

BUILDING CODE ANALYSIS

Applicable Codes:
building subcode (njac 5:23-3.14) international building code/2021, nj ed (bc w/ nj eds) corrected pages (nj errata) corrected sections (icc errata) other referenced codes (ifc/2021; ispsc/2021; etc.) other referenced ic standards (iccansi a117-1-2017; icc 300-2017; etc.)
plumbing subcode (njac 5:23-3.13) international plumbing code/2021 national standard plumbing code/2021
electrical subcode (njac 5:23-3.16) national electrical code (nfpa 70)/2020
energy subcode (njac 5:23-3.18) international energy conservation code/2021
mechanical subcode (njac 5:23-2.20) international mechanical code/2021
fuel gas subcode (njac 5:23-3.22) international fuel gas code/2021
barrier free subcode (chapter 11 of bc/2015 & njac 5:23-7) iccansi a117.1-2017
elevator subcode (njac 5:23-12) american society of mechanical engineers (asme)

Chapter 3: Use and Occupancy Classification: Non-Separated B Occupancy
The primary Use Occupancy is Business Type B Use as defined by section 304. The Project is composed of office space with accessory mechanical and storage areas of non-separated use.
Main Occupancies (non separated): B BUSINESS
Accessory Occupancies (non separated) S-2 MECHANICAL AND STORAGE
311.1.1: room or space used for storage purposes and accessory to another occupancy shall be classified as part of that occupancy.

Chapter 4: Special Detailed Requirements Based on Use and Occupancy
Atriums section 404: automatic sprinkler system shall be installed throughout the entire building per 404.5 exception #1: smoke control is not required for atriums that connect only two stories. per 404.6 exception #4: a fire-barrier is not required in not required between the atrium and the adjoining spaces where the atrium is not required to be provided with a smoke control system

Chapter 5: General Building Heights and Areas
The design is based on Type IIB Construction. The building is to be equipped throughout with a sprinkler system per 903.3.1.1.
HEIGHT LIMITATIONS: Table 504.3 & table 504.4 notes that in Occupancy classifications B the following is allowable:
Type IIB Construction, With Sprinklers per 903.3.1.1: 75' Maximum Height; 4 stories above grade plane
Proposed Height: <75ft from the Grade Plane to the average roof height. Refer to the building elevations Proposed building is 2 stories with roof access penthouse.

BUILDING AREA:
506.2.1 Single Occupancy buildings. The allowable area of each story of a single-occupancy building shall be determined in accordance with Equation 5-1:
B Occupancy Allowable Area Factor: 69,000 sf
Proposed largest story (2nd floor): 20,333 sf
no frontage increase required or used.

Chapter 6 Types of Construction

Proposed construction type: TYPE 2B
Table 601 indicates the following minimum required ratings for various building elements:

Type IIB	Rating
Primary Structural Frame	0
Bearing Walls (Exterior)	0
Bearing Walls (Interior)	0
Non-Bearing Walls (Exterior)	0
Non-Bearing Walls (Interior)	0
Floor Construction + Secondary Members	0
Roof Construction + Secondary Members	0

Exterior Wall Ratings: According to Table 602, the exterior walls do not need to be rated since the building is more than 30' from any adjacent buildings.

Chapter 7 Fire and Smoke Protection Features
Exterior Wall Openings 705.8. The maximum exterior wall openings are not limited based on Table 705.8. The project features a fire separation distance greater than 30' and the openings are unprotected but within a sprinklered building.
Fire-barrier continuity 707.5: fire barriers shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above and shall be securely attached thereto.
fire-barrier supporting construction 707.5.1: supporting construction for a fire barrier shall be protected to afford the required fire-resistance rating of the fire barrier supported. hollow vertical spaces within a fire-barrier shall be fireblocked in accordance with section 718.2 at every floor level.
Shaft Enclosures section 713: 1-hour, connecting less than four stories.
- shall be constructed as fire-barriers in accordance with section 707

Chapter 8 Interior Finishes

OCCUPANCY GROUP:	Interior exit stairways, interior exit ramps, and exit passageways:	Corridors and enclosure for exit access stairways and ramps:	Rooms and enclosed spaces:
B:	B	C	C
S:	C	C	C

Chapter 9 Fire Protection Systems

901.6.1 automatic sprinkler systems shall be monitored by an approved supervising station
901.6.3 Fire Alarm Systems. Fire alarm systems required by the provisions of Section 907.2 of the 2021 IBC/NJ and Sections 907.2 and 907.9 of the International Fire Code shall be monitored by an approved supervising station in accordance with Section 907.6 of the IBC/NJ.
Automatic Sprinkler systems Provided, fully sprinklered per 903.3 to meet NFPA 13
Fire Pump and Riser Room Size 902.1: Fire pump and riser room size: where provided, shall be designed with adequate space for all equipment necessary for the installation, with sufficient working room around the stationary equipment, and doors and unobstructed passageways large enough to allow removal of the largest piece of equipment.
902.1.2 access doors shall be labeled with approved sign having lettering in contrasting color to the background, letters shall have minimum 2" height with 3/8" stroke.

Portable Fire Extinguishers 906.1 Where required:
1. Portable fire extinguishers shall be installed in B and S occupancies
2. Special hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire protection subcode official.
906.3 Size and Distribution. The size and distribution of portable fire extinguishers shall be in accordance with Sections 906.3.1 through 906.3.4.
fire extinguisher size: 2-A:10B typical;
Maximum floor area for each unit of A: 1,500 sf;
Maximum distance of travel to extinguisher: 75' typical;
Fire Alarm and Detection Systems: 907.2 approved fire alarm system installed in accordance with provisions of the IBC-NJ and NFPA 72
907.2.2 group B: manual fire alarm system which activates the occupant notification system in accordance with detection 907.5, shall be installed in group B occupancies

Chapter 10 Means of Egress
Occupant loads per Table 1004.1.2:
- S-1 Storage Areas / Mechanical: 300 gross
- B Business Areas: 150 gross
- unconcentrated assembly 15 net
Egress Components:
per 1005.3.1 stairways: 0.3' per occupant
per 1005.3.2 other egress components:
corridors, Door Width Components: 2" per occupant
Spaces with one exit & common path travel distances per Table 1006.2.1:
Occupancy Max occupant load: Common path of travel:
B: 49 100'
S: 29 100'
Number of exits:
Each story and occupied roof shall have a minimum number of independent exits or access to exits per Table 1006.3.1
Occupant load per story: 1-500 = 2 exits required and provided.
(20350gsf / 150 sf per occ = 136 occupants per floor)
Boiler rooms: two exit access doorways are required in boiler, incinerator and furnace rooms where the area is over 500sf and any fuel fired equipment exceeds 400,000 BTUs input capacity per
Two exits or exit access doorways:
1007.1.1 exception 2: where building is equipped through with an automatic sprinkler system, the separation distance shall be not less than one-third of the length of the maximum overall diagonal dimension of the area served.
Exit access travel distance (Table 1017.2)
B Occupancy: 300' with a Sprinkler System
S-1 Occupancy: 250' with a Sprinkler System
Corridor Width:
Capacity of corridors shall be determined as specified in section 1005.1 but not less than 44" as per Table 1020.2.
Dead end corridor:
Maximum length to be no more than 50 ft per 1020.4 exception 2 for Occupancy Groups B and S-1.
Corridor Fire-Resistance Rating (Table 1020.1)
B, S Occupancies: No rating required with a sprinkler system.

Atriums:
exit access travel distance for areas open to an atrium shall comply with the requirements of sections 1017.3.2.1 through 1017.3.2.3.
- Where required access to the exits is not through the atrium exit access travel distance shall comply with 1017.2.
- Where the path of egress travel is through an atrium space, exit access travel distance at the level of exit discharge shall be determined in accordance with 1017.2.
- Where path of egress travel is not at the level of exit discharge from the atrium, that portion of the total permitted exit access travel distance shall not be greater than 200 feet.
Exit access stairways 1019.3 exception #1: exit access stairways in group B that serve or atmospherically communicate between only two adjacent stories shall not be enclosed within a shaft enclosure.
Accessible means of egress: 1009.1: Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress are required from any accessible space, each accessible portion of the space shall be served by not less than two accessible means of egress.
1009.2: each required accessible means of egress shall be continuous to a public way and shall consist of one or more of the following components
1. accessible routes complying with section 1104
2. interior exit stairways complying with sections 1009.3 and 1023
3. exit access stairways complying with sections 1009.3 and 1019.2 or 1019.4
1009.3 stairways part of an accessible means of egress between stories shall comply with sections 1009.3.1 through 1009.3.3
1009.3.1 exit access stairways that connect levels in the same story are not permitted as part of an accessible means of egress
1009.3.2 exception #1 clear width 48" between handrails is not required in buildings equipped throughout with an automatic sprinkler system.
1009.3.3 area of refuge: stairways shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from an area of refuge complying with section 1009.6. areas of refuge are not required at exit access stairways where two-way communication is provided at the elevator landing in accordance with section 1009.8
1009.6 areas of refuge shall be accessible from the space it serves by an accessible means of egress, shall not exceed the exit access travel distance permitted for the occupancy, shall have direct access to a stairway, shall be sized to accommodate one wheel chair space 30inches x 52 inches for each 200 occupants or portion thereof, shall not reduce the means of egress minimum width or required capacity, shall be separated from the remainder of the story per 1009.6.4 exception #1 located within an enclosure for interior exit stairways, and shall be provided with two-way communication systems complying with sections 1009.8.1 and 1009.8.2
1009.8 two-way communication shall be provided at the landing servicing each elevator or bank of elevators on each accessible floor that is one or more stories above the level of exit discharge.
exception #5: two-way communication systems are not required at the landings serving only service elevators that are not designated as part of the accessible means of egress or serve as part of the required accessible route into the facility.
Chapter 11 Accessibility
Site Arrival Points 1104.1: At least one accessible route within the site shall be provided from public transportation stops, accessible parking, accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served. This project features accessible parking spaces and loading zones with an accessible route from those areas to the main entry.
Public Entrances 1105.1: At least 60% of public entrances shall be accessible. The project's design features 100% accessible public entrances.
Accessible Parking Facilities 1106.2: At least 2% but not less than 1 parking space will be accessible. As per section 1106.5, at least one space of every 6 accessible parking spaces is required to be a Van-Type space.

Chapter 15 Rooftop Structures
Section 1511.1.1 area limitation: aggregate area of penthouses and other enclosed rooftop structures shall not exceed one-third of area of supporting roof deck. such penthouses and other enclosed rooftop structures shall not be required to be included in determining the building area or number of stories as regulated by section 503.1
Section 1511.2 penthouse shall be considered as a portion of the story directly below the roof deck on which such penthouses are located when:
- shall not exceed 18ft in height above the roof deck as measured to the average height above the roof deck as measured to the average height of the roof of the penthouse
- shall not be used for purposes other than the shelter of mechanical or electrical equipment, elevators, stairways, including ancillary spaces used to access elevator and stairways
- provisions such as louvers, lower blades or flashings shall be made to protect the building interior from elements
- penthouses shall be constructed of building elements as required for the type of construction of the building on which such penthouses are built.
Section 1511.6 Mechanical screens: fire separation distance is greater than 5ft, mechanical screens shall not be required to comply with fire resistance rating requirements. height shall not exceed 18ft in height above roof deck as measured to the highest point on the mechanical equipment screen.

PROPOSED COMPLIES.

Total Building Area and Occupancy

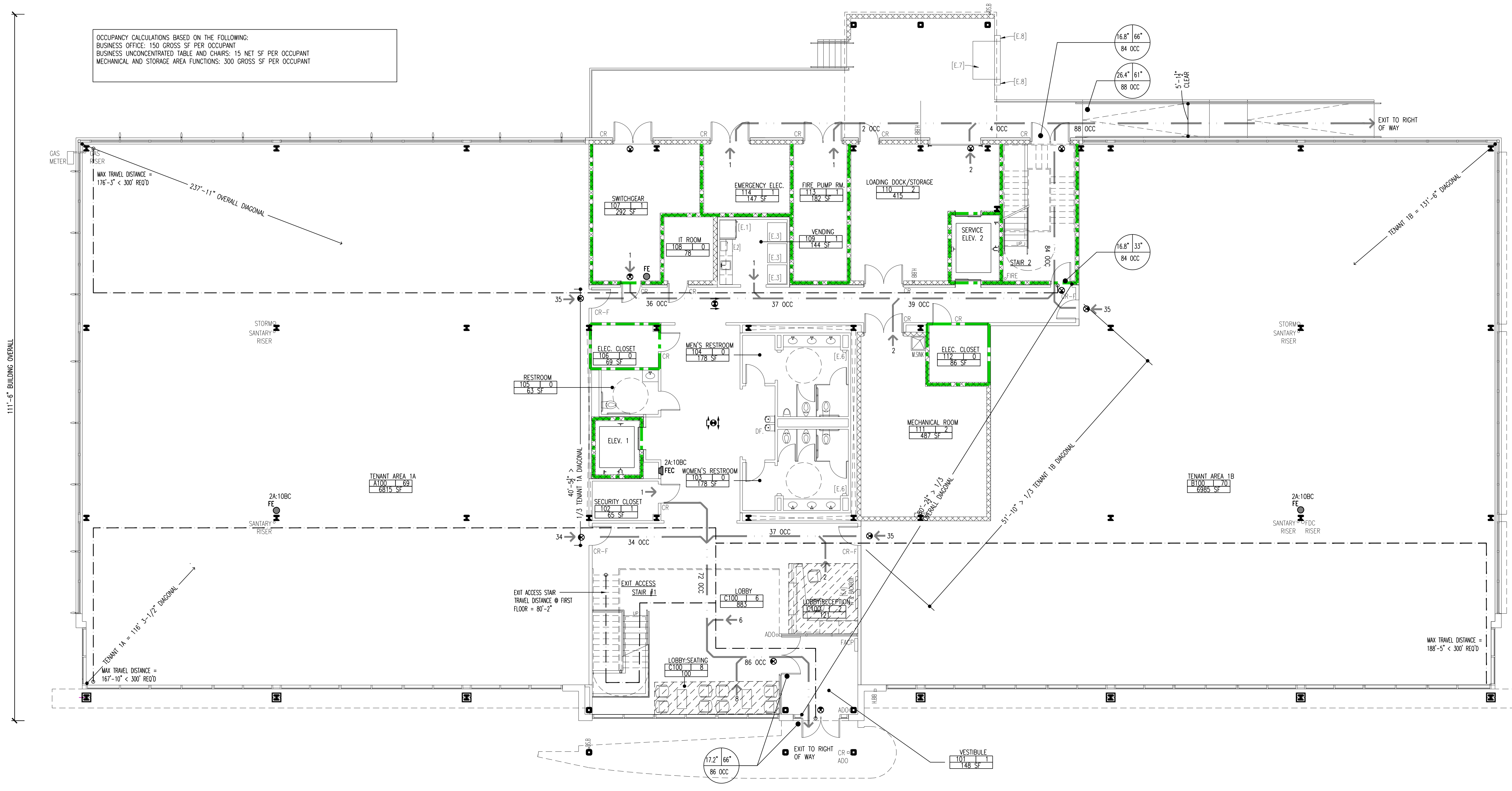
Floor	Occupants	Area
1st Floor	132	19,783 gsf
2nd Floor	136	20,333 gsf
total:	268	40,116 gsf

Plumbing Fixtures:
(2021 NSPC NJ Edition)
When based on the egress occupants, the number of occupants may be reduced to 2/3 the total occupant load: 180 occupants total = 90 Occupants per floor.
When both sexes are present in equal numbers, the total occupants may be multiplied by 90%. 45 Occupants per sex, per floor
Minimum required number of plumbing fixtures (per floor):
Women: required: 2 Water Closets, 1 Lavatory provided: 3 water closets, 2 lavatories
Men: required: 2 Water Closets, 1 Lavatory provided: 3 water closets, 2 lavatories
other: required: 1 drinking fountain per floor, 1 mop sink per floor provided: 2 drinking fountains per floor, 1 mop sink per floor

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OCCUPANCY CALCULATIONS BASED ON THE FOLLOWING:
BUSINESS OFFICE: 150 GROSS SF PER OCCUPANT
BUSINESS UNCONCENTRATED TABLE AND CHAIRS: 15 NET SF PER OCCUPANT
MECHANICAL AND STORAGE AREA FUNCTIONS: 300 GROSS SF PER OCCUPANT



LEGEND:

- PATH OF EGRESS
- REQUIRED EGRESS WIDTH
- PROVIDED EGRESS WIDTH
- # OF OCCUPANTS
- NAME OF ROOM
- # OF OCCUPANTS
- ROOM NUMBER
- SQUARE FOOTAGE
- SEMIRECESSED FIRE EXTINGUISHER CABINET AND FIRE EXTINGUISHER PER SPECIFICATIONS MIN SIZE 2A-10BC U.O.N., UNLESS OTHERWISE NOTED. *FIELD VERIFY LOCATIONS W/ ARCHITECT PRIOR TO INSTALLATION.
- SURFACE MOUNT FIRE EXTINGUISHER BRACKET AND FIRE EXTINGUISHER PER SPECIFICATIONS, MIN SIZE 2A-10BC U.O.N., UNLESS OTHERWISE NOTED.
- 1 HOUR RATED FIRE PARTITION
- 2-HOUR RATED FIRE BARRIER
- 34 OCC

SUBMISSIONS

DATE	DESCRIPTION
1 5/1/2023	SCHEMATIC DESIGN
2 6/2/2023	DESIGN DEVELOPMENT
3 7/10/2023	90% CD'S
4 8/04/2023	OSC SUBMISSION
5 8/18/2023	EARLY SITE PACKAGE
6 9/15/2023	FOR CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION
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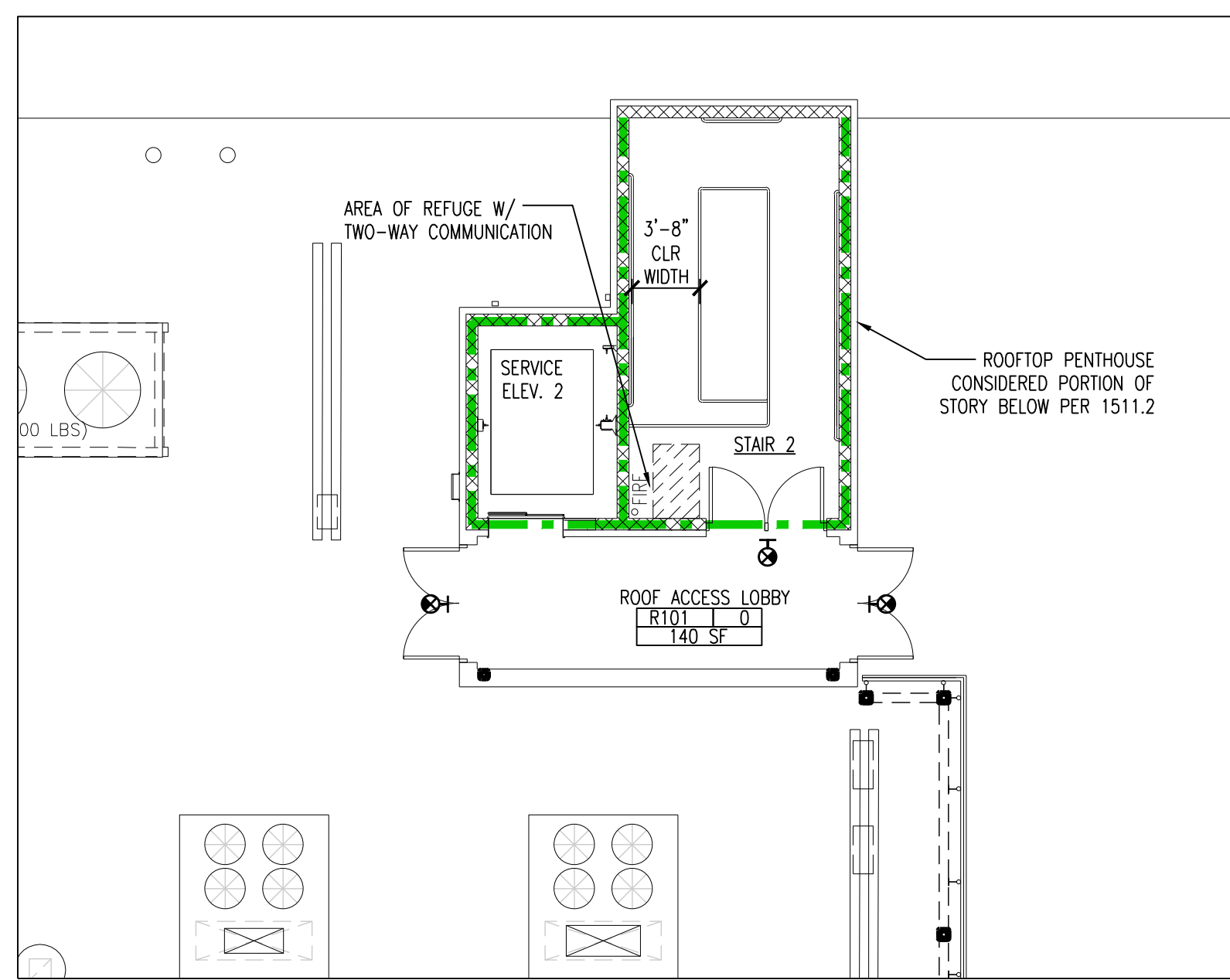
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NU LICENSE NO. 2140030200
DATE: 09/15/2023

N.A.R.T.P. BUILDING 2
EGG HARBOR TWP., NEW JERSEY

DATE:
SCALE: AS NOTED
DRAWN BY:
CHECKED BY:

SHEET TITLE:
FIRST FLOOR LIFE SAFETY PLAN

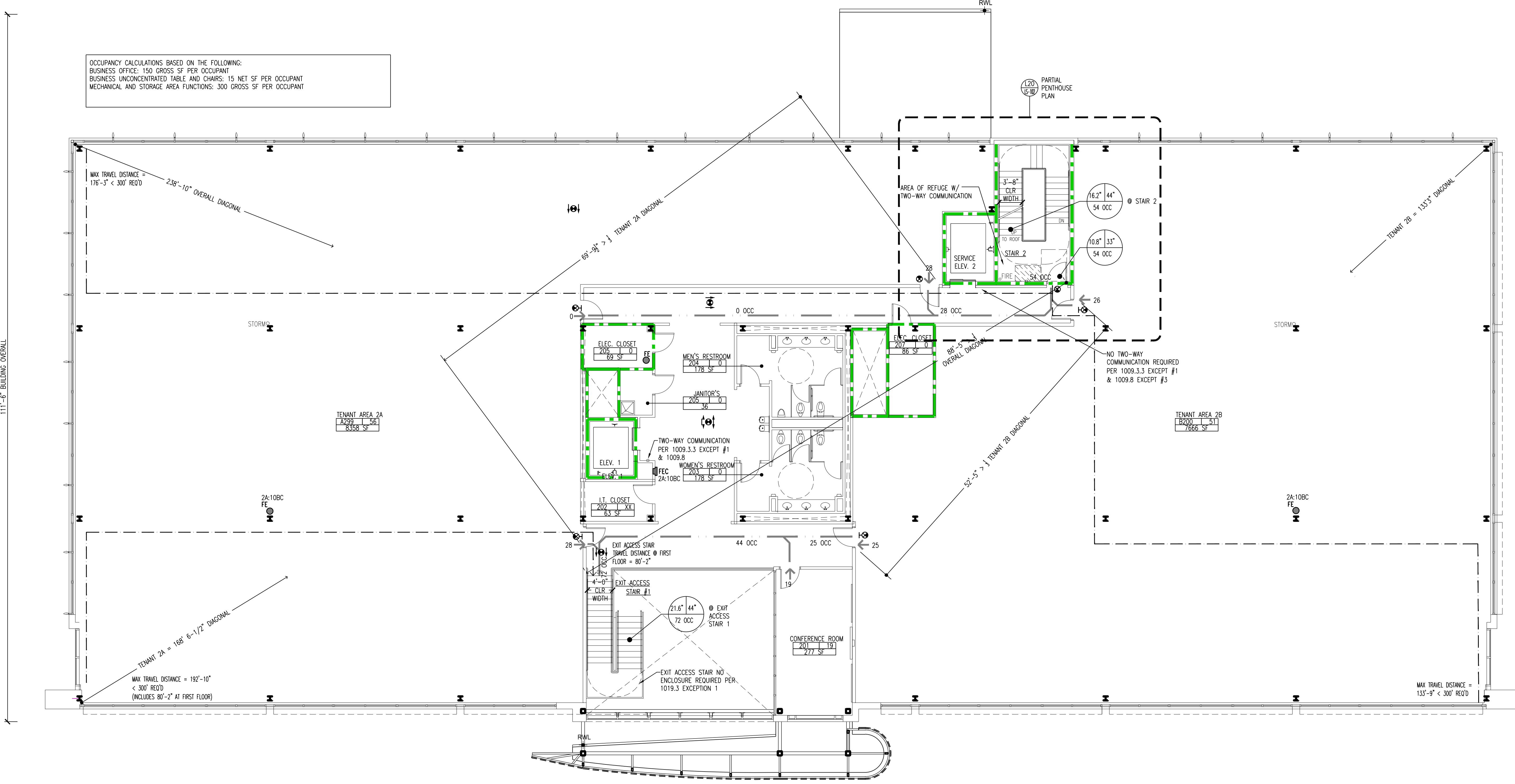
DRAWING NO.:
LS-101
CCH PROJECT NO: 2328



L20 PARTIAL ROOF & ROOFTOP PENTHOUSE LIFE-SAFETY PLAN

SCALE: 1/8" = 1'-0"

OCCUPANCY CALCULATIONS BASED ON THE FOLLOWING:
 BUSINESS OFFICE: 150 GROSS SF PER OCCUPANT
 BUSINESS UNCONCENTRATED TABLE AND CHAIRS: 15 NET SF PER OCCUPANT
 MECHANICAL AND STORAGE AREA FUNCTIONS: 300 GROSS SF PER OCCUPANT



LEGEND:

- PATH OF EGRESS
- REQUIRED EGRESS WIDTH
- PROVIDED EGRESS WIDTH
- # OF OCCUPANTS
- ROOM NUMBER
- SQUARE FOOTAGE
- NAME OF ROOM
- # OF OCCUPANTS
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- 1 HOUR RATED FIRE PARTITION
- 2-HOUR RATED FIRE BARRIER
- 34 OCC

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REVISIONS

ARCHITECT
 NU LICENSE NO. 2140030200

DATE: 09/15/2023

N.A.R.T.P.
BUILDING 2
 EGG HARBOR TWP.,
 NEW JERSEY

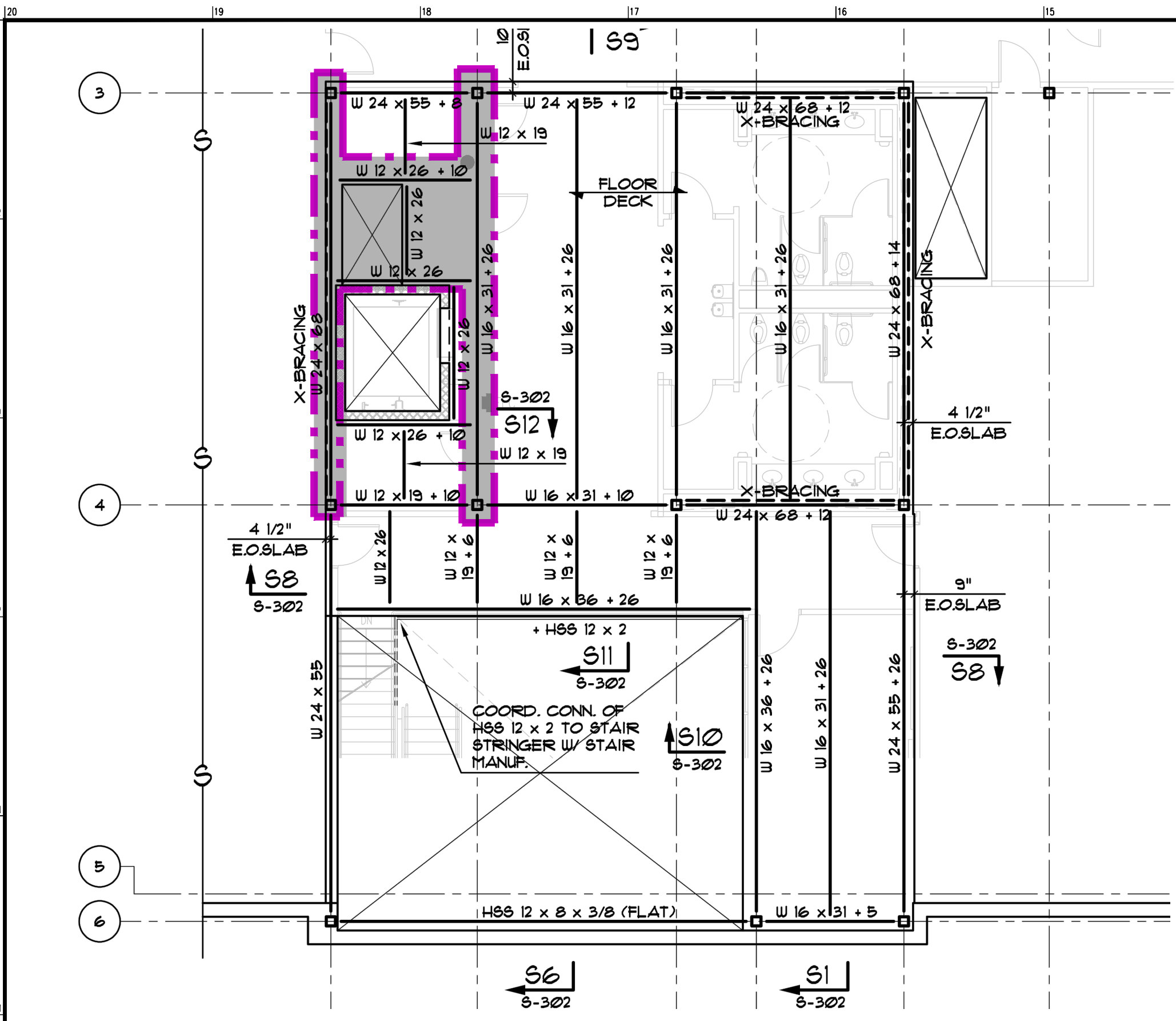
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 DRAWN BY:
 CHECKED BY:

SHEET TITLE:
**SECOND FLOOR
 LIFE SAFETY
 PLAN**

DRAWING NO.:
LS-102
 CCH PROJECT NO.: 2328

A20 SECOND FLOOR LIFE SAFETY PLAN

SCALE: 1/8" = 1'-0"



L20 PARTIAL SECOND FLOOR AT CORE FRAMING - SPRAY FIREPROOFING PLAN

SCALE: 1/8" = 1'-0"

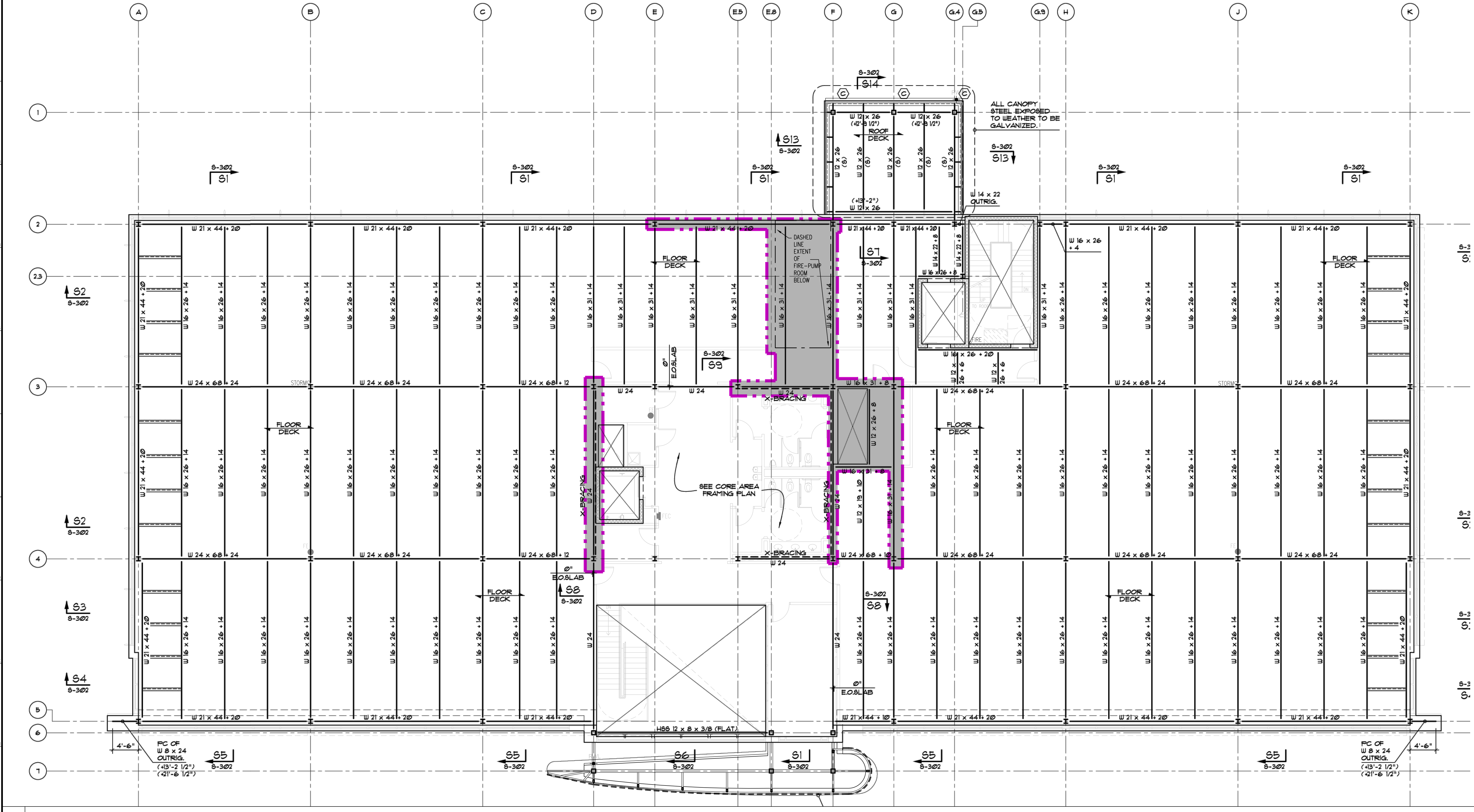
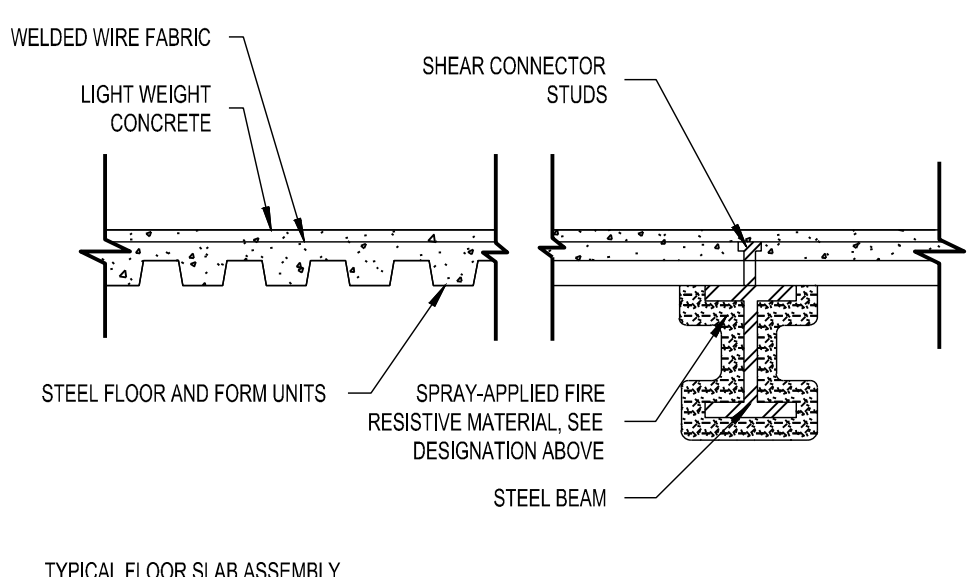
LEGEND

- AREA OF SPRAY FIREPROOFING, TO RECEIVE SP1 UNLESS OTHERWISE NOTED.
- LOCATION OF SHAFT ABOVE

SPRAY FIRE RESISTIVE MATERIAL SCHEDULE

DESIGNATION	DESCRIPTION	UL ASSEMBLY # (BEAMS) (MIN WBX28)	UL ASSEMBLY # (COLUMNS) (MIN WBX28)	UL ASSEMBLY # (HSS) (MIN WBX28)	UL ASSEMBLY # (ELEVATED FLOOR ASSEMBLIES)	UL ASSEMBLY # (ROOF ASSEMBLIES)
SP1	1 HR SFRM	X854	X854	Y710	D902	P723

1. UL NUMBERS PROVIDED REPRESENT APPROVED EQUAL ASSEMBLIES BASED ON CONTRACTORS CHOICE OF PRODUCTS AND MANUFACTURER.
2. ALL BEAMS & COLUMNS & SECONDARY STEEL SHALL RECEIVE SPRAY FIRE RESISTIVE RATED MATERIALS WHERE LOCATED WITHIN AN AREA OF SPRAY FIREPROOFING ON SPRAY FIREPROOFING PLANS.
3. EXPOSED EXTERIOR STEEL, SPECIFICALLY BUT NOT LIMITED TO DUNNAGE, ARE NOT REQUIRED TO BE RATED AND WILL NOT RECEIVE A FIRE RATING. ALL EXTERIOR STEEL IS TO BE HOT-DIPPED GALVANIZED AND SHOP PRIMED.
4. DO NOT APPLY SHOP PRIMER TO STEEL RECEIVING SPRAY-APPLIED OR INTUMESCENT FIRE-PROOFING. GC COORDINATE.
5. REFER TO SPRAY FIREPROOFING PLANS FOR EXTENT.
6. FLOOR SLAB CONCRETE FILLED METAL DECKING FIRE-RATING ACHIEVES 1-HOUR FIRE-RATING (1 REQUIRED) THROUGH THICKNESS OF CONCRETE PER D902, MINIMUM 3-1/2" NORMAL WEIGHT CONCRETE HAVING DENSITY OF 147-153 PCF. SPRAY-MATERIAL NOT REQUIRED.



A20 SECOND FLOOR - SPRAY FIREPROOFING PLAN

SCALE: 1/8" = 1'-0"

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PROJECT NO. 2140130200

 DATE: 09/15/2023

N.A.R.T.P. BUILDING 2
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DATE:
 SCALE: AS NOTED
 DRAWN BY:
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SHEET TITLE:
SPRAY FIRE-PROOFING PLANS

DRAWING NO.:
LS-110
 CCH PROJECT NO.: 2328