

THE VILLAGE AT DISCOVERY - LOT 5

LEE'S SUMMIT, MO

PRINTS ISSUED
09/09/2024 - CITY SUBMISSION

REVISIONS:
1 10/04/2024 RESPONSE TO CITY COMMENTS



THE VILLAGE AT DISCOVERY -
LOT 5
LEE'S SUMMIT, MO
1900 NE DISCOVERY AVE.

SHEET TITLE
TITLE SHEET

PROJECT NUMBER: 23102

SHEET NUMBER:

G-001

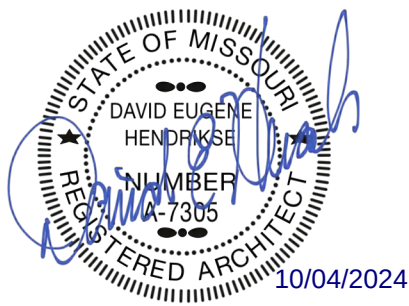
PROJECT CERTIFICATION

I, **David E. Hendrikse**, hereby specify pursuant to the governing requirements of the state, that the documents intended to be authenticated by my seal are limited to:

G-001	G-201	G-212	A-120	A-306	A-503
G-002	G-202	G-213	A-200	A-400	A-504
G-003	G-203	G-300	A-201	A-401	A-505
G-004	G-204	G-301	A-202	A-402	A-506
G-005	G-205	G-302	A-203	A-403	A-600
G-006	G-206	G-303	A-300	A-404	A-601
G-007	G-207	AS-101	A-301	A-405	A-602
G-100	G-208	A-101	A-302	A-415	A-603
G-101	G-209	A-102	A-303	A-500	A-700
G-102	G-210	A-103	A-304	A-501	
G-200	G-211	A-105	A-305	A-502	

and I hereby disclaim any responsibility for all other plans, specifications, reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

SEAL



David E. Hendrikse, AIA

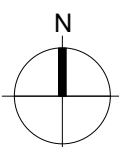
REGIONAL MAP



VICINITY MAP



THE VILLAGE AT DISCOVERY - LOT 5
LEE'S SUMMIT, MO



SHEET INDEX

GENERAL

Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
09/09/24	G-001	TITLE SHEET		
09/09/24	G-002	GENERAL INFORMATION	1	10/04/2024
09/09/24	G-003	PLAN GENERAL NOTES		
09/09/24	G-004	GENERAL INFORMATION		
09/09/24	G-005	GENERAL INFORMATION		
09/09/24	G-006	GENERAL INFORMATION		
09/09/24	G-007	GENERAL INFORMATION		
09/09/24	G-100	CODE ANALYSIS	1	10/04/2024
09/09/24	G-101	PARTITION ASSEMBLIES - WOOD, CMU, CONCRETE		
09/09/24	G-102	PARTITION ASSEMBLIES - WOOD, CMU, CONCRETE	1	10/04/2024
09/09/24	G-200	UL ASSEMBLIES - D916	1	10/04/2024
09/09/24	G-201	UL ASSEMBLIES - D916 / L546		
09/09/24	G-202	UL ASSEMBLIES - L546		
09/09/24	G-203	UL ASSEMBLIES - L546 / P545		
09/09/24	G-204	UL ASSEMBLIES - P545		
09/09/24	G-205	UL ASSEMBLIES - U305		
09/09/24	G-206	UL ASSEMBLIES - U305 / U341		
09/09/24	G-207	UL ASSEMBLIES - U341 / U415		
09/09/24	G-208	UL ASSEMBLIES - U415 / U423		
09/09/24	G-209	UL ASSEMBLIES - U423		
09/09/24	G-210	UL ASSEMBLIES - X790		
09/09/24	G-211	UL ASSEMBLIES - L516		
09/09/24	G-212	UL ASSEMBLIES - L516		
09/09/24	G-213	UL ASSEMBLIES - U356	1	10/04/2024
09/09/24	G-300	ACCESSIBILITY STANDARDS		
09/09/24	G-301	ACCESSIBILITY STANDARDS		
09/09/24	G-302	ACCESSIBILITY STANDARDS		
09/09/24	G-303	ACCESSIBILITY STANDARDS		
09/09/24	AS-101	ARCHITECTURAL SITE AMENITIES		

ARCHITECTURAL

Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
09/09/24	A-202	EXTERIOR ELEVATIONS COLOR		
09/09/24	A-203	EXTERIOR ELEVATIONS COLOR		
09/09/24	A-300	BUILDING SECTIONS		
09/09/24	A-301	WALL SECTIONS		
09/09/24	A-302	ELEVATOR SECTION & PLANS		
09/09/24	A-303	ELEVATOR DETAILS		
09/09/24	A-304	STAIR 1 - SECTION & DETAILS		
09/09/24	A-305	STAIR 2 - SECTION & PLANS		
09/09/24	A-306	STAIR DETAILS		
09/09/24	A-400	CLARION UNIT PLAN - TYPE A		
09/09/24	A-401	ARA UNIT PLAN - TYPE B		
09/09/24	A-402	ARA ALT. UNIT PLAN - TYPE B	1	10/04/2024
09/09/24	A-403	CLARION UNIT PLAN - TYPE B		
09/09/24	A-404	CLEMENT UNIT PLAN - TYPE B		
09/09/24	A-405	DYLAN UNIT PLAN - TYPE B		
09/09/24	A-415	UNIT DETAILS		
09/09/24	A-500	FOUNDATION & FRAMING DETAILS		
09/09/24	A-501	FLOOR/CEILING DETAILS		
09/09/24	A-502	ROOF DETAILS		
09/09/24	A-503	BRICK PENETRATION DETAILS		
09/09/24	A-504	BALCONY WATERPROOFING DETAILS		
09/09/24	A-505	BALCONY WATERPROOFING DETAILS		
09/09/24	A-506	BALCONY DETAILS		
09/09/24	A-600	WINDOW / DOOR / FINISH SCHEDULES		
09/09/24	A-601	TYPICAL STOREFRONT ELEVATIONS		
09/09/24	A-602	WINDOW / DOOR DETAILS		
09/09/24	A-603	WINDOW DETAILS		
09/09/24	A-700	INTERIOR TRANSITIONS		

STRUCTURAL

Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
09/09/24	S001	GENERAL NOTES	1	10/04/2024
09/09/24	S002	GENERAL NOTES	1	10/04/2024
09/09/24	S003	GENERAL NOTES		
09/09/24	S004	SHEAR WALL SCHEDULE AND SCHEDULE OF STRUCTURAL SPECIAL INSTRUCTIONS	1	10/04/2024
09/09/24	S005	REINFORCING & LOAD PLANS		
09/09/24	S100	EXTERIOR FOUNDATION WALL AND SLAB-ON-GRADE DIMENSION PLAN		
09/09/24	S100A	FOUNDATION PLAN - AREA A		
09/09/24	S100B	FOUNDATION PLAN - AREA B		
09/09/24	S101A	STOREFRONT OPENING STEEL SUPPORT - AREA A		
09/09/24	S101B	STOREFRONT OPENING STEEL SUPPORT - AREA B		
09/09/24	S102A	LEVEL 2 FRAMING PLAN - AREA A		
09/09/24	S102B	LEVEL 2 FRAMING PLAN - AREA B		
09/09/24	S103A	LEVEL 3 FRAMING PLAN - AREA A		
09/09/24	S103B	LEVEL 3 FRAMING PLAN - AREA B		
09/09/24	S104A	ROOF FRAMING PLAN - AREA A		
09/09/24	S104B	ROOF FRAMING PLAN - AREA B		
09/09/24	S400	ENLARGED FRAMING PLANS		
09/09/24	S401	ENLARGED FRAMING PLANS		
09/09/24	S500	TYPICAL CONCRETE DETAILS		
09/09/24	S501	FOUNDATION DETAILS		
09/09/24	S502	FOUNDATION DETAIL DETAILS		
09/09/24	S510	TYPICAL STEEL DETAILS		
09/09/24	S511	TYPICAL STEEL DETAILS		
09/09/24	S512	PODIUM FRAMING DETAILS		
09/09/24	S513	PODIUM FRAMING DETAILS		
09/09/24	S520	MASONRY DETAILS		
09/09/24	S521	MASONRY DETAILS		
09/09/24	S530	TYPICAL WOOD FRAMING DETAILS		
09/09/24	S531	FLOOR FRAMING DETAILS		
09/09/24	S532	FLOOR FRAMING DETAILS		
09/09/24	S533	FLOOR FRAMING DETAILS		
09/09/24	S534	FLOOR FRAMING DETAILS		
09/09/24	S540	ROOF FRAMING DETAILS		
09/09/24	S541	ROOF FRAMING DETAILS		
09/09/24	S542	ROOF FRAMING DETAILS		
09/09/24	S550	SHEAR WALL DETAILS		
09/09/24	S551	SHEAR WALL DETAILS		

ARCHITECTURAL

Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
09/09/24	A-101	FIRST FLOOR PLAN		
09/09/24	A-102	SECOND FLOOR PLAN		
09/09/24	A-103	THIRD FLOOR PLAN	1	10/04/2024
09/09/24	A-105	ROOF PLAN		
09/09/24	A-120	REFLECTED CEILING PLANS		
09/09/24	A-200	EXTERIOR ELEVATIONS		
09/09/24	A-201	EXTERIOR ELEVATIONS		

SOLID FILL INDICATES INCLUSION IN ISSUE SHEET ISSUE DATE			
10 / 10 / 2024	A-000	SHEET NAME	10 / 10 / 2024
SHEET INDEX LEGEND			
SHEET NUMBER AND NAME			
CURRENT REVISION NUMBER & REVISION DATE ON SHEET			

MECHANICAL

Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
09/09/24	MEP1	MECHANICAL ELECTRICAL PLUMBING COVER SHEET		
09/09/24	MEP2	SITE UTILITIES PLAN		
09/09/24	MEP3	SITE LIGHTING PLAN		
09/09/24	MEP4	MEP PLAN - ROOF		
09/09/24	M101	HVAC PLAN - 1ST FLOOR		
09/09/24	M102	HVAC PLAN - 2ND FLOOR		
09/09/24	M103	HVAC PLAN - 3RD FLOOR		
09/09/24	M501	HVAC DETAILS		
09/09/24	M601	HVAC SCHEDULES		

ELECTRICAL

Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
09/09/24	EP101	POWER PLAN - 1ST FLOOR		
09/09/24	EP102	POWER PLAN - 2ND FLOOR		
09/09/24	EP103	POWER PLAN - 3RD FLOOR		
09/09/24	EL101	LIGHTING PLAN - 1ST FLOOR	1	10/04/2024
09/09/24	EL102	LIGHTING PLAN - 2ND FLOOR	1	10/04/2024
09/09/24	EL103	LIGHTING PLAN - 3RD FLOOR	1	10/04/2024
09/09/24	E601	ELECTRICAL DETAILS	1	10/04/2024
09/09/24	E601	ELECTRICAL SCHEDULES		
09/09/24	FP101	FIRE PROTECTION PLAN - 1ST FLOOR		
09/09/24	FP102	FIRE PROTECTION PLAN - 2ND & 3RD FLOOR		

PLUMBING

Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
09/09/24	PS101	SANITARY SEWER PLAN - 1ST FLOOR	1	10/04/2024
09/09/24	PS102	SANITARY SEWER PLAN - 2ND FLOOR		
09/09/24	PS103	SANITARY SEWER PLAN - 3RD FLOOR		
09/09/24	PS201	STORM DRAIN PLAN - 1ST FLOOR		
09/09/24	PS202	STORM DRAIN PLAN - 2ND FLOOR		
09/09/24	PS203	STORM DRAIN PLAN - 3RD FLOOR		
09/09/24	PW101	WATER & GAS PLAN - 1ST FLOOR		
09/09/24	PW102	WATER & GAS PLAN - 2ND FLOOR		
09/09/24	PW103	WATER & GAS PLAN - 3RD FLOOR		
09/09/24	P501	PLUMBING DETAILS & SCHEDULES	1	10/04/2024
09/09/24	UMEP1.1	MEP PLAN - ARA - TYPE B UNIT		
09/09/24	UMEP1.2	MEP PLAN - ARA - TYPE B SHAFT UNIT		
09/09/24	UMEP1.3	MEP PLAN - CLARION - TYPE A UNIT		
09/09/24	UMEP1.4	MEP PLAN - CLARION - TYPE B UNIT		
09/09/24	UMEP1.5	MEP PLAN - CLEMENT - TYPE B UNIT		
09/09/24	UMEP1.6	MEP PLAN - DYLAN - TYPE B UNIT		

PROJECT DATA

PROJECT DESIGN INFORMATION

NEW CONSTRUCTION:

ZONING: PMIX - PLANNED MIXED USE DISTRICT
CODE:

2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL FIRE CODE
2017 NATIONAL ELECTRIC CODE
2009 ACCESSIBILITY CODE ICC/ANSI 117-1
LEE'S SUMMIT AMENDMENTS TO ENERGY CODE

OCCUPANCY GROUP: R-2, APARTMENTS
A-2, UNCONCENTRATED

TYPE OF CONSTRUCTION: TYPE VA

BUILDING SUMMARY:

NUMBER: 1 TOTAL BUILDING
HEIGHT: 3 STORIES, (50')

SQUARE FOOTAGES:

	GROSS	NET
FIRST FLOOR	13,580 S.F.	13,158 S.F.
SECOND FLOOR	13,327 S.F.	12,178 S.F.
THIRD FLOOR	13,327 S.F.	12,178 S.F.

OVERALL BUILDING 40,234 S.F. 37,515 S.F.

UNIT SUMMARY:

36 TOTAL UNITS

TYPE "A" UNITS (2% OF TOTAL) (1) UNITS - CLARION "A"

HIVU UNITS (2% OF TOTAL) (1) UNITS - ARA "HIVU"

TYPE "B" UNITS (25) UNITS - ARA "B"
(1) UNITS - CLARION "B"
(4) UNITS - CLEMENT
(4) UNITS - DYLAN

TOTAL UNITS (36) UNITS

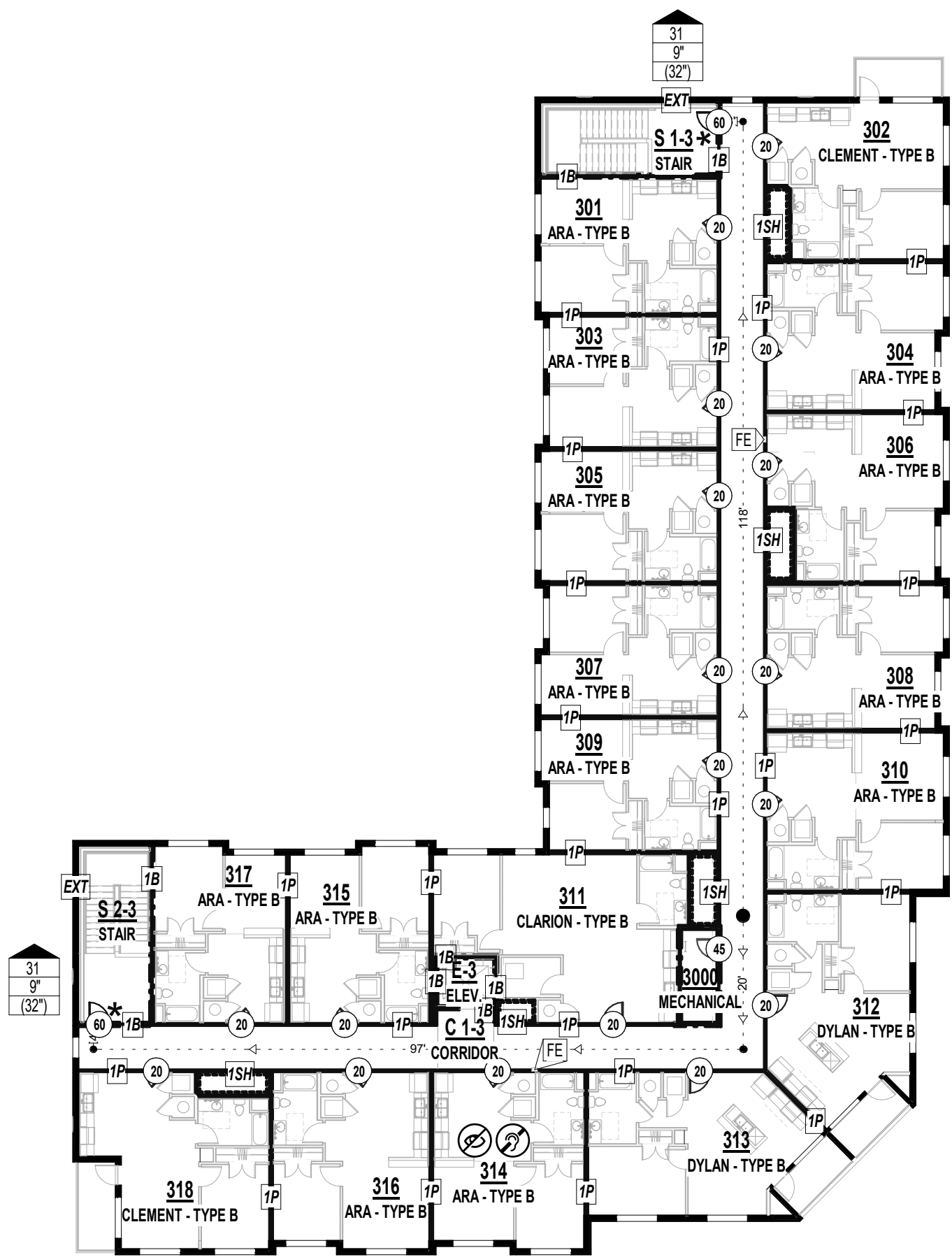
SQUARE FOOTAGE:

	GROSS	NET
ARA - ALT 1	520 S.F.	481 S.F.
ARA - ALT 2	523 S.F.	484 S.F.
ARA - ALT 3	559S.F.	518 S.F.
ARA - ALT 4	611 S.F.	568 S.F.
ARA - ALT 5	673 S.F.	629 S.F.
ARA - ALT 6	585 S.F.	543 S.F.
CLARION	609 S.F.	564 S.F.
CLEMENT	850 S.F.	794 S.F.
CLEMENT - ALT	635 S.F.	580 S.F.
DYLAN	569 S.F.	523 S.F.
	682 S.F.	636 S.F.

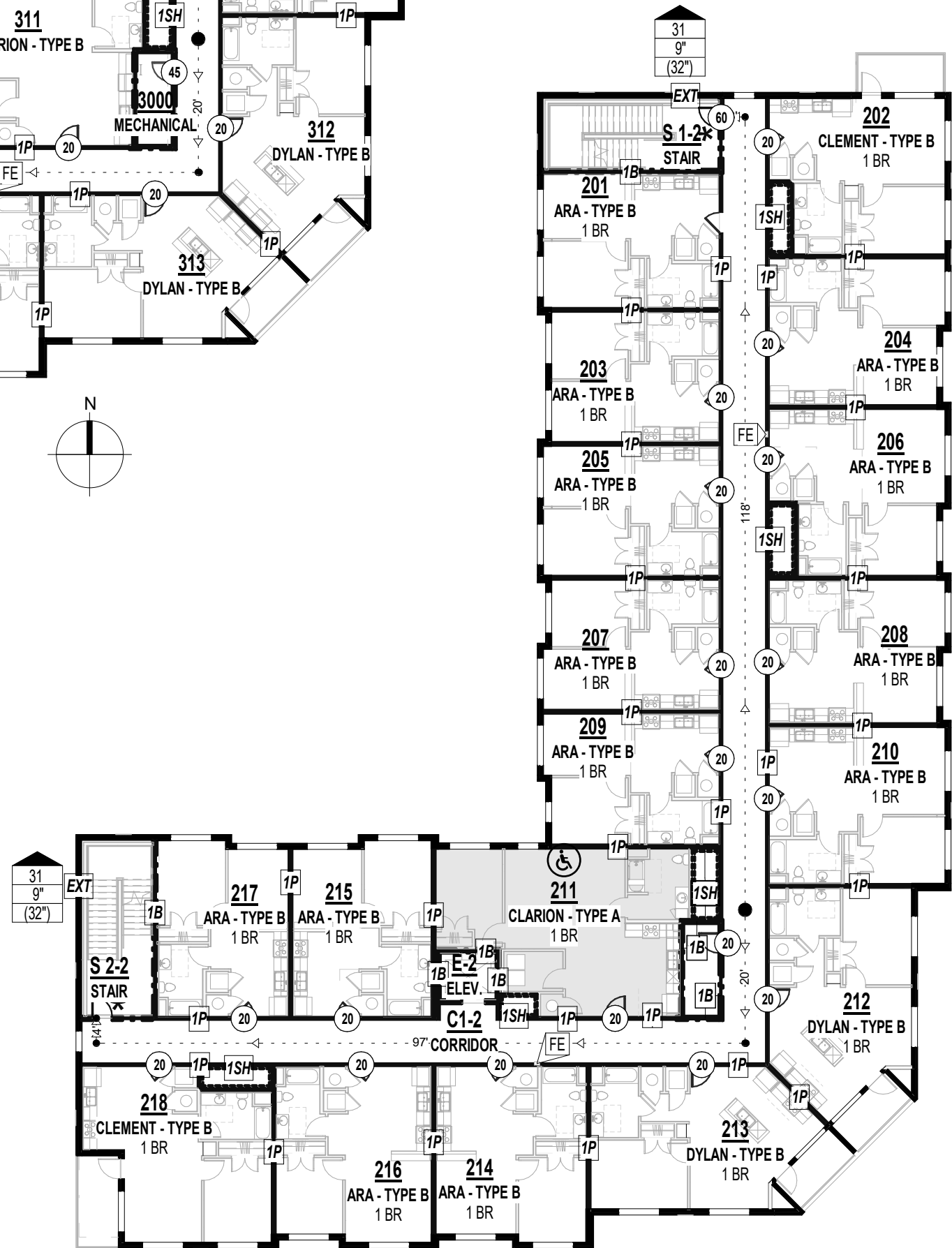
SEE CIVIL FOR SITE SUMMARY

NOTE: SQUARE FOOTAGE

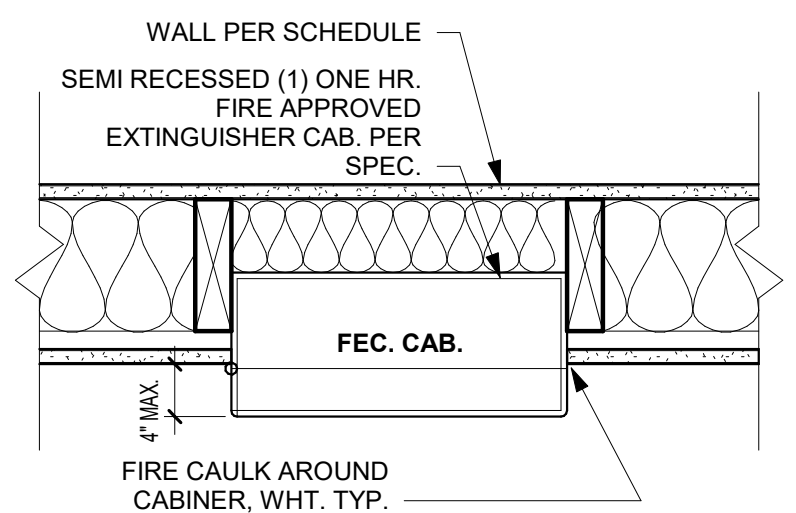
-GROSS - COMMON SPACE CALCULATION: OUTSIDE PERIMETER OF STUD (ENTIRE BUILDING) LESS THE TOTAL OF THE GROSS UNIT SQUARE FOOTAGE PER FLOOR.
-GROSS - UNIT CALCULATION: CENTERLINE OF PARTY WALL TO OUTSIDE OF EXTERIOR STUD WALL AND/OR OUTSIDE OF CORRIDOR STUD WALL.
-NET - PAINT-TO-PAINT AT PERIMETER, TAKEN FROM INSIDE OF DEMISING, EXTERIOR, AND CORRIDOR WALLS.



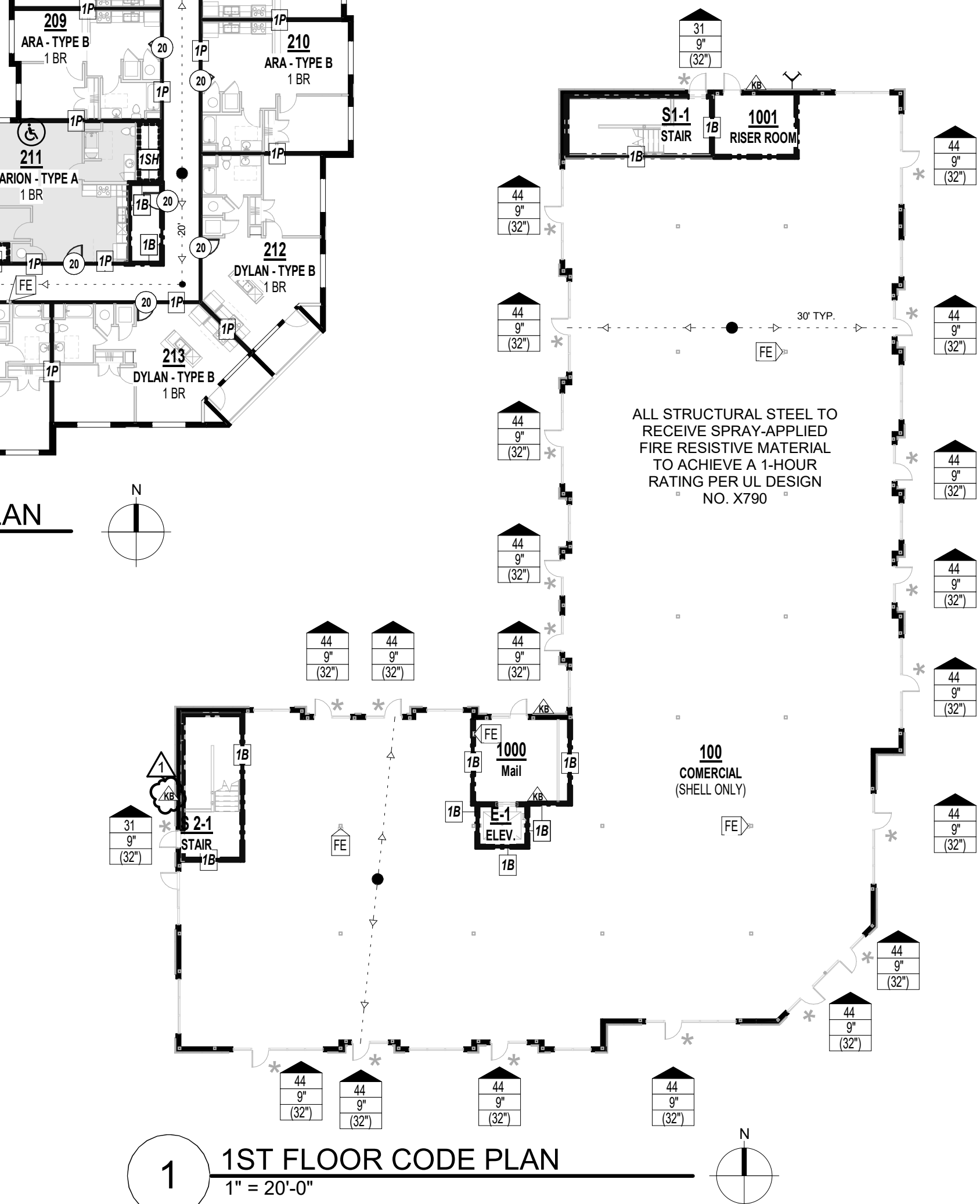
3 THIRD FLOOR PLAN
1" = 20'-0"



2 2ND FLOOR CODE PLAN
1" = 20'-0"



4 FEC CAB
1 1/2" = 1'-0"



1 1ST FLOOR CODE PLAN
1" = 20'-0"

CODE REVIEW			
PROJECT NAME: PROJECT LOCATION: CODE: CODE REVIEW COMPLETED BY:		THE VILLAGE AT DISCOVERY - LOT 5 LEE'S SUMMIT, MO 2018 IBC A.J. DOLPH	
CHAPTER THREE			
SECTION 302 OCCUPANCY:		R-2, APARTMENTS A-2, UNCONCENTRATED	
CHAPTER FOUR			
402 COVERED MALL BUILDINGS:		N/A	416 FLAMMABLE FINISHES:
403 HIGH RISE BUILDINGS:		N/A	417 DRYING ROOMS:
404 ATRIUMS:		N/A	418 ORGANIC COATINGS:
405 UNDERGROUND BUILDINGS:		N/A	419 LIV/WORK UNITS:
407 GROUP I-2:		N/A	421 HYDROGEN FUEL GAS ROOMS:
408 GROUP I-3:		N/A	422 AMBULATORY CARE FACILITY:
409 MOTION PICTURE PROJECTION:		N/A	423 STORM SHELTERS:
410 STAGES AND PLATFORMS:		N/A	424 CHILDREN'S PLAY STRUCTURE:
411 SPECIAL AMUSEMENT BUILDINGS:		N/A	425 HYPERBARIC FACILITY:
412 AIRCRAFT RELATED OCCUP:		N/A	426 COMBUSTIBLE DUSTS & GRAINS:
413 COMBUSTIBLE STORAGE:		N/A	427 MEDICAL GAS SYSTEMS:
414 HAZARDOUS MATERIALS:		N/A	428 HIGHER EDUCATION LAB:
415 GROUPS H-1, H-2, H-3, H-4, H-5:		N/A	
420 GROUPS I-1, R-1, R-2, R-3, & R-4:		WALLS SEPARATING SLEEPING UNITS TO BE FIRE PARTITIONS PER SECTION 708	
420.2 SEPARATION WALLS:			
420.3 HORIZONTAL SEPARATION:		FLOORS SEPARATING SLEEPING UNITS TO BE HORIZONTAL ASSEMBLY PER SECTION 711	
420.4 AUTOMATIC SPRINKLER:		13R PER 903.3.1.2 FOR R	
CHAPTER FIVE			
TABLE 504.3 ALLOWABLE HEIGHT IN FEET ABOVE GRADE PLANE:		CONSTRUCTION TYPE VA R: ACTUAL: 49'-8" A: ACTUAL: 16'-0"	
		ALLOWABLE: 60'-0" ALLOWABLE: 50'-0"	
TABLE 504.4 ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE:		CONSTRUCTION TYPE VA R-2: ACTUAL: 3 A-2: ACTUAL: 1	
		ALLOWABLE: 4 STORIES ALLOWABLE: 2 STORIES	
TABLE 506.2 ALLOWABLE AREA FACTOR:		CONSTRUCTION TYPE VA R-2: ACTUAL: 13,890 A-2: ACTUAL: 13,816	
		ALLOWABLE: 12,000 SQFT ALLOWABLE: 34,500 SQFT	
AREA INCREASE TAKEN FOR R-2 OCCUPANCY, SEE CALCULATION 506.2.4			
506.2.4 MIXED-OCCUPANCY, R-2: MULTISTORY BUILDING:		Aa = [At + (NS x If)] Aa = [12,000 + (12,000 x 0.75)] Aa = 21,000	
506.3 FRONTAGE INCREASE:		W = (Ln x Wn) / F W = (100 x 30) / 100 W = 30	
506.3.3. AMOUNT OF INCREASE:		If = [F/P - 0.25]W/30 If = (100/100 - 0.25)30/30 If = 0.75	
TABLE 508.4 REQUIRED SEPARATION OF OCCUPANCIES:		R - R: 1 HOUR R - A: 1 HOUR R - S: 1 HOUR A - A: 0 HOUR A - S: 0 HOUR S - S: 0 HOUR	
TABLE 509 INCIDENTAL USES:		LAUNDRY > 100 SF, 1HR STORAGE > 100 SF, 1HR	
CHAPTER SIX			
TABLE 601 FIRE RESISTANCE REQS. FOR BUILDING ELEMENTS (HOURS):		CONSTRUCTION TYPE VA & IIA PRIMARY STRUCTURAL FRAME: 1 HOUR INTERIOR BEARING WALL: 1 HOUR EXTERIOR BEARING WALL: 1 HOUR NON-BEARING WALL: 0 HOUR FLOOR CONSTRUCTION: 1 HOUR ROOF CONSTRUCTION: 1 HOUR	
TABLE 602 FIRE RESISTANCE REQS. FOR EXTERIOR WALLS BASED ON FIRE SEP. DISTANCE:		0 HOUR <30 FEET, 0 >30 FEET	
CHAPTER SEVEN			
704 FIRE-RESISTANCE RATING OF STRUCTURAL MEMBERS:		1 HOUR RATED SPRAY APPLIED FIRE RESISTANT MATERIAL	
705.5 EXTERIOR WALLS FIRE-RESISTANCE RATING:		FIRE SEPARATION DISTANCE > 10'-0" RATED EXPOSURE FROM INSIDE ONLY	
TABLE 705.8 MAX AREA OF EXTERIOR WALL OPENINGS:		FIRE SEPARATION DISTANCE > 25'-0" UNPROTECTED, NO LIMIT	
706 FIRE WALLS:		N/A	
707 FIRE BARRIERS:		1 HOUR RATED	
708 FIRE PARTITIONS:		1 HOUR RATED	
709 SMOKE BARRIERS:		N/A	
710 SMOKE PARTITIONS:		N/A	
711 FLOOR & ROOF ASSEMBLIES:		1 HOUR RATED	
712 VERTICAL OPENINGS:		N/A	
713 SHAFT ENCLOSURES:		1 HOUR RATED	
714 PENETRATIONS:		MATCH ASSEMBLY RATING	
715 FIRE-RESISTANT JOINT SYSTEM:		MATCH ASSEMBLY RATING	
TABLE 716.1(2) OPENING FIRE PROTECTION & RATING:		1 HOUR FIRE BARRIER: 60 MINUTE DOOR 1 HOUR CORRIDOR: 20 MINUTE DOOR	
717 DUCTS AND AIR TRANSFER OPENINGS:		REQUIRED AT RATED PENETRATIONS, 1.5 HOUR DAMPER RATING	
SECTION 718 CONCEALED SPACES:		FIREBLOCK & DRAFTSTOP	
CHAPTER NINE			
903 AUTOMATIC SPRINKLER SYSTEM:		R-2, REQUIRED: NFPA 13R A-2, REQUIRED: NFPA 13	
905 STANDPIPE SYSTEM:		CLASS I REQUIRED	
906 PORTABLE FIRE EXTINGUISHERS:		REQUIRED PER NFPA 10, 75'-0" MAX TRAVEL	
907 FIRE ALARM & DETECTION SYSTEM:		REQUIRED PER NFPA 72	
909 SMOKE CONTROL SYSTEM:		COMPLY WITH IMC	
CHAPTER TEN			
TABLE 1004.5 MAX FLOOR AREA ALLOWANCES PER OCCUPANT:		R-2, 200 GROSS A-2, 15 NET	
SECTION 1005 MEANS OF EGRESS SIZING:		STAIRS 0.2/OCC., W/ SPRINKLER EXCEPTION OTHER EGRESS 0.15/OCC., W/ SPRINKLER EXCP.	
TABLE 1006.2.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY:		R-2: 20 OCC., 125' MAX. PATH OF EGRESS A-2: 49 OCC., 75' MAX. PATH OF EGRESS	
TABLE 1006.3.2 MINIMUM NUMBER OF EXITS PER STORY:		2 EXITS REQ.D W/ OCCUPANT LOAD/STORY 1-500	
1009.3.3 AREA OF REFUGE:		NOT REQUIRED W/ SPRINKLER EXCEPTION	
1009.8 TWO-WAY COMMUNICATION:		REQ'D. AT EACH ELEV. LANDING ABOVE GRADE	
1011.2 STAIRWAY WIDTH CAPACITY:		44" MIN.	
1011.12 STAIRWAY TO ROOF:		UNOCCUPIED ROOF, ACCESS VIA ROOF HATCH	
1014.2 HANDRAIL HEIGHT:		34" MIN. - 38" MAX.	
1014.6 HANDRAIL EXTENSIONS:		EXTEND HORIZONTALLY 12" BEYOND TOP RISER CONTINUE SLOPE 1 DEPTH TREAD AT BOTTOM	
1015 GUARDS:		42" MIN. HEIGHT, 4" MAX. OPENING	
TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE:		R: 250' W/ 13R SPRINKLER A: 250' W/ 13 SPRINKLER	
1019 EXIT ACCESS STAIRWAYS:		1 HOUR RATED PER 713	
TABLE 1020.1 CORRIDOR RATING:		R: 1/2 HOUR RATED W/ 13R SPRINKLER A: NO RATING REQ.D W/ 13 SPRINKLER	
1020.1.1 HOISTWAY OPENING PROTECTION:		NOT REQUIRED PER 3006.2	
TABLE 1020.2 MIN. CORRIDOR WIDTH:		44" MIN.	
1020.4 DEAD ENDS:		20'-0" MAX.	
CHAPTER ELEVEN			
ACCESSIBILITY TO COMPLY WITH THIS CH. OF IBC, ICC A117.1, ADA, & FAIR HOUSING			
TABLE 1106.1 ACC. PARKING:		SEE CIVIL	
TABLE 1107.6.1.1 ACCESSIBLE DWELLING & SLEEPING UNITS:		2% OF TOTAL REQ'D. TO BE TYPE A	
CHAPTER TWELVE			
1206 SOUND TRANSMISSION:		50STC RATING BETWEEN SLEEPING UNITS	

CODE PLAN GENERAL NOTES:

- FIRE EXTINGUISHERS SHALL BE LOCATED SO THAT THE MAXIMUM TRAVEL DISTANCE SHALL NOT EXCEED 75 FEET. GENERAL CONTRACTOR TO PROVIDE SEMI-RECESSED FIRE EXTINGUISHER CABINETS WITH FIRE EXTINGUISHERS THROUGHOUT AT ACCESSIBLE HEIGHT.
- SIGNS IDENTIFYING FIRE PROTECTION EQUIPMENT, CONTROLS FOR AIR CONDITIONING SYSTEMS, SPRINKLER RISERS AND VALVES, OR OTHER FIRE DETECTION, SUPPRESSION OR CONTROL ELEMENTS SHALL BE IDENTIFIED FOR THE USE OF THE FIRE DEPARTMENT PER 2012 IBC. SIGNAGE SHALL ALSO MEET 2012 IFC REQUIREMENTS FOR HEIGHT AND LETTERING. GC TO COORDINATE WITH AUTHORITY HAVING JURISDICTION ON ALL SIGNAGE.
- KNOX BOX QUANTITY AND LOCATION TO BE COORDINATED BY THE GENERAL CONTRACTOR WITH AUTHORITY HAVING JURISDICTION.
- ANNUNCIATOR PANEL AND FACP QUANTITY AND LOCATION TO BE COORDINATED BY THE GENERAL CONTRACTOR WITH AUTHORITY HAVING JURISDICTION PRIOR TO INSTALL.
- ALL DIMENSIONS ARE APPROXIMATE ON CODE PLAN. ACTUAL ARCHITECTURAL DIMENSIONS PER ARCHITECTURAL AND STRUCTURAL PLAN.
- PROJECT COMPLIES WITH 20xx INTERNATIONAL ENERGY CONSERVATION CODE (IECC) - COMCHECK REPORT INCLUDED IN THE SPECIFICATIONS.

CODE PLAN LEGEND			
	NUMBER OF OCCUPANTS EXITING	123	ROOM NUMBER
	REQUIRED EXIT WIDTH		FIRE EXTINGUISHER CABINET OR SURFACE MOUNTED AT COLUMNS
	EXIT WIDTH PROVIDED BY DESIGN		FIRE DEPARTMENT KNOX BOX (DEFER SUBMITTAL FOR LOC.)
	EXT. - RATED PARTITION (IBC CH. 6)		FIRE DEPARTMENT CONNECTION
	NON - RATED PARTITION		DOOR RATING
	1 HR RATED PARTITION (IBC 708)		DOOR WITH PANIC HARDWARE (SEE DOOR SCHEDULE)
	1 HR RATED BARRIER (IBC 707)		EXIT SIGNAGE: SEE ELECTRICAL
	1 HR RATED SHAFT ENCLOSURE (IBC 713)		EGRESS STARTING POINT
			EGRESS DISTANCE OF TRAVEL
			EGRESS DIRECTION OF TRAVEL

REFERENCE G-003 FOR GENERAL NOTES

PRINTS ISSUED

09/09/2024 - CITY SUBMISSION

REVISIONS:

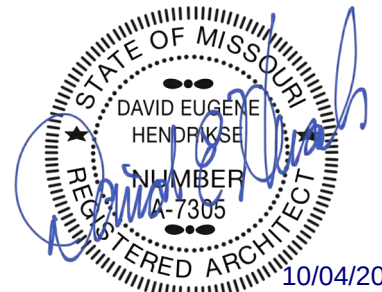
1 10/04/2024 RESPONSE TO CITY COMMENTS

rosemann & ASSOCIATES P.C.

ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

1526 Grand Boulevard
Kansas City, MO 64108-1404
P: 816.472.1448
W: www.rosemann.com
© 2024 Rosemann & Associates, P.C.

DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA



THE VILLAGE AT DISCOVERY -
LOT 5
LEE'S SUMMIT, MO

SHEET TITLE
CODE ANALYSIS

PROJECT NUMBER: 23102

SHEET NUMBER:

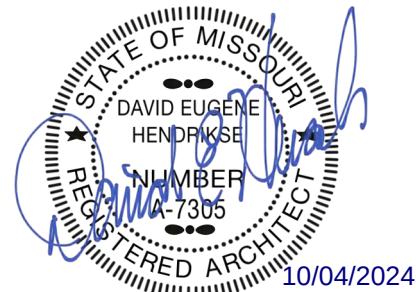
G-100



rosemann & associates P.C.
ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

1526 Grand Boulevard
Kansas City, MO 64108-1404
p: 816.472.1448
w: www.rosemann.com
© 2024 Rosemann & Associates, P.C.

DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA



THE VILLAGE AT DISCOVERY -
LOT 5
LEE'S SUMMIT, MO

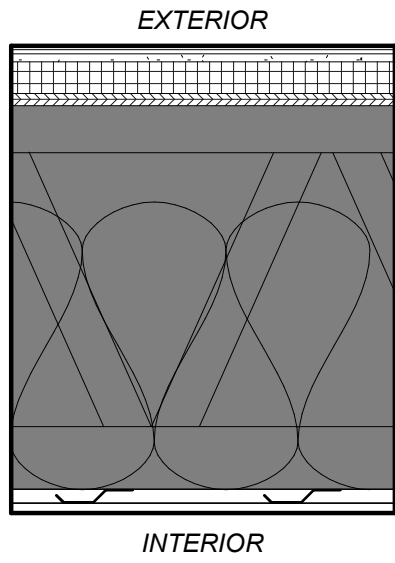
SHEET TITLE
PARTITION ASSEMBLIES - WOOD,
CMU, CONCRETE

PROJECT NUMBER: 23102

SHEET NUMBER:

G-102

ROOF/CEILING ASSEMBLY-WOOD

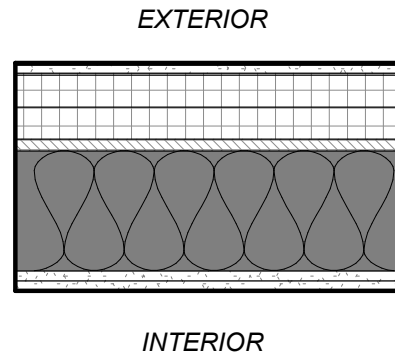


R8

- WOOD PARALLEL CHORD TRUSS - 1HR - TPO**
- TPO ROOFING, PER SPECIFICATION TO MEET IECC
 - 1/2" COVERBOARD, NON-COMBUSTIBLE, WATER-RESISTANT
 - TAPERED INSULATION, SLOPE PER PLAN
 - 15/32" MIN. ROOF SHEATHING, SEE NOTE b.
 - WOOD TRUSS FRAMING PER STRUCT. DWGS, MAX SPACING 24" OC - REFERENCE UL FOR CONSTRUCTION
 - R-38 INSULATION PER 2015 IECC, INSTALLED PER UL
 - 25 MSG GALVANIZED STEEL RESILIENT CHANNELS, SPACED PER UL
 - (1) LAYER OF 5/8" TYPE 'AG-C' GWB, BY AMERICAN GYPSUM CO, PER UL

- NOTES:
- ASSEMBLY TO COMPLY WITH UL DESIGN P545 (FEB 16, 2024)
 - STRUCTURAL SHALL SUPERCEDE IF STRUCT SHEATHING IS THICKER OR DIFFERENT TYPE THAN LISTED ABOVE. PROVIDE REQ MIN ABOVE.
 - REFER TO UL FOR SCREW PATTERN
 - CRICKETS AS INDICATED ON ROOF PLAN TO BE FORMED OUT OF PRE-SLOPED POLYISO RIGID INSULATION. SLOPE TO DRAIN
 - ROOF VENTS PER ROOF PLAN TO MEET REQUIRED VENTING

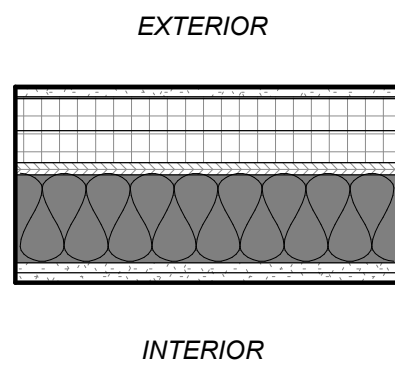
VAPOR BARRIER REMOVED FFROM ASSEMBLY



R13

- WOOD FLAT 2X6 LUMBER - 1HR - TPO**
- TPO ROOFING MEMBRANE PER SPECIFICATIONS TO MEET IECC
 - 1/2" COVERBOARD, NON-COMBUSTIBLE, WATER-RESISTANT
 - PRE-SLOPED POLYISO RIGID INSULATION FOR SLOPE PER ROOF PLAN
 - R-20 RIGID INSULATION MIN. (OR NECESSARY TO MEET MIN. IECC REQUIREMENT)
 - SHEATHING PER STRUCTURAL DWGS.
 - WOOD 2X6 FRAMING SPACED PER STRUCTURAL
 - R-19 BATT INSULATION
 - (2) LAYERS OF 5/8" TYPE 'X' GWB. PER GA ASSEMBLY

- NOTES:
a. DESIGN NO. 721.1(3) 2018 IBC, RE: G-200s.
VAPOR BARRIER REMOVED FFROM ASSEMBLY

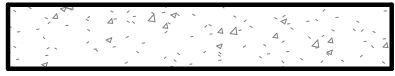


R14

- WOOD FLAT 2X6 LUMBER - 1HR - TPO**
- TPO ROOFING MEMBRANE PER SPECIFICATIONS TO MEET IECC
 - 1/2" COVERBOARD, NON-COMBUSTIBLE, WATER-RESISTANT
 - PRE-SLOPED POLYISO RIGID INSULATION FOR SLOPE PER ROOF PLAN
 - R-20 RIGID INSULATION MIN. (OR NECESSARY TO MEET MIN. IECC REQUIREMENT)
 - VAPOR BARRIER CLASS 1, SELF ADHERED TO SHEATHING, AS REQUIRED
 - SHEATHING PER STRUCTURAL DWGS.
 - WOOD 2X6 FRAMING SPACED PER STRUCTURAL
 - R-19 BATT INSULATION
 - (2) LAYERS OF 5/8" TYPE 'X' GWB. PER GA ASSEMBLY

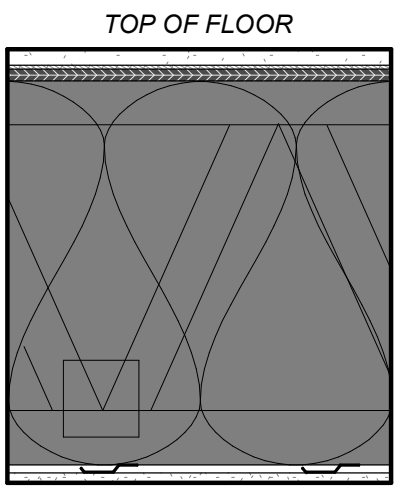
- NOTES:
a. DESIGN NO. 721.1(3) 2018 IBC, RE: G-200s.
VAPOR BARRIER REMOVED FFROM ASSEMBLY

FLOOR/CEILING ASSEMBLY-WOOD



F1

- CONCRETE - NON-RATED - SLAB ON GRADE**
- CONCRETE SLAB ON GRADE PER STRUCT. DWGS.
- NOTES
- SEE STRUCTURAL FOR REINFORCING AND THICKNESS
 - VERIFY SLAB ELEVATIONS WITH CIVIL AND LANDSCAPE

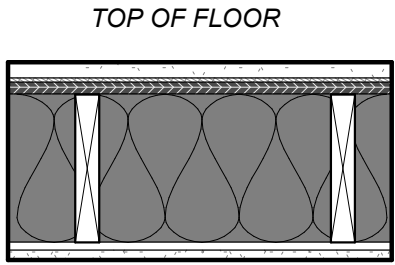


F3

- WOOD OPEN WEB TRUSS - 1HR**
- 1" GYPCRETE TOPPING
 - 1/4" ACOUSTICAL MAT
 - 19/32" MIN. PLYWOOD SHEATHING, TYPE 'C/D', SEE ALSO NOTE b.
 - WOOD TRUSSES PER STRUCTURAL, REFER TO UL FOR MIN. REQs
 - UNFACED FIBERGLASS INSULATION COMPLETELY FILLED IN CONCEALED CAVITY TO COMPLY WITH NFPA 13 CONCEALED SPACES.
 - 25 MSG GALVANIZED RESILIENT CHANNELS, SPACED PER U.L.
 - (1) LAYER OF 5/8" TYPE 'C' GWB PER UL

- NOTES:
- ASSEMBLY TO COMPLY WITH UL DESIGN L546 (OCT 3, 2023)
 - STRUCTURAL SHALL SUPERCEDE IF STRUCT SHEATHING IS THICKER OR DIFFERENT TYPE THAN LISTED ABOVE. PROVIDE REQ MIN ABOVE.
 - REFER TO UL FOR SCREW PATTERN
 - STC TO BE MIN. 50 PER IBC CHAPTER 12, IIC TO BE EQUAL OR GREATER THAN 50 WHEN TESTED UNDER ASTM E 492. (STC 60 BASED UPON TESTING 30160-08-90744-11, IIC 52 BASED UPON TESTING 30160-08-90744-7 ASSUMING VCT FLOOR FINISH.)
 - VERIFY GWB AND RESILIENT CHANNEL WITH UL SPECIFIED, TAKE NOTE OF REQUIRED RESILIENT CHANNEL SPACING WITH INSULATION-FILLED CAVITY
 - MIN. DEPTH OF TRUSS SHALL BE 18" WHEN DUCT PRESENT.

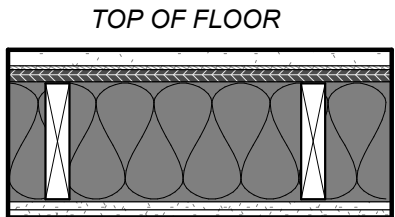
MEETS
STC/IIC



F6

- WOOD 2X10 LUMBER - 1HR**
- 1" GYPCRETE TOPPING
 - 1/4" ACOUSTICAL MAT
 - MIN 15/32" TYPE 'C/D' SHEATHING OR PER UL SYSTEM, SEE NOTE b.
 - 2X10 WOOD JOISTS SPACED MAX 16" O.C., REFER TO STRUCTURAL FOR REQUIRED SPACING IF MORE RESTRICTIVE
 - CROSS BRIDGING PER UL
 - UNFACED FIBERGLASS INSULATION COMPLETELY FILLED IN CONCEALED CAVITY TO COMPLY WITH NFPA 13 CONCEALED SPACES AND UL
 - 25 MSG GALVANIZED RESILIENT CHANNEL SPACED PER UL.
 - (1) LAYER OF 5/8" TYPE 'C' GWB PER UL

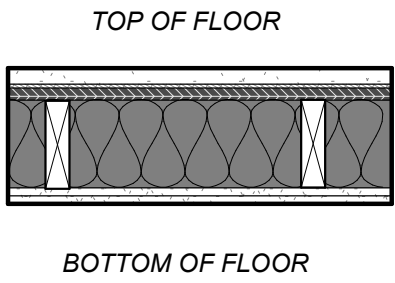
- NOTES:
- ASSEMBLY TO COMPLY WITH UL DESIGN L516, (MAY 28, 2024)
 - STRUCTURAL SHALL SUPERCEDE IF STRUCT SHEATHING IS THICKER OR DIFFERENT TYPE THAN LISTED ABOVE. PROVIDE REQ MIN ABOVE
 - STC SHALL BE MIN. 50 PER IBC CHAPTER 12, IIC TO BE EQUAL OR GREATER THAN 50 WHEN TESTED UNDER ASTM E 492. (STC 59 BASED UPON TESTING TL88-110, IIC 52 BASED UPON TESTING 1003365570RT-001m ASSUMING VINYL FLOOR FINISH.)
 - REFER TO UL FOR SCREW PATTERN
 - VERIFY SHEATHING TYPE, GWB, AND RESILIENT CHANNEL WITH UL SYSTEM SPECIFIED, TAKE NOTE OF REQUIRED RESILIENT CHANNEL SPACING WITH INSULATION-FILLED CAVITY



F7

- WOOD 2X8 LUMBER - 1HR - CORRIDOR**
- 1" GYPCRETE TOPPING
 - 1/4" ACOUSTICAL MAT
 - 15/32" SHEATHING MIN. SEE NOTE b.
 - 2X8 WOOD JOISTS SPACED PER STRUCTURAL
 - UNFACED FIBERGLASS INSULATION COMPLETELY FILLED IN CONCEALED CAVITY TO COMPLY WITH NFPA 13 CONCEALED SPACES.
 - (2) LAYERS OF 5/8" TYPE 'X' GWB PER IBC

- NOTES:
- RATING FOR 2X8 DIMENSIONAL LUMBER ASSEMBLY: 2018 IBC TABLE 721.1(3) #21-1.1 & AMERICAN WOOD COUNCIL'S DCA 4 (COMPONENT ADDITIVE METHOD FOR CALCULATING AND DEMONSTRATING ASSEMBLY FIRE RESISTANCE)
 - STRUCTURAL SHALL SUPERCEDE IF STRUCT SHEATHING IS THICKER OR DIFFERENT TYPE THAN LISTED ABOVE. PROVIDE REQ MIN ABOVE.
 - REFER TO IBC TABLE FOR SCREW PATTERN

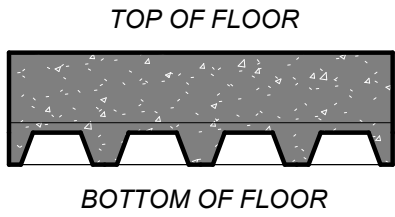


F8

- WOOD 2X6 LUMBER - 1HR - CORRIDOR**
- 1" GYPCRETE TOPPING
 - 1/4" ACOUSTICAL MAT
 - 15/32" SHEATHING MIN. SEE NOTE b.
 - 2X6 WOOD JOISTS SPACED PER STRUCTURAL
 - UNFACED FIBERGLASS INSULATION COMPLETELY FILLED IN CONCEALED CAVITY TO COMPLY WITH NFPA 13 CONCEALED SPACES.
 - (2) LAYERS OF 5/8" TYPE 'X' GWB PER IBC

- NOTES:
- RATING FOR 2X6 DIMENSIONAL LUMBER ASSEMBLY: 2018 IBC TABLE 721.1(3) #21-1.1 & AMERICAN WOOD COUNCIL'S DCA 4 (COMPONENT ADDITIVE METHOD FOR CALCULATING AND DEMONSTRATING ASSEMBLY FIRE RESISTANCE)
 - STRUCTURAL SHALL SUPERCEDE IF STRUCT SHEATHING IS THICKER OR DIFFERENT TYPE THAN LISTED ABOVE. PROVIDE REQ MIN ABOVE.
 - REFER TO IBC TABLE FOR SCREW PATTERN

FLOOR/CEILING ASSEMBLY-METAL



F32

- METAL DECK AND CONCRETE - 1HR**
- CONCRETE TOPPING SLAB PER STRUCT.
 - WELDED WIRE FABRIC PER STRUCT. DWGS.
 - METAL DECKING PER STRUCT. DWGS.

- NOTES:
- SHALL COMPLY WITH UL DESIGN D916 (FEB 8, 2024)

UL Product iQ®



Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

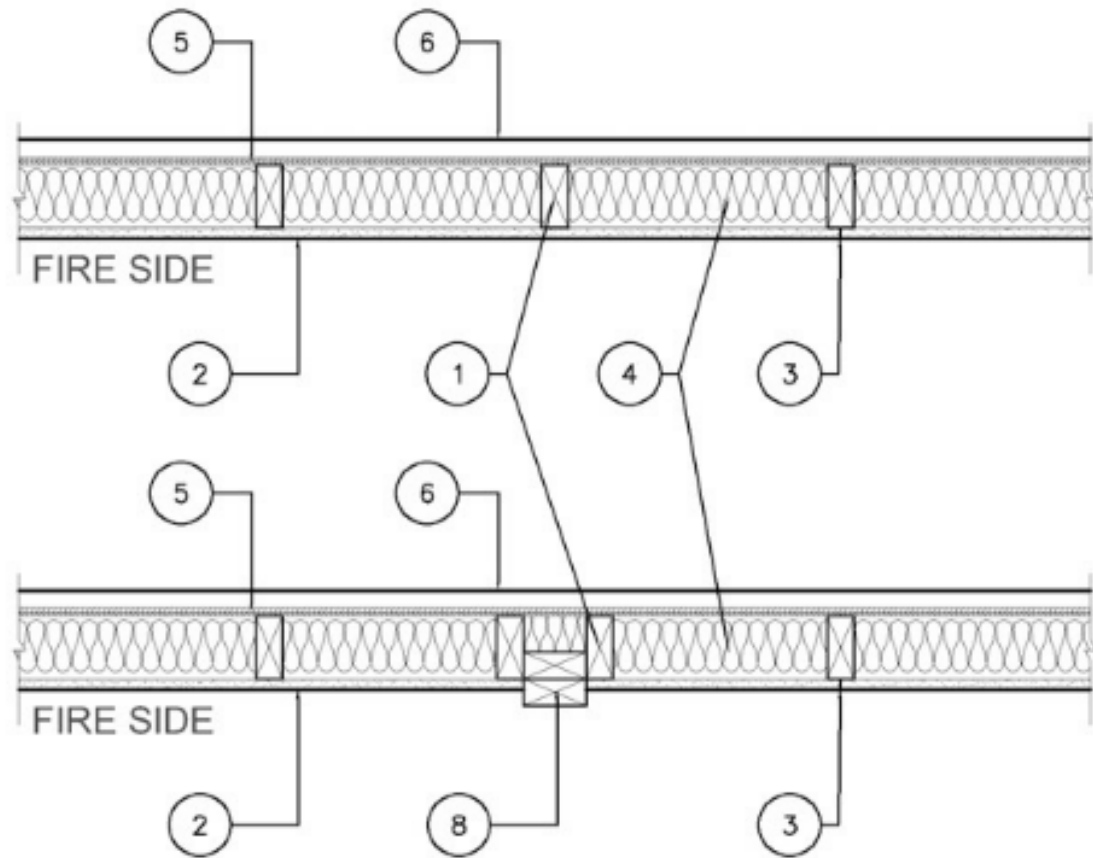
Design No. U356

January 29, 2024

Bearing Wall Rating - 1 Hr Rating Exposed to Fire on Interior Face Only
Bearing Wall Rating — 1 Hr Rating Exposed to Fire on Exterior Face (See Item 6E)

Finish Rating — 23 Min or 25 Min (See Item 2C)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



1. **Wood Studs** — Nom 2 by 4 in. spaced 16 in. OC with two 2 by 4 in. top and one 2 by 4 in. bottom plates. Studs laterally-braced by wood structural panel sheathing (Item 5). When **Mineral and Fiber Boards*** (Item 5A) are considered as bracing for the studs, the load is restricted to 76% of allowable axial load. Walls effectively fire stopped at top and bottom of wall.

2. **Gypsum Board*** — Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. LS01, GS12 or U305. Nom 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, 1-7/8 in. long with 1/4 in. diam head.
When Item **Steel Framing Members*** (Item 7 or any alternate clips), is used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When Item 7A **Steel Framing Members***, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers.

AMERICAN GYPSUM CO (View Classification) — CNKXR14196

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (View Classification) — CNKXR19374

CABOT MANUFACTURING ULC (View Classification) — CNKXR25370

CERTAINTED GYPSUM INC (View Classification) — CNKXR3660

COC INC (View Classification) — CNKXR19751

CERTAINTED GYPSUM INC (View Classification) — CNKXR18482

GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CNKXR2717

NATIONAL GYPSUM CO (View Classification) — CNKXR3501

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (View Classification) — CNKXR7094

PANEL REY S A (View Classification) — CNKXR21796

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (View Classification) — CNKXR19262

THAI GYPSUM PRODUCTS PCL (View Classification) — CNKXR27517

UNITED STATES GYPSUM CO (View Classification) — CNKXR1319

USG BORAL DRYWALL SFZ LLC (View Classification) — CNKXR38438

USG MEXICO S A DE C V (View Classification) — CNKXR16089

2A. **Gypsum Board*** — (As an alternate to Item 2, Not Shown) — Any 5/8 in. thick 4 ft wide gypsum panels that are eligible for use in Design Nos. LS01, GS12 or U305, supplied by the Classified Companies listed below shown in the **Gypsum Board*** (CNKX) category. Applied vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.

COC INC

UNITED STATES GYPSUM CO

USG BORAL DRYWALL SFZ LLC

USG MEXICO S A DE C V

2B. **Gypsum Board*** — (As an alternate to Item 2, Not Shown) — 5/8 in. thick 4 ft wide gypsum panels applied vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, LightRoc

CABOT MANUFACTURING ULC — Type X, 5/8 Type X, Type Blueglass Exterior Sheathing

CERTAINTED GYPSUM INC — Type C, Type X-1, Easi-Lite Type X-2

GEORGIA-PACIFIC GYPSUM L L C — Types X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, Type X ComfortGuard Sound Deadening Gypsum Board.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS, PGI

THAI GYPSUM PRODUCTS PCL — Type C or Type X

2C. **Gypsum Board*** — (As an alternate to Item 2, Not Shown) — For Use with Item 5A only - 5/8 in. thick 4 ft wide gypsum panels applied horizontally and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screws 1 in. and 4 in. from edges of board. Finish Rating is 25 min.

CABOT MANUFACTURING ULC — 5/8 Type X, Type Blueglass Exterior Sheathing

GEORGIA-PACIFIC GYPSUM L L C — Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS, PGI

2D. **Gypsum Board*** — (As an alternate to Item 2) — Not to be used with Item 7. 5/8 in. thick, 4 ft wide, paper surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC. NATIONAL GYPSUM CO — Type SBW8

2E. **Gypsum Board*** — (As an alternate to Items 2 through 2D) — Nominal 5/8 in. thick, 4 ft wide panels, secured as described in Item 2. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRoc ES.

2F. **Gypsum Board*** — (As an alternate to Item 2) — Not to be used with Item 7. 5/8 in. thick, 4 ft wide, paper surfaced, applied vertically or horizontally and fastened to the studs and plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.

CERTAINTED GYPSUM INC — Type SilentFX

2G. **Wall and Partition Facings and Accessories*** — (As an alternate to Items 2 through 2F) — Nominal 5/8 in. thick, 4 ft wide panels, secured as described in Item 2. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRoc S27.

2H. **Gypsum Board*** — (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

CERTAINTED GYPSUM INC — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

2I. **Gypsum Board*** — (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum boards are to be installed horizontally.

AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), AG-C (finish rating 25 min.), LightRoc (finish rating 25 min.)

NATIONAL GYPSUM CO — Type FSK, Type FSK-G, Type FSW, Type FSW-3, Type FSW-5, Type FSW-G, Type FSK-C, Type FSW-C, Type FSMR-C, Type FSW-6, Type FSL

2J. **Gypsum Board*** — (As an alternate to Item 2) - 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread steel screws spaced a max 8 in. OC with the last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum boards are to be installed horizontally.

CERTAINTED GYPSUM INC — Type C, Type X-1 (finish rating 26 min), Easi-Lite Type X (finish rating 24 min), Easi-Lite Type X-2, Type EGR6 or GlasRoc or GlasRoc Sheathing (finish rating 23 min)

3. **Joints and Fastener Heads** — (Not Shown) — Gypsum board joints covered with tape and joint compound. Fastener heads covered with joint compound.

4. **Batts and Blankets*** — Mineral fiber or glass fiber insulation, 3-1/2 in. thick, pressure fit to fill wall cavities between studs and plates. Mineral fiber insulation to be unfaced and to have a min density of 3 pcf. Glass fiber insulation to be faced with aluminum foil or kraft paper and to have a min density of 0.9 pcf (min R-13 thermal insulation rating).
See **Batts and Blankets*** (BNV) Category in the Building Materials Directory and **Batts and Blankets*** (BZJ2) Category in the Fire Resistance Directory for names of Classified Companies.

4A. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft³. Alternate Application Method: The fiber is applied under water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product.
Applegate GreenFiber Acquisition LLC — Insulmax and SANCTUARY are to be used for dry application only.

4B. **Fiber, Sprayed*** — As an alternate to Item 4 and 4A — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 4.58 lb/ft³.
NU-WOOL CO INC — Cellulose Insulation

4C. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lb/ft³.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

4D. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 4) — Spray applied, granulated mineral fiber material. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCA2).
AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

5. **Wood Structural Panel Sheathing** — Min 7/16 in. thick, 4 ft wide wood structural panels, min grade "C-D" or "Sheathing", installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 6d cement coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs.

5A. **Mineral and Fiber Boards*** — As an alternate to Item 5 - Min 1/2 in. thick, 4 ft wide sheathing, installed vertically to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 1-1/2 in. long galvanized roofing nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs. As an option a weather resistive barrier may be applied over the Mineral and Fiber Boards.

6. **Exterior Facings** — Installed in accordance with the manufacturer's installation instructions. One of the following exterior facings is to be applied over the sheathing:

A. **Vinyl Siding — Molded Plastic*** — Contoured rigid vinyl siding having a flame spread value of 20 or less.

See **Molded Plastic** (BTAT) category in the Building Materials Directory for names of manufacturers.

B. **Particle Board Siding** — Hardboard exterior sidings including patterned panel or lap siding.

C. **Wood Structural Panel or Lap Siding** — APA Rated Siding, Exterior, plywood, OSB or composite panels with veneer faces and structural wood core, per PS 1 or APA Standard PRP-108, including textured, rough sawn, medium density overlay, brushed, grooved and lap siding.

D. **Cementitious Stucco** — Portland cement or synthetic stucco systems with self-furring metal lath or adhesive base coat. Thickness from 3/8 to 3/4 in., depending on system.

E. **Brick Veneer** — Any type on nom 4 in. wide brick veneer. When brick veneer is used, the rating is applicable with exposure on either face. Brick veneer fastened with corrugated metal wall ties attached over sheathing to wood studs with 8d nail per tie: ties spaced not more than each sixth course of brick and max 32 in. OC horizontally. One in. air space provided between brick veneer and sheathing.

F. **Exterior Insulation and Finish System (EIFS)** — Nom 1 in. **Foamed Plastic*** insulation bearing the UL Classification Marking, attached over sheathing and finished with coating system, or Portland cement or synthetic stucco systems, in accordance with manufacturer's instructions. See **Foamed Plastic** (BRFX and CCVW) categories for names of Classified companies.

G. **Siding** — Aluminum or steel siding attached over sheathing to studs.

H. **Fiber-Cement Siding** — Fiber-cement exterior sidings including smooth and patterned panel or lap siding.

I. **Wall and Partition Facings and Accessories*** — Stone veneer is mortar bonded to a lath, scratch coat and water resistant barrier applied to sheathing, installed in accordance with the manufacturers installation instructions, and meeting the requirements of local code agencies.
ELDORADO STONE OPERATIONS L L C — Type Eldorado Stone

J. **Cementitious Backer Units** — 1/2 in. or 5/8 in., min. 32 in. wide - Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum 3/4 in., spaced a max of 8 in. OC. Horizontal joints need not be backed by framing. When Cementitious Backer Units are used, the rating is applicable with exposure on either face. Cementitious Backer Units for use as substrate for exterior finishes such as ceramic tile, slate, marble, natural stone, manufactured stone, thin brick, or Portland cement or synthetic stucco.

NATIONAL GYPSUM CO — Type PermaBase

K. **Building Units** — 1 in., 2 in. or 3 in. thick, 4 ft wide composite exterior cement backer board with rigid insulation, finished with ceramic tile, marble, natural stone, manufactured stone, thin brick, Portland cement or synthetic stucco.

NATIONAL GYPSUM CO — Type PBCI

6A. **Building Units*** — As an alternate to Exterior Facing Item 6 — Insulated steel panels, 12 through 42 in. wide. Attached over sheathing through retainer clips to studs or support steel with No. 14 hex head self-tapping screws located at each joint in the concealed lip of the units and spaced in accordance with the structural design requirements.

KINGSPAN INSULATED PANELS INC — Types KS series with Kingspan PIR core, 3in. nominal thickness; or Designwall 2000 or Designwall 4000D, 2 or 3 in. nominal thickness.

7. **Steel Framing Members*** — (Optional, Not Shown) — Furring Channels and Steel Framing Members as described below:
a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members*** — Used to attach furring channels (Item 7A) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75).

7A. **Steel Framing Members*** — (Optional, Not Shown, As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Two layers of gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members*** — Used to attach furring channels (Item 7Aa) to interior side of studs. Clips spaced 48 in. OC, and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.

KINETICS NOISE CONTROL INC — Type Isomax.

7B. **Steel Framing Members*** — (Optional, Not Shown, As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members*** — Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

PLITEQ INC — Type Genie Clip

7C. **Steel Framing Members*** — (Optional, Not Shown, As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members*** — Used to attach furring channels (Item 7Ca) to studs. Clips spaced 48 in. OC, and secured to studs with 2 in.

coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDDO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

7D. **Steel Framing Members*** — (Optional, Not Shown, As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 7D. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members*** — Used to attach furring channels (Item 7Da) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

7E. **Steel Framing Members*** — (Optional, Not Shown, As an alternate to Item 7) — Resilient channels and Steel Framing Members as described below:

a. **Resilient Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 2.

b. **Steel Framing Members*** — Used to attach resilient channels (Item 7Ea) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.

KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

7F. **Steel Framing Members*** — (Optional, Not Shown, As an alternate to Item 7) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members*** — Used to attach furring channels (Item 7Fa) to studs. Clips spaced maximum 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.

CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

8. **Non-Bearing Wall Partition Intersection** — (Optional) — Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2024-01-29

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product.

UL Solutions permits the reproduction of the material contained in Product iQ subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from Product iQ with permission from UL Solutions" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "©2024 UL LLC."

DESIGN NO. 721.1(3) 2018 IBC

FLOOR/CEILING ASSEMBLY
ASSEMBLY RATING - 75 MINUTE

RESOURCE: TABLE 721.1(3) FIRE-RESISTANCE-RATED CONSTRUCTION
2018 INTERNATIONAL BUILDING CODE

FLOOR OR ROOF CONSTRUCTION	ITEM NUMBER	CEILING CONSTRUCTION	THICKNESS OF FLOOR OR ROOF SLAB (INCHES)				MINIMUM THICKNESS OF CEILING (INCHES)			
			4 hours	3 hours	2 hours	1 hour	4 hours	3 hours	2 hours	1 hour
21. Wood joists, wood I-joists, floor trusses and flat or pitched roof trusses spaced a maximum of 24" o.c. with 1-1/4" Type S or Type W drywall structural panels with exterior glue applied at right angles to top of joist or top chord of trusses with 8d nails. The wood structural panel thickness shall not be less than nominal 1/2" nor less than required by Chapter 23.	21-1.1	Base layer 5/8" Type X gypsum wallboard applied at right angles to joist or truss 24" o.c. with 1-1/4" Type S or Type W drywall screws 12" o.c. Face layer 5/8" Type X gypsum wallboard or veneer base applied at right angles to joist or truss. Face layer Type G drywall screws placed 2" back on either side of face layer and joints, 12" o.c.	-	-	-	Varies	-	-	-	1-1/4

PRINTS ISSUED

09/09/2024 - CITY SUBMISSION

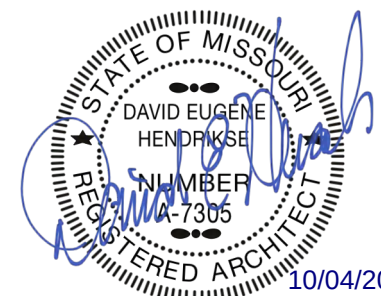
REVISIONS:

1 10/04/2024 RESPONSE TO CITY COMMENTS

rosemann & ASSOCIATES P.C.

ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING
1526 Grand Boulevard
Kansas City, MO 64108-1404
p: 816.472.1448
w: www.rosemann.com
© 2024 Rosemann & Associates, P.C.

DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA



THE VILLAGE AT DISCOVERY -

LOT 5

LEE'S SUMMIT, MO

SHEET TITLE
UL ASSEMBLIES - U356

PROJECT NUMBER: 23102

SHEET NUMBER:

G-213

10/3/2024 4:22:12 PM
Autodesk Docs 202300033
Discovery Park Lee's Summit 202300033
Resummit - Lot 5 (2) 21

A. DESIGN CRITERIA

- Design Codes:
 - International Building Code: IBC 2018
 - Minimum Design Loads for Buildings and Other Structures: ASCE 7-16
 - Design Loads:
 - Dead Loads
 - Wood Floors = 27 psf
 - Composite Deck w/ LW Concrete = 51 psf
 - Addl Load In Residential Units = 15 psf (additive to floor load)
 - To Account For Interior Walls = 36 psf max allowed
 - King Size Brick Veneer = 70 psf max allowed
 - Large Format Masonry Roof = 20 psf plus mechanical equipment shown on roof plan
 - Live Loads (reducible per code UNO)
 - Slab on Grade = 100 psf
 - Residential Units = 40 psf
 - Public Rooms = 100 psf (non-reducible)
 - Corridors (Public) = 100 psf
 - Mechanical/Storage = 125 psf (non-reducible)
 - Balconies = 60 psf (1.5 x Occupancy Served)
 - Typical Roof Handrails = 20 psf
 - 200 lb point load at any point on handrail or on top rail = 50 plf linear load on top rail
 - Elevator Hoist Beam = 5 kips (non-reducible) verify w/ elevator supplier
 - Roof Snow Load
 - Ground Snow Load (p_g) = 20 psf
 - Flat Roof Snow Load (p_f) = 14 psf
 - Balanced Snow Load (p_{bal}) = 20 psf
 - Minimum Snow Load (p_{min}) = 20 psf
 - Snow Exposure Factor (C_e) = 1.0
 - Snow Load Importance (I_s) = 1.0
 - Thermal Factor (C_t) = 1.0
 - Slope Factor (C_s) = 1.0
 - Parapet Snow Drift Load (p_d) = 50 psf
 - Parapet Snow Drift width (w) = 12'-6"
 - Balcony Snow Drift Load (p_d) = 40 psf
 - Balcony Snow Drift width (w) = Full Balcony Depth
 - Rain on Snow Surcharge = 5 psf
 - Wind Load
 - Basic Design Wind Speed, V = 109 mph (3 sec. Gust)
 - ASD Wind Speed, V_{asd} = 85 mph
 - Risk Category = II
 - Wind Exposure = C
 - Internal pressure Coefficient (GC_{pi}) = ± 0.18
 - Components and Cladding (psf):

Zone	A=10R ²	A=50 R ²	A=100 R ²
1	+16/-51	+16/-44	+16/-40
1'	+16/-30	+16/-30	+16/-30
2	+30/-68	+27/-58	+25/-53
3	+30/-68	+27/-58	+25/-53
4	+30/-32	+27/-29	+25/-28
5	+30/-40	+27/-33	+25/-31
 - Earthquake Load
 - Risk Category = II
 - Seismic Importance Factor (I_s) = 1.0
 - Mapped Spectral Response Acceleration Parameters: $S_S = 0.099$ $S_1 = 0.068$
 - Design Spectral Response Acceleration Parameters: $S_{DS} = 0.109$ $S_{D1} = 0.109$
 - Soil Site Class: D
 - Seismic Design Category: B
 - Basic Seismic Force Resisting System(s)
 - Wood Walls with Wood Structural Panels (ASCE 7 Table 12.2-1 Line A.15)
 $R = 6.5$ $O_d \leq 3.0$ $C_d = 0.013$ $C_{d0} = 4.0$
(O_d reduced to 2.5 per ASCE7-16 Table 12.2-1 footnote b)
 - Wood Walls with Panels of other Materials (Gypsum) (ASCE 7 Table 12.2-1 Line A.17)
 $R = 2.0$ $O_d \leq 2.5$ $C_d = 0.043$ $C_{d0} = 2.0$
(O_d reduced to 2.0 per ASCE7-16 Table 12.2-1 footnote b)
 - Ordinary Reinforced Masonry Shear Walls (ASCE 7 Table 12.2-1 Line A.9)
 $R = 2.0$ $O_d \leq 2.5$ $C_d = 0.043$ $C_{d0} = 1.75$
 - Design Base Shear, $V = C_d \times W$ = XXX kips
 - Analysis Procedure = Equivalent Lateral Force Procedure (ASCE 7-16 Chapter 12.8)
 - Rain Load
 - 100 Year 15 min. Rain Intensity (i) = 7.5 in/hr
- Allowable Deflections:

	Total Load	Live/Snow/Wind Load	Absolute Maximum
Floor Joists/Trusses	L/360	L/480	1"
Roof Joists/Trusses	L/240	L/360	1.5"
Wall Framing (flexible finish)		L/360	0.75"
Wall Framing (brittle/brick finish)		L/600	0.5"

Cantilever deflection limits are the more restrictive of 2 x the appropriate L/— limit (e.g. 2L/360 = L/180) or absolute maximum value listed above, measured at the tip of the cantilever U.N.O.
- Soil Properties:
 - Foundation design is based on the following to be considered part of the construction documents:
 - Project Geotechnical Report titled "Geotechnical Report – The Village at Discovery Park Lot 5" prepared by OVN Inc dated March 27, 2024. (Herein known as "Geotechnical Report").
 - Signed letter from Ground Improvement Engineering by Vaughn Rupnow, PE, dated May 31, 2024 confirming Rammed Aggregate Piers as a viable foundation option with **allowable subgrade bearing pressure of 6,000 psf**.
 - It is the owner's decision to proceed with Rammed Aggregate Piers.

B. STRUCTURAL ENGINEERING DESIGN NARRATIVE

- McClure Engineering Company (McClure, MEC) is the Structural Engineer of Record (EOR) responsible for the documentation of structural design criteria, strength and stability of the primary vertical and lateral load-carrying systems in their completed form, and conformance of the structural design to the applicable building codes. These drawings produced by McClure convey the structural engineering design for the project, which includes the following components and systems:
 - Foundations consisting of concrete frost walls, column pedestals, and footings supported by rammed aggregate piers.
 - Slabs on grade.
 - Residential Building Level 2 Walls and Above:
 - Load-bearing wood wall and opening framing.
 - Plywood sheathing on open web wood trusses – Level 3 and Roof
 - Steel framed balconies with non-composite deck.
 - Commercial Building Framing Level 2 Floor and Below:
 - Structural steel framing identified on the drawings.
 - Concrete on composite steel deck – Level 2
 - CMU stair and elevator walls.
 - The lateral force resisting system of the structure consisting of plywood sheathed wood stud walls, gypsum sheathed wood stud walls, masonry shear walls, composite deck diaphragms, and wood sheathed diaphragms.
- The following items are Deferred Submittals. Framing intent and additional requirements for these structural components are provided within these drawings:
 - Structural steel connections – see general notes section "Structural Steel"
 - Cold-formed steel framing (walls and miscellaneous) below Level 2
 - Wood roof/floor trusses – see general notes section "Wood Framing and Fastening" / see S001 and S003 for applicable design criteria
 - All premanufactured canopy and awning framing including connections to the structure.
 - Handrails at balconies – see S001 "Design Criteria" for applicable loading

* Reference section "D. Submittal Requirements." Coordinate requirements of these drawings with those of other design consultant drawings and the Project Specifications.
- The following items are specifically excluded from McClure's design scope as represented on these drawings:
 - Requirements for fire rating of assemblies or fire protection of structural members
 - Global stability of soil mass
 - Any exterior slabs, bollards, curbs, and any enclosures not shown on these drawings
 - Interior non-load-bearing wood framed walls or furring
 - Shoring design, formwork design, temporary bracing, and other means and methods items

C. GENERAL NOTES

- All construction shall conform to the Design Codes in Section "A. Design Criteria," including all applicable standards and documents referenced within those codes.
- Plan and detail notes provided on specific sheets within these drawings supplement information in these General Notes. Always coordinate the requirements of these notes with what is shown within the drawings.
- Unless noted specifically on a plan, all floor plans show framing for the floor indicated and vertical framing (walls, openings, posts, columns) supporting that floor.
- Contract Document Coordination:
 - The drawings contained herein are intended to be utilized in conjunction with other design consultant's drawings (architectural, civil, mechanical, etc.). It is the responsibility of the Contractor to coordinate the requirements of the drawings into their shop drawings and construction.
 - Refer to the Project Specifications issued as part of the contract documents for information supplemental to these drawings.
 - Should conflicts between these drawings and the Specifications exist, the Contractor shall bring them to the attention of the structural engineer for clarification.
- Refer to the architectural, mechanical, electrical, and civil drawings for location and size of block outs, inserts, openings, curbs, bases & pads, and dimensions not shown on these drawings.
- Refer to the architectural drawings for size and location of doors and window openings, exterior wall assemblies, and floor, wall, and roof finishes. Refer to the mechanical and electrical drawings for additional information including locations of mechanical units, generators, etc.
- Omissions or conflicts between various elements of the drawings, notes and details shall be brought to the attention of the structural engineer and resolved before proceeding with the work.
- Use of Drawings in Construction:
 - The Contractor shall verify all dimensions and conditions at the job site before commencing work and shall report any discrepancies to the engineer responsible for the design of that work.
 - Do not use scaled dimensions; use written dimensions or, where no dimension is provided, consult the structural engineer for clarification before proceeding with the work.
 - Where member locations are not specifically dimensioned, members are either located on columns lines or are equally spaced between located members.
- Details and keynotes shown shall be incorporated into the project at all appropriate locations, whether specifically called out or not.
- McClure may provide the contractor with electronic files for their convenience and use in the preparation of shop drawings. These electronic files are not construction documents; the contractor is not relieved of his/her duty to fully comply with the contract documents, including the need to confirm and coordinate all dimensions and details, take field measurements, verify field conditions, and coordinate the contractor's work with that of other contractors for the project.
- Changes During Construction:
 - Openings shall not be cut or otherwise made in any structural member unless that opening is specifically shown in these drawings. The Contractor shall obtain written approval from the structural engineer for any design incorporating additional openings.
 - Support details shown for Architectural, Mechanical, Electrical, and Plumbing equipment as well as elevators are based upon available information from the manufacturer (if any). The Contractor shall coordinate requirements of actual equipment supplied with details and shall provide any additional framing required.
 - The Contractor has the responsibility to notify the structural engineer of any architectural, mechanical, electrical, or plumbing load imposed on the structure that is not documented on the Contract Documents or differs from what is shown. Provide documentation of location, load, size, and anchorage of all loads in excess of 250 lbs.
- Construction Sequence and Methods:
 - These drawings and the related Specifications represent the finished structure and, except where specifically shown, do not indicate the method or means of construction. Loads on the structure during construction shall not exceed 20 psf in addition to the self-weight of the structure. Design Criteria". The Contractor shall supervise and direct the work and shall be solely responsible for all construction means, methods, procedures, techniques, and sequence.
 - The Contractor is responsible for compliance with all applicable job-related safety standards proceeding from governing organizations (e.g. OSHA).
 - It is the responsibility of the Contractor to ensure the stability of the structural elements during construction as a result of means and sequence by providing shoring, bracing, etc. as required.
 - Stability considerations should include all applicable temporary construction and environmental loads per ASCE 37 which may include wind and seismic forces.
 - Temporary bracing shall remain in place until positive connection is made between the floor/roof diaphragm and the lateral force resisting elements. This is a means and methods item.
 - The Contractor may at their discretion employ a Specialty Structural Engineer, licensed in the state where the project is located, for the design of any temporary bracing, lifting, rigging, and shoring.
 - The Contractor shall consider the effects of thermal movements due to hot or cold weather construction and the potential for extreme temperature variations before the structure is closed. Often the contractor will request that basement (retaining) walls be designed to be backfilled prior to floor construction. Walls designed for this loading should be clearly indicated; in general, the assumption should be that walls are not designed for this condition. Delete nested note "1," above when it is not applicable.
 - The Contractor is responsible for the protection and repair of any adjacent existing structures, surfaces, and areas which may be damaged as a result of the work.

D. SUBMITTAL REQUIREMENTS

- Submittal Procedures:
 - The Contractor shall provide all submittals in PDF format unless otherwise requested or indicated in the Project Specifications.
 - All submittals must be reviewed by the Contractor prior to McClure's review. The Contractor is responsible for reviewing each submittal for basic coordination with these drawings and to verify that all the required components of the submittal are incorporated. The submittal must bear the electronic review stamp of the Contractor before McClure will proceed with the review.
 - Incomplete submittals or submittals not meeting the requirements of this section will not be reviewed. McClure will notify the contractor that the submittal is incomplete or unacceptable and that resubmission is required.
 - Submittals requiring engineering calculations for all or a portion of the work are considered incomplete without the sealed calculations and will not be reviewed.
 - Shop Drawings shall be original drawings. Submissions incorporating any portion or reproduction of the contract documents will not be reviewed.
 - Deferred Submittals not meeting the seal requirements of section D.2.b are considered incomplete and will not be reviewed.
 - Resubmittals with comments from a previous review left unaddressed or without any response will not be reviewed.
 - Allow two weeks for review of all submittals unless an agreement for expedited review is made in writing by McClure.
 - McClure's submittal review scope of work includes a single submittal review and one review of the revised submittal if required (two reviews total of the same submittal). Time required for more than two reviews of a submittal is considered an additional service and will be billed hourly. McClure reserves the right to withhold review of a submittal surpassing this allowance until proper billing to the responsible party can be established.
 - Submittals must be returned to the Contractor by McClure bearing a stamp marked "Reviewed No Exception Taken" or "Reviewed With Comments/Exceptions" prior to proceeding with the work. Submittals marked "Reject/Resubmit" must be revised, resubmitted, and approved prior to commencing with the respective scope of work.
- Deferred Submittals:
 - See Section "B. Structural Engineering Design Narrative" for the list of items considered Deferred Submittals.
 - Deferred Submittals shall bear the seal of a professional engineer licensed in the state where the project is located. If the project requires a licensed Structural Engineer (S.E.) as the Engineer of Record according to state laws, the same qualification level applies to the engineer sealing the Deferred Submittals.
 - Deferred Submittal items shall not be installed until the Deferred Submittal documents have been approved by the Building Official.
- Submittal List:
 - Submittals (product data, test records, shop drawings, and/or calculations) are required for the following:

Submittal Name	Product Data	Shop Drawings	Test Records	Engineering Drawings	Engineering Calculations
1. Concrete Mix Designs	X		X		
2. Concrete Break Reports			X		
3. Concrete Reinforcing Layout		X			
4. Concrete Anchor Bolts & Embedded Plates	X	X			
5. Concrete & CMU Anchors (Post-Installed)	X				
6. Post-Installed Anchor Substitutions	X				X
7. Post-Installed Connection Geometry Alteration	X			X	X
8. Structural Steel Framing	X	X			
9. Structural Steel Framing Connections	X	X			X
10. Steel Floor Deck	X	X			
11. Wood Framing Materials	X				
12. Wood Floor & Roof Trusses incl. Reactions			X		X
13. Wood Truss Connections to Supporting Structure			X		X
14. Specialty Wood Fasteners	X				
15. Manufactured Wood Shear Panels	X				
16. Exterior CFS Wall Framing below Podium Level	X	X	X		X
17. Premanufactured Canopies and Awnings	X	X		X	X
18. Masonry Wall Materials	X		X		
19. Aggregate Reinforcing		X		X	
20. Rammed Aggregate Piers		X		X	

- "Product Data" may indicate mill certifications, material data sheets, Evaluation Service Reports (ESRs), etc. See requirements of each material section of the general notes for further information.
- Where "Engineering Drawings" and/or "Engineering Calculations" are indicated, the submittal must comply with the requirements of item "2. Deferred Submittals" above.
- Submittals For Record:
 - The following items impact the structural design and therefore must be submitted to the engineer; however, they do not require review. They will be returned stamped as "Received For Record".
 - Elevator Shop Drawings with Loads to Structure
 - Mechanical Equipment Shop Drawings with Weight
 - Brick & Stone Veneer with Weight

E. CONCRETE

- Reinforced concrete shall have the following minimum 28 day compressive strengths:
 - Interior Slabs on grade, unless noted otherwise = 4000 psi normal weight
 - Foundations and Exterior Slabs on grade = 5000 psi normal weight
 - Drilled piers and pile caps = 5000 psi normal weight
 - Slabs on non-composite metal deck = 4000 psi normal weight
 - Slabs on composite metal deck = 4000 psi lightweight
- All concrete exposed to weather shall have 6% (+/- 1%) air entrainment.
- Submit mix designs for all concrete mixes prior to placement. All submittals shall include the following:
 - Concrete cast against and permanently exposed to earth: 3"
 - Strength test results for trial mixes.
 - Cured unit weight results (for lightweight concrete mixes only).
 - Aggregate source(s) and gradation(s).
 - Product data for cement, fly ash and other cementitious materials.
 - Product data for all admixtures.
- Provide minimum concrete cover for reinforcing bars as follows (unless a greater amount is specified on sections and details):
 - Cast-in-place concrete
 - Concrete cast against and permanently exposed to earth: 3"
 - Concrete exposed to earth and weather (formed)
 - #5 and smaller = 1-1/2"
 - #6 and larger = 2"
 - Concrete not exposed to weather and not in contact with ground:
 - Slabs and walls = 3/4"
 - Beams and columns = 1-1/2"
- Provide construction or control joints in slab on grade as shown on plans. If joint pattern is not shown, provide joints at 10'-0" x 10'-0" and at locations to conform to bay spacing wherever possible (at column centerlines, half bays, third bays, etc.).
- Interface of all slab and beam construction joints shall be roughened with 1/4" amplitude. Surface of construction joints shall be clean and free of laitance. Immediately before new concrete is placed, construction joints shall be wetted and standing water removed.
- Construction joints in walls shall be keyed and placed at locations approved by the Architect and Structural Engineer.
- Provide control joints in all retaining walls at 15 ft to 20 ft intervals.
- Elevator pit walls shall not have control joints as they are part of the lateral system.
- Provide PVC waterstops in all below grade construction joints and at other locations as shown.
- Provide compressible filler and sealant in all slab-on-grade and wall and column interfaces that are not doweled together.
- All column pockets shall be filled with concrete after column is erected.
- Sleeves and openings in slabs not shown on structural drawings or outside the parameters of typical sleeve details are not permitted, unless approved by the Structural Engineer.
- Conduit and pipes embedded in slabs, walls, or foundations shall be no larger in outside dimension than 1/3 the overall member thickness and shall be placed no closer than 3 diameters or widths on center.
- Conduits and pipes shall not be permitted in concrete pilasters or columns.
- See "G. Foundations" section 4 for slab-on-grade requirements.
- Bond break material for slip joints shall be one of the following: 1/8" thick tempered wood particleboard, 1/8" thick high-density plastic elastomeric strips, two layers of 10mil polyethylene sheeting or equivalent.
- Provide concrete housekeeping pads under all mechanical, plumbing, fire protection, and electrical equipment per plans. Pads shall extend beyond equipment a nominal 6" on all sides. Provide reinforcing per details.
- At floor drains, locally slope floor towards drain. See architectural and plumbing drawings for drain locations.
- Foundation walls shall be temporarily braced until positive attachment is made to floor framing per details. This is a means and methods item.

F. REINFORCING FOR CONCRETE

- General
 - All reinforcing steel to be ASTM A615, Grade 60, deformed bars, unless noted otherwise.
 - Any reinforcing to be welded shall be ASTM A706 and welded with E70 electrodes and proper preheat according to AWS D1.4.
 - Alternatively, ASTM A615 reinforcing may be welded with E60 electrodes and proper preheat according to AWS D1.4.
 - E70 electrodes are not permitted for welding rebar.
 - Welded wire fabric shall be ASTM A185. Welded wire fabric shall be in flat sheets.
 - All reinforcing bars to be detailed and placed in accordance with the ACI Manual of Standard Practice for Detailing Reinforced Concrete Structures' specifications.
 - All reinforcing, including dowels, shall be securely tied and cast with the lower member. Placing reinforcing after concrete has been placed will not be permitted.
 - Field bending of reinforcing partially embedded in concrete will not be allowed unless specifically noted on the drawings or approved by the Structural Engineer.
 - All reinforcing bars shall be contact lap spliced or doweled as follows, unless noted otherwise:

Tension Development and Splice Lengths for $f_c = 5,000$ psi									
Bar Size	Development		Class "B" Splice		Standard 90 deg. Hook		Embed Dia	Leg Length	Bend Dia
	Top Bar	Other Bar	Top Bar	Other Bar	Top Bar	Other Bar			
#3	17	13	22	17	6	6	8	2-1/4	
#4	22	17	29	22	6	8	3		
#5	28	22	36	28	8	10	3-3/4		
#6	33	26	43	33	9	12	4-1/2		
#7	49	37	63	49	11	14	5-1/4		
#8	55	43	72	55	12	16	6		
#9	63	48	81	63	14	19	9-1/2		
#10	70	54	91	70	15	22	10-3/4		
#11	78	60	101	78	17	24	12		
#14	94	72	---	---	29	31	18-1/4		
#18	125	96	---	---	39	41	24		

Tension Development and Splice Lengths for $f_c = 4,000$ psi									
Bar Size	Development		Class "B" Splice		Standard 90 deg. Hook		Embed Dia	Leg Length	Bend Dia
	Top Bar	Other Bar	Top Bar	Other Bar	Top Bar	Other Bar			
#3	19	15	24	19	6	6	8	2-1/4	
#4	25	19	32	25	7	8	3		
#5	31	24	40	31	9	10	3-3/4		
#6	37	29	48	37	10	12	4-1/2		
#7	54	42	70	54	14	12	5-1/4		
#8	62	48	80	62	14	16	6		
#9	70	54	91	70	15	19	9-1/2		
#10	79	61	102	79	17	22	10-3/4		
#11	87	67	113	87	19	24	12		
#14	105	81	---	---	32	31	18-1/4		
#18	139	107	---	---	43	41	24		

- Straight development and Class "B" splice lengths shown in above tables are based on uncoated bars assuming center-to-center bar spacing $\geq 3d$, without ties or stirrups, or $\geq 2'd$, with ties or stirrups, and bar clear cover $\geq 1.0'd$. Normal weight concrete as well as no transverse reinforcing are both assumed.
- Standard 90 deg. hook embedment lengths are based on bar side cover $\geq 2.5"$ and bar end cover $\geq 2"$ without ties around hook.
- For special seismic considerations, refer to ACI 318 Code Chapter 21.
- All tension splices shall be Class "B" splices unless noted otherwise on plans.

- All welded wire fabric shall be lapped 12" or 48 wire diameters, whichever is greater.
- Provide (2) #5 x 6'-0" diagonals at all corners of openings and re-entrant corners, unless noted otherwise.
- Dowels between foundation and walls shall be the same grade, size, and spacing as the vertical wall reinforcing, unless noted otherwise.
- Provide corner bars to match longitudinal reinforcing in all footings. Provide (2) corner bars at tee intersections.
- Provide 500 pounds of miscellaneous straight bar reinforcing (#4 & #5) to be used in field for special conditions. Labor for placing same to be included.
- Slabs and Slabs-on-Grade
 - All slabs on grade to be reinforced with 6x6 – W2.9xW2.9 welded wire fabric, unless noted otherwise.
- Walls
 - Provide corner bars in the outside face and at wall intersections to match horizontal wall bars. Use (3) #5 vertical construction rods at corners.
 - Provide #4 at 12" o.c. each way in each face of walls, unless noted otherwise.

PRINTS ISSUED

09/09/2024 PERMIT SUBMITTAL

REVISIONS:

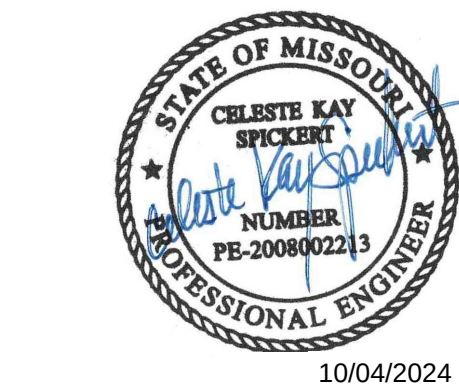
1 10/04/2024 RESPONSE TO CITY COMMENTS



1901 Pennsylvania Drive
Columbia, MO 65202
P 573-314-1568

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistencies, ambiguities, or conflicts contained within the Plans or Specifications.

MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024



THE VILLAGE AT DISCOVERY

LOT 5

1900 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE

GENERAL NOTES

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S001

G. FOUNDATIONS

- Foundation design is based on the following to be considered part of the construction documents:
 - Project Geotechnical Report titled "Geotechnical Report – The Village at Discovery Park Lot 5" prepared by O'WN Inc dated March 27, 2024. (Herein known as "Geotechnical Report")
 - Signed letter from Ground Improvement Engineering by Vaughn Rupnow, PE, dated May 31, 2024 confirming Rammed Aggregate Piers as a viable foundation option with **allowable subgrade bearing pressure of 6,000 psf**.
 - It is the owner's decision to proceed with Rammed Aggregate Piers.
- A geotechnical representative shall be retained on site for all construction activity to verify that all proper requirements have been met to meet the design requirements outlined in the geotechnical report. Representative shall be O'WN Inc or someone familiar with all documents of the geotechnical investigation provided for the project.
- The Contractor shall provide dewatering of excavations from surface water and ground water. Do not place concrete if water is present at base of excavation.
- Slab on Grade
 - Slabs shall be constructed as shown on the plans.
 - Slabs-on-grade shall be placed on subgrade prepared in accordance with the requirements of the geotechnical report and the details in these construction documents.
 - A 10mil minimum vapor retarder shall be installed under all slabs on grade in occupied or conditioned spaces per the drawings. See the geotechnical report for additional information regarding the installation of the vapor retarder.
 - Provide joints at 30 x slab thickness (+/-) in both directions and located to conform to bay spacing wherever possible (at column centerlines, half bays, third bays, etc.). Submit control joint layout for approval to the Structural Engineer.
 - Saw cut control joints shall be done late enough to prevent raveling of the cut edges and early enough to prevent racking of the slab ahead of the saw blade.
 - Plumbing and utilities passing through the slab on grade shall be constructed with flexible fittings to allow for slab movement. The expected slab movement shall be considered up to 2" minimum for fittings.
 - Concrete slab to be cured according to ACI Standards. Concrete slab cure to be compatible with any sealer, grout, or adhesive that may be used in the floor later.
 - Locally slope floor towards any floor drains. See architectural and plumbing drawings for drain locations.
- Geotechnical Testing Agency Requirements
 - If the geotechnical representative on site takes exception to anything in the Geotechnical Report and requires additional field investigation to clarify those exceptions, the cost of such investigation shall be included in the additional fee for field quality control and testing and identified as such. All other exceptions shall be documented and approved by the geotechnical engineer.
 - The geotechnical representative must have read all documents pertaining to the geotechnical report for the project and understood and accepted the criteria contained in the report.
 - The geotechnical representative must understand and be able to make decisions affecting the work for field observations and conditions described in the report during construction. The representative must be capable of advising the owner or contractor for procedures regarding, but not limited to: sub-grade preparation, dewatering activities, and other construction considerations.

H. POST-INSTALLED ANCHORS TO CONCRETE AND MASONRY

- Post installed anchors shall be expansion, adhesive, or screw anchors as indicated in the details, unless noted otherwise. Only use the anchor type indicated. All anchors on the project of each type must be by the same manufacturer, see below for allowable substitutions.
 - Expansion anchors:
 - Concrete:
 - Hilti Kwik Bolt TZ (ICC-ES ESR1917).
 - Simpson Strong-Bolt Z (ICC-ES ESR3037).
 - DeWalt Power-Stud+ SD2 (ICC-ES ESR2502).
 - Grout-filled Concrete Masonry:
 - Hilti Kwik Bolt 3 (ICC-ES ESR1385).
 - Simpson Strong-Bolt Z (UES ER0240).
 - DeWalt Power-Stud+ SD1 (ICC-ES ESR2968).
 - Adhesive anchors (threaded rods shall be ASTM A193 B7 for all anchors):
 - Concrete:
 - Hilti HIT RE 500-SD (ICC-ES ESR2322) or Hilti HIT-HY 200 (ICC-ES ESR3187).
 - Simpson AT-XP (UES ER263), SET-XP (ICC-ES ESR2508) or ET-HP (ICC-ES ESR3372).
 - DeWalt Pure 110+ (ICC-ES ESR3298), PE1000+ (ICC-ES ESR2583), Pure 50+ (ICC-ES ESR3576), AC 200+ (ICC-ES ESR4027), or AC100+ Gold (ICC-ES ESR2582).
 - Solid grouted concrete masonry:
 - Hilti HIT-HY 70 (ICC-ES ESR3342).
 - Simpson AT-XP (UES ER0281), SET-XP (UES ER0265) or ET-HP (UES ER0241).
 - DeWalt AC100+ Gold (ICC-ES ESR3200).
 - Hollow concrete or multi-wythe clay masonry:
 - Hilti HIT-HY 70 with screen tubes (ICC-ES ESR3342).
 - Simpson SET-XP (UES ER0265).
 - DeWalt AC100+ Gold with screen tubes (ICC-ES ESR3200).
 - Screw anchors:
 - Concrete:
 - Hilti Kwik HUS EZ (ICC-ES ESR3027).
 - Simpson Titen HD (ICC-ES ESR2713).
 - DeWalt Screw-Bolt+ (ICC-ES ESR2526).
 - Grout-filled concrete masonry:
 - Hilti Kwik HUS EZ (ICC-ES ESR3056).
 - Simpson Titen HD (ICC-ES ESR1056).
 - DeWalt Screw-Bolt+ (ICC-ES ESR1678).
- Post-installed anchors shall only be used where specified in the drawings. The Contractor shall obtain approval from the engineer prior to using post-installed anchors for missing or misplaced cast-in-place anchors.
- All personnel installing anchors shall be trained and certified by the anchoring system manufacturer or by ACI. Contractor shall submit current certifications for all personnel. ACI certification is required for all personnel installing adhesive anchors in a horizontal or overhead conditions. If a failure occurs at any time during testing or construction, personnel shall be retrained and recertified.
- Installation:
 - Do not cut existing reinforcing.
 - The hole through the supported steel member shall be 1/16" larger in diameter (1/8" for screw anchors) than the anchor unless noted otherwise. Use plate washers with a standard size hole welded to steel members where oversized holes must be used.
 - Holes shall be drilled per the manufacturer's written instructions as outlined in the ESR.
 - Where applicable, installation shall follow cleaning procedure indicated in the ESR. Holes shall be made with a hammer drill. Use of a core drill is not allowed.
- Special inspection shall be provided for all post installed anchors as required by the building code and/or ICC-ES report. Written special inspection reports shall be submitted to the registered design professional in responsible charge by the special inspector. The reports shall record and report the following as a minimum:
 - One of every ten anchors installed by each technician in locations listed below shall be randomly tested in direct tension. At least one anchor shall be tested on each day that anchors are installed.
 - Test anchors in the following locations:
 - Shear wall hold down anchors.
 - Anchors supporting dead or live loads in tension.
 - Test anchor to twice the allowable tension load as provided in the ESR. Test load shall not exceed 80 percent of the yield strength of the anchor ($0.8 \times A_{se} \times f_{ut}$).
 - Post-installed anchors shall not be tested using a torque wrench.
 - If any anchor fails quality control testing, all anchors of the same type shall be randomly tested until (10) consecutive anchors pass. Resume normal frequency after this with approval of the engineer. The failed anchor(s) shall be removed and the affected area patched per engineer's direction. Consult the engineer for anchor replacement instructions. The cost for additional work and testing required due to anchor failure is the responsibility of the installing contractor.
 - Prior to and during installation of anchors, inspection and report shall include:
 - Installer shall have reviewed manufacturer's ESR report and written installation procedures and have been certified by the manufacturer or ACI.
 - General concrete or CMU block conditions (cracked or un-cracked, wet or dry, grouted or hollow, etc).
 - Whether manufacture's written procedures for preparation of hole were followed. Indicate if hole is wet or dry.
 - Whether hole was made with a hammer drill
 - Whether manufacture's written procedures for anchor installation were followed.
 - Embedment depth and concrete or block thickness.
 - Anchor diameter, length, and type.
 - After installing anchors, inspection and report shall include:
 - All test locations.
 - Anchor size and/or type.
 - Applied load, loading procedure, load increments and rate of loading.
 - Mode of failure.
 - Photographs of test equipment and typical failures.
- Substitution requests for products other than those listed above shall be submitted to the engineer with calculations that are prepared and sealed by a registered structural engineer at least two weeks prior to scheduled installation. Calculations shall demonstrate that the substituted product will achieve an equivalent capacity using the appropriate design procedure required by the building code. Product ICC-ES code reports shall be included with the submittal package.

I. STRUCTURAL STEEL

- Materials:
 - Materials shall conform to the following, unless noted otherwise.
 - Rolled WF shapes ASTM A992, Fy = 50ksi
 - Plates and angles ASTM A572-50
 - Channels ASTM A36
 - HSS: Rectangular ASTM A500, Grade C
 - HSS: Round ASTM A500, Grade C
 - Bolts ASTM F3125
 - All bolts shall be Grade A325 or F1852, UNO
 - Bolts designed as "A490" shall be Grade A490 or F2280
 - Nuts ASTM A563 DH or A194
 - Washers ASTM F436
 - Anchor Bolts ASTM F1554 Grade 36, UNO
 - Threaded Rod ASTM A36
 - Studs ASTM A108, Type B Nelson headed shear stud connectors or equal.
 - Electrodes Matching weld metal, 70 ksi minimum strength.
 - Finishes
 - Prepare all surfaces that will be exposed in accordance with SSPC SP3.
 - All exterior steel components exposed to view or weather shall be galvanized in accordance with ASTM A123.
 - All exterior welded connections shall be cold galvanized in accordance with ASTM A780.
- Fabricator:
 - Steel fabricator shall be AISC Certified.
 - Structural members shall be detailed, fabricated, and erected in accordance with the latest edition AISC Code of Standard Practice.
 - Structural steel fabrication and erection drawings must be submitted to the engineer for review and approval prior to fabrication.
 - Fabricator shall engage a professional engineer registered in the state of the project for the design and detailing of:
 - Steel connections.
 - Temporary bracing.
 - Steel deck (for continuity and load transfer).
- Connections:
 - The contractor has the option to use bolted or welded connections. Any connections not specifically detailed on the drawings shall be designed by a professional structural engineer licensed in the project state and retained by the fabricator. In general, any connections shown on the drawings are schematic and are intended to show only the relative relationship of the connected members.
 - Structural design calculations for all beam and bracing connections shall be submitted to the engineer prior to fabrication and include the following (as a minimum):
 - All plate dimensions and grades (minimum plate thickness shall be 3/8").
 - All weld sizes, lengths, pitches and returns.
 - Number and type of bolts.
 - Connection design forces:
 - Beam shear connections shall be designed for the reactions shown in the "Minimum Design Reactions Schedule". Any design reactions exceeding the schedule are indicated on the plans. Forces shown are envelope reactions based on ASD load combinations.
 - Connections indicated on the drawings as moment-resisting shall be designed for the moment shown. If moment is not indicated on the drawings, connection shall be designed to develop the full capacity of the member.
 - Columns have not been checked for local effects at connections. Fabricator shall verify if stiffener or web doubler plates are required and provide as necessary. Column size may also be increased with approval of the Structural Engineer.
 - Connection loads indicated on the drawings include compensation for Code permitted stress increases and load reductions for connection design.
 - Bolted Connections:
 - Minimum bolt diameter shall be 3/4".
 - Slip critical connections shall be used for bracing members, moment-resisting connections, cantilevers, and as indicated on the drawings. Standard oversized and long-slotted holes are permitted for friction-type connections.
 - All non-slip-critical connections shall be typical bearing type. Oversized or slotted holes are not permitted unless indicated on the drawings.
 - The fabricator is responsible for verifying the tensile capacity of axially loaded members with the presence of bolt holes. Increase member size; add plates (etc) as required.
 - Welded Connections:
 - All fillet welds shall be sized according to AISC minimums, but never less than 3/16" (UNO).
 - All welds shall be performed in accordance with the latest edition of the AWS Structural Welding Code.
- Erection:
 - All structural steel to be fabricated and erected in accordance with latest AISC specifications.
 - It is the responsibility of the contractor to ensure that the structure is maintained in a safe, stable configuration at all times.
 - Any shoring required shall be submitted with engineering calculations for approval.
 - Splicing of steel members not specifically shown on the drawings is prohibited without prior approval from the engineer.
 - All beams shall be installed with the mill camber up.
- Steel Lintels:
 - Loose lintels for brick masonry veneer at all openings shall be the following, one angle per 4" wythe of masonry, long leg vertical:
 - L 3-1/2" x 3-1/2" x 5/16" for spans less than 9'-0"
 - L 5" x 3-1/2" x 5/16" for spans between 9'-0" and 7'-11"
 - L 6" x 3-1/2" x 5/16" for spans between 8'-0" and 9'-7"
 - L 7" x 4" x 3/8" for spans between 9'-8" and 11'-10"
 - Lintel sizes are based on 36 psf long brick weight with 8'-0" max height of brick above the lintel.
 - Loose lintels for large format masonry at all openings shall be the following:
 - L 6" x 6" x 3/8" for spans less than 6'-6"
 - L 6" x 6" x 1/2" for spans between 6'-6" and 9'-3"
 - Large format masonry sizes are based on 70 psf masonry weight with 10'-0" max height of masonry above lintel
 - Lintels shall bear 8" minimum each end.
 - Lintels shall be galvanized.
 - All double angle lintels back-to-back shall be bolted at 32" o.c. maximum spacing, with 5/8" diameter A307 bolts, a minimum of two bolts per span.
 - See architectural and mechanical drawings for opening sizes and locations.

MINIMUM DESIGN REACTION SCHEDULE (FOR BEAM REACTIONS NOT SHOWN ON PLANS OR DETAILS)			
Beam	Min. No. of Bolts	Shear Tab to Column	Double Angle to Beam
W8	2	12.4 Kips	12.4 Kips
W10	2	13.8 Kips	13.8 Kips
W12	3	23.0 Kips	23.0 Kips
W14	3	26.4 Kips	26.4 Kips
W16	4	39.0 Kips	39.0 Kips
W18	5	53.0 Kips	59.1 Kips
W21	6	63.6 Kips	83.6 Kips
W24	7	74.2 Kips	110.6 Kips
W27	7	74.2 Kips	128.6 Kips
W30	8	84.8 Kips	151.3 Kips
W33	9	95.4 Kips	185.0 Kips
W36	10	103.0 Kips	205.0 Kips

Note: Unless reactions are noted on plan, beam connections shall be designed for these reactions & provided with these minimum bolt quantities. Fabricator shall provide shop drawings indicating the provided capacity of all typical connections.
Table assumptions:
- Least web thickness for beam depth series
- 3/8" 36 ksi single shear plate or 9/16" 36 ksi double angles
- 3/4" dia. A325 bolts with threads included
- Standard size bolt holes
- Beam coped top & bottom
- Distance from end of beam to center of bolt holes = 1 1/2" minimum
- Distance from top of coped web to center of first bolt hole = 1 1/4" min.

PRINTS ISSUED

09/09/2024 PERMIT SUBMITTAL

REVISIONS:

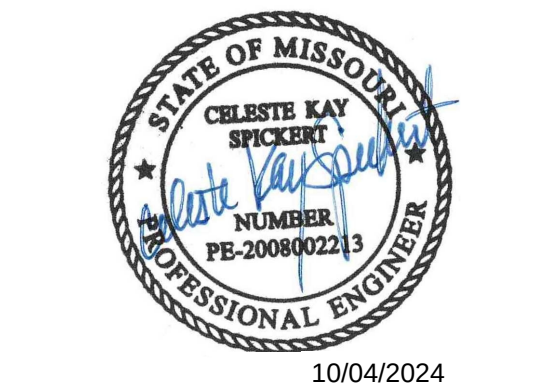
1 10/04/2024 RESPONSE TO CITY COMMENTS



1901 Pennsylvania Drive
Columbia, MO 65202
P 573-814-1568

NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistencies, ambiguities, or conflicts contained within the Plans or Specifications.

MISSOURI CERTIFICATE OF AUTHORITY
NO. E-2006023253
EXPIRES: DECEMBER 31, 2024



THE VILLAGE AT DISCOVERY

LOT 5

1900 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE

GENERAL NOTES

PROJECT NUMBER: 2023000333

SHEET NUMBER:

S002

STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS

Project Name: Discovery Park Lee's Summit Lot Address: 1900 NE Discovery Ave. Lee's Summit, MO 64064

5

1. This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspector to be retained for conducting these...

2. The Special Inspector shall keep records of all inspections and shall furnish inspection reports to the Building Official and the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

3. Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible...

4. A Final Report of Special Inspections documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use an...

5. Job site safety and means and methods of construction are solely the responsibility of the Contractor. This Statement of Special Inspections includes the following building systems marked with an "x":

x Soils

x Cast-In-Place Foundations Elements

o Helical Pile Foundations

x Concrete Construction

o Masonry Construction - Level 2-3

x Steel Construction Other than Structural Steel

o Spray Fire-Resistant Materials

o Exterior Insulation and Finish System (EIFS)

o Smoke Control

o Seismic Resistance

x Rammed Aggregate Piers

o Driven Deep Foundation Elements

o Cast-In-Place Deep Foundation Elements

x Masonry Construction - Level 1

x Structural Steel Construction

o Wood Construction

o Mastic and Intumescent Fire-Resistant Coatings

o Fire-Resistant Penetrations and Joints

o Wind Resistance

1

6. The following components are wind-resisting components or part of the main wind-force resisting system and are subject to special inspections in accordance with the Special Inspection Schedule - Wind Resistance:

7. Special Inspection Agency:

Special Inspection Schedule: Fabricators				
Verification And Inspection Task	Applicable To This Project?	Frequency		
		Continuous	Periodic	
1. Verify fabrication and implementation procedures:				
a. Steel Construction	X	-		X
b. Concrete Construction (including rebar fabrication)	X	-		X
c. Masonry Construction	X	-		X
d. Wood Construction	X	-		X
e. Cold Formed Metal Construction	-	-		X
f. Other Construction	-	-		X

Special Inspection Schedule: Soils			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	X	-	X
2. Verify excavations are extended to proper depth and have reached proper material.	X	-	X
3. Perform classification and testing of compacted fill materials.	X	-	X
4. Verify use of proper materials, densities and lift thickness during placement and compaction of compacted fill.	X	X	-
5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	X	-	X

Special Inspection Schedule: Rammed Aggregate Piers			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Observed installation operations and maintain complete and accurate records for each element.	X	X	-
2. Verify placement locations, pre-auger diameter and soil conditions encountered during drilling (if applicable), pier lengths, and planned and actual pier elevations at the top and bottom of the pier.	X	X	-
3. Document average lift thickness of each pier, volume of aggregate used in each pier, and any unusual conditions encountered including cave-in contamination.	X	X	-
4. Perform modulus test, bottom stabilization test for Geopier replacement elements, and crowd stabilization test for Geopier replacement elements.	X	X	-
5. Verify type and size of densification equipment used and rammer or compaction energy.	X	X	-

Special Inspection Schedule: Cast-In-Place Foundation Elements			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Special Inspections and verifications for concrete foundation construction in accordance with the Special Inspection Schedule: Cast-In-Place Concrete for the following foundation elements:			
a. Isolated spread concrete footings.	-	-	X
b. Continuous concrete Grade Beams.	-	-	-
c. Concrete foundation walls.	X	X	-

Special Inspection Schedule: Concrete Construction			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Inspect reinforcing steel, including prestressing tendons and placement.	X	-	X
2. Inspect reinforcing steel welding in accordance with the Special Inspection Schedule: Steel Construction (other than Item 3).	X	-	-
3. Inspect anchors cast in concrete where allowable loads have been increased or where strength design is used.	X	-	X
4. Inspect anchors post-installed in hardened concrete members.	X	-	X
5. Verify use of required design mix.	X	-	X
6. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and record the temperature of the concrete.	X	X	-
7. Inspect concrete and shotcrete placement for proper application techniques.	X	X	-
8. Inspect for maintenance of specified curing temperature and techniques.	X	-	X
9. Inspection of Prestressed Concrete:			
a. Observe application of prestressing forces.	-	X	-
b. Observe grouting of bonded prestressing tendons in the seismic force resisting system.	-	X	-
10. Inspect erection of precast concrete members.	-	-	X
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
12. Inspect formwork for shape, location, and dimensions of the concrete member being formed.	X	-	X

Special Inspection Schedule: Masonry Construction - Level 1			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Compliance with required inspection provisions of the Construction Documents and the approved submittals shall be verified.	X	-	X
2. Verify fm and faac prior to construction except where specifically exempted by the building code.	X	-	X
3. Verify slump flow and VSI as delivered to the site for self-consolidating grout.	X	X	-
4. As masonry construction begins, the following shall be verified to ensure compliance:			
a. Proportions of site-prepared mortar.	X	-	X
b. Construction of mortar joints.	X	-	X
c. Location of reinforcement, connectors, and anchorages.	X	-	X
d. Prestressing technique.	-	-	X
e. Grade and size of prestressing tendons and anchorages.	-	-	X
5. During construction, the inspection program shall verify:			
a. Size and location of structural elements.	X	-	X
b. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction.	X	-	X
c. Specified size, grade, and type of reinforcement, anchor bolts, and anchorages.	X	-	X
d. Welding of reinforcing bars.	-	X	-
e. Preparation, construction, and protection of masonry during cold weather (temperature < 40°F) or hot weather (temperature > 90°F).	X	-	X
f. Application and measurement of prestressing force.	-	X	-
6. Prior to grouting, the following shall be verified to ensure compliance:			
a. Grout space is clean.	X	-	X
b. Placement of reinforcement, connectors, prestressing tendons, and anchorages.	X	-	X
c. Proportions of site-prepared grout and prestressing grout for bonded...	X	-	X
d. Construction of mortar joints.	X	-	X
7. Grout placement shall be verified to ensure compliance with Building Code and Construction Document provisions.			
a. Grouting of prestressing bonded tendons.	-	X	-
8. Preparation of any required grout specimens, mortar specimens, and/or prisms shall be observed.	X	-	X

Special Inspection Schedule: Structural Steel Construction			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Material verification of high-strength bolts, nuts and washers:			
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	X	-	X
b. Manufacturer's certificate of compliance required.	X	-	X
2. Inspection of high-strength bolting:			
a. Snug-tight joints.	X	-	X
b. Pretensioned and slip-critical joints using turn-of-nut with match marking, twist-off bolt, or direct tension indicator methods of installation.	-	-	X
c. Pretensioned and slip-critical joints using turn-of-nut without match marking or calibrated wrench methods of installation.	-	X	-
3. Material verification of structural steel:			
a. Identification markings to conform to ASTM standards specified in the approved Construction Documents and AISC 360.	X	-	X
b. Manufacturer's certified test reports.	X	-	X
4. Material verification of weld filler materials:			
a. Identification markings to conform to AWS specification in the approved Construction Documents.	X	-	X
b. Manufacturer's certificate of compliance required.	X	-	X
5. Inspection of welding, structural steel:			
a. Complete and partial penetration groove welds.	X	X	-
b. Multi-pass fillet welds.	X	X	-
c. Single-pass fillet welds > 5/16".	X	X	-
d. Single-pass fillet welds < 5/16".	X	-	X
6. Inspection of steel frame joint details for compliance with approved Construction Documents:			
a. Details such as bracing and stiffening.	X	-	X
b. Member locations.	X	-	X
c. Application of joint details at each connection.	X	-	X

Shear Wall Schedule					
Shear Wall Label	Level	Sheathing/Fastener Layout	Post	Hold-Down	Base Connection
SW1	Level 3	(1) Sided, Wood Structural Panels - Sheathing - 15/32" Thick, 8d Nail, 6" Edge fastening Unblocked	(2) 2x6	LSTA30 w/ (22) 0.148"x2-12" nails	(2) 16d Nails @ 16" o.c.
	Level 2	(1) Sided, Wood Structural Panels - Sheathing - 15/32" Thick, 8d Nail, 6" Edge fastening Blocked	(2) 2x6	HTT4 w/ (18) 0.148Øx1-1/2" & 5/8"Ø Anchor Rod w /ATS-SBC5H	1/2"Ø KH-EZ w/ 2-1/8" embed @ 48" o.c.
SW2	Level 3	(2) Sided, Gypsum Wallboard - 5/8" Thick, 6d Nail, 7" Edge Fastening, 16"O.C. Blocked	(2) 2x6	MST37 w/ (20) 0.162x2-1/2" nails	(2) 16d Nails @ 16" o.c.
	Level 2	(2) Sided, Gypsum Wallboard - 5/8" Thick, 6d Nail, 4" Edge Fastening, 16"O.C. Blocked	(2) 2x6	HTT4 w/ (18) 0.148Øx1-1/2" & 5/8"Ø Anchor Rod w /ATS-SBC5H	1/2"Ø KH-EZ w/ 2-1/8" embed @ 32" o.c.
SW3	Level 3	(2) Sided, Gypsum Wallboard - 5/8" Thick, 6d Nail, 7" Edge Fastening, 16" O.C. Blocked	(2) 2x4 (x2)	MSTA 49 w/ (26) 0.148"x2-12" nails	(2) 16d Nails @ 16" o.c.
	Level 2	(2) Sided, Gypsum Wallboard - 5/8" Thick, 6d Nail, 4" Edge Fastening, 16" O.C. Blocked	(2) 2x4 (x2)	HTT4 w/ (18) 0.148Øx1-1/2" & 5/8"Ø Anchor Rod w /ATS-SBC5H	1/2"Ø KH-EZ w/ 2-1/8" embed @ 36" o.c.
SW4	Level 3	(2) Sided, Gypsum Wallboard - 5/8" Thick, 6d Nail, 4" Edge Fastening, 16" O.C. Blocked	(2) 2x4 (x2)	MSTA48 w/ (32) 0.162"x2-12" nails	(2) 16d Nails @ 8" o.c.
	Level 2	(2) Sided, Wood Structural Panels - Sheathing - 15/32" Thick, 8d Nail, 6" Edge fastening Blocked	(2) 2x4 (x2)	HTT5 w/ (26) 0.162"Øx2-1/2" & 5/8"Ø Anchor Rod w /ATS-SBC5H	1/2"Ø KH-EZ w/ 2-1/8" embed @ 24" o.c.
SW5	Level 3	(2) Sided, Gypsum Wallboard - 5/8" Thick, No. 6 Screw, 8/12 Edge Fastening, 16" O.C. Unblocked	(2) 2x6	LSTA9 w/ (8) 0.148"x2-12" nails	(2) 16d Nails @ 16" o.c.
	Level 2	(2) Sided, Gypsum Wallboard - 5/8" Thick, No. 6 Screw, 8/12 Edge Fastening, 16" O.C. Unblocked	(2) 2x6	HTT4 w/ (18) 0.148Øx1-1/2" & 5/8"Ø Anchor Rod w /ATS-SBC5H	1/2"Ø KH-EZ w/ 2-1/8" embed @ 48" o.c.
SW6	Level 3	(1) Sided, Wood Structural Panels - Sheathing - 19/32" Thick, 10d Nail, 6" Edge fastening Blocked	(2) 2x6	MSTA60 w/ (34) 0.162"x2-12" nails	(2) Simpson SDS 25300 @ 8" o.c.
	Level 2	(1) Sided, Wood Structural Panels - Sheathing - 15/32" Thick, 10d Nail, 3" Edge fastening	(2) 2x6	HDQ8-SDS3 w/ (20) 1/4"Øx3" SDS screws & 7/8"Ø Anchor Rod w/ATS-SBC7	1/2"Ø KH-EZ w/ 2-1/8" embed @ 16" o.c.
SW7	Level 3	(2) Sided, Wood Structural Panels - Sheathing - 15/32" Thick, 8d Nail, 6" Edge fastening	(2) 2x4 (x2)	MSTA48 w/ (32) 0.162"x2-12" nails	(2) 16d Nails @ 8" o.c.
	Level 2	(2) Sided, Wood Structural Panels - Sheathing - 15/32" Thick, 8d Nail, 6" Edge fastening	(2) 2x4 (x2)	HTT5 w/ (26) 0.162"Øx2-1/2" & 5/8"Ø Anchor Rod w/ ATS-SBC5H	1/2"Ø KH-EZ w/ 2-1/8" embed @ 16" o.c.
SW8	Level 3	(2) Sided, Gypsum Wallboard - 5/8" Thick, 6d Nail, 7" Edge Fastening, 16" O.C. Blocked	(2) 2x6	MSTA37 w/ (22) 0.162"x2-12" nails	(2) 16d Nails @ 10" o.c.
	Level 2	(2) Sided, Wood Structural Panels - Sheathing - 15/32" Thick, 10d Nail, 6" Edge fastening	(2) 2x6	HTT4 w/ (18) 0.148Øx1-1/2" & 5/8"Ø Anchor Rod w/ ATS-SBC5H	1/2"Ø KH-EZ w/ 2-1/8" embed @ 24" o.c.

Notes:

- See sheets S520 & S521 for shear wall framing details.
- Floor to floor strap ties at top of wall shall match that of the floor above.
- All hold-downs and strap ties are Simpson Strong-Tie brand, U.N.O.
- All drag trusses shall be connected to shear walls per detail 2/S540.
- Provide floor to floor strapping on the same side as the OSB sheathing.
- See 3/S551 for shear wall floor-to-floor strap tie detail.
- Minimum spacing of Level 2 KH-EZ bottom plate fasteners = 4"

PRINTS ISSUED

09/09/2024 PERMIT SUBMITTAL

REVISIONS:

1 10/04/2024 RESPONSE TO CITY COMMENTS

McCLURE™

1901 Pennsylvania Drive
Columbia, MO 65202
P 573-814-1568

NOTICE:

McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistencies, ambiguities, or conflicts contained within the Plans or Specifications.

MISSOURI CERTIFICATE OF AUTHORITY

NO. E-2006023253

EXPIRES: DECEMBER 31, 2024

STATE OF MISSOURI

CELESTE KAY

SPECKERT

NUMBER

PE-2008002213

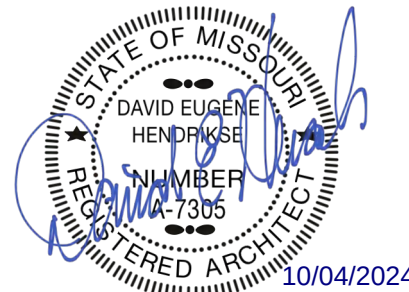
PROFESSIONAL ENGINEER

10/04/2024

THE VILLAGE AT DISCOVERY
LOT 5
1900 NE DISCOVERY AVE.
LEE'S SUMMIT, MO 64064

SHEET TITLE
SHEAR WALL SCHEDULE AND
SCHEDULE OF STRUCTURAL
SPECIAL INSPECTIONS
PROJECT NUMBER: 2023000333
SHEET NUMBER:

S004



THE VILLAGE AT DISCOVERY -
LOT 5
LEE'S SUMMIT, MO

SHEET TITLE
THIRD FLOOR PLAN

PROJECT NUMBER: 23102

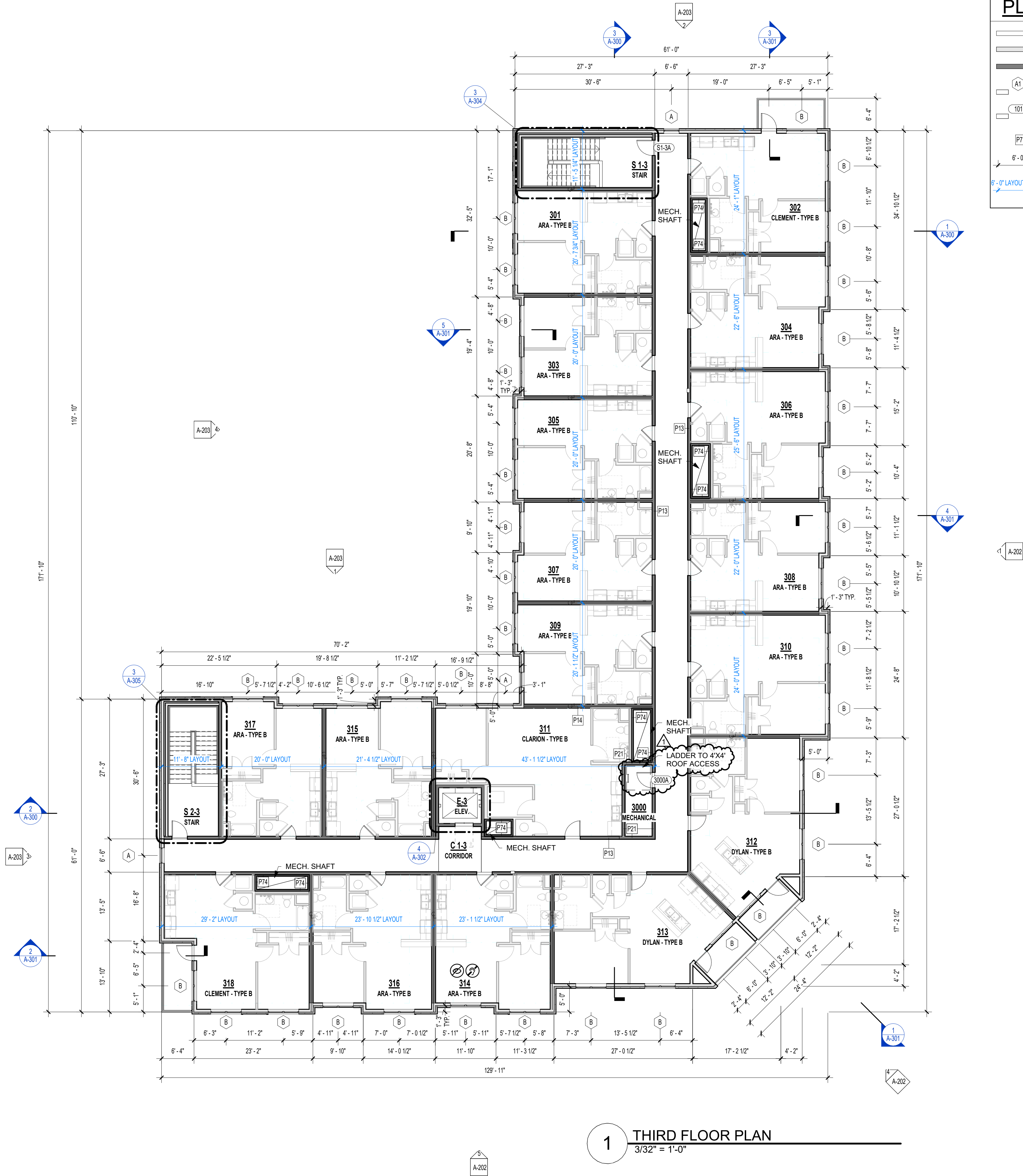
SHEET NUMBER:

A-103

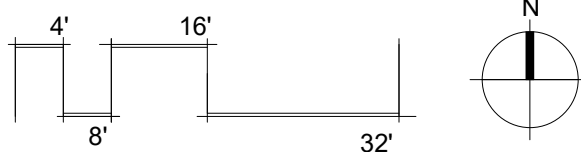
PLAN LEGEND

- PARTIAL HEIGHT PARTITION
- NON-RATED PARTITION; SEE ASSEMBLIES
- 1 HR RATED PARTITION; SEE ASSEMBLIES
- WINDOW TYPE; SEE WINDOW SCHEDULE
- DOOR TYPE; SEE DOOR SCHEDULE
- PARTITION TYPE; SEE ASSEMBLIES
- FRAMING DIMENSIONS
- LAYOUT LINE DIMENSIONS

INTERIOR SHAFT ASSEMBLIES (METAL-RATED)	
P74	METAL 2 1/2" C-H STUD - 1HR RATED SHAFT - INTERIOR (1) LAYER 5/8" TYPE "X" GYPSUM BOARD PER UL 2-1/2" C-H STUDS SPACED 24" O.C. (1) LAYER 1" SHAFT WALL LINER
INTERIOR PARTITION ASSEMBLIES - (METAL - NON RATED)	
P54	METAL 7/8" FURRING / HAT CHANNEL - NON-RATED FURRING - INTERIOR (1) LAYER 5/8" TYPE "X" GYPSUM BOARD 7/8" FURRING / HAT CHANNEL, SPACED 16" O.C. (GAUGE DETERMINED BY WALL HEIGHT)
EXTERIOR PARTITION ASSEMBLIES - WOOD - NON RATED	
P30	WOOD 2x6 STUD - NON RATED - EXTERIOR - EXTERIOR FINISH SYSTEM PER ELEVATIONS - WEATHER RESISTANT BARRIER, PER SPECIFICATIONS (1) LAYER SHEATHING PER STRUCT. DWGS. 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS. 5-1/2" KRAFT OR FOIL FACED BATT INSULATION IN STUD CAVITY, R-VALUE PER DRAWINGS/SPECIFICATIONS TO MEET IECC. (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
P36	WOOD 2x6 STUD - NON-RATED EXTERIOR - EXTERIOR FINISH SYSTEM PER ELEVATIONS - WEATHER RESISTANT BARRIER, PER SPECIFICATIONS (1) LAYER SHEATHING PER STRUCT. DWGS. 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS. (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
P36.1	WOOD 2x6 STUD - NON-RATED EXTERIOR - EXTERIOR FINISH SYSTEM PER ELEVATIONS - WEATHER RESISTANT BARRIER, PER SPECIFICATIONS (1) LAYER SHEATHING PER STRUCT. DWGS. 2x4 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS. 1" AIR GAP 2x4 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS. (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
INTERIOR BARRIER ASSEMBLIES - WOOD - 1 HR RATED	
P21	WOOD 2x6 STUD - 1HR BARRIER - INTERIOR SOUND DAMPENING (1) LAYER 5/8" TYPE "X" GYPSUM BOARD 25 MSG GALVANIZED RESILIENT CHANNEL (1/2" DEPTH), SPACED 24" O.C. 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS. 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
P21.1	WOOD 2x6 STUD - 1HR BARRIER - INTERIOR SOUND DAMPENING (1) LAYER 5/8" TYPE "X" GYPSUM BOARD 25 MSG GALVANIZED RESILIENT CHANNEL (7/8" DEPTH), SPACED 24" O.C. 2x6 WOOD STUDS SPACED 16" O.C. MAX OR PER STRUCT. DWGS. 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
INTERIOR PARTITION ASSEMBLIES - WOOD - 1 HR RATED	
P10	WOOD 2x4 STUD - 1HR PARTITION - INTERIOR (1) LAYER 5/8" TYPE "X" GYPSUM BOARD 2x4 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS. 3-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
P11	WOOD 2x6 STUD - 1HR PARTITION - INTERIOR (1) LAYER 5/8" TYPE "X" GYPSUM BOARD 2x6 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS. 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
P13	WOOD 2x6 STUD - 1HR PARTITION - INTERIOR SOUND DAMPENING (1) LAYER 5/8" TYPE "X" GYPSUM BOARD 25 MSG GALVANIZED STEEL RESILIENT CHANNEL, 24" O.C. 2x6 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS. 5-1/2" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
P14	WOOD DOUBLE 2x4 STUD - 1HR PARTITION - INTERIOR (1) LAYER 5/8" TYPE "X" GYPSUM BOARD 2x4 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS. 3 1/2" FRICTION FIT BATT INSULATION IN STUD CAVITY 1" AIR GAP 2x4 WOOD STUDS SPACED 16" O.C. MAX. OR PER STRUCT. DWGS. 3 1/2" FRICTION FIT BATT INSULATION IN STUD CAVITY (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
INTERIOR PARTITION ASSEMBLIES - WOOD - NON RATED	
P1	WOOD 2x4 STUD - NON-RATED PARTITION - INTERIOR (1) LAYER 5/8" TYPE "X" GYPSUM BOARD 2x4 WOOD STUDS SPACED 16" O.C. (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
P2	WOOD 2x6 STUD - NON-RATED PARTITION - INTERIOR (1) LAYER 5/8" TYPE "X" GYPSUM BOARD 2x6 WOOD STUDS SPACED 16" O.C. (1) LAYER 5/8" TYPE "X" GYPSUM BOARD
P7	WOOD 2x4 STUD - NON-RATED FURRING - INTERIOR (1) LAYER 5/8" TYPE "X" GYPSUM BOARD ON OCCUPIED SIDE 2x4 WOOD STUDS SPACED 16" O.C.
P9	WOOD 2x6 STUD - NON-RATED FURRING - INTERIOR (1) LAYER 5/8" TYPE "X" GYPSUM BOARD ON OCCUPIED SIDE 2x6 WOOD STUDS SPACED 16" O.C.



1 THIRD FLOOR PLAN
3/32" = 1'-0"

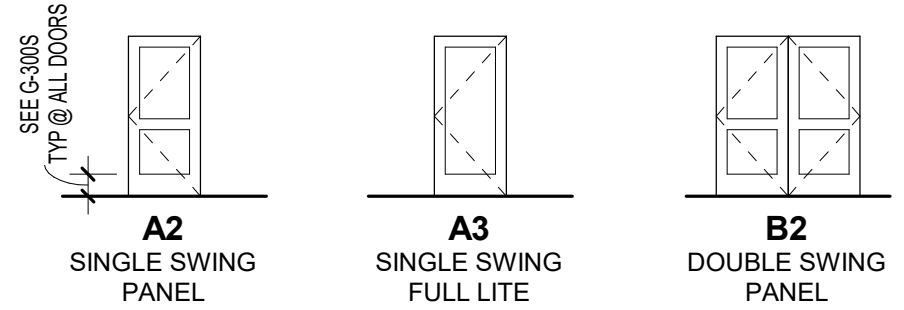


10/2/2024 1:44:07 PM
C:\Area Local\2024\23102\01-5_LOTS_003_A\01ph-1.rvt

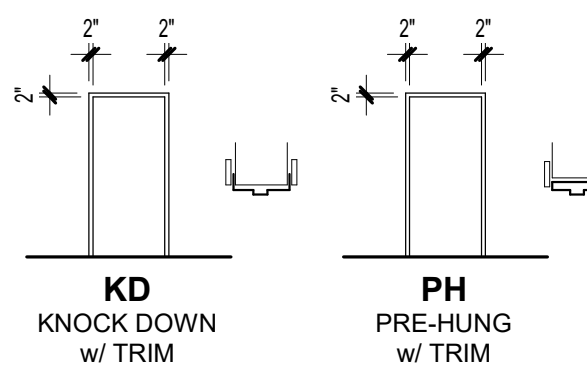
ROOM FINISH SCHEDULE - UNITS						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
001	ENTRY	LVT1	WB, PT3	PT1	PT4	
003	LIVING	LVT1	WB, PT3	PT1	PT4	
004	KITCHEN	LVT1	WB, PT3	PT1	PT4	
005	MECH.	LVT1	-	PT2	PT4	
006	LAUNDRY	LVT1	WB, PT3	PT2	PT4	
008	BATHROOM	LVT1	WB, PT3	PT1	PT4	
009	BEDROOM	LVT1	WB, PT3	PT1	PT4	
010	CLOSET	LVT1	WB, PT3	PT2	PT4	

DOOR SCHEDULE - UNIT DOORS (BY UNIT TYPE)									
Mark	Width	Height	Thickness	Fire Rating (Minutes)	Type Mark	Frame Type	OVT Hardware Set	Comments	
001	3'-0"	7'-0"	1 3/4"	20	A1				
005B	2'-8"	6'-8"	1 3/4"		108		12		
006B	2'-8"	6'-8"	1 3/4"		108		08		
008	3'-0"	6'-8"	1 3/4"		82				
009	3'-0"	6'-8"	1 3/4"		82		10		
010	4'-0"	6'-8"	1 3/4"		93		09		

DOOR TYPES



FRAME TYPES



REFERENCE G-003 FOR GENERAL NOTES

UNIT PLAN LEGEND

- PARTIAL HEIGHT PARTITION
- P1 WALL (UNLESS NOTED OTHERWISE); SEE PARTITION SCHEDULE FOR ASSEMBLY INFORMATION
- CASEWORK TAG
- DOOR TAG
- ACCESSIBLE ROUTE (36" CLEAR; 32" MIN REQ'D @ DOOR OPENING PER ANSI A117.1)
- DRYER BOX LOCATION; COORD WITH MECH

PRINTS ISSUED

09/09/2024 - CITY SUBMISSION

REVISIONS:

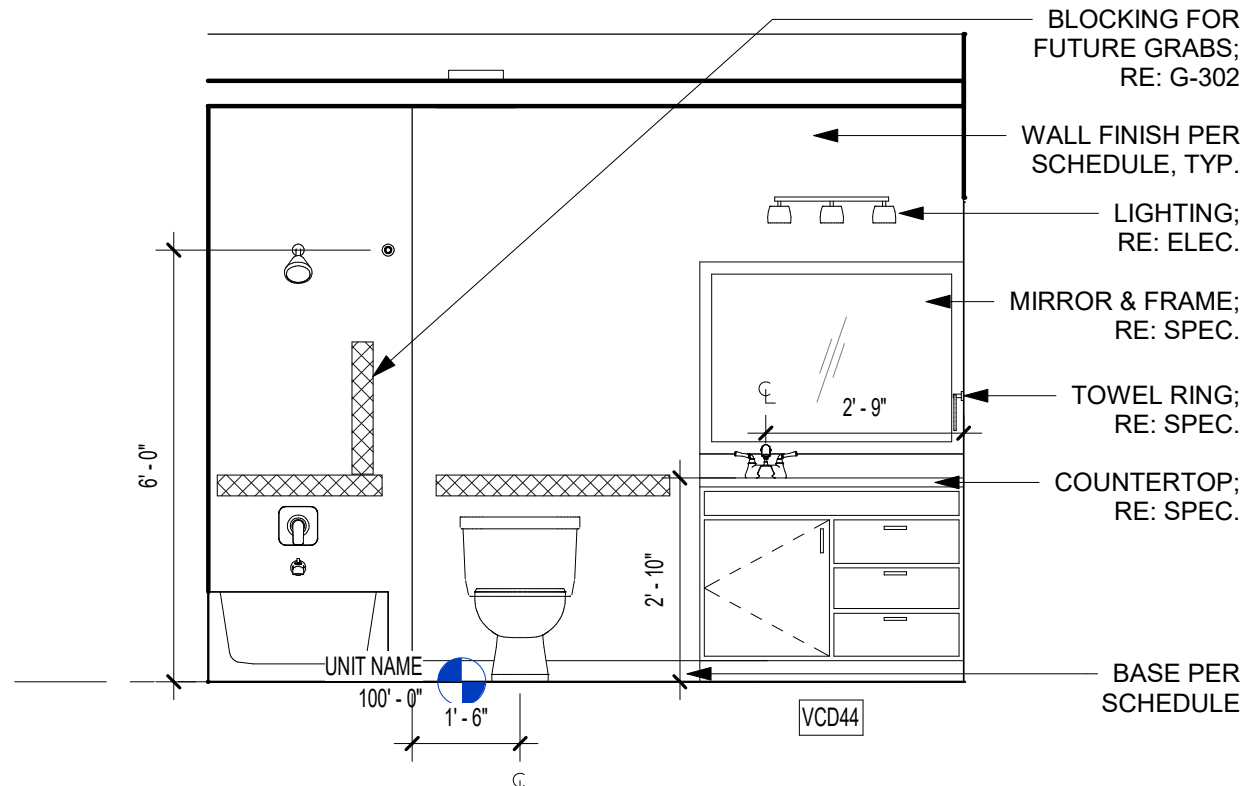
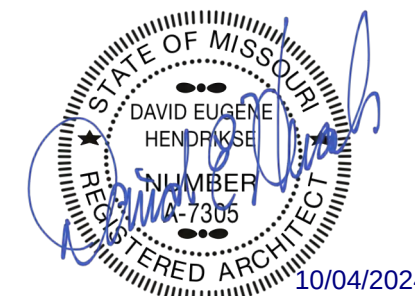
1 10/04/2024 RESPONSE TO CITY COMMENTS

rosemann & ASSOCIATES P.C.

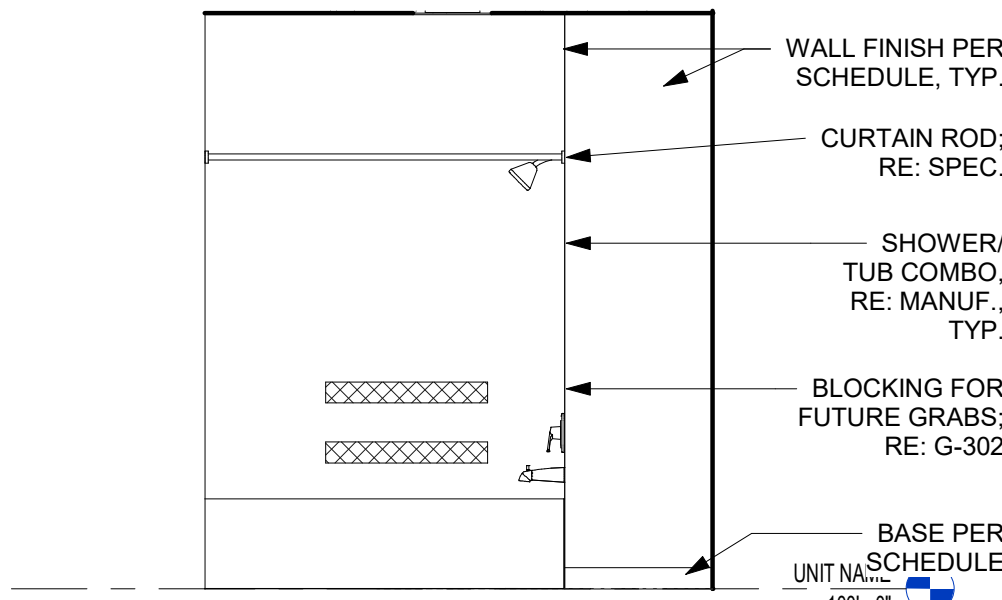
ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

1526 Grand Boulevard
Kansas City, MO 64108-1404
P: 816.472.1448
W: www.rosemann.com
© 2024 Rosemann & Associates, P.C.

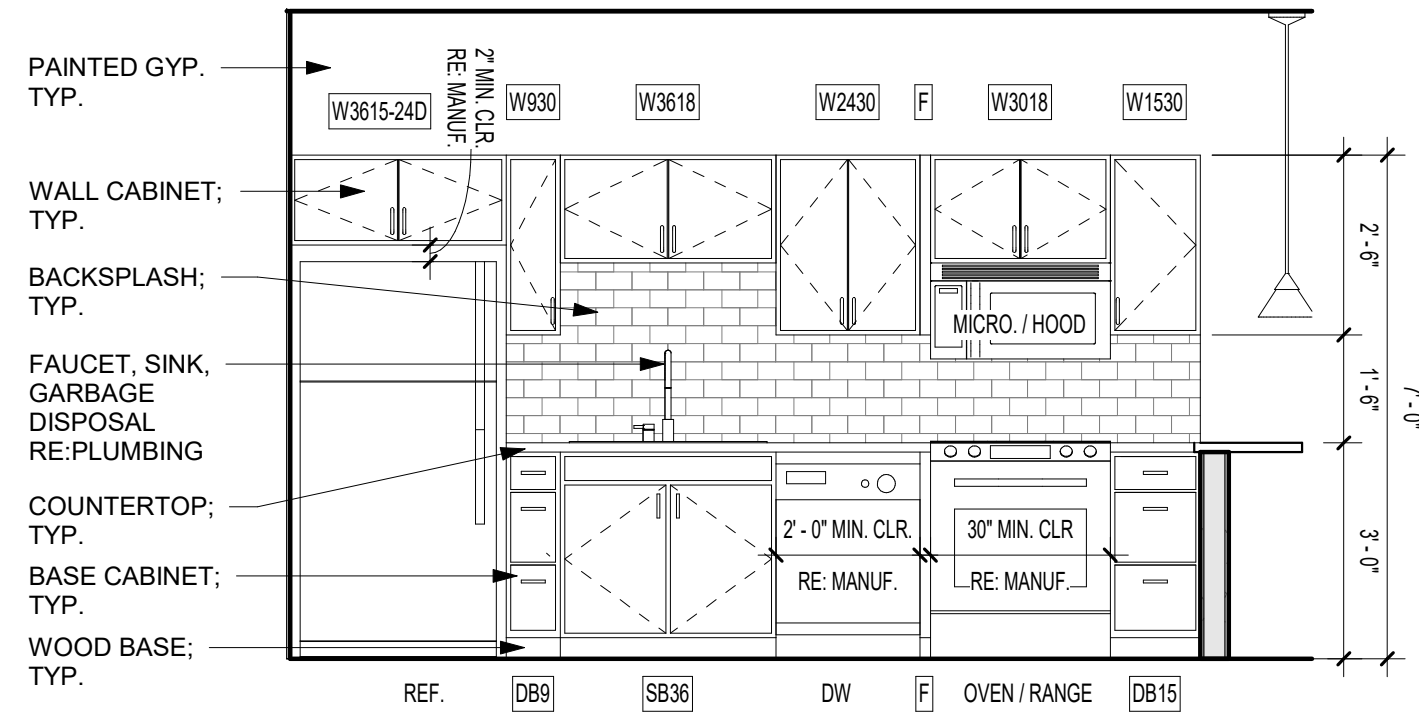
DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA



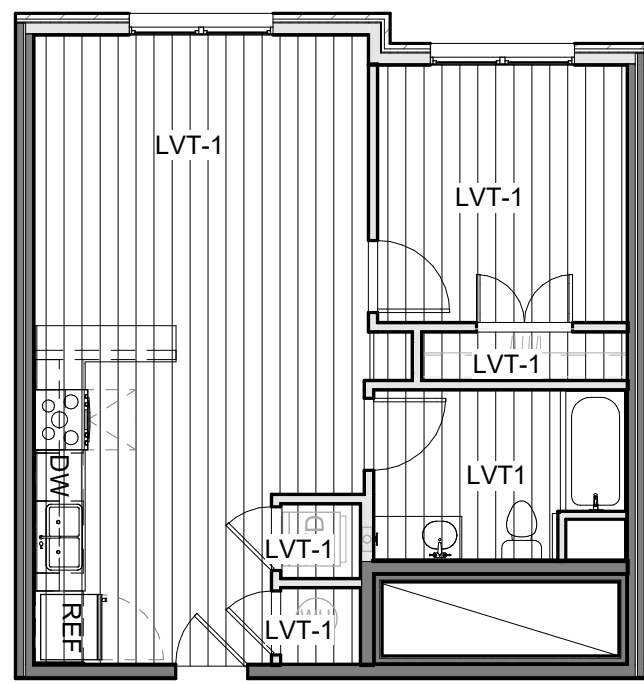
7 ARA ALT. BATH ELEV. 2
3/8" = 1'-0"



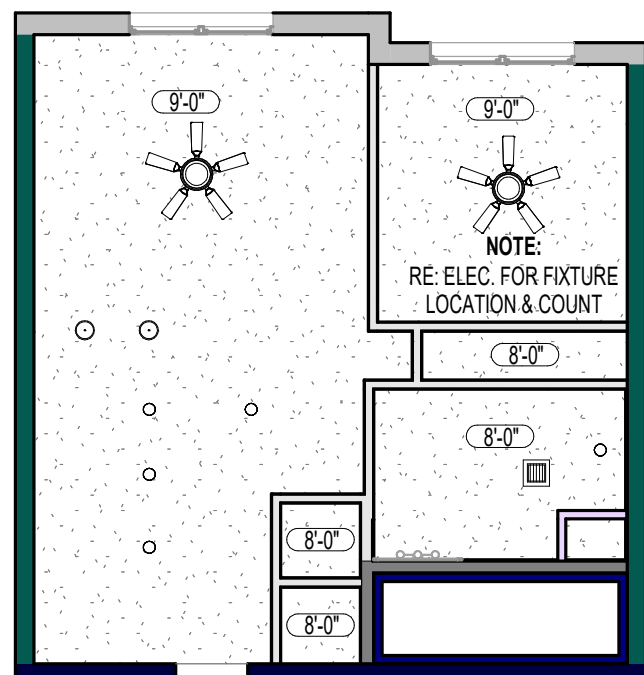
6 ARA ALT. BATH ELEV. 1
3/8" = 1'-0"



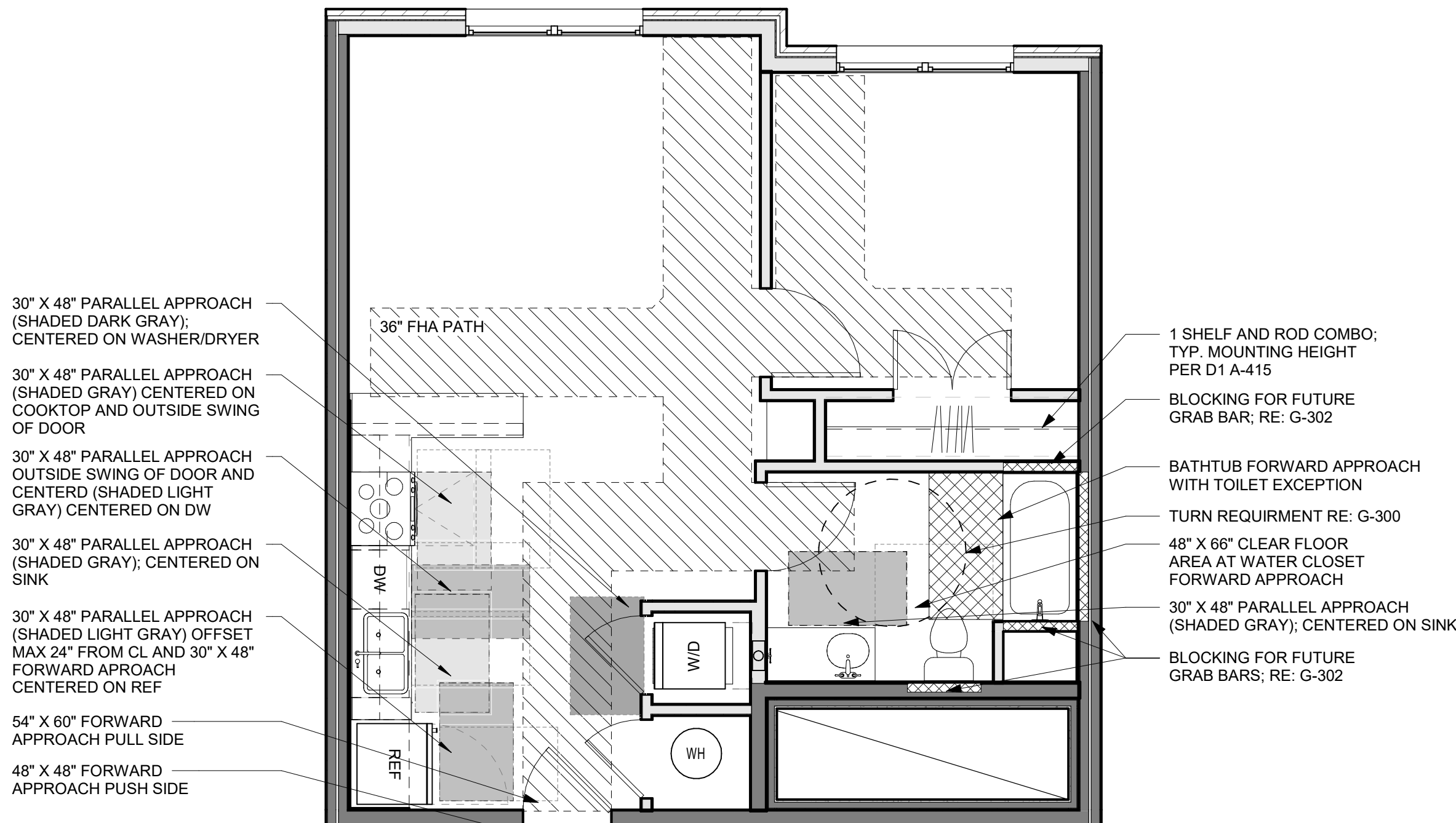
5 ARA ALT. KITCHEN ELEV.
3/8" = 1'-0"



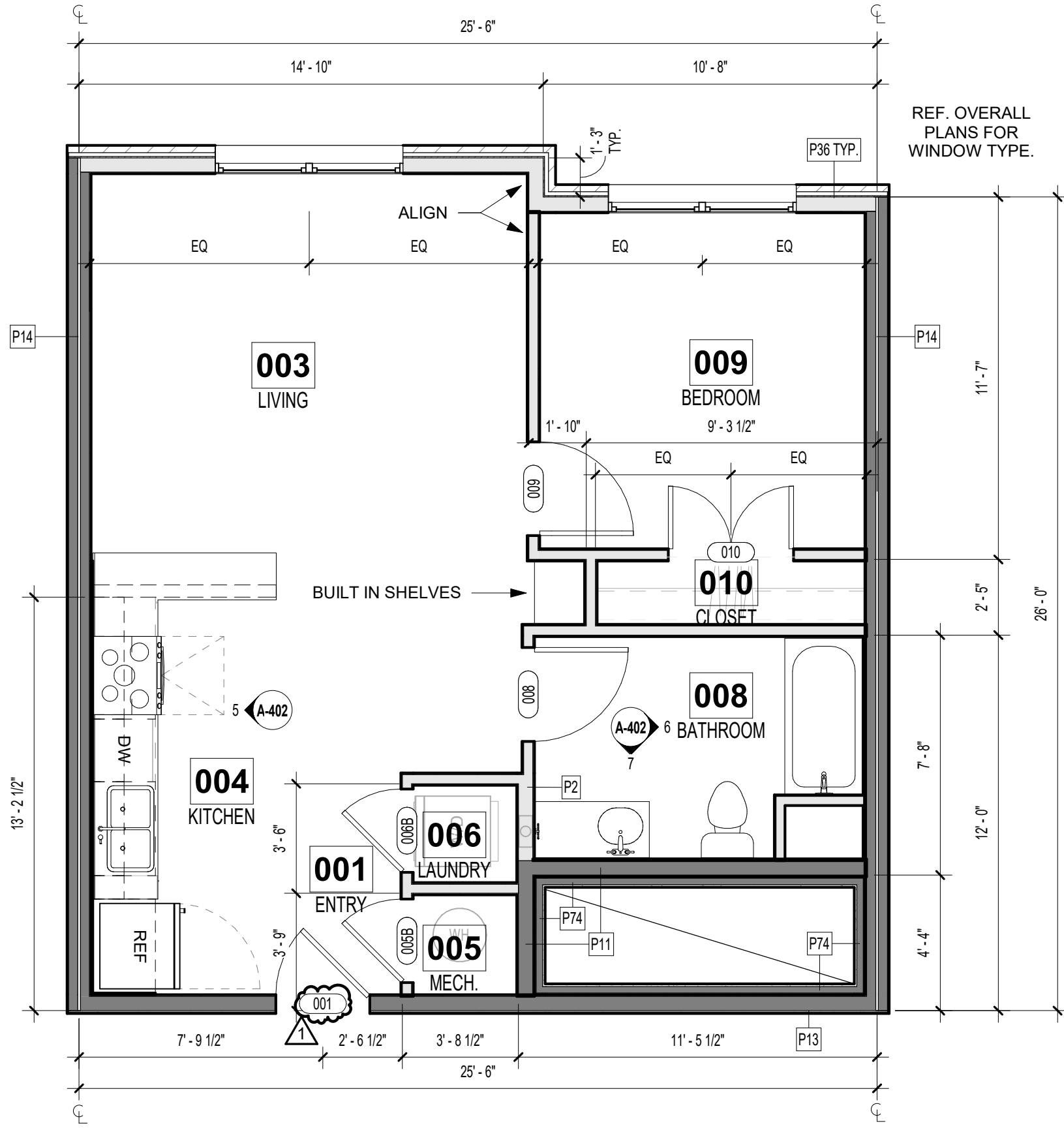
4 ARA ALT. UNIT - TYPE B - FINISH PLAN
1/8" = 1'-0"



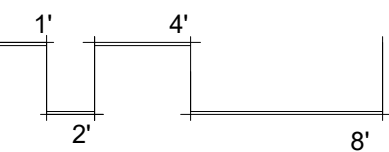
3 ARA ALT. UNIT - TYPE B - REFLECTED CEILING PLAN
1/8" = 1'-0"



2 ARA ALT. UNIT - TYPE B - CLEAR SPACE PLAN
1/4" = 1'-0"



1 ARA ALT. UNIT - TYPE B - FLOOR PLAN
1/4" = 1'-0"



THE VILLAGE AT DISCOVERY -
LOT 5
LEE'S SUMMIT, MO

SHEET TITLE
ARA ALT. UNIT PLAN - TYPE B

PROJECT NUMBER: 23102

SHEET NUMBER:

A-402

LIGHTING PLAN SYMBOL LEGEND

- X1 → "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
- → LIGHTING FIXTURE
- EM → "EM" INDICATES EMERGENCY BATTERY BACKUP
- NL → "NL" INDICATES UN-SWITCHED NIGHT LIGHT
- EXIT LIGHT
- INDICATES REQUIRED REMOTE HEAD
- EMERGENCY EGRESS LIGHT
- SWITCH (WALL MOUNTED)
- SWITCH TYPE:
- 3 = 3-WAY
 - 4 = 4-WAY
 - OP = PASSIVE INFRARED OCCUPANCY SENSOR
 - OJ = ULTRASONIC OCCUPANCY SENSOR
 - OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR
 - VP = PASSIVE INFRARED VACANCY SENSOR
 - VJ = ULTRASONIC VACANCY SENSOR
 - VT = DUAL-TECHNOLOGY VACANCY SENSOR
 - M = MOMENTARY SWITCH
 - SS = SCENE SWITCH
- DIMMER SWITCH (WALL MOUNTED)
- SWITCH TYPE:
- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- SWITCH (CEILING MOUNTED)
- SWITCH TYPE:
- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

OCCUPANCY SENSOR

- AUTO FULL-ON (OR 50% IF NOTED)
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

VACANCY SENSOR

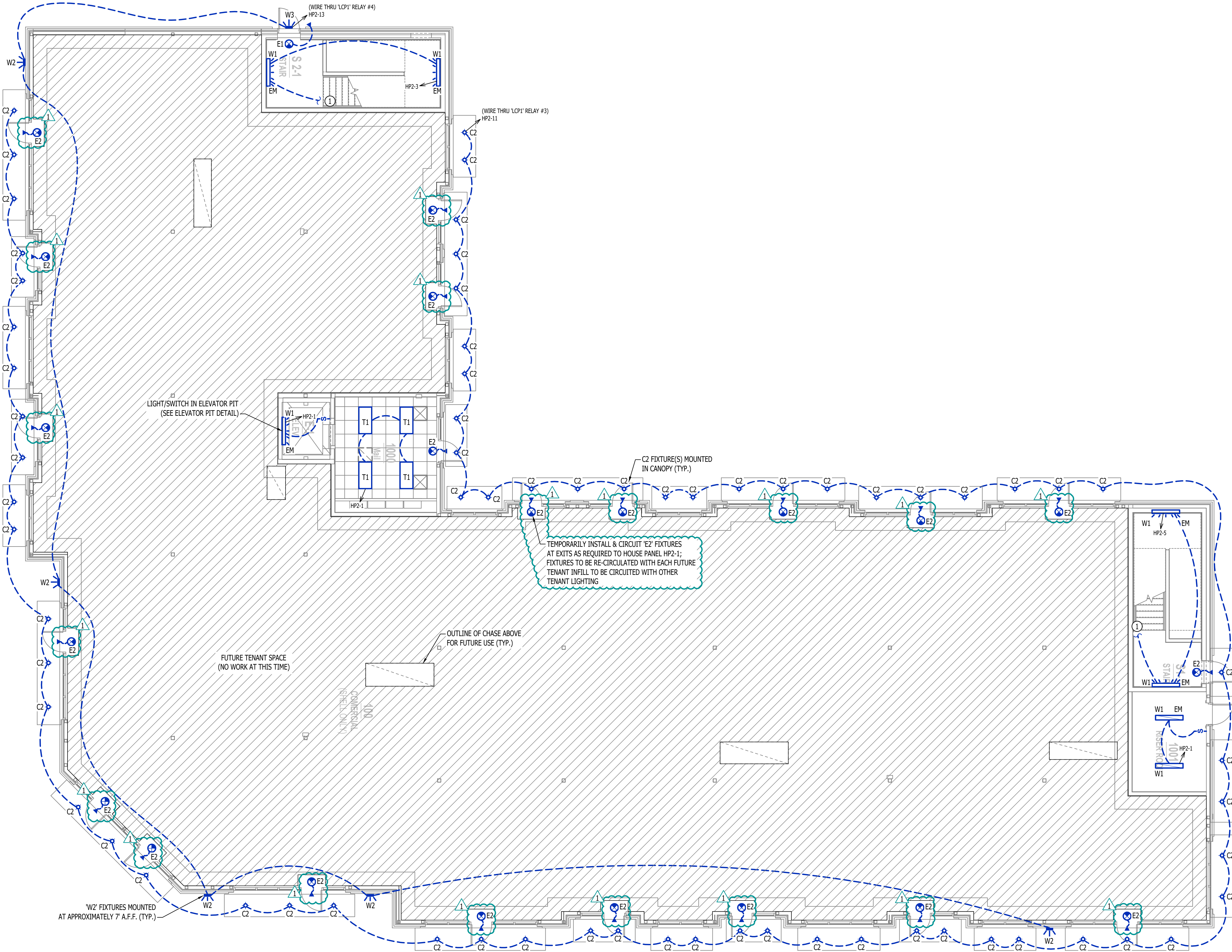
- MANUAL FULL-ON
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

LIGHTING PLAN GENERAL NOTES:

- REFER TO E500 AND/OR E600 SERIES SHEETS FOR ADDITIONAL LIGHTING NOTES, DETAILS, REQUIREMENTS, AND SCHEDULES.
- OCCUPANCY/VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE & INSTALL SENSOR WITH SPACING PER MANUFACTURER'S SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURER'S ACCEPTABLE MOUNTING HEIGHT RANGE.
- ELECTRICAL CONTRACTOR SHALL REVIEW ALL PROJECT DOCUMENTS AND COORDINATE LOCATION OF ALL FIXTURES, WIRING, HANGERS / SUPPORTS, ETC. WITH HVAC AND PLUMBING TRADES BEFORE INSTALLATION OF ANY MATERIAL. ADDITIONAL COSTS ASSOCIATED WITH LACK OF COORDINATION WILL NOT BE REIMBURSED.

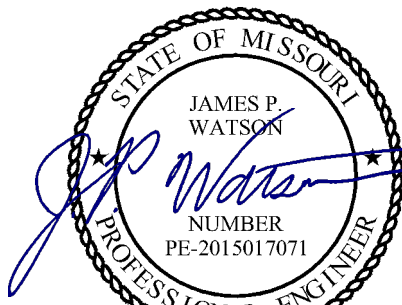
LIGHTING PLAN KEY NOTES:

- ① CIRCUIT CONTINUES TO LEVEL ABOVE

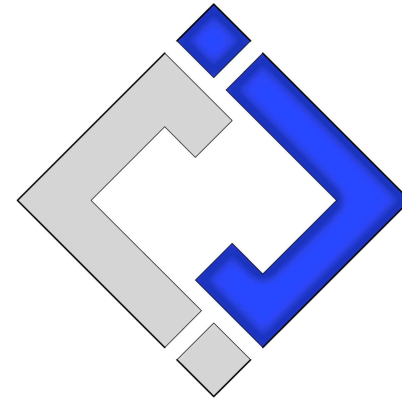


LIGHTING PLAN - 1ST FLOOR

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



James Watson, P.E. October 4, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



J-SQUARED
ENGINEERING

2400 Bluff Creek Drive, Suite 101
Columbia, Missouri 65201
573.234.4492
www.j-squaredeng.com

J2 PROJECT No: J21008

J2 DESIGN: ACW

ISSUE TITLE DATE

CITY SUBMITTAL 09 - 09 - 2024

REVISION 1 10 - 04 - 2024

MECHANICAL - ELECTRICAL - PLUMBING DESIGN DRAWINGS FOR:

The Village at Discovery - Lot 5

Street Address
Lee's Summit, Jackson County, MO

AHJ APPROVAL STAMP

SHEET TITLE

LIGHTING PLAN - 1ST
FLOOR

SHEET NUMBER

EL101

LIGHTING PLAN SYMBOL LEGEND

- X1

EM

NL
- →

→
- "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)

LIGHTING FIXTURE

"EM" INDICATES EMERGENCY BATTERY BACKUP

"NL" INDICATES UN-SWITCHED NIGHT LIGHT
-
- EXIT LIGHT
-
- INDICATES REQUIRED REMOTE HEAD
-
- EMERGENCY EGRESS LIGHT
- S_X
- SWITCH (WALL MOUNTED)
- SWITCH TYPE:

• 3 = 3-WAY

• 4 = 4-WAY

• OP = PASSIVE INFRARED OCCUPANCY SENSOR

• OU = ULTRASONIC OCCUPANCY SENSOR

• OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR

• VP = PASSIVE INFRARED VACANCY SENSOR

• VU = ULTRASONIC VACANCY SENSOR

• VT = DUAL-TECHNOLOGY VACANCY SENSOR

• M = MOMENTARY SWITCH

• SS = SCENE SWITCH
- D_X
- DIMMER SWITCH (WALL MOUNTED)
- SWITCH TYPE:

• SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS
- ⊙_X
- SWITCH (CEILING MOUNTED)
- SWITCH TYPE:

• SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

OCCUPANCY SENSOR

- AUTO FULL-ON (OR 50% IF NOTED)
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

VACANCY SENSOR

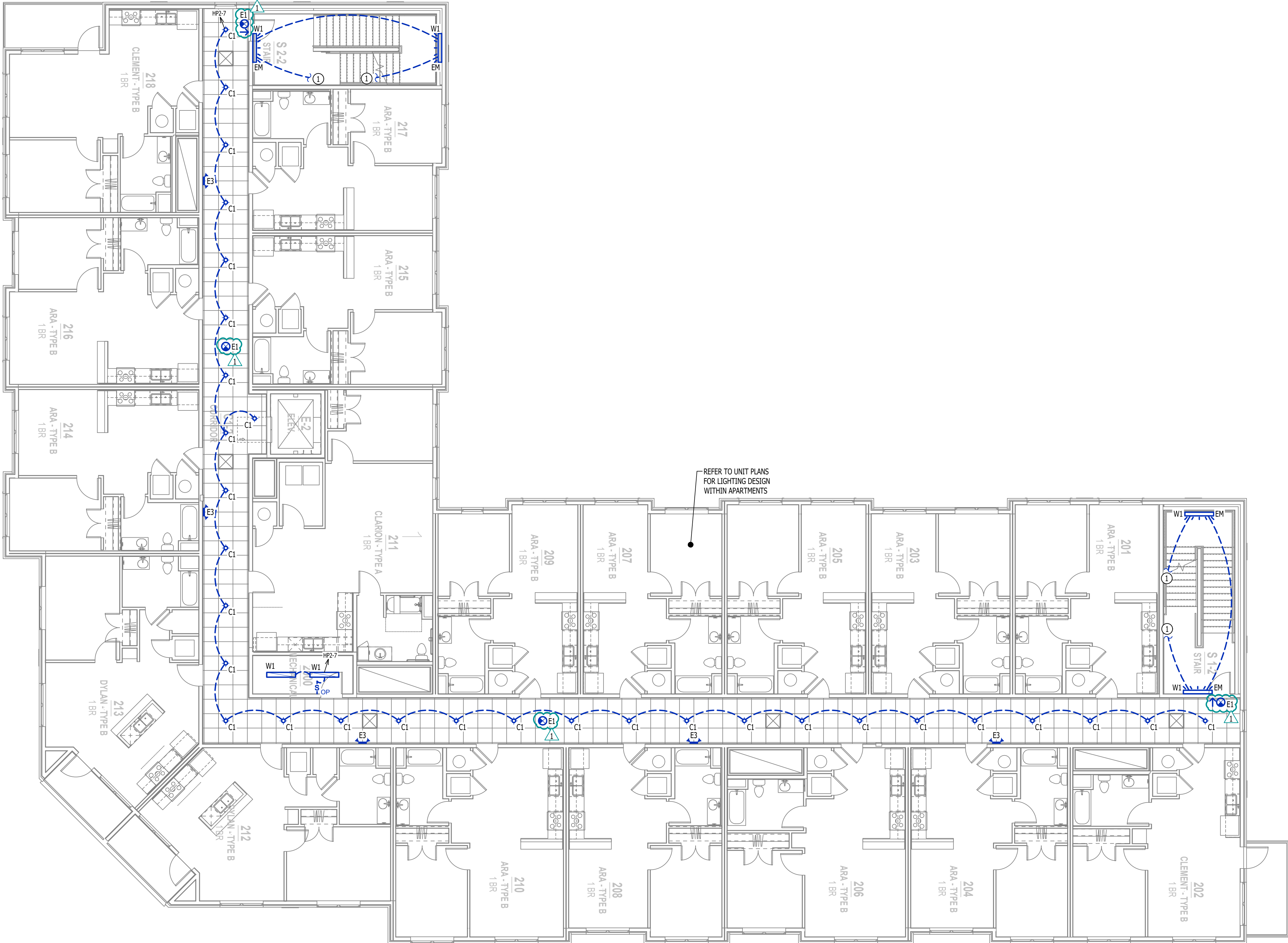
- MANUAL FULL-ON
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

LIGHTING PLAN GENERAL NOTES:

- REFER TO E500 AND/OR E600 SERIES SHEETS FOR ADDITIONAL LIGHTING NOTES, DETAILS, REQUIREMENTS, AND SCHEDULES.
- OCCUPANCY/VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE & INSTALL SENSOR WITH SPACING PER MANUFACTURER'S SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURER'S ACCEPTABLE MOUNTING HEIGHT RANGE.
- ELECTRICAL CONTRACTOR SHALL REVIEW ALL PROJECT DOCUMENTS AND COORDINATE LOCATION OF ALL FIXTURES, WIRING, HANGERS / SUPPORTS, ETC. WITH HVAC AND PLUMBING TRADES BEFORE INSTALLATION OF ANY MATERIAL. ADDITIONAL COSTS ASSOCIATED WITH LACK OF COORDINATION WILL NOT BE REIMBURSED.

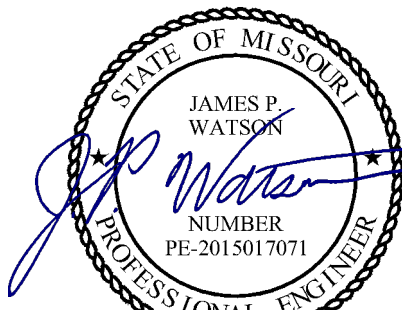
LIGHTING PLAN KEY NOTES:

- ① CIRCUIT CONTINUES TO LEVEL ABOVE/BELOW.

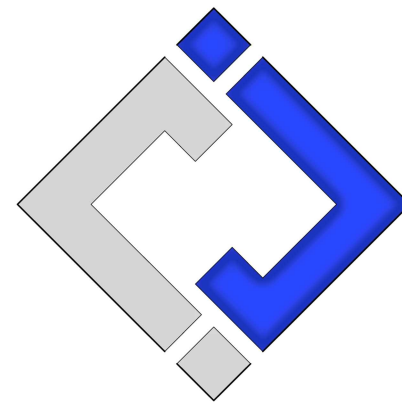


LIGHTING PLAN - 2ND FLOOR

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



James Watson, P.E. October 4, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



J-SQUARED
ENGINEERING

2400 Bluff Creek Drive, Suite 101
Columbia, Missouri 65201
573.234.4492
www.j-squaredeng.com

J2 PROJECT No: J21008

J2 DESIGN: ACW

ISSUE TITLE DATE

CITY SUBMITTAL 09 - 09 - 2024

REVISION 1 10 - 04 - 2024

MECHANICAL - ELECTRICAL - PLUMBING DESIGN DRAWINGS FOR:

The Village at Discovery - Lot 5

Street Address
Lee's Summit, Jackson County, MO

AHJ APPROVAL STAMP

SHEET TITLE

LIGHTING PLAN - 2ND
FLOOR

SHEET NUMBER

EL102

LIGHTING PLAN SYMBOL LEGEND

X1

EM

NL

→

→

→

"X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)

LIGHTING FIXTURE

"EM" INDICATES EMERGENCY BATTERY BACKUP

"NL" INDICATES UN-SWITCHED NIGHT LIGHT

↗

EXIT LIGHT

↔

INDICATES REQUIRED REMOTE HEAD

↔

EMERGENCY EGRESS LIGHT

S_X

SWITCH (WALL MOUNTED)

SWITCH TYPE:

- 3 = 3-WAY
- 4 = 4-WAY
- OP = PASSIVE INFRARED OCCUPANCY SENSOR
- OJ = ULTRASONIC OCCUPANCY SENSOR
- OT = DUAL-TECHNOLOGY OCCUPANCY SENSOR
- VP = PASSIVE INFRARED VACANCY SENSOR
- VJ = ULTRASONIC VACANCY SENSOR
- VT = DUAL-TECHNOLOGY VACANCY SENSOR
- M = MOMENTARY SWITCH
- SS = SCENE SWITCH

D_X

DIMMER SWITCH (WALL MOUNTED)

SWITCH TYPE:

- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

⊙_X

SWITCH (CEILING MOUNTED)

SWITCH TYPE:

- SEE "SWITCH (WALL MOUNTED)" FOR TYPE DESIGNATIONS

OCCUPANCY SENSOR

- AUTO FULL-ON (OR 50% IF NOTED)
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

VACANCY SENSOR

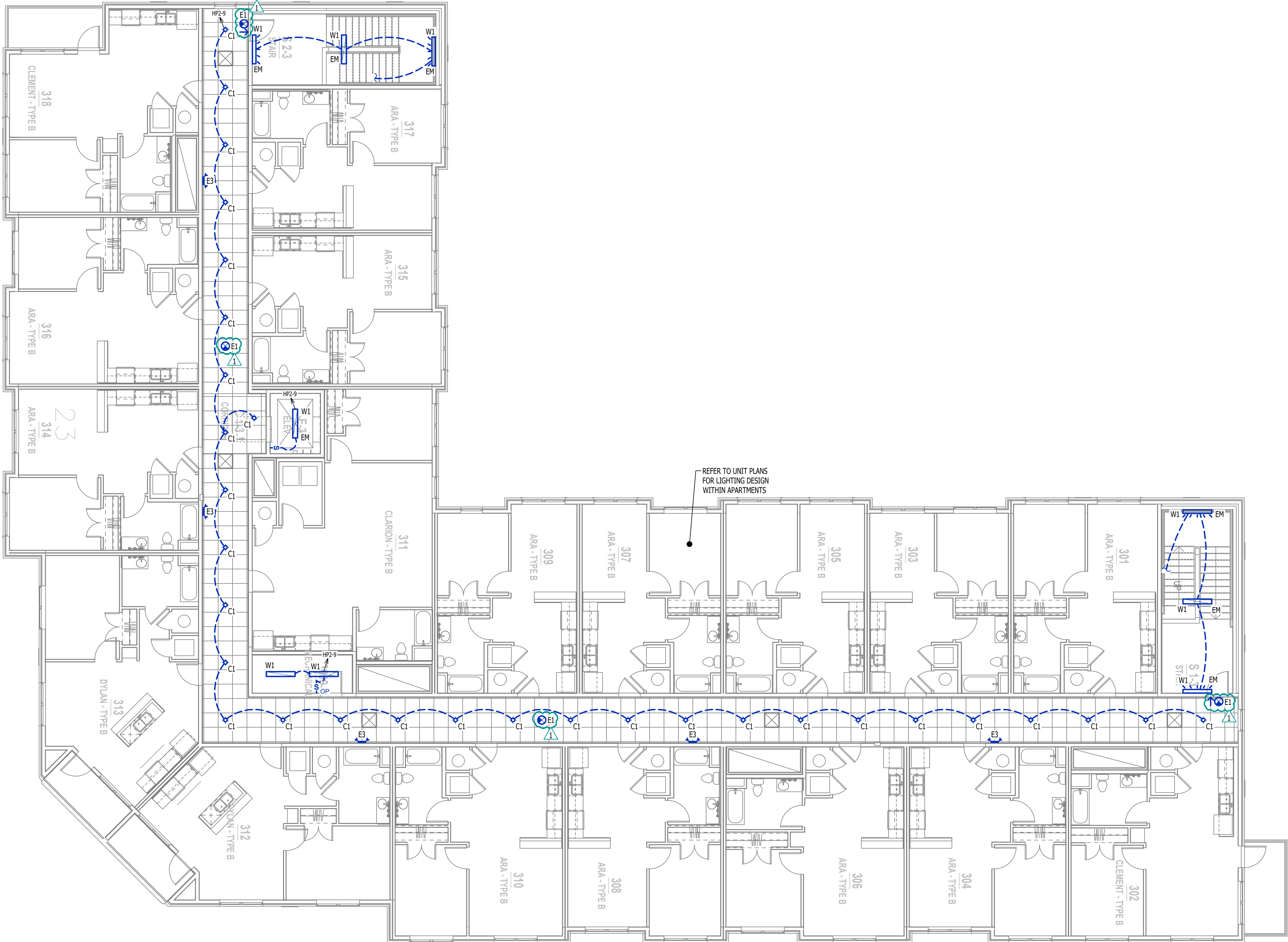
- MANUAL FULL-ON
- AUTOMATICALLY TURN OFF LIGHTING AFTER 20 MINUTES WITHOUT OCCUPANT DETECTION
- WITH MANUAL OVERRIDE CONTROL (IF NOTED)

LIGHTING PLAN GENERAL NOTES:

- REFER TO E500 AND/OR E600 SERIES SHEETS FOR ADDITIONAL LIGHTING NOTES, DETAILS, REQUIREMENTS, AND SCHEDULES.
- OCCUPANCY/VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE & INSTALL SENSOR WITH SPACING PER MANUFACTURER'S SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURER'S ACCEPTABLE MOUNTING HEIGHT RANGE.
- ELECTRICAL CONTRACTOR SHALL REVIEW ALL PROJECT DOCUMENTS AND COORDINATE LOCATION OF ALL FIXTURES, WIRING, HANGERS / SUPPORTS, ETC. WITH HVAC AND PLUMBING TRADES BEFORE INSTALLATION OF ANY MATERIAL. ADDITIONAL COSTS ASSOCIATED WITH LACK OF COORDINATION WILL NOT BE REIMBURSED.

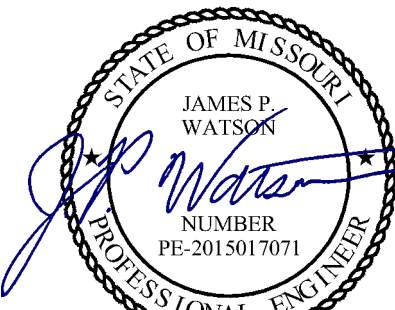
LIGHTING PLAN KEY NOTES:

- CIRCUIT CONTINUES TO LEVEL ABOVE/BELOW.
- LIGHT FIXTURE AT TOP OF ELEVATOR SHAFT; COORDINATE EXACT LOCATION & REQUIREMENTS WITH ELEVATOR EQUIPMENT SUPPLIER.

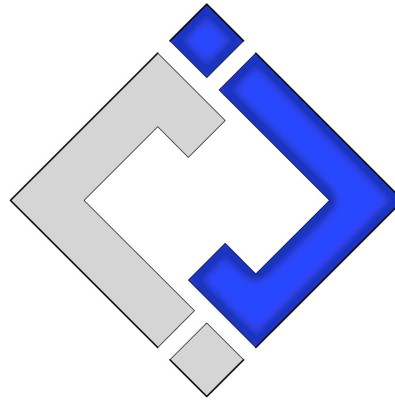


LIGHTING PLAN - 3RD FLOOR

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



James Watson, P.E. October 4, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



J-SQUARED
ENGINEERING

2400 Bluff Creek Drive, Suite 101
Columbia, Missouri 65201
573.234.4492
www.j-squaredeng.com

J2 PROJECT No: J21008

J2 DESIGN: ACW

ISSUE TITLE DATE

CITY SUBMITTAL 09 - 09 - 2024

REVISION 1 10 - 04 - 2024

MECHANICAL - ELECTRICAL - PLUMBING DESIGN DRAWINGS FOR:

The Village at Discovery - Lot 5

Street Address
Lee's Summit, Jackson County, MO

AHJ APPROVAL STAMP

SHEET TITLE

LIGHTING PLAN - 3RD
FLOOR

SHEET NUMBER

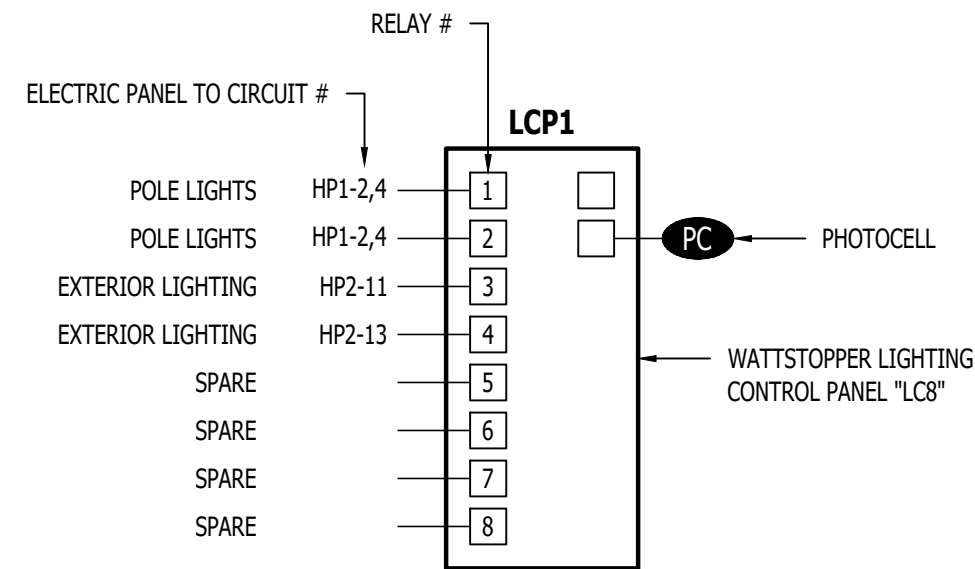
EL103

ELECTRICAL SPECIFICATIONS

1. GENERAL
- 1.1. CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL NECESSARY PIECES AND COMPONENTS TO PROVIDE A COMPLETE AND COMPLIANT ELECTRICAL SYSTEM UNLESS OTHERWISE NOTED ON PLANS.
- 1.2. THE ENTIRE ELECTRICAL SYSTEM SHALL BE CONTINUOUSLY GROUNDED. EVERY BRANCH CONDUIT SHALL INCLUDE A GREEN GROUND CONDUCTOR SIZED PER NEC.
- 1.3. ARC-FAULT CIRCUITS SHALL BE RUN WITH A DEDICATED NEUTRAL AS REQUIRED BY MANUFACTURER.
- 1.4. PROVIDE PERMANENT ARC-FLASH LABEL AFFIXED TO EVERY DISCONNECT AND PANEL.
- 1.5. PROVIDE TYPE WRITTEN PANEL SCHEDULE FOR EACH PANEL.
2. WORKMANSHIP
- 2.1. ALL ELECTRICAL SYSTEM COMPONENTS SHALL BE INSTALLED LEVEL, PLUMB, AND PARALLEL/PERPENDICULAR TO BUILDING ORIENTATION WHERE POSSIBLE.
- 2.2. ALL ELECTRICAL DEVICES AND LIGHT FIXTURES SHALL BE INSTALLED IN A SAFE, FIRST-CLASS MANNER WITH ATTENTION GIVEN TO OVERALL AESTHETICS. CARE SHOULD BE TAKEN TO ALLOW FOR FUTURE REPLACEMENT AND ACCESS FOR SERVICE.
3. MATERIALS
- 3.1. CONDUIT & CONDUCTORS
- 3.1.1. ALL CONDUCTORS SIZES INDICATED ARE COPPER UNLESS NOTED OTHERWISE ON PLANS.
- 3.1.2. ABOVE GRADE CONDUCTORS SHALL BE TYPE THHN.
- 3.1.3. BELOW GRADE CONDUCTORS SHALL BE TYPE XHHW-2.
- 3.1.3. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG UNLESS NOTED OTHERWISE. 120-VOLT, 20-AMP CIRCUITS WITH CONDUCTOR LENGTHS GREATER THAN 100' SHALL BE #10 AWG MINIMUM. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MEASURING ACTUAL CONDUCTOR LENGTH AND INCREASING CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP AS REQUIRED BY NEC.
- 3.1.4. RIGID GALVANIZED OR SCHEDULE 40 PVC CONDUIT SHALL BE USED FOR SERVICE WIRING, BELOW GRADE INSTALLATIONS, OR WHERE EXPOSED TO WEATHER.
- 3.1.5. IN APPLICATIONS OTHER THAN THOSE LISTED IN 3.1.4, EMT OR MC CABLE IS ACCEPTABLE, WHERE CONDUCTORS ARE PROTECTED FROM DAMAGE, ENCLOSED IN BUILDING MATERIALS, AND CONSTRUCTION IS OF A PERMITTED TYPE, NM CABLE MAY BE USED.
- 3.1.6. FOR CAST-IN-PLACE CONCRETE, TILT-UP WALL CONSTRUCTION, OR PRE-MANUFACTURED WALL SYSTEMS, COORDINATE EXACT LOCATIONS OF ALL DEVICES WITHIN WALLS WITH WALL SUPPLIER. CONDUIT EMBEDDED IN WALLS SHALL BE SCHEDULE 80 PVC OR LFMC, OR OTHER SYSTEM APPROVED BY WALL MANUFACTURER.
- 3.1.7. EXPOSED CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACES, VERIFY COLOR WITH ARCHITECT/OWNER.
- 3.2. DEVICES
- 3.2.1. CONTRACTOR TO PROVIDE J-BOXES, COVER PLATES, AND ANY ACCESSORIES REQUIRED TO PROVIDE A COMPLETE SYSTEM. SEE ARCHITECTURAL PLANS FOR DEVICE COLORS.
- 3.2.1. DUPLEX RECEPTACLES SHALL BE TAMPER RESISTANT, 20-AMP, EQUAL TO LEVITON #TBR-20.
- 3.2.2. SINGLE POLE TOGGLE WALL SWITCHES SHALL BE EQUAL TO LEVITON CS120-2.
- 3.2.2. THREE-WAY TOGGLE WALL SWITCHES SHALL BE EQUAL TO LEVITON CS320-2.
- 3.2.3. DIMMER SWITCHES SHALL BE TESTED WITH FIXTURES AND LAMPS FOR COMPATIBILITY. SEE LIGHTING PLANS FOR DETAILS.
- 3.2.4. WHERE GFCI PROTECTION IS SHOWN ON PLANS AND UNLESS OTHERWISE NOTED, PROVIDE A LISTED GFCI-PROTECTED RECEPTACLE WHERE THE RECEPTACLE IS ACCESSIBLE ON PLANS. IF THE RECEPTACLE LOCATION IS NOT ACCESSIBLE AS DEFINED BY NEC, PROVIDE GFCI PROTECTION AT CIRCUIT BREAKER.
- 3.2.5. DO NOT INSTALL OCCUPANCY/VACANCY SENSORS WITHIN 48" OF HVAC DIFFUSERS/GRILLES OR SIMILAR OBSTRUCTION THAT MAY AFFECT SENSOR FUNCTIONALITY. ALL SENSORS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- 3.2.6. ALL APPLICABLE SWITCHES, RECEPTACLES, CONTROLS, ETC. SHALL BE MOUNTED AT ADA-ACCESSIBLE HEIGHTS.
- 3.2.7. WIRING DEVICES SHOWN ON PLANS NEXT TO ONE ANOTHER SHALL UTILIZE A SINGLE COVER PLATE UNLESS NOTED OTHERWISE.
- 3.2.8. WIRING DEVICES SHOWN BACK-TO-BACK ON EACH SIDE OF A WALL SHALL BE OFFSET TO REDUCE SOUND TRANSMISSION.
- 3.2.9. EACH RECEPTACLE COVER SHALL BE NEATLY AND LEGIBLY LABELED WITH CORRESPONDING PANEL AND CIRCUIT NUMBER FOR CIRCUIT IDENTIFICATION.
4. EMERGENCY LIGHTING
- 4.1. BRANCH CIRCUIT FEEDING EMERGENCY FIXTURE(S) SHALL BE SAME BRANCH CIRCUIT AS THAT SERVING NORMAL LIGHTING IN SAME AREA AND CONNECTED AHEAD OF ANY LOCAL SWITCHES.
- 4.2. EMERGENCY LIGHTING SYSTEM SHALL PROVIDE 1FC AVERAGE AND 0.1FC MINIMUM ALONG EGRESS PATHS. ADJUST ANY EMERGENCY FIXTURES AS NECESSARY TO PROVIDE PROPER ILLUMINATION WITHOUT OBSTRUCTION FROM FURNITURE OR OBSTACLES.

POWER RISER GENERAL NOTES:

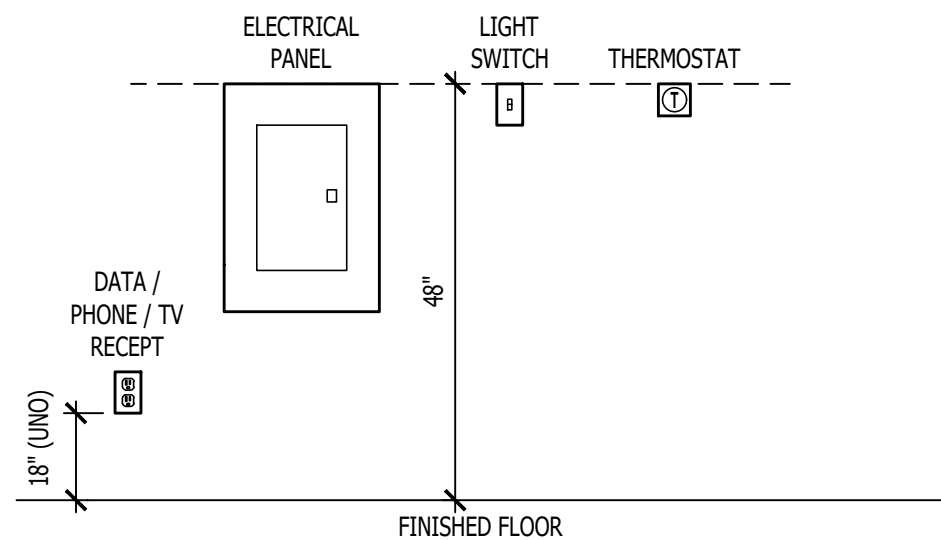
1. SEE MEP SITE PLAN FOR APPROXIMATE TRANSFORMER & SERVICE ENTRANCE LOCATIONS.
2. COORDINATE ALL DETAILS OF NEW ELECTRIC SERVICE WITH EVERY.
3. CONTRACTOR SHALL PROVIDE A SHORT-CIRCUIT AND COORDINATION STUDY INCLUDING ARC FAULT ANALYSIS AND EQUIPMENT LABELING ON ALL SERVICE SWITCHBOARDS AND DISTRIBUTION BOARDS.
4. AIC-RATINGS ARE BASED ON THE FOLLOWING:
- 4.1. TRANSFORMER LOCATED APPROXIMATELY WHERE SHOWN ON PLANS.
- 4.2. 750 KVA TRANSFORMER, 100% PF, 5.75% Z.
- 4.3. ELECTRICAL CONTRACTOR TO RECALCULATE REQUIRED AIC-RATINGS IF FIELD CONDITIONS VARY FROM THOSE SHOWN ON PLANS.
5. PROVIDE MEANS FOR ARC-ENERGY REDUCTION ON MAIN ELECTRIC SERVICE PER NEC 240.87.



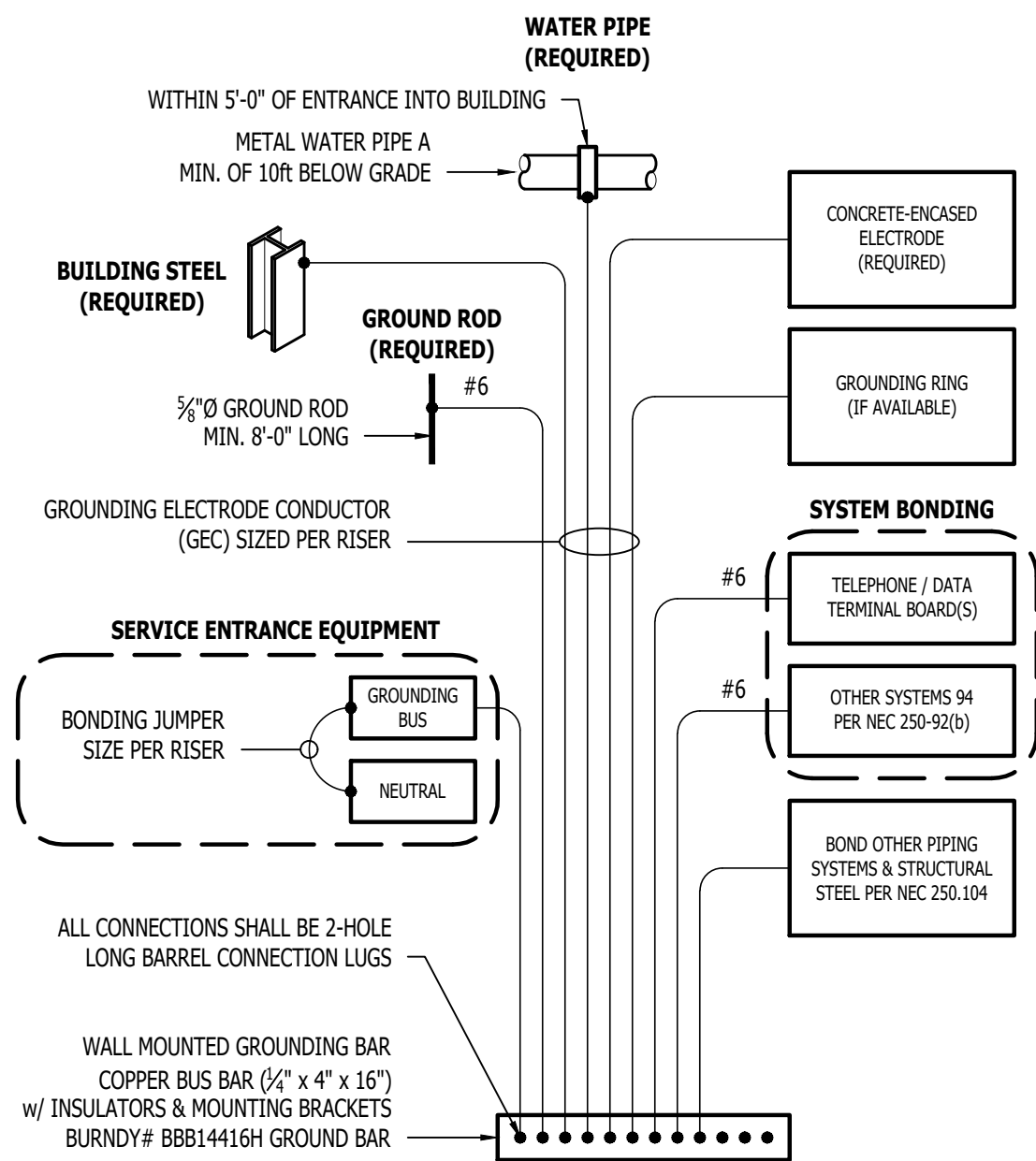
LIGHTING CONTROL PANEL SCHEDULE

RELAY #	OVERRIDE SWITCH	OPERATIONAL SCHEDULE
1	NO	ON DURING NIGHT HOURS (PHOTOCELL INPUT)
2	NO	ON DURING NIGHT HOURS (PHOTOCELL INPUT)
3	NO	ON DURING NIGHT HOURS (PHOTOCELL INPUT)
4	NO	ON DURING NIGHT HOURS (PHOTOCELL INPUT)
5	-	-
6	-	-
7	-	-
8	-	-

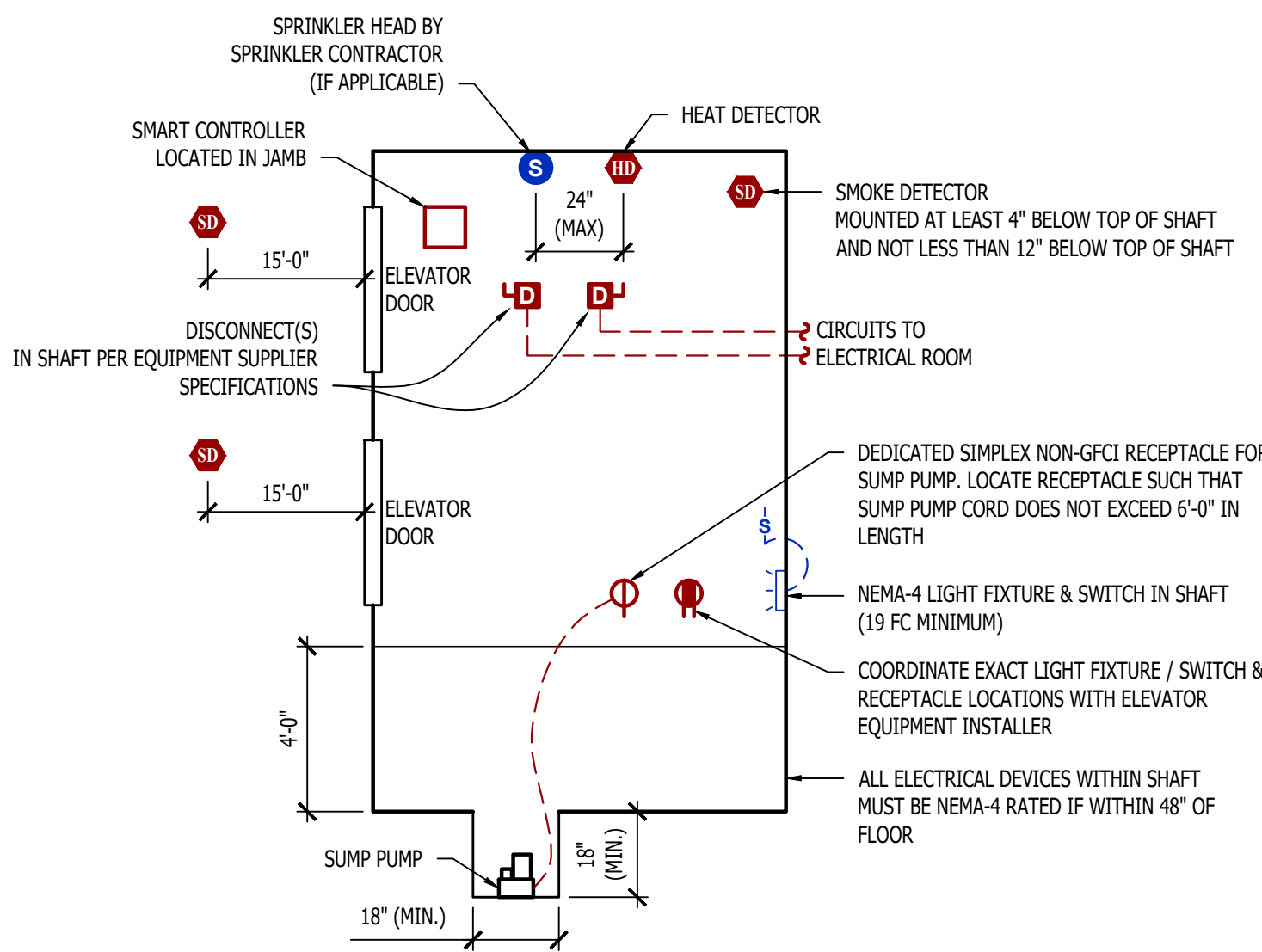
LIGHTING CONTROL PANEL



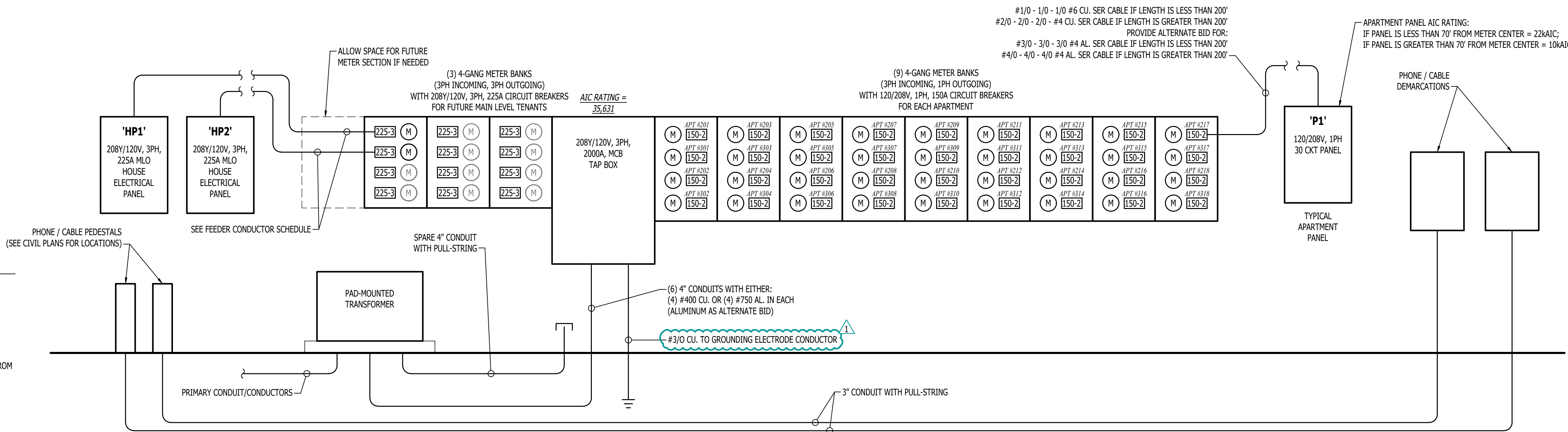
TYPICAL ADA MOUNTING HEIGHTS DETAIL



TYPICAL GROUNDING & BONDING DETAIL



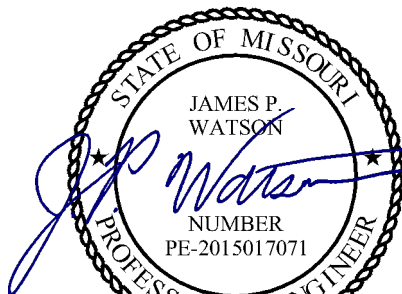
MACHINE - ROOM - LESS ELEVATOR DETAIL



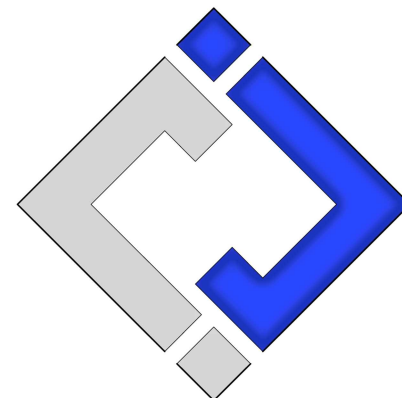
POWER RISER

NOTES:

1. ALL ELECTRICAL CONDUCTORS WITHIN ELEVATOR PIT MUST COMPLY WITH NEC 620.21.
2. SUMP PUMP RECEPTACLE, SHAFT / PIT RECEPTACLES, & SHAFT LIGHTING TO ALL BE ON EMERGENCY POWER IF ELEVATOR IS ON EMERGENCY POWER.
3. ADDITIONAL SMOKE DETECTOR REQUIRED IN ELEVATOR MACHINE ROOM (IF APPLICABLE).
4. IN CASES WHERE ELEVATOR IS NOT SHUNT-TRIP PROTECTED, A LABELED SPRINKLER SHUT-OFF MUST BE LOCATED OUTSIDE THE ELEVATOR HOISTWAY AND/OR EQUIPMENT ROOM.
5. PERMANENTLY LABEL ALL CIRCUITS AND FEEDERS.
6. SUMP PUMP DISCHARGE LINE SHALL BE HARD PIPED (NO PVC).



James Watson, P.E. October 4, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



J-SQUARED
ENGINEERING

2400 Bluff Creek Drive, Suite 101
Columbia, Missouri 65201
573.234.4492
www.j-squaredeng.com

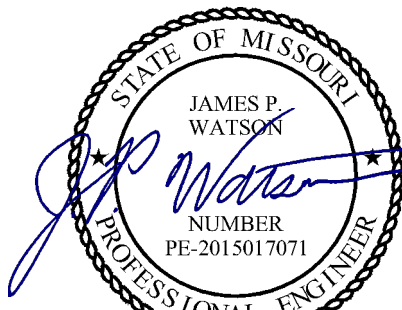
J2 PROJECT No: J221008

J2 DESIGN: ACW

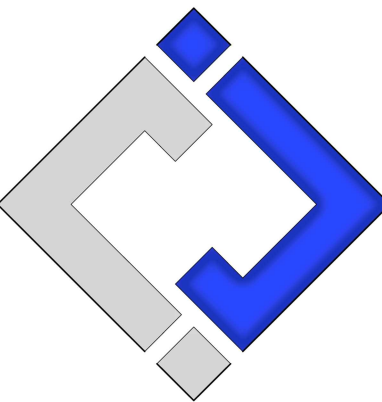
ISSUE TITLE DATE

CITY SUBMITTAL 09 - 09 - 2024

REVISION 1 10 - 04 - 2024



James Watson, P.E. October 4, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



J-SQUARED
ENGINEERING

2400 Bluff Creek Drive, Suite 101
Columbia, Missouri 65201
573.234.4492
www.j-squaredeng.com

J2 PROJECT No: J21008

J2 DESIGN: ACW

ISSUE TITLE DATE

CITY SUBMITTAL 09 - 09 - 2024

REVISION 1 10 - 04 - 2024



The Village at Discovery - Lot 5

MECHANICAL - ELECTRICAL - PLUMBING DESIGN DRAWINGS FOR:

Street Address
Lee's Summit, Jackson County, MO

AHJ APPROVAL STAMP

SHEET TITLE

SANITARY SEWER PLAN
- 1ST FLOOR

SHEET NUMBER

PS101

SANITARY SEWER PLAN SYMBOL LEGEND

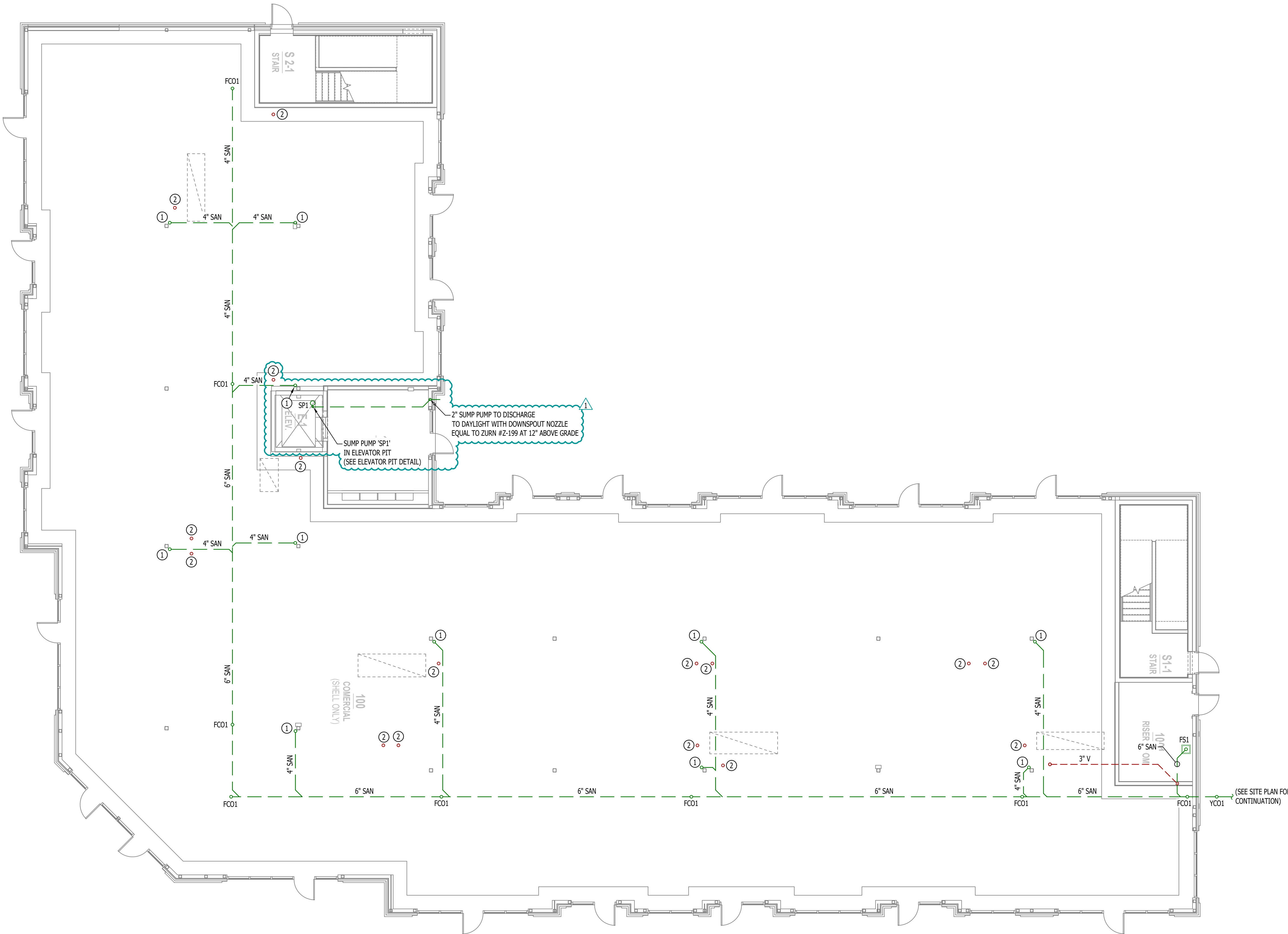
- SANITARY SEWER PIPING
- VENT PIPING
- PIPING TURNED DOWN / TURNED UP
- TIE INTO EXISTING

SANITARY SEWER PLAN GENERAL NOTES:

- REFER TO P500 AND/OR P600 SERIES SHEETS FOR ADDITIONAL PLUMBING NOTES, DETAILS, REQUIREMENTS, AND SCHEDULES.
- PLUMBING CONTRACTOR SHALL REVIEW ALL PROJECT DOCUMENTS AND COORDINATE LOCATION OF ALL EQUIPMENT, PIPING, HANGERS / SUPPORTS, ETC. WITH HVAC AND ELECTRICAL TRADES BEFORE INSTALLATION OF ANY MATERIAL. ADDITIONAL COSTS ASSOCIATED WITH LACK OF COORDINATION WILL NOT BE REIMBURSED.

SANITARY SEWER PLAN KEY NOTES:

- ① 4" SAN DOWN NEXT TO COLUMN FROM LEVEL ABOVE.
- ② 4" VENT (CAPPED FOR FUTURE CONNECTION) CONTINUES TO LEVEL ABOVE.



SANITARY SEWER PLAN - 1ST FLOOR

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

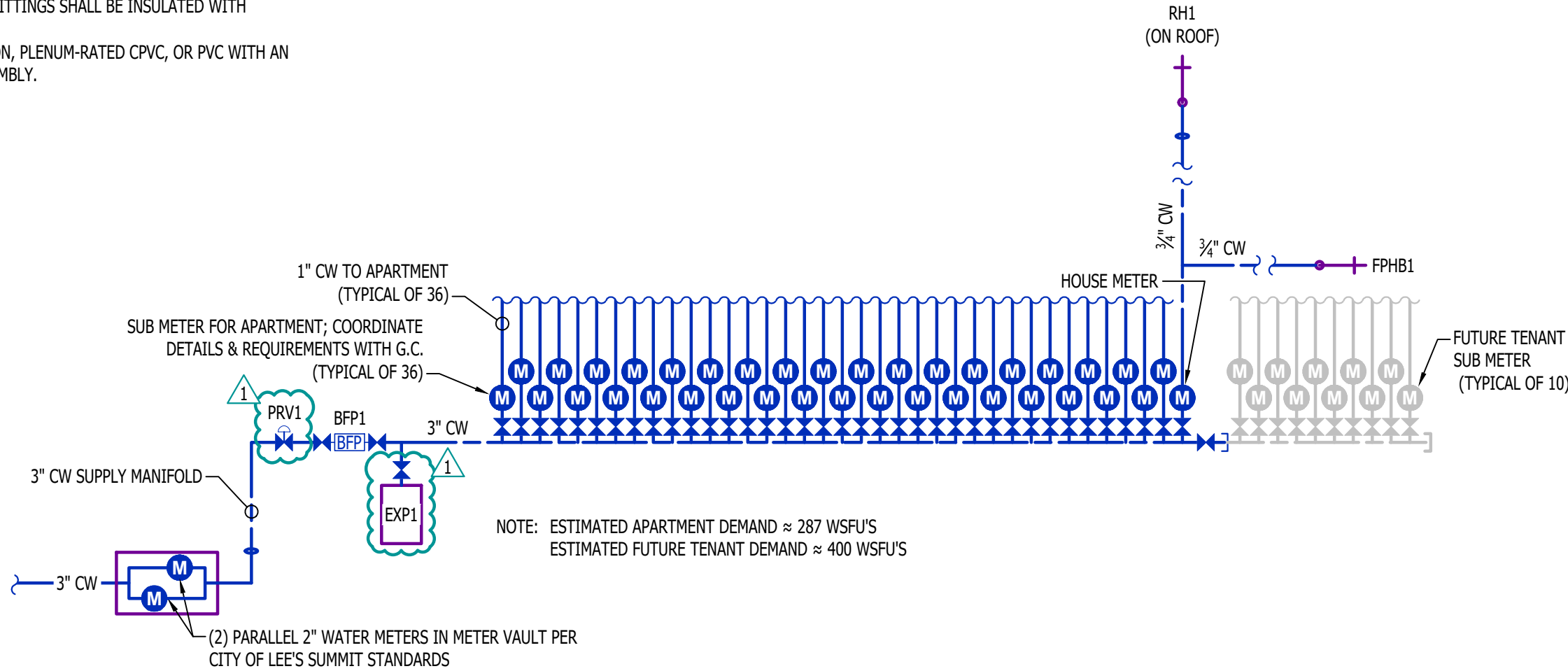
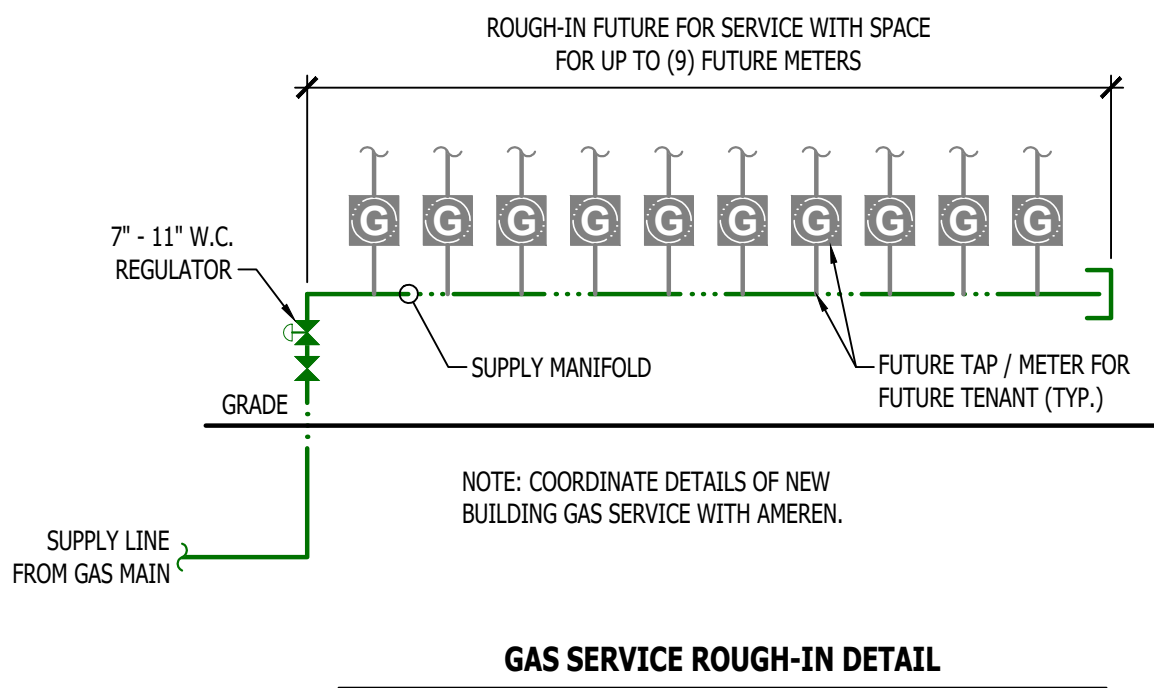
PLUMBING SPECIFICATIONS

1. GENERAL
- 1.1. PLUMBING CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL ESCUTCHEONS, ¼ TURN STOPS, P-TRAPS, AND SUPPLY LINES TO PROVIDE A COMPLETE SYSTEM AT EACH FIXTURE INDICATED ON PLANS UNLESS NOTED OTHERWISE.
- 1.2. ALL PLUMBING SYSTEMS SHALL BE INSTALLED LEVEL, PLUMB, AND PARALLEL/PERPENDICULAR TO BUILDING ORIENTATION WHERE POSSIBLE.
- 1.3. COORDINATE ALL PIPING INSTALLATIONS WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THRU STRUCTURAL ELEMENTS AS NECESSARY, VERIFY WITH STRUCTURAL ENGINEER.
- 1.4. VERIFY ALL UTILITY CONNECTION POINTS WITH PROPOSED PLUMBING LAYOUTS PRIOR TO BEGINNING WORK.
- 1.5. CLEAN ALL PLUMBING FIXTURES AND CHANGE FAUCET AERATORS AND SINK STRAINERS AT PROJECT COMPLETION PRIOR TO TURNING OVER TO OWNERSHIP.
2. EQUIPMENT / FIXTURES
- 2.1. ALL EQUIPMENT AND/OR FIXTURES MUST MEET OR EXCEED THE PERFORMANCE, FUNCTIONAL INTENT, AND AESTHETICS AS MODELS SPECIFIED ON PLANS. WHERE SPECIFIC MANUFACTURERS AND/OR MODELS ARE INDICATED ON PLANS OR WITHIN SCHEDULES, CONTRACTOR TO PROVIDE MODEL INDICATED OR APPROVED EQUAL. VERIFY SUBSTITUTION APPROVAL PRIOR TO PURCHASE OR INSTALLATION OF EQUIPMENT.
- 2.2. CONTRACTOR TO SUPPLY SUBMITTALS FOR ALL EQUIPMENT FOR REVIEW BY ARCHITECT AND ENGINEER. FORMAL APPROVAL SHALL BE RECEIVED BY CONTRACTOR PRIOR TO EQUIPMENT PURCHASE.
- 2.3. CONTRACTOR TO SHARE APPROVED EQUIPMENT SUBMITTALS WITH ANY PERTINENT ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTORS WITHIN TWO WEEKS OF RECEIVING APPROVED SUBMITTALS FROM ARCHITECT/ENGINEER.
3. SANITARY
- 3.1. BELOW AND ABOVE GRADE WASTE AND VENT PIPING IN BUILDING TO BE SOLID CORE SCHEDULE 40 PVC LISTED FOR DWV APPLICATIONS.
- 3.2. NO WASTE OR VENT PIPING INSTALLED BELOW GRADE SHALL BE SMALLER THAN 2".
- 3.3. MINIMUM SLOPES FOR WASTE PIPING (UNLESS NOTED OTHERWISE ON PLANS):
- 3.3.1. 2 ½" OR LESS DIAMETER: ¼" PER FOOT
- 3.3.2. 3" TO 6" DIAMETER: ¼" PER FOOT
- 3.3.3. 8" OR LARGER DIAMETER: ¼" PER FOOT
- 3.4. ACCESSIBLE FULL PIPE SIZE CLEANOUTS SHALL BE PROVIDED & INSTALLED ON BUILDING SANITARY LINES AT LOCATIONS SHOWN ON PLANS, AT INTERVALS OF NO MORE THAN 100', AT EVERY CHANGE IN DIRECTION GREATER THAN 45°, AND AT THE BASE OF EACH WASTE STACK.
- 3.5. WASTE AND VENT PIPING IN PLENUMS SHALL BE CAST IRON, PLENUM-RATED CPVC, OR PVC WITH AN INSULATION WRAP LISTED FOR USE AS SUCH AN ASSEMBLY.
- 3.6. ALL VENT PIPE TERMINATIONS SHALL BE LOCATED EITHER 10' HORIZONTALLY OR 3' ABOVE MECHANICAL AIR INTAKE LOCATIONS. TERMINATIONS SHALL NOT BE INSTALLED UNDER ANY OPERABLE BUILDING OPENING OR OPERABLE ADJACENT BUILDING OPENING. CONTRACTOR TO OFFSET VENT PIPING AS NECESSARY TO MEET THESE REQUIREMENTS.

4. DOMESTIC WATER
- 4.1. ALL DOMESTIC WATER PIPING TO BE EITHER COPPER OR PEX, SHALL CONFORM TO NSF 61 AND BE LISTED FOR USE IN POTABLE WATER SYSTEMS.
- 4.1.1. WHERE PEX PIPING IS USED, IT SHALL BE INCREASED ONE PIPE SIZE FROM WHAT IS INDICATED ON PLANS FOR ALL PORTIONS OF DISTRIBUTION SYSTEM.
- 4.1.2. PEX-A MAY BE INSTALLED AT SIZES INDICATED ON PLANS ONLY IF AN ENGINEERED PLAN IS SUBMITTED SHOWING ACCEPTABLE PRESSURE DROPS AND FLUID VELOCITIES, APPROVAL MUST BE GRANTED PRIOR TO PURCHASE AND INSTALLATION.
- 4.1.3. COPPER WATER PIPING BELOW GRADE SHALL BE TYPE "K". BELOW GRADE JOINTS SHALL BE SILVER SOLDERED. THERE SHALL BE NO JOINTS IN WATER PIPING LOCATED BENEATH BUILDING SLAB.
- 4.1.4. COPPER WATER PIPING ABOVE GRADE SHALL BE TYPE "L".
- 4.2. PROVIDE WATER HAMMER ARRESTORS AT ALL QUICK-CLOSE VALVES. FIXTURES REQUIRING WATER HAMMER ARRESTORS INCLUDE BUT ARE NOT LIMITED TO PLUSH VALVES, SENSOR FAUCETS, AND WASHING MACHINE BOXES. AIR CHAMBERS SHALL NOT BE PERMITTED.
- 4.3. ALL DOMESTIC WATER PIPING SHALL BE ROUTED WITHIN BUILDING THERMAL ENVELOPE AND WITHIN WALL CAVITIES, ABOVE FINISHED CEILINGS, OR BELOW SLAB TO REMAIN CONCEALED UNLESS OTHERWISE NOTED. NOTIFY ENGINEER OF ANY NECESSARY ADJUSTMENTS THAT REQUIRE PIPING TO BE EXPOSED.
- 4.4. DOMESTIC WATER PIPING INSULATION
- 4.4.1. ALL HW PIPING, WHETHER COPPER OR PEX, SHALL BE INSULATED WITH PLENUM RATED CLOSED CELL ELASTOMERIC INSULATION.
- 4.4.1.1. FOR PIPING LESS THAN 1½", INSULATION THICKNESS TO BE 1".
- 4.4.1.2. FOR PIPING 1½" OR GREATER, INSULATION THICKNESS SHALL BE 1½".
- 4.4.2. CW COPPER PIPING TO INSULATED WITH ½" PLENUM RATED CLOSED CELL ELASTOMERIC INSULATION. CW PEX NEED NOT BE INSULATED UNLESS NOTED OTHERWISE ON PLANS.

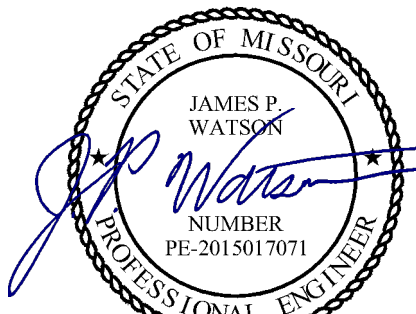
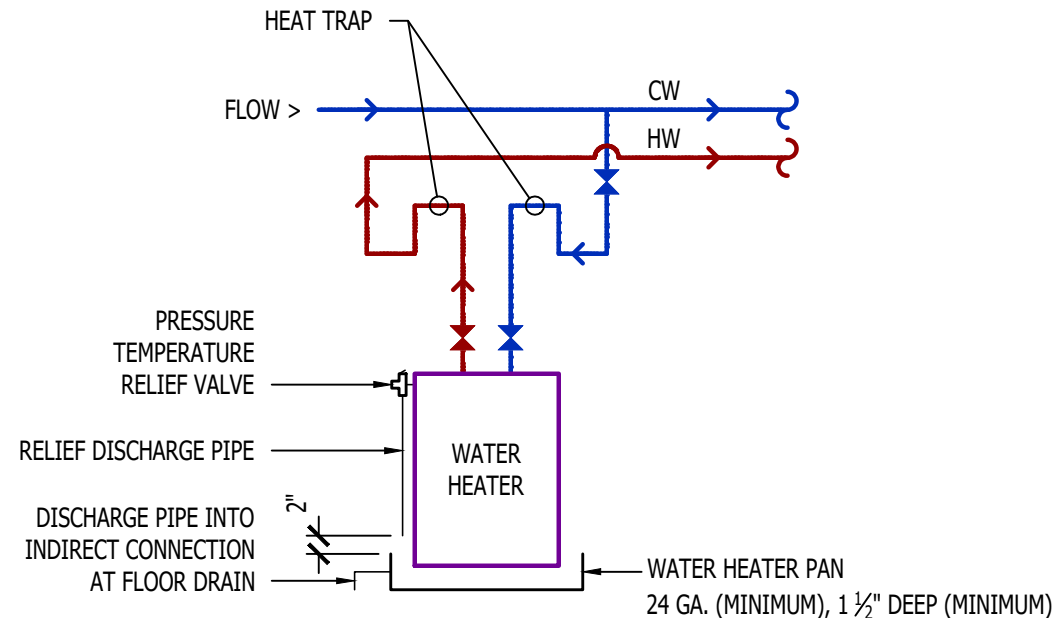
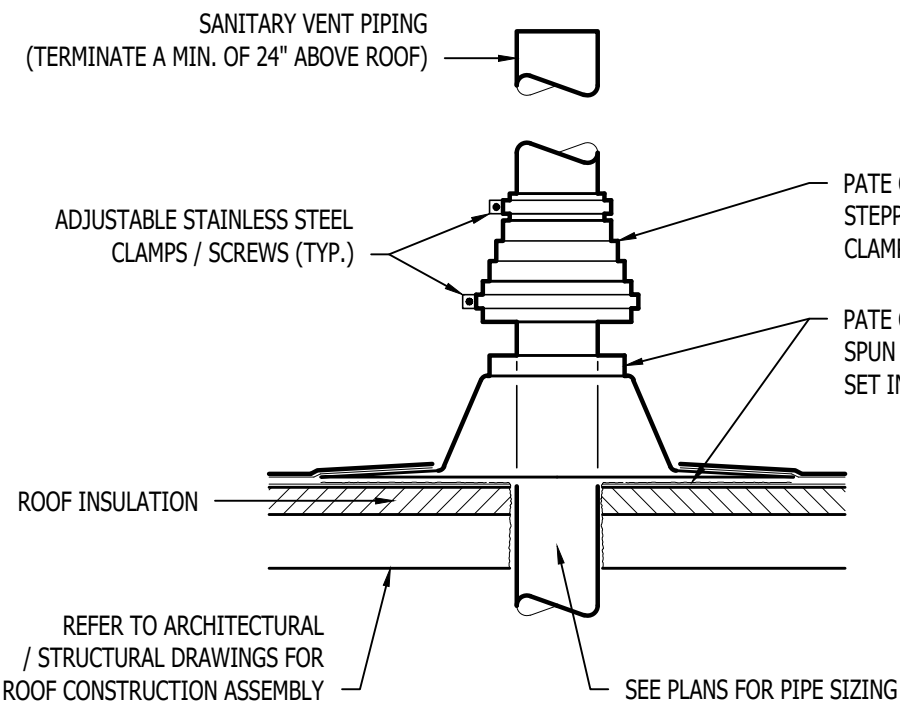
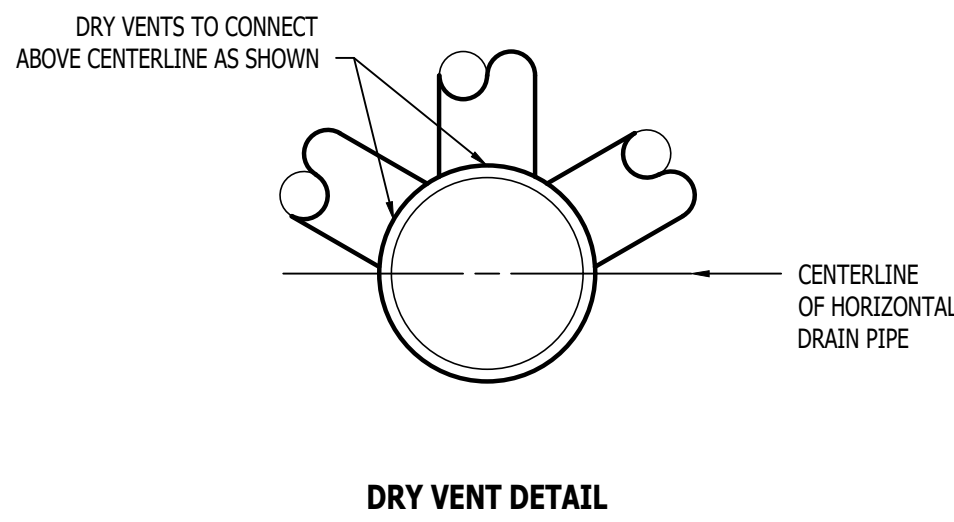
5. GAS PIPING
- 5.1. GAS PIPING SHALL BE INSTALLED LEVEL, PLUMB, AND PARALLEL OR PERPENDICULAR TO BUILDING ORIENTATION WHERE POSSIBLE.
- 5.2. QUARTER-TURN FULL-PORT SHUTOFF VALVES SHALL BE INCLUDED AT EACH APPLIANCE CONNECTION, AS WELL AS AN IN-LINE REGULATOR FROM DELIVERY PRESSURE TO APPLIANCE OPERATING PRESSURE IF REQUIRED. INCLUDE SEDIMENT TRAPS PER IFGC REQUIREMENTS.
- 5.1. NATURAL GAS AND LIQUID PROPANE (LP) PIPING TO SHALL BE SCHEDULE 40 BLACK STEEL.
- 5.2. PIPE JOINTS SHALL BE THREADED WITH CLASS 150 FITTINGS, OR WELDED. NOTIFY OWNER/GC OF ANY NECESSARY HOT-WORK ASSOCIATED WITH WELDED CONNECTIONS.
- 5.3. WHERE PIPING IS EXPOSED ON EXTERIOR FACE OF BUILDING, PAINT TO MATCH BUILDING. PAINT YELLOW IN ALL OTHER LOCATIONS.
- 5.4. ON ROOFTOPS, INSTALL GAS PIPE WITH "ROOFTOP BLOX" PER MANUFACTURER'S INSTRUCTION.

6. STORM DRAIN PIPING
- 6.1. ABOVE AND BELOW GRADE STORM PIPING SHALL BE SOLID CORE SCHEDULE 40 PVC.
- 6.2. ALL PRIMARY & SECONDARY STORM DRAIN PIPING & FITTINGS SHALL BE INSULATED WITH ½" FIBERGLASS INSULATION WITH ASJ JACKET.
- 6.3. STORM DRAIN PIPING IN PLENUMS SHALL BE CAST IRON, PLENUM-RATED CPVC, OR PVC WITH AN INSULATION WRAP LISTED FOR USE AS SUCH AN ASSEMBLY.

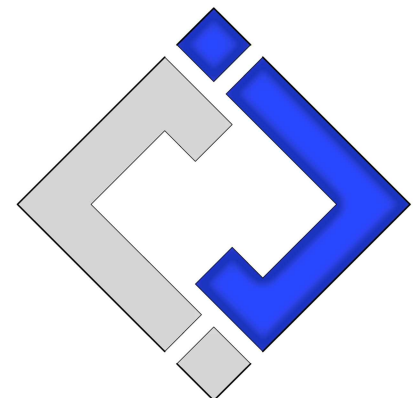


PLUMBING FIXTURE SCHEDULE				
TAG	DESCRIPTION	MANUFACTURER (OR EQUAL)	MODEL (OR EQUAL)	NOTES
AAV1	AIR ADMITTANCE VALVE	OATEY	39020	1.5 - 6 DFU's MAX
BFP1	BACKFLOW PREVENTER	WILKINS	375	RPZ - 3"
DN1	DOWNSPOUT NOZZLE	ZURN	Z199	
EXP1	EXPANSION TANK	WATTS	DETA-100	
FCO1	FLOOR CLEANOUT	ZURN	1400	
FD1	FLOOR DRAIN	ZURN	Z415-BZ	WITH Z1072 TRAP SEAL
FPHB1	FROST PROOF HOSE BIB	WOODFORD	MODEL 67	
FS1	FLOOR SINK	ZURN	FD2370	
LAV1	LAVATORY - INTEGRAL BOWL	-	-	WITH PFISTER #G142-8000 CHROME FAUCET
PRV1	PRESSURE REDUCING VALVE	ZURN	600XL	3" INLET / 3" OUTLET
RD1	ROOF DRAIN	ZURN	Z100	
REF1	REFRIGERATOR BOX	SILOUX CHIEF	696-G1000	
RH1	ROOF HYDRANT	WOODFORD	SRH-MS	
SK1	KITCHEN SINK	DAYTON	DSESR12722	WITH PFISTER #F-529-CRS FAUCET, INSINKERATOR DISPOSAL #BADGER-1
SP1	SUMP PUMP	ZOELLER	153-0002	120V, 1/2 HP
TUB1	TUB / SHOWER	AQUARIS	G6030TS	WITH PFISTER #R89-0300 SHOWER TRIM KIT
TUB2	ADA TUB / SHOWER	AQUATIC	26035MTE	WITH GRAB BARS & ADA HANDHELD SHOWER ASSEMBLY
WC1	WATER CLOSET - STANDARD HEIGHT - TANK	AMERICAN STANDARD	215CA.004	WITH CHURCH 7200SLEC SEAT AND COVER, STAINLESS BRAIDED SUPPLY, AND 1/4 TURN SHUT-OFF
WC2	WATER CLOSET - ADA - TANK	AMERICAN STANDARD	215AA.004	WITH CHURCH 7200SLEC SEAT AND COVER, STAINLESS BRAIDED SUPPLY, AND 1/4 TURN SHUT-OFF
WH1	WATER HEATER - ELECTRIC - LOWBOY	AO SMITH	ECLB-40	38 GALLON, 208V 1-PH, 4500W, WITH 'EXP1'
YCO1	YARD CLEAN OUT	ZURN	Z1400	
NOTES: 1. VERIFY NECESSARY FIXTURES MEET ADA REQUIREMENTS WITH ARCHITECT PRIOR TO INSTALLATION. 2. VERIFY FIXTURE FINISHES WITH OWNER / ARCHITECT.				

PLUMBING CONNECTION SIZING SCHEDULE					
FIXTURE		SANITARY PIPING		SUPPLY PIPING	
TYPE	TYPICAL ABBREVIATION	WASTE CONNECTION	VENT CONNECTION	COLD WATER CONNECTION	HOT WATER CONNECTION
DRINKING FOUNTAIN	DF	1-1/2"	1-1/4"	1/2"	-
FLOOR DRAIN	FD	3"	2"	-	-
HAND / HAIR SINK	HS / SK	2"	1-1/4"	1/2"	1/2"
HOSE BIBB	HB	-	-	3/4"	-
LAVATORY	LAV	1-1/2"	1-1/4"	1/2"	1/2"
MOP SINK	MS	3"	1-1/2"	1/2"	1/2"
ICE MAKER OUTLET BOX	REF	-	-	1/2"	-
SHOWER	SH	3"	1-1/2"	1/2"	1/2"
URINAL	UR	2"	1-1/4"	3/4"	-
WATER CLOSET (FLUSH TANK)	WC	3"	2"	1/2"	-
WATER CLOSET (FLUSH VALVE)	WC	3"	2"	1"	-
NOTES: 1. SIZES SHOWN ABOVE ARE TYPICAL UNLESS NOTED OTHERWISE ON PLANS					



James Watson, P.E. October 4, 2024
PE-2015017071
MO Certificate of Authority # 2018029680



J-SQUARED
ENGINEERING

2400 Bluff Creek Drive, Suite 101
Columbia, Missouri 65201
573.234.4492
www.j-squaredeng.com

J2 PROJECT No: J21008

J2 DESIGN: ACW

ISSUE TITLE DATE

CITY SUBMITTAL 09 - 09 - 2024

REVISION 1 10 - 04 - 2024

MECHANICAL - ELECTRICAL - PLUMBING DESIGN DRAWINGS FOR:

The Village at Discovery - Lot 5

Street Address

Lee's Summit, Jackson County, MO

AHJ APPROVAL STAMP

SHEET TITLE

PLUMBING DETAILS & SCHEDULES

SHEET NUMBER

P501