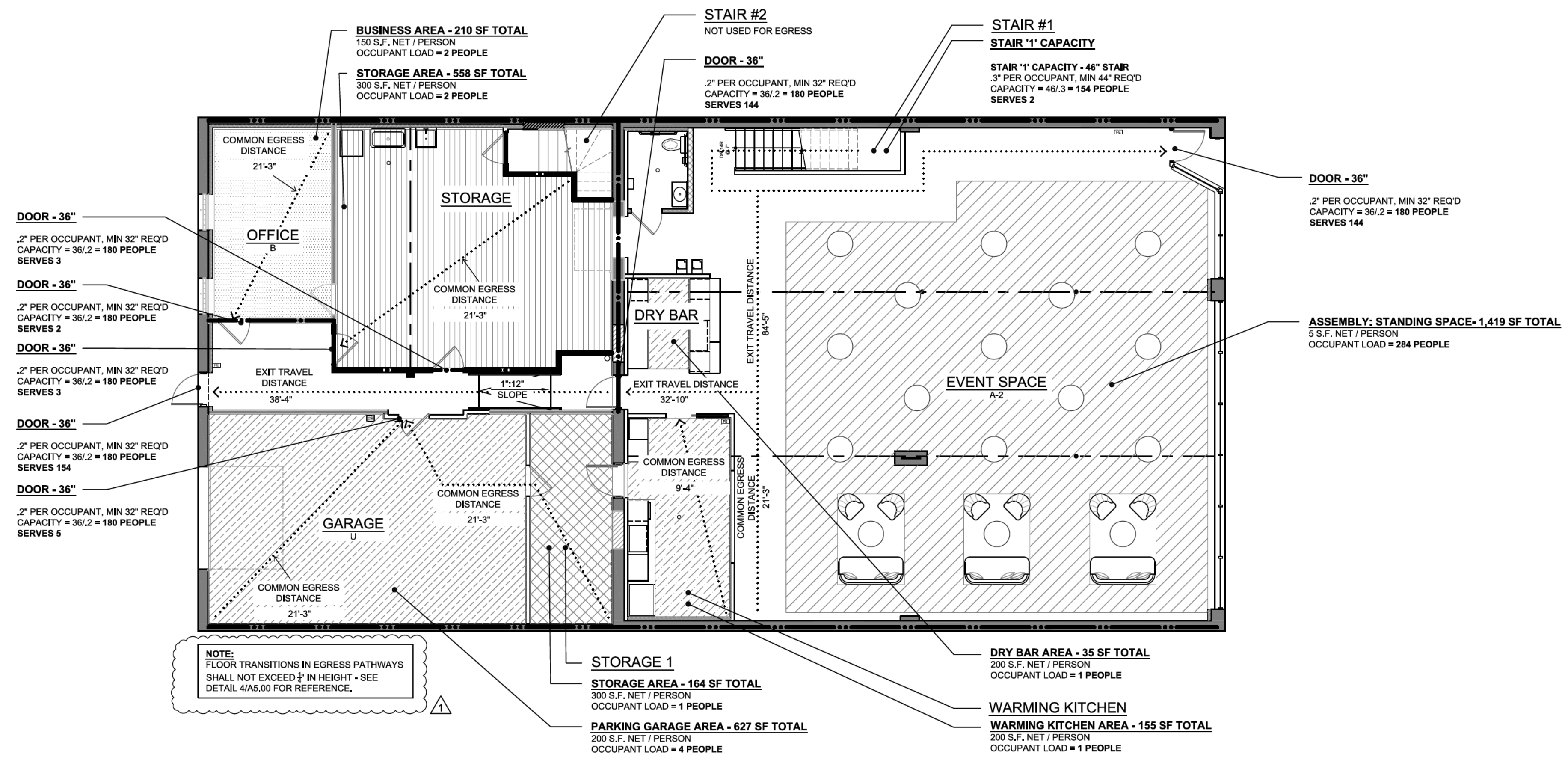
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**SHEET TITLE**

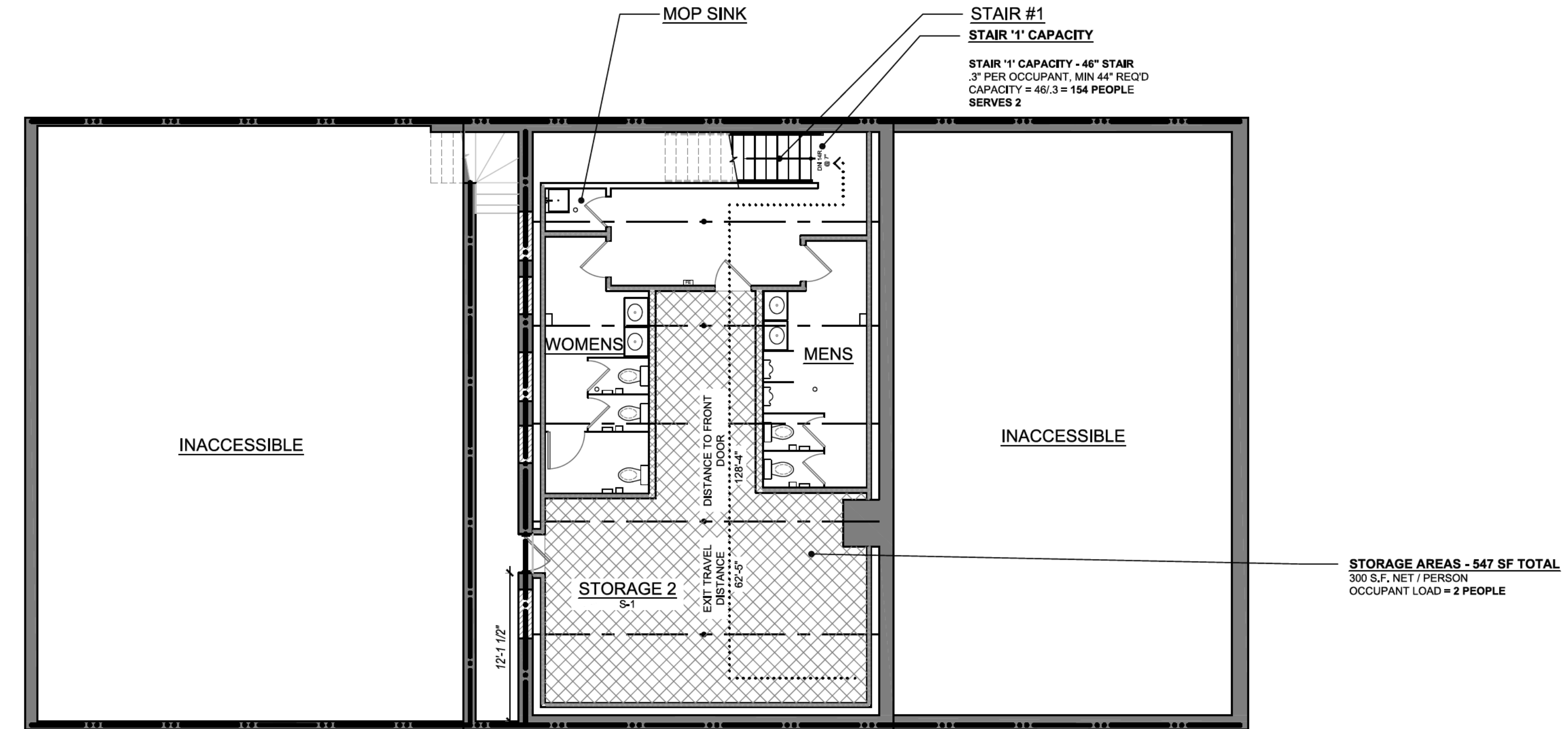
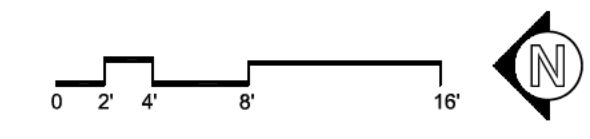
**FIRST FLOOR ELECTRICAL PLAN**

**SHEET #**

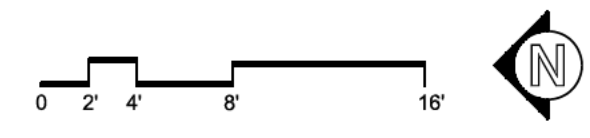
**E1.1**



**2 FIRST FLOOR EXITING & OCCUPANCY PLAN**  
SCALE: 1'-0" = 1/4"



**1 BASEMENT EXITING & OCCUPANCY PLAN**  
SCALE: 1'-0" = 1/4"



**KEY LEGEND**

- ASSEMBLY: STANDING SPACE - 5
- KITCHEN AND SERVICE AREAS, COMMERCIAL - 200 GROSS
- ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM - 300 GROSS
- GARAGE AREA - 200 GROSS
- BUSINESS AREAS, WORKSHOP - 150 GROSS
- FABRICATION - 200 GROSS

**FIXTURE REQUIREMENTS: ILLINOIS PLUMBING CODE**

TOTAL OCCUPANTS - 298 PERSONS  
BASED ON IPC

BASEMENT: 2 OCCUPANTS  
1ST FLOOR: 296 OCCUPANTS

# OCC.	REQ'D # OF FIXTURES		TOTAL
	MEN	WOMEN	
WC	2	3	5
URINAL	2	-	2
LAV	1	1	2
MOP SINK	1 PER FLOOR		2
DRINKING FOUNTAIN	1 PER EACH SET OF MALE/FEMALE PUBLIC RESTROOM		1 HIGH LOW

**FIXTURES PROVIDED:**

TOTAL OCCUPANTS - 298 PERSONS

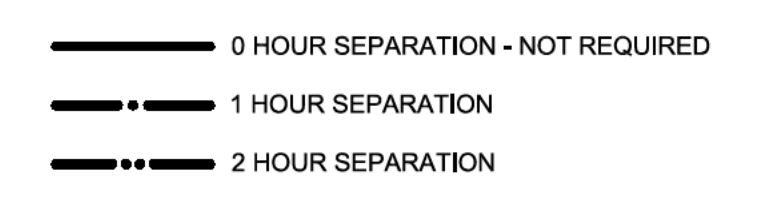
BASEMENT: 2 OCCUPANTS  
1ST FLOOR: 296 OCCUPANTS

# OCC.	ACTUAL # OF FIXTURES		TOTAL
	MEN	WOMEN	
WC	6	6	12
LAV	5	5	10
MOP SINK	2		2
DRINKING FOUNTAIN	1 HIGH LOW		1
URINALS	2		2

**LIST OF ITEMS TO BE STORED IN STORAGE**

F-1 = WOOD & MTL. CUTTING
LUMBER
PAINT
GLUE
PAINTERS CLOTH

**HOURLY SEPARATION LEGEND**



**OCCUPANCY**

BASEMENT FLOOR CAPACITY - 2 PEOPLE  
FIRST FLOOR CAPACITY - 296 PEOPLE  
BASEMENT + FIRST FLOOR TOTAL (ASSEMBLY A-2) - 298 OCCUPANTS

**DEAD ENDS**  
1020.4 NOT EXCEED 50 FEET

**SPRINKLER**  
903.2.1.2  
2. THE FIRE AREA HAS AN OCCUPANT LOAD OF 100 OR MORE.

**MAXIMUM EXIT ACCESS TRAVEL DISTANCE**

PER TABLE 1017.2:  
ASSEMBLY USE (A-2) - 250 FT. (SPRINKLERED)  
FACTORY USE (F-1) - 250 FT. (SPRINKLERED) → WORKSHOP TO BE USED  
STORAGE USE (S-1) - 250 FT. (SPRINKLERED) FOR CUTTING WOOD AND  
BUSINESS USE (B) - 300 FT. (SPRINKLERED) METAL FOR OWNER'S USE.  
UTILITY USE (U) - 400 FT. (SPRINKLERED)

**MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE**

PER TABLE 1006.2.1:  
ASSEMBLY USE (A-2) - 75 FT. (SPRINKLERED)  
FACTORY USE (F-1) - 100 FT. (SPRINKLERED)  
STORAGE USE (S-1) - 100 FT. (SPRINKLERED)  
BUSINESS USE (B) - 100 FT. (SPRINKLERED)  
UTILITY USE (U) - 75 FT. (SPRINKLERED)

**MINIMUM NUMBER OF EXITS**

MIN. NUMBER OF EXITS PER STORY: PER TABLE 1006.3.3:  
-OCCUPANT LOAD PER STORY BETWEEN 1-500 REQUIRE MINIMUM 2 NUMBER OF EXITS OR ACCESS TO EXITS FROM STORY

1006.3.4 (2):  
FIRST STORY BELOW GRADE PLAN FOR A-2 & S-1: MAX OCC. LOAD 29 & 75' MAX EXIT ACCESS TRAVEL DISTANCE 1 EXIT REQUIRED AT BASEMENT.

1019.3:  
FLOOR OPENINGS CONTAINING EXIT ACCESS STAIRWAYS THAT DO NOT COMPLY WITH ONE OF THE CONDITIONS LISTED BELOW SHALL BE ENCLOSED WITH A SHAFT.

PER 1019.3 EXCEPTION 1:  
EXIT ACCESS STAIRWAYS THAT SERVE OR ATMOSPHERICALLY COMMUNICATE BETWEEN ONLY TWO STORIES SHALL NOT BE OPEN TO OTHER STORIES

**ACCESSORY OCCUPANCY**  
508.2: ACCESSORY OCCUPANCIES ARE THOSE OCCUPANTS THAT ARE ANCILLARY TO THE MAIN OCCUPANCY OF THE BUILDING OR PORTION THERE OF

508.2.4:  
NO SEPARATION IS REQUIRED BETWEEN ACCESSORY OCCUPANCIES AND THE MAIN OCCUPANCY.

**REQUIRED SEPARATION OF OCCUPANCIES**

PER TABLE 508.4:  
- REQUIRED SEPARATION (SPRINKLERED): 1 HOUR  
A AND F1 SEPARATION = 1 HOUR (SPRINKLERED)  
A AND S-1 SEPARATION = 0 HOUR (SPRINKLERED)  
U AND S-1 SEPARATION = 1 HOUR (SPRINKLERED)  
F1 AND B SEPARATION = 0 HOUR (SPRINKLERED)  
F1 AND U SEPARATION = 1 HOUR (SPRINKLERED)  
B AND U SEPARATION = 1 HOUR (SPRINKLERED)

**CORRIDOR FIRE RESISTANCE RATING**  
1020.2  
A,B,F,S,U  
OCCUPANT LOAD GRATER THAN 30 REQUIRES 0 HOUR FIRE RESISTANCE RATING WITH SPRINKLER SYSTEM

**FIRE RESISTANCE RATING REQUIREMENT**

PER TABLE 601 FOR TYPE III-B CONSTRUCTION:  
**BEARING WALLS:**  
- EXTERIOR = 2 HOURS REQUIRED  
- INTERIOR = 0 HOUR REQUIRED  
**NON-BEARING WALLS:**  
- EXTERIOR = PER TABLE 705.5 FIRE SEPARATION DISTANCE  
- INTERIOR = 0 HOURS REQUIRED

**FLOOR CONSTRUCTION**  
- 0 HOUR REQUIRED

**ROOF CONSTRUCTION**  
- 0 HOUR REQUIRED

**FIRE SEPARATION DISTANCE**

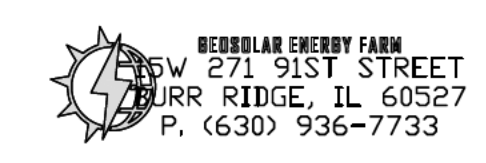
PER TABLE 705.5 FOR TYPE III-B CONSTRUCTION  
OCCUPANCY A,B,F,S,U:

EXTERIOR NON-BEARING WALLS:  
-  $X \geq 30'-0"$  = 0 HOUR REQUIRED

X = FIRE SEPARATION DISTANCE

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PROJECT NAME:  
**6136 W. ROOSEVELT RD**  
PROJECT ADDRESS:  
**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

**BUILDING TO BE SPRINKLERED**

PROJECT INFO	ISSUE	CERTIFICATION	SHEET TITLE	SHEET #
PROJECT NO. 25100 PROJECT TEAM: JB, BB, GV	12.30.25 - ISSUED FOR PERMIT 03.23.26 - ISSUE FOR ZONING COMMENTS 02.04.26 - ISSUED FOR PERMIT CORRECTIONS		<b>EXITING AND OCCUPANCY PLANS</b>	<b>A1.40</b>

# 6136 W. ROOSEVELT RD.

## 6136 W. ROOSEVELT RD. OAK PARK, IL. 60304

### PROJECT DESCRIPTION

ADAPTIVE RE-USE OF AN EXISTING 1 STORY MASONRY BUILDING AND BASEMENT INTO AN EVENT SPACE WITH OWNER WORK SPACES AT REAR OF BUILDING.

### PROJECT TEAM

**ARCHITECT:** SPACE ARCHITECTS + PLANNERS  
JAY KELLER - ARCHITECT OF RECORD  
2149 N. TALMAN AVE. CHICAGO, IL 60647  
312.829.6666

**STRUCTURAL ENGINEER:** SP ENGINEERS, LTD.  
JEFF PRIBYL  
134 N. LASALLE, SUITE 1930 CHICAGO, IL 60620  
773.590.2903

**MEP ENGINEER:** GEOSOLAR ENERGY FARM  
GUY VALCOUR  
13709 WEST CEDARBEND DR. HOMER GLEN IL, 60491  
630.936.7733

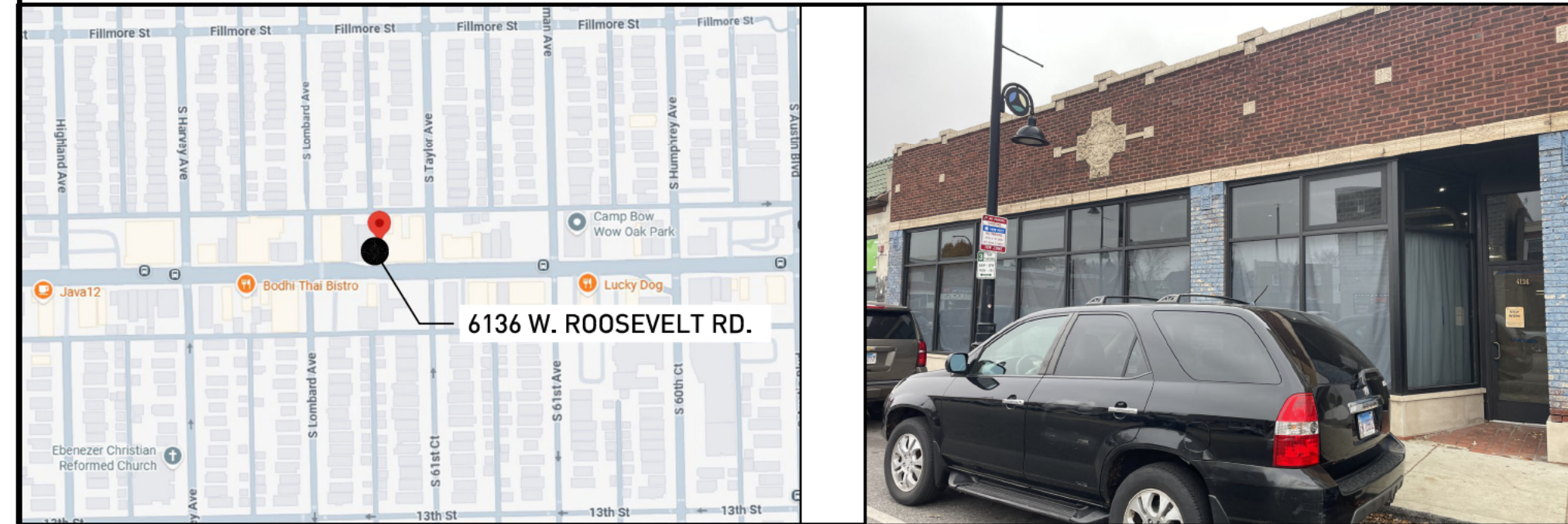
**GENERAL CONTRACTOR:** FIX IT CHICAGO INC.  
ROBERTO QUINONES  
6136 W. ROOSEVELT RD. OAK PARK, IL. 60304  
312.231.7533

**OWNER:** FIX IT CHICAGO INC.  
ROBERTO QUINONES  
6136 W. ROOSEVELT RD. OAK PARK, IL. 60304  
312.231.7533

### PROJECT SCOPE

ISSUED FOR:				
REVIEW / BID	ZONING	PERMIT	AMENDED PERMIT	CONSTRUCTION
WORK TO INCLUDE:				
ARCHITECTURAL	ACCESSIBILITY	ELECTRICAL	ENVIRONMENTAL	FIRE PREVENTION
LANDSCAPING	PLUMBING	REFRIGERATION	STRUCTURAL	VENTILATION

### KEY PLAN / BUILDING IMAGE



### PROJECT DATA

CODE / LIFE SAFETY	
BUILDING CODE	2021 INTERNATIONAL BUILDING CODE
MECHANICAL CODE	2021 INTERNATIONAL MECHANICAL CODE
ELECTRICAL CODE	2020 NATIONAL ELECTRIC CODE
PLUMBING CODE	2014 ILLINOIS PLUMBING CODE
ACCESSIBILITY CODE	2018 ILLINOIS ACCESSIBILITY CODE + ENVIRONMENTAL BARRIERS ACT
ENERGY CODE	2021 INTERNATIONAL ENERGY CONSERVATION CODE
EXISTING BUILDING CODE	2021 INTERNATIONAL EXISTING BUILDING CODE
FUEL GAS CODE	2021 INTERNATIONAL FUEL GAS CODE
FIRE CODE	2021 INTERNATIONAL FIRE CODE

### CODE MATRIX

GENERAL BUILDING REQUIREMENTS PER I.B.C. 2021 EDITION				
Code	Proposed Occupancy Classification(s)	A-2	A-2	See separated occupancies
	Existing Occupancy Classification(s)	F-1	F-1	
	Alteration level	Level 3	Level 3	Exceeds 50 percent of building area
202.504.3	Building Height in Feet Above Grade Plane	14'-4" Exst.	14'-4" Exst.	Average of 16'-0" and 13'-0" = 14.5'
504.4	Number of Stories Above Grade Plane	1	1	
506	Building Area		5,000 sq.ft.	
506.1.3	Number of Basements Excluded from Area	1	1	
508	Mixed Occupancy Strategy	SEPARATED	SEPARATED	A/ F-1 = 1 HR REQ'D, A/ S1 = 0 HR REQ'D, U/ S-1 = 1 HR REQ'D, B/ F-1 = 0 HR REQ'D, F-1/U = 1 HR REQ'D, B/U = 1 HR REQ'D SPRINKLERED
402	Construction Classification	III-B	III-B	
401	Rating - Primary Structural Frame	0	0	
401	Rating - Exterior Bearing Walls	2	2 Exst.	
401	Rating - Interior Bearing Walls	0	NA	
402	Rating - Exterior Nonbearing Walls		2 Exst.	
401	Rating - Floor Construction	0	1 Exst.	
401	Rating - Roof Construction	0	0 Exst.	
705.11	Exterior Wall Parapets	SAME AS BELOW	SAME AS BELOW	EXIST - SAME AS BELOW
508.4 707.2.9 711.2.4.1	Floor Rating - Occupancy Separation	SEPARATED	SEPARATED	A/ S-1 = 1 HR REQ'D - SPRINKLERED.
708 1020.1	Wall/Floor - Corridor	1 HR	1 HR	1 HOUR REQUIRED FOR OCCUPANT LOAD GREATER THAN 30
713.4	Shaft Enclosure - Rating	1 HR	1 HR	STAIR SHAFT 1HR - 4 STORIES (UNLESS OCCUPANCY SEPARATION IS 2 HOURS). 1019.3 exception 1 - Exit access stairways and ramps that serve or atmospherically communicate between only two adjacent stories. Such inter-connected stairways shall not be open to other stories.
803.13	Interior Finish: Rooms / Spaces	A/B	A/B	A B STAIRS AND CORRIDORS / B B ROOMS AND ENCLOSED SPACES FOR A-2/ C B STORAGE SPACES
903.2.11.1.3	Automatic Sprinkler System	YES	PROVIDED	PROVIDED UNDER SEPARATE PERMIT
906.1	Portable Fire Extinguishers	YES	PROVIDED	75' MAX TRAVEL DISTANCE
907.2	Fire Alarm System	YES	PROVIDED	PROVIDED UNDER SEPARATE PERMIT
1003.2	Egress Ceiling Height	MIN. 7'-4"	EXIST. BLD HEIGHT	6'-8" @ STAIRS ALLOWED.
1005.3.2	Egress width / occupant	0.2 Inch	SEE A1.40	SPRINKLER, 0.3 IN AT STAIRS, SEE SHEET A1.40
1004.1	Occupant Load Calculations	SEE A1.40	SEE A1.40	SEE SHEET A1.40.
1005.1	Egress Capacity Calculations Shown	SEE A1.40	SEE A1.40	SEE SHEET A1.40.
1006.2.1	Common Path of Egress Travel Distance	SEE A1.40	SEE A1.40	SEE A1.40
1009	Accessible Means of Egress	REQ'D @ 1ST FLOOR	PROVIDED	SEE PLANS
1010.1.1	Door Minimum Width	32"	SEE A1.40	SEE A1.40
	Door Fire Rating			SEE A1.40
	Door Swing	DIRECTION OF EGRESS	DIRECTION OF EGRESS	
	Force Req'd	5 LBS	5 LBS	
1011	Stair Minimum Width	44"	50"	
	Max riser / tread	MAX. 7"R MAX. 11" T	SEE A1.40	
	Max vertical distance between landings	12'-0"	NA	
	Stair Construction	PER III-B CONST	METAL	HANDRAILS ALLOWED TO BE WOOD
	Handrail Height	MIN. 34" - MAX. 38"	36"	
	Handrail Extensions		SEE A5.00	12" beyond top riser & depth of one tread beyond bottom riser
	Projections	MAX. 4-1/2"	SEE A5.00	
	Ramp - Max Rise / Run	SEE COMMENTS	1:12	MAX. 1:12 MAX. 30" TOTAL RISE PER RUN
306.5	Roof Access	NA	NA	PERMANENTLY INSTALLED LADDER REQUIRED IF ROOF HEIGHT IS OVER 16'-0" TALL. BUILDING HEIGHT = 14'-8" AND 13'-0" AT REAR OF BUILDING
1013	Exit Signs	REQ'D	PROVIDED	
1017.2	Exit Access Travel Distance	SEE A1.40	SEE A1.40	
1020.5	Max distance @ dead-end corridor	20'	SEE PLANS	
1505.1	Roof Fire Classification	C	C	

### CERTIFICATION STATEMENTS

ARCH	I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY PROFESSIONAL KNOWLEDGE THEY CONFORM TO THE LATEST EDITION OF THE 2021 INTERNATIONAL BUILDING CODE. STATE LICENSE NUMBER: 001-018443 STATE LICENSE EXPIRATION DATE: 11.30.2026 SIGNED: <i>J Keller</i> DATE: 12.30.2025	
ENERGY	I CERTIFY THAT I AM A REGISTERED ENERGY PROFESSIONAL (REP). I ALSO CERTIFY THAT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE AND BELIEF THAT THE PLANS FOR - 6136 W. ROOSEVELT RD. - FULLY COMPLY WITH THE REQUIREMENTS OF THE 2021 ENERGY CONSERVATION CODE. SIGNED: <i>J Keller</i> DATE: 12.30.2025	
DESIGN FIRM	I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY A LICENSED ARCHITECT - WORKING FOR A STATE OF ILLINOIS LICENSED ARCHITECTURAL DESIGN FIRM - PER THE STATE OF ILLINOIS ARCHITECT OR ENGINEER REGISTRATION ACT OF 1989 STATE LICENSE NUMBER: 184.005142 SIGNED: <i>J Keller</i> DATE: 12.30.2025	
ACCESSIBILITY	I CERTIFY THAT THESE DRAWINGS HAVE BEEN REVIEWED TO THE BEST OF MY KNOWLEDGE AND THAT I BELIEVE THEY ARE IN ACCORDANCE WITH THE IAC AND ICC / ANSI 117.1 AND ALL CODES AND BUILDING ORDINANCES OF THE VILLAGE OF OAK PARK, STATE OF ILLINOIS, AS SPECIFIED ON DATA PAGE A0.00. SIGNED: <i>J Keller</i> DATE: 12.30.2025	
STRUCTURAL	I CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY PROFESSIONAL KNOWLEDGE THEY CONFORM TO THE 2021 INTERNATIONAL BUILDING CODE. STATE LICENSE EXPIRATION DATE: 11/2026 STATE LICENSE NUMBER: 081-006010 SIGNED: <i>Jeff M. Prybyl</i> DATE: 12.30.2025	
MEP	I CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY PROFESSIONAL KNOWLEDGE THEY CONFORM TO THE 2021 INTERNATIONAL MECHANICAL CODE. STATE LICENSE EXPIRATION DATE: 11/30/2026 STATE LICENSE NUMBER: 062-049931 SIGNED: <i>Guy Valcour</i> DATE: 12.30.2025	

SEE A0.01 FOR DRAWING INDEX

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**BUILDING TO BE SPRINKLERED**

PROJECT INFO

PROJECT NO. 25100  
PROJECT TEAM: JK, BB, GV

ISSUE

12.30.25 - ISSUED FOR PERMIT

CERTIFICATION

SHEET TITLE

**PROJECT DATA**

SHEET #

**A0.00**

# DRAWING INDEX

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	A0.10	SITE PLAN		E1.22	ROOF PLAN
	A0.40	SCHEDULES		E2.00	ELECTRICAL SCHEDULES, NOTES AND DETAILS
	A1.00	BASEMENT DEMOLITION PLAN		E2.01	ELECTRICAL SCHEDULES, NOTES AND DETAILS
	A1.01	FIRST FLOOR DEMOLITION PLAN		E2.02	ELECTRICAL SCHEDULES, NOTES AND DETAILS
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	A1.21	FIRST FLOOR PLAN		P1.20	BASEMENT FLOOR PLAN
	A1.22	ROOF PLAN		P1.21	FIRST FLOOR PLAN
	A1.40	EXITING AND OCCUPANCY PLANS		P1.22	ROOF PLAN
	A2.10	ELEVATIONS		P2.00	PLUMBING SCHEDULES, NOTES AND DETAILS
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S4.1		SECTIONS AND DETAILS			
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	M1.22	ROOF PLAN		X1.2	GENERAL SPECIFICATIONS
	M2.00	MECHANICAL SCHEDULES, NOTES AND DETAILS		X1.3	GENERAL SPECIFICATIONS
	M2.01	MECHANICAL SCHEDULES, NOTES AND DETAILS		X1.4	GENERAL SPECIFICATIONS
	M2.02	MECHANICAL SCHEDULES, NOTES AND DETAILS		X1.5	GENERAL SPECIFICATIONS
	M2.03	MECHANICAL SCHEDULES, NOTES AND DETAILS			
	M2.04	MECHANICAL SCHEDULES, NOTES AND DETAILS			

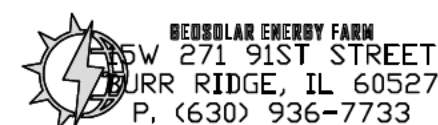
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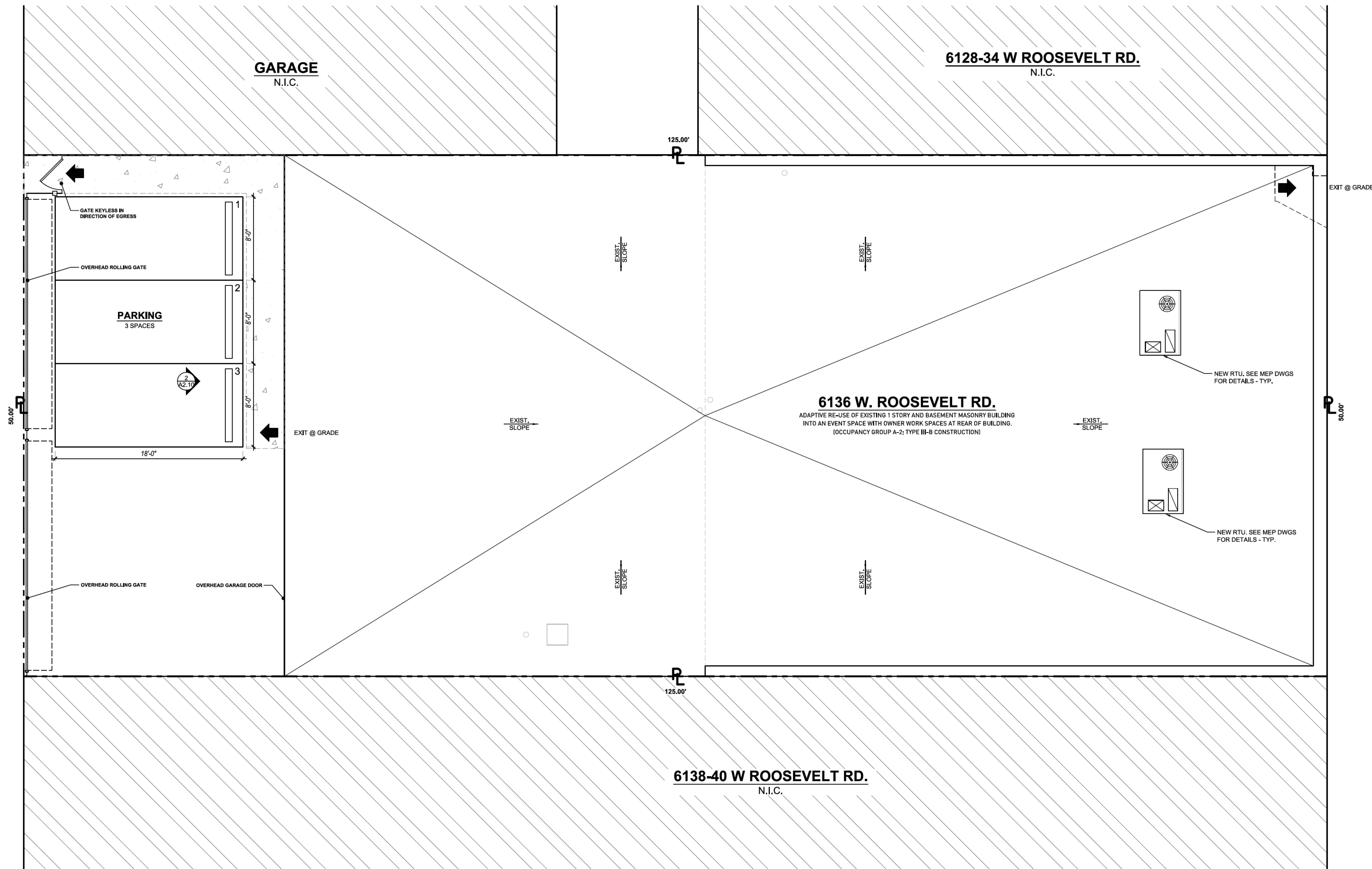
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**DRAWING INDEX**

SHEET #

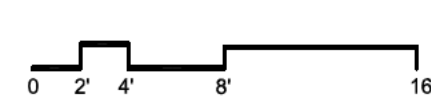
**A0.01**

**PUBLIC ALLEY**  
TWO WAY TRAFFIC



**W. ROOSEVELT RD.**  
TWO WAY TRAFFIC

**1 SITE PLAN**  
SCALE: 1'-0" = 1/8"



**INFORMATION TAKEN FROM:**

SURVEY BY: LEON R. PASS  
DATED: 12/22/2025  
ORDER NUMBER: 2512-000

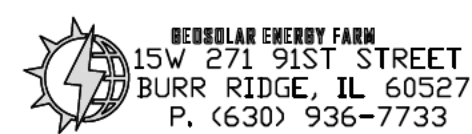
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**BUILDING TO BE  
SPRINKLERED**

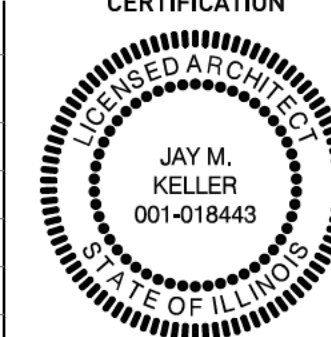
PROJECT INFO

PROJECT NO.  
251020  
PROJECT TEAM:  
JK  
BB  
GV

ISSUE

12.30.25 - ISSUED FOR PERMIT

CERTIFICATION



SHEET TITLE

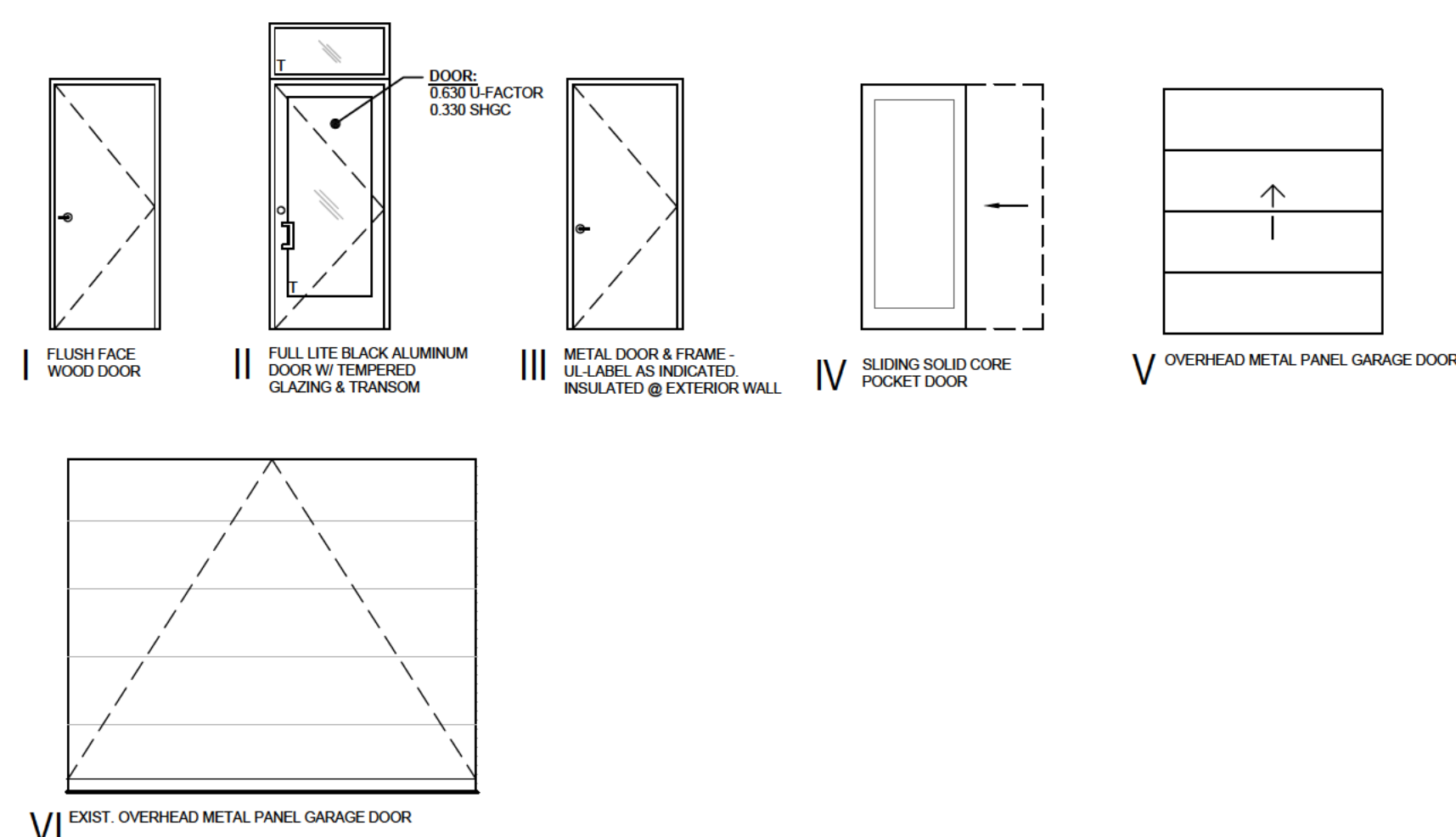
**SITE PLAN**

SHEET #

**A0.10**

DOOR SCHEDULE - COMMON														REMARKS		
DOOR NO.	DOOR			FRAME			HARDWARE									
	WIDTH	HEIGHT	THICK	TYPE	MATERIAL	FINISH	MATERIAL	FINISH	FIRE RATING (MINUTES)	ENTRY	PASSAGE	PRIVACY	DUMMY		AUTO CLOSURE HOLD OPEN DEVICE**	OTHER
BASEMENT																
001	3'-0"	7'-0"	1 3/4	I	WD	PNT	WD	PNT								RESTROOM
002	3'-0"	7'-0"	1 3/4	I	WD	PNT	WD	PNT								STORAGE 1
003	3'-0"	7'-0"	1 3/4	I	WD	PNT	WD	PNT								RESTROOM
004	2'-6"	7'-0"	1 3/4	I	WD	PNT	WD	PNT								MOP SINK
005	3'-0"	7'-0"	1 3/4	III	MTL	PNT	MTL	PNT	45							STORAGE 1 DOOR TO BE SELF CLOSING AND SELF LATCHING
1ST FLOOR																
010	3'-0"	7'-0"	1 3/4	II	AL/GLZ	ADZ	ALM	ADZ								STOREFRONT ENTRY W/ PUSH BUTTON
012	3'-0"	7'-0"	1 3/4	I	WD	PNT	WD	PNT								UNISEX RESTROOM
013	6'-0"	8'-0"	1 3/4	V	ALM	ADZ	ALM	ADZ	45							OVERHEAD DOOR
014	3'-0"	7'-0"	1 3/4	III	ALM	ADZ	ALM	ADZ	45							CORR DOR. DOOR TO BE SELF CLOSING AND SELF LATCHING
015	3'-0"	7'-0"	1 3/4	IV	SCW	PNT	WD	PNT								WARMING KITCHEN
016	3'-0"	7'-0"	1 3/4	III	MTL	PNT	MTL	PNT								STORAGE
017	3'-0"	7'-0"	1 3/4	I	WD	PNT	WD	PNT								STORAGE
018	3'-0"	7'-0"	1 3/4	III	MTL	PNT	MTL	PNT	45							GARAGE DOOR TO BE SELF CLOSING AND SELF LATCHING
019	3'-0"	7'-0"	1 3/4	III	MTL	PNT	MTL	PNT	45							WORKSHOP DOOR TO BE SELF CLOSING AND SELF LATCHING
020	3'-0"	7'-0"	1 3/4	III	MTL	PNT	MTL	PNT	45							STAIR 2 DOOR TO BE SELF CLOSING AND SELF LATCHING
021	3'-0"	7'-0"	1 3/4	III	MTL	PNT	MTL	PNT	45							WORKSHOP DOOR TO BE SELF CLOSING AND SELF LATCHING
022	3'-0"	7'-0"	1 3/4	I	WD	PNT	WD	PNT								OFFICE
023	3'-0"	7'-0"	1 3/4	III	MTL	PNT	MTL	PNT	45							OFFICE DOOR TO BE SELF CLOSING AND SELF LATCHING
024	3'-0"	7'-0"	1 3/4	III	MTL	PNT	MTL	PNT	45							REAR EXIT, U-VALUE 3/70
025	8'-4"	10'-6"	1 3/4	VI	ALM	ADZ	ALM	ADZ								OVERHEAD GARAGE DOOR

ABBREVIATIONS: WD - WOOD / ALM - ALUMINUM / MTL - METAL / PNT - PAINT / ADZ - ANODIZED



DOOR TYPES NTS SEE PLANS FOR DOOR SWINGS

**DOOR NOTES:**

- ALL DOORS USED IN CONNECTION W/ EXITS SHALL BE SO ARRANGED AS TO BE READILY OPENED WITHOUT A KEY IN THE DIRECTION OF EGRESS
- VERIFY ALL DOOR WIDTHS & HEIGHTS IN FIELD PRIOR TO ORDERING
- PROVIDE ROLLER CATCH OR MAGNETIC CATCH AT DUMMY TRIM
- ALL HINGES & HANDLES TO BE SELECTED BY OWNER
- ALL DOORS & HARDWARE TO BE SELECTED BY OWNER & REVIEWED BY ARCHITECT / I.D. PRIOR TO PURCHASE BY CONTRACTOR, U.N.O.
- CONTRACTOR TO PURCHASE ALL DOORS, U.N.O.
- ALL DOOR FRAMES MUST BE FIRE LISTED TO MATCH THE FIRE RATING OF THE DOOR.
- ALL EXTERIOR DOORS TO COMPLY WITH 2021 IECC PERFORMANCE REQUIREMENTS INCLUDING AIR INFILTRATION

**DOOR & WINDOW GLASS REQUIREMENTS:**

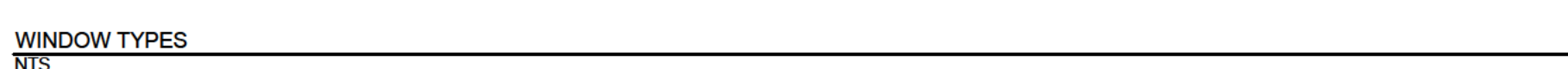
- PROVIDE SAFETY GLAZING UNDER THE FOLLOWING CONDITIONS:
  - ALL DOORS / SKYLIGHTS / SHOWER DOORS
  - ALL WINDOWS WHICH OCCUR AT BATHTUBS OR SHOWERS
  - ALL SIDELIGHTS WITHIN 24" ARC OF A DOOR
- FOR ALL WINDOWS OTHER THAN SIDELIGHTS WITHIN 18" OF THE FLOOR, SAFETY GLASS IS REQUIRED IF ALL OF THE FOLLOWING CONDITIONS EXIST:
  - GLASS AREA IS 9 SF OR MORE
  - BOTTOM EDGE OF GLASS IS LESS THAN 18" ABOVE FLOOR
  - TOP EDGE OF GLASS IS MORE THAN 36" ABOVE FLOOR
- WHERE THE FLOOR OR WALKING SURFACE IS FURTHER THAN 36" HORIZONTALLY FROM THE GLASS, SAFETY GLASS IS NOT REQUIRED.
- WHERE SAFETY GLASS IS REQUIRED AND DOUBLE GLAZING IS SPECIFIED, BOTH THE PANES MUST BE SAFETY GLASS IF WITHIN 25 FEET OF THE GRADE. IF ABOVE 25 FEET, ONLY THE INNER PANE NEEDS TO BE SAFETY GLASS.
- FIRE RATED GLASS AT ANY EXIT CORRIDORS / WALKWAYS.
- THE FORCE FOR PUSHING OR PULLING OPEN DOORS SHALL BE AS FOLLOWS:
  - INTERIOR HINGED DOORS AND GATES: 5 POUNDS (22.2 N) MAXIMUM.
  - SLIDING OR FOLDING DOORS: 5 POUNDS (22.2 N) MAXIMUM.

**WINDOW NOTES:**

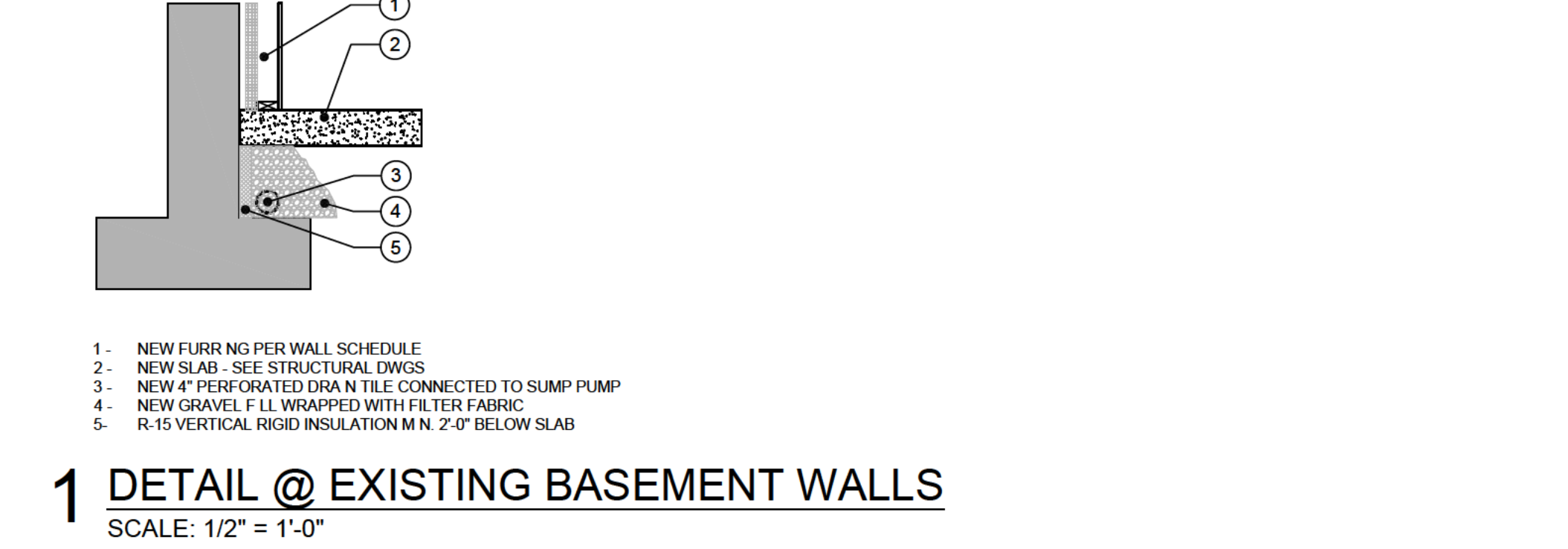
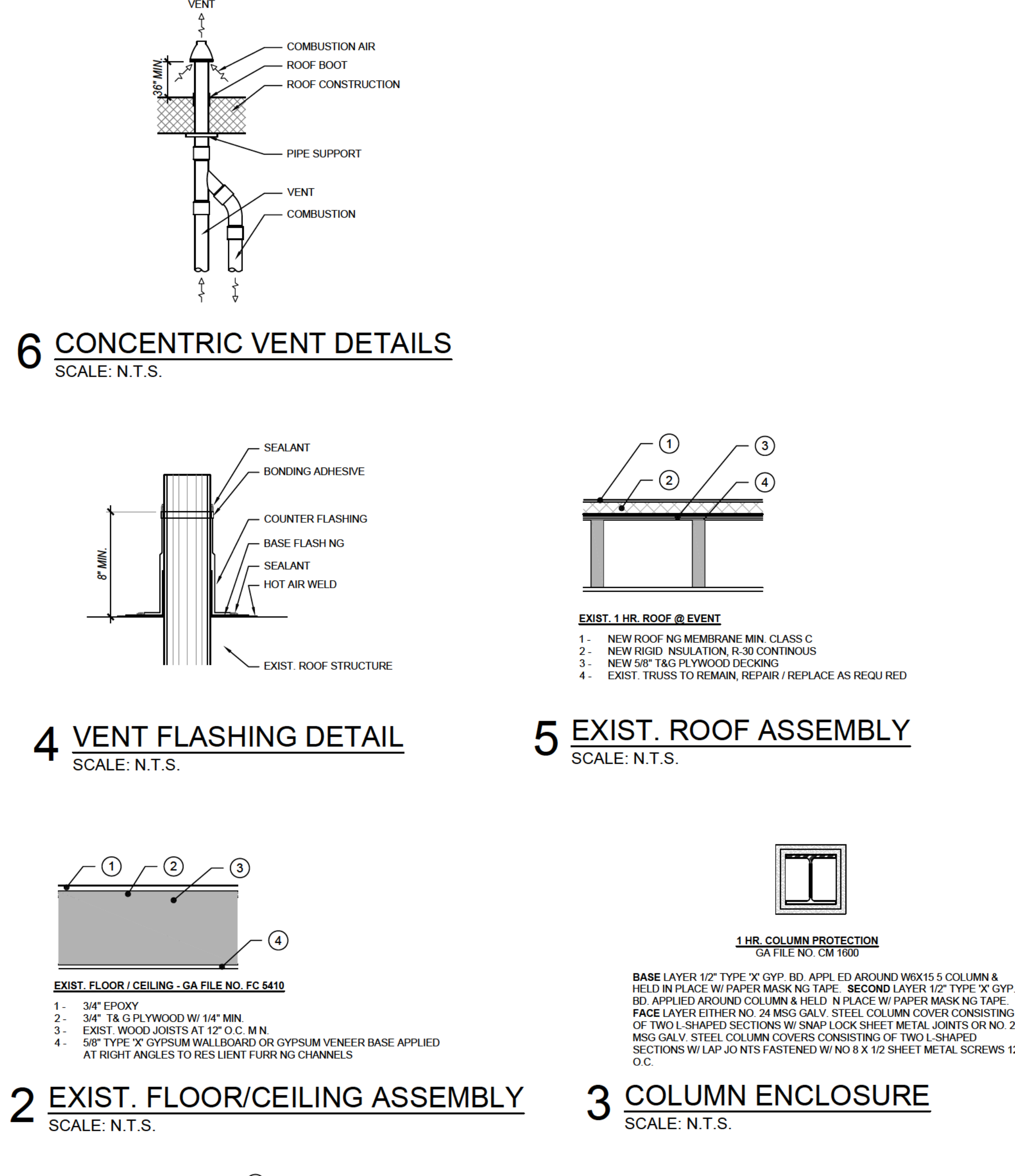
- CONTRACTOR TO VERIFY ALL ROUGH OPENING SIZES IN THE FIELD PRIOR TO ORDERING
- ARCHITECT TO REVIEW AND APPROVE WINDOW SPECIFICATIONS PRIOR TO GC PLACING ORDER
- ALL NEW WINDOWS IN EXISTING OPENINGS TO BE FULL REPLACEMENT WINDOWS
- PROVIDE WOOD TRIM AND SILL AT ALL INTERIOR WINDOWS
- CONTRACTOR TO VERIFY ALL WINDOWS MEET LIGHT & VENT REQUIREMENTS IN SCHEDULE AND NOTIFY ARCHITECT IF DEFICIENT
- ANY WINDOWS WITH SILLS LOWER THAN 2'-0" A.F.F. TO HAVE FIXED TEMPERED LOWER PANE. WINDOW TO OPEN FROM TOP DOWN.
- ALL WINDOWS WHERE SILLS ARE LESS THAN 2' AFF ARE TO BE EQUIPPED WITH 4" RESTRICTOR
- ALL NEW WINDOWS TO COMPLY WITH 2021 IECC PERFORMANCE REQUIREMENTS INCLUDING AIR INFILTRATION AND INSECT SCREEN AT OPERABLE OPENINGS

WALL PARTITION SCHEDULE					
MARK	UNIT SIZE (R.O.)	TYPE	MODEL #	GLASS TYPE	REMARKS
1	4'3/4"				1 HR. RATED INTERIOR PARTITION UL U305 - NON-BEARING & BEARING 1. WOOD STUDS - NOM 2 BY 4 IN. SPACED 16 IN. OC MAX, EFFECTIVELY FIRESTOPPED. 2. JOINTS AND NAIL HEADS - JOINTS COVERED WITH JOINT COMPOUND AND PAPER TAPE. JOINT COMPOUND AND PAPER TAPE MAY BE OMITTED WHEN SQUARE EDGE BOARDS ARE USED. 3. GYPSUM BOARD - TYPE "X" - 5/8" N. THICK PAPER OR VINYL SURFACED, WITH BEVELED, SQUARE, OR TAPERED EDGES, APPLIED EITHER HORIZONTALLY OR VERTICALLY. GYPSUM PANELS NAILED 7" IN. OC WITH 40 CEMENT COATED NAILS 1-7/8 IN. LONG, 0.0915 N. SHANK DIAM AND 15/64 N. DIAM HEADS. WHEN USED IN WIDTHS OTHER THAN 48" N., GYPSUM PANELS ARE TO BE INSTALLED HORIZONTALLY. 4. BATTIS AND BLANKETS - PLACED IN STUD CAVITIES OF ALL EXTERIOR WALLS. MINERAL WOOL BATT MATERIAL BEARING THE UL CLASSIFICATION MARKING AS TO FIRE RESISTANCE, OF A THICKNESS TO COMPLETELY FILL STUD CAVITY. INSULATION AS INDICATED ON PLAN. ** WALL TO BE 42" TALL
2	VARIABLES SEE PLANS				1 HR. RATED INTERIOR CHASE PARTITION GA FILE NO WP 5513 - LOAD-BEARING ONE LAYER 5/8" TYPE "X" GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED PARALLEL OR AT RIGHT ANGLES TO EACH SIDE OF 2 X 4 WOOD STUDS 16 O.C. STAGGERED 8" O.C. ON 2X8 WOOD PLATES WITH 2" TYPE W SCREWS 7" O.C. MINIMUM 3/12" GLASS FIBER BATTIS, WOVEN IN CAVITY. (LOAD-BEARING)
3	5'-0"				2 HR. RATED INTERIOR PARTITION U.L. # U906 - BEARING 6" CLASS D-2 CONCRETE MASONRY UNITS LAID IN 3/8" THICK FULL BED OF MORTAR
4	VARIABLES SEE PLANS				EXIST. 2 HR CONCRETE WALL EXISTING CONCRETE WALL (MIN. 5'00") W/ 2X4 WOOD FURRING @ 16" O.C. W/ GYP. BD. ONE SIDE HELD OFF WALL. MIN R7.5 CONTINUOUS RIGID INSULATION
5	VARIABLES SEE PLANS				EXIST. 2 HR MASONRY WALL EXISTING MASONRY WALL (MIN. 3'8") W/ 2X4 WOOD FURRING @ 16" O.C. W/ GYP. BD. ONE SIDE HELD OFF WALL. MIN R7.5 CONTINUOUS RIGID INSULATION
EX	VARIABLES SEE PLANS				EXIST. 2 HR MASONRY WALL EXISTING MASONRY WALL
EX	VARIABLES SEE PLANS				EXIST. FOUNDATION WALL EXISTING FOUNDATION WALL. ANY SIGN OF EFFLORESCENCE ON MASONRY WALL TO BE ADDRESSED BY G.C.

WINDOW SCHEDULE							
MARK	UNIT SIZE (R.O.)		TYPE	MODEL #	GLASS TYPE		REMARKS
	WIDTH	HEIGHT			CLEAR	SPANDREL	
A	5'-0"	10'-0"	STOREFRONT	II			NEW @ EXIST NG WINDOW LOCATION V.I.F.
B	8'-9"	10'-0"	STOREFRONT	II			NEW @ EXIST NG WINDOW LOCATION V.I.F.
C	30'-0"	10'-0"	STOREFRONT	I			NEW @ EXIST NG WINDOW LOCATION V.I.F.
EX	V.I.F.	V.I.F.	GLASSBLOCK	III			EXISTING TO REMAIN



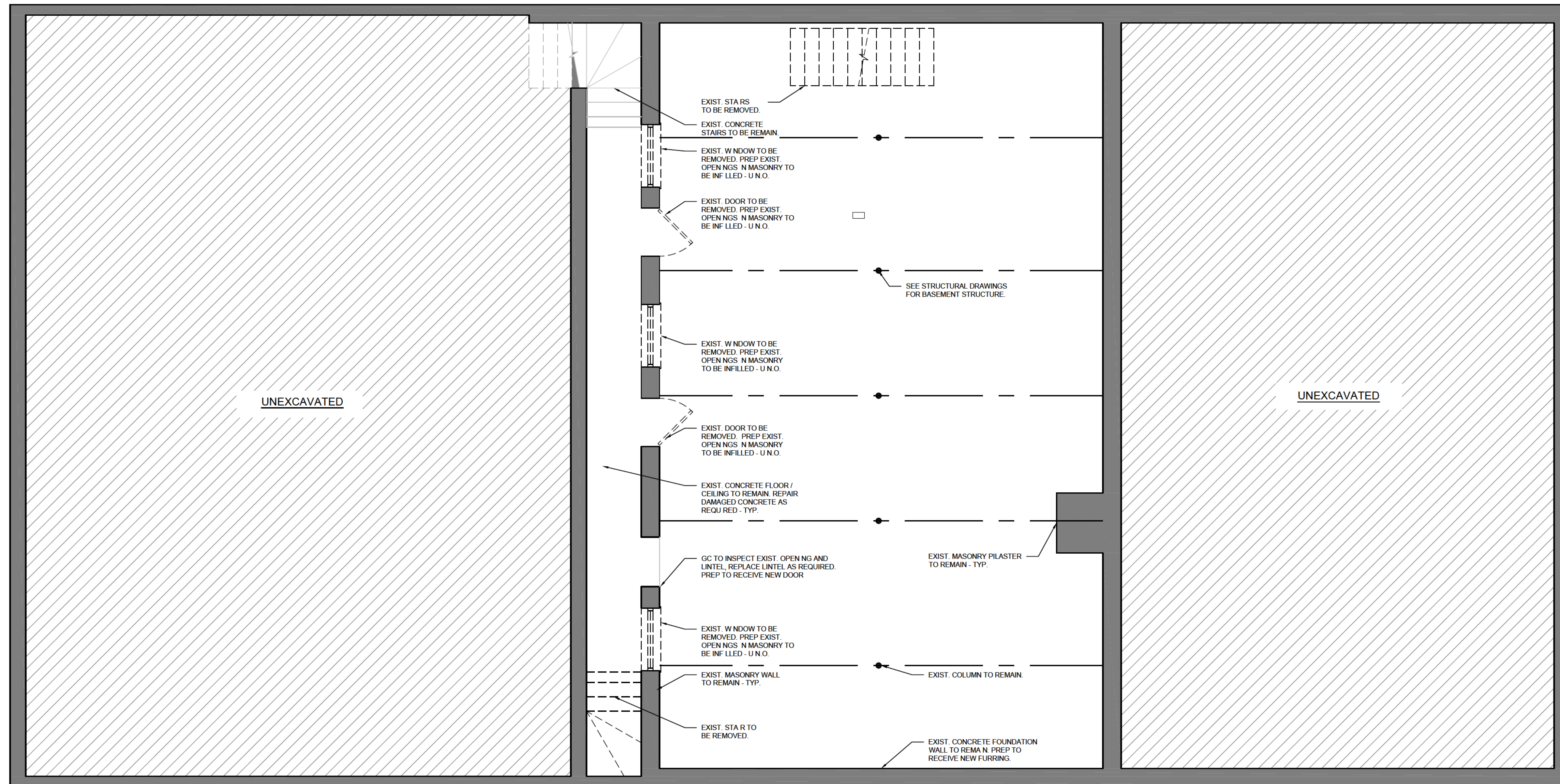
WINDOW TYPES NTS



1. NEW FURRING PER WALL SCHEDULE  
2. NEW SLAB - SEE STRUCTURAL DWGS  
3. NEW 4" PERFORATED DRAIN TILE CONNECTED TO SUMP PUMP  
4. NEW GRAVEL FILL WRAPPED WITH FILTER FABRIC  
5. R-15 VERTICAL RIGID INSULATION MIN. 2'-0" BELOW SLAB

**1 DETAIL @ EXISTING BASEMENT WALLS**  
SCALE: 1/2" = 1'-0"

<p>2149 N. TALMAN AVENUE CHICAGO, IL 60647 312.829.6666 www.spacearchplan.com</p>	<p>CONSULTANTS</p> <p>Consulting Structural Engineers 134 N. LaSalle, Suite 1930 Chicago, IL 60602 Phone: 312.332.2800 Fax: 312.332.2820</p>	<p>PROJECT NAME: <b>6136 W. ROOSEVELT RD</b></p> <p>PROJECT ADDRESS: <b>6136 W. ROOSEVELT RD., OAK PARK, IL 60304</b></p>	<p>BUILDING TO BE <b>SPRINKLERED</b></p>	<p>PROJECT INFO</p> <p>PROJECT NO: 25102 PROJECT TEAM: JK, BB, GV</p>	<p>ISSUE</p> <p>12.30.25 - ISSUED FOR PERMIT</p>	<p>CERTIFICATION</p>	<p>SHEET TITLE</p> <p><b>SCHEDULES</b></p>	<p>SHEET #</p> <p><b>A0.50</b></p>
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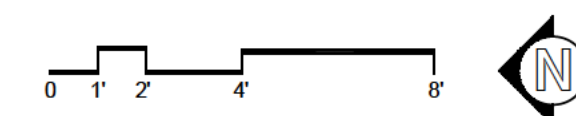


**GENERAL DEMOLITION NOTES:**

- ALL WORK TO BE PERFORMED TO COMPLY WITH CURRENT VILLAGE OF OAK PARK BUILDING, ZONING CODES & AMENDMENTS.
- CONTRACTOR'S STAFF RESPONSIBLE FOR THE DEMOLITION SHALL BE EXPERIENCED IN DEMOLITION WORK.
- EQUIPMENT USED FOR DEMOLITION SHOULD BE SUITABLE FOR USE, IN GOOD WORKING CONDITION & OPERATED BY A SKILLED OPERATOR.
- ALL WORK SHALL BE DONE IN A SAFE & CAUTIOUS MANNER IN ORDER TO AVOID ACCIDENT & PROPERTY DAMAGE.
- DEMOLITION METHODS SHALL BE SOLELY THE CONTRACTOR'S RESPONSIBILITY.
- IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT THE ADJOINING STRUCTURES FROM DIRT & DAMAGE CAUSED BY THE DEMOLITION WORK.
- ALL WORK DAMAGE BY THE DEMOLITION SHALL BE REPLACED BY DEMOLITION CONTRACTOR AT NO COST TO THE OWNER.
- ALL SALVAGED MATERIAL, UNLESS NOTED OTHERWISE, SHALL BECOME THE PROPERTY OF THE CONTRACTOR & SHALL BE EVALUATED IN THE CONTRACTOR'S BID PRICE.
- SALVAGEABLE MATERIALS SHALL BE REMOVED PROMPTLY FROM THE CONSTRUCTION SITE AS THE WORK PROCEEDS PER THE VILLAGE OF OAK PARK SITE CLEANLINESS OR RECYCLING ORDINANCE.
- CAREFULLY DISMANTLE, STORE & PROTECT ON SITE ALL MATERIAL SCHEDULED TO REMAIN UNTIL REMOVED BY THE OWNER OR UNTIL THE END OF THE CONTRACT.
- GENERAL CONTRACTOR IS TO BE RESPONSIBLE FOR ALL DEMOLITION & REMOVAL OF EXISTING PARTITIONS, SCOFFITS, DOORS, FRAMES, ANY MECHANICAL, PLUMBING OR ELECTRICAL EQUIPMENT, WALL TREATMENTS, FLOOR COVERINGS, ETC. AS NECESSARY FOR THE PROPER INSTALLATION OF NEW WORK.
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- REMOVE & DISCARD OF EXISTING LIGHT FIXTURES, WHERE REQUIRED, PER OWNER'S INSTRUCTIONS.
- REMOVE / DISCARD EXISTING APPLIANCES AS REQUIRED, DISPOSE OF PER OWNER INSTRUCTIONS - U.N.O.
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**1 BASEMENT DEMOLITION PLAN**

SCALE: 1'-0" = 1/4"

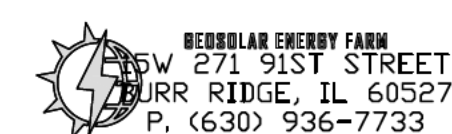


ALL EXISTING ELECTRICAL & RELATED WIRING TO BE REMOVED THROUGHOUT - U.N.O.	ALL INTERIOR FINISHES TO BE REMOVED. CONTRACTOR TO CONFIRM W/ OWNER ITEMS TO BE SALVAGED - U.N.O.	REMOVE ALL FINISHED FLOORING. PREP TO RECEIVE NEW FLOORING U.N.O.	REFER TO STRUCTURAL DWGS PER SCOPE OF WORK AT FOUNDATIONS
GC TO CONF RM WITH OWNER ALL ITEMS TO BE SALVAGED PRIOR TO DEMO	ALL EXIST. FLOOR AND ROOF JOISTS TO REMAIN U.N.O. SEE STRUCTURAL DWGS FOR DETAILS	PREP TO RECEIVE NEW NFPA 13 SPRINKLER	
ALL BUILT IN FURNITURE & CASEWORK TO BE REMOVED - U.N.O.	ALL PLUMBING FIXTURES & ASSOC. PIPING TO BE REMOVED U.N.O.	ALL INTERIOR EXIST. MASONRY WALLS TO BE CLEANED & TUCKPOINTED.	

**SPACE**  
ARCHITECTS + PLANNERS

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CHICAGO, IL 60647  
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**SP|Engineers**  
Consulting Structural Engineers  
134 N. LaSalle, Suite 1930 Chicago, IL 60602  
Phone: 312.332.2800  
Fax: 312.332.2820



PROJECT NAME:  
**6136 W. ROOSEVELT RD**

PROJECT ADDRESS:  
**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

BUILDING TO BE  
SPRINKLERED

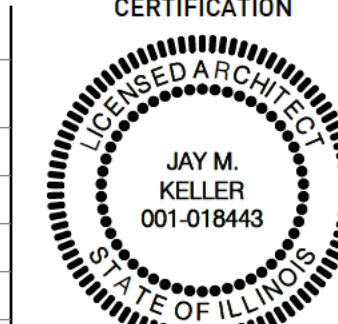
**PROJECT INFO**

PROJECT NO.  
25-028  
PROJECT TEAM:  
JK  
BB  
GV

**ISSUE**

12.30.25 - ISSUED FOR PERMIT

**CERTIFICATION**

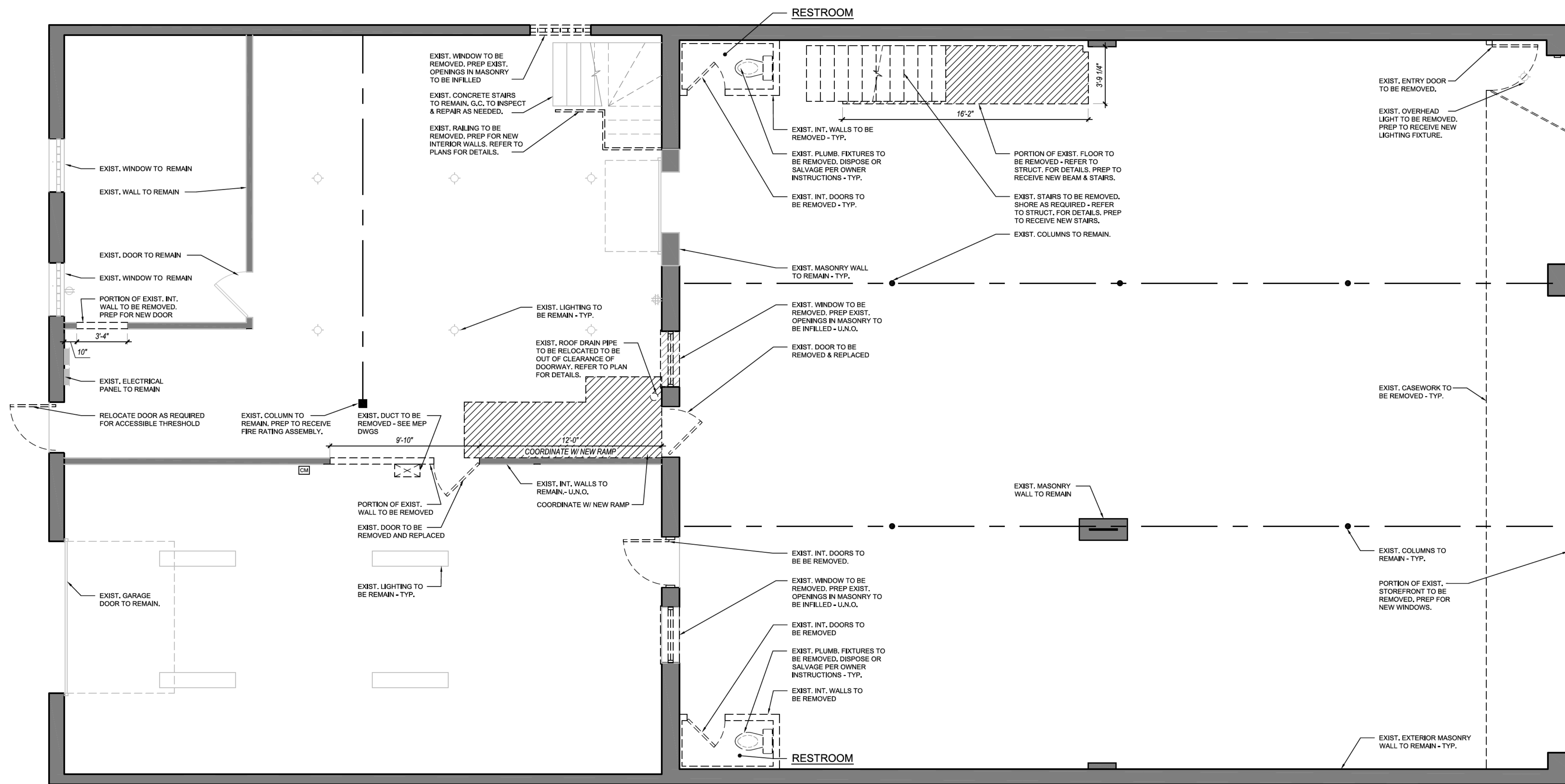


**SHEET TITLE**

**BASEMENT  
DEMOLITION PLAN**

**SHEET #**

**A1.00**

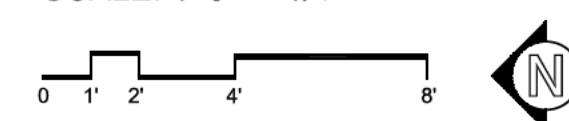


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**1 FIRST FLOOR DEMOLITION PLAN**

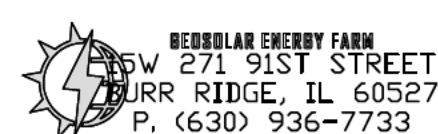
SCALE: 1'-0" = 1/4"



ALL EXISTING ELECTRICAL & RELATED WIRING TO BE REMOVED THROUGHOUT - U.N.O.	ALL INTERIOR FINISHES TO BE REMOVED, CONTRACTOR TO CONFIRM W/ OWNER ITEMS TO BE SALVAGED - U.N.O.	REMOVE ALL FINISHED FLOORING, PREP TO RECEIVE NEW FLOORING U.N.O.	REFER TO STRUCTURAL DWGS PER SCOPE OF WORK AT FOUNDATIONS
GC TO CONFIRM WITH OWNER ALL ITEMS TO BE SALVAGED PRIOR TO DEMO	ALL EXIST. FLOOR AND ROOF JOISTS TO REMAIN U.N.O. SEE STRUCTURAL DWGS FOR DETAILS	PREP TO RECEIVE NEW NFPA 13 SPRINKLER	
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**CONSULTANTS**

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PROJECT NAME:  
**6136 W. ROOSEVELT RD**

PROJECT ADDRESS:  
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BUILDING TO BE  
 SPRINKLERED

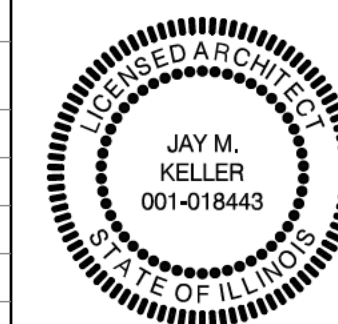
**PROJECT INFO**

PROJECT NO.  
251020  
 PROJECT TEAM:  
JK  
BB  
GV

**ISSUE**

12.30.25 - ISSUED FOR PERMIT

**CERTIFICATION**



**SHEET TITLE**

**FIRST FLOOR  
 DEMOLITION PLAN**

**SHEET #**

**A1.01**

**SPACE**  
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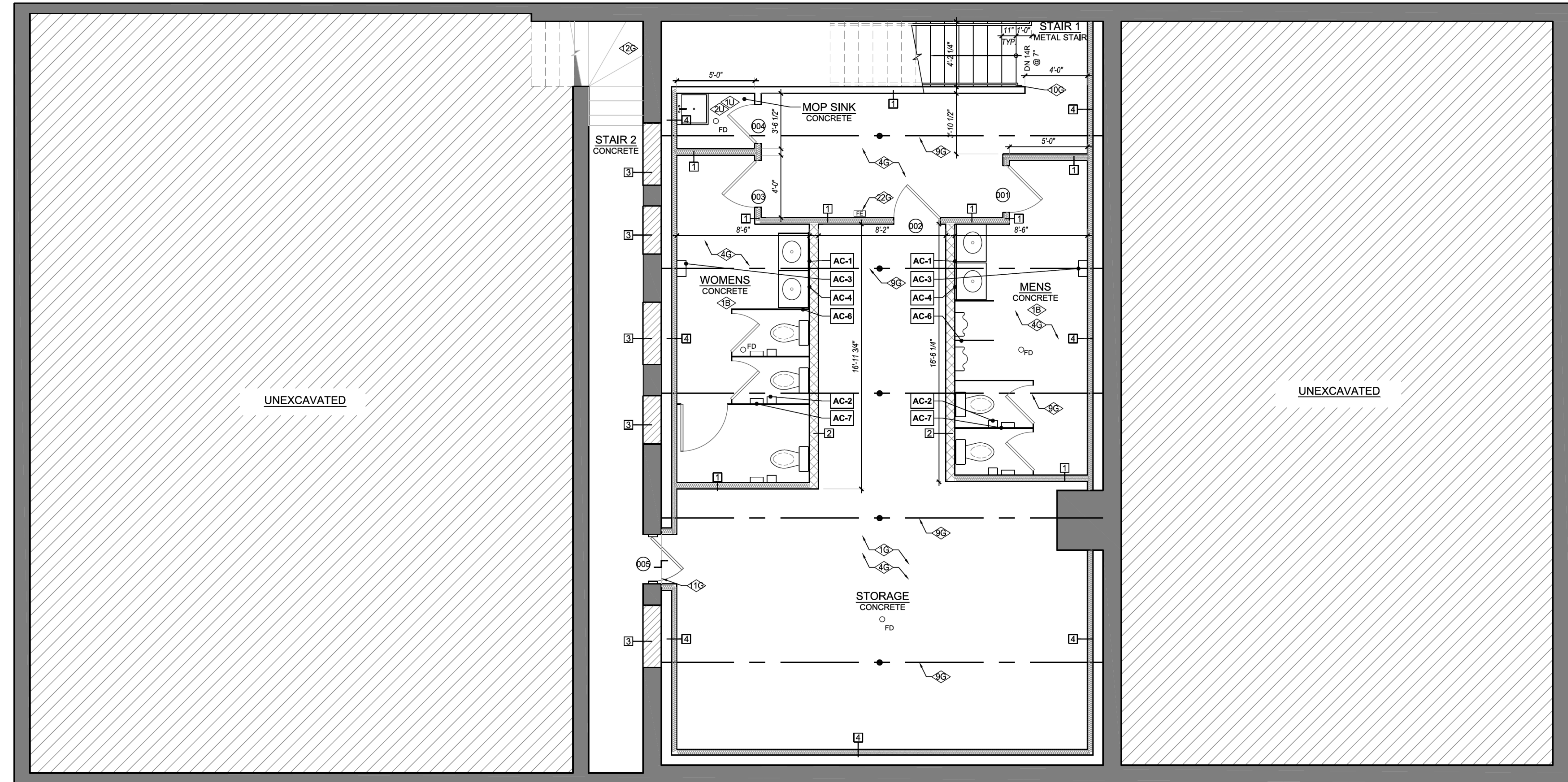
**GENERAL NOTES:**

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS AT JOB SITE, AND IS TO NOTIFY ARCHITECT OF ANY DISCREPANCIES, OMISSIONS AND / OR CONFLICTS PRIOR TO PROCEEDING WITH WORK.
- ALL WORK SHALL CONFORM TO LATEST EDITION OF "VILLAGE OF OAK PARK" BUILDING AND ZONING CODES.
- DO NOT SCALE DRAWINGS.
- DO NOT RUN ANY PLUMBING ON EXTERIOR WALLS.
- ALL DIMENSIONS ARE TO FINISHED FACE UNLESS NOTED OTHERWISE.
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- PROVIDE WALL CONDENSATE DRAIN AT ALL FURNACE LOCATIONS WHERE NO FLOOR DRAIN EXISTS.
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- REFER TO GENERAL SPECIFICATIONS FOR ADDITIONAL NOTES.
- TUCKPOINT, CLEAN AND SEAL ALL INTERIOR EXPOSED BRICK. FOR ALL BRICK CLEANING, USE HOT WATER WITH PRESSURE. NOT TO EXCEED 400 PSI. NO CHEMICALS TO BE USED. CONTRACTOR TO BE LICENSED IN LEAD PAINT ABATEMENT - TYP.

ACCESSORY SCHEDULE				
MARK	TYPE	MANUFACTURER	SIZE (WxDxH)	MOUNTING (MEASURED FROM BOTTOM OF ACCESSORY)
AC-1	SOAP DISPENSER	PER G.C.	PER PLANS / ELEVATIONS	MOUNTED 40" A.F.F. (ADA)
AC-2	TOILET TISSUE DISPENSER	PER G.C.	PER PLANS / ELEVATIONS	MOUNTED 17-19" MIN. A.F.F. (ADA)
AC-3	WALL MOUNTED HAND DRYER	PER G.C.	PER PLANS / ELEVATIONS	MOUNTED AT 36" A.F.F.
AC-4	WALL MOUNTED MIRROR	PER G.C.	PER ELEVATIONS	MOUNTED PER ELEVATIONS
AC-5	GRAB BARS	PER G.C.	PER PLANS / ELEVATIONS	MOUNTED AT 36" A.F.F.
AC-6	STALL PARTITIONS	PER G.C.	PER PLANS / ELEVATIONS	MOUNTED PER ELEVATIONS
AC-7	SANITARY NAPKIN DISPOSAL	PER G.C.	PER PLANS / ELEVATIONS	MOUNTED 15" MIN. A.F.F. (ADA)

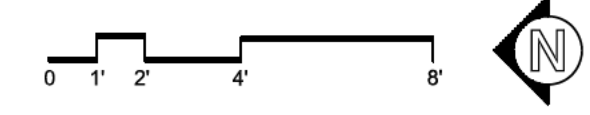
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NOTE: G.C. TO VERIFY SELECTIONS WITH OWNER PRIOR TO PURCHASE



- GENERAL KEYNOTES:**
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- BATHROOM KEYNOTES:**
- 1B VANITY PER OWNER SELECTION - TYP.
  - PLUMBING FIXTURES PER OWNER SELECTION - TYP.
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  - NEW MOP SINK

**1 BASEMENT PLAN**  
SCALE: 1'-0" = 1/4"



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MURR RIDGE, IL 60527  
P. (630) 936-7733

PROJECT NAME:  
**6136 W. ROOSEVELT RD**

PROJECT ADDRESS:  
**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

BUILDING TO BE  
SPRINKLERED

PROJECT INFO	ISSUE	CERTIFICATION	SHEET TITLE	SHEET #
PROJECT NO. 251020 PROJECT TEAM: JK, BB, GV	12.30.25 - ISSUED FOR PERMIT	JAY M. KELLER 001-018443 STATE OF ILLINOIS	BASEMENT PLAN	<b>A1.20</b>

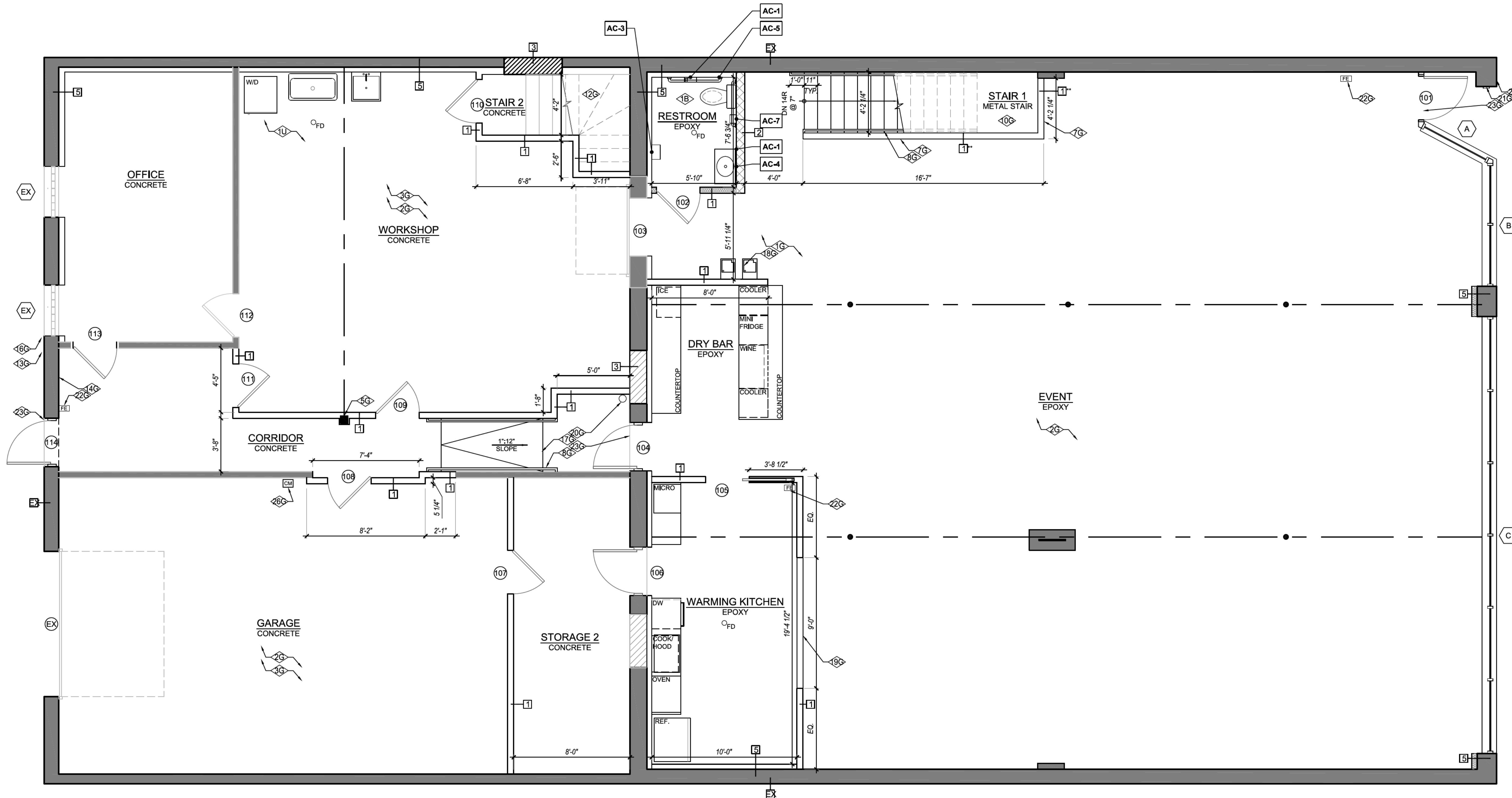
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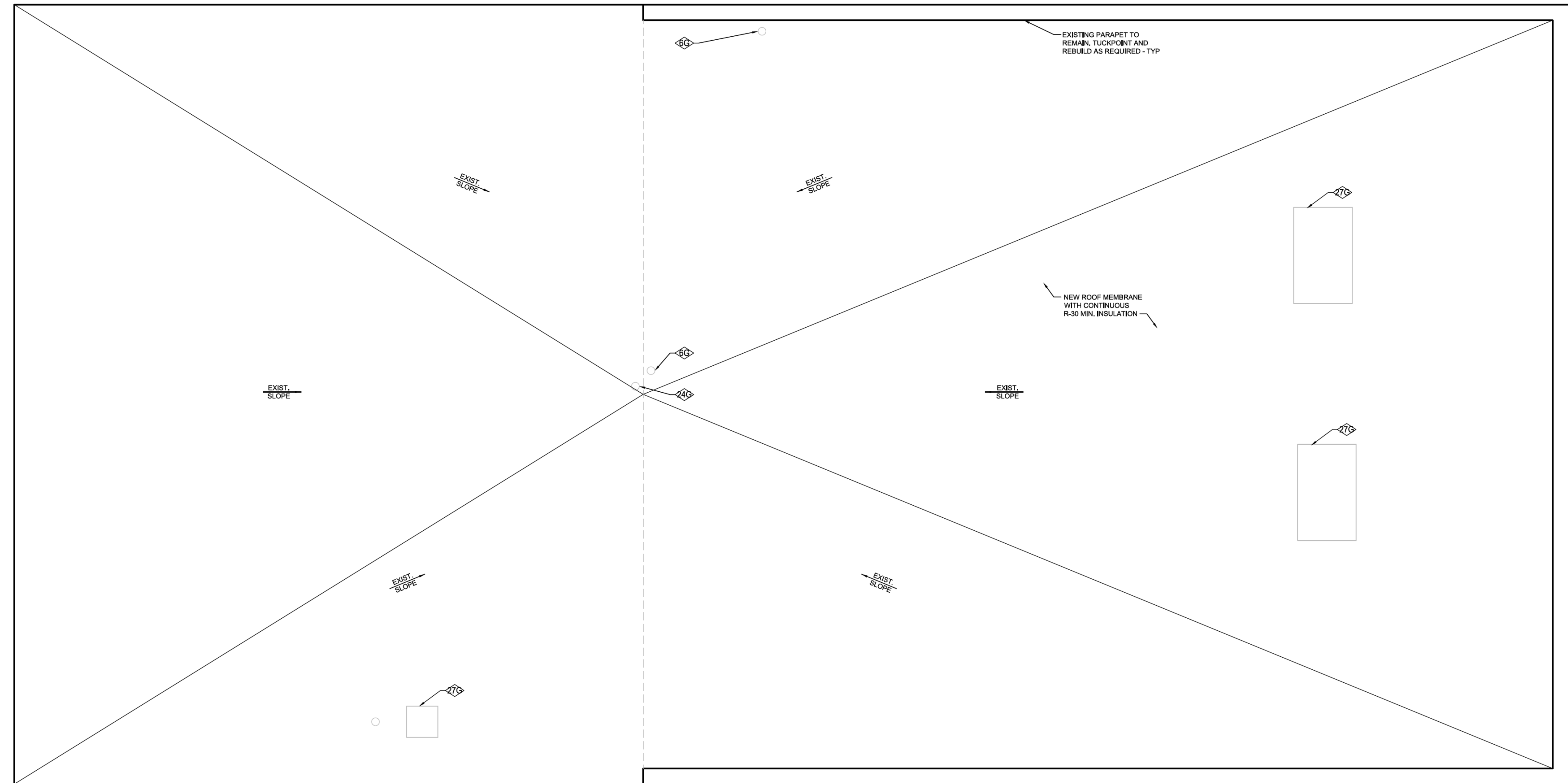
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  - 21G PROVIDE GREYBOX @ SIDE OF WASHER - TYP.
  - 22G NEW MOP SINK

**1 FIRST FLOOR PLAN**  
SCALE: 1'-0" = 1/4"  
0 1' 2' 4' 8'

**GENERAL NOTES:**

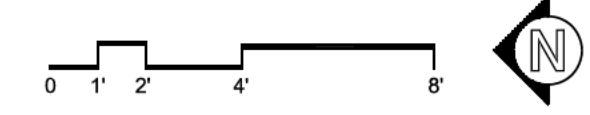
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**1 ROOF PLAN**  
SCALE: 1'-0" = 1/4"



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PROJECT NAME:  
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**BUILDING TO BE SPRINKLERED**

PROJECT INFO

PROJECT NO. 251020  
PROJECT TEAM: JK, BB, GY

ISSUE

12.30.25 - ISSUED FOR PERMIT

CERTIFICATION

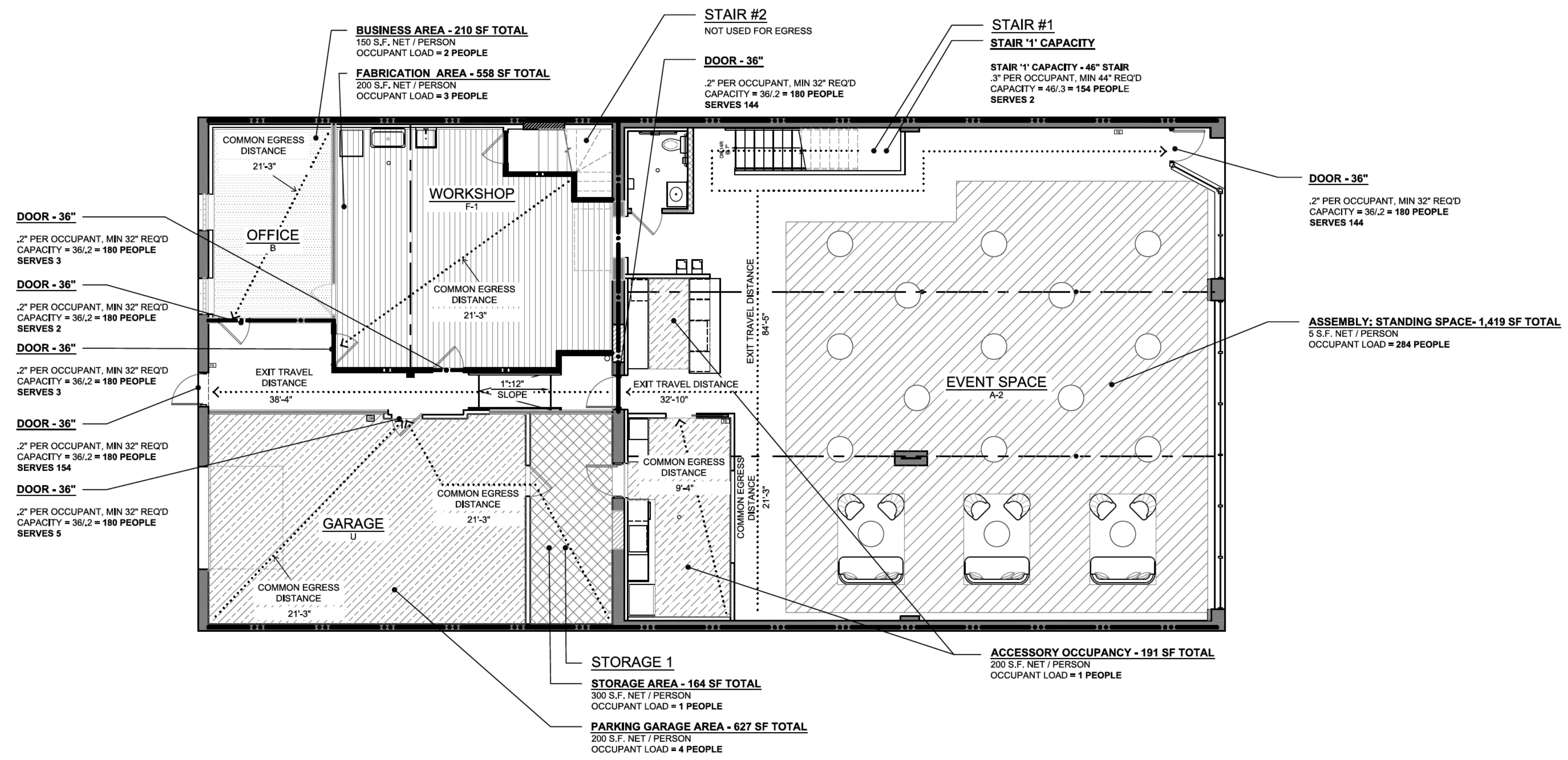
JAY M. KELLER  
001-018443  
STATE OF ILLINOIS

SHEET TITLE

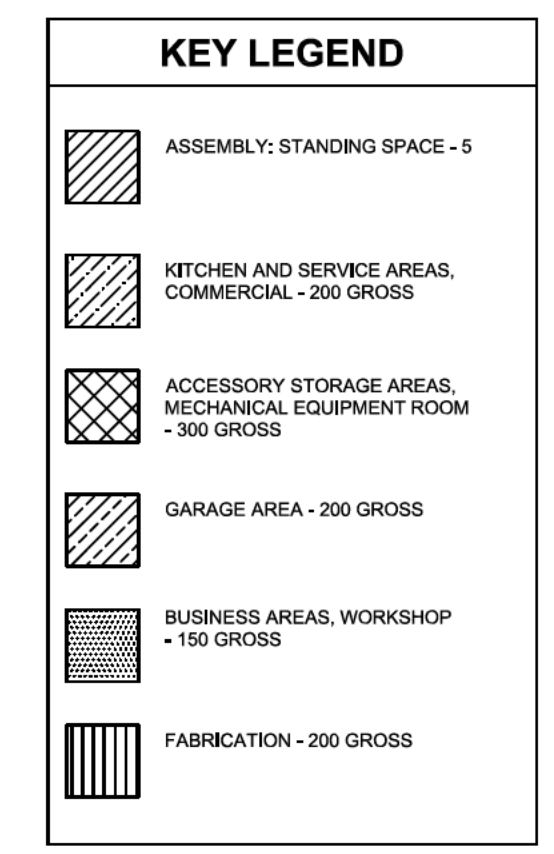
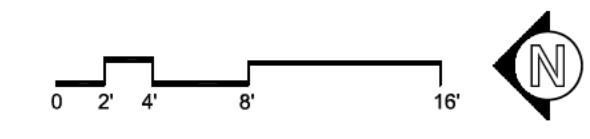
**ROOF PLAN**

SHEET #

**A1.22**



**2 FIRST FLOOR EXITING & OCCUPANCY PLAN**  
SCALE: 1'-0" = 1/4"



**FIXTURE REQUIREMENTS: ILLINOIS PLUMBING CODE**

TOTAL OCCUPANTS - 297 PERSONS  
BASED ON IPC

BASEMENT: 2 OCCUPANTS  
1ST FLOOR: 295 OCCUPANTS

# OCC.	REQ'D # OF FIXTURES		TOTAL
	MEN	WOMEN	
WC	2	3	5
URINAL	2	-	2
LAV	1	1	2
MOP SINK	1 PER FLOOR		2
DRINKING FOUNTAIN	1 PER EACH SET OF MALE/FEMALE PUBLIC RESTROOM		1 HIGH LOW

**FIXTURES PROVIDED:**

TOTAL OCCUPANTS - X PERSONS

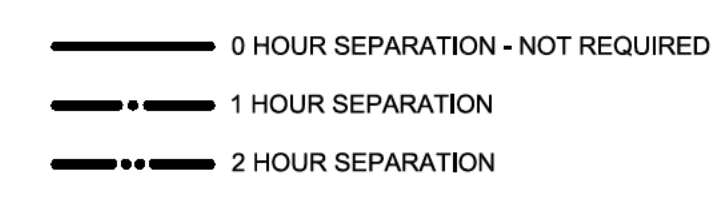
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# OCC.	ACTUAL # OF FIXTURES		TOTAL
	MEN	WOMEN	
WC	6	5	11
LAV	5	5	10
MOP SINK	2		2
DRINKING FOUNTAIN	1 HIGH LOW		1 HIGH LOW
URINALS	2		2

**LIST OF ITEMS TO BE STORED IN STORAGE**

F-1 = WOOD & MTL. CUTTING
LUMBER
PAINT
GLUE
PAINTERS CLOTH

**HOURLY SEPARATION LEGEND**



**OCCUPANCY**

BASEMENT FLOOR CAPACITY - 2 PEOPLE  
FIRST FLOOR CAPACITY - 295 PEOPLE  
BASEMENT + FIRST FLOOR TOTAL (ASSEMBLY A-2) - 297 OCCUPANTS

**DEAD ENDS**  
1020.4 NOT EXCEED 50 FEET

**SPRINKLER**  
903.2.1.2  
2. THE FIRE AREA HAS AN OCCUPANT LOAD OF 100 OR MORE.

**MAXIMUM EXIT ACCESS TRAVEL DISTANCE**

PER TABLE 1017.2:  
ASSEMBLY USE (A-2) - 250 FT. (SPRINKLERED)  
FACTORY USE (F-1) - 250 FT. (SPRINKLERED) → WORKSHOP TO BE USED FOR CUTTING WOOD AND METAL FOR OWNER'S USE.  
STORAGE USE (S-1) - 250 FT. (SPRINKLERED)  
BUSINESS USE (B) - 300 FT. (SPRINKLERED)  
UTILITY USE (U) - 400 FT. (SPRINKLERED)

**MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE**

PER TABLE 1006.2.1:  
ASSEMBLY USE (A-2) - 75 FT. (SPRINKLERED)  
FACTORY USE (F-1) - 100 FT. (SPRINKLERED)  
STORAGE USE (S-1) - 100 FT. (SPRINKLERED)  
BUSINESS USE (B) - 100 FT. (SPRINKLERED)  
UTILITY USE (U) - 75 FT. (SPRINKLERED)

**MINIMUM NUMBER OF EXITS**

MIN. NUMBER OF EXITS PER STORY: PER TABLE 1006.3.3:  
-OCCUPANT LOAD PER STORY BETWEEN 1-500 REQUIRE MINIMUM 2 NUMBER OF EXITS OR ACCESS TO EXITS FROM STORY

1006.3.4 (2):  
FIRST STORY BELOW GRADE PLAN FOR A-2 & S-1: MAX OCC. LOAD 29 & 75' MAX EXIT ACCESS TRAVEL DISTANCE  
1 EXIT REQUIRED AT BASEMENT.

1019.3:  
FLOOR OPENINGS CONTAINING EXIT ACCESS STAIRWAYS THAT DO NOT COMPLY WITH ONE OF THE CONDITIONS LISTED BELOW SHALL BE ENCLOSED WITH A SHAFT.

PER 1019.3 EXCEPTION 1:  
EXIT ACCESS STAIRWAYS THAT SERVE OR ATMOSPHERICALLY COMMUNICATE BETWEEN ONLY TWO STORIES SHALL NOT BE OPEN TO OTHER STORIES

**ACCESSORY OCCUPANCY**  
508.2: ACCESSORY OCCUPANCIES ARE THOSE OCCUPANTS THAT ARE ANCILLARY TO THE MAIN OCCUPANCY OF THE BUILDING OR PORTION THERE OF

508.2.4:  
NO SEPARATION IS REQUIRED BETWEEN ACCESSORY OCCUPANCIES AND THE MAIN OCCUPANCY.

**REQUIRED SEPARATION OF OCCUPANCIES**

PER TABLE 508.4:  
- REQUIRED SEPARATION (SPRINKLERED): 1 HOUR  
A AND F1 SEPARATION = 1 HOUR (SPRINKLERED)  
A AND S-1 SEPARATION = 0 HOUR (SPRINKLERED)  
U AND S-1 SEPARATION = 1 HOUR (SPRINKLERED)  
F1 AND B SEPARATION = 0 HOUR (SPRINKLERED)  
F1 AND U SEPARATION = 1 HOUR (SPRINKLERED)  
B AND U SEPARATION = 1 HOUR (SPRINKLERED)

**CORRIDOR FIRE RESISTANCE RATING**  
1020.2  
A,B,F,S,U  
OCCUPANT LOAD GRATER THAN 30 REQUIRES 0 HOUR FIRE RESISTANCE RATING WITH SPRINKLER SYSTEM

**FIRE RESISTANCE RATING REQUIREMENT**

PER TABLE 601 FOR TYPE III-B CONSTRUCTION:  
**BEARING WALLS:**  
- EXTERIOR = 2 HOURS REQUIRED  
- INTERIOR = 0 HOUR REQUIRED

**NON-BEARING WALLS:**  
- EXTERIOR = PER TABLE 705.5 FIRE SEPARATION DISTANCE  
- INTERIOR = 0 HOURS REQUIRED

**FLOOR CONSTRUCTION**  
- 0 HOUR REQUIRED

**ROOF CONSTRUCTION**  
- 0 HOUR REQUIRED

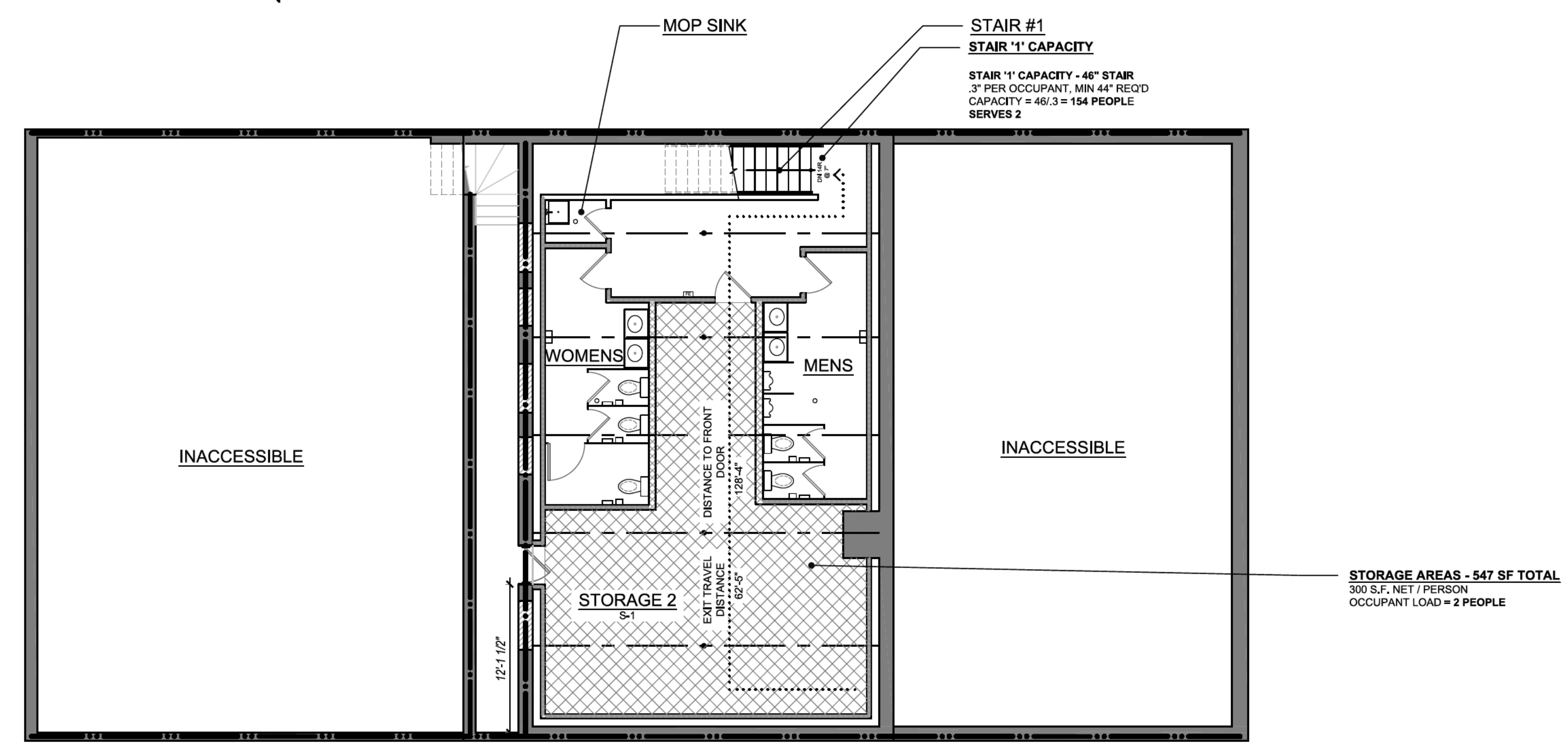
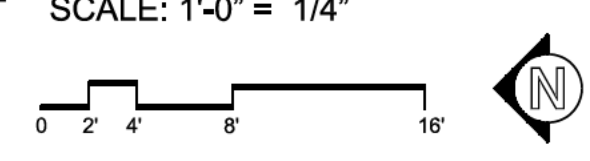
**FIRE SEPARATION DISTANCE**

PER TABLE 705.5 FOR TYPE III-B CONSTRUCTION  
OCCUPANCY A,B,F,S,U:

EXTERIOR NON-BEARING WALLS:  
-  $X \geq 30'-0"$  = 0 HOUR REQUIRED

X = FIRE SEPARATION DISTANCE

**1 BASEMENT EXITING & OCCUPANCY PLAN**  
SCALE: 1'-0" = 1/4"



**SPACE**  
ARCHITECTS + PLANNERS  
2149 N. TALMAN AVENUE  
CHICAGO, IL 60647  
312.829.6666  
www.spacearchplan.com

**SP Engineers**  
Consulting Structural Engineers  
134 N. LaSalle, Suite 1930 Chicago, IL 60602  
Phone: 312.332.2800  
Fax: 312.332.2820

**CONSULTANTS**

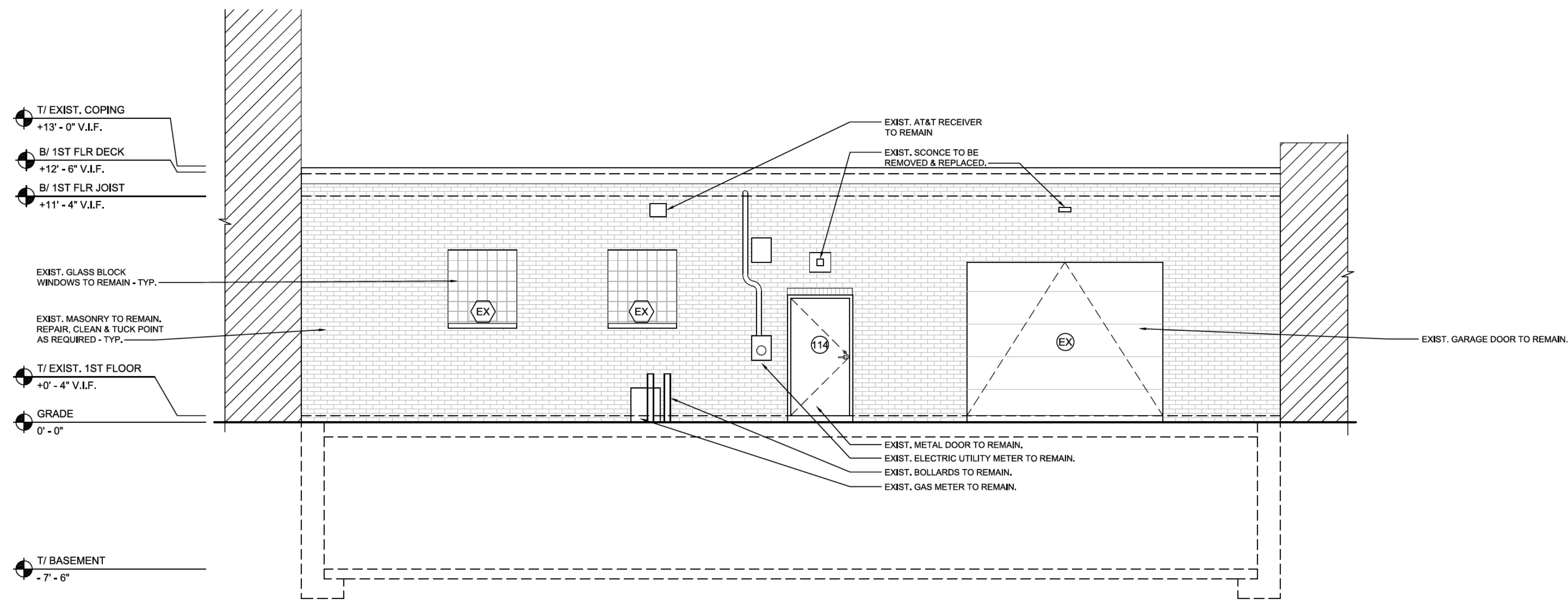
**RENEWABLE ENERGY FARM**  
15W 271 91ST STREET  
BURR RIDGE, IL 60527  
P. (630) 936-7733

PROJECT NAME:  
**6136 W. ROOSEVELT RD**

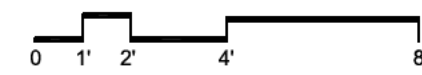
PROJECT ADDRESS:  
**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

**BUILDING TO BE SPRINKLERED**

PROJECT INFO	ISSUE	CERTIFICATION	SHEET TITLE	SHEET #
PROJECT NO. 25102	12.30.25 - ISSUED FOR PERMIT		<b>EXITING AND OCCUPANCY PLANS</b>	<b>A1.40</b>
PROJECT TEAM: JR, BB, GV				

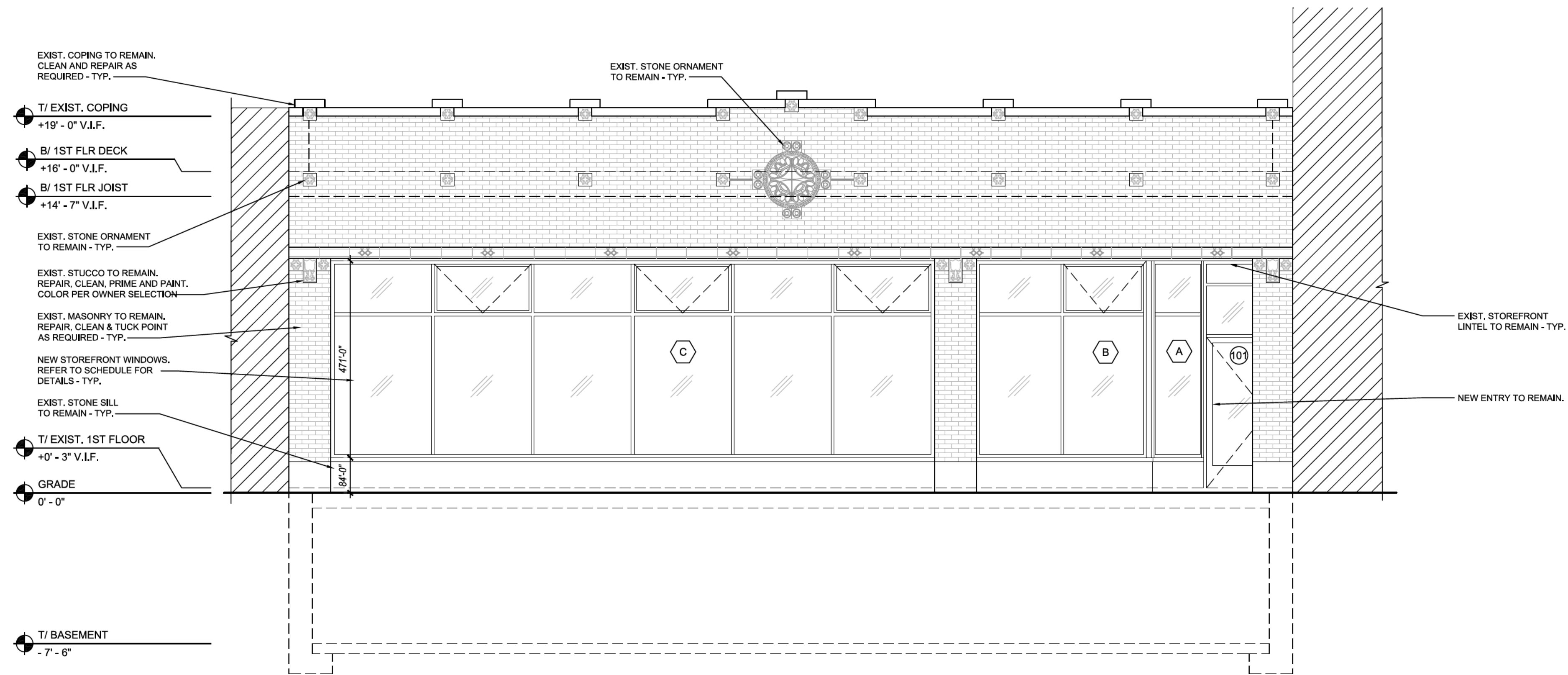


**2 SOUTH ELEVATION**  
SCALE: 1'-0" = 1/4"

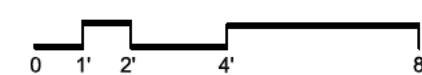


**ELEVATION GENERAL NOTES:**

- GRIND & TUCKPOINT EXTERIOR - REPLACE LOOSE / CRACKED BRICKS AS REQUIRED - TYP.
- FOR ALL BRICK CLEANING USE HOT WATER WITH PRESSURE NOT TO EXCEED 400 PSI - NO CHEMICALS TO BE USED - TYP.
- PAINT ALL EXPOSED STEEL W/ 1 COAT EXT. GRADE PRIMER AND 2 COATS EXT. GRADE ENAMEL BASED PAINT
- ALL NEW MORTAR TO MATCH EXIST. MORTAR IN COLOR, JOINT PROFILE, AND STRENGTH TYPE - TYP.

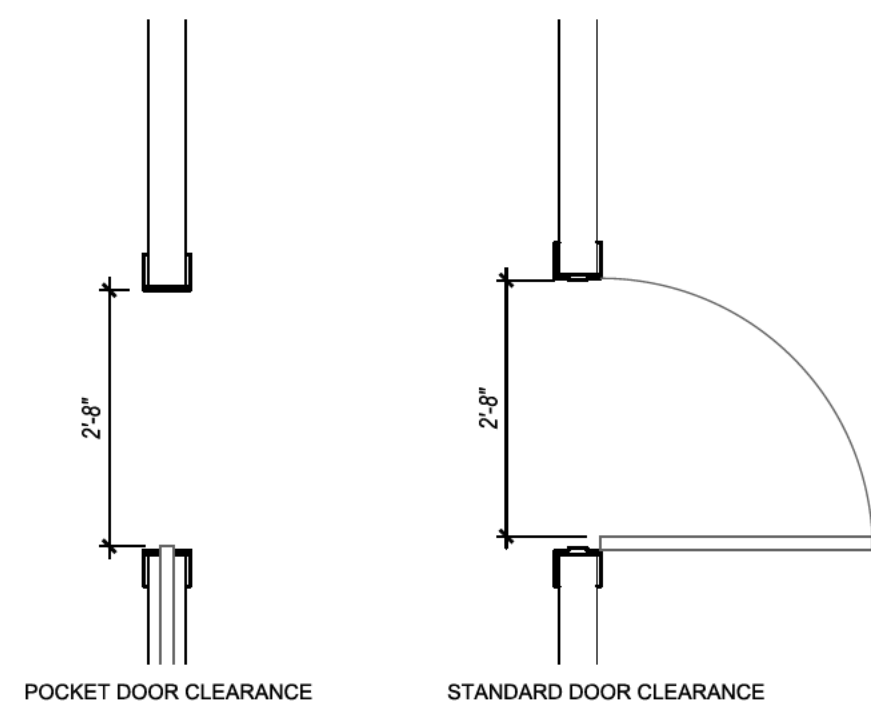


**1 NORTH ELEVATION**  
SCALE: 1'-0" = 1/4"

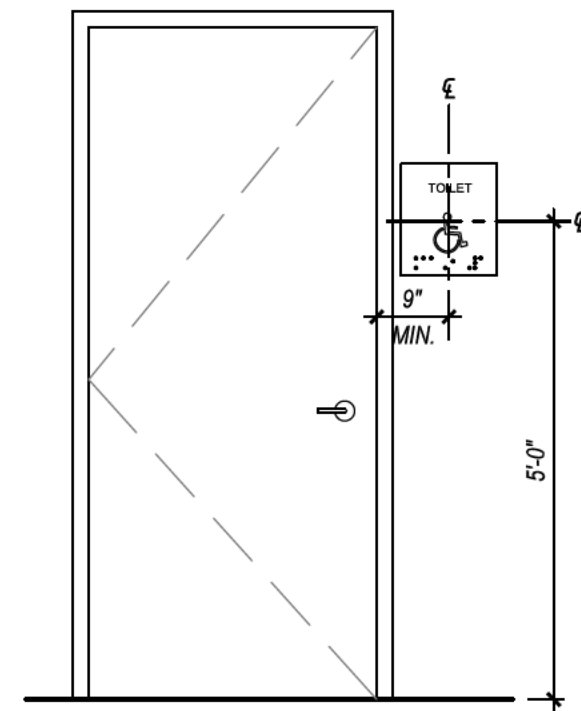


**GENERAL ACCESSIBILITY NOTES:**

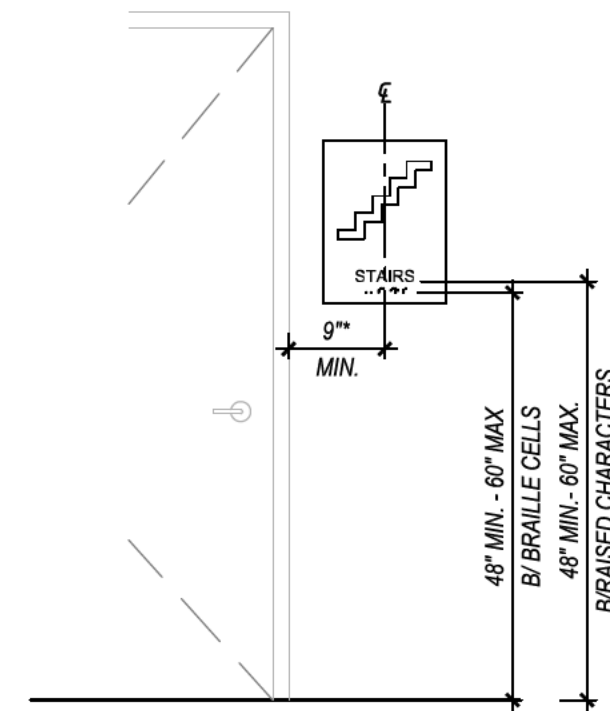
- ALL ACCESSIBLE FEATURES AND LAYOUTS TO COMPLY WITH THE VILLAGE OF OAK PARK ACCESSIBILITY CODE REQUIREMENTS, AND ALL OTHER MUNICIPAL, STATE OR FEDERAL CODES WHICH APPLY.
- ALL COMMON USE AREAS AND PUBLIC USE SPACES ON ALL FLOORS SHALL BE ACCESSIBLE.
- DOORS**
  - ALL DOORS TO HAVE MIN. 32" CLEAR OPENING MEASURED FROM THE FACE OF THE DOOR WHEN IT IS 90% TO THE DOOR STOP PER ICC/ANSI A117.1-2003
  - PROVIDE PROPER MANEUVERING CLEARANCES AT ALL DOORS PER ICC/ANSI A117.1-2003 4.04.2.3
  - THRESHOLDS SHALL NOT EXCEED 1/2" IN HEIGHT
  - ALL NEW OR ALTERED DOORS TO HAVE LEVER OPERATED HARDWARE PER ICC/ANSI A117.1-2003 4.04
  - ALL PUBLIC AND COMMON AREA INTERIOR DOORS TO HAVE 5# MAX. FORCE TO OPEN PER IAC 400.310 (4-10)
  - ALL PUBLIC AND COMMON AREA EXTERIOR DOORS TO HAVE 8.5# MAX. FORCE TO OPEN PER IAC 400.310 (4-10)
  - ALL DOORS LEADING INTO HAZARDOUS ROOMS OR SPACES TO HAVE KNURLED HARDWARE
- PROVIDE 6" TALL SIGNAGE IN PICTOGRAPH, WORDS + BRAILLE CENTERED ON DOORS & 48" ABOVE THE FLOOR @ TOILET ROOMS
- ALL CONTROLS & OPERATING MECHANISMS TO BE WITHIN REACH RANGE PER ICC/ANSI A117.1-2003 3.308 3.309 & BE BETWEEN 15" & 48"
- FLOOR SURFACES SHALL BE FIRM, STABLE & SLIP RESISTANT PER ICC/ANSI A117.1-2003 3.302.1
- TOILET ROOMS**
  - FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS TO BE ON OPEN SIDE OF WC
  - PROVIDE TOE CLEARANCE OF 9 INCHES MIN. ABOVE FLOOR & EXTENDING 6 INCHES BEYOND THE COMPARTMENT SIDE FACE OF THE TOILET PARTITIONS, EXCLUSIVE OF SUPPORT MEMBERS
  - WATER SUPPLY & DRAINPIPES UNDER LAVATORIES & SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT
- SEE ICC / ANSI - A117.1-2003 CHAPTER 7.703.3.11 FOR LOCATION OF PERMANENT ROOM AND SPACE SIGNAGE REQUIREMENTS.
- A PORTION OF THE ADA SEATING WILL BE ADJACENT TO THE BAR COUNTER WITH THE SAME SERVICE AS THE BAR COUNTER. IN LIEU OF AN ACCESSIBLE BAR COUNTER WITH KNEE SPACE PER CBC 18-11-1108.2-8.2



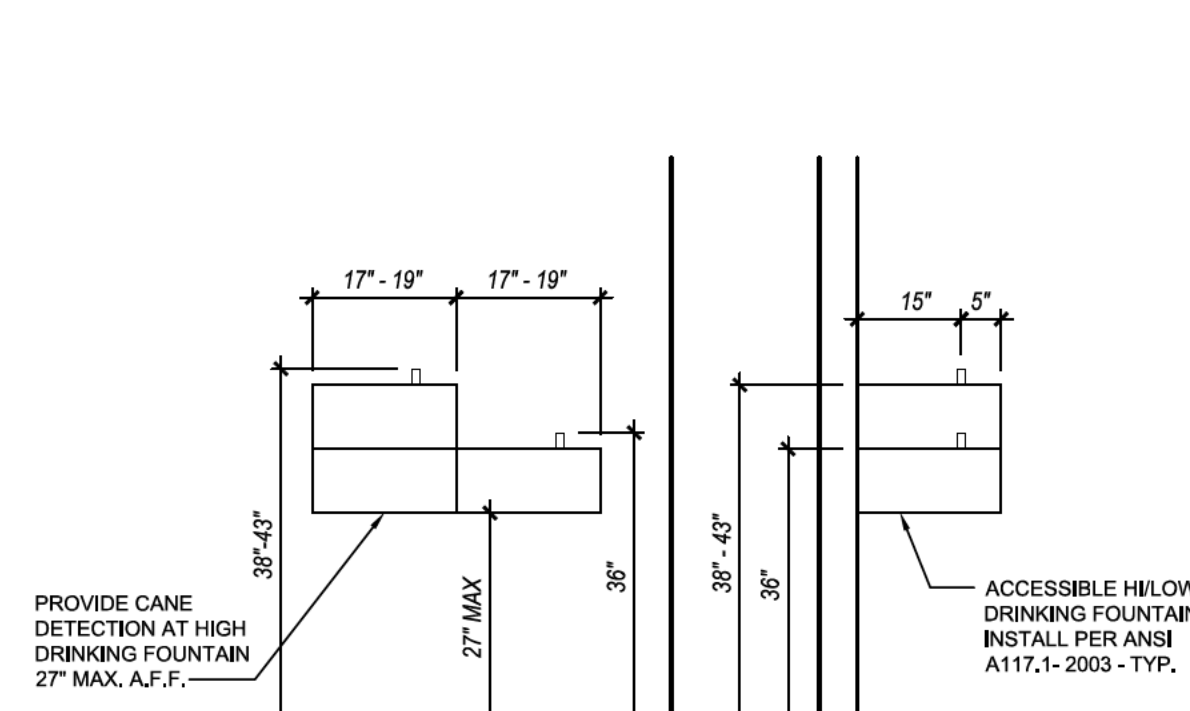
**6 DOOR CLEARANCE DETAILS**  
SCALE: N.T.S.



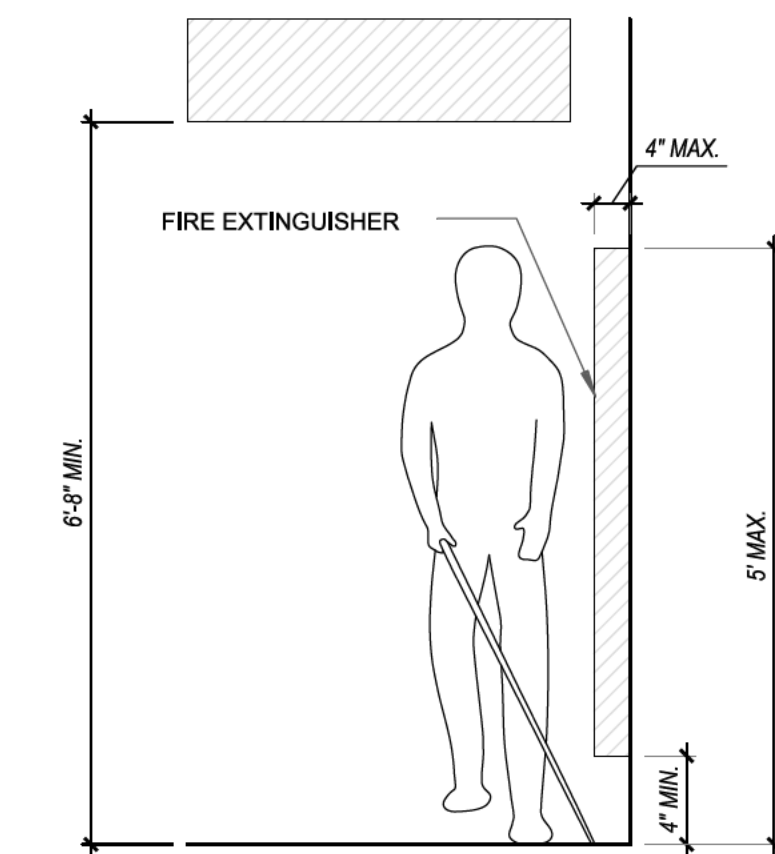
**7 SIGNAGE DETAIL**  
SCALE: N.T.S.



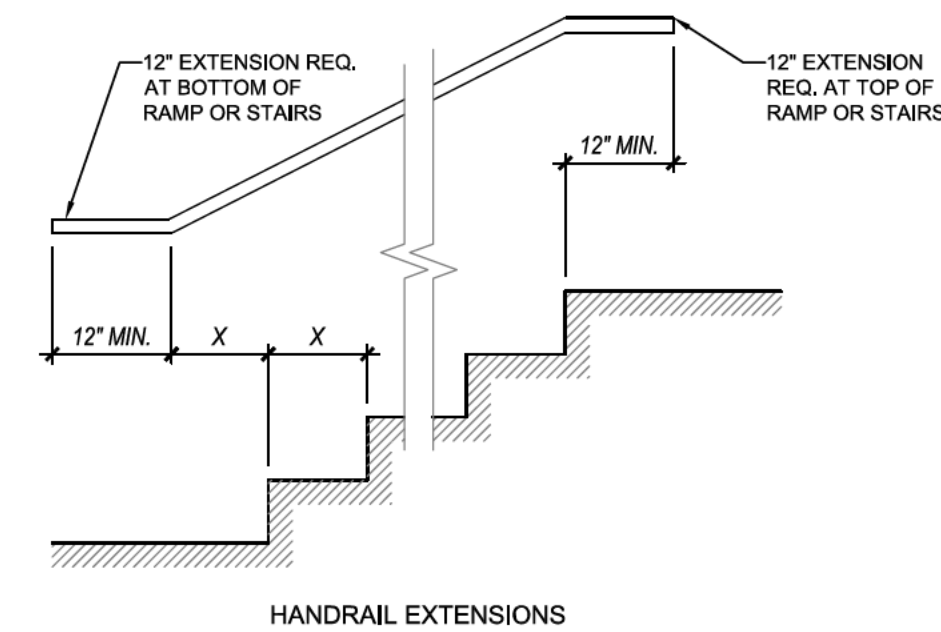
**8 SIGNAGE DETAIL**  
SCALE: N.T.S.



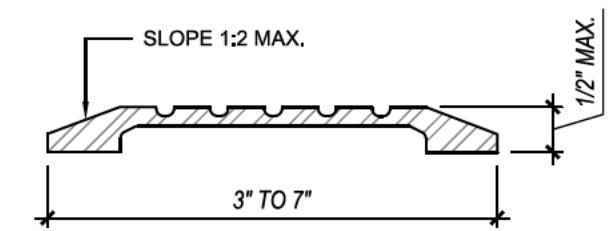
**9 ACCESSIBLE DRINKING FOUNTAIN DETAIL**  
SCALE: 1/2" = 1'-0"



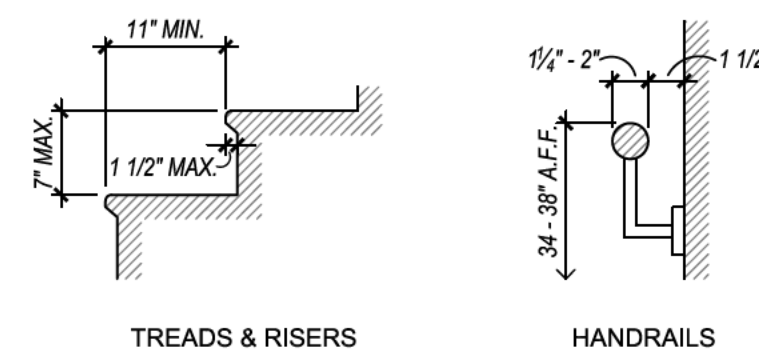
**10 TYP. PROJECTION**  
SCALE: N.T.S.



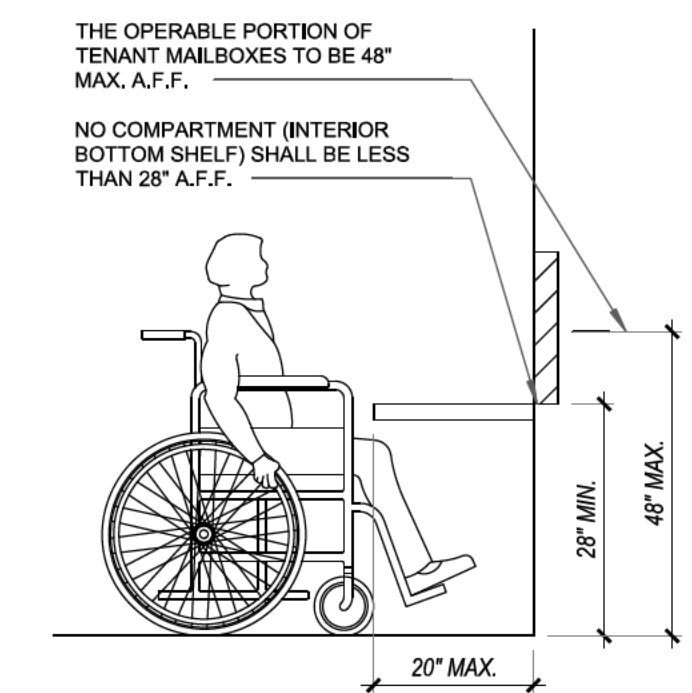
**3 STAIR & RAMP RAILING**  
SCALE: N.T.S.



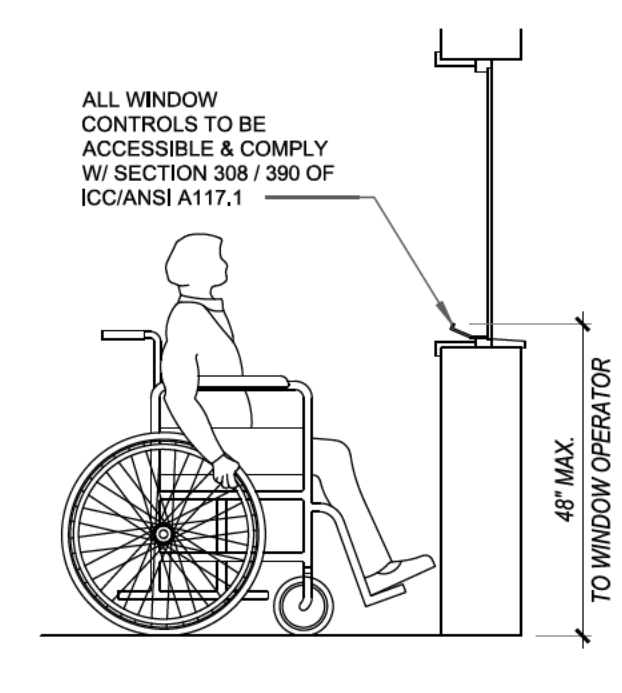
**4 ACCESSIBLE THRESHOLD**  
SCALE: N.T.S.



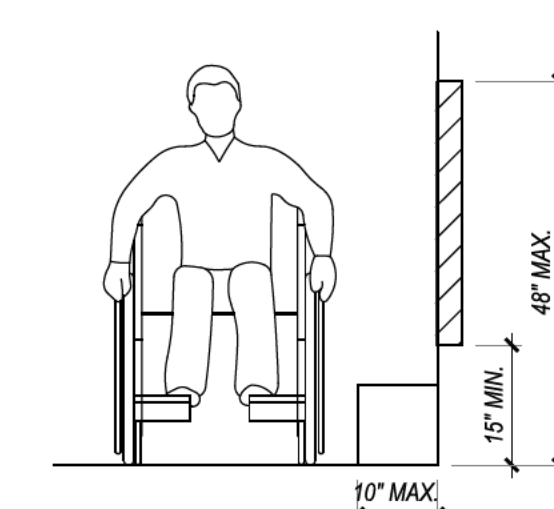
**5 STAIR & HANDRAIL DETAILS**  
SCALE: N.T.S.



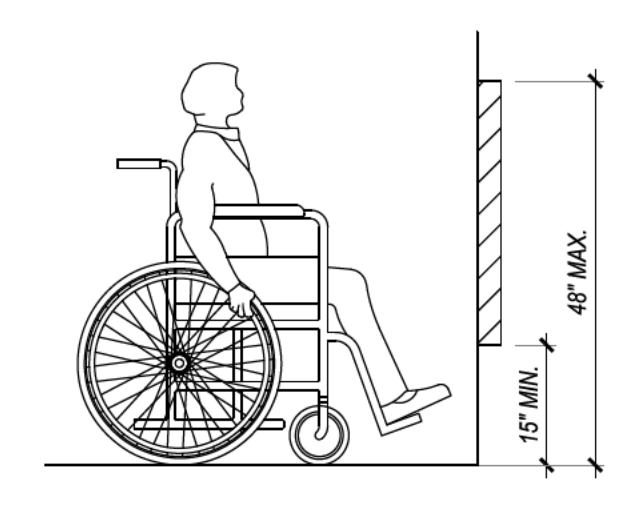
MAILBOX REACH RANGE



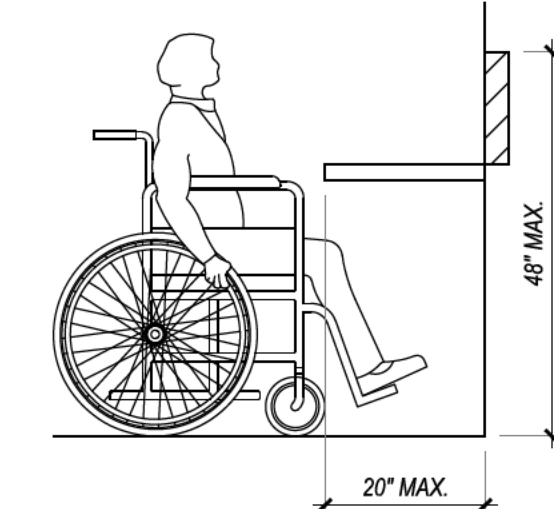
WINDOW OPERATOR REACH RANGE



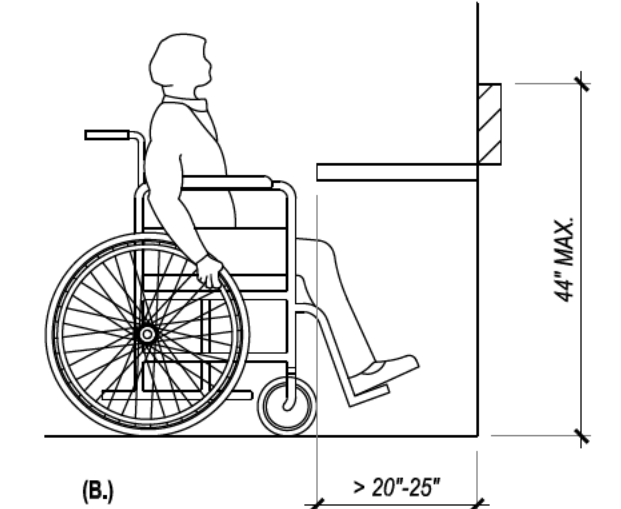
UNOBSTRUCTED SIDE REACH



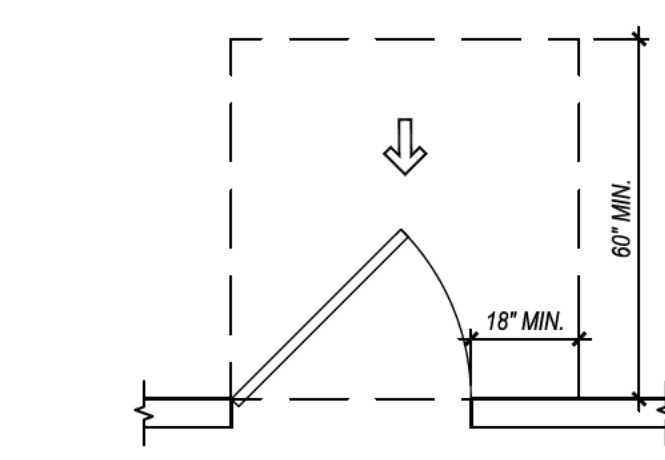
UNOBSTRUCTED FORWARD REACH



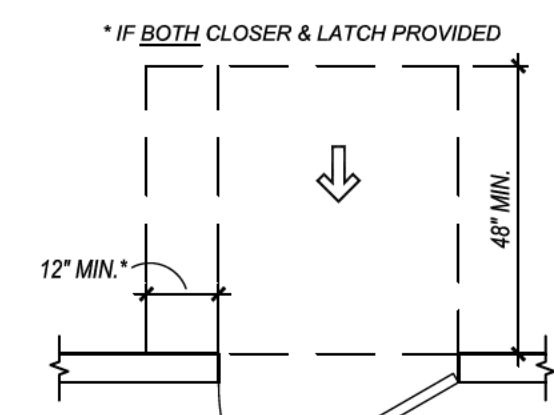
OBSTRUCTED HIGH FORWARD REACH



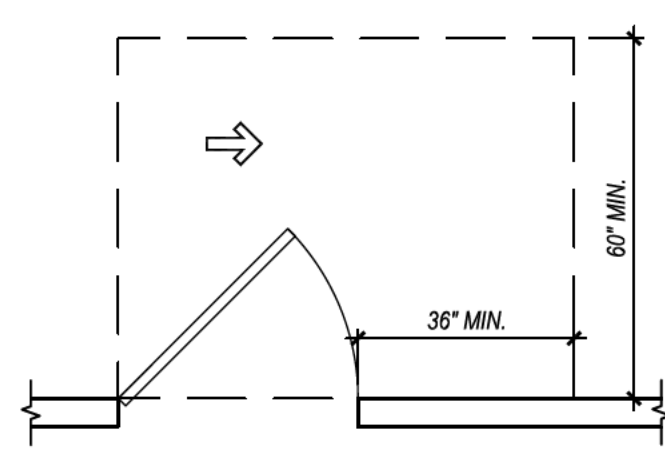
**2 ACCESSIBLE REACH RANGE DETAILS**  
SCALE: 1/2" = 1'-0"



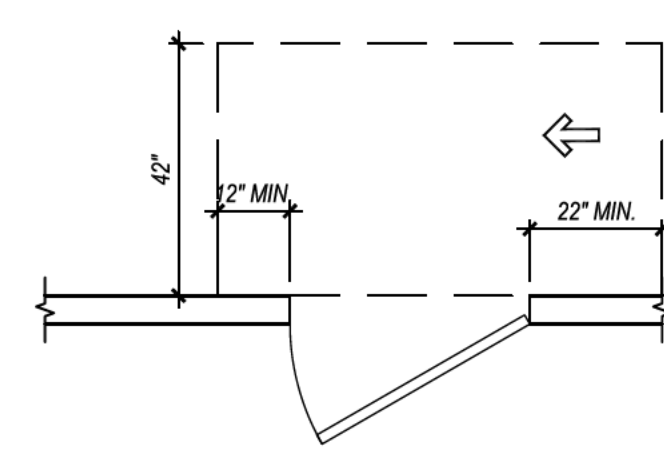
FRONT APPROACH - PULL SIDE  
**A. ACCESSIBLE CLEARANCE**



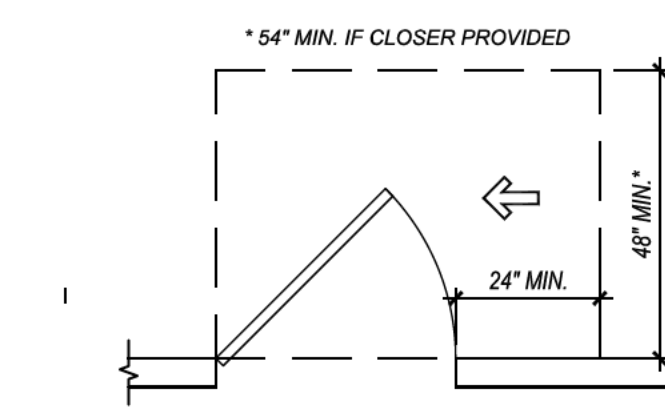
FRONT APPROACH - PUSH SIDE  
**B. ACCESSIBLE CLEARANCE**



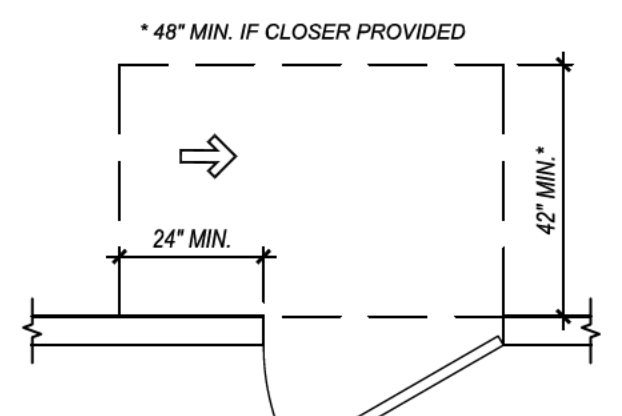
HINGE APPROACH - PULL SIDE  
**C. ACCESSIBLE CLEARANCE**



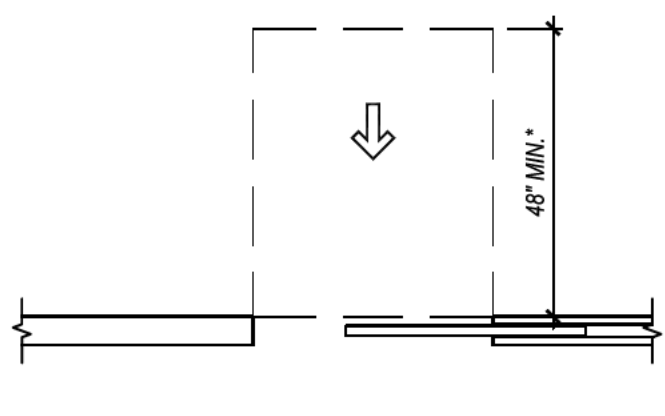
HINGE APPROACH - PUSH SIDE  
**D. ACCESSIBLE CLEARANCE**



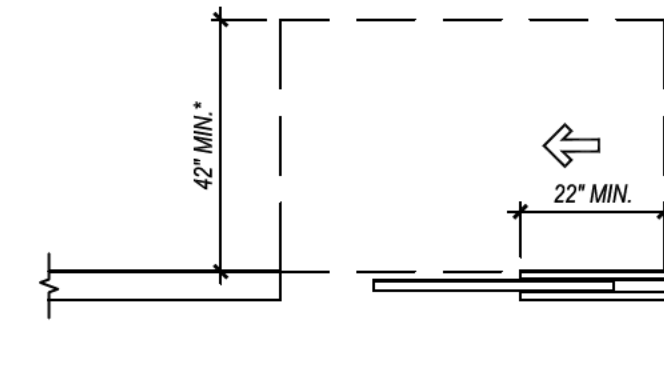
LATCH APPROACH - PULL SIDE  
**E. ACCESSIBLE CLEARANCE**



LATCH APPROACH - PUSH SIDE  
**F. ACCESSIBLE CLEARANCE**

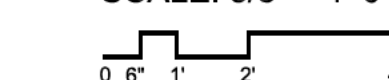


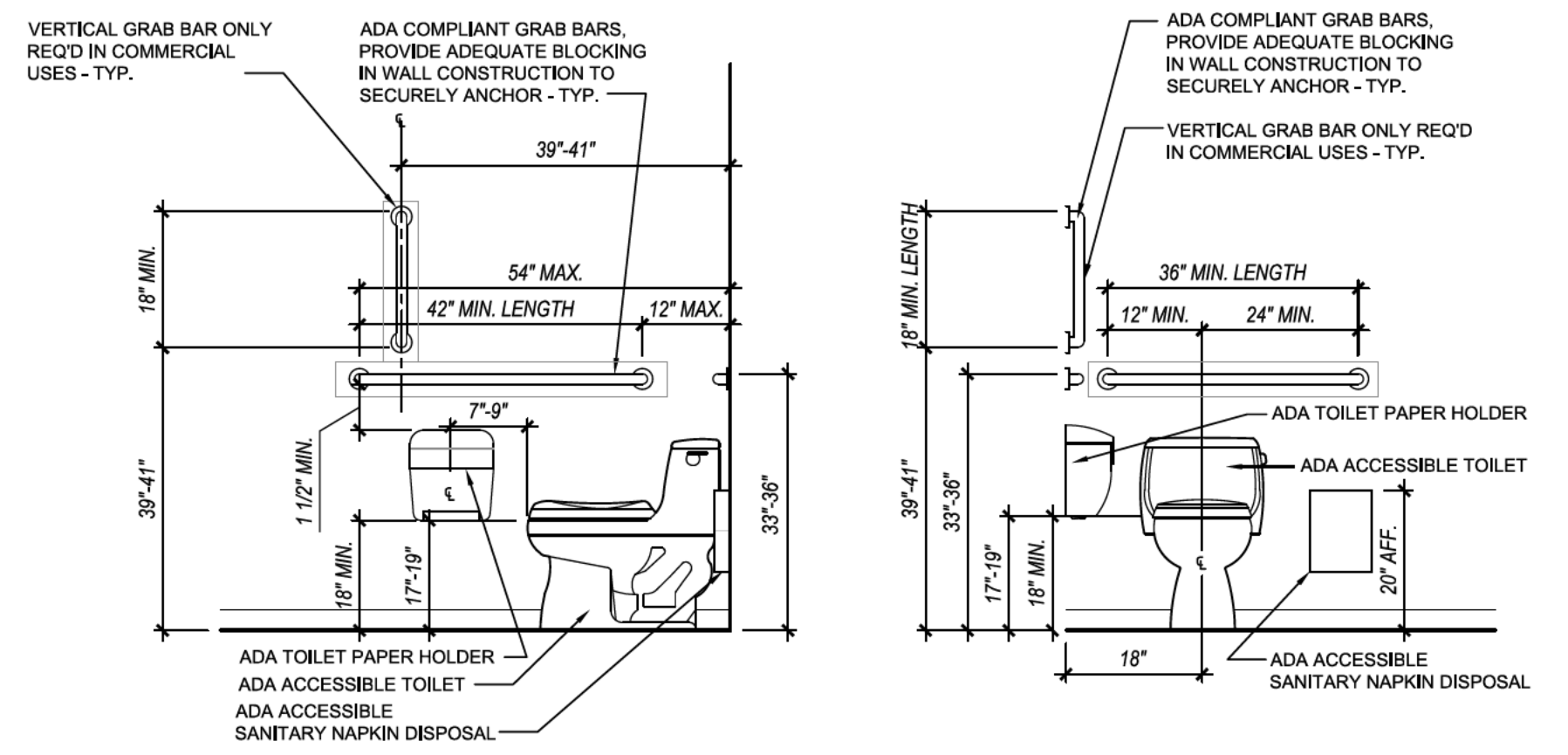
FRONT APPROACH - SLIDING DOOR  
**G. ACCESSIBLE CLEARANCE**



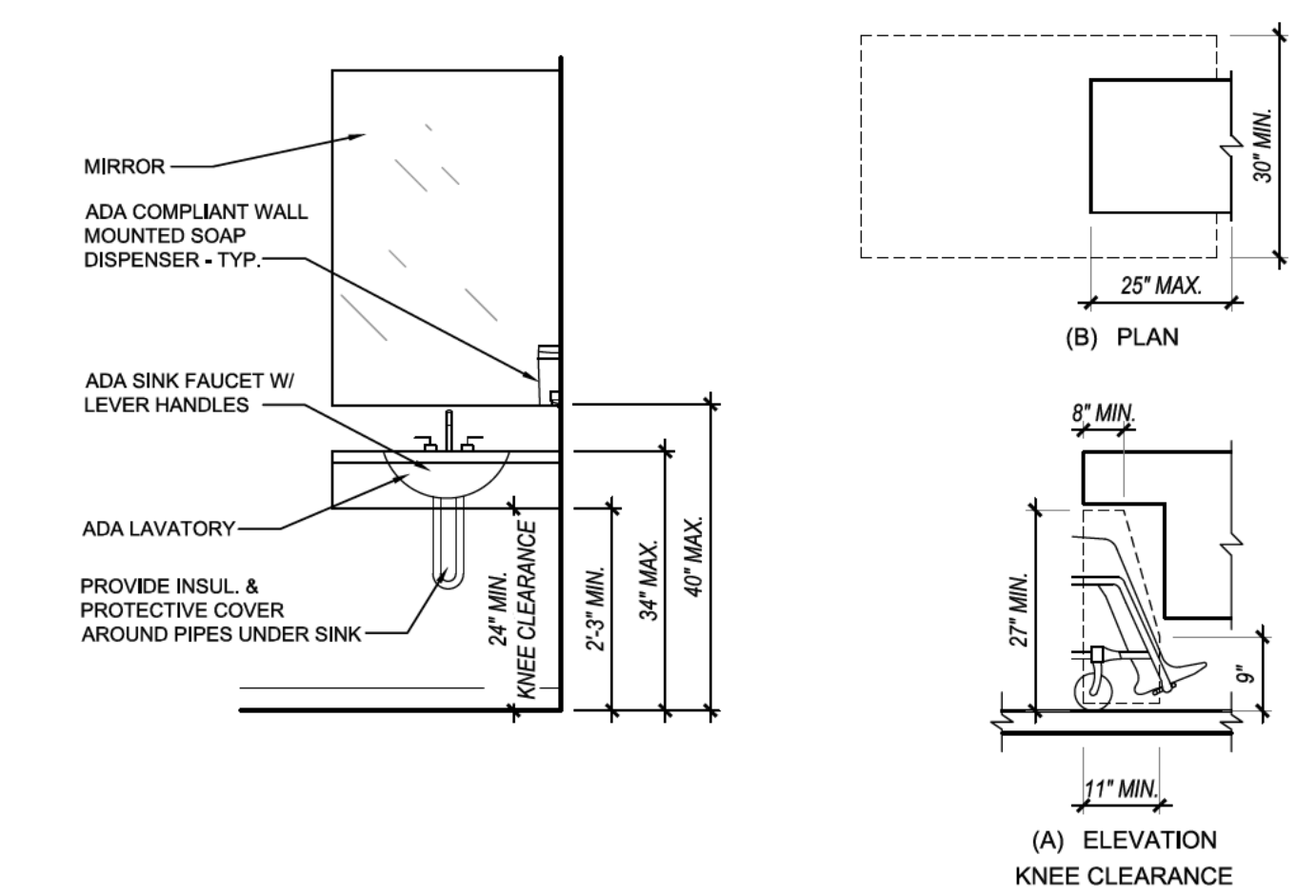
SIDE APPROACH - SLIDE SIDE  
**H. ACCESSIBLE CLEARANCE**

**1 ACCESSIBLE DOOR CLEARANCES**  
SCALE: 3/8" = 1'-0"

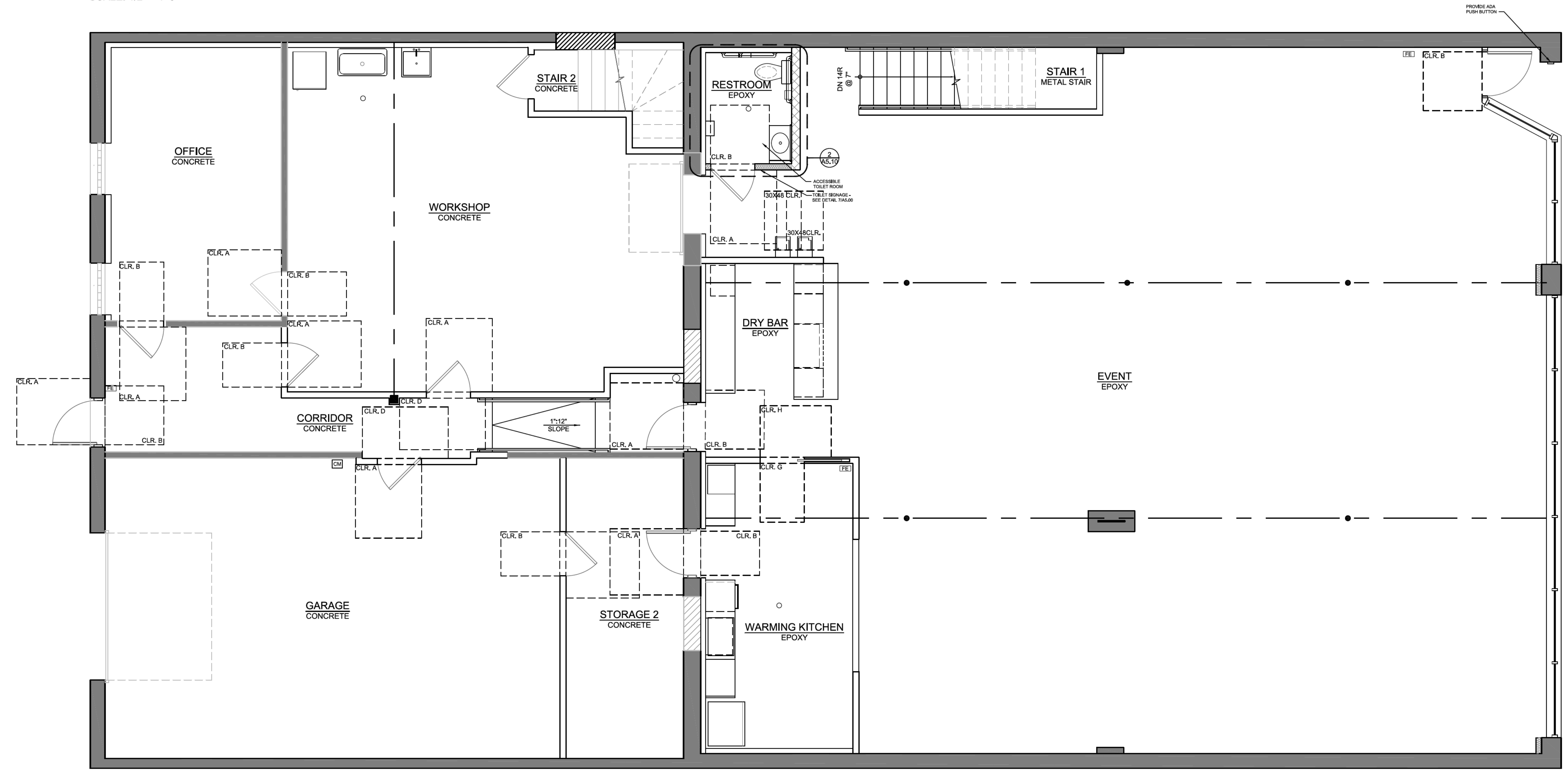




**3 ACCESS. TOILET ELEVATION - TYP.**  
SCALE: 1/2" = 1'-0"

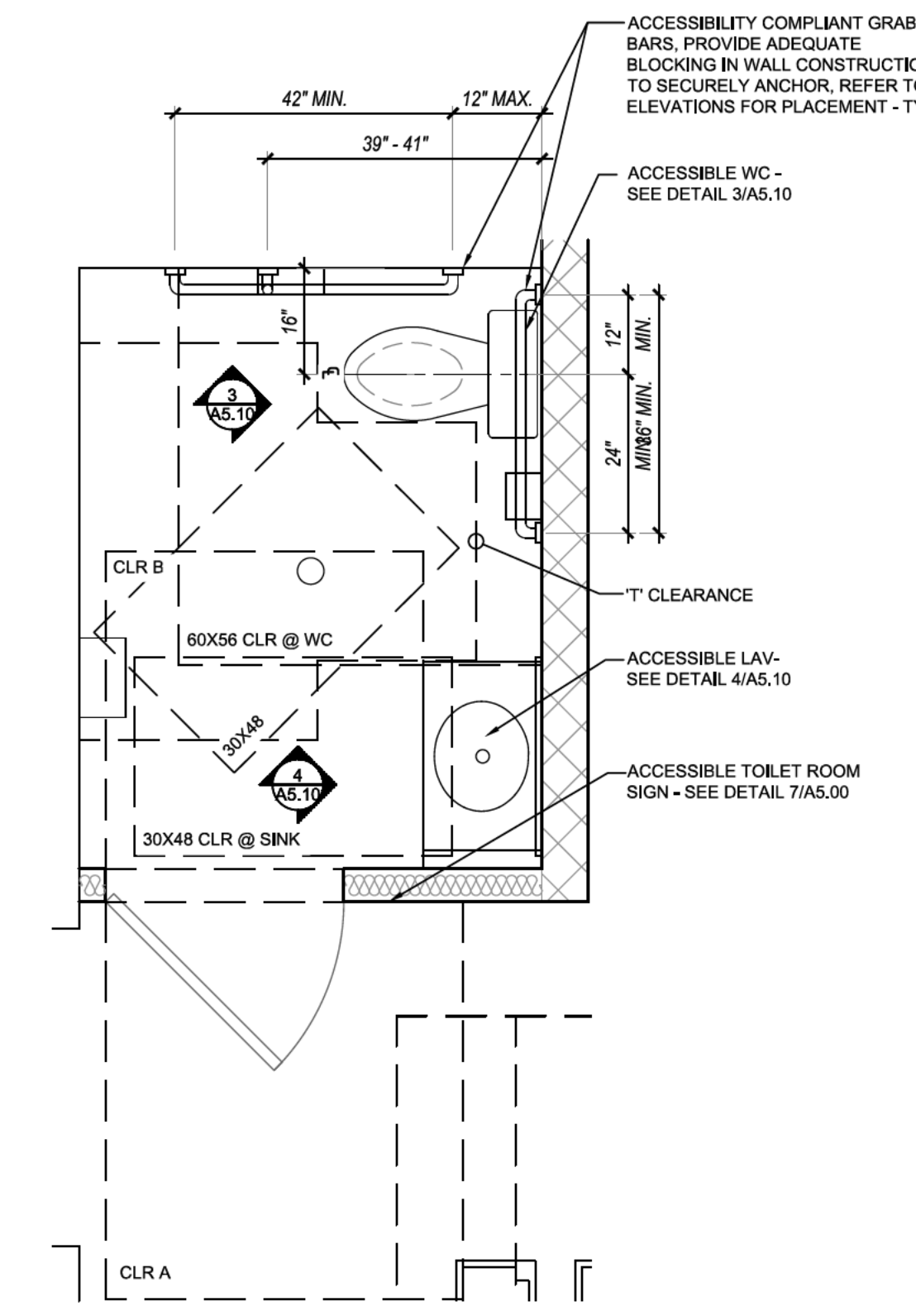


**4 ACCESS. LAV ELEVATION & CLEARANCE - TYP.**  
SCALE: 1/2" = 1'-0"



**1 FIRST FLOOR ACCESSIBILITY PLAN**  
SCALE: 1'-0" = 1/4"

- GENERAL ACCESSIBILITY NOTES:**
- ALL ACCESSIBLE FEATURES AND LAYOUTS TO COMPLY WITH THE VILLAGE OF OAK PARK ACCESSIBILITY CODE REQUIREMENTS, AND ALL OTHER MUNICIPAL, STATE OR FEDERAL CODES WHICH APPLY
  - ALL COMMON USE AREAS AND PUBLIC USE SPACES ON ACCESSIBLE FLOORS SHALL BE ACCESSIBLE
  - DOORS
    - ALL DOORS TO HAVE MIN. 32" CLEAR OPENING MEASURED FROM THE FACE OF THE DOOR WHEN IT IS 90% TO THE DOOR STOP PER ICC/ANSI A117.1-2003
    - PROVIDE PROPER MANEUVERING CLEARANCES AT ALL DOORS PER ICC/ANSI A117.1-2003 4.404.2.3
    - THRESHOLDS SHALL NOT EXCEED 1/2" IN HEIGHT
    - ALL NEW OR ALTERED DOORS TO HAVE LEVER OPERATED HARDWARE PER ICC/ANSI A117.1-2003 4.404
    - ALL PUBLIC AND COMMON AREA INTERIOR DOORS TO HAVE 5# MAX. FORCE TO OPEN PER IAC 400.310 (J-10)
    - ALL PUBLIC AND COMMON AREA EXTERIOR DOORS TO HAVE 8.5# MAX. FORCE TO OPEN PER IAC 400.310 (J-10)
    - ALL DOORS LEADING INTO HAZARDOUS ROOMS OR SPACES TO HAVE KNURLED HARDWARE
  - PROVIDE 6" TALL SIGNAGE IN PICTOGRAPH, WORDS + BRAILLE CENTERED ON DOORS & 48" ABOVE THE FLOOR @ TOILET ROOMS
  - ALL CONTROLS & OPERATING MECHANISMS TO BE WITHIN REACH RANGE PER ICC/ANSI A117.1-2003 3.308.3.309 & BE BETWEEN 15' & 48"
  - FLOOR SURFACES SHALL BE FIRM, STABLE & SLIP RESISTANT PER ICC/ANSI A117.1-2003 3.302.1
  - TOILET ROOMS
    - FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS TO BE ON OPEN SIDE OF WC
    - PROVIDE TOE CLEARANCE OF 9 INCHES MIN. ABOVE FLOOR & EXTENDING 6 INCHES BEYOND THE COMPARTMENT SIDE FACE OF THE TOILET PARTITIONS, EXCLUSIVE OF SUPPORT MEMBERS
    - WATER SUPPLY & DRAINPIPES UNDER LAVATORIES & SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT
  - SEE ICC / ANSI - A117.1-2003 CHAPTER 7.703.3.11 FOR LOCATION OF PERMANENT ROOM AND SPACE SIGNAGE REQUIREMENTS.



**2 ENLARGED PLAN**  
SCALE: 1'-0" = 1/2"

## GENERAL

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE STRUCTURAL WORK WITH THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS, AS WELL AS ANY OTHER APPLICABLE TRADES. IN CASE OF CONFLICT BETWEEN THE STRUCTURAL WORK AND DRAWINGS RELATED TO OTHER TRADES, THE CONTRACTOR SHALL MAKE ALLOWANCES IN HIS BID FOR THE MORE SEVERE REQUIREMENTS. CONFLICTS BETWEEN THE STRUCTURAL WORK AND THE DRAWINGS OF OTHER TRADES SHALL NOT BE REASON FOR ANY EXTRA COST OR DELAY IN EXECUTION OF THE WORK. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS OF ALL DRAWINGS INTO THEIR SHOP DRAWINGS AND WORK.
- NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.
- THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.
- THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR SHALL FURNISH ALL TEMPORARY BRACING AND/OR SUPPORTS REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
- USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS OR USE ANY DIMENSIONS TAKEN FROM ELECTRONIC DRAWING FILES.
- THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY THE ARCHITECT'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
- ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS AND AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. PLANS AND/OR SPECIFICATIONS WILL BE CORRECTED, OR A WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ARCHITECT BEFORE THE AFFECTED WORK PROCEEDS.

## CODES

THE PROJECT DOCUMENTS REFER TO THE FOLLOWING CODES AND STANDARDS, U.N.O.

**BUILDING CODE:** INTERNATIONAL BUILDING CODE 2021

**STRUCTURAL STEEL:** MANUAL OF STEEL CONSTRUCTION ASD, FIFTEENTH EDITION THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC 360 2016)

**STRUCTURAL CONCRETE:** BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, THE AMERICAN CONCRETE INSTITUTE (ACI 318-14)

**STRUCTURAL MASONRY:** BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, TMS 402/602-16, TMS403-17, OR TMS 404

**STRUCTURAL WOOD:** AWC NDS 2018

## SUBMITTALS AND TESTING

FOLLOWING ITEMS REQUIRE SUBMITTALS FOR STRUCTURAL REVIEW:

- CONCRETE REINFORCING LAYOUT
- CONCRETE MIX DESIGNS
- MASONRY UNIT AND GROUT DESIGNS
- STRUCTURAL STEEL
- STRUCTURAL STEEL CONNECTIONS
- PREFABRICATED WOOD TRUSSES
- HOLLOW CORE PRECAST CONCRETE PLANKS
- SOIL IMPROVEMENT SYSTEMS

THESE SUBMITTALS MAY BE SUBMITTED FOR STRUCTURAL REVIEW IN FORM OF SHOP DRAWINGS AND CALCULATIONS, AS REQUIRED, SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER IN THE STATE OF ILLINOIS.

THE FOLLOWING ITEMS REQUIRE SHOP DRAWINGS, SUBMITTED FOR REVIEW OF INTERACTION WITH THE STRUCTURE:

- ARCHITECTURAL ORNAMENTATION (FLAGPOLES, BANNERS, MASTS, ETC.)
- COLD-FORMED METAL FRAMING
- METAL STAIRS

THE FOLLOWING STRUCTURAL ITEMS REQUIRE TESTING AND/OR INSPECTIONS:

- CONCRETE REINFORCEMENT
- EXPANSION AND ADHESIVE ANCHORS
- FOUNDATIONS
- CAST-IN-PLACE CONCRETE
- STRUCTURAL CONCRETE MASONRY CONSTRUCTION
- STRUCTURAL STEEL MATERIALS, WELDS, AND CONNECTIONS.

## DESIGN CRITERIA

### SUPERIMPOSED DEAD LOADS:

CEILING, MECHANICAL, ELECTRICAL, FLOORING = 10 PSF

### LIVE LOADS:

COMMERCIAL = 100 PSF  
STAIR FRAMING = 100 PSF  
STAIR TREADS = 100 PSF OR 300LBS. CONCENTRATED LOAD

### HANDRAIL / GUARDRAIL:

RESIST SIMULTANEOUSLY VERTICAL AND HORIZONTAL THRUST OF 50 PLF APPLIED AT THE TOP OF THE RAILING OR A CONCENTRATED LOAD OF 200 LBS. IN ANY DIRECTION. INTERMEDIATE RAILS SHALL BE DESIGNED TO RESIST A HORIZONTAL CONCENTRATED LOAD OF 50 LBS. ON AN AREA NOT TO EXCEED 12' X 12'.

### SNOW LOAD:

GROUND SNOW LOAD = 25 PSF  
 $C_s = 0.9$   
 $L = 1.0$

### ALLOWABLE DEFLECTION CRITERIA:

SUPERIMPOSED LIVE LOAD =  $L/40$   
TOTAL LOAD =  $L/240$   
MEMBER CARRYING UNREINFORCED BRICK =  $L/600$   
MEMBER CARRYING REINFORCED MASONRY =  $L/480$

## FOUNDATIONS

- THE FOUNDATION DESIGN IS BASED ON AN ASSUMED ALLOWABLE BEARING CAPACITY OF 2500 PSF.
- ALL SOIL SUPPORTED FOOTINGS SHALL BE FOUNDED UPON PREPARED SUBGRADE AND/OR ON ENGINEERED FILL RESULTING TO AN ASSUMED ALLOWABLE BEARING CAPACITY OF 2,500 PSF TO BE VERIFIED BY GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION. FINAL, EXACT ELEVATIONS AND SOIL BEARING CAPACITIES SHALL BE FIELD DETERMINED AND VERIFIED BY THE CONTRACTOR'S AND REVIEWED BY THE ARCHITECT/ENGINEER DURING CONSTRUCTION.
- PLACE FOOTINGS ON UNDISTURBED, NATURAL SUBGRADE. IF SUBGRADE IS DEEMED UNSUITABLE, EXTEND EXCAVATION TO SUITABLE, UNDISTURBED, NATURAL SUBGRADE, AND RAISE GRADE USING COMPACTED ENGINEERED FILL OR PLAIN CONCRETE.
- ALL FOUNDATION CONCRETE SHALL BE PLACED THE SAME DAY THAT EXCAVATIONS ARE DUG. IF EXCAVATION MUST REMAIN OPEN OVERNIGHT OR IF RAINFALL BECOMES IMMINENT WHILE BEARING SOILS ARE EXPOSED, A 2 TO 4 INCH THICK MAT OF LEAN CONCRETE SHALL BE PLACED ON BEARING SOILS BEFORE PLACEMENT OF REINFORCING STEEL.
- NO MUD SLABS, FOOTINGS OR SLABS SHALL BE PLACED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST OR ICE.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER PLACING OF CONCRETE AND UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE.
- THE CONCRETE FOR EACH ISOLATED FOOTING SHALL BE PLACED IN ONE (1) CONTINUOUS PLACEMENT.
- ALL SLAB AND FOOTING MUD SLABS SHALL BE THOROUGHLY CLEANED IMMEDIATELY PRIOR TO THE FOUNDATION CONCRETE PLACEMENT.
- ALL PERIMETER WALL AND COLUMN FOOTINGS SHALL BEAR A MINIMUM OF 3'-6" BELOW FINISHED GRADES SHOWN ON THE ARCHITECTURAL DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR ALL WATERPROOFING AND DAMPPROOFING DETAILS.

## STRUCTURAL TIMBER NOTES

- ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "TIMBER CONSTRUCTION STANDARDS" OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE "NATIONAL DESIGN SPECIFICATION FOR STRESS-GRADE LUMBER AND ITS FASTENINGS" OF THE NATIONAL FOREST PRODUCTS ASSOCIATION.
- MATERIALS:  
ALL INTERIOR FRAMING TO HAVE PROPERTIES INDICATED BELOW:  
A. LAMINATED VENEER LUMBER  
E = 2,000,000 PSI  
F<sub>b</sub> = 2,950 PSI  
F<sub>v</sub> = 285 PSI  
F<sub>c||</sub> = 2510 PSI  
F<sub>c⊥</sub> = 750 PSI  
B. DIMENSIONAL LUMBER  
SPECIES: DOUGLAS FIR LARCH—NO. 2 & BTR.  
E = 1,600,000 PSI  
F<sub>b</sub> = 900 PSI  
F<sub>v</sub> = 180 PSI  
F<sub>c||</sub> = 1350 PSI  
F<sub>c⊥</sub> = 625 PSI

ALL EXTERIOR EXPOSED MEMBERS ARE TO BE WOLMANIZED WITH PROPERTIES INDICATED BELOW

- THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL TIMBER MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR REVIEW OF THE ARCHITECT.
- NO WOOD TREATMENTS OR PRESERVATIVES SHALL BE USED WITHOUT PRIOR REVIEW OF THE ARCHITECT.
- ALL MATERIALS AND FABRICATING PROCEDURES SHALL BE INSPECTED BY THE OWNER'S TESTING LABORATORY. MATERIALS SHALL BE GRADED AND MARKED IN COMPLIANCE WITH THE SPECIFICATIONS.
- ALL WOOD MEMBERS SHALL BE SUPPORTED WITH METAL JOIST HANGERS OR STEEL BEAM HANGERS ADEQUATE TO SUPPORT THE REQUIRED LOADS AS DEFINED IN THE LOAD CRITERIA. NO METAL HANGERS SHALL BE EXPOSED OR SEEN FROM THE EXTERIOR.
- ALL MANUFACTURED LAMINATED WOOD BEAMS SUCH AS MICRO=LAM OR PARALLAM AS SHOWN ON THE DRAWINGS SHALL FOLLOW THE MANUFACTURER'S NAILING AND BOLTING PATTERNS FOR MULTIPLE MEMBER USE.
- SILL PLATES ON CONCRETE WALLS SHALL BE PRESSURE TREATED.
- ALL EXTERIOR EXPOSED WOOD FRAMING SHALL BE PRESSURE TREATED.
- PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS. BLOCK SOLID AT 4'-0" O.C. AT PARALLEL PARTITIONS TO JOISTS ON EITHER SIDE.
- SILL PLATES ON CONCRETE WALLS SHALL BE PRESSURE TREATED.
- ALL DIMENSIONAL JOIST AND RAFTER FRAMING SHALL HAVE BRIDGING AT 8'-0" O.C. MAX.

## PLYWOOD SHEATHING

- ALL PLYWOOD SHALL BE APA RATED FOR THE REQUIRED SPAN OR AS INDICATED ON THE DRAWINGS.
- PLYWOOD SHALL BE GLUED AND NAILED TO FLOOR AND ROOF FRAMING WITH A MINIMUM 1/4" BEAD OF ADHESIVE ON FRAMING MEMBERS AND IN GROOVE JOINTS. ADHESIVE SHALL MEET THE REQUIREMENTS OF ASTM D3498 OR PERFORMANCE SPECIFICATION AFG-01.
- 1/8" GAP SHALL BE LEFT BETWEEN FLOOR EDGE AND EDGE JOINTS AND BETWEEN PANELS.
- PLYWOOD SHALL BE FASTENED TO FRAMING WITH 8d RING OR SCREW SHANK NAILS OR EQUIVALENT CAPACITY SCREWS.  
  
NAIL SPACING:  
EDGES = 6" O.C.  
INTERMEDIATE = 12" O.C.
- PLYWOOD SHALL BE INSTALLED WITH FACE GRAIN PERPENDICULAR TO FRAMING MEMBERS.

## STRUCTURAL CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-14. THESE DOCUMENTS SHALL BE AVAILABLE IN THE FIELD OFFICE.
- ALL CONCRETE SHALL BE NORMAL WEIGHT AND WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI U.N.O. ALL EXTERIOR CONCRETE AND CONCRETE IN UNHEATED SPACES SHALL BE AIR ENTRAINED WITH 5%-7% AIR ENTRAINMENT.
- CEMENT SHALL CONFORM TO ASTM C150 TYPE I OR II. USE ONLY ONE BRAND OF CEMENT FOR ALL EXPOSED TO VIEW CONCRETE. AGGREGATES SHALL CONFORM TO ASTM C33 (REGULAR WEIGHT). ALL CONCRETE SHALL CONTAIN AN APPROVED WATER REDUCING ADMIXTURE. NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.
- REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315. BAR SUPPORTS IN CONTACT WITH EXPOSED SURFACES SHALL BE PLASTIC TIPPED.
- CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE PROVIDED BY CLEAR COVER FROM FACE OF CONCRETE TO OUTSIDE OF BAR AS PER ACI 318-99 SECTION 7.7.
- CHECKED SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.
- THE CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS SHOWING THE LOCATIONS OF ALL CONSTRUCTION JOINTS, REVEALS, CURBS, SLAB DEPRESSIONS, SLEEVES, OPENINGS, ETC.
- ALL REINFORCING SPLICES SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, LATEST EDITION, BUT IN NO CASE SHALL BE LESS THAN 36 BAR DIAMETERS, UNLESS NOTED OTHERWISE. ALL WELDED WIRE FABRIC SHALL BE LAPPED TWO (2) FULL MESH PANELS AND TIED SECURELY. WHERE REQUIRED, DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN REINFORCING, UNLESS NOTED OTHERWISE.
- ALL WALLS AND STRUCTURAL SLABS SHALL BE REINFORCED WITH AT LEAST #4 AT 12" EACH WAY, EACH FACE, UNLESS NOTED OTHERWISE. ALL SLABS-ON-GRADE SHALL BE REINFORCED WITH AT LEAST ONE (1) LAYER OF 6X6-W2.1XW2.1 W.W.R., UNLESS NOTED OTHERWISE. PROVIDE ONE (1) LAYER OF 6X6-W1.4XW1.4 W.W.R. CONTINUOUS IN ALL CONCRETE FILLS OVER THE STRUCTURAL SLAB.
- ADDITIONAL BARS SHALL BE PROVIDED AROUND ALL FLOOR AND WALL OPENINGS.
- UNLESS NOTED OTHERWISE, ALL MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT PADS SHALL BE REINFORCED WITH AT LEAST ONE (1) LAYER OF 6X6-W4XW4 W.W.R. SEE HVAC, PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL REINFORCING REQUIREMENTS OF PADS.
- PLACE ALL SLABS-ON-GRADE WITH AN APPROVED PATTERN AND SEQUENCE OF CONSTRUCTION AND CONTROL JOINTS TO MINIMIZE SHRINKAGE CRACKS. THE MAXIMUM SPACING BETWEEN JOINTS SHALL BE 15 FEET.
- CONCRETE TESTING WILL BE PERFORMED BY THE CONTRACTOR'S TESTING LABORATORY IN ACCORDANCE WITH ACI 301-84 CHAPTER 16 AND THE CONCRETE SPECIFICATIONS.

CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	SPECIFIED COVER, IN.
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	NO. 6 THROUGH NO. 18 BARS	2
		NO. 5 BAR, W31 OR D31 WIRE, AND SMALLER	1½
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS, AND WALLS	NO. 14 AND NO. 18 BARS	1½
		NO. 11 BAR AND SMALLER	¾
BEAMS, COLUMNS, PEDESTALS, AND TENSION TIES	PRIMARY REINFORCEMENT, STRUTS, TIES, SPIRALS, AND HOOPS	NO. 14 AND NO. 18 BARS	1½
		NO. 11 BAR AND SMALLER	¾

## STRUCTURAL STEEL

- ALL STRUCTURAL STEEL WORK SHALL CONFORM TO AISC 360-16 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
- STRUCTURAL STEEL SHALL CONFORM TO FOLLOWING STANDARD AND MATERIAL PROPERTIES, U.N.O.:  
WF AND WT SHAPES: ASTM A992, GRADE 50  
CHANNELS, PLATES, ANGLES: ASTM A36  
HOLLOW STRUCTURAL SECTIONS: ASTM A500, GRADE B  
ANCHOR RODS: ASTM F1554
- ALL BOLTS (OTHER THAN ANCHOR BOLTS), NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325 UNLESS OTHERWISE INDICATED. ALL BOLTS SHALL BE 3/4 INCH DIAMETER, MINIMUM.
- ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS AND SHALL CONFORM TO AWS D1.1 "STRUCTURAL WELDING CODE", LATEST EDITION. ALL WELDING ELECTRODES SHALL BE E70XX.
- ALL CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR. THE CONNECTIONS SHALL BE DESIGNED BY, OR UNDER THE SUPERVISION OF, A STRUCTURAL OR PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ILLINOIS. DETAILING SHALL BE PERFORMED USING RATIONAL ENGINEERING DESIGN AND STANDARD PRACTICE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE GENERAL DETAILS SHOWN ON THE DRAWINGS ARE CONCEPTUAL ONLY AND DO NOT INDICATE THE REQUIRED NUMBER OF BOLTS OR WELD SIZES, UNLESS SPECIFICALLY NOTED. ADVISE THE ARCHITECT IMMEDIATELY IF THE INFORMATION ON THE DRAWINGS IS NOT SUFFICIENT FOR COMPLETE DESIGN OF CONNECTIONS.
- THE FABRICATOR/ERECTOR SHALL SUBMIT TO THE ARCHITECT, FOR REVIEW, ENGINEERED AND CHECKED DRAWINGS SHOWING SHOP FABRICATION DETAILS, FIELD ASSEMBLY DETAILS AND ERECTION DIAGRAMS FOR ALL STRUCTURAL STEEL. WITH EACH SUBMITTAL OF SHOP DRAWINGS, THE FABRICATOR'S ENGINEER SHALL CERTIFY THAT THE CONNECTIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AISC SPECIFICATIONS AND THE CONTRACT DOCUMENTS. CERTIFIED MILL TEST REPORTS SHALL BE SUBMITTED.
- ALL CONNECTIONS SHALL BE BOLTED OR WELDED AND SHALL BE DESIGNED FOR THE END REACTIONS INDICATED ON PLANS OF IF NOT INDICATED SHALL BE DESIGNED TO DEVELOP 60% OF THE ALLOWABLE UNIFORM LOAD TABULATED IN THE THIRTEENTH EDITION OF THE AISC "MANUAL OF STEEL CONSTRUCTION" FOR ALLOWABLE STRESS DESIGN UNLESS NOTED OTHERWISE. NUMBER TO BOLTS MUST SATISFY MIN. REQUIREMENTS AS FOLLOWS: 2 BOLTS PER CONNECTION FOR 8" AND 10" DEEP MEMBERS, 3 FOR 12" AND 14" DEEP MEMBERS, 4 FOR 16" AND 18" DEEP MEMBERS, 5 FOR 21" AND 24" DEEP MEMBERS AND 6 FOR 27" AND DEEPER MEMBERS.
- THE DEPTH OF A SIMPLE SHEAR CONNECTION SHALL NOT BE LESS THAN ONE HALF OF THE NOMINAL DEPTH OF THE BEAM. THE MINIMUM NUMBER OF BOLTS PER CONNECTION SHALL BE TWO (2).
- CONNECTIONS OF BEAMS FRAMING INTO COLUMNS SHALL BE CAPABLE OF RESISTING AN AXIAL FORCE IN ORDER TO BRACE THE COLUMN. THE BRACING FORCE (IN KIPS) SHALL BE TAKEN AS 0.127 TIMES THE NOMINAL WEIGHT IN POUNDS PER LINEAR FOOT OF THE COLUMN FOR A36 COLUMNS. THE BRACING FORCE ACTS IN BOTH PRINCIPAL AXES OF THE COLUMN, AND MAY BE RESISTED BY A COMBINATION OF BEAM CONNECTIONS.
- COLUMN BASES AND SPLICED ENDS SHALL BE MILLED OR SAW CUT TO PROVIDE FULL BEARING.
- GUSSET PLATES SHALL BE 3/8" THICK, MINIMUM, UNLESS NOTED OTHERWISE.
- SHOP AND FIELD TESTING OF WELDS AND BOLTS SHALL BE AS FOLLOWS:  
A. ALL WELDS SHALL BE VISUALLY INSPECTED.  
B. FILLET WELDS: TWENTY FIVE (25) PERCENT OF THE FILLET WELDS, SELECTED AT RANDOM SHALL BE MEASURED, AND TEN (10) PERCENT SELECTED AT RANDOM SHALL BE CHECKED BY MAGNETIC PARTICLE FOR FINAL PASS ONLY.  
C. PENETRATION WELDS: ULTRASONICALLY TEST 100 PERCENT OF ALL FULL PENETRATION WELDS, AND ALL PARTIAL PENETRATION COLUMN SPLICE WELDS. IF THE WELDS MADE BY AN INDIVIDUAL WELDER ARE CONSISTENTLY SATISFACTORY, TESTING OF HIS WELDS MAY BE REDUCE TO 50 PERCENT.  
D. BOLTED CONNECTIONS: CHECK BY CALIBRATED TORQUE WRENCH 25 PERCENT OF BOLTS IN EACH CONNECTION, BUT NOT LESS THAN TWO (2) BOLTS PER CONNECTION.  
E. THE CONTRACTOR'S TESTING AGENCY SHALL PERFORM ALL SHOP AND FIELD INSPECTION AND TESTING AS OUTLINED ABOVE AND SUBMIT THE REPORTS TO ARCHITECT/ENGINEER.
- ALL BEAMS SHALL BE FABRICATED WITH THE NATURAL CAMBER UP. PROVIDE CAMBER, OR SHORING AS INDICATED ON THE DRAWINGS.
- AFTER FABRICATION, ALL STEEL SHALL BE CLEANED OF ALL RUST, LOOSE MILL SCALE AND OTHER FOREIGN MATERIALS. STRUCTURAL STEEL EXPOSED TO VIEW IS TO BE PAINTED WITH SHOP PRIMER. STEEL EXPOSED TO THE WEATHER SHALL BE BLAST CLEANED (SSPC-SP6) AND GIVEN SHOP PRIME AND FIELD FINISH COATS OF PAINT AS SPECIFIED.
- THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR APPROVAL OF THE ARCHITECT.

**REQUIRED SPECIAL INSPECTIONS AND TESTS**

**STRUCTURAL STEEL**

1. 1705.2.1 – SPECIAL INSPECTIONS AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES, AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360.

**WOOD CONSTRUCTION**

1. 1705.5 – SPECIAL INSPECTIONS OF PREFABRICATED WOOD STRUCTURAL ELEMENTS AND ASSEMBLIES SHALL BE IN ACCORDANCE WITH SECTION 1704.2.5. SPECIAL INSPECTIONS OF SITE-BUILT ASSEMBLIES SHALL BE IN ACCORDANCE WITH 1705.5.1 (IF NOTED AS HIGH-LOAD DIAPHRAGM) AND 1705.5.2.

TABLE 1705.3				
REQUIRED SPECIAL INSPECTIONS AND TEST OF CONCRETE CONSTRUCTION				
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	-	X	ACIS 318 CH. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. REINFORCING BAR WELDING:				
A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706;	-	X	AWS D1.4 ACI 318: 26.6.4	-
B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM $\frac{1}{8}$ " AND		X		
C. INSPECT ALL OTHER WELDS.	X			
3. INSPECT ANCHORS CAST IN CONCRETE.	-	X	ACI 318: 17.8.2	-
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.				
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X		ACI 318: 17.8.2.4	-
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.		X	ACI 318: 17.8.2	
5. VERIFY USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C 172 ASTM C31 ACI 318: 26.4, 26.12	1908.10
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 26.5	1908.6, 1908.7 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 26.5.3-26.5.5	1908.9
9. INSPECT PRESTRESSED CONCRETE FOR:				
A. APPLICATION OF PRESTRESSING FORCES; AND	X	-	ACI 318: 26.10	-
B. GROUTING OF BONDED PRESTRESSING TENDONS.	X	-		
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	-	X	ACI 318: CH. 26.8	-
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X	ACI 318: 26.11.2	-
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	ACI 318: 26.11.1.2(B)	-


TABLE 1705.6			
REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS			
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X	
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X	
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-	
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X	

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PROJECT NAME:  
**6136 W. ROOSEVELT RD**  
  
PROJECT ADDRESS:  
**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

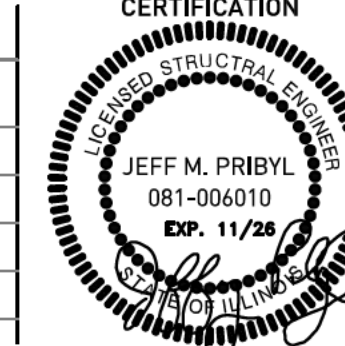
PROJECT INFO

PROJECT NO.  
251020  
  
PROJECT TEAM:  
JK  
BB  
GV

ISSUE

12.30.25 - ISSUED FOR PERMIT

CERTIFICATION

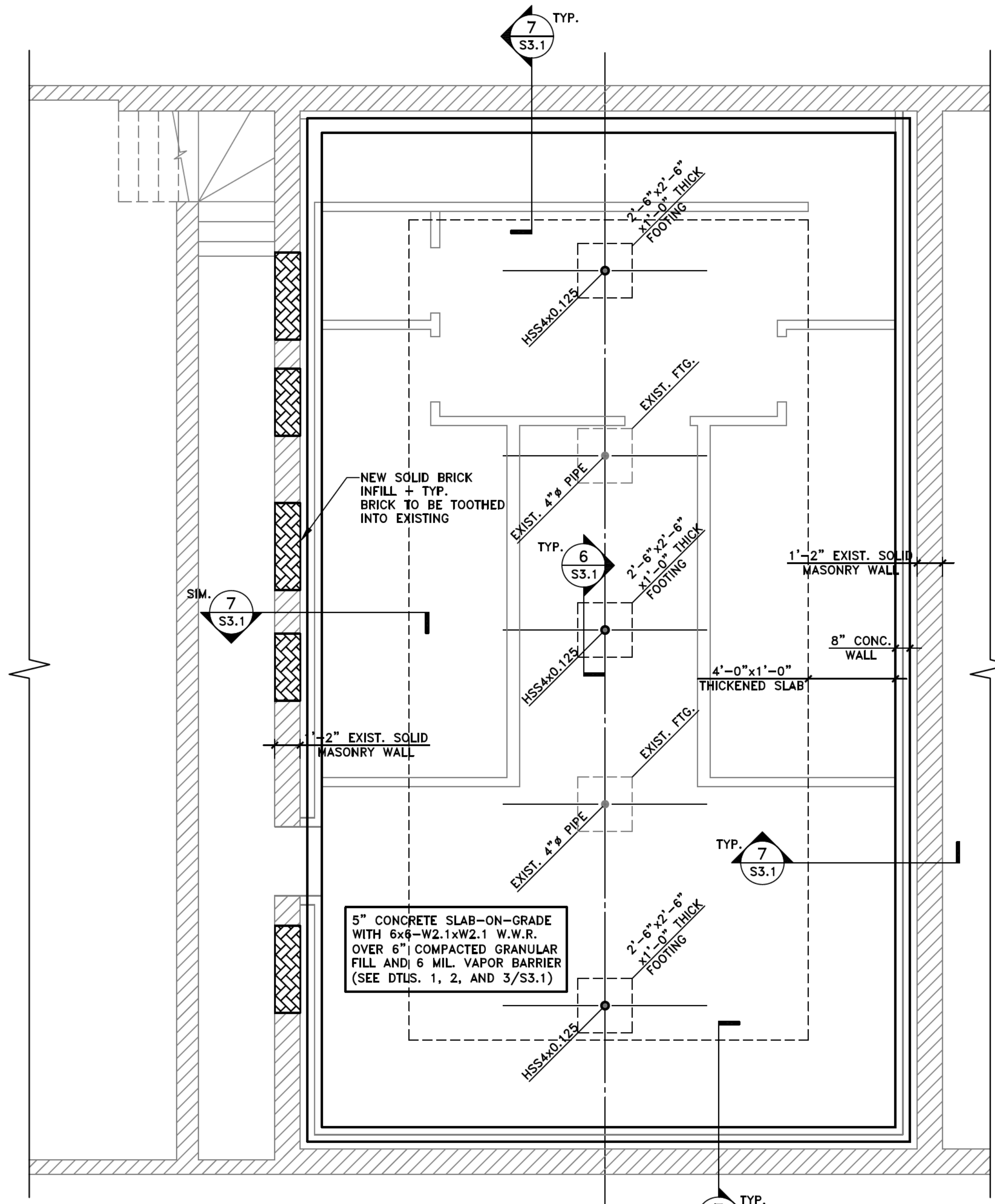


SHEET TITLE

STRUCTURAL NOTES

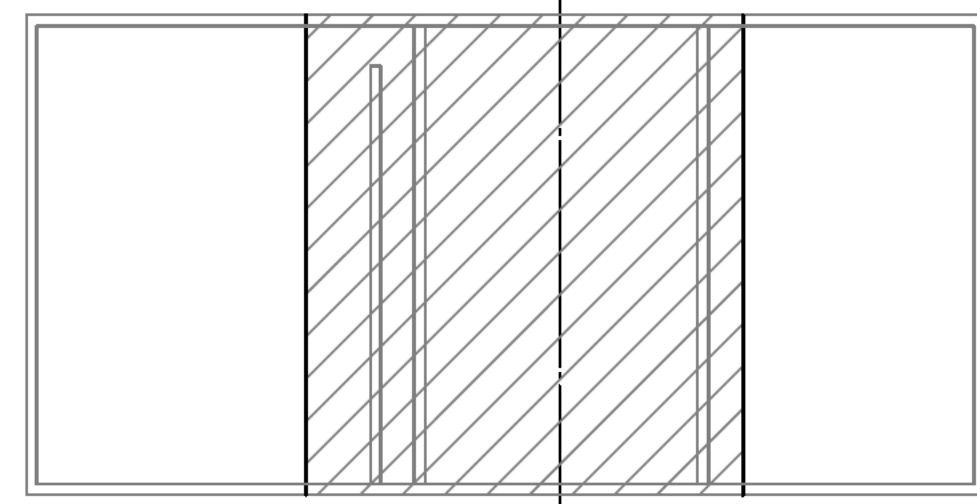
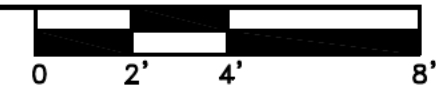
SHEET #

**S1.2**



**A FOUNDATION AND BASEMENT PLAN**

SCALE: 1/4"=1'-0"

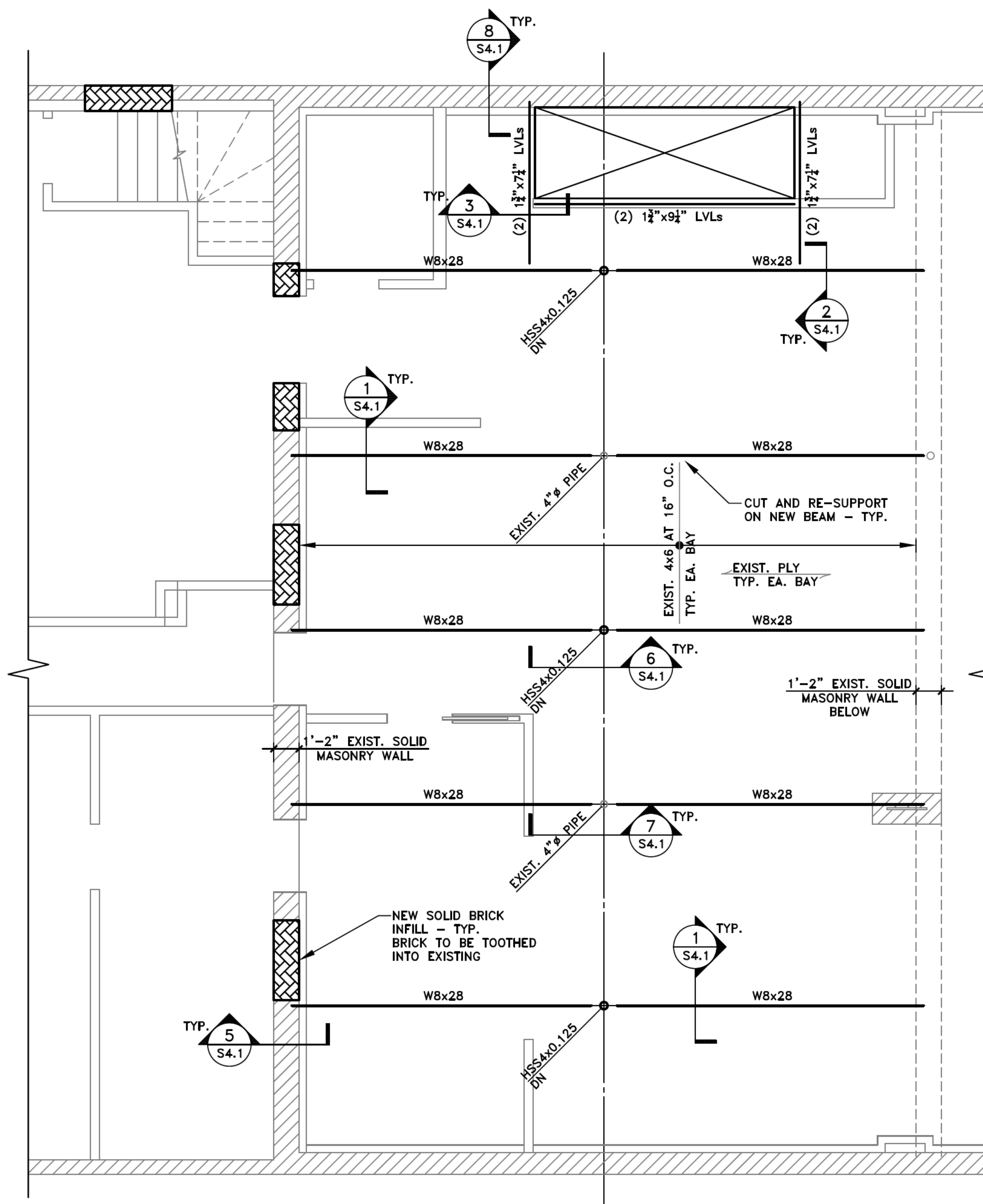


**KEY PLAN**

NOT TO SCALE

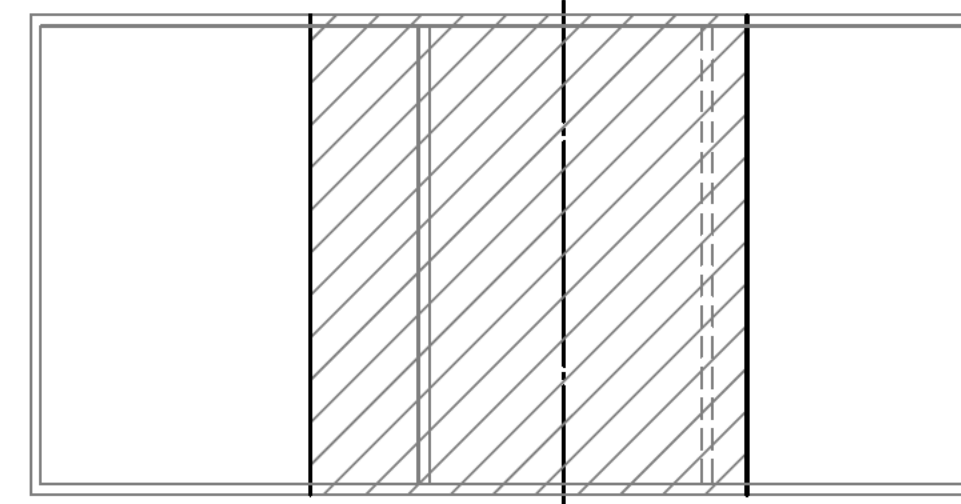
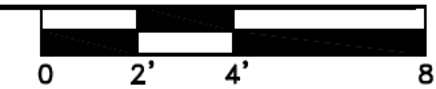
**NOTES:**

1. ASSUMED ALLOWABLE SOIL BEARING PRESSURE = 2500 PSF TO BE VERIFIED BY SOIL TESTING AGENCY PRIOR TO CONSTRUCTION
2. NEW SOLID BRICK INFILL - BRICK TO BE TOOTHED INTO EXISTING



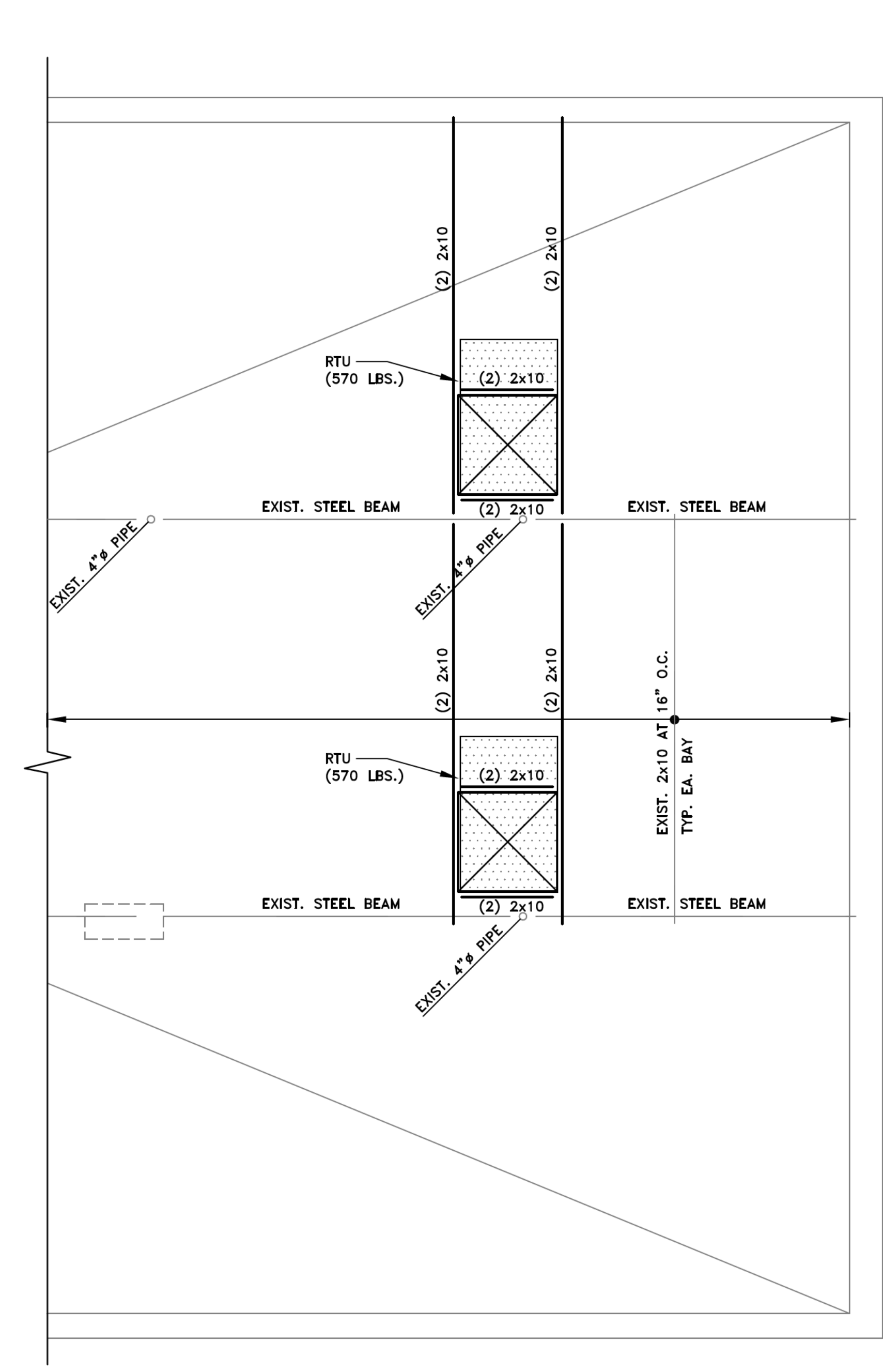
**B FIRST FLOOR FRAMING PLAN**

SCALE: 1/4"=1'-0"



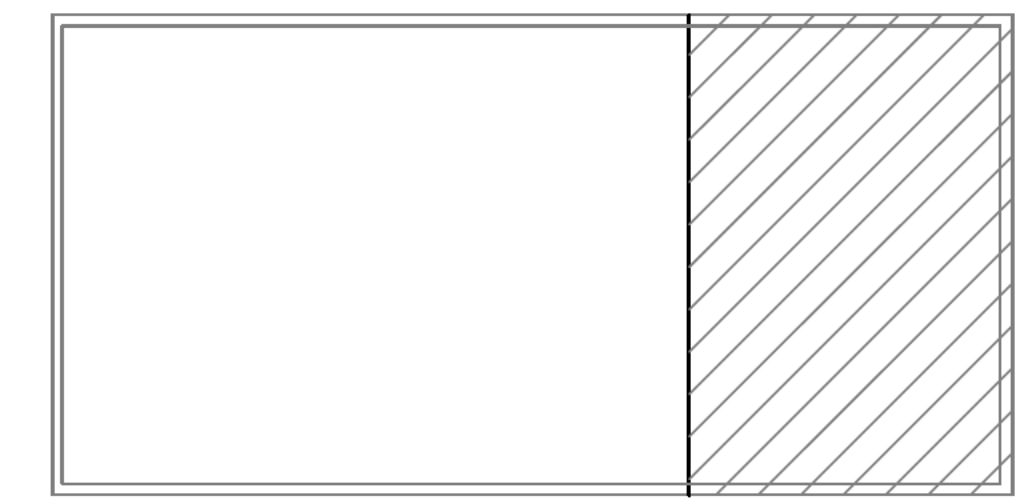
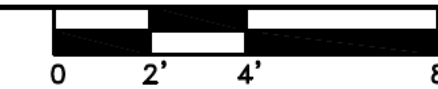
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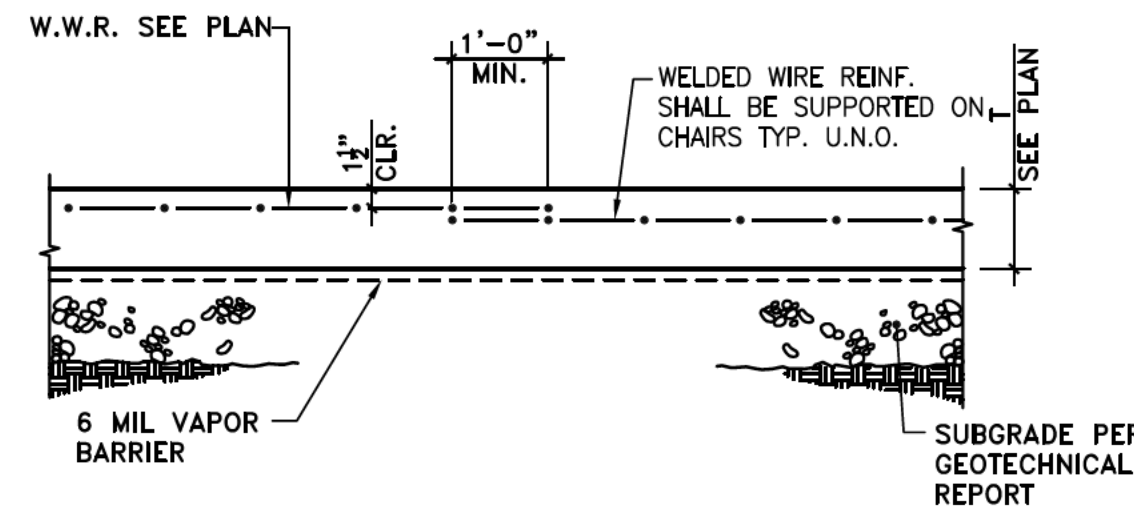
**C ROOF FRAMING PLAN**

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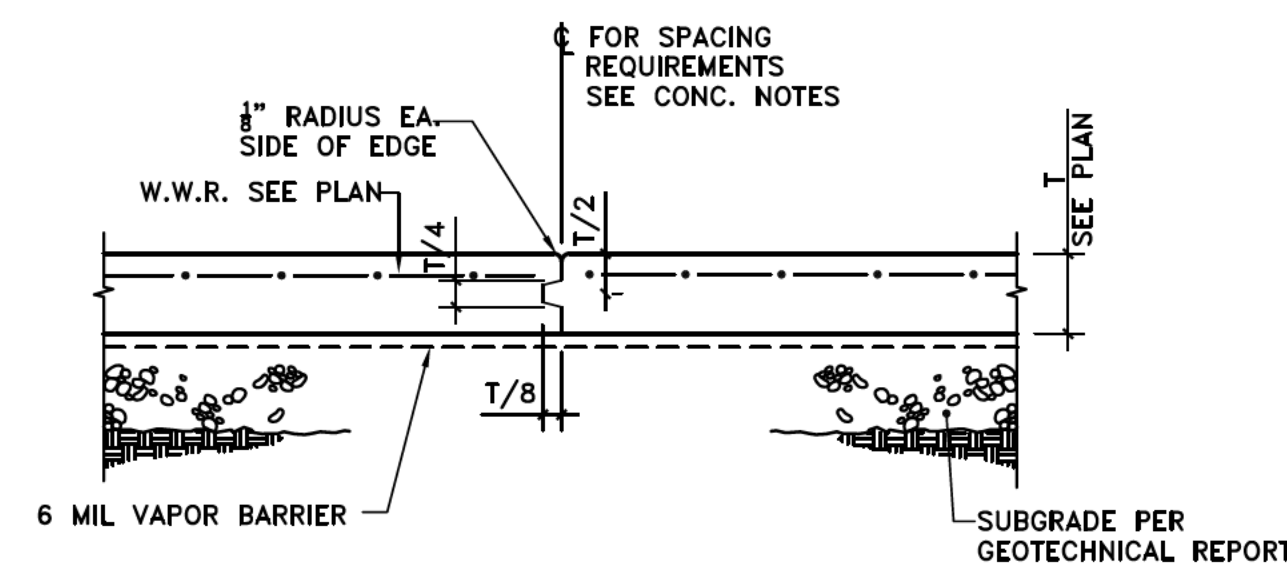


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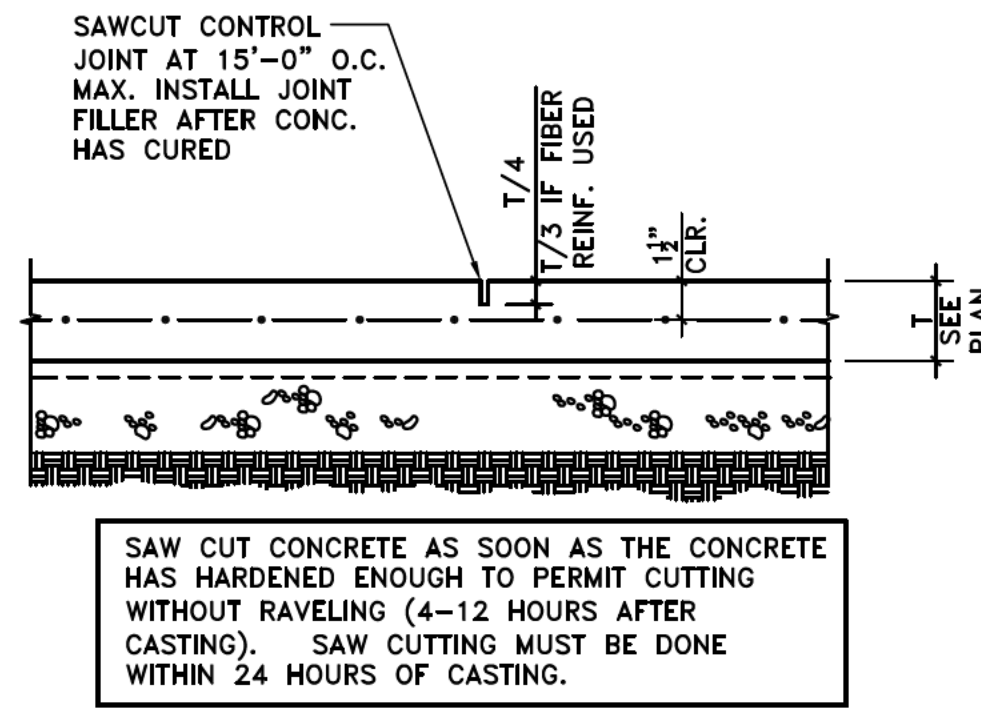
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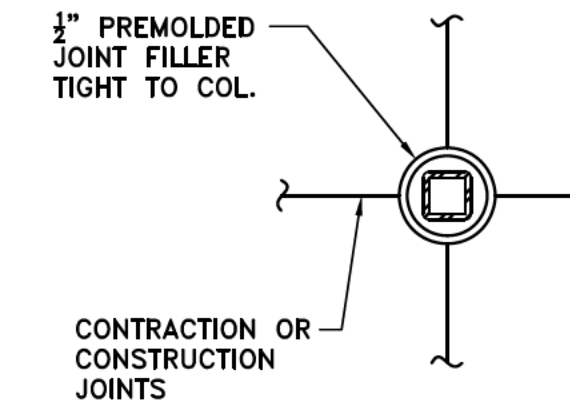
**1** TYPICAL SLAB-ON-GRADE  
SCALE: N.T.S.



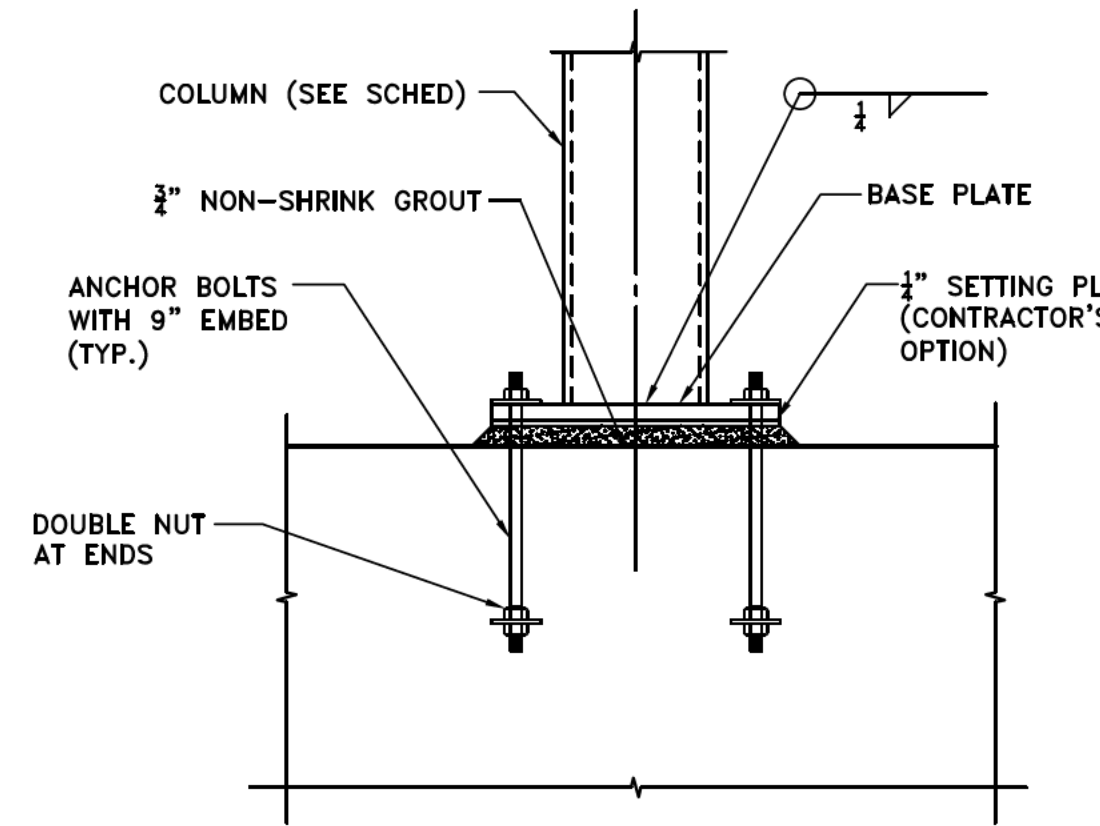
**2** TYPICAL SLAB-ON-GRADE CONSTRUCTION JOINT  
SCALE: N.T.S.



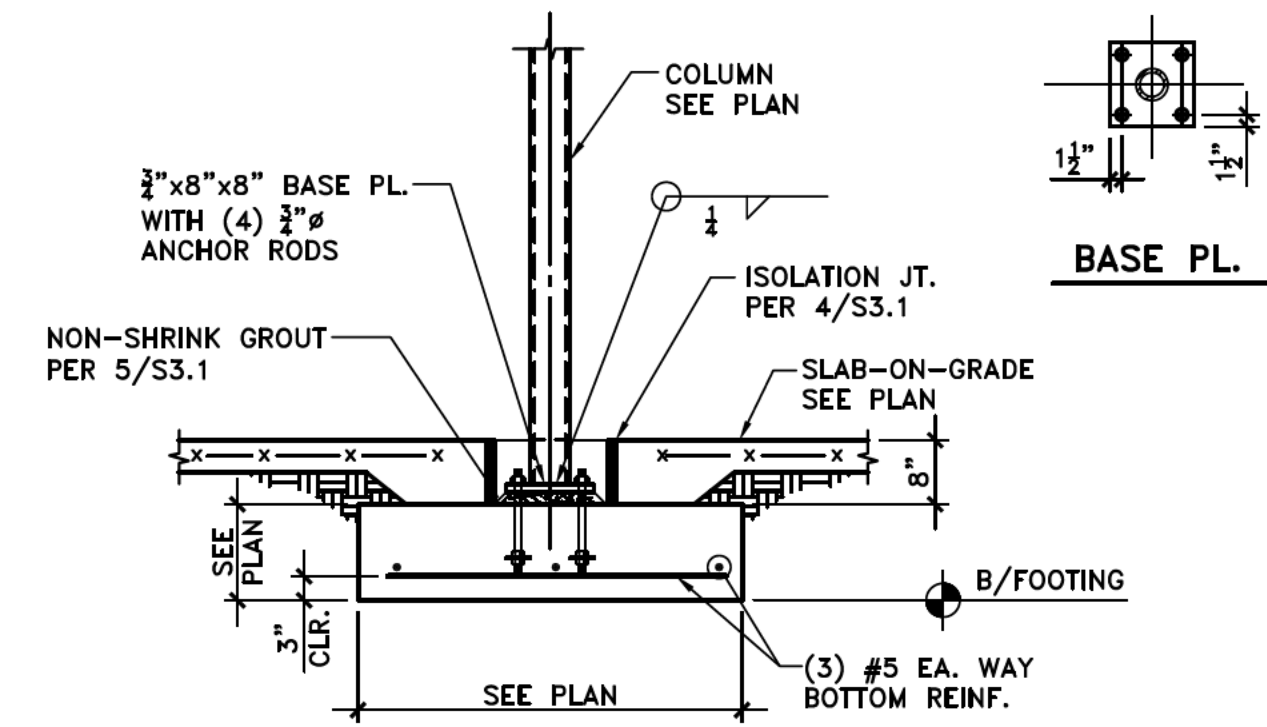
**3** TYPICAL SLAB-ON-GRADE CONTROL JOINT  
SCALE: N.T.S.



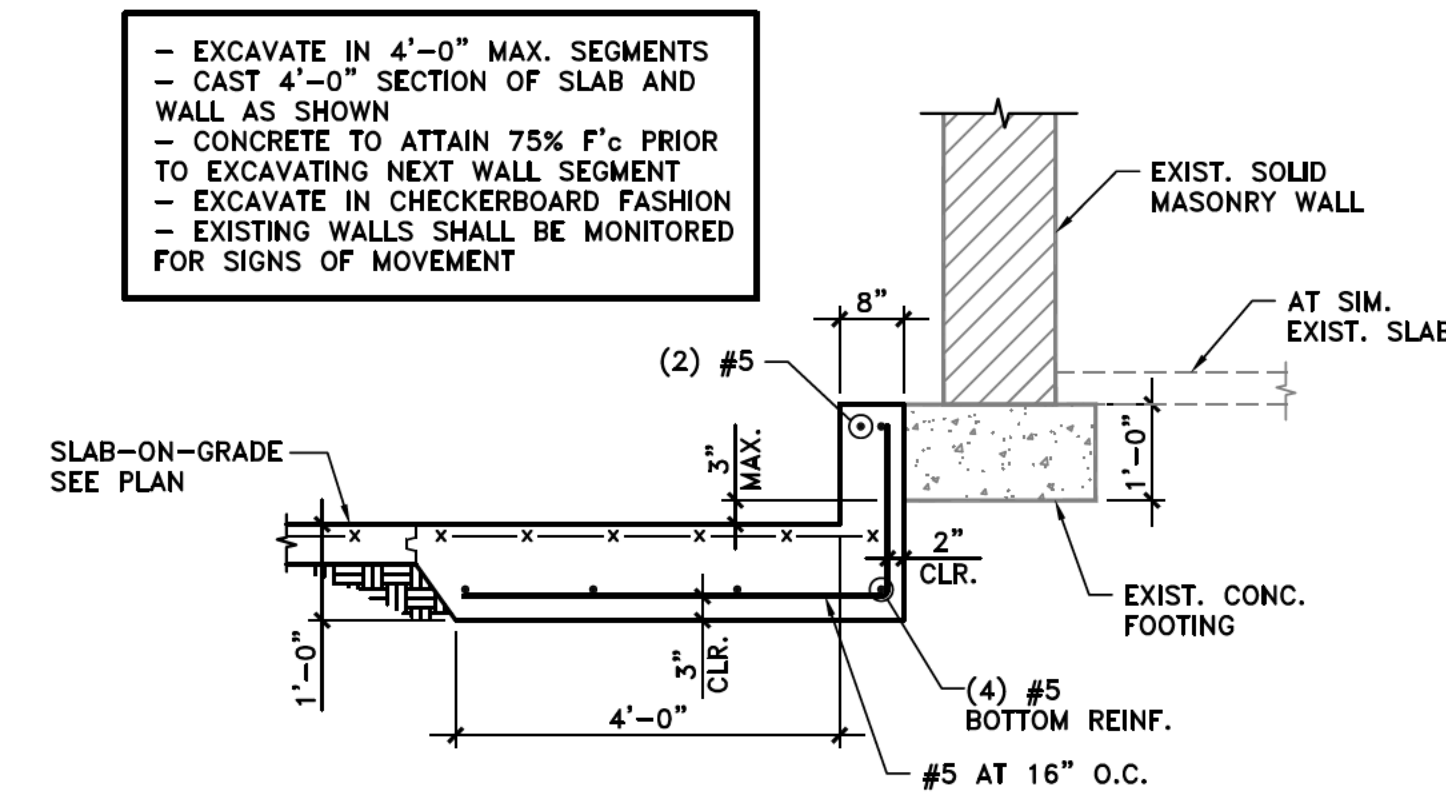
**4** TYP. COLUMN ISOLATION JOINTS  
SCALE: N.T.S.



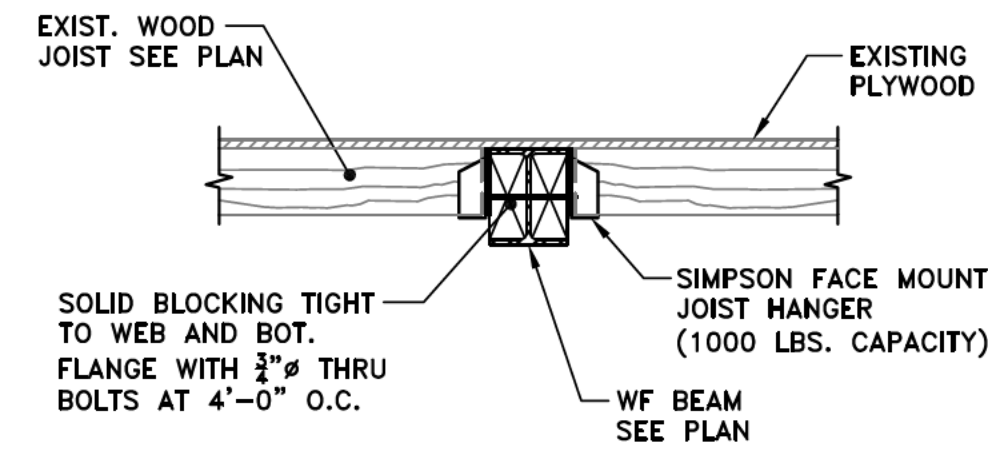
**5** TYPICAL BASE PLATE DETAIL  
NOT TO SCALE



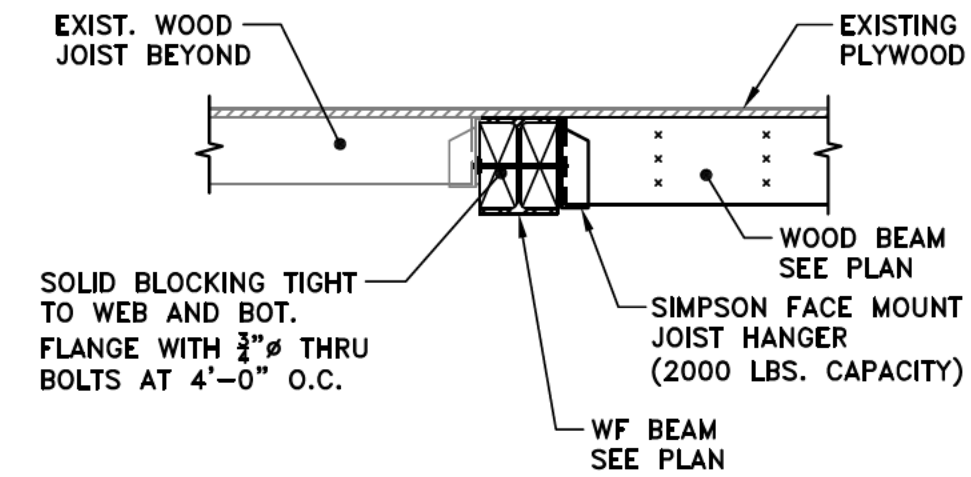
**6** TYP. HSS COL. ON NEW SPREAD FOOTING  
SCALE: 1/2" = 1'-0"



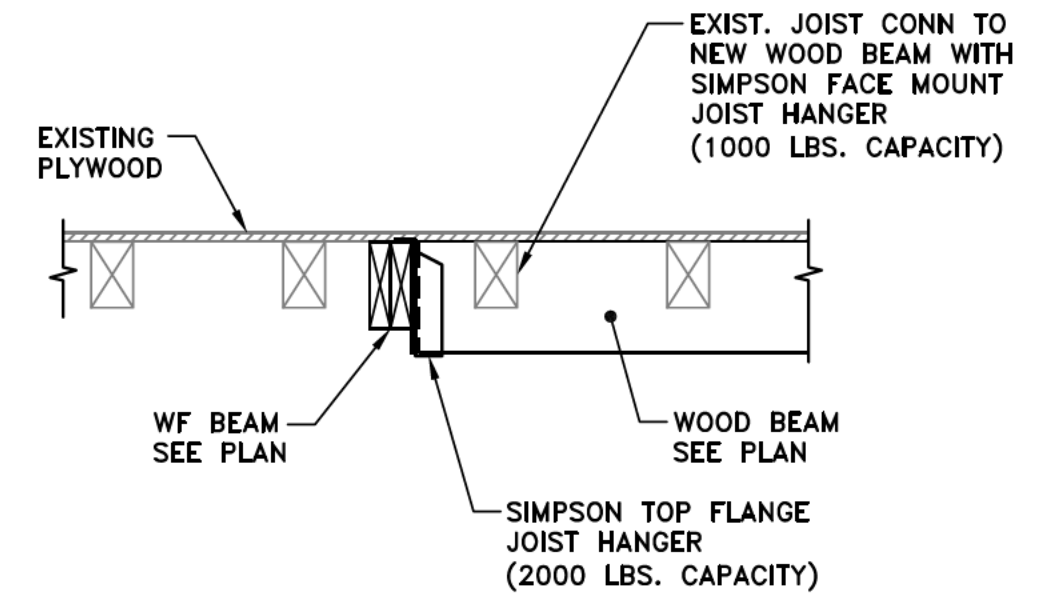
**7** TYP. SECTION AT EXTERIOR WALL  
SCALE: 1/2" = 1'-0"



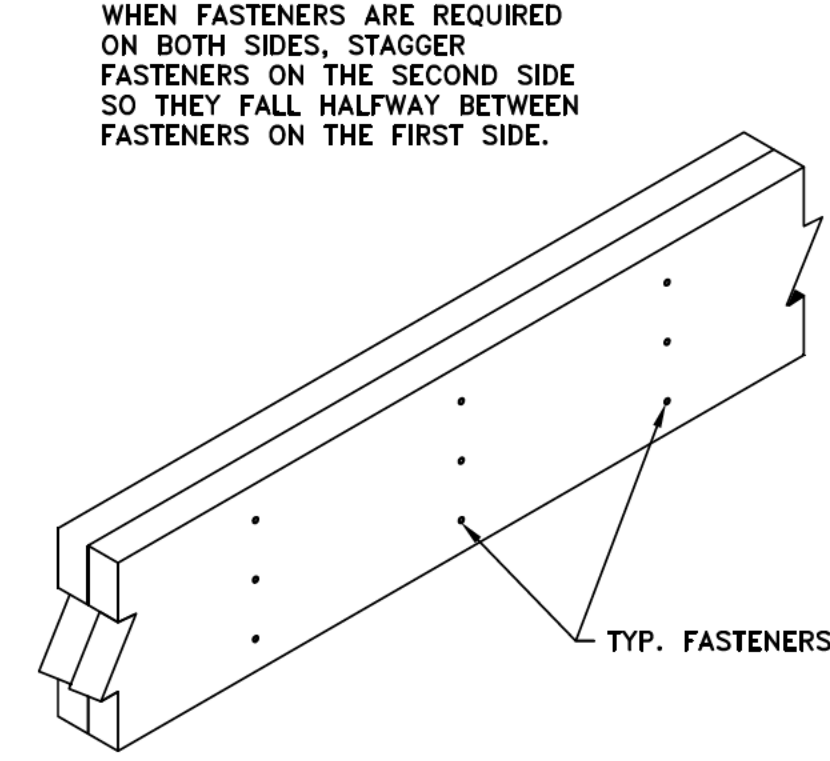
**1** EXIST. WOOD JOIST FRAMING INTO WF BEAM EA. SIDE  
SCALE: 3/4" = 1'-0"



**2** NEW WOOD BEAM TO WF BEAM CONNECTION  
SCALE: 3/4" = 1'-0"



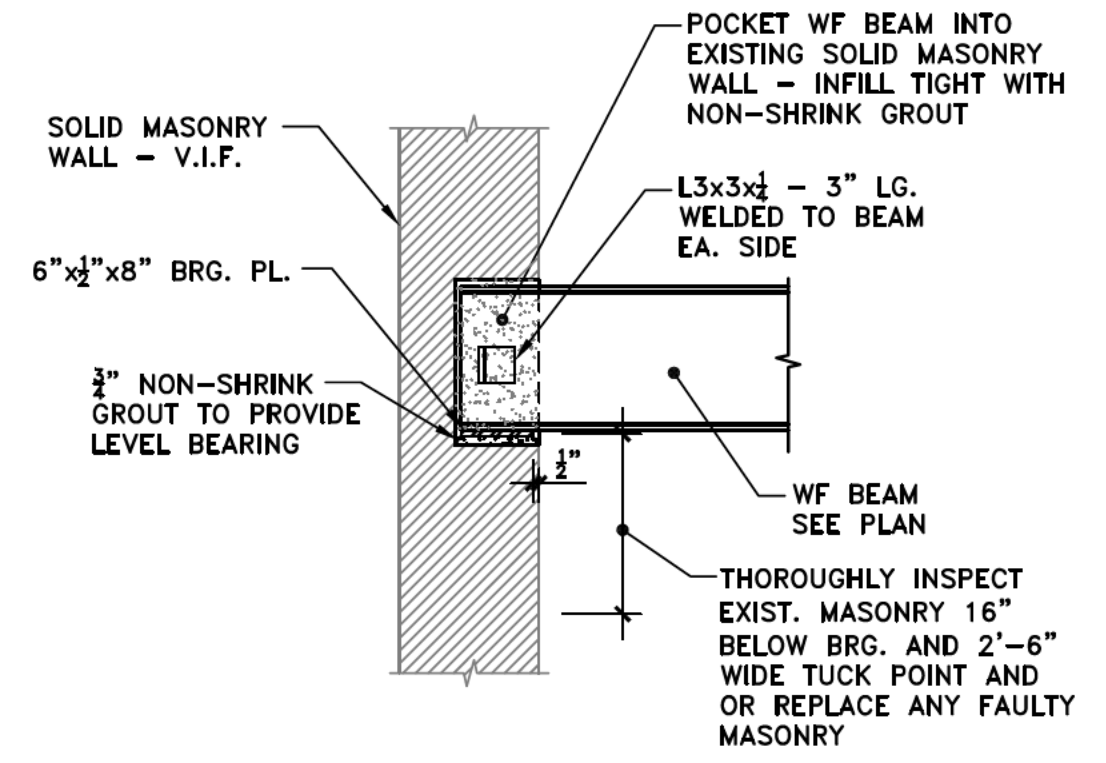
**3** NEW WOOD BEAM TO NEW WOOD BEAM CONNECTION  
SCALE: 3/4" = 1'-0"



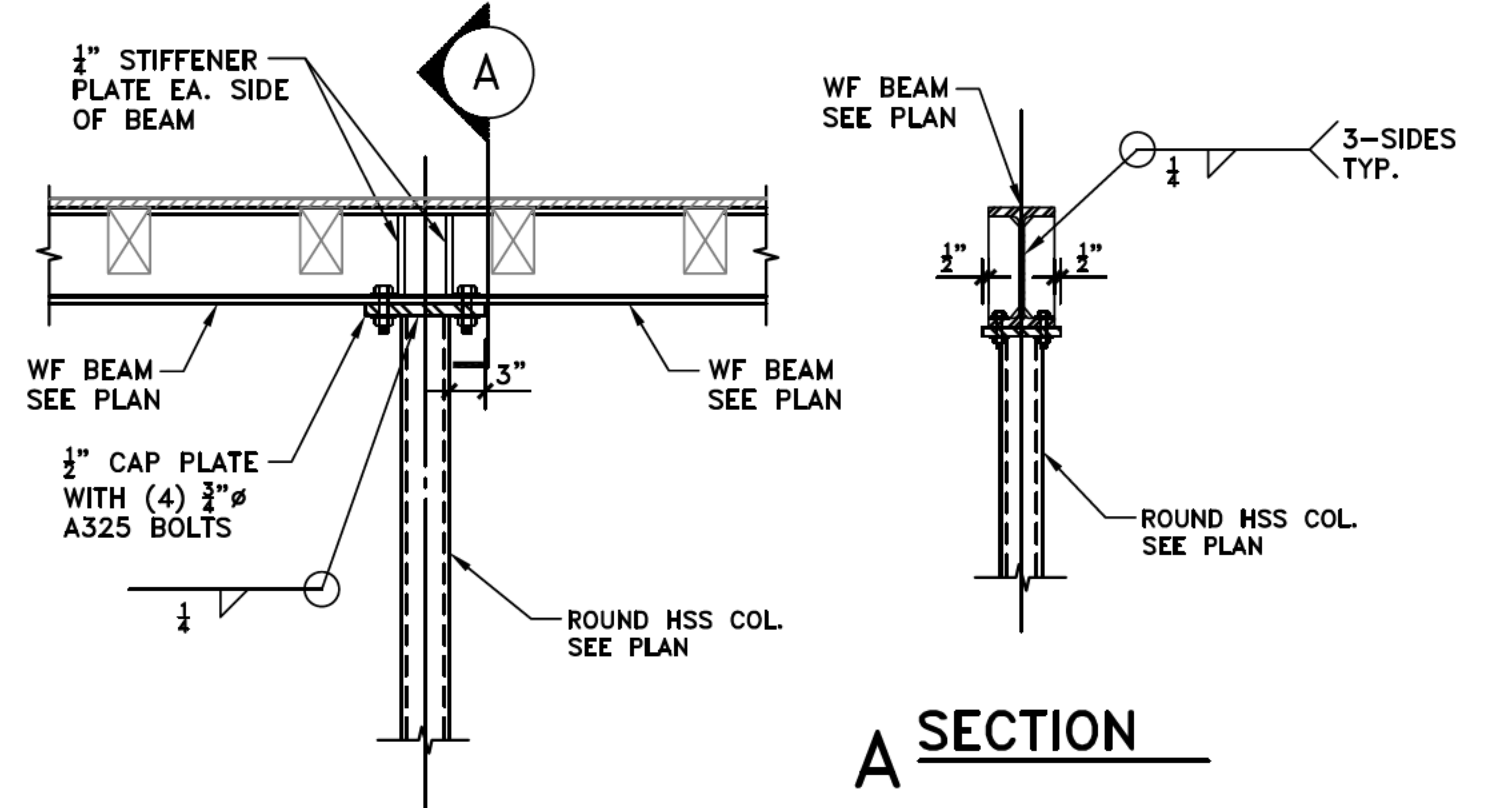
**4** MULTIPLE -MEMBER CONNECTION PATTERN  
NOT TO SCALE

NUMBER OF PLYS	FASTENER TYPE	MIN. LENGTH	# ROWS	SPACNG	LOCATION
2-PLY < 14" DEEP	10d NAILS	3" - 1 1/2" PLY 2 1/2" - 1 1/2" PLY	3 (2)	9"	ONE SIDE
	12d, 16d NAILS	3 1/4" - 1 3/4" PLY 2 1/2" - 1 1/2" PLY	2 (2)	9"	ONE SIDE
	SCREWS	3 3/8" - 1 3/4" PLY 2 1/2" - 1 1/2" PLY	2	15"	ONE SIDE
3-PLY < 14" DEEP	10d NAILS	3" - 1 1/2" PLY 3" - 1 1/2" PLY	3 (2)	9"	BOTH SIDES
	12d, 16d NAILS	3 1/4" - 1 3/4" PLY 3" - 1 1/2" PLY	2 (2)	9"	BOTH SIDES
	SCREWS	3 3/8" - 1 3/4" PLY 2 1/2" - 1 1/2" PLY	2	15"	BOTH SIDES

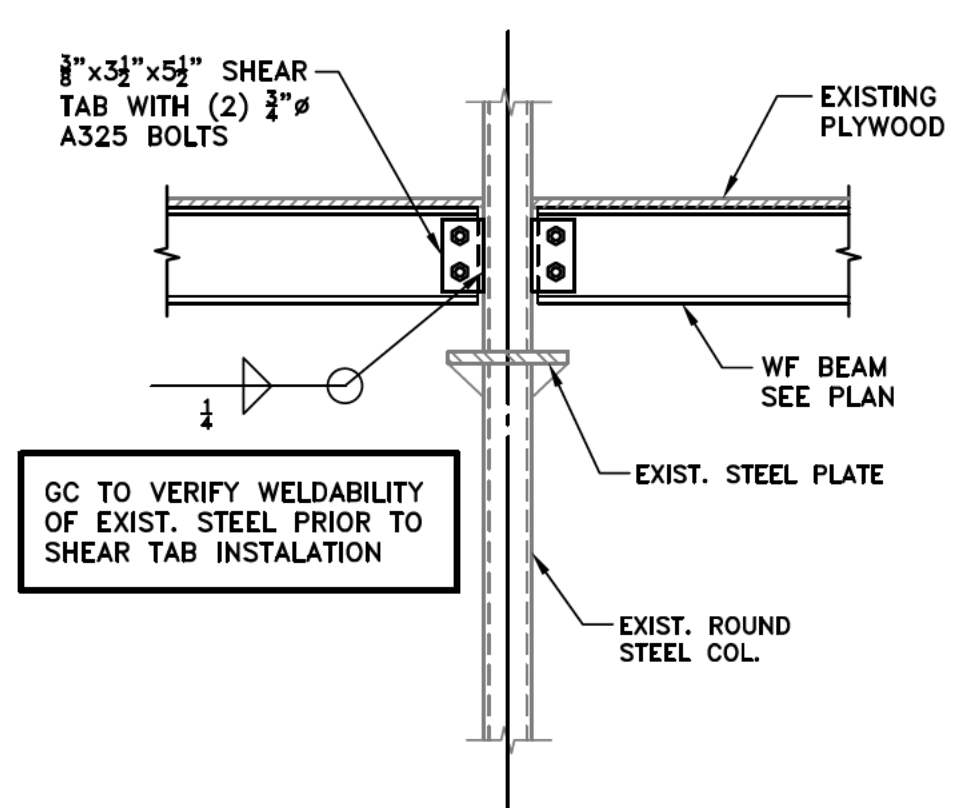
NOTES:  
1. 10D NAILS ARE 0.128" DIAMETER; 12D-16D NAILS ARE 0.148"-0.162" DIAMETER;  
SCREWS ARE SDS, USP WS, TRUSSLOK® OR SDW.  
2. AN ADDITIONAL ROW OF NAILS IS REQUIRED WITH DEPTHS OF 14" OR GREATER.



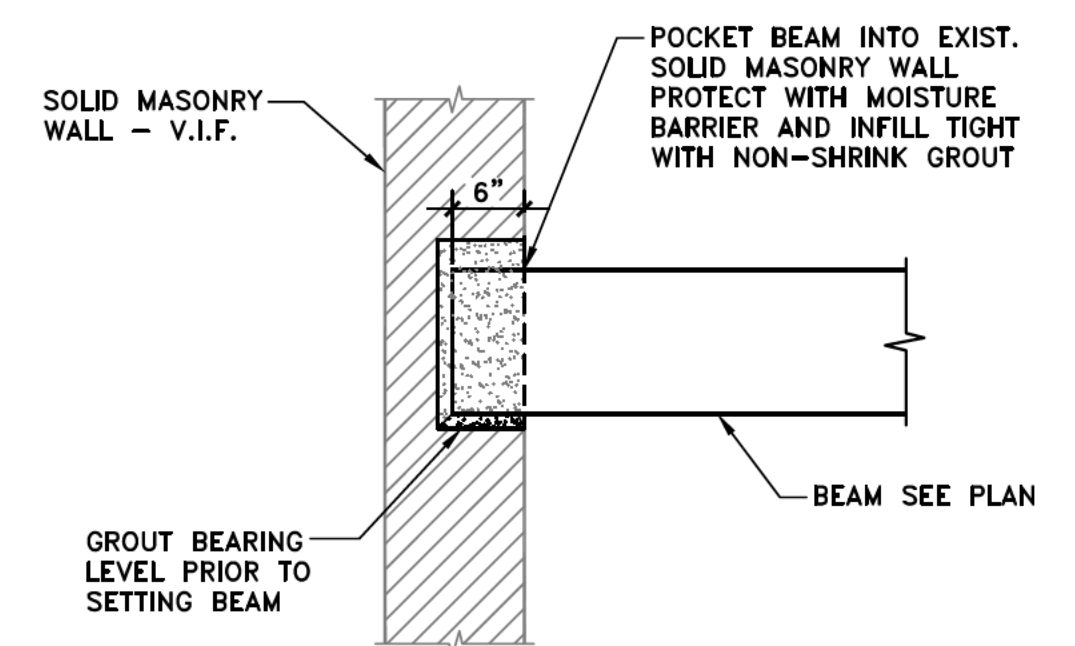
**5** WF BEAM BEARING ON EXIST. SOLID MASONRY WALL - PERP.  
NOT TO SCALE



**6** WF BEAM BRG. ON HSS COL.  
SCALE: 3/4" = 1'-0"



**7** WF BEAM BRG. ON EXIST. HSS COL.  
SCALE: 3/4" = 1'-0"



**8** WOOD BEAM BEARING ON EXIST. SOLID MASONRY WALL  
SCALE: 3/4" = 1'-0"

EXISTING MECHANICAL NOTES:

- ① EXISTING TO BE REMOVED AND CAPPED
  - ② EXISTING TO BE RELOCATED, EXTEND ALL EXISTING, PROVIDE NEW CONNECTION (NOT LIMITED TO DUCTS, ELECTRICAL, GAS)
  - ③ PROVIDE NEW CONNECTION TO EXISTING
  - ④ EXISTING TO REMAIN
  - NEW CONNECTION
  - EXISTING TO BE REMOVED
- PROVIDE SA AND RA DIFFUSERS TO MATCH EXISTING
- TEST, CHECK AND OPERATE ALL EXISTING EQUIPMENT TO REMAIN. AS LISTED BELOW AND NOT LIMITED TO.
1. FURNACE AND CONDENSING UNIT
  2. TOILET EXHAUST FANS

GENERAL HVAC DEMO NOTES:

1. REFER TO GENERAL TRADES DEMOLITION DRAWINGS, REMOVE OR RELOCATE ALL M & E FEATURES AS NECESSARY (WHETHER SPECIFICALLY SHOWN OR NOT)
  2. INFORMATION SHOWN HERE REFLECTS EXISTING RECORDS & RECENT ON-SITE OBSERVATIONS. THE DEMOLITION WORK SHOWN IS INTENDED TO CONVEY THE GENERAL NATURE & SCOPE OF THE WORK REQUIRED. THE CONTRACTOR SHALL PERFORM ALL DEMOLITION WORK NECESSARY PROPERLY COMPLETE THE NEW WORK SHOWN ELSEWHERE.
  3. THE DEMOLITION DRAWINGS ARE INTENDED TO SHOW THE GENERAL EXTENT OF THE MECHANICAL AND ELECTRICAL WORK REQUIRED FOR THIS PROJECT. IT IS INTENDED THAT ALL MECHANICAL AND ELECTRICAL DEMOLITION THAT IS REQUIRED TO PROVIDE THE COMPLETION OF THE NEW SYSTEMS BE PERFORMED AS A PART OF THE BASE BID FOR THE PROJECT.
  4. REMOVE ALL EXISTING PIPING, DUCTWORK, WIRING, ETC. THAT IS NOT REQUIRED TO SUPPORT THE PROPER OPERATION OF THE NE SYSTEMS & EXISTING SYSTEMS TO REMAIN.
  5. PATCH AND REPAIR ALL EXISTING SURFACES TO REMAIN THAT MAY BE DAMAGED BY THE PERFORMANCE OF THE DEMOLITION WORK.
  6. PROTECT PIPING, DUCTWORK, CONDUIT, ETC., FROM ENTRANCE OF FOREIGN MATERIALS.
  7. TEST AND BALANCE ALL AIR SYSTEMS PROVIDE REPORT TO ENGINEER FOR REVIEW. ALL WORK MUST ACCOMMODATE OCCUPIED OFFICE SPACE BEING SERVED FROM FURNACE'S. DISCUSS HOURS OF UPGRADE WORK WITH OWNER PRIOR TO BID.
- \*NOT ALL EXISTING TO BE REMOVED DUCTWORK, DIFFUSERS, PIPING, ETC. NOT SHOWN CONTRACTOR TO VIF

EXISTING WORK SHOWN:  
THE SCOPE BASED ON AN ASSUMPTION AND CONTRACTOR TO NOTIFY THE ARCHITECT/ENGINEER/OWNER (ONE OR SOME COMBINATION OF THESE) IF CONTRACTOR DISCOVERS SOMETHING DIFFERENT FROM THE ASSUMPTIONS.

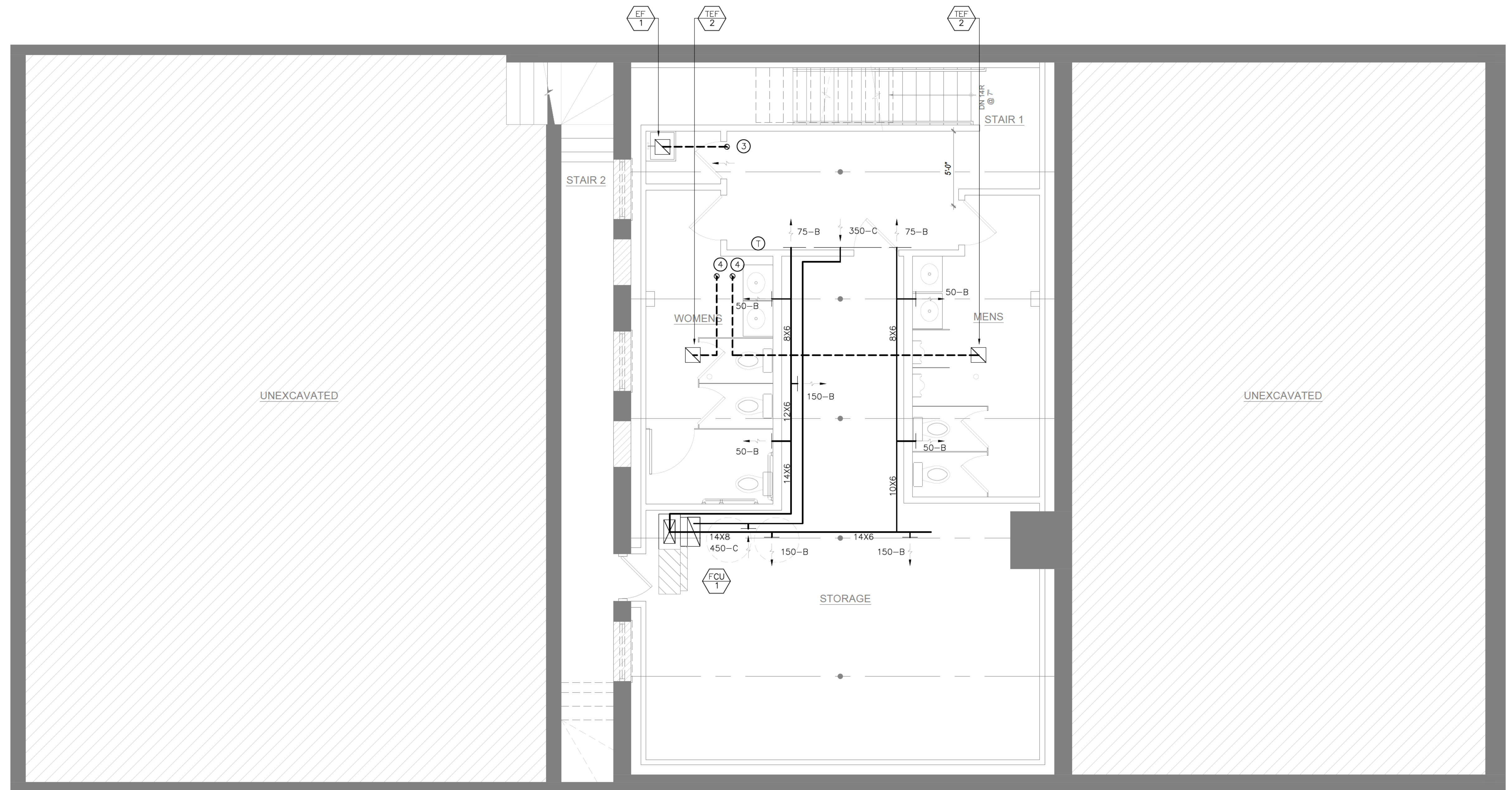
MECHANICAL NOTES:

- ① ② 3" PVC EX/CAI FROM FURNACE & OR BOILER RESPECTIVELY.
- ② 4" RIGID METAL DRYER VENT, WITH VENT HOOD
- ③ 4" TOILET EXHAUST (<20FT)
- ④ 6" TOILET EXHAUST (<=100CFM, NO LIMIT)
- ⑤ 6" KITCHEN EXHAUST
- ⑥ SEIHO SFX SXL 10 COORDINATE COLOR WITH GC/ARCH
- ⑦ PROVIDE ACCESS HATCH/SERVICE CLEARANCE

KE, TE, OR PVC/CAI (PROVIDE CONCENTRIC VENT), TERMINATE THRU WALL PROVIDE WALL CAP & BIRD SCREEN.

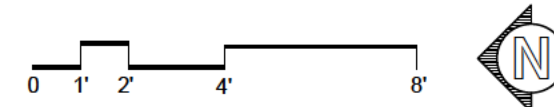
FOR ENVIRONMENTAL AIR DUCT EXHAUST: 3 FEET FROM THE PROPERTY LINE; 3 FEET FROM OPENINGS INTO THE BUILDING

MAINTAIN 12" MIN CLEAR ABOVE HEIGHT OF HIGHEST ANTICIPATED SNOW LEVEL OR GRADE WHICHEVER IS GREATER.



1 BASEMENT PLAN

SCALE: 1'-0" = 1/4"

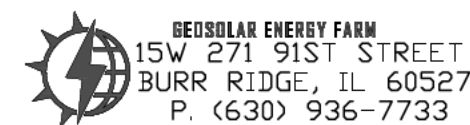


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CONSULTANTS



PROJECT NAME:  
**6136 W. ROOSEVELT RD**

PROJECT ADDRESS:  
**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

PROJECT INFO

PROJECT NO.  
25 020  
PROJECT TEAM:  
JK  
BB  
GV

ISSUE

12.30.25 - ISSUED FOR PERMIT

CERTIFICATION



SHEET TITLE

BASEMENT FLOOR PLAN

SHEET #

**M1.20**

EXISTING MECHANICAL NOTES:

- 1 EXISTING TO BE REMOVED AND CAPPED
- 2 EXISTING TO BE RELOCATED, EXTEND ALL EXISTING, PROVIDE NEW CONNECTION (NOT LIMITED TO DUCTS, ELECTRICAL, GAS)
- 3 PROVIDE NEW CONNECTION TO EXISTING
- 4 EXISTING TO REMAIN
- NEW CONNECTION
- EXISTING TO BE REMOVED

PROVIDE SA AND RA DIFFUSERS TO MATCH EXISTING

TEST, CHECK AND OPERATE ALL EXISTING EQUIPMENT TO REMAIN, AS LISTED BELOW AND NOT LIMITED TO:

1. FURNACE AND CONDENSING UNIT
2. TOILET EXHAUST FANS

GENERAL HVAC DEMO NOTES:

1. REFER TO GENERAL TRADES DEMOLITION DRAWINGS, REMOVE OR RELOCATE ALL M & E FEATURES AS NECESSARY (WHETHER SPECIFICALLY SHOWN OR NOT)
2. INFORMATION SHOWN HERE REFLECTS EXISTING RECORDS & RECENT ON-SITE OBSERVATIONS. THE DEMOLITION WORK SHOWN IS INTENDED TO CONVEY THE GENERAL NATURE & SCOPE OF THE WORK REQUIRED. THE CONTRACTOR SHALL PERFORM ALL DEMOLITION WORK NECESSARY PROPERLY COMPLETE THE NEW WORK SHOWN ELSEWHERE.
3. THE DEMOLITION DRAWINGS ARE INTENDED TO SHOW THE GENERAL EXTENT OF THE MECHANICAL AND ELECTRICAL WORK REQUIRED FOR THIS PROJECT. IT IS INTENDED THAT ALL MECHANICAL AND ELECTRICAL DEMOLITION THAT IS REQUIRED TO PROVIDE THE COMPLETION OF THE NEW SYSTEMS BE PERFORMED AS A PART OF THE BASE BID FOR THE PROJECT.
4. REMOVE ALL EXISTING PIPING, DUCTWORK, WIRING, ETC. THAT IS NOT REQUIRED TO SUPPORT THE PROPER OPERATION OF THE NE SYSTEMS & EXISTING SYSTEMS TO REMAIN.
5. PATCH AND REPAIR ALL EXISTING SURFACES TO REMAIN THAT MAY BE DAMAGED BY THE PERFORMANCE OF THE DEMOLITION WORK.
6. PROTECT PIPING, DUCTWORK, CONDUIT, ETC., FROM ENTRANCE OF FOREIGN MATERIALS.
7. TEST AND BALANCE ALL AIR SYSTEMS. PROVIDE REPORT TO ENGINEER FOR REVIEW. ALL WORK MUST ACCOMMODATE OCCUPIED OFFICE SPACE BEING SERVED FROM FURNACE'S. DISCUSS HOURS OF UPGRADE WORK WITH OWNER PRIOR TO BID.

\*NOT ALL EXISTING TO BE REMOVED DUCTWORK, DIFFUSERS, PIPING, ETC. NOT SHOWN CONTRACTOR TO VIF

EXISTING WORK SHOWN:  
THE SCOPE BASED ON AN ASSUMPTION AND CONTRACTOR TO NOTIFY THE ARCHITECT/ENGINEER/OWNER (ONE OR SOME COMBINATION OF THESE) IF CONTRACTOR DISCOVERS SOMETHING DIFFERENT FROM THE ASSUMPTIONS.

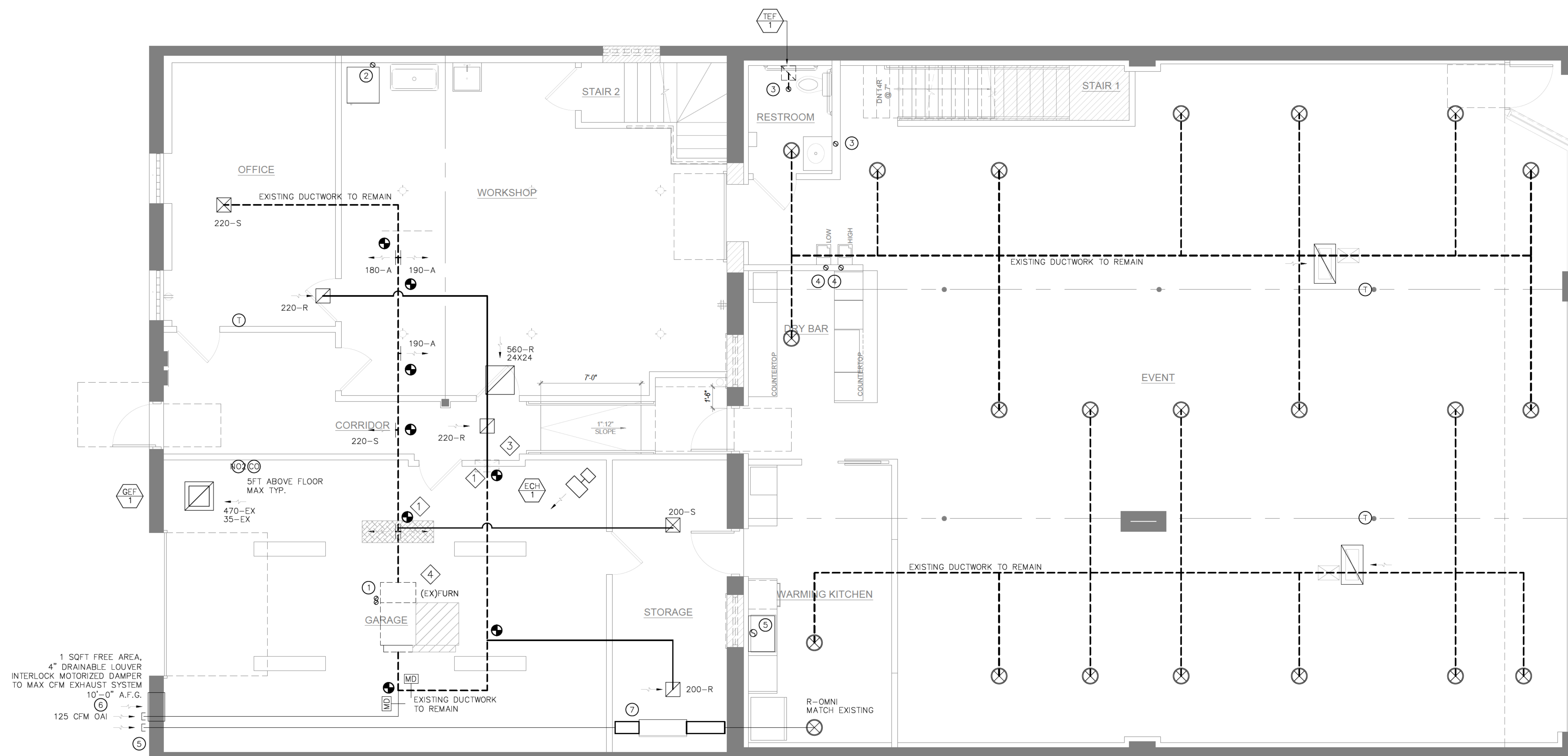
MECHANICAL NOTES:

- 1 125 CFM OAI
- 2 3" PVC EX/CAI FROM FURNACE & OR BOILER RESPECTIVELY.
- 3 4" RIGID METAL DRYER VENT, WITH VENT HOOD
- 4 4" TOILET EXHAUST (<20FT)
- 5 6" TOILET EXHAUST (<=100CFM, NO LIMIT)
- 6 6" KITCHEN EXHAUST
- 7 SEIHO SFX SXL 10 COORDINATE COLOR WITH GC/ARCH
- 8 PROVIDE ACCESS HATCH/SERVICE CLEARANCE

KE, TE, OR PVC/CAI (PROVIDE CONCENTRIC VENT), TERMINATE THRU WALL PROVIDE WALL CAP & BIRD SCREEN.

FOR ENVIRONMENTAL AIR DUCT EXHAUST: 3 FEET FROM THE PROPERTY LINE; 3 FEET FROM OPENINGS INTO THE BUILDING

MAINTAIN 12" MIN CLEAR ABOVE HEIGHT OF HIGHEST ANTICIPATED SNOW LEVEL OR GRADE WHICHEVER IS GREATER.



**GARAGE NOTES:**  
GEF-MAX OPERATE FOR FULL ON 470CFM OPERATION @ PRESENCE OF CO/NO2 GASSES (25PPM).  
GEF-MIN 35CFM PROVIDES CONTINUOUS STANDBY OPERATION.  
SENSOR MUST BE UL2075, 49FT RADIUS

**1 FIRST FLOOR PLAN**  
SCALE: 1'-0" = 1/4"  
0 1 2 4 8'

TAG	MAJ &
F-1	CARRIE
F-2	CARRIE

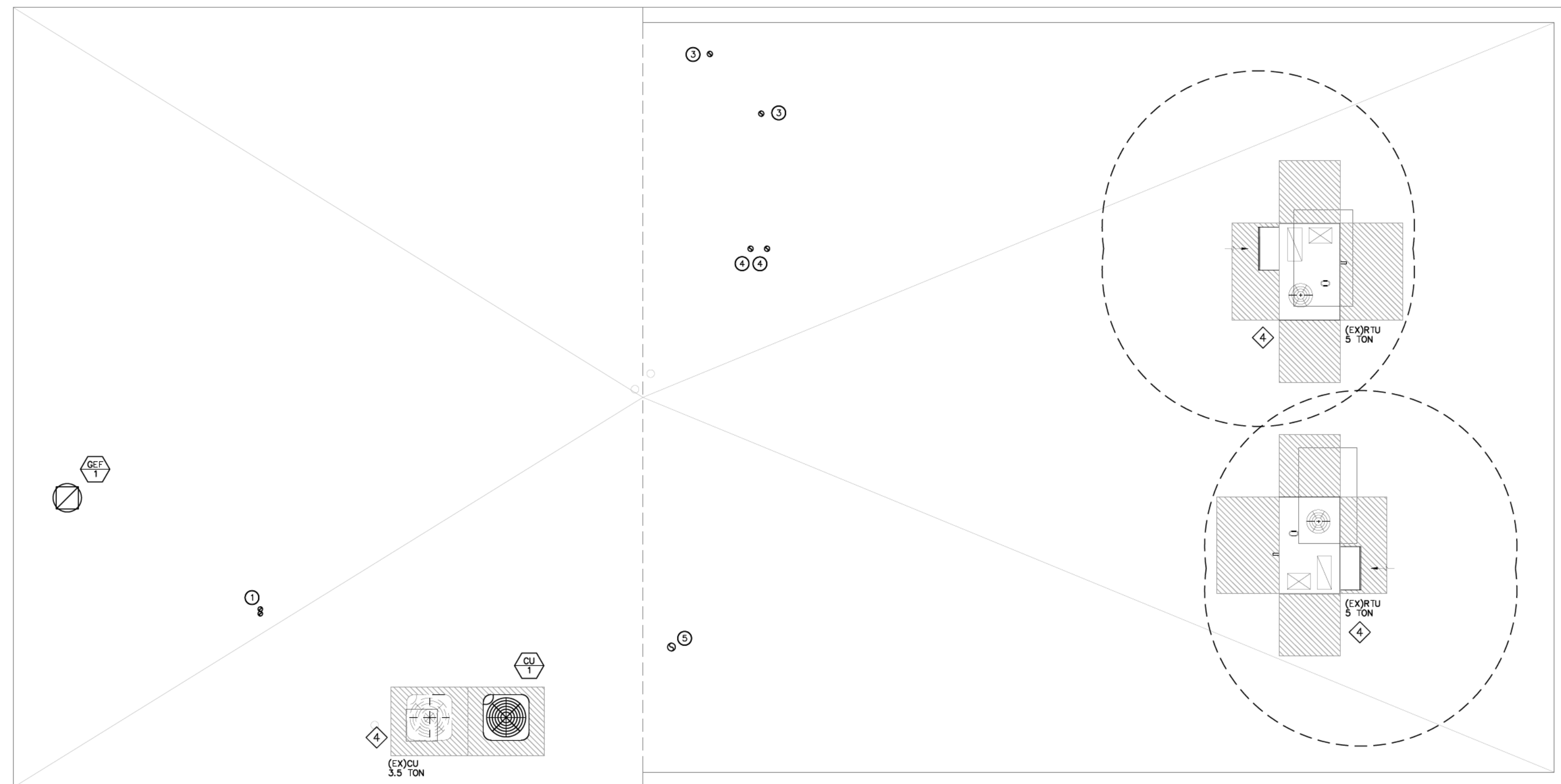
NOTES: HUMB  
BYPASS), DRA

TAG	UNIT
CU-1.0	
CU-1.1	

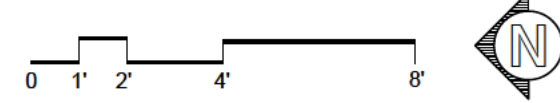
NOTES: COMPI

MARK	DES
CU-1.0	
CU-1.1	

REFRIGERATION  
1.) INSTALL PR  
2.) REMOVE D  
3.) REFRIGERAN  
4.) ALL CONNE  
5.) INSULATE /



**1 ROOF PLAN**  
SCALE: 1'-0" = 1/4"



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PROJECT INFO

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25 020  
  
PROJECT TEAM:  
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DIB  
GV

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SHEET TITLE

ROOF PLAN

SHEET #

**M1.22**

SYMBOL	TYPE	MODEL	FRAME	DAMPER	FINISH	REMARKS
S	SUPPLY	TITUS OMNI	SURF MTD	OBD	BWE	12X12 MODULE, NC<18
R	RETURN	TITUS PAR	SURF MTD	OBD	BWE	12X12 MODULE UNLESS OTHERWISE NOTED
A	SUPPLY	TITUS CT480	SURF MTD	OBD	BWE	12X5 MODULE, NC<18
B/C	SA/RA	TITUS CT480	SURF MTD	OBD	BWE	18X3.5 MODULE, 100CFM/FT

REFER TO DRAWINGS FOR:  
 1. DUCT SIZE OR NECK SIZE.  
 2. FACE SIZE - i.e.: 8"(24x24).  
 3. PATTERN (3-WAY, etc.) IF APPLICABLE.  
 4. CFM  
 5. SYMBOL

A EXT AIR EXTRACTOR  
 ALB AIR LIGHT BOOT, PLENUM AND VOLUME DAMPER  
 ASR ANTI-SMUDGE RING  
 AVD AUTOMATIC VOLUME DAMPER  
 BWE BAKED WHITE ENAMEL  
 EQE EQUALIZING GRID  
 FR-1 WITH 1-HOUR DAMPER  
 MSD MULTI SHUTTER DAMPER  
 OBD OPPOSED BLADE DAMPER  
 PC PRIME COAT

REFER TO ROOM FINISH  
 SCHEDULE AND REFLECTED  
 CEILING PLAN FOR PROPER  
 COORDINATING OF DIFFUSERS,  
 GRILLES, AND REGISTERS.

CFM RANGE	NECK SIZE		TOTAL PRESSURE	REMARKS
	SQUARE	ROUND		
50-100	6" x 6"	6"ø	0.04	①
100-200	9" x 9"	8"ø	0.04	①
200-300	10" x 10"	10"ø	0.04	①
300-450	12" x 12"	12"ø	0.04	①
500-750	15" x 15"	14"ø	0.04	①
500-1000	18" x 18"	16"ø	0.04	①

① DIFFUSER SHALL BE LAY-IN CEILING TYPE. COORDINATE WITH DIFFUSER SCHEDULE.

CFM RANGE	NECK SIZE		TOTAL PRESSURE	REMARKS
	SQUARE	ROUND		
<200	8" x 8"	8"ø	0.04	①
200-300	10" x 10"	10"ø	0.04	①
300-450	12" x 12"	12"ø	0.04	①
500-750	15" x 15"	14"ø	0.04	①
500-1000	18" x 18"	16"ø	0.04	①
1000-2000	22" x 22"	-	0.04	①

① DIFFUSER SHALL BE LAY-IN CEILING TYPE. COORDINATE WITH DIFFUSER SCHEDULE.

TAG	DESCRIPTION	SPECIFICATION
MAU-1	MAKEUP AIR SYSTEM	ELECTRO EM-MC05-208-3-08, 4.8KW HTR (13.3 AMPS) . 350 CFM (BASED ON 600 CFM HOOD), TIED TO KITCHEN HOOD OPERATION, 208V, 20 MOCOP, METAL, INTAKE WALL HOOD, MOTORIZED SHUT-OFF DAMPER, WARMFLO CONTROLLER, TIED TO HOOD OPERATION, . INSULATE ALL COMPONENTS, PROVIDE ACCESS HATCH. INSTALL PER MANUFACTURE, PROVIDE OUTLET/INLET SENSORS PROVIDE ACCESS FOR SENSORS.

UNIT No.	UNIT DESCRIPTION	LOCATION	MOTOR				TOTAL KW	FINAL AIR TEMP.	CFM FINAL AIR TEMP.	REMARKS
			HP	RPM	VOLT	PHASE				
ECH-1	MARKEL UH Series	VARIES	9.1	-	480	3	5	-	400	① ② ④ WALL BRACKET

① UNIT MTD. THERMOSTAT. ② UNIT MTD. DISCONNECT SW  
 ③ 4-WIRE SERVICE ④ LOW-VOLTAGE CONTACTOR

MCFS-MIN. CIRCUIT FUSE SIZE  
 FLA-FULL LOAD AMP  
 \*CORD COLOR W/ARCH

UNIT HEATERS SHALL BE INSTALLED IN ACCORDANCE WITH THE LISTING AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUSPENDED TYPE HEATERS SHALL BE SUPPORTED BY ELEMENTS THAT ARE DESIGNED TO ACCOMMODATE THE WEIGHT AND DYNAMIC LOADS. HANGERS AND BRACKETS SHALL BE OF NON-COMBUSTIBLE MATERIAL. IMC 2012 SECTION 920

UNIT No.	MODEL	AREA SERVED	CFM	S.P. IN W.G.	FPM	FAN RPM	DRIVE	MOTOR				REMARKS
								HP	RPM	VOLT	PHASE	
TEF-1	Panasonic FV0511VK1	TOILET RMS	50/80	0.10	-	659	DD	16.1W	1205	120	1	NOTE 1
TEF-2	Panasonic FV30VQ3	Toilet RMS	280	0.1	-	877	DD	67.1W	877	120	1	NOTE 1
KEF-1	BY OWNER	KITCHEN	600	0.1	-	0	DD	4.3A	-	120	1	10"ø, BD,DS
DE-1	ALDES DBF4XLT	Laundry	110	0.6	-	-	DD	0.73A	-	120	1	Note 2
GEF-1	GREENHECK G090VG	GARAGE	35/470	0.2	-	1026	DD	1/6	1026	208	1	Note 3

NOTE 1: WALL SW, ROOF CAP, INSULATED DAMPER & PROVIDE FABRIC FLEX CONNECTION FOR THERMAL BREAK AT EXTERIOR PENETRATION, WIRED TO TIMER  
 NOTE 2: PROVIDE ROOF CAP, ACCESS PANEL FOR LINT TRAP, SECONDARY LINT TRAP, PRESSURE SENSOR SW, FAST CLAMPS

Room No.	Room Name	Floor Area [SF]	Use of Space	Occupant Density, #/1000 SQFT [P2]	Occupant Density, #	OSA, CFM/Person [Rp]	Outdoor Air Rate, CFM/SQFT [Ra]	Exhaust Airflow, CFM/SQFT	Supply Air, [CFM]	Outdoor Air, [CFM]		Exhaust Air, [CFM]		Remarks
										REQD	ACTUAL	REQD	ACTUAL	
	Corridor	123	Corridors	0.00	0	0.00	0.06	0.00	150	7.4	45	0.0	45	FC-1
	Women	103	Toilet rooms - public	0.00	0	0.00	0.00	50/70	100	0.0	30	50/70	30	FC-1
	Men	157	Toilet rooms - public	0.00	0	0.00	0.00	50/70	100	0.0	30	50/70	30	FC-1
	Storage	579	Inactive Storage	0.00	0	0.00	0.00	0.00	450	0.0	135	0.0	135	FC-1
	Warming Kitchen	194	Kitchen (cooking)	20.00	4	7.50	0.12	0.70	200	52.4	60	0.7	60	(2) EX RTU
	Corridor	94	Corridors	0.00	0	0.00	0.06	0.00		5.7	0	0.0	0	(2) FX RTU
	Dry Use	86	Inactive Storage	0.00	0	0.00	0.00	0.00	200	0.0	60	0.0	60	(2) EX RTU
	Restroom	44	Toilet rooms - public	0.00	0	0.00	0.00	50/70	50	0.0	15	50/70	15	(2) EX RTU
	Fabrik	5174	Multifuse assembly	100.00	517	7.50	0.06	0.00	3750	577.9	660	0.0	660	(2) FX RTU
	Corridor	214	Corridors	0.00	0	0.00	0.06	0.00	220	12.8	66	0.0	66	EX FURN
	Office	210	Office spaces	5.00	1	5.00	0.06	0.00	220	17.9	66	0.0	66	EX FURN
	Garage	164	Storage Rooms	0.00	0	0.00	0.12	0.00		23.3	0	0.0	470	GCF-1
	Workroom	558	Storage Rooms	0.00	0	0.00	0.12	0.00	540	67.0	162	0.0	162	FX FURN

Indoor Unit	Equipment Name	Manufacturer	Model Code	Refrigerant	Indoor Unit										Outdoor Unit										Local Controller	Note								
					Airflow				Electricity Characteristic			Noise (H)	Product Weight	Panel	Equipment Name	Model Code	Airflow	Product Weight	Cooling Capacity		Heating Capacity		Electricity Characteristic				Refrigerant Pipe		Efficiency					
					Low	Mid	High	ESP	Power	Phase	Frequency								Rated	Range	Rated	Range	Power	Phase			Frequency	MCA	MOP	Liquid Pipe	Gas Pipe	SEER	EER	HSPF
					(CFM)	(CFM)	(CFM)	(in Aq/ft)	(V)		(Hz)	(dB(A))	(lbs)	Model Code	(CFM)	(lbs)	(Btu/h)	(Btu/h)	(Btu/h)	(Btu/h)	(V)	(Hz)	(A)	(A)			(in)	(in)	(Btu/W-h)	(Btu/W-h)	(Btu/W-h)			
FC-1	Samsung	AC0249WDCI/AA	MPAH	R410A	547.00	635.00	759.00	0.85	208-230	1	60	41	97.00	-	CU-1 (2-coil)	AC0249WDCI/AA	2684.00	158.70	24000	-	27000	-	208-230	1	60	24.10	30.00	1/4"	5/8"	16.9000	9.7000	10.3	MWH-W600LN	SEE NOTES

THE EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. THESE INSTRUCTIONS SHALL BE ON-SITE AND AVAILABLE FOR ALL INSPECTIONS.

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**PERMIT NOTES:**

- EQUIPMENT NOISE LEVEL NOT TO EXCEED 55 DB AT THE LOT LINE.
- ALL EXPANSION VALVES, DEVICES AND CONNECTIONS SHALL BE REMOVED FROM THE AIRSTREAM OF ALL MECHANICAL EQUIPMENT AS PER LOCAL CODES.
- THE MECHANICAL CONTRACTOR SHALL GUARANTEE, AS APPLICABLE, THAT THE PLENUM CHAMBER USED FOR RECIRCULATION OF AIR WILL BE OF TIGHT CONSTRUCTION AND THAT ALL SOURCES OF AIR CONTAMINANTS FROM TRAPS, SOIL STACKS, DOWN SPOUTS, VENTS, EXHAUST DISCHARGES AND OTHER SOURCES WILL BE ENCLOSED SO THAT NO CONTAMINATED AIR WILL BE RECIRCULATED.
- THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL A SAFETY RELIEF VALVE DESIGNED TO RELIEVE AND/OR PREVENT THE BUILDUP OF EXCESSIVE REFRIGERANT PRESSURE WITHIN THE DIRECT EXPANSION SYSTEMS. THE PRESSURE RELIEF DEVICE SHALL BE SET AT 400 PSI AND SHALL BE INSTALLED ON THE HIGH PRESSURE SIDE AT THE DISCHARGE OF THE COMPRESSOR AND UPSTREAM OF THE COMPRESSOR SHUTOFF (STOP) VALVE.
- ALL FRESH AIR INTAKE OPENINGS SHALL BE A MINIMUM OF 15'-0" (CHICAGO) 10'-0" (OUTSIDE CHICAGO) AWAY FROM ANY EXHAUST OR POINT OF CONTAMINATE DISCHARGE.
- ALL DUCTWORK SHALL BE IN ACCORDANCE WITH "SMACNA" LOW VELOCITY DUCT MANUAL AND "ASHRAE" RECOMMENDATIONS.
- THE EQUIPMENT IN THE VENTILATING AND HEATING SYSTEM SHALL BE SUFFICIENT TO MAINTAIN 72 DEGREES F WITHIN THE AREA SERVED AT ALL TIMES WHEN 33-1/3 PERCENT OF CODE REQUIRED AIR IS SUPPLIED FROM OUTDOORS AT -10 DEGREES F.
- VOLUME DAMPERS OF LOCKING TYPE SHALL BE PLACED IN EACH FORCED WARM AIR RUN.

**VENTILATION NOTES:**

- CLEARANCES FOR FORCED AIR FURNACES MUST CONFORM TO MANUFACTURERS REQUIREMENTS (OR SHOW CLEARANCES ON THE DRAWINGS).
- ALL DUCTWORK MUST BE GALVANIZED STEEL OR STAINLESS STEEL., INTAKE MUST BE INSULATED.
- SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS ARE SHOWN ON ELECTRICAL DRAWING(S).
- IF THE PROJECT INCLUDES A PLENUM CEILING OR FLOOR: THE CONTRACTOR SHALL GUARANTEE THAT THE PLENUM CHAMBER USED FOR RECIRCULATION OF AIR WILL BE OF TIGHT CONSTRUCTION AND THAT ALL SOURCES OF AIR CONTAMINATION FROM TRAPS, SOIL STACKS, DOWNSPOUTS, VENTS AND ALL OTHER SOURCES OF CONTAMINATION WILL BE ENCLOSE SUCH THAT NO CONTAMINATED AIR WILL BE RECIRCULATED.

**GENERAL COORDINATION NOTES:**

- EACH TRADE CONTRACTOR SHALL VISIT CONSTRUCTION SITE PRIOR TO BIDDING, EXAMINE SCOPE AND CONDITIONS OF OTHER CONTRACT WORK, EXAMINE EXISTING CONDITIONS AND ALL INTERFERENCES AND REQUIRED COORDINATION IN ORDER TO INCLUDE EFFECT OF SAID CONDITIONS IN THEIR BID. BID DRAWINGS ARE DIAGRAMMATIC AND DO NOT INDICATE ALL REQUIRED RELOCATIONS, OFFSETS, CHANGE IN ASPECT RATIOS, OR ROUTING CHANGES REQUIRED TO INTEGRATE WORK WITH ALL OTHER CONDITIONS OR TRADES. WORK INSTALLED BEFORE COORDINATING SO AS TO CAUSE INTERFERENCES WITH OTHER TRADES SHALL BE REMOVED AND REWORKED WITHOUT COST TO OWNER. COST OF PROVIDING SUCH RELOCATIONS, OFFSETS, SIZE, CHANGES, REROUTING, ETC. SHALL BE INCLUDED IN BID. CODE CONFORMING SCALED (1/4") COORDINATED DRAWINGS SHALL BE PREPARED BY EACH TRADE TO FACILITATE AND VERIFY FIT AND CONGRUENCE OF THEIR INSTALLATION WITH OTHER TRADES.
- WHERE ADDITIONAL DETAILS, DIAGRAMS, EQUIPMENT DATA, AND ISOMETRICS ARE REQUIRED BY BUILDING DEPARTMENT OR CODE AUTHORITIES FOR PERMIT OR APPROVAL, CONTRACTOR SHALL PROVIDE SAME AT NO ADDITIONAL COST.
- BUILDING PLANS SHOWN ARE COMPILED FROM SOURCES BELIEVED TO BE ACCURATE. HOWEVER, THE INFORMATION SHOWN ON THESE PLANS IS SCHEMATIC AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROPER DIMENSIONS, SIZES, SYSTEM VOLTAGES, QUANTITIES AND EXTENT OF WORK.
- THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, STRUCTURAL, PLUMBING, FIRE PROTECTION, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR COORDINATION AND EXTENT OF THE WORK OF THE VARIOUS TRADES AND IMPACT ON THEIR WORK.
- WITH THE APPROVAL OF THE ARCHITECT AND WITHOUT ADDITIONAL COST TO THE OWNER, MAKE MODIFICATIONS IN THE WORK, INCLUDING REROUTING AS REQUIRED BY INTERFERENCE WITH STRUCTURAL, GENERAL AND WORK OF OTHER TRADES FOR PROPER EXECUTION OF THE WORK.
- REFER TO THE ARCHITECTURAL DRAWINGS, FIELD CONDITIONS AND DETAILS FOR EXACT LOCATION OF PARTITIONS.
- CUTTING AND PATCHING FOR THEIR WORK SHALL BE PERFORMED BY EACH TRADE CONTRACTOR UNLESS NOTED OTHERWISE.

**GENERAL MECHANICAL NOTES:**

- ALL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH BUILDING STANDARDS AND ALL APPLICABLE CODES.
- MEDIUM/LOW PRESSURE DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST SMACNA STANDARDS.
- PROVIDE MANUAL DAMPER ON ALL LOW PRESSURE SUPPLY BRANCH TAKE-OFF OF DUCTWORK.
- ALL DUCT SIZES SHOWN SHALL BE CLEAR INSIDE DIMENSIONS.
- DIFFUSERS, REGISTERS ARE AS SCHEDULED IN THE DRAWING. CONTRACTOR TO VERIFY AND COORDINATE WITH ARCHITECT TYPE OF CEILING TO DETERMINE FRAME TYPE.
- BLANK-OFF WITH BLACK PAINTED PANEL WHERE SHOWN. DO NOT PAINT EXPOSED DUCTS OR REGISTERS.
- PROVIDE UL APPROVED FIRE DAMPERS. PROVIDE UL APPROVED FIRE DAMPERS IN ALL DUCT PENETRATIONS THRU FIRERATED ASSEMBLIES WHETHER INDICATED OR NOT.
- FLEXIBLE DUCTWORK: NOT TO BE USED
- PROVIDE LINING ON ALL SUPPLY AND RETURN AIR DUCTWORK AT A MIN. OF 15'-0" FROM THE HEAT PUMPS/FURNACES.
- INSULATE ALL DUCTWORK LOCATED IN UNCONDITIONED SPACES. PER R403.3 INSULATE HVAC DUCTWORK AS FOLLOWS:
  - UNLESS INDICATED OTHERWISE, NEW HVAC SUPPLY AND RETURN AIR DUCTWORK SHALL BE EXTERNALLY INSULATED.
  - INSULATE COLD ROOM SUPPLY AND EXHAUST DUCTS.
  - IF DUCTS ARE INTERNALLY INSULATED, THEY ARE NOT EXTERNALLY INSULATED UNLESS SPECIFICALLY DIRECTED.
  - TRANSFER AND EXHAUST DUCTS ARE INTERNALLY INSULATED ONLY IF SPECIFICALLY DIRECTED.
  - INSTALL AN INSULATION JACKET ON EXTERNALLY-INSULATED HVAC DUCTWORK LOCATED OUTDOORS; AND INDOORS EXCEPT IN MECHANICAL ROOMS AND ABOVE CEILINGS.
  - INSULATE OUTSIDE AIR INTAKE DUCTS IF LOCATED IN NON-MECHANICAL ROOM INDOORS SPACE.
- ALL LONGITUDINAL AND TRANSVERSE JOINTS, SEAMS AND CONNECTIONS IN METALLIC AND NONMETALLIC DUCTS SHALL BE CONSTRUCTED AS SPECIFIED IN SMACNA HVAC DUCT CONSTRUCTION STANDARDS--METAL AND FLEXIBLE AND NAIMA FIBROUS GLASS DUCT CONSTRUCTION STANDARDS. 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, LIQUID SEALANTS OR TAPES. CLOSURE SYSTEMS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED "181A-P" FOR PRESSURE-SENSITIVE TAPE, "181 A-M" FOR MASTIC OR "181 A-H" FOR HEAT-SENSITIVE TAPE. CLOSURE SYSTEMS USED TO SEAL FLEXIBLE AIR DUCTS AND FLEXIBLE AIR CONNECTORS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED "181B-FX" FOR PRESSURE-SENSITIVE TAPE OR "181B-M" FOR MASTIC. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. MECHANICAL FASTENERS FOR USE WITH FLEXIBLE NONMETALLIC AIR DUCTS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED "181B-C." CLOSURE SYSTEMS USED TO SEAL METAL DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. UNLISTED DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY DUCT.
 

EXCEPTION: CONTINUOUSLY WELDED AND LOCKING-TYPE LONGITUDINAL JOINTS AND SEAMS IN DUCTS OPERATING AT STATIC PRESSURES LESS THAN 2 INCHES OF WATER COLUMN (500 PA) PRESSURE CLASSIFICATION SHALL NOT REQUIRE ADDITIONAL CLOSURE SYSTEMS.
- DUCTS SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED 10 FEET AND SHALL BE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS--METAL AND FLEXIBLE. FLEXIBLE AND OTHER FACTORY-MADE DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- ALL EQUIPMENT AND APPLIANCES, INCLUDING THE AIR CONDITIONER, WATER HEATER AND FURNACE, SHALL BE INSTALLED IN ACCORDANCE WITH THEIR LISTINGS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. A COPY OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS MUST BE PROVIDED ON SITE AT THE TIME OF INSPECTION.
- INSULATE ALL PIPING PER TABLE IECC R403.4 MIN. R-3
- SEAL ALL PER IECC R403.3.2 DUCT JOINTS, TAKEOFFS, CONNECTIONS AND REGISTERS E.T.C. PROVIDE DUCT TESTING PER IECC R403.3.3 AND PROVIDE WRITTEN REPORT TO CODE OFFICIAL.
- PROVIDE DRAIN PAN FOR ALL UNITS THAT MAY CAUSE DAMAGE TO BLDG COMPONENTS AS A RESULT OF OVERFLOW FROM CONDENSATE REMOVAL (COOLING COIL OR FUEL BURNING EQUIP.). EXCEPTION IF THE APPLIANCE AUTOMATICALLY SHUT DOWN IN EVENT OF STOPPAGE IN CONDENSATE DRAINAGE SYSTEM.
- CONTRACTOR IS TO PROVIDE A FINAL CERTIFIED BLOWER DOOR TEST AND AIR DUCT TEST REPORT PRIOR TO OR AT FINAL INSPECTION TO CODE OFFICIAL. IECC R402.4

**GAS MONITORING AND CONTROL SYSTEM**

MCC2 SERIES CONTROL PANEL & AT-1130/LC-1112 GAS TRANSMITTERS

**PART 1 - GENERAL**

1.1 SCOPE: WORK UNDER THIS SECTION OF THE SPECIFICATIONS SHALL INCLUDE THE FURNISHING AND INSTALLATION OF A COMPLETE GAS MONITORING AND CONTROL SYSTEM INCLUDING ALL RELATED ACCESSORIES.

1.2 SUBMITTALS: FURNISH SUBMITTAL DATA FOR THE FOLLOWING MATERIALS AND EQUIPMENT

- GAS MONITORING AND CONTROL SYSTEM.
- ALL RELATED DEVICES.

**PART 2 - PRODUCT SPECIFICATIONS**

2.1 CONTROL PANEL

- THE CONTROL PANEL SHALL PROVIDE CONTINUOUS MONITORING OF THE DESIGNATED GAS LEVELS IN THE ASSIGNED AREA AND CONTROL THE VENTILATION SYSTEM VIA DIGITAL OUTPUTS IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
- THE CONTROL PANEL SHALL HAVE THE ABILITY TO INTERFACE VIA ANALOG OR DIGITAL OUTPUTS TO ANY COMPATIBLE ELECTRONIC ANALOG CONTROL, DDC/PLC CONTROL OR AUTOMATION SYSTEM. THE CONTROL PANEL SHALL HAVE THE CAPABILITY TO ACCEPT ANY COMBINATION OF 4-20 MA TRANSMITTERS PROVIDED BY INTEC CONTROLS (A RELEVANT SOLUTIONS BRAND).
- THE CONTROL PANEL SHALL ACCEPT UP TO 12 ANALOG INPUTS WITH FOUR (4) DIGITAL INPUTS. EACH ANALOG INPUT CAN HAVE FIVE (5) TRIP/SET-POINTS.
- THERE SHALL BE FIVE (5) RELAY OUTPUTS FOR EVERY FOUR (4) ANALOG INPUTS AND TWO (2) INDEPENDENT 4-20 MA OUTPUTS AVAILABLE. THE OUTPUTS SHALL BE PROGRAMMABLE IN THE FIELD. EACH OF THE SENSING POINTS IS READILY ADDRESSABLE TO EITHER OF THE (2) ANALOG OUTPUTS BY SELECTING THE MINIMUM, MAXIMUM, OR AVERAGE VALUE.
- THE ALARM SHALL BE ACKNOWLEDGED BY AN EXTERNAL MANUAL RESET SWITCH VIA THE DIGITAL INPUT OR THROUGH THE CONTROL PANEL MENU.
- THE CONTROL PANEL SHALL HAVE STATUS INDICATOR LED'S LOCATED ON THE FRONT; RED = FAIL, YELLOW = ALARM.
- THE CONTROL PANEL SHALL INCLUDE A TWO LINE, BACKLIT LCD DISPLAY OF 16 CHARACTERS, AT 1 DIGIT RESOLUTION.
- THE CONTROLLER SHALL BE NRTL PERFORMANCE TESTED AND CERTIFIED TO ANSI/UL 2017.
- THE CONTRACTOR SHALL SUPPLY THE POLYGARD® SERIES MCC2-12-1500US ANALOG CONTROLLER, BY INTEC CONTROLS (A RELEVANT SOLUTIONS BRAND); PHONE (858) 761-9319; FAX (858) 578-4633.

2.2 CARBON MONOXIDE (CO) SENSOR/TRANSMITTER

- THE CARBON MONOXIDE SENSOR/TRANSMITTER SHALL PROVIDE MONITORING OF THE CARBON MONOXIDE LEVELS IN THE PARKING GARAGE AND CONTROL THE VENTILATION SYSTEM VIA THE CONTROL PANEL IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
- THE SENSORS SHALL BE ELECTROCHEMICAL TYPE. THE SENSOR/TRANSMITTER SHALL HAVE PLUG-IN TECHNOLOGY FOR EASE OF TROUBLESHOOTING AND REPLACEMENT OF BOTH THE ELEMENT AND THE PRINTED CIRCUIT BOARD. SOLID-STATE SENSING DEVICES SHALL NOT BE ACCEPTABLE.
 

THE SENSOR RANGE SHALL BE 0-250 PPM CARBON MONOXIDE. A MICROPROCESSOR-BASED TRANSMITTER SHALL GENERATE A PROPORTIONAL 4-20 MA OUTPUT SIGNAL. THE WIRING BETWEEN THE TRANSMITTER AND THE CONTROL PANEL SHALL BE A 2-WIRE, TWISTED AND SHIELDED, 4-20MA, 17-28 VDC CONFIGURATION. EACH SENSOR/TRANSMITTER SHALL COVER BETWEEN 5,000 AND 10,000 SQUARE FEET OF THE GARAGE FLOOR AND PLACEMENT SHALL BE APPLIED STRATEGICALLY AND APPROPRIATELY PER FLOOR PLAN REQUIREMENT.
- THE SENSOR SHALL HAVE STABILITY AND RESOLUTION OF ± 3 PPM OF READING, REPEATABILITY OF ± 3% OF READING, AND A RESPONSE TIME OF 50 SECONDS TO A 90% STEP CHANGE. THE LONG-TERM OUTPUT DRIFT SHALL NOT EXCEED MORE THAN 0.4% OF SIGNAL LOSS PER MONTH. THE PERMISSIBLE AMBIENT WORKING TEMPERATURE SHALL BE 14F TO 122F (-10C TO 50C) AND PERMISSIBLE AMBIENT HUMIDITY SHALL BE 15 TO 95% RH, NON-CONDENSING. THE SENSOR SHALL REQUIRE NO ROUTINE MAINTENANCE OTHER THAN PERIODIC CALIBRATION. ITS LIFE EXPECTANCY SHALL BE 5 YEARS OF NORMAL SERVICE. THE MANUFACTURER SHALL PROVIDE A TWO 2-YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP, AND A 12-MONTH WARRANTY ON THE SENSING ELEMENT UNDER NORMAL EXPOSURE.
- THE SENSOR/TRANSMITTER PRINTED CIRCUIT BOARD SHALL HAVE THE CAPABILITY OF ADDING UP TO (2) ALARM RELAYS WITH INDIVIDUAL SETPOINTS FOR LOCAL CONTROL OR STATUS INDICATION.
- THE SENSOR/TRANSMITTER SHALL BE CONTAINED IN A NEMA 4X METAL ENCLOSURE. THE ENCLOSURE FOR THE SENSOR/TRANSMITTER SHALL BE INSTALLED ON WALLS OR COLUMNS APPROXIMATELY 5 FEET ABOVE THE FLOOR.
- THE OUTPUT SIGNAL FROM THE SENSOR/TRANSMITTER SHALL BE A DIRECT INPUT TO THE CONTROL PANEL. ALL SEQUENCES OF FAN AND ALARM CONTROL, INCLUDING TIME DELAY FUNCTIONS TO PREVENT HUNTING OF VENTILATION FANS SHALL BE A PART OF THE CONTROL PANEL.
- IF THE LEVEL OF CARBON MONOXIDE REACHES 25 PPM IN THE AREA OF DETECTION, THE LOW ALARM SHALL ACTIVATE AND THE EXHAUST FANS WILL BE STARTED. IF THE LEVEL OF CO INCREASES TO 100 PPM, THE HIGH ALARM SHALL ACTIVATE.
- THE SENSOR/TRANSMITTER SHALL BE NRTL PERFORMANCE TESTED AND CERTIFIED TO ANSI/UL 2075.
- THE CONTRACTOR SHALL SUPPLY THE POLYGARD® SERIES LC-1112 CO SENSOR/TRANSMITTER, BY INTEC CONTROLS

2.3 NITROGEN DIOXIDE (NO2) SENSOR/TRANSMITTER

- THE NITROGEN DIOXIDE SENSOR/TRANSMITTER SHALL PROVIDE MONITORING OF THE NITROGEN DIOXIDE LEVELS PRESENT IN DIESEL EXHAUST IN THE PARKING GARAGE AND CONTROL THE VENTILATION SYSTEM VIA THE CONTROL PANEL IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
  - THE SENSORS SHALL BE ELECTROCHEMICAL TYPE. THE SENSOR/TRANSMITTER SHALL HAVE PLUG-IN TECHNOLOGY FOR EASE OF TROUBLESHOOTING AND REPLACEMENT OF BOTH THE SENSING ELEMENT AND THE PRINTED CIRCUIT BOARD. SOLID-STATE SENSING DEVICES SHALL NOT BE ACCEPTABLE.
 

THE SENSOR RANGE SHALL BE 0-10 PPM NITROGEN DIOXIDE. A MICRO-PROCESSOR-BASED TRANSMITTER SHALL GENERATE A POLARITY PROTECTED, PROPORTIONAL 4-20 MA OUTPUT SIGNAL. THE WIRING BETWEEN THE TRANSMITTER AND THE CONTROL PANEL SHALL BE A 2-WIRE, TWISTED AND SHIELDED, 4-20MA, 17-28 VDC CONFIGURATION. EACH SENSOR/TRANSMITTER SHALL COVER BETWEEN 4,000 AND 6,000 SQUARE FEET OF THE GARAGE FLOOR AND PLACEMENT SHALL BE APPLIED STRATEGICALLY AND APPROPRIATELY PER FLOOR PLAN REQUIREMENT.
  - THE SENSOR SHALL HAVE AN ACCURACY AND RESOLUTION OF ±0.1 PPM OF READING, REPEATABILITY OF ±2% OF READING, AND A RESPONSE TIME OF LESS THAN 40 SECONDS TO A 90% STEP CHANGE. THE SENSOR DRIFT SHALL NOT EXCEED MORE THAN 2% SIGNAL LOSS PER MONTH. THE PERMISSIBLE AMBIENT WORKING TEMPERATURE SHALL BE 14F TO 104F (-20C TO 40C) AND THE PERMISSIBLE AMBIENT HUMIDITY SHALL BE 15 TO 95% RH, NON-CONDENSING. THE SENSOR SHALL REQUIRE NO ROUTINE MAINTENANCE OTHER THAN PERIODIC CALIBRATION. ITS LIFE EXPECTANCY SHALL BE 2 YEARS OF NORMAL SERVICE. THE MANUFACTURER SHALL PROVIDE A TWO 2-YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP, AND A 12-MONTH WARRANTY ON THE SENSING ELEMENT UNDER NORMAL EXPOSURE.
  - THE SENSOR/TRANSMITTER SHALL BE CONTAINED IN A NEMA 4X ENCLOSURE. THE ENCLOSURE WITH THE SENSOR/TRANSMITTER SHALL BE INSTALLED ON WALLS OR COLUMNS APPROXIMATELY 1.5 FT. ABOVE THE FLOOR.
  - THE SENSOR/TRANSMITTER SHALL HAVE THE CAPABILITY OF ADDING UP TO (2) RELAYS AS A SEPARATE COMPONENT TO THE PRINTED CIRCUIT BOARD OF THE SENSOR.
  - THE OUTPUT SIGNAL FROM THE SENSOR/TRANSMITTER SHALL BE A DIRECT INPUT INTO THE DIGITAL CONTROL BUILDING AUTOMATION SYSTEM. ALL SEQUENCES OF FAN AND ALARM CONTROL, INCLUDING TIME DELAY FUNCTIONS TO PREVENT HUNTING OF VENTILATION FANS SHALL BE A PART OF THE CONTROL PANEL.
  - IF THE LEVEL OF NO2 REACHES 2 PPM, THE LOW ALARM SHALL ACTIVATE. IF THE LEVEL OF NO2 INCREASES TO 5 PPM, THE HIGH ALARM SHALL ACTIVATE. THE CONTRACTOR SHALL SUPPLY THE POLYGARD® SERIES AT-1130 NO2 SENSOR/TRANSMITTER, BY INTEC CONTROLS
- 2.4 SUPPLIER: THE CONTRACTOR SHALL SUPPLY THE MCC-SERIES CONTROL PANEL AND ALL ASSOCIATED GAS TRANSMITTERS, BY INTEC CONTROLS
- 2.5 WARRANTY: THE MANUFACTURER SHALL PROVIDE A TWO 2-YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP, AND A 12-MONTH WARRANTY ON THE SENSING ELEMENT UNDER NORMAL EXPOSURE.

**PART 3 - EXECUTION**

3.1 INSPECTION: GENERAL: EXAMINE AREAS AND CONDITIONS UNDER WHICH GAS MONITORING AND CONTROL SYSTEM SHALL BE INSTALLED. RELATED ITEMS SHALL BE EXAMINED AS WELL.

3.2 CONTROL SEQUENCE: THE CONTROLLER SHALL OPERATE ACCORDING TO THE SPECIFICATIONS RECOMMENDED BY THE MANUFACTURER. THE OPERATION SHALL BE AS FOLLOWS:

- THE CONTROLLER SHALL BE CALIBRATED TO THE DESIRED SET-POINTS BEFORE OPERATION.
  - THE CONTROLLER SHALL CONTINUOUSLY DETECT THE SURROUNDING AIR FOR ANY TRACES OF THE GAS DETECTED.
  - WHEN THE FIRST SET-POINT IS REACHED, THE SENSOR SHALL ACTIVATE THE LOW ALARM ON THE CONTROLLER AND THE CORRESPONDING DEVICES, SUCH AS THE EXHAUST FANS, DAMPERS, ETC.
  - IF THE GAS LEVEL CONTINUES TO INCREASE TO THE SECOND SET-POINT, THE HIGH ALARM SHALL ACTIVATE WITH THE CORRESPONDING DEVICES, SUCH AS THE AUDIO/VISUAL ALARM, ETC.
  - THE SENSOR SHALL CONTINUE TO TRACE THE SPECIFIED GAS AND WILL NOT DISABLE THE ALARM UNTIL THE GAS LEVEL IS DROPPED A SIGNIFICANT PERCENTAGE BELOW THE ALARM SET-POINTS.
- 3.3 OPERATION AND MAINTENANCE MANUALS: THE OPERATION AND MAINTENANCE MANUALS SHALL CONTAIN ALL INFORMATION NECESSARY FOR THE OPERATION, MAINTENANCE, REPLACEMENT, INSTALLATION, AND PARTS PROCUREMENT FOR THE ENTIRE GAS DETECTION SYSTEM. THIS DOCUMENTATION SHALL INCLUDE SPECIFIC PART NUMBERS.
- 3.4 AS-BUILT DOCUMENTATION: FOLLOWING PROJECT COMPLETION AND TESTING, THE CONTRACTOR WILL SUBMIT AS-BUILT DRAWINGS REFLECTING THE EXACT INSTALLATION OF THE SYSTEM.

3.5 CALIBRATION: CALIBRATION SHALL NOT BE NECESSARY TO VERIFY SYSTEM OPERATION. THE USER SHALL VERIFY SIGNAL TRANSMISSION FROM THE SENSOR TO THE CONTROL PANEL BY APPLYING THE APPROPRIATE TEST GAS TO THE CORRESPONDING SENSOR. THE CALIBRATION KIT CAN BE USED FOR SYSTEM VERIFICATION OR SENSOR CALIBRATION WHEN REQUIRED. ONE CALIBRATION KIT SHALL BE PROVIDED BY THE CONTRACTOR SUPPLIED BY INTEC CONTROLS

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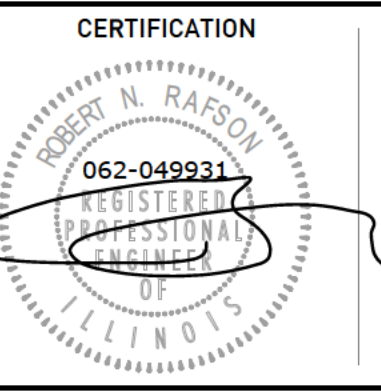
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**PROJECT NAME:**  
**6136 W. ROOSEVELT RD**

**PROJECT ADDRESS:**  
**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

PROJECT INFO	ISSUE
PROJECT NO. 25 020	12.30.25 - ISSUED FOR PERMIT
PROJECT TEAM: JK BB GV	



**SHEET TITLE**  
**MECHANICAL SCHEDULES, NOTES AND DETAILS**

**SHEET #**  
**M2.01**

PERMIT NOTES:

- EQUIPMENT NOISE LEVEL NOT TO EXCEED 55 DB AT THE LOT LINE.
- ALL EXPANSION VALVES, DEVICES AND CONNECTIONS SHALL BE REMOVED FROM THE AIRSTREAM OF ALL MECHANICAL EQUIPMENT AS PER LOCAL CODES.
- THE MECHANICAL CONTRACTOR SHALL GUARANTEE, AS APPLICABLE, THAT THE PLENUM CHAMBER USED FOR RECIRCULATION OF AIR WILL BE OF TIGHT CONSTRUCTION AND THAT ALL SOURCES OF AIR CONTAMINANTS FROM TRAPS, SOIL STACKS, DOWN SPOUTS, VENTS, EXHAUST DISCHARGES AND OTHER SOURCES WILL BE ENCLOSED SO THAT NO CONTAMINATED AIR WILL BE RECIRCULATED.
- THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL A SAFETY RELIEF VALVE DESIGNED TO RELIEVE AND/OR PREVENT THE BUILDUP OF EXCESSIVE REFRIGERANT PRESSURE WITHIN THE DIRECT EXPANSION SYSTEMS. THE PRESSURE RELIEF DEVICE SHALL BE SET AT 400 PSI AND SHALL BE INSTALLED ON THE HIGH PRESSURE SIDE AT THE DISCHARGE OF THE COMPRESSOR AND UPSTREAM OF THE COMPRESSOR SHUTOFF (STOP) VALVE.
- ALL FRESH AIR INTAKE OPENINGS SHALL BE A MINIMUM OF 15'-0" (CHICAGO) 10'-0" (OUTSIDE CHICAGO) AWAY FROM ANY EXHAUST OR POINT OF CONTAMINATE DISCHARGE.
- ALL DUCTWORK SHALL BE IN ACCORDANCE WITH "SMACNA" LOW VELOCITY DUCT MANUAL AND "ASHRAE" RECOMMENDATIONS.
- THE EQUIPMENT IN THE VENTILATING AND HEATING SYSTEM SHALL BE SUFFICIENT TO MAINTAIN 72 DEGREES F WITHIN THE AREA SERVED AT ALL TIMES WHEN 33-1/3 PERCENT OF CODE REQUIRED AIR IS SUPPLIED FROM OUTDOORS AT -10 DEGREES F.
- VOLUME DAMPERS OF LOCKING TYPE SHALL BE PLACED IN EACH FORCED WARM AIR RUN.

VENTILATION NOTES:

- CLEARANCES FOR FORCED AIR FURNACES MUST CONFORM TO MANUFACTURERS REQUIREMENTS (OR SHOW CLEARANCES ON THE DRAWINGS).
- ALL DUCTWORK MUST BE GALVANIZED STEEL OR STAINLESS STEEL., INTAKE MUST BE INSULATED.
- SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS ARE SHOWN ON ELECTRICAL DRAWING(S).
- IF THE PROJECT INCLUDES A PLENUM CEILING OR FLOOR: THE CONTRACTOR SHALL GUARANTEE THAT THE PLENUM CHAMBER USED FOR RECIRCULATION OF AIR WILL BE OF TIGHT CONSTRUCTION AND THAT ALL SOURCES OF AIR CONTAMINATION FROM TRAPS, SOIL STACKS, DOWNSPOUTS, VENTS AND ALL OTHER SOURCES OF CONTAMINATION WILL BE ENCLOSE SUCH THAT NO CONTAMINATED AIR WILL BE RECIRCULATED.

GENERAL COORDINATION NOTES:

- EACH TRADE CONTRACTOR SHALL VISIT CONSTRUCTION SITE PRIOR TO BIDDING, EXAMINE SCOPE AND CONDITIONS OF OTHER CONTRACT WORK, EXAMINE EXISTING CONDITIONS AND ALL INTERFERENCES AND REQUIRED COORDINATION IN ORDER TO INCLUDE EFFECT OF SAID CONDITIONS IN THEIR BID. BID DRAWINGS ARE DIAGRAMMATIC AND DO NOT INDICATE ALL REQUIRED RELOCATIONS, OFFSETS, CHANGE IN ASPECT RATIOS, OR ROUTING CHANGES REQUIRED TO INTEGRATE WORK WITH ALL OTHER CONDITIONS OR TRADES. WORK INSTALLED BEFORE COORDINATING SO AS TO CAUSE INTERFERENCES WITH OTHER TRADES SHALL BE REMOVED AND REWORKED WITHOUT COST TO OWNER. COST OF PROVIDING SUCH RELOCATIONS, OFFSETS, SIZE, CHANGES, REROUTING, ETC. SHALL BE INCLUDED IN BID. CODE CONFORMING SCALED (1/4") COORDINATED DRAWINGS SHALL BE PREPARED BY EACH TRADE TO FACILITATE AND VERIFY FIT AND CONGRUENCE OF THEIR INSTALLATION WITH OTHER TRADES.
- WHERE ADDITIONAL DETAILS, DIAGRAMS, EQUIPMENT DATA, AND ISOMETRICS ARE REQUIRED BY BUILDING DEPARTMENT OR CODE AUTHORITIES FOR PERMIT OR APPROVAL, CONTRACTOR SHALL PROVIDE SAME AT NO ADDITIONAL COST.
- BUILDING PLANS SHOWN ARE COMPILED FROM SOURCES BELIEVED TO BE ACCURATE. HOWEVER, THE INFORMATION SHOWN ON THESE PLANS IS SCHEMATIC AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROPER DIMENSIONS, SIZES, SYSTEM VOLTAGES, QUANTITIES AND EXTENT OF WORK.
- THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, STRUCTURAL, PLUMBING, FIRE PROTECTION, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR COORDINATION AND EXTENT OF THE WORK OF THE VARIOUS TRADES AND IMPACT ON THEIR WORK.
- WITH THE APPROVAL OF THE ARCHITECT AND WITHOUT ADDITIONAL COST TO THE OWNER, MAKE MODIFICATIONS IN THE WORK, INCLUDING REROUTING AS REQUIRED BY INTERFERENCE WITH STRUCTURAL, GENERAL AND WORK OF OTHER TRADES FOR PROPER EXECUTION OF THE WORK.
- REFER TO THE ARCHITECTURAL DRAWINGS, FIELD CONDITIONS AND DETAILS FOR EXACT LOCATION OF PARTITIONS.
- CUTTING AND PATCHING FOR THEIR WORK SHALL BE PERFORMED BY EACH TRADE CONTRACTOR UNLESS NOTED OTHERWISE.

GENERAL MECHANICAL NOTES:

- ALL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH BUILDING STANDARDS AND ALL APPLICABLE CODES.
- MEDIUM/LOW PRESSURE DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST SMACNA STANDARDS.
- PROVIDE MANUAL DAMPER ON ALL LOW PRESSURE SUPPLY BRANCH TAKE-OFF OF DUCTWORK.
- ALL DUCT SIZES SHOWN SHALL BE CLEAR INSIDE DIMENSIONS.
- DIFFUSERS, REGISTERS ARE AS SCHEDULED IN THE DRAWING. CONTRACTOR TO VERIFY AND COORDINATE WITH ARCHITECT TYPE OF CEILING TO DETERMINE FRAME TYPE.
- BLANK-OFF WITH BLACK PAINTED PANEL WHERE SHOWN. DO NOT PAINT EXPOSED DUCTS OR REGISTERS.
- PROVIDE UL APPROVED FIRE DAMPERS. PROVIDE UL APPROVED FIRE DAMPERS IN ALL DUCT PENETRATIONS THRU FIRERATED ASSEMBLIES WHETHER INDICATED OR NOT.
- FLEXIBLE DUCTWORK: NOT TO BE USED
- PROVIDE LINING ON ALL SUPPLY AND RETURN AIR DUCTWORK AT A MIN. OF 15'-0" FROM THE HEAT PUMPS/FURNACES.
- INSULATE ALL DUCTWORK LOCATED IN UNCONDITIONED SPACES. PER R403.3 INSULATE HVAC DUCTWORK AS FOLLOWS:
  - UNLESS INDICATED OTHERWISE, NEW HVAC SUPPLY AND RETURN AIR DUCTWORK SHALL BE EXTERNALLY INSULATED.
  - INSULATE COLD ROOM SUPPLY AND EXHAUST DUCTS.
  - IF DUCTS ARE INTERNALLY INSULATED, THEY ARE NOT EXTERNALLY INSULATED UNLESS SPECIFICALLY DIRECTED.
  - TRANSFER AND EXHAUST DUCTS ARE INTERNALLY INSULATED ONLY IF SPECIFICALLY DIRECTED.
  - INSTALL AN INSULATION JACKET ON EXTERNALLY-INSULATED HVAC DUCTWORK LOCATED OUTDOORS; AND INDOORS EXCEPT IN MECHANICAL ROOMS AND ABOVE CEILINGS.
  - INSULATE OUTSIDE AIR INTAKE DUCTS IF LOCATED IN NON-MECHANICAL ROOM INDOORS SPACE.
- ALL LONGITUDINAL AND TRANSVERSE JOINTS, SEAMS AND CONNECTIONS IN METALLIC AND NONMETALLIC DUCTS SHALL BE CONSTRUCTED AS SPECIFIED IN SMACNA HVAC DUCT CONSTRUCTION STANDARDS--METAL AND FLEXIBLE AND NAIMA FIBROUS GLASS DUCT CONSTRUCTION STANDARDS. 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, LIQUID SEALANTS OR TAPES. CLOSURE SYSTEMS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED "181A-P" FOR PRESSURE-SENSITIVE TAPE, "181 A-M" FOR MASTIC OR "181 A-H" FOR HEAT-SENSITIVE TAPE. CLOSURE SYSTEMS USED TO SEAL FLEXIBLE AIR DUCTS AND FLEXIBLE AIR CONNECTORS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED "181B-FX" FOR PRESSURE-SENSITIVE TAPE OR "181B-M" FOR MASTIC. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. MECHANICAL FASTENERS FOR USE WITH FLEXIBLE NONMETALLIC AIR DUCTS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED "181B-C." CLOSURE SYSTEMS USED TO SEAL METAL DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. UNLISTED DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY DUCT.
 

EXCEPTION: CONTINUOUSLY WELDED AND LOCKING-TYPE LONGITUDINAL JOINTS AND SEAMS IN DUCTS OPERATING AT STATIC PRESSURES LESS THAN 2 INCHES OF WATER COLUMN (500 PA) PRESSURE CLASSIFICATION SHALL NOT REQUIRE ADDITIONAL CLOSURE SYSTEMS.
- DUCTS SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED 10 FEET AND SHALL BE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS--METAL AND FLEXIBLE. FLEXIBLE AND OTHER FACTORY-MADE DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- ALL EQUIPMENT AND APPLIANCES, INCLUDING THE AIR CONDITIONER, WATER HEATER AND FURNACE, SHALL BE INSTALLED IN ACCORDANCE WITH THEIR LISTINGS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. A COPY OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS MUST BE PROVIDED ON SITE AT THE TIME OF INSPECTION.
- INSULATE ALL PIPING PER TABLE IECC R403.4 MIN. R-3
- SEAL ALL PER IECC R403.3.2 DUCT JOINTS, TAKEOFFS, CONNECTIONS AND REGISTERS E.T.C. PROVIDE DUCT TESTING PER IECC R403.3.3 AND PROVIDE WRITTEN REPORT TO CODE OFFICIAL.
- PROVIDE DRAIN PAN FOR ALL UNITS THAT MAY CAUSE DAMAGE TO BLDG COMPONENTS AS A RESULT OF OVERFLOW FROM CONDENSATE REMOVAL (COOLING COIL OR FUEL BURNING EQUIP.). EXCEPTION IF THE APPLIANCE AUTOMATICALLY SHUT DOWN IN EVENT OF STOPPAGE IN CONDENSATE DRAINAGE SYSTEM.
- CONTRACTOR IS TO PROVIDE A FINAL CERTIFIED BLOWER DOOR TEST AND AIR DUCT TEST REPORT PRIOR TO OR AT FINAL INSPECTION TO CODE OFFICIAL. IECC R402.4

GAS MONITORING AND CONTROL SYSTEM

MCC2 SERIES CONTROL PANEL & AT-1130/LC-1112 GAS TRANSMITTERS

PART 1 - GENERAL

1.1 SCOPE: WORK UNDER THIS SECTION OF THE SPECIFICATIONS SHALL INCLUDE THE FURNISHING AND INSTALLATION OF A COMPLETE GAS MONITORING AND CONTROL SYSTEM INCLUDING ALL RELATED ACCESSORIES.

1.2 SUBMITTALS: FURNISH SUBMITTAL DATA FOR THE FOLLOWING MATERIALS AND EQUIPMENT

- GAS MONITORING AND CONTROL SYSTEM.
- ALL RELATED DEVICES.

PART 2 - PRODUCT SPECIFICATIONS

2.1 CONTROL PANEL

- THE CONTROL PANEL SHALL PROVIDE CONTINUOUS MONITORING OF THE DESIGNATED GAS LEVELS IN THE ASSIGNED AREA AND CONTROL THE VENTILATION SYSTEM VIA DIGITAL OUTPUTS IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
- THE CONTROL PANEL SHALL HAVE THE ABILITY TO INTERFACE VIA ANALOG OR DIGITAL OUTPUTS TO ANY COMPATIBLE ELECTRONIC ANALOG CONTROL, DDC/PLC CONTROL OR AUTOMATION SYSTEM. THE CONTROL PANEL SHALL HAVE THE CAPABILITY TO ACCEPT ANY COMBINATION OF 4-20 MA TRANSMITTERS PROVIDED BY INTEC CONTROLS (A RELEVANT SOLUTIONS BRAND).
- THE CONTROL PANEL SHALL ACCEPT UP TO 12 ANALOG INPUTS WITH FOUR (4) DIGITAL INPUTS. EACH ANALOG INPUT CAN HAVE FIVE (5) TRIP/SET-POINTS.
- THERE SHALL BE FIVE (5) RELAY OUTPUTS FOR EVERY FOUR (4) ANALOG INPUTS AND TWO (2) INDEPENDENT 4-20 MA OUTPUTS AVAILABLE. THE OUTPUTS SHALL BE PROGRAMMABLE IN THE FIELD. EACH OF THE SENSING POINTS IS READILY ADDRESSABLE TO EITHER OF THE (2) ANALOG OUTPUTS BY SELECTING THE MINIMUM, MAXIMUM, OR AVERAGE VALUE.
- THE ALARM SHALL BE ACKNOWLEDGED BY AN EXTERNAL MANUAL RESET SWITCH VIA THE DIGITAL INPUT OR THROUGH THE CONTROL PANEL MENU.
- THE CONTROL PANEL SHALL HAVE STATUS INDICATOR LED'S LOCATED ON THE FRONT; RED = FAIL, YELLOW = ALARM.
- THE CONTROL PANEL SHALL INCLUDE A TWO LINE, BACKLIT LCD DISPLAY OF 16 CHARACTERS, AT 1 DIGIT RESOLUTION.
- THE CONTROLLER SHALL BE NRTL PERFORMANCE TESTED AND CERTIFIED TO ANSI/UL 2017.
- THE CONTRACTOR SHALL SUPPLY THE POLYGARD® SERIES MCC2-12-1500US ANALOG CONTROLLER, BY INTEC CONTROLS (A RELEVANT SOLUTIONS BRAND); PHONE (858) 761-9319; FAX (858) 578-4633.

2.2 CARBON MONOXIDE (CO) SENSOR/TRANSMITTER

- THE CARBON MONOXIDE SENSOR/TRANSMITTER SHALL PROVIDE MONITORING OF THE CARBON MONOXIDE LEVELS IN THE PARKING GARAGE AND CONTROL THE VENTILATION SYSTEM VIA THE CONTROL PANEL IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
- THE SENSORS SHALL BE ELECTROCHEMICAL TYPE. THE SENSOR/TRANSMITTER SHALL HAVE PLUG-IN TECHNOLOGY FOR EASE OF TROUBLESHOOTING AND REPLACEMENT OF BOTH THE ELEMENT AND THE PRINTED CIRCUIT BOARD. SOLID-STATE SENSING DEVICES SHALL NOT BE ACCEPTABLE.
 

THE SENSOR RANGE SHALL BE 0-250 PPM CARBON MONOXIDE. A MICROPROCESSOR-BASED TRANSMITTER SHALL GENERATE A PROPORTIONAL 4-20 MA OUTPUT SIGNAL. THE WIRING BETWEEN THE TRANSMITTER AND THE CONTROL PANEL SHALL BE A 2-WIRE, TWISTED AND SHIELDED, 4-20MA, 17-28 VDC CONFIGURATION. EACH SENSOR/TRANSMITTER SHALL COVER BETWEEN 5,000 AND 10,000 SQUARE FEET OF THE GARAGE FLOOR AND PLACEMENT SHALL BE APPLIED STRATEGICALLY AND APPROPRIATELY PER FLOOR PLAN REQUIREMENT.
- THE SENSOR SHALL HAVE STABILITY AND RESOLUTION OF ± 3 PPM OF READING, REPEATABILITY OF ± 3% OF READING, AND A RESPONSE TIME OF 50 SECONDS TO A 90% STEP CHANGE. THE LONG-TERM OUTPUT DRIFT SHALL NOT EXCEED MORE THAN 0.4% OF SIGNAL LOSS PER MONTH. THE PERMISSIBLE AMBIENT WORKING TEMPERATURE SHALL BE 14F TO 122F (-10C TO 50C) AND PERMISSIBLE AMBIENT HUMIDITY SHALL BE 15 TO 95% RH, NON-CONDENSING. THE SENSOR SHALL REQUIRE NO ROUTINE MAINTENANCE OTHER THAN PERIODIC CALIBRATION. ITS LIFE EXPECTANCY SHALL BE 5 YEARS OF NORMAL SERVICE. THE MANUFACTURER SHALL PROVIDE A TWO 2-YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP, AND A 12-MONTH WARRANTY ON THE SENSING ELEMENT UNDER NORMAL EXPOSURE.
- THE SENSOR/TRANSMITTER PRINTED CIRCUIT BOARD SHALL HAVE THE CAPABILITY OF ADDING UP TO (2) ALARM RELAYS WITH INDIVIDUAL SETPOINTS FOR LOCAL CONTROL OR STATUS INDICATION.
- THE SENSOR/TRANSMITTER SHALL BE CONTAINED IN A NEMA 4X METAL ENCLOSURE. THE ENCLOSURE FOR THE SENSOR/TRANSMITTER SHALL BE INSTALLED ON WALLS OR COLUMNS APPROXIMATELY 5 FEET ABOVE THE FLOOR.
- THE OUTPUT SIGNAL FROM THE SENSOR/TRANSMITTER SHALL BE A DIRECT INPUT TO THE CONTROL PANEL. ALL SEQUENCES OF FAN AND ALARM CONTROL, INCLUDING TIME DELAY FUNCTIONS TO PREVENT HUNTING OF VENTILATION FANS SHALL BE A PART OF THE CONTROL PANEL.
- IF THE LEVEL OF CARBON MONOXIDE REACHES 25 PPM IN THE AREA OF DETECTION, THE LOW ALARM SHALL ACTIVATE AND THE EXHAUST FANS WILL BE STARTED. IF THE LEVEL OF CO INCREASES TO 100 PPM, THE HIGH ALARM SHALL ACTIVATE.
- THE SENSOR/TRANSMITTER SHALL BE NRTL PERFORMANCE TESTED AND CERTIFIED TO ANSI/UL 2075.
- THE CONTRACTOR SHALL SUPPLY THE POLYGARD® SERIES LC-1112 CO SENSOR/TRANSMITTER, BY INTEC CONTROLS

2.3 NITROGEN DIOXIDE (NO2) SENSOR/TRANSMITTER

- THE NITROGEN DIOXIDE SENSOR/TRANSMITTER SHALL PROVIDE MONITORING OF THE NITROGEN DIOXIDE LEVELS PRESENT IN DIESEL EXHAUST IN THE PARKING GARAGE AND CONTROL THE VENTILATION SYSTEM VIA THE CONTROL PANEL IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
  - THE SENSORS SHALL BE ELECTROCHEMICAL TYPE. THE SENSOR/TRANSMITTER SHALL HAVE PLUG-IN TECHNOLOGY FOR EASE OF TROUBLESHOOTING AND REPLACEMENT OF BOTH THE SENSING ELEMENT AND THE PRINTED CIRCUIT BOARD. SOLID-STATE SENSING DEVICES SHALL NOT BE ACCEPTABLE.
 

THE SENSOR RANGE SHALL BE 0-10 PPM NITROGEN DIOXIDE. A MICRO-PROCESSOR-BASED TRANSMITTER SHALL GENERATE A POLARITY PROTECTED, PROPORTIONAL 4-20 MA OUTPUT SIGNAL. THE WIRING BETWEEN THE TRANSMITTER AND THE CONTROL PANEL SHALL BE A 2-WIRE, TWISTED AND SHIELDED, 4-20MA, 17-28 VDC CONFIGURATION. EACH SENSOR/TRANSMITTER SHALL COVER BETWEEN 4,000 AND 6,000 SQUARE FEET OF THE GARAGE FLOOR AND PLACEMENT SHALL BE APPLIED STRATEGICALLY AND APPROPRIATELY PER FLOOR PLAN REQUIREMENT.
  - THE SENSOR SHALL HAVE AN ACCURACY AND RESOLUTION OF ±0.1 PPM OF READING, REPEATABILITY OF ±2% OF READING, AND A RESPONSE TIME OF LESS THAN 40 SECONDS TO A 90% STEP CHANGE. THE SENSOR DRIFT SHALL NOT EXCEED MORE THAN 2% SIGNAL LOSS PER MONTH. THE PERMISSIBLE AMBIENT WORKING TEMPERATURE SHALL BE 14F TO 104F (-20C TO 40C) AND THE PERMISSIBLE AMBIENT HUMIDITY SHALL BE 15 TO 95% RH, NON-CONDENSING. THE SENSOR SHALL REQUIRE NO ROUTINE MAINTENANCE OTHER THAN PERIODIC CALIBRATION. ITS LIFE EXPECTANCY SHALL BE 2 YEARS OF NORMAL SERVICE. THE MANUFACTURER SHALL PROVIDE A TWO 2-YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP, AND A 12-MONTH WARRANTY ON THE SENSING ELEMENT UNDER NORMAL EXPOSURE.
  - THE SENSOR/TRANSMITTER SHALL BE CONTAINED IN A NEMA 4X ENCLOSURE. THE ENCLOSURE WITH THE SENSOR/TRANSMITTER SHALL BE INSTALLED ON WALLS OR COLUMNS APPROXIMATELY 1.5 FT. ABOVE THE FLOOR.
  - THE SENSOR/TRANSMITTER SHALL HAVE THE CAPABILITY OF ADDING UP TO (2) RELAYS AS A SEPARATE COMPONENT TO THE PRINTED CIRCUIT BOARD OF THE SENSOR.
  - THE OUTPUT SIGNAL FROM THE SENSOR/TRANSMITTER SHALL BE A DIRECT INPUT INTO THE DIGITAL CONTROL BUILDING AUTOMATION SYSTEM. ALL SEQUENCES OF FAN AND ALARM CONTROL, INCLUDING TIME DELAY FUNCTIONS TO PREVENT HUNTING OF VENTILATION FANS SHALL BE A PART OF THE CONTROL PANEL.
  - IF THE LEVEL OF NO2 REACHES 2 PPM, THE LOW ALARM SHALL ACTIVATE. IF THE LEVEL OF NO2 INCREASES TO 5 PPM, THE HIGH ALARM SHALL ACTIVATE. THE CONTRACTOR SHALL SUPPLY THE POLYGARD® SERIES AT-1130 NO2 SENSOR/TRANSMITTER, BY INTEC CONTROLS
- 2.4 SUPPLIER: THE CONTRACTOR SHALL SUPPLY THE MCC-SERIES CONTROL PANEL AND ALL ASSOCIATED GAS TRANSMITTERS, BY INTEC CONTROLS
- 2.5 WARRANTY: THE MANUFACTURER SHALL PROVIDE A TWO 2-YEAR WARRANTY FOR MATERIALS AND WORKMANSHIP, AND A 12-MONTH WARRANTY ON THE SENSING ELEMENT UNDER NORMAL EXPOSURE.

PART 3 - EXECUTION

3.1 INSPECTION: GENERAL: EXAMINE AREAS AND CONDITIONS UNDER WHICH GAS MONITORING AND CONTROL SYSTEM SHALL BE INSTALLED. RELATED ITEMS SHALL BE EXAMINED AS WELL.

3.2 CONTROL SEQUENCE: THE CONTROLLER SHALL OPERATE ACCORDING TO THE SPECIFICATIONS RECOMMENDED BY THE MANUFACTURER. THE OPERATION SHALL BE AS FOLLOWS:

- THE CONTROLLER SHALL BE CALIBRATED TO THE DESIRED SET-POINTS BEFORE OPERATION.
- THE CONTROLLER SHALL CONTINUOUSLY DETECT THE SURROUNDING AIR FOR ANY TRACES OF THE GAS DETECTED.
- WHEN THE FIRST SET-POINT IS REACHED, THE SENSOR SHALL ACTIVATE THE LOW ALARM ON THE CONTROLLER AND THE CORRESPONDING DEVICES, SUCH AS THE EXHAUST FANS, DAMPERS, ETC.
- IF THE GAS LEVEL CONTINUES TO INCREASE TO THE SECOND SET-POINT, THE HIGH ALARM SHALL ACTIVATE WITH THE CORRESPONDING DEVICES, SUCH AS THE AUDIO/VISUAL ALARM, ETC.
- THE SENSOR SHALL CONTINUE TO TRACE THE SPECIFIED GAS AND WILL NOT DISABLE THE ALARM UNTIL THE GAS LEVEL IS DROPPED A SIGNIFICANT PERCENTAGE BELOW THE ALARM SET-POINTS.

3.3 OPERATION AND MAINTENANCE MANUALS: THE OPERATION AND MAINTENANCE MANUALS SHALL CONTAIN ALL INFORMATION NECESSARY FOR THE OPERATION, MAINTENANCE, REPLACEMENT, INSTALLATION, AND PARTS PROCUREMENT FOR THE ENTIRE GAS DETECTION SYSTEM. THIS DOCUMENTATION SHALL INCLUDE SPECIFIC PART NUMBERS.

3.4 AS-BUILT DOCUMENTATION: FOLLOWING PROJECT COMPLETION AND TESTING, THE CONTRACTOR WILL SUBMIT AS-BUILT DRAWINGS REFLECTING THE EXACT INSTALLATION OF THE SYSTEM.

3.5 CALIBRATION: CALIBRATION SHALL NOT BE NECESSARY TO VERIFY SYSTEM OPERATION. THE USER SHALL VERIFY SIGNAL TRANSMISSION FROM THE SENSOR TO THE CONTROL PANEL BY APPLYING THE APPROPRIATE TEST GAS TO THE CORRESPONDING SENSOR. THE CALIBRATION KIT CAN BE USED FOR SYSTEM VERIFICATION OR SENSOR CALIBRATION WHEN REQUIRED. ONE CALIBRATION KIT SHALL BE PROVIDED BY THE CONTRACTOR SUPPLIED BY INTEC CONTROLS

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PROJECT NAME:  
**6136 W. ROOSEVELT RD**

PROJECT ADDRESS:  
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CERTIFICATION

ROBERT N. RAJFSON  
REGISTERED PROFESSIONAL ENGINEER  
ILLINOIS

062-049931

SHEET TITLE

**MECHANICAL SCHEDULES, NOTES AND DETAILS**

SHEET #

**M2.02**

Gas Piping/Tubing Material Matrix(Based on IFGC 403)			
Material	Permitted	Not Permitted	Standards to Follow
Wrought-Iron	Schedule 40 or better		ASME B 36.10.10M or ASTM A35 or ASTM A106
Steel	Schedule 40 or better		ASME B 36.10.10M or ASTM A35 or ASTM A106

N.G. DISTRIBUTION PIPING SHALL BE SCHEDULE 40 STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A 53/A 53M WITH 150# MALLEABLE IRON FITTINGS. GAS PIPING LARGER THAN 2" OR MORE THAN 5 PSIG TO BE WELDED TO BE SCHEDULE 40 STEEL PIPING.

Note: The gas piping design shall conform to all the requirements of IFGC 403.

**GENERAL GAS PIPING NOTES:**

- ALL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH BUILDING STANDARDS AND ALL APPLICABLE CODES.
- FUEL GAS PIPING AND CONTROLS MUST CONFORM TO THE INTERNATIONAL FUEL GAS CODE(IFGC), CHAPTER 4 (WITH MODIFICATIONS AS NOTED IN ARTICLE 14). [18-28-1400]
- GAS PIPING MUST BE SIZED IN ACCORDANCE WITH IFGC TABLES 402.1) THROUGH 402.3(34). [IFGC 402.3]
- THE MAXIMUM DESIGN OPERATING PRESSURE FOR GAS PIPING SYSTEMS LOCATED INSIDE BUILDINGS SHALL NOT EXCEED 5 PSIG (SOME EXCEPTIONS ARE NOTED). [IFGC 402.5]
- GAS PIPING MATERIALS MUST CONFORM TO THE GAS PIPING & TUBING MATERIAL MATRIX (IFGC 403 REQUIREMENTS). [IFGC 403]
- PIPING IN CONCEALED LOCATIONS MUST CONFORM TO THIS IFGC 404.3. [IFGC 404.3]
- MINIMUM REQUIRED BURIAL DEPTH FOR UNDERGROUND PIPING SYSTEMS MUST CONFORM TO IFGC 404.9. (MINIMUM 12 INCHES BELOW GRADE). [IFGC 404.9]
- GAS PIPES MUST BE SLOPED AT 1/4 INCH IN EVERY 15 FEET. [IFGC 408.1]
- GAS PIPING GREATER THAN 2" INSIDE DIAMETER OR CARRYING MORE THAN 5 POUNDS(PSIG) SHALL BE SCHEDULE 40 STANDARD WELD FITTINGS.
- PIPING METER IDENTIFICATION SHALL BE MARKED WITH AN APPROVED PERMANENT IDENTIFICATION AND BE READILY IDENTIFIABLE.
- PAINT ALL GAS PIPING THAT IS EXPOSED TO THE ELEMENTS.
- UNDERGROUND PIPING SHALL BE A MIN OF 18" BELOW GRADE. [IFGC 404.12]

**GARAGE NOTES:**

- GAS APPLIANCES ARE NOT ALLOWED IN GARAGES UNLESS EITHER:
  - THE GAS APPLIANCE IS A DIRECT VENT HEATER INTENDED TO HEAT ONLY THE GARAGE SPACE AND DOES NOT COMMUNICATE ITS HEATED AIR TO THE REST OF THE BUILDING. THE HEATER SHALL BE INSTALLED SO THAT ALL BURNER AND IGNITION DEVICES ARE GREATER THAN 18" (457 MM) ABOVE THE GARAGE FLOOR. THE HEATER SHALL BE LOCATED OR PROTECTED SO THAT IT IS NOT SUBJECT TO VEHICULAR DAMAGE.
  - A SEPARATE UTILITY ROOM IS CONSTRUCTED IN THE GARAGE WITH AT LEAST ONE MEANS OF ACCESS, AND:
    - THE APPLIANCE IS INSTALLED ON A NONCOMBUSTIBLE SURFACE AND ALL BURNER AND BURNER IGNITION DEVICES ARE LOCATED 18" (457 MM) ABOVE THE GARAGE FLOOR.
    - THE WALLS AND CEILING OF THE UTILITY ROOM HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN ONE HOUR.
    - ALL DOORS TO THE UTILITY ROOM HAVE A FIRE PROTECTION RATING OF NOT LESS THAN 45 MINUTES AND ARE SELF-CLOSING.
    - ALL AIR FOR COMBUSTION AND DILUTION AIR IS TAKEN FROM AN AREA OTHER THAN THE GARAGE IN ACCORDANCE WITH ARTICLE 7.
    - ALL DOORS TO THE UTILITY ROOM ARE CLEARLY MARKED: DANGER -KEEP DOOR CLOSED.
    - ALL OPENINGS IN THE UTILITY ROOM FOR PIPES, CONDUIT, OR DUCTS ARE SEALED AIRTIGHT.
    - THE GARAGE IS NOT HEATED BY THE SAME FORCED AIR SYSTEM THAT HEATS THE HABITABLE SPACE.

**LIGHT DUTY EQUIPMENT ISOLATION NOTES:**

KINETICS LDR LIGHT DUTY RAIL ISOLATION SYSTEM IS A LOW-COST SOLUTION DESIGNED TO ISOLATE RESIDENTIAL STYLE CONDENSING UNITS AND OTHER LIGHT WEIGHT EQUIPMENT (SMALL FANS, MINI SPLIT SYSTEMS, ETC.). LDR ELIMINATES VIBRATION FROM PENETRATING INTO THE STRUCTURE AND OCCUPANTS BELOW.

ISOLATION SYSTEM SHALL BE COMPRISED OF TWO (2) INDEPENDENT SUPPORT RAILS WITH ADJUSTABLE EQUIPMENT MOUNTING CLIPS EACH SUPPORTED BY TWO (2) SEISMIC AND WIND RESISTANT HOUSED SPRING ISOLATORS. THE SPRINGS SHALL HAVE ALL OF THE CHARACTERISTICS OF FREE STANDING COIL SPRING ISOLATORS PER SECTION D BELOW. ISOLATORS SHALL CONSIST OF A SINGLE LATERALLY STABLE STEEL COIL SPRING ASSEMBLED INTO STEEL HOUSINGS DESIGNED TO LIMIT MOVEMENT OF THE SUPPORTED EQUIPMENT IN ALL DIRECTIONS.

HOUSING ASSEMBLY SHALL BE A STEEL MEMBER THAT INCLUDES PROVISIONS FOR ATTACHMENT TO STRUCTURAL OR ELEVATED ROOF ISLAND ELEMENTS. IT SHALL INTERFACE WITH A COIL SPRING LEVELING ASSEMBLY AND A 3-AXIS RESTRAINT SNUBBING ELEMENT THAT SHALL BOLT DIRECTLY TO THE UNDERSIDE OF THE EQUIPMENT SUPPORT RAIL. THE HOUSING SHALL BE FITTED WITH INTEGRAL NON-SKID ISOLATION PADS AND HOLES FOR ANCHORING THE HOUSING TO THE SUPPORTING STRUCTURE. HOUSING SHALL BE ZINC PLATED FOR OUTDOOR CORROSION RESISTANCE. HOUSING SHALL BE DESIGNED TO PROVIDE A CONSTANT FREE AND OPERATING HEIGHT WITHIN 1/8" (3 MM).

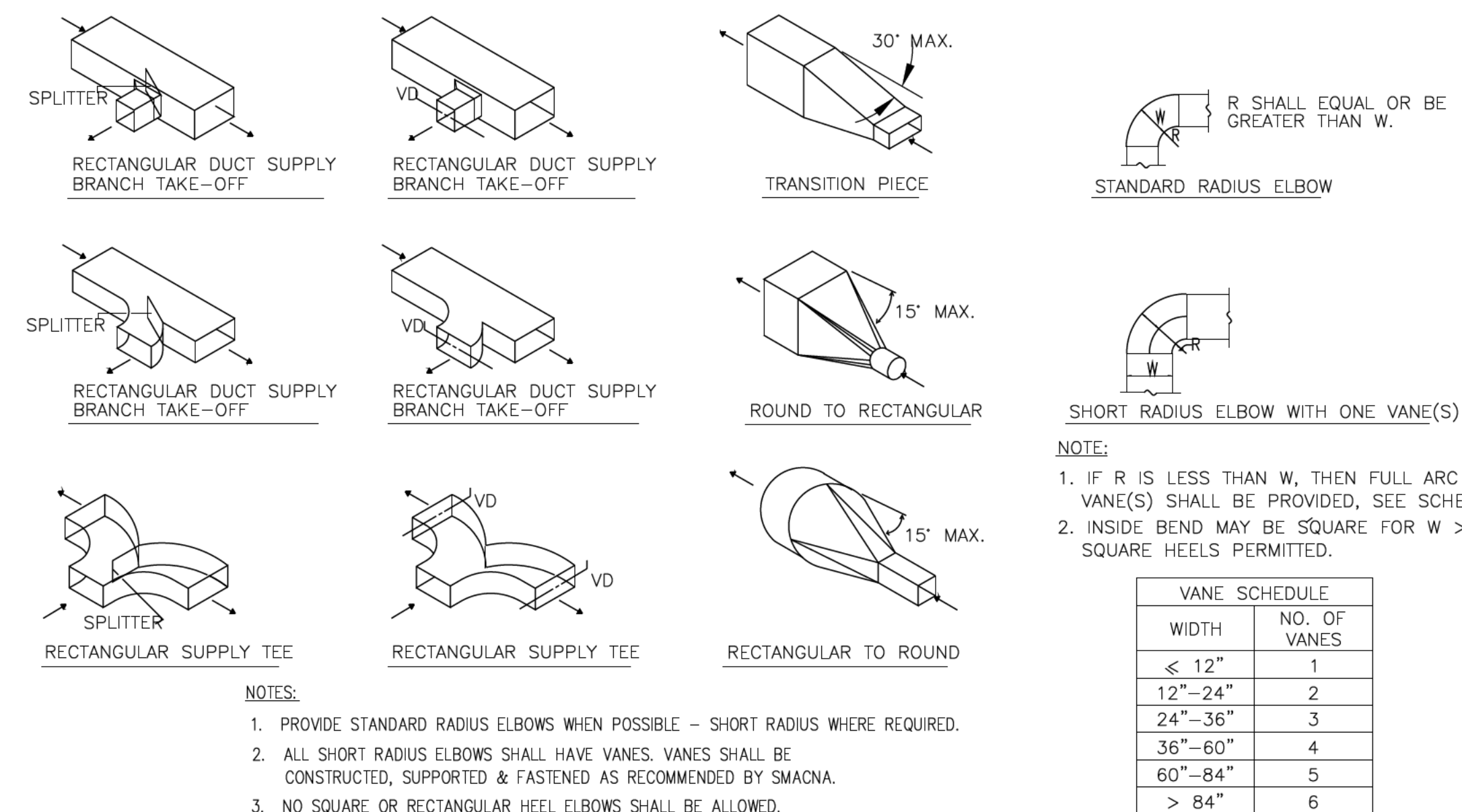
THE ISOLATOR HOUSING SHALL BE DESIGNED TO WITHSTAND THE PROJECT DESIGN SEISMIC FORCES IN ALL DIRECTIONS.

COIL SPRING ELEMENTS SHALL BE SELECTED TO PROVIDE STATIC DEFLECTIONS OF EITHER 1 OR 2 INCHES AS SHOWN ON THE VIBRATION ISOLATION SCHEDULE OR AS INDICATED OR REQUIRED IN THE PROJECT DOCUMENTS. SPRING ELEMENTS SHALL BE COLOR CODED OR OTHERWISE EASILY IDENTIFIED. SPRINGS SHALL HAVE A LATERAL STIFFNESS GREATER THAN 1.1 TIMES THE RATED VERTICAL STIFFNESS AND SHALL BE DESIGNED TO RETAIN A MINIMUM OF 0.75 INCH TRAVEL BEYOND THE RATED CAPACITY TO ACCOMMODATE OVERLOADS. NON-WELDED SPRING ELEMENTS SHALL BE EPOXY POWDER COATED AND SHALL HAVE A MINIMUM OF A 1000 HOUR RATING WHEN TESTED IN ACCORDANCE WITH ASTM B-117.

SPRING RAIL ASSEMBLY SHALL BE MODEL LDR AS MANUFACTURED BY KINETICS NOISE CONTROL.

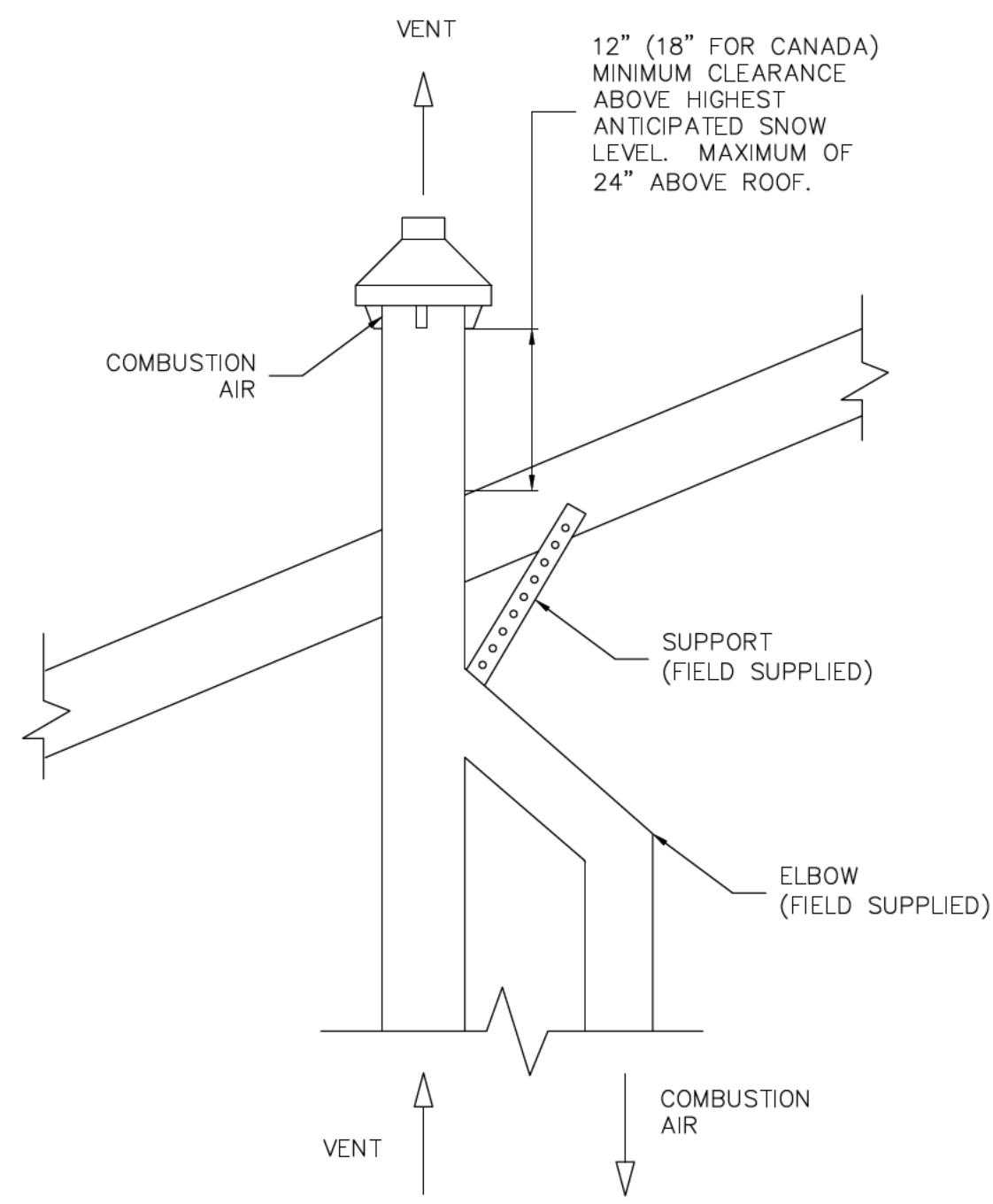
CONTROL SYMBOLS		VENTILATION SYMBOLS		MECHANICAL SYMBOLS		
SYMBOL	DESCRIPTION	SINGLE LINE	DOUBLE LINE	DESCRIPTION	SYMBOL	DESCRIPTION
	DIGITAL INPUT			NEW DUCTWORK - WxD AIRWAY DIMENSIONS		PRESSURE GAUGE AND COCK STRAINER
	ANALOG INPUT			DUCT SECTION - SUPPLY UP		STRAINER W/BLOW-OFF VALVE
	DIGITAL OUTPUT			DUCT SECTION - SUPPLY DOWN		THERMOMETER
	ANALOG OUTPUT			DUCT SECTION - RETURN OR EXHAUST UP		PRESSURE / TEMPERATURE SENSOR
	CONTROL VALVE (ELECTRICAL)			DUCT SECTION - RETURN OR EXHAUST DOWN		CAP UNION
	CONTROL VALVE (PNEUMATIC)			DUCT SECTION - RETURN OR EXHAUST DOWN		ANCHOR W/ALIGNMENT GUIDES
	DIFFERENTIAL PRESSURE SWITCH			DUCT SECTION - RETURN OR EXHAUST DOWN		EXPANSION JOINT
	VARIABLE SPEED CONTROLLER			DUCT SECTION - RETURN OR EXHAUST DOWN		FLEXIBLE CONNECTION
	NORMALLY OPEN			DUCT SECTION - RETURN OR EXHAUST DOWN		PRESSURE RED. VALVE
	NORMALLY CLOSED			DUCT SECTION - RETURN OR EXHAUST DOWN		RELIEF VALVE
	END SWITCH			DUCT SECTION - RETURN OR EXHAUST DOWN		TRIPLE DUTY VALVE
	MOTOR OPERATED DAMPER			DUCT SECTION - RETURN OR EXHAUST DOWN		CHECK VALVE (SP) SPRING
	VELOCITY SENSOR			DUCT SECTION - RETURN OR EXHAUST DOWN		BALANCING VALVE
	TEMPERATURE SENSOR			DUCT SECTION - RETURN OR EXHAUST DOWN		GLOBE VALVE
	HUMIDITY SENSOR			DUCT SECTION - RETURN OR EXHAUST DOWN		GATE VALVE
	DIFFERENTIAL PRESSURE SENSOR			DUCT SECTION - RETURN OR EXHAUST DOWN		BUTTERFLY VALVE - WHEN DIA. > 2"
	SMOKE DETECTOR			DUCT SECTION - RETURN OR EXHAUST DOWN		BALL VALVE - WHEN DIA. < 2"
<b>ABBREVIATIONS</b>				VALVE WITH MEMORY STOP		
FD	FIRE DAMPER			GAS COCK		
H.P.	HORSE POWER			CONTROL VALVE, 2-WAY		
EXP VLV	EXPANSION VALVE			CONTROL VALVE, 3-WAY		
MBH	THOUSAND BRITISH THERMAL UNITS			CIRCUIT SETTER		
MFG.	MANUFACTURER			CODE BACKFLOW PREVENTOR		
MTD.	MOUNTED			UNIT HEATER - HORIZONTAL		
PH.	PHASE			PIPE DOWN		
R.P.M.	REVOLUTIONS PER MINUTE			PIPE UP		
T-STAT	THERMOSTAT			NEW PIPING		
V	VOLTS			PIPING ASSEMBLY - SEE DETAIL		
VEL.	VELOCITY			VENT (MANUAL OR AUTOMATIC)		
W.C.	INCHES IN WATER COLUMN			FLOW CONTROL FITTING		
TG	TRANSFER GRILLE			FLOW INDICATOR		
DN	DOWN			FLOW SWITCH		
CFH	CUBIC FEET PER HOUR			PRESSURE SWITCH		
GPS	GEOEXCHANGE PIPE SUPPLY			BASE MOUNTED PUMP - SEE DETAIL		
GPR	GEOEXCHANGE PIPE RETURN			IN-LINE PUMP - SEE DETAIL		
CAI	COMBUSTION AIR INTAKE			EQUIPMENT (SPECIFIED BY TAG BELOW)		
RBD	ROUND BACKDRAFT DAMPER			EQUIPMENT TAG W/NUMBER		
TYP	TYPICAL			DRAIN LINE		
S.A.	SUPPLY AIR DUCT			GAS LINE		
R.A.	RETURN AIR DUCT			VENT LINE		
E.A.	EXHAUST AIR DUCT			HWS HOT WATER HEATING SUPPLY		
O.S.A.	OUTSIDE AIR			HWR HOT WATER HEATING RETURN		
C.D.	CEILING DIFFUSER			CHWS CHILLED WATER HEATING SUPPLY		
C.F.M.	CUBIC FEET PER MINUTE			CHWR CHILLED WATER HEATING RETURN		
A.F.F.	ABOVE FINISHED FLOOR			SL REFRIGERANT SUCTION LINE		
A.F.G.	ABOVE FINISHED GRADE			LL REFRIGERANT LIQUID LINE		
CAP.	CAPACITY			CR CONDENSATE RETURN LINE		
CLG.	CEILING			CDW CONDENSER WATER LINE		
CONN.	CONNECTION			ELECTRIC DUCT HEATER		

NOTE: NOT ALL SYMBOLS ARE APPLICABLE TO THIS PROJECT.

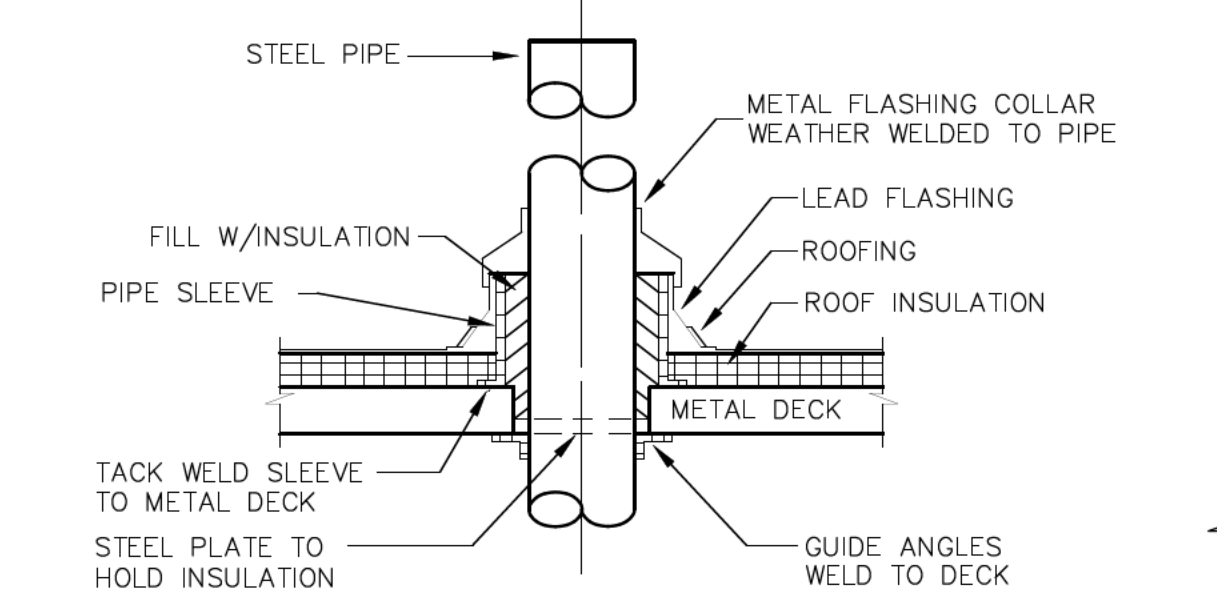
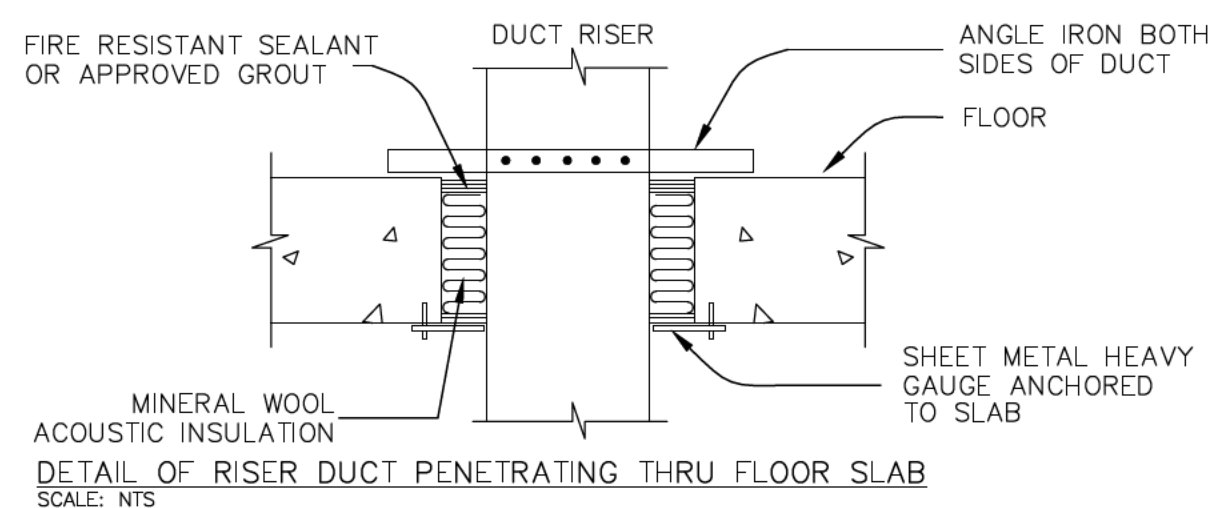


TYPICAL DUCT DETAILS  
SCALE: NTS

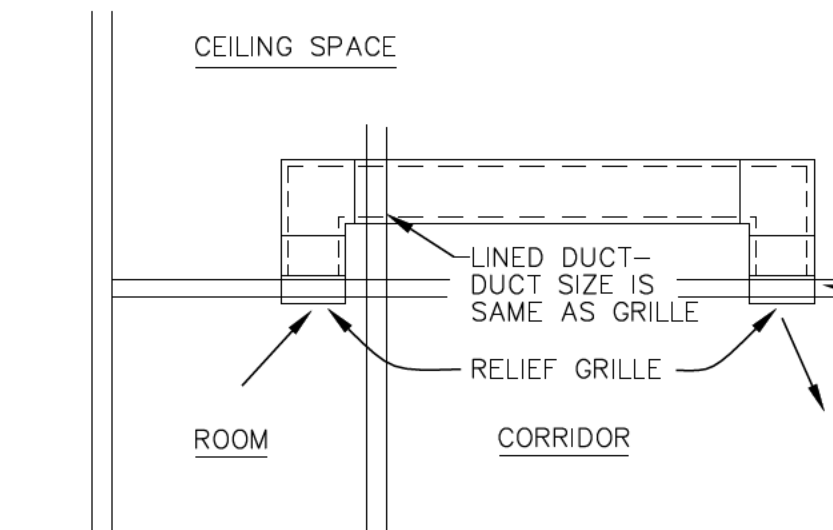
<p>2149 N. TALMAN AVENUE CHICAGO, IL 60647 312 829 6666 www.spacearchplan.com</p>	<p>134 N. LaSalle, Suite 1930 Chicago, IL 60602 Phone: 312.332.2800 Fax: 312.332.2820</p>	<p>15W 271 91ST STREET BURR RIDGE, IL 60527 P. (630) 936-7733</p>	<p>CONSULTANTS</p>	<p>PROJECT NAME: <b>6136 W. ROOSEVELT RD</b></p> <p>PROJECT ADDRESS: <b>6136 W. ROOSEVELT RD., OAK PARK, IL 60304</b></p>	<p>PROJECT INFO</p> <p>PROJECT NO. 25.020</p> <p>PROJECT TEAM: JK, DB, GV</p>	<p>ISSUE</p> <p>12.30.25 - ISSUED FOR PERMIT</p>	<p>CERTIFICATION</p> <p>ROBERT N. RAJFSON 062-049931 REGISTERED PROFESSIONAL ENGINEER ILLINOIS</p>	<p>SHEET TITLE</p> <p>MECHANICAL SCHEDULES, NOTES AND DETAILS</p>	<p>SHEET #</p> <p><b>M2.03</b></p>
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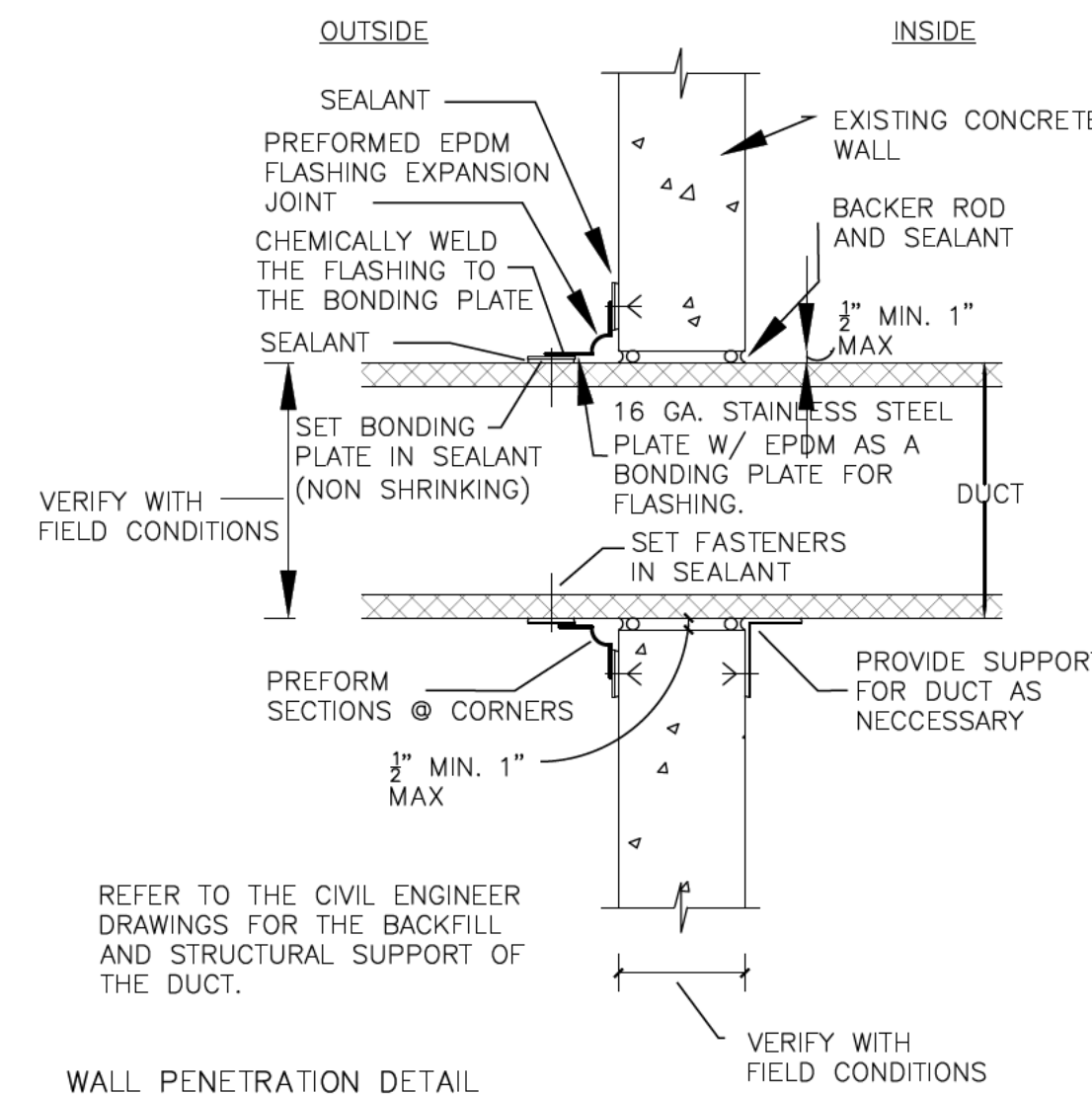
CONCENTRIC VENT DETAIL  
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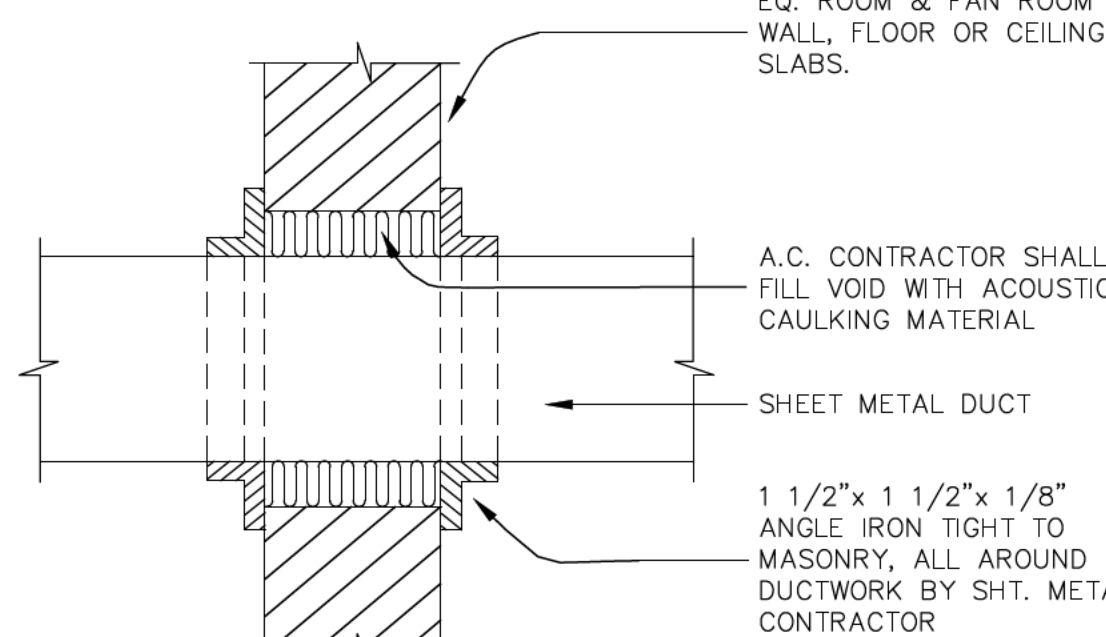
NOTE: PROVIDE EXPANDING TYPE SILICONE FIRE RATED SEALANT.  
PIPE PENETRATION THRU ROOF  
SCALE: NONE



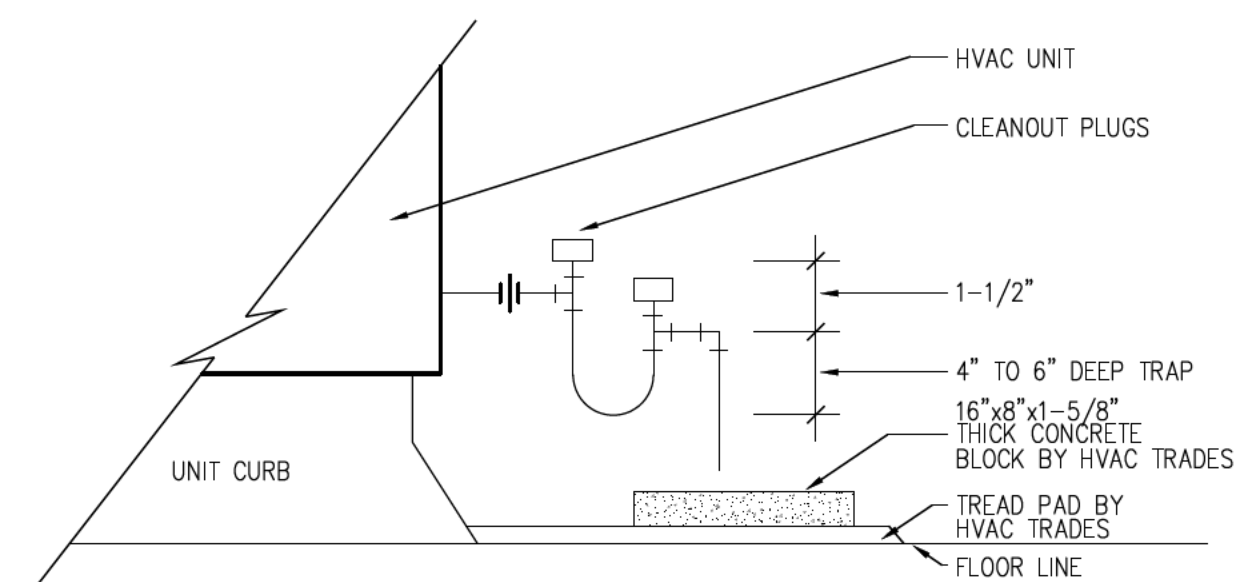
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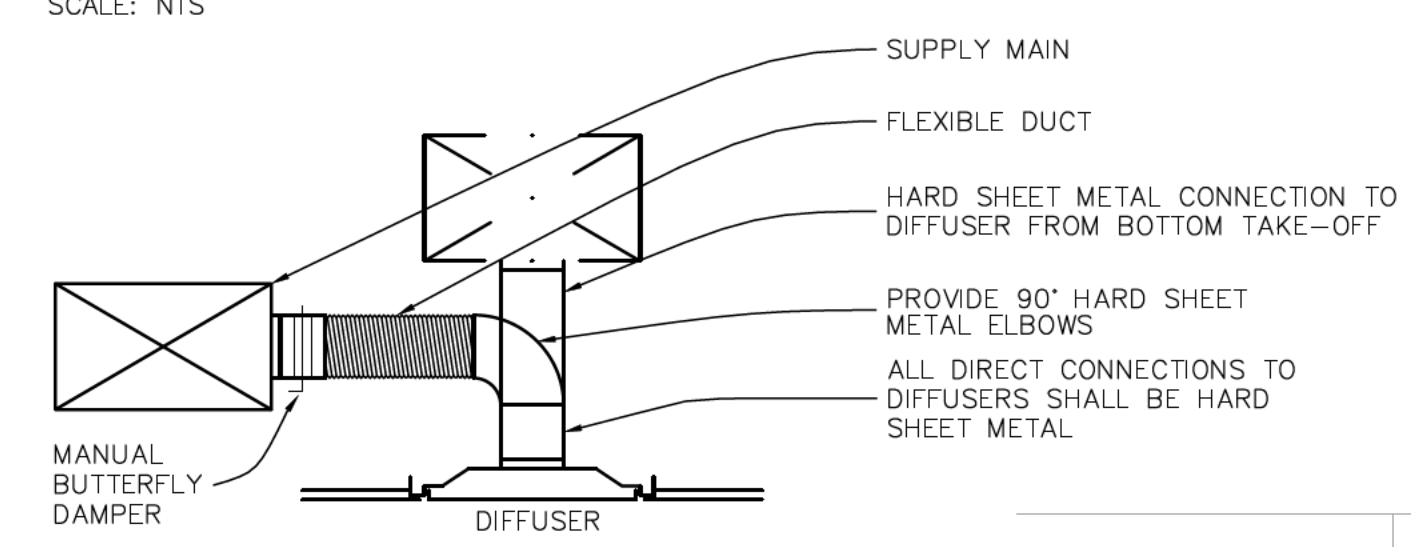
WALL PENETRATION DETAIL  
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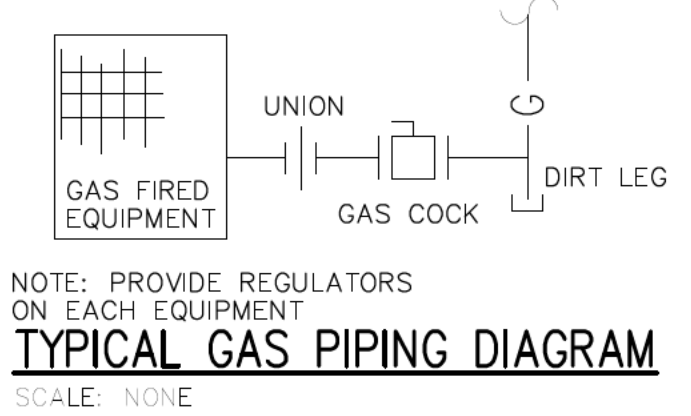
DETAIL OF ACOUSTICAL CAULKING OF DUCTS PIERCING EQ. AREA WALLS, FLOORS OR SLABS  
SCALE: NONE



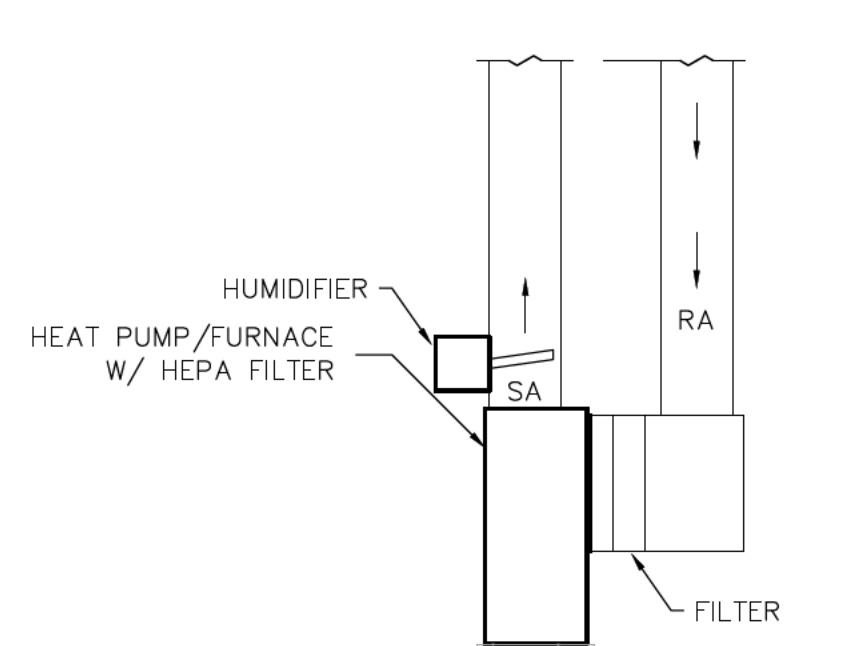
AHU/RTU UNIT CONDENSATE DRAIN DETAIL  
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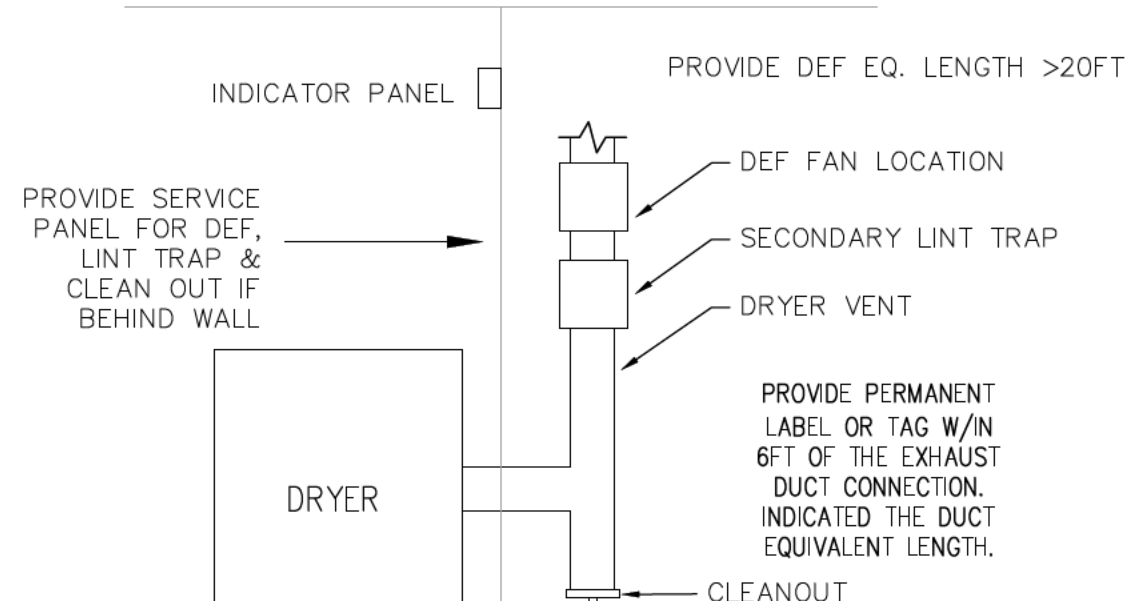
DIFFUSER INSTALLATION DETAIL  
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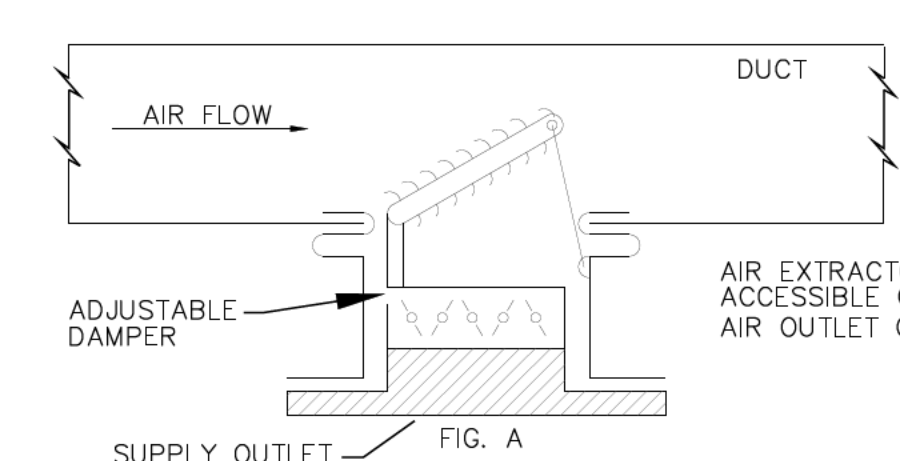
TYPICAL GAS PIPING DIAGRAM  
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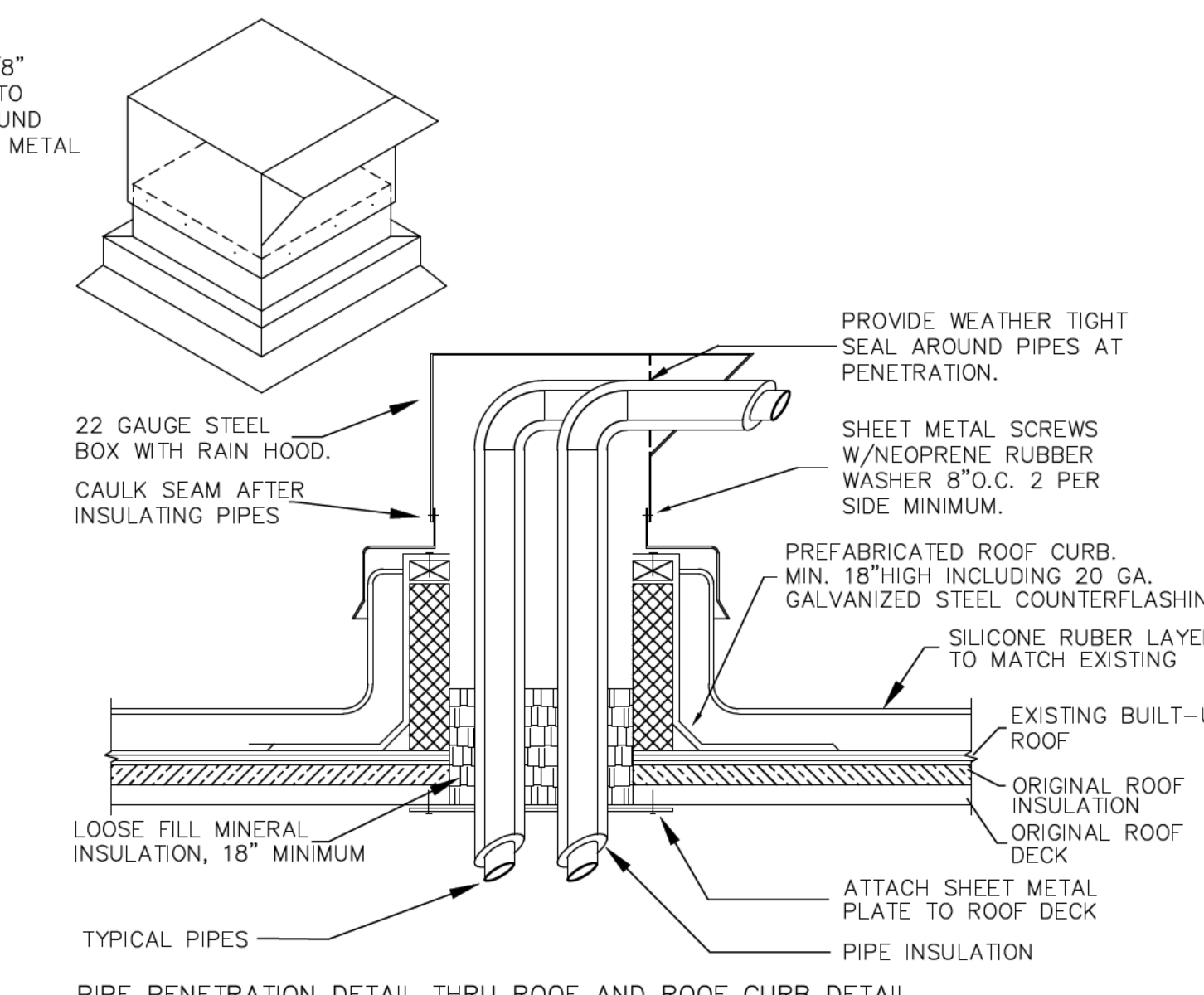
TYP FILTER & HUMIDIFIER INSTALLATION  
SCALE: NTS



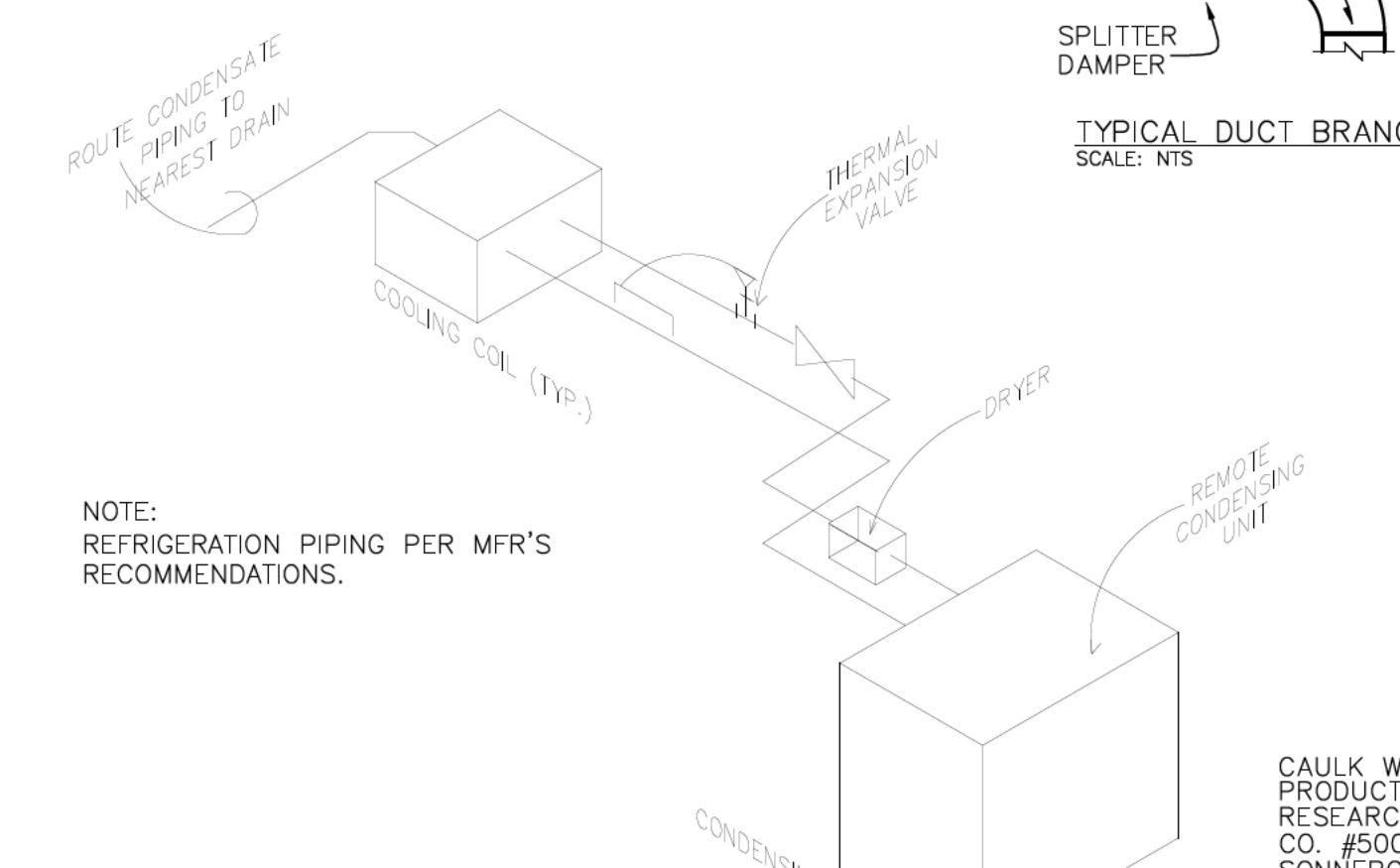
TYP. DRYER VENT DETAIL  
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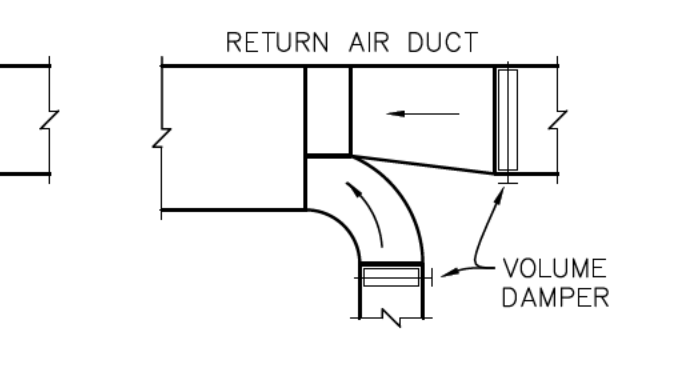
GRILLE AND REGISTER CONNECTION  
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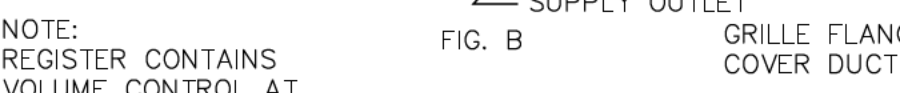
PIPE PENETRATION DETAIL THRU ROOF AND ROOF CURB DETAIL  
SCALE: NTS



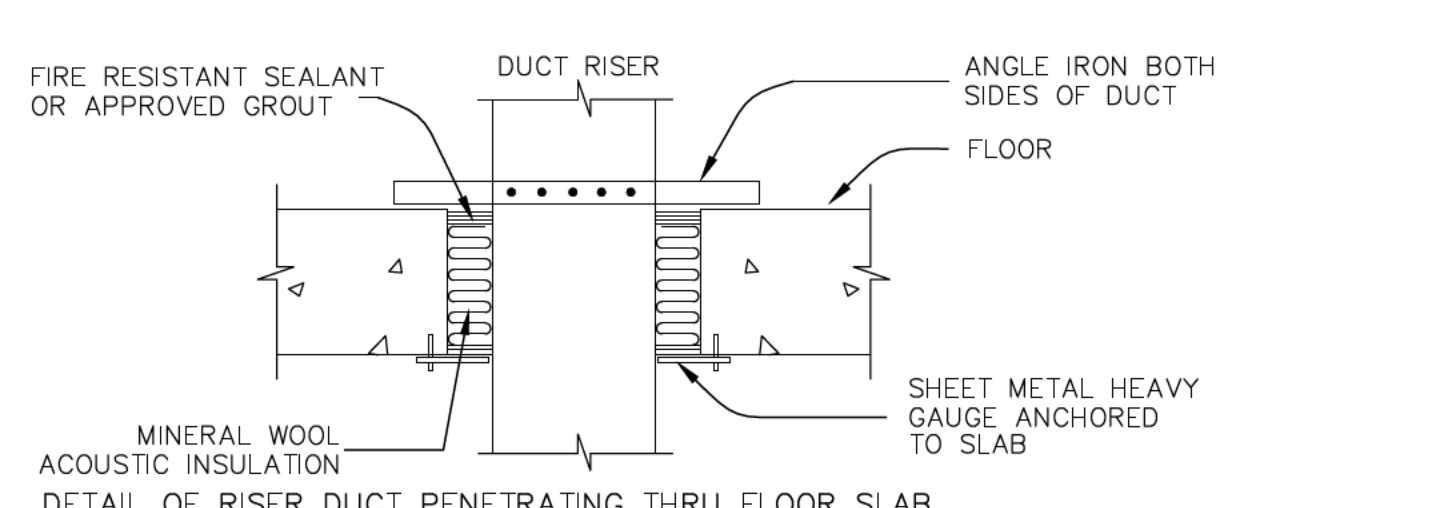
REMOTE REFRIGERATION DIAGRAM TYP.  
SCALE: NTS



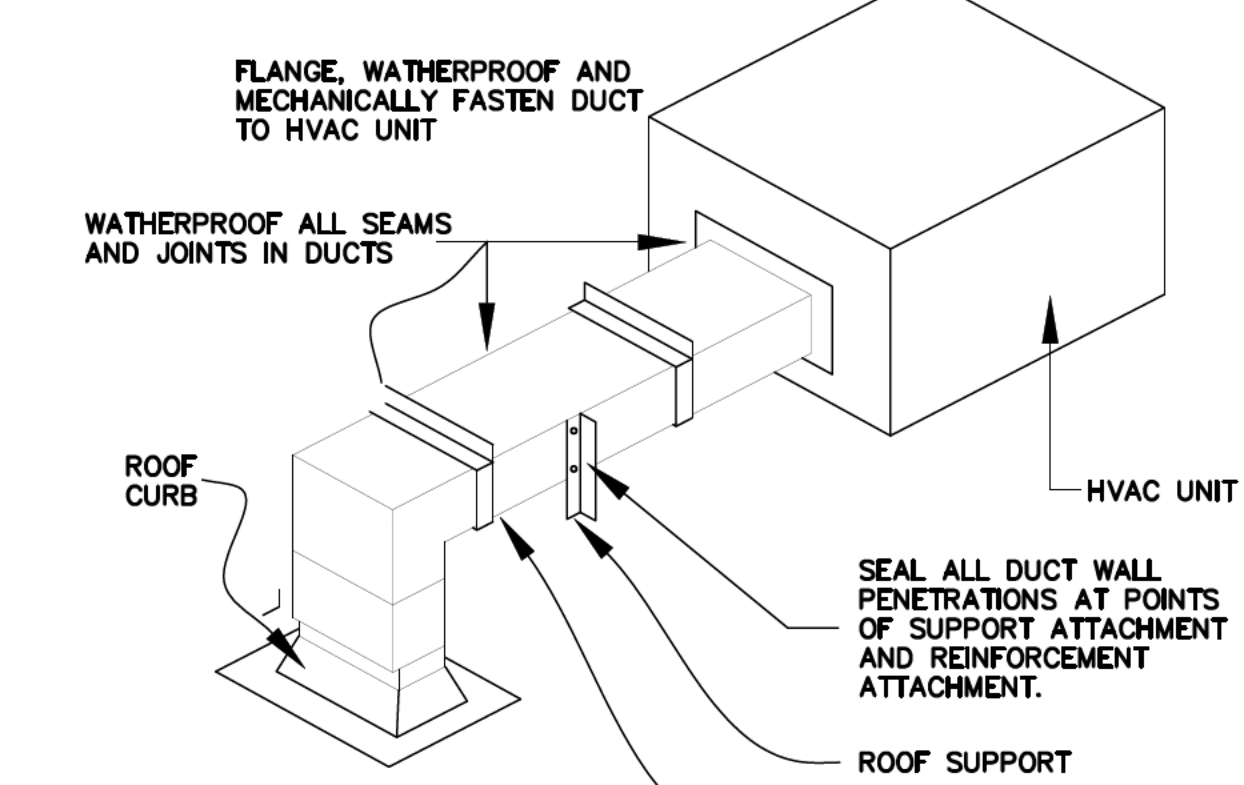
TYPICAL DUCT BRANCH  
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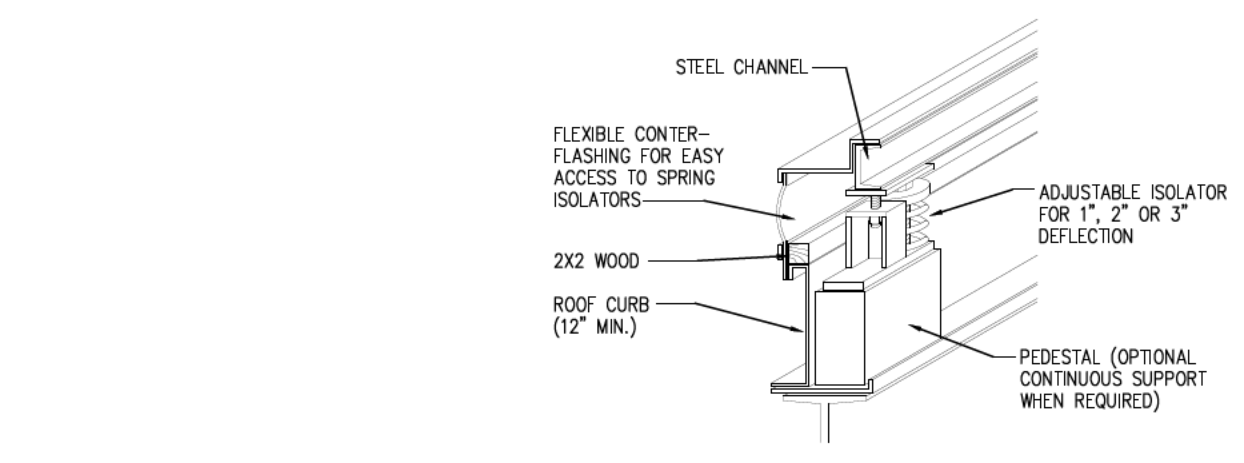
EXHAUST FAN DETAIL  
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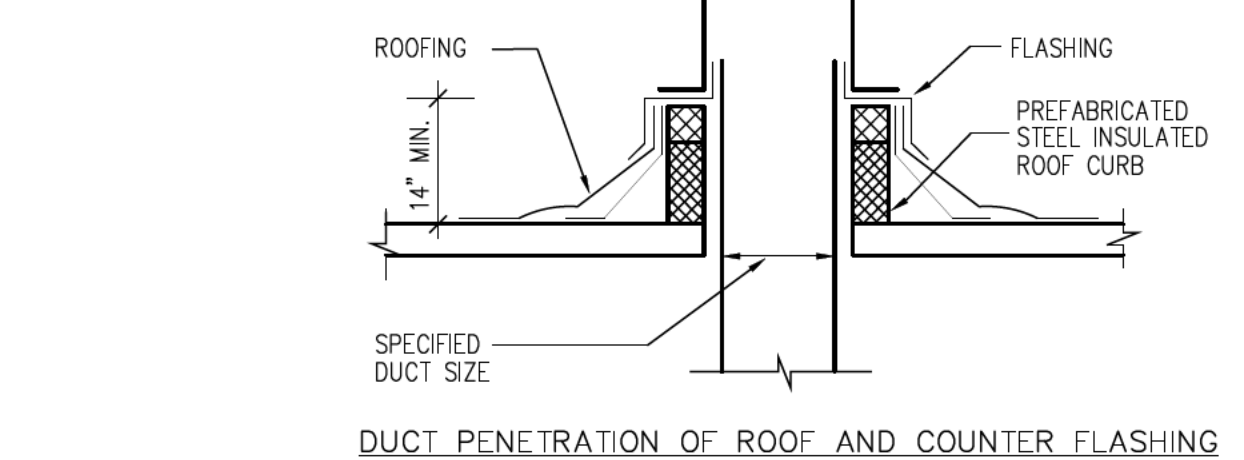
DETAIL OF RISER DUCT PENETRATING THRU FLOOR SLAB  
SCALE: NTS



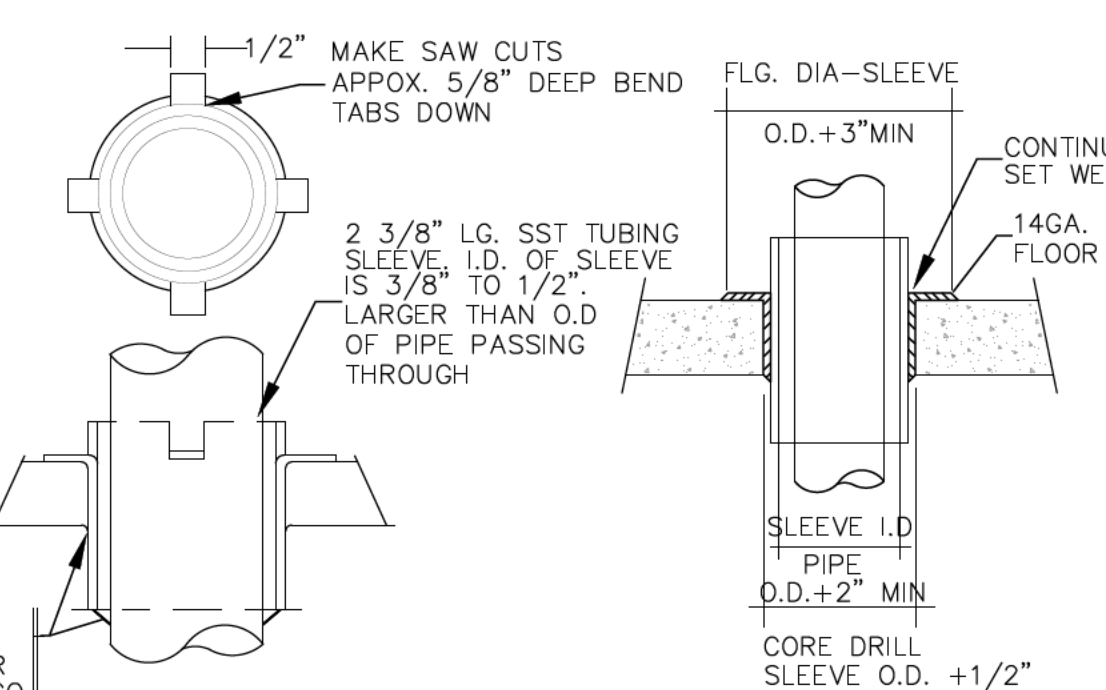
ROOFTOP DUCT INSULATION  
SCALE: NTS



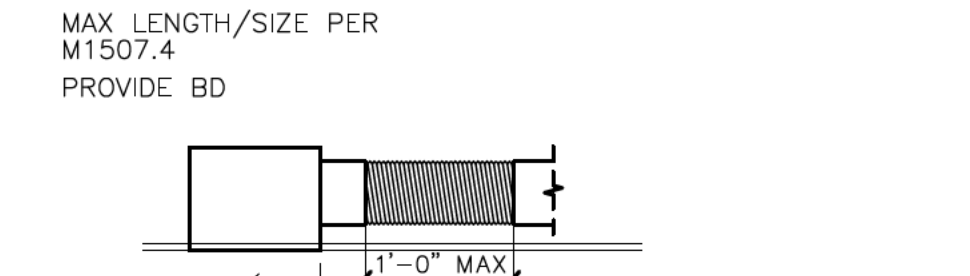
VIBRO-CURB DETAIL  
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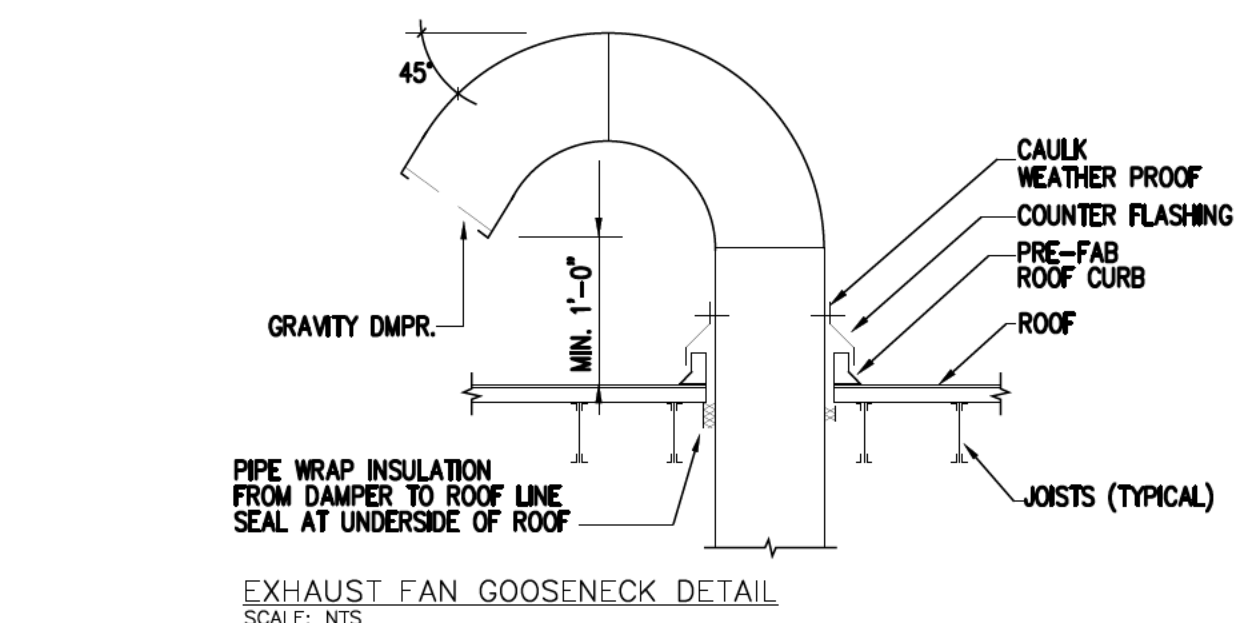
DUCT PENETRATION OF ROOF AND COUNTER FLASHING  
SCALE: NTS



CEILING SLEEVE DETAIL  
SCALE: NONE



RECTANGULAR/ROUND DUCT BRANCH CONNECTION DETAILS  
SCALE: NONE



EXHAUST FAN GOOSENECK DETAIL  
SCALE: NTS

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PROJECT ADDRESS:  
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PROJECT INFO

PROJECT NO. 25 020  
PROJECT TEAM: JK, BB, GV

ISSUE

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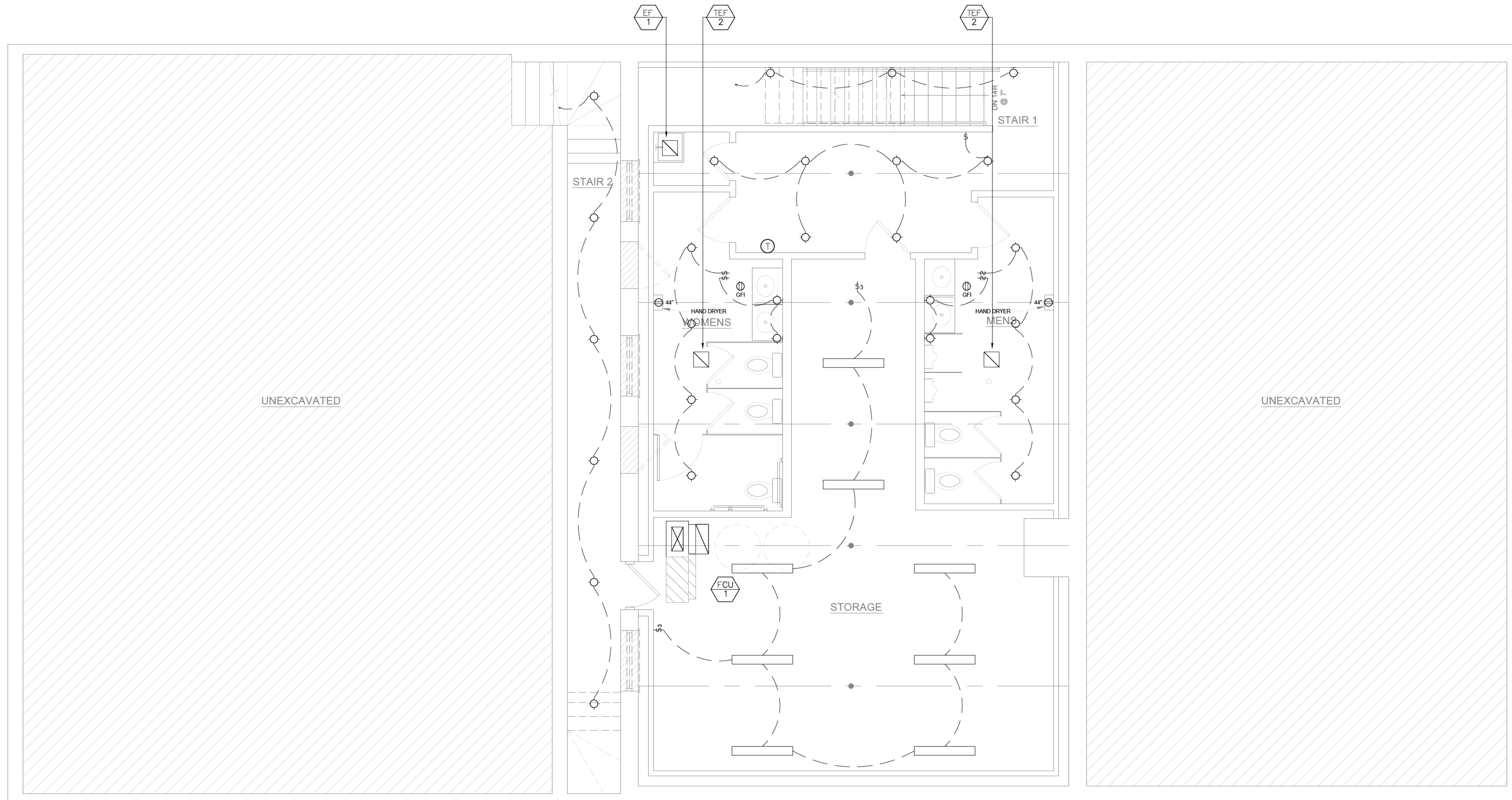
ROBERT N. RAJFSON  
REGISTERED PROFESSIONAL ENGINEER  
ILLINOIS  
062-049931

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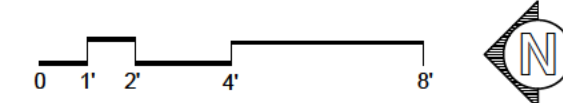
MECHANICAL SCHEDULES, NOTES AND DETAILS

SHEET #

**M2.04**



**1 BASEMENT PLAN**  
SCALE: 1'-0" = 1/4"



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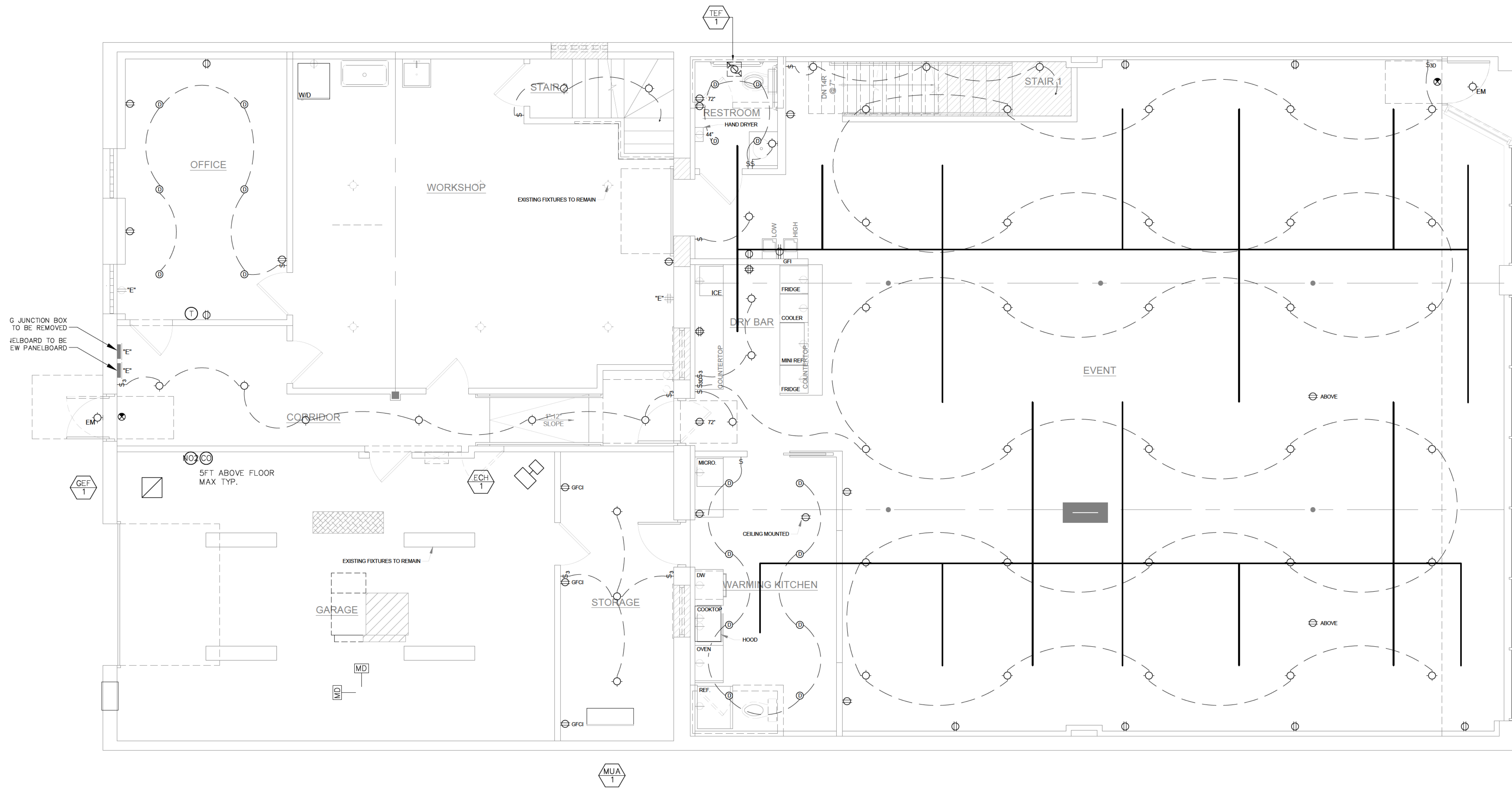


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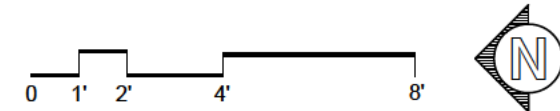
BASEMENT FLOOR PLAN

SHEET #

**E1.20**



**1 FIRST FLOOR PLAN**  
SCALE: 1'-0" = 1/4"



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PROJECT NO.  
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BIB  
GV

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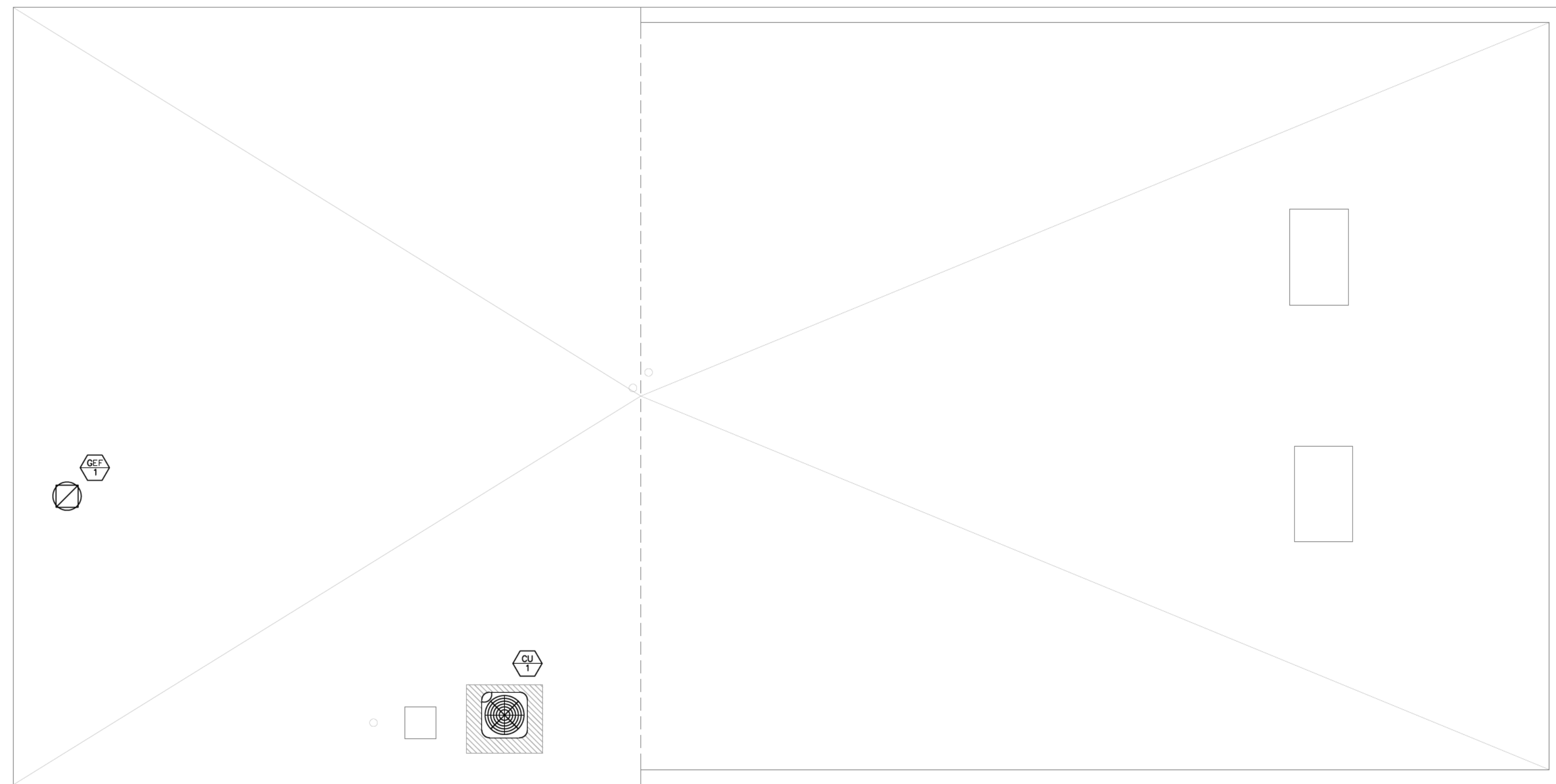


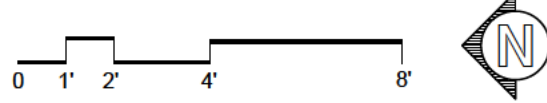
SHEET TITLE

FIRST FLOOR PLAN

SHEET #

**E1.21**



**1 ROOF PLAN**  
 SCALE: 1'-0" = 1/4"  


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SHEET TITLE

ROOF PLAN

SHEET #

**E1.22**

**GENERAL ELECTRICAL NOTES (APPLICABLE TO ALL ELECTRICAL DRAWINGS)**

1. **DEFINITIONS:**
- "FURNISH" MEANS TO "SUPPLY" AND USUALLY REFERS TO DELIVERY OF AN ITEM OF EQUIPMENT TO THE PROJECT SITE, READY FOR INSTALLATION.
- "INSTALL" MEANS TO SET IN PLACE, CONNECT AND PLACE IN FULL OPERATIONAL ORDER.
- "PROVIDE" MEANS TO "FURNISH" AND "INSTALL".
- "FUTURE", "BY OTHERS", "REFER (DISCIPLINE) DIVISION" AND SIMILAR EXPRESSIONS INDICATE WORK THAT MAY BE PERFORMED UNDER THE CONTRACT DOCUMENTS BUT, NOT NECESSARILY UNDER THE DIVISION OR DISCIPLINE ON WHICH THE NOTE APPEARS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK WITH SUPPLIERS, SUBCONTRACTORS, EMPLOYEES, ETC. SHOULD CLARIFICATION OF ANY PORTION OF THE WORK BE REQUIRED, CONTACT THE ARCHITECT/ENGINEER PRIOR TO SUBMITTING BID.
2. **CODES:**
- THE WORK SHALL COMPLY WITH ALL APPLICABLE LOCAL, MUNICIPAL, AND NATIONAL CODES (CURRENT CODE NEC 2020). THIS WOULD INCLUDE, BUT IS NOT LIMITED TO, THE CURRENT CITY BUILDING CODE, NFPA, ANSI, OSHA, AND ALL OTHER LOCAL OR MUNICIPAL BUREAUS AND DEPARTMENTS WHICH HAVE AUTHORITY OVER THE PROJECT; ANYTHING IN THESE CONTRACT DOCUMENTS NOT WITHSTANDING, THIS SHALL NOT BE CONSTRUED AS WAIVING COMPLIANCE WITH ANY REQUIREMENTS OF THE PLANS AND SPECIFICATIONS WHICH MAY BE IN EXCESS OF ANY REQUIREMENTS OF THESE CODES. SEE A0.2 FOR APPLICABLE CODES.
3. **INTERPRETATION OF THE DOCUMENTS**
- THE CONTRACTOR SHALL CAREFULLY COMPARE THE DRAWINGS AND SPECIFICATIONS, CHECKING THE MEASUREMENTS AND CONDITIONS UNDER WHICH CONSTRUCTION IS TO BE IMPLEMENTED, FOR CLARIFICATION BETWEEN VARIOUS DRAWINGS AND/OR SPECIFICATIONS, THE DISPUTED ISSUE SHALL BE REFERRED TO THE ENGINEER BEFORE ANY WORK IS EXECUTED. THE CONTRACTOR SHALL STATE IN THEIR PROPOSAL ANY EXCEPTIONS NECESSARY TO MAKE THIS WORK A COMPLETE AND READY-TO-USE INSTALLATION. IF NOT SO-STATED IN THE CONTRACTOR'S PROPOSAL, ANY SUCH WORK WILL NOT BE CONSIDERED ADDITIONAL.
4. **NOT USED**
5. **SITE EXAMINATION**
- THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, EXAMINE THE PRELIMINARIES, AND MAKE A THOROUGH SURVEY OF THE CONDITIONS UNDER WHICH CONSTRUCTION WILL BE IMPLEMENTED. THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT. ANY LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.
6. **PERMITS**
- THE CONTRACTOR SHALL SECURE, OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS, TAXES, LICENCES, AND FEES TO ALL GOVERNMENT AGENCIES REQUIRED FOR THE EXECUTION AND COMPLETION OF THE ELECTRICAL WORK. SCHEDULING OF ALL REQUIRED INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL PREPARE AND SUBMIT ALL SHOP DRAWINGS AS REQUIRED TO THE GOVERNMENTAL AGENCIES AND UTILITY COMPANIES FOR THEIR APPROVAL.
7. **NOT USED**
8. **CONTRACTOR'S DRAWING REVIEW**
- ALL CONTRACTORS/BIDDERS SHALL HAVE RECEIVED A COMPLETE SET OF CONSTRUCTION DOCUMENTS FOR REVIEW AND REFERENCE TO WORK INDICATED. CONDUIT LOCATE SERVICES SHALL BE REQUESTED AND COMPLETED BEFORE DISTURBANCE OF ANY EXISTING GRADE OR ON-GRADE CONSTRUCTION, SLAB DEMOLITION, OR OTHER ACTIVITIES THAT MAY IMPACT BURIED UTILITIES OR COMMUNICATION CONDUITS. THE CONTRACTOR SHALL CONFIRM THAT CONDUIT LOCATE SERVICES HAVE BEEN COMPLETED AND THAT NO POTENTIAL CONFLICTS EXIST BEFORE EXISTING GRADE IS EXCAVATED OR EXISTING FLOORING DEMOLISHED, REGARDLESS OF THE LOCATION ON THE PROPERTY. THIS SHALL BE REVIEWED WITH THE OWNER'S PROJECT REPRESENTATIVE.
9. **STATEMENT OF WORK**
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION
10. **WORK PERFORMANCE REQUIREMENTS**
- ANY PENETRATIONS OR OPENINGS IN FIRE-RATED PARTITIONS (WALLS OR FLOORS) SHALL BE CLOSED AT THE END OF EACH WORK DAY, OR WHENEVER IT IS ANTICIPATED THAT NO FURTHER WORK WILL OCCUR IN THAT OPENING DURING THE DAY. THIS INCLUDES ALL TEMPORARY OPENINGS. CLOSURE SHALL BE IN COMPLIANCE WITH 3M FIREPROOFING PRODUCT SPECIFICATIONS. ALL ROOF PENETRATIONS SHALL BE SEALED WATER-TIGHT AT THE END OF EACH WORK DAY. ALL TEMPORARY WALL AND FLOOR OPENINGS SHALL BE PROTECTED AND MARKED AT ALL TIMES. PAINTING SHALL BE SCHEDULED SUCH THAT DRYING TIME OCCURS DURING NON-WORKING HOURS FOR OPERATIONS PERSONNEL COMFORT. NO WELDING SHALL TAKE PLACE INSIDE OF OPERATING FACILITY WITHOUT THE WRITTEN AUTHORIZATION OF THE OWNER'S PROJECT REPRESENTATIVE. WELDING SHALL NOT TAKE PLACE WITHIN 5 FEET OF ANY TELECOM EQUIPMENT RACK WITHOUT ADEQUATE PROTECTIVE MEASURES, AS DETERMINED APPROPRIATE BY THE OWNER'S PROJECT REPRESENTATIVE. THE CONTRACTOR SHALL CHECK, VERIFY AND LABEL PHASE ROTATION ANY TIME LEADS ARE CONNECTED TO A NEW OR EXISTING AC SERVICE, GENSET, RECTIFIER OR ANY MOTOR-EQUIPPED, 3-PHASE EQUIPMENT. ALL THREE-PHASE PANELS SERVING SINGLE-PHASE LOADS SHALL BE BALANCED WITHIN 10 PERCENT, USING AMPMETER READINGS. MEASUREMENTS SHALL BE TAKEN AT THE END OF CONSTRUCTION AND AGAIN AFTER 30 DAYS IN SERVICE.
11. **CUTTING AND PATCHING**
- ALL CUTTING, DRILLING AND PATCHING OF MASONRY STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTIONS OF THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVE.

12. **AS-BUILT DRAWINGS**
- THE CONTRACTOR SHALL PROVIDE ALL "AS-BUILT" DRAWINGS SCALED 1/4" MINIMUM AND SUBMIT FOR APPROVAL TO THE ARCHITECT/ENGINEER, AS BUILTS TO BE MARKED UP PDF'S
13. **NOT USED**
14. **TEMPORARY POWER AND LIGHTING**
- THE CONTRACTOR SHALL PROVIDE TEMPORARY POWER AND LIGHTING FOR THIS WORK DURING CONSTRUCTION. TEMPORARY LIGHTING SHALL AT LEAST BE THE EQUAL OF (1)100-WATT FIXTURE EVERY 100 SQUARE FEET, WITH A MINIMUM ONE FIXTURE PER ROOM. TEMPORARY LIGHTING SHALL BE LEFT IN PLACE UNTIL PERMANENT LIGHTING IS COMPLETELY OPERATIONAL. COORDINATE TEMPORARY POWER REQUIREMENTS WITH THE OTHER TRADES AND PROVIDE ADEQUATE PROVISIONS. THE CONTRACTOR SHALL PERFORM ALL COORDINATION WITH THE OWNER AND/OR LANDLORD. TEMPORARY LIGHTING TO MEET OSHA REQUIREMENTS
15. **SWITCH AND RECEPTACLE IDENTIFICATION**
- PROVIDE MACHINE-PRINTED, PRESSURE SENSITIVE, ABRASION RESISTANT LABEL TAPE ON FACE OF ALL DEVICE PLATES TO IDENTIFY THE PANELBOARD AND CIRCUIT NUMBER FROM WHICH EACH DEVICE IS SERVED.
16. **UTILITY COMPANY COORDINATION**
- THE CONTRACTOR SHALL PERFORM ALL COORDINATION AND SCHEDULING OF THE INSTALLATION OF THE NEW ELECTRICAL SERVICE WITH THE LOCAL UTILITY COMPANY.
17. **EXCAVATION/UNDERGROUND UTILITIES**
- UNDERGROUND UTILITY LOCATE SERVICES SHALL BE REQUESTED AND COMPLETED BEFORE DISTURBANCE OF ANY EXISTING GRADE OR ON-GRADE CONSTRUCTION, SLAB DEMOLITION, OR OTHER ACTIVITIES THAT MAY IMPACT BURIED UTILITY CABLE CONDUITS. THE CONTRACTOR SHALL CONFIRM THAT UTILITY LOCATE SERVICES HAVE BEEN COMPLETED BEFORE EXISTING GRADE IS EXCAVATED OR EXISTING FLOORING IS DEMOLISHED, DRILLED, OR CUT, REGARDLESS OF THE LOCATION ON THE PROPERTY.
18. **PANELBOARDS**
- ALL PANELBOARDS IN WHICH WORK OCCURS PER THESE DOCUMENTS, SHALL BE PROVIDED WITH UPDATED-TYPEWRITTEN DIRECTORIES. GIVEN ONLY FOR CLARITY AND QUANTITY, CIRCUIT NUMBERS SHOWN IN THE PLANS MAY NOT NECESSARILLY REPRESENT ACTUAL CIRCUIT NUMBERS IN PANELBOARD. FROM FLUSH-MOUNTED PANELBOARDS, STUB-OUT ONE 3/4" CONDUIT INTO THE CEILING CAVITY FOR EACH SET OF 3 SPARES AND/OR SPACES OR FRACTION THEREOF.
19. **CABLEING**
- UNLESS NOTED OTHERWISE, ALL WIRE AND CABLE SHALL BE 600-VOLT COPPER CONDUCTORS WITH TYPE "THH-N/THWN" INSULATION. MINIMUM WIRE SIZE SHALL BE #12 AWG FOR LIGHTING AND POWER CIRCUITS AND #14 AWG FOR CONTROL CIRCUITS. PROVIDE GROUNDING FOR CIRCUITS PER THE NEC. UNLESS SPECIFICALLY NOTED OTHERWISE IN THE PLANS, ALL CABLING SHALL BE (2) #12 AND (1) #12 G IN 3/4" C.
20. **CABLE SIZING**
- BRANCH CIRCUIT CABLE SIZE SHALL BE ADJUSTED BASED ON THE CONDUCTOR LENGTH, AS INDICATED BELOW:
- A.) 120/208V CABLING FROM PANEL TO ELECTRICAL LOAD SHALL BE AS FOLLOWS, UNLESS OTHERWISE INDICATED:  
 LESS THAN 100 FEET, USE #12 AWG MINIMUM  
 FROM 100 TO 200 FEET, USE #10 AWG MINIMUM  
 FROM 200 TO 250 FEET, USE #8 AWG MINIMUM
- B.) 277/480/277/480V CABLING FROM PANEL TO ELECTRICAL LOAD SHALL BE AS FOLLOWS, UNLESS OTHERWISE INDICATED:  
 FROM 0 TO 150 FEET, USE #12 AWG MINIMUM  
 FROM 150 TO 250 FEET, USE #10 AWG MINIMUM  
 FROM 250 TO 300 FEET, USE #8 AWG MINIMUM
21. **COMMUNICATIONS WIRING CONDUIT SIZING**
- ALL HORIZONTAL TELEPHONE, DATA AND CABLE TELEVISION OUTLET WIRING IN RESIDENTIAL UNITS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AND SHALL TERMINATE IN THE COMMON TELE/DATA ROOM/CLOSET AT EACH FLOOR LEVEL. ALL MAIN DATA AND CABLE TELEVISION WIRING SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUITS FOR DATA AND TELEPHONE OUTLETS (EXCEPT WITHIN RESIDENTIAL UNITS) AS FOLLOWS:
- 3 CABLES-3/4" C     13 CABLES-1 1/2" C     47 CABLES-3" C  
 5 CABLES-1" C     21 CABLES-2" C     63 CABLES-3 1/2" C  
 9 CABLES-1 1/4" C     30 CABLES-2 1/2" C     81 CABLES-4" C
22. **CONDUIT/RACEWAY SYSTEMS**
- THE CONDUIT ROUTINGS INDICATED ARE ONLY DIAGRAMMATIC IN NATURE. FIELD CONDITIONS SHALL DICTATE THE CONTRACTOR'S EXACT CONDUIT ROUTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING AND LOCATING PULL BOXES PER THE NEC AND FOR COORDINATION WITH OTHER DISCIPLINES. ALL EXPOSED RACEWAYS SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO WALLS OR STRUCTURAL MEMBERS, SUCH AS TO FOLLOW STRUCTURAL SURFACE CONTOURS AND NOT OBSTRUCT PASSAGEWAYS. MULTIPLE RACEWAYS SHALL BE RUN TOGETHER, IN GROUPING. ALL EXPOSED CONDUIT SHALL BE ROUTED PERPENDICULAR, PARALLEL AND TIGHT TO COLUMNS AND BEAMS. ALL EXPOSED CONDUIT SHALL BE COORDINATED WITH THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION. EXTRA TIME SHOULD BE ALLOWED FOR THIS REVIEW AND APPROVAL. NO ADDITIONAL COST TO OWNER WILL BE ALLOWED DUE TO LACK OF COORDINATION. ALL CONDUIT SHALL BE ELECTRICAL METALLIC TUBING (EMT) AND MINIMUM SIZE SHALL BE 3/4" UNLESS NOTED OTHERWISE. CONNECTORS AND COUPLINGS SHALL BE INSULATED-THROAT COMPRESSION TYPE ONLY. RIGID GALVANIZED-STEEL (RGS) CONDUIT SHALL BE USED WHEN CONDUIT IS INSTALLED IN OUTDOOR AREAS OR WHERE OTHERWISE EXPOSED TO PHYSICAL HARM. EMERGENCY SYSTEMS SHALL BE RUN IN SEPARATE RACEWAY/CONDUIT SYSTEM(S). A SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE PULLED WITH THE CIRCUIT CONDUCTORS, WHETHER OR NOT INDICATED ON THE DRAWINGS. METAL RACEWAY OR CABLE ARMOR/ SHEATH SHALL NOT BE USED AS THE PRIMARY EQUIPMENT GROUNDING CONDUCTOR. RACEWAY SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONTINUOUS AND SHALL BE BONDED AT ALL POINTS TO THE INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ACCORDANCE WITH THE APPLICABLE PROVISIONS IN ARTICLE 250 OF THE NEC.
23. **EQUIPMENT**
- ALL MATERIALS AND EQUIPMENT PROVIDED IN THIS WORK SHALL BE NEW AND SHALL HAVE THE APPROPRIATE UL LISTING AND/OR FM APPROVAL. UNLESS NOTED OTHERWISE, DISCONNECT/SAFETY SWITCHES SHALL BE NON-FUSED HEAVY-DUTY 600-VOLT TYPE. INDOOR ENCLOSURES SHALL BE NEMA 1 AND OUTDOOR ENCLOSURES SHALL BE NEMA 3R.

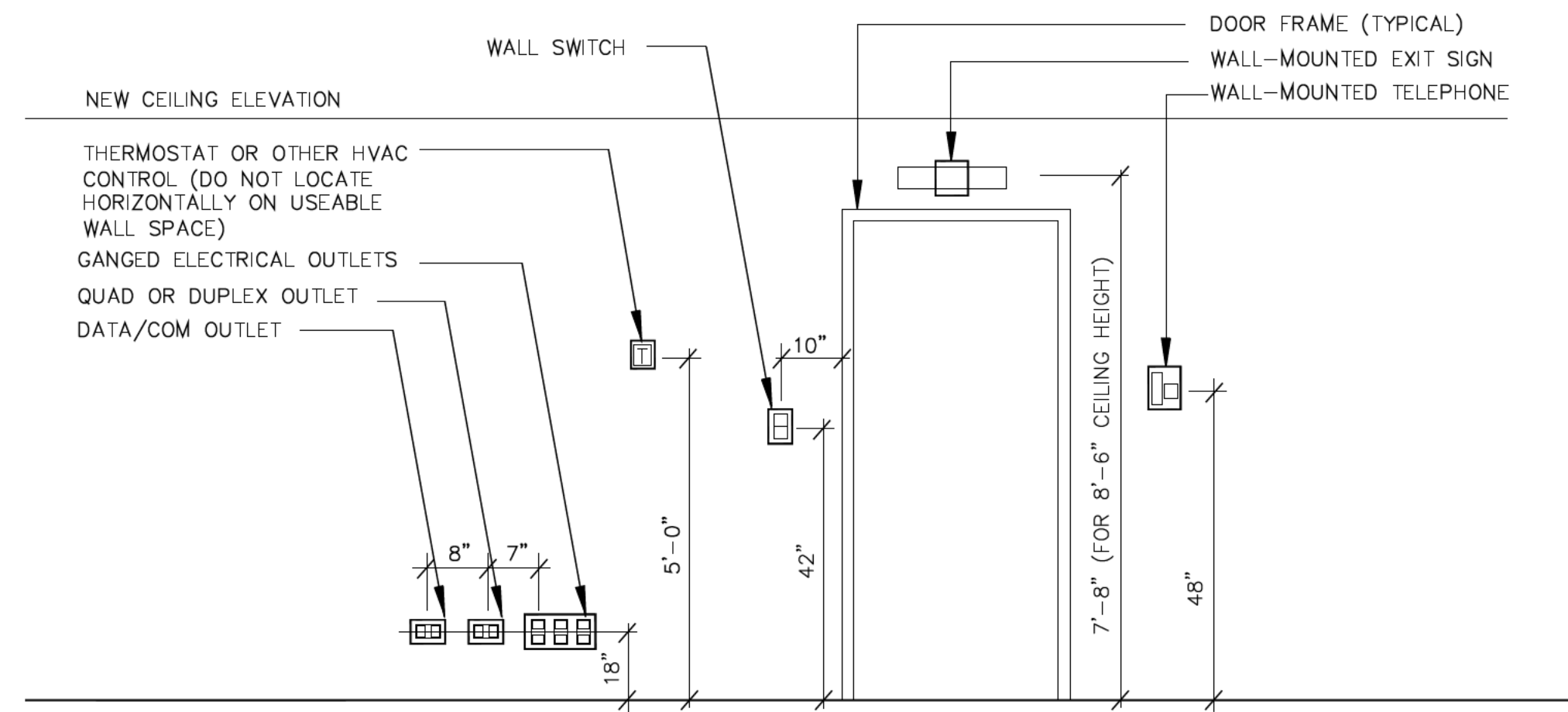
24. **MECHANICAL EQUIPMENT**
- ALL MECHANICAL EQUIPMENT WILL BE INSTALLED BY THE DIVISION 15 CONTRACTOR. COORDINATE THE EXACT LOCATION AND NATURE OF ANY REQUIRED ELECTRICAL CONNECTION TO BE PROVIDED FOR MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN. VERIFY THE ELECTRICAL SERVICE REQUIRED FOR EACH ITEM OF MECHANICAL EQUIPMENT WITH THE MECHANICAL CONTRACTOR PRIOR TO FURNISHING SUCH POWER. REFER TO MECHANICAL DRAWING FOR MECHANICAL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. MAKE CONNECTION AND PROVIDE APPROPRIATE WIRE, CONDUIT AND OVERCURRENT PROTECTION FOR EQUIPMENT. THE DISCONNECTING MEANS FOR ALL MECHANICAL EQUIPMENT SHALL BE ACCESSIBLE AND HAVE CLEARANCES AS REQUIRED BY THE NEC. MOTORS SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 15 WORK, WITH POWER CONNECTED UNDER DIVISION 16 WORK. FINAL CONNECTION SHALL BE MADE WITH SUITABLE LENGTH OF LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT. ALL MOTOR BRANCH CIRCUITS, ETC., SHALL BE FIELD-VERIFIED FOR PROPER SEQUENCE AND MOTOR ROTATION. PHASE SEQUENCE SHALL BE A-B-C (VIEWED FROM FRONT: LEFT TO RIGHT, TOP TO BOTTOM, FRONT TO REAR). REFER TO MECHANICAL DRAWINGS FOR MOTORS THAT ARE TO BE INTERLOCKED.
25. **MISCELLANEOUS SUPPORTING MEMBERS**
- ALL ANGLES, CHANNELS, AND OTHER MISCELLANEOUS STEEL, BOLTS, THREADED RODS, ETC., REQUIRED TO SUPPORT LIGHT FIXTURES, LADDER TRAY OR OTHER ELECTRICAL EQUIPMENT OR DEVICES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. ALL THREADED RODS SHALL BE A MINIMUM OF 3/8" IN DIAMETER. ALL LIGHTING FIXTURES AT SUSPENDED CEILING SHALL BE PROPERLY SUPPORTED IN ACCORDANCE WITH APPLICABLE NEC ARTICLES 410, 300-11 ETC.
26. **DERATING**
- 30 CURRENT CARRYING CONDUCTORS CONTAINED IN THE SAME RACEWAY, ELECTRICAL ENCLOSURE SHALL BE DERATED ACCORDING TO ADJUSTMENT FACTORS IN ARTICLE 310.15(B)(3)(c).
27. **EMERGENCY LIGHTING AND EXIT SIGN CIRCUITING**
- EMERGENCY LIGHTING AND EXIT SIGNS SHALL BE FED FROM THE NORMAL LIGHTING CIRCUIT IN THE SAME ROOM AHEAD OF THE SWITCH.
28. **LIGHTING CONTROL PROGRAMMING**
- CONTRACTOR SHALL PROVIDE EVIDENCE THAT THE LIGHTING CONTROL SYSTEMS HAVE BEEN PROGRAMMED, CALIBRATED AND TESTED PRIOR TO FINAL INSPECTIONS. FUNCTIONAL TESTING SHALL BE ACCORDANCE WITH SECTIONS C408.3.1.1 AND C408.3.1.2.

**GENERAL LOW VOLTAGE CABLING NOTES:**

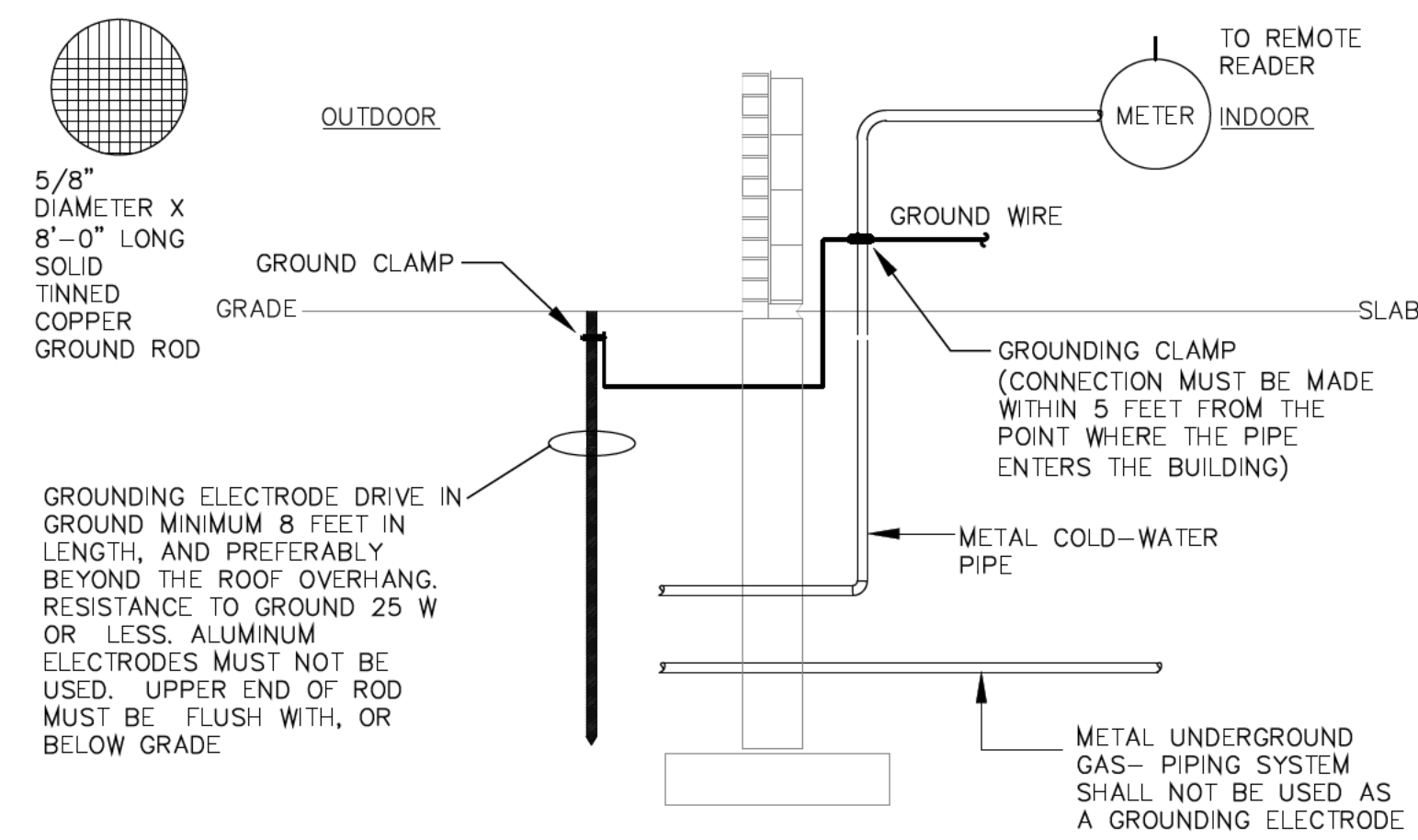
- ALL TELEPHONE CABLING SHALL BE CAT 5e AND SHALL HOMERUN FROM EACH TELEPHONE OUTLET LOCATION TO THE TELEPHONE DISTRIBUTION POINT LOCATED IN THE MECH/ELEC ROOM.
- ALL TELEVISION OUTLET CABLE SHALL BE COAXIAL RG-6 AND SHALL HOMERUN TO TELEVISION DISTRIBUTION POINT LOCATED IN THE MECH/ELEC ROOM AT FIRST FLOOR.
- CONDUIT IS NOT REQUIRED FOR TELEPHONE, DATA, OR TELEVISION CABLING IN ACCESSIBLE CEILINGS. PROVIDE WALL BOX WITH CONDUIT STUB-UP TO ABOVE ACCESSIBLE CEILING. TYPICAL FOR ALL LOW VOLTAGE SYSTEMS.
- PROVIDE A DEDICATED BOXES AND CONDUIT RACEWAY SYSTEM FOR THE BUILDING FIRE ALARM SYSTEM.

ELECTRICAL ABBREVIATIONS:			
A	AMPERE	MCC	MOTOR CONTROL CENTER
AC	ALTERNATING CURRENT	MFR	MANUFACTURE
AF	ABOVE FINISHED FLOOR	MISC	MISCELLANEOUS
C	CONDUIT	MTG	MOUNTING
CKT	CIRCUIT	(N)	NEW WORK
CT	CURRENT TRANSFORMER	NEUT	NEUTRAL
DC	DIRECT CURRENT	NL	NIGHT LIGHTING
DISC	DISCONNECT	NTS	NOT TO SCALE
DWG	DRAWING	PB	PUSH BUTTON
EMER	EMERGENCY	PH	PHASE
EQUIP	EQUIPMENT	PNL	PANEL
E.C.	ELECTRICAL CONTRACTOR	PRI	PRIMARY
(E)	EXISTING	PWR	POWER
EWC	ELECTRIC WATER COOLER	(R)	RELOCATED
FDR	FEEDER	RGS	RIGID GALVANIZED STEEL CONDUIT
FLEX	FLEXIBLE	SEC	SECONDARY
G	GROUND WIRE	SP	SPARE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SW	SWITCH
GRD	GROUND	TEL	TELEPHONE
HP	HORSE POWER	V	VOLTS
KVA	KILO VOLT AMPERE	VA	VOLT AMPERES
KW	KILOWATT	VM	VOLT METER
LC	LIGHTING CONTRACTOR	W	WAIT OR WIRE
LV	LOW VOLTAGE	WP	WEATHER PROOF
LTG	LIGHTING	XFMR	TRANSFORMER
		100AF	100 AMPERES FRAME
		100AT	100 AMPERES TRIP

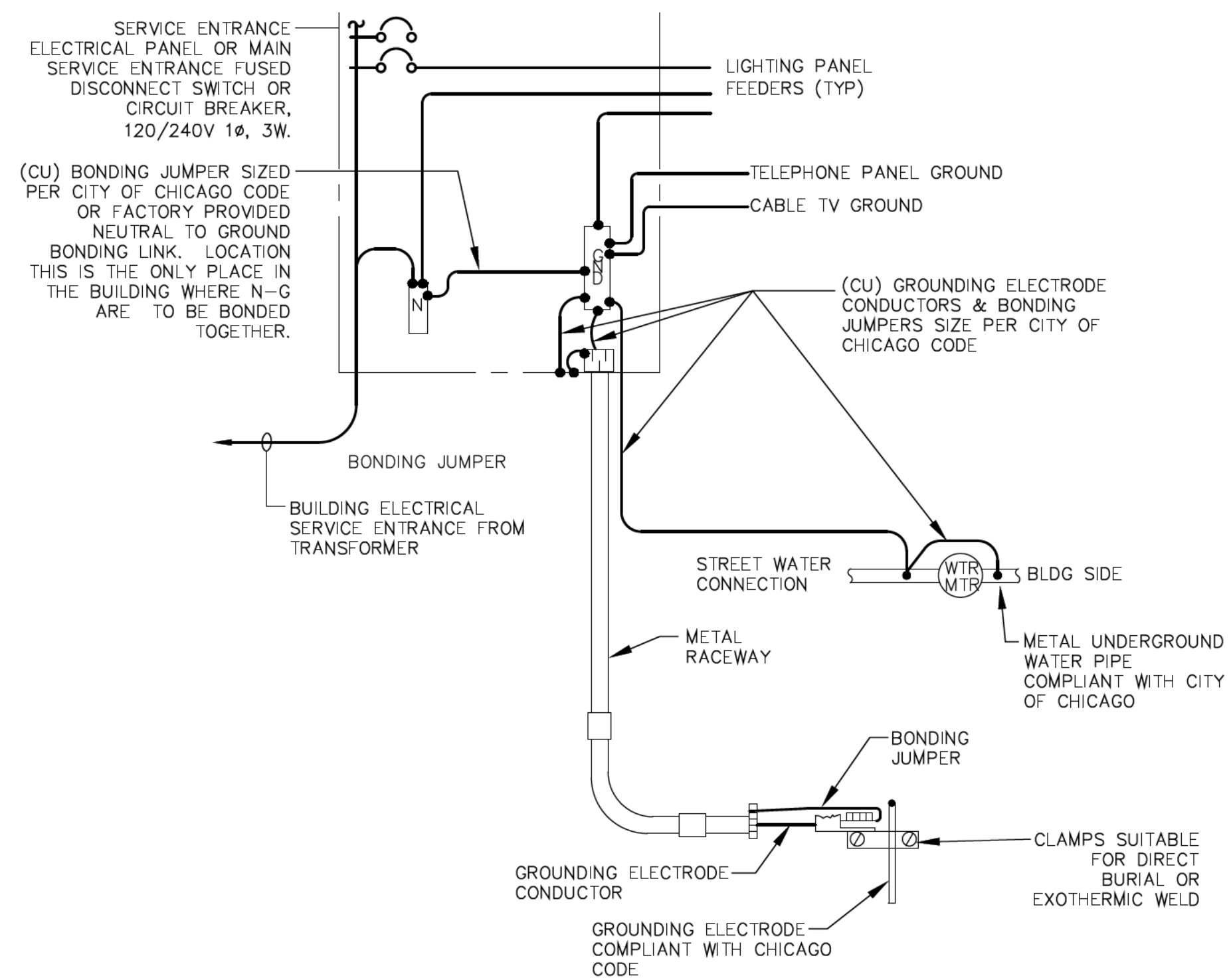
ELECTRICAL SYMBOL LIST		
	DISTRIBUTION COMBINATION MAGNETIC MOTOR STARTER/CONTROLLER WITH NON-FUSED DISCONNECT SWITCH IN NEMA 1 ENCLOSURE (THREE POLES UNLESS OTHERWISE NOTED).	2b 69 2b 3W 69
	NON-FUSED DISCONNECT SWITCH. PROVIDE LIQUID TIGHT FLEXIBLE CONDUIT AND MAKE FINAL CONNECTION. (THREE POLES UNLESS OTHERWISE NOTED).	2b 69 4W 69
	FUSED DISCONNECT SWITCH. PROVIDE LIQUID TIGHT FLEXIBLE CONDUIT AND MAKE FINAL CONNECTION. (THREE POLES UNLESS OTHERWISE NOTED).	M 69
	VARIABLE FREQUENCY CONTROLLER. COORDINATE WITH MECHANICAL DRAWINGS	D 69
	SURFACE MOUNTED PANELBOARD	3D 69
	SURFACE MOUNTED POWER DISTRIBUTION PANELBOARD	OC 69
	MISCELLANEOUS PANELS AND CABINETS. TYPE AS INDICATED ON PLANS.	69
	MOTOR CONNECTION. PROVIDE LIQUID-TIGHT FLEXIBLE CONNECTION AND JUNCTION BOX.	
	EQUIPMENT TAG. REFER TO EQUIPMENT FEEDER SCHEDULE FOR WIRING REQUIREMENTS RACEWAY	
	EXPOSED CONDUIT CONDUIT CONCEALED IN FLOOR OR BELOW GRADE	
	CONDUIT CONCEALED IN WALL OR CEILING CONDUIT TURNED UP	
	CONDUIT TURNED DOWN JUNCTION BOX WITH BLANK COVER	
	CEILING OR WALL MOUNTED JUNCTION BOX WITH BLANK COVER AND A MAX. 6'-0" FLEXIBLE LIQUID-TIGHT CONDUIT CONNECTION. SURFACE MOUNTED DUAL SERVICE METAL RACEWAY (WIREFOLD G-4000 WITH IVORY SCUFFCOAT FINISH) WITH DEVICES MOUNTED OUTLETS - FLUSH MOUNTED UNLESS OTHERWISE NOTED	
	LIGHTING FIXTURES 2'x4' FLUORESCENT LUMINAIRE PER LUMINAIRE SCHEDULE. F1 - INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION AND MOUNTING. 3 - INDICATES CIRCUIT NUMBER a - INDICATES SWITCH CONTROL	
	4' FLUORESCENT STRIP LIGHT RECESSED DOWN LIGHT	
	WALL SCONCE / WALL MOUNTED LIGHT FIXTURE TRACK LIGHTING / CEILING MOUNTED LIGHT FIXTURE	
	EXIT SIGN - SHADING INDICATES LIGHTED FACE. ARROW INDICATES STENCIL INDICATED EXIT DIRECTION	
	FIRE ALARM SYSTEM EQUIPMENT	
	REMOTE GRAPHIC FIRE ALARM ANNUNCIATOR CONTROL PANEL, WITH L.E.D.'S AND LAMP TEST SWITCH FULLY RECESSED IN WALL.	
	REMOTE DUCT DETECTOR ANNUNCIATOR CONTROL PANEL, WITH L.E.D.'S AND LAMP TEST SWITCH FULLY RECESSED IN WALL. ELEVATOR SYSTEM ANNUNCIATOR PANEL FULLY RECESSED IN WALL	
	120VAC SMOKE DETECTOR (RESIDENTIAL UNITS ONLY). CO/SD INDICATES COMBINATION CARBON MONOXIDE AND SMOKE DETECTOR	
	HVAC DUCT SMOKE DETECTOR WITH ADDRESSIBLE RELAY, COMPLETE WITH PERFORATED SAMPLING TUBES. SAMPLING TUBES SHALL EXTEND THE COMPLETE LENGTH OF THE HEADER DUCTWORK.	
	DUCT SMOKE DETECTOR REMOTE ANNUNCIATOR STATUS LED LIGHT IN A SINGLE GANG BACKBOX AND COVERPLATE. PROVIDE ENGRAVED IDENTIFICATION LABEL INDICATING EQUIPMENT SERVED.	
	FIRE ALARM SPEAKER DEVICE WITH VISUAL ALARM DEVICE (PER A.D.A. REQUIREMENTS AND CITY OF CHICAGO HIGH RISE CODE)	
	ZONE ADDRESSABLE RELAY MODULE	
	TROUBLE BELL VALVE SUPERVISORY CONTROL PANEL	
	VALVE SUPERVISORY ANNUNCIATOR PANEL	
	VALVE SUPERVISORY SWITCH WATER FLOW SWITCH	
	AIR FLOW SWITCH	
NOTES:- ALL OUTLET HEIGHTS AND EXACT LOCATION MUST BE VERIFIED WITH ARCHITECT PRIOR TO WORK BEING DONE.		



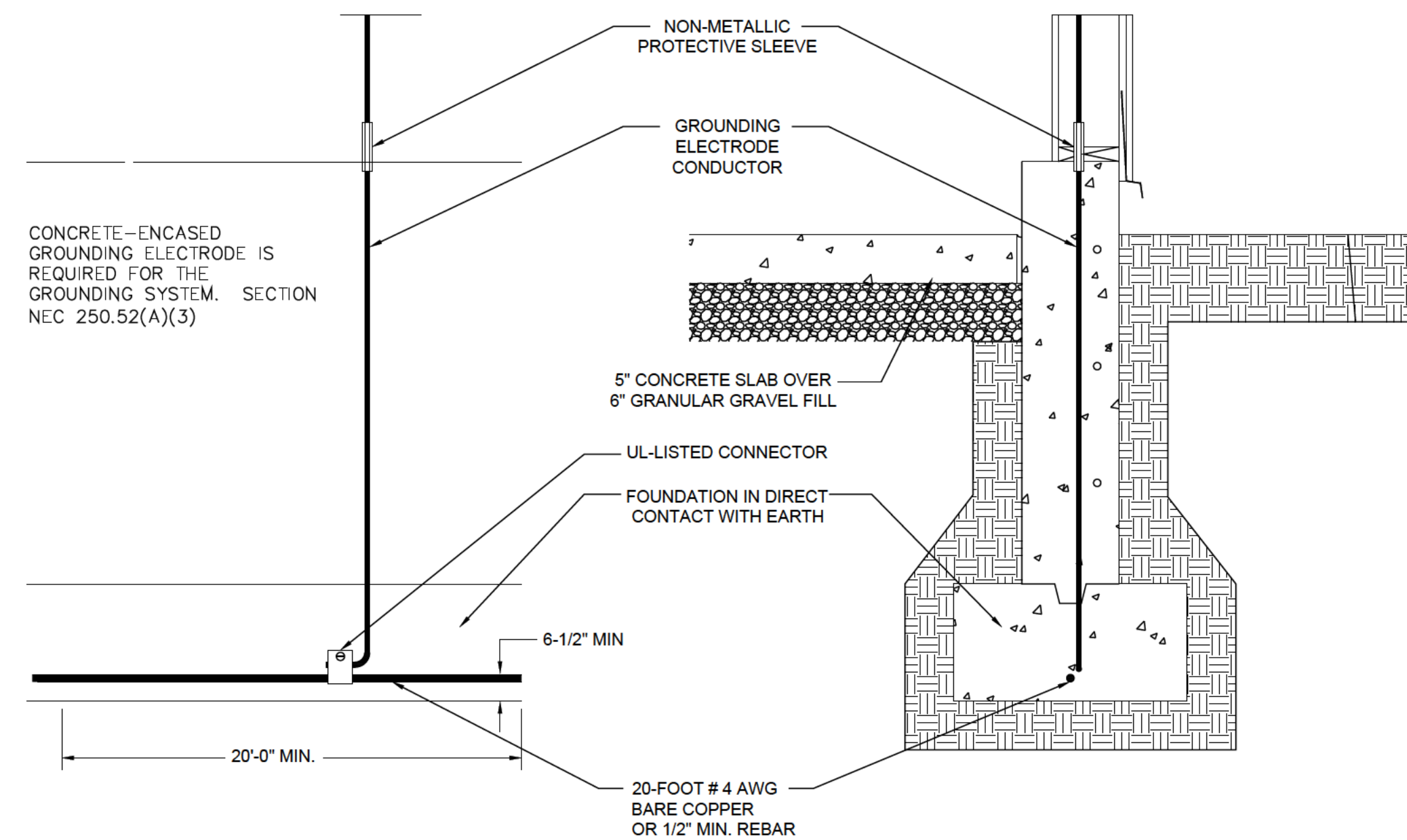
1 STANDARD ELECTRICAL MOUNTING HEIGHTS  
SCALE: N.T.S.



3 COMPONENTS OF SERVICE GROUNDING SYSTEM  
SCALE: N.T.S.



1 BUILDING GROUNDING DETAIL  
SCALE: N.T.S.



2 CONCRETE ENCASED ELECTRODE DETAIL  
SCALE: N.T.S.

GENERAL GROUNDING NOTES

- TWO-HOLE LONG BARREL (DOUBLE INDENT) BOLTED-TYPE HYDRAULIC COPPER COMPRESSION CONNECTORS SHALL BE USED FOR CONDUCTORS LARGER THAN #8 AWG. ALL COMPRESSION CONNECTORS FOR CABLE SIZES #10 AWG AND LARGER SHALL EMPLOY HEX OR CIRUMFERENTIAL TYPE CRIMPS, AND SHALL HAVE AN INSPECTION HOLE BETWEEN THE TONGUE AND BARREL. THE CABLE SHALL BE COMPLETELY INSERTED INTO THE CONNECTOR BEFORE THE CRIMPS ARE MADE. CONNECTORS SHALL BE AS MANUFACTURED BY BURNDY, TYPE YA "HYLUG", AND ONLY ON STRANDED WIRE. ALL SOLID WIRE GROUND CONNECTIONS MUST BE EXOTHERMIC ALLY WELDED OR, IF RUN IN THE INTERIOR, SOLDERED.
- USE HYDRAULIC COPPER COMPRESSION H-TAP CONNECTORS AS MANUFACTURED BY BURNDY, TYPE YH "H COPPER CRIMPIT". PROVIDE FLAME RETARDANT INSULATING COVERS. PROVIDE THOMAS AND BETTS HARD COVER TYPE "HTC".
- ALL COMPRESSION AND MECHANICAL CONNECTIONS SHALL BE COATED WITH THE CORROSION PREVENTATIVE COMPOUND NO-OX-ID "A", AS MANUFACTURED BY DEARBORN CHEMICAL COMPANY.
- ALL GROUND CONDUCTORS SHALL BE COPPER WITH GREEN (COLOR) INSULATION. GREEN-INSULATED GROUND WIRE FOR ALL SIZES IS AVAILABLE THROUGH QUAD CABLOCON (TROY, MI (800) 969-9220) OR RELTEC SERVICES (800-927-2780). GROUND CONDUCTORS LARGER THAN #1 SWG SHALL BE TYPE RHH/RHW (BRAIDED-CLOTH JACKET, SYNTHETIC RUBBER INSULATION).
- ALL GROUNDING CONDUCTORS SHALL BE IN METALLIC CONDUIT, UNLESS OTHERWISE NOTED. GROUND CONDUCTORS SHALL NOT BE RUN CONCEALED IN SLABS, COLUMNS, OR WALLS. USE RIGID GALVANIZED STEEL CONDUIT SLEEVES WHERE GROUND CONDUCTORS PENETRATE WALLS OR FLOOR SLABS.
- METALLIC STRAPS SHALL BE USED TO SECURE GROUND CONDUCTOR CONDUITS EVERY 18" HORIZONTALLY AND EVERY 9" VERTICALLY TO THE BUILDING COLUMNS OR WALLS. IF METALLIC STRAPS ARE USED, THEY SHALL BE OF THE TYPE WHICH DO NOT COMPLETELY ENCIRCLE THE CONDUCTOR. PLASTIC "CLIC" CONNECTORS BY LITCHFIELD INTERNATIONAL COMPANY (800-345-CLIC) ARE ACCEPTABLE FOR USE AS CONDUIT AND CONDUCTOR SUPPORTS. DO NOT USE CONDUIT, CABLE TRAY, MECHANICAL DUCT, OR PLASTIC TIE WRAPS TO SECURE GROUND CONDUCTORS.
- THE MINIMUM BEND RADII ON GROUND CONDUCTORS SHALL BE AS FOLLOWS:  
#12 - #6 6"  
#4 - #4/0 12"  
#250 - #750 KCMIL 24"
- PACK OPENINGS AROUND GROUND CONDUCTOR PENETRATIONS OF FLOOR SLABS OR WALLS WITH FIRE RETARDANT MATERIAL. APPROVED FIRE RETARDANT MATERIAL SHALL BE HILTI FIRE BARRIER CAULK (NO SUBSTITUTIONS).
- TAG ALL GROUND CONDUCTOR TERMINATIONS AT GROUND BAR WITH GRAY OVAL FIBER "FAR-END DESTINATION" 145P TAGS AS MANUFACTURED BY ONE OF THE FOLLOWING:  
A. ANIXTER (BLOOMINGTON, ILLINOIS) TEL. # 309/662-5162 OR 800/ANIXTER PART #847755246  
B. MARCONI (OHIO) TEL. # 800/927-2780 PART #847755246  
GROUND SERVICES MAY BE STAMPED, ENGRAVED, OR LEGIBLY/NEATLY HANDWRITTEN ON FIBER TAG. AT GROUND BAR TERMINATIONS ALSO PROVIDE ENGRAVED BRASS "DO NOT DISCONNECT" TAGS MANUFACTURED BY:  
C. ANIXTER (MANUFACTURED BY FLEXTRONICS AND SOLD BY ANIXTER) PART # P0411719  
D. GUS BERTHOLD ELECTRIC COMPANY (CHICAGO ILLINOIS) TEL. # 312/243- 5767 (BLANK TAGS PURCHASED BY GBE CO. AND STAMPED)
- ALL TAGS AT GROUND BAR TERMINATIONS SHALL BE SEALED WITH 9-PLY OR 12-PLY TWINE/CORD MANUFACTURED BY ANIXTER. TIE WRAPS SHALL NOT BE USED. 9-PLY PART # 095017, 12-PLY PART # 224758.
- THE MAIN BUILDING GROUND BAR (MGB) SHALL BE THE EXTENSION OF THE BUILDING GROUNDING SYSTEM AND SHALL SERVE AS THE MAIN POINT OF BONDING WITHIN THE FACILITY AND SHALL COMPLY WITH CHICAGO BUILDING CODE. THE MGB SHALL BE THE COMMON GROUND POINT TO WHICH ALL GROUND POINTS FOR THE FACILITY ARE BONDED.
- THE ROUTE OF THE BONDING CONDUCTORS FROM THE MGB TO THE FACILITY GROUND RING SHALL BE AS SHORT AND STRAIGHT AS PRACTICALLY POSSIBLE.
- THE MGB WILL SHALL BE CONFIGURED TO MAINTAIN SEPARATION BETWEEN SURGE PRODUCERS, ABSORBERS, NON-ISOLATED AND ISOLATED GROUNDS. THE MGB SHALL BE PERMANENTLY AND APPROPRIATELY LABELED AND IDENTIFY WITH "P", "A", "N", AND "I" SECTIONS OF THE MGB.
- BONDING CONDUCTORS BETWEEN THE MGB AND OTHER ANCILLARY GROUND BARS OR EQUIPMENT BAYS SHALL RUN IN THE STRAIGHTEST ROUTE MINIMIZING THE TOTAL LENGTH OF THE CONDUCTOR.
- ALL GROUNDING SYSTEM CABLE RUNS THAT ARE ROUTED THROUGH WALLS, CEILING OR FLOORS SHALL BE PROTECTED BY METALLIC CONDUITS OR SLEEVES.
- CONNECTIONS TO THE BURIED DELTA GROUND RING SHALL BE EXOTHERMIC ALLY WELDED BY TECHNICIANS CERTIFIED ON THE PROCESS. CONNECTIONS OTHER THAN EXOTHERMIC WELD SHALL BE LOCATED SO AS TO FACILITATE PERIODIC INSPECTION AND MAINTENANCE.
- ALL BURIED CONNECTIONS SHALL BE EXOTHERMIC WELDS. ALL EXPOSED MECHANICAL AND/OR HIGH COMPRESSION CONNECTIONS SHALL BE TREATED WITH A PROTECTIVE, ANTI-OXIDANT COATING. ALL EXOTHERMIC WELDS TO GALVANIZING SURFACES SHALL BE SPRAYED WITH GALVANIZING PAINT.

### EXIT AND EMERGENCY LIGHTING FIXTURE SCHEDULE

FIXT. TAG	SYMBOL	LAMP(S)			VOLTS	MOUNTING		MANUFACTURER	CATALOG NO	REMARKS
		QTY.	TYPE	TOTAL WATTS		TYPE	HEIGHT			
EM		2	24W INCAND. SEALED-BEAM		120	SURFACE WALL	8'-6"	SURE-LITES	HR12170C	EMERGENCY WALL PACK LIGHT FIXTURE WITH METALLIC ENCLOSURE; SEALED LEAD-CADMIUM 120 MINUTE BATTERY AND INTEGRAL TEST SWITCH CHICAGO APPROVED
EX			LED SEALED-BEAM		120	SURFACE WALL	8'-6"	SURE-LITES		EMERGENCY EXIT SIGNS WITH INTEGRAL BATTERY PACK AS APPROVED BY LOCAL CODE AUTHORITIES CHICAGO APPROVED

### LIGHTING FIXTURE SCHEDULE NOTES:

- ELECTRICAL CONTRACTOR SHALL SUBMIT CATALOG CUTS TO ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING LIGHTING FIXTURES.
- ALL BALLASTS SHALL BE PROGRAMMABLE RAPID START, ELECTRONIC ENERGY SAVING TYPE.
- ALL EXIT SIGNS AND EMERGENCY LIGHT FIXTURES SHALL BE IN STRICT ACCORDANCE WITH LOCAL CODE AUTHORITY. ALL EXIT SIGNS SHALL BE INSTALLED IN A VISIBLE LOCATION, WITHOUT ANY OBSTRUCTIONS IN ORDER TO FACILITATE VIEWING. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT STEMS WHERE NECESSARY TO DROP A SIGN BELOW AN OBSTRUCTION.
- ELECTRICAL CONTRACTOR SHALL PROVIDE SUBMITTAL ON FULL LIGHTING FIXTURE PURCHASE FOR ARCHITECT'S APPROVAL PRIOR TO ORDER.
- FIXTURES SHALL HAVE APPROPRIATE UL LABEL, DAMP, OR WET AS REQUIRED BY LOCAL CODES.
- PROVIDE LAMPS FROM: OSRAM SYLVANIA, GE OR PHILIPS UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL VERIFY FINAL VOLTAGES AND CEILING TRIM COMPATIBILITY PRIOR TO ORDERING FIXTURES.
- CEILING THICKNESS IN EXCESS OF 3/4" SHALL BE IDENTIFIED IN WRITING BY CONTRACTOR/ARCHITECT.
- FIXTURES LOCATED IN AN INSULATED CEILING AREA, SHALL HAVE AN IC HOUSING (ELECTRICAL CONTRACTOR TO COORDINATE).
- FIXTURES SHALL BE ORDERED WITH THE APPROPRIATE BALLASTS THAT HAVE UL AND CBM LABELS. BALLASTS SHALL CONFORM TO LOCAL CODE REQUIREMENTS FOR PERFORMANCE, SWITCHING, AND WIRING (I.E. TANDEM).
- PROVIDE APPROVED FIRE-RATED ENCLOSURES FOR LIGHTING FIXTURES LOCATED IN A FIRE-RATED CEILING.
- WALLS DIRECTLY ILLUMINATED SHALL BE INSTALLED AND FINISHED IN A MANNER TO ELIMINATE SHADOWS OR BLEMISHES (I.E. HANG DRY WALL VERTICALLY).
- THE ARCHITECT AND LIGHTING DESIGNER SHALL APPROVE FIXTURE SUBSTITUTIONS PRIOR TO BID. CONTRACTOR SHALL SUPPLY A SAMPLE AND/OR PHOTOMETRIC DATA IF REQUESTED. IF SUBSTITUTION IS REJECTED, CONTRACTOR SHALL PROVIDE SPECIFIED PRODUCT.
- FIXTURES SHALL INCLUDE ACCESSORIES FOR INSTALLATION ACCORDING TO LOCAL AND NATIONAL CODES.
- PRIOR TO ORDERING LIGHTING EQUIPMENT, THE CONTRACTOR SHALL VERIFY LOCATIONS AND RECESS DEPTHS.
- LAMPS SHALL BE PROVIDED AND INSTALLED ACCORDING TO THE ATTACHED FIXTURE SCHEDULE.
- VERIFY EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES WITH ARCHITECT PRIOR TO ROUGH-IN.

### LIGHTING CONTROLS SCHEDULE

#### LIGHTING CONTROL NOTES:

- ALL SENSORS SELF-ADAPTING.
- VERIFY NUMBER OF CONTROL UNITS.
- ELECTRICAL CONTRACTOR SHALL PROVIDE 1/4" SCALED LIGHTING CONTROL SHOP DRAWINGS CONSISTING OF ENGINEERED PLANS AND LIGHTING CONTROL DEVICE SCHEDULE FROM LIGHTING CONTROL MANUFACTURER FOR ENGINEER'S REVIEW.

SENSOR TAG	MANUFACTURER AND CATALOG NUMBER	FIELD VIEW	VOLT	LOCATION	REMARKS
	SENSOR SWITCH ACUITY #WSX-PDT	SHORT: 20'	120 VAC	SMALL TOILET ROOMS, SMALL STORAGE ROOMS, UTILITY AND AUX. ROOMS	1-POLE DUAL TECHNOLOGY (PIR/MICROPHONICS) OCCUPANCY SENSOR, SELF-ADJUSTING WHITE, 120/277 VAC 800/1200 WATTS PER CIRCUIT WITH 180 DEGREE COVERAGE AND BUILT-IN MANUAL OVERRIDE CONTROL TO MANUALLY SHUT LIGHTS OFF WHEN DESIRED.
	SENSOR SWITCH ACUITY ACUITY #WSX-PDT-2P	SHORT: 20'	120 VAC	LARGE OFFICE	2-POLE DUAL TECHNOLOGY (PIR/MICROPHONICS) OCCUPANCY SENSOR, SELF-ADJUSTING WHITE, 120/277 VAC 800/1200 WATTS PER CIRCUIT WITH 180 DEGREE COVERAGE AND TWO BUILT-IN MANUAL OVERRIDE CONTROL TO MANUALLY SHUT EITHER CIRCUIT OFF WHEN DESIRED.
	SENSOR SWITCH ACUITY WV-16 #CM-PDT-10 OR WV-PDT-BR	LONG: 30' SHORT: 12'	120 VAC	SURFACE CEILING	DUAL TECHNOLOGY OCCUPANCY SENSOR, EXTENDED RANGE, SELF ADAPTING, UL LISTED POWER PACK. PROVIDE VIDE VIEW SENSOR MICROPHONIC-DUAL TECHNOLOGY-12 TO 24 VDC/VAC

#### SENSOR NOTES

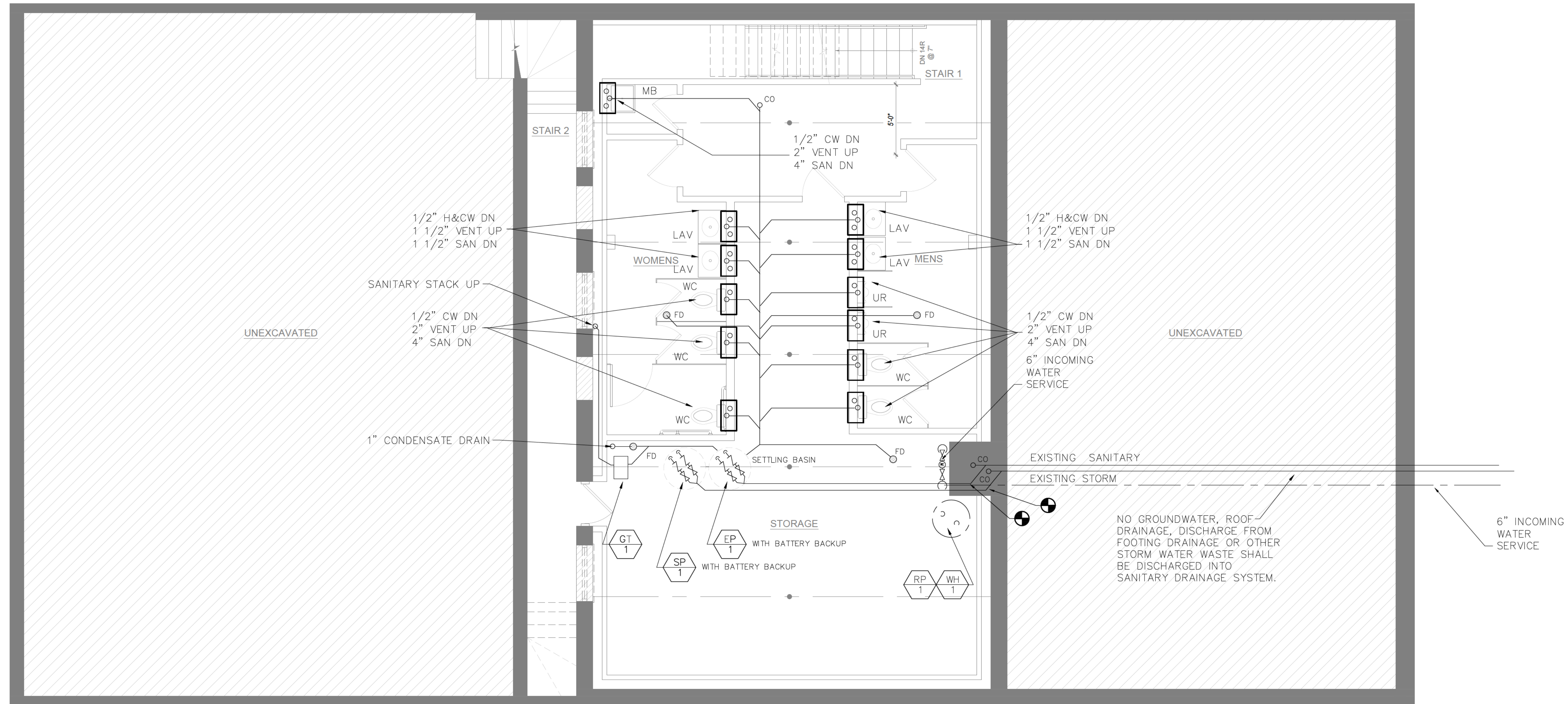
- SENSORS IN ELECTRICAL/MECHANICAL LOCATIONS NEED TO BE VERIFIED WITH AUTHORITY HAVING JURISDICTION. REFER TO NEC 110.26.D: "ILLUMINATION. ILLUMINATION SHALL BE PROVIDED FOR ALL WORKING SPACES ABOUT SERVICE EQUIPMENT, SWITCHBOARDS, PANELBOARDS, OR MOTOR CONTROL CENTERS INSTALLED INDOORS. ADDITIONAL LIGHTING OUTLETS SHALL NOT BE REQUIRED WHERE THE WORK SPACE IS ILLUMINATED BY AN ADJACENT LIGHT SOURCE OR AS PERMITTED BY 210.70(A)(1), EXCEPTION NO. 1, FOR SWITCHED RECEPTACLES. IN ELECTRICAL EQUIPMENT ROOMS, THE ILLUMINATION SHALL NOT BE CONTROLLED BY AUTOMATIC MEANS ONLY."
- SENSORS ON DRAWINGS WERE PLACED WITH CURRENT INFORMATION. ADDITIONAL SENSORS MAY BE REQUIRED TO PROVIDE COMPLETE COVERAGE DEPENDING ON CHANGES, FINAL PARTITION HEIGHT/PLACEMENT, FURNITURE PLACEMENT, EQUIPMENT HEIGHT/PLACEMENT AND SHELVING HEIGHT/PLACEMENT.
- SENSOR MASKING KITS MAY BE REQUIRED TO LIMIT COVERAGE DEPENDING ON THE PROJECT REQUIREMENTS.

PANELBOARD SCHEDULE												LOCATION: SEE PLANS	
SERVICE: 120/240V-3PH-4W												NEUTRAL BUS: STANDARD, COPPER	
MAIN CIRCUIT BREAKER: 200A MCB												GROUND BUS: STANDARD, COPPER	
MAIN BUS RATING AND TYPE: 200A COPPER												MOUNTING: RECESSED	
INTERRUPT RATING: 16,000 AIC												ENCLOSURE: NEMA 1	
DESCRIPTION	CCT NO	CCT BRKR	CCT LOAD	CONN. LOAD (VA)			CCT LOAD	CCT BRKR	CCT NO	DESCRIPTION	R		
				A	B	C							
L LIGHTING	1	20A-1P	500	1580			1080	20A-1P	2	GENERAL USE RECEPTACLES	R		
L LIGHTING	3	20A-1P	500		1580		1080	20A-1P	4	GENERAL USE RECEPTACLES	R		
L LIGHTING	5	20A-1P	500			1580	1080	20A-1P	6	GENERAL USE RECEPTACLES	R		
L LIGHTING	7	20A-1P	500	1580			1080	20A-1P	8	GENERAL USE RECEPTACLES	R		
L LIGHTING	9	20A-1P	500		1580		1080	20A-1P	10	GENERAL USE RECEPTACLES	R		
M REFRIGERATOR	11	20A-1P	1200			2400	1200	20A-1P	12	KEF-1 / HOOD	K		
M REFRIGERATOR	13	20A-1P	1200	2700			1500	20A-1P	14	MICROWAVE	K		
M REFRIGERATOR	15	20A-1P	1200		2700		1500	20A-1P	16	DISHWASHER	K		
M SHOP AIR FILTER	17	20A-1P	120			720	600	20A-1P	18	ICE MACHINE	M		
K COOKTOP	19	30A-2P	1500	3000			1500	20A-1P	20	HAND DRYER	M		
K	21	-	1500		3000		1500	20A-1P	22	HAND DRYER	M		
M MINI FRIDGE	23	20A-1P	600			2100	1500	20A-1P	24	HAND DRYER	M		
M MINI FRIDGE	25	20A-1P	600	600					26	SPACE			
M MINI FRIDGE	27	20A-1P	600		1200		600	20A-1P	28	GARAGE DOOR	M		
SPACE	29						1500	20A-1P	30	ELECTRIC WATER COOLER	M		
K WALL OVEN	31	30A-2P	1500	1700			200	20A-1P	32	EXISTING FURNACE	H		
K	33	-	1500		1900		400	20A-1P	34	EXHAUST FANS	M		
M WASHER/DRYER	35	20A-1P	1500			1500			36	SPACE			
H ECH-1 GARAGE	37	20A-1P	1200	1800			600	20A-1P	38	WATER HEATER	M		
M FCU-1	39	20A-1P	600		1600		1000	20A-1P	40	EJECTOR PUMP	M		
M GEF-1	41	20A-1P	120			1120	1000	20A-1P	42	RECIRC PUMP	M		
SPACE	43			1000			1000	20A-1P	44	SUMP PUMP	M		
SPACE	45				1600		1600	20A-3P	46	MUA-1	M		
SPACE	47					1600	1600	-	48	-	M		
SPACE	49			1600			1600	-	50	-	M		
C EXISTING CU	51	30A-2P	2496		4992		2496	30A-2P	52	NEW CU	C		
C	53	-	2496			4992	2496	-	54	-	C		
H EXISTING RTU	55	50A-3P	3600	7200			3600	50A-3P	56	EXISTING RTU	H		
H	57	-	3600		7200		3600	-	58	-	H		
H	59	-	3600			7200	3600	-	60	-	H		
TOTAL VA PER PHASE				22760	27352	24712							
				CONNECTED LOAD			DEMAND FACTOR		DEMAND LOAD				
L LIGHTING				2.50	KVA		1.25	3.13 KVA					
R RECEPTACLES				5.40	KVA		NEC	5.40 KVA					
M MOTOR/EQUIPMENT				23.74	KVA		1.00	23.74 KVA					
H HEATING				23.00	KVA		1.00	23.00 KVA					
K KITCHEN				10.20	KVA		NEC	10.20 KVA					
C COOLING				9.98	KVA		0.00	0.00 KVA					
TOTAL CONNECTED LOAD:				74.82	KVA		TOTAL DEMAND LOAD:		65.5	KVA			
TOTAL CONNECTED CURRENT:				180.00	AMPS		TOTAL DEMAND CURRENT:		157.48	AMPS			

#### NOTES:

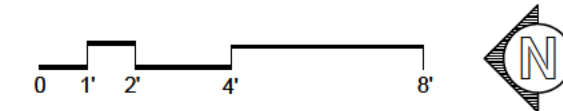
- TOILET FANS TO BE CONNECTED WITH TOILET LIGHTING.

LESSER OF COOLING VS HEATING IS DEDUCTED



**1 BASEMENT PLAN**

SCALE: 1'-0" = 1/4"



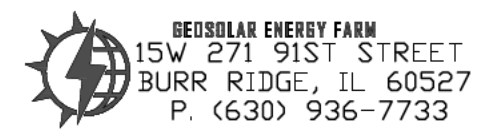
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**SP Engineers**  
Consulting Structural Engineers  
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Phone: 312.332.2800  
Fax: 312.332.2820

CONSULTANTS



PROJECT NAME:  
**6136 W. ROOSEVELT RD**

PROJECT ADDRESS:  
**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

PROJECT INFO

PROJECT NO.  
25 020  
PROJECT TEAM:  
JK  
DB  
GV

ISSUE

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CERTIFICATION

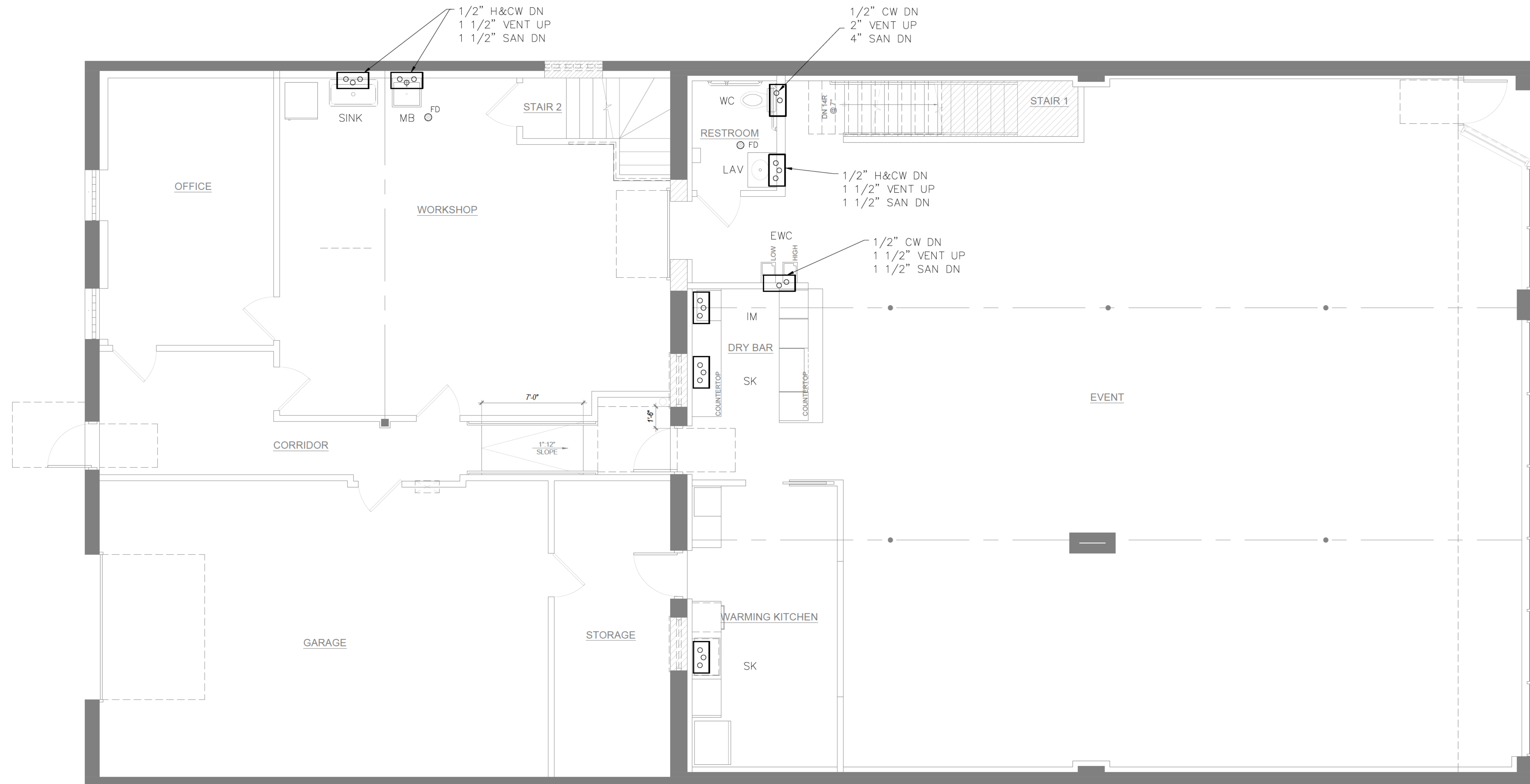


SHEET TITLE

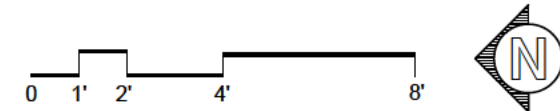
BASEMENT FLOOR PLAN

SHEET #

**P1.20**



**1 FIRST FLOOR PLAN**  
SCALE: 1'-0" = 1/4"



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CONSULTANTS



**HESSIAN ENERGY PARK**  
15W 271 91ST STREET  
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PROJECT NAME:  
**6136 W. ROOSEVELT RD**  
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**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

PROJECT INFO

PROJECT NO.  
25 020  
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BB  
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ISSUE

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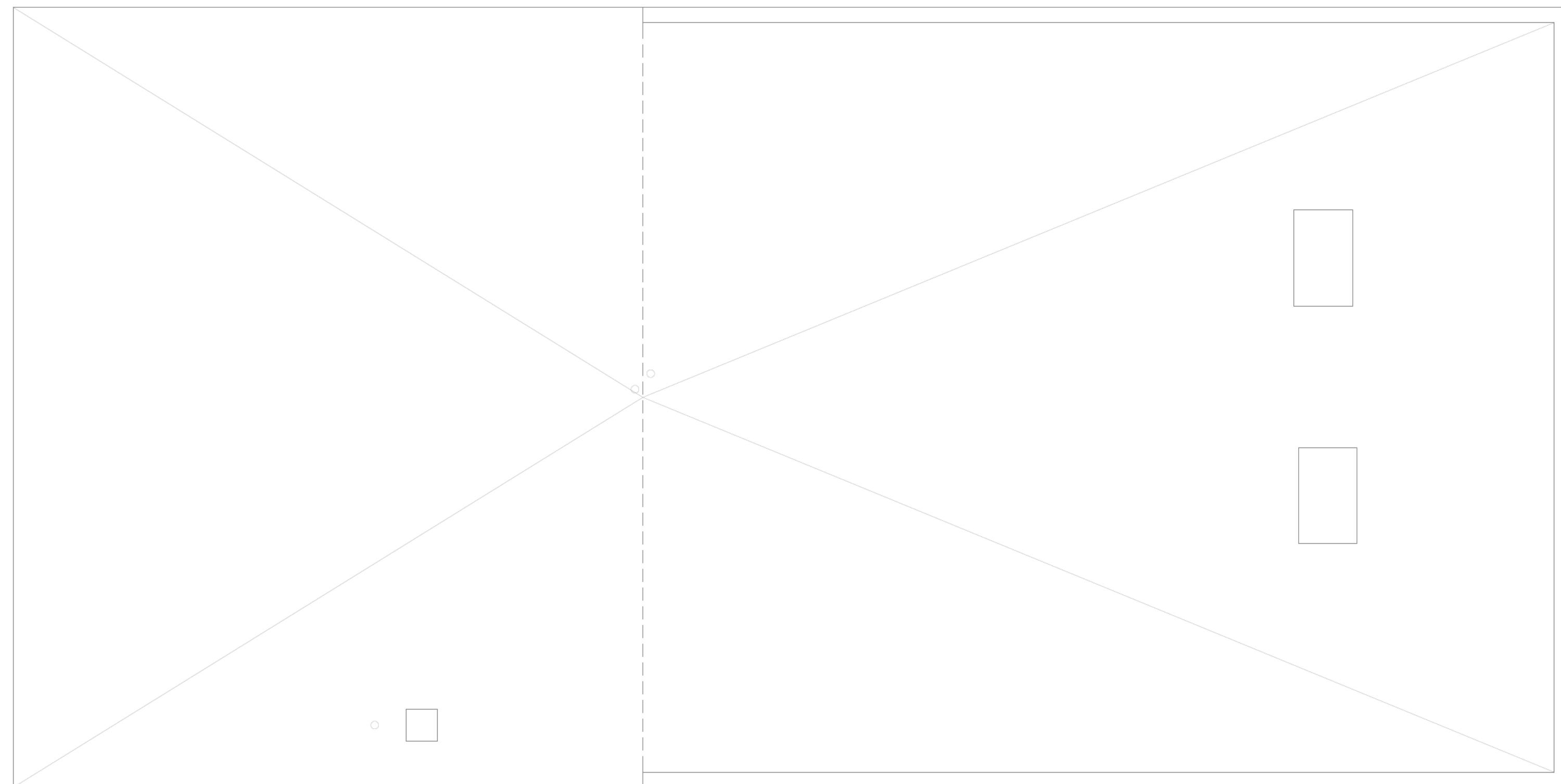


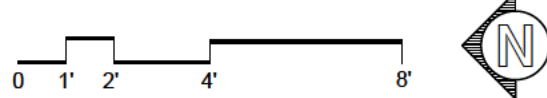
SHEET TITLE

FIRST FLOOR PLAN

SHEET #

**P1.21**



**1 ROOF PLAN**  
 SCALE: 1'-0" = 1/4"  



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 **HEISSMAN ENERGY PARK**  
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**6136 W. ROOSEVELT RD**  
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PROJECT INFO

PROJECT NO.  
 25 020  
 PROJECT TEAM:  
 JK  
 DS  
 GV

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SHEET TITLE

ROOF PLAN

SHEET #

**P1.22**

PLUMBING TO MEET STATE OF ILLINOIS 2014  
ILLINOIS PLUMBING CODE

PLUMBING FIXTURE SCHEDULE						
TAG	FLOW RATE (GPM)	FIXTURE	MFR. / MODEL No.	DESCRIPTION	REMARKS	QUANTITY
WC	1.6/1.1 GPF	TOILET WALL HUNG	AMERICAN STANDARD "ATWALL" FLUSH VALVE MODEL No. 29271103	ELONGATED, WALL MOUNTED, TOP SPUD, TO BE WHITE IN COLOR. PROVIDE SLOAN "UPPERCUT" DUAL-FLUSH FLUSHOMETER MODEL No. WES-111 PROVIDE OPEN FRONT, ANTI-BACTERIAL TOILET SEAT WITH STAINLESS STEEL CHECK HINGE. PROVIDE VANDAL RESISTANT QUARTER TURN SUPPLY STOP	SEE MFR. SPECIFICATIONS PRIOR TO ROUGH-IN	
LAV.	0.5 GPM	LAVATORY	ZURN WALL HUNG MODEL No. Z5840	VITREOUS CHINA, 20" x 18" WALL HUNG LAVATORY, TO BE WHITE IN COLOR, 4" FAUCET CENTERS. PROVIDE GRID STRAINER, ADA P-TRAP & TAILPIECE & VANDAL RESISTANT QUARTER TURN SUPPLY STOPS. PROVIDE TRU-BRO LAV GUARD III FOR ALL LAVS. PROVIDE THERMOSTATIC MIXING VALVE FOR ALL LAVS. PROVIDE SINK FAUCET WITH 0.5 GPM VANDAL RESISTANT PRESSURE COMPENSATING MALE ADAPTOR.	SEE MFR. SPECIFICATIONS PRIOR TO ROUGH-IN	
MB.	2.5 GPM	MOP BASIN	ZURN CUSTODIAL FLOOR SINK MODEL No. Z5850-D3	28" x 28" ENAMELED CAST IRON, CORNER FLOOR SINK. SPECIFY OPTION -D3 (3" IPS CONNECTION) AND OPTION -R0 (REMOVABLE VINYL-COATED RM GUARD). PROVIDE ZURN SINK FAUCET MODEL Z843M WITH POLISHED CHROME FINISH, INTEGRAL SERVICE STOPS, CAST BRASS SPOUT WITH CHEMICAL RESISTANT VACUUM BREAKER 3/4" HOSE THREADED OUTLET, PAL HOOK AND ADJUSTABLE WALL HOOK. SPECIFY -CS (CHECK STOPS) -WH (WALL HOOK) AND -SH (5" VINYL HOSE). INSTALL VACUUM BREAKER 7'-6" ABOVE FINISHED FLOOR.	SEE MFR. SPECIFICATIONS PRIOR TO ROUGH-IN	

FAUCETS PLUMBING FIXTURES TO BE WATERSENSE CERTIFIED  
60PSI MAX SYSTEM PRESSURE WITH THERMOSTATIC MIXING VALVES FOR MAX 125 DEGREES FOR LAVS AND SHOWERS

HYDRANT SCHEDULE					
TAG	FIXTURE	MFR. / MODEL No.	DESCRIPTION	REMARKS	QUANTITY
NTHB-1	NON-FREEZE WALL HYDRANT	ZURN ECOCONTROL MODEL 1320	ENCASED ANTI-SIPHON AUTOMATIC DRAINING WALL HYDRANT FOR FLUSH INSTALLATION w/ INTEGRAL BACKFLOW PREVENTOR, COPPER CASING, ALL BRONZE INTERIOR PARTS, STAINLESS STEEL BOX w/ HINGED COVER AND OPERATING KEY LOCK.	SEE MFR. SPECIFICATION PRIOR TO INSTALLATION	

EXPANSION TANK SCHEDULE									
TAG	QTY	MFR. / MODEL No.	LOCATION	TANK VOLUME (GAL.)	ACCEPTANCE VOLUME (GAL.)	MAX OPER. PRESS. (PSIG)	DDA (IN.)	HEIGHT (IN.)	REMARKS
EXP-1	1	WATTS "PLT" SERIES MODEL PLT-12	005 MECHANICAL RM	4.5	2.8	150	10-1/2"	13-1/2"	SEE MFR. SPEC. SHEET PRIOR TO INSTALL.

DRAIN SCHEDULE					
TAG	FIXTURE	MFR. / MODEL No.	DESCRIPTION	REMARKS	QUANTITY
FD	FLOOR DRAIN	ZURN Z5415SS	ZURN FLOOR & SHOWER DRAIN, DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, "TYPE 55" STAINLESS STEEL MEDIUM DUTY SQUARE STRAINER & HEAD.	SEE MFR. SPECIFICATION PRIOR TO INSTALLATION	
OSD	OPEN SITE DRAIN	NA	PROVIDE 4" OPEN HUB DRAIN WITH P-TRAP.	SEE MFR. SPECIFICATION SHEET PRIOR TO INSTALL.	
GT	GREASE TRSP	ZURN GT2700-50	100# GREASE TRAP	SEE MFR. SPECIFICATION SHEET PRIOR TO INSTALL.	

DOMESTIC WATER HEATER SCHEDULE							
HEATER TYPE	LOCATION	STORAGE (GALS.)	TEMP. RISE RECOVERY (GPM/°F)	SYSTEM TEMP.	MANUFACTURER/ MODEL NO.	REMARKS	QUANTITY
WH-1 RP-1	2ND FLOOR	120	76GPH/90'	110'	AO SMITH 100 GAL CONDENSING 150MBH GAS	SEE MFR. SPECIFICATION SHEET PRIOR TO INSTALL. RECIRC PUMP TO BE EQUAL TO GRUNDFOS COMFORT HOT WATER 595916 PROVIDE THERMOSTAT FOR AUTOMATIC QFF AT TEMP SET POINT, SENSOR TO ALSO LIMIT RETURN TEMP TO 104 MAX.	

THERMOSTATIC MIXING VALVE, LIMIT TO 120 PRESET TAP RELIEF VALVE. PROVIDE DRAIN PAN

EJECTOR & SUMP PUMP SCHEDULE										
PUMP NO.	LOCATION	MEDIA OR SYSTEM	PUMP DATA			MOTOR DATA			MANUFACTURER AND MODEL	REMARKS
			TYPE	CAPACITY (GPM)	HEAD (FT)	V / PH / HZ	HP	RPM		
SP-1	BASEMENT MECH. RM.	SANITARY	SUBMERSIBLE DUPLEX	50	25	115/1/60	.75	3400	ZOELLER MODEL 140	SEE MFR. SPEC. SHEET PRIOR TO INSTALL. SEE NOTE 1
EP-1	BASEMENT MECH. RM.	STORM	SUBMERSIBLE DUPLEX	50	15	115/1/60	1/2	1725	ZOELLER MODEL M266	SEE MFR. SPEC. SHEET PRIOR TO INSTALL. SEE NOTE 1

NOTE 1: PROVIDE DUPLEX PUMPS WITH WATER ALARM WATER BUGS, ONE OF EACH DUPLEX PUMP TO BE POWERED FROM THE GENERATOR 24" DIAMETER BASIN MIN. DEPTH 24" BELOW INVERT

**ENERGY CONSERVATION NOTES: (RESIDENTIAL)**  
 1.) WATER HEATER TO HAVE A VI LESS THEN 0.95 WITH AN INPUT TO VI RATIO <0.000.  
 2.) SHOWERS TO HAVE MAXIMUM FLOW RATES OF 2.0 GPM AT 80 PSI.  
 3.) PROVIDE HEAT TRAPS ON WATER HEATERS WITH VERTICAL RISERS ON BOTH INLET AND OUTLET OF THE WATER HEATER.  
 4.) INSULATE ALL HOT & COLD WATER PIPING IN ACCORDANCE WITH SPECIFICATIONS.

**GENERAL PLUMBING NOTES:**  
 1.) PROVIDE BACK FLOW PREVENTORS AND TEST IN ALL LOCATIONS REQUIRED BY CODE.  
 2.) PROVIDE MAXIMUM HEADROOM IN ALL PIPED LOCATIONS.  
 3.) PROVIDE ISOLATION VALVES FOR COLD, HOT, AND HOT WATER RETURN SYSTEMS AT EACH FIXTURE, TO ALLOW FOR PROPER MAINTENANCE.  
 4.) INSTALL EQUIPMENT PER MANUFACTURERS INSTRUCTIONS AND ALL APPLICABLE CODES. PROVIDE PANS AND DRAIN LINES.  
 5.) PROVIDE 12" AIR CHAMBER FOR EACH FIXTURE CONNECTED TO DOMESTIC WER RISER.  
 6.) INSULATE ALL PIPES RACKED TO OUTSIDE WALLS SUBJECT TO FREEZING.  
 7.) PROVIDE ALL PROPER BUILDING PENETRATIONS TO MEET ALL MANUFACTURERS INSTRUCTIONS AND ALL APPLICABLE CODES.  
 8.) INSULATE ALL HOT & COLD WATER LINES.

**SECTION 15400  
PLUMBING**

**PART 1 - GENERAL**

**1.1 SCOPE OF WORK**

- FURNISHING OF ALL LABOR, MATERIALS, TOOLS, TRANSPORTATION, SERVICES, AND RELATED ITEMS NECESSARY TO COMPLETE THE INSTALLATION OF THE PLUMBING SYSTEM AS ILLUSTRATED ON THE DRAWINGS AND INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
  - HOT AND COLD WATER SYSTEMS WITH COMPLETE CONNECTIONS FROM THE WATER METER TO ALL PLUMBING FIXTURES AND EQUIPMENT REQUIRING WATER CONNECTIONS.
  - SOIL, WASTE, VENT AND CONDENSATE SYSTEM LINES INSIDE THE BUILDING.
  - PLUMBING FIXTURES, INCLUDING ALL THE REQUIRED TRIM AND SUPPORTS.
  - TRENCHING AND BACKFILLING.
  - FINAL PLUMBING CONNECTIONS TO HEATING AND AIR CONDITIONING EQUIPMENT.
  - METERS AND UTILITY CONNECTIONS.

**PART 2 - PRODUCTS**

**2.1 DESCRIPTION**

- SOIL, WASTE AND VENT PIPING BELOW FLOOR TO 5'-0" OUTSIDE BUILDING: STANDARD WEIGHT COATED CAST IRON PIPE AND CAST IRON/NEOPRENE GASKET FITTINGS.
- SOIL, WASTE AND VENT PIPING ABOVE FLOOR: STANDARD WEIGHT COATED CAST IRON PIPE AND STAINLESS STEEL/NEOPRENE GASKET FITTING AS APPROVED BY LOCAL AUTHORITY IN CONCEALED LOCATIONS.
- HOT AND COLD WATER PIPING ABOVE FLOOR: TYPE "L" COPPER, HARD DRAWN. BELOW GROUND OUTSIDE OF BUILDING: TYPE "K" HARD COPPER. BELOW SLAB INSIDE OF BUILDING: BELOW GROUND OUTSIDE OF BUILDING: (SEE CIVIL FOR SERVICE MAIN APPROVED MATERIALS) TYPE "K" SOFT DRAWN COPPER TUBING WITHOUT JOINTS.
- CONDENSATE DRAIN PIPING: BY MECHANICAL CONTRACTOR.
- INSIDE STORM PIPING ABOVE GROUND: STANDARD WEIGHT COATED CAST IRON PIPE AND STAINLESS STEEL/NEOPRENE GASKET FITTING AS APPROVED BY LOCAL AUTHORITY.

WATER DISTRIBUTION PIPE	
MATERIAL	STANDARD
Brass pipe	ASTM B43
Copper or copper-alloy pipe	ASTM B42; ASTM B302
Copper or copper-alloy tubing (Type K, L, or M)	ASTM B74; ASTM B88; ASTM B251; ASTM B447
Galvanized steel pipe	ASTM A53

NOTE: NO PVC ALLOWED

UNDERGROUND DRAINAGE AND VENT PIPE	
MATERIAL	STANDARD
Cast-iron pipe, hub and spigot	ASTM A74 CIPSI 301; ASTM A 888
Glass pipe	ASTM C 1053
Copper or copper-alloy tubing (Type K)	ASTM B75; ASTM B88; ASTM B251
Ductile iron pipe	AWWA C151; AWWA C115

NOTE: NO PVC ALLOWED

**2.2 INSULATION**

- PROVIDE FOAM RUBBER INSULATION EQUAL TO ARMSTRONG ARMAFLEX TYPE "AP" ON COLD AND HOT WATER, AND CONDENSATE DRAIN PIPING. INSULATION TO BE SLIPPED ON WITH BUTT JOINTS. USE MITER CUT PIECES FOR FITTINGS AND PRE-FORMED FITTINGS FOR ALL VALVES. APPLY MANUFACTURER'S PAINT TO ALL EXPOSED RUNS. UTILIZE 1" THICK INSULATION ON HOT WATER PIPING AND 1/2" THICK ON COLD WATER AND CONDENSATE DRAIN PIPING.
- INSULATE "P" TRAP AND EXPOSED HOT WATER SUPPLY LINES BELOW HANDICAPPED ACCESSIBLE HAND SINKS AND LAVATORIES IN ONE OF THE FOLLOWING MANNERS:
  - MOLDED FLEXIBLE VINYL INSULATION SYSTEM, MODEL #101 "HANDI LAV-GUARD" AS MANUFACTURED BY TRUEBRO.
  - PVC 2 PIECE "P" TRAP COVER WITH INSULATION TUBING, "TRAP-GUARD" AS MANUFACTURED BY BUCKAROOS.
  - OTHER MANUFACTURERS/TYPES BY PRIOR APPROVAL ONLY.

**2.3 FIXTURES**

- ALL FIXTURES: AS INDICATED ON DRAWINGS WITH EQUAL PRODUCTS FURNISHED BY AMERICAN STANDARD, KOHLER OR ELJER.

**2.4 CLEANOUTS, FLOOR DRAINS, FLOOR SINKS AND ROOF DRAINS**

- ALL ACCESSORIES: AS INDICATED ON THE DRAWINGS THE EQUAL PRODUCTS FURNISHED BY WADE JOSAM OR ZURN BEING ACCEPTABLE.

**2.5 EQUIPMENT**

- SHUT-OFF VALVES UNDERNEATH LAVATORIES, TANK TYPE WATER CLOSETS AND KITCHEN FIXTURES: CHROME PLATED ANGLE STOP VALVES WITH CHROME PLATED ESCUTCHEON PLATES AND AS SCHEDULED ON DRAWINGS.
- HOSE BIBBS: AS SCHEDULED ON DRAWINGS.
- VACUUM BREAKERS: AS SCHEDULED ON DRAWINGS.
- BACKFLOW PREVENTERS: AS SCHEDULED ON DRAWINGS.

**PART 3 - INSTALLATION**

**3.1 PIPING**

- RUN ALL PIPING CONCEALED EXCEPT WHERE OTHERWISE INDICATED ON DRAWINGS.
- INSTALL VALVES, TRAPS, CLEAN-OUTS AND OTHER APPARATUS IN AN EASILY ACCESSIBLE LOCATION.
- INSTALL SOIL, WASTE, VENT OFFSETS AND CONDENSATE DRAINS WITH A MINIMUM UNIFORM GRADE OF ONE QUARTER INCH TO THE FOOT.
- MAINTAIN HOT AND COLD WATER LINES AT LEAST 6" APART WHERE PIPING IS PARALLEL.
- PROVIDE ESCUTCHEON PLATES WHERE ALL PIPES PASS THROUGH A FINISHED WALL.

**3.2 HANGERS AND SUPPORTS**

- SUPPORT COPPER PIPING AT INTERVALS NOT TO EXCEED 7'-0" AND AT EACH CHANGE IN HORIZONTAL OR VERTICAL DIRECTION.

**3.3 PLUMBING FIXTURES**

- FURNISH AND INSTALL ALL PLUMBING FIXTURES COMPLETE WITH ALL EQUIPMENT FITTINGS, TRIMMINGS AND ACCESSORIES.
- ALL FIXTURES: GRADE A, WHITE.
- EXPOSED PIPING TO FIXTURES: A PRODUCT OF THE FIXTURE MANUFACTURER.
- PROVIDE STOPS AS MANUFACTURED BY THE FIXTURE MANUFACTURER, WITH METAL-TO-METAL SEAT FOR ALL FIXTURES AND EQUIPMENT.

**3.4 TEST**

- THE PLUMBING SYSTEM AND ASSOCIATED SYSTEM IS SUBJECT TO FINAL APPROVAL OF THE OWNER'S.

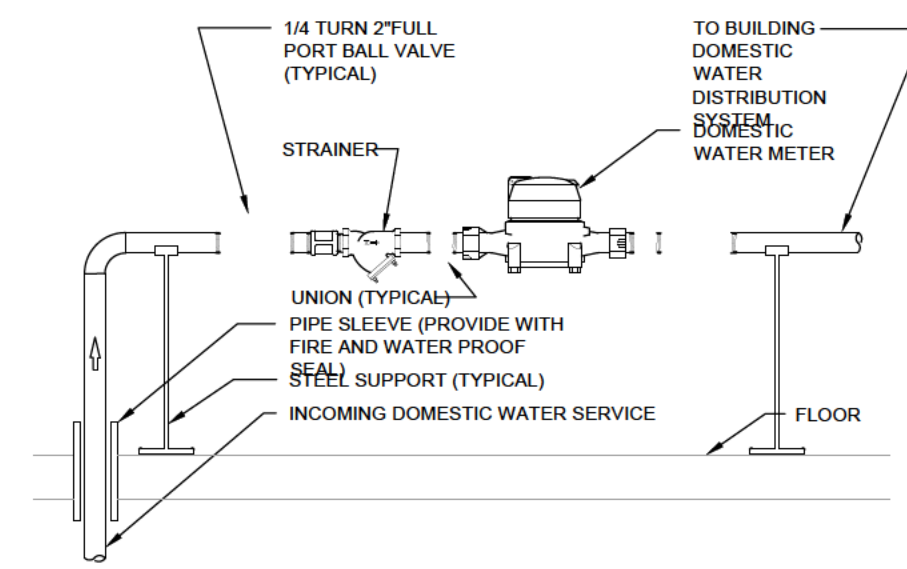
**3.5 CLEANING**

- AFTER THE PLUMBING PIPING HAS BEEN INSTALLED, INSPECTED AND APPROVED, FLUSH THE PIPING SYSTEM TO REMOVE ANY FOREIGN MATTER FROM THE PIPES. WHERE REQUIRED, USE CHLORINE OR HTH SOLUTION TO SANITIZE THE NEW PIPING.

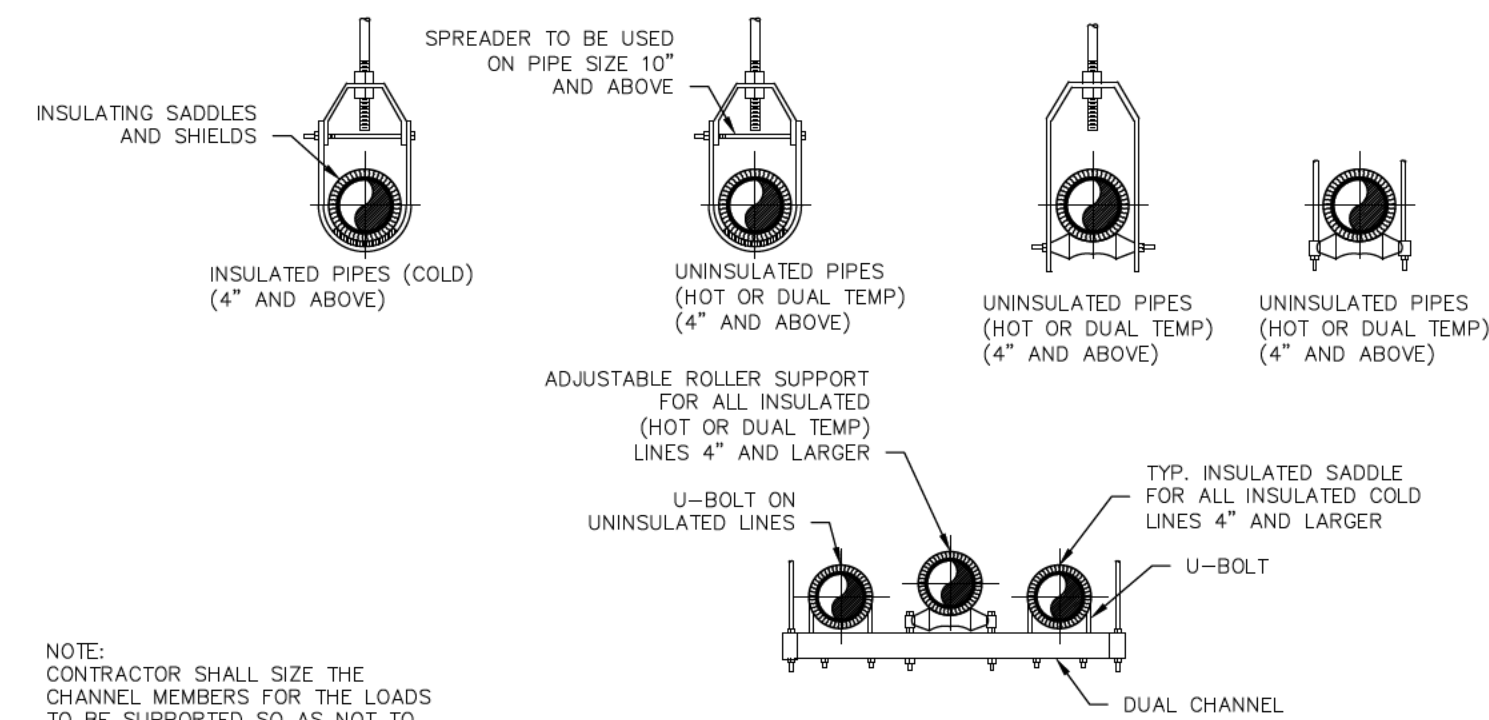
WATER SERVICE PIPE	
MATERIAL	STANDARD
Copper or copper-alloy tubing (Type K)	ASTM B75; ASTM B88; ASTM B251 ASTM B447
Ductile iron pipe	AWWA C151; AWWA C115

ABOVE GROUND DRAINAGE AND VENT PIPE	
MATERIAL	STANDARD
Cast-iron pipe, hub and spigot	ASTM A74
Copper or copper-alloy pipe	ASTM B42; ASTM B43; ASTM B302
Copper or copper-alloy tubing (Type K)	ASTM B75; ASTM B88; ASTM B251
Ductile iron pipe	AWWA C151

NOTE: NO PVC ALLOWED



INCOMING DOMESTIC WATER METER DETAIL



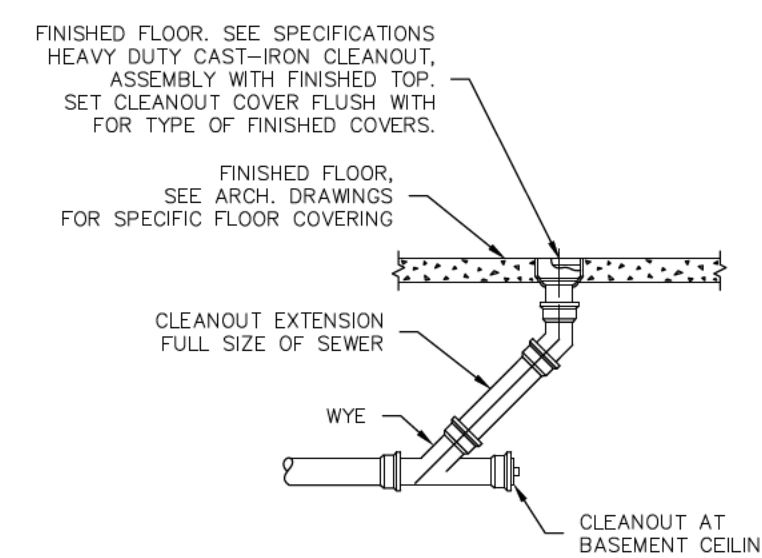
NOTE:  
CONTRACTOR SHALL SIZE THE CHANNEL MEMBERS FOR THE LOADS TO BE SUPPORTED SO AS NOT TO EXCEED A MAXIMUM DEFLECTION OF 1/240 OF THE SPAN BETWEEN HANGER RODS.

PIPE SUPPORT AND HANGER DETAIL

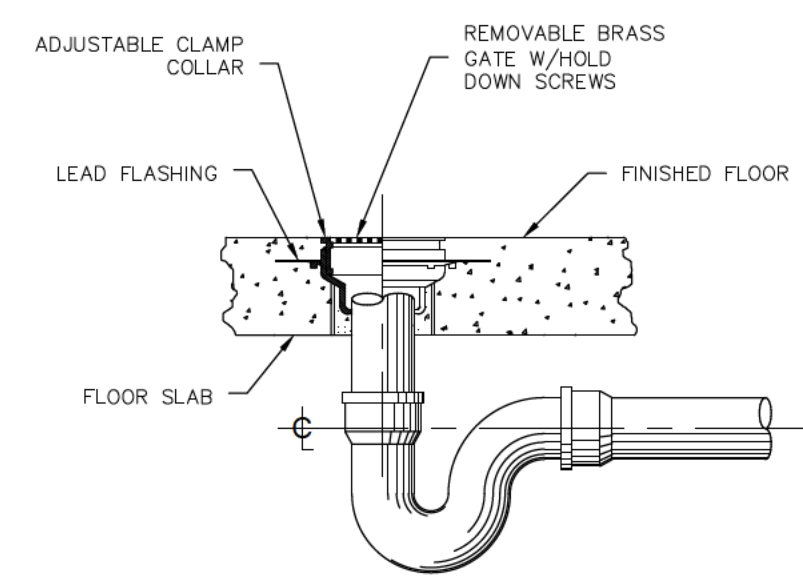
GENERAL PLUMBING PERMIT NOTES:

ALL THE FOLLOWING NOTES APPLIES TO ALL PLUMBING DRAWINGS.

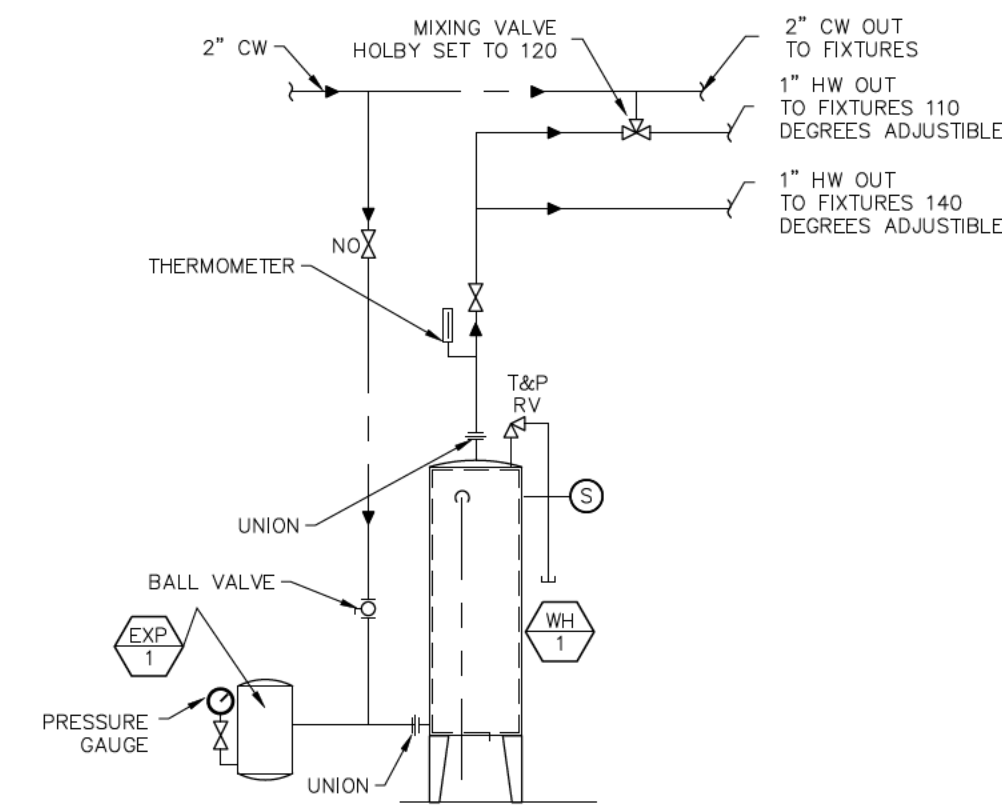
1. DRAIN TILE MATERIAL IS REQUIRED TO BE SCHEDULE 40 PVC OR SDR 26.
2. SUMP PUMP TO BE DUPLEX WITH BATTERY BACKUP, TIED INTO HOME AUTOMATION SYSTEM FOR ALARM NOTIFICATION. FLOOR WATER SENSORS THROUGHOUT BASEMENT FOR LEAKS OR RAINWATER FROM AREA DRAINS OR SUNKEN PATIO TO ALARM OWNERS.



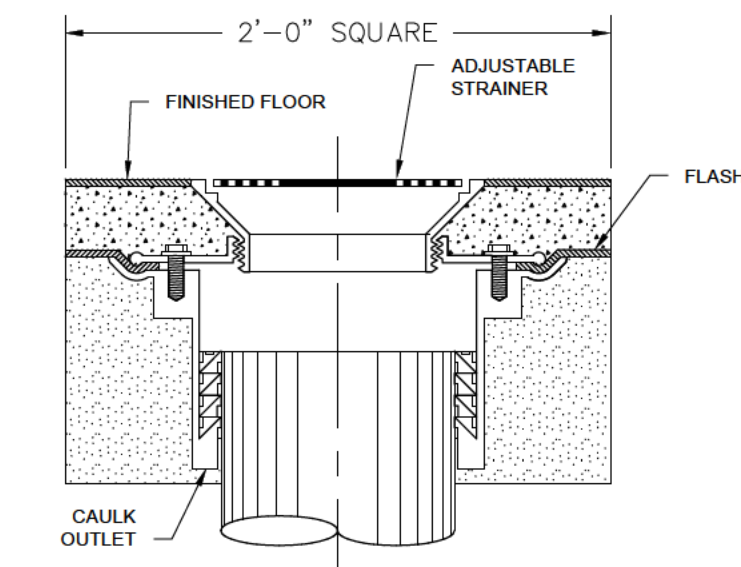
TYP DETAIL OF FLOOR CLEANOUT



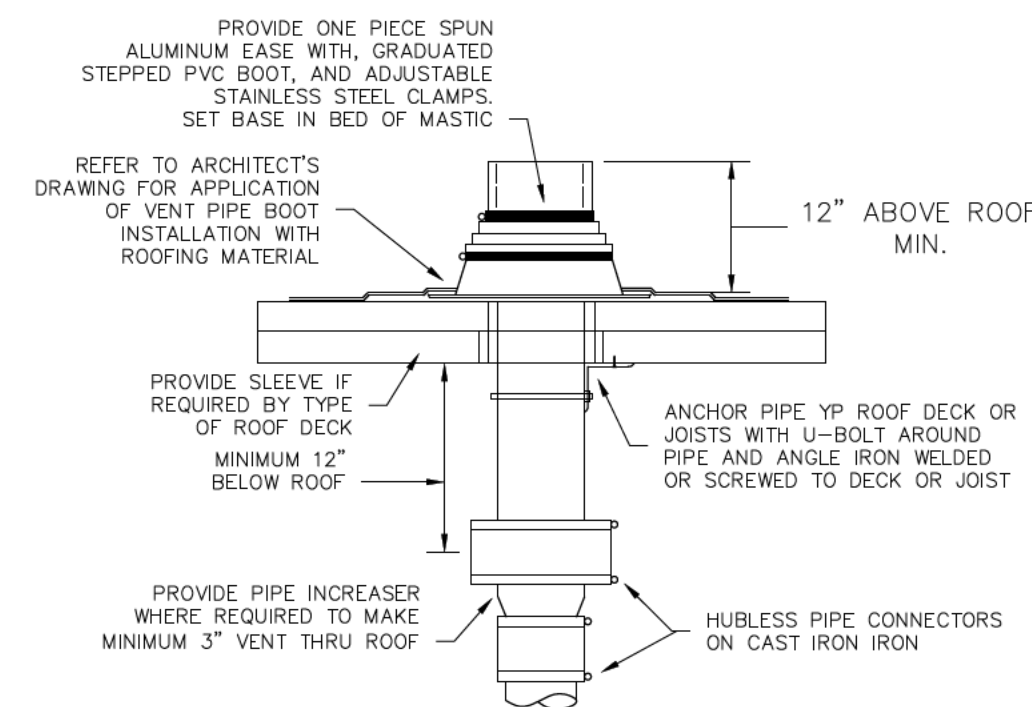
FLOOR DRAIN DETAIL



HOT WATER HEATER

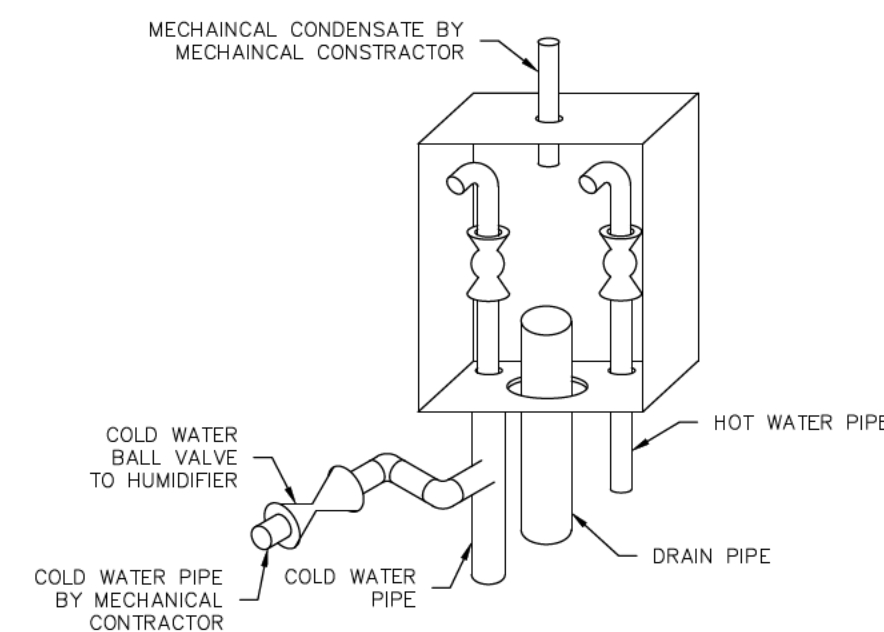


FLOOR DRAIN DETAIL FOR LAUNDRY ROOMS

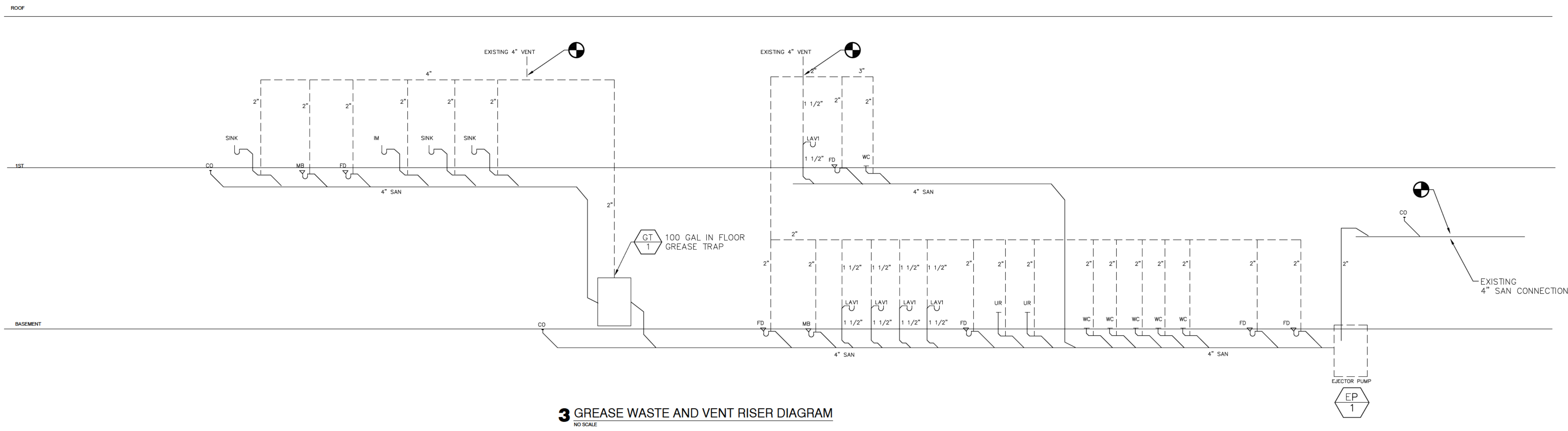
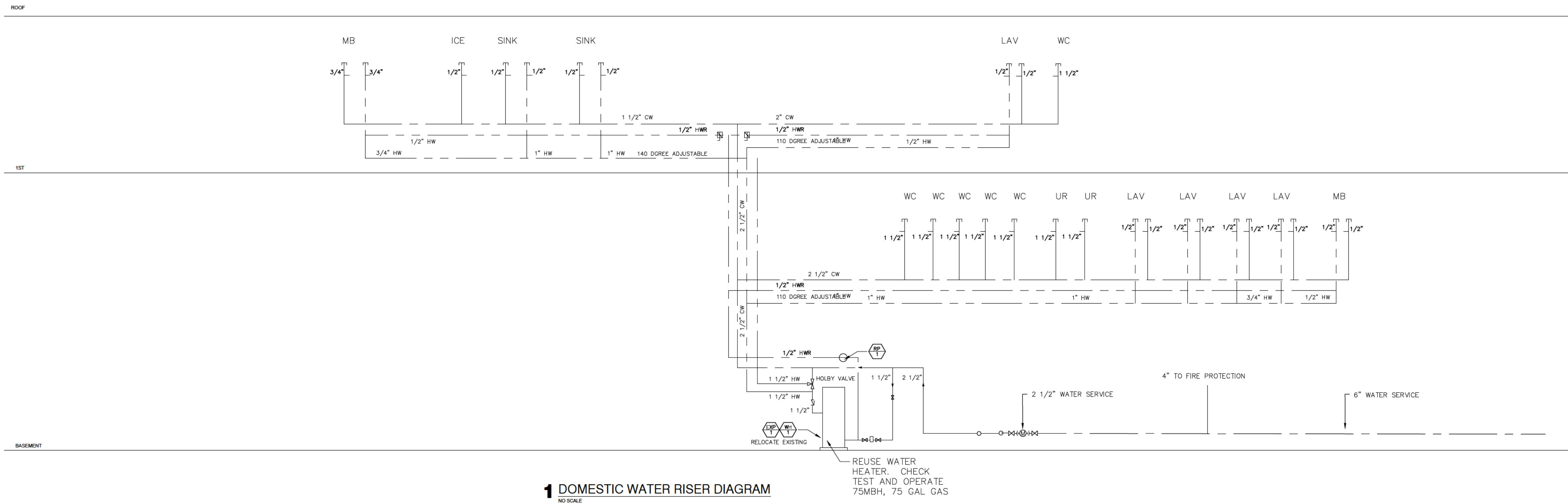


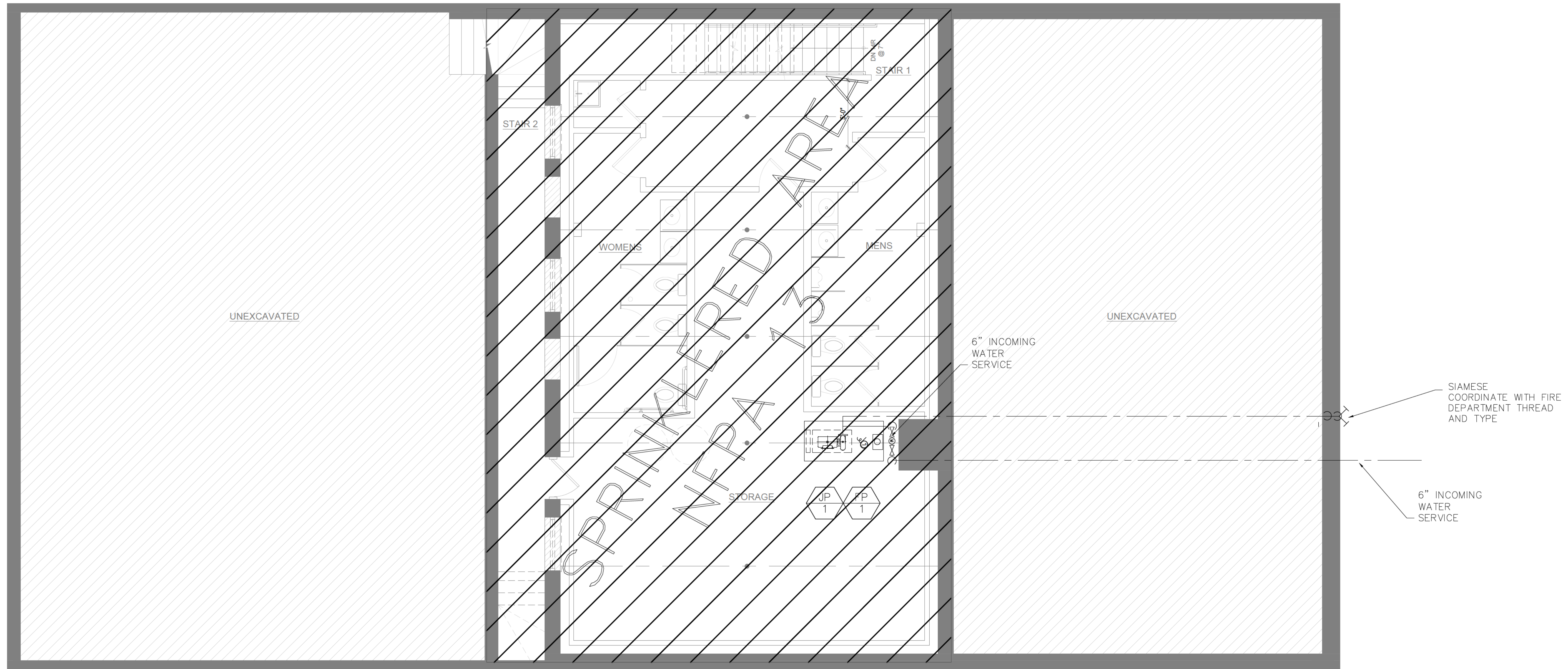
REFER TO PLANS FOR VTR PIPES SIZES AND LOCATIONS. LOCATE VTR MINIMUM TEN FEET HORIZONTAL OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, AND ONE FOOT FROM ANY VERTICAL SURFACE. PROVIDE 1\"/>

VENT THRU ROOF



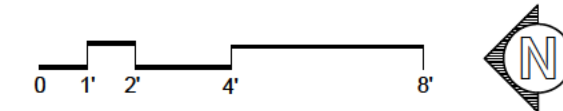
GUY GRAY BOX DETAIL





**1 BASEMENT PLAN**

SCALE: 1'-0" = 1/4"



**SPACE**  
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PROJECT NAME:  
**6136 W. ROOSEVELT RD**

PROJECT ADDRESS:  
**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

PROJECT INFO

PROJECT NO.  
25 020  
PROJECT TEAM:  
JK  
DB  
GV

ISSUE

12.30.25 - ISSUED FOR PERMIT

CERTIFICATION

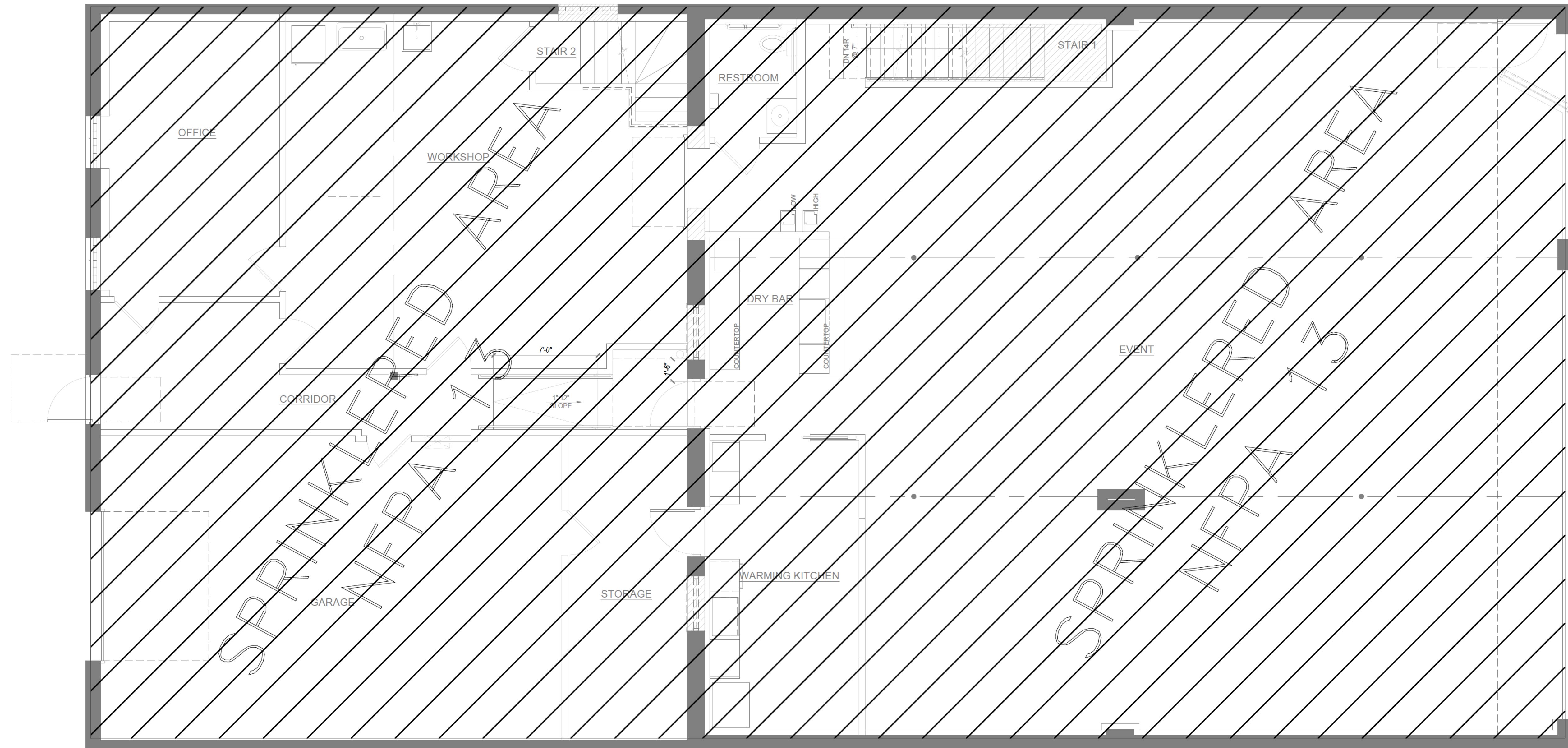


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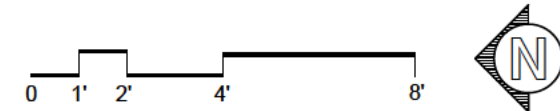
BASEMENT FLOOR PLAN

SHEET #

**FP1.20**



**1 FIRST FLOOR PLAN**  
SCALE: 1'-0" = 1/4"

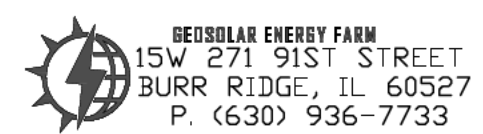


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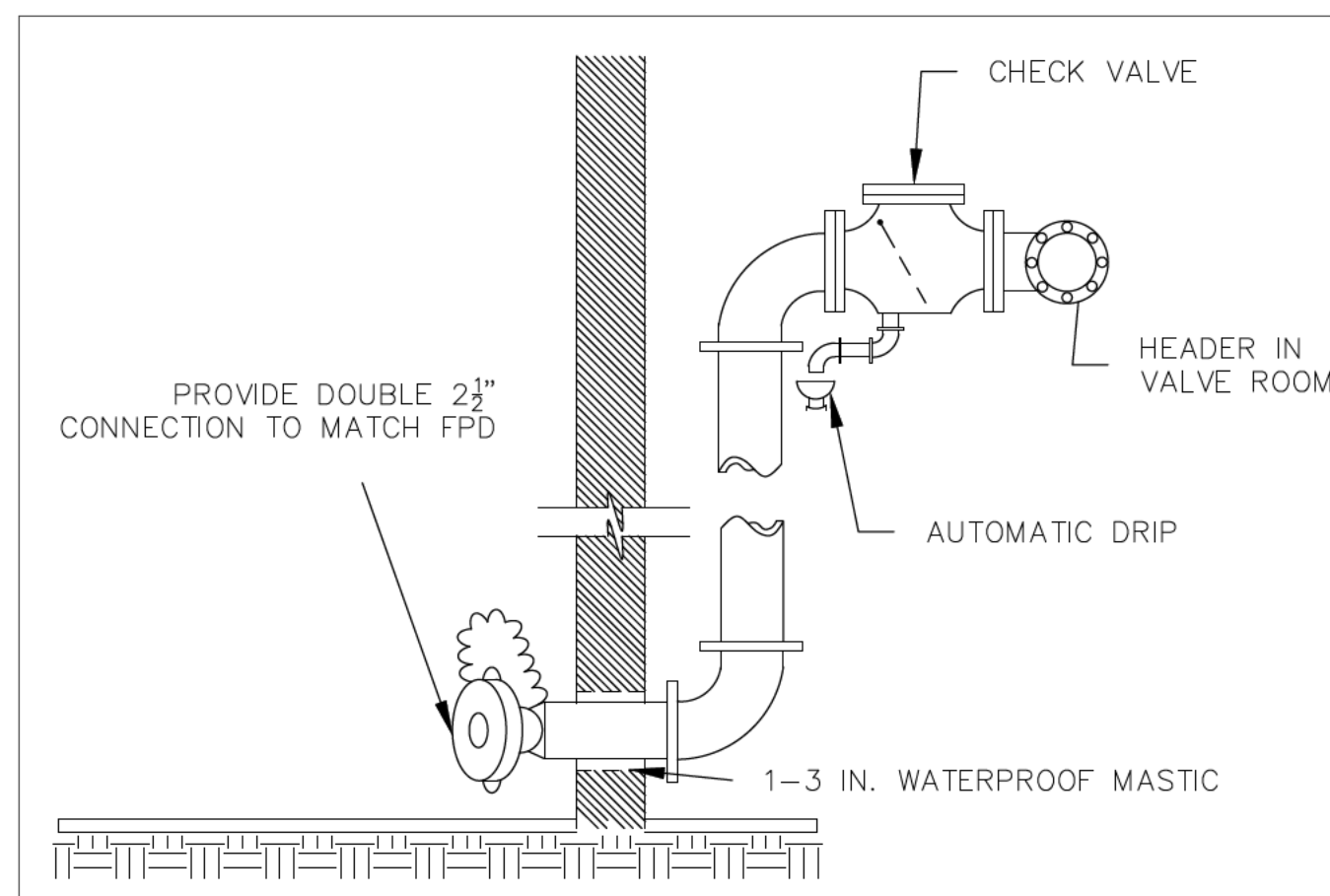


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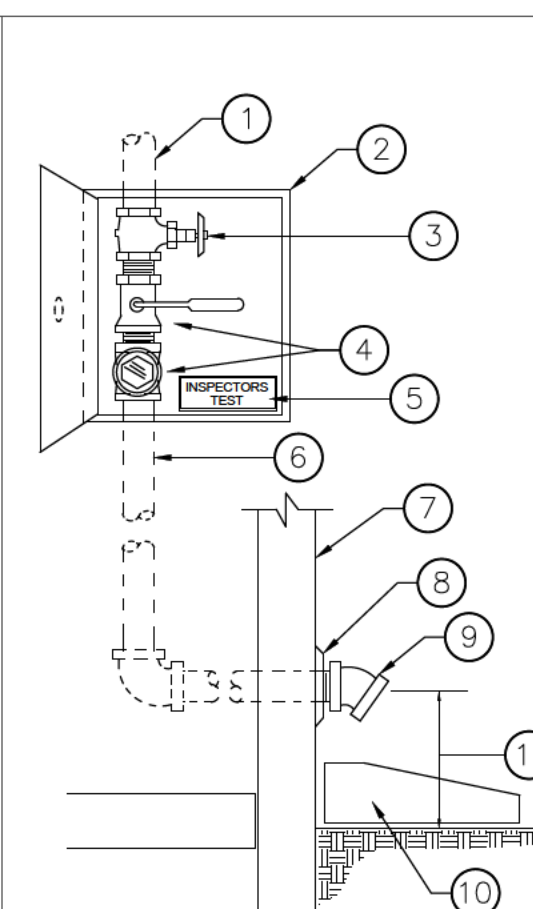
FIRST FLOOR PLAN

SHEET #

**FP1.21**



SIAMESE CONNECTION DETAIL



- 1 1" TEST/DRAIN LINE
- 2 RECESSED CABINET: 16 GA. BOX W/14 GA. DOOR, PIANO HINGE, CYLINDER LOCK EQUAL TO KARP #KRVB. PAINT TO MATCH ADJACENT SURFACE.
- 3 GATE VALVE (N.C.)
- 4 TEST/DRAIN ASSEMBLY BALL VALVE W/RESTRICTED ORFICE EQUAL TO FLOW OF ONE SPRINKLER HEAD AND SIGHT GLASS.
- 5 SINAGE
- 6 1" TEST/DRAIN LINE IN WALL
- 7 EXTERIOR WALL
- 8 CHROME ESCUTCHEON PLATE
- 9 1" DISCHARGE AT 45 DEG. ANGLE
- 10 PRECAST CONCRETE SPLASHBLOCK
- 11 12" MAX.

THE FIRE SPRINKLER DRAIN SHALL BE PIPED DIRECTLY OUTSIDE.

INSPECTORS TEST DETAIL

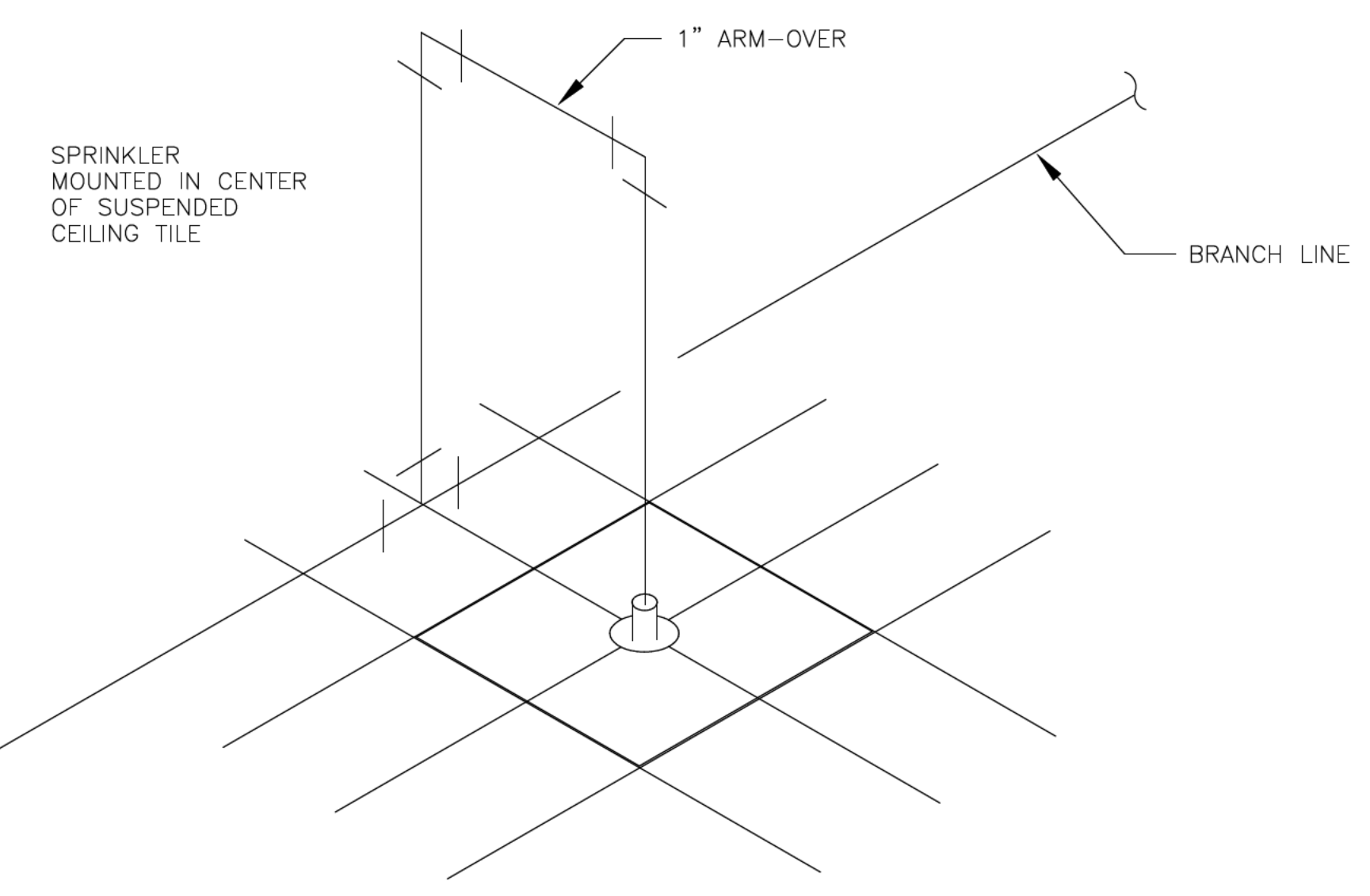
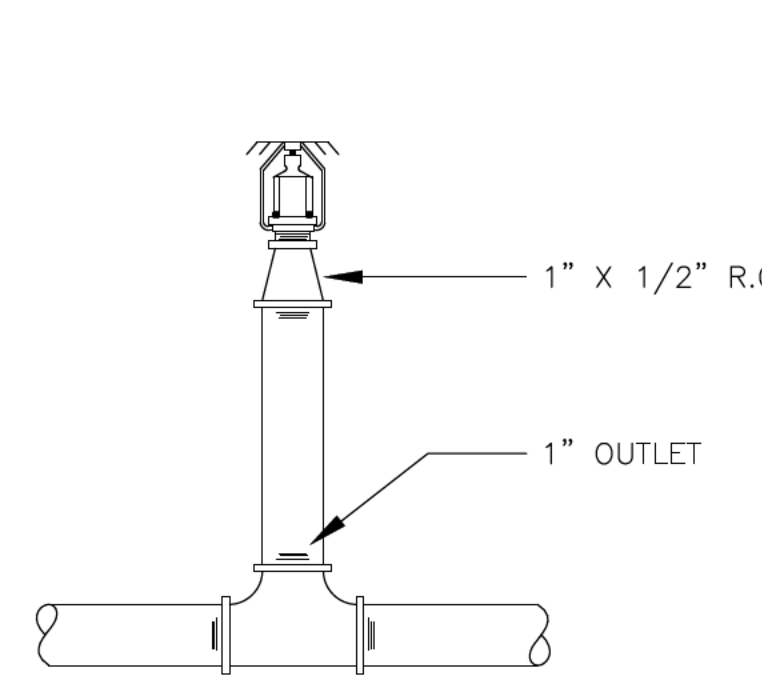
SPRINKLER HEAD TYPE: AREAS WITH CEILING PROVIDE CHROME RECESSED (PENDANT) TYPE, AREAS WITHOUT CEILINGS PROVIDE BRASS (UP - RIGHT) TYPE.

FLOW TEST: CONTACT WATER UTILITY SERVING BUILDING FOR LATEST PRESSURE READING IN AREA.

- NOTES:
1. THE ABOVE MENTIONED CRITERIA SHALL BE USED AS A MINIMUM DESIGN BASIS. BUILDING TYPE, CONSTRUCTION, AND CLASSIFICATION TO BE CONFIRMED BY CRITERIA SET FORTH IN ARCHITECTURAL DRAWINGS.
  2. FIRE ALARM SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW, INCLUDING CALCULATIONS AND MANUFACTURE'S CUT SHEETS
  3. THE DOMESTIC AND FIRE SUPPRESSION WATER SUPPLY SHALL BE SEPARATED
  4. THE UNDERGROUND SUPPLY FOR THE FIRE SPRINKLER SYSTEM SHALL HAVE A FLUSH TEST WITNESSED BY THE FPD. THE SPRINKLER RISER SHALL NOT BE CONNECTED TO THE SUPPLY LINE UNTIL THERE IS A SUCCESSFUL FLUSH TEST.
  5. THE FIRE DEPARTMENT CONNECTION SHALL BE A 2 1/2" INCH CONNECTION
  6. THE FIRE SPRINKLER DRAIN SHALL BE PIPED DIRECTLY OUTSIDE.

NOTE: USE RECESSED/CONCEALED SPRINKLER HEADS FOR ALL FINISHED CEILING AREAS.

FIRE PROTECTION CRITERIA

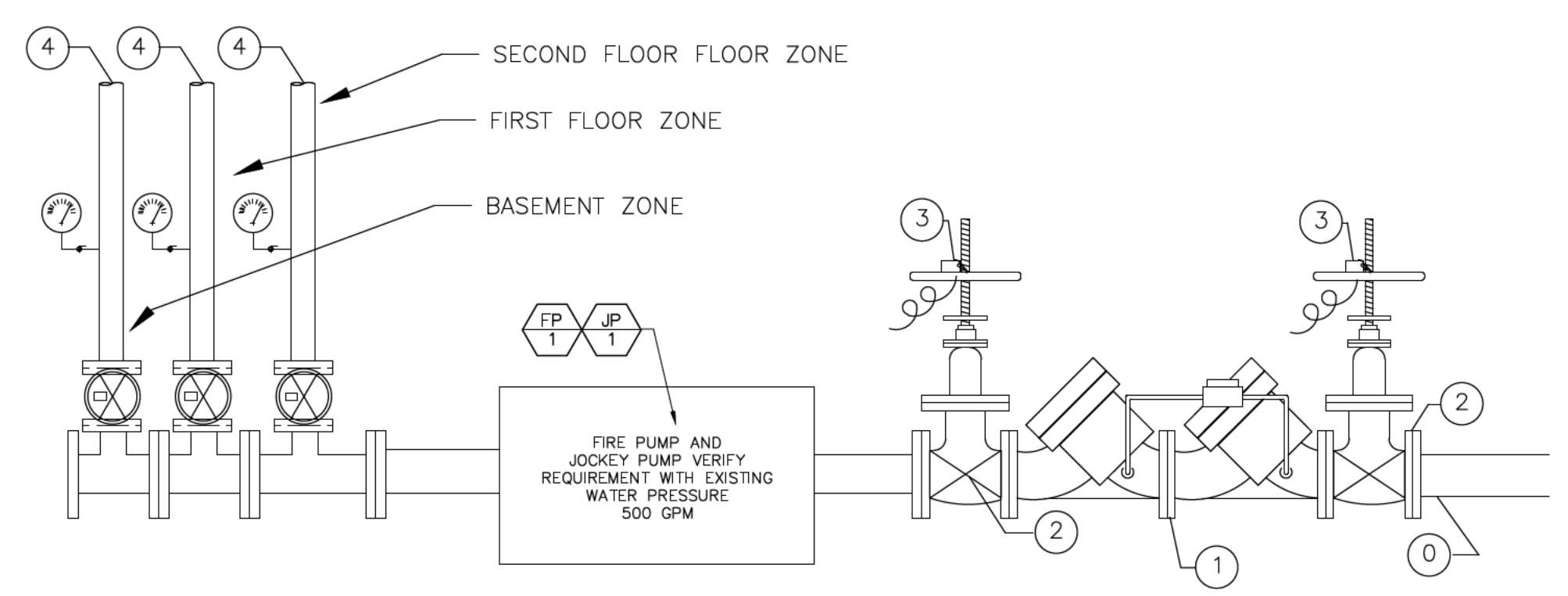


SPRINKLER MOUNTED IN CENTER OF SUSPENDED CEILING TILE

NOTE:  
ALL BRANCH LINES SHALL BE SIZED FOR ADDITIONAL SPRINKLERS (2 SPRINKLERS PER 1" OUTLET).

UPRIGHT DETAIL

ARM OVER DETAIL



LEGEND FOR FIRE PROTECTION

- 0 4" INCOMING FIRE SUPPRESSION WATER SERVICE
- 1 4" DOUBLE DETECTOR CHECK VALVE ASSY.
- 2 4" GATE VALVE
- 3 TAMPER SWITCH (TYP.)
- 4 TO SPRINKLERS

GENERAL FIRE PROTECTION PERMIT NOTES:

- ALL THE FOLLOWING NOTES APPLIES TO ALL PLUMBING DRAWINGS.
1. AN AUTOMATIC FIRE PROTECTION SYSTEM IS REQUIRED. SPRINKLER CONTRACTOR TO PROVIDE DRAWINGS TO THE VILLAGE FOR REVIEW AND APPROVAL BEFORE THE SYSTEM IS INSTALLED (IRC313.2.1)
  2. WATER CONNECTION TO THE FIRE SPRINKLER SYSTEM SHALL BE AFTER THE WATER METER
  3. THE UNDERGROUND SUPPLY FOR THE FIRE SPRINKLER SYSTEM SHALL HAVE A FLUSH TEST WITNESSED BY THE FPD. THE SPRINKLER RISER SHALL NOT BE CONNECTED TO THE SUPPLY LINE UNTIL THERE IS A SUCCESSFUL FLUSH TEST.

FIRE PREVENTION SCOPE OF WORK COMPLIES TO PART OF PREVIOUS PERMIT. CONTRACTOR TO SUBMIT FINAL SHOP DRAWINGS FOR APPROVAL PRIOR TO START OF WORK.

# SPECIFICATION NOTES:

- 1.) THE ENTIRE FACILITY SHALL BE SPRINKLERED IN ACCORDANCE WITH ALL REQUIRED AND ADVISORY PROVISIONS OF LOCAL CITY FIRE PREVENTION BUREAU, NFPA AND THE APPLICABLE REQUIREMENTS OF THE FACTORY MUTUAL RESEARCH CORP.
- 2.) ALL COMPONENTS UTILIZED IN THE FIRE PROTECTION SYSTEMS MUST BE U.L. LISTED AND FACTORY MUTUAL APPROVED.
- 3.) THE SCOPE OF THE WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:
  - A.) HYDRAULIC DESIGN OF SPRINKLER SYSTEMS, COORDINATED WORKING DRAWINGS AND CALCULATIONS, SUBMITTALS FOR APPROVALS TO ARCHITECT/ENGINEER, ELGIN FIRE PREVENTION BUREAU, FACTORY MUTUAL AND IDPH.
  - B.) INSTALLATION OF APPROVED SYSTEMS INCLUDING ALL NECESSARY MATERIALS, PRODUCTS, COMPONENTS, DEVICES, SPECIALTIES EQUIPMENT, LABOR, SERVICES, LOADING, UNLOADING, HOISTING, HANDLING AND STORAGE OF MATERIALS, CUTTING, CORING AND PATCHING OF GENERAL CONSTRUCTION.
  - C.) PIPE SLEEVES SET IN COORDINATED LOCATIONS THROUGH WALLS FLOORS AND STRUCTURAL ELEMENTS; CHROME PLATED OR PRIME FINISHED STEEL ESCUTCHEON PLATES FOR EXPOSED PIPES PASSING THROUGH FINISHED WALLS, FLOORS OR CEILINGS.
  - D.) SMOKE/FIRE STOPPING OF ALL PENETRATIONS OF GENERAL CONSTRUCTION CREATED BY THIS CONTRACT. PROVIDE A 2-PART MINIMUM FIRE STOPPING SYSTEM COMPLYING WITH FIRE DEPT. APPROVED, U.L. LISTED DETAILS, WHICH ESTABLISH A SMOKE OR FIRE RESISTANCE RATING EQUAL TO OR GREATER THAN THE WALL OR FLOOR PENETRATED.
  - E.) ALL REQUIRED ACCEPTANCE TESTING CLEAN-UP ON A DAILY BASIS OF DEBRIS ASSOCIATED WITH THIS CONTRACT, AND TEMPORARY FIRE PROTECTION TO THE SATISFACTION OF THE FIRE DEPT, FOR CONSTRUCTION OPERATIONS.
  - F.) FURNISH ACCESS PANELS PER ARCHITECTURAL SPECIFICATIONS FOR INSTALLATION BY GENERAL INSPECTOR'S TEST CONNECTIONS, AUXILIARY DRAINS CONCEALED ABOVE CEILINGS.
- 4.) DESIGN EACH SPRINKLER SYSTEM GIVING FULL CONSIDERATION TO THE VERTICAL AND HORIZONTAL OBSTRUCTIONS TO SPRINKLER SPRAY PATTERNS, PIPING, ELECTRICAL EQUIPMENT, BUILDING CONSTRUCTION, DUCTWORK AND MECHANICAL EQUIPMENT, ETC.; COORDINATE THE LOCATION OF SPRINKLER SYSTEM PIPING AND COMPONENTS WITH THE DETAILED INSTALLATION DRAWINGS OF ALL OTHER TRADES. THE SPACING SHALL NOT EXCEED THAT PERMITTED BY NFPA FOR THE LIGHT AND ORDINARY HAZARD OCCUPANCIES OF 225 AND 130 SQ. FT. PER SPRINKLER. WHERE PRACTICAL, UNIFORMLY SPACE SPRINKLERS ON THE BRANCH PIPING. LOCATE SPRINKLERS IN AN ARCHITECTURAL PATTERN CONSISTENT WITH CEILING GRIDS, LIGHTS, AIR SUPPLY DIFFUSERS AND OTHER CEILING ELEMENTS, WHERE CEILINGS ARE PROVIDED FROM ARCHITECTURAL REFLECTED CEILING PLANS.
- 5.) DENSITY OF APPLICATION OF WATER SHALL BE 0.12 GPM PER SQ. FT. FOR LIGHT HAZARD; 0.15 GPM PER SQ. FT. FOR ORDINARY HAZARD, GP.1; 0.20 GPM PER SQ. FT. FOR ORDINARY HAZARD GP.2.
- 6.) SPRINKLER DISCHARGE AREA SHALL BE THE HYDRAULICALLY MOST REMOTE 1500 SQ. FT., FOR LIGHT HAZARD AND 2500 SQ.FT. FOR ORDINARY HAZARD OCCUPANCIES, AS DEFINED IN THE LOCAL CITY BUILDING CODE.
- 7.) TOTAL COMBINED INSIDE AND OUTSIDE HOSE HYDRAULIC CALCULATIONS SHALL INCLUDE AN ALLOWANCE OF 250 GPM FOR HOSE STREAMS, ADDED AT THE POINT OF CONNECTION TO THE WATER SUPPLY. HYDRAULIC DESIGN OF SPRINKLERS SHALL PROVIDE 10% OF STATIC CITY WATER PRESSURE AS A SAFETY CUSHION. IF STATIC WATER MAIN PRESSURE IS LESS THAN 50 PSI, PROVIDE 5 PSI SAFETY CUSHION.

- 8.) LOCATIONS AND ARRANGEMENT OF WET SPRINKLER PIPING LAYOUTS MAY BE "TREE" "LOOP" OR "GRID" SYSTEMS, AS MAY BE ADVANTAGEOUS HYDRAULICALLY; SYSTEM ARRANGEMENT SHALL BE ABOVE TOP OF LIGHTING FIXTURES WITHIN CEILING SPACES. DRY SPRINKLER SYSTEMS MAY BE "TREE" OR "LOOP" SYSTEMS, BUT SHALL NOT BE GRIDDED; THE LOCATION OF THE DRY VALVE SHALL BE AS CLOSE TO THE HAZARD AS PRACTICAL. NO DRY SPRINKLER SYSTEM SHALL BE CONFIGURED GREATER THAN 750 GALLONS IN VOLUME, PER DRY VALVE. PROVIDE QUICK OPENING DEVICES AT DRY VALVES FOR SYSTEM VOLUMES OVER 500 GALLON IN CAPACITY. PROVIDE DRY SYSTEMS WITH REQUIRED SLOPE FOR CONDENSATE DRAINAGE, INCLUDING DRUM DRIPS. PROVIDE AIR MAINTENANCE DEVICES AND AIR COMPRESSORS, SIZED TO MEET THE MAXIMUM FILL TIME REQUIREMENTS.
  - A.) THE ARRANGEMENT, POSITIONS AND CONNECTIONS OF PIPES, DRAINS, VALVES, SPRINKLERS, ETC., SHALL BE ESTABLISHED BY THE FIRE PROTECTION CONTRACTOR'S DESIGN, AND SHALL BE CONFIGURED TO DRAIN FULLY, AVOIDING TRAPPED PIPING SECTIONS AND EXCESSIVE AUXILIARY DRAINS. SPRINKLER SYSTEMS SHALL BE CONCEALED ABOVE ARCHITECTURAL CEILING WHERE CEILINGS ARE PROVIDED, UNLESS INDICATED OTHERWISE. SPRINKLER LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL REFLECTED CEILING PLANS, OR PROVIDED TO MEET NFPA#13 REQUIREMENTS IN UNFINISHED AREAS. SPRINKLERS FOR AREAS DETERMINED BY ARCHITECTURAL REFLECTED CEILING PLANS SHALL BE QUICK RESPONSE, CONCEALED TYPES, AND SHALL BE INSTALLED CENTERED IN CEILING TILES + 1/2", TO PRESENT A BALANCED AND SYMMETRICAL LAYOUT WITH OTHER CEILING ELEMENTS, LIGHTS AND DIFFUSERS. SPRINKLER BRANCH LINES TO TRASH CHUTES, ELEVATOR MACHINE ROOMS, ELEVATOR SHAFTS AND HOIST WAYS SHALL BE PROVIDED WITH SUPERVISED CONTROL VALVES AND SHALL COMPLY WITH NFPA#13 AND ELEVATOR CODE REQUIREMENTS. PROVIDE HEAT COLLECTION HOODS FOR HORIZONTAL SIDEWALL SPRINKLERS USED WITHIN ELEVATOR SHAFTS.
  - 9.) **PIPE:** ABOVE GROUND FIRE PROTECTION PIPING AND FITTINGS SHALL BE IN ACCORDANCE WITH NFPA#13. NO PIPING WITH A CORROSION RESISTANCE RATING (CRR) LESS THAN 1 SHALL BE THREADED. GALVANIZED PIPE SHALL BE USED FOR DRY SPRINKLER SYSTEMS, MAIN AND AUXILIARY DRAINS AND WHERE PIPING IS EXPOSED TO EXTERIOR CONDITIONS.SCHEDULE 40 MILD STEEL PIPE SHALL BE USED WITH THREADED AND CUT-GROOVED JOINTS. LIGHT WALL PIPE SHALL BE ROLL GROOVED ONLY, WITH APPROVED GROOVE ROLLING MACHINE FOR MECHANICAL GROOVED PIPE COUPLINGS AND FITTINGS, PRODUCTS AND GROOVING EQUIPMENT SHALL BE OF THE SAME MANUFACTURER.
 

**FITTINGS:** FITTINGS SHALL BE PRESSURE RATED FOR THE MAXIMUM PRESSURE OF THE SYSTEM. FITTINGS FOR THREADED SCHEDULE 40 PIPE SHALL BE CAST MALLEABLE IRON, LISTED BY UL AND/OR FM, FOR USE IN FIRE PROTECTION SYSTEMS. GASKETS FOR COUPLING PRODUCTS USED IN DRY SPRINKLER SYSTEMS SHALL BE LISTED FOR DRY SYSTEM USE. FLANGES, FLANGE ADAPTERS AND FLANGED FITTINGS SHALL BE NEW 175 PSI CAST IRON, LISTED BY UL OR FM, FOR USE IN FIRE PROTECTION SYSTEMS.

**VALVES:** VALVES SHALL BE PLAINLY MARKED WITH THE NAME OR TRADEMARK OF THE MANUFACTURER, SIZE OF THE VALVE, UL AND/OR FM IDENTIFICATION MARK.

**OS&Y GATE VALVES:** IRON BODY, BRONZE MOUNTED, CRANE, AMERICAN, KENNEDY, NIBCO OR APPROVED EQUAL, 4" AND LARGER. PROVIDE VALVE SUPERVISORY DEVICES AS SPECIFIED HEREIN.

# FIRE PROTECTION NOTES:

- 1.) THE SPRINKLER DESIGN DRAWINGS ARE FOR BIDDING PURPOSES ONLY. THE SPRINKLER CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL. THE SPRINKLER DESIGN AS SHOWN IS A REPRESENTATIVE DESIGN ONLY. THE SPRINKLER CONTRACTOR SHALL BASE HIS DESIGN ON THE LATEST ARCHITECTURAL AND MECHANICAL DRAWINGS AND ACTUAL FIELD CONDITIONS BEFORE ANY FABRICATION OR INSTALLATION OF THE PROPOSED SPRINKLER WORK.
- 2.) THE SPRINKLER CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES.
- 3.) FLOW TEST:
 

A HYDRANT FLOW TEST WAS CONDUCTED WITH THE FOLLOWING RESULTS:

STATIC= PSI  
RESIDUAL = PSI  
FLOW = GPM
- 4.) THE SPRINKLER SYSTEM SHALL BE DESIGNED AND INSTALLED PER LOCAL CITY FIRE PREVENTION CODES.
- 5.) ALL NEW SYSTEMS SHALL BE TESTED HYDROSTATIC ALLY AT NOT LESS THAN 200 POUNDS PER SQUARE INCH PRESSURE FOR TWO HOURS, OR AT 50 POUNDS PER SQUARE INCH IN EXCESS OF THE MAXIMUM STATIC PRESSURE WHEN THE MAXIMUM STATIC PRESSURE IS IN EXCESS OF 150 POUNDS.
- 6.) THE SPRINKLER CONTRACTOR SHALL PAY FOR ALL PERMITS AND FEES RELATED TO THE SPRINKLER WORK.
- 7.) THE SPRINKLER CONTRACTOR SHALL SUBMIT SAMPLE SPRINKLERS TO THE ARCHITECT FOR APPROVAL BEFORE INSTALLATION.
- 8.) PROVIDE WET SYSTEM LOW POINT DRAINS AND AUXILIARY DRAINS AS NECESSARY.
- 9.) THE OWNER SHALL PROVIDE A MINIMUM 40 DEGREES F TEMPERATURE THROUGHOUT ALL AREAS OF THE BUILDING WHERE WET PIPE SPRINKLER SYSTEMS ARE PROVIDED.
- 10.) THE SPRINKLER CONTRACTOR SHALL PROVIDE HANGERS PER NFPA #13.
- 11.) SUBMIT FOUR (4) SETS OF COMPLETE SHOP DRAWINGS TO THE ARCHITECT (INCLUDING CATALOG CUTS AND HYDRAULIC CALCULATIONS) FOR APPROVAL PRIOR TO FABRICATION AND THE START OF WORK.
- 12.) SUBMIT FOUR (4) SETS OF COMPLETE SHOP DRAWINGS TO THE FIRE PREVENTION BUREAU FOR APPROVAL PRIOR TO FABRICATION AND THE START OF WORK.
- 13.) DELIVER MATERIAL TO THE JOB SITE, UNLOAD AND STORE IT IN A LOCATION AS DETERMINED BY THE OWNER'S REPRESENTATIVE.
- 14.) MAINTAIN THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL OR RUBBISH COVERED BY THIS WORK. AT THE COMPLETION OF THE WORK, REMOVE ALL SURPLUS MATERIALS TOOLS, ETC. AND LEAVE THE PREMISES CLEAN.
- 15.) THE SPRINKLER CONTRACTOR SHALL PROVIDE SPRINKLER PROTECTION UNDER ALL MECHANICAL DUCTWORK OR OBSTRUCTIONS IN EXCESS OF 4"-0" IN WIDTH, IN EXPOSED STRUCTURE AREAS, IN ACCORDANCE WITH NFPA #13 REQUIREMENTS.
- 16.) SPRINKLER GUARDS SHALL BE PROVIDED FOR ALL SPRINKLERS WITHIN 7'-0" ABOVE FINISHED FLOOR AND/OR IN AREAS SUBJECT TO MECHANICAL DAMAGE.
- 17.) REFER TO SPECIFICATIONS FOR ADDITIONAL DESIGN REQUIREMENTS.
- 18.) SPRINKLER CONTRACTOR IS RESPONSIBLE TO PROVIDE ACCESS PANELS WHERE REQUIRED TO PROVIDE FUTURE ACCESS.

SECTION 02 4100 – DEMOLITION

PART 1 GENERAL:

1.01 SECTION INCLUDES

- A. Building demolition excluding removal of hazardous materials and toxic substances.
- B. Selective demolition of building elements for alteration purposes.
- C. Abandonment and removal of existing utilities and utility structures.

1.02 REFERENCE STANDARDS

- A. 29 CFR 1926 – U.S. Occupational Safety and Health Standards.

1.03 SUBMITTALS

- A. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.04 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Company specializing in the type of work required.
- 1. Minimum of 5 years of documented experience

PART 2 EXECUTION

2.01 SCOPE

- A. Remove the entire building or applicable portions thereof designated in the construction documents.
- B. Outside the area of new construction, remove foundation walls and footings to a minimum of 2 feet below finished grade.
- C. Remove concrete slabs on grade within site boundaries.
- D. Remove fences and gates.
- E. Remove other items indicated, for salvage, relocation, and recycling.
- F. Fill excavations, open pits, and holes in ground areas generated as a result of removals, using specified fill; compact fill as required so that required rough grade elevations do not subside within one year after completion.

2.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
  - 1. Obtain required permits.
  - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
  - 3. Provide, erect, and maintain temporary barriers and security devices.
  - 4. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
  - 5. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
- B. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- C. Protect existing structures and other elements that are not to be removed.
  - 1. Provide bracing and shoring as required.
  - 2. Provide movement or settlement of adjacent structures.
  - 3. Stop work immediately if adjacent structures appear to be in danger.
- D. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- E. If hazardous materials are discovered during removal operations, stop work and notify Owner and Architect; hazardous materials including regulated asbestos containing materials, lead, PCB's and mercury.
- F. Perform demolition in a manner that maximizes salvage and recycling of materials.
  - 1. Dismantle existing construction and separate materials.
  - 2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or port or reuse.

2.03 EXISTING UTILITIES

- A. Coordinate work with utility companies.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt utilities without permission from authorities having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations or disconnected and abandoned utilities.

2.04 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing conditions and utilities are based on existing record documents only.
  - 1. Verify that construction and utility arrangements are as shown
  - 2. Report discrepancies to Owner and Architect before disturbing existing installation.
  - 3. Beginning of demolition work constitutes acceptance of existing conditions.
- B. Remove existing work as indicated and as required to accomplish new work.
  - 1. Remove items indicated on drawings
- C. Services (including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
  - 1. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
  - 2. Verify that abandoned services serve only abandoned facilities before removal.
  - 3. Remove abandoned pipes, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- D. Protect existing work to remain.
  - 1. Prevent movement of structure; provide shoring and bracing if necessary.
  - 2. Repair adjacent construction and finishes damaged during removal work.
  - 3. Patch as specified for patching new work.

2.05 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

SECTION 03 0130.75 – CONCRETE REPAIR

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preparation of concrete and application of repair materials.
- B. Repair of concrete internal reinforcement.

1.02 REFERENCE STANDARDS

- A. ASTM A 82/A 82M – Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
- B. ACI 301 – Specifications for Structural Concrete for Buildings: American Concrete Institute.

PART 2 PRODUCTS

PART 2 PRODUCTS

2.01 REFERENCE STANDARDS

- A. Epoxy Resin: Two-Part adhesive containing 100 percent solids, meeting the following minimum characteristics:
  - 1. Bond Strength (ASTM C 882): 2,700 psi.
  - 2. Tensile Strength (ASTM D 638): 6,600 psi.
  - 3. Percent Elongation (ASTM D 638): 2 percent at 7 days at 70 degrees F.
  - 4. Flexural Strength (ASTM D 790): 8,000 psi.
  - 5. Compressive Strength (ASTM D 695): 6,500 psi.
- B. Bonding Agent: Polyvinyl acetate emulsion, dispersed in water while mixing, non-coagulant in mix, water resistant when cured.
- C. Portland Cement: ASTM C 150, Type I, grey.
- D. Sand: ASTM C 33 or ASTM C 404; uniformly graded, clean.
- E. Water: Clean and potable.
- F. Cleaning Agent: Commercial muriatic acid.

2.02 REINFORCEMENT MATERIALS

- A. Reinforcing Steel: ASTM A 615/A 615M Grade 40 (280) billet-steel deformed bars, unfinished.

2.03 MIXING CEMENTITIOUS MATERIALS

- A. Mix cementitious mortar and grout in accordance with manufacturer's instructions for purpose intended.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work.
- B. Beginning of installation means acceptance of substrate.

3.02 PREPARATION

- A. Clean concrete surfaces of dirt, laitance, corrosion, or other contamination: wire brush using water; rinse surface and allow to dry.
- B. Flush out cracks and voids with chemical solvent to remove laitance and dirt. Chemically neutralize by rinsing with water.
- C. Blast clean the exposed reinforcement steel surfaces. Mechanically cut away damaged portions of bar.

3.03 REPAIR WORK

- A. Repair exposed structural, shrinkage, and settlement cracks of concrete as indicated on drawings by the epoxy injection method.
- B. Remove spalling. Fill voids flush with surface. Apply surface finish.
- C. Repair reinforcement by welding new bar reinforcement to existing reinforcement with sleeve splices. Strength of welded splices to exceed original stress values.

3.04 INJECTION – EPOXY RESIN ADHESIVE

- A. Inject adhesive into prepared ports under pressure using equipment appropriate for particular application.
- B. Remove temporary seal and excess adhesive.
- C. Clean surfaces adjacent to repair and blend finish.

3.05 APPLICATION – CEMENTITIOUS MORTAR

- A. Apply spray coating of bonding agent to dry concrete surfaces. Provide full surface coverage.
- B. Apply cementitious mortar by steel trowel to an average thickness of 2 inches. Tamp into place filling voids at spalled areas. Work mix into honeycomb.
- C. Clean up spillage and wind-blown debris from public and private lands.

SECTION 03 1000 – CONCRETE FORMING AND ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Formwork for cast-in-place concrete, with shoring, bracing and anchorage.
- B. Form Stripping.

1.02 REFERENCE STANDARDS

- A. ACI 117 – Standard Specification for Tolerances for Concrete Construction and Materials.
- B. ACI 301 – Specifications for Structural Concrete for Buildings: American Concrete Institute.

1.03 QUALITY ASSURANCE

- A. Designer Qualifications: Design formwork under direct supervision of a Professional Structural Engineer experienced in design of concrete formwork and licensed in Illinois.

PART 2 PRODUCTS

2.01 FORMWORK – GENERAL

- A. Provide concrete forms, accessories, shoring and bracing as required to accomplish cast-in-place concrete work.
- B. Design and construct to provide resultant concrete that conforms to design with respect to shape, lines, and dimensions.
- C. Comply with applicable State and local codes with respect to design, fabrication, erection, and removal of formwork.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

3.02 ERECTION

- A. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI 301.
- B. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to over-stressing by construction loads.
- C. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.

3.03 APPLICATION – FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.

3.04 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Provide formed openings where required for items to be embedded in passing through concrete work.
- B. Locate and set in place items that will be cast directly into concrete.
- C. Coordinate with work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other work.

3.05 FORMWORK TOLERANCES

- A. Construct formwork to maintain tolerances required by ACI 117.

3.06 FORM REMOVAL

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.

SECTION 03 2000 – CONCRETE REINFORCING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Reinforcing steel for cast-in-place concrete.

1.02 REFERENCE STANDARDS

- A. ACI 301 – Specifications for Structural Concrete for Buildings: American Concrete Institute.
- B. ASTM A 82/ A 82M – Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
- C. ASTM A 615/ A 615 M – Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
- D. ASTM A 884/ A 884M – Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement.
- E. CRSI (D44) – Manual of Standard Practice; Concrete Reinforcing Steel Institute.

1.03 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301.

PART 2 PRODUCTS

2.01 FORMWORK – GENERAL

- A. Reinforcing Steel: ASTM A 615/A 615M Grade 60 (420).
- B. Steel Welded Wire Reinforcement: ASTM A 884/A 884M, deformed, Class A epoxy coated type.
- C. Flat Sheets.
- D. Mesh Size: 6 x 6.

2.02 FABRICATION

- A. Fabricate concrete reinforcing in accordance with CRSI (D44) – Manual of Standard Practice.

PART 3 EXECUTION

3.01 PLACEMENT

- A. Place, support and secure reinforcement against displacement. Do not deviate from required position.
- B. Conform to applicable code for concrete cover over reinforcement.

SECTION 04 0100 – MAINTENANCE OF MASONRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Water cleaning of masonry surfaces.
- B. Repair of damaged masonry.

1.02 REFERENCE STANDARDS

- A. ACI 530/ASCE 5/TMS 402 – Building Code Requirements for Masonry Structures; American Concrete Institute International.
- B. ACI 530.1/ASCE 6/TMS 602 – Specification for Masonry Structures; American Concrete Institute International.

1.03 QUALITY ASSURANCE

- A. Restorer: Company specializing with masonry restoration with minimum three years of documented experience.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver masonry neatly stacked and tied with pallets. Store clear of ground with adequate waterproof covering.

1.05 FIELD CONDITIONS

- A. Cold and Hot Weather Requirements: Comply with requirements of ACI 530.1/ASCE 6/TMS 602 or applicable building code, whichever is more stringent.

PART 2 PRODUCTS

2.01 CLEANING MATERIALS

- A. Cleaning Agent: Detergent and Solvent cleaner type.
- B. Cleaning Agent: 0.5 lb of sodium hydrosulphite mixture to one gallon of water.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces to be cleaned are ready for work on this session.

3.02 PREPARATION

- A. Protect surrounding elements from damage due to restoration procedures.
- B. Carefully remove and store removable items located in areas to be restored, including fixtures, fittings, finish hardware, and accessories; reinstall upon completion.
- C. Separate areas to be protected from restoration areas using means adequate to prevent damage.
- D. Mask immediately adjacent surfaces with material that will withstand cleaning and restoration procedures.

3.03 CLEANING NEW MASONRY

- A. Verify mortar is fully set and cured.
- B. Clean surfaces and remove large particles with wood scrapers, brass or nylon wire brushes.
- C. Before solution dries, rinse and remove acid solution and dissolved mortar, using clean, pressurized water.

3.04 CLEANING

- A. Immediately remove stains, efflorescence, or other excess resulting from the work of this section.
- B. Remove excess mortar, smears, and droppings as work proceeds and upon completion.
- C. Clean surrounding surfaces.

SECTION 04 0511 – MASONRY MORTARING & GROUTING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Mortar for masonry.
- B. Grout for masonry.

1.02 REFERENCE STANDARDS

- A. ASTM C 91 – Standard Specification for Masonry Cement.
- B. ASTM C 270 – Standard Specification for Mortar for Unit Masonry.
- C. ASTM C 476 – Standard Specification for Grout for Masonry.

1.03 QUALITY ASSURANCE

- A. Comply with provisions of ACI 530/ASCE 5/TMS 402 and ACI 530.1/ASCE 6/TMS 602, except where exceeded by requirements of the contract documents.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Maintain packaged materials dry and clean, dry, and protected against dampness, freezing, and foreign matter.

1.05 FIELD CONDITIONS

- A. Cold and Hot Weather Requirements: Comply with requirements of ACI 530.1/ASCE 6/TMS 602 or applicable building code, whichever is more stringent.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Masonry Cement: ASTM C 91, Type N
- B. Mortar Aggregate : ASTM C 144
- C. Water: Clean and potable
- D. Moisture-Resistant Admixture: Water repellent compound designed to reduce capillarity.
- E. Bonding Agent: Latex type.

2.02 MORTAR MIXING

- A. Thoroughly mix mortar ingredients using mechanical batch mixer, in accordance with ASTM C 270 and in quantities needed for immediate use.
- B. Maintain sand uniformly damp immediately before the mixing process.
- C. Do not use anti-freeze compounds to lower the freezing point of mortar.
- D. If water is lost by evaporation, re-temper only within two hours of mixing.

2.03 GROUT MIXES

- A. Bond Beams and Lintels: 3,000 psi strength at 28 days; 8–10 inches slump; provide premixed type in accordance with ASTM C 270 and in quantities needed for immediate use.
- B. Engineered Masonry: 3,000 psi strength at 28 days; 8–10 inches slump; provide premixed type in accordance with ASTM C 94/C 94M.

2.03 GROUT MIXING

- A. Mix grout in accordance with ASTM C 94/C 94M.
- B. Thoroughly mix grout ingredients in quantities needed for immediate use in accordance with ASTM C 476 for fine and coarse point.

PART 3 EXECUTION

3.01 GROUT MIXES

- A. Apply bonding agent to existing concrete surfaces.
- B. Work grout into masonry cores and cavities to eliminate voids
- C. Do not install grout in lifts greater than 16 inches without consolidating grout by rodding.
- D. Remove excess mortar from grout spaces.

SECTION 05 1200 – STRUCTURAL STEEL FRAMING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Structural steel framing members, support members.
- B. Base plates, shear stud connectors and expansion joint plates

1.02 REFERENCE STANDARDS

- A. AISC (MAN) – Steel Construction Manual; American Institute of Steel Construction, Inc.
- B. AISC S303 – Code of Standard Practice for Steel Buildings and Bridges; American Institute of Steel Construction, Inc.
- C. ASTM A 992/A 992M – Standard Specification for Structural Steel Shapes.

1.03 QUALITY ASSURANCE

- A. Fabricate structural steel members in accordance with AISC "Steel Construction Manual."

PART 2 PRODUCTS

2.01 MATERIALS

- A. Steel Angles and Plates: ASTM A 36/A 36M
- B. Steel W Shapes and Tees: ASTM A 992/A992 M
- C. Steel Shapes, Plates, and Bars: ASTM A 242/A242M high-strength, corrosion-resistant structural steel.

2.02 FINISH

- A. Shop prime structural steel members. Do not prime surfaces that will be fireproofed, field welded, in contact with concrete, or high strength bolted

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that conditions are appropriate for erection of structural steel and that the work may properly proceed.

3.02 ERECTION

- A. Erect structural steel in compliance with AISC "Code of Standard Practice for Steel Buildings and Bridges."

3.03 TOLERANCE

- A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.

SECTION 05 2100 – STEEL JOIST FRAMING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Open web steel joist, with bridging, attached seats and anchors.

1.02 REFERENCE STANDARDS

- A. SJI (SPEC) – Catalog of Standard Specifications and Load Tables for Steel Joists and Joist Girders; Steel Joist Institute.
- B. SJI Technical Digest No.9 – Handling and Erection of Steel Joists and Joist Girders; Steel Joist Institute.

1.03 QUALITY ASSURANCE

- A. Design connections not detailed on the drawings under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in Illinois.
- B. Perform Work, including that for headers and other supplementary framing, in accordance with SJI Standard Specifications Load Tables and SJI Technical Digest No.9.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Open Web Joists: SJI Type K Joists;
- B. Open Web Joists: SJI Type LH Joists;
- C. Open Web Joists: SJI Type DLH Joists;
- D. Open Web Joists: SJI Joist Girders;
- E. Anchor Bolts, Nuts and Washers: ASTM A 307, hot-dip galvanized per ASTM A 153/A153M, Class C.
- F. Welding Materials: AWS D1.1; type required for materials being welded.
- G. Shop and Touch-Up Primer: SSPC-Paint 25, zinc oxide, complying with VOC limitations of authorities having jurisdiction.

2.02 FINISH

- A. Shop prime joists as specified.
- B. Prepare surfaces to be finished in accordance with SSPC-SP 2.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions prior to beginning work.

3.02 ERECTION

- A. Erect joist with correct bearing on supports.
- B. Allow for erection loads. Provide sufficient temporary bracing to maintain framing safe, plumb, and in true alignment.
- C. Do not permit erection of decking until joists are braced bridged, and secured or until completion of erection and installation of permanent bridging and bracing.
- D. Do not field cut or alter structural members without approval of joist manufacturer.

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SECTION 05 5100 – METAL STAIRS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Stairs with concrete treads.
- B. Stairs with metal treads.
- C. Structural steel stair framing and supports.

1.02 REFERENCE STANDARDS

- A. ASTM A 5/A 6M – Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling.
- B. AWS D1.1/D1.1M – Structural Welding Code – Steel, American Welding Society.
- C. NAAMM AMP 510 – Metal Stairs Manual; The National Association of Architectural Metal Manufacturers.

1.03 QUALITY ASSURANCE

- A. Structural Designer Qualification: Professional Structural Engineer experienced in design of this work and licensed in Illinois, or personnel under direct supervision of such an engineer.

PART 2 PRODUCTS

2.01 METAL STAIRS – GENERAL

- A. Metal Stairs: Provide stairs of the design specified, complete with landing platforms, vertical and horizontal supports, railings, and guards, fabricated accurately for anchorage to each other and to building structure.
  - 1. Regulatory Requirements: Provide stairs and railings complying with the most stringent requirements of local, State, and federal regulations; where requirements of the contract documents exceed those of regulations, comply with the contract documents.
  - 2. Dimensions: As indicated on drawings.
  - 3. Shop assemble components; disassemble into largest practical sections suitable for transport and access to site.
  - 4. No sharp or rough areas on exposed travel surfaces and surfaces accessible to touch.
  - 5. Separate dissimilar metals using paint or permanent tape.
- B. Metal Jointing and Finish Quality Levels:
  - 1. Architectural: All joints as inconspicuous as possible, whether welded or mechanical.
    - a. Welded Joints: Continuously welded and ground smooth and flush.
    - b. Mechanical Joints: Butted tight, flush, and hairline; concealed fastenings only with the contract documents.
    - c. Exposed Edges and Corners: Eased to small uniform radius.
    - d. Metal Surfaces to be Painted: Sanded or ground smooth, suitable for highest quality glass finish.
- C. Fasteners: Same material or compatible with materials being fastened; type consistent with design and specified quality level.
- D. Anchors and Related Components: Same material and finish as item to be anchored, except where specifically indicated otherwise; provide all anchors and fasteners required.

2.02 METAL STAIRS WITH CONCRETE TREADS

- A. Jointing and Finish Quality Level: Architectural, as defined above.
- B. Risers: Closed unless noted otherwise on the drawings.
- C. Treads: Metal pan with precast concrete tread.
  - 1. Precast Concrete Tread Thickness: 1–1/2 inches, minimum.
  - 2. Precast Concrete Treads:
    - a. Concrete Strength: 4,000 psi at 28 days, minimum.
    - b. Cement Color: Natural gray.
  - 3. Tread Pan Material: Steel sheet.
  - 4. Tread Pan Thickness: As required by design; 1/4 gage, 0.075 inch minimum.
- D. Riser: Same material and thickness as tread pans.
  - 1. Riser/Nosing Profile: Sloped riser with rounded nosing of minimum radius.
  - 2. Nosing Depth: Not more than 1 inch overhang.
- E. Stringers: Rolled steel channels.
  - 1. Stringer Depth: 12 inches.
  - 2. End Closure: Sheet steel of same thickness as risers welded across ends.
- F. Railings: Steel pipe railings – unless noted otherwise on drawings.

2.03 METAL STAIRS WITH METAL TREADS

- A. Jointing and Finish Quality Level: Architectural, as defined above.
- B. Risers: Closed.
- C. Treads: Checkered steel plate.
  - 1. Tread Thickness: 1/4 inch, minimum.
  - 2. Anchorage to Stringers: Welded or bolted to carrier angles welded or bolted to stringers.
- D. Riser: Steel sheet.
  - 1. Riser Thickness: As required by design; 1/4 gage, 0.075 inch minimum.
  - 2. Riser/Nosing Profile: Sloped riser with rounded nosing of minimum radius.
- E. Stringers: Rolled steel channels.
  - 1. Stringer Depth: 12 inches.
  - 2. End Closure: Sheet steel of same thickness as risers welded across ends.
- F. Railings: Steel pipe railings – unless noted otherwise on drawings.

2.04 MATERIALS

- A. Steel Sections: ASTM A 36/A 36M.
- B. Checkered Plate: ASTM A786/A 786M, rolled steel floor plate, pattern no. 2.
- C. Steel Bolts, Nuts, and Washers: ASTM A 325 (ASTM A 325M), Type 1, galvanized to ASTM A 153/A 153M where connecting galvanized components.
- D. Welding Materials: AWS D1.1; type required for materials being welded.

2.05 SHOP FINISHING

- A. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

- A. When field welding is required, clean and strip primed steel items to bare metal.

3.03 INSTALLATION

- A. Install components plumb and level, accurately fitted, free from distortion or defects.
- B. Provide anchors, plates, angles, hangers, and struts required for connecting stairs to structure.
- C. Allow for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- D. Provide welded field joints where specifically indicated on drawings. Perform field welding in accordance with AWS D1.1.
- E. Other field joints may be either welded or bolted provided the result complies with the limitations specified for jointing quality levels.
- F. Obtain approval prior to site cutting or creating adjustments not scheduled.
- G. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized, except surfaces to be in contact with concrete.

SECTION 05 5213 – PIPE AND TUBE RAILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Wall mounted handrails.
- B. Stairs railings and guardrails.
- C. Balcony railings and guardrails.

1.02 REFERENCE STANDARDS

- A. AAMA 611 – Voluntary Specification for Anodized Architectural Aluminum; American Architectural Manufacturers Association.
- B. ASTM E 935 – Standard Test Methods for Performance of Permanent Metal Railing Systems and Rails for Buildings.
- C. ASTM E 985 – Standard Specification for Permanent Metal Railing Systems and Rails for Buildings.

PART 2 PRODUCTS

2.01 RAILINGS – GENERAL REQUIREMENTS

- A. Design, fabricate, and test railing assemblies in accordance with the most stringent requirements of ASTM E 985 and applicable state and local codes.
- B. Design railing assembly, wall rails, and attachments to resist lateral force of 200 lbs at any point without damage or permanent set.
- C. Dimensions: See drawings for configurations and heights.
  - 1. Top Rails and Wall Rails: 1–1/2 inches diameter, round unless noted otherwise on the drawings.
  - 2. Post: 1–1/2 inches square.
  - 3. Baluster: 1/2 inch square solid bar.
- D. Provide anchors and other components as required to attach to structure, made of same materials as railing components unless otherwise indicated; where exposed fasteners are unavoidable provide flush countersunk fasteners.
- E. Provide mechanical and welding fittings where indicated to join lengths, seal open ends, and conceal exposed mounting bolts and nuts, including but not limited to elbow, T-shapes, splice connectors, flanges, escutcheons, and wall brackets.

2.02 FABRICATION

- A. Accurately form components to suit specific project conditions and for proper connection to building structure.
- B. Fit and shop assemble components in largest practical sizes for delivery to site..
- C. Fabricate components with joints tightly fitted and secured.

2.03 ALUMINUM FINISHES

- A. Class 1 Natural Anodized Finish: AAMA 611 AA-M12C224A1 Clear anodic coating not less than 0.7 mils thick.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Apply one coat of bituminous paint to concealed aluminum surfaces that will be in contact with cementitious or dissimilar materials.

3.03 INSTALLATION

- A. Install in accordance with manufacturer’s instructions.
- B. Install components plumb and level, accurately fitted, free from distortion or defects, with tight joints.
- C. Anchor railings securely to structure.

3.04 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per floor level, non-cumulative.

SECTION 06 1000 – ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Structural dimension lumber framing.
- B. Non-structural dimension lumber framing.
- C. Rough opening framing for doors, windows, and roof openings.
- D. Sheathing.
- E. Subflooring.
- F. Preservative treated wood materials.
- G. Concealed wood blocking, nailers, and supports.

1.02 REFERENCE STANDARDS

- A. AFPA (WFCM) – Wood Frame Construction Manual for One- and Two-Family Dwellings; American Forest and Paper Association.
- B. AWA U1 – Use Category System: User Specification for Treated Wood; American Wood-Preserves’ Association.
- C. PS 20 – American Softwood Lumber Standard; National Institute of Standards and Technology (Department of Commerce).

1.03 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.
- B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, or installation.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
  - 1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
  - 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standards Committee ( ) and who provides graderservice for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
- B. Lumber fabricated from old growth timber is not permitted.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.
- C. Stud Framing (2 by 2 through 2 by 6):
  - 1. Grade: No. 2.
- D. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16):
  - E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
    - 1. Lumber: S4S, No. 2 or Standard Grade.
    - 2. Boards: Standard or No. 3.

2.03 CONSTRUCTION PANELS

- A. Subfloor/Underlayment Combination: APA PRP – 108, Rated Sturd-I–Floor
  - 1. Exposure Class: Exterior
  - 2. Span Rating: 16 inches.
  - 3. Thickness: ¾ inches, nominal.
- B. Roof Sheathing: APA PRP – 108/APA PRPR – 108, Form B455 Structural I Rated Sheathing, Exterior Exposure Class and as follows:
  - 1. Span Rating: 24/0
- C. Wall Sheathing: APA PRP – 108/APA PRPR – 108, Form B455 Structural I Rated Sheathing, Exterior Exposure Class and as follows:
  - 1. Span Rating: 24/0

2.04 ACCESSORIES

- A. Fasteners and Anchors:
  - 1. Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
  - 2. Sill Gasket on Top of Foundation Wall: ¾ inch thick, plate width, closed cell plastic foam from continuous rolls.
  - 3. Subfloor Glue: Waterproof, water base, air cure type, cartridge dispensed.
- B. Factory Wood Treatment
  - 1. Treated Lumber and Plywood: Comply with requirements of AWA U1 – Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
    - 1. Preservative – Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWA standards.
  - 2. Preservative Treatments:
    - 1. Preservative Pressure Treatment of Lumber Above Grade: AWA Use Category UC3B, Commodity Specification A (Treatment C2) using waterborne preservative to 0.25 lb/cu ft retention.

- Kiln dry lumber after treatment to maximum moisture content of 19 percent. Treat lumber exposed to weather. Treat lumber in contact with masonry or concrete.

PART 3 EXECUTION

3.01 PREPARATION

- A. Install sill gasket under all plate of framed wall bearing on foundations; puncture gasket cleanly to fit tightly around protruding anchor bolts.

3.02 INSTALLATION – GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.03 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to installation of permanent bracing.
- C. Install structural members full length without splices unless otherwise specifically detailed.
- D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AFPA Wood Frame Construction Manual.
- E. Install horizontal spanning members with crown edge up and not less than 1–1/2 inches of bearing at each end.
- F. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed.
- G. Provide bridging at joists in excess of 8 feet span as detailed. Fit solid blocking at ends of members.
- H. Frame wall openings with two or more studs at each jamb; support headers on single studs.

3.04 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
- C. Where ceiling-mounted is indicated, provide blocking and supplementary supports above ceiling, unless other method is explicitly indicated.

3.05 INSTALLATION OF CONSTRUCTION PANELS

- A. Subfloor/Underlayment Combination: Screw to framing; nails are not permitted.
- B. Roof Sheathing: Secure panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.
  - 1. Nail panels to framing; staples are not permitted.
- C. Wall Sheathing: Secure panels with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails or screws.

3.06 CLEANING

- A. Do not leave any wood, shavings, sawdust, etc. on the ground or buried in fill.
- B. Prevent sawdust and wood shavings from entering the storm drainage system.

SECTION 06 1753 – SHOP-FABRICATED WOOD TRUSSES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop fabricated wood trusses for roof framing.
- B. Bridging, bracing, and anchorage.

1.02 REFERENCE STANDARD

- A. TPI 1 – National Design Standard for Metal Plate Connected Wood Truss Construction; Truss Plate Institute (ANSI/TPI 1).
- B. BCSI 1 – Building Component Safety Information Booklet: The Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses; joint publication of the Truss Plate Institute and the Wood Trust Council of America.

1.03 DESIGN REQUIREMENTS

- A. Comply with applicable code for structural loading criteria and fire retardant requirements.
- B. Design Floor Live and Dead Load: 70 lbs/sq ft with deflection limited to 1/360 – unless noted otherwise on drawings.
- C. Design Roof Live and Dead Load: 40 lbs/sq ft with deflection limited to 1/240.

1.04 QUALITY ASSURANCE

- A. Truss Design, Fabrication, and Installation: In accordance with TPI 1, TPI DSB–89, and BCSI 1.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Handle and erect trusses in accordance with BCSI 1.

PART 2 PRODUCTS:

2.01 MATERIALS

- A. Lumber:
  - 1. Grade: RIS (GR), Grade as specified by truss manufacture for uniform live and dead loads as required per state and local codes.
  - 2. Moisture Content: Between 7 and 9 percent.
  - 3. Lumber fabricated from old growth timber is not permitted.
- B. Truss Bridging: Type, size and spacing recommended by truss manufacturer.

2.02 FABRICATION

- A. Fabricate trusses to achieve structural requirements specified.
- B. Brace wood trusses in accordance with TPI DSB–89 and BCSI 1.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated on shop drawings.
- B. Verify that supports and openings are ready to receive trusses.

3.02 ERECTION

- A. Install trusses in accordance with manufacturer’s instructions and TPI DSB–89 and BCSI 1.
- B. Set members level and plumb, in correct position.
- C. Install permanent bridging and bracing.

SECTION 06 2000 – FINISH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Finish carpentry items.

1.02 REFERENCE STANDARDS

- A. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
- B. AW/AMAC (QSI) – Architectural Woodwork Quality Standards Illustrated; Architectural Woodwork Institute and Architectural Woodwork Manufacturers Association of Canada.
- C. NHLA G–101 – Rules for the Measure

1.03 QUALITY ASSURANCE

- A. Grade materials in accordance with the following:
  - 1. Softwood Lumber: In accordance with rules certified by ALSC; .
  - 2. Plywood: Certified by the American Plywood Association
  - 3. Hardwood Lumber: In accordance with NHLA Grading rules; .

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Protect work from moisture damage.

PART 2 PRODUCTS:

2.01 MATERIALS – GENERAL

- A. Unless otherwise indicated provide products of quality specified by AW Architectural Woodwork Quality Standards Illustrated for Custom grade.

2.02 WOOD–BASED COMPONENTS

- A. Wood fabricated from old growth timber is not permitted.

2.03 WOOD TREATMENT

- A. Fire Retardant Treatment (FR–S Type): Chemically treated and pressure impregnated; capable of providing flame spread index of 25, maximum, and smoke developed index of 450, maximum, when tested in accordance with ASTM E84.
- B. Provide identification of fire retardant treated material.
- C. Redry wood after pressure treatment to maximum 12 percent moisture content.

2.04 FABRICATION

- A. Shop assemble work for delivery to site, permitting passage through building openings.
- B. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify mechanical, electrical, and building items affecting work of this section are placed and ready to receive this work.

3.02 INSTALLATION

- A. Set and secure materials and components in place, plumb and level.
- B. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim to conceal larger gaps.

3.03 TOLERANCES

- A. Maximum Variation from True Position: 1/16 inch.
- B. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch.

SECTION 07 1113 – BITUMINOUS DAMP PROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Bituminous Damp Proofing

1.02 REFERENCE STANDARDS

- A. ASTM D 449 – Standard Specification for Asphalt Used in Damp Proofing and Waterproofing.
- B. ASTM D 4586 – Standard Specification for Asphalt Roof Cement, Asbestos – Free.

1.03 FIELD CONDITIONS

- A. Maintain ambient temperatures above 40 degrees F for 24 hours before and during application until damp proofing has cured.

PART 2 PRODUCTS

2.01 HOT ASPHALTIC MATERIALS

- A. Bitumen: ASTM D 449, Type I, asphalt.
- B. Primer: ASTM D 41, compatible with substrate.
- C. Sealing Mastic: Asphalt roof cement, ASTM D 4586, Type I.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify substrate surfaces are durable, free of matter detrimental to adhesion or application of damp proofing system.
- C. Verify that items that penetrate surfaces to receive damp proofing are securely installed.

SECTION 07 1400 – FLUID–APPLIED WATER PROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fluid applied membrane water proofing.

1.02 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D – National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency.
B. ASTM D 3468 – Standard Specification for Liquid–Applied Neoprene and Chlorosulfonated Polyethylene Used in Roofing and Water Proofing

1.03 QUALITY ASSURANCE

A. Membrane Manufacturer Qualifications: Company specializing in water proofing sheet membranes with three years experience.

1.04 FIELD CONDITIONS

A. Maintain ambient temperatures above 40 degrees F for 24 hours before and during application and until cured.

PART 2 PRODUCTS

2.01 MEMBRANE MATERIALS

A. Fluid–Applied Water Proofing – General: Synthetic rubber fluid–applied membrane. Synthetic Rubber Membrane: Neoprene complying with ASTM D 3468; one component; cold applied, quick setting.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.
B. Verify substrate surfaces are free of frozen matter, dampness, loose particles, cracks, pits, projections, penetrations, or foreign matter detrimental to adhesion or application of water proofing system.
C. Verify that substrate surfaces are smooth, free of honeycomb or pitting, and not detrimental to full contact bond of water proofing materials.
D. Verify that items that penetrate surfaces to receive water proofing are securely installed.

3.02 PREPARATION

A. Protect adjacent surfaces not designated to receive water proofing.
B. Clean and prepare surfaces to receive water proofing in accordance with manufacturer’s instructions. Vacuum substrate clean.
C. Do not apply water proofing to surfaces unacceptable to manufacturer.
D. Seal cracks and joints with sealant using methods recommended by sealant manufacturer.

3.03 INSTALLATION

A. Conform to NRCA Water Proofing and Damp Proofing Manual drawing details as noted.
B. Apply water proofing in accordance with manufacturer’s instructions to specified minimum thickness.
C. Seal membrane and flashings to adjoining surfaces. Install termination bar at all edges. Install counter flashing over all exposed edges.

3.04 PROTECTION

A. Do not permit traffic over unprotected or uncovered membrane.

SECTION 07 2100 – THERMAL INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Board Insulation and integral vapor retarder at cavity wall construction, perimeter foundation wall, and underside of floor slabs.
B. Batt insulation and vapor retarder in exterior wall, ceiling, and roof construction.

1.02 REFERENCE STANDARDS

A. ASTM C 578 – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
B. ASTM D 665 – Standard Specification for Mineral–Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
C. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.

PART 2 PRODUCTS

2.01 APPLICATIONS

A. Insulation under Concrete Slabs: Extruded polystyrene board – unless noted otherwise.
B. Insulation at Perimeter of Foundation: Extruded Polystyrene board – unless noted otherwise.
C. Insulation inside Cavity Walls: Extruded polystyrene board – unless noted otherwise.
D. Insulation in Metal Framed Walls: Batt insulation with separate vapor retarder – unless noted otherwise.
E. Insulation in Wood Framed Walls: Batt insulation with separate vapor retarder – unless noted otherwise.
F. Insulation in Wood Framed Ceiling: Batt insulation w/ separate vapor retarder – unless noted otherwise.

2.02 BOARD INSULATION MATERIALS

A. Extruded Polystyrene Board Insulation: ASTM C 578, Type X; Extruded polystyrene board with either natural skin or cut cell surfaces; with the following characteristics.
B. Flame Spread Index: 75 or less, when tested in accordance with ASTM E 84.
C. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E 84.
D. Board Thickness: as indicated on plans.

2.03 PREPARATION

A. Batt Insulation: ASTM C 665; preformed batt; friction fit, conforming to the following:
B. Flame Spread Index: 25 or less, when tested in accordance with ASTM E 84.
C. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E 84.
D. Combustibility: Non–combustible, when tested in accordance with ASTM E 136, except for facing, if any.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation and adhesive.
B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.

3.02 BOARD INSTALLATION AT FOUNDATION PERIMETER

A. Install boards horizontally on foundation perimeter.
B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

3.03 BOARD INSTALLATION AT CAVITY WALLS

A. Install boards to fit snugly between wall ties.
B. Install boards horizontally on walls.
C. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

3.04 BOARD INSTALLATION UNDER CONCRETE SLABS

A. Place insulation under slabs on grade after base for slab has been compacted.
B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.
C. Prevent insulation from being displaced or damaged while placing vapor retarder and placing slab.

3.05 BATT INSULATION

A. Install in exterior wall and roof spaces without gaps or voids. Do not compress insulation. Install insulation and vapor retarder in accordance with manufacturer’s instructions.
B. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
C. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
D. At wood framing, place vapor retarder on warm side of insulation by stapling at 6 inches on center. Lap and seal sheet retarder joints over member face.
E. At metal framing, place vapor retarder on warm side of insulation; lap and seal sheet retarder joint of member face.
F. Tape seal tears or cuts in vapor retarder.
G. Extend vapor retarder tightly to full perimeter of adjacent window and door frames and other items interrupting the plane of the membrane. Tape and seal in place.

3.06 PROTECTION

A. Do not permit installed insulation to be damaged prior to its concealment.

SECTION 07 2129 – SPRAYED INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Cellulose insulation applied to underside of structure.

1.02 REFERENCE STANDARDS

A. ASTM C 739 – Standard Specification for Cellulosic Fiber Loose – Fill Thermal Insulation

PART 2 PRODUCTS

2.01 MATERIALS

A. Cellulose Fiber Insulation: ASTM C 739; treated cellulose fiber, white color, conforming to the following test requirements:
1. K factor: 0.22 K, when tested in accordance with ASTM C 177.
2. Density: 2 lb/ cu ft., when tested in accordance with ASTM D 1622.
3. NRC: 0.75 for 1 inch thickness.

PART 3 EXECUTION

3.01 EXECUTION

A. Verify that surfaces are clean, dry and free of matter that may inhibit adhesion.
B. Verify that ceiling hangers and supporting clips have been installed correctly.
C. Verify other more on and within spaces to be insulated is complete prior to application.

3.02 PREPARATION

A. Mask and protect adjacent surfaces from overspray or damage.
B. Apply primer in accordance with manufacturer’s instructions.
C. Install insulation stops between rafters at wall/ sloped roof construction to prevent insulation from covering soffit vents or from limiting air circulation from soffit to attic space.

3.03 INSTALLATION

A. Install insulation in accordance with manufacturer’s instructions.
B. Install insulation to a uniform monolithic density with voids.

3.04 PROTECTION

A. Do not permit subsequent construction work to disturb applied insulation.

SECTION 07 5200 – MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Modified bituminous roofing membrane, conventional application.
B. Insulation, flat and tapered.
C. Base flashings.

1.02 REFERENCE STANDARDS

A. ASTM C 578 – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
B. ASTM D 41– Standard Specification for Asphalt Primer Used in Roofing, Damp Proofing, and Water Proofing.
C. ASTM D 312 – Standard Specification for Asphalt Used in Roofing.
D. ASTM D 4586 – Standard Specification for Asphalt Roof Cement, Asbestos–Free.
E. ASTM D 4601– Standard Specification for Asphalt–Coated Glass Fiber Base Sheet Used in Roofing.
F. NRCA ML104 – The NRCA Roofing and Water Proofing and Water Proofing Manual; National Roofing Contractors Association.

1.03 QUALITY ASSURANCE

A. Perform work in accordance with NRCA Roofing and Water Proofing Manual and manufacturer’s instructions.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver products in manufacturer’s original containers, dry, undamaged, with seals and labels intact.
B. Store products in weather protected environment, clear of ground and moisture; ballast materials may be stored outdoors.
C. Protect foam insulation from direct exposure to sunlight.

1.05 FIELD CONDITIONS

A. Do not apply roofing membrane when environmental conditions are outside the ranges recommended by manufacturer.

PART 2 PRODUCTS

2.01 ROOFING – CONVENTIONAL APPLICATION

A. Modified Bituminous Roofing: Two–ply membrane, with vapor retarder and insulation.
B. Roofing Assembly Requirement.
C. Acceptable Insulation Types – Tapered Application: Any of the types specified.
1. Tapered extruded polystyrene board.

2.02 ROOFING – PROTECTED MEMBRANE APPLICATION

A. Modified Bituminous Roofing: Two–ply membrane, with separation sheet, insulation, water pervious fabric, and ballast.
B. Roofing Assembly Requirements.
C. Acceptable Insulation Types:
1. Extruded polystyrene board.

2.03 MEMBRANE AND SHEET MATERIALS

A. Membrane: Polymer modified asphalt, reinforced with non–woven fabric; smooth surfaced; with the following characteristics:
1. Minimum Quality: ASTM D 6162 Type I, styrene–butadiene–styrene (SBS) modified, glass fiber and polyester reinforced.
B. Base Sheet: ASTM D 4601 Type I, asphalt–coated fiber; unperforated.
C. Flexible Flashing Material: Same Material as membrane.
D. Separation Sheet: Sheet polyethylene; 4 mil thick.
E. Water Pervious Fabric: Woven polyethylene, UV stabilized, open to moisture movement, black.

2.04 BITUMINOUS MATERIALS

A. Bitumen: Asphalt, ASTM D 312 Type IV; for adhering insulation, use Type III.
B. Primer: ASTM D 41, asphalt type.
C. Roof Cement: ASTM D 4586, Type II.

2.05 INSULATION

A. Extruded Polystyrene Board Insulation: ASTM C 578, Type X; Extruded expanded polystyrene board with natural skin surfaces, with drainage channels one face; with the following characteristics:
1. Board Size: 48 X 96 inch.
2. Board Thickness: 1– 1/2 inches.
3. Tapered Board: Slope as indicated; minimum thickness 1/2 in; fabricate of fewest layers possible.
4. Board Edges: Square.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces and site conditions are ready to receive work.
B. Verify deck is supported and secure.
C. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.
D. Verify deck surfaces are dry and free of snow or ice.
E. Verify that roof openings, curbs, and penetrations through roof are solidly set, and cant strips are in place.

3.02 INSULATION INSTALLATION – CONVENTIONAL APPLICATION

A. Ensure vapor retarder is clean and dry, continuous, and ready for application of roofing system.
B. Attachment of insulation:
1. Mechanically fasten first layer of insulation to deck in accordance with roofing manufacturer’s instructions and Factory Mutual requirements.
C. Place tapered insulation to the required slope pattern in accordance with manufacturer’s instructions.
D. Lay boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.
E. Do not apply more insulation that can be covered with membrane in same day.

3.03 MEMBRANE APPLICATION

A. Apply membrane in accordance with manufacturer’s instructions.
B. Apply membrane; lap and seal edges and ends permanently waterproof.
C. Apply smooth, free from air pockets, wrinkles, fish–mouths, or tears. Endure full bond of membrane to substrate.
D. At end of day’s operation, install waterproof cut–off. Remove cut–off before resuming roofing.
E. At intersections with vertical surface:
1. Extend membrane over cant strips and up a minimum of 8 inches onto vertical surfaces.
2. Apply flexible flashing over membrane.
F. Around roof penetrations, mop in and seal flanges and flashings with flexible flashing.
G. Coordinate installation of roof drains and sumps and related flashings.

3.04 CLEANING

A. Remove bituminous markings from finished surfaces.
B. In areas where finished surfaces are soiled by bitumen or other source of soiling caused by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.
C. Repair or replace defaced or damaged finishes caused by work on this section.

3.05 PROTECTION

A. Protect installed roofing and flashings from construction operations.
B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials.

SECTION 07 6200 – SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fabricated sheet metal items, including flashings, counter flashings, gutters, and downspouts.

1.02 REFERENCE STANDARDS

A. AAMA 2604 – Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
B. ASTM B 209 – Standard Specification for Aluminum and Aluminum Extrusions and Panels.
C. ASTM D 4586 – Standard Specification for Asphalt Roof Cement, Asbestos–Free.
D. SMACNA (ASMM) – Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors’ National Association.

1.03 QUALITY ASSURANCE

A. Perform work in accordance with SMACNA Architectural Sheet Metal Manual requirements and standard details, except as otherwise indicated.

1.04 QUALITY ASSURANCE

A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
B. Prevent contact with materials that could cause discoloration or staining.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

A. Aluminum: ASTM B 209 (ASTM B 209M); 0.032 inch thick; anodized finish of color as selected.
B. Pre–Finished Aluminum: ASTM B 209 (ASTM B 209M); 0.32 inch thick; plain finish slope pre coated with fluoropolymer coating of color as selected.
1. Fluoropolymer Coating: High Performance Organic Finish, AAMA 2604; multiple coat, thermally cured fluoropolymer finish system; color as scheduled.

2.02 ACCESSORIES

A. Fasteners: Galvanized steel, with soft neoprene washers.
B. Primer: Zinc chromate type.
C. Protective Basking Paint: Zinc molybdate alkyl.
D. Plastic Cement: ASTM D 4586, Type I

2.03 FABRICATION

A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
B. Form pieces in longest lengths.
C. Hem exposed edges on underside 1/2 inch; miter and seam corners.
D. Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet–type or interlocking hooked seams.
E. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal with sealant.
F. Fabricate vertical faces with bottom edge formed outward 1/4 inch (6mm) and hemmed to form drip.
G. Fabricate flashings to allow toe to extend 2 inches over roofing gravel. Return and brake edges.

2.04 GUTTER AND DOWNSPOUT FABRICATION

A. Gutters: SMACNA Architectural Sheet Metal Manual, Rectangular profile.
B. Downspouts: Rectangular profile.
C. Gutters and Downspouts: Size for rainfall intensity determined by a storm occurrence of 1 in 5 years in accordance with SMACNA Architectural Sheet Metal Manual.
D. Downspout Boots: Steel.
E. Seal Metal joints.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify roof openings, curbs, pipes, sleeve, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.
B. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 PREPARATION

A. Install starter and edge strips, and cleats before starting installation.
B. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil.
C. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
D. Secure gutters and downspouts in place using concealed fasteners.
E. Slope gutters 1/4 inch per foot minimum.
F. Connect downspouts to downspout boots at 8” above grade and seal connection watertight.

3.03 INSTALLATION

A. Secure Flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
B. Apply plastic cement compound between metal flashings and felt flashings.
C. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
D. Secure gutters and downspouts in place and using concealed fasteners.
E. Slope gutters 1/4 inch per foot minimum.
F. Connect downspouts to downspout boots at 8” above grade and seal connection watertight.

SECTION 07 7100 – ROOF SPECIALITIES

PART 1 GENERAL:

1.01 SECTION INCLUDES

A. Manufactured roof specialties, including copings, fascias, and vents.

1.02 REFERENCE STANDARDS

A. ASTM D 4586 – Standard Specification for Asphalt Roof Cement, Asbestos–Free.
B. NRCA ML104 –The NRCA Roofing and Water Proofing Manual; National Roofing Contractors Association.
C. SMACNA – Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors’ National Association.

1.03 QUALITY ASSURANCE

A. Perform work in accordance with SMACNA Architectural Sheet Metal Manual details.

PART 2 PRODUCTS

2.01 COMPONENTS

A. Copings: Extruded aluminum, sized and shaped as indicated, including special supports spaced at 12 inches on center. Include cover plates to conceal and weather seal joints and attachment flanges.
1. Finish: Mill Finish.
2. Color: As selected.
B. Roof vents: Formed aluminum, of watertight construction to permit construction below roof membrane to breathe; with attachment flanges 2 inch wide.
1. Finish: Mill Finish.
2. Color: As selected.

2.02 ACCESSORIES

A. Roof Cement: ASTM D 4586, Type I.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that deck, curbs, roof membrane, base flashing, and other items affecting work of this Section are in place and positioned correctly.

3.02 INSTALLATION

A. Install components in accordance with manufacturer’s instructions.

SECTION 07 8100 – APPLIED FIREPROOFING

PART 1 GENERAL:

1.01 SECTION INCLUDES

A. Fireproofing of interior structural steel.

1.02 REFERENCE STANDARDS

A. ASTM E 84 – Standard Test Method for surface Burning Characteristics of Building Materials.
B. ASTM E 605 – Standard Test Methods for Thickness and Density of Sprayed Fire–Resistive Material (SFRM) Applied to Structural Members.
C. ASTM E 736 – Standard Test Method for Cohesion/ Adhesion of Sprayed Fire–Resistive Materials Applied For Structural Members.

1.03 FIELD CONDITIONS

A. Do not apply spray fireproofing when temperature of substrate material and surrounding air is below 40 degrees F.
B. Provide ventilation in areas to receive fireproofing during applications and 24 hours afterward, to dry applied material.
C. Provide temporary enclosure to prevent spray from contaminating air.

PART 2 PRODUCTS

2.01 FIREPROOFING ASSEMBLIES

A. Low Density Sprayed Fire–Resistive Material: Factory Mixed, cementitious material blended for uniform texture with vermiculite or lightweight synthetic aggregate, and conforming to the following requirements:
1. Bond Strength: ASTM E 736, 200 psf when set and dry.
a. Bond Impact: ASTM E 760, no cracking, flanking or delamination.
b. Dry Density: ASTM E 605, minimum average density if 14lb/ cu ft, with minimum individual density of any test sample of 13 lb/ cu ft.
c. Compressive Strength: ASTM E 761, minimum 7.0 psi.
d. Surface Burning Characteristics: Maximum flame spread of 0 and maximum smoke developed of 0, when tested in accordance with ASTM E 84.
2. Medium Density Sprayed Fire–Resistive Material: Factory Mixed, portland cement blended or uniform texture with mineral aggregates or mineral fibers and additives, without chlorides, approved for exterior use and conforming to the following requirements:

CONSULTANTS

SP Engineers Consulting Structural Engineers 134 N. LaSalle, Suite 1930 Chicago, IL 60602 Phone: 312.332.2800 Fax: 312.332.2820

ROOSEVELT ENERGY PLAN NEW 271 91ST STREET BURR RIDGE, IL 60527 P. (630) 936-7733

PROJECT NAME: 6136 W. ROOSEVELT RD PROJECT ADDRESS: 6136 W. ROOSEVELT RD., OAK PARK, IL 60304

BUILDING TO BE SPRINKLERED

PROJECT INFO: PROJECT NO. 251020 PROJECT TEAM: JW, BB, GV ISSUE: 12.30.25 - ISSUED FOR PERMIT CERTIFICATION: LICENSED ARCHITECT JAY M. KELLER 001-018443 STATE OF ILLINOIS SHEET TITLE: GENERAL SPECIFICATIONS SHEET #: X1.2

SPACE ARCHITECTS + PLANNERS

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- a. Bond Strength: ASTM E 736, 2000 psf when set and dry.
  - b. Bond Impact: ASTM E 760, no cracking, flaking or delamination.
  - c. Dry Density: ASTM E 605, minimum density of 21lb/ cu ft.
  - d. Compressive Strength: ASTM E 761, minimum 65 psi.
  - e. Surface Burning Characteristics: Maximum flame spread of 0 and maximum smoke developed 0, when tested in accordance with ASTM E 84.
3. High Density Sprayed Fire- Resistive Material: Factory mixed, Portland cement blended for uniform texture with mineral aggregates and additives, without chlorides, approved for exterior use and conforming to the following requirements.
- a. Bond Strength: ASTM E 736, 2000 psf when set and dry.
  - b. Bond Impact: ASTM E 760, no cracking, flaking or delamination
  - c. Dry Density: ASTM E 605, minimum density of 39 lb/cu ft.
  - d. Compressive Strength: ASTM E 761, minimum 300 psi.
  - e. Surface Burning Characteristics: Maximum flame spread of 0 and maximum smoke developed of 0, when tested in accordance with ASTM E 84.

#### PART 3 EXECUTION

##### 3.01 EXAMINATION

- A. Verify that surfaces are ready to receive fireproofing.
- B. Verify that clips, hangers, supports, sleeves, and other items required to penetrate fireproofing are in place.
- C. Verify that ducts, piping, equipment, or other items that would interfere with application of fireproofing have not been installed.
- D. Verify that voids and cracks in substrate have been filled. Verify that projections have been removed where fireproofing will be exposed to view as finish material.

##### 3.02 PREPARATION

- A. Perform tests as recommended by fireproofing manufacturer in situations where adhesion of fireproofing to substrate is in question.
- B. Remove incompatible materials that could affect bond by scraping, brushing, scrubbing, or sandblasting.
- C. Prepare substrates to receive fireproofing in strict accordance with instructions of fireproofing manufacturer.
- D. Protect surfaces not scheduled for fireproofing and equipment from damage by overspray, fall-out, and dusting.
- E. Close off and seal duct work in area where fireproofing is being applied.

##### 3.03 APPLICATION

- A. Apply primer adhesive in accordance with manufacturer's instructions.
- B. Apply fireproofing in sufficient thickness to adhesive required ratings, with as many passes as necessary to cover with monolithic blanket of uniform density and texture.

##### 3.04 CLEANING

- A. Remove excess material, overspray, droppings, and debris.
- B. Remove fireproofing from materials and surfaces not required to be fireproofed.

## SECTION 07 8400 – FIRESTOPPING

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Firestopping of all joints and penetrations in fire-resistance rated and smoke-resistant assemblies, whether indicated on drawings or not, and other openings indicated.

##### 1.02 REFERENCE STANDARDS

- A. ASTM E 119 – Standard Test Methods for Fire Tests of Building Construction and Materials.
- B. ASTM E 814– Standard Test Methods for Fire Tests of Through–Penetration Fire Stops.
- C. UL (FRD) – Fire Resistive Directory, Underwriters Laboratories

#### PART 2 PRODUCTS

##### 2.01 FIRESTOPPING SYSTEMS

- A. Firestoppping: Any material meeting requirements
  - 1. Fire Ratings: Use and system listed by UL or tested in accordance with ASTM E 814 that has F Rating equal to fire rating of penetrated assembly and T Rating equal to F rating and that meets all other specified requirements.

##### 2.02 MATERIALS

- A. Firestopping Sealants: Provide only products having lower volatile organic compound (VOC) content than required by South Coast Air Quality Management District Rule No.1168.
- B. Fiber Firestopping: Mineral Fiber insulation used in conjunction with elastomeric surface sealer forming airtight bond to opening; conforming to the following:
  - 1. Durability and Longevity: Permanent.
- C. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Type required for tested assembly design.

#### PART 3 EXECUTION

##### 3.01 EXAMINATION

- A. Verify openings are ready to receive the work of this section.

##### 3.02 PREPARATION

- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other mater that could adversely affect bond of firestopping material.
- B. Remove incompatible materials that could adversely affect bond.

##### 3.03 INSTALLATION

- A. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openings.

##### 3.04 CLEANING

- A. Clean adjacent surfaces of firestopping materials.

## SECTION 07 9005 – JOINT SEALERS

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Sealants and joint backing.

##### 1.02 REFERENCE STANDARDS

- A. ASTM C 834 – Standard Specification for Latex Sealants
- B. ASTM E 814– Standard Specification for Elastomeric Joint sealants.
- C. SCAQMD 1168 – South Coast Air Quality Management District Rule No. 1168; .

##### 1.03 FIELD CONDITIONS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

#### PART 2 PRODUCTS

##### 2.01 SEALANTS

- A. Sealants and Primers – General: Provide only products having lower volatile organic compound (VOC) content than required by South Coast Air Quality Management District Rule No. 1168.
- B. Type 2 – General Purpose Exterior Sealant: Acrylic, solvent release curing; ASTM C 834,Type 0P, Grade NF single component, paintable.
  - 1. Color: Standard colors matching finished surfaces.
- C. Type 3 – General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C 834, Type 0P, Grade NF single component, paintable.
  - 1. Color: Standard colors matching finished surfaces
- D. Type 4 – Silicone Sealant: ASTM C 920, Grade NS, Class 2S, Uses NT, A, G, M, O; single component, solvent curing, non-sagging, non-staining, fungus resistant, non-bleeding.

#### 2.02 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Backing: Round foam rod compatible with sealant; ASTM D 1667, closed cell PC; oversized 30 to 50 percent larger than joint width.
- C. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

#### PART 3 EXECUTION

##### 3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.
- B. Verify that joint backing and release tapes are compatible with sealant.

##### 3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean and prime joints in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C 1193.
- D. Protect elements surrounding the work of this section from damage or disfigurement.

##### 3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C 1193.
- C. Install bond breaker where joint backing is not used.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Tool joints concave.

##### 3.04 CLEANING

- A. Clean adjacent soiled surfaces.

##### 3.05 PROTECTION

- A. Protect sealants until cured.

## SECTION 08 1113 – HOLLOW METAL DOORS AND FRAMES

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Non-fire rated steel doors and frames
- B. Steel frames for wood doors.
- C. Fire-rated steel doors and frames.
- D. Thermally insulated steel doors.

##### 1.02 REFERENCE STANDARDS

- A. ANSI/ICC A117.1 – American National Standard for Accessible and Usable Buildings and Facilities; International Code Council.
- B. ANSI A250.8 – SDI-100 Recommended Specifications for Standard Steel Doors and Frames.
- C. ASTM A 653/A 653M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- D. NAAMM HMMa 840 – Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; The National Association of Architectural Metal Manufacturers.
- E. NFPA 80 – Standard for Fire Doors and Fire Windows; National Fire Protection Association.
- F. UL 10C – Standard for Positive Pressure Fire Tests of Door Assemblies.

##### 1.03 DELIVERY, STORAGE, AND HANDLING

- A. Store in accordance with NAAMM HMMa 840.
- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion.

#### PART 2 PRODUCTS

##### 2.01 DOORS AND FRAMES

- A. Requirements for All Doors and Frames:
  - 1. Accessibility: Comply with ANSI/ICC A117.1.
  - 2. Door Top Closures: Flush with top of faces and edges.
  - 3. Door Edge Profile: Beveled on both edges.
  - 4. Door Texture: Smooth faces.
- B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with all the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

##### 2.02 STEEL DOORS

- A. Exterior Doors Type 1
  - 1. Grade: ANSI A250.8 Level 3, physical performance Level A, Model 2, seamless.
  - 2. Core: Polystyrene foam.
  - 3. Galvanizing: All components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A 653/A 653M, with manufacturer's standard coating thickness.
  - 4. Finish: Factory primed, for field finishing.
- B. Interior Doors, Non-Fire-Rated:
  - 1. Grade: ANSI A250.8 Level 1, physical performance Level C, Model 1, full flush.
  - 2. Core: Mineral fiberboard.
  - 3. Thickness: 1–3/4 inches.
  - 4. Finish: Factory primed, for field finishing.
- C. Interior Doors, Fire-Rated:
  - 1. Grade: ANSI A250.8 Level 2, physical performance Level B, Model 1, full flush.
  - 2. Fire Rating: As indicated on Door and Frame Schedule, tested in accordance with UL 10C (positive pressure)
    - a. Provide units listed and labeled by UL
    - b. Attach fire rating label to each fire rated unit.
  - 3. Core: Mineral fiberboard.
  - 4. Finish: Factory primed, for field finishing.

##### 2.03 STEEL FRAMES

- A. General:
  - 1. Comply with the requirements of grade specified for corresponding door.
    - a. ANSI A250.8 Level 1 Doors: 16 gage frames.
  - 2. Finish: Factory primed, for field finishing.
- B. Exterior Door Frames: Face welded, seamless with joints filled.
  - 1. Galvanizing: All components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A 653/A 653M, with manufacturer's standard coating thickness.
  - 2. Weather stripping: Separate, see Section 08 7100.
- C. Interior Door Frames, Fire-Rated: Knock-down type.
  - 1. Fire Rating: Same as door, labeled.

##### 2.04 ACCESSORY MATERIALS

- A. Louvers: Roll formed steel with overlapping frame; factory-painted finish, color as selected; factory-installed.
  - 1. In Fire-Rated Doors: UL-listed fusible link louver, same rating as door.
  - 2. Style: Standard straight slat blade.

##### 2.05 FINISH MATERIALS

- A. Primer: Rust-inhibiting, complying with ANSI A250.10, door manufacturer's standard.
- B. Factory Finish: Complying with ANSI A 250.3, manufacturer's standard coating of color as selected.

#### PART 3 EXECUTION

##### 3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.

#### 3.02 INSTALLATION

- A. Install in accordance with the requirements of the specified door grade standard and NAAMM HMMa 840.
- B. In addition, install fire rated units in accordance with NFPA 80.
- C. Coordinate frame anchor placement with wall construction.
- D. Coordinate installation of hardware.
- E. Touch up damaged factory finishes.

##### 3.03 ADJUSTING

- A. Adjust for smooth and balanced door movement.

## SECTION 08 1416 – FLUSH WOOD DOORS

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Flush wood doors; flush configuration; fire rated and non-rated.

##### 1.02 REFERENCE STANDARDS

- A. AW/AWAC (QS) – Architectural Woodwork Quality Standards Illustrated; Architectural Woodwork Institute and Architectural Woodwork Manufacturers Association of Canada.
- B. IBC (IBC) – International Building Code
- C. NFPA 80 – Standard for Fire Doors and Fire Windows; National Fire Protection Association.
- D. UL (BMD) – Building Materials Directory; Underwriters Laboratories Inc..

##### 1.03 QUALITY ASSURANCE

- A. Installed Fire Rated Door and Transom Panel Assembly: Conform to NFPA 80 for fire rated class as indicated.

##### 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Package, deliver and store doors in accordance with specified quality standard.
- B. Accept doors on site in manufacturer's packaging. Inspect for damage.
- C. Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.

#### PART 2 PRODUCTS

##### 2.01 DOORS AND PANELS

- A. All Doors: See drawings for locations and additional requirements including door and hardware schedules.
  - 1. Quality Level: Custom Grade, Heavy Duty performance, in accordance with WDMA I.5.1-A.
  - 2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.
- B. Interior Doors: Flush solid core construction.
  - 1. Thickness: 1–3/4 inches, unless otherwise indicated.
  - 2. Facing: Wood veneer with factory transparent finish where indicated on drawings.
- C. Interior Doors: 1–3/4 inches thick unless otherwise indicated; flush construction.
  - 1. Provide solid core doors at all locations.
  - 2. Fire Rated Doors: Tested to ratings indicated on drawings in accordance with International Building Code (positive pressure); UL or WH (ITS) labeled without any visible seals when door is open.

##### 2.02 DOORS AND PANELS CORES

- A. Fire Rated Doors: Mineral core, Type FD, piles and faces as indicated above; with core blocking as required to provide adequate anchorage of hardware without through-bolting.

##### 2.03 DOOR FACINGS

- A. Wood Veneer Facing for Transparent Finish: Natural birch, veneer grade as specified by quality standard, plain sliced, book veneer match, running assembly match; unless otherwise indicated.

##### 2.04 ACCESSORIES

- A. Wood Louvers:
  - 1. Louver Blade: Flush louver.

##### 2.05 DOOR CONSTRUCTION

- A. Fabricate doors in accordance with door quality standard specified.
- B. Cores Constructed with Stiles and Rails:
- C. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.
- D. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearance in accordance with specified quality standard.
  - 1. Exception: Doors to be field finished.
- E. Provide edge clearances in accordance with AW Quality Standards Illustrated Section 1700.

##### 2.06 FACTORY FINISHING – WOOD VENEER DOORS

- A. Factory finish doors in accordance with specified quality standard.

#### PART 3 EXECUTION

##### 3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

##### 3.02 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions and specified quality standard.
- B. Install fire-rated doors in accordance with NFPA 80 requirements.
- C. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.
- D. Use machine tools to cut or drill for hardware.
- E. Coordinate installation of doors with installation of frames and hardware.

##### 3.03 ADJUSTING

- A. Adjust doors for smooth and balanced door movement.
- B. Adjust closers for full closure.

## SECTION 08 3613 – SECTIONAL DOORS

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Overhead sectional doors, manually operated.
- B. Operating hardware and supports.

##### 1.02 REFERENCE STANDARDS

- A. ASTM A 653/ A 653M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- B. ASTM B 209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- C. DASMA 102 – American National Standard Specifications for Sectional Overhead Type Doors; Door & Access Systems Manufacturers' Association, International.

#### PART 2 PRODUCTS

##### 2.01 ALUMINUM DOOR COMPONENTS

- A. Aluminum Doors: Flush aluminum, insulated; standard lift operating style with track and hardware; complying with DASMA 102, Commercial application.
  - 1. Door Nominal Thickness: 2 inches thick.
  - 2. Finish: Pre-finished with baked enamel of color as selected.
- B. Door Panels: Flush aluminum construction; outer aluminum sheet; inner aluminum sheet; flat profile; core reinforcement of roll formed aluminum; rabbeted weather joints at meeting rails; insulated.

#### 2.02 DOOR COMPONENTS

- A. Track: Rolled galvanized steel, 0.090 inch thick; 2 inch wide, continuous one piece per side; galvanized steel mounting brackets 1/4 inch thick.
- B. Hinge and Roller Assemblies: Heavy duty hinges and adjustable roller holders of galvanized steel; floating hardened steel bearing rollers, located at top and bottom of each panel, each side.
- C. Lift Mechanism: Torsion spring on cross head shaft, with braided galvanized steel lifting cables.
  - 1. For Manual Operation: Requiring maximum exertion of 25 lbs force to open.
- D. Sill Weather stripping: Resilient hollow rubber strip, one piece; fitted to bottom of door panel, full length contact.
- E. Jamb Weather stripping: Roll formed steel section full height of jamb, fitted with resilient weather tripping, placed in moderate contact with door panels.
- F. Head Weather stripping: EPDM rubber seal, one piece full length.
- G. Panel Joint Weather stripping: Neoprene foam seal, one piece full length.
- H. Lock: Inside center mounted, adjustable keeper, spring actuated latch bar with feature to retain in locked or retracted position; interior and exterior handle.

##### 2.03 MATERIALS

- A. Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A 653/A 653M, with G60/Z180 coating, plain surface.
- B. Aluminum Sheet: ASTM B 209 (ASTM B 209M), 5005 alloy, H14 temper, plain surface.

#### PART 3 EXECUTION

##### 3.01 EXAMINATION

- A. Verify that wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.

##### 3.02 PREPARATION

- A. Prepare opening to permit correct installation of door unit to perimeter air and vapor seal.

##### INSTALLATION

- A. Install door unit assembly in accordance with manufacturer's instructions.
- B. Anchor assembly to wall construction and building framing without distortion or stress.
- C. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
- D. Fit and align door assembly including hardware.

##### 3.04 ADJUSTING

- A. Adjust door assembly for smooth operation and full contact with weather stripping.

##### 3.05 CLEANING

- A. Clean doors and frames and glazing.
- B. Remove temporary labels and visible markings.

##### 3.06 PROTECTION

- A. Protect installed products from damage during subsequent construction.
- B. Do not permit construction traffic through overhead door openings after adjustment and cleaning.

## SECTION 08 4126 – ALL GLASS ENTRANCES AND STOREFRONTS

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. All glass entrances.
- B. All-glass storefronts.
- C. Swinging doors.

##### 1.02 REFERENCE STANDARDS

- A. ASTM A 666 – Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
- B. ASTM C 920 – Standard Specification for Elastomeric Joint Sealants.
- C. ASTM C 1036 – Standard Specification for Flat Glass.
- D. ASTM C 1048 – Standard Specification for Heat-Treated Flat Glass – Kind HS, Kind FT Coated and Uncoated Glass.

#### PART 2 PRODUCTS

##### 2.01 ASSEMBLIES

- A. Entrances and Storefronts: Factory fabricated assemblies consisting of frameless glass panels fastened with metal structural fittings in configuration indicated on the drawings.
  - 1. Operational Loads: Designed to withstand door operation under normal traffic without damage, racking, sagging, or deflection.
  - 2. Prepared for all specified hardware whether specified in this section or not.
  - 3. Finished metal surfaces protected with strippable film.
  - 4. Factory assembled to greatest extent practicable; may be disassembled to accommodate shipping constraints.

##### 2.02 FITTINGS

- A. Exposed Fittings: Stainless steel, Number 4, satin polish finish.
- B. Swinging Door Fittings

## SECTION 08 4313 – ALUMINUM–FRAMED STOREFRONTS

## PART 1 GENERAL

## 1.01 SECTION INCLUDES

- A. Aluminum–framed storefront, with vision glass.
- B. Aluminum doors and frames.
- C. Weather stripping.

## 1.02 REFERENCE STANDARDS

- A. AAMA CW 10 – Care and Handling of Architectural Aluminum from Shop to Site; American Architectural Manufacturers Association.
- B. AAMA 2604 – Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
- C. ASTM B221 – Standard Specification for Aluminum and Aluminum–Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- D. ASTM E 283 – Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
- E. ASTM E 330 – Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
- F. ASTM E 331 – Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference.

## 1.03 PERFORMANCE REQUIREMENTS

- A. Design and size components to withstand the following load requirements without damage or permanent set, when tested in accordance with ASTM E 330, using loads 1.5 times the design wind loads and 10 second duration of maximum load.
  1. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
- B. Movement: Accommodate movement between storefront and perimeter framing and deflection of lintel, without damage to components or deterioration of seals.
- C. Air Infiltration: Limit air infiltration through assembly to 0.06 cu ft/min/sq ft of wall area, measured at a reference differential pressure across assembly of 1.57 psf as measured in accordance with ASTM E 283.
- D. Water Leakage: None, when measured in accordance with ASTM E 331 with a test pressure difference of 2.86 lb/ft<sup>2</sup> sq ft.
- E. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
- F. Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.

## 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Handle products of this section in accordance with AAMA CW–10.
- B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond to aluminum when exposed to sunlight or weather.

## 1.05 FIELD CONDITIONS

- A. Do not install sealants when ambient temperature is less than 40 degrees F. Maintain this minimum temperature during and 48 hours after installation.

## PART 2 PRODUCTS

## 2.01 COMPONENTS

- A. Aluminum–Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashing, anchorage and attachment devices.
  1. Finish: High performance organic coating.
  2. Color: As selected from manufacturer's standards.
- B. Aluminum–Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.
  1. Glazing Stops: Flush.
- C. Doors: Glazed aluminum.
  1. Thickness: 1–3/4 inches.
  2. Top Rail: 4 inches wide.
  3. Vertical Stiles: 4–1/2 inches wide.
  4. Bottom Rail: 10 inches wide.

## 2.02 MATERIALS

- A. Extruded Aluminum: ASTM B 221 (ASTM B 221M).
- B. Fasteners: Stainless steel.
- C. Glass: Insulated and tempered and as further indicated on drawings and schedules.
- D. Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.

## 2.03 FINISHES

- A. High Performance Organic Finish: AAMA 2604; multiple coats, thermally cured fluoropolymer system; color as schedules.

## 2.04 HARDWARE

- A. Door Hardware: Storefront manufacturer's standard type to suit application.

## PART 3 EXECUTION

## 3.01 EXAMINATION

- A. Verify dimensions, tolerances, and method of attachment with other work.
- B. Verify that wall openings and adjoining air and vapor seal materials are ready to receive work of this section.

## 3.02 INSTALLATION

- A. Install wall system in accordance with manufacturer's instructions.
- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- C. Provide alignment attachments and shim to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
- E. Provide thermal isolation where components penetrate or disrupt building insulation.
- F. Install sill flashings. Turn up ends and edges; seal to adjacent work to form water tight dam.
- G. Coordinate attachment and seal of perimeter air and vapor barrier materials.
- H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- I. Install hardware using templates provided.
- J. Install glass and infill panels in accordance with manufacturers standard, using glazing method required to achieve performance criteria.
- K. Touch–up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

## 3.03 ADJUSTING

- A. Adjust operating hardware and sash for smooth operation.

## 3.04 CLEANING

- A. Remove protective material from pre–finished aluminum surfaces.
- B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.
- C. Remove excess sealant by method acceptable to sealant manufacturer.

## 3.05 PROTECTION

- A. Protect installed products from damage during subsequent construction.

## SECTION 08 7100 – DOOR HARDWARE

## PART 1 GENERAL

## 1.01 SECTION INCLUDES

- A. Hardware for wood, hollow steel, and aluminum doors.
- B. Hardware for fire–rated doors.
- C. Weather stripping, seals and door gaskets.

## 1.02 REFERENCE STANDARDS

- A. ANSI/ICC A117.1 – American National Standard for Accessible and Usable Buildings and Facilities; International Code Council.
- B. BHMA A156.1 – American National Standard for Butts and Hinges; Builders Hardware Manufacturers Association, Inc. (ANSI/BHMA A156.1).
- C. NFPA 80 – Standard for Fire Doors and Fire Windows; National Fire Protection Association.
- D. UL(BMD) – Building Materials Directory; Underwriters Laboratories Inc.

## 1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products onto which door hardware will be installed.

## 1.04 QUALITY ASSURANCE

## PART 2 PRODUCTS

## 2.01 MANUFACTURERS

- A. Hinges: As schedule
  1. Hager Companies: [www.hagerco.com](http://www.hagerco.com).
  2. Stanley Hardware: [www.stanleyworks.com](http://www.stanleyworks.com).
- B. Lock and Latch Sets: As scheduled
  1. Schlage: [www.schlage.com](http://www.schlage.com). (or equal as approved by Architect and Owner)
- C. Push/Pulls: As scheduled
  1. Hager Companies: [www.hagerco.com](http://www.hagerco.com). (or equal as approved by Architect and Owner)
- D. Cylindrical Locksets: As scheduled
  1. Schlage: [www.schlage.com](http://www.schlage.com). (or equal as approved by Architect and Owner)
- E. Electrified Locksets: As scheduled
  1. Best Access System: [www.beststock.com](http://www.beststock.com). (or equal as approved by Architect and Owner)
- F. Exit Devices: As scheduled
  1. Assa Abloy Corbin Russwin, Sargent, or Yale: [www.assaabloydss.com](http://www.assaabloydss.com).
- G. Closers: As scheduled
  1. Assa Abloy Corbin Russwin, Norton, Rixson, Sargent, or Yale: [www.assaabloydss.com](http://www.assaabloydss.com).

## 2.02 GENERAL REQUIREMENTS FOR DOOR HARDWARE PRODUCTS

- A. Provide products that comply with the following:
  1. Applicable provisions of Federal, State, and local codes.
  2. ANSI/ICC A117.1, American National Standard for Accessible and Usable Buildings and Facilities.
  3. Fire–Rated Doors: NFPA 80
  4. All hardware on Fire–Rated Doors: Listed and classified by UL as suitable for the purpose specified and indicated.
- B. Finishes: Identified in schedule on drawings.

## 2.03 KEYING

- A. Door Locks: Master keyed.

## PART 3 EXECUTION

## 3.01 EXAMINATION

- A. Verify that doors and frames are ready to receive work and dimensions are as indicated on shop drawings.

## 3.02 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Use templates provided by hardware item manufacturer.
- C. Install hardware on fire–rated doors and frames in accordance with code and NFPA 80.
- D. Mounting heights for hardware from finished floor to center line of hardware item: As listed in Schedule, unless otherwise noted.

## 3.03 ADJUSTING

- A. Adjust hardware for smooth operation.

## 3.04 PROTECTION

- A. Do not permit adjacent work to damage hardware or finish.

## SECTION 08 8000 – GLAZING

## PART 1 GENERAL

## 1.01 SECTION INCLUDES

- A. Glass
- B. Glazing compounds and accessories.

## 1.02 REFERENCE STANDARDS

- A. 16 CFR 1201 – Safety Standard for Architectural Glazing Materials.
- B. ANSI Z97.1 – American National Standard for Safety Glassing Materials Used in Buildings, Safety Performance Specifications and Tests of Test.
- C. ASTM C 864 – Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
- D. ASTM C 1036 – Standard Specification for Flat Glass.
- E. ASTM C 1048 – Standard Guide for Heat–Treated Flat Glass—Kind HS, Kind FT Coated and Uncoated Glass.
- F. ASTM C 1193 – Standard Guide for Use of Joint Sealants.

## 1.03 FIELD CONDITIONS

- A. Do not install glazing when ambient temperature is less than 50 degrees F.

## PART 2 PRODUCTS

## 2.01 EXTERIOR GLAZING ASSEMBLIES

- A. Structural Design Criteria: Select type and thickness to withstand dead loads & wind loads acting normal to plane of glass at design pressures calculated in accordance w/ applicable state & local codes.
  1. Use the procedure specified in ASTM E 1300 to determine glass type and thickness.
  2. Limit glass deflection to 1/200 or flexure limit of glass, whichever is less, with full recovery of glazing materials.
  3. Thicknesses listed are minimums.

## 2.02 FLAT GLASS MATERIALS

- A. Manufacturers:
  1. Pilkington Building Products North America.
  2. PPG Industries, Inc.
- B. Clear Float Glass: Clear, fully tempered.
  1. Comply with ASTM C 1036, Type I, transparent flat, Class 1 clear, Quality Q3 (glazing select).
- C. Safety Glass: Clear, fully tempered with horizontal tempering.
  1. Laminated with 0.030 inch thick plastic interlayer; comply with ASTM C 1172.
  2. Comply with ASTM C 1036, Type I, transparent flat, Class 1 clear, Quality Q3 (glazing select) and ASTM C 1048.
  3. Comply with 16 CFR 1201 test requirements for Category II.
- D. Low E Glass: Float type, heat strengthened, clear.
  1. Coating on inner surface.
  2. Visible light transmittance to comply with all State and Local codes and Energy codes.

## 2.03 PLASTIC SHEET MATERIALS

- A. Polycarbonate Sheet: Plastic compound, clear; ultraviolet stabilized.
  1. Silicone abrasion resistant coating for scratch resistance.

## 2.04 GLAZING COMPOUNDS

## A. Manufacturers:

- 1. Bostik Inc.
- 2. BASF Construction Chemicals–Building Systems.

- B. Silicone Sealant (Type 1): Single component; neutral curing; capable of water immersion without loss of properties; non–bleeding, not–staining; ASTM C 920, Type S, Grade NS, Class 25, Uses M, A, and G; cured Shore A hardness of 15 to 25; color as selected.

## 2.05 GLAZING ACCESSORIES

- A. Setting Blocks: Neoprene, 80 to 90 Shore A durometer hardness, ASTM C 864 Option I. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbit space minus 1/16 inch x height to suit glazing method and pane weight and area.
- B. Space Shims: Neoprene, 50 to 60 Shore A durometer hardness, ASTM C 864 Option I. Minimum 3 inch long x one half the height of the glazing stop x thickness to suit application, self adhesive on one face.
- C. Glazing Tape: Preformed butyl compound with integral resilient tube spacing device; 10 to 15 Shore A durometer hardness; coated on release paper; black color.
- D. Glazing Gaskets: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C 864 Option I; color as selected.

## PART 3 EXECUTION

## 3.01 EXAMINATION

- A. Verify that openings for glazing are correctly sized and within tolerance.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

## 3.02 PREPARATION

- A. Clean contact surfaces with solvent and wipe dry.
- B. Prime surfaces scheduled to receive sealant.
- C. Install sealants in accordance with ASTM C 1193 and FOMA Sealant Manual.

## 3.03 INSTALLATION – EXTERIOR/INTERIOR DRY METHOD (GASKET GLAZING)

- A. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.
  - B. Resize glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.
  - C. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.
- 3.04 INSTALLATION – INTERIOR WET/DRY METHOD (TAPE AND SEALANT)
- A. Cut glazing tape to length and install against permanent stops, projecting 1/16 inch (1.6 mm).
  - B. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.
  - C. Reseal glazing on setting blocks and push against tape to ensure full contact at perimeter of pane or unit.
  - D. Install removable stops, spacer shims inserted between glazing and applied stops at 24 inch intervals, ¼ inch below sight line.
  - E. Fill gaps between pane and applied stop with silicone type sealant to depth equal to bite on glazing, to uniform and level line.
  - F. Trim protruding tape edge.

## 3.05 CLEANING

- A. Remove glazing materials from finish surfaces.
- B. Remove labels after work is complete.
- C. Clean glass and adjacent surfaces.

## 3.06 PROTECTION

- A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.

## SECTION 09 2116 – GYPSUM BOARD ASSEMBLIES

## PART 1 GENERAL

## 1.01 SECTION INCLUDES

- A. Metal stud wall framing.
- B. Acoustic insulation.
- C. Gypsum sheathing.
- D. Cementitious backing board.
- E. Gypsum wallboard.
- F. Joint treatment and accessories.
- G. Water–resistive barrier over exterior wall sheathing.

## 1.02 REFERENCE STANDARDS

- A. ANSI A108.11 – American National Standard for Interior Installation of Cementitious Backer Units.
- B. ASTM C 645 – Standard Specification for Nonstructural Steel Framing Members.
- C. ASTM C 665 – Standard Specification for Mineral–Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
- D. ASTM c 840 – Standard Specification for Application and Finishing of Gypsum Board.
- E. ASTM C 1002 – Standard Specification for Steel Self–Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
- F. ASTM C 1280 – Standard Specification for Application of Gypsum Sheathing.
- G. ASTM E 90 – Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
- H. UL (FRD) – Fire Resistance Directory; Underwriters Laboratories Inc.

## PART 2 PRODUCTS:

## 2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C 840 and GA–216.
- B. Interior Partitions Indicated as Sound–Rated: Provide completed assemblies with the following characteristics:
  1. Acoustic Attenuation: STC of 45–49 calculated in accordance with ASTM E 413, based on tests conducted in accordance with ASTM E 90.
- C. Fire Rated Assemblies: Provide completed assemblies with the following characteristics:
  1. Fire Rated Partitions: UL listed assembly No. as indicated on drawings; 1–4 hour rating.
  2. UL Assembly Number: Provide construction equivalent to that listed for the particular assembly in the current UL Fire Resistance Directory.

## 2.02 METAL FRAMING MATERIALS

- A. Non–Load bearing Framing System components: ASTM C 645; galvanized sheet steel, of size and properties necessary to comply with ASTM C 754 for the spacing indicated, with Maximum deflection of wall framing of L/240 at 5 psf.
  1. Studs: 'C' shaped with flat or formed webs with knurled faces.
  2. Runners: U shaped, sized to match studs.
- B. Partition Head to Structure Connections: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and fastened as indicated on drawings.

## 2.03 BOARD MATERIALS

## A. Manufacturers – Gypsum–Based Board

- 1. American Gypsum.
  - 2. National Gypsum Company.
  - 3. USG Corporation.
- B. Wallboard: Paper–faced gypsum wallboard as defined in ASTM C 1396/C 1396M; sizes to minimize joints in place; end square cut.
1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
  2. Thickness:
    - a. Vertical Surfaces: 5/8 inch.
    - b. Ceilings: 5/8 inch.
  3. Paper–Faced Products:
    - a. American Gypsum; EagleRoc Gypsum Wallboard and FireBloc Type X Gypsum Wallboard.

## C. Backing Board For Wet Areas: One of the following products:

- 1. Application: Surfaces behind tile in wet areas including tub and shower surrounds, shower ceilings, and kitchen sink areas.
- 2. ASTM Cement–Based Board: Non–gypsum based, cementitious board complying with ASTM C 1288.
  - a. Thickness: 1/2 inch.
- D. Ceiling Board: Special sag–resistant gypsum ceiling board as defined in ASTM C 1396/C 1396M; sizes to minimize joints in place; ends square cut.
  1. Application: Ceilings, unless otherwise indicated.
  2. Thickness: 5/8 inch.
  3. Edges: Tapered.

## D. Ceiling Board: Special sag–resistant gypsum ceiling board as defined in ASTM C 1396/C 1396M; sizes to minimize joints in place; ends square cut.

## E. Exterior Sheathing Board: Sizes to minimize joints in place; ends square cut.

- 1. Application: Exterior sheathing, unless otherwise indicated.
- 2. Core Type: Regular and Type X, as indicated.
- 3. Type X Thickness: 5/8 inch.
- 4. Edges: Square, for vertical application.

## 2.04 ACCESSORIES

- A. Acoustic Insulation: ASTM C 665; preformed glass fiber, friction fit type, unfaced.
- B. Water–Resistive Barrier: No. 15 asphalt felt.
- C. Joint Materials: ASTM C 475 and as recommended by gypsum board manufacturer for project conditions.
- D. Screws for Attachment to Steel Members Less Than 0.03 inch in Thickness, to Wood Members, and to Gypsum Board: ASTM C 1002; self piercing tapping type; cadmium–plated for exterior locations.
- E. Screws for Attachment to Steel Members From 0.033 to 0.112 inch in Thickness: ASTM C 954; steel drill screws for application of gypsum board to load bearing steel studs.

## PART 3 EXECUTION

## 3.01 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

## 3.02 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C 754 and manufacturer's instructions.
- B. Studs: Space studs as indicated
  1. Extend partition framing to structure where indicated and to ceiling in other locations.
  2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
  3. Partitions Terminating at Structure: Attach extended leg top runner to structure, maintain clearance between top of studs and structure, and brace both flanges of studs with continuous bridging.
- C. Blocking: Install wood blocking for support of:
  1. Framed openings.
  2. Wall mounted cabinets.
  3. Plumbing fixtures.
  4. Toilet partitions.
  5. Wall mounted door hardware.
- D. Acoustic Accessories Installation
  1. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- E. Board Installation
  - A. Comply with ASTM C 840, GA–216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
  - B. Fire–Rated Construction: Install gypsum board in strict compliance with requirements of assembly listings.
  - C. Exterior Sheathing: Comply with ASTM C 1280. Install sheathing vertically, with edges butted tight and ends occurring over firm bearing.
  - D. Paper–Faced Sheathing: Immediately after installation, protect from weather by application of water–resistive barrier.
  - E. Cementitious Backing Board: Install over steel framing members and plywood substrate where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.
- F. Joint Treatment
  - A. Finish gypsum board in accordance with levels defined in ASTM C 840, as follows:
    1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
    2. Level 1: Fire rated wall areas above finished ceilings, whether or not accessible in the completed construction.
  - B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
    1. Feather coats of joint compound so that camber is maximum 1/32 inch.

## SECTION 09 3000 – TILING

## PART 1 GENERAL

## 1.01 SECTION INCLUDES

- A. Tile for floor applications.
- B. Tile for wall applications.
- C. Tile for shower receptors.
- D. Cementitious backer board as tile substrate.
- E. Ceramic trim.

## 1.02 REFERENCE STANDARDS

- A. ANSI A108 Series/A118 Series/A136.1 – American National Standard Specifications for the Installation of Ceramic Tile (Compendium).
  1. ANSI A108.1c – Specifications for Contractors Option: Installation of Ceramic Tile in the Wet–Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar Bed with Dry–Set or Latex Portland Cement Mortar.
  2. ANSI A108.10 – American National Standard Specifications for Installation of Grout in Tile work.
  3. ANSI A118.9 – American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units.
  4. ANSI A118.10 – American National Standard Specifications for Load Bearing, Bonded, Waterproof Membranes for Thin–Set Ceramic Tile and Dimension Stone Installation.
- B. TCA (HB) – Handbook for Ceramic Tile Installation; Tile Council of North America, Inc.

## 1.03 QUALITY ASSURANCE

- A. Maintain one copy of TCA Handbook and ANSI A108 Series/A118 Series on site.

## 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

## 1.05 FIELD CONDITIONS

- A. Do not install adhesives in an unventilated environment.
- B. Maintain ambient and substrate temperature of 50 degrees F during installation of mortar materials.

## PART 2 PRODUCTS:

## 2.01 TILE

- A. Manufacturers: All products of each type by the same manufacturer (refer to drawings for size and model of tile or consult with owner).

## 2.02 TRIM AND ACCESSORIES

- A. Ceramic Trim: Matching bull nose, double bull nose, cove base, and cove ceramic shapes in sizes coordinated with field tile.
  1. Manufacture: Same as for tile.

## 2.03 ADHESIVE MATERIALS

- A. Organic Adhesive: ANSI A136.1, thin set bond type; use Type I in areas subject to prolonged moisture exposure.

## SECTION 09 5100 – ACOUSTICAL CEILINGS

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Suspended metal grid ceiling system.
- B. Acoustical units

#### 1.02 REFERENCE STANDARDS

- A. ASTM C 635 – Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
- B. ASTM E 1264 – Standard Classification for Acoustical Ceiling Products.

#### 1.03 FIELD CONDITIONS

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

### PART 2 PRODUCTS:

#### 2.01 ACOUSTICAL UNITS

- A. Acoustical Units – General: ASTM E 1264 Type III, with to the following characteristics:
  1. Thickness: 5/8 inch.
  2. Edge: Beveled.
  3. Surface Color: White.
  4. Surface Pattern: As selected by Owner and Architect.
  5. Suspension System: Concealed grid.
- B. Acoustical Tile: Painted mineral fiber, ASTM E 1264 Type III, with to the following characteristics:
  1. Thickness: 5/8 inch.
  2. Edge: Beveled.
  3. Surface Color: White.
  4. Surface Pattern: As selected by Owner and Architect.
  5. Suspension System: Concealed grid.

#### 2.02 SUSPENSION SYSTEM(S)

- A. Suspension Systems – General: ASTM C 635; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.
- B. Concealed Suspension System: Formed steel, commercial quality cold rolled; light-duty.

#### 2.03 ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

#### 3.02 INSTALLATION – SUSPENSION SYSTEM

- A. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- B. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
- C. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- D. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- E. Do not support components on main runners or cross runners if weight caused total dead load to exceed deflection capability.
- F. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- G. Do not eccentrically load system or induce rotation of runners.

#### 3.03 INSTALLATION – ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.
- D. Install units after above-ceiling work is complete.
- E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- F. Cutting Acoustical Units:
  1. Make Field cut edges of same profile as factory edges.

#### 3.04 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.

## SECTION 09 6714 – RESILIENT URETHANE FLOORING

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Fluid-applied polyurethane elastomeric flooring.

#### 1.02 REFERENCE STANDARDS

- A. ASTM D 412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension.

#### 1.03 DELIVERY, STORAGE, AND HANDLING

- A. Store materials in a dry area and maintain a minimum temperature of 70 degrees F.
- B. Store materials in area of installation for three days prior to installation to achieve temperature stability.

### PART 2 PRODUCTS:

#### 2.01 MATERIALS

- A. Resilient Urethane Flooring: Fluid-applied, self-leveling urethane based coat(s) with pigmented urethane top coat(s):
  1. Primer: 2 mils thick.
  2. Base Coat: 1 coat, ¼ inch thick, total.
  3. Top Coat: 3 mils thick; color as selected.
  4. Critical Radiant Flux: Min. of 0.22 watts/sq cm, when tested in accordance with ASTM E 648

#### 2.02 ACCESSORIES

- A. Subfloor Filler: White premix latex; type recommended by flooring material manufacturer.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive flooring.
- B. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of materials to sub-floor surfaces.
- C. Verify that concrete sub-floor surfaces are ready for flooring installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within limits recommended by flooring materials manufacturer.

#### 3.02 PREPARATION

- A. Remove subfloor ridges and bumps. Fill low spots, cracks, joints, holes & other defects w/ subfloor filler.
- B. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Grind irregularities above the surface level. Prohibit traffic until filler is cured.

#### 3.03 INSTALLATION

- A. Apply in accordance with manufacturer's instructions.

#### 3.04 PROTECTION

- A. Prohibit traffic on floor finish for one week after installation.

## SECTION 09 9000 – PAINTING AND COATING

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints, stains, and varnishes.
- C. Scope: Finish all interior and exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
  1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
  2. Exposed surfaces of steel lintels and ledge angles.
  3. Mechanical and Electrical:
    - a. In finished areas, paint all insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
    - b. Paint dampers exposed behind louvers, grilles, and convactor baseboard cabinets to match face panels.
- D. Do not Paint or Finish the Following Items:
  1. Items full factory-finished unless specifically so indicated; materials and products having factory-applied primers are not considered factory finished.
  2. Items indicated to receive other finishes.
  3. Items indicated to remain unfinished.
  4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
  5. Floors, unless specifically so indicated.
  6. Glass.
  7. Concealed pipes, ducts, and conduits.

#### 1.02 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D – National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency.
  - B. ASTM D 4442 – Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials.
- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
  - B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
  - C. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

#### 1.03 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

### PART 2 PRODUCTS:

#### 2.01 MANUFACTURERS

- A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
- B. Substitutions: Not permitted unless approved by owner and architect.

#### 2.02 PAINTS AND COATINGS – GENERAL

- A. Paints and Coatings: Ready mixed, unless intended to be a field-catalyzed coating.
  1. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
  2. Supply each coating material in quantity required to complete entire project's work from a single production run.
  3. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
- B. Primers: Where the manufacture offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.
- C. Volatile Organic Compound (VOC) Content:
  1. Provide coatings that comply with the most stringent requirements specified in the following:
    - a. 40 CFR 59, Subpart D—National Volatile Organic Compound Emission Standards for Architectural Coatings.
  2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- D. Flammability: Comply with applicable code for surface burning characteristics.
- E. Colors: As indicated on drawings
  1. Allow for minimum of three colors for each system, unless otherwise indicated, without additional cost to Owner.
  2. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.

#### 2.03 PAINT SYSTEMS – EXTERIOR

- A. Paint WE–OP–3L – Wood, Opaque, Latex, 3 Coat:
  1. One coat of latex primer sealer.
  2. Semi-gloss: Two coats of latex enamel.
- B. Paint WE–TR–V – Wood, Transparent, Varnish, No Stain:
  1. One coat sealer.
  2. Satin: One coat of varnish.
- C. Paint WE–TR–S – Wood, Transparent, Sealer, Optional Stain:
  1. One coat of stain.
  2. One coat of clear sealer.
- D. Paint GE–OP–3L – Stucco and Direct Applied Exterior Finishing System, Opaque, Latex, 3 Coat:
  1. One coat of latex primer sealer.
  2. Flat: Two coats of latex.
- E. Paint ME–OP–2L – Ferrous Metals, Primed, Latex, 2 Coat:
  1. Touch-up with rust-inhibitive primer recommended by top coat manufacturer.
  2. Semi-gloss: Two coats of latex enamel.

#### 2.04 PAINT SYSTEMS – INTERIOR

- A. Paint WI–OP–3L – Wood, Opaque, Latex, 3 Coat:
  1. One coat of latex primer sealer.
  2. Semi-gloss: Two coats of latex enamel.
  3. Eggshell: Two coats of latex enamel.
  4. Flat: Two coats of latex enamel.
- B. Paint WI–TR–V – Wood, Transparent, Varnish, No Stain:
  1. One coat sealer.
  2. Satin: One coat of varnish.
- C. Paint GI–OP–3L – Gypsum Board/Plaster, Latex, 3 Coat:
  1. One coat of alkyl primer sealer.
  2. Semi-gloss: Two coats of latex enamel.
  3. Eggshell: Two coats of latex enamel.
  4. Flat: Two coats of latex enamel.

#### 2.05 ACCESSORY MATERIALS

- A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Test shop-applied primer for compatibility with subsequent cover materials.
- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
  1. Gypsum Wallboard: 12 percent
  2. Interior Wood: 15 percent, measured in accordance with ASTM D 4442
  3. Exterior Wood: 15 percent, measured in accordance with ASTM D 4442

### 3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to coating application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove surface appearances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry thoroughly.
- F. Interior Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.
- G. Interior Wood Surfaces to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.
- H. Exterior Wood Surfaces to Receive Opaque Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior caulking compound after prime coat has been applied. Back prime concealed surfaces before installation.
- I. Exterior Wood to Receive Transparent Finish: Remove dust, grit, and foreign matter; seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes with tinted exterior caulking compound after sealer has been applied. Prime concealed surfaces.
- J. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with clear sealer.
- K. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

### 3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Exterior Wood to Receive Opaque Finish: If final painting must be delayed more than 2 weeks after installation of woodwork, apply primer within 2 weeks and final coating within 4 weeks.
- C. Apply products in accordance with manufacturer's instructions.
- D. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- E. Apply each coat to uniform appearance.
- F. Sand wood and metal surfaces lightly between coats to achieve required finish.
- G. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- H. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- I. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

### 3.04 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers. And remove daily from site.

### 3.05 PROTECTION

- A. Protect finished coating until completion of project.
- B. Touch-up damaged coatings after substantial completion.

## SECTION 10 1400 – SIGNAGE

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Room and door signs.
- B. Interior directional and informational signs.
- C. Emergency evacuation maps.
- D. Building identification signs.

#### 1.02 REFERENCE STANDARDS

- A. ANSI/ICC A117.1 – American National Standard for Accessible and Usable Buildings and Facilities; International Code Council
- B. ATGB ADAAG – Americans with Disabilities Act Accessibility Guidelines.

#### 1.03 FIELD CONDITIONS

- A. Do not install tape adhesive when ambient temperature is lower than recommended by manufacturer.
- B. Maintain this minimum temperature during and after installation of signs.

### PART 2 PRODUCTS:

#### 2.01 SIGNAGE TYPES

- A. Accessibility Compliance: All signs are required to comply with ADAAG and ANSI/ICC A 117.1 and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
- B. All Signage Types: Unless otherwise indicated:
  1. Character Font: Helvetica, Arial, or other sans serif font.
  2. Character Case: Upper case only.
  3. Background Color: Clear.
  4. Character Color: Contrasting color.
- C. Room and Door Signs: Provide a sign for every doorway, whether it has a door or not, including corridors, lobbies, and similar open areas.
  1. Provide "tactile" signage, with letters raised minimum 1/32 inch and Grade II braille.
  2. Use engraved panel signs as specified.
  3. Character Height: 1 inch.
  4. Sign Height: 2 inches, unless otherwise indicated.
  5. Service Rooms: Identify with the room names and numbers shown on the drawings.
  6. Rest Rooms: Identify with pictograms, the names "MEN" and "WOMEN", and braille.
- D. Interior Directional and Informational Signs:
  1. Type: Same as room and door signs.

#### 2.02 SIGNAGE MAPS:

1. Allow for one map per elevator lobby.

## 2.02 TACTILE SIGNAGE MATERIALS

- A. Engraved Panel Signs: Laminated colored plastic; engraved through face to expose core as background color.
  1. Total Thickness: 1/16 inch.
  2. Panel Edges: Square or Rounded.
  3. Panel Corners: Square or Rounded.
  4. Mounting: Tape adhesive.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.

#### 3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install neatly, with horizontal edges level.
- C. Locate signs where indicated:
  1. Room and Door Signs: Locate on wall at latch side of door with centerline of sign at 60 inch above finished floor.
  2. If no location is indicated obtain Owner's instructions.
- D. Protect from damage until Substantial Completion; repair or replace damage items.

## SECTION 10 4400 – FIRE PROTECTION SPECIALTIES

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Fire extinguishers.

#### 1.02 REFERENCE STANDARDS

- A. NFPA 10 – Standard for Portable Fire Extinguishers; National Fire Protection Association.
- B. UL (FFFD) – Fire Protection Equipment Directory, Underwriters Laboratories Inc.

#### PART 2 PRODUCTS:

#### 2.01 FIRE EXTINGUISHERS

- A. Fire Extinguishers – General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
  1. Provide extinguishers labeled by Underwriters Laboratories Inc. for the purpose specified and indicated.
  2. Dry Chemical Type Fire Extinguishers: Stainless steel tank, with pressure gage.
    - a. Class B: C.
    - b. Size 10.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Verify existing conditions before starting work.

#### 3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Secure rigidly in place.

## SECTION 32 1216 – ASPHALT PAVING

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Aggregate base course
- B. Single course bituminous concrete paving
- C. Double course bituminous concrete paving.

#### 1.02 REFERENCE STANDARDS

- A. AI MS–2– Mix Design Methods for Asphalt Concrete and other Hot-Mix types; The Asphalt Institute.

#### 1.03 QUALITY ASSURANCE

- A. Perform Work in accordance with State of Illinois Highway standard.
- B. Mixing Plant: Conform to State of Illinois Highway standard.
- C. Obtain mixing materials from same source throughout.

#### 1.04 REGULATORY REQUIREMENTS

- A. Conform to applicable code for paving work on public property.

### PART 2 PRODUCTS

#### 2.01 MATERIALS

- A. Aggregate for Base Course: In accordance with State of Illinois Highway standards.
- B. Aggregate for Binder Course: In accordance with State of Illinois Highway standards.
- C. Aggregate for Wearing Course: In accordance with State of Illinois Highway standards.
- D. Fine Aggregate: In accordance with State of Illinois Highway standards.

#### 2.02 ASPHALT PAVING MIXES AND MIX DESIGN

- A. Base course: 3.0 to 6 percent of asphalt cement by weight in mixture in accordance with AI MS–2.
- B. Binder Course: 4.5 to 6 percent of asphalt cement by weight in mixture in accordance with AI MS–2.
- C. Wearing Course: 5 to 7 percent of asphalt cement by weight in mixture in accordance with AI MS–2.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Verify that compacted sub grade is dry and ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.

#### 3.02 BASE COURSE

- A. Place and compact base course.

#### 3.03 PLACING ASPHALT PAVEMENT – SINGLE COURSE

- A. Install work in accordance with State of Illinois Highway standards.
- B. Place asphalt within 24 hours of applying primer or tack coat.
- C. Compact pavement by rolling to specified density. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.
- D. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.

#### 3.04 PLACING ASPHALT PAVEMENT – DOUBLE COURSE

- A. Place asphalt binder course within 24 hours of applying primer or tack coat.
- B. Place wearing course within two hours of placing and compacting binder course.
- C. Compact pavement by rolling to specified density. Do not displace or extrude pavement from position. Hand compact in area in accessible to rolling equipment.
- D. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.

#### 3.05 TOLERANCES

- A. Flatness: Maximum variation of ¼ inch measured with 10 foot straight edge.
- B. Variation from true Elevation: Within ½ inch.

#### 3.06 SCHEDULE

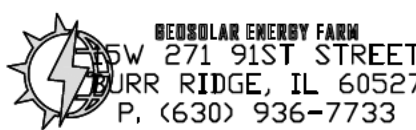
- A. Pavement at Truck Ramp and Garbage Area: Single course of 3 – 1/2" inch compacted thickness, sand seal coat.
- B. Pavement at Parking Area: Two courses; binder course of 2–1/2 inch compacted thickness and wearing course of 1 inch compacted thickness, fog seal coat.

**SPACE**  
ARCHITECTS + PLANNERS

2149 N. TALMAN AVENUE  
CHICAGO, IL 60647  
312.829.6666  
www.spacearchplan.com

CONSULTANTS

**SP Engineers**  
Consulting Structural Engineers  
134 N. LaSalle, Suite 1930 Chicago, IL 60602  
Phone: 312.332.2800  
Fax: 312.332.2820



PROJECT NAME:  
**6136 W. ROOSEVELT RD**  
PROJECT ADDRESS:  
**6136 W. ROOSEVELT RD., OAK PARK, IL 60304**

**BUILDING TO BE  
SPRINKLERED**

PROJECT INFO

PROJECT NO.  
25102  
PROJECT TEAM:  
JB  
GB

ISSUE

12.30.25 - ISSUED FOR PERMIT

CERTIFICATION



SHEET TITLE

**GENERAL  
SPECIFICATIONS**

SHEET #

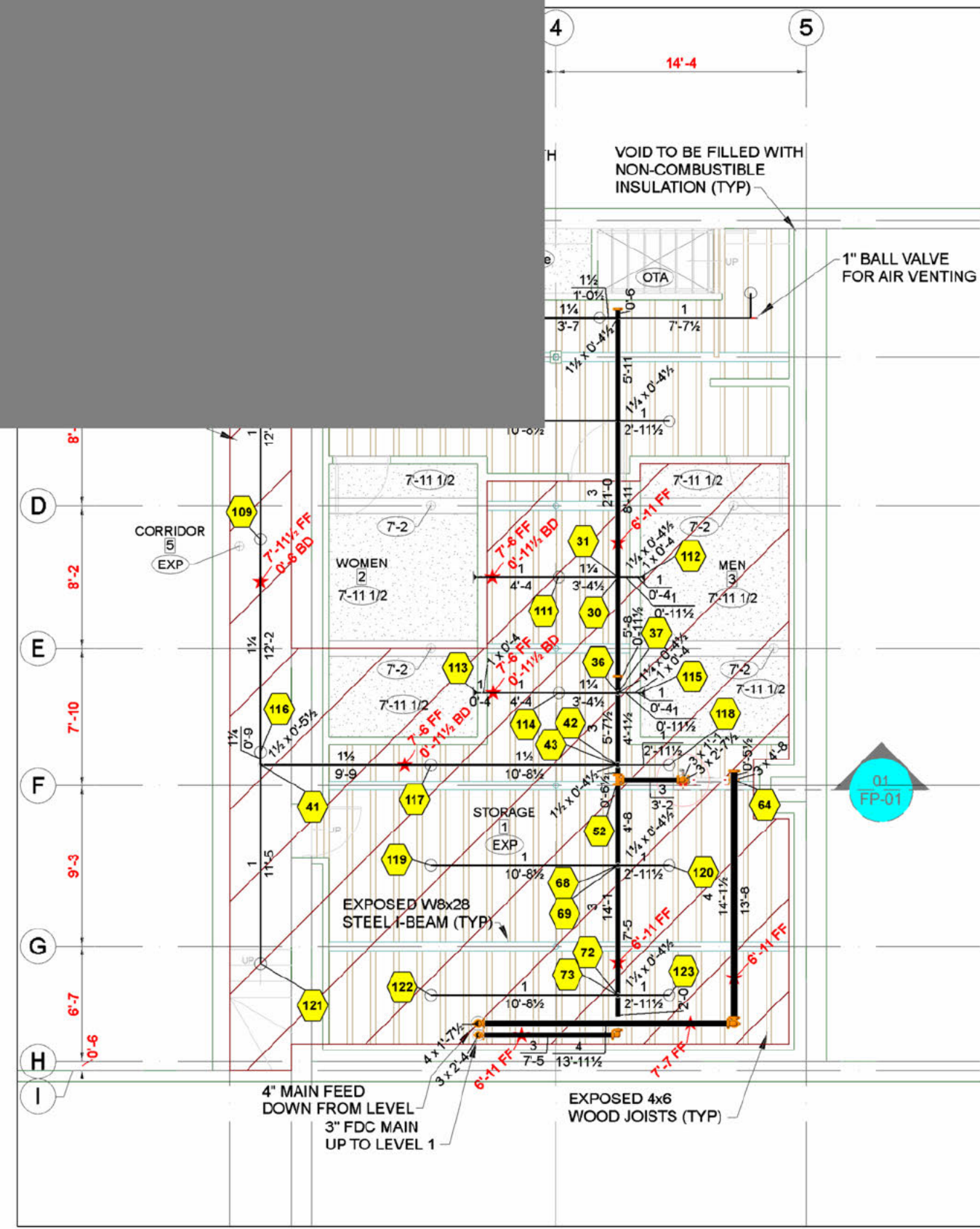
**X1.5**

# RETAIL PROJECT - BUILD-OUT FOR FUTURE LEASE

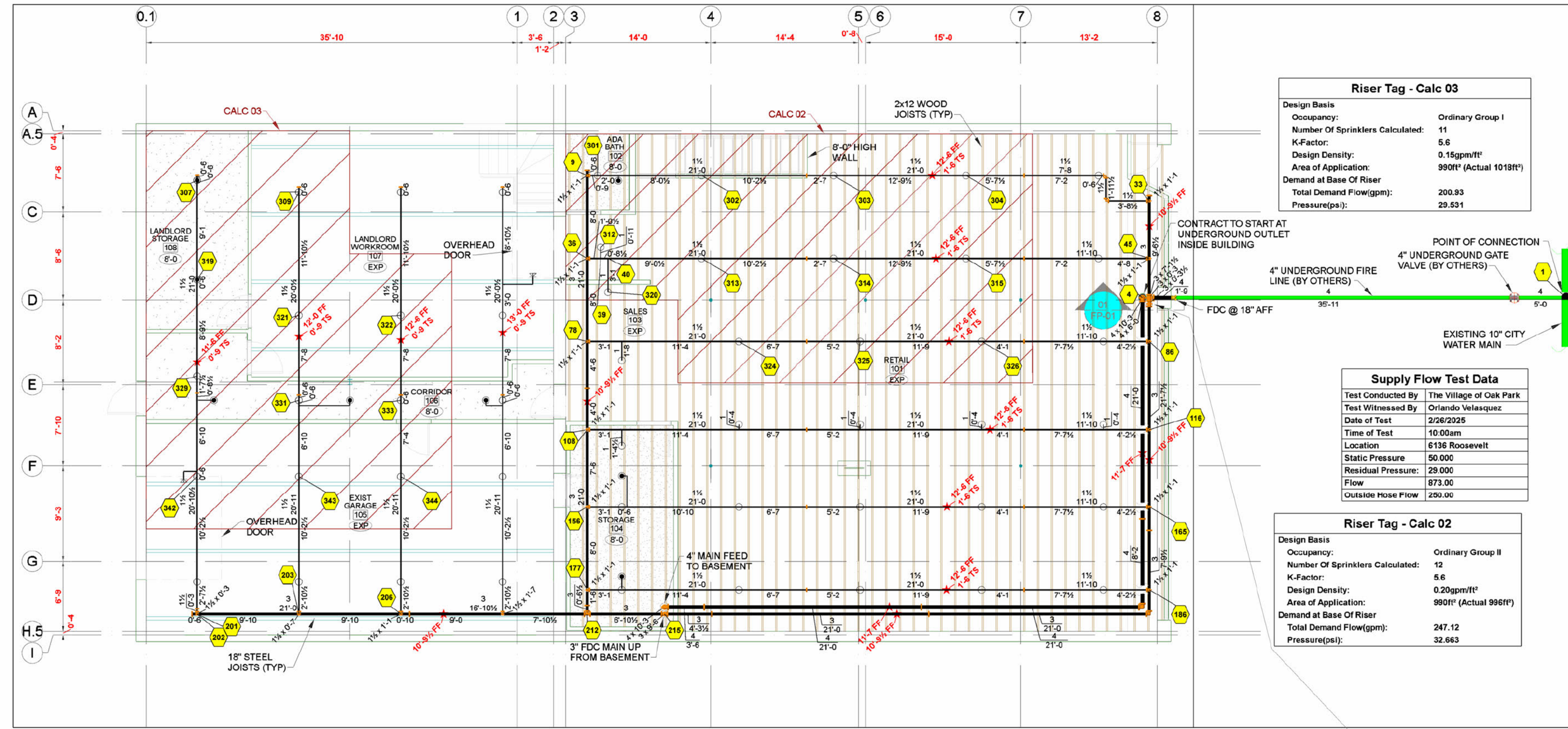
## 6136 W. Roosevelt Rd., Oak Park, IL 60304

### GENERAL NOTES:

- FIRE PROTECTION SYSTEMS TO BE DESIGNED IN ACCORDANCE WITH THE FOLLOWING STANDARD: NFPA 13
- INSTALLATION AS PER NFPA 13, STATE AND LOCAL AUTHORITIES.
- ALL SYSTEM PIPING TO BE BLACK STEEL SCH. 40 PIPE AND SCH 10 PIPE.
  - ALL SCH. 10 PIPING TO USE GROOVED FITTINGS WITH WELDED OUTLETS.
  - ALL SCH. 40 PIPING TO USE THREADED FITTINGS.
- ALL EQUIPMENT TO BE UL LISTED OR FM APPROVED.
- ALL ELECTRICAL WIRING IS BY OTHERS.
- PAINTING IF REQUIRED IS BY OTHERS.
- JOB CHECK FOR HIGH TEMPERATURE HEAD LOCATIONS.
- FREEZE PROTECTION OF THE WET PIPE SYSTEMS IS THE OWNER'S RESPONSIBILITY.
- A FIRE ALARM SYSTEM TO MONITOR THE AUTOMATIC SPRINKLER SYSTEM IS REQUIRED TO BE MONITORED BY AN APPROVED SUPERVISING STATION PER IBC 901.6.1. ALL ALARM WORK IS BY OTHERS.
- ALL CONTROL VALVES WILL BE TAMPERED. TAMPER AND FLOW SWITCHES SHALL BE MONITORED. (ALL ALARM WORK IS BY OTHERS)
- A HYDROSTATIC TEST WILL BE PERFORMED IN ACCORDANCE WITH NFPA 13
- PIPE HANGERS SHALL BE IN ACCORDANCE WITH NFPA 13. HANGER SPACING AND ROD DIAMETER SHALL BE IN ACCORDANCE WITH NFPA 13 AS FOLLOWS:
  - SEE HANGER CHART
- FLOW TEST:
  - STATIC: 50 PSI
  - RESIDUAL: 29 PSI
  - FLOW: 873 GPM
- OCCUPANCY: MERCANTILE GROUP M
- DESIGN CRITERIA:
  - NFPA 13, REDUCED FOR QR SPRINKLER HEADS PER NFPA 13
- 1 DENOTES HYDRAULIC CALCULATION NODE POINT



**FIRE PROTECTION PLAN - BASEMENT**  
1/8"=1'-0"



**FIRE PROTECTION PLAN - LEVEL 1**  
1/8"=1'-0"

**Riser Tag - Calc 03**

Design Basis	Ordinary Group I
Occupancy	19
Number Of Sprinklers Calculated	5.6
K-Factor	0.15gpm/ft <sup>2</sup>
Design Density	900R (Actual 1019R)
Area of Application	308.80
Demand at Base of Riser	29.51
Total Demand Flow(gpm)	29.51
Pressure(psi)	

**Supply Flow Test Data**

Test Conducted By	The Village of Oak Park
Test Witnessed By	Orlando Velazquez
Date of Test	2/26/2025
Time of Test	10:00am
Location	6136 Roosevelt
Static Pressure	50.000
Residual Pressure	29.000
Flow	873.00
Outside Inlet Flow	290.00

**Riser Tag - Calc 02**

Design Basis	Ordinary Group II
Occupancy	19
Number Of Sprinklers Calculated	5.6
K-Factor	0.20gpm/ft <sup>2</sup>
Design Density	900R (Actual 989R)
Area of Application	308.80
Demand at Base of Riser	24.12
Total Demand Flow(gpm)	24.12
Pressure(psi)	32.883

### SCOPE OF WORK:

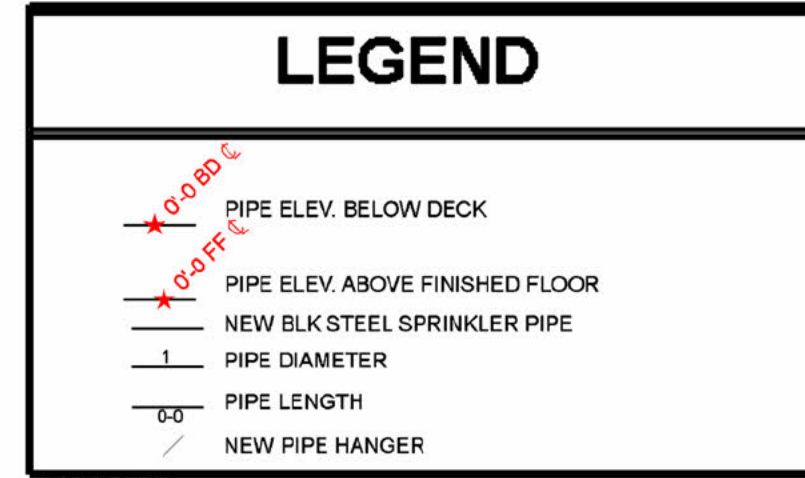
COMPLETE ALL SPRINKLER PIPE, RISER ASSEMBLY, BACKFLOW PREVENTER & FDC DESIGN AND INSTALLATION FOR THE EXISTING BUILDING.

ISAK FIRE PROTECTION, INC. SHALL START AT THE 4" UNDERGROUND FIRE LINE LOCATED ON LEVEL 1.

**BUILDING AREA:**  
BASEMENT: 1,350sqft  
LEVEL 1: 5,000sqft

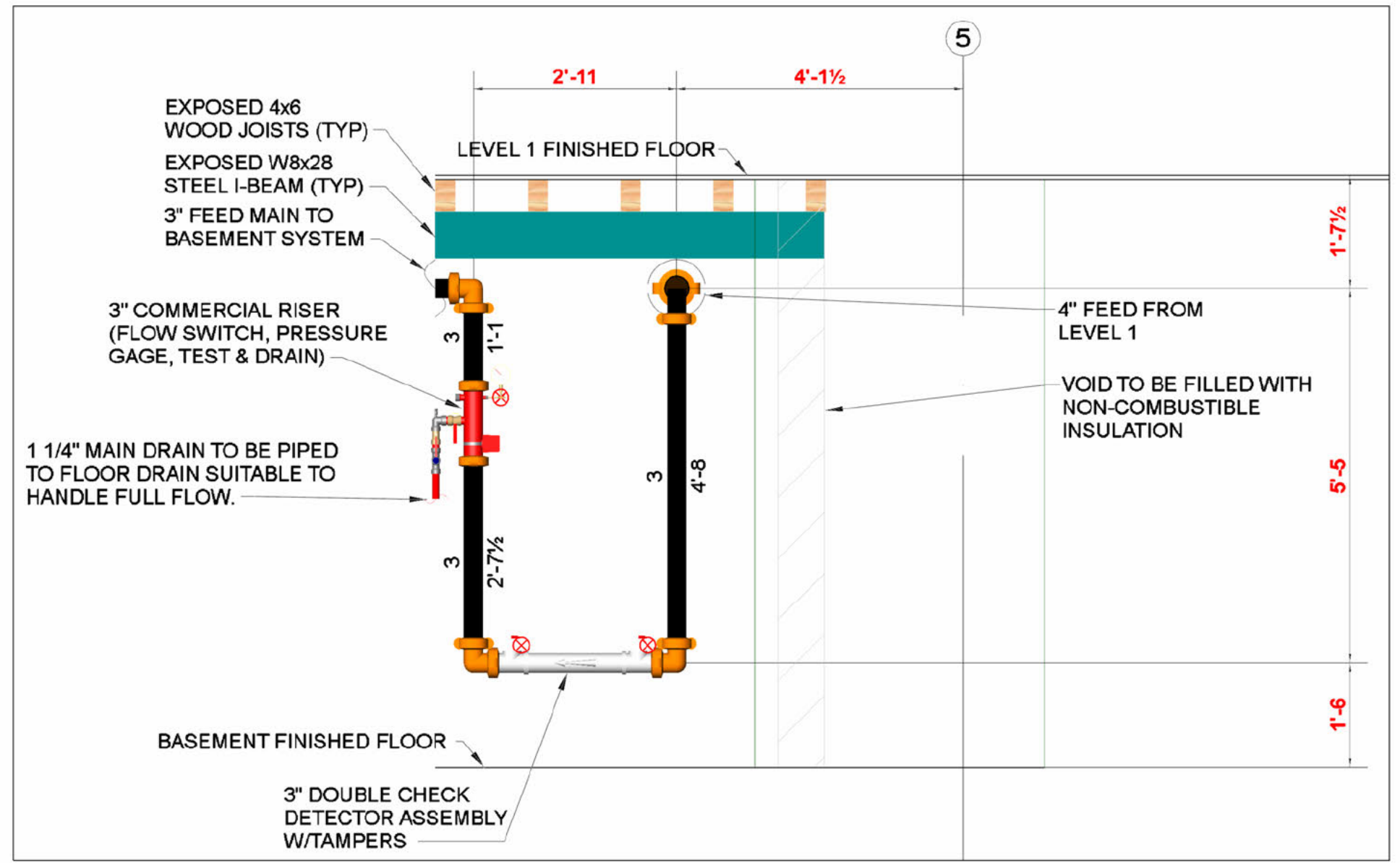
**BUILDING OCCUPANCY:**  
GROUP M

**SPRINKLER SYSTEM:**  
THROUGHOUT EXISTING BUILDING PER NFPA 13  
FIRE PROTECTION SPRINKLER SYSTEM TO BE HYDRAULICALLY CALCULATED PER NFPA 13.

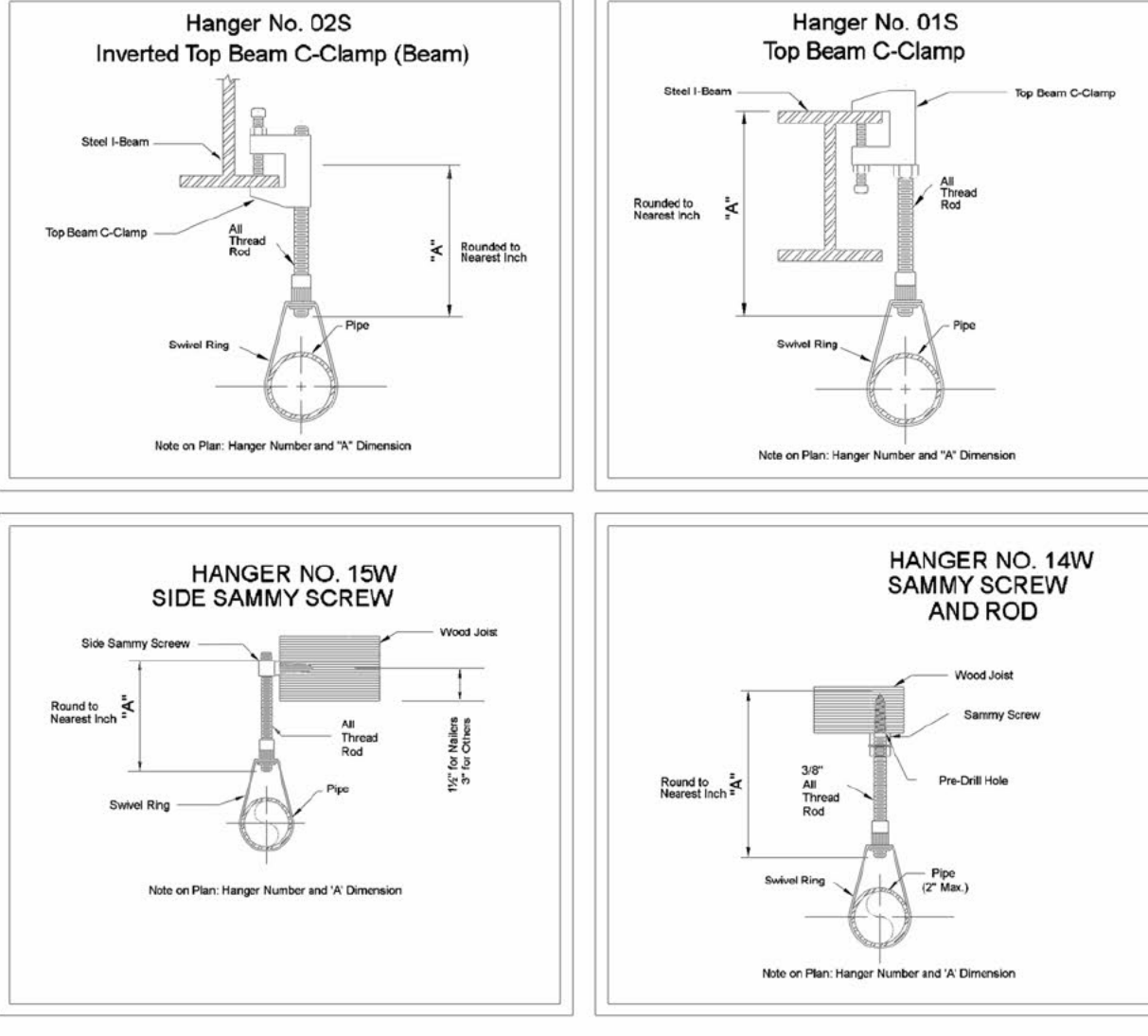


**Riser Tag**

Design Basis	Ordinary Group I
Occupancy	19
Number Of Sprinklers Calculated	5.6
K-Factor	0.15gpm/ft <sup>2</sup>
Design Density	900R (Actual 989R)
Area of Application	308.80
Demand at Base of Riser	29.51
Total Demand Flow(gpm)	29.51
Pressure(psi)	29.492

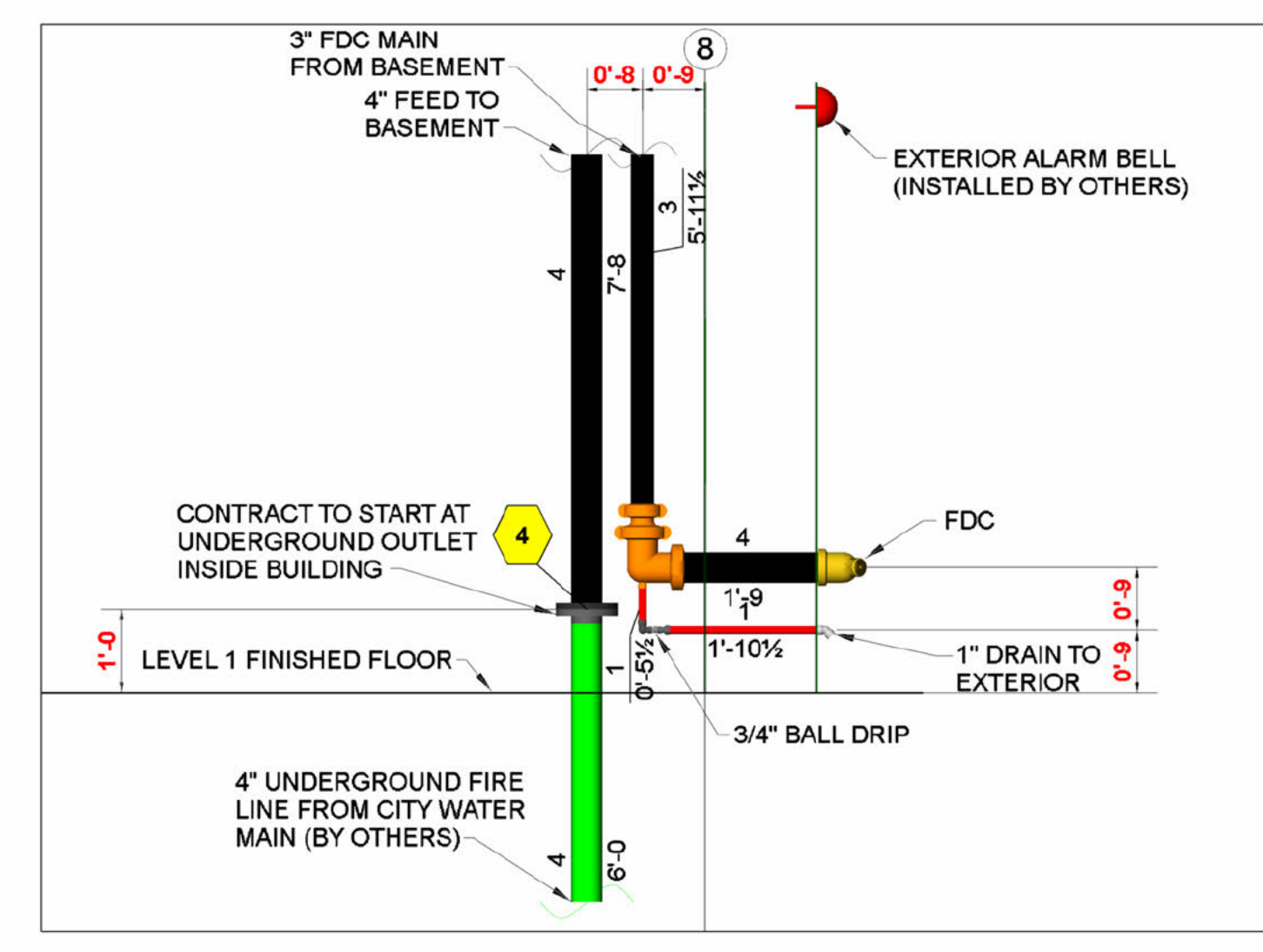
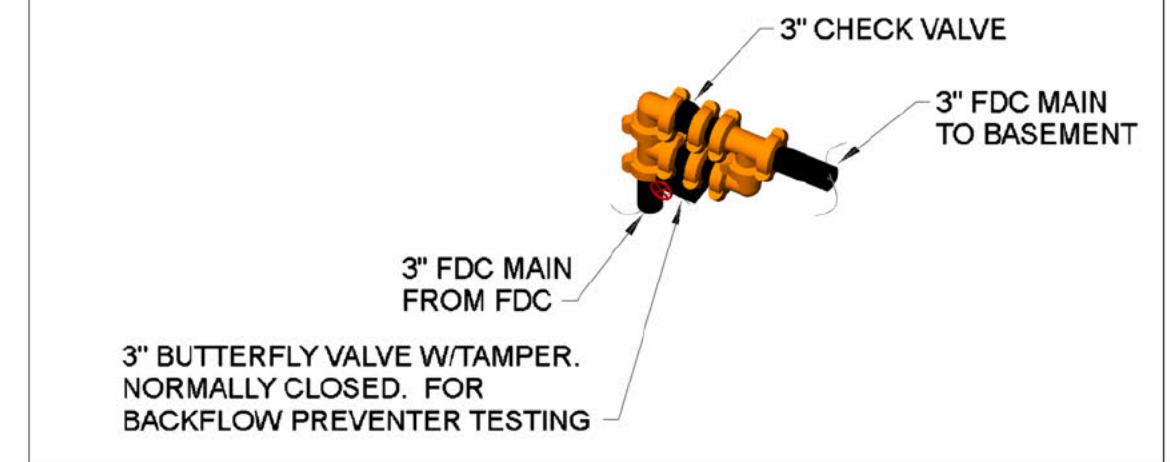


**03 FIRE PROTECTION - RISER DETAIL**  
1/8"=1'-0"



**NFPA Table 9.2.2.1 (a) Maximum Distance Between Hangers (ft.-in.)**

	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
Steel pipe except threaded thimble	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0



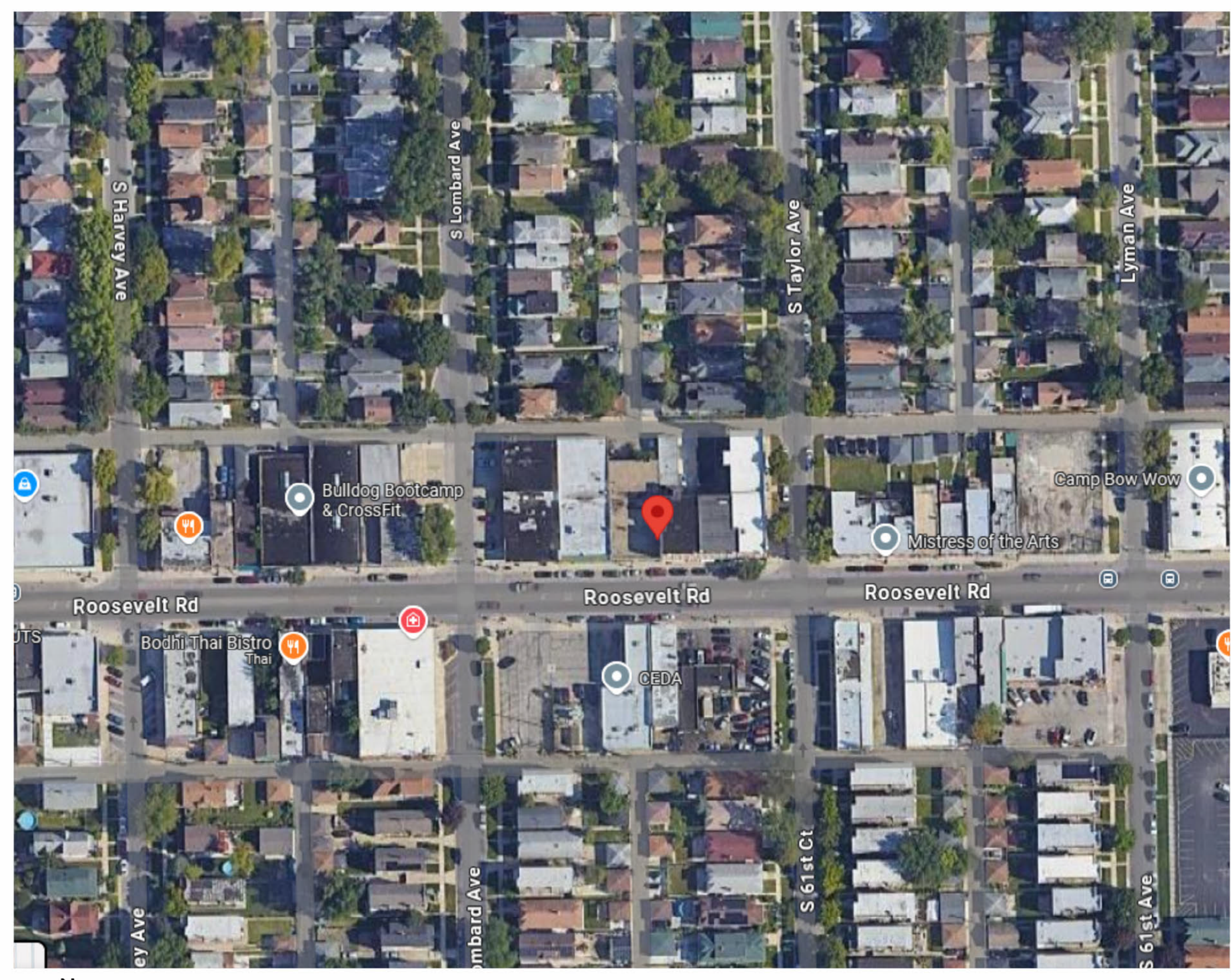
**03 FIRE PROTECTION - FDC SECTION**  
1/8"=1'-0"

**Sprinkler Legend - Basement**

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
○	Viking	VK300	Microfast	17	5.6	Upright	1/2"	Quick	Brass	155°F	
○	Viking	VK305	Microfast	6	5.6	Horizontal Sidewall	1/2"	Quick	White Polyester	155°F	
				<b>Total = 23</b>							

**Sprinkler Legend - Level 1**

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
○	Viking	VK302	Microfast	8	5.6	Pendent	1/2"	Quick	White Polyester	155°F	
○	Viking	VK300	Microfast	51	5.6	Upright	1/2"	Quick	Brass	155°F	
○	Viking	VK305	Microfast	2	5.6	Horizontal Sidewall	1/2"	Quick	Brass	155°F	
				<b>Total = 61</b>							



**SITE PLAN**  
N.T.S.



**Isak Fire Protection Inc.**  
875 North Michigan Ave.  
Suite 3100  
Chicago, IL 60611  
Tel: (224) 216-2272  
*Fire Safety is Our Priority*

**REVISIONS**

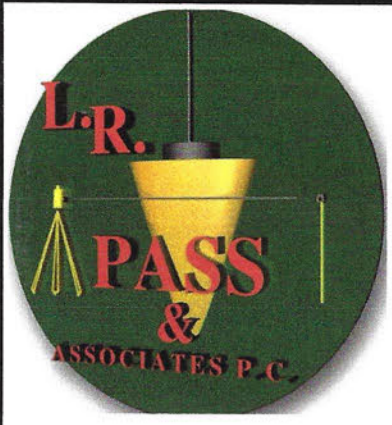
No.	Date	Description
1	03/13/25	SUBMITTAL
2	12/15/25	FOR REVIEW - 1ST FLOOR
3	12/22/25	SUBMITTAL

**REVISIONS**

No.	Date	Description
1	03/13/25	SUBMITTAL
2	12/15/25	FOR REVIEW - 1ST FLOOR
3	12/22/25	SUBMITTAL

**RETAIL PROJECT**  
**BUILD-OUT FOR FUTURE LEASE**  
**6136 W. ROOSEVELT RD.,**  
**OAK PARK, IL 60304**

CONTRACT NUMBER: 00319  
DRAWN BY: Ryan Waterman  
DATE: 03-13-25  
SCALE: 1/8" = 1'-0"  
AREA: BASEMENT & LEVEL 1  
SHEET NUMBER: **FP-01**



# PLAT OF SURVEY

L. R. PASS & ASSOCIATES  
Professional Land Surveyors

Plat of Surveys  
Topography  
Mortgage  
Inspection  
Condominiums  
Land Development  
Legal Descriptions

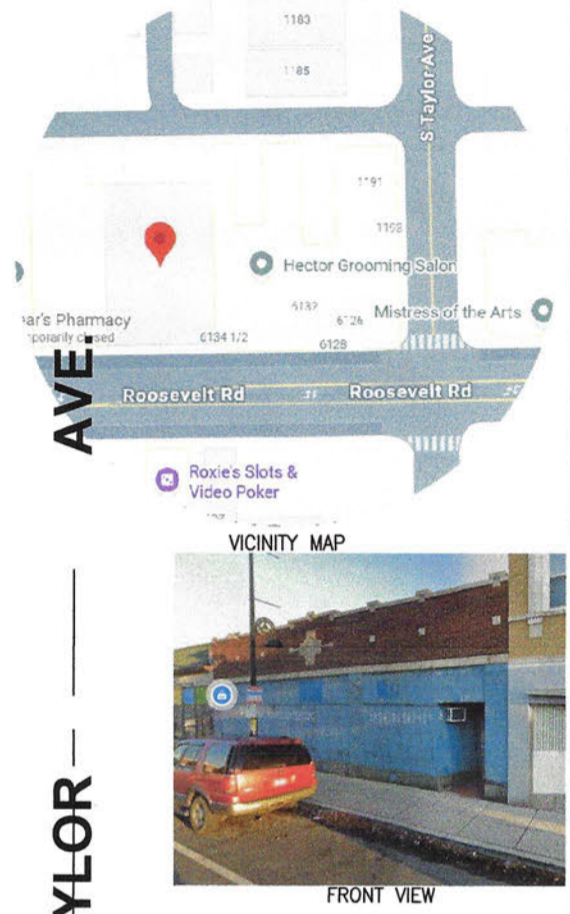
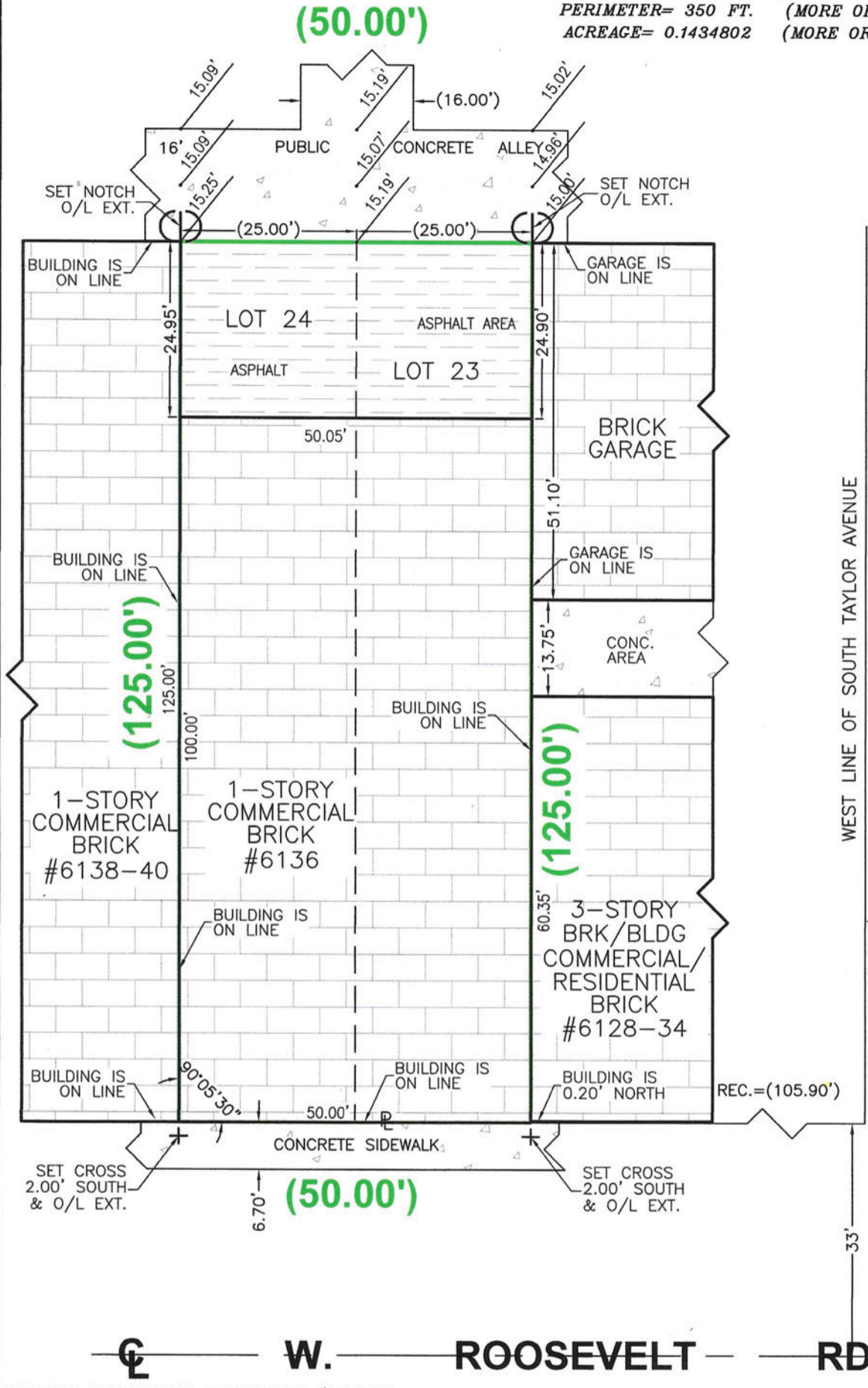
LOTS 23 AND 24 IN BLOCK 13 IN AUSTIN PARK, A SUBDIVISION OF THE EAST 1/2 OF THE SOUTHWEST 1/4 OF SECTION 17, TOWNSHIP 39 NORTH, RANGE 13, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

(COMMONLY KNOWN AS: 6136 W. ROOSEVELT ROAD, OAK PARK, ILLINOIS 60304)

AREA= 6,250 SQ. FT. (MORE OR LESS)  
PERIMETER= 350 FT. (MORE OR LESS)  
ACREAGE= 0.1434802 (MORE OR LESS)



SCALE: 1"=20'



LEGEND	
	METAL FENCE
	PLASTIC FENCE
	FENCE POST (F.P.)
	"MAG" NAIL SET
	SET IRON PIPE
	IRON PIPE FOUND
	CUT CROSS- FOUND OR SET
	PROPERTY LINE
(140.45)	RECORDED DATA
140.45	MEASURED DIMENSION
	NOTCH
	WOOD & METAL FENCE (W.M.F.)
	WOOD FENCE (W.F.)
	CHAIN LINK FENCE (C.L.F.)
	WROUGHT IRON FENCE (W.I.F.)
	5 NAILS (SET)

UNLESS REQUESTED OTHERWISE (BY THE CLIENT OR HIS/HER AGENT) MONUMENTS OR WITNESS POINTS SHALL BE SET FOR ALL ACCESSIBLE CORNERS OF THE SURVEY.

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS OF PRACTICE APPLICABLE TO BOUNDARY SURVEYS. ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-0003083.

BENCH #519  
10.0 FEET EAST OF THE WEST LINE OF SOUTH MAY  
28.0 FEET NORTH OF THE NORTHLINE OF WEST 107TH STREET  
ELEV. 43.81

COMPARE ALL POINTS BEFORE BUILDING. NO IMPROVEMENTS SHOULD BE MADE ON THE BASIS OF THIS PLAT ALONE. CRITICAL FIELD MONUMENTATION SHOULD BE ESTABLISHED PRIOR TO THE COMMENCEMENT OF ANY AND ALL CONSTRUCTION. PLEASE REFER TO DEED, TITLE POLICY AND/OR LOCAL ORDINANCES FOR BUILDING LINE RESTRICTIONS AND/OR EASEMENTS NOT SHOWN HEREON. PLEASE CHECK LEGAL DESCRIPTION WITH DEED AND IMMEDIATELY REPORT ANY DISCREPANCY TO THE SURVEYOR FOR EXPLANATION AND/OR CORRECTION. ALL DIMENSIONS AND MEASUREMENTS ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF, AND ARE CORRECTED TO A TEMPERATURE OF 62 DEGREES FAHRENHEIT.



WE, L.R. PASS & ASSOCIATES, P.C., DO HEREBY CERTIFY THAT WE HAVE SURVEYED THE ABOVE DESCRIBED PROPERTY AND TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, THE PLAT HEREON DRAWN IS A REPRESENTATION OF SAID SURVEY.

GIVEN UNDER MY HAND AND SEAL THIS 24TH DAY OF DECEMBER 2025.  
LICENSE EXPIRATION DATE: 11/30/26

P.O. Box 43559 Chicago, Illinois 60643 TEL.: (773) 779-1700 Fax: (773) 779-9143 E-mail: lrpassassoc@yahoo.com	
<b>NELIDA QUINONES</b>	
P.I.N.#	16-17-328-034-0000
CHECKED BY: L.R.P.	FIELD DATE: 12-22-2025
BOOK NO.: G.P.	SURVEYOR: S.J.S.
PROJECT NO.: 2512-000	SCALE: 1"=20'
J.R., © 2025 L.R. PASS & ASSOCIATES P.C. ALL RIGHTS RESERVED.	



# Q6 EVENTS LLC

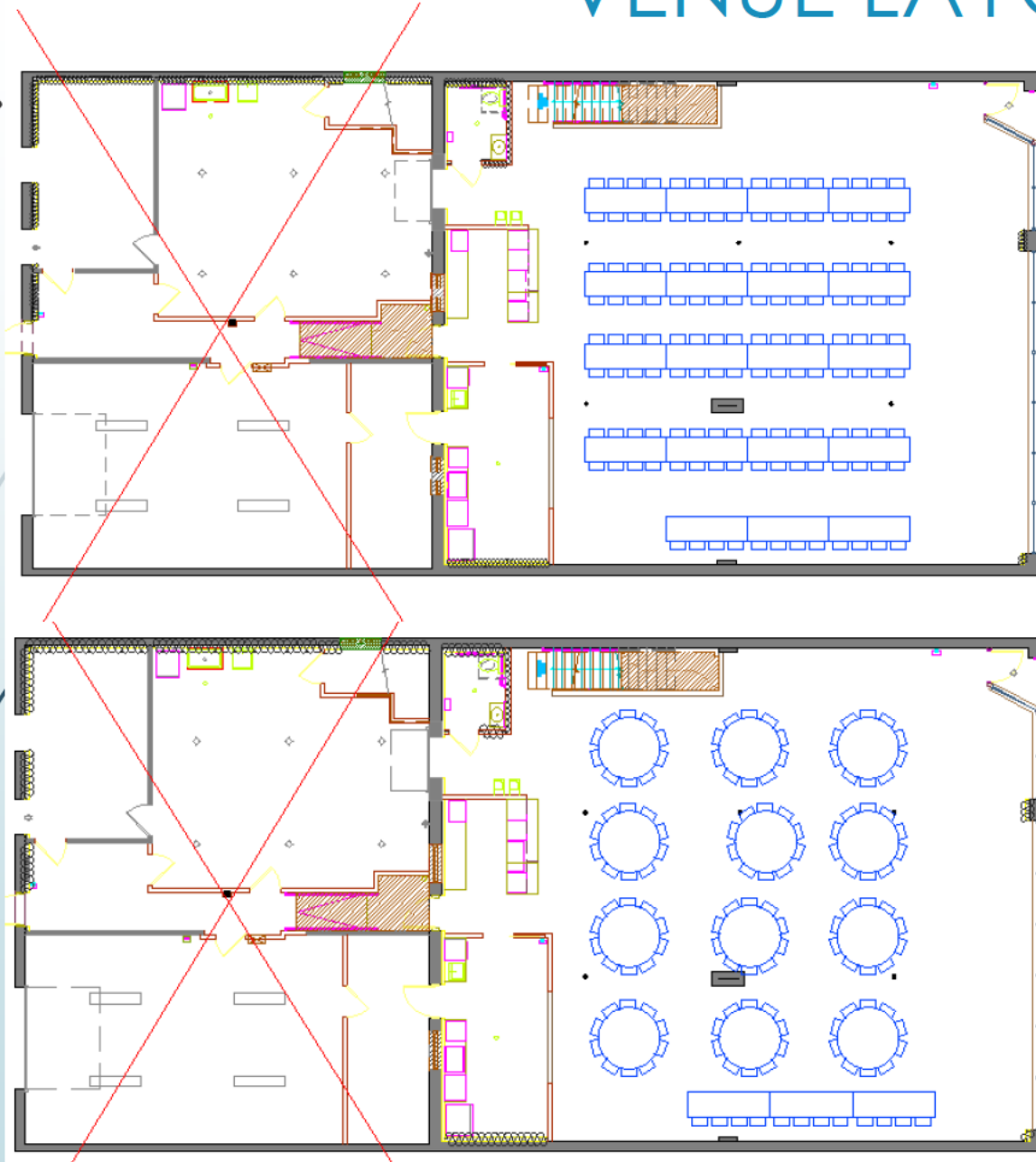
6136 ROOSEVELT RD, OAK PARK, IL 60304



# ABOUT US



# VENUE LAYOUT



The event space has an occupancy of approximately 200 people. That is based on standing room only. Based on the layout for a sit-down event such as weddings, the space will accommodate a max of 140 guests. This includes a dance floor and DJ space. The top photo shows rectangular tables accommodating 128 with the head table of 12 people. This is 140 total. The bottom photo shows circular tables accommodating 120 with a head table of 12 people. This is 132 total. With servers, cleaning crew and security that will be approximately 145 people max.

The occupancy is 145 people.

# VENUE GUIDELINES

## Rental Windows:

**Full-Day Rentals:** Often cover a 10–12 hour window, such as **10:00 AM – 8:00 PM** or **12:00 PM – 12:00 AM**. Music is down at 11 pm and clean-up until 12am.

**Time Slots:** specific shifts will be **10:00 AM – 2:00 PM** (showers/ceremonies) or **3:00 PM – 11:00 PM** (receptions).

**Staffing-** There will be staff on-site. They will be responsible for the logistical execution and guest experience of an event. Their roles typically fall into three phases: setup, live operation, and teardown.

**Safety and Security-** A security guard's primary duty at an event space is to ensure the safety of all attendees and staff while protecting the venue's property and assets. Their role is a mix of surveillance, preventative screening, and active crowd management to maintain a secure environment. The number of security guards will depend on the number of attendees. There will be one guard for 50- 100 guests.

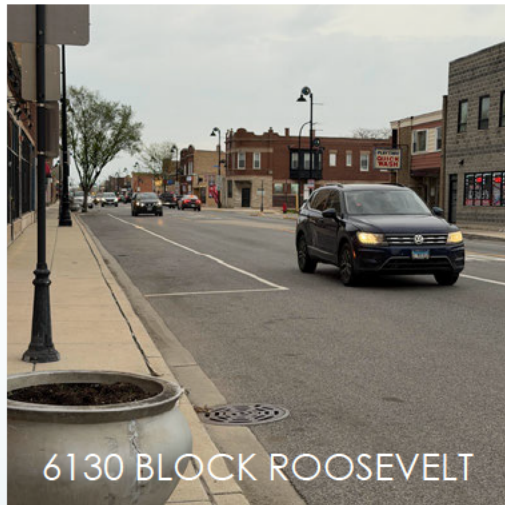


## PARKING STUDY

The study will be based on the highlighted area of the map and will reflect Friday and Saturday parking from 5pm-9pm. Friday and Saturday will consist of events for larger parties such as Weddings for a capacity of around 145 people. The study does not reflect parking in residential areas. The numbers in red reflect the available parking in that area.

TOTAL PARKING SPOTS: 86 spots within the highlighted area

AVERAGE PARKING SPOTS FOR AN EVENT WITH 145 PEOPLE: 58-73 SPOTS (According to the Dept. of Transportation)



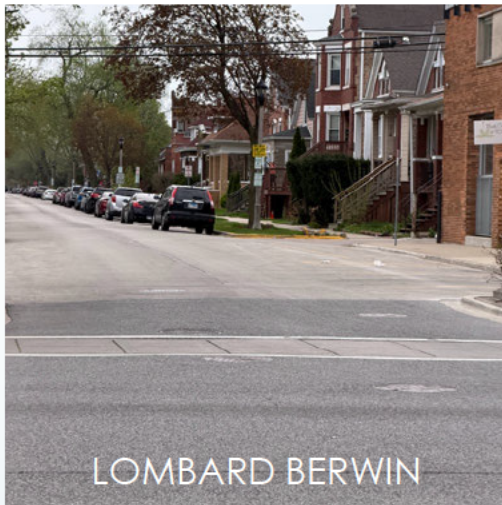
6130 BLOCK ROOSEVELT



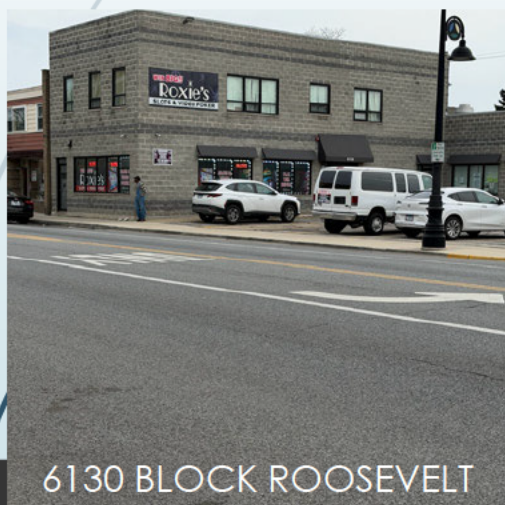
6200 BLOCK ROOSEVELT



6200 BLOCK ROOSEVELT



LOMBARD BERWIN



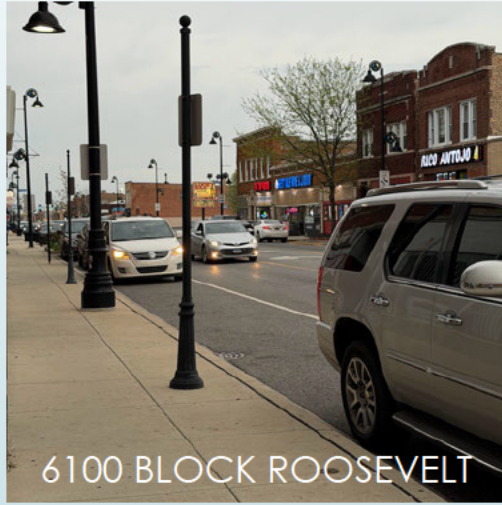
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TAYLOR



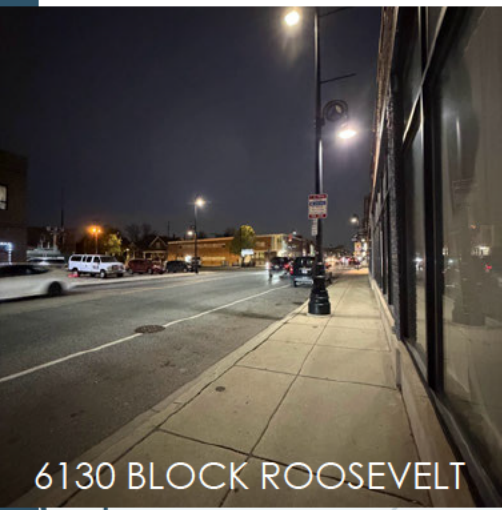
61<sup>ST</sup> CT



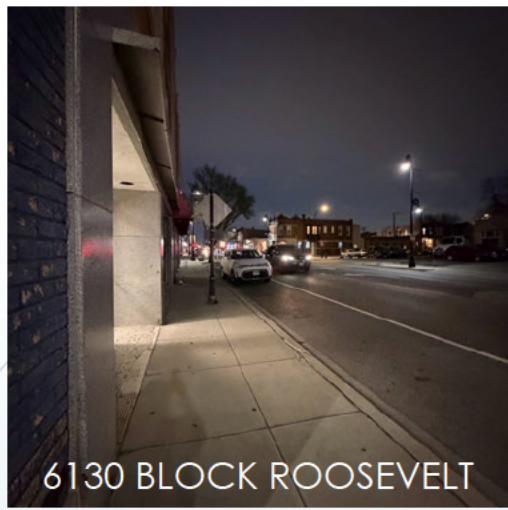
6100 BLOCK ROOSEVELT

## FRIDAY PARKING DATA 4/17/2026

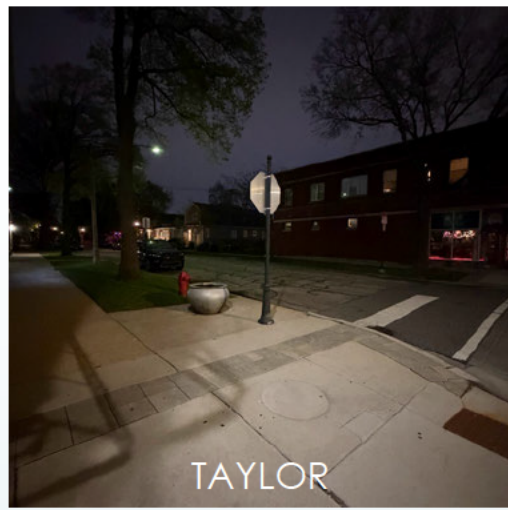
Open Parking spots at 6:45pm: 59 spots



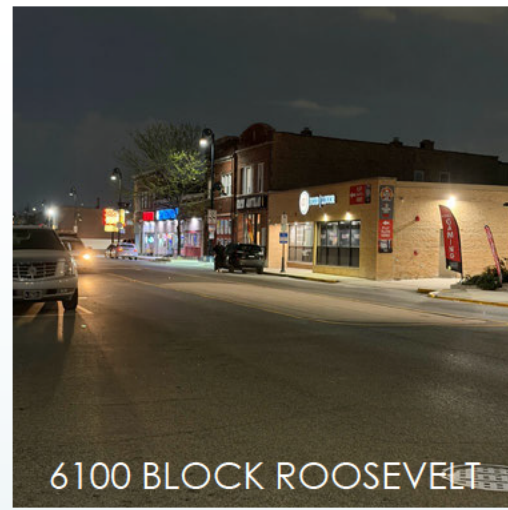
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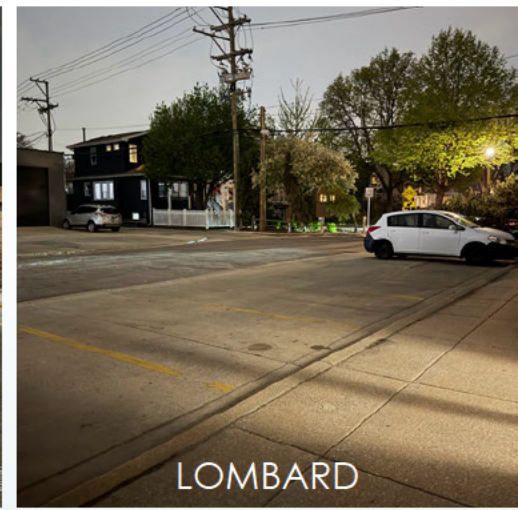
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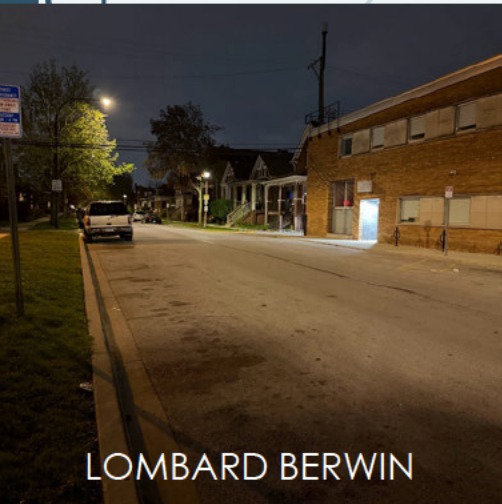
TAYLOR



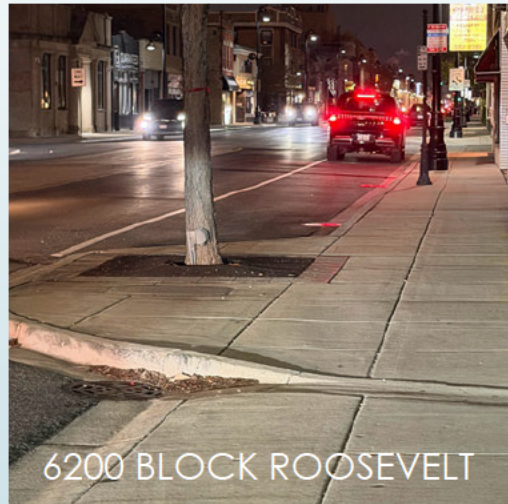
6100 BLOCK ROOSEVELT



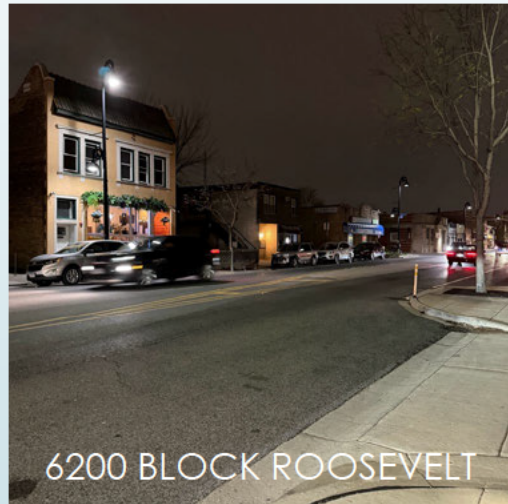
LOMBARD



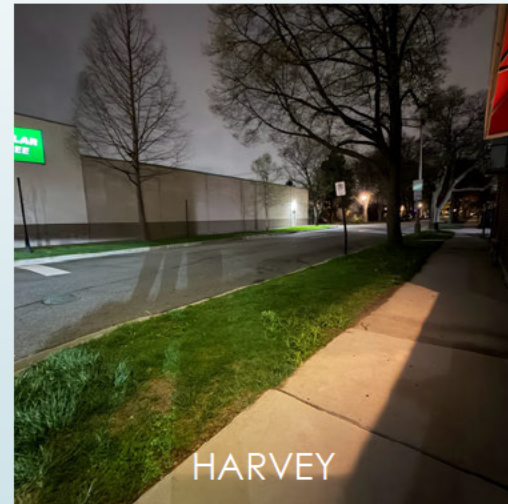
LOMBARD BERWIN



6200 BLOCK ROOSEVELT



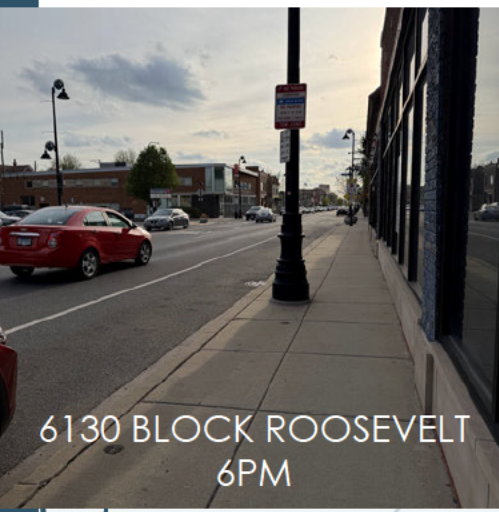
6200 BLOCK ROOSEVELT



HARVEY

## FRIDAY PARKING DATA 4/17/2026

Open Parking spots at 8pm: 63 spots



6130 BLOCK ROOSEVELT  
6PM



6130 BLOCK ROOSEVELT  
6PM



6PM LOMBARD



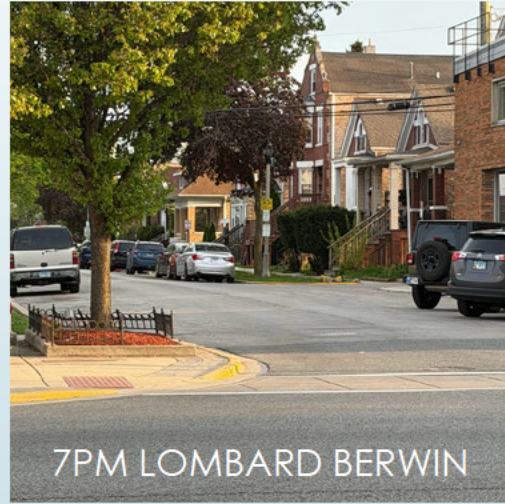
6PM LOMBARD BERWIN



6200 BLOCK ROOSEVELT  
6PM



6200 BLOCK ROOSEVELT  
7PM



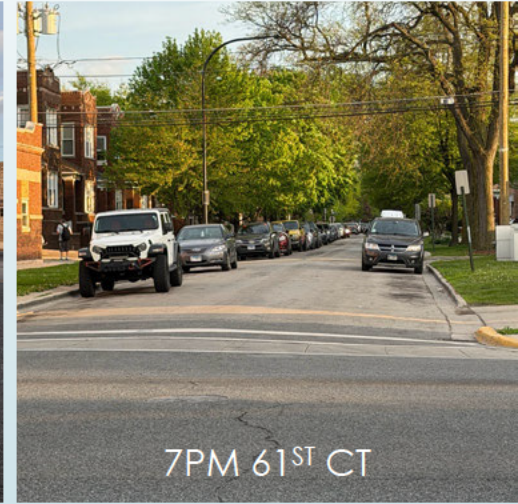
7PM LOMBARD BERWIN



7PM TAYLOR



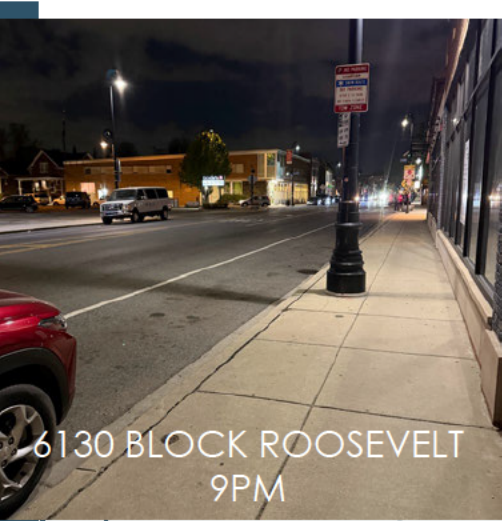
6100 BLOCK ROOSEVELT  
7PM



7PM 61<sup>ST</sup> CT

## FRIDAY PARKING DATA 4/24/2026

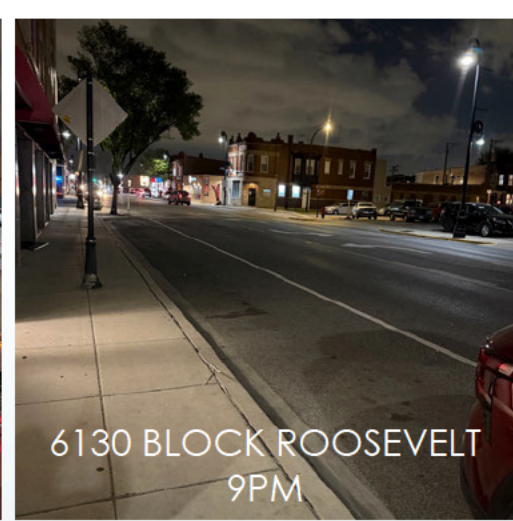
Open Parking spots at 6pm: 52 spots  
Open Parking spots at 7pm: 51 spots



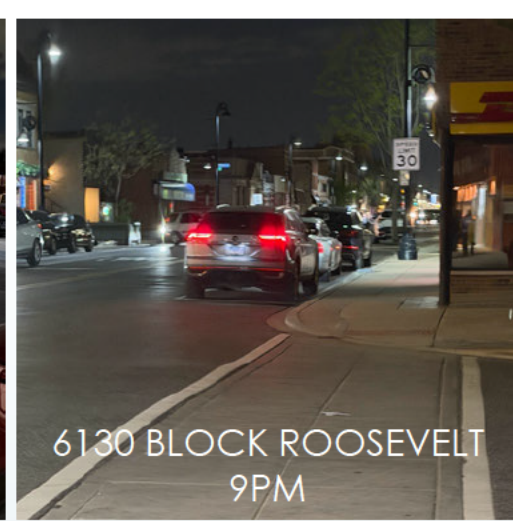
6130 BLOCK ROOSEVELT  
9PM



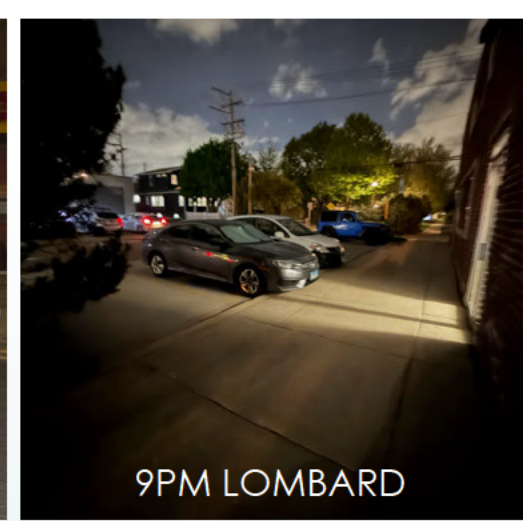
6130 BLOCK ROOSEVELT  
9PM



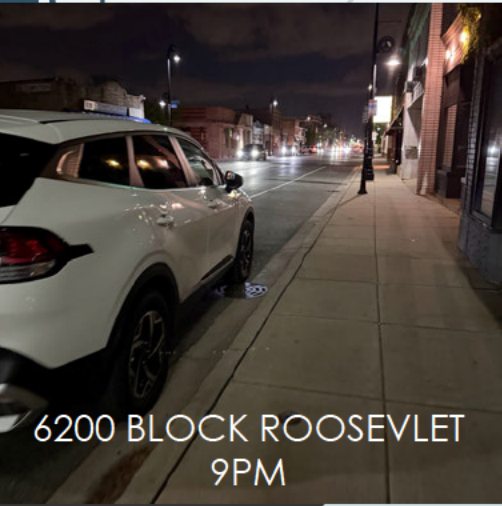
6130 BLOCK ROOSEVELT  
9PM



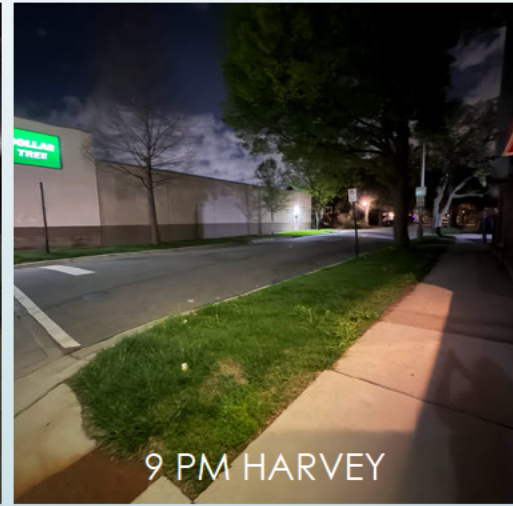
6130 BLOCK ROOSEVELT  
9PM



9PM LOMBARD



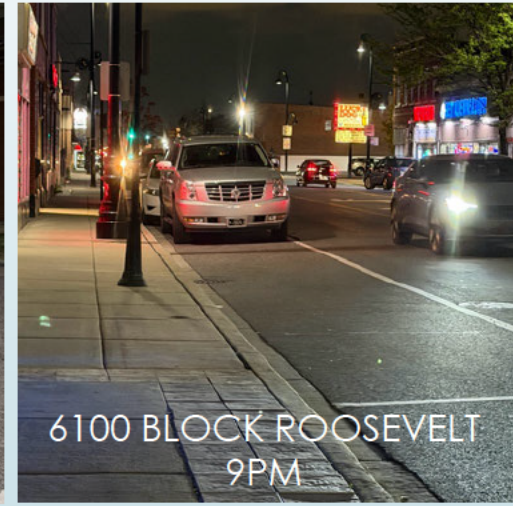
6200 BLOCK ROOSEVELT  
9PM



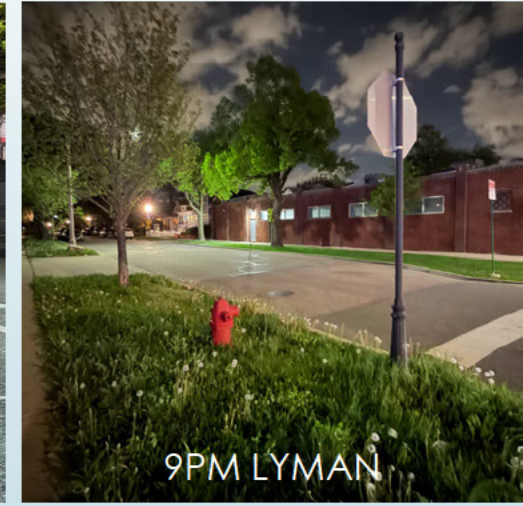
9 PM HARVEY



9PM TAYLOR



6100 BLOCK ROOSEVELT  
9PM



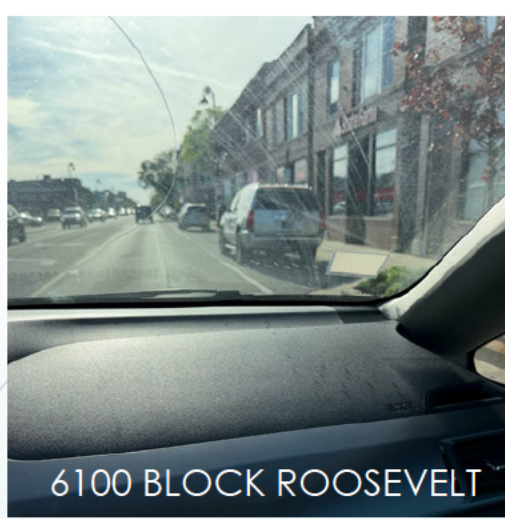
9PM LYMAN

# FRIDAY PARKING DATA 4/24/2026

Open Parking spots at 9pm: 57 spots available



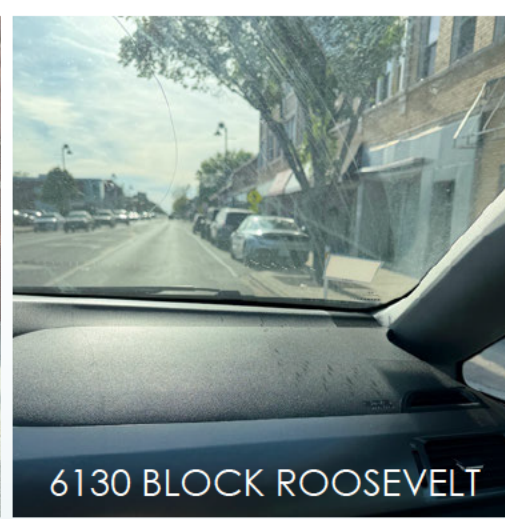
LYMAN



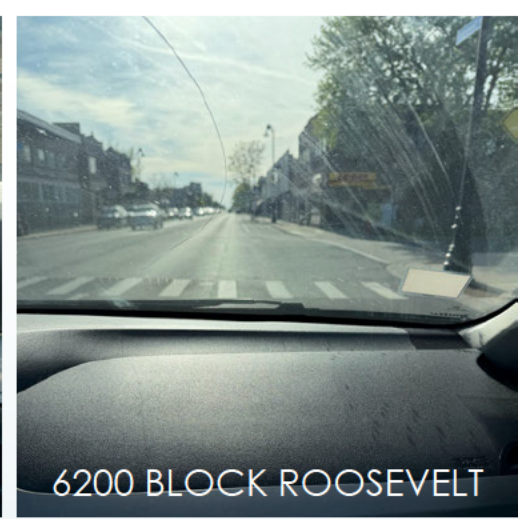
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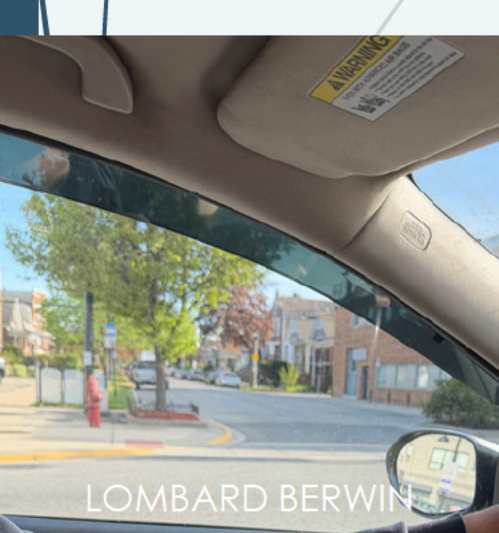
TAYLOR



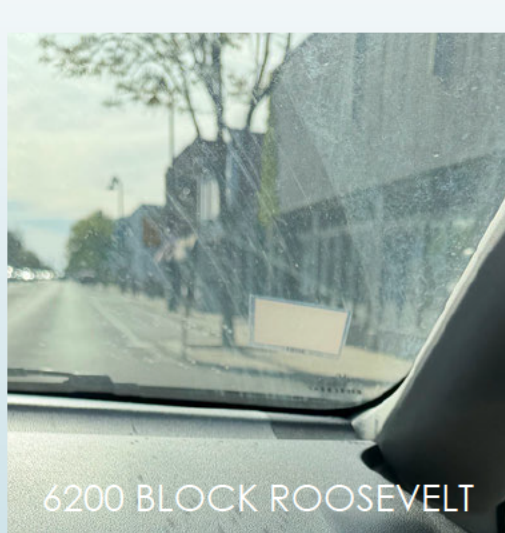
6130 BLOCK ROOSEVELT



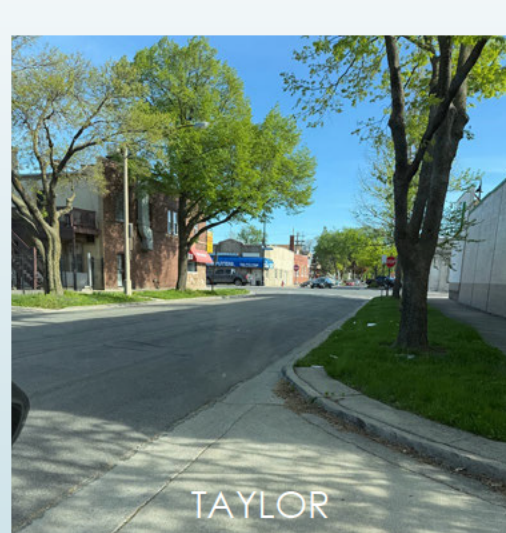
6200 BLOCK ROOSEVELT



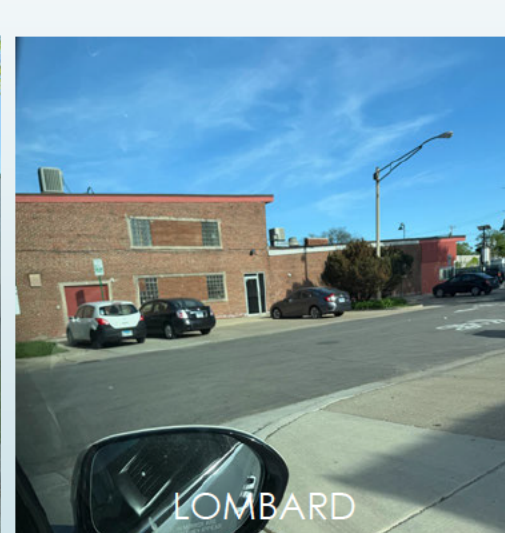
LOMBARD BERWIN



6200 BLOCK ROOSEVELT



TAYLOR



LOMBARD

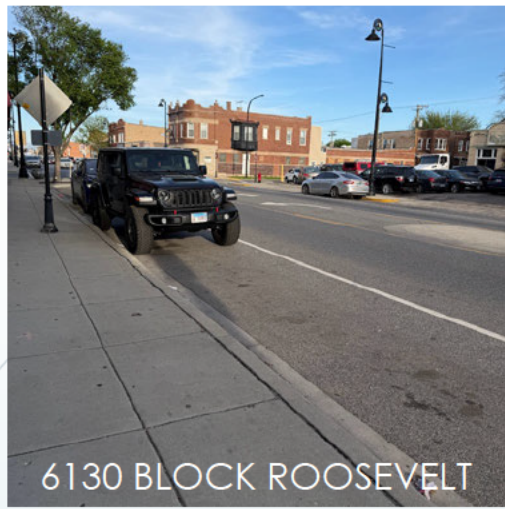
## SATURDAY PARKING DATA 04/25/2026

Open Parking Spots:

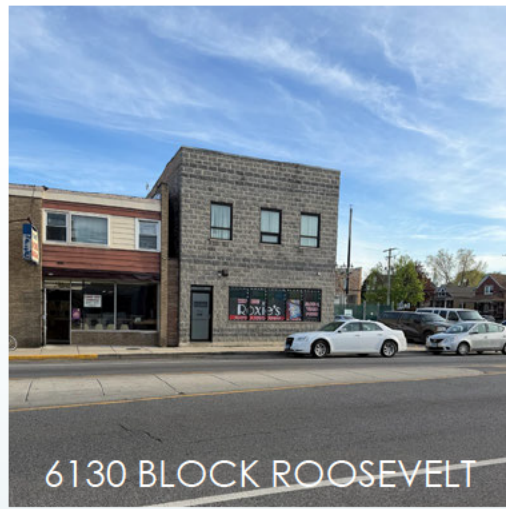
5pm: 56 spots



6130 BLOCK ROOSEVELT



6130 BLOCK ROOSEVELT



6130 BLOCK ROOSEVELT



TAYLOR



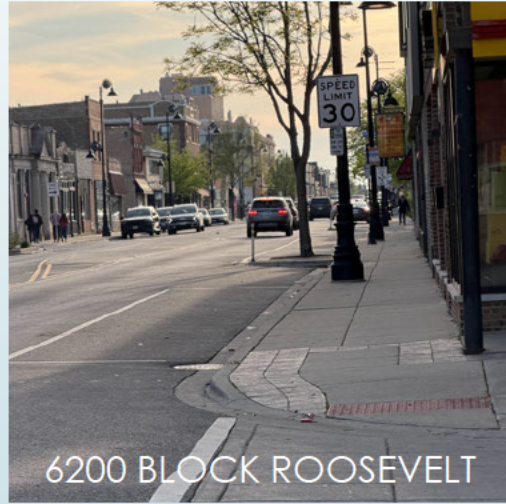
61<sup>ST</sup> CT



6100 BLOCK ROOSEVELT



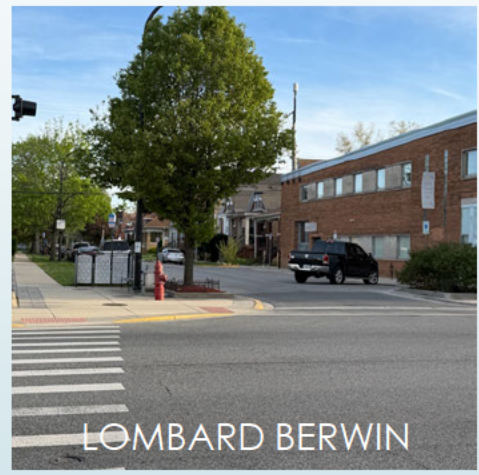
LYMAN



6200 BLOCK ROOSEVELT



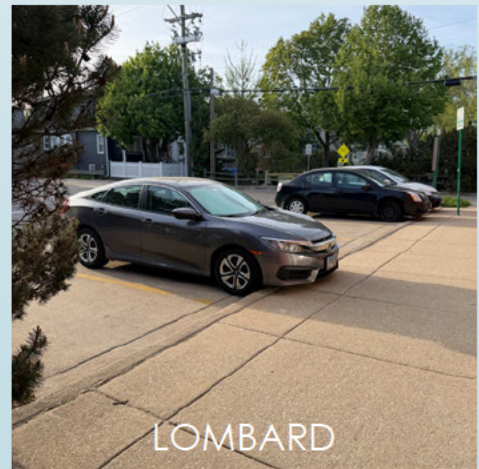
6200 BLOCK ROOSEVELT



LOMBARD BERWIN



HARVEY



LOMBARD

# SATURDAY PARKING DATA 04/25/2026

Open Parking Spots:

6pm: 55 spots



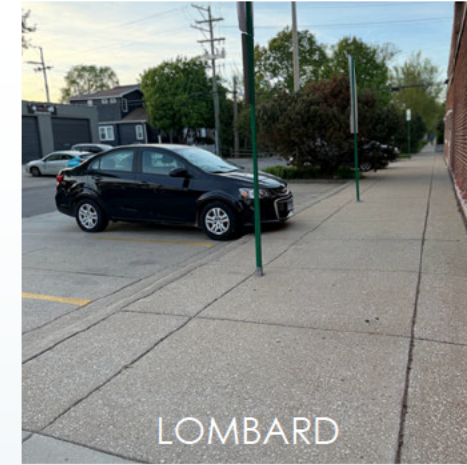
6130 BLOCK  
ROOSEVELT



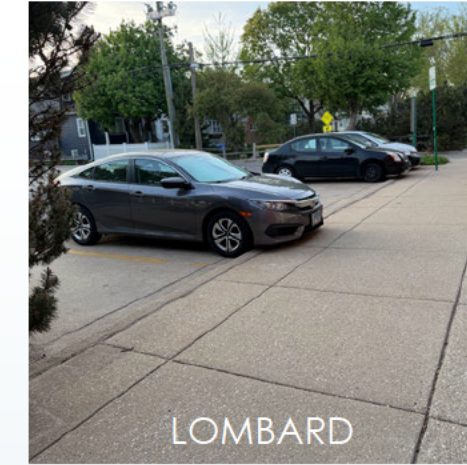
6130 BLOCK  
ROOSEVELT



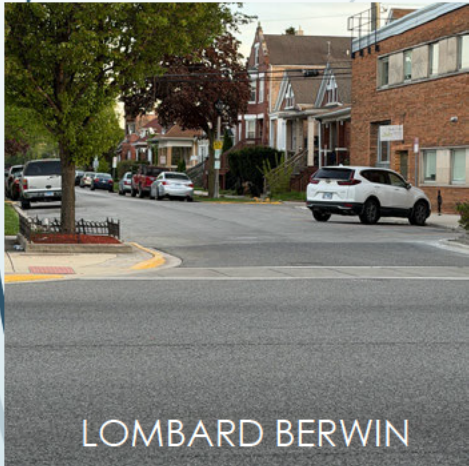
6130 BLOCK  
ROOSEVELT



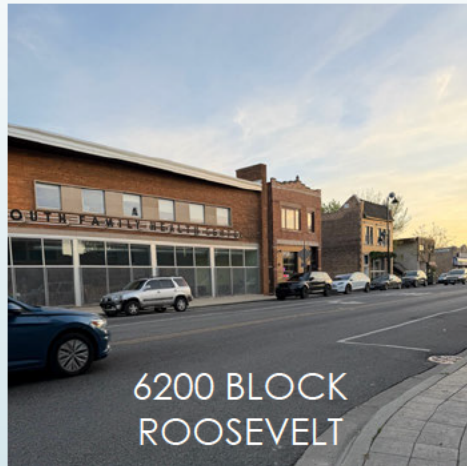
LOMBARD



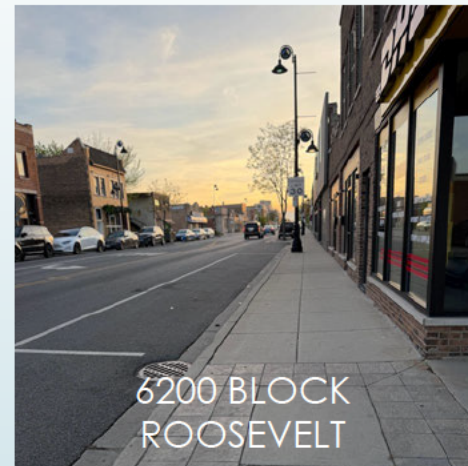
LOMBARD



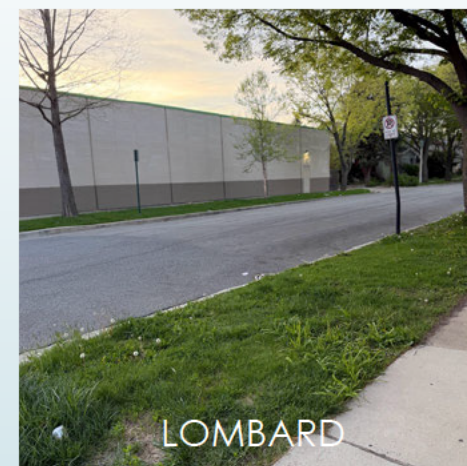
LOMBARD BERWIN



6200 BLOCK  
ROOSEVELT



6200 BLOCK  
ROOSEVELT



LOMBARD



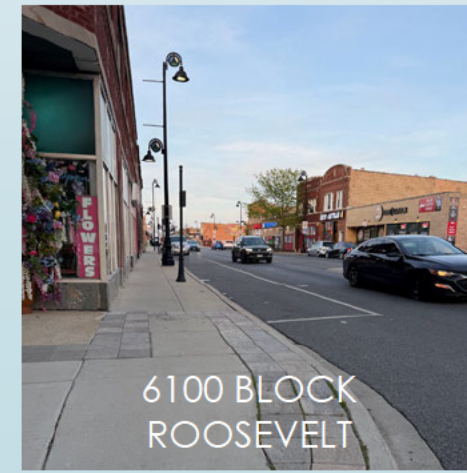
TAYLOR

# SATURDAY PARKING DATA 04/25/2026

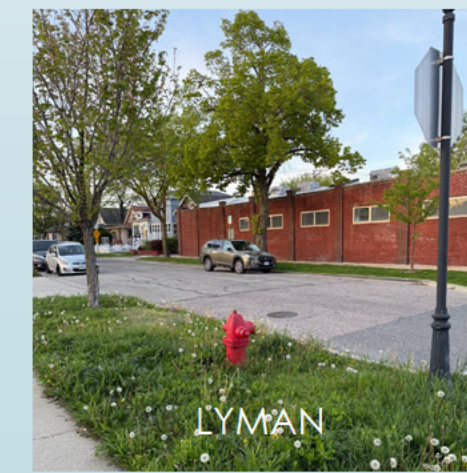
Open Parking Spots 7pm: 58 spots



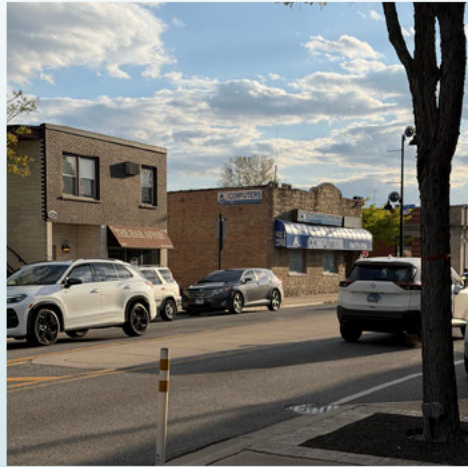
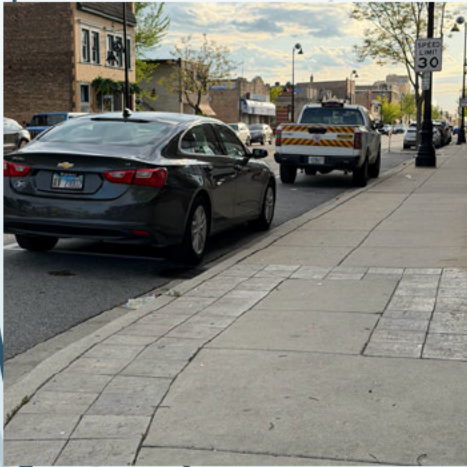
61<sup>ST</sup> CT



6100 BLOCK  
ROOSEVELT

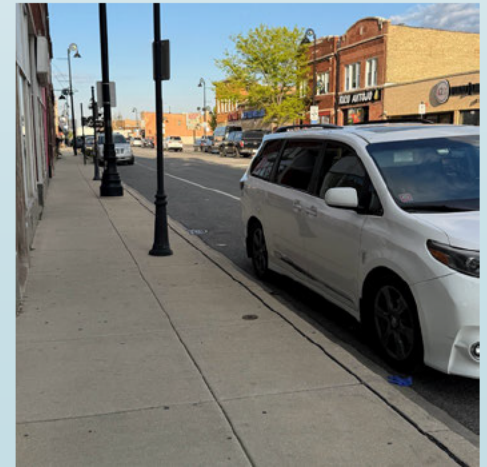
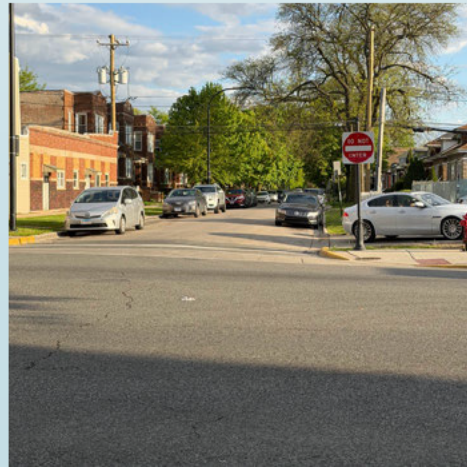


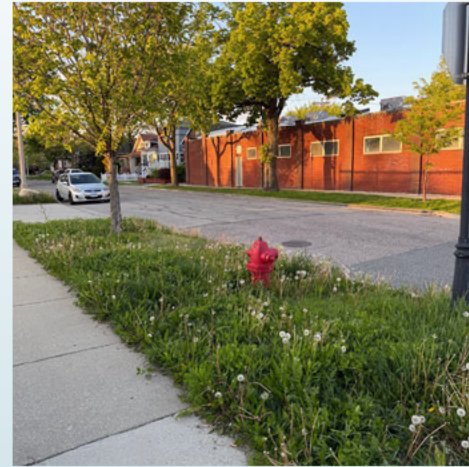
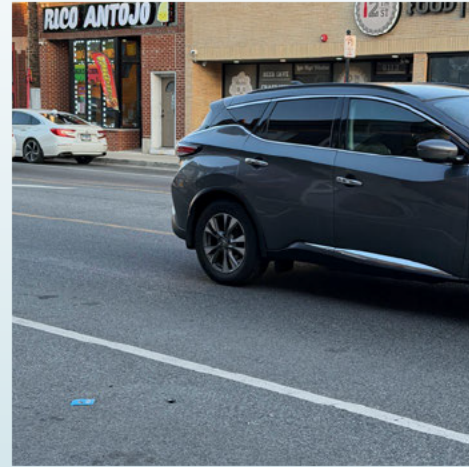
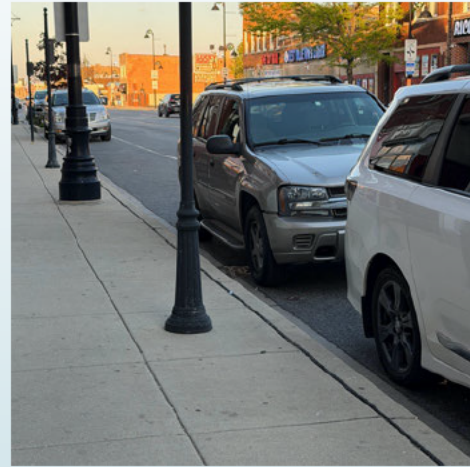
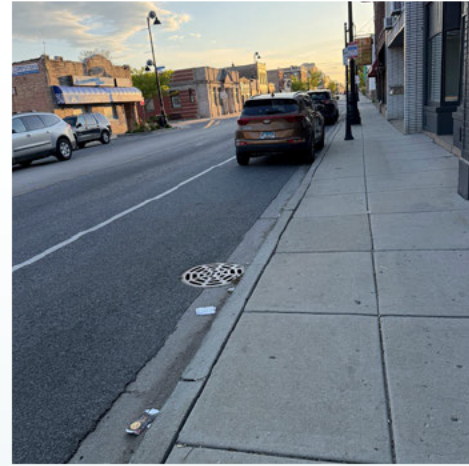
LYMAN



# SATURDAY PARKING DATA 05/02/2026

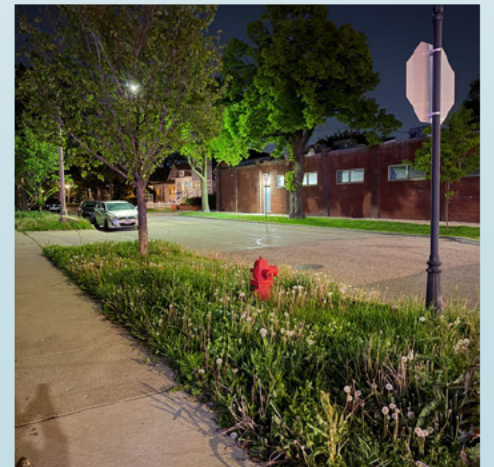
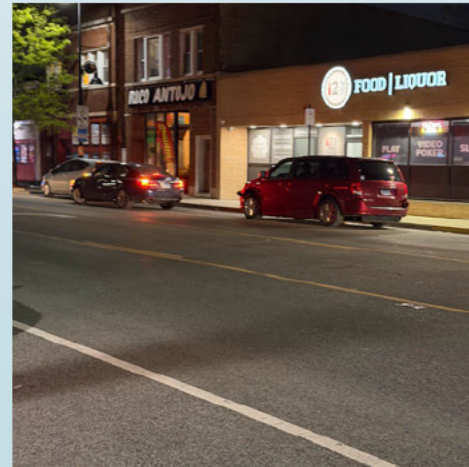
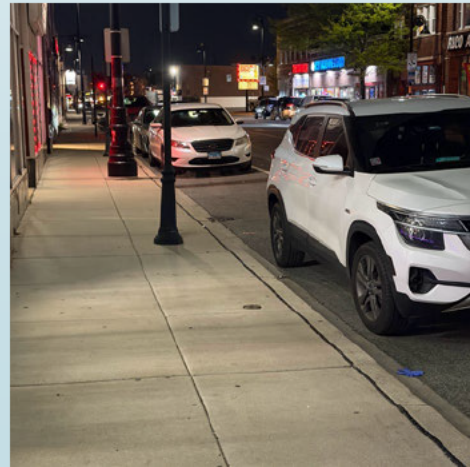
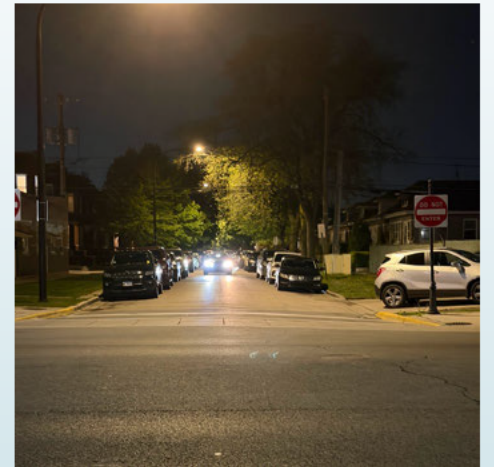
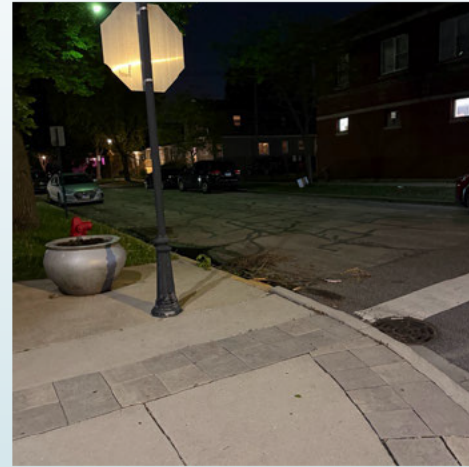
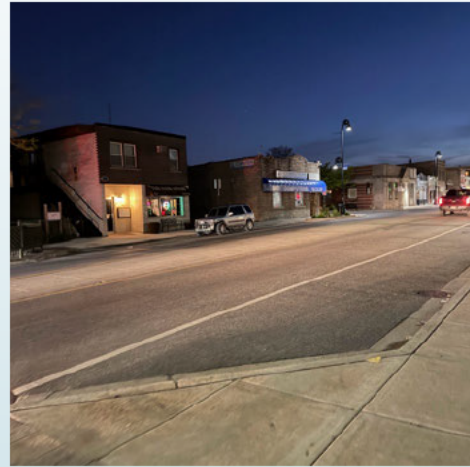
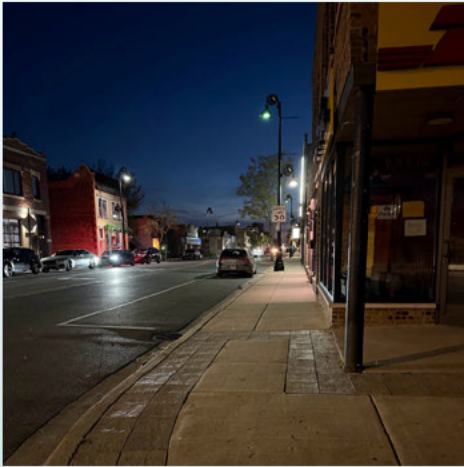
Open spots at 6pm: 42spots





# SATURDAY PARKING DATA 05/02/2026

Open spots at 7pm: 51



# SATURDAY PARKING DATA 05/02/2026

Open spots at 8:30: 53 spots

# PARKING DATA CHART

DATE	DAY	TIME	STREET PARKING AVAILABLE	*20 ADDITIONAL	TOTAL SPOT AVAILABLE
04/17/2026	FRIDAY	7PM	59	20	79
04/17/2026	FRIDAY	8PM	63	20	82
04/24/2026	FRIDAY	6PM	52	20	72
04/24/2026	FRIDAY	7PM	51	20	71
04/24/2026	FRIDAY	9PM	57	20	77
04/25/2026	SATURDAY	5PM	56	20	76
04/25/2026	SATURDAY	6PM	55	20	75
04/25/2026	SATURDAY	7PM	58	20	78
05/02/2026	SATURDAY	6PM	42	20	62
05/02/2026	SATURDAY	7PM	57	20	77
05/02/2026	SATURDAY	8:30PM	53	20	73

\* Roxies's parking lot across the street from the event space.

## PARKING DATA CHART

DAY	MEAN	MEDIAN
FRIDAY	56.4	57
SATURDAY	53.5	56

## RESULTS ON PARKING STUDY

Based on the data collected on available parking spaces on Friday and Saturday, there is sufficient parking available for an event of 145 people. Data from The results show an average of 54 to 57 street parking spots on Roosevelt Rd and selected side streets. The study focused on Friday and Saturday as they are peak days for celebrations. The study did not count residential streets; which can also be additional parking for events. The parking space across the street has been added as additional 20 spaces. The added parking spots reflect the overall parking availability. Due to the results of the study, there is sufficient parking on the street with the additional lot for events of 145 people.

## PARKING PLAN

Based on the results, the plan is to use street parking and the parking lot across the street. If there is an event that does not require as much seating and would allow additional people, then an additional plan will come into effect. The additional plan is to use the parking lot at Warren Park Elementary School at 1225 S 60<sup>th</sup> Ct, Cicero. It is approximately three blocks from the event space. The parking lot as a total of 45 spots and will be used as a valet service.

## E. Approval Standards

The listing of a use as a special use within a zoning district does not constitute an assurance or presumption that such special use will be approved. Rather, each special use must be evaluated on an individual basis, in relation to all applicable standards of this Ordinance. Such evaluation will determine whether approval of the special use is appropriate at the particular location and in the particular manner proposed. The recommendation of the Zoning Board of Appeals and decision of the Village Board must make findings to support each of the following conclusions:

- 1. The establishment, maintenance, and operation of the proposed special use will not have a substantial or unduly adverse impact on the neighborhood or endanger the public health, safety, or welfare.**

The space will serve as a flexible, professional environment for conferences, workshops, training sessions, art displays, meetings, and private gatherings. The space will operate exclusively for private bookings and will not function as a public venue, nightclub, or club-affiliated location. Events will not involve public ticket sales or payments at the door. Access will be limited to invited guests of the renting client. Reservations will be made by contract only with defined event hours to control noise level. The space is to benefit the community with supports of professional development and education, to encourage local creative expression through art displays, to provide safe, controlled gathering space, to attract small business and organizational activity, and to maintain a low-impact, private-use operational model. There will be no adverse impact on public health, safety, or welfare to the community. The proposed operation includes formal rental agreements for all events, clear use restrictions prohibiting public open-entry events, compliance with building, fire, and occupancy regulations, responsible alcohol policies (if applicable and permitted), and optional event oversight or management presence. Because the venue does not function as a nightclub, bar, or public entertainment facility, it avoids the operational characteristics typically associated with higher-intensity assembly uses. The use is structured, scheduled, and contract-based, ensuring accountability and compliance.

- 2. The proposed special use is compatible with the general land use of adjacent properties and other property within the immediate vicinity.**

The space is intended to support commercial, service, office, and mixed-use activities along the Roosevelt Road corridor while promoting pedestrian engagement and neighborhood-serving businesses. It meets the district guidelines with adjacent properties. The proposed event space operates as a commercial

rental venue consistent with business and service-oriented uses contemplated within the RR District. It functions in a manner similar to meeting halls, training centers, cultural spaces, and assembly uses typically found in commercial corridors. It activates commercial space without introducing retail congestion, heavy traffic turnover, or daily high-volume operations. The use supports the RR District's goal of maintaining viable commercial activity while allowing flexible occupancy models that respond to evolving business needs.

**3. The special use in the specific location proposed is consistent with the spirit and intent of this Ordinance, adopted land use policies and the Comprehensive Plan.**

The space is compatible with Roosevelt Road Corridor. The Roosevelt Road corridor includes a mix of retail, service, office, and commercial uses. A private event space complements this character by serving as a flexible commercial service use, drawing patrons who support nearby restaurants and businesses, enhancing corridor activity without creating daily retail competition, and maintaining a professional and community-oriented identity. The space will contribute positively to the commercial vitality of the corridor while respecting its mixed-use context.

**4. The special use meets the requirements for such classification in this Ordinance.**

The proposed space will be established, maintained, and operated in a manner that will not have a substantial or undue adverse impact on the surrounding neighborhood or endanger the public health, safety, or welfare. All events will take place within a fully enclosed building and will operate during reasonable hours to minimize disruption to nearby properties. The venue will maintain strict occupancy limits consistent with building and fire codes. Noise levels will be controlled through indoor programming and appropriate sound management practices. The property will be professionally maintained, including regular landscaping, lighting designed to avoid spillover onto adjacent properties, and proper waste management. Security and event supervision will be provided when necessary to ensure orderly conduct and compliance with all local ordinances. These operational measures ensure the venue will be compatible with surrounding uses and will not negatively affect the character, safety, or livability of the neighborhood.