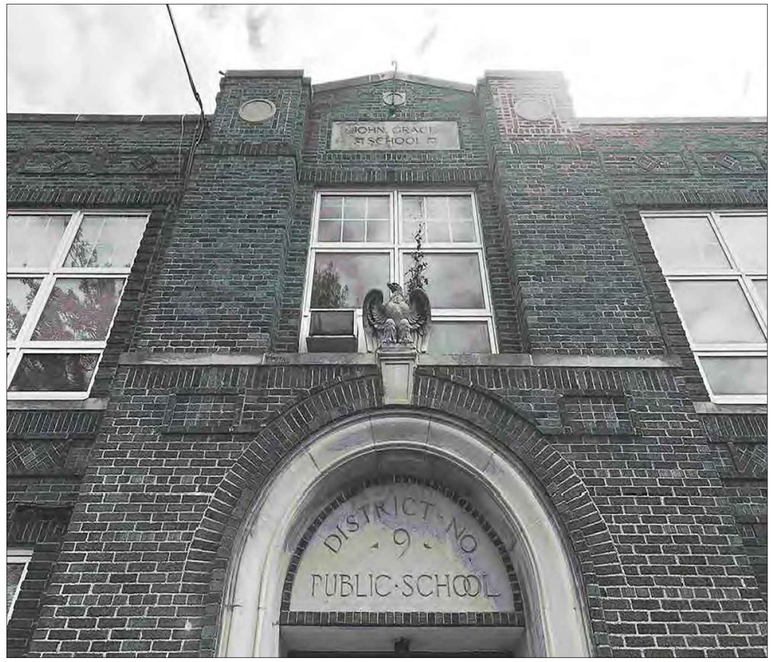
JOHN GRACE ARMS

21030 INDIAN ST.
SOUTHFIELD, MI 48033



DEVELOPED BY

JOHN GRACE ARMS LDHA LLC

LOCATION MAP (NTS)



PROJECT TEAM:

ARCHITECT:

SDG ASSOCIATES, LLC

607 SHELBY STREET
SUITE 704
DETROIT, MI 48226
PH: 313.961.9000
FAX: 313.964.3233

CIVIL ENGINEERS:

SPALDING DEDECKER ENGINEERS

905 SOUTH BOULEVARD EAST
ROCHESTER HILLS, MICHIGAN 48307
PH: 800-598-1600
INFO@SDA-ENG.COM

STRUCTURAL ENGINEERS:

IMEG

33533 W. TWELVE MILE
SUITE 200
FARMINGTON HILLS, MI 48331
PH: 248-344-2800
FAX: 248-344-1650

M.E.P. ENGINEERS:

A&A ENGINEERING & CONSULTING

28862 VISTA WAY
SOUTH LYON, MICHIGAN 48178
PH: 419-303-8503
SHENNARD@AAENGINEERCO.COM

PRESERVATION CONSULTANT:

KIDORF PRESERVATION CONSULTING

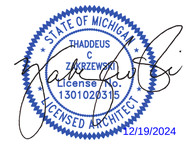
451 E. FERRY STREET
DETROIT, MICHIGAN 48202
PH: 313-300-9376
KRISTINE@KIDORFPRESERVATIONCONSULTING.COM

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-9000
Fax:313-964-3233

REGISTRATION SEAL

KEY PLANS



SHEET TITLE

TITLE SHEET

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
For Permit	10.25.2024
Bulletin No. 1 (1)	02.19.2025
Bulletin No. 2 (2)	03.05.2025
Bulletin No. 3 (3)	05.21.2025
Bulletin No. 4 (4)	07.01.2025

EBH
DRAWN BY

TZ
CHECKED

JA
APPROVED

21026.00
FILE NO.

COVER
SHEET NO.

JOHN GRACE ARMS

21030 INDIAN STREET
SOUTHFIELD, MI

DEVELOPMENT TEAM

CIVIL ENGINEER
SPALDING DeDECKER
905 SOUTH BOULEVARD EAST
ROCHESTER HILLS, MICHIGAN 48307
PHONE (248) 844-5400

ARCHITECT
SDG ASSOCIATES
607 SHELBY, SUITE 704
DETROIT, MI 48226
JOHN ABELA
313-961-9000

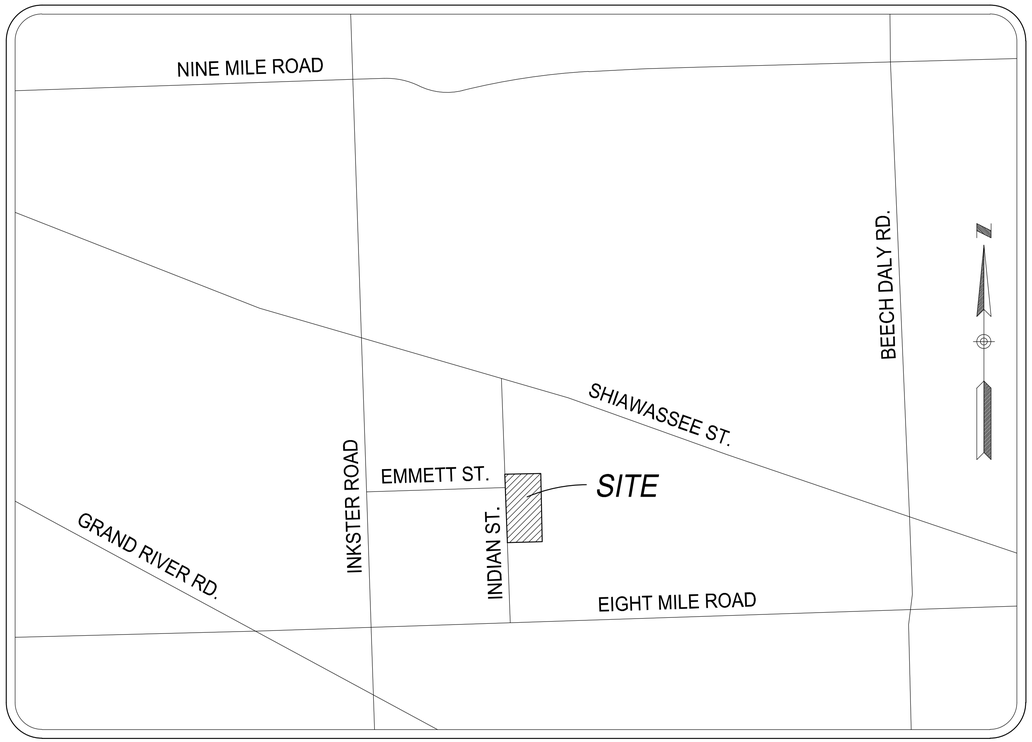
LANDSCAPE ARCHITECT
ECO LANDSCAPE & DESIGN, LLC.
ROBERT O'REILLY, R.L.A.
734-276-8446

OWNER
SOUTHFIELD NEIGHBORHOOD REVITALIZATION INITIATIVE, LLC.
19785 WEST 12 MILE ROAD, SUITE 404
SOUTHFIELD, MI 48076
CONTACT
PHONE 833-373-2313

(60) units total (42 addition)
(7) ADA
(5) 2BR
(55) 1BR

Characteristic	Existing Conditions	Proposed Conditions
Total Development Area (ac)	3.99 Acres	3.99 Acres
Impervious Area (ac)	2.31 Acres	2.35 Acres
Total Pervious Area (ac)	1.68 Acres	1.64 Acres
Pervious Area Breakdown by Cover Type		
Pervious Area Land Use Data		
Meadow/fallow/natural areas (non-cultivated)	0.00 Acres	0.00 Acres
Predominant NRCS Soil Type (A, B, C, or D)	A	A
Improved areas (turf grass, landscape, row crops)	1.68 Acres	1.64 Acres
Predominant NRCS Soil Type (A, B, C, or D)	A	A
Wooded Areas	0.00 Acres	0.00 Acres
Predominant NRCS Soil Type (A, B, C, or D)	A	A
Proposed Pond Area (acres)		
CPVC Volume ***Calculated*** (cubic feet)	12,869 CU FT	
CPVC Volume ***Provided*** (cubic feet)	54,568 CU FT	
CPRC Volume ***Calculated*** (cubic feet)	18,809 CU FT	
CPRC Volume ***Provided*** (cubic feet)	18,809 CU FT	

The Professional Engineer who signs and seals this site plan certifies that the values in this table reflect the WRC stormwater calculations required for this development and that geotechnical investigations were performed that provide conclusive documentation that demonstrates whether infiltration (i.e., CPVC Volume Control) is practicable.



LOCATION MAP
NTS

SITE DATA

CURRENT ZONING ..... R-1, RUDD
SITE AREA ..... ±4.62 ACRES

SURROUNDING PROPERTY ZONING:
SOUTH – R-1
NORTH – R-1
EAST – R-1
WEST – R-1

BUILDING & SETBACKS REQUIREMENTS

	REQUIRED	PROPOSED
FRONT	*20'*	*70.1' (EXISTING)*
REAR	**RUDD*	*42.7'*
SIDE (1)	**RUDD*	*TBD*
SIDE (2)	**RUDD*	*23' (EXISTING)*

LOT COVERAGE CALCULATION
MAXIMUM LOT COVERAGE = 75%
*PROVIDED LOT COVERAGE = 57%**
**LOT COVERAGE CALCULATION DOES NOT INCLUDE PROPOSED PARK AREA.*

PARKING CALCULATION
PARKING REQUIRED = 32 SPACES
*CALCULATION: (.5 SPACES/UNIT * 60 UNITS) + 1 SPACE/2 EMPLOYEES*

PARKING PROVIDED = 45 SPACES
LANDBANKED PARKING = 17 SPACES

STREET PARKING (PARALLEL) PROVIDED = 18 SPACES

ACCESSIBLE PARKING CALCULATION

	PROPOSED	REQUIRED	FORMULA
TOTAL	*8 SPACES*	*3 SPACES*	*51-75 TOTAL SPACES PROVIDED*
VAN	*4 SPACES*	*2 SPACES*	*1/6 ACCESSIBLE SPACES*

BUILDING INFORMATION
REFER TO ARCHITECTURAL FLOOR PLAN AND ELEVATIONS FOR BUILDING DETAILS.

GOVERNING AGENCIES

PLANNING
CITY OF SOUTHFIELD PLANNING DEPARTMENT
26000 EVERGREEN ROAD
SOUTHFIELD, MI 48076
CONTACT JEFFREY SPENCE
PHONE 248-796-4150

LANDSCAPE
CITY OF SOUTHFIELD
26000 EVERGREEN ROAD
SOUTHFIELD, MI 48076
CONTACT NOREEN LUSK
PHONE 248-796-4156

ENGINEERING
CITY OF SOUTHFIELD ENGINEERING DEPARTMENT
26000 EVERGREEN ROAD
SOUTHFIELD, MI 48076
CONTACT LEIGH SCHULTZ
PHONE 248-796-4812

FIRE DEPT.
CITY OF SOUTHFIELD FIRE DEPARTMENT
26000 EVERGREEN ROAD
SOUTHFIELD, MI 48076
CONTACT MIKE ALBO
PHONE 248-796-5706

LEGAL DESCRIPTION

ATA NATIONAL TITLE GROUP, LLC
COMMITMENT DATE: AUGUST 11, 2021
TAX PARCEL ID: 24-31-376-033
ADDRESS: 21030 INDIAN ST.

THE LAND REFERRED TO THIS TITLE COMMITMENT IS SITUATED IN THE CITY OF SOUTHFIELD, OAKLAND COUNTY, STATE OF MICHIGAN, AS FOLLOWS:

LOT 7, 9 AND THE NORTH 140 FEET OF LOT 11, THOMAS HITCHMAN'S SUBDIVISION, AS RECORDED IN LIBER 10, PAGE 49 OF PLATS, OAKLAND COUNTY RECORDS.

WETLANDS

THERE ARE NO EXISTING WETLANDS ON-SITE.

FLOODPLAIN NOTE

PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD MAP (MAP NO. 26125C0658F, DATED SEPTEMBER 29, 2006), THE SITE LIES WITHIN ZONE X WHICH ARE AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.

PERMIT MATRIX

TYPE	ISSUED BY	STATUS
SITE PLAN	CITY OF SOUTHFIELD	APPROVED
ENGINEERING	CITY OF SOUTHFIELD	APPROVED
SESC	CITY OF SOUTHFIELD	APPROVED
WATER SUPPLY	EGLE	APPROVED

CIVIL SHEET INDEX	
Sheet Number	Sheet Title
C1.0	Cover
C2.1	Demolition Plan
C3.1	Utility Plan
C3.2	Storm Profiles
C3.3	Watermain Profiles
C4.1	Drainage Area Map
C4.2	Detention Calculations
C4.3	Operations & Maintenance Plan
C5.1	Paving Plan
C5.2	Paving Details
C6.1	Grading Plan
C6.2	Detailed Grading
C7.1	Right-of-Way Parking Plan
C8.1	SESC Plan
L1.1	Landscape Plan
L1.2	Landscape Details

ATTACHED PLANS

TOPOGRAPHICAL SURVEY BY SDA (3 SHEETS)
CITY OF SOUTHFIELD WATERMAIN DETAILS (4 SHEETS)
OCWRC SANITARY SEWER DETAILS AND NOTES (2 SHEETS)
OCWRC STORM DRAIN NOTES AND DETAILS (1 SHEET)
OCWRC SESC DETAILS (1 SHEET)

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Fax (313) 305-9121

27333 Meadowbrook Rd., Suite 210
Novi, MI 48377
Phone (248) 844-6274

400 Ann St. NW, Suite 204
Grand Rapids, MI 49504
Phone (616) 885-5802

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P.O. BOX 2055
SOUTHFIELD, MI 48037-2055

811 Know what's below. Call before you dig.

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JOHN GRACE ARMS

CONSTRUCTION PLANS
Cover

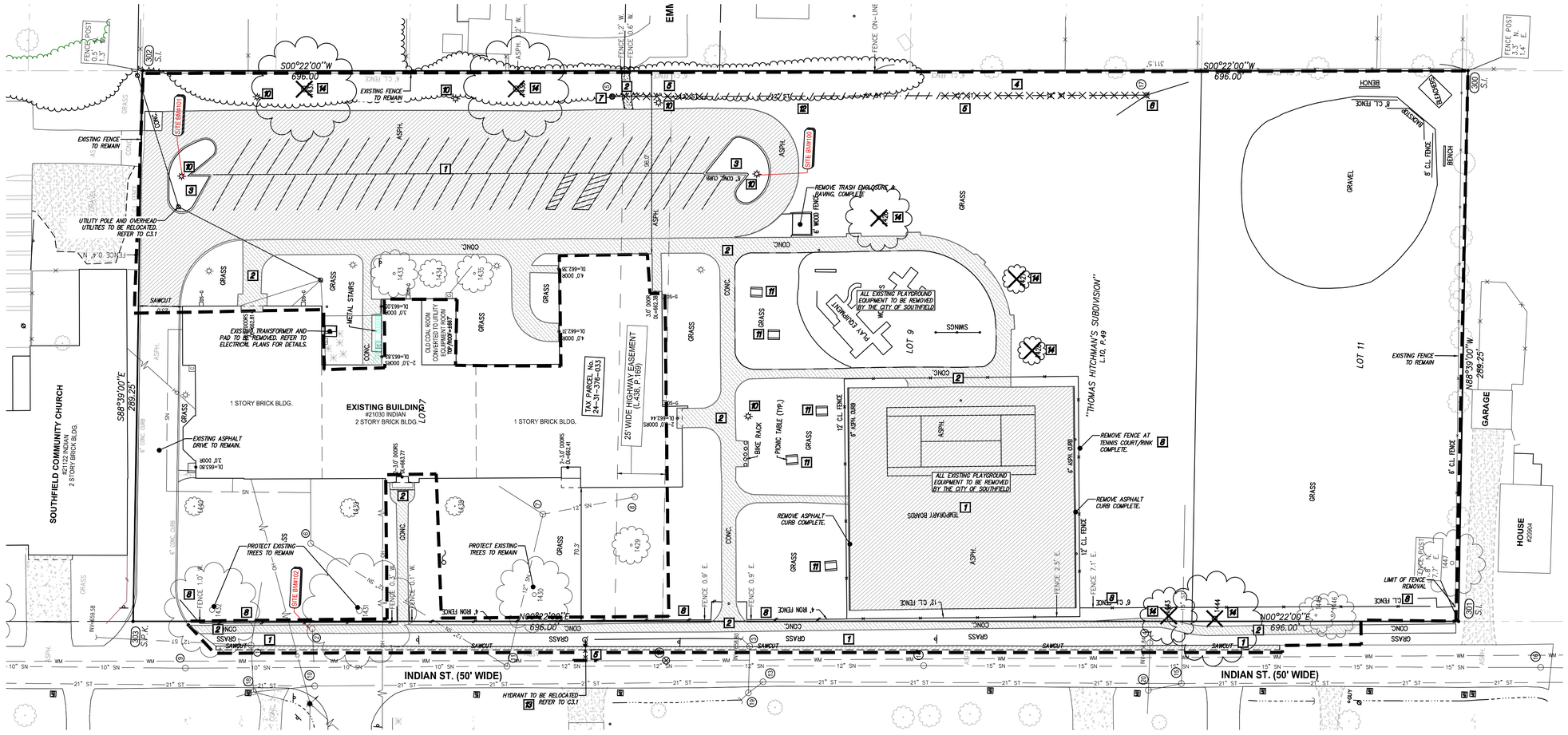
SECTION 31
TOWN 01N **RANGE** 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

NO.	DATE	REVISION
1	03-04-2024	OWNER REVIEW
2	03-22-2024	PAGE TURN
3	03-29-2024	REV. OWNER REVIEW
4	10-25-2024	PERMIT
5	12-13-2024	HUD SUBMISSION
6	12-20-2024	PERMIT
7	02-19-2025	⚠1 BULLETIN NO. 1
8	03-07-2025	⚠2 BULLETIN NO. 2
9	11-19-2025	CITY ENG. REV.
10	12-12-2025	CITY ENG. APPROVED
11	03-02-2026	EGLE ENG. REV.
11	04-13-2026	CITY ENG. REV.

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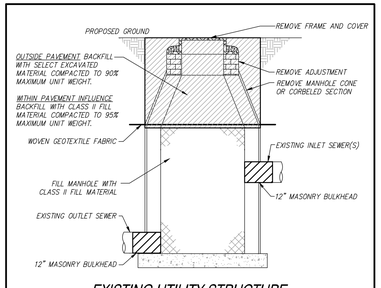
DRAFTER -	DATE -
DESIGNER J. CHRISTOPHER	DATE 24-01-26
CHECKED J. CHRISTOPHER	DATE 24-01-26
PROJECT MANAGER T. SOVEL	BID PLAN DATE
DEPARTMENT MANAGER APPROVAL -	DATE
JOB NO. NP22006	DRAWING NO. NP2006PAV
SCALE:	SHEET NO. C1.0

Plotted: Apr 13, 2026, 12:33 PM by user: lll1 - Saved: 12/13/2025 by user: lll1
N:\NPNLD Projects\NP22006 - Grace School - Senior Housing\DWG\NP22006CVR.dwg



SURVEY NOTES

1. TOPOGRAPHIC AND/OR BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS MAY BE BASED ON RECORD DATA NOT MEASURED IN THE FIELD.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL INFORMATION SHOWN ON THIS SURVEY AND NOTIFYING THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
3. CONTRACTOR SHALL UTILIZE A PRIVATE UTILITY LOCATOR TO STAKE PUBLIC AND PRIVATE UTILITY LOCATIONS PRIOR TO START OF CONSTRUCTION. IT IS THE CONTRACTORS RESPONSIBILITY, AT NO COST TO THE PROJECT, TO REPAIR OR REPLACE ANY DAMAGE CAUSED TO EXISTING UTILITIES.
4. CONTRACTOR SHALL CONTACT MISS DIG (811) THREE WORKING DAYS PRIOR TO THE START OF CONSTRUCTION FOR STAKING OF UTILITIES.



EXISTING UTILITY STRUCTURE ABANDONMENT DETAIL

NO SCALE

DEMOLITION NOTES

1. REMOVE ASPHALT PAVEMENT TO FULL DEPTH, INCLUDING AGGREGATE BASE. SAWCUT FULL DEPTH WHERE NEW PAVEMENT WILL BE PLACED ADJACENT TO EXISTING PAVEMENT. REMOVAL LIMITS TO BE FIELD VERIFIED BY ENGINEER.
2. REMOVE CONCRETE PAVEMENT TO FULL DEPTH, INCLUDING AGGREGATE BASE. SAWCUT FULL DEPTH TO NEAREST JOINT WHERE NEW PAVEMENT WILL BE PLACED ADJACENT TO EXISTING PAVEMENT. REMOVAL LIMITS TO BE FIELD VERIFIED BY ENGINEER.
3. REMOVE CONCRETE CURB TO FULL DEPTH. SAWCUT FULL DEPTH TO NEAREST JOINT WHERE NEW CONCRETE CURB WILL BE PLACED ADJACENT TO EXISTING CONCRETE CURB. REMOVAL LIMITS TO BE FIELD VERIFIED BY ENGINEER.
4. CLEAR AND GRUB TO THE LIMITS SHOWN. INCLUDE REMOVAL OF ALL SIGNS, POSTS, FOOTINGS, GRAVEL, BRUSH, SHRUBS, GRASS, AND TREES NOT INDICATED FOR PROTECTION, INCLUDING ROOTS. STRIP TOPSOIL AND STOCKPILE ON SITE IN DESIGNATED LOCATION.
5. REMOVE EXISTING UTILITY PIPE. BACKFILL WITH CLASS II FILL AND COMPACT TO 95% OF MAXIMUM DENSITY. INSTALL WATERTIGHT BULKHEADS AT STRUCTURES WHERE EXISTING PIPE IS TO BE REMOVED.
6. REMOVE EXISTING UTILITY STRUCTURE COMPLETE. BACKFILL WITH CLASS II FILL AND COMPACT TO 95% OF MAXIMUM DENSITY.
7. ABANDON EXISTING UTILITY STRUCTURE. REFER TO DETAIL ON THIS SHEET.
8. REMOVE AND SALVAGE EXISTING FENCE, INCLUDING ANY GATES.
9. REMOVE AND SALVAGE EXISTING FLAG POLE TO BE TURNED OVER TO OWNER. REMOVE AND DISPOSE EXISTING FOOTING.
10. REMOVE AND SALVAGE EXISTING LIGHT POST TO BE TURNED OVER TO OWNER. REMOVE AND DISPOSE OF EXISTING FOOTING.
11. REMOVE AND SALVAGE EXISTING PICNIC TABLE TO BE TURNED OVER TO THE OWNER.
12. ABANDON EXISTING UTILITY PIPE IN PLACE (CONTRACTOR TO CONFIRM NO CONFLICTS). CUT AND INSTALL WATERTIGHT CAP AT EXISTING PIPE AND INSTALL BULKHEAD AT STRUCTURES WHERE PIPE IS TO BE ABANDONED IN PLACE. FILL WITH FLOWABLE GROUT.
13. CUT AND CAP EXISTING HYDRANT LEAD AT THE EXISTING WATER MAIN. REMOVE EXISTING HYDRANT, VALVE, AND ASSOCIATED APPURTENANCES. CAP ABANDONED CONNECTION WATERTIGHT. REFER TO C3.1 FOR NEW HYDRANT LOCATION.
14. REMOVE EXISTING TREE, INCLUDE STUMP AND ROOTS.

UNLESS OTHERWISE SPECIFIED, PROTECT EXISTING UTILITIES AND UTILITY STRUCTURES TO REMAIN.

EXISTING SIGNAGE AND MAILBOXES WITHIN THE CLEARING LIMITS ARE TO BE REMOVED AND SALVAGED. STAGE IN ON SITE LOCATION AS SPECIFIED BY OWNER.

ALL DEPRESSIONS CREATED BY DEMOLITION PROCEDURES SHALL BE BACKFILLED WITH CLASS II FILL MATERIAL, IN 8" LIFTS COMPACTED TO 95% OF MAXIMUM UNIT WEIGHT, UP TO PROPOSED SUBGRADE.

CONTRACTOR IS RESPONSIBLE FOR DOING AN EARTHWORK CALCULATION FOR CUT AND FILL REQUIREMENTS, AND IS RESPONSIBLE FOR INCLUDING IMPORT AND EXPORT OF MATERIALS IN THEIR BID. ALL EXCESS MATERIAL (INCLUDING TOPSOIL, CLEAN FILL, AND WASTE MATERIAL) SHALL BE REMOVED FROM THE SITE.

EXISTING SUPPORTED SLABS AT BUILDING ENTRY/DOORS TO REMAIN, UNLESS OTHERWISE DIRECTED. CONTRACTOR TO VERIFY LIMITS OF EXISTING SUPPORTED SLAB AND REMOVE ADJACENT WALKS AS SHOWN ON PLANS.

CONTRACTOR TO PROTECT EXISTING WALKS, PAVEMENT, CURBS, GUTTERS, WALLS, FENCES, GATES, LANDSCAPING AND TREES TO REMAIN DURING CONSTRUCTION.

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JOHN GRACE ARMS

CONSTRUCTION PLANS
Demolition Plan

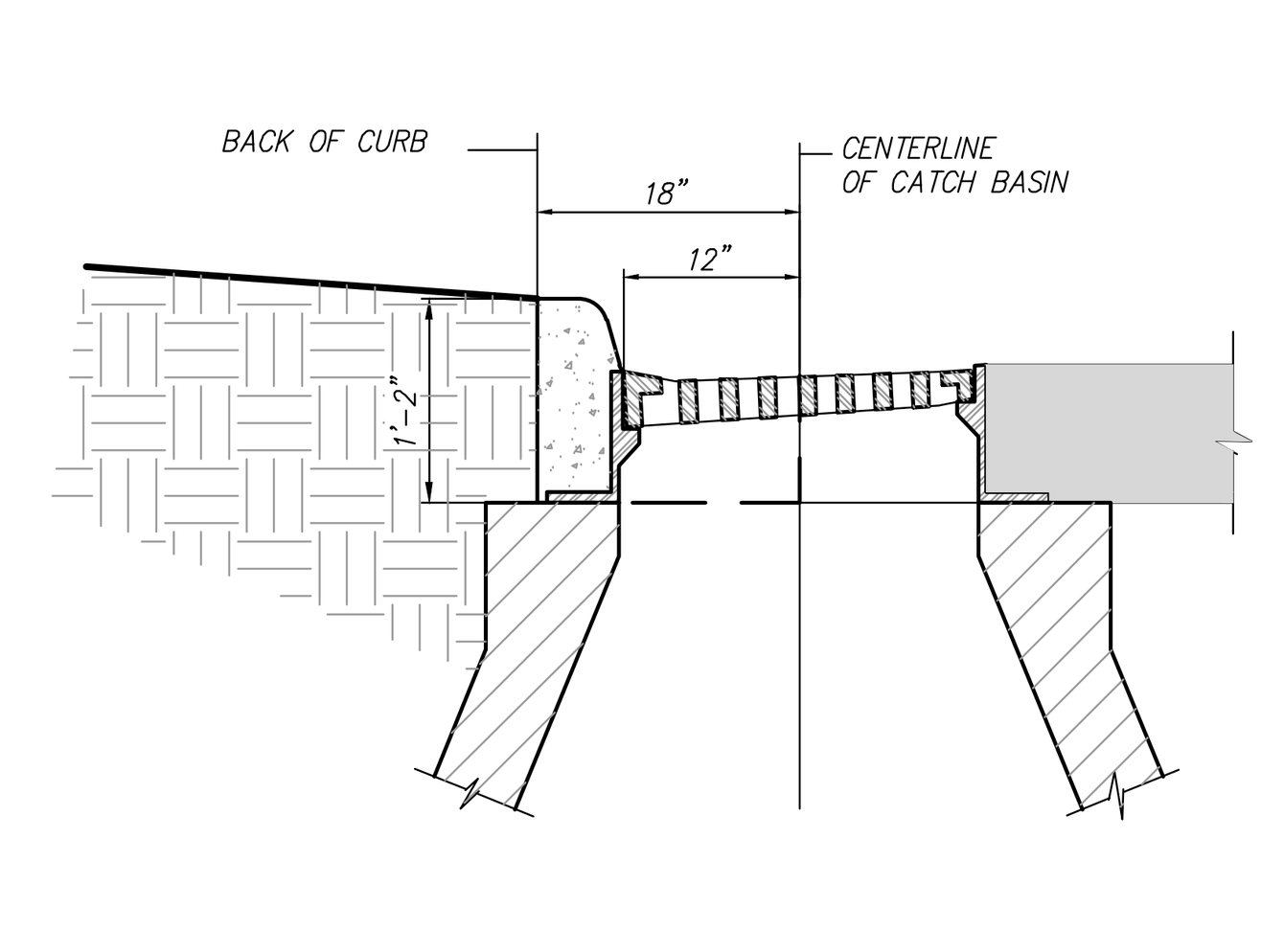
SECTION 31
TOWN 01N RANGE 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

NO.	DATE	REVISION
11	04-13-2026	CITY ENG. REV.
12	06-23-2026	RFI 121
13	07-02-2026	RFI 115
14	11-02-2026	RFI 161

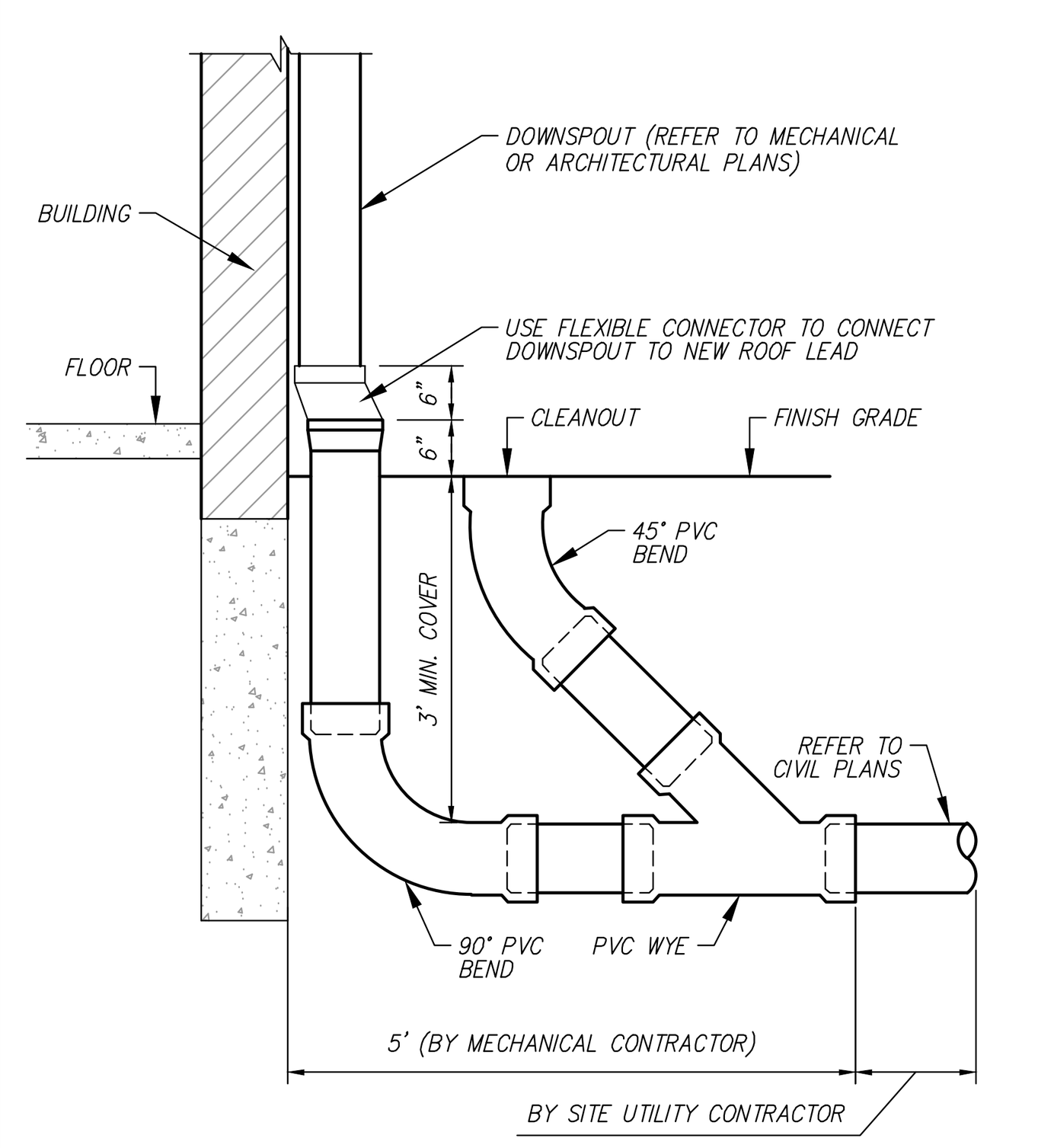
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DRAFTER: -	DATE: -
DESIGNER: J. CHRISTOPHER	DATE: 24-01-26
CHECKED: J. CHRISTOPHER	DATE: 24-01-26
PROJECT MANAGER: T. SOVEL	BID PLAN DATE
DEPARTMENT MANAGER APPROVAL: -	DATE
JOB NO.: NP22006	DRAWING NO.: NP2006PAV
SCALE: 1" = 30'	SHEET NO.: C2.1

Plotted: Nov 2, 2026, 7:54 AM by user: 1111 - Saved: 11/2/2026 by user: 1111
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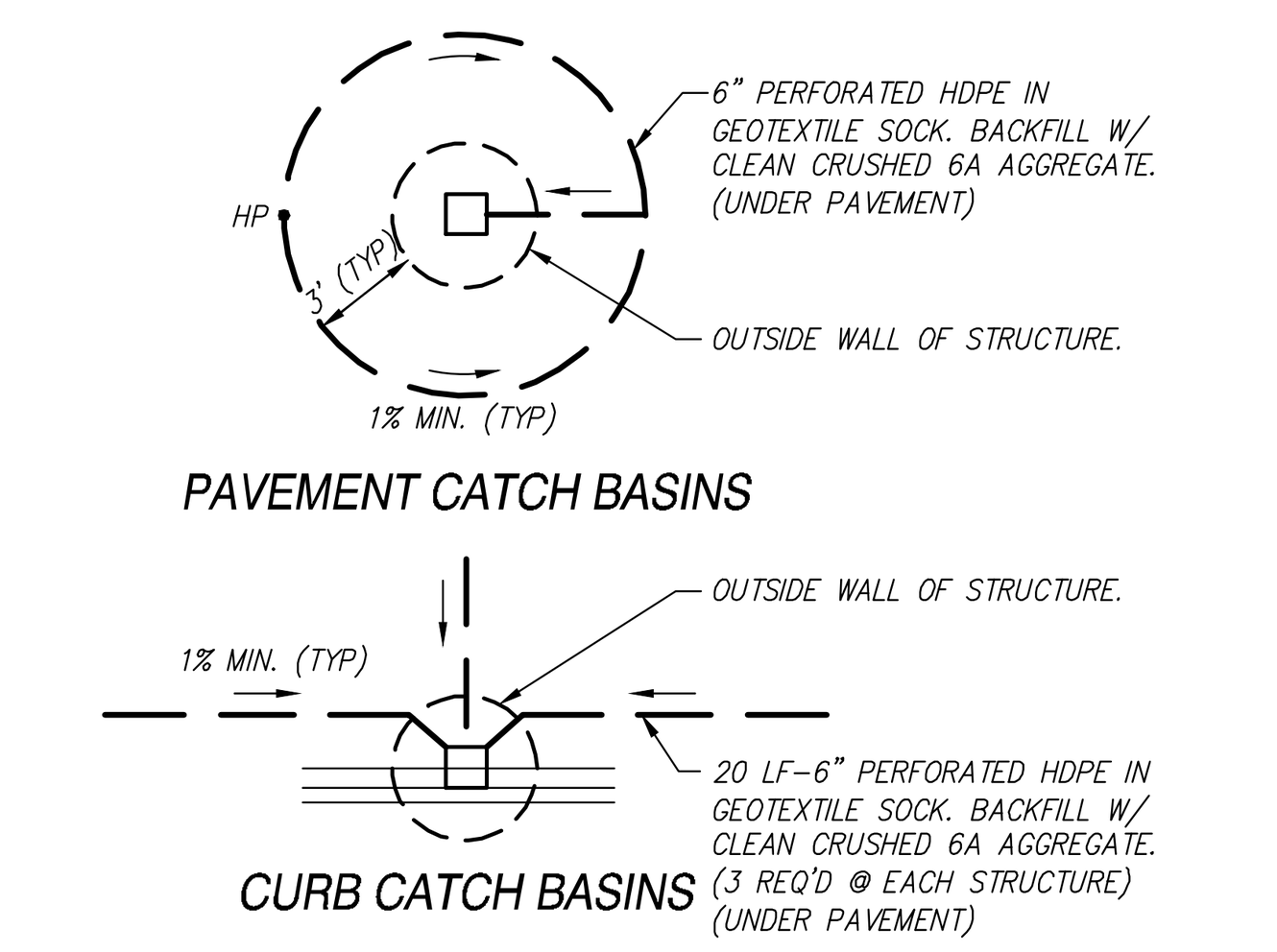
CURB DRAINAGE STRUCTURE LOCATION
NO SCALE



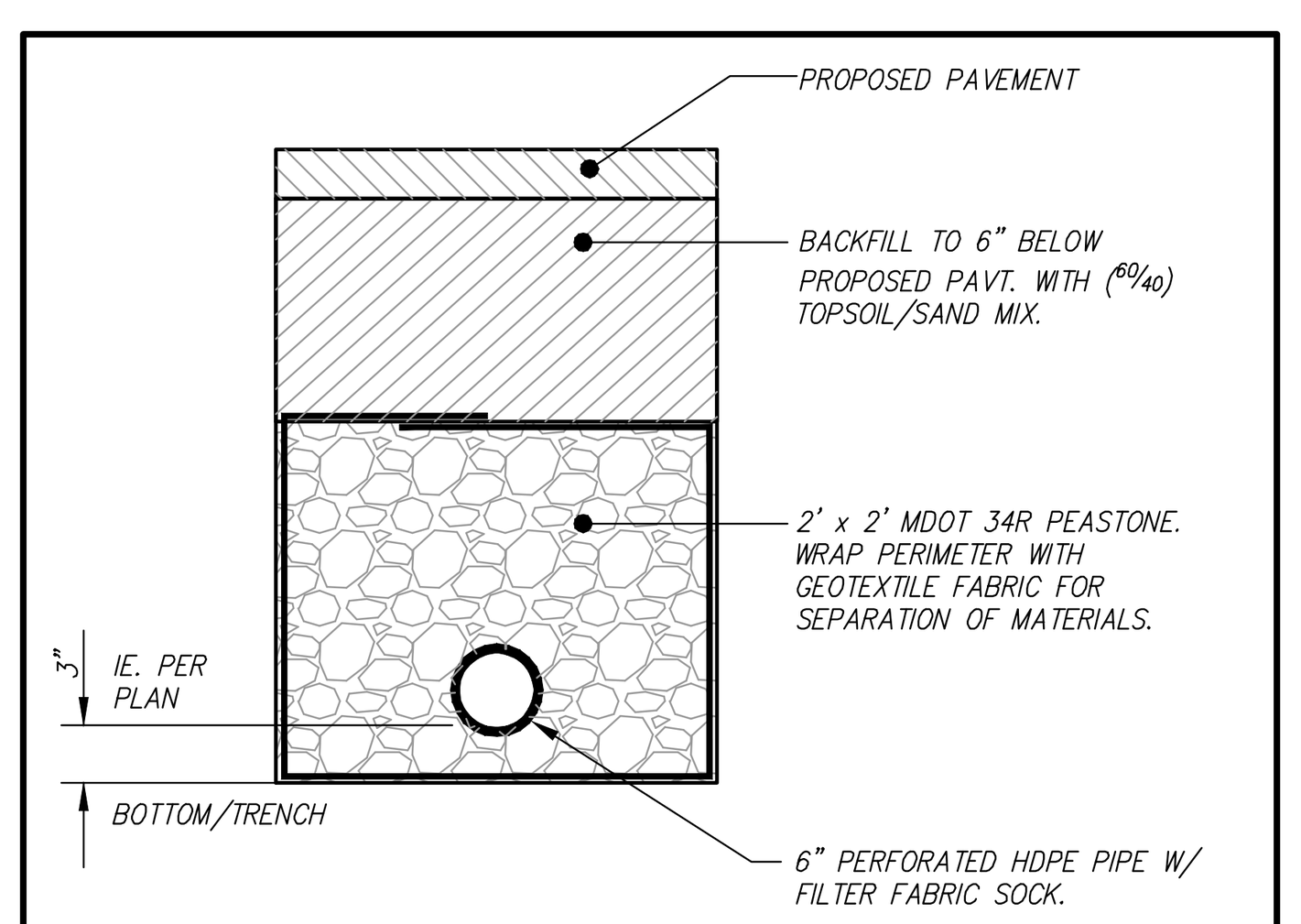
NOTES:

1. ALL DOWNSPOUT LEADS TO BE AT 1.00% (UNLESS NOTED OTHERWISE)
2. EXTEND ALL DOWNSPOUTS LEADS TO 12" ABOVE GRADE & STUB FOR DOWNSPOUT CONNECTION (CONFIRM EXACT LOCATION WITH ARCHITECTURE PLANS)
3. ALL INVERT ELEVATIONS SHOWN FOR BUILDING ROOF LEADS ARE AT 5' FROM THE LOCATION OF THE DOWNSPOUT. THE SITE CONTRACTOR IS REQUIRED TO EXTEND THE LEADS TO THE DOWNSPOUT LOCATION AND STUB THE LEAD AT 12" ABOVE PROPOSED GROUND. THE MECHANICAL CONTRACTOR WILL MAKE THE FINAL CONNECTION WITH THE APPROPRIATE FITTINGS. COORDINATE EXACT DOWNSPOUT LOCATION WITH ARCHITECTURE PLANS.
4. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTING PROPOSED UTILITIES. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS.

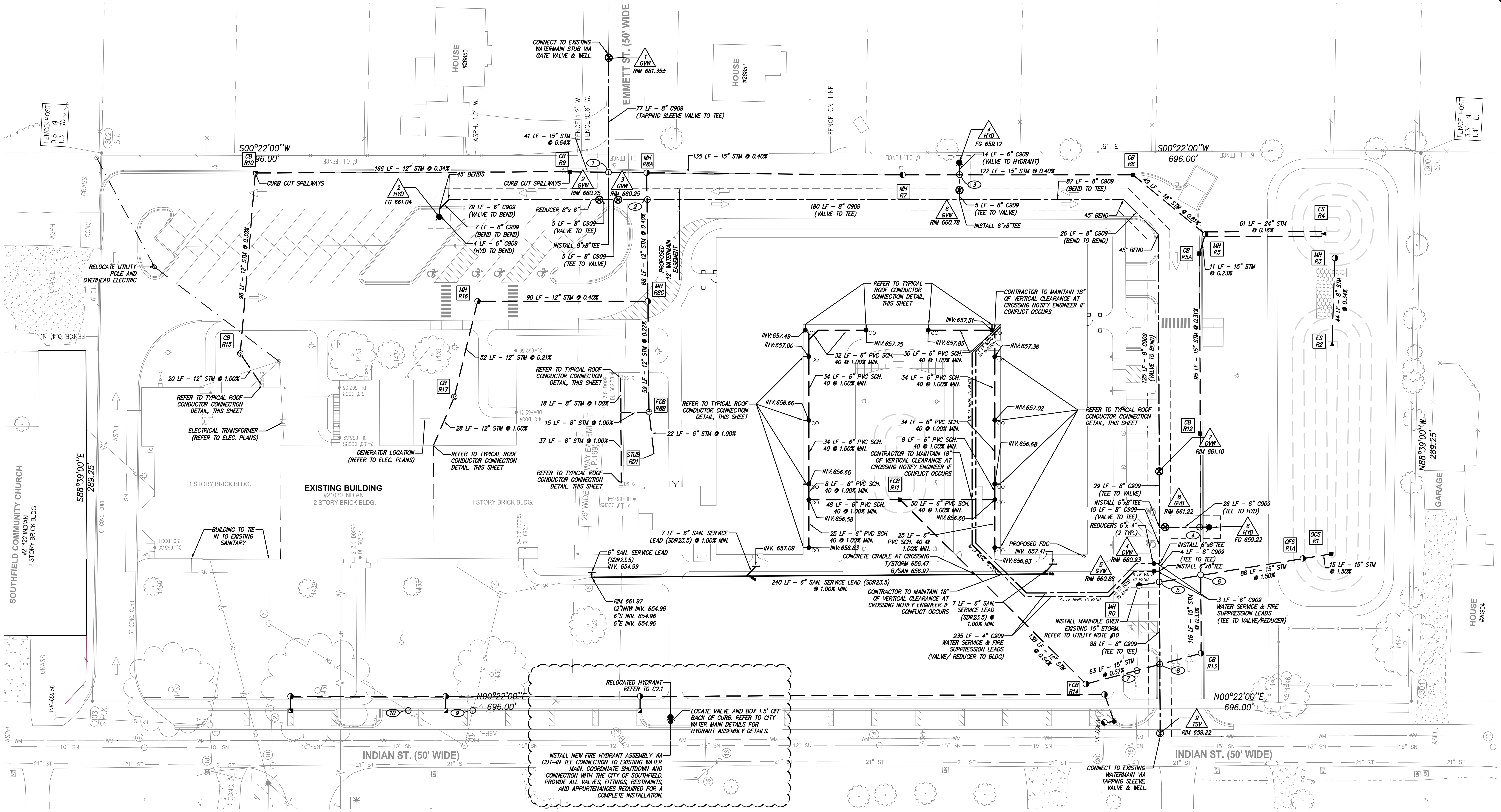
TYPICAL ROOF CONDUCTOR CONNECTION
NOT TO SCALE



STRUCTURE UNDERDRAIN DETAIL
NO SCALE



EDGE DRAIN DETAIL
NO SCALE



STORM STRUCTURE SCHEDULE

STR. NO.	TYPE	RIM ELEV.	INV. SIZE	INV. DIR.	INVERT	IN/OUT
R0	MH	660.86	15"	S	650.00'	In
R1	OCS	655.64	15"	N	651.54'	Out
R1A	OFS	655.64	15" 15"	S N	651.31' 651.31'	In Out
R2	ES	654.52	8"	E	652.85'	In
R3	MH	654.19	8"	W	653.00'	Out
R4	ES	654.52	24"	N	653.00'	In
R5	MH	660.75	18" 15" 24"	NE W S	653.50' 653.78' 653.10'	In In Out
R5A	CB	660.40	15" 15"	W E	653.90' 653.80'	In Out
R6	CB	660.10	15" 18"	N SW	653.90' 653.80'	In Out
R7	MH	660.10	15" 15"	S N	654.39' 654.42'	Out In
R8A	MH	659.23	15" 15" 12"	N S W	654.96' 654.96' 655.16'	In Out In
R8B	CB	661.85	6" 12" 8"	W E N	655.66' 655.56' 655.66'	In Out In
R8C	MH	661.02	12" 12" 12"	W E N	655.43' 655.43' 655.43'	In Out In
R9	CB	660.15	12" 15"	N S	655.32' 655.22'	In Out
R10	CB	659.31	12" 12"	S W	655.88' 655.98'	Out In
R11	FCB	659.50	12" 6" 6"	SW N S	656.00' 656.10' 656.10'	Out In In
R12	CB	660.10	15" 15"	E W	654.20' 654.30'	Out In
R13	CB	659.45	15" 15"	E N	654.69' 654.79'	Out In
R14	FCB	658.96	15" 12"	S NE	655.15' 655.25'	Out In
R15	CB	662.16	12" 12"	SW E	656.36' 656.26'	In Out
R16	MH	661.28	12" 12"	W S	655.79' 655.79'	In Out
R17	CB	662.45	12" 12"	W E	656.00' 655.90'	In Out

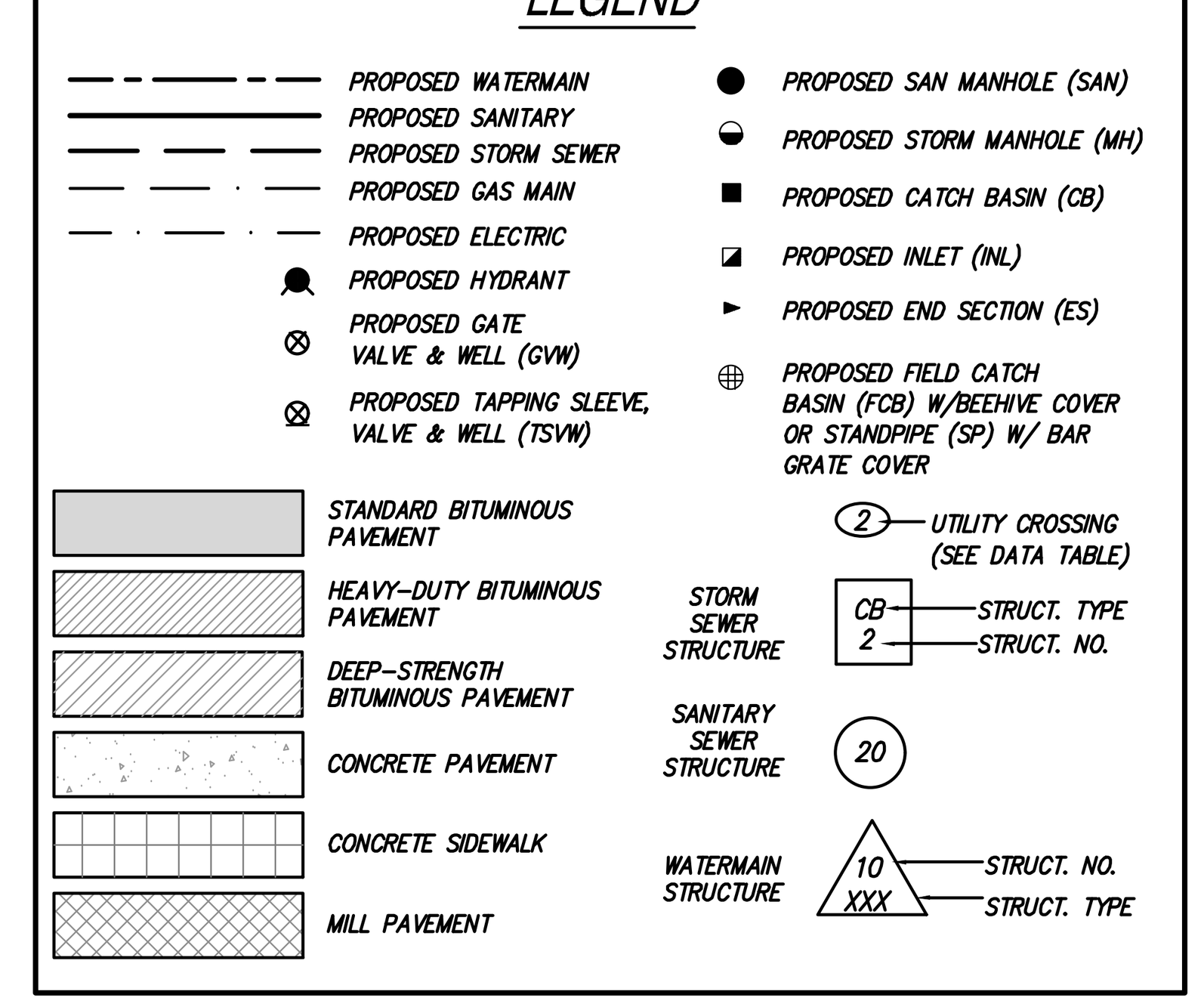
CITY OF SOUTHFIELD STANDARD NOTES

1. NOTIFY THE CITY OF SOUTHFIELD ENGINEERING DIVISION (248) 796-4810 A MINIMUM OF FORTY-EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION.
2. ALL CONSTRUCTION MUST CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS ADOPTED BY THE CITY OF SOUTHFIELD.
3. UTILITIES MUST BE LOCATED UNDERGROUND.
4. CALL MISS DIG (1-800-482-7171 / 811) A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO THE START OF CONSTRUCTION.
5. ALL SOIL EROSION AND SILT MUST BE CONTROLLED AND CONTAINED ON-SITE.
6. ALL EXCAVATION UNDER OR WITHIN THREE FEET (3') OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (CLASS II MDOT).
7. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
8. PRIOR TO THE ISSUANCE OF AN OCCUPANCY PERMIT, ENGINEERING SITE INSPECTION IS REQUIRED.

UTILITY NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF SOUTHFIELD.
2. STORM SEWER 12" AND LARGER SHALL BE C76 CL IV (PREM.JT.) UNLESS OTHERWISE NOTED ON THE PLAN.
3. STORM SEWER 6" AND SMALLER SHALL BE PVC SDR 23.5. STORM SEWER GREATER THAN 6" THROUGH 10" SHALL BE PVC SDR 26.
4. ALL UTILITY TRENCHES THAT FALL WITHIN A 1-ON-1 INFLUENCE OF PAVEMENT AREAS SHALL BE BACKFILLED WITH CLASS 2 SAND AND COMPACTED TO 95% OF MAXIMUM DENSITY.
5. ALL UTILITIES SHALL BE INSTALLED ON CLASS "B" BEDDING OR BETTER.
6. ALL UTILITIES SHALL BE PLACED AT LEAST 10' FROM OTHER UTILITIES, SIGNIFICANT TREES, AND FIXED STRUCTURES.
7. UNLESS OTHERWISE NOTED, ALL STORM SEWER STRUCTURES SHALL BE 4' DIAMETER (INLETS SHALL BE 2' DIAMETER). CONTRACTOR IS RESPONSIBLE FOR VERIFYING STRUCTURES SIZES IN RELATION TO PIPE SIZES AND ANGLES AND PRICING THEIR BID ACCORDINGLY. UNLESS OTHERWISE INDICATED ON THE STANDARD DETAIL SHEETS CASTINGS SHALL BE:
   PVMT. CATCH BASINS – EJIW 5105 – "M1" (FRAMES WITH CURB BOXES WILL NOT BE ALLOWED)
   YARD CATCH BASINS – EJIW 1040 – "02"
   MANHOLES – EJIW 1040 – "A"
8. PLACEMENT OF EDGE DRAINS AND FINGER DRAINS AT ALL PAVEMENT CATCH BASINS IS REQUIRED. SEE STRUCTURE UNDERDRAIN DETAIL SHEET C4.3.
9. FOR CURB CATCH BASINS, SEE BASIN LOCATION DETAIL FOR BASIN STAKING RELATIVE TO THE CURB.
10. CONTRACTOR TO VERIFY CONDITION OF EXISTING PIPE AND REPLACE IF NECESSARY. PASSAGE OF EXISTING UPSTREAM FLOW TO BE MAINTAINED.
11. ALL DUCTILE IRON PIPES AND FITTINGS MUST BE WRAPPED IN POLYETHYLENE.
12. NO ROOF DRAINS (EXISTING OR PROPOSED) MAY BE CONNECTED TO THE SANITARY SYSTEM. CONTRACTOR TO CONFIRM CONNECTION POINT OF EXISTING ROOF DRAINS AND RE-ROUTE IF NECESSARY.

LEGEND



PUBLIC WATERMAIN QUANTITY TABLE

8" C909 PVC	640 LF
6" C909 PVC	246 LF
8" 45 DEG. BENDS	4 EA
8"x8"x6" TEE	4 EA
8"x8"x8" TEE	1 EA
8" GATE VALVE	5 EA
6" GATE VALVE	2 EA
HYDRANT ASSEMBLY	3 EA
REDUCERS 6"x4"	2 EA
REDUCERS 8"X6"	1 EA

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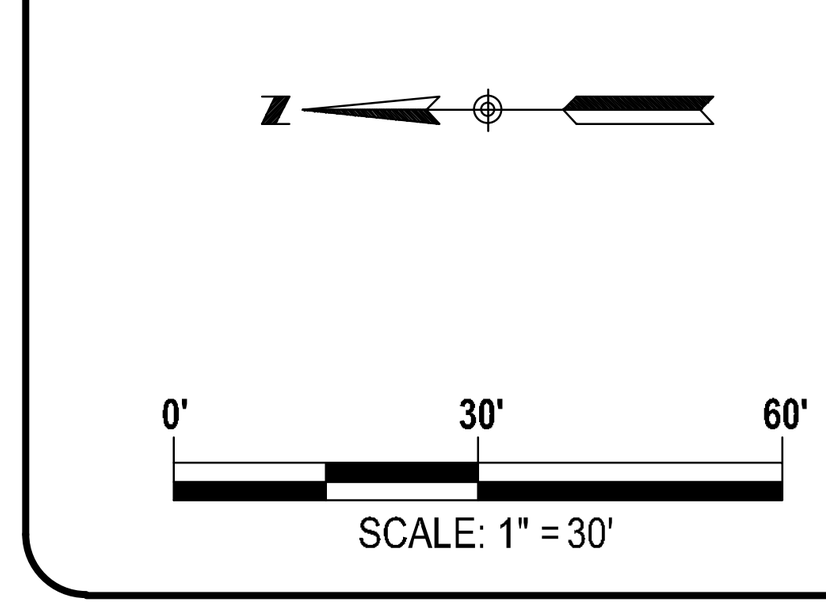
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CONSTRUCTION PLANS
Utility Plan

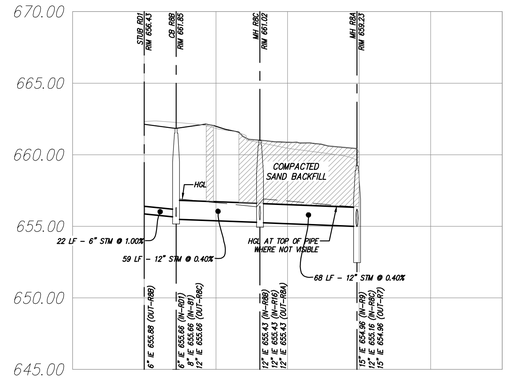
SECTION 31
TOWN 01N RANGE 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

NO.	DATE	REVISION
11	04-13-2026	CITY ENG. REV.
12	06-23-2026	RFI 121
13	07-02-2026	RFI 115
14	11-02-2026	RFI 161

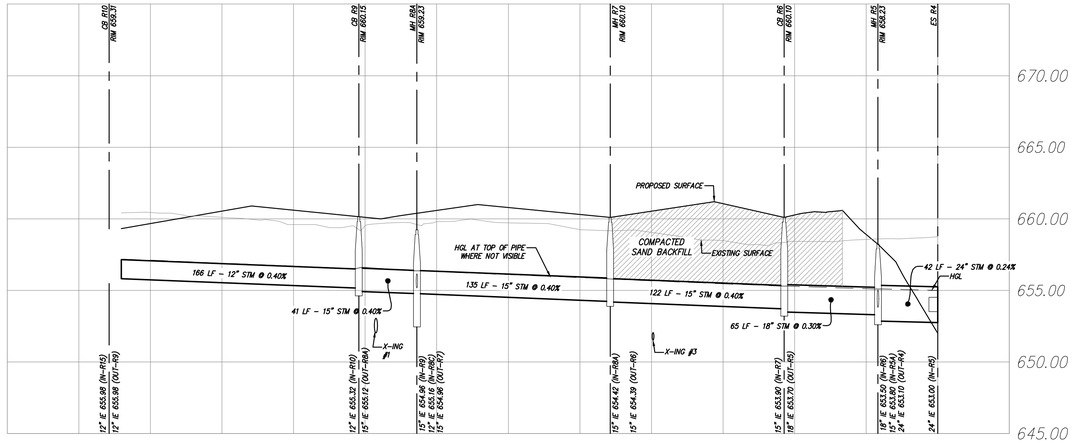
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DESIGNER: J. CHRISTOPHER	DATE: 24-01-26
CHECKED: J. CHRISTOPHER	DATE: 24-01-26
PROJECT MANAGER: T. SOVEL	BID PLAN DATE
DEPARTMENT MANAGER APPROVAL: -	DATE
JOB NO.: NP22006	DRAWING NO.: NP2006PAV
SCALE: 1" = 30'	SHEET NO.: C3.1

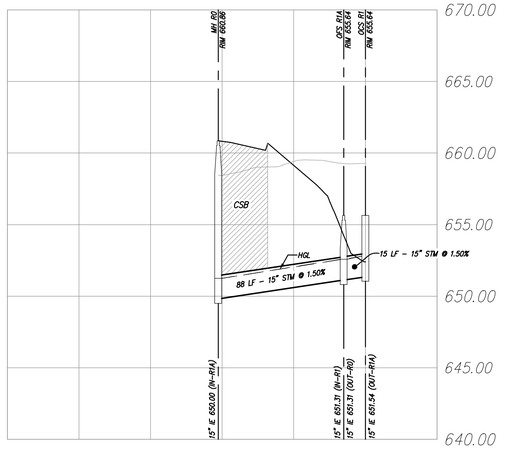
Plotted: Nov 2, 2026, 8:14 AM by user: 1111 - Saved: 11/2/2026 by user: 1111
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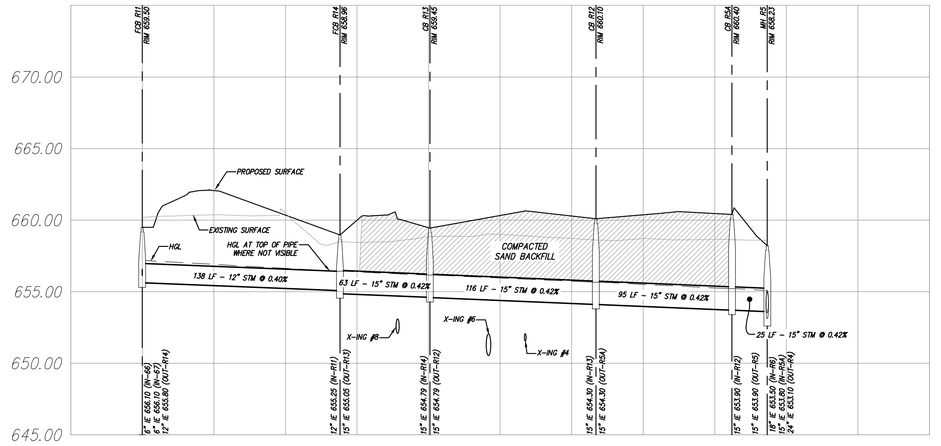
RD1–R8A



R10–R4



R1–R0



R11–R5

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CONSTRUCTION PLANS
Storm Profiles

SECTION 31
TOWN 01N **RANGE** 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

NO.	DATE	REVISION
1	03-04-2024	OWNER REVIEW
2	03-22-2024	PAGE TURN
3	03-29-2024	REV. OWNER REVIEW
4	10-25-2024	PERMIT
5	12-13-2024	HUD SUBMISSION
6	12-20-2024	PERMIT
7	02-19-2025	⚠1 BULLETIN NO. 1
8	03-07-2025	⚠2 BULLETIN NO. 2
9	11-19-2025	CITY ENG. REV.
10	12-12-2025	CITY ENG. APPROVED
11	03-02-2026	EGLE ENG. REV.
11	04-13-2026	CITY ENG. REV.

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CHECKED: J. CHRISTOPHER	DATE: 24-01-26
PROJECT MANAGER: T. SOVEL	BID PLAN DATE:
DEPARTMENT MANAGER APPROVAL: -	DATE:
JOB NO.: NP22006	DRAWING NO.: NP2006PAV
SCALE: H:1" = 50' V:1"=5'	SHEET NO.: C3.2

Plotted: Apr 13, 2026, 12:38 PM by user: 1111 - Saved: 4/13/2026 by user: 1111
N:\NPNLD Projects\NP22006 - Grace School - Senior Housing\DWG\NP22006DPR.dwg

Water Main Basis of Design

REU Calculation

Factor	*Units*	*Equivalent Units (R.E.U.)*
0.6	60	36
REU/Unit		
	Total =	36

Total Population

3.5	people per units X R.E.U. =	126.0	people		

Average Flow

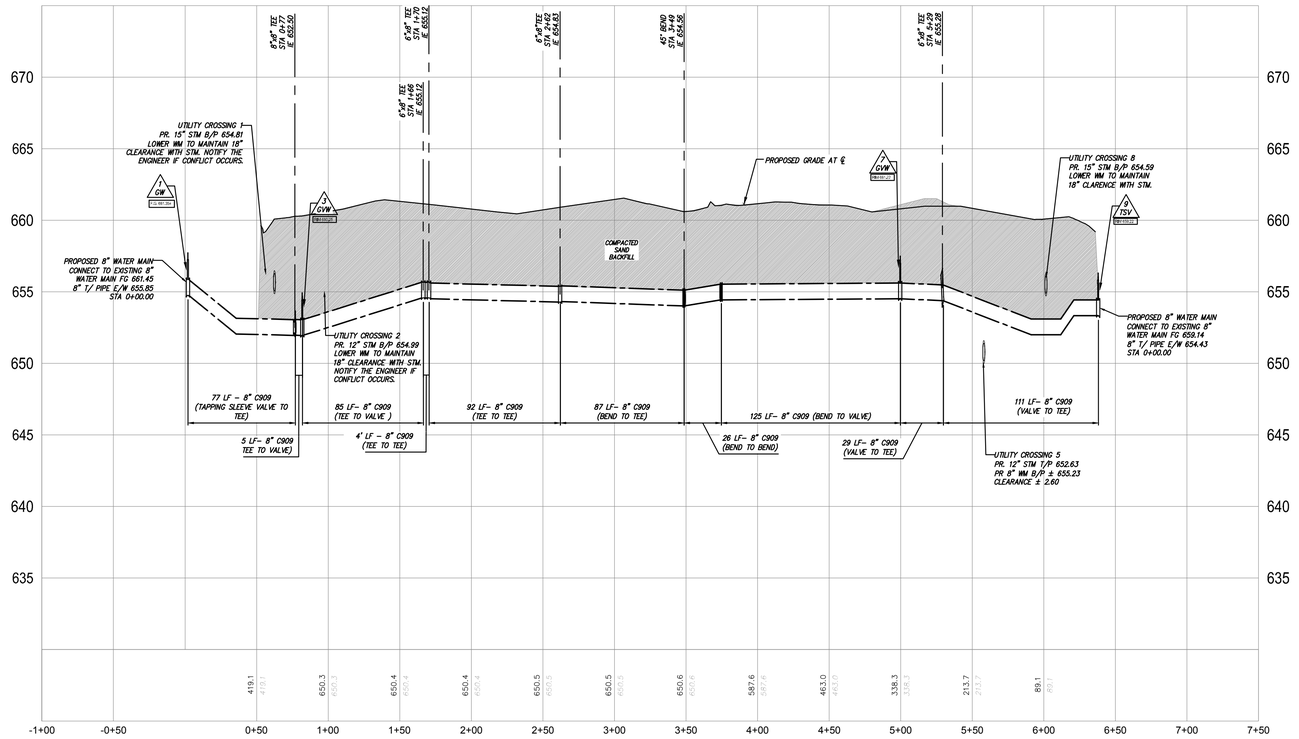
126.0	people X 100 GCPD =	12,600	gal/day	= 0.01260	mgd
12,600	gal/day x 1day/86400 sec x 1cfs/7.48 gal =	0.0195	cfs		

Peak Factor

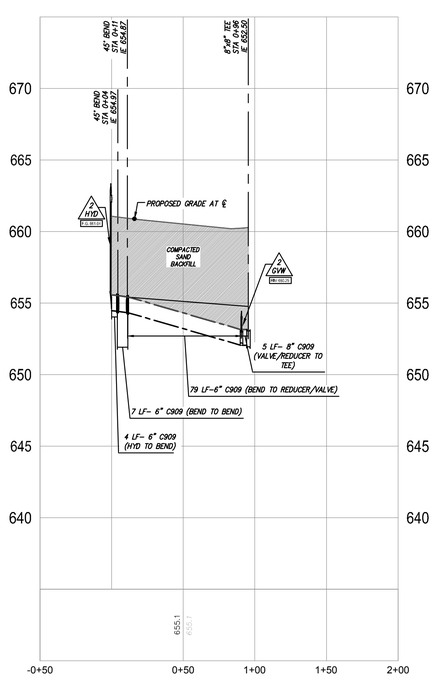
Q = (18+ SQRT(p / 1000)) / (4+ SQRT(p/1000)) = 4.2147 (Ten States Standards)

Peak Flow

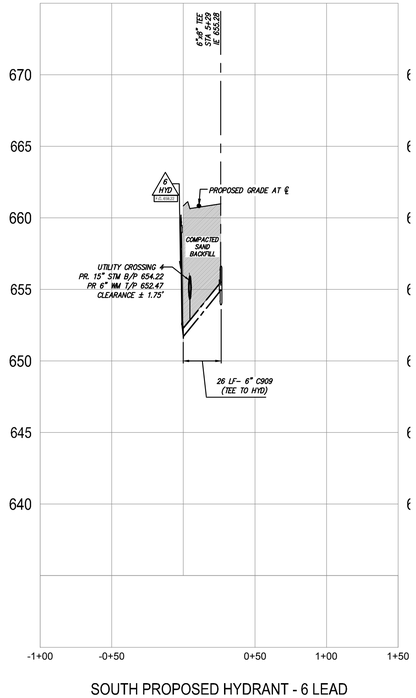
4.2147	x ave gal/day =	53,105	gal/day	= 0.05311	mgd
53,105	gal/day x 1day/86400 sec x 1cfs/7.48 gal =	**0.0822**	**cfs**		



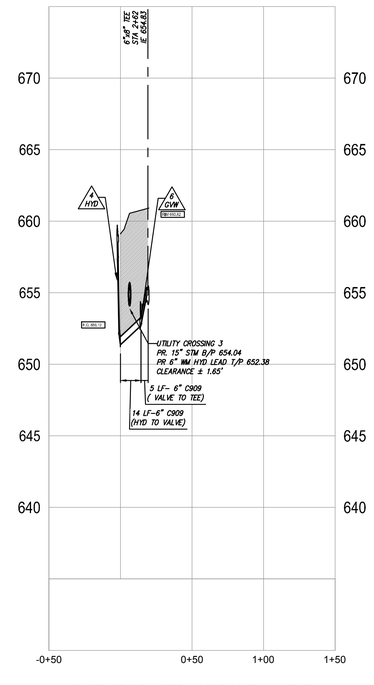
WATER MAIN PROFILES



NORTH PROPOSED HYDRANT- 2 LEAD



SOUTH PROPOSED HYDRANT - 6 LEAD



EAST PROPOSED HYDRANT - 4 LEAD

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CONSTRUCTION PLANS
Watermain Profiles

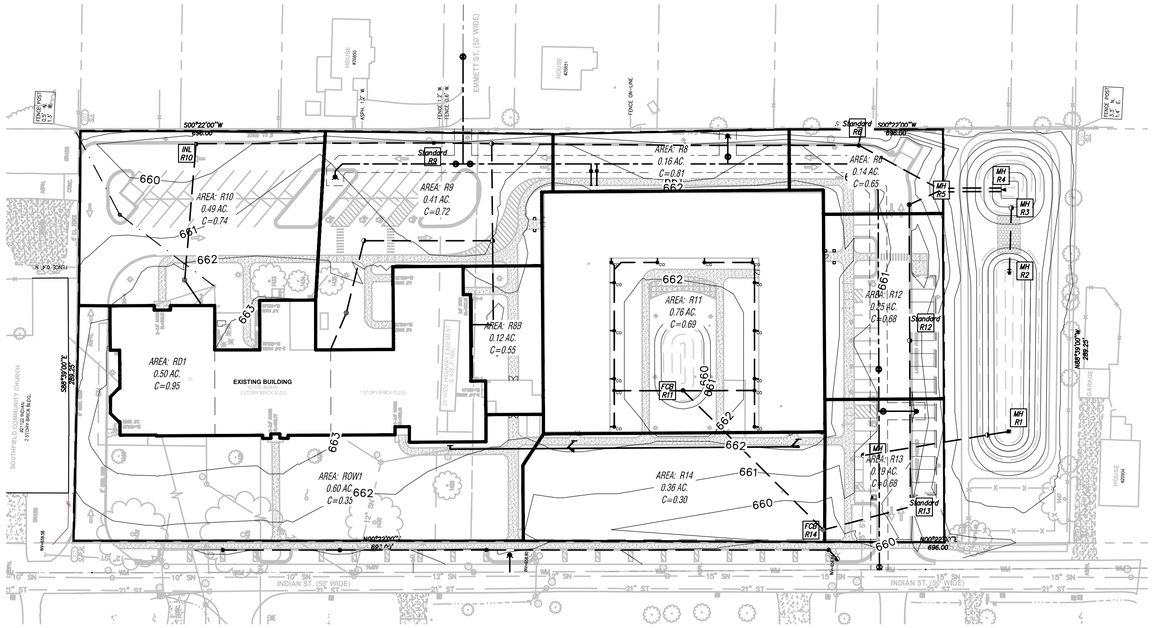
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DEPARTMENT MANAGER APPROVAL: -	DATE: -
JOB NO.: NP22006	DRAWING NO.: NP2006PAV
SCALE: H:1" = 50' V:1"=5'	SHEET NO.: C3.3

Plotted: Apr 13, 2026, 12:30 PM by user: lll1 - Saved: 3/4/2026 by user: jkeeder
N:\NPNLD Projects\NP22006 - Grace School - Senior Housing\DWG\NP22006VPR.dwg



STRUCTURE UP STREAM	STRUCTURE DOWN STREAM	A DRAINAGE AREA (ACRES)	C RUNOFF COEF.	EQUIV. AREA 100% ACRES (C x A)	TOTAL AREA 100% ACRES (SUM C x A)	T TIME (MIN.)	I INTENSITY (IN / HR)	Q FLOW (C.F.S.) (C x I x A)	CAPACITY OF PIPE (C.F.S.)	DIAM. OF PIPE (IN.)	LENGTH OF PIPE (FT.)	SLOPE OF PIPE (%)	MIN HG BASED ON "Q" (%)	HG (%)	VELOCITY (FT / SEC)	TIME OF FLOW (MIN.)	H.G.L. ELEV. UPPER END	H.G.L. ELEV. LOWER END	GROUND ELEV. UPPER END	GROUND ELEV. LOWER END	INVERT ELEV. UPPER END	INVERT ELEV. LOWER END
ON-SITE DESIGN																						
R10	R9	0.49	0.74	0.36	0.36	10.00	5.00	1.82	2.25	12	166	0.40	0.26	0.40	2.9	1.00	657.19	656.52	659.25	659.01	655.98	655.32
R9	R8A	0.41	0.72	0.30	0.66	11.00	4.86	3.21	4.09	15	41	0.40	0.25	0.40	3.3	0.20	656.52	656.36	659.01	659.40	655.12	654.96
R8A	R8	0.00	0.00	0.00	0.73	11.20	4.83	3.51	4.09	15	135	0.40	0.29	0.40	3.3	0.70	656.36	655.82	659.40	659.08	654.96	654.42
R8	R7	0.16	0.81	0.13	0.85	11.90	4.74	4.05	4.09	15	9	0.40	0.39	0.40	3.3	0.00	655.82	655.78	659.08	660.10	654.42	654.38
R7	R6	0.00	0.00	0.00	0.85	11.90	4.74	4.05	4.09	15	122	0.40	0.39	0.40	3.3	0.60	655.78	655.30	660.10	660.10	654.38	653.90
R6	R5	0.14	0.65	0.09	0.94	12.50	4.67	4.40	5.75	18	65	0.30	0.18	0.30	3.3	0.30	655.30	655.10	660.10	658.23	653.70	653.50
R5	R4	0.00	0.00	0.00	1.88	12.80	4.63	8.71	11.08	24	42	0.24	0.15	0.24	3.5	0.20	655.10	655.00	658.23	654.52	653.10	653.00
R11	R14	0.76	0.69	0.53	0.53	10.00	5.00	2.63	2.31	12	138	0.42	0.55	0.42	2.9	0.80	657.18	656.43	659.53	658.96	655.83	655.25
R14	R13	0.36	0.30	0.11	0.64	10.80	4.89	3.11	4.19	15	63	0.42	0.23	0.42	3.4	0.30	656.43	656.16	658.96	659.45	655.05	654.79
R13	R12	0.19	0.68	0.13	0.77	11.10	4.85	3.72	4.19	15	116	0.42	0.33	0.42	3.4	0.60	656.16	655.67	659.45	660.10	654.79	654.30
R12	R5A	0.25	0.68	0.17	0.94	11.70	4.77	4.47	4.19	15	95	0.42	0.48	0.42	3.4	0.50	655.67	655.22	660.10	660.40	654.30	653.90
R5A	R5	0.00	0.00	0.00	0.94	12.20	4.70	4.47	4.19	15	25	0.42	0.48	0.42	3.4	0.10	655.22	655.10	660.40	658.23	653.90	653.80
R8B	R8A	0.12	0.55	0.06	0.06	10.00	5.00	0.32	2.31	12	133	0.42	0.01	0.42	2.9	0.80	656.92	656.36	662.20	659.40	655.71	655.16
R1	R0	0.00	0.00	0.00	0.00	10.00	5.00	6.88	7.91	15	103	1.50	1.13	1.50	6.5	0.30	652.79	651.25	655.00	660.85	651.54	650.00

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JOHN GRACE ARMS

CONSTRUCTION PLANS
Drainage Area Map

SECTION 31
TOWN 01N **RANGE** 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

NO.	DATE	REVISION
1	03-04-2024	OWNER REVIEW
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7	02-19-2025	⚠1 BULLETIN NO. 1
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DESIGNER: J. CHRISTOPHER	DATE: 24-01-26
CHECKED: J. CHRISTOPHER	DATE: 24-01-26
PROJECT MANAGER: T. SOVEL	BID PLAN DATE:
DEPARTMENT MANAGER APPROVAL: -	DATE:
JOB NO.: NP22006	DRAWING NO.: NP2006PAV
SCALE: 1" = 50'	SHEET NO.: C4.1

Plotted: Apr 13, 2026, 12:30 PM by user: 1111 - Saved: 4/9/2026 by user: 1111
N:\NP\NLD Projects\NP22006 - Grace School - Senior Housing\DWG\NP2006DAM.dwg

Post-Development (Proposed Conditions) Runoff Coefficient Calculator (Area Weighted)			
Location/Land Cover	Area (acres)	Runoff Coefficient ("C")	Area X C
CATCHMENTS			
RD1	**0.50**	**0.95**	0.475
R8	**0.49**	**0.74**	0.3626
R7	**0.41**	**0.72**	0.2952
R9	**0.16**	**0.74**	0.1184
COURTYARD	**0.28**	**0.51**	0.1428
RD2	**0.49**	**0.95**	0.4655
R5	**0.14**	**0.64**	0.0896
R4 & R3	**0.44**	**0.95**	0.418
ROW2	**0.36**	**0.3**	0.108
ROW1	**0.72**	**0.35**	0.252
Subtotals	3.99	N/A	2.7271
Post Development Contributing Area (Acres) = A =			**3.99**
Post-Development Runoff Coefficient (Area Weighted) = C =			**0.68**

POST DEVELOPMENT C-FACTOR CALCULATION

EQ. 9 CHANNEL PROTECTION VOLUME CONTROL REQUIRED = 3630 x 1.30 x C x A			
Term	Variable	Value	Unit
Contributing Area =	A =	3.99	Acres
Post-development Runoff Coefficient =	C =	0.68	Dimensionless
Required Channel Protection Volume =	V_{CP-R} =	**12,869**	CFT

CHANNEL PROTECTION VOLUME CONTROL

EQ. 19 SEDIMENT FOREBAY VOLUME = $V_F = 0.15V_{WQ}$ = 545 x C x A			
Term	Variable	Value	Unit
Contributing Area =	A =	3.99	Acres
Post-development Runoff Coefficient =	C =	0.68	Dimensionless
Required Water Quality Volume =	V_{WQ} =	9,163	CFT
Volume of Sediment Forbay =	V_F =	**1,374**	CFT

SEDIMENT FOREBAY VOLUME

EQ. 21 CHANNEL PROTECTION RATE CONTROL: EXTENDED DETENTION - 6,897 x C x A			
Term	Variable	Value	Unit
Contributing Area =	A =	3.99	Acres
Post-development Runoff Coefficient =	C =	0.68	Dimensionless
Required Extended Detention Volume =	V_{ED} =	**18,809**	CFT

CHANNEL PROTECTION RATE CONTROL: EXTENDED DETENTION

EQ. 24: $Q_{100IN} = C \times I_{100} \times A$			
Term	Variable	Value	Unit
Contributing Area =	A =	3.99	Acres
Post-development Runoff Coefficient =	C =	0.68	Dimensionless
Peak Rainfall Intensity (100 year event) =	$I_{100peak}$ =	6.31	in/hr
100-year post-development peak inflow rate	Q_{100IN} =	17.21	CFS

EQ. 25: RAINFALL INTENSITY (in/hr) = $I_{100Peak} = \frac{83.3}{(T_C + 9.17)^{0.81}}$

Term	Variable	Value	Unit
Time of Concentration =	T_C =	15.00	Minutes
Peak Rainfall Intensity (100 year event) =	$I_{100peak}$ =	6.31	in/hr

EQ. 26: $Q_{VRR} = 1.1055 - 0.206 \ln(A)$			
Term	Variable	Value	Unit
Contributing Area =	A =	3.99	Acres
Allowable release rate =	*Q_{VRR} =	**0.82**	CFS/Acre

*= The Variable release rate (cfs/acre) is capped at 1.0 cfs/acre for developments 2 acres or less. For all developments equal to or greater than 100 acres, the variable release rate is 0.15 cfs/acre.

$Q_{100P} = Q_{VRR} \times A$			
Term	Variable	Value	Unit
Contributing Area =	A =	3.99	Acres
Allowable release rate =	*Q_{VRR} =	**0.82**	CFS/Acre
Allowable 100-year post development peak flow rate =	Q_{100P} =	**3.27**	CFS

*= The Variable release rate (cfs/acre) is capped at 1.0 cfs/acre for developments 2 acres or less. For all developments equal to or greater than 100 acres, the variable release rate is 0.15 cfs/acre.

EQ. 27: $R = [0.206 - 0.15*LN(Q_{100P}/Q_{100IN})]$			
Term	Variable	Value	Unit
Allowable 100-year post development peak flow rate =	Q_{100P} =	3.27	CFS
100-year post-development peak inflow rate =	Q_{100IN} =	17.21	CFS
Storage Curve Factor =	R =	0.45	Dimensionless

EQ. 28: $V_{100P} = 18{,}985 \times C \times A$			
Term	Variable	Value	Unit
Contributing Area =	A =	3.99	Acres
Post-development Runoff Coefficient =	C =	0.68	Dimensionless
Post-development 100-year runoff volume =	V_{100R} =	51,774	CFT

EQ. 29 REQUIRED 100-YEAR DETENTION VOLUME = $V_{100D} = (V_{100R} \times R) - V_{CP-P}$			
Term	Variable	Value	Unit
Post-development 100-year runoff volume =	V_{100R} =	51,774	CFT
Storage Curve Factor =	R =	0.45	Dimensionless
Provided CPVC volume =	V_{CP-P} =	**4500.00**	CFT
Required 100-yr detention volume =	V_{100D} =	**19,056**	CFT
Key Rule Check: Adjusted 100-year detention volume (V_{100D}) is ≥ the Extended Detnetion Volume (V_{ED}) =		**PASS**	

100-YEAR FLOOD CONTROL

EQ. III-29: ORIFICE SIZING - EXTENDED DETENTION = $Q_{P-AVG-ED} = C_O \times A_O \times SQRT(2 \times g \times h)$			
Term	Variable	Value	Unit
Orifice diameter =	O_{ED-DIA} =	**1.00**	IN
Number of orifices at same elevation =	O_{ED-No} =	**3.00**	Dimensionless
Total head at V_{ED} water level=	h =	**2.40**	FT
Area of single orifice =	A_O =	0.0055	FT^2
Orifice coefficient =	C_O =	0.62	Dimensionless
Gravity constant =	g =	32.2	FT/S^2
Avg. outflow rate (Via V_{ED} orifice(s) W/ V_{ED} Event) =	$Q_{P-AVG-ED}$ =	**0.089**	CFS
Extended Detention Volume =	V_{ED} =	18,809	CFT
Drain Time for V_{ED} =	T_{ED-D} =	**58.6**	HR
Key Rule Check: Extended Detention Volume (V_{ED}) must drain in no less than 48 hours		**PASS**	
Total head at V_{100D} water level=	h =	**2.00**	FT
Max outflow rate (Via V_{ED} orifice(s) w/ V_{100D} Event) =	$Q_{P-MAX-ED}$ =	**0.081**	CFS

ORIFICE SIZING - MAX 100-YEAR OUTFLOW RATE = $Q_P = C_O \times A_O \times SQRT(2 \times g \times h)$			
Term	Variable	Value	Unit
Orifice diameter =	O_{ED-DIA} =	**2.00**	IN
Number of orifices at same elevation =	O_{ED-No} =	**15.00**	Dimensionless
Total head at V_{100D} water level =	h =	**2.64**	FT
Area of single orifice =	A_O =	0.0218	FT^2
Orifice coefficient =	C_O =	0.62	Dimensionless
Gravity constant =	g =	32.2	FT/S^2
Max outflow rate [thru 100-year orifice(s)] =	$Q_{P-MAX-100}$	**2.65**	CFS

MAX COMBINED OUTFLOW RATE [VED Orifice(s) & V100D Orifice(s)]			
Max outflow rate (Via V_{ED} orifice(s) w/ V_{100D} Event) =	$Q_{P-MAX-ED}$ =	0.081	CFS
Max outflow rate [thru 100-year orifice(s)] =	$Q_{P-MAX-100}$ =	2.65	CFS
Allowable 100-year post development peak	Q_{100P} =	3.27	CFS
Provided 100-year post-dev peak release rate =	$Q_{100-Design}$	**2.727**	CFS
Key Rule Check: Allowable 100-year peak flow rate must be ≥ the Provided 100-year peak release rate		**PASS**	

ORIFICE SIZING CALCULATIONS

Equation 10: Average Infiltration Area = $A_I = (A_1 + A_2)/2$			
Bottom of Basin Area =		0	sq ft
Storage Elevation Area =		8,503	sq ft
A_I= (8503+0)/2=		4251.5	sq ft

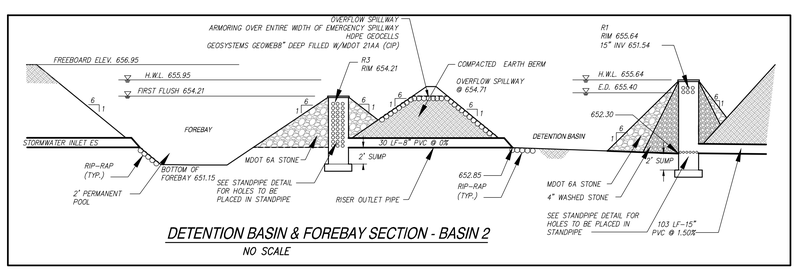
Equation 13: Infiltration Volume During 6 Hour Period			
$V_I = (K_{sat} \times S_I \times 6 \times A_I)/12$			
K_{sat} =		25.67	in/hr
S_I =		1.00	
A_I =		4251.5	sq ft
V_I =		54568	cu ft

INFILTRATION CALCULATIONS

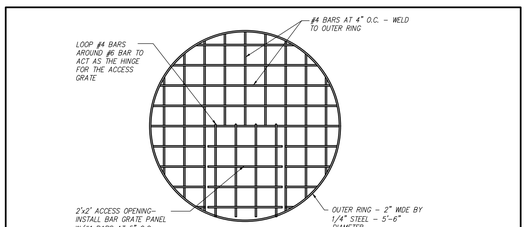
Detention			
Elevation	Area	Increm. Vol	Cum. Vol.
653.00	2,656 sf	00 cf	00 cf
654.00	3,852 sf	3,254 cf	3,254 cf
655.00	5,149 sf	7,805 cf	11,059 cf
656.00	10,390 sf	19,569 cf	30,628 cf
657.00	12,965 sf	25,226 cf	55,854 cf
658.00	15,661 sf	14,313 cf	70,167 cf
		Storage Elev.	655.64
		Extended Detention	655.40

Forebay			
Elevation	Area	Increm. Vol	Cum. Vol.
653.00	534 sf	00 cf	00 cf
654.00	1,150 sf	842 cf	842 cf
655.00	1,994 sf	2,528 cf	3,370 cf
656.00	1,538 sf	2,688 cf	6,058 cf
657.00	2,488 sf	2,013 cf	8,071 cf
		Storage Elevation	654.21

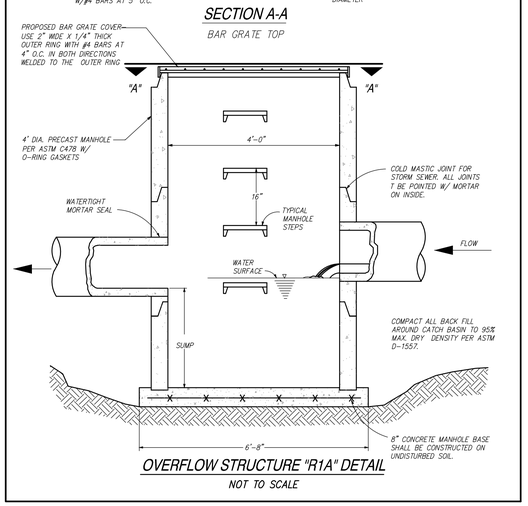
STORAGE ELEVATIONS



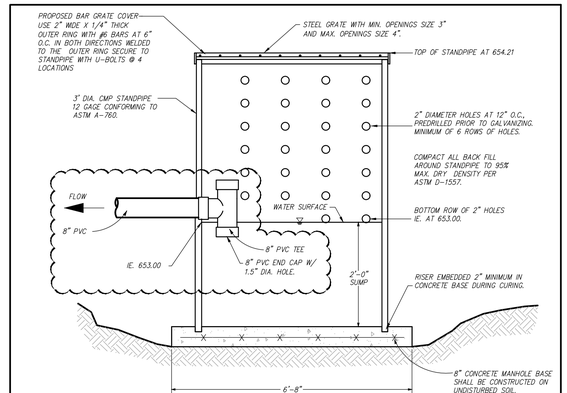
DETENTION BASIN & FOREBAY SECTION - BASIN 2
NO SCALE



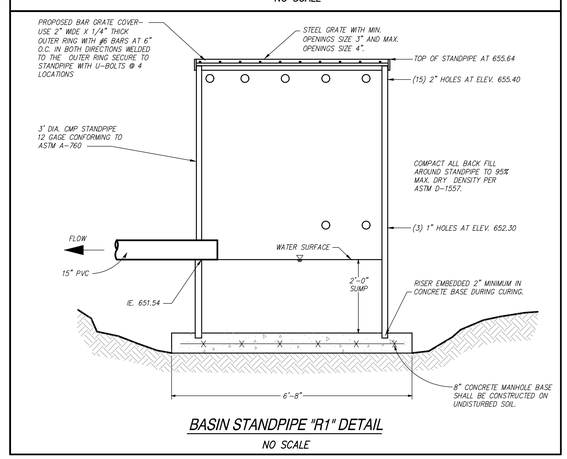
SECTION A-A
BAR GRATE TOP



OVERFLOW STRUCTURE "R1A" DETAIL
NOT TO SCALE



FOREBAY STANDPIPE "R3" DETAIL
NO SCALE



BASIN STANDPIPE "R1" DETAIL
NO SCALE

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CONSTRUCTION PLANS
Detention Calculations

SECTION 31
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12	04-13-2026	CITY ENG. REV.
13	06-23-2026	RFI 121
14	07-02-2026	RFI 115

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SCALE: 1" = 50'	SHEET NO.: C4.2

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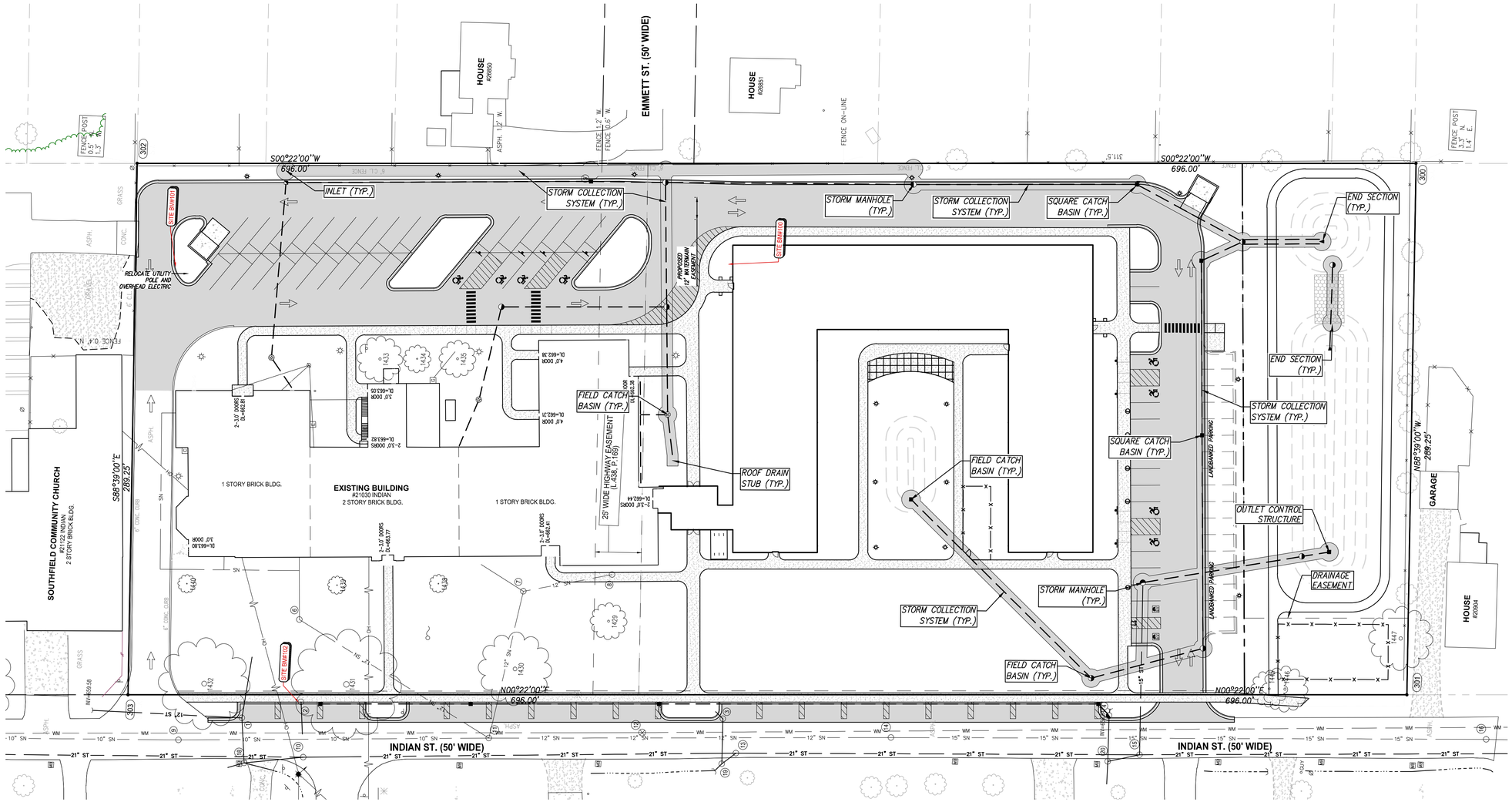


CHART A

MAINTENANCE TASKS AND SCHEDULE DURING CONSTRUCTION

TASKS	COMPONENTS										SCHEDULE
	Storm Sewer System	Catch Basin Sumps	Catch Basin Inlet Casings	Ditches and Swales	Outflow Control Structure	Rip-Rap	Filtration Basins	Storm Detention Areas	Wetlands	Emergency Overflow	
Inspect for sediment accumulation	X	X		X	X		X	X			Weekly
Removal of sediment accumulation	X	X		X	X		X	X			As needed* & prior to turnover
Inspect for floatables and debris			X	X	X		X	X			Quarterly
Cleaning of floatables and debris			X	X	X		X	X			Quarterly & at turnover
Inspection for erosion				X	X		X	X			Weekly
Re-establish permanent vegetation on eroded slopes				X			X	X			As needed & at turnover
Replacement of Stone					X						As needed* & prior to turnover
Mowing			X	X	X	X	X	X			0 to 2 times per year
Inspect Stormwater system components during wet weather and compare to as-built plans (by professional engineer reporting to XYZ Co.)				X	X		X	X			Annually and at turnover
Make adjustments or replacements as determined by annual wet weather inspection	X	X	X	X	X	X	X	X	X	X	As needed

*as needed means when sediment has accumulated to a maximum of one foot depth

CHART B

PERMANENT MAINTENANCE TASKS AND SCHEDULE

TASKS	COMPONENTS								SCHEDULE
	Catch Basin Inlet Casings	Ditches and Swales	Outflow Control Structure	Rip-Rap	Filtration Basins	Storm Detention Areas	Wetlands	Emergency Overflow	
Inspect for sediment accumulation		X	X		X	X			Annually
Removal of sediment accumulation		X	X		X	X			Every 2 years as needed
Inspect for floatables and debris	X	X	X		X	X			Annually
Cleaning of floatables and debris	X	X	X		X	X			Annually
Inspection for erosion		X	X		X	X			Annually
Re-establish permanent vegetation on eroded slopes		X			X	X			As Needed
Replacement of Stone			X						Every 3-5 years as needed
Clean Streets									Semi-Annually
Mowing		X			X	X			0-2 times per year
Inspect Stormwater system components during wet weather and compare to as-built plans (by professional engineer reporting to XYZ Co.)	X	X	X	X	X	X	X	X	Annually
Make adjustments or replacements as determined by annual wet weather inspection	X	X	X	X	X	X	X	X	As needed
Keep records of all inspections and maintenance activities and report to XYZ Co.									Annually
Keep records of all costs for inspections, maintenance and repairs. Report to XYZ Co.									Annually

LEGEND

- COLLECTION SYSTEM
- MANHOLE
- SQUARE CATCH BASIN
- INLET
- ROUND CATCH BASIN
- END SECTION
- STORM SEWER COLLECTION SYSTEM

MAINTENANCE PLAN NOTES

1. *RESPONSIBILITY FOR MAINTENANCE*
   DURING CONSTRUCTION, IT IS THE DEVELOPER'S RESPONSIBILITY TO PERFORM THE MAINTENANCE. FOLLOWING CONSTRUCTION, IT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER TO PERFORM THE MAINTENANCE. THE MASTER DEED WILL SPECIFY THAT ROUTINE MAINTENANCE OF THE STORMWATER FACILITIES MUST BE COMPLETED WITHIN 14 DAYS OF RECEIPT OF WRITTEN NOTIFICATION THAT ACTION IS REQUIRED, UNLESS OTHER ACCEPTABLE ARRANGEMENTS ARE MADE WITH SALINE TOWNSHIP, THE OAKLAND COUNTY DRAIN COMMISSIONER OR SUCCESSORS. EMERGENCY MAINTENANCE (I.E. WHEN THERE IS ENDANGERMENT TO PUBLIC HEALTH, SAFETY OR WELFARE) SHALL BE PERFORMED IMMEDIATELY UPON RECEIPT OF WRITTEN NOTICE. SHOULD SALINE AREA SCHOOLS FAIL TO ACT WITHIN THESE TIME FRAMES, SALINE TOWNSHIP, OAKLAND COUNTY OR SUCCESSORS MAY PERFORM THE NEEDED MAINTENANCE AND ASSESS THE COSTS AGAINST THE PROPERTY OWNER.
2. *SOURCE OF FINANCING*
   THE PROPERTY OWNER IS REQUIRED TO PAY FOR ALL MAINTENANCE ACTIVITIES ON A CONTINUING BASIS.
3. *MAINTENANCE TASKS AND SCHEDULE*
   REFER TO CHARTS "A" AND "B" THIS SHEET. THE MAINTENANCE TASKS DURING CONSTRUCTION TO BE PERFORMED BY THE DEVELOPER, AND THE PERMANENT MAINTENANCE TASKS TO BE PERFORMED BY THE PROPERTY OWNER ARE DESCRIBED. IMMEDIATELY FOLLOWING CONSTRUCTION, THE DEVELOPER WILL HAVE THE STORMWATER MANAGEMENT SYSTEM INSPECTED BY AN ENGINEER TO VERIFY GRADES OF THE DETENTION AND FILTRATION AREAS AND MAKE RECOMMENDATIONS FOR ANY NECESSARY SEDIMENT.

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CONSTRUCTION PLANS
Operations & Maintenance Plan

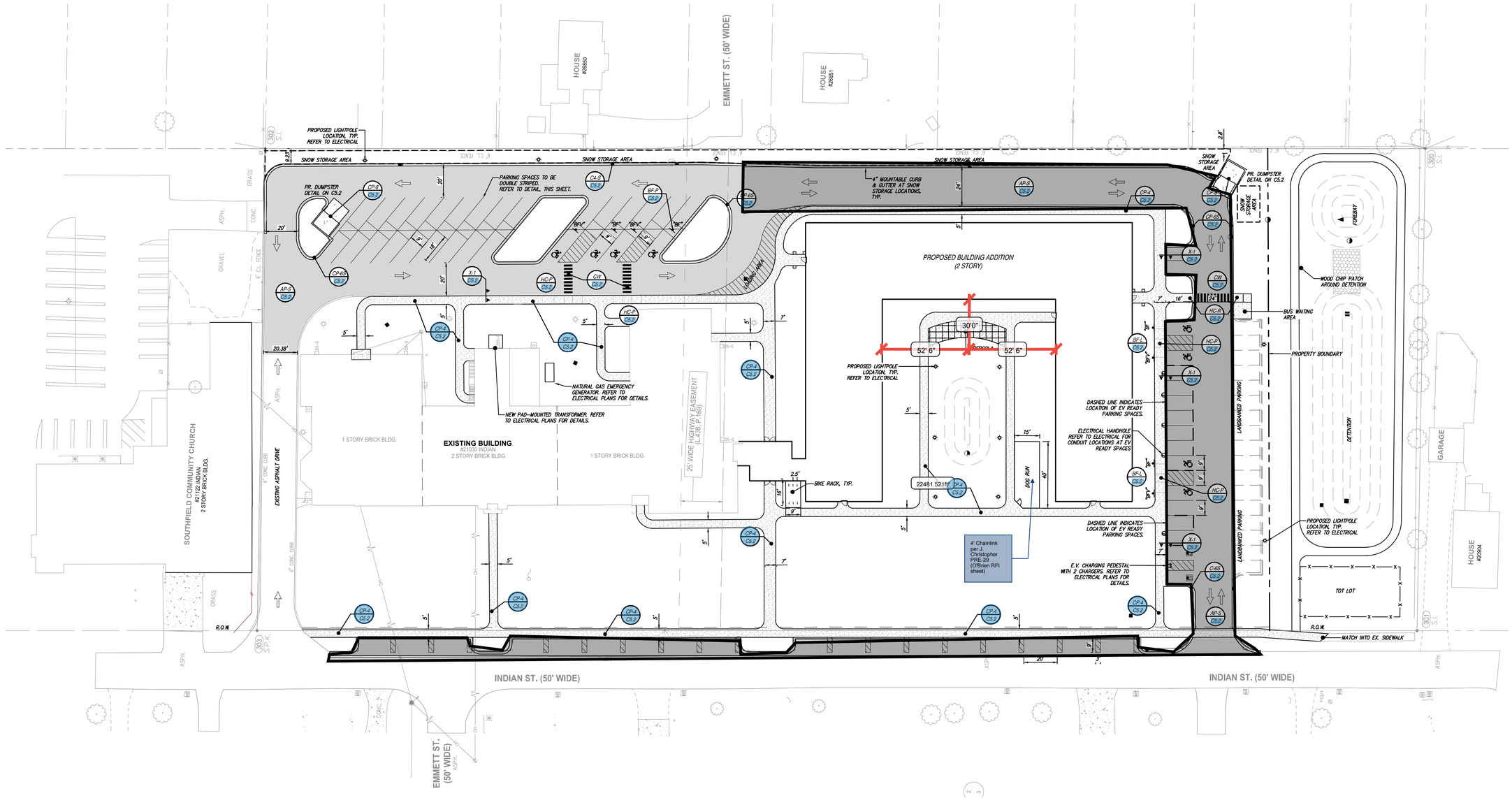
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JOB NO.: NP22006	DRAWING NO.: NP2006PAV
SCALE: 1" = 30'	SHEET NO.: C4.3

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PAVING CONSTRUCTION NOTES

1. EARTHWORK AND PAVEMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS OTHERWISE NOTED IN THE FOLLOWING ITEMS.
2. REMOVE ANY EXISTING TOPSOIL, VEGETATION, TREES AND OTHER DELETERIOUS MATERIALS TO EXPOSE THE SUBGRADE SOIL. TREE ROOTS SHALL BE COMPLETELY REMOVED.
3. EXCAVATE TO THE DEPTH OF THE FINAL SUBGRADE ELEVATION TO ALLOW FOR GRADE CHANGES AND THE PLACEMENT OF THE RECOMMENDED PAVEMENT SYSTEM.
4. THE TOP 12 INCHES OF THE EXPOSED SUBGRADE SHALL BE COMPACTED TO A DENSITY NO LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR (ASTM D 1557-91).
5. THE FINAL SUBGRADE SHALL BE THOROUGHLY PROOFROLLED UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS WHICH CANNOT BE MECHANICALLY STABILIZED SHALL BE REMOVED AND REPLACED WITH ENGINEERED FILL OR AS DICTATED BY FIELD CONDITIONS.
6. THE AGGREGATE BASE SHALL BE COMPACTED TO A DENSITY NO LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR (ASTM D 1557-91). THE BASE SHALL EXTEND A MINIMUM OF 1 FOOT BEYOND THE PAVED EDGE.
7. ALL BITUMINOUS MATERIAL SHALL BE COMPACTED TO A DENSITY NO LESS THAN 97 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MARSHALL METHOD.
8. A BOND COAT OF SS-1H EMULSION IS REQUIRED BETWEEN THE LEVELING COURSE AND THE WEARING COURSE WHEN EITHER 24 HOURS HAVE ELAPSED BETWEEN PLACEMENT OF THE BITUMINOUS COURSES OR THE SURFACE OF THE PAVEMENT HAS BEEN CONTAMINATED WITH DIRT, DUST, OR FOREIGN MATERIAL. THE BOND COAT SHALL BE APPLIED IN A UNIFORM MANNER OVER THE SURFACE AT A RATE OF 0.1 GALLONS/S.Y. IN THE EVENT A BOND COAT IS NOT REQUIRED, THE LEVELING COURSE MAY REQUIRE LOCALIZED BROOM CLEANING.
9. PERFORMANCE GRADE PG64-22 ASPHALT CEMENT SHALL BE USED IN THE PRODUCTION OF ALL BITUMINOUS MIXTURES. RECLAIMED ASPHALT PAVEMENT (RAP) SHALL BE ALLOWED ONLY AS SPECIFIED BY THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, UNLESS NOTED ON THE PROJECT DETAILS.
10. CONSTRUCTION TRAFFIC SHALL BE MINIMIZED ON THE NEW PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, THE PLACEMENT OF THE FINAL LIFT SHALL BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. THIS ACTION WILL ALLOW REPAIR OF LOCALIZED FAILURE, IF ANY DOES OCCUR, AS WELL AS REDUCE LOAD DAMAGE ON THE PAVEMENT SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR TO ANY DAMAGED SECTION RESULTING FROM CONSTRUCTION ACTIVITY.
11. TAPER CURB HEIGHT DOWN TO ZERO HEIGHT IN FIVE FEET AT ALL CURB ENDINGS UNLESS OTHERWISE NOTED ON THE PLAN.
12. WHERE CURB AND GUTTER SECTION IS ADJACENT TO A HANDICAP RAMP, DROP CURB HEIGHT TO MAXIMUM 1/4" ACROSS THE RAMP OPENING.
13. RESTRIPE PARKING LOTS AS SHOWN, USING 4" PAVEMENT MARKING – BLUE FOR RESERVED SPACES, YELLOW FOR STANDARD SPACES. IF NEW PARKING LAYOUT IS NOT INDICATED, MATCH ORIGINAL STRIPING PATTERN.
14. DIRECTIONAL ARROW PAVEMENT MARKINGS AND PAVEMENT MARKING LETTERING WHERE INDICATED SHALL BE WHITE PREFORMED THERMOPLASTIC UNLESS OTHERWISE NOTED. INSTALLATION OF THESE PERMANENT PAVEMENT MARKINGS SHALL BE PERFORMED PER THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTIONS 811 AND 920.
15. CONTRACTOR SHALL PROTECT EXISTING CURB, GUTTER, SIDEWALK, WALLS, FENCES AND ALL OTHER EXISTING SITE FEATURES NOT INDICATED FOR REMOVAL OR REHABILITATION.
16. PLACE EXPANSION JOINTS WHERE NEW CONCRETE PAVEMENT OR WALKS ABUT BUILDING WALLS (PROPOSED OR EXISTING), CURB, OR EXISTING CONCRETE PAVEMENT. PLACE SILICONE JOINT SEALANT ON ALL EXPANSION JOINTS.
17. CONTRACTOR TO CONSTRUCT CONTRACTION AND EXPANSION JOINTS IN ALL NEW CONCRETE PAVEMENT. CONTRACTION JOINTS SHALL BE TOOLED WHERE SIDEWALK WIDTH IS 8' OR LESS, AND SHALL BE SPACED EQUAL TO THE WIDTH OF THE PAVEMENT (I.E. 8' SPACING FOR 8' WIDE WALK), BUT NOT MORE THAN 10' APART. PLACE EXPANSION JOINTS WITH SILICONE JOINT SEALANT AT MAXIMUM 50' SPACING. CONTRACTOR SHALL GENERALLY MATCH THE JOINT PATTERNS FOR CONCRETE PAVEMENT WHEN SHOWN ON THE PLANS.
18. WHERE THESE PLANS DIFFER FROM THE STANDARD DETAILS OR STANDARD SPECIFICATIONS OF THE COMMUNITY, THE COMMUNITY REQUIREMENTS SHALL GOVERN.
19. CONCRETE PAVEMENT SHALL MEET THE REQUIREMENTS FOR MDOT GRADE 4000 CONCRETE PER THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
- STANDARD BITUMINOUS PAVEMENT
- HEAVY-DUTY BITUMINOUS PAVEMENT
- DEEP-STRENGTH BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT
- STORM SEWER STRUCTURE: CB 2 — STRUCT. TYPE / STRUCT. NO.
- SANITARY SEWER STRUCTURE: 20
- WATERMAIN STRUCTURE: 10 / XXX — STRUCT. NO. / STRUCT. TYPE
- UTILITY CROSSING (SEE DATA TABLE): 2

SIGN LEGEND

"RS" – RESERVED PARKING ONLY
"RSV" – RESERVED PARKING ONLY VAN ACCESSIBLE
"ST" – STOP

ALL SIGNAGE SHALL BE IN ACCORDANCE WITH THE CURRENT M.M.U.T.C.D. AND THE MDOT TRAFFIC AND SAFETY SIGN SUPPORT STANDARD PLANS.

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CONSTRUCTION PLANS
Paving Plan

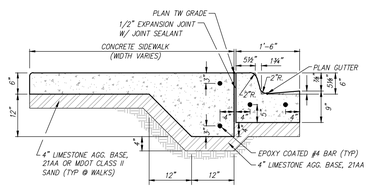
SECTION 31
TOWN 01N RANGE 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

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11	04-13-2026	CITY ENG. REV.

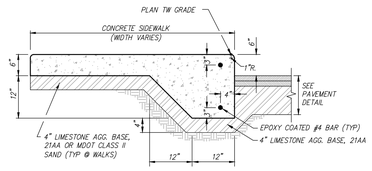
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JOB NO.: NP22006	DRAWING NO.: NP2006PAV
SCALE: 1" = 30'	SHEET NO.: C5.1

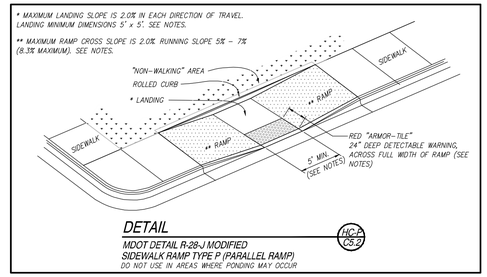
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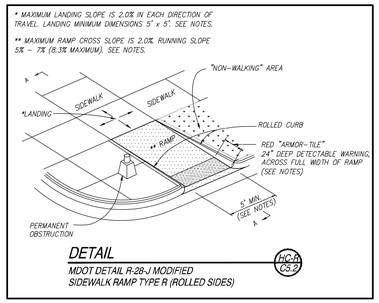
SECTION
WALK/CURB & GUTTER STANDARD PAN — X-2 / C5.2



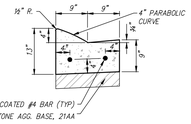
SECTION
INTEGRAL WALK/CURB — X-1 / C5.2



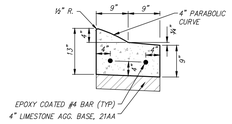
DETAIL
MDOT DETAIL R-28-J MODIFIED
SIDEWALK RAMP TYPE P (PARALLEL RAMP)
DO NOT USE IN AREAS WHERE PONDING MAY OCCUR — HC-P / C5.2



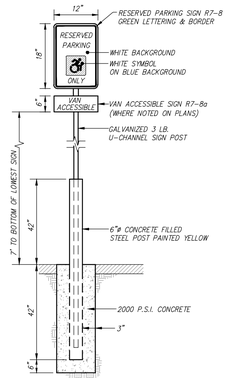
DETAIL
MDOT DETAIL R-28-J MODIFIED
SIDEWALK RAMP TYPE R (ROLLED SIDES) — HC-R / C5.2



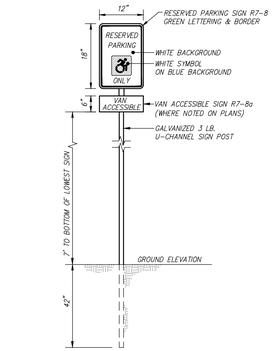
DETAIL
4" MOUNTABLE CURB & GUTTER STANDARD PAN — C4-S / C5.2



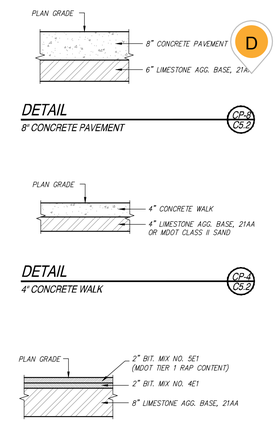
DETAIL
4" MOUNTABLE CURB & GUTTER REVERSE PAN — C4-R / C5.2



DETAIL
BARRIER FREE SIGN IN PAVEMENT DETAIL — BF-P / C5.2



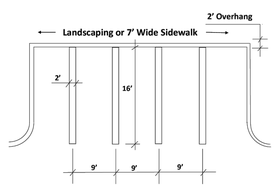
DETAIL
BARRIER FREE SIGN DETAIL — BF-S / C5.2



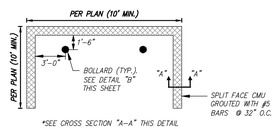
DETAIL
8" CONCRETE PAVEMENT — CP-8 / C5.2

DETAIL
4" CONCRETE WALK — CP-4 / C5.2

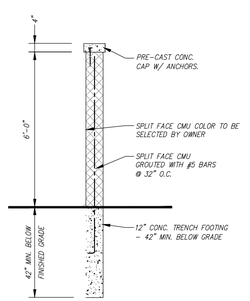
DETAIL
STANDARD BITUMINOUS PAVEMENT — AP-S / C5.2



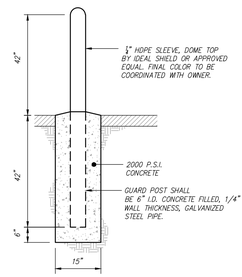
DETAIL
DOUBLE STRIPING



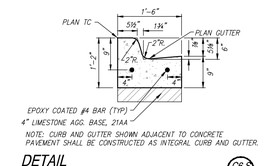
PLAN



CROSS SECTION "A-A"

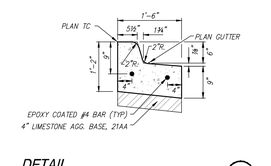


DETAIL
BOLLARD DETAIL — B / C5.2



NOTE: CURB AND GUTTER SHOWN ADJACENT TO CONCRETE PAVEMENT SHALL BE CONSTRUCTED AS INTEGRAL CURB AND GUTTER.

DETAIL
6" CURB & GUTTER STANDARD PAN (MDOT TYPE F1) — C6-S / C5.2



DETAIL
6" CURB & GUTTER REVERSE PAN (MDOT TYPE F1) — C6-R / C5.2

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CONSTRUCTION PLANS
Paving Details

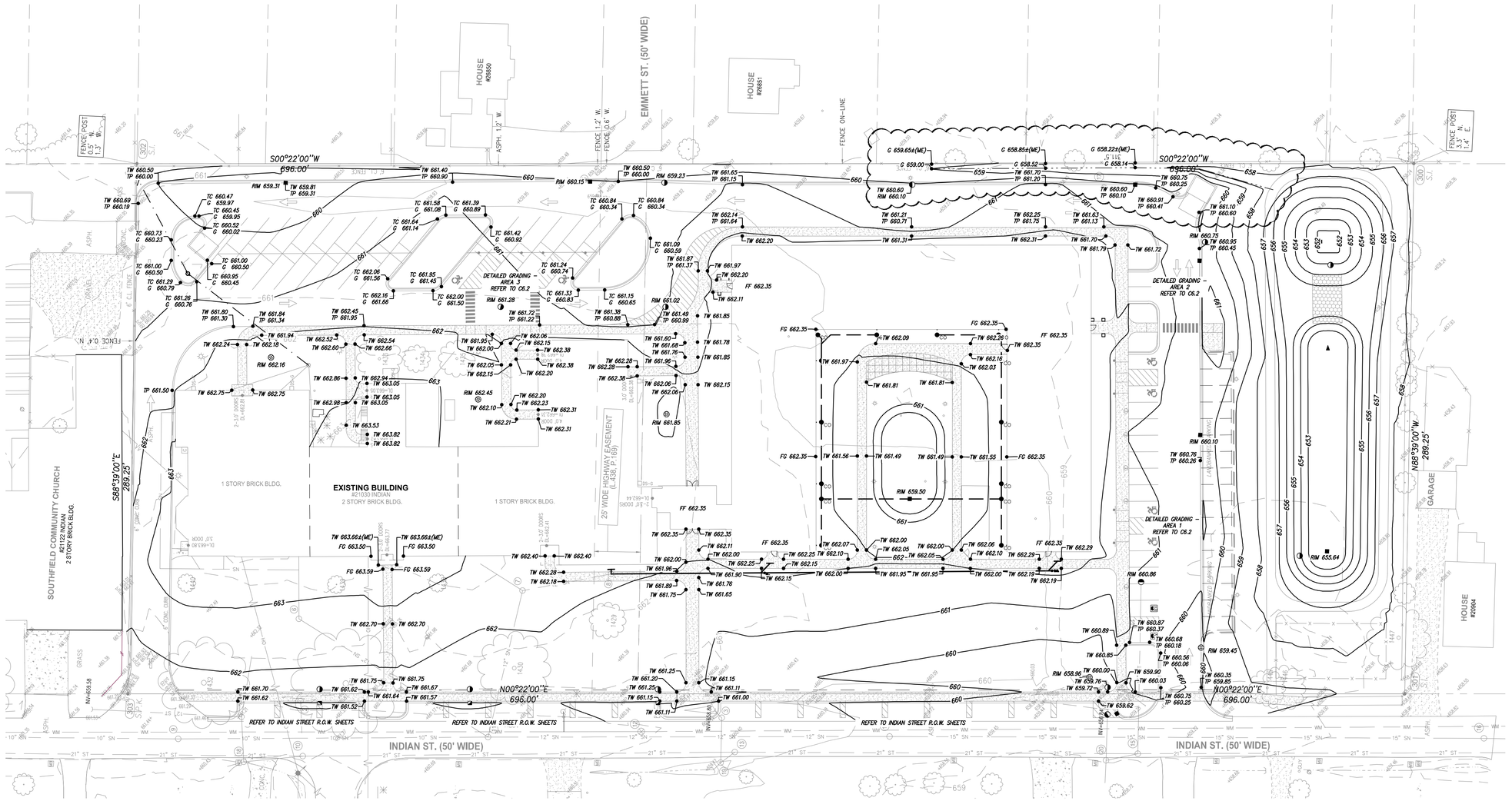
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JOB NO.: NP22006	DRAWING NO.: NP2006PAV
SCALE: NTS	SHEET NO.: C5.2

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RESTORATION NOTE

RESTORE ALL NON-PAVED AREAS WITH 3" OF CLEAN TOPSOIL AND SEED MIX (30% KENTUCKY BLUEGRASS, 20% PERENNIAL RYEGRASS, 50% CREEPING RED FESCUE). PLACE MULCH IN ALL SEEDED AREAS. ON SLOPES IN EXCESS OF 10 HORIZONTAL TO 1 VERTICAL PLACE NORTH AMERICAN GREEN DS150 MULCH BLANKET IMMEDIATELY AFTER SEEDING. USE METAL STAPLES PER MANUFACTURERS RECOMMENDATIONS TO HOLD MATTING IN PLACE.

GRADING LEGEND

- EXISTING ELEVATION
- TC 000.00 — PROPOSED TOP OF CURB ELEVATION
- G 000.00 — PROPOSED GUTTER ELEVATION
- OG 000.00 — OUTSIDE GRADE ELEVATION
- 1130 — EXISTING CONTOURS
- 1130 — PROPOSED CONTOURS
- TP 000.00 — TOP OF PAVEMENT ELEVATION
- TW 000.00 — TOP OF WALK ELEVATION
- FG 000.00 — FINISH GRADE ELEVATION
- T/WALL 000.00 — TOP OF WALL ELEVATION
- ME 000.00 — MATCH EXISTING ELEVATION
- FLOW ARROW

GRADING NOTES

1. CONTRACTOR TO PLACE ALL NEW PAVEMENT TO THE GRADES INDICATED, OR MATCH ORIGINAL GRADES IF NEW GRADES ARE NOT SHOWN. CONTRACTOR SHALL CONFIRM MINIMUM 1% PAVEMENT SLOPES ARE ATTAINED IN ALL AREAS.
2. PROPOSED GRADES MAY BE BASED ON AN INTERPOLATION OF DATA SHOWN ON THE TOPOGRAPHIC SURVEY. THIS INTERPOLATED DATA IS APPROXIMATE AND COULD DIFFER SLIGHTLY BASED ON THE ACCURACY OF THE SURVEY. CONTRACTOR SHALL CONFIRM THAT THE PROPOSED GRADES SHOWN ON THIS PLAN WILL NOT CREATE A STANDING WATER CONDITION (I.E. A LOW SPOT OR PAVEMENT SLOPES LESS THAN 1%) OR AN UNSAFE CONDITION WITH SLOPES IN EXCESS OF 5%. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF THEY BELIEVE THAT ONE OF THESE SITUATIONS WILL OCCUR BASED ON THE PROPOSED GRADES.
3. ALL PAVEMENT PLACED WITHIN BARRIER FREE PARKING AREAS (STALLS AND ACCESS AISLES) SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION, INCLUDING MEASURED DIAGONALLY ACROSS THE AREAS. CONTRACTOR SHALL ADJUST SLOPES AS NECESSARY TO PROVIDE ADA COMPLIANT SLOPES AS WELL AS PROVIDING RE-GRADED TRANSITION SLOPES OUTSIDE OF THE BARRIER FREE PARKING AREAS. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF TRANSITION ZONES WILL EXCEED MAXIMUM 5% SLOPES. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE PATTERNS WITH ALL NECESSARY PAVEMENT RE-GRADING.
4. ALL BARRIER FREE RAMPS AND ADA ACCESSIBLE ROUTES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF MDOT DETAIL R-28 "SIDEWALK RAMP AND DETECTABLE WARNING DETAILS".
5. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER RUNOFF DURING CONSTRUCTION OPERATIONS. OF PARTICULAR CONCERN WILL BE THE TIME PERIOD AFTER THE SITE HAS BEEN STRIPPED AND NOT YET RESTORED, BUILT UPON, OR PAVED. CONTRACTOR MUST INSTALL OR CONSTRUCT APPROPRIATE TEMPORARY MEASURES TO PROTECT ADJACENT PROPERTIES.

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
- UTILITY CROSSING (SEE DATA TABLE)
- STANDARD BITUMINOUS PAVEMENT
- HEAVY-DUTY BITUMINOUS PAVEMENT
- DEEP-STRENGTH BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT
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- SANITARY SEWER STRUCTURE: 20
- WATERMAIN STRUCTURE: 10 XXX — STRUCT. NO. / STRUCT. TYPE

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Fax (248) 844-5404

15 E. Baltimore St.
Detroit, MI 48202
Phone (313) 305-9120
Fax (313) 305-9121

27333 Meadowbrook Rd., Suite 210
Novi, MI 48377
Phone (248) 844-6274

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Grand Rapids, MI 49504
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CLIENT:

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26000 EVERGREEN ROAD
P.O. BOX 2055
SOUTHFIELD, MI 48037-2055

Know what's **below.** **Call** before you dig.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. CALL MISS DIG 3 WORKING DAYS PRIOR TO CONSTRUCTION.

UTILITY NOTE

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CONSTRUCTION PLANS
Grading Plan

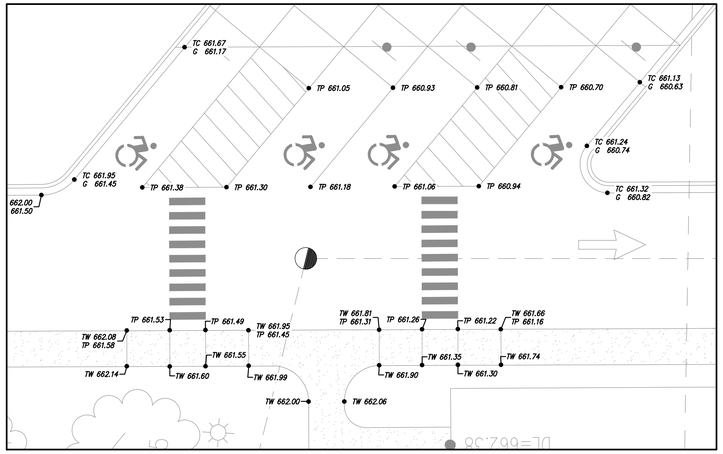
SECTION 31
TOWN 01N RANGE 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

NO.	DATE	REVISION
11	04-13-2026	CITY ENG. REV.
12	06-23-2026	RFI 121
13	07-02-2026	RFI 115
	11-11-2026	RFI 165

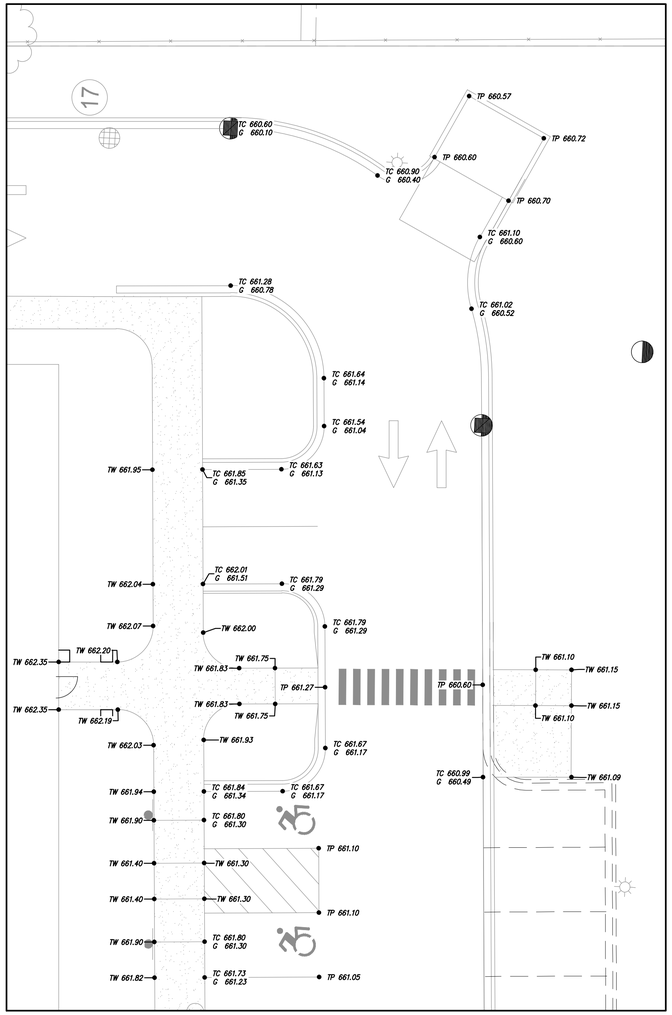
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DRAFTER -	DATE -
DESIGNER J. CHRISTOPHER	DATE 24-01-26
CHECKED J. CHRISTOPHER	DATE 24-01-26
PROJECT MANAGER T. SOVEL	BID PLAN DATE
DEPARTMENT MANAGER APPROVAL -	DATE
JOB NO. NP22006	DRAWING NO. NP2006PAV
SCALE: 1" = 30'	SHEET NO. C6.1

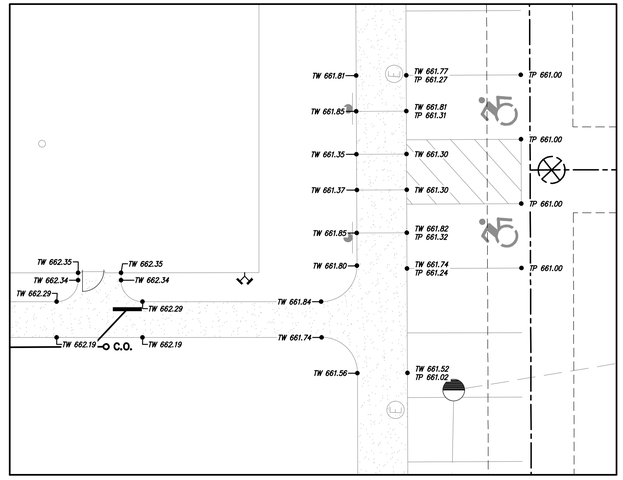
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N:\NPNLD Projects\NP22006 - Grace School - Senior Housing\DWG\NP22006GRD.dwg



GRADING DETAIL - AREA 3



GRADING DETAIL - AREA 2



GRADING DETAIL - AREA 1

RESTORATION NOTE

RESTORE ALL NON-PAVED AREAS WITH 3" OF CLEAN TOPSOIL AND SOD PER SPEC SECTION 2920. PEG SOD IN PLACE ON SLOPES IN EXCESS OF 10 HORIZONTAL TO 1 VERTICAL USING WOODEN PEGS A MINIMUM OF 12" LONG. WATER SOD ON A REGULAR BASIS AS INDICATED IN THE SPECIFICATIONS.

RESTORATION NOTE

RESTORE ALL NON-PAVED AREAS WITH 3" OF CLEAN TOPSOIL AND SEED MIX (30% KENTUCKY BLUEGRASS, 20% PERENNIAL RYEGRASS, 50% CREEPING RED FESCUE). PLACE MULCH IN ALL SEEDED AREAS. ON SLOPES IN EXCESS OF 10 HORIZONTAL TO 1 VERTICAL PLACE NORTH AMERICAN GREEN DS150 MULCH BLANKET IMMEDIATELY AFTER SEEDING. USE METAL STAPLES PER MANUFACTURERS RECOMMENDATIONS TO HOLD MATTING IN PLACE.

GRADING LEGEND

- EXISTING ELEVATION
- TC 000.00 / G 000.00 — PROPOSED TOP OF CURB ELEVATION / PROPOSED GUTTER ELEVATION
- OG 000.00 — OUTSIDE GRADE ELEVATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- TP 000.00 — TOP OF PAVEMENT ELEVATION
- TW 000.00 — TOP OF WALK ELEVATION
- FG 000.00 — FINISH GRADE ELEVATION
- T/WALL 000.00 — TOP OF WALL ELEVATION
- ME 000.00 — MATCH EXISTING ELEVATION
- FLOW ARROW

GRADING NOTES

1. CONTRACTOR TO PLACE ALL NEW PAVEMENT TO THE GRADES INDICATED, OR MATCH ORIGINAL GRADES IF NEW GRADES ARE NOT SHOWN. CONTRACTOR SHALL CONFIRM MINIMUM 1% PAVEMENT SLOPES ARE ATTAINED IN ALL AREAS.
2. PROPOSED GRADES MAY BE BASED ON AN INTERPOLATION OF DATA SHOWN ON THE TOPOGRAPHIC SURVEY. THIS INTERPOLATED DATA IS APPROXIMATE AND COULD DIFFER SLIGHTLY BASED ON THE ACCURACY OF THE SURVEY. CONTRACTOR SHALL CONFIRM THAT THE PROPOSED GRADES SHOWN ON THIS PLAN WILL NOT CREATE A STANDING WATER CONDITION (I.E. A LOW SPOT OR PAVEMENT SLOPES LESS THAN 1%) OR AN UNSAFE CONDITION WITH SLOPES IN EXCESS OF 5%. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF THEY BELIEVE THAT ONE OF THESE SITUATIONS WILL OCCUR BASED ON THE PROPOSED GRADES.
3. ALL PAVEMENT PLACED WITHIN BARRIER FREE PARKING AREAS (STALLS AND ACCESS AISLES) SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION, INCLUDING MEASURED DIAGONALLY ACROSS THE AREAS. CONTRACTOR SHALL ADJUST SLOPES AS NECESSARY TO PROVIDE ADA COMPLIANT SLOPES AS WELL AS PROVIDING RE-GRADED TRANSITION SLOPES OUTSIDE OF THE BARRIER FREE PARKING AREAS. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF TRANSITION ZONES WILL EXCEED MAXIMUM 5% SLOPES. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE PATTERNS WITH ALL NECESSARY PAVEMENT RE-GRADING.
4. ALL BARRIER FREE RAMPS AND ADA ACCESSIBLE ROUTES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF MDOT DETAIL R-28 "SIDEWALK RAMP AND DETECTABLE WARNING DETAILS".
5. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER RUNOFF DURING CONSTRUCTION OPERATIONS. OF PARTICULAR CONCERN WILL BE THE TIME PERIOD AFTER THE SITE HAS BEEN STRIPPED AND NOT YET RESTORED, BUILT UPON, OR PAVED. CONTRACTOR MUST INSTALL OR CONSTRUCT APPROPRIATE TEMPORARY MEASURES TO PROTECT ADJACENT PROPERTIES.

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
- STANDARD BITUMINOUS PAVEMENT
- HEAVY-DUTY BITUMINOUS PAVEMENT
- DEEP-STRENGTH BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT
- UTILITY CROSSING (SEE DATA TABLE)
- STORM SEWER STRUCTURE: CB 2 — STRUCT. TYPE / STRUCT. NO.
- SANITARY SEWER STRUCTURE: 20
- WATERMAIN STRUCTURE: 10 XXX — STRUCT. NO. / STRUCT. TYPE

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SCALE: 1" = 10'

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CONSTRUCTION PLANS
Detailed Grading

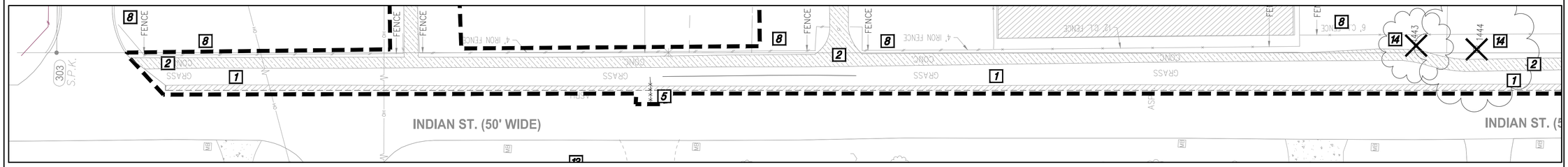
SECTION 31
TOWN 01N **RANGE** 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

NO.	DATE	REVISION
1	03-04-2024	OWNER REVIEW
2	03-22-2024	PAGE TURN
3	03-29-2024	REV. OWNER REVIEW
4	10-25-2024	PERMIT
5	12-13-2024	HUD SUBMISSION
6	12-20-2024	PERMIT
7	02-19-2025	1 BULLETIN NO. 1
8	03-07-2025	2 BULLETIN NO. 2
9	11-19-2025	CITY ENG. REV.
10	12-12-2025	CITY ENG. APPROVED
11	03-02-2026	EGLE ENG. REV.
11	04-13-2026	CITY ENG. REV.

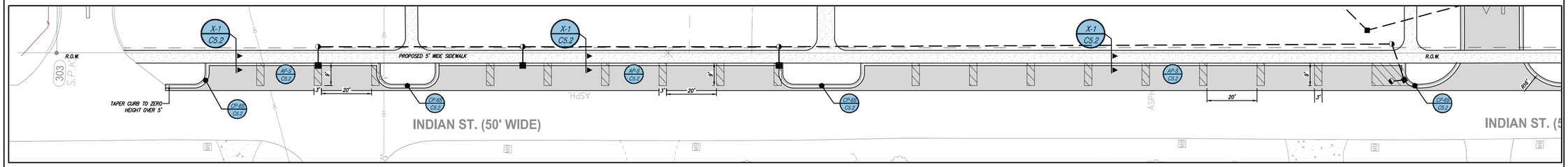
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DRAFTER: -	DATE: -
DESIGNER: J. CHRISTOPHER	DATE: 24-01-26
CHECKED: J. CHRISTOPHER	DATE: 24-01-26
PROJECT MANAGER: T. SOVEL	BID PLAN DATE
DEPARTMENT MANAGER APPROVAL: -	DATE
JOB NO.: NP22006	DRAWING NO.: NP2006PAV
SCALE: 1" = 30'	SHEET NO.: C6.2

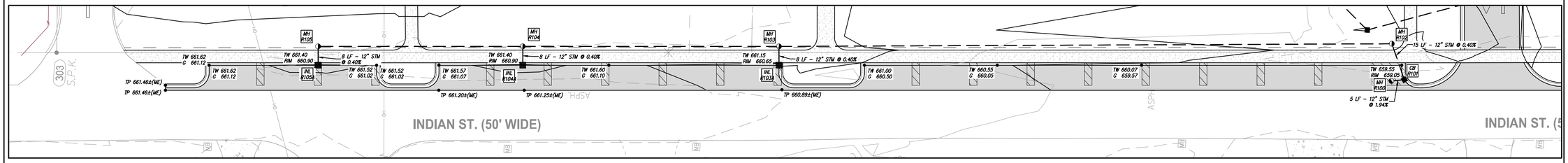
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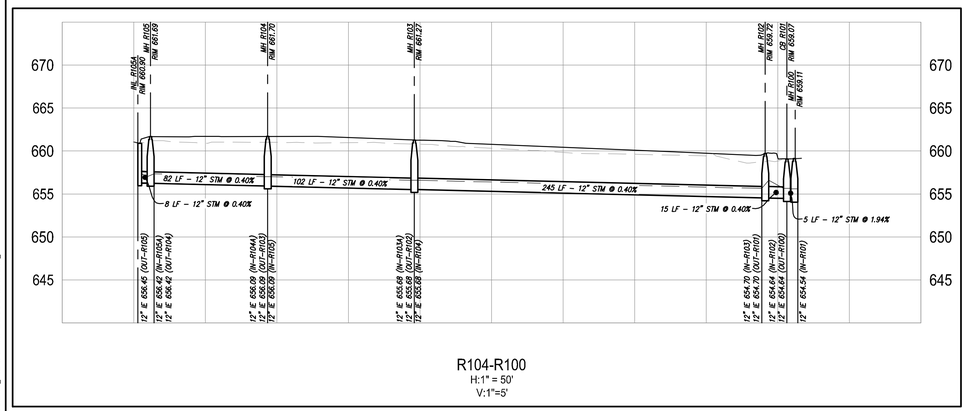
RIGHT-OF-WAY DEMOLITION PLAN



RIGHT-OF-WAY PAVING PLAN



RIGHT-OF-WAY GRADING & STORMWATER PLAN



R104-R100
H:1" = 50'
V:1"=5'

RIGHT-OF-WAY STORM SEWER PROFILE

CITY OF SOUTHFIELD STANDARD NOTES

1. NOTIFY THE CITY OF SOUTHFIELD ENGINEERING DIVISION (248) 796-4810 A MINIMUM OF FORTY-EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION.
2. ALL CONSTRUCTION MUST CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS ADOPTED BY THE CITY OF SOUTHFIELD.
3. UTILITIES MUST BE LOCATED UNDERGROUND.
4. CALL MISS DIG (1-800-482-7171 / 811) A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO THE START OF CONSTRUCTION.
5. ALL SOIL EROSION AND SILT MUST BE CONTROLLED AND CONTAINED ON-SITE.
6. ALL EXCAVATION UNDER OR WITHIN THREE FEET (3') OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (CLASS II MDOT).
7. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
8. PRIOR TO THE ISSUANCE OF AN OCCUPANCY PERMIT, ENGINEERING SITE INSPECTION IS REQUIRED.

UTILITY NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF SOUTHFIELD.
2. STORM SEWER 12" AND LARGER SHALL BE C76 CL IV (RMEM.J.T.) UNLESS OTHERWISE NOTED ON THE PLAN.
3. STORM SEWER 6" AND SMALLER SHALL BE PVC SDR 23.5. STORM SEWER GREATER THAN 6" THROUGH 10" SHALL BE PVC SDR 26.
4. ALL UTILITY TRENCHES THAT FALL WITHIN A 1-ON-1 INFLUENCE OF PAVEMENT AREAS SHALL BE BACKFILLED WITH CLASS 2 SAND AND COMPACTED TO 95% OF MAXIMUM DENSITY.
5. ALL UTILITIES SHALL BE INSTALLED ON CLASS "B" BEDDING OR BETTER.
6. ALL UTILITIES SHALL BE PLACED AT LEAST 10' FROM OTHER UTILITIES, SIGNIFICANT TREES, AND FIXED STRUCTURES.
7. UNLESS OTHERWISE NOTED, ALL STORM SEWER STRUCTURES SHALL BE 4' DIAMETER (INLETS SHALL BE 2' DIAMETER). CONTRACTOR IS RESPONSIBLE FOR VERIFYING STRUCTURES SIZES IN RELATION TO PIPE SIZES AND ANGLES AND PRICING THEIR BID ACCORDINGLY. UNLESS OTHERWISE INDICATED ON THE STANDARD DETAIL SHEETS CASTINGS SHALL BE: PVMT. CATCH BASINS – EJIW 5105 – "M" (FRAMES WITH CURB BOXES WILL NOT BE ALLOWED)
   YARD CATCH BASINS – EJIW 1040 – "02"
   MANHOLES – EJIW 1040 – "A"
8. PLACEMENT OF EDGE DRAINS AND FINGER DRAINS AT ALL PAVEMENT CATCH BASINS IS REQUIRED. SEE STRUCTURE UNDERDRAIN DETAIL SHEET C4.3.
9. FOR CURB CATCH BASINS, SEE BASIN LOCATION DETAIL FOR BASIN STAKING RELATIVE TO THE CURB.
10. CONTRACTOR TO VERIFY CONDITION OF EXISTING PIPE AND REPLACE IF NECESSARY. PASSAGE OF EXISTING UPSTREAM FLOW TO BE MAINTAINED.
11. ALL DUCTILE IRON PIPES AND FITTINGS MUST BE WRAPPED IN POLYETHYLENE.
12. NO ROOF DRAINS (EXISTING OR PROPOSED) MAY BE CONNECTED TO THE SANITARY SYSTEM. CONTRACTOR TO CONFIRM CONNECTION POINT OF EXISTING ROOF DRAINS AND RE-ROUTE IF NECESSARY.

RESTORATION NOTE

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GRADING LEGEND

000.00	EXISTING ELEVATION	• TP 000.00	TOP OF PAVEMENT ELEVATION
• TC 000.00	PROPOSED TOP OF CURB ELEVATION	• TW 000.00	TOP OF WALK ELEVATION
• G 000.00	PROPOSED GUTTER ELEVATION	• FG 000.00	FINISH GRADE ELEVATION
• OG 000.00	OUTSIDE GRADE ELEVATION	• T/WALL 000.00	TOP OF WALL ELEVATION
1130	EXISTING CONTOURS	• ME 000.00	MATCH EXISTING ELEVATION
1130	PROPOSED CONTOURS		FLOW ARROW

GRADING NOTES

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5. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER RUNOFF DURING CONSTRUCTION OPERATIONS. OF PARTICULAR CONCERN WILL BE THE TIME PERIOD AFTER THE SITE HAS BEEN STRIPPED AND NOT YET RESTORED, BUILT UPON, OR PAVED. CONTRACTOR MUST INSTALL OR CONSTRUCT APPROPRIATE TEMPORARY MEASURES TO PROTECT ADJACENT PROPERTIES.

DEMOLITION NOTES

1. REMOVE ASPHALT PAVEMENT TO FULL DEPTH, INCLUDING AGGREGATE BASE. SAWCUT FULL DEPTH WHERE NEW PAVEMENT WILL BE PLACED ADJACENT TO EXISTING PAVEMENT. REMOVAL LIMITS TO BE FIELD VERIFIED BY ENGINEER.
2. REMOVE CONCRETE PAVEMENT TO FULL DEPTH, INCLUDING AGGREGATE BASE. SAWCUT FULL DEPTH TO NEAREST JOINT WHERE NEW PAVEMENT WILL BE PLACED ADJACENT TO EXISTING PAVEMENT. REMOVAL LIMITS TO BE FIELD VERIFIED BY ENGINEER.
3. REMOVE CONCRETE CURB TO FULL DEPTH. SAWCUT FULL DEPTH TO NEAREST JOINT WHERE NEW CONCRETE CURB WILL BE PLACED ADJACENT TO EXISTING CONCRETE CURB. REMOVAL LIMITS TO BE FIELD VERIFIED BY ENGINEER.
4. CLEAR AND GRUB TO THE LIMITS SHOWN. INCLUDE REMOVAL OF ALL SIGNS, POSTS, FOOTINGS, GRAVEL, BRUSH, SHRUBS, GRASS, AND TREES NOT INDICATED FOR PROTECTION, INCLUDING ROOTS. STRIP TOPSOIL AND STOCKPILE ON SITE IN DESIGNATED LOCATION.
5. REMOVE EXISTING UTILITY PIPE. BACKFILL WITH CLASS II FILL AND COMPACT TO 95% OF MAXIMUM DENSITY. INSTALL WATERTIGHT BULKHEADS AT STRUCTURES WHERE EXISTING PIPE IS TO BE REMOVED.
6. REMOVE EXISTING UTILITY STRUCTURE COMPLETE. BACKFILL WITH CLASS II FILL AND COMPACT TO 95% OF MAXIMUM DENSITY.
7. ABANDON EXISTING UTILITY STRUCTURE. REFER TO DETAIL ON THIS SHEET.
8. REMOVE AND SALVAGE EXISTING FENCE, INCLUDING ANY GATES.
9. REMOVE AND SALVAGE EXISTING FLAG POLE TO BE TURNED OVER TO OWNER. REMOVE AND DISPOSE EXISTING FOOTING.
10. REMOVE AND SALVAGE EXISTING LIGHT POST TO BE TURNED OVER TO OWNER. REMOVE AND DISPOSE OF EXISTING FOOTING.
11. REMOVE AND SALVAGE EXISTING PICNIC TABLE TO BE TURNED OVER TO THE OWNER.
12. ABANDON EXISTING UTILITY PIPE IN PLACE (CONTRACTOR TO CONFIRM NO CONFLICTS). CUT AND INSTALL WATERTIGHT CAP AT EXISTING PIPE AND INSTALL BULKHEAD AT STRUCTURES WHERE PIPE IS TO BE ABANDONED IN PLACE. FILL WITH FLOWABLE GROUT.
13. REMOVE AND SALVAGE EXISTING FIRE HYDRANT TO BE RELOCATED. REFER TO C3.1.
14. REMOVE EXISTING TREE, INCLUDE STUMP AND ROOTS.

   UNLESS OTHERWISE SPECIFIED, PROTECT EXISTING UTILITIES AND UTILITY STRUCTURES TO REMAIN.

   EXISTING SIGNAGE AND MAILBOXES WITHIN THE CLEARING LIMITS ARE TO BE REMOVED AND SALVAGED. STAGE IN ON SITE LOCATION AS SPECIFIED BY OWNER.

   ALL DEPRESSIONS CREATED BY DEMOLITION PROCEDURES SHALL BE BACKFILLED WITH CLASS II FILL MATERIAL, IN 8" LIFTS COMPACTED TO 95% OF MAXIMUM UNIT WEIGHT, UP TO PROPOSED SUBGRADE.

   CONTRACTOR IS RESPONSIBLE FOR DOING AN EARTHWORK CALCULATION FOR CUT AND FILL REQUIREMENTS, AND IS RESPONSIBLE FOR INCLUDING IMPORT AND EXPORT OF MATERIALS IN THEIR BID. ALL EXCESS MATERIAL (INCLUDING TOPSOIL, CLEAN FILL, AND WASTE MATERIAL) SHALL BE REMOVED FROM THE SITE.

   EXISTING SUPPORTED SLABS AT BUILDING ENTRY/DOORS TO REMAIN, UNLESS OTHERWISE DIRECTED. CONTRACTOR TO VERIFY LIMITS OF EXISTING SUPPORTED SLAB AND REMOVE ADJACENT WALKS AS SHOWN ON PLANS.

   CONTRACTOR TO PROTECT EXISTING WALKS, PAVEMENT, CURBS, GUTTERS, WALLS, FENCES, GATES, LANDSCAPING AND TREES TO REMAIN DURING CONSTRUCTION.

STORM STRUCTURE SCHEDULE (Storm (NP22006))

STR. NO.	TYPE	RIM ELEV.	INV. SIZE	INV. DIR.	INVERT	IN/OUT
R100	MH	659.11	12"	S	654.54'	In
R101	CB	659.07	12" 12"	E N	654.64' 654.64'	In Out
R102	MH	659.72	12" 12"	N W	654.70' 654.70'	In Out
R103	MH	661.27	12" 12" 12"	W S N	655.68' 655.68' 655.68'	In Out In
R103A	2' DIA INLET	660.65	12"	E	655.71'	Out
R104	MH	661.70	12" 12" 12"	W S N	656.09' 656.09' 656.09'	In Out In
R104A	2' DIA INLET	660.90	12"	E	656.12'	Out
R105	MH	661.69	12" 12"	W S	656.42' 656.42'	In Out
R105A	2' DIA INLET	660.90	12"	E	656.45'	Out

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
- STANDARD BITUMINOUS PAVEMENT
- HEAVY-DUTY BITUMINOUS PAVEMENT
- DEEP-STRENGTH BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT
- UTILITY CROSSING (SEE DATA TABLE)
- STORM SEWER STRUCTURE: CB 2 — STRUCT. TYPE / STRUCT. NO.
- SANITARY SEWER STRUCTURE: 20
- WATERMAIN STRUCTURE: 10 / XXX — STRUCT. NO. / STRUCT. TYPE

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Phone (248) 844-6274

400 Ann St. NW, Suite 204
Grand Rapids, MI 49504
Phone (616) 885-5802

www.sda-eng.com
(800) 598-1600

0' 20' 20'
SCALE: 1" = 20'

CLIENT:

JOHN GRACE ARMS LIMITED HOUSING
26000 EVERGREEN ROAD
P.O. BOX 2055
SOUTHFIELD, MI 48037-2055

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CONSTRUCTION PLANS
Right-of-Way Parking Plan

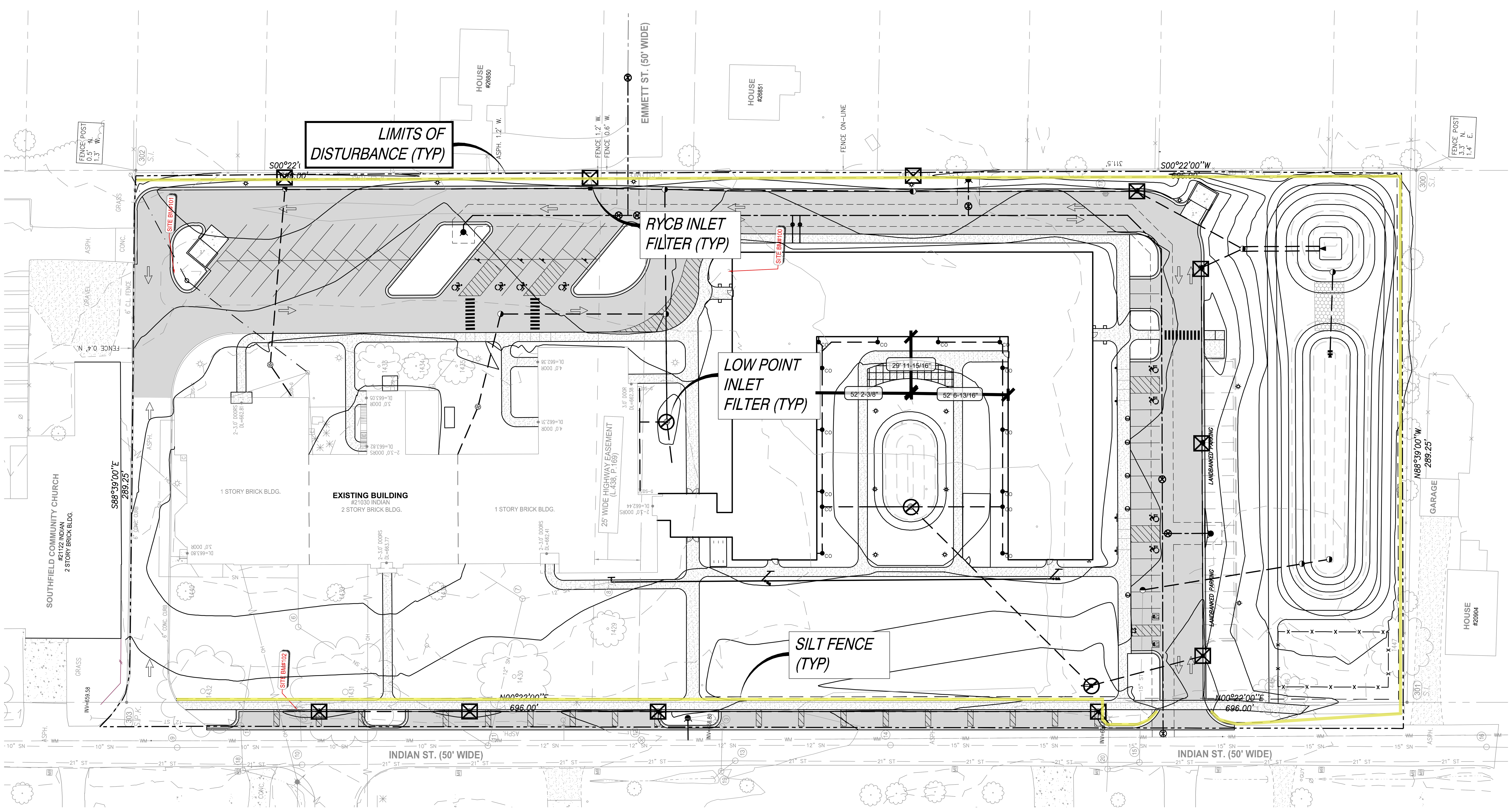
SECTION 31
TOWN 01N RANGE 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

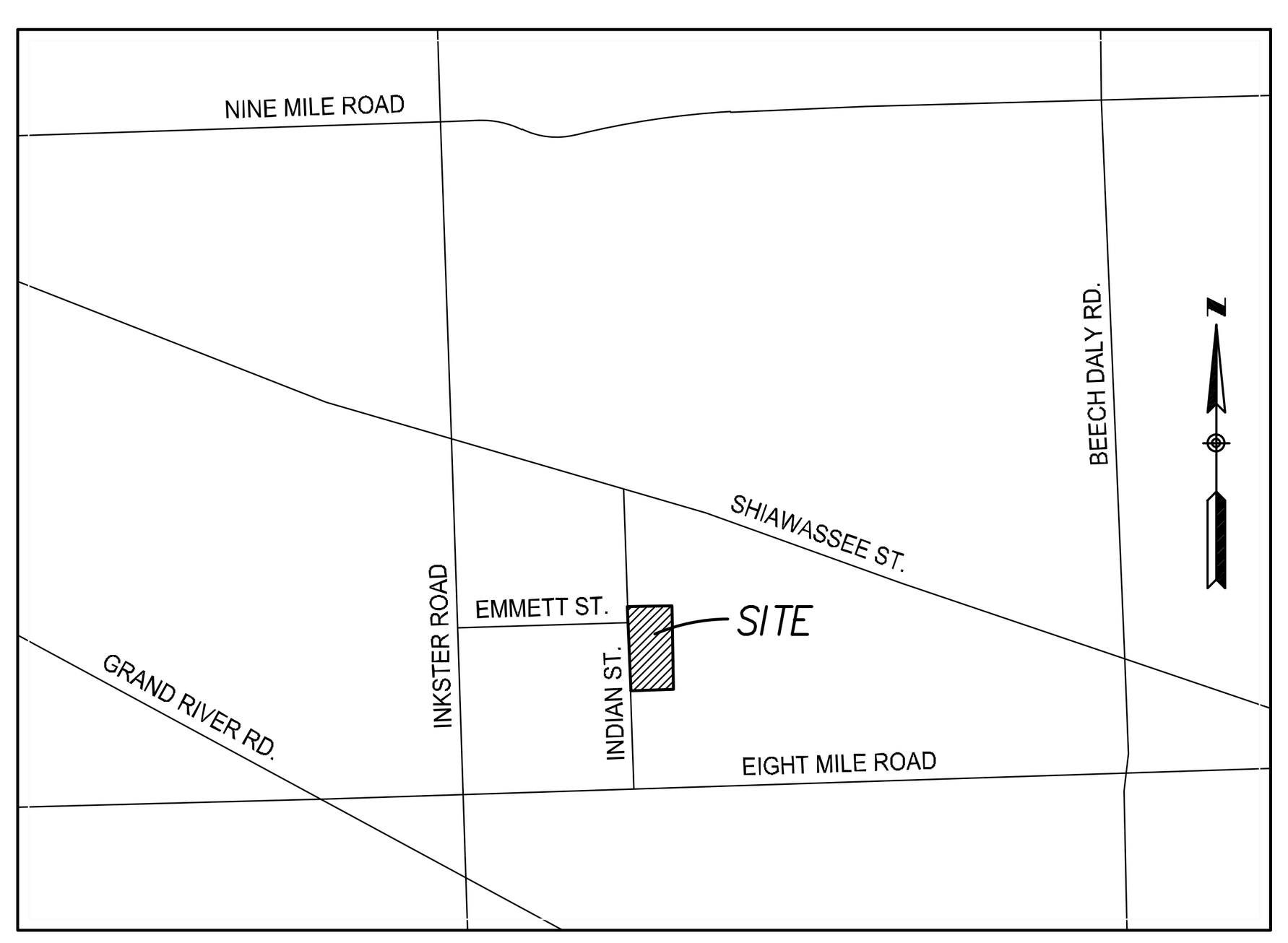
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12	04-13-2026	CITY ENG. REV.
13	07-02-2026	RFI 121 RFI 115

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DRAFTER: -	DATE: -
DESIGNER: J. CHRISTOPHER	DATE: 24-01-26
CHECKED: J. CHRISTOPHER	DATE: 24-01-26
PROJECT MANAGER: T. SOVEL	BID PLAN DATE
DEPARTMENT MANAGER APPROVAL: -	DATE
JOB NO.: NP22006	DRAWING NO.: NP2006PAV
SCALE: 1" = 30'	SHEET NO.: C7.1

Plotted: Jul 2, 2026, 2:55 PM by user: 1107 - Saved: 7/2/2026 by user: 1107
N:\NP\NLD Projects\NP22006 - Grace School - Senior Housing\DWG\NP22006RDW.dwg





LOCATION MAP

NOT TO SCALE

LEGAL DESCRIPTION

SOURCE: ATA NATIONAL TITLE GROUP, LLC
COMMITMENT DATE: AUGUST 11, 2021
TAX PARCEL ID: 24-31-376-033
ADDRESS: 21030 INDIAN ST.

THE LAND REFERRED TO THIS TITLE COMMITMENT IS SITUATED IN THE CITY OF SOUTHFIELD, OAKLAND COUNTY, STATE OF MICHIGAN, AS FOLLOWS:

LOT 7, 9 AND THE NORTH 140 FEET OF LOT 11, THOMAS HITCHMAN'S SUBDIVISION, AS RECORDED IN LIBER 10, PAGE 49 OF PLATS, OAKLAND COUNTY RECORDS.

SOIL EROSION/SEDIMENTATION CONTROL CONSTRUCTION SEQUENCE

1. INSTALL INLET FILTERS, AND SILT FENCE AROUND DEFINED PERIMETER AS SHOWN.
2. COMPLETE SITE DEMOLITION ACTIVITIES INCLUDING PAVEMENT REMOVAL AND DISPOSAL. CLEAR, GRUB AND STRIP TOPSOIL IN AREAS OF EARTH DISRUPTION.
3. COMPLETE ROUGH GRADING LAND BALANCING OPERATIONS.
4. INSTALL PROPOSED UNDERGROUND UTILITIES AND PLACE INLET FILTERS IN NEW STORM STRUCTURES WHERE INDICATED. REPLACED INLET FILTERS WITHIN AFFECTED EXISTING STRUCTURES AS NECESSARY.
5. PERFORM FINE GRADING, PAVING OPERATIONS, AND FIELD.
6. COMPLETE LANDSCAPING ACTIVITIES INCLUDING LAWN RESTORATION.
7. EROSION CONTROL MEASURES ARE NOT TO BE REMOVED UNTIL THE CITY AND/OR COUNTY GRANTS ITS APPROVAL. INLET FILTERS SHALL BE PERIODICALLY INSPECTED AND CLEANED/REPLACED AS NECESSARY.

ALL EROSION CONTROL MEASURES SHALL BE INSTALLED APPROXIMATELY ACCORDING TO THE FOLLOWING SEQUENCE OF CONSTRUCTION.

PROJECT COMMENCEMENT ON OR ABOUT MARCH 2024.

SCHEDULE

A.	INSTALL SILT FENCE, AND INLET FILTERS IN EXISTING STRUCTURES.	1–2 DAYS
B.	STRIP AND STOCKPILE TOPSOIL, SITE DEMOLITION, AND ROUGH GRADE SITE.	2–3 WEEKS
C.	INSTALL PROPOSED UTILITIES AND NEW STRUCTURES.	2–3 WEEKS
D.	INSTALL INLET FILTERS IN DRAINAGE STRUCTURES	1–2 DAYS
E.	BUILDING ADDITION CONSTRUCTION.	2 MONTHS
F.	FINE GRADE SITE, PAVE, INSTALL LANDSCAPING AND ESTABLISH VEGETATION.	2–3 WEEKS
G.	CLEAN PAVEMENTS, WALKS, CULVERTS, AND WATERCOURSES OF ALL ACCUMULATED SEDIMENT IN CONJUNCTION WITH REMOVAL ALL TEMPORARY DEVICES.	1–2 WEEKS

PROJECT COMPLETION ON OR ABOUT NOVEMBER 2024.

RESTORATION NOTE

RESTORE ALL NON-PAVED AREAS WITH 3" OF CLEAN TOPSOIL AND SEED MIX (30% KENTUCKY BLUEGRASS, 20% PERENNIAL RYEGRASS, 50% CREEPING RED FESCUE). PLACE MULCH IN ALL SEEDED AREAS. ON SLOPES IN EXCESS OF 10 HORIZONTAL TO 1 VERTICAL PLACE NORTH AMERICAN GREEN DS150 MULCH BLANKET IMMEDIATELY AFTER SEEDING. USE METAL STAPLES PER MANUFACTURERS RECOMMENDATIONS TO HOLD MATTING IN PLACE.

APPROX. GROSS ACREAGE DISTURBED = 4.10± ACRES
DISTANCE TO NEAREST BODY OF WATER = 1,045± LF NORTH
(UNNAMED TRIBUTARY TO ROUGE RIVER)

SOIL TYPES:

14B - OAKVILLE FINE SAND, 0 TO 6 PERCENT SLOPES
AtruaB - ALTMAR-URBAN LAND COMPLEX, 0 TO 4 PERCENT SLOPES
TeduaB - TEDROW-URBAN LAND COMPLEX, 0 TO 4 PERCENT SLOPES

THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF ACT 451 OF 1994, AS AMENDED. THE SOIL EROSION AND SEDIMENT CONTROL ACT.

GRADING LEGEND

000.00	EXISTING ELEVATION	• TP 000.00	TOP OF PAVEMENT ELEVATION
• TC 000.00 / G 000.00	PROPOSED TOP OF CURB ELEVATION / PROPOSED GUTTER ELEVATION	• TW 000.00	TOP OF WALK ELEVATION
• OG 000.00	OUTSIDE GRADE ELEVATION	• FG 000.00	FINISH GRADE ELEVATION
1130 / 1131	EXISTING CONTOURS	• T/WALL 000.00	TOP OF WALL ELEVATION
1130	PROPOSED CONTOURS	• ME 000.00	MATCH EXISTING ELEVATION
			FLOW ARROW

SOIL EROSION CONTROL DEVICES

- LOW POINT INLET FILTER (SI–2)
- RYCB INLET FILTER (SI–3)
- SILT FENCE (SP–3)
- LIMITS OF DISTURBANCE
- CONSTRUCTION ENTRANCE (SP–9)

SOIL EROSION/SEDIMENTATION CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF PONTIAC AND/OR COUNTY OF OAKLAND.
2. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL DEVICES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
3. EROSION AND ANY SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATER WAYS. WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
4. EROSION AND SEDIMENT CONTROL DEVICES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION; SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
5. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES AS REQUIRED AND AS DIRECTED ON THESE PLANS. HE SHALL REMOVE TEMPORARY DEVICES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED AND APPROVED BY THE CITY AND/OR COUNTY.
6. DEBRIS FROM PROJECT WILL BE LEFT ON THE SITE BY DELIVERY OR CONSTRUCTION VEHICLES THROUGH THE USE OF CLEAN STONE EXITS. SHOULD THE STONE BECOME LESS EFFECTIVE IT WILL BE REPLACED. ALL CONSTRUCTION TRAFFIC WILL USE THE CLEAN STONE EXIT.
7. DUST CONTROL WILL BE EXERCISED AT ALL TIMES WITHIN THE PROJECT BY THE CONTRACTORS. SPRINKLING TANK TRUCKS WILL BE AVAILABLE AT ALL TIMES TO BE USED ON HAUL ROUTES OR OTHER PLACES WHERE DUST BECOMES A PROBLEM.
8. IMMEDIATELY AFTER SEEDING, MULCH ALL SEEDED AREAS WITH UNWEATHERED SMALL GRAIN STRAW OR HAY. SPREAD UNIFORMLY AT A RATE OF 1 1/2 TO 2 TONS PER ACRE OR 0.10 POUNDS PER SQUARE FEET. ANCHOR MULCH WITH DISC TYPE MULCH ANCHORING TOOL.
9. ALL MUD, DIRT, AND DEBRIS TRACKED ONTO EXISTING ROADS FROM THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR OR BUILDER. ALL MUD, DIRT, AND DEBRIS TRACKED OR SPILLED ONTO PAVED SURFACES WITHIN THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
10. PERMANENT SOIL EROSION CONTROL DEVICES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGES HAVE BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES TEMPORARY SOIL EROSION CONTROL DEVICES SHALL BE IMPLEMENTED WITHIN 30 CALENDAR DAYS. ALL TEMPORARY SOIL EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION DEVICES ARE IMPLEMENTED AND/OR ESTABLISHED. ALL PERMANENT SOIL EROSION CONTROL DEVICES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.
11. ALL CONTRACTORS ARE TO KEEP EXCAVATED MATERIAL ON SITE. PARTICULAR CARE SHOULD BE TAKEN WHEN WORKING ALONG THE PERIMETER OF THE SITE. IN NO EVENT SHALL THE WORK AREA EXTEND BEYOND THE LIMITS INDICATED ON THE PLANS.
12. THE SOIL EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND AFTER EVERY STORM EVENT BY THE CONTRACTOR.

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- STANDARD BITUMINOUS PAVEMENT
- HEAVY–DUTY BITUMINOUS PAVEMENT
- DEEP–STRENGTH BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
- (2) UTILITY CROSSING (SEE DATA TABLE)
- STORM SEWER STRUCTURE: CB – STRUCT. TYPE; 2 – STRUCT. NO.
- SANITARY SEWER STRUCTURE: (20)
- WATERMAIN STRUCTURE: 10 – STRUCT. NO.; XXX – STRUCT. TYPE

OWNER

John Grace Arms Limited Housing
26000 Evergreen Road
P.O. Box 2055
Southfield, MI 48037-2055
PHONE:

GRAPHIC SCALE
0 15 30 60
(IN FEET)
1 inch = 30 ft.

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JOHN GRACE ARMS

CONSTRUCTION PLANS
SESC Plan

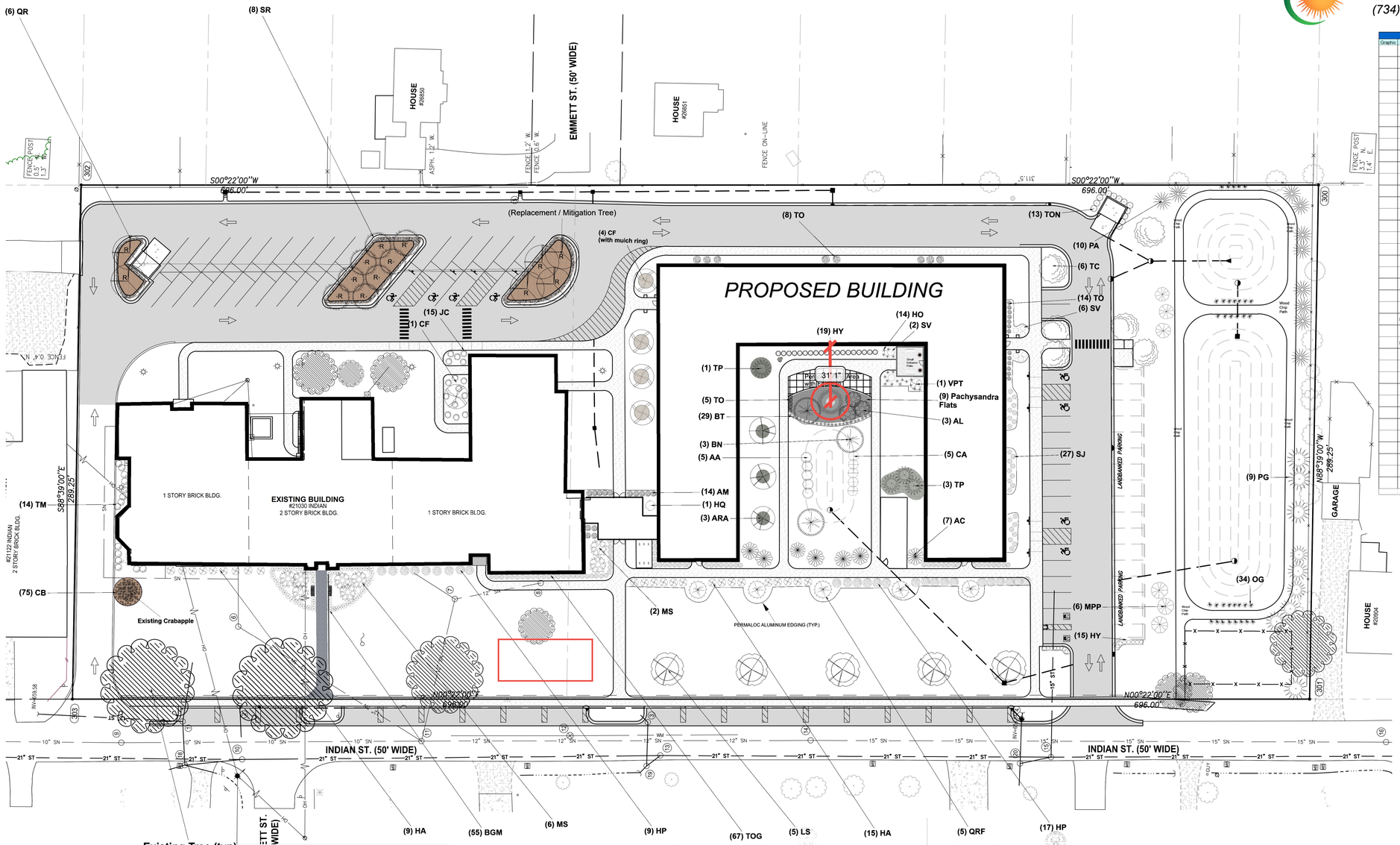
SECTION 31
TOWN 01N RANGE 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

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DEPARTMENT MANAGER APPROVAL: -	DATE
JOB NO.: NP22006	DRAWING NO.: NP2006PAV
SCALE: 1" = 30'	SHEET NO.: C8.1

Plotted: Apr 13, 2026, 12:31 PM by user: 1111 - Saved: 12/9/2025 by user: 1111
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Graphic Scale

0 10 30 60

(IN FEET)
1 inch = 30 ft.

Plant Legend

Graphic	Symbol	Qty	Common	Botanical	Size	Specs
	TON	13	Dark Green Arborvitae	Thuja occidentalis 'Nigra'	4-6'	B&B
	TOG	67	Golden Globe Cedar	Thuja occidentalis 'Golden Globe'	No.5	Cont
	LS	5	American Sweetgum	Liquidambar styraciflua	2.5"	B&B
	TO	27	Emerald Arborvitae	Thuja occidentalis 'Emerald Green'	4-5'	B&B
	TP	4	Green Giant Arborvitae	Thuja plicata 'Green Giant'	5-6'	B&B
	AM	14	Aronia Low Scape	Aronia melanocarpa 'Low Scape Mound'	No. 3	Cont
	PG	9	Black Hills Spruce	Picea glauca var. densata	6-7'	B&B
	PA	10	Norway Spruce	Picea abies	6-7'	B&B
	CB	75	Coral Bells	Heuchera	No. 1	Cont
	TM	14	Dense Spreading Yew	Taxus x media 'Densiformis'	18-24"	B&B
	OG	34	Feather Reed Grass	Calamagrostis x acutiflora 'Karl Foerster'	No. 1	Cont
	CF	5	Flowering Dogwood	Cornus florida var. 'Rubra'	2"	B&B
	HY	34	Hicks Yew	Taxus x media 'Hicksii'	24-30"	B&B
	HO	14	Hosta	Hosta sp.	No. 1	Cont
	HQ	1	Hydrangea	Hydrangea quercifolia	No. 5	Cont
	BT	29	Japanese Barberry	Berberis thunbergii 'Crimson Pygmy'	No. 3	Cont
	BGM	55	Japanese Boxwood	Buxus 'Green Mountain'	12-15"	Cont
	SJ	27	Japanese Meadowsweet	Spiraea japonica 'Little Princess'	No. 3	Cont
	SR	8	Japanese Tree Lilac	Syringa reticulata	2"	B&B
	JC	15	Juniper Calgary Carpet	Juniperus communis 'Calgary Carpet'	No. 3	Cont
	SV	8	Miss Kim Dwarf Lilac	Syringa patula 'Miss Kim'	No. 5	Cont
	TC	6	Littleleaf Linden	Tila cordata	2.5"	B&B
	PT	9	Pachysandra	Pachysandra terminalis	Flats	Flats
Existing	3		Prairiefire crabapple	Malus 'Prairiefire'	EX	EX
	AA	5	Red Chokeberry	Aronia arbutifolia 'Brilliantissima'	No. 5	Cont
Existing	10		Red Maple	Acer rubrum	EX	EX
	ARA	3	Redpointe Red Maple	Acer rubrum 'Redpointe'	2.5"	B&B
	QR	6	Red Oak	Quercus rubra	2.5"	B&B
	QRF	5	Upright English Oak	Quercus robur 'Fastigiata'	2.5"	B&B
	MPP	6	Prairiefire crabapple	Malus 'Prairiefire'	2"	B&B
	CA	5	Tatarian Dogwood 'Ivory Halo'	Cornus alba 'Ivory Halo'	No. 5	Cont
	BN	3	Heritage River birch	Betula nigra 'Heritage'	8-10'	B&B
	AL	3	Allegheny Serviceberry	Amelanchier laevis	5-6'	B&B
	HP	26	Panicle Hydrangea	Hydrangea paniculata 'Quick Fire'	No. 5	Cont
	HA	24	Annabelle Smooth Hydrangea	Hydrangea arborescens 'Annabelle'	No. 5	Cont
	MS	8	Star Magnolia	Magnolia stellata 'Royal Star'	4-5'	B&B
	VPT	1	Doublefile Viburnum	Viburnum plicatum	24-30"	B&B
	AC	7	Concolor Fir	Abies concolor	6-7'	B&B

LANDSCAPE NOTES:

Exceptions to the following specifications will be considered, if acceptable alternates are discussed with the City of Southfield Planning Department prior to landscape installation. Additional specifications are to be added by the landscape architect as needed.

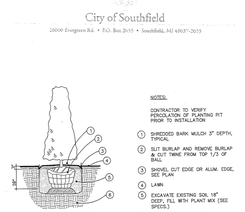
1. Prior to any land clearing or construction, tree protection fencing is to be installed by the contractor and inspected by the City. This fencing shall be installed at the drip line of all trees and shrubs, in accordance with the City's Tree Protection Detail, and must be maintained as approved for the duration of the project. No cutting, filling or trespassing shall occur inside the fenced areas without prior approval from the City of Southfield Planning Department.
2. Trees to be transplanted on the site shall be so marked in the field by the landscape architect, approved by the City of Southfield and transplanted using only the appropriate size tree spade, per the American Association of Nurserymen and City of Southfield Standards. Transplants are to be watered immediately following planting. See detail on landscape plan.
3. Trees shown on the plan to save or transplant that are removed or damaged shall be replaced with one (1) 2 ½ - 3" caliper tree for each tree removed under 6" diameter. Trees over 6" diameter shall be replaced with one (1) 2 ½ - 3" caliper tree for each 6" in diameter removed. Type of replacement and location shall be determined by the project landscape architect or the City of Southfield Planning Department.
4. Plant trees and shrubs no closer than the following minimum distances from sidewalks, curbs and parking stalls:

Shade/Canopy Trees	5 feet
Ornamental/Flowering Trees	10 feet
Evergreen Trees	10 feet
Evergreen/Flowering Shrubs	4 feet

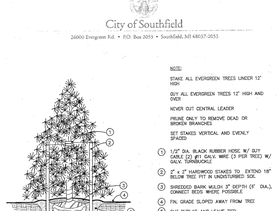
5. Dig shrub pits a minimum of 1' larger than shrub root balls and tree pits 2' larger than root balls. Backfill with one part top soil and one part soil from the excavated planting hole. Plant trees and shrubs at the same grade level at which they were planted at the nursery. If wet, clay soils are evident, plant trees and shrubs higher.
6. Remove all twine, wire and burlap from the top 1/3 of tree and shrub earth balls and from tree trunks. Remove all non-biodegradable material such as plastic or nylon completely.
7. Lawn trees are to be mulched with a minimum of 4' wide by 4" deep shredded bark rings or approved design for trunk protection. Only natural-colored shredded hardwood bark mulch will be accepted.
8. Shrub beds are to be mulched with shredded bark mulch to a minimum depth of 3". Only natural-colored shredded hardwood bark mulch will be accepted.
9. Sod is to be provided for all new lawn areas, especially in right-of-ways and high use areas. Peat sod is not acceptable.
10. Existing lawn that the owner intends to save and areas that are damaged during construction must be inspected by the City to determine viability. If the existing lawn is found to be level, healthy, dense and free from weeds, lawn may not require replacement or renovation. If restoration is required or is part of the approved plan, then the following requirements will apply:

    Existing lawn found to be in poor condition must first be sprayed with Round-Up (or equal) to kill the existing lawn and weed areas. Wait for a minimum period of seven (7) days for the herbicide to take effect, then remove all dead sod and weeds to a minimum depth of two (2) inches. Add a minimum of four (4) to six (6) inches of new topsoil to all lawn areas. Back fill and compact topsoil to the top of all curbs and walks prior to sodding. Regrade to eliminate all bumps and depressions and reseed all areas.

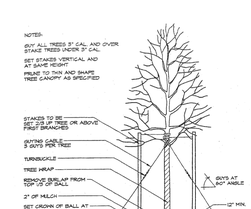
    Existing lawn found to be generally in good condition but with bare, sparse or weedy areas must be renovated by filling in low areas, raking, overseeding and top dressing all sparse and bare spots and by initiating a weed and feed program.
11. Backfill directly behind all curbs and along sidewalks and compact to the top of curb or walk to support vehicle and pedestrian weight without settling.
12. All landscape areas, especially parking lot islands and landscape beds next to buildings shall be excavated of all building materials and poor soils to a depth of 12 – 18" and backfilled with good, medium textured planting soil (loam or light yellow clay). Add 4 – 6" of topsoil over fill material and crown a minimum of 6" above top of curbs and/or walks after earth settling unless otherwise noted on the landscape plan.
13. In natural areas the following procedures shall be followed:
    A. Remove any trees and brush per City of Southfield direction only.
    B. Remove trash and perform surface grading (if any) only to fill in the worst low spots. Do not cut or fill around trees.
    C. Rake, hydroseed and mulch bare ground areas with proper seed mix (shade or sunny mix).
    D. Let area revert to trees and shrubs. Mow very minimally, if necessary.
14. Landscape berms are to be constructed of light yellow clay or loam soils and are to be free of construction materials and debris. Use of heavy clays for berm construction must be approved by the City of Southfield Planning Department prior to installation. Slopes are to be no steeper than 1:3 unless otherwise specified on the landscape plan.
15. Conversion of all asphalt and gravel areas to landscape shall be done in the following manner:
    A. Remove all asphalt, gravel and compacted earth to a depth of 6 – 18" depending on the depth of the sub base and dispose of off site.
    B. Call (248) 796-4156 for an inspection prior to backfilling.
    C. Replace excavated material with good, medium textured planting soil (loam or light yellow clay) to a minimum of 2" above top of curb and sidewalk, add 4 – 6" of topsoil and crown to a minimum of 6" above adjacent curb and walk after earth settling, unless otherwise noted on the landscape plan.
16. All landscape areas including right-of-ways shall be irrigated by an automatic underground irrigation system. Lawns and shrub/landscape areas shall be watered by separate zones to minimize overwatering.
17. All existing trees on site and in the right-of-way shall be pruned as directed by the City of Southfield to remove dead, dying and hazardous limbs or to remove limbs which impede construction, driveways and sidewalks. Pruning and deep-root fertilizing is to be done only by a qualified tree service company licensed with the City of Southfield.
18. The construction of detention basins should be made with the following goals in mind:
    A. Natural, free form appearing grades
    B. Slopes of 1:4 or flatter
    C. No fencing
    D. No water levels to be retained
    E. Mow slopes and let bottom of basin revert to natural vegetation
19. Provide continuous curbing around all landscape areas on site. Alternate landscape area protection such as decorative fences, retaining walls, etc., may be acceptable in lieu of curbing or may be required in addition to curbing to protect the landscape areas and property defect vehicular and pedestrian traffic.



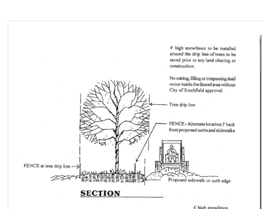
HEDGE PLANTING DETAIL
NOT TO SCALE



EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



DECIDUOUS TREE PLANTING
SECTION NOT TO SCALE



TREE PROTECTION DETAIL
CITY OF SOUTHFIELD STANDARD DETAIL Not Scale

ECO Landscape Design & Consulting
West Bloomfield, Michigan
(734) 276-8446

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STATE OF MICHIGAN
ROBERT M. O'REILLY
LANDSCAPE ARCHITECT
NO. 3901001417
REGISTERED LANDSCAPE ARCHITECT

JOHN GRACE ARMS

CONSTRUCTION PLANS
Landscape Plan

SECTION 31
TOWN 01N RANGE 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

NO.	DATE	REVISION
1	03-04-2024	OWNER REVIEW
2	03-22-2024	PAGE TURN
3	03-29-2024	REV. OWNER REVIEW
4	10-25-2024	PERMIT
5	12-13-2024	HUD SUBMISSION
6	12-20-2024	PERMIT

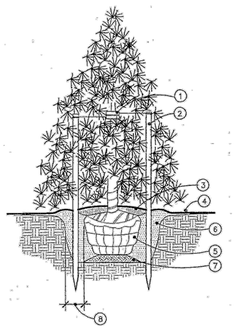
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAFTER -	DATE -
DESIGNER J. CHRISTOPHER	DATE 24-01-26
CHECKED J. CHRISTOPHER	DATE 24-01-26
PROJECT MANAGER T. SOVEL	BID PLAN DATE
DEPARTMENT MANAGER APPROVAL -	DATE -
JOB NO. NP22006	DRAWING NO. NP2006PAV
SCALE:	SHEET NO. L1.1

Plotted: Dec 16, 2024, 11:24 AM by user: 1111 - Saved: 3/29/2024 by user: 1111
N:\NP\NLD Projects\NP22006 - Grace School - Senior Housing\DWG\NP22006LSC.dwg

City of Southfield

26000 Evergreen Rd. • P.O. Box 2055 • Southfield, MI 48037-2055



NOTE:

STAKE ALL EVERGREEN TREES UNDER 12' HIGH

GUY ALL EVERGREEN TREES 12' HIGH AND OVER

NEVER CUT CENTRAL LEADER

PRUNE ONLY TO REMOVE DEAD OR BROKEN BRANCHES

SET STAKES VERTICAL AND EVENLY SPACED

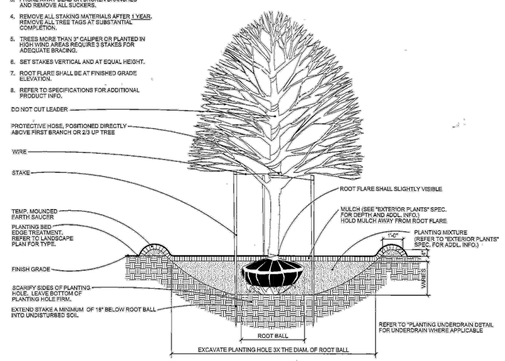
1. 1/2" DIA. BLACK RUBBER HOSE W/ GUY CABLE (2) #11 GALV. WIRE (3 PER TREE) W/ GALV. TURNBUCKLE
2. 2" x 2" HARDWOOD STAKES TO EXTEND 18" BELOW TREE PIT IN UNDISTURBED SOIL
3. SHREDDED BARK MULCH 3" DEPTH (6' DIA.), CONNECT BEDS WHERE POSSIBLE
4. FIN. GRADE SLOPED AWAY FROM TREE
5. SLIT BURLAP AND LEAVE TIED
6. PLANT MIX
7. SCARIFY TO 4" DEPTH & RECOMPACT
8. 12" MIN. BETWEEN ROOTBALL AND EDGE OF PLANT PIT.

EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

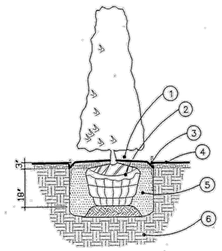
NOTES:

1. SET ALL PLANTS AT THE PROPER DEPTH. PLANT ALL TRUNKS PLUMB.
2. REMOVE ALL BURLAP, WIRE CAGE, TWINE AND ROPE FROM UPPER 50% OF ROOT BALL AFTER STABILIZING LOWER 1/3 OF ROOT BALL IN PLANTING TOPSOIL. DO NOT REMOVE SOIL FROM ROOTBALL.
3. PRUNE AWAY DEAD OR BROKEN BRANCHES AND REMOVE ALL SUCKERS.
4. REMOVE ALL STAKING MATERIALS AFTER 1 YEAR. REMOVE ALL TREE TAGS AT SUBSTANTIAL COMPLETION.
5. TREES MORE THAN 3" CALIPER OR PLANTED IN HIGH WIND AREAS REQUIRE 3 STAKES FOR ADEQUATE BRACING.
6. SET STAKES VERTICAL AND AT EQUAL HEIGHT.
7. ROOT FLARE SHALL BE AT FINISHED GRADE ELEVATION.
8. REFER TO SPECIFICATIONS FOR ADDITIONAL PRODUCT INFO.



DECIDUOUS TREE PLANTING WITH TREE STAKES - B & B

SCALE: N.T.S.



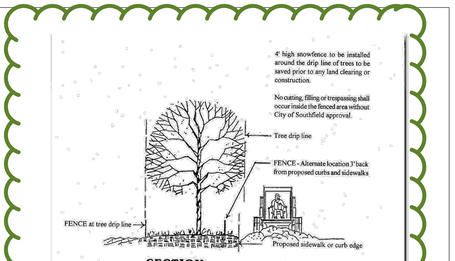
NOTES:

CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION

1. SHREDDED BARK MULCH 3" DEPTH, TYPICAL
2. SLIT BURLAP AND REMOVE BURLAP & CUT TWINE FROM TOP 1/3 OF BALL
3. SHOVEL CUT EDGE OR ALUM. EDGE, SEE PLAN
4. LAWN
5. EXCAVATE EXISTING SOIL 18" DEEP, FILL WITH PLANT MIX (SEE SPECS.)
6. UNDISTURBED SUBGRADE

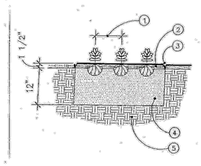
HEDGE PLANTING DETAIL

NOT TO SCALE



TREE PROTECTION DETAIL

CITY OF SOUTHFIELD STANDARD DETAIL - NO SCALE



CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION

1. SEE PLANT LIST FOR SPACING
2. 1-1/2" DEPTH DOUBLE PROCESSED SHREDDED BARK MULCH
3. SHOVEL CUT EDGE OR ALUM. EDGE, SEE PLAN
4. EXCAVATE EXISTING SOIL 12" DEEP, FILL WITH PLANT MIX (SEE SPECS.)
5. UNDISTURBED SUBGRADE

PERENNIAL/GROUNDCOVER PLANTING DETAIL

NOT TO SCALE

LANDSCAPE NOTES:

Exceptions to the following specifications will be considered, if acceptable alternates are discussed with the City of Southfield Planning Department prior to landscape installation. Additional specifications are to be added by the landscape architect as needed.

1. Prior to any land clearing or construction, tree protection fencing is to be installed by the contractor and inspected by the City. This fencing shall be installed at the drip line of all trees and shrubs, in accordance with the City's Tree Protection Detail, and must be maintained as approved for the duration of the project. No cutting, filling or trespassing shall occur inside the fenced areas without prior approval from the City of Southfield Planning Department.

2. Trees to be transplanted on the site shall be so marked in the field by the landscape architect, approved by the City of Southfield and transplanted using only the appropriate size tree spade, per the American Association of Nurserymen and City of Southfield Standards. Transplants are to be watered immediately following planting. See detail on landscape plan.

3. Trees shown on the plan to save or transplant that are removed or damaged shall be replaced with one (1) 2 ½ - 3" caliper tree for each tree removed under 6" diameter. Trees over 6" diameter shall be replaced with one (1) 2 ½ - 3" caliper tree for each 6" in diameter removed. Type of replacement and location shall be determined by the project landscape architect or the City of Southfield Planning Department.

4. Plant trees and shrubs no closer than the following minimum distances from sidewalks, curbs and parking stalls:

Shade/Canopy Trees	5 feet
Ornamental/Flowering Trees	10 feet
Evergreen Trees	10 feet
Evergreen/Flowering Shrubs	4 feet

5. Dig shrub pits a minimum of 1' larger than shrub root balls and tree pits 2' larger than root balls. Backfill with one part top soil and one part soil from the excavated planting hole. Plant trees and shrubs at the same grade level at which they were planted at the nursery. If wet, clay soils are evident, plant trees and shrubs higher.

6. Remove all twine, wire and burlap from the top 1/3 of tree and shrub earth balls and from tree trunks. Remove all non-biodegradable material such as plastic or nylon completely.

7. Lawn trees are to be mulched with a minimum of 4' wide by 4" deep shredded bark rings or approved design for trunk protection. Only natural-colored shredded hardwood bark mulch will be accepted.

8. Shrub beds are to be mulched with shredded bark mulch to a minimum depth of 3". Only natural-colored shredded hardwood bark mulch will be accepted.

9. Sod is to be provided for all new lawn areas, especially in right-of-ways and high use areas. Peat sod is not acceptable.

10. Existing lawn that the owner intends to save and areas that are damaged during construction must be inspected by the City to determine viability. If the existing lawn is found to be level, healthy, dense and free from weeds, lawn may not require replacement or renovation. If renovation is required or is part of the approved plan, then the following requirements will apply:

    Existing lawn found to be in poor condition must first be sprayed with Round-Up (or equal) to kill the existing lawn and weed areas. Wait for a minimum period of seven (7) days for the herbicide to take effect, then remove all dead sod and weeds to a minimum depth of two (2) inches. Add a minimum of four (4) to six (6) inches of new topsoil to all lawn areas. Back fill and compact topsoil to the top of all curbs and walks prior to sodding. Regrade to eliminate all bumps and depressions and resod all areas.

    Existing lawn found to be generally in good condition but with bare, sparse or weedy areas must be renovated by filling in low areas, raking, overseeding and top dressing all sparse and bare spots and by initiating a weed and feed program.

11. Backfill directly behind all curbs and along sidewalks and compact to the top of curb or walk to support vehicle and pedestrian weight without settling.

12. All landscape areas, especially parking lot islands and landscape beds next to buildings shall be excavated of all building materials and poor soils to a depth of 12 – 18" and backfilled with good, medium textured planting soil (loam or light yellow clay). Add 4 – 6" of topsoil over fill material and crown a minimum of 6" above top of curbs and/or walks after earth settling unless otherwise noted on the landscape plan.

13. In natural areas the following procedures shall be followed:

    A. Remove any trees and brush per City of Southfield direction only.
    B. Remove trash and perform surface grading (if any) only to fill in the worst low spots. Do not cut or fill around trees.
    C. Rake, hydroseed and mulch bare ground areas with proper seed mix (shade or sunny mix).
    D. Let area revert to trees and shrubs. Mow very minimally, if necessary.

14. Landscape berms are to be constructed of light yellow clay or loam soils and are to be free of construction materials and debris. Use of heavy clays for berm construction must be approved by the City of Southfield Planning Department prior to installation. Slopes are to be no steeper than 1:3 unless otherwise specified on the landscape plan.

15. Conversion of all asphalt and gravel areas to landscape shall be done in the following manner:

    A. Remove all asphalt, gravel and compacted earth to a depth of 6 – 18" depending on the depth of the sub base and dispose of off site.
    B. Call (248) 796-4156 for an inspection prior to backfilling.
    C. Replace excavated material with good, medium textured planting soil (loam or light yellow clay) to a minimum of 2" above top of curb and sidewalk, add 4 – 6" of topsoil and crown to a minimum of 6" above adjacent curb and walk after earth settling, unless otherwise noted on the landscape plan.

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    A. Natural, free form appearing grades
    B. Slopes of 1:4 or flatter
    C. No fencing
    D. No water levels to be retained
    E. Mow slopes and let bottom of basin revert to natural vegetation

19. Provide continuous curbing around all landscape areas on site. Alternate landscape area protection such as decorative fences, retaining walls, etc., may be acceptable in lieu of curbing or may be required in addition to curbing to protect the landscape areas and properly deflect vehicular and pedestrian traffic.

20. Ryerson steel edging typical around all beds that meet lawn.

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NO. 3901001417
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JOHN GRACE ARMS

CONSTRUCTION PLANS
Landscape Details

SECTION 31
TOWN 01N RANGE 10E
CITY OF SOUTHFIELD
OAKLAND COUNTY

NO.	DATE	REVISION
1	03-04-2024	OWNER REVIEW
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DRAFTER: -	DATE: -
DESIGNER: J. CHRISTOPHER	DATE: 24-01-26
CHECKED: J. CHRISTOPHER	DATE: 24-01-26
PROJECT MANAGER: T. SOVEL	BID PLAN DATE
DEPARTMENT MANAGER APPROVAL: -	DATE
JOB NO.: NP22006	DRAWING NO.: NP2006PAV
SCALE:	SHEET NO.: L1.2

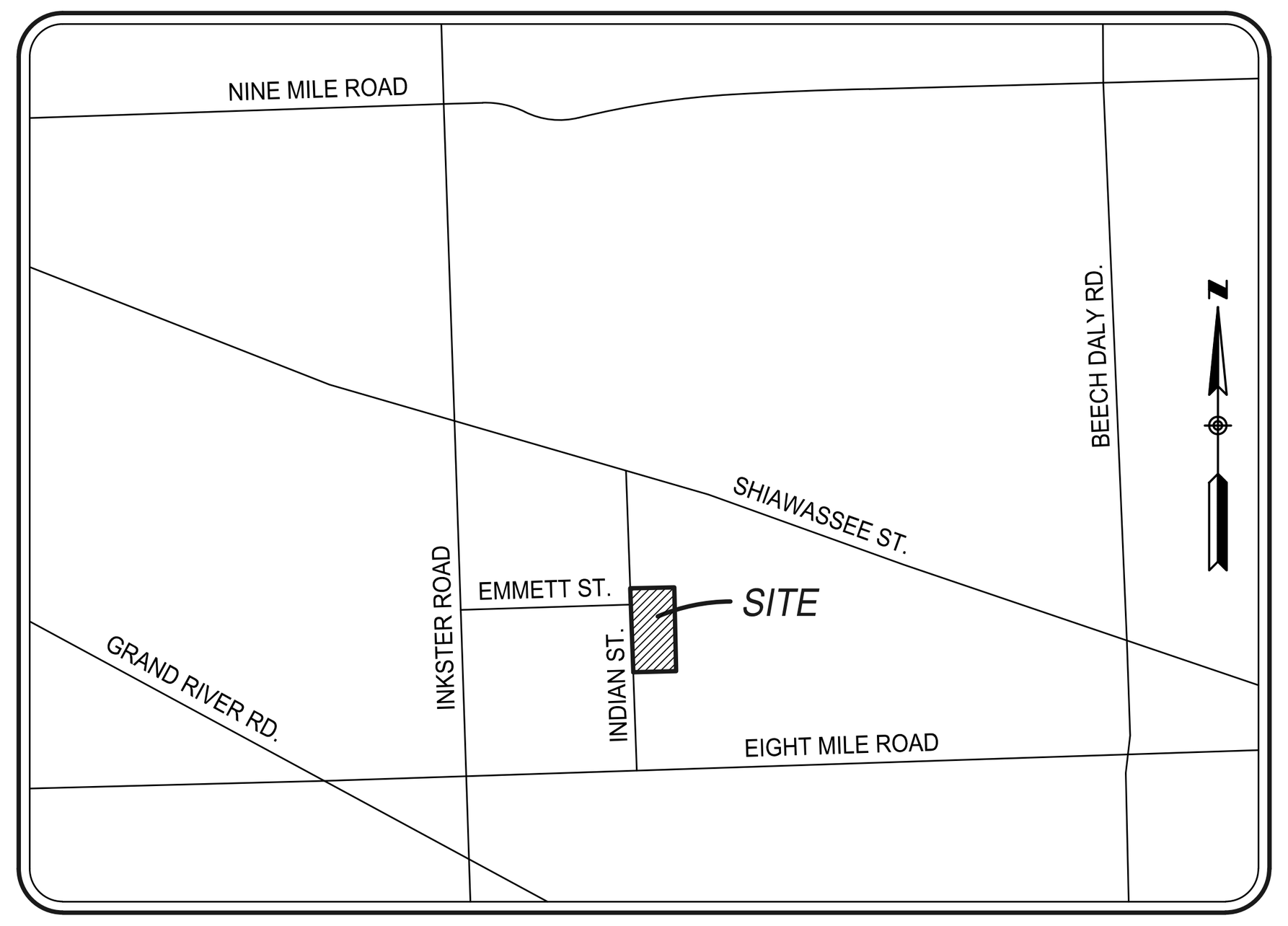
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LEGEND

- MANHOLE
- CATCH BASIN
- C.O. SEWER CLEAN OUT
- GAS METER
- GAS SHUT OFF VALVE
- VALVE BOX
- GATE VALVE & WELL
- WATER SHUT OFF VALVE
- FIRE HYDRANT
- SPRINKLER VALVE BOX
- LAWN SPRINKLER HEAD
- HAND HOLE
- ELECTRIC RISER OR METER
- TELEPHONE RISER
- CABLE TV RISER
- AIR CONDITION UNIT
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- UTILITY POLE W/ LAMP EXTENSION (ARROW INDICATES DIRECTION OF ARM)
- LIGHT POLE
- LIGHT POLE WITH LAMP EXTENSION
- TRAFFIC SIGNAL
- POLE W/ TRAFFIC SIGNAL (OVER ROAD)
- GUY GUY WIRE
- GP GUY POLE
- GROUND LEVEL / DECORATIVE LIGHTING
- FLAG POLE
- PB PHONE OR PHONE BOOTH
- METAL OR CONC. POST
- MB MAILBOX
- SIGN
- WATER FOUNTAIN
- PARKING METER
- BILLBOARD OR LARGE SIGN
- BB BASKETBALL HOOP
- BOULDER
- STATUE OR SCULPTURE
- BENCH BENCH
- STUMP
- DS-S DOWNSPOUT INTO STORM DRAIN
- DS-G DOWNSPOUT TO GROUND
- CONIFEROUS TREE
- DECIDUOUS TREE
- DECIDUOUS SHRUB
- CONIFEROUS SHRUB
- SECTION CORNER
- SDA#10 TRAVERSE POINT
- (1) STRUCTURE NUMBER
- (10) SDA POINT No.
- 655.00 X SPOT ELEVATION

TC	TOP OF CURB ELEVATION
GU	GUTTER ELEVATION
TP	TOP OF PAVEMENT ELEVATION
EM	EDGE OF METAL ELEVATION
TW	TOP OF WALK ELEVATION
T/WALL	TOP OF WALL ELEVATION
B/WALL	BOTTOM OF WALL ELEVATION
GR	GROUND ELEVATION
UG	UNDERGROUND
FO	FIBER OPTIC
CONC	CONCRETE
ASPH	ASPHALT
FF	FINISH FLOOR ELEVATION
DL	DOOR LEDGE ELEVATION
F.I.	FOUND IRON
F.M.	FOUND MONUMENT
F.P.K.	FOUND P.K. NAIL
S.I.	SET IRON W/SDA CAP
S.P.K.	SET P.K. NAIL
S.P.K./TAG	SET P.K. NAIL W/SDA TAG
MAG	SET MAGNETIC NAIL
MAG/TAG	SET MAGNETIC NAIL W/SDA TAG
M	MEASURED
R	RECORD
C	CALCULATED
INV.	INVERT ELEVATION
CMP	CORRUGATED METAL PIPE

- G — GAS
- SN — SANITARY SEWER (SAN)
- ST — STORM SEWER (STM)
- WM — WATERMAIN (WM)
- OH — OVERHEAD WIRE
- COMBINED SEWER
- STE — STEAM LINE
- O — OIL LINE
- F — UG FIBER (COMM.)
- E — UG ELECTRIC (ELEC.)
- T — UG PHONE (PH)
- C — UG CABLE (CBL)
- CHAIN LINK FENCE (CL)
- WOOD FENCE
- WOVEN WIRE FENCE (WW)
- GUARD RAIL
- EDGE OF BRUSH/WOODS
- CENTERLINE OF DITCH
- CULVERT
- BANK/TOP OF SLOPE
- 650 MAJOR CONTOUR
- 651 MINOR CONTOUR
- BOUNDARY LINES
- ROW LINES
- SECTION LINES
- PROPERTY LINES
- ASPHALT
- CONCRETE
- GRAVEL
- BRICK / PAVERS
- WATER



LOCATION MAP
NOT TO SCALE

BENCHMARK DESCRIPTIONS

DATUM: GPS-DERIVED NAVD'88

SITE BM#100 CHISELED "+" ON NORTHWEST PLATE OF LIGHT POLE, LOCATED ±70' SOUTHEAST OF THE SOUTHEAST BUILDING CORNER OF #21030.
ELEV.=661.24

SITE BM#101 CHISELED "+" ON SOUTHWEST PLATE OF LIGHT POLE, LOCATED ±70' EAST OF OF THE NORTHEAST BUILDING CORNER OF #21030.
ELEV.=661.68

SITE BM#102 CHISELED "+" ON THE NORTH RIM OF STORM MANHOLE (STRUCTURE No. 2), LOCATED ON THE EAST SIDE OF INDIAN STREET ±100' SOUTHWEST OF THE NORTHWEST BUILDING CORNER OF #21030.
ELEV.=661.05

SURVEYOR'S COMMENTS

1. THIS BOUNDARY AND TOPOGRAPHICAL SURVEY IS BASED UPON A FIELD SURVEY PERFORMED BY SPALDING DEDECKER INC. DURING JANUARY OF 2022.
2. THE PROPERTY LINES/RIGHT-OF-WAY LINES SHOWN ON THIS TOPOGRAPHICAL SURVEY ARE INTENDED TO BE AN ACCURATE GRAPHICAL REPRESENTATION BASED UPON A COMBINATION OF A PROVIDED LEGAL DESCRIPTION, FOUND FIELD MONUMENTATION AND OCCUPATION. A COMPLETE PROPERTY LINE ANALYSIS HAS BEEN PERFORMED AND PROPERTY CORNERS HAVE BEEN SET IN THE FIELD PER THE AGREED TO SCOPE OF SERVICES.
3. THIS SURVEY HAS BEEN PREPARED WITH THE BENEFIT OF A CURRENT TITLE SEARCH. AN INFORMATIONAL TITLE SEARCH BY ATA NATIONAL TITLE GROUP HAVING AN ORDER NUMBER OF 63-21796421-SCM AND AN EFFECTIVE DATE OF AUGUST 11, 2021 HAS BEEN PROVIDED TO SPALDING DEDECKER. ALL PLOTTABLE ENCUMBRANCES LISTED ON SCHEDULE B-II EXCEPTIONS OF THIS TITLE SEARCH HAVE BEEN SHOWN ON THIS SURVEY IF THEY FALL WITHIN THE LIMITS OF DETAILED MAPPING. FURTHERMORE, EACH PLOTTABLE EXCEPTION IS DETAILED ON THE "INFORMATIONAL TITLE EXCEPTION COMMENTS" TABLE ON THIS SURVEY.
4. THE BASIS OF BEARINGS FOR THIS SURVEY IS THE STATE PLANE GRID AND THE UNITS ARE INTERNATIONAL FEET AS ESTABLISHED WITH RTK GPS MEASUREMENTS USING A DATA LINK TO THE MDOT CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS). THE COORDINATE SYSTEM FOR THIS SURVEY IS THE STATE PLANE COORDINATE SYSTEM, MICHIGAN SOUTH ZONE (2113) BASED ON NAD83 (2011).
5. PROPERTY LINES HAVE BEEN ROTATED TO STATE PLANE GRID BEARINGS; THEREFORE, THE BEARINGS OF THE PROPERTY LINES ON THE DRAWING WILL NOT MATCH THOSE SHOWN IN THE LEGAL DESCRIPTION.
6. THE VERTICAL DATUM OF THIS SURVEY IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS ESTABLISHED WITH RTK GPS MEASUREMENTS USING A DATA LINK TO THE MDOT CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS).
7. THE PARKING LOT STRIPING SHOWN ON THIS SURVEY IS APPROXIMATE. DIMENSIONAL AND/OR ORIENTATION VARIATIONS MAY EXIST. THIS DRAWING SHOULD NOT BE USED FOR A PARKING SPACE COUNT.
8. THE UTILITY INFORMATION SHOWN ON THIS SURVEY IS BASED UPON A COMBINATION OF RECORD INFORMATION AND FIELD MEASUREMENTS. A MISS DIG DESIGN TICKET NUMBER OF 2022011300117 HAS BEEN REFERENCED TO THIS PROJECT AND A UTILITY PROVIDER CHART IS SHOWN ON THIS DRAWING. THERE ARE NO ASSURANCES THAT ALL PROVIDERS HAVE RESPONDED AND THE SURVEYOR DOES NOT GUARANTEE THAT ALL UNDERGROUND UTILITIES ARE SHOWN AND/OR POSITIONED PROPERLY ON THIS DRAWING DUE TO AMBIGUOUS PLANS AND RECORDS PROVIDED TO US. THE INFORMATION SHOWN ON THIS DRAWING IS INTENDED TO BE USED AS A GUIDE FOR POSSIBLE UNDERGROUND UTILITY CONFLICTS. IT IS THE RESPONSIBILITY OF OTHERS TO RESOLVE THE ACTUAL LOCATION OF ANY UNDERGROUND UTILITY THROUGH THE MISS DIG FIELD VERIFICATION SYSTEM PRIOR TO ANY SITE EXCAVATION. CALL 811 OR 800-482-7171.

LEGAL DESCRIPTION

SOURCE: ATA NATIONAL TITLE GROUP, LLC
COMMITMENT DATE: AUGUST 11, 2021
TAX PARCEL ID: 24-31-376-033
ADDRESS: 21030 INDIAN ST.

THE LAND REFERRED TO THIS TITLE COMMITMENT IS SITUATED IN THE CITY OF SOUTHFIELD, OAKLAND COUNTY, STATE OF MICHIGAN, AS FOLLOWS:

LOT 7, 9 AND THE NORTH 140 FEET OF LOT 11, THOMAS HITCHMAN'S SUBDIVISION, AS RECORDED IN LIBER 10, PAGE 49 OF PLATS, OAKLAND COUNTY RECORDS.

INFORMATIONAL TITLE EXCEPTION COMMENTS

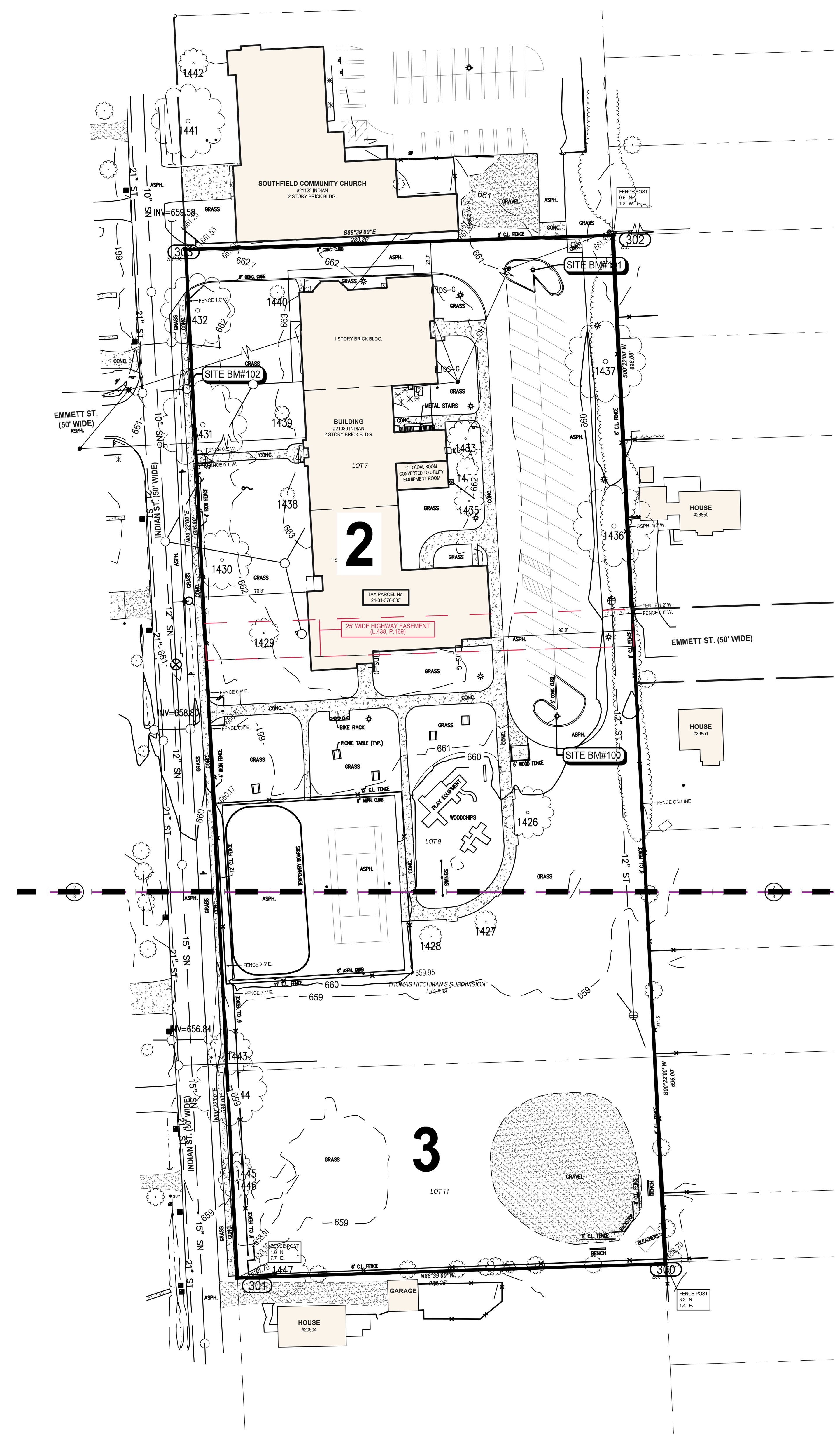
COMMITMENT ISSUED BY: ATA NATIONAL TITLE GROUP, LLC
COMMITMENT NUMBER: 63-21796421-SCM
EFFECTIVE DATE: 08/11/2021

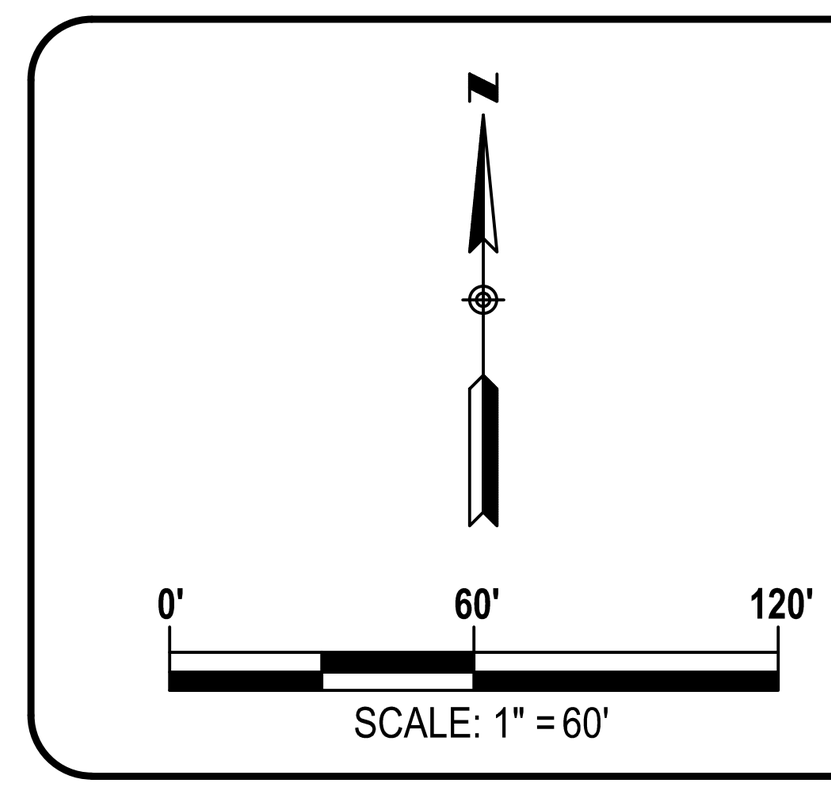
HIGHWAY EASEMENT
RECORDED DATE: 12-18-1984
LIBER/PAGE: 438 / 169
REMARKS: 25' HIGHWAY EASEMENT
SDA COMMENTS: SHOWN ON SURVEY

BOUNDARY & TOPOGRAPHICAL SURVEY

SOUTHFIELD GRACE SCHOOL

21030 INDIAN, SOUTHFIELD, MICHIGAN 48033





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SOUTHFIELD GRACE SCHOOL

SOUTHFIELD, MI
BOUNDARY AND TOPOGRAPHICAL SURVEY

SECTION 31
TOWN 01 NORTH RANGE 10 EAST
CITY OF SOUTHFIELD
OAKLAND COUNTY, MICHIGAN

NO.	DATE	REVISION

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAFTER: S.BROWN	DATE: 01-27-22
CHECKED: D.JACKSON	DATE: 01-27-22
FIELD LEADER: J.LONERO	PROJECT SURVEYOR: D.JACKSON
PROJECT MANAGER: D.JACKSON	DEPARTMENT MANAGER: G.PLATZ
JOB NO.: NP22006	DRAWING NO.: NP22006TPG
SCALE: 1" = 60'	SHEET NO.: 1 OF 3

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N:\NP\NLD Projects\NP22006 – Grace School – Senior Housing\Survey\DWG\NP22006TPG.dwg

LEGEND

- MANHOLE
- CATCH BASIN
- SEWER CLEAN OUT
- GAS METER
- GAS SHUT OFF VALVE
- VALVE BOX
- GATE VALVE & WELL
- WATER SHUT OFF VALVE
- FIRE HYDRANT
- SPRINKLER VALVE BOX
- LAWN SPRINKLER HEAD
- HAND HOLE
- ELECTRIC RISER OR METER
- TELEPHONE RISER
- CABLE TV RISER
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- UTILITY POLE
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- DS-G DOWNSPOUT TO GROUND
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- DECIDUOUS TREE
- DECIDUOUS SHRUB
- CONIFEROUS SHRUB
- SECTION CORNER
- SDA#10 TRAVERSE POINT
- 1 STRUCTURE NUMBER
- 10 SDA POINT No.
- 655.00 SPOT ELEVATION

TC	TOP OF CURB ELEVATION
GU	GUTTER ELEVATION
TP	TOP OF PAVEMENT ELEVATION
EM	EDGE OF METAL ELEVATION
TW	TOP OF WALK ELEVATION
T/WALL	TOP OF WALL ELEVATION
B/WALL	BOTTOM OF WALL ELEVATION
GR	GROUND ELEVATION
UG	UNDERGROUND
FO	FIBER OPTIC
CONC	CONCRETE
ASPH	ASPHALT
FF	FINISH FLOOR ELEVATION
DL	DOOR LEDGE ELEVATION
F.I.	FOUND IRON
F.M.	FOUND MONUMENT
F.P.K.	FOUND P.K. NAIL
S.I.	SET IRON W/SDA CAP
S.P.K.	SET P.K. NAIL
S.P.K./TAG	SET P.K. NAIL W/SDA TAG
MAG	SET MAGNETIC NAIL
MAG/TAG	SET MAGNETIC NAIL W/SDA TAG
M	MEASURED
R	RECORD
C	CALCULATED
INV.	INVERT ELEVATION
CMP	CORRUGATED METAL PIPE

- G GAS
- SN SANITARY SEWER (SAN)
- ST STORM SEWER (STM)
- WM WATERMAIN (WM)
- OH OVERHEAD WIRE
- COMBINED SEWER
- STE STEAM LINE
- O OIL LINE
- F UG FIBER (COMM.)
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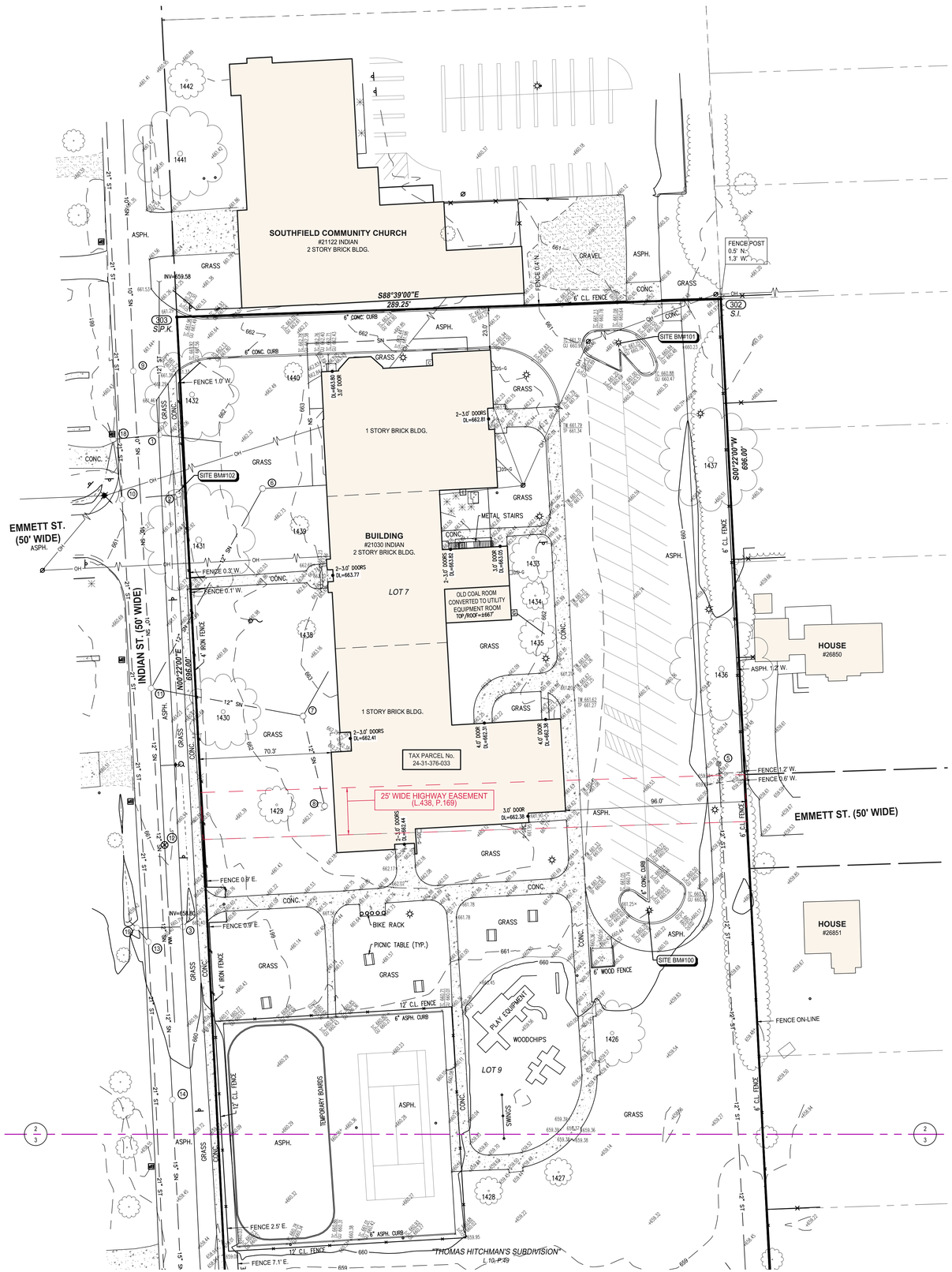
STRUCTURE TABLE

THE STRUCTURE TABLE ON THIS DRAWING IDENTIFIES THE AS-SURVEYED UNDERGROUND UTILITY MANHOLES THAT WERE FIELD MEASURED USING REASONABLE AND TRADITIONAL SURVEYING PRACTICES. PIPE SIZES, DIRECTIONS AND ELEVATIONS ARE INDICATED BY A COMBINATION OF FIELD EVIDENCE AND AVAILABLE RECORD INFORMATION. UNDERGROUND UTILITY PIPE SIZES AND CONNECTIONS ARE MANY TIMES AMBIGUOUS. SOME STRUCTURES MAY HAVE PIPES WITH UNKNOWN CONNECTIONS, SUMPS AND / OR PIPES THAT ARE FILLED WITH DEBRIS. IT WILL BE UP TO THE DESIGN ENGINEER TO LOOK AT THE PRESENTED SURVEY RESULTS AND DECIDE IF FURTHER INVESTIGATION BY OTHER METHODS SUCH AS VACUUM CLEAN OUT, UNDERGROUND RADAR, SMOKE TESTING AND PHYSICAL EXCAVATION IS REQUIRED AS AN ADDITIONAL SERVICE.

#	TYPE	RIM	SIZE	MTRL	INVERT	DIRECTION	CONNECT
1	**STORM MANHOLE**	661.17	12"	CMP	659.12	EAST	
			12"	CMP	658.62	NORTH	ES
			12"	RCP	656.67	WEST	18
	BOTTOM	656.42					
2	**STORM MANHOLE**	661.05	12"	RCP	656.12	WEST	
	TOP / WATER	656.12					
	BOTTOM	652.85					
3	**STORM MANHOLE**	660.60	12"	CMP	658.70	NNE	ES
			12"	RCP	655.40	WEST	19
4	**STORM MANHOLE**	659.14	12"	CMP	656.74	EAST	ES
			12"	RCP	654.48	WEST	20
5	**ROUND CATCH BASIN**	659.06	12"	RCP	654.88	SOUTH	17
	TOP / WATER	654.86					
	BOTTOM	652.86					
6	**SANITARY MANHOLE**	662.39	4"	PVC	656.61	EAST	
			6"	PVC	656.61	EAST	
			12"	RCP	652.65	SW	11
7	**SANITARY MANHOLE**	662.42	12"	RCP	653.92	SSE	8
			12"	RCP	654.12	NE	
			12"	RCP	653.02	WNW	
8	**SANITARY MANHOLE**	661.97	12"	RCP	654.96	NNW	7
9	**SANITARY MANHOLE**	661.55	10"	RCP	652.00	NORTH	
			10"	RCP	651.99	SOUTH	11
10	**STORM MANHOLE**	661.23	12"	RCP	656.03	NORTH	18
			21"	RCP	646.15	NORTH	
			21"	RCP	646.09	SOUTH	13
	BOTTOM	646.13					
11	**SANITARY MANHOLE**	661.49	10"	RCP	649.87	NORTH	9
			12"	RCP	649.77	SOUTH	14
			12"	RCP	650.79	NE	6
			12"	RCP	651.99	ESE	7
	BOTTOM	649.82					
	FLOW DIRECTION:	SOUTH					
12	**GATE VALVE & WELL**	661.11					
	TOP / PIPE	655.11				N / S	
	TOP / WATER	655.21					
	BOTTOM	654.01					
13	**STORM MANHOLE**	660.46	12"	RCP	654.46	NNW	19
			21"	RCP	645.51	NORTH	10
			21"	RCP	645.43	SOUTH	15
14	**SANITARY MANHOLE**	659.86	12"	RCP	649.16	NORTH	11
			15"	RCP	648.56	SOUTH	16
15	**STORM MANHOLE**	659.43	12"	RCP	653.78	NORTH	20
			15"	RCP	645.43	EAST	
			21"	RCP	644.73	NORTH	13
			21"	RCP	644.63	SOUTH	
16	**SANITARY MANHOLE**	658.85	15"	RCP	647.63	NORTH	14
			15"	RCP	647.05	SOUTH	
17	**ROUND CATCH BASIN**	657.94	12"	RCP	653.49	NORTH	5
			12"	RCP	653.46	SSE	
			4"	PVC	653.74	NNW	
	TOP / WATER	653.45					
	BOTTOM	652.54					
18	**STORM MANHOLE**	661.05	12"	RCP	656.37	EAST	1
			12"	RCP	656.27	SOUTH	10
			12"	CMP	658.85	NNW	
			12"	CMP	658.85	SSW	
	TOP / WATER	656.25					
	BOTTOM	653.55					
19	**STORM MANHOLE**	659.93	12"	RCP	654.78	EAST	3
			12"	RCP	654.73	SE	13
			12"	CMP	658.73	NW	ES
	TOP / WATER	654.73					
	BOTTOM	652.23					
20	**STORM MANHOLE**	659.20	12"	RCP	654.10	EAST	4
			12"	RCP	654.02	SOUTH	15
			12"	CMP	656.35	WEST	

UTILITY CHART

UTILITY PROVIDER	MISS-DIG RESULTS	DATE	CONTACT #
AT&T TELEPHONE	RECEIVED	1/13/2022	231-409-7939
CONSUMERS ENERGY GAS	NOT YET RECEIVED	N / A	517-788-1806
DTE ENERGY (ELECTRIC)	NOT YET RECEIVED	N / A	313-235-5824
DTE ENERGY (GAS)	RECEIVED	1/16/2022	248-318-7839
OAKLAND COUNTY DRAIN COMMISSIONER	NOT YET RECEIVED	N / A	248-858-1116
CITY OF SOUTHFIELD	NOT YET RECEIVED	N / A	248-796-4850
SUNOCO PIPELINE	RECEIVED	1/13/2022	713-989-7079



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PROJECT MANAGER: D.JACKSON	DEPARTMENT MANAGER: G.PLATZ
JOB NO.: NP22006	DRAWING NO.: NP22006TPG
SCALE: 1" = 30'	SHEET NO.: 2 OF 3

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LEGEND

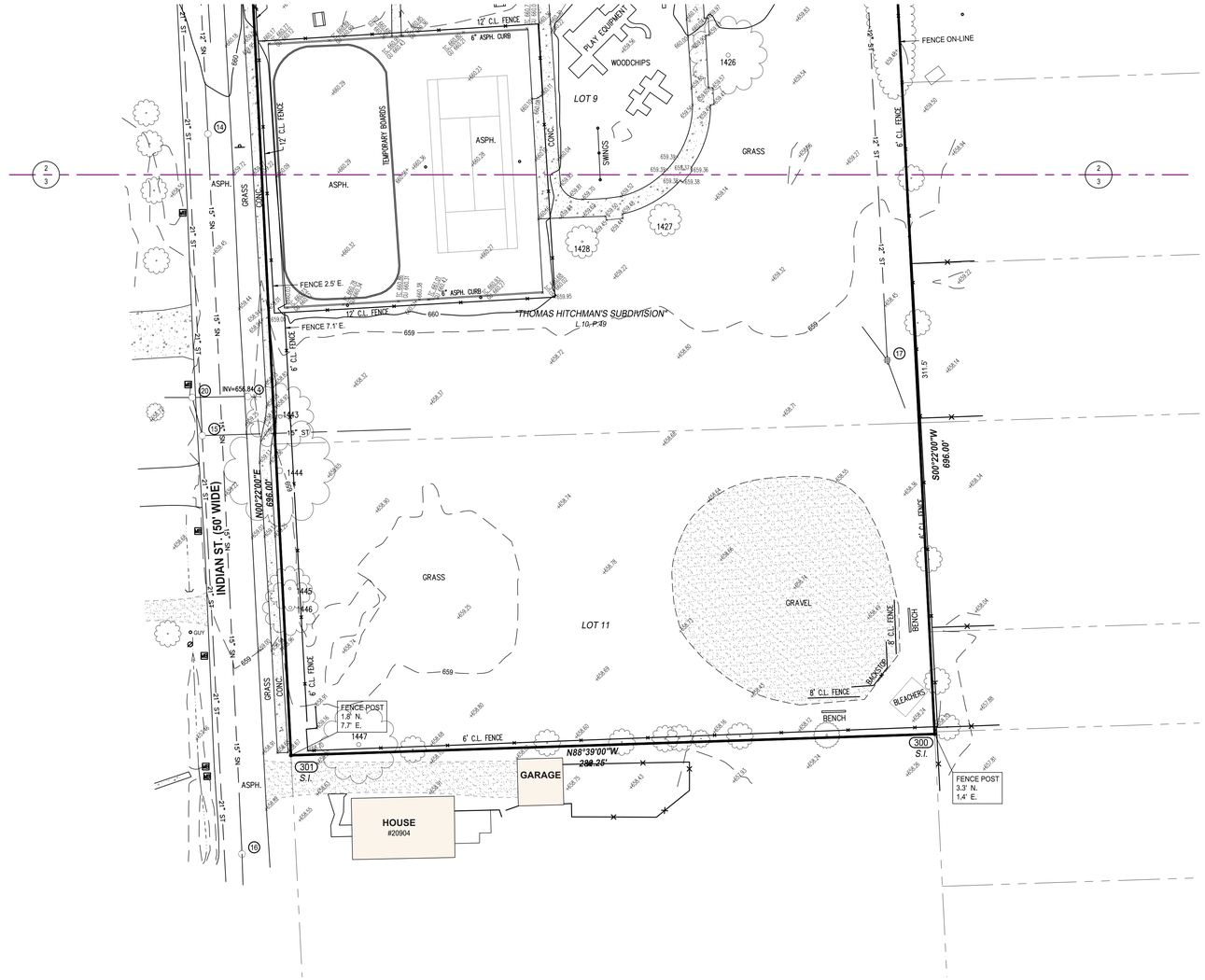
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- (1) STRUCTURE NUMBER
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- ASPHALT
- CONCRETE
- GRAVEL
- BRICK / PAVERS
- WATER

TREE INVENTORY

PREFORMED BY: JOHN P. MOSES
REGISTERED FORESTER - MICHIGAN
ID# 45988

Tree Tag #	D.B.H. in Inches	Species Name (Common - Botanical)	Health Score^	Health Condition	Crown Spread"	Notes	Save / Remove
1426	23	Norway Maple - Acer platanoides	24	Good	35	Landmark	
1427	11	Red Maple - Acer rubrum	25	Good	15		
1428	8	Red Maple - Acer rubrum	26	Good	15		
1429	11	American Elm - Ulmus americana	26	Good	20		
1430	19	Norway Maple - Acer platanoides	23	Good	35	Landmark	
1431	49	Silver Maple - Acer saccharinum	22	Fair	65	Landmark	
1432	19	Black Walnut - Juglans nigra	24	Good	40		
1433	12	Red Maple - Acer rubrum	25	Good	20		
1434	8	Red Maple - Acer rubrum	24	Good	10		
1435	11	Red Maple - Acer rubrum	26	Good	15		
1436	36	Silver Maple - Acer saccharinum	14	Poor	45	EX	
1437	34	Siberian Elm - Ulmus pumila	18	Fair	50	Landmark	
1438	8	Crabapple - Malus spp.	26	Good	15		
1439	7	Crabapple - Malus spp.	26	Good	15		
1440	6	Redbud - Cercis canadensis	24	Good	15		
1441	26	Pin Oak - Quercus palustris	25	Good	45	Landmark	
1442	14	Norway Maple - Acer platanoides	23	Good	25		
1443	20	Siberian Elm - Ulmus pumila	23	Good	40		
1444	34	Silver Maple - Acer saccharinum	8	Very Poor	30	EX	
1445	15	Siberian Elm - Ulmus pumila	23	Good	35		
1446	18	Siberian Elm - Ulmus pumila	20	Fair	40		
1447	18,18	Black Walnut - Juglans nigra	23	Good	30		

Landmark = LANDMARK TREE AS DESCRIBED PER ORDINANCE SEC 5.56 (13) WITH A HEALTH SCORE OF >16 (FAIR AND GOOD TREES)
EX = REPLACEMENT EXEMPTION RECOMMENDED DUE TO EVALUATED HEALTH SCORE OF <16 (POOR AND VERY POOR TREES)
^ = HEALTH SCORE DETERMINED UTILIZING GUIDANCE PER ORDINANCE SEC. 5.56 (13) (B) EVALUATION CHART
" = CROWN SPREAD PROVIDED AS REQUIRED PER ORDINANCE SEC 5.56 (7) (B) 5. (IN FEET)



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0' 30' 60'
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PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. CALL MISS DIG 3 WORKING DAYS PRIOR TO CONSTRUCTION.

UTILITY NOTE

UTILITY INFORMATION ON THIS DRAWING MAY BE FROM INFORMATION DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANIES, CITY/COUNTY AGENCIES AND OTHER VARIOUS SOURCES. UNDERGROUND UTILITIES WHICH ARE ON PRIVATE PROPERTY ARE USUALLY NOT DELINEATED UPON A UTILITY COMPANY'S PUBLISHED PLANS. THEIR LOCATION, IF SHOWN UPON THIS SURVEY, ARE APPROXIMATED FROM FOUND PAINT MARKS/STAKES, ETC. AS LOCATED BY THIS FIRM FROM SOURCES WHICH ARE UNKNOWN. NO GUARANTEE IS GIVEN AS TO THE COMPLETENESS OR ACCURACY THEREOF.

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SOUTHFIELD GRACE SCHOOL

SOUTHFIELD, MI
BOUNDARY AND TOPOGRAPHICAL SURVEY

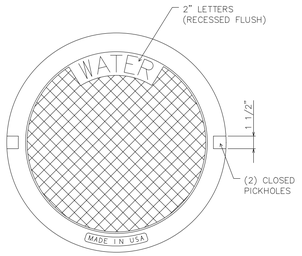
SECTION 31
TOWN 01 NORTH RANGE 10 EAST
CITY OF SOUTHFIELD
OAKLAND COUNTY, MICHIGAN

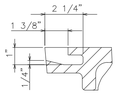
NO.	DATE	REVISION

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

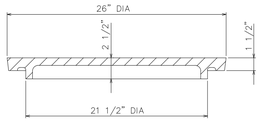
DRAFTER: S.BROWN	DATE: 01-27-22
CHECKED: D.JACKSON	DATE: 01-27-22
FIELD LEADER: J.LONERO	PROJECT SURVEYOR: D.JACKSON
PROJECT MANAGER: D.JACKSON	DEPARTMENT MANAGER: G.PLATZ
JOB NO.: NP22006	DRAWING NO.: NP22006TPG
SCALE: 1" = 30'	SHEET NO.: 3 OF 3

Plotted: Jan 28, 2022, 9:12 AM by user: 510 – Saved: 1/28/2022 by user: 510
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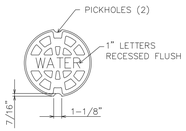


PICKHOLE DETAIL

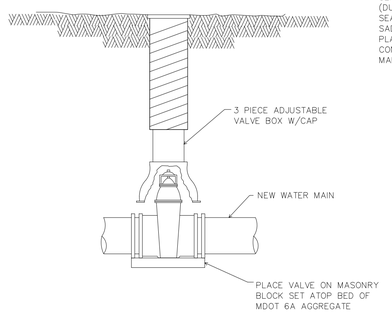


COVER SECTION

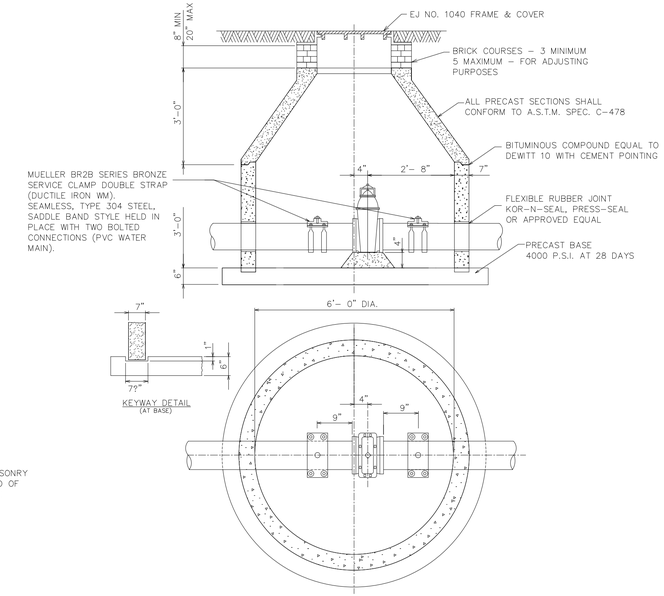
GATE WELL COVER



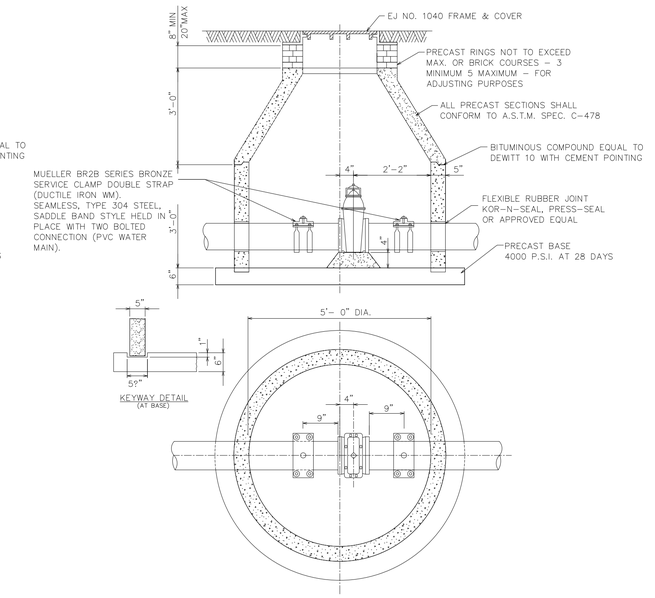
VALVE BOX COVER



GATE VALVE AND BOX
NO SCALE



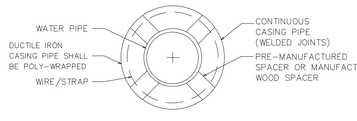
12" & 16" PRECAST
GATE & WELL DETAIL



8" PRECAST
GATE & WELL DETAIL

UNLESS OTHERWISE SPECIFIED, MINIMUM CASING PIPE SHALL BE ASTM A-139 GRADE B, WALL THICKNESS AS FOLLOWS:

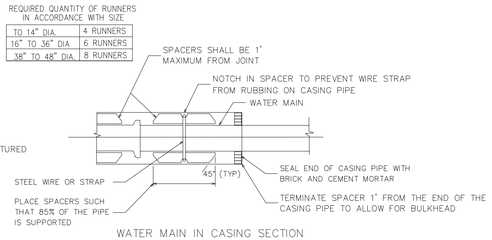
NOMINAL SIZE	MINIMUM WALL THICKNESS
8"– 42"	0.375
48"– 60"	0.500



SUPPORT FOR WATER MAIN
CONSTRUCTED IN CASING PIPE
SCALE 1"= 4'

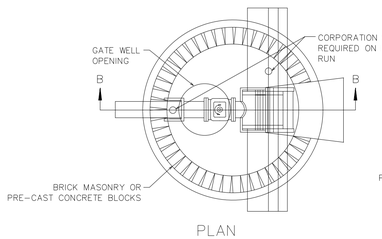
REQUIRED QUANTITY OF RUNNERS IN ACCORDANCE WITH SIZE

TO 14" DIA.	4 RUNNERS
16" TO 36" DIA.	6 RUNNERS
38" TO 48" DIA.	8 RUNNERS

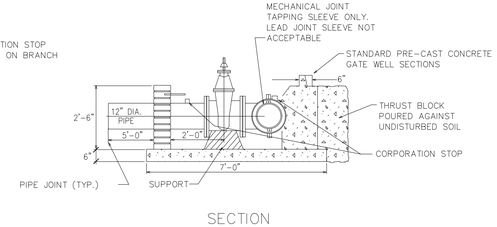


WATER MAIN IN CASING SECTION
SCALE 1"= 2'

WATER MAIN IN CASING DETAILS

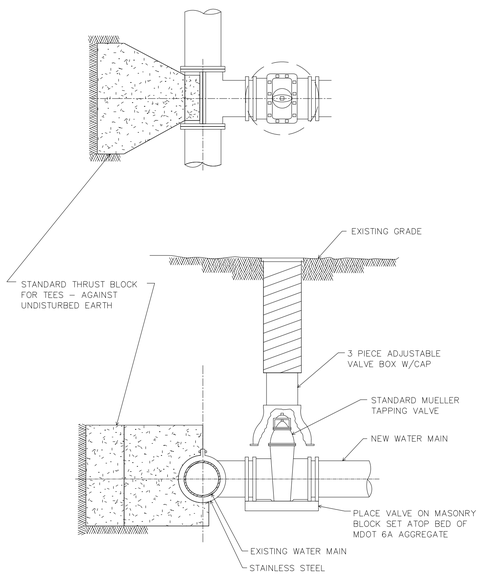


PLAN

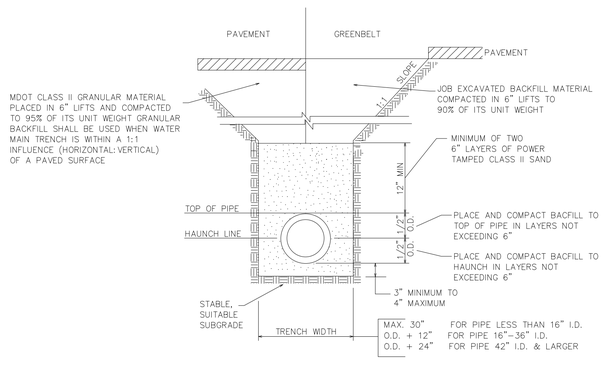


SECTION

TAPPING SLEEVE GATE VALVE & WELL DETAILS
NO SCALE



TAPPING SLEEVE & VALVE
W/VALVE BOX

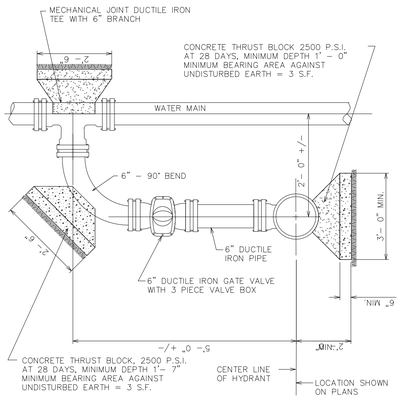


STANDARD BEDDING FOR WATER MAIN
NO SCALE

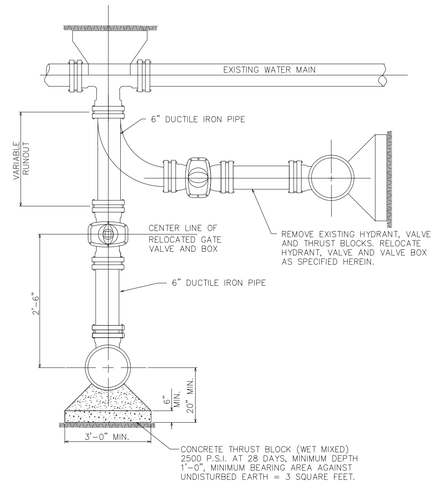
CITY OF SOUTHFIELD
PUBLIC SERVICES GROUP ENGINEERING DEPARTMENT

WATERMAIN DETAILS

DRAWN BY	SP	REVISIONS			
DESIGNED BY		No.	DESCRIPTION	DATE	BY
APPROVED BY	LS	1	SOUTHFIELD SPEC. UPDATES	05/22	ZJH
DATE	2014				
SC: HORZ. VERT.	NTS				
SHEET 1 OF 4					
JOB No.					

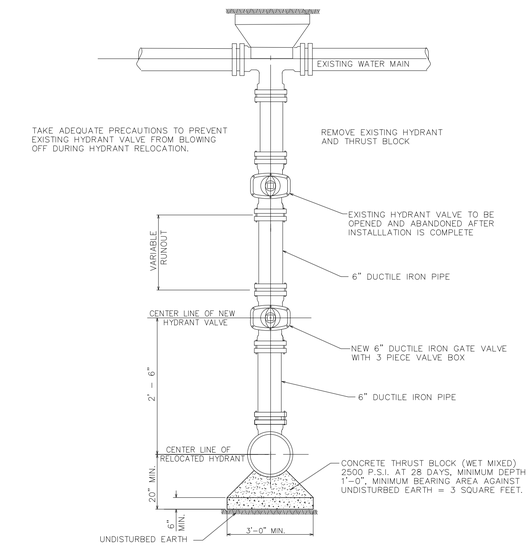


"L" HYDRANT CONNECTION



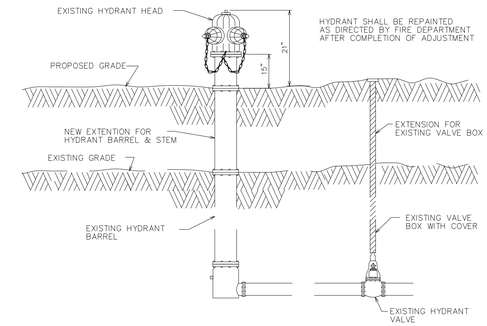
HYDRANT RELOCATION

NOTE: TRAVERSE CITY OF CITY OF DETROIT FIRE DEPARTMENT HYDRANTS SHALL BE REPLACED

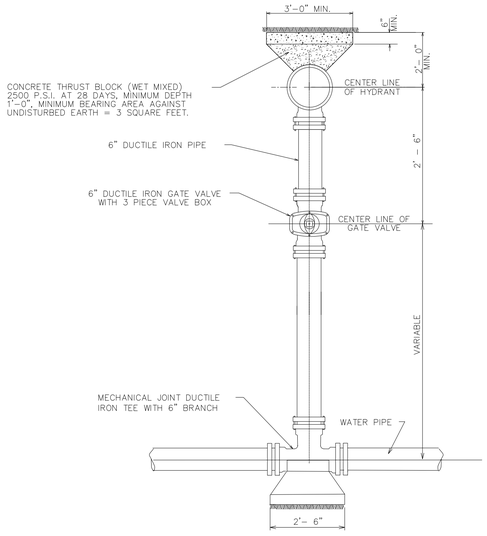


HYDRANT RELOCATION

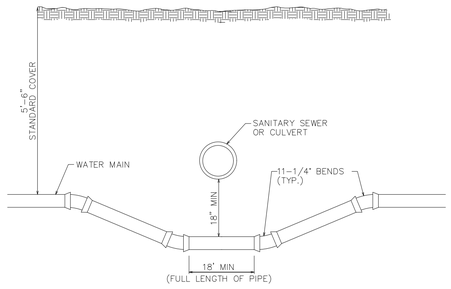
NOTE: TRAVERSE CITY OF CITY OF DETROIT FIRE DEPARTMENT HYDRANTS SHALL BE REPLACED



HYDRANT ADJUSTMENT

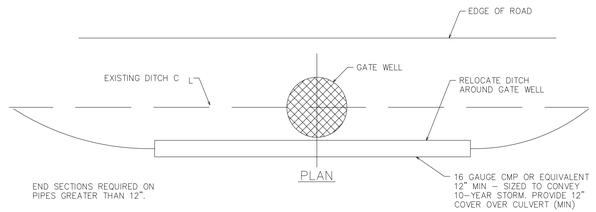


STRAIGHT HYDRANT CONNECTION



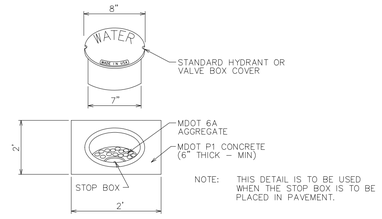
SEWER OR CULVERT CROSSING

NO SCALE

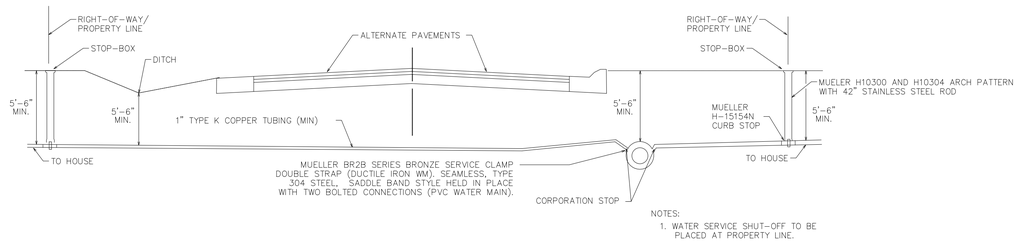


DITCH ENCLOSURE AT GATE WELL

NO SCALE

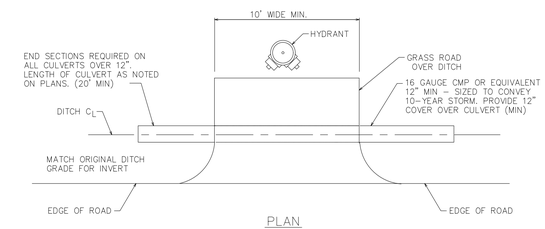


STOP BOX PROTECTION (PAVED AREAS)



TYPICAL PUBLIC ROAD WATER SERVICE CONNECTION

NO SCALE



DITCH ENCLOSURE AT HYDRANT

NO SCALE

CITY OF SOUTHFIELD

PUBLIC SERVICES GROUP ENGINEERING DEPARTMENT

WATERMAIN DETAILS

DRAWN BY	SP	REVISIONS			
DESIGNED BY		No.	DESCRIPTION	DATE	BY
APPROVED BY	LS	1	SOUTHFIELD SPEC. UPDATES	05/22	ZJH
DATE 2014					
SC: HORZ. NTS VERT.					
SHEET 2 OF 4					
JOB No.					

WATER MAIN NOTES

1. All water main construction shall have full–time inspection provided by or caused to be provided by the City of Southfield Engineering Department. Contractor shall contact the Engineering Department for inspection at least 48 hours prior to start of construction.
2. When it is necessary to shut down existing water mains, the contractor shall contact the City of Southfield Water and Sewer Department and shall cooperate with the City forces in closing the necessary gate valves and in notifying the affected residents and places of business.
3. All water mains shall be constructed with a minimum cover of five and a half (5.5) feet and a maximum of seven (7) feet below finished grade. Where water mains must dip to pass under other utilities, the sections which are deeper than normal shall be kept to a minimum length by the use of 11–1/4 degree bends,properly anchored or restrained.
4. Contractor shall use lengths of pipe and/or additional bends to accomplish horizontal and/or vertical deflections as indicated on the plan.
5. All water main under or within three (3) feet of existing or proposed pavement shall be back filled with MDOT granular material, Class II, mechanically tamped in 12–inch lifts to 95% compaction.
   If construction is within the Road Commission for Oakland County and/or Michigan Department of Transportation rights–of–way, permits shall be required from the respective agencies.
6. All new water main and services shall include tracer wire and test points at ground appurtenances, valves and hydrants. Tracer wire layout and installation shall be in accordance with the special detail sheet.
7. Please refer to the City of Southfield Water Main Specifications for additional requirements for construction, materials, etc..

GENERAL CONSTRUCTION NOTES

1. All construction shall conform to the current standards and specifications of the City of Southfield. A pre–construction meeting shall be held prior to start of construction and shall be scheduled by the City of Southfield Engineering Department at 248–796–4810.
2. The Standard Details and Specifications of the City of Southfield are incorporated as part of these plans.
3. Prior to any excavation, the Contractor shall contact " MISS DIG " (by dialing 811) forlocation of underground utilities and shall also notify representatives of other utilities located in the vicinity of the work. TheContractor shall make any necessary arrangements with utility companies for relocation of existing utilities, if required. Utility poles shall be properly supported, tunneled and/or temporarily relocated as required.
4. No City street shall be closed without prior permission from the City of Southfield. Forty–eight (48) hours prior to closing any City street, the Contractor shall notify the City Police, Fire and Streets and Highway Department. Traffic control, routing and signing shall be in accordance with the requirements of the City of Southfield and the Michigan Manual of Uniform Traffic Control Devices.
5. All property irons and monuments disturbed or destroyed by the Contractor's operation shall be replaced by a Registered Land Surveyor provided by or caused to be provided by the Contractor at the Contractor's expense.
6. Existing fences shall be removed and restored to their original condition or better.
7. Cost of protection of any removal and/or replacement of public and private utilities shall be borne by the Contractor
8. All necessary easements for public water mains shall be provided in the name of the City of Southfield of the water main prior to acceptance of the water distribution system for operation.

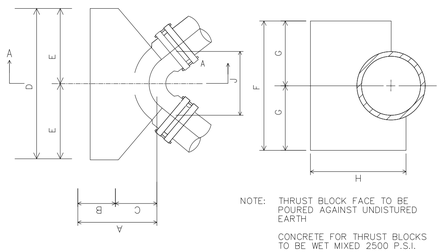
SIZE	TEE	END CAP	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	REDUCERS	VERT OFFSET
6"		36'	14'	6'	3'	2'	19'	
8"	*	47'	18'	8'	4'	2'	20'	*
12"		67'	25'	11'	5'	3'	36'	

*ENGINEER SHALL PROVIDE CALCULATIONS FOR SPECIFIC RESTRAINT SCENARIOS

PIPE RESTRAINT NOTES

1. THE ABOVE TABLE IS FOR INFORMATION ONLY. THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING RESTRAINT SCHEDULES AND PROVIDING IT TO THE CITY OF SOUTHFIELD OR ITS REPRESENTATIVE FOR REVIEW.
2. THE VALUES PROVIDED REPRESENT RESTRAINT LENGTH IN EACH DIRECTION FROM THE POINT OF DEFLECTION OR TERMINATION EXCEPT FROM TEES, AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE STEM IS INCLUDED.
3. REDUCER RESTRAINT LENGTH ASSUMES ONE STEP–DOWN IN SIZE.
4. THE ABOVE PIPE RESTRAINT WAS CALCULATED USING THE EBAA IRON RESTRAINT CALCULATOR ASSUMING THE FOLLOWING PARAMETERS:
   - 4.1. SOIL TYPE: CL GRAN. FILL
   - 4.2. SAFETY FACTOR: 1.5 TO 1
   - 4.3. TRENCH TYPE 4
   - 4.4. DEPTH OF BURY: 5 FEET
   - 4.5. TEST PRESSURE: 150 PSI

MECHANICAL RESTRAINT FOR PVC

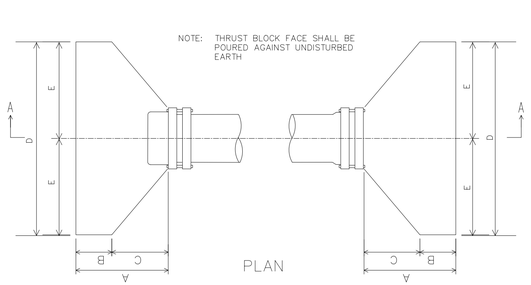


NOTE: THRUST BLOCK FACE TO BE POURED AGAINST UNDISTURED EARTH

CONCRETE FOR THRUST BLOCKS TO BE WET MIXED 2500 P.S.I.

SIZE	ANGLE	A MIN.	B MIN.	C	D	E	F	G	H MIN.	J
6"	45°	1'–6"	0'–9"	0'–9"	1'–6"	0'–9"	1'–6"	0'–9"	1'–8"	0'–10"
6"	90°	1'–6"	0'–9"	0'–9"	2'–0"	1'–0"	2'–0"	1'–0"	1'–8"	0'–10"
8"	45°	1'–9"	0'–9"	1'–0"	2'–4"	1'–2"	2'–0"	1'–0"	1'–11"	1'–4"
8"	90°	1'–9"	0'–9"	1'–0"	3'–4"	1'–8"	2'–6"	1'–3"	1'–11"	1'–2"
12"	22–1/2°	1'–9"	0'–9"	1'–0"	2'–6"	1'–3"	2'–0"	1'–0"	2'–0"	1'–4"
12"	45°	2'–1"	0'–9"	1'–4"	3'–6"	1'–9"	2'–6"	1'–3"	2'–4"	1'–4"
12"	90°	2'–1"	0'–9"	1'–4"	5'–6"	2'–9"	3'–0"	1'–6"	2'–4"	1'–8"
16"	22–1/2°	2'–5"	1'–0"	1'–8"	3'–4"	1'–8"	2'–6"	1'–3"	3'–0"	1'–2"
16"	45°	2'–8"	1'–0"	1'–8"	5'–4"	2'–8"	3'–0"	1'–6"	3'–0"	1'–6"
16"	90°	2'–8"	1'–0"	1'–8"	6'–0"	3'–0"	5'–0"	2'–6"	3'–0"	1'–8"
24"	90°	4'–7"	1'–0"	3'–7"	10'–0"	5'–0"	7'–0"	3'–6"	5'–4"	2'–4"

CONCRETE THRUST BLOCK FOR BENDS



SIZE	A MIN.	B MIN.	C	D	E	F	G
8"	1'– 11"	0'– 9"	1'– 2"	3'– 0"	1'– 6"	2'– 0"	1'– 0"
12"	2'– 1"	0'– 9"	1'– 4"	4'– 0"	2'– 0"	3'– 0"	1'– 6"
16"	2'– 8"	1'– 0"	1'– 8"	5'– 0"	2'– 6"	4'– 0"	2'– 0"

CONCRETE THRUST BLOCK FOR ENDS

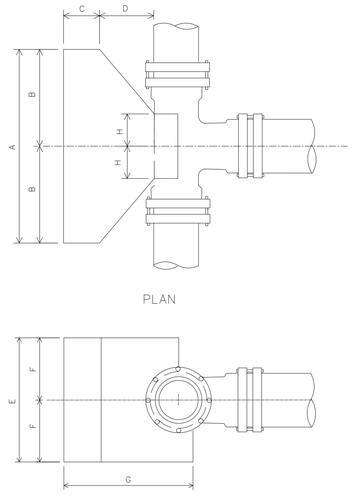
SIZE	TEE	END CAP	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	REDUCERS	VERT OFFSET
6"		56'	16'	7'	3'	2'	29'	
8"	*	73'	20'	9'	4'	2'	31'	*
12"		104'	28'	12'	6'	3'	55'	

*ENGINEER SHALL PROVIDE CALCULATIONS FOR SPECIFIC RESTRAINT SCENARIOS

PIPE RESTRAINT NOTES

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   - 4.2. SAFETY FACTOR: 1.5 TO 1
   - 4.3. TRENCH TYPE 4
   - 4.4. DEPTH OF BURY: 5 FEET
   - 4.5. TEST PRESSURE: 150 PSI

MECHANICAL RESTRAINT FOR POLY–WRAPPED DUCTILE IRON



THRUST BLOCK FACE SHALL BE POURED AGAINST UNDISTURBED EARTH.

CONCRETE FOR THRUST BLOCKS TO BE WET MIXED 2500 P.S.I.

SCHEDULE OF THRUST BLOCK DIMENSIONS				
CODE		TEE SIZE 8"x8" 12"x8" 16"x8" 24"x8"	TEE SIZE 12"x12" 16"x12" 24"x12"	TEE SIZE 16"x16" 24"x16"
A		3'–0"	4'–0"	5'–0"
B		1'–6"	2'–0"	2'–6"
C		0'–9"	0'–9"	1'–0"
D		1'–0"	1'–4"	1'–8"
E		2'–0"	3'–0"	4'–0"
F		1'–0"	1'–6"	2'–0"
G	8"	2'–2"		
	12"	2'–6"	2'–10"	
	16"	2'–10"	3'–1"	3'–8"
	24"	3'–5"	3'–7"	4'–2"
H	8"	0'–6"		
	12"	0'–6"	0'–10"	
	16"	0'–6"	0'–10"	1'–0"
	24"	0'–6"	0'–10"	1'–0"

CONCRETE THRUST BLOCK FOR TEES

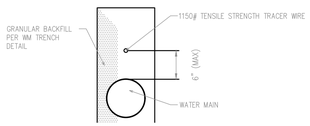
CITY OF SOUTHFIELD

PUBLIC SERVICES GROUP ENGINEERING DEPARTMENT

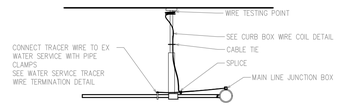
WATERMAIN DETAILS

DRAWN BY	SP
DESIGNED BY	
APPROVED BY	LS
DATE	2014
SC: HORZ.	NTS
SC: VERT.	
SHEET	3 OF 4
JOB No.	

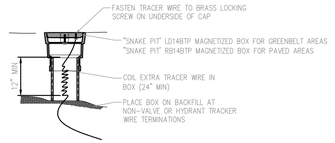
REVISIONS			
No.	DESCRIPTION	DATE	BY
1	SOUTHFIELD SPEC. UPDATES	05/22	ZJH



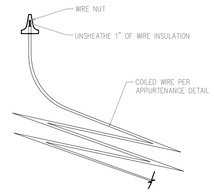
OPEN CUT MAIN LINE TRENCH
NO SCALE



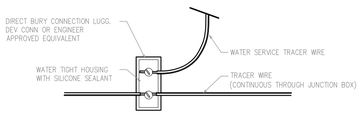
CURB STOP CONNECTION
NO SCALE



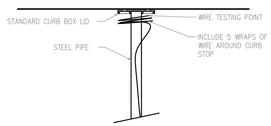
TRACER WIRE TEST POINT
NO SCALE



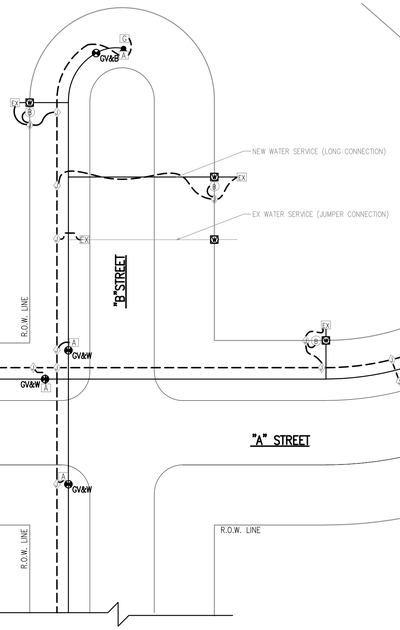
WIRE TESTING POINT
NO SCALE



MAIN LINE JUNCTION BOX
NO SCALE



CURB BOX WIRE COIL
NO SCALE



TRACER WIRE SYSTEM SCHEMATIC

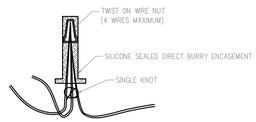
KEY

WATER SYSTEM

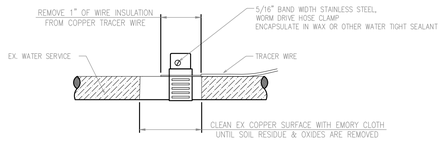
- GATE VALVE
- HYDRANT
- CURB BOX
- PROP WATER MAIN
- EX WATER SERVICE

TRACING WIRE SYSTEM

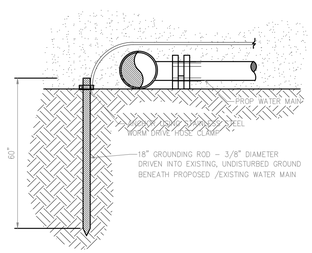
- JUNCTION
- CURB BOX WIRE COIL
- WATER SERVICE TERMINATION
- TEST POINT
- GROUNDING ROD TERMINATION
- ACCESS POINT
- TRACING WIRE



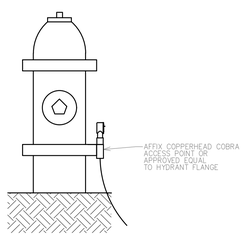
SPLICE CONNECTOR
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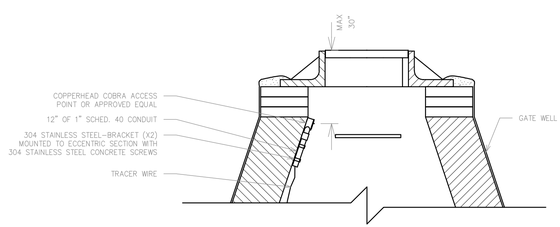
WATER SERVICE TERMINATION
NO SCALE



GROUNDING ROD TERMINATION
NO SCALE



HYDRANT TRACER WIRE ACCESS POINT
NO SCALE



GATE WELL TRACER WIRE ACCESS POINT
NO SCALE

CITY OF SOUTHFIELD
PUBLIC SERVICES GROUP ENGINEERING DEPARTMENT

WATERMAIN TRACER SYSTEM DETAILS

DRAWN BY	PD	REVISIONS		
DESIGNED BY		No.	DESCRIPTION	DATE BY
APPROVED BY	LS	1	ADD HYDRANT TEST POINT	01/17 LS
DATE 2014		2	SOUTHFIELD SPEC. UPDATES	05/22 ZJH
SC: HORZ. VERT. NTS				
SHEET 4 OF 4				
JOB No.				

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⊠ NEW SHEET

	NO.	SHEET TITLE	ISSUED FOR: 03.28.2024 UPDATE	04.12.2024 PERMITS	10.25.2024 FOR PERMIT	12.13.2024 HUD SUBMISSION	12.20.2024 PERMIT	02.19.2025 BULLETIN 1	03.05.2025 BULLETIN 2	BULLETIN 3	BULLETIN 4	05.14.2025 BULLETIN 5	05.16.2025 ISSUED FOR PERMIT	07.15.2025 BULLETIN 6	12.18.2025 CLOSE OUT ISSUE	01.14.2026 BULLETIN 7	05.01.2026 BULLETIN 8
	COVER	TITLE SHEET		●	●	●	●	●	●							●	
	G-001	DRAWING INDEX AND GENERAL INFORMATION		●	●	●	●									●	
CIVIL	C1.0	CIVIL COVER		●	●	●	●									●	
	C2.1	DEMOLITION PLAN		●	●	●	●									●	
	C3.1	UTILITY PLAN		●	●	●	●									●	
	C3.2	STORM PROFILES		●	●		●									●	
	C3.3	WATERMAIN PROFILES		●	●		●									●	
	C4.1	DRAINGAGE AREA MAP		●	●	●	●									●	
	C4.2	DETENTION CALCULATIONS		●	●	●	●									●	
	C4.3	UNDERGROUND DETENTION DETAILS				●	●										
	C5.1	PAVING PLAN		●	●	●	●	●	●							●	
	C5.2	PAVING DETAILS		●	●	●	●									●	
	C6.1	GRADING PLAN		●	●	●	●	●								●	
	C6.2	DETAILED GRADING		●	●	●	●									●	
	C7.1	ROW PARKING PLAN		●	●	●	●									●	
	C8.1	SESC PLAN		●	●	●	●									●	
		MAINTENANCE PLAN														●	
	L1.1	LANDSCAPE PLAN		●	●	●	●									●	
	L1.2	LANDSCAPE DETAILS		●	●	●	●									●	
	1 OF 3	BOUNDARY / TOPOGRAHICAL SURVEY		●	●	●	●									●	
	2 OF 3	BOUNDARY / TOPOGRAHICAL SURVEY		●	●	●	●									●	
	3 OF 3	BOUNDARY / TOPOGRAHICAL SURVEY		●	●	●	●									●	
	1 OF 4	WATERMAIN DETAILS		●	●	●	●									●	
	2 OF 4	WATERMAIN DETAILS		●	●	●	●									●	
	3 OF 4	WATERMAIN DETAILS		●	●	●	●									●	
	4 OF 4	WATERMAIN DETAILS		●	●	●	●									●	
	1 OF 2	SANITARY SEWER DETAILS		●	●	●	●									●	
	2 OF 2	SANITARY SEWER DETAILS		●	●	●	●									●	
	1 OF 1	STORM DRAIN NOTES		●	●	●	●									●	
	1 OF 1	SOIL EROSION DETAILS		●	●	●	●									●	
ARCHITECTURAL	G-004	LIFE SAFETY CRITERIA AND PLANS - EXISTING BUILDING		●	●	●	●									●	●
	G-005	ADDITION - CODE REVIEW (FORMERLY A300)		●	●	●	●									●	
	G-006	ADDITION ASSEMBLIES					●	●	●					●	●	●	
	A-201	EXISTING - FIRST FLOOR DEMOLITION		●	●	●	●									●	
	A-202	EXISTING - SECOND FLOOR DEMOLITION		●	●	●	●									●	
	A-203	EXISTING - ROOF PLAN		●	●	●	●									●	
	A-301	ADDITION - FIRST FLOOR PLAN		●	●	●	●	●	●					●	●	●	
	A-303	ADDITION - SECOND FLOOR PLAN		●	●	●	●	●	●					●	●	●	
	A-304	EXISTING - FIRST FLOOR PLAN		●	●	●	●							●		●	
	A-305	EXISTING - SECOND FLOOR PLAN		●	●	●	●							●		●	
	A-306	EXISTING - ROOF PLAN		●	●	●	●							●		●	
	A-307	EXISTING - REFLECTED CEILING PLAN			●	●	●							●		●	
	A-331	ADDITION - ROOF PLAN		●	●	●	●	●								●	
	A-351	EXISTING - ENLARGED PLAN		●	●	●	●							●		●	
	A-352	EXISTING - ENLARGED PLAN		●	●	●	●							●		●	
	A-353	EXISTING - ENLARGED PLAN		●	●	●	●							●		●	
	A-354	EXISITNG - ENLARGED PLAN		●	●	●	●							●		●	
	A-355	EXISTING - ENLARGED PLAN		●	●	●	●							●		●	
	A-356	EXISTING - ENLARGED SECOND FLOOR PLAN		●	●	●	●	●								●	
	A-361	ADDITION - UNIT PLANS		●	●	●	●	●								●	
	A-362	ADDITION - UNIT PLANS		●	●	●	●							●	●	●	
	A-363	CONNECTOR AREA PLAN		●	●	●	●	●								●	
	A-364	SOUTH COMMON AREA PLANS		●	●	●	●	●								●	
	A-365	ADDITION - WEST STAIR PLANS		●	●	●	●									●	
	A-371	EXISTING - REFLECTED CEILING PLAN		●	●	●	●									●	
	A-372	EXISTING - REFLECTED CEILING PLAN		●	●	●	●									●	
	A-373	EXISTING - REFLECTED CEILING PLAN		●	●	●	●									●	
	A-374	EXISTING - REFLECTED CEILING PLAN		●	●	●	●									●	
	A-375	EXISTING - REFLECTED CEILING PLAN		●	●	●	●									●	
	A-376	EXISTING - REFLECTED CEILING PLAN		●	●	●	●									●	
	A-461	ADDITION - REFLECTED CEILING PLAN		●	●	●	●	●								●	
	A-462	ADDITION - REFLECTED CEILING PLAN		●	●	●	●	●								●	
	A-501	EXISTING - EXTERIOR ELEVATIONS		●	●	●	●	●						●	●	●	
	A-502	EXISITNG - EXTERIOR ELEVATIONS		●	●	●	●	●						●	●	●	
	A-503	EXISTING - EXTERIOR ELEVATIONS		●	●	●	●	●						●	●	●	
	A-504	EXISTING - EXTERIOR ELEVATIONS		●	●	●	●	●								●	
	A-505	NOT USED															
	A-506	WINDOW ELEVATIONS AND SCHEDULE		●	●	●	●	●								●	
	A-507	WINDOW ELEVATIONS AND SCHEDULE		●	●	●	●	●								●	
	A-508	WINDOW SCHEDULE AND DETAILS		●	●	●	●	●								●	
	A-550	ADDITION - EXTERIOR ELEVATIONS		●	●	●	●									●	●
	A-551	ADDITION - EXTERIOR ELEVATIONS		●	●	●	●							●	●	●	●
	A-552	ADDITION - SECTIONS		●	●	●	●	●								●	●
	A-553	ADDITION - ENTRY ELEVATIONS AND SECTION		●	●	●	●									●	●
	A-601	SECTIONS AND DETAILS			●	●	●							●		●	
	A-602	TYPICAL MOUNTING DETAILS					●									●	
	A-603	WALL SECTIONS		●	●	●	●	●								●	●
	A-604	WALL SECTIONS		●	●	●	●	●								●	●
	A-605	DETAILS		●	●	●	●	●								●	●
	A-606	CANOPY DETAILS AND ELEVATOR SHAFT SECTION		●	●	●	●	●	●							●	
	A-607	WINDOW DETAILS			●	●	●	●						●	●	●	●
	A-701	ELEVATOR SHAFT		●	●	●	●									●	
	A-901	FINISH SCHEDULE		●	●	●	●							●		●	
	A-902	DOOR SCHEDULE		●	●	●	●							●		●	
	A-903	FINISH SCHEDULE		●	●	●	●									●	
	A-904	DOOR AND WINDOW SCHEDULES		●	●	●	●									●	

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STRUCTURAL	S000	COVER / GENERAL NOTES		●	●	●	●					●			●	●	
	S001	GENERAL NOTES		●	●	●	●								●		
	S002	SPECIAL INSPECTIONS		●	●	●	●								●		
	S003	LOADING DIAGRAMS		●	●	●	●								●		
	S004	SCHEDULES			●	●	●	●				●			●	●	
	S100-A	ADDITION FOUNDATION & 1ST FLOOR PLAN		●	●	●	●					●			●	●	
	S100-E	EXISTING FOUNDATION & 1ST FLOOR PLAN		●	●	●	●					●			●		
	S101-A	ADDITION 2ND FLOOR FRAMING PLAN		●	●	●	●								●	●	
	S101-E	EXISTING 2ND FLOOR FRAMING PLAN		●	●	●	●								●		
	S102-A	ADDITION ROOF FRAMING PLAN		●	●	●	●								●	●	
	S102-E	EXISTING ROOF FRAMING PLAN		●	●	●	●								●		
	S300	TYPICAL CONCRETE DETAILS		●	●	●	●	●							●		
	S400	TYPICAL MASONRY DETAILS		●	●	●	●	●							●		
	S430	MASONRY SECTIONS		●	●	●	●								●		
	S500	TYPICAL STEEL DETAILS & SECTIONS		●	●	●	●								●		
	S600	TYPICAL WOOD DETAILS		●	●	●	●								●		
	S601	TYPICAL WOOD DETAILS		●	●	●	●								●		
	S602	WOOD SECTIONS & DETAILS		●	●	●	●	●							●		
MECHANICAL	M-001	MECHANICAL SYMBOLS AND ABBREVIATIONS		●	●	●	●			●					●		
	MD-101	FIRST FLOOR MECHANICAL DEMOLITION PLAN		●	●	●	●								●		
	MD-102	SECOND FLOOR MECHANICAL DEMOLITION PLAN				●	●								●		
	M-101	FIRST FLOOR MECHANICAL HVAC PLAN		●	●	●	●		●	●				●	●		
	M-102	FIRST FLOOR - ADDITION MECHANICAL PLAN HVAC		●	●	●	●		●						●		
	M-103	SECOND FLOOR MECHANICAL PLAN HVAC		●	●	●	●			●				●	●		
	M-104	SECOND FLOOR - ADDITION MECHANICAL PLAN HVAC		●	●	●	●								●		
	M-105	ROOF PLAN - EXISTING MECHANICAL PLAN		●	●	●	●			●				●	●		
	M-106	ROOF PLAN ADDITION MECHANICAL PLAN					●			●					●		
	M-401	MECHANICAL HVAC ENLARGED PLANS		●	●	●	●	●	●	●					●		
	M-402	MECHANICAL HVAC ENLARGED PLANS		●	●	●	●			●				●	●		
	M-403	MECHANICAL HVAC ENLARGED PLANS		●	●	●	●			●		●		●	●		
	M-404	MECHANICAL HVAC ENLARGED PLANS		●	●	●	●							●	●		
	M-405	MECHANICAL HVAC ENLARGED PLANS		●	●	●	●		●	●				●	●		
	M-406	MECHANICAL HVAC ENLARGED PLANS		●	●	●	●			●		●		●	●		
	M-407	MECHANICAL HVAC ENLARGED PLANS					●			●				●	●		
	M-501	MECHANICAL TYPICAL DETAILS		●	●	●	●								●		
	M-502	MECHANICAL TYPICAL DETAILS		●	●	●	●								●		
	M-503	MECHANICAL TYPICAL DETAILS		●	●	●	●								●		
	M-504	MECHANICAL TYPICAL DETAILS					●			●					●		
	M-505	MECHANICAL TYPICAL DETAILS					●			●					●		
	M-601	MECHANICAL SCHEDULE		●	●	●	●	●				●			●		
	M-602	MECHANICAL VENTILATION SCHEDULE		●	●	●	●	●		●					●		
PLUMBING	P-001	PLUMBING NOTES / SYMBOLS / ABBREVIATIONS		●	●	●	●								●		
	PD-101	FIRST FLOOR PLUMBING DEMOLITION PLAN		●	●	●	●					●			●		
	PD-102	SECOND FLOOR PLUMBING DEMOLITION PLAN		●	●	●	●					●			●		
	P-101	FIRST FLOOR SANITARY, VENTING, STORM WATER PLAN		●	●	●	●			●	●				●		
	P-102	FIRST FLOOR ADDITION SANITARY, VENTING, STORM WATER PLAN		●	●	●	●								●		
	P-103	SECOND FLOOR SANITARY, VENTING, STORM WATER PLAN		●	●	●	●								●		
	P-104	SECOND FLOOR ADDITION SANITARY, VENTING, STORM WATER PLAN		●	●	●	●								●		
	P-201	FIRST FLOOR PLUMBING PLAN		●	●	●	●								●		
	P-202	FIRST FLOOR - ADDITION PLUMBING PLAN		●	●	●	●								●		
	P-203	SECOND FLOOR - PLUMBING PLAN		●	●	●	●								●		
	P-204	SECOND FLOOR - ADDITION PLUMBING PLAN		●	●	●	●								●		
	P-301	ROOF - PLUMBING PLAN		●	●	●	●			●		●			●		
	P-302	ROOF - ADDITION PLUMBING PLAN		●	●	●	●			●					●		
	P-401	ENLARGED PLUMBING PLANS		●	●	●	●								●	●	
	P-402	ENLARGED PLUMBING PLANS		●	●	●	●								●		
	P-403	ENLARGED PLUMBING PLANS		●	●	●	●			●					●		
	P-404	ENLARGED PLUMBING PLANS		●	●	●	●								●		
	P-405	ENLARGED PLUMBING PLANS		●	●	●	●	●							●		
	P-406	ENLARGED PLUMBING PLANS		●	●	●	●								●		
	P-407	ENLARGED PLUMBING PLANS		●	●	●	●								●		
	P-408	ENLARGED PLUMBING PLANS		●	●	●	●								●		
	P-409	ENLARGED PLUMBING PLANS		●	●	●	●								●		
	P-410	ENLARGED PLUMBING PLANS		●	●	●	●								●		
	P-411	ENLARGED PLUMBING PLANS		●	●	●	●			●					●		
	P-412	ENLARGED PLUMBING PLANS		●	●	●	●								●		
	P-501	PLUMBING TYPICAL DETAILS		●	●	●	●			●					●		
	P-502	PLUMBING TYPICAL DETAILS		●	●	●	●								●		
	P-503	PLUMBING TYPICAL DETAILS			●	●	●								●		
	P-601	PLUMBING SCHEDULES		●	●	●	●			●					●		
	P-701	SCHEMATIC PLUMBING RISER DIAGRAMS		●	●	●	●			●					●		
ELECTRICAL	E-001	ELECTRICAL SYMBOLS / ABBREVIATIONS		●	●	●	●								●		
	E-002	ELECTRICAL SCHEDULES		●	●	●	●			●					●		
	E-003	LIGHTING SCHEDULES		●	●	●	●								●		
	E-004	ELECTRICAL RISER DIAGRAM				●	●			●					●		
	E-300	ELECTRICAL DETAILS		●	●	●	●								●		
	E-400	ELECTRICAL PANEL SCHEDULES - EXISTING		●	●	●	●								●		
	E-401	ELECTRICAL PANEL SCHEDULES - EXISTING		●	●	●	●								●		
	E-402	ELECTRICAL PANEL SCHEDULES - EXISTING		●	●	●	●								●		
	E-403	ELECTRICAL PANEL SCHEDULES - ADDITION		●	●	●	●	●	●	●					●		
	ES-101	ELECTRICAL SITE PLAN		●	●	●	●	●	●			●			●		
	EL-101	1ST FLOOR LIGHTING PLAN - EXISTING		●	●	●	●								●		
	EL-102	2ND FLOOR LIGHTING PLAN - EXISTING		●	●	●	●								●		
	EL-103	1ST FLOOR LIGHTING PLAN - ADDITION		●	●	●	●								●		
	EL-104	2ND FLOOR LIGHTING PLAN - ADDITION		●	●	●	●								●		
	EL-401	1ST FLOOR ENLARGED LIGHTING PLANS - EXISTING			●		●								●		
	EL-402	1ST FLOOR ENLARGED LIGHTING PLANS - EXISTING			●		●								●		
	EL-403	2ND FLOOR ENLARGED LIGHTING PLANS - EXISTING			●		●								●		
	EL-404	TYPICAL UNIT LIGHTING PLANS - ADDITION					●								●		
	EL-405	TYPICAL UNIT LIGHTING PLANS - ADDITION					●								●		

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ELECTRICAL	EP-101	1ST FLOOR ELECTRICAL PLAN - EXISTING		●	●	●	●								●		
	EP-102	2ND FLOOR ELECTRICAL PLAN - EXISTING		●	●	●	●								●		
	EP-103	ROOF ELECTRICAL PLAN - EXISTING		●	●	●	●								●		
	EP-104	1ST FLOOR ELECTRICAL PLAN - ADDITION		●	●	●	●								●		
	EP-105	2ND FLOOR ELECTRICAL PLAN - ADDITION		●	●	●	●								●		
	EP-106	ROOF ELECTRICAL PLAN - ADDITION		●	●		●								●		
	EP-401	1ST FLOOR ENLARGED ELECTRICAL PLANS - EXISTING		●	●		●								●		
	EP-402	1ST FLOOR ENLARGED ELECTRICAL PLANS - EXISTING		●	●		●								●		
	EP-403	2ND FLOOR ENLARGED ELECTRICAL PLANS - EXISTING		●	●		●								●		
	EP-404	TYPICAL UNIT ELECTRICAL PLANS - ADDITION					●								●		
	EP-405	TYPICAL UNIT ELECTRICAL PLANS - ADDITION					●								●		

John Grace Arms
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607 Shelby Street
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Tel: 313-961-9000
Fax:313-964-3233

REGISTRATION SEAL

KEY PLANS

SHEET TITLE
DRAWING INDEX

ISSUED FOR	DATE
Update	03.28.2024
Permits	04.12.2024
For Permit	10.25.2024
HUD Submission	12.13.2024
Permit	12.20.2024
Bulletin No. 1 (1)	02.19.2025
Bulletin No. 2 (2)	03.05.2025
Close Out Issue	12.18.2025
Bulletin No. 8 (8)	05.01.2026

DRAWN BY: EBH
CHECKED: TZ
APPROVED: JA

FILE NO. 21026.00

SHEET NO. G-001

ABBREVIATIONS:

A.F.F.	ABOVE FINISH FLOOR	F.O.	FLOOR OPENING
ALUM	ALUMINUM	FTG	FOOTING
ANOD	ANODIZED	GALV	GALVANIZED
ACT	ACOUSTICAL TILE	GC	GENERAL CONTRACTOR
AHJ	AUTHORITY HAVING JURISDICTION	GL	GLASS
BC	BOTTOM CHORD	GB	GRAB BAR
BRD	BOARD	GYP	GYPSUM
BFF	BELOW FINISH FLOOR	H.M.	HOLLOWED METAL
BLK	BLOCK	HVAC	HEATING & VENT.
BM	BEAM	JST	JOIST
BOF	BOTTOM OF FOOTING	JT	JOINT
CAB	CABINET	LD	LIVE LOAD
C.B.	CATCH BASINS	LP	LIGHT POLE
CER	CERAMIC	MAX	MAXIMUM
C.J.	CONTROL JOINT	MCM	METAL COMPOSITE MATERIAL
C.L.	CENTER LINE	MECH	MECHANICAL
CLG	CEILING	MEP	MECHANICAL, ELECTRICAL AND PLUMBING
CLOS	CLOSET		
CO	CLEAR OPENING	MIN	MINIMUM
CM	CONSTRUCTION MANAGER	MO	MASONRY OPENING
COL	COLUMN	MTL	METAL
CONC	CONCRETE	O.O.	ON CENTER
CONT	CONTINUOUS	OPH	OPPOSITE HAND
DEFS	DIRECT-APPLIED EXTERIOR FINISH SYSTEM	NIC	NOT IN CONTRACT
		NTS	NOT TO SCALE
DET	DETAIL	PL	PLATE
DIM	DIMENSION	PSF	POUNDS PER SQUARE FOOT
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DL	DEAD LOAD	PNT	PAINT
DN	DOWN	RA	RETURN AIR
DS	DOWN SPOUT	RD	ROOF DRAIN
DWG	DRAWING	REINF	REINFORCING
EA	EACH	REQ	REQUIRED
E.C.	ELEC. CONTRACTOR	RO	ROUGH OPENING
E.F.	EACH FACE	SA	SUPPLY AIR
E.J.	EXPANSION JOINT	SIM	SIMILAR
ELEC	ELECTRICAL	STL	STEEL
ELEV	ELEVATION	TB	TOWEL BAR
EXH	EXHAUST	TC	TOP CHORD
EX/EXIST	EXISTING	T & B	TOP AND BOTTOM
EXT	EXTERIOR	TBL	TOP OF BRICK LEDGE
E.W.	EACH WAY	T.O.A.	TOP OF STEEL
F&I	FURNISH AND INSTALL	T.O.P.	TOP OF PIER
FD	FLOOR DRAIN	T.O.W.	TOP OF WALL
F.F.	FINISH FLOOR	TYP	TYPICAL
F.F.E.	FINISH FLOOR ELEVATION	U.N.O.	UNLESS NOTED OTHERWISE
FND	FOUNDATION	V.I.F.	VERIFY IN FIELD
FOF	FACE OF FINISH	W/	WITH
FOG	FACE OF GYPSUM	WD	WOOD
FOM	FACE OF MASONRY	WWF	WELDED WIRE FABRIC

A.I.A	AMERICAN INSTITUTE FOR ARCHITECTS
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
CRSI	CONCRETE REINFORCING SOCIETY INSTITUTE.
MBC	MICHIGAN BUILDING CODE
MMC	MICHIGAN MECHANICAL CODE
MPC	MICHIGAN PLUMPING CODE
MEC	MICHIGAN ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
UL	UNDERWRITERS LABORATORIES

CODE CRITERIA:

CONSTRICTION TYPE - IIIB:	UL DESIGN NO. (UN RESTRAINED)	REQUIRED (HOURS)	PROVIDED (HOURS)
PRIMARY STRUCTURAL FRAME:			
COLUMNS	NA	0	0
FLOOR JOISTS / BEAMS	NA	0	0
ROOF JOISTS / BEAMS	NA	0	0
BEARING WALL:			
EXTERIOR	No. U905	2	2
INTERIOR		0	0
NON BEARING WALLS & PARTITIONS:			
EXTERIOR	NA	0	0
INTERIOR	NA	0	0
FLOOR CONSTRUCTION *	No. D902	1	1
ROOF CONSTRUCTION	NA	0	0
SHAFTS ENCLOSURES (MBC 713.4)	No. U905	1	1
FIRE PARTITIONS ** (MBC 708.1.1)	No. U905, U415 & NER258 SYSTEM G	1	1
CORRIDORS (MBC 708.1.3)	No. U905 & U419	1/2	1/2
EXIT PASSAGEWAYS	No. U905/ No. U419	1	1

* PER FLOOR ASSEMBLIES REQUIREMENTS IN MBC 711.2..4.3 ONLY. NO FIRE RESISTANCE RATING IS REQUIRED FOR THE BUILDING ELEMENT IN MBC 601.

** FIRE PARTITIONS = TENANT SEPARATION WALLS.

OPENINGS IN EXTERIOR WALLS:
MBC - 705.8 NOT LIMIT
MBC - 705.8.2 NOT REQUIRED TO BE PROTECTED

MISCELLANEOUS CRITERIA:

MBC - 1004.1.2	OCCUPANT LOAD	200 GSF
MBC - 1005.3.1	STAIRWAYS WIDTHS	0.20 IN / OCCUPANT
MBC - 1005.3.2	OTHER COMPONENTS WIDTHS	0.15 IN / OCCUPANT
MBC - 1006.2.1	COMMON PATH OF EGRESS	125 FT
MBC - 1006.2.1	MAXIMUM OCCUPANT LOAD	10 OCCUPANTS
MBC - 1017.2	TRAVEL DISTANCE	250 FT
MBC - 1020.4	DEAD END CORRIDOR	20 FT

EGRESS WIDTH WITH AUTOMATIC SPRINKLER SYSTEM AND VOICE FIRE ALARM COMMUNICATION SYSTEM (MBC-907.5.2.2):
MBC - 1005.3.1.1 - STAIRS 0.30" PER OCCUPANT
MBC - 1005.3.2.1 - OTHER EGRESS COMPONENTS 0..20" PER OCCUPANT

STAIRS:
PER MBC - 1011: 44" MINIMUM WIDTH CAPACITY 80" MINIMUM HEADROOM

EXISTING BUILDING CONSTRUCTION:

USE GROUP: PROPOSED R-2 - CONDOMINIUMS CURRENTLY UN-OCCUPIED (PREVIOUSLY CONSTRUCTED FOR SCHOOL USE)

CONSTRUCTION CLASS: IIIB
NUMBER OF STORIES: 2 WITH PARTIAL BASEMENT
FIRE PROTECTION: NOT PROTECTED

BUILDING HEIGHTS:
SLOPPED ROOF MID POINT +/- 20'
PARAPETS +/- 34' & +/- 16'

BUILDING AREAS:

BASEMENT	192 SF
GROUND LEVEL	20,157 SF
SECOND LEVEL	4,597 SF
TOTAL	24,946 SF

ALLOWED BUILDING HEIGHT AND AREA:

(SECTION 504 & 506)
CONSTRUCTION TYPE: IIIB
HEIGHT (STORIES): 4
- BASE AREA - NS: 16,000 SF
- BASE AREA - S13R: 16,000 SF

AREA INCREASE - TYPE IIIB CONSTRICTION:
SINGLE OCCUPANCY, MULTI STOREY.

AREA INCREASE (506.2.3):

$$Aa = [\,A_t + (\,NS \times I_f\,)\,] \times S_a$$

[16,000 + (16,000 x 0.75)] x 2
56,000 SF TOTAL BUILDING ALLOWABLE AREA
28,000 SF TOTAL ALLOWABLE AREA PER FLOOR

FRONTAGE INCREASE (506.3.3):
If = [F/P - 0.25] W / 30
[(778 / 778) - 0.25] 30/30
0.75

EXISTING BUILDING CODE NARRATIVE:

1. EXISTING BUILDING IS CURRENTLY UNOCCUPIED.
2. A SMALL BASEMENT LEVEL IS NOT OCCUPIED FOR ANY USE AND WAS/IS ONLY SERVING EXISTING UTILITIES AND WILL REMAIN AS IS AND IT IS NOT TO BE OCCUPIED.
3. EXISTING BUILDING IS NOT PROTECTED WITH A FIRE SUPPRESSION SYSTEM.
4. PROPOSED BUILDING RENOVATION WILL HAVE A FULL FIRE PROTECTION SYSTEM THROUGHOUT ALL FLOORS.
5. FIRE PROTECTION SPRINKLER SYSTEM IS NOT SHOWN ON THESE DRAWINGS AND IS BY CONTRACTOR IN COORDINATION TO SUBMIT TO AUTHORITY FOR REVIEW AND APPROVAL.

CODES AND STANDARDS REFERENCES:

ALL CONTRACTORS TO COMPLY WITH ALL FEDERAL, STATE, CITY AND LOCAL CODES WHERE APPLICABLE. ALL CONSTRUCTION SHALL COMPLY TO THE FOLLOWING.:

- 2015 MICHIGAN BUILDING CODE (MBC).
- 2021 MICHIGAN MECHANICAL CODE - 2021 IMC WITH PART 9A AMENDMENTS AND ADDITIONS (MMC).
- 2021 MICHIGAN PLUMBING CODE - 2021 IPC WITH PART 7 AMENDMENTS AND ADDITIONS (MPC).
- 2023 MICHIGAN ELECTRICAL CODE - NFPA 70: 2023 NATIONAL ELECTRICAL CODE WITH PART 8 AMENDMENTS AND ADDITIONS (MEC)
- 2009 ICC/ANSI A117.1 AND MICHIGAN BARRIER FREE DESIGN LAW P.A. 1 OF 1966 AS AMENDED.
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) WITH 2013 ASHRAE STANDARD 90.1 STANDARD INCLUDING AMENDMENTS.
- 2015 MICHIGAN UNIFORM ENERGY CODE, PART 10A (MEC
- NFPA 13 - INSTALLATION OF SPRINKLER SYSTEM
- NFPA 70 - NATIONAL ELECTRICAL CODE
- NFPA 101 - LIFE SAFETY CODE
- CITY OF SOUTHFIELD ZONING ORDINANCE AND CODES
- MICHIGAN ELEVATOR CODE
- UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS)

ADDITIONAL REQUIRED REFERENCES:

IN ADDITION TO THE ABOVE CODES AND AUTHORITIES HAVING JURISDICTIONS , ALL WORK TO COMPLY WITH ADDITIONAL REQUIREMENTS FOR THIS PROJECT . ALL CONSTRUCTION SHALL COMPLY TO THE FOLLOWING.:

- THIS BUILDING IS A HISTORIC REHABILITATION PROJECT.
- MSHDA STANDARDS OF DESIGN - DECEMBER 7 2022
- PHIUS 2021 - PASSIVE BUILDING STANDARD CERTIFICATION GUIDEBOOK (V 3.2 - JULY 2023)
- HUD - SECTION 202 SUPPORTIVE HOUSING FOR THE ELDERLY PROGRAM

FLOOR PLAN SYMBOL LEGEND:

- 1 HOUR FIRE BARRIER WALL CONSTRUCTION (ELEVATOR / STAIRS)
- 1 HOUR FIRE PARTITION WALL CONSTRUCTION (DWELLING SEPARATION)
- 1 HOUR FIRE PARTITION WALL CONSTRUCTION (CORRIDORS)
- F.E.C. FIRE EXTINGUISHER CABINET (75' MAX. TRAVEL DISTANCE)
- # OCCUPANT LOAD EXITING THROUGH EGRESS COMPONENT
- # OCCUPANT CAPACITY OF EGRESS COMPONENT
- (50) OCCUPANT LOAD
- F.D.C. FIRE DEPARTMENT CONNECTION (COORDINATE LOCATION WITH LOCAL FIRE DEPARTMENT)
- KB KNOCK BOX (COORDINATE LOCATION WITH LOCAL FIRE DEPARTMENT)

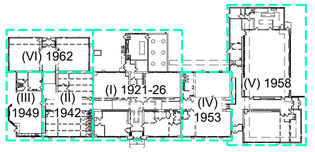
G.C. / C.M. TO FIELD VERIFY AND CONFIRM THE EXISTING SECOND FLOOR CONCRETE FLOOR DECK IS HAS A MINIMUM THICKNESS OF A CONSTANT 2-1/2" TO MEET FIRE RATING AT ALL LOCATIONS.

EXISTING BUILDING CONSTRUCTION

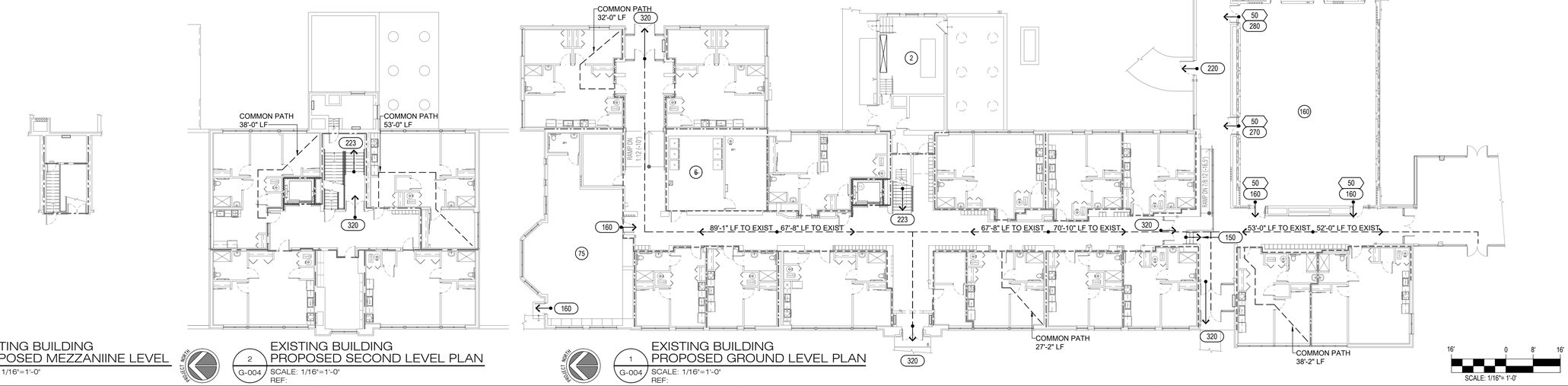
FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS

PRIMARY STRUCTURAL FRAMES CONSIST OF MASONRY BEARING WALLS AND SOME STEEL COLUMNS

ZONE	FLOOR CONSTRUCTION	ROOF CONSTRUCTION
I	FIELD VERIFY. CRAWL SPACE OBSERVED IN EXISTING MAIN LOBBY (NEW CORRIDOR 101). POSSIBLE CRAWL SPACE UNDER ENTIRE ZONE 1 AREA	NA
II	SECOND FLOOR: UNABLE TO OBSERVE. PER ORIGINAL BUILDING DRAWINGS - 2" CONCRETE SLAB OVER 3/4" RIBBED EXP. METAL LATH	OBSERVED 10" JOISTS AT 30" OR 36" O.C. WITH 1x WOOD DECKING
III	FIELD VERIFY. PER OHM UNDERGROUND INVESTIGATION, CRAWL SPACE / TUNNELS ARE PRESENT BELOW THE MAJORITY OF THIS AREA	OBSERVED 2x12 WOOD JOISTS @16" O.C. WITH 1x WOOD DECKING
IV	FIELD VERIFY. PER OHM UNDERGROUND INVESTIGATION, CRAWL SPACE / TUNNELS ARE PRESENT BELOW THIS AREA	FIELD VERIFY. UNABLE TO OBSERVE.
V	NA	FIELD VERIFY. UNABLE TO OBSERVE. UNABLE TO OBSERVE. EXISTING GYMNASIUM - LONG SPAN METAL CEILING PANEL BEARING ON STEEL A-FRAME STRUCTURE.
VI	FIELD VERIFY. PER OHM UNDERGROUND INVESTIGATION, CRAWL SPACE / TUNNELS ARE PRESENT BELOW THIS AREA	PER ORIGINAL BUILDING DRAWINGS: STEEL BEAMS WITH 2" TECTUM BOARD DECKING



4 G-004 EXISTING BUILDING CONSTRUCTION ZONES
SCALE: NOT TO SCALE
REF:



3 G-004 EXISTING BUILDING PROPOSED MEZZANIINE LEVEL
SCALE: 1/16"=1'-0"
REF:

2 G-004 EXISTING BUILDING PROPOSED SECOND LEVEL PLAN
SCALE: 1/16"=1'-0"
REF:

1 G-004 EXISTING BUILDING PROPOSED GROUND LEVEL PLAN
SCALE: 1/16"=1'-0"
REF:

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REGISTRATION SEAL

KEY PLANS

STATE OF MICHIGAN
ZHADDEUS C ZAKRZEWSKI
License No. 1301026315
LICENSED ARCHITECT
12/19/2024

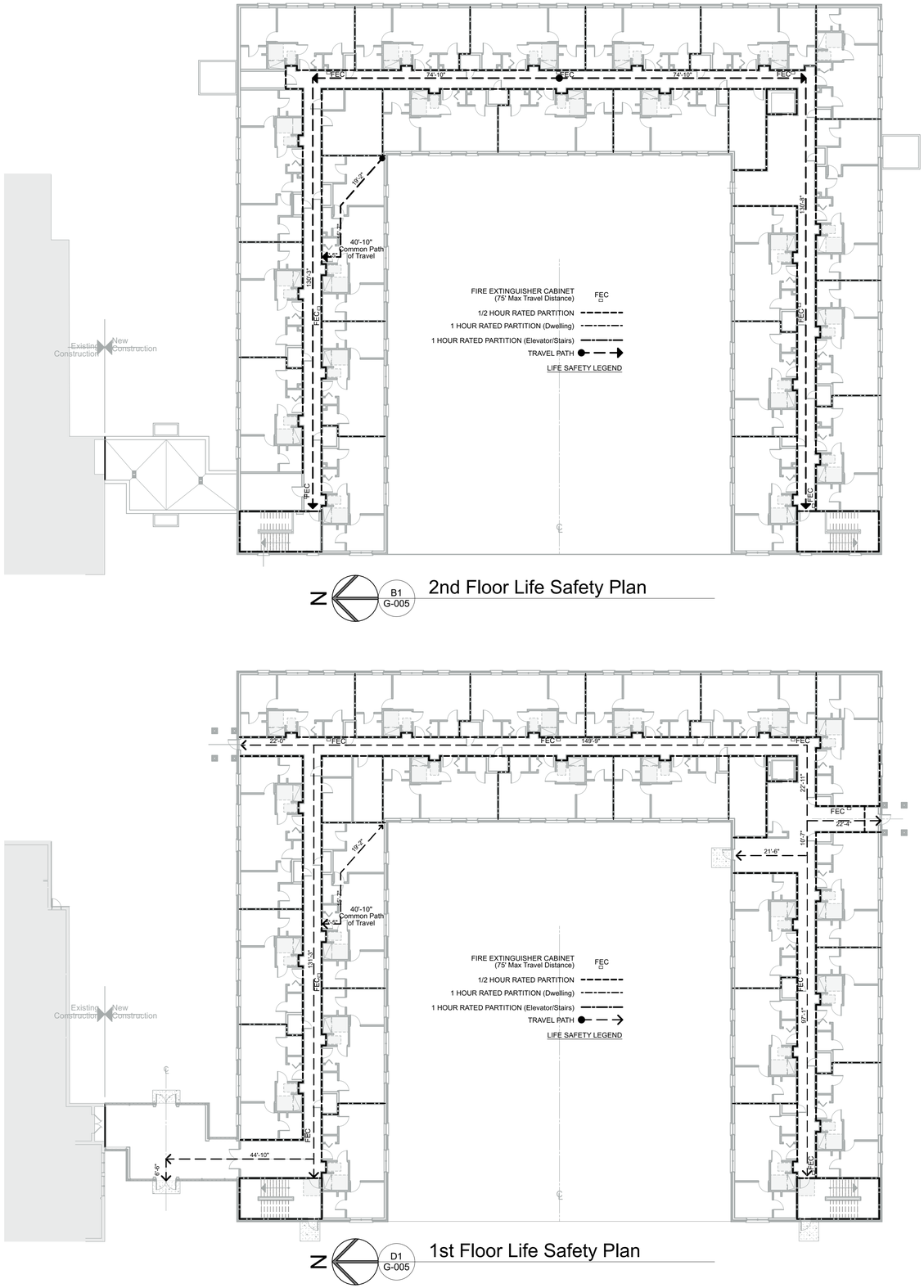
SHEET TITLE
EXISTING BUILDING GENERAL INFORMATION AND LIFE SAFETY
SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024

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APPROVED

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FILE NO.

G-004
SHEET NO.



N B1 G-005

2nd Floor Life Safety Plan

N D1 G-005

1st Floor Life Safety Plan

New Building Architectural Sheet Index

Number	Sheet Name
G-005	Addition Code Review
G-006	Addition Assemblies
A-301	1st Floor Plan
A-304	2nd Floor Plan
A-331	Roof Plan
A-361	1B Unit Plans
A-362	2B Unit Plans
A-363	North Connector Area Plans
A-364	South Common Area Plans
A-365	West Stair Plans
A-461	1st Floor Ceiling Plan
A-462	2nd Floor Ceiling Plan
A-550	Elevations
A-551	Elevations Courtyard
A-552	Sections
A-553	Entry Elevations and Sections
A-602	Typical Mounting Details
A-603	Wall Sections
A-604	Wall Sections
A-605	Details
A-606	Details
A-607	Window Details
A-903	Room Finish Schedule
A-904	Door and Window Scheudle

Code Compliance Analysis and Project Data

City of Southfield Current Building Codes

2015 Michigan Building Code
2015 Michigan Rehab Code
2021 Michigan Plumbing Code - 2021 IPC with Part 7 amendments and additions
2021 Michigan Mechanical Code - 2021 IMC with Part 9A amendments and additions
2015 Michigan Residential Code
2023 MEC, Michigan Electrical Code NFPA 70: 2023 National Electrical Code with Part 8 amendments and additions
A117.1-2009 Accessible and Usable Buildings and Facilities
2021 International Fire Code as referenced in the 2021 Michigan Mechanical Code
2015 International Property Maintenance Code

Health Regulation
Oakland County Heath Department
27725 Greenfield Road
Southfield, Mi. 480769-3625

American Wood Council
Underwriters Laboratory

USE GROUP MBC Sect 310	Residential Group R-2	
TYPE OF CONSTRUCTION MBC Sect 602	Type V A (5A, all building elements of any material. 1-Hour fire resistance rating of structure), with approved automatic sprinkler system	
ALLOWABLE HEIGHT AND AREA MBC Table 503	Group R2, SM (sprinkler multistory system per Sect. 903.1.1) Area Allowable 36,000 sf per floor (T506.2) Height Allowable 4 Stories (T 504.4) 70'-0" max (T 504.3)	
ACTUAL HEIGHT AND AREA AREA HEIGHT	1st Floor 21,118 SF < 36,000 2nd Floor 19,817 SF < 36,000 2 Stories < 4 Stories 29' < 70'-0"	
ALLOWANCE PER OCCUPANT PER FLOOR MBC Table 1004.1.2	Residential 200 sf gross / Occupant	
CALCULATED OCCUPANCY LOAD PER RLOOR		Per Code
	1st Floor Residential 21,118 SF / 200 sf gross =	106 Occupants
	2nd Floor Residential 19,817 SF / 200 sf gross =	99 Occupants
	TOTAL	205 Occupants
MEANS OF EGRESS		
Max Exit Access Travel Distance (MBC T1017.2)	250'-0" w/ Fire Suppression System	Provided: See Life Safety Plans
Max Dead End Corridor (MBC 1020.4)	50'-0" w/ Fire Suppression System	Provided: See Life Safety Plans
Min Corridor and Stair Width (MBC T1020.2 & 1005.3.2) (MBC 1009.4 & 1005.3.1) (MBC 1011.2)	44" Min	Provided: See Plans
Min Number of Exits (MBC 1006.3.1)	(2) per floor with Occupant Load 1-500	Provided 2 per floor above grade
FIRE SEPARATION		
MBC Sect T1023.2	Interior Exit Stairway Fire Barrier (Connection Less than 4-Stories)	Wall: 1 Hour Fire Rating Fire Door: 1 Hour (MBC T.716.5) Vision: 100 sq in
MBC Sect 713.4	Shaft Enclosure (Elevator) (Connection Less than 4-Stories)	Wall: 1 Hour Fire Rating Fire Door: 1 Hour (MBC T.716.5) Vision: 100 sq in
MBC Sect T 1020.1	Residential Corridor Wall Fire Partition Greater than 10 occupants (Sprinkled)	Wall: 0.5 Hour Fire Rating Fire Door: 1/3 Hour (MBC T.716.5) (20 mins)
MBC Sec 708	Fire Partitions Walls Separating dwelling units	1 Hour
MBC Sec 711	Horizontal Assemblies Floors Separating dwelling units	1 Hour

Statement of Special Inspections

CONSTRUCTION OPERATION	CODE SECTION	SPECIAL INSPECTIONS REQ'D YES	SPECIAL INSPECTIONS REQ'D NO	AGENCY TO PERFORM SPECIAL INSPECTION
STEEL CONSTRUCTION	(1704.3)	X	-	TBD
CONCRETE CONSTRUCTION	(1704.4)	X	-	TBD
MASONRY CONSTRUCTION	(1704.5)	X	-	TBD
WOOD CONSTRUCTION	(1704.6)	X	-	TBD
SOILS	(1704.7)	X	-	TBD
PILE FOUNDATIONS	(1704.8)	-	X	-
PIER FOUNDATIONS	(1704.9)	-	X	-
WALL PANELS AND VENEERS	(1704.10)	-	X	-
SPRAY FIRE-RESISTANT MTLS	(1704.11)	-	X	-
EXTERIOR INSULATION/FINISH	(1704.12)	-	X	-
SPECIAL CASES	(1704.13)	-	X	-
SMOKE CONTROL	(1704.14)	-	X	-

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REGISTRATION SEAL

KEY PLANS

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01/07/2025

SHEET TITLE
Addition Code Review

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024

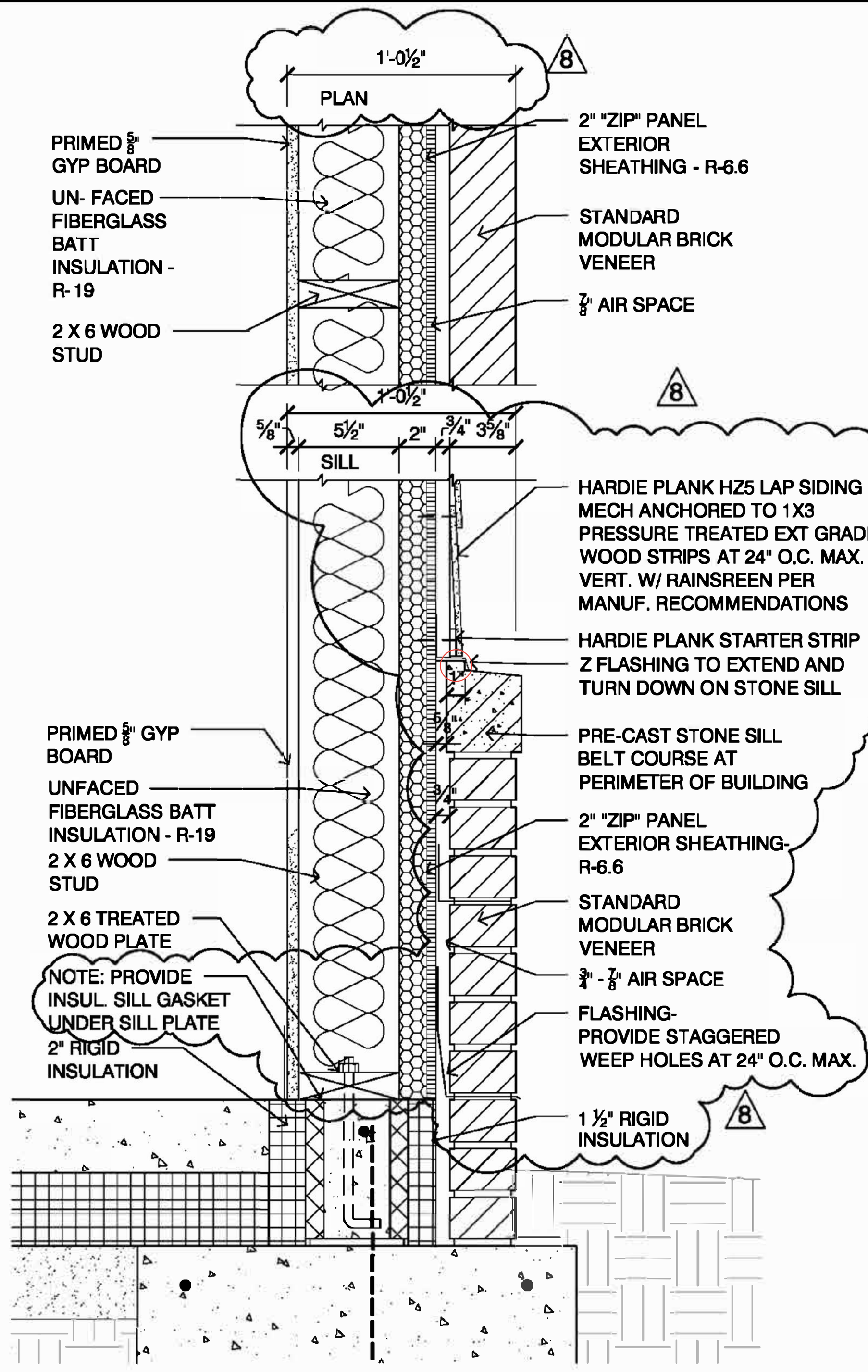
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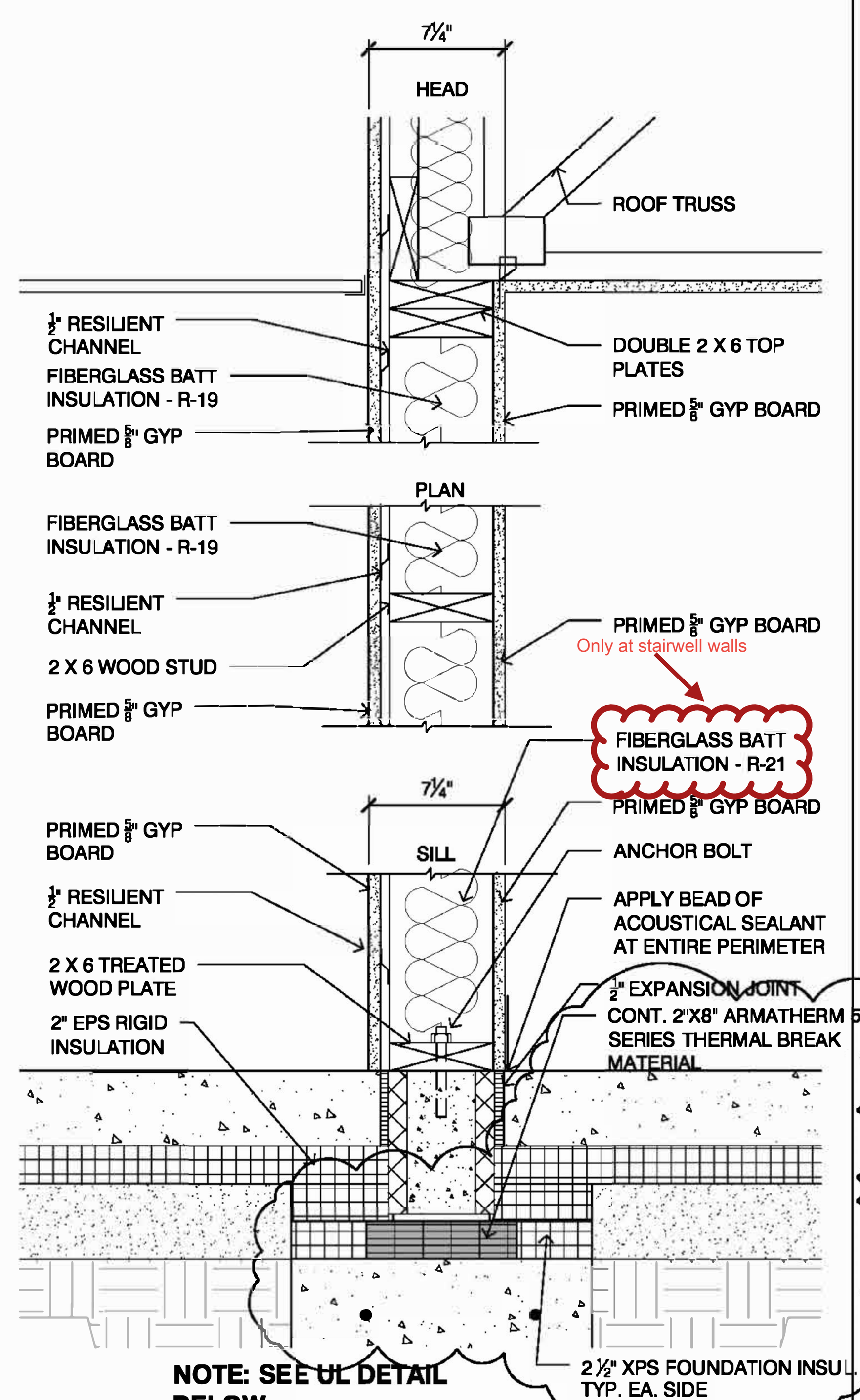
G-005
SHEET NO.

/Volumes/enright/Shared/Projects/-SDG/23-460_SDG_John_Grace_Housing/5_Disciplines-Design/Architectural/CAD/CD/John_Grace_CD_6.4.pln
Printed: Tuesday, January 7, 2025

John Grace Arms
21030 Indian St, Sout hfi eMd 48033
Developed by
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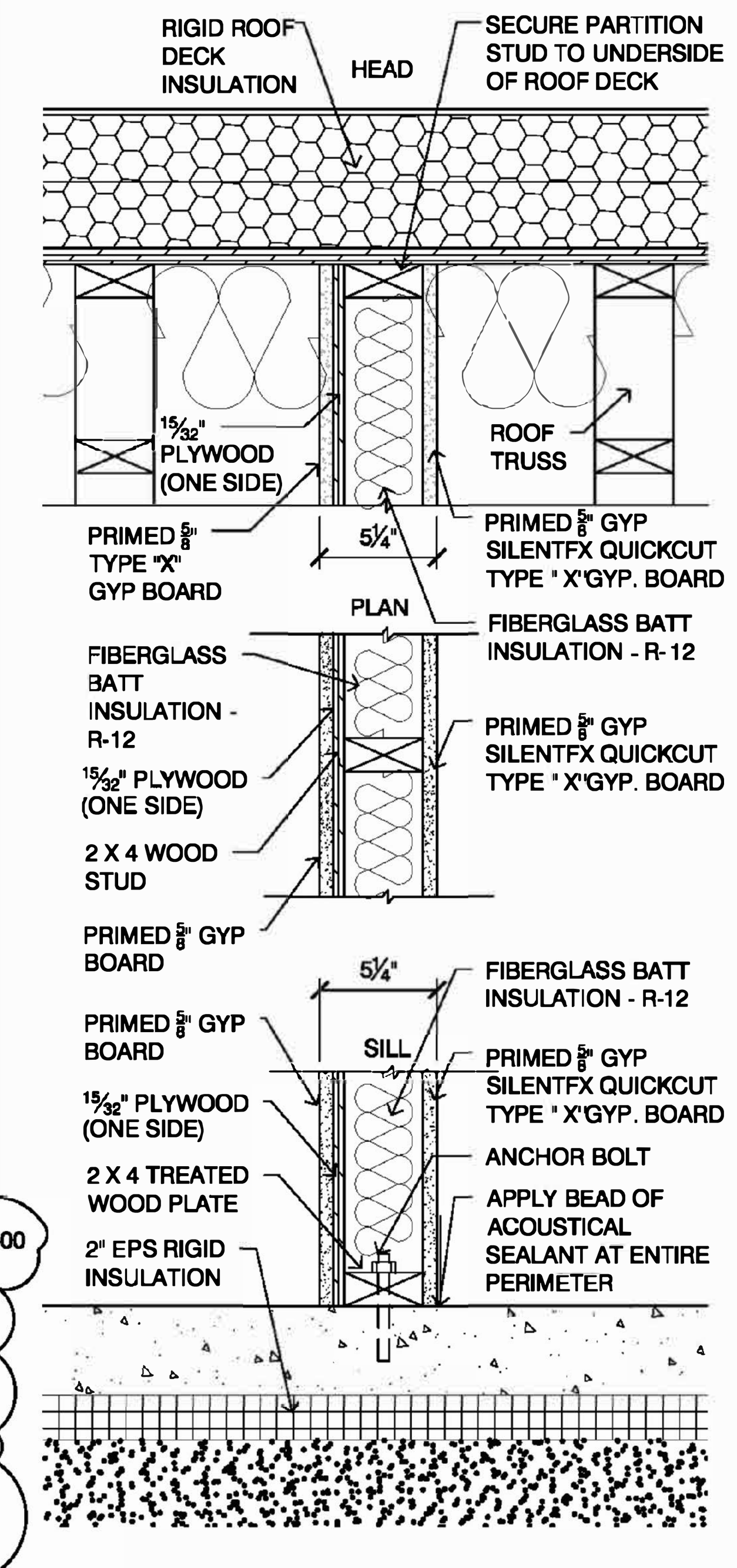
B1 G-006 **Wall Type W1/ W6 Exterior Wall - Brick / Wood Stud**
SCALE: 1 1/2" = 1'-0"



NOTE: SEE UL DETAIL BELOW

B-2 G-006 **Wall Type W2 - Interior Corridor Wall**
SCALE: 1 1/2" = 1'-0"

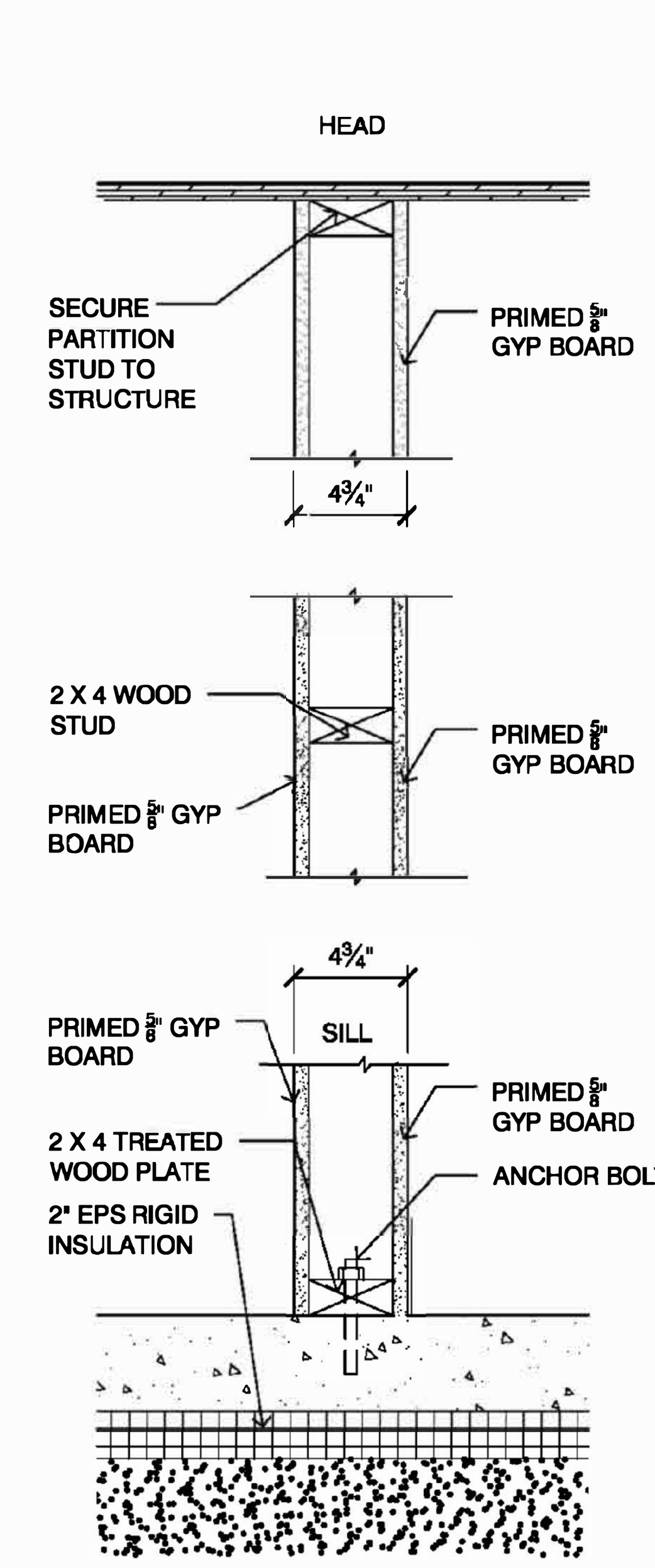
STC 51
FIRE RATED - 1 HR
UL U305



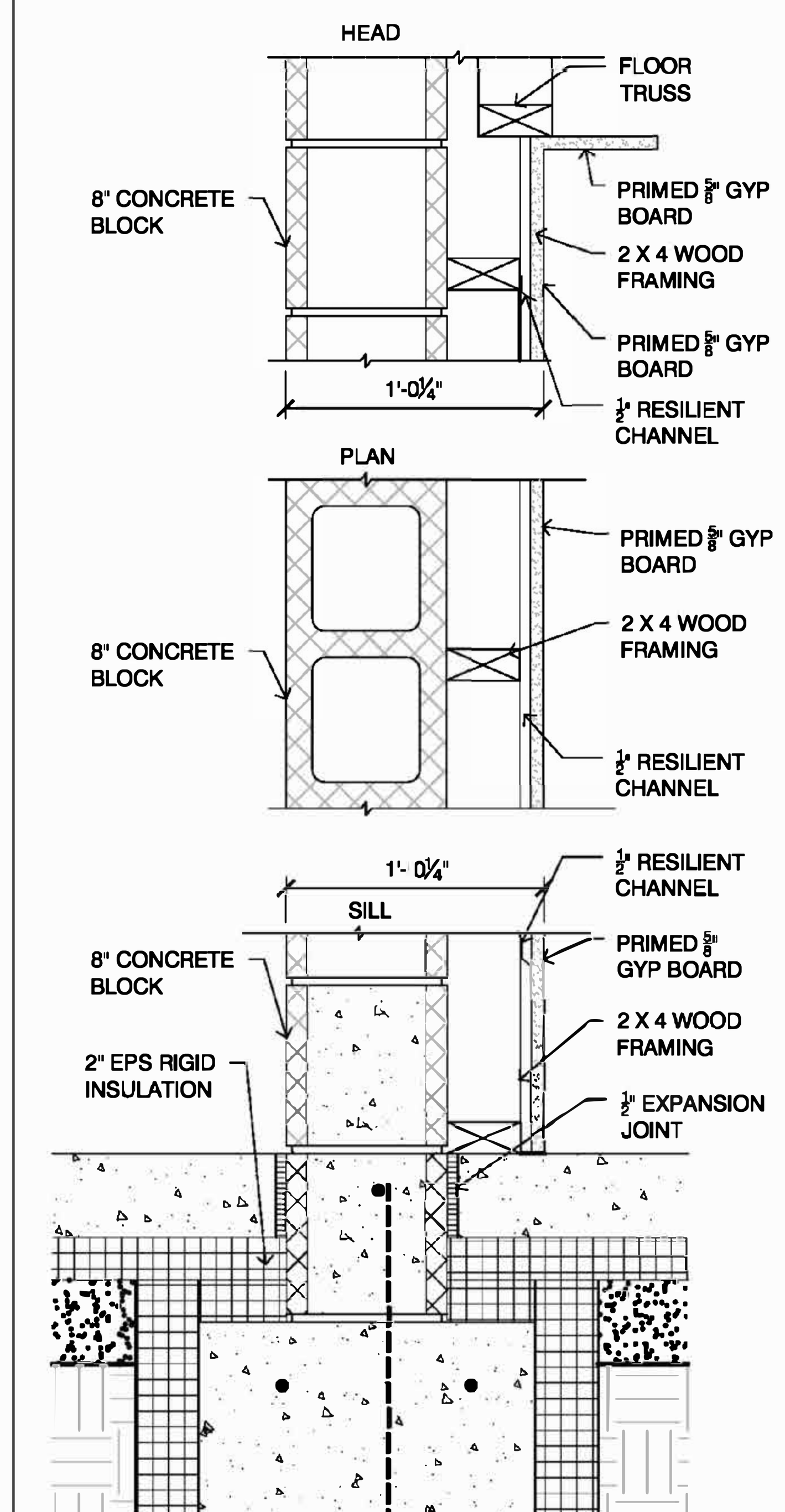
NOTE: SEE UL DETAIL BELOW

B3 G-006 **Wall Type W3 - Interior Units**
SCALE: 1 1/2" = 1'-0"

STC 56 VERIFY
FIRE RATED - 1 HR
UL U344



B4 G-006 **Wall Type W4 - Typ.Partition**
SCALE: 1 1/2" = 1'-0"



B5 G-005 **Wall Type W5 - Concrete Block**
SCALE: 1 1/2" = 1'- 0"

NOTE:
WALL TYPES INDICATED FOR BUILDING ADDITION ONLY

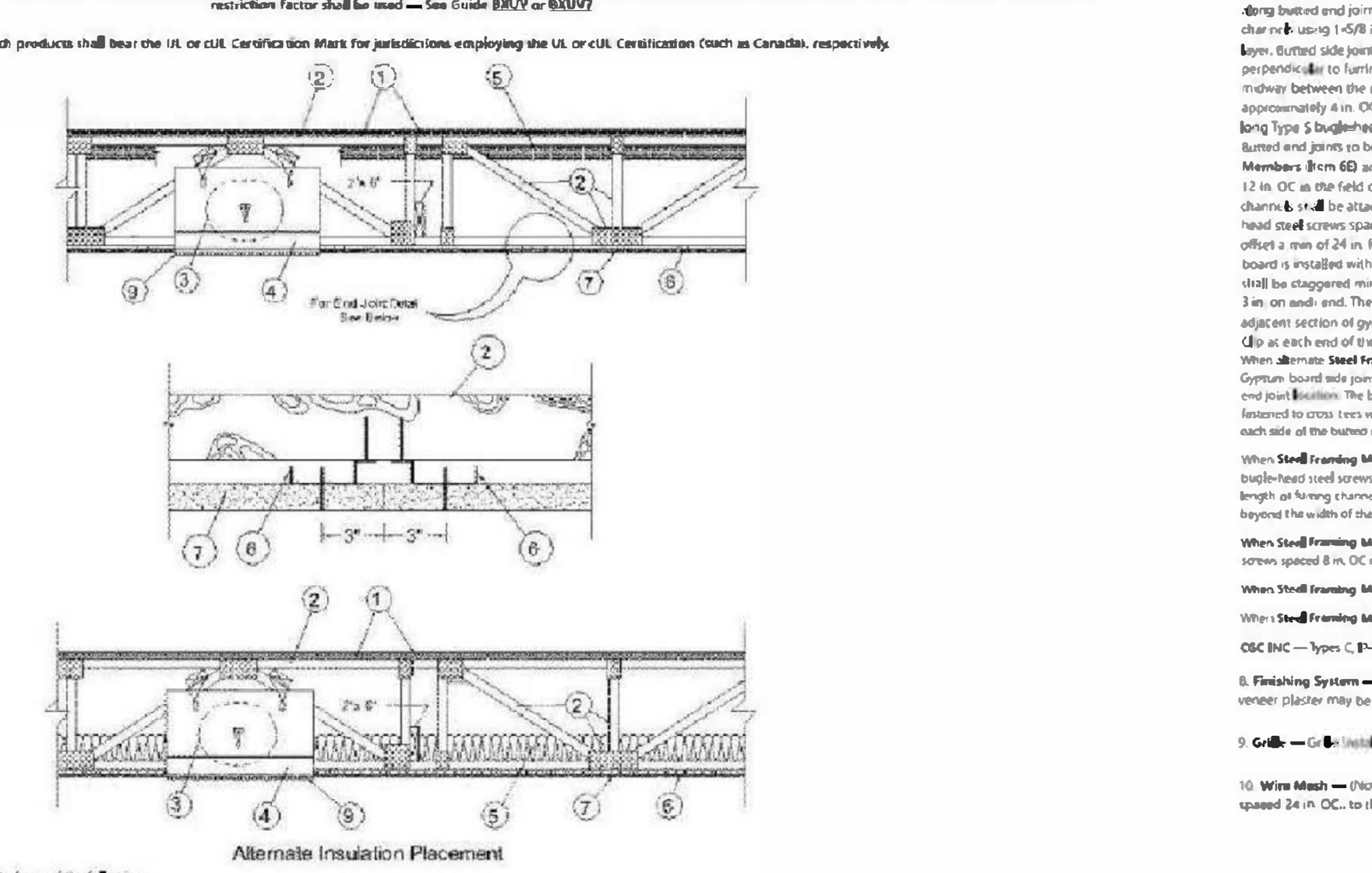
Design/System/Construction/Assembly Usage Disclaimer

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

Design No. L521

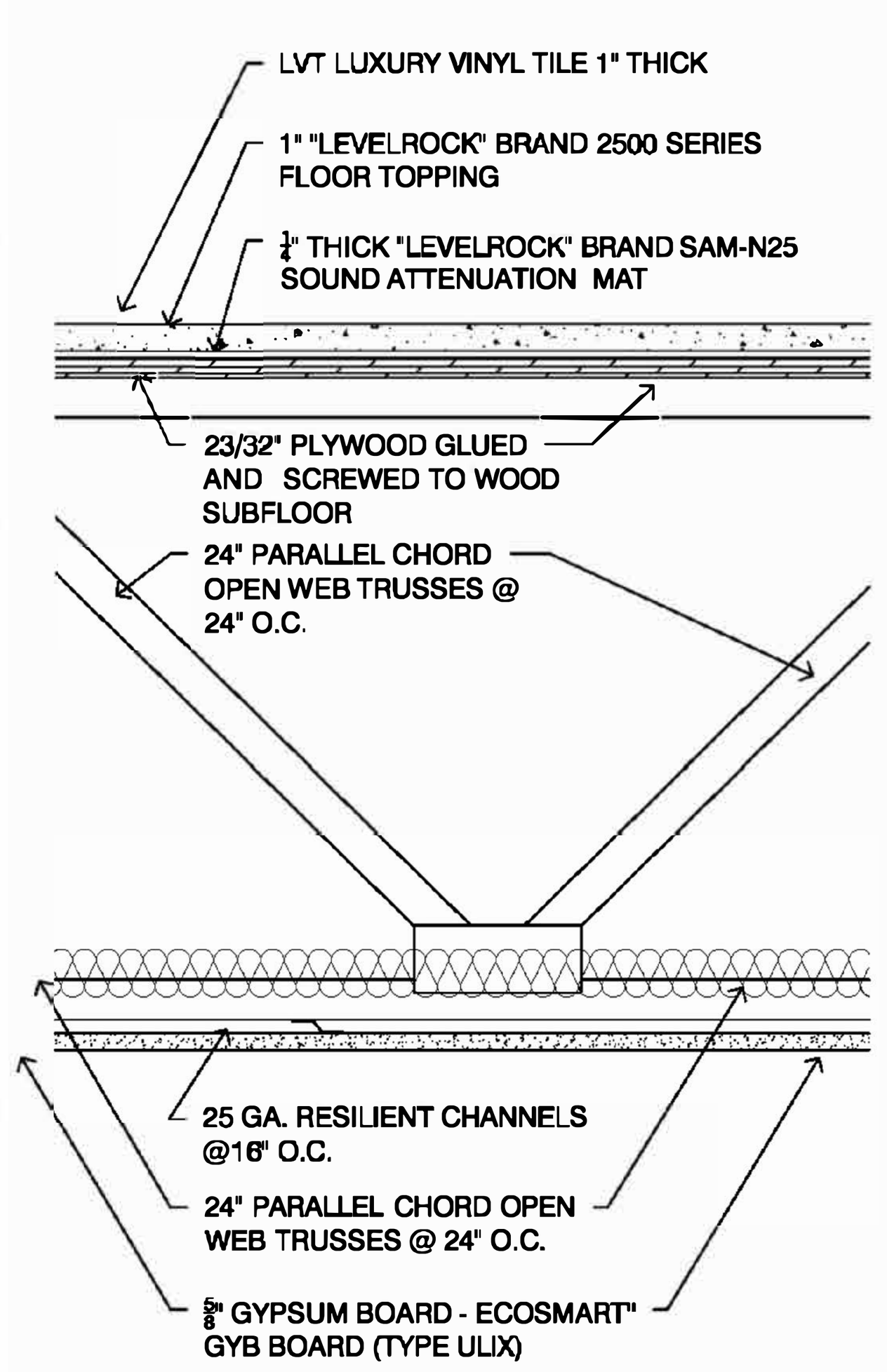
December 18, 2024

Unrestrained Assembly Rating — 1 Hr
Finish Rating — 25 Min (See Items 5 and 5A), 20 Min (See Items 6H and 7A)



Alternate Insulation Placement

D1 G-006 **UL Specification - UL #L521**
SCALE: No Scale



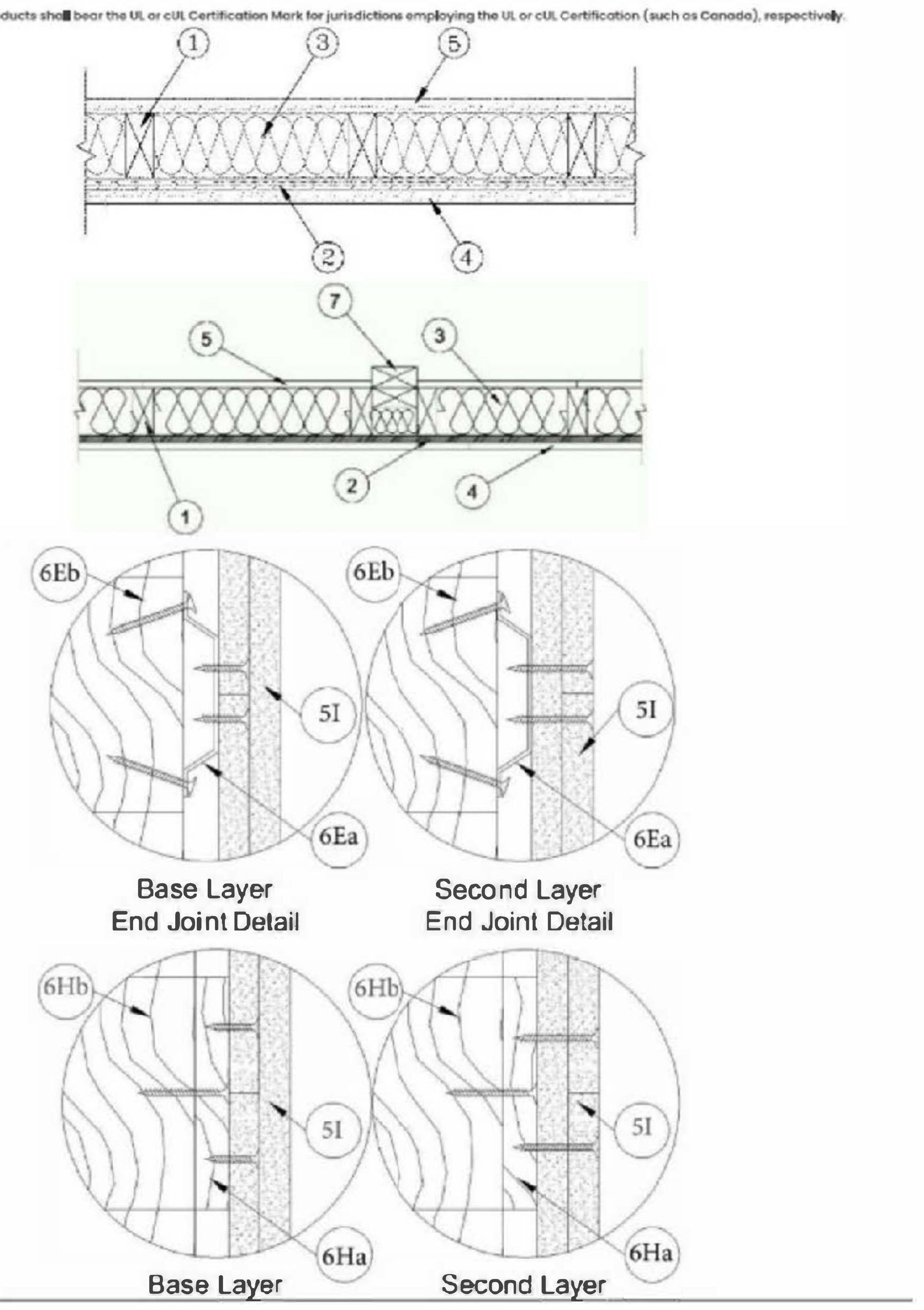
STC RATING 59
IIC RATING 48
FIRE RATED - 1 HR
UL L521

D2 G-006 **UL Floor Assembly - UL - 521**
SCALE: 1 1/2" = 1'- 0"

Design No. U344

November 14, 2025

Bearing Wall Rating — 1 Hr.
Finish Rating — 24 Min.



D3 G-006 **UL Specification - UL #U344**
SCALE: No Scale

SDG Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-9000
Fax: 313-964-3233

REGISTRATION SEAL

STATE OF MICHIGAN THADDEUS C ZAKRZEWSKI License No. 1301020315 LICENSED ARCHITECT

KEY PLANS

SHEET TITLE
Addition Assemblies

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1 ⚠1	02.19.2025
BULLETIN #2 ⚠2	03.05.2025
BULLETIN #6 ⚠6	12.12.2025
BULLETIN #8 ⚠8	05.01.2026

DWP
DRAWN BY
JA
CHECKED
APPROVED
21026.00
FILE NO.
G-006
SHEET NO.

DEMOLITION GENERAL NOTES:

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(A) EXISTING LOCKERS TO BE PROTECTED AND PRESERVED IN PLACE.

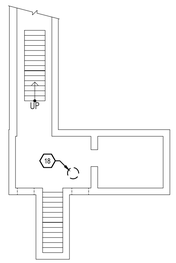
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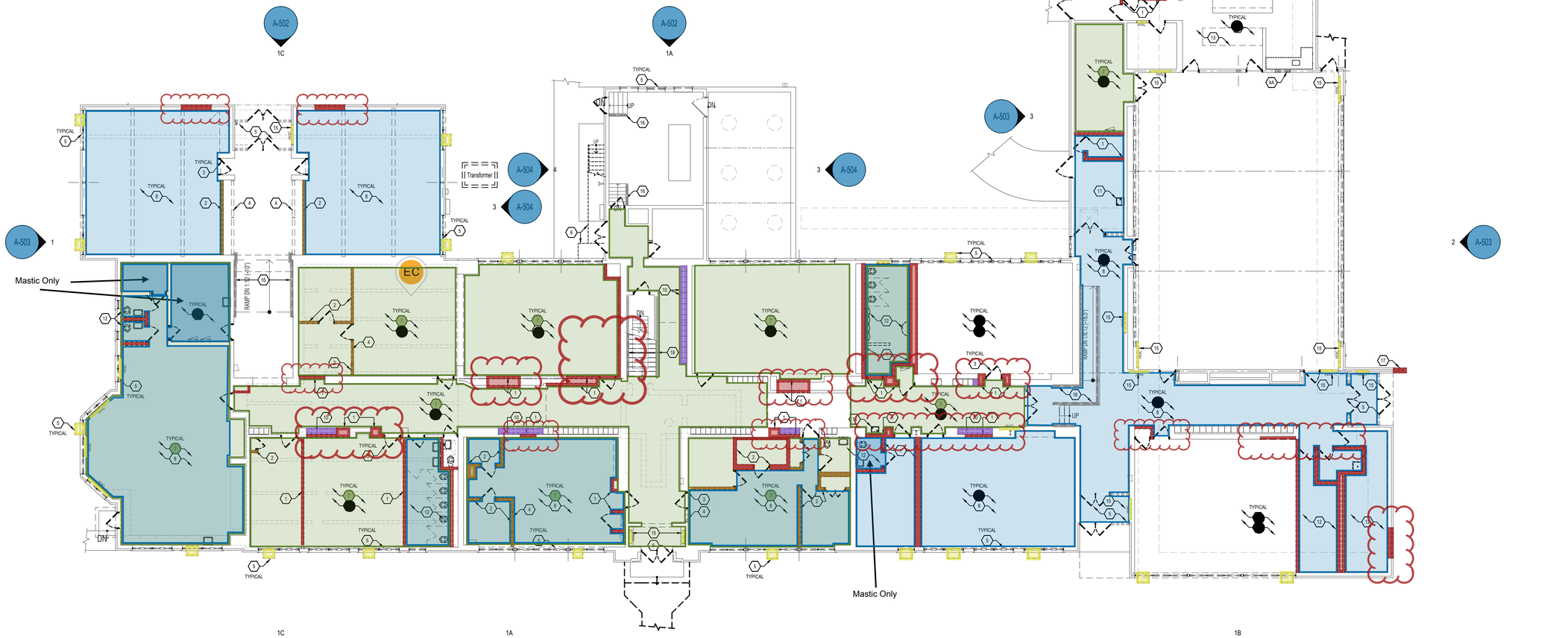
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2 / A-201 BASEMENT PLAN - EXISTING BUILDING
SCALE: 3/32"=1'-0"
REF:



1 / A-201 GROUND LEVEL PLAN - EXISTING BUILDING
SCALE: 3/32"=1'-0"
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10' 0 5' 10'
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License No. 1301020315
LICENSED ARCHITECT
12/19/2024

SHEET TITLE
GROUND LEVEL PLAN
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SCALE:

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Permits	04.12.2024
Permits	10.25.2024
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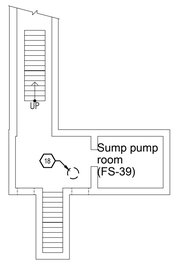
FILE NO. 21026.00

SHEET NO. A-201

Abatement Demo

ACM's 3 24-16496 Asbestos ...
24-16496 Asbestos ...
01-9914-0-0002 210...

- Flooring tile only
- Flooring & Mastic
- Ceiling
- Insulation (Pipe Wrap)
- Door & Frames
- Window Sills
- Caulking
- Wall Material
- Light Heat Shield
- Window Glazing
- Window Transite Panel



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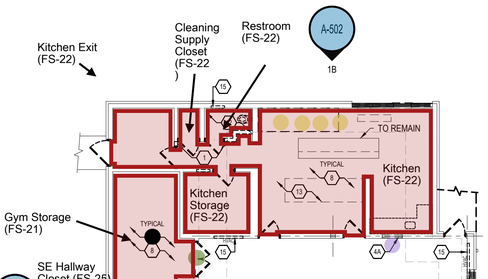
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SCALE: 3/32"=1'-0"
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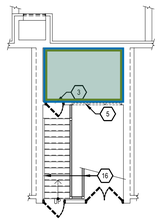
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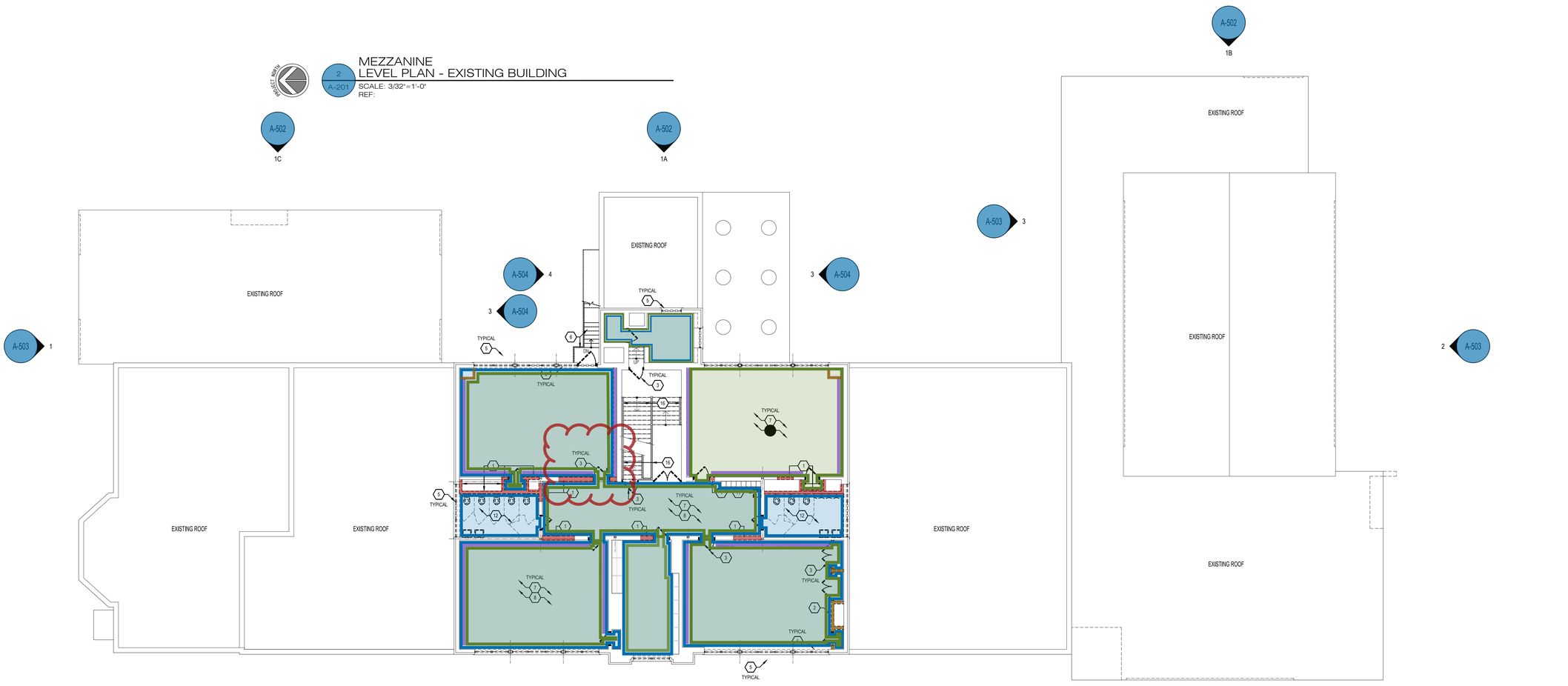
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2 A-201 MEZZANINE LEVEL PLAN - EXISTING BUILDING
SCALE: 3/32"=1'-0"
REF:

1 A-201 SECOND LEVEL PLAN - EXISTING BUILDING
SCALE: 3/32"=1'-0"
REF:

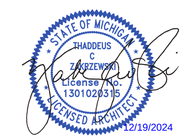
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607 Shelby Street
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Detroit, MI 48226
Tel: 313-961-8000
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REGISTRATION SEAL

KEY PLANS



SHEET TITLE
SECOND LEVEL
FLOOR PLAN
EXISTING BUILDING

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024

DRAWN BY: EBH
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APPROVED:

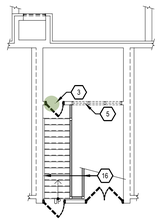
FILE NO. 21026.00

SHEET NO. A-202

Abatement Demo

ACM's 3 24-16496 Asbestos ...
01-9914-0-0002 210...
24-16496 Asbestos ...

- Flooring tile only
- Flooring & Mastic
- Ceiling
- Insulation (Pipe Wrap)
- Door & Frames
- Window Sills
- Caulking
- Wall Material
- Light Heat Shield
- Window Glazing
- Window Transite Panel



DEMOLITION GENERAL NOTES:

1. COORDINATE ALL WORK WITH ENVIRONMENTAL REPORTS FOR ANY FINISHES AND / OR MATERIALS THAT ARE TO REMAIN AND / OR TO BE ENCAPSULATED.
2. CONTRACTORS ARE RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING THE EXISTING CONDITIONS PRIOR TO COMMENCING DEMOLITION AND / OR CONSTRUCTION.
3. ALL DEMOLITION INFORMATION IS PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH THE NEW WORK. THE DEMOLITION INFORMATION PROVIDED HERE MAY NOTE TYPICAL ITEMS IN SOME AREAS, WHICH APPLY IN OTHER AREAS (AND ARE DESIGNATED WITH DASHED, HIDDEN OR STRUCK THRU LINES). COORDINATE ALL DEMOLITION WORK WITH OWNER AND OTHER CONTRACTORS.
4. WHERE EXISTING WALLS ARE INDICATED TO BE REMOVED TO UNDER SIDE OF EXISTING CEILING OR PARTIAL HEIGHT: PRIOR TO ANY DEMOLITION, FIELD VERIFY ALL ITEMS ON AND IN WALLS (ELECTRICAL, PLUMBING, ETC....) FOR PROPER DISCONNECT OR RELOCATION.
5. REMOVE ELECTRICAL BACK TO PANEL OR LAST CONNECTION POINT.
6. ALL REMOVED ITEMS, WALLS, FLOORS, CEILINGS, OPENINGS, ETC. ARE TO BE PATCHED/REPAIRED AND PREPPED TO RECEIVE NEW WORK AND/OR FINISHES WHERE REMOVED ITEMS INTERFACE WITH SURFACES TO REMAIN.
7. ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. WALL REMOVAL THAT TERMINATES INTO A WALL OR CEILING TO REMAIN SHALL BE COMPLETELY REMOVED FREE OF PROJECTIONS, READY TO RECEIVE NEW WORK.
9. AFTER COORDINATING WITH THE OWNER, REMOVE ALL UNUSED ITEMS PROJECTING FROM EXISTING WALLS OR FLOORS TO REMAIN (BLOCKING, SCREWS, FASTENERS, HANGERS, PIPES, CONDUITS, MOUNTING PLATES, FIXED EQUIPMENT, ETC). PATCH AND REPAIR FOR NEW FINISH.
10. CONTRACTOR SHALL PROTECT EXISTING BUILDING ELEMENTS AND SITE FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES. CONTRACTOR SHALL REPAIR ALL DAMAGED AREAS (IDENTIFIED BY OWNER OR ARCHITECT) AT NO ADDITIONAL COST.
11. DISPOSE OF ALL DEMOLITION MATERIALS LEGALLY OFF-SITE, U.N.O.. ITEMS IDENTIFIED TO BE SALVAGED AND/OR TURNED OVER ARE NOTED. ALL REMAINING ITEMS ARE TO BE REMOVED.
12. COORDINATE WITH PROPOSED PLANS AND INTERIOR ELEVATIONS FOR DIMENSIONS AND LOCATIONS OF ALL ASSOCIATED DEMO ELEMENTS.
13. REFER TO AND COORDINATE WITH SPECIFICATION AND SHEET G.004 FOR GENERAL INFORMATION.

FLOOR PLANS HISTORIC PRESERVATION AREAS LEGEND:

A. EXISTING LOCKERS TO BE PROTECTED AND PRESERVED IN PLACE.

B. EXISTING MILLWORK / CASEWORK TO BE PROTECTED AND PRESERVED IN PLACE.

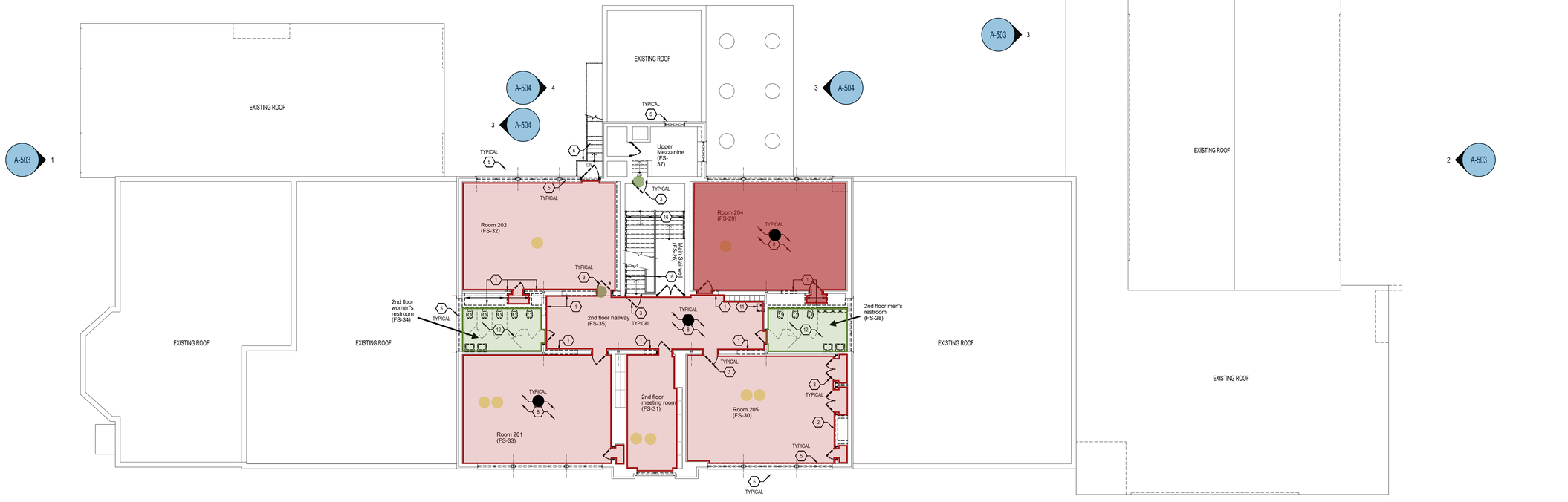
"HISTORIC PRESERVATION" ITEMS / AREAS: G.C. TO COORDINATE WITH OWNER AND PROTECT SUCH AREAS PRIOR TO COMMENCING AND ANY DEMOLITION AND / OR CONSTRUCTION. NOTIFY ARCHITECT / ENGINEER OWNER AND OWNER HISTORIC PRESERVATION CONSULTING OF ANY DISCREPANCIES FOR CLARIFICATION.

ENTIRE BUILDING SHALL BE FULLY FIELD VERIFIED AND INVESTIGATED FOR ANY AREAS AND / OR CONDITIONS THAT ARE NOT VISIBLE, NOTICEABLE OR ACCESSIBLE DURING THE DESIGN STAGE. GC/CM TO NOTIFY OWNER, ARCHITECT AND ENGINEER WITH ANY NEW FINDINGS NOT DEPICTED ON THESE DESIGN DOCUMENTS.

EXISTING / DEMOLITION NOTES LEGEND:

1. EXISTING CMU WALL TO BE DEMOLISHED: G.C. / C.M TO COORDINATE BRACING / SUPPORT AS NEEDED OF SUCH WALLS PRIOR TO COMMENCING ANY DEMOLITION WORK.
2. EXISTING NON BEARING WALL PARTITIONS TO BE REMOVED FULL HEIGHT, TYPICAL.
3. ALL EXISTING DOORS AND FRAMSE TO BE REMOVED. TYPICAL.
4. ALL EXISTING WINDOWS TO BE REMOVED. TYPICAL.
   4A = SHUTTERS TO BE REMOVED
5. ALL EXISTING ALUMINUM OR HOLLOW METAL (OR ANY OTHER) STORE FRONT WINDOWS AND ENTRY DOORS TO BE REMOVED. INCLUDING MECHANICAL WINDOW UNITS.
6. EXISTING EXTERIOR STEEL STAIR HAND / GUARD RAILING TO BE REMOVED ALONG WITH ASSOCIATED ITEMS INTO THE WALL AND AT GROUND LEVEL. PATCH, REPAIR AND SEAL TIGHT AFFECTED WALL AND GROUND AREAS.
7. ALL EXISTING CEILINGS TO BE REMOVED ALONG WITH ALL ASSOCIATED CEILING SUSPENSIONS / SUPPORTS INCLUDING ALL MECHANICAL, ELECTRICAL AND PLUMBING ITEMS UNLESS NOTED OTHERWISE (U.N.O).
8. ALL EXISTING FLOORING TO BE REMOVED. PATCH & PREP FLOOR SURFACE FOR INSTALLATION OF A NEW FLOOR FINISHES. EXCEPT WHERE NOTED. ALL EXISTING TERRAZZO TO REMAIN. REPAIR AND PATCH AS NEEDED.
9. EXISTING BUILT-IN CASEWORK TO REMAIN U.N.O. COORDINATE/VERIFY WORK WITH OWNER AND CONTRACTOR
10. EXISTING LOCKERS TO BE REMOVED AND STORED. G.C. / C.M. TO VERIFY WITH OWNER, TYPICAL.
11. EXISTING DRINKING FOUNTAIN TO BE REMOVED.
12. EXISTING RESTROOMS. ALL EXISTING PLUMBING FIXTURES AND ACCESSORIES TO BE REMOVED / DEMOLITION AND PROPERLY DISPOSED OF INCLUDING ANY UNDERGROUND OR UNDER FLOOR ITEMS.
13. EXISTING KITCHEN AREAS: ALL EXISTING ITEMS EXCEPT CENTER COUNTER TO BE DEMOLISHED AND PROPERLY DISPOSED OF INCLUDING ANY UNDERGROUND ITEMS. COORDINATE DISPOSAL OF ANY EXISTING EQUIPMENT WITH OWNER.
14. EXISTING MECHANICAL EQUIPMENT. ALL EXISTING CONNECTIONS AND EQUIPMENT TO BE DEMOLISHED AND PROPERLY DISPOSED OF INCLUDING ASSOICATED ITEMS SUCH AS PIPING AND WIRING. REFER TO MECHANICAL.
15. EXISTING RECESSED MECHANICAL EQUIPMENT: ALL EXISTING EQUIPMENT TO BE DEMOLISHED AND PROPERLY DISPOSED OF INCLUDING ASSOICATED ITEMS SUCH AS PIPING AND WIRING. COORDINATE WITH MECHANICAL IF EXISTING OPENING IS UTILIZED FOR NEW EQUIPMENT. TYPICAL. REFER TO MECHANICAL.
16. ALL EXISTING HAND AND GAURD RAILS TO BE UPDATED TO CURRENT CODES. REFER TO NEW WORK. TYPICAL
17. PORTION OF EXISTING NON-BEARING MASONRY WALL TO BE REMOVED. REFER TO AND COORDINATE WITH ADDITION DRAWINGS.
18. EXISTING SUMP PUMP PIT TO BE REMOVED.

2 A-201 MEZZANINE LEVEL PLAN - EXISTING BUILDING
SCALE: 3/32"=1'-0"
REF:



1 A-201 SECOND LEVEL PLAN - EXISTING BUILDING
SCALE: 3/32"=1'-0"
REF:

10' 0 5' 10'
SCALE: 3/32"= 1'-0"

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REGISTRATION SEAL

KEY PLANS

STATE OF MICHIGAN
THADDEUS C ZAJKOWSKI
License No. 1301020315
LICENSED ARCHITECT
12/19/2024

SHEET TITLE

SECOND LEVEL
FLOOR PLAN
EXISTING BUILDING

SCALE:

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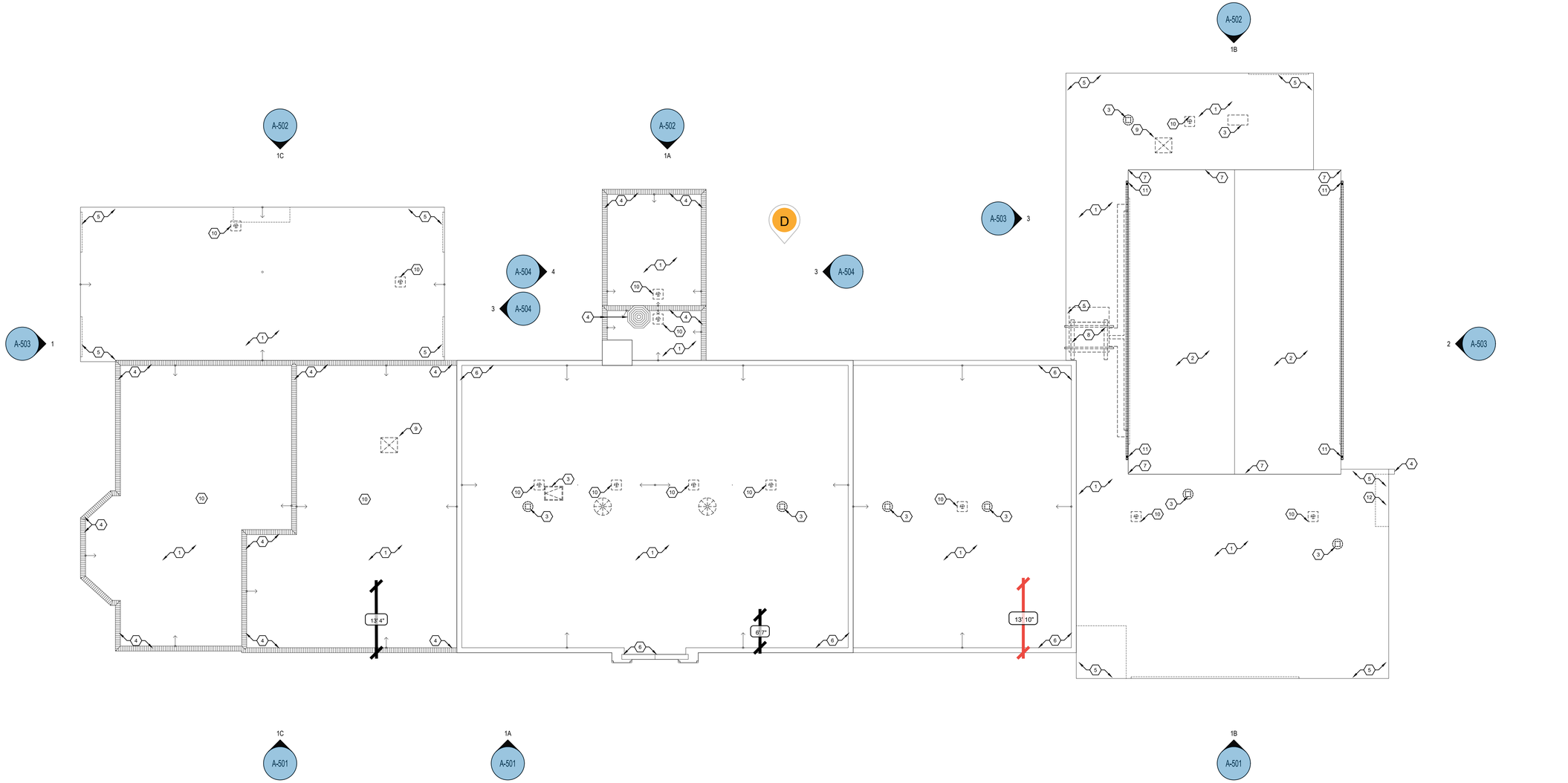
ROOF DEMOLITION GENERAL NOTES:

1. CONTRACTORS ARE RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING THE EXISTING CONDITIONS PRIOR TO COMMENCING DEMOLITION AND / OR CONSTRUCTION.
2. ALL DEMOLITION INFORMATION IS PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH THE NEW WORK. THE DEMOLITION INFORMATION PROVIDED HERE MAY NOTE TYPICAL ITEMS IN SOME AREAS, WHICH APPLY IN OTHER AREAS (AND ARE DESIGNATED WITH DASHED, HIDDEN OR STRUCK THRU LINES). COORDINATE ALL DEMOLITION WORK WITH OWNER AND OTHER CONTRACTORS.
3. WHERE NOTED AS "HISTORIC PRESERVATION", G.C. TO COORDINATE WITH OWNERS AND PROTECT SUCH AREAS PRIOR TO COMMENCING AND DEMOLITION AND / OR CONSTRUCTION. NOTIFY ARCH/ENGINEER OF ANY DISCREPANCIES AND CLARIFICATION.
4. REMOVE ELECTRICAL BACK TO PANEL OR LAST CONNECTION POINT.
5. ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
6. CONTRACTOR SHALL PROTECT EXISTING BUILDING ELEMENTS AND SITE FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES. CONTRACTOR SHALL REPAIR ALL DAMAGED AREAS (IDENTIFIED BY OWNER OR ARCHITECT) AT NO ADDITIONAL COST.
7. DISPOSE OF ALL DEMOLITION MATERIALS LEGALLY OFF-SITE, U.O.N. ITEMS IDENTIFIED TO BE SALVAGED AND/OR TURNED OVER ARE NOTED. ALL REMAINING ITEMS ARE TO BE REMOVED.
8. COORDINATE WITH PROPOSED PLANS AND INTERIOR ELEVATIONS FOR DIMENSIONS AND LOCATIONS OF ALL ASSOCIATED DEMO ELEMENTS.

EXISTING / DEMOLITION ROOF NOTES LEGEND:

1. EXISTING ROOFING SYSTEM AND INSULATION TO BE REMOVED AND PREPARED FOR INSTALLATION OF NEW ROOF SYSTEM. TYPICAL.
2. EXISTING SLOPED ROOFING SYSTEM AND INSULATION TO BE REMOVED AND PREPARED FOR INSTALLATION OF NEW ROOF SYSTEM.]
3. EXISTING ROOF VENTILATORS, EXHAUST FANS, VENT HOODS AND ROOF HATCH TO BE REMOVED. PROVIDE NEW ROOF DECK MATCHING EXISTING ROOF DECK THICKNESS.
4. EXISTING PARAPET METAL COPPING TO BE REMOVED. TYPICAL.
5. EXISTING ROOF EDGE TO BE REMOVED. TYPICAL.
6. EXISTING PARAPET STONE COPING. DAMAGED STONE COPING TO BE REPLACED AS NEEDED. REFER TO NEW ROOF PLAN DRAWING A-305.
7. EXISTING SLOPED ROOF EDGE TO BE REMOVED. TYPICAL.
8. EXISTING ROOF CURBS TO BE REMOVED AND REPLACED IN PLACE. PROVIDE NEW ROOFING MEMBRANE AND FLASHING. COORDINATE NEW CURBS MECHANICAL EQUIPMENT. ROOF AREA TO BE PATCHED WITH MATCHING ROOF DECK SYSTEM OR NEW METAL DECK.
9. ROOF OPENING FOR NEW ROOF ACCESS HATCH.
10. EXISTING ROOF DRAIN TO BE REMOVED. TYPICAL.
11. EXISTING METAL GUTTERS AND DOWNSPOUTS TO BE REMOVED. TYPICAL.
12. REFER TO BUILDING ADDITION SHEETS FOR NEW WORK

ENTIRE EXISTING ROOF SHALL BE FULLY FIELD VERIFIED AND INVESTIGATED FOR ANY AREAS AND / OR CONDITIONS THAT ARE NOT VISIBLE, NOTICEABLE OR ACCESSIBLE DURING THE DESIGN STAGE. GC/CM TO NOTIFY OWNER, ARCHITECT AND ENGINEER WITH ANY NEW FINDINGS NOT DEPICTED ON THESE DESIGN DOCUMENTS.



2 A-201 ROOF PLAN - EXISTING BUILDING
SCALE: 3/32"=1'-0"
REF:

10' 0 5' 10'
SCALE: 3/32"= 1'-0'

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-9000
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REGISTRATION SEAL

KEY PLANS

STATE OF MICHIGAN
THADDEUS C ZAJDZEWICZ
License No. 1301029315
LICENSED ARCHITECT
12/19/2024

SHEET TITLE

ROOF PLAN
EXISTING BUILDING

SCALE:

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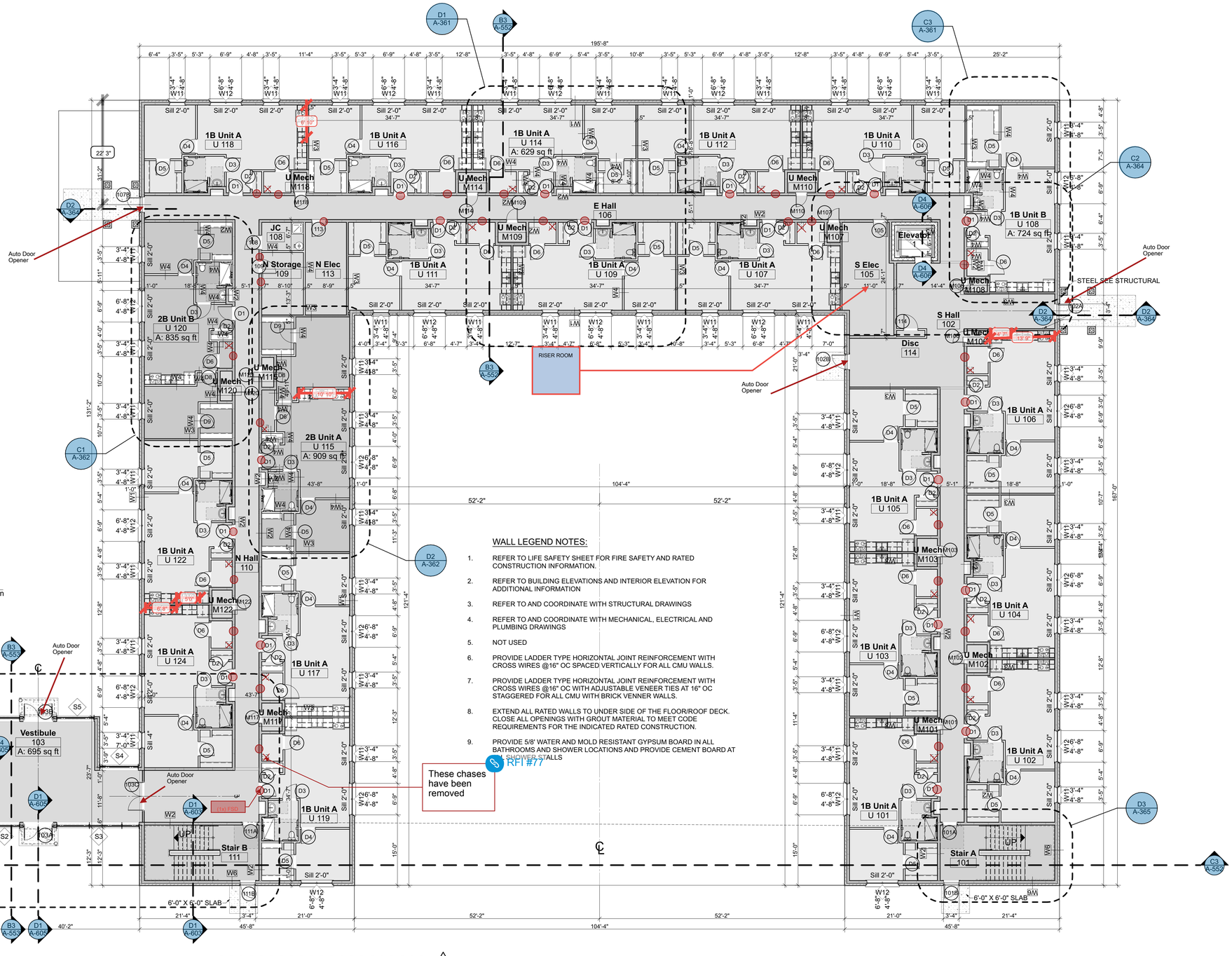
EBH
DRAWN BY

JA
CHECKED

APPROVED

21026.00
FILE NO.

A-203
SHEET NO.



Wall Types

W1 Exterior Wall Brick and Wood Stud
4" Brick Veneer
7/8" Air Space
2" Zip Sheathing R-9
2 x 6 @16" with R-19 (6") Batt Insulation
5/8" Type "X" Gyp Bd.

W2 Interior Corridor Wall
1 Hour STC 51
UL U305
5/8" Type X Gyp Bd on
1/2" Resilient Channel
2x6 @16" OC with R-21 (6") Batt Insulation on
5/8" Type X Gyp Bd
A bead of acoustical sealant shall be applied around the partition perimeter for sound control.
Assembly to be continuous from the floor to the deck above. On the first floor to the 2nd floor deck, and on the 2nd floor to the roof deck.

W3 Interior Unit to Unit Wall
1 Hour / STC 56 (Verify)
UL 344
5/8" Type "X" Gyp Bd.
15/32" Plywood (One Side)
2 X 4 Wood studs @16" O.C.
R-12 Batt Insulation
5/8" SilentFX QuickCut Type "X" Gyp Bd.
A bead of acoustical sealant shall be applied around the partition perimeter for sound control. Assembly to be continuous from the floor to the deck above. On the first floor to the 2nd floor deck and on the 2nd floor, deck to the roof deck

W4 Typical Interior Partition:
5/8" Gyp Bd both sides on 2x4 @ 16" OC

W5 Interior CMU Wall:
5/8" Gyp Bd. on 1/2" Resilient Channels on 8" CMU

W6 Exterior stair Wall:
4" Brick Veneer
7/8" Air Space
2" Zip Sheathing R-9
2 x 6 @16" with R-19 (6") Batt Insulation
5/8" Type "X" Gyp Bd.

1st Floor Plan
SCALE: 3/32" = 1'-0"

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
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REGISTRATION SEAL

KEY PLANS

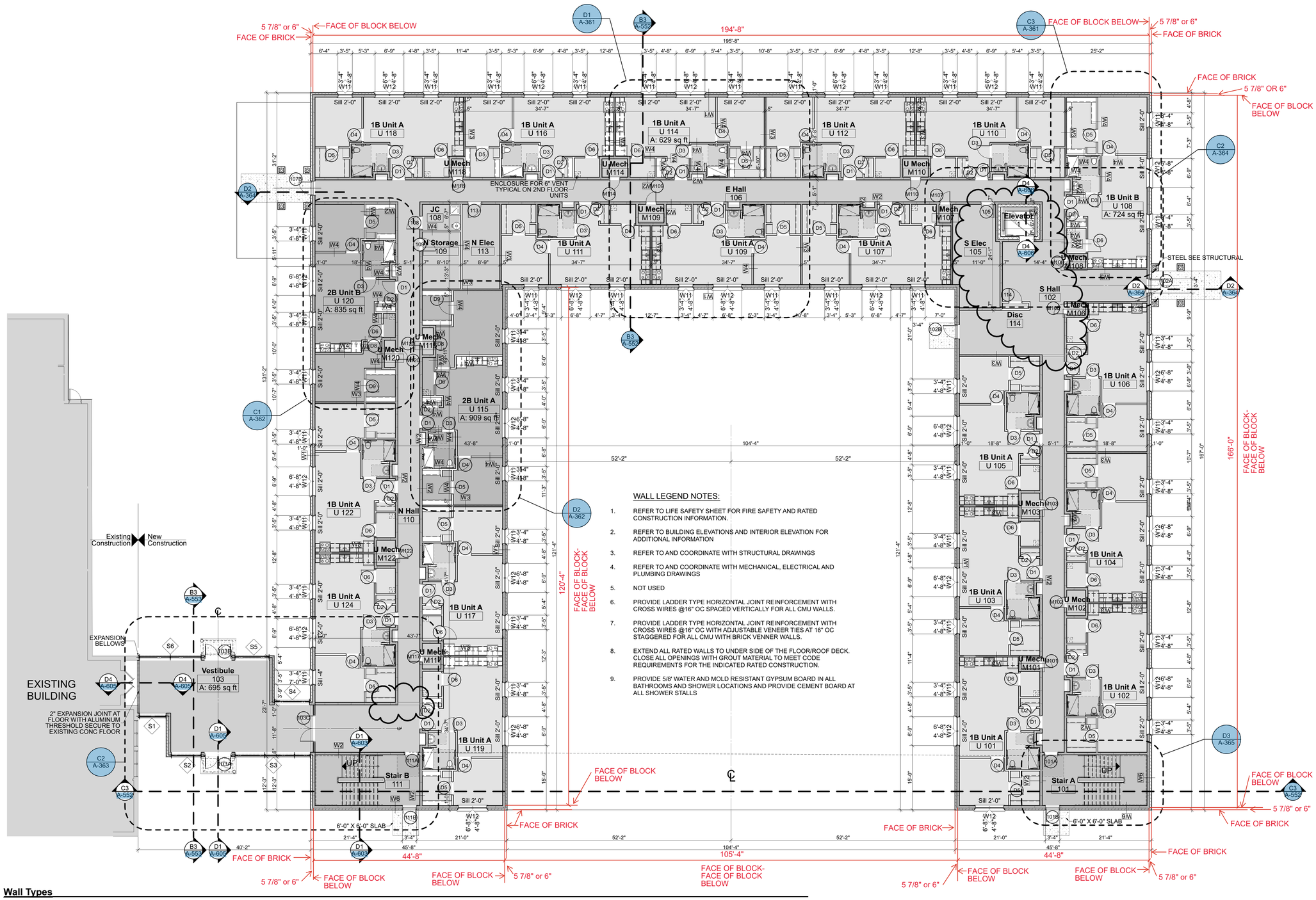
SHEET TITLE
1st Floor Plan

SCALE:

ISSUED FOR		DATE
HUD Submission		12.13.2024
PERMIT		12.20.2024
BULLETIN #1	1	02.19.2025
BULLETIN #2	2	03.05.2025
BULLETIN #6	6	12.12.2025

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CHECKED: JA
APPROVED:
FILE NO.: 21026.00
SHEET NO.: A-301



Wall Types

W1 Exterior Wall Brick and Wood Stud
4" Brick
7/8" air space
1 1/2" Zip Sheathing R-6.6
2x6 @16" OC with R19 (6") Batt Insulation
5/8" Type X Gyp Bd.

W2 Interior Corridor Wall
1 Hour STC 51
UL U305
5/8" Type X Gyp Bd on
1/2" Resilient Channel
2x6 @16" OC with R-21 (6") Batt Insulation on
5/8" Type X Gyp Bd
A bead of acoustical sealant shall be applied around the partition perimeter for sound control.
Assembly to be continuous from the floor to the deck above. On the first floor to the 2nd floor deck, and on the 2nd floor to the roof deck.

W3 Interior Unit to Unit Wall
1 Hour STC 51
UL U305
5/8" Type X Gyp Bd on
1/2" Resilient Channel
2x4 @16" OC with R-21 (6") Batt Insulation on
5/8" Type X Gyp Bd
A bead of acoustical sealant shall be applied around the partition perimeter for sound control.
Assembly to be continuous from the floor to the deck above. On the first floor to the 2nd floor deck, and on the 2nd floor to the roof deck.

W4 Typical Interior Partition:
5/8" Gyp Bd both sides on 2x4 @ 16" OC

W5 Interior CMU Wall:
5/8" Gyp Bd. on 1/2" Resilient Channels on 8" CMU

W6 Exterior stair Wall:
4" Brick with 7/8" air space
1 1/2" Zip Sheathing R-6.6
2x6 @16" OC with Batt Insulation R-21 with 5/8" Gyp Bd.

1st Floor Plan
SCALE: 3/32" = 1'-0"
0 8' 16' 24'

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REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAKRZEWSKI
License No. 1301020315
LICENSED ARCHITECT
12/18/2025

KEY PLANS

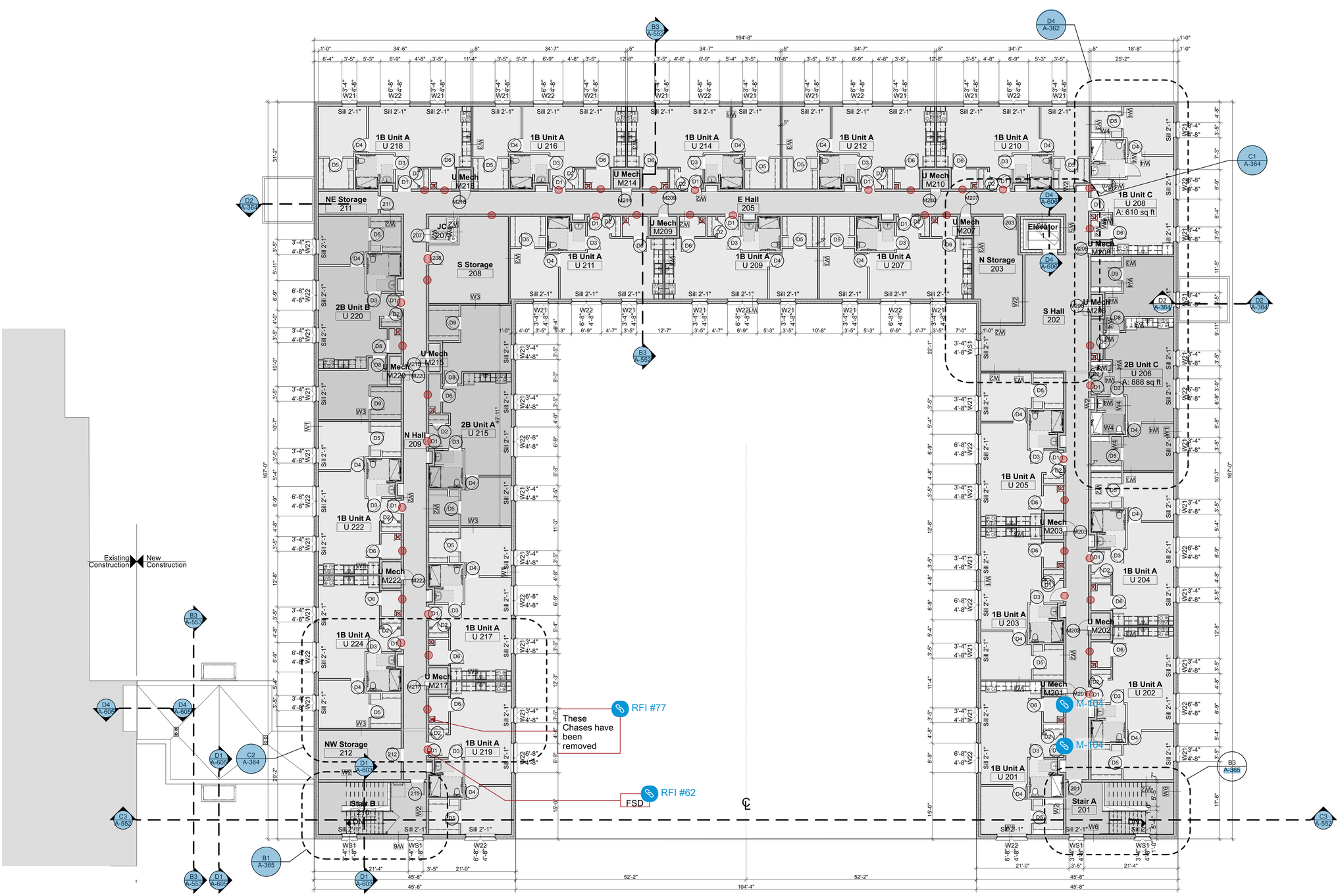
SHEET TITLE
1st Floor Plan

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/Volumes/enright/Shared/Projects/-SDG/23-460_SDG_John_Grace_Housing/5_Disciplines-Design/Architectural/CAD/CD/John_Grace_CD_6.5.pln
Printed: Monday, February 17, 2025



Wall Types

W1 Exterior Wall Brick and Wood Stud
4" Brick Veneer
7/8" Air Space
2" Zip Sheathing R-9
2 x 6 @16" with R-19 (6") Batt Insulation
5/8" Type "X" Gyp Bd.

W2 Interior Corridor Wall
1 Hour STC 51
UL U305
5/8" Type X Gyp Bd on
1/2" Resilient Channel
2x6 @16" OC with R-21 (6") Batt Insulation on
5/8" Type X Gyp Bd
A bead of acoustical sealant shall be applied around the partition perimeter for sound control.
Assembly to be continuous from the floor to the deck above. On the first floor to the 2nd floor deck, and on the 2nd floor to the roof deck.

W3 Interior Unit to Unit Wall
1 Hour / STC 56 (Verify)
UL 344
5/8" Type "X" Gyp Bd.
15/32" Plywood (One Side)
2 X 4 Wood studs @16" O.C.
R-12 Batt Insulation
5/8" SilentFX QuickCut Type "X" Gyp Bd.
A bead of acoustical sealant shall be applied around the partition perimeter for sound control. Assembly to be continuous from the floor to the deck above. On the first floor to the 2nd floor deck and on the 2nd floor deck to the roof deck

W4 **Typical Interior Partition:**
5/8" Gyp Bd both sides on 2x4 @ 16" OC

W5 **Interior CMU Wall:**
5/8" Gyp Bd. on 1/2" Resilient Channels on 8" CMU

W6 **Exterior stair Wall:**
4" Brick Veneer
7/8" Air Space
2" Zip Sheathing R-9
2 x 6 @16" with R-19 (6") Batt Insulation
5/8" Type "X" Gyp Bd.

N

2nd Floor Plan
SCALE: 3/32" = 1'-0"

0 8" 16" 24"

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21030 Indian St, Southfield MI 48033
Developed by
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REGISTRATION SEAL

KEY PLANS

SHEET TITLE
2nd Floor Plan

SCALE:

ISSUED FOR	DATE
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/Volumes/enright/Shared/Projects/-SDG/23-460_SDG_John_Grace_Housing/5_Disciplines-Design/Architectural/CAD/CD/John_Grace_CD_6.5.pln
Printed: Thursday, March 6, 2025

FLOOR PLANS NOTES:

1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. REFER TO AND COORDINATE WITH STRUCTURAL DRAWINGS
4. REFER TO AND COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
5. MATCH EXISTING BRICK AND CMU FINISH AND COLOR AND IS SUBJECT TO ARCHITECT APPROVAL OF SAMPLE SUBMITTALS. FIELD VERIFY AND MATCH MASONRY PATTERN AND COURSING. TOOTH IN ALL NEW WORK INTO EXISTING COURSING.
6. PROVIDE 9 GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. SPACED VERTICALLY FOR ALL CMU WALLS.
7. PROVIDE 9 GA LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. WITH ADJUSTABLE VENEER TIES AT 16" O.C. STAGGERED FOR ALL CMU WITH BRICK VENEER WALLS.
8. UNLESS NOTED OTHERWISE, EXTEND ALL WALLS TO UNDER SIDE OF FLOOR / ROOF METAL DECK FOR SMOKE TIGHT CONSTRUCTION. CLOSE ALL OPENINGS WITH GROUT MATERIAL TO MEET CODE REQUIREMENTS FOR A THE INDICATED RATED CONSTRUCTION. REFER TO FLOOR PLANS FOR LOCATIONS.
9. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.

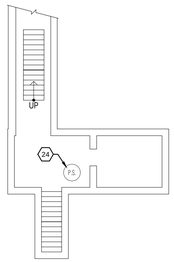
FLOOR PLANS WALL LEGEND:

- 1 HOUR FIRE BARRIER WALL CONSTRUCTION (ELEVATOR / STAIRS)
- 1 HOUR FIRE PARTITION WALL CONSTRUCTION (DWELLING SEPARATION)
- 1/2 HOUR FIRE PARTITION WALL CONSTRUCTION (CORRIDORS)
- E1 — EXISTING MULTI WYTHE EXTERIOR MASONRY WALL
- E2 — EXISTING SINGLE WYTHE INTERIOR MASONRY PARTITION WALL. EXISTING CMU WALLS VARY IN WIDTH OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS.
- E3 — EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU.
- E4 — ONE HOUR FIRE PARTITION WALL: EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU. GC/CM TO VERIFY AND CONFIRM WALL IS EXTENDED TO UNDER SIDE DECK AND EXTEND AND PATCH EXISTING WALL AS NECESSARY TO MEET A ONE HOUR FIRE RATED PARTITION WALL. OTHERWISE PROVIDE A NEW FIRE PARTITION WALL TYPE G3
- M1 — 6" C.M.U. WALL. EXISTING CMU WALLS VARY IN WIDTHS OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS AND REFER TO PLANS FOR INTERIOR WALL FURRING.
  - M1A = 8" CMU
  - M1B = 4" CMU
  - M1C = THICKNESS VARIES AS NOTED WITH FULL THICKNESS OF CMU.
  - M1F = 8" CMU ONE HOUR RATED FIRE BARRIER WALL
- F1 — 5/8" GYPSUM BOARD ON 20 GA. 2-1/2" METAL STUDS @ 16" O.C . EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH 2 1/2" R8 FIBER GLASS INSULATION
- F2 — 5/8" GYPSUM BOARD ON 20 GA. 4" METAL STUDS @ 16" O.C . EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH MINIMUM 4" R13 FIBER GLASS INSULATION.
- G1 — 5/8" GYPSUM BOARD ON BOTH SIDES OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.
  - G1A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS
  - G1B = PARTIAL HEIGHT WALL: MINIMUM OF 3'-6" ABOVE TOP LANDING (5'-0" TOTAL HEIGHT) 4"-18 GA METAL STUD FRAMING AT 16" O.C WITH 5/8" GYPSUM BOARD ON BOTH SIDES: STUD TYPE CS3-400S200-43 (18). BRACE EXISTING PLATFORM OR TWO PROVIDE PONY WALL STEEL POSTS.
- G2 — 5/8" GYPSUM BOARD ON ONE SIDE OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.
- G3 — 1 HOUR FIRE PARTITION WALL: 5/8" GYPSUM BOARD ON BOTH SIDES OF TWO STAGGERED ROWS 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY. UL DESIGN U493. G3A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS
- V1 / V2 — BRICK AND CMU INFILL AREAS: PATCH AND REPAIR ALL WALL OPENING AFTER REMOVAL OF RECESSED ITEMS. FIELD VERIFY AND MATCH BRICK, CMU, GLAZED CMU AND SUBMIT SAMPLES FOR APPROVAL. COORDINATE WITH MECHANICAL IF EXISTING OPENING IS UTILIZED FOR NEW EQUIPMENT. TYPICAL. V2 = NEW MASONRY INFILL (BRICK AND CMU) TO MATCH EXISTING. NEW BRICK AND CMU TO BE TOOTHED INTO EXISTING.

OBS

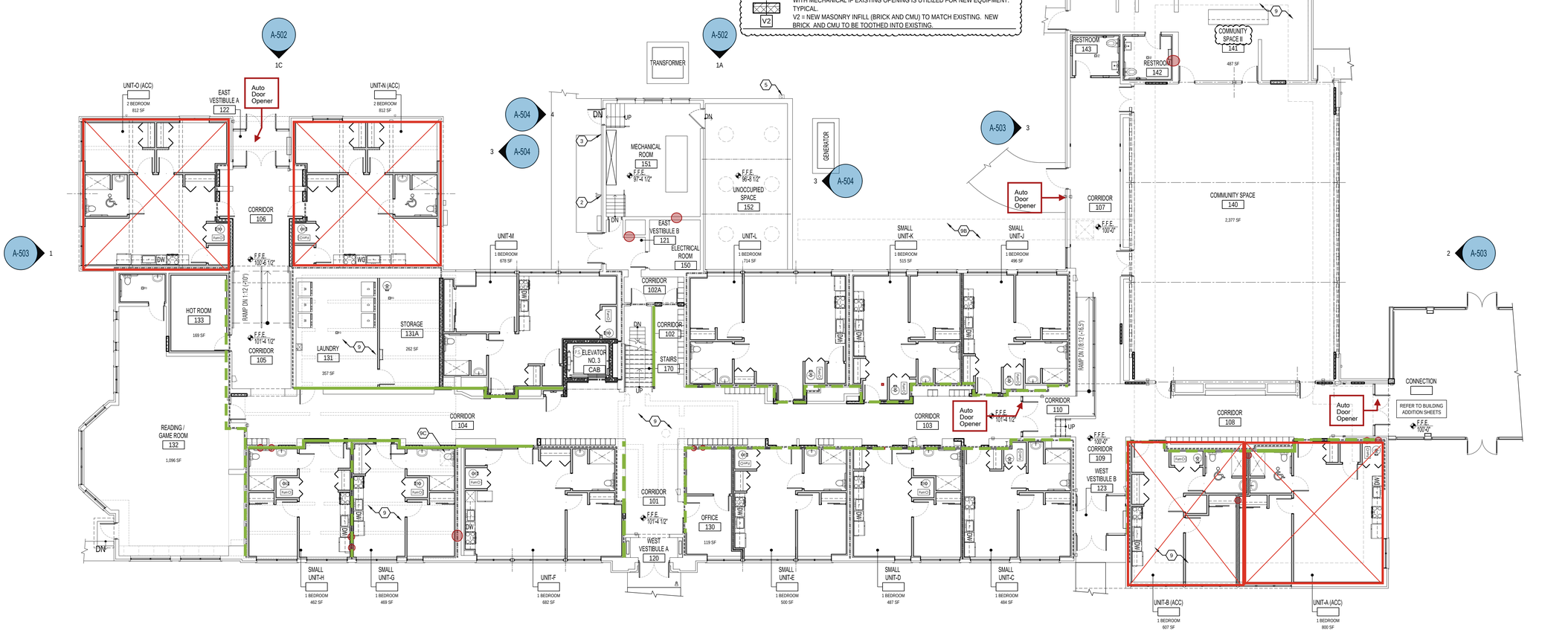
FLOOR PLANS NOTES LEGEND:

1. BARRIER FREE POWER ASSIST DOOR ACTUATOR. PROVIDE POST AS NEEDED (1A).
2. EXISTING FIRE EXTINGUISHER CABINET TO REMAIN. PROVIDE NEW EXTINGUISHER.
3. PATCH AND REPAIR WALL WITH MATCHING EXISTING MATCHING.
4. NEW SOLID SURFACE SILL AND WINDOW SHADES AT ALL WINDOW. COORDINATE SHADE SELECTION WITH OWNER. TYPICAL.
5. ELEVATOR DISCONNECT SWITCH. COORDINATE WITH ELECTRICAL AND ELEVATOR SUPPLIER
6. REFER TO SHEET A-603 FOR TYPICAL MOUNTING DIMENSIONS PER ANSI A117.1-2009
7. NEW HAND AND GUARD RAILS AT ALL STAIRS AND RAMPS. TYPICAL.
8. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS. REFER TO AND COORDINATE WITH BUILDING AND GLAZING ELEVATIONS.
9. TUNNEL AND CRAWL SPACE AREAS. ALL SLAB ON GRADE AREAS TO INSPECTED FOR POSSIBLE SUPPORTED SLAB CONDITION.
   9A = BASEMENT AREA.
   9B = EXTERIOR TUNNEL TO BE REMOVED AND BACK FILLED. CLOSE WITH CMU AT BUILDING
   9C = EXISTING TUNNEL ACCESS TO BE CLOSED SEALED WITH CONCRETE AND RELOCATED TO STORAGE ROOM 131A. COORDINATE WITH OWNER.
10. ROOF ACCESS LADDER AND HATCH. SEE DETAIL 2 ON SHEET A-501
11. ELEVATOR SUMP PUMP. COORDINATE & VERIFY LOCATION WITH ELEVATOR MANUF. AND FOOTINGS AND ELEC. / MECH.
12. COORDINATE LOCATION OF PROPOSED KNOX BOX LOCATION WITH LOCAL AUTHORITY
13. EXISTING FIRE DEPARTMENT CONNECTION (F.D.C.). COORDINATE WITH CIVIL AND MECHANICAL.
13. FIRE PROTECTION ASSEMBLY. REFER TO MECHANICAL
14. EXISTING GAS METER. COORDINATE WITH CIVIL AND MECHANICAL.
15. NEW ELECTRICAL TRANSFORMER CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
16. NEW GENERATOR CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
17. ELEVATOR SUMP PUMP CONTROL PANEL. COORDINATE LOCATION WITH ELEVATOR MANUFACTURER.
18. FLOOR DRAIN: 18A = NOT SHOWN. REFER TO MECHANICAL FOR LOCATION. TYPICAL
19. EXISTING CASEWORK. LOCKERS TO BE PROTECTED
20. REFER TO BUILDING ADDITION DRAWING. TYPICAL.
21. SOLID WOOD OR SOLID SURFACE MATERIAL WALL SILL.
22. 22A = RECESSED OR SEMI-RECESSED ELECTRIC UNIT HEATER (ECUH)
    22B = WALL SURFACE MOUNTED ELECTRIC UNIT HEATER (ECUH)
    IN FILL EXISTING WALL OPENING WITH MATCHING MATERIAL. SEE WALL TYPE V1
23. EXISTING RECESSED METAL POCKET: CLEAN AND REMOVE ANY SHARP EDGES AND PREP FOR PAINTING TO MATCH EXISTING COLOR. PROVE A 2x TREADED WOOD AT THE BASE AND COVER WITH 1/2" SOLID SURFACE MATERIAL. TYPICAL AT ALL LOCATIONS.
24. NEW SUMP PUMP AND 30" ROUND x 24" DEEP PIT. FIELD VERIFY EXIST LOCATION WITH ELEVATOR AND COORDINATE WITH AND ELEC. / MECH. REFER TO SIMILAR ELEVATOR DETAIL AND PROVIDE UNI-STRUT FROM FLOOR TO CEILING PIPE SUPPORT. SEE DETAIL 5 ON SHEET A-701.
25. "HISTORIC PRESERVATION" ITEMS / AREAS (REFER TO EXISTING FLOOR PLANS SHEETS):
    25A: EXISTING BLACK CHALKBOARD TO BE PRESERVED AND INSTALLED OVER NEW FURRED WALL.



2 / A-201 — BASEMENT PLAN - EXISTING BUILDING
SCALE: 3/32"=1'-0"
REF:

Existing Building:
4 Units to be ADA Compliant:
Units A, B, N, and O.
The 4 units to be fully ADA compliant for wheelchair, visually impaired and sight impaired.



1 / A-304 — PROPOSED GROUND LEVEL PLAN - EXISTING BUILDING
SCALE: 3/32"=1'-0"
REF:

10' 0 5' 10'
SCALE: 3/32"=1'-0"

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-8000
Fax:313-964-3233

REGISTRATION SEAL

KEY PLANS

SHEET TITLE
PROPOSED GROUND LEVEL PLAN
EXISTING BUILDING

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024
Issued	10.16.2025

DRAWN BY: EBH
CHECKED: JA
APPROVED

FILE NO. 21026.00

SHEET NO. A-304

FLOOR PLANS NOTES:

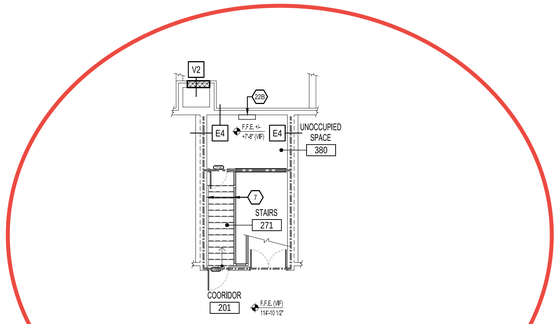
1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. REFER TO AND COORDINATE WITH STRUCTURAL DRAWINGS
4. REFER TO AND COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
5. MATCH EXISTING BRICK AND CMU FINISH AND COLOR AND IS SUBJECT TO ARCHITECT APPROVAL OF SAMPLE SUBMITTALS. FIELD VERIFY AND MATCH MASONRY PATTERN AND COURSING. TOOTH IN ALL NEW WORK INTO EXISTING COURSING.
6. PROVIDE 9 GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. SPACED VERTICALLY FOR ALL CMU WALLS.
7. PROVIDE 9 GA LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. WITH ADJUSTABLE VENEER TIES AT 16" O.C. STAGGERED FOR ALL CMU WITH BRICK VENEER WALLS.
8. UNLESS NOTED OTHERWISE, EXTEND ALL WALLS TO UNDER SIDE OF FLOOR / ROOF METAL DECK FOR SMOKE TIGHT CONSTRUCTION. CLOSE ALL OPENINGS WITH GROUT MATERIAL TO MEET CODE REQUIREMENTS FOR A THE INDICATED RATED CONSTRUCTION. REFER TO FLOOR PLANS FOR LOCATIONS.
9. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.

FLOOR PLANS WALL LEGEND:

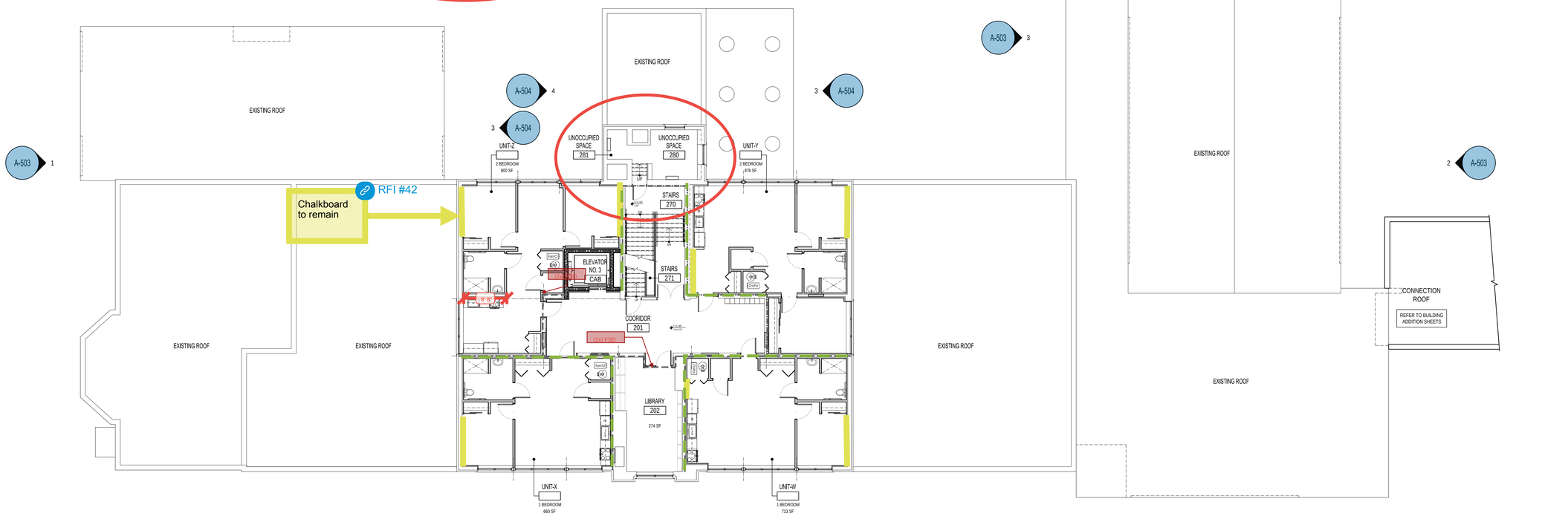
- 1 HOUR FIRE BARRIER WALL CONSTRUCTION (ELEVATOR / STAIRS)
- 1 HOUR FIRE PARTITION WALL CONSTRUCTION (DWELLING SEPARATION)
- 1/2 HOUR FIRE PARTITION WALL CONSTRUCTION (CORRIDORS)
- V/F E1 — EXISTING MULTI WYTHE EXTERIOR MASONRY WALL
- V/F E2 — EXISTING SINGLE WYTHE INTERIOR MASONRY PARTITION WALL. EXISTING CMU WALLS VARY IN WIDTH OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS.
- V/F E3 — EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU.
- V/F E4 — ONE HOUR FIRE PARTITION WALL: EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU. GC/CM TO VERIFY AND CONFIRM WALL IS EXTENDED TO UNDER SIDE DECK AND EXTEND AND PATCH EXISTING WALL AS NECESSARY TO MEET A ONE HOUR FIRE RATED PARTITION WALL.
  OTHERWISE PROVIDE A NEW FIRE PARTITION WALL TYPE G3
- 6" M1 — 6" C.M.U. WALL. EXISTING CMU WALLS VARY IN WIDTHS OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS AND REFER TO PLANS FOR INTERIOR WALL FURRING.
  - M1A = 8" CMU
  - M1B = 4" CMU
  - M1C = THICKNESS VARIES AS NOTED WITH FULL THICKNESS OF CMU.
  - M1F = 8" CMU ONE HOUR RATED FIRE BARRIER WALL
- 3" F1 — 5/8" GYPSUM BOARD ON 20 GA. 2-1/2" METAL STUDS @ 16" O.C . EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH 2 1/2" R8 FIBER GLASS INSULATION
- 4" F2 — 5/8" GYPSUM BOARD ON 20 GA. 4" METAL STUDS @ 16" O.C . EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH MINIMUM 4" R13 FIBER GLASS INSULATION.
- 5" G1 — 5/8" GYPSUM BOARD ON BOTH SIDES OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.
  - G1A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS
  - G1B = PARTIAL HEIGHT WALL: MINIMUM OF 3'-6" ABOVE TOP LANDING (5'-0" TOTAL HEIGHT) 4"-18 GA METAL STUD FRAMING AT 16" O.C WITH 5/8" GYPSUM BOARD ON BOTH SIDES: STUD TYPE CS3-400S200-43 (18). BRACE TO EXISTING PLATFORM OR TWO PROVIDE PONY WALL STEEL POSTS.
- 4" G2 — 5/8" GYPSUM BOARD ON ONE SIDE OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-6" O.C.VERTICALLY.
- 8" G3 — 1 HOUR FIRE PARTITION WALL: 5/8" GYPSUM BOARD ON BOTH SIDES OF TWO STAGGERED ROWS 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY. UL DESIGN U493.
  G3A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS
- V1 / V2 — BRICK AND CMU INFILL AREAS: PATCH AND REPAIR ALL WALL OPENING AFTER REMOVAL OF RECESSED ITEMS. FIELD VERIFY AND MATCH BRICK, CMU, GLAZED CMU AND SUBMIT SAMPLES FOR APPROVAL. COORDINATE WITH MECHANICAL IF EXISTING OPENING IS UTILIZED FOR NEW EQUIPMENT. TYPICAL.
  V2 = NEW MASONRY INFILL (BRICK AND CMU) TO MATCH EXISTING. NEW BRICK AND CMU TO BE TOOTHED INTO EXISTING.

FLOOR PLANS NOTES LEGEND:

1. BARRIER FREE POWER ASSIST DOOR ACTUATOR. PROVIDE POST AS NEEDED (1A).
2. EXISTING FIRE EXTINGUISHER CABINET TO REMAIN. PROVIDE NEW EXTINGUISHER.
3. PATCH AND REPAIR WALL WITH MATCHING EXISTING MATCHING.
4. NEW SOLID SURFACE SILL AND WINDOW SHADES AT ALL WINDOW. COORDINATE SHADE SELECTION WITH OWNER. TYPICAL.
5. ELEVATOR DISCONNECT SWITCH. COORDINATE WITH ELECTRICAL AND ELEVATOR SUPPLIER
6. REFER TO SHEET A-603 FOR TYPICAL MOUNTING DIMENSIONS PER ANSI A117.1-2009
7. NEW HAND AND GUARD RAILS AT ALL STAIRS AND RAMPS. TYPICAL.
8. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS. REFER TO AND COORDINATE WITH BUILDING AND GLAZING ELEVATIONS.
9. TUNNEL AND CRAWL SPACE AREAS. ALL SLAB ON GRADE AREAS TO INSPECTED FOR POSSIBLE SUPPORTED SLAB CONDITION.
   9A = BASEMENT AREA.
   9B = EXTERIOR TUNNEL TO BE REMOVED AND BACK FILLED. CLOSE WITH CMU AT BUILDING
   9C = EXISTING TUNNEL ACCESS TO BE CLOSED SEALED WITH CONCRETE AND RELOCATED TO STORAGE ROOM 131A. COORDINATE WITH OWNER.
10. ROOF ACCESS LADDER AND HATCH. SEE DETAIL 2 ON SHEET A-601
11. ELEVATOR SUMP PUMP. COORDINATE & VERIFY LOCATION WITH ELEVATOR MANUF. AND FOOTINGS AND ELEC. / MECH.
12. COORDINATE LOCATION OF PROPOSED KNOX BOX LOCATION WITH LOCAL AUTHORITY
13. EXISTING FIRE DEPARTMENT CONNECTION (F.D.C.). COORDINATE WITH CIVIL AND MECHANICAL.
13. FIRE PROTECTION ASSEMBLY. REFER TO MECHANICAL
14. EXISTING GAS METER. COORDINATE WITH CIVIL AND MECHANICAL.
15. NEW ELECTRICAL TRANSFORMER CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
16. NEW GENERATOR CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
17. ELEVATOR SUMP PUMP CONTROL PANEL. COORDINATE LOCATION WITH ELEVATOR MANUFACTURER.
18. FLOOR DRAIN: 18A = NOT SHOWN. REFER TO MECHANICAL FOR LOCATION. TYPICAL
19. EXISTING CASEWORK. LOCKERS TO BE PROTECTED
20. REFER TO BUILDING ADDITION DRAWING. TYPICAL.
21. SOLID WOOD OR SOLID SURFACE MATERIAL WALL SILL.
22. 22A = RECESSED OR SEMI-RECESSED ELECTRIC UNIT HEATER (ECUH)
    22B = WALL SURFACE MOUNTED ELECTRIC UNIT HEATER (ECUH)
    IN FILL EXISTING WALL OPENING WITH MATCHING MATERIAL. SEE WALL TYPE V1
23. EXISTING RECESSED METAL POCKET: CLEAN AND REMOVE ANY SHARP EDGES AND PREP FOR PAINTING TO MATCH EXISTING COLOR. PROVE A 2x TREADED WOOD AT THE BASE AND COVER WITH 1/2" SOLID SURFACE MATERIAL. TYPICAL AT ALL LOCATIONS.
24. NEW SUMP PUMP AND 30" ROUND x 24" DEEP PIT. FIELD VERIFY EXIST LOCATION WITH ELEVATOR AND COORDINATE WITH AND ELEC. / MECH. REFER TO SIMILAR ELEVATOR DETAIL AND PROVIDE UNI-STRUT FROM FLOOR TO CEILING PIPE SUPPORT. SEE DETAIL 5 ON SHEET A-701.
25. "HISTORIC PRESERVATION" ITEMS / AREAS (REFER TO EXISTING FLOOR PLANS SHEETS).
    25A: EXISTING BLACK CHALKBOARD TO BE PRESERVED AND INSTALLED OVER NEW FURRED WALL.



2 A-201 — MEZZANINE LEVEL PLAN - EXISTING BUILDING
SCALE: 3/32"=1'-0"
REF:



1 A-305 — PROPOSED SCOND LEVEL PLAN - EXISTING BUILDING
SCALE: 3/32"=1'-0"
REF:

10' 0 5' 10'
SCALE: 3/32"= 1'-0"

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-8000
Fax:313-964-3233

REGISTRATION SEAL

KEY PLANS

SHEET TITLE
PROPOSED SECOND LEVEL PLAN
EXISTING BUILDING

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024
Issued	10.16.2025

DRAWN BY: EBH
CHECKED: JA
APPROVED:

FILE NO. 21026.00

SHEET NO. A-305

ROOF LEGEND NOTES:

1. REFER TO AND COORDINATE WITH SPECIFICATIONS FOR ADDITIONAL SPECIFIC INFORMATION.
2. ALL ROOFING AND ASSOCIATES ITEMS SHALL COMPLY WITH SELECTED ROOF SYSTM MANUFACTURER SPECIFICATIONS AND WARRENTY.
3. EXTEND ROOFING MEMBRANE UP PARAPET WALL TO UNDERSIDE OF EXISTING COPING, TYPICAL. REFER TO SECTIONS.
4. PROVIDE COUNTER FLASHING ALL TERMINATION BARS.
5. REFER TO AND COORDINATE WITH MECHANICAL AND ELECTRICAL. ALL ROOF EQUIPMENT.
6. MAINTAIN MINIMUM REQUIRED SPACING BETWEEN EQUIPMENT AS REQUIRED BY MANUFACTURER AND CODE.
7. VERIFY ALL EQUIPMENT SIZES WITH MANUFACTURER FOR CURB SIZES AND LOCATIONS.
8. COORDINATE ROOF CONDUCTORS WITH PLUMBING, STEEL AND CONCRETE FOUNDATION CONTRACTORS.

ENTIRE EXISTING ROOF SHALL BE FULLY FIELD VERIFIED AND INVESTIGATED FOR ANY AREAS AND / OR CONDITIONS THAT ARE NOT VISIBLE, NOTICEABLE OR ACCESSIBLE DURING THE DESIGN STAGE. GC/CM TO NOTIFY OWNER, ARCHITECT AND ENGINEER WITH ANY NEW FINDINGS NOT DEPICTED ON THESE DESIGN DOCUMENTS.

ROOF SYSTEM:

ROOF SYSTEM 1 (METAL ROOF DECK):
- 60 MIL FULLY ADHERED EPDM ROOF MEMBRANE.
- INSULATION PROTECTION BOARD.
- +/- 5" MINIMUM R-30 POLYISO RIGID BOARD INSULATION.
- EXISTING METAL ROOF DECKING ON EXISTING STEEL JOISTS. FIELD VERIFY.

ROOF SYSTEM 2 (WOOD ROOF DECK):
- 60 MIL FULLY ADHERED EPDM ROOF MEMBRANE.
- INSULATION PROTECTION BOARD.
- +/- 5" MINIMUM R-30 POLYISO RIGID BOARD INSULATION.
- EXISTING WOOD DECK ROOF ON EXISTING WOOD ROOF JOISTS. FIELD VERIFY.

ROOF SYSTEM 3 (WOOD FIBER PANEL):
- 60 MIL FULLY ADHERED EPDM ROOF MEMBRANE.
- INSULATION PROTECTION BOARD.
- +/- 5" MINIMUM R-30 POLYISO RIGID BOARD INSULATION.
- EXISTING WOOD FIBER PANEL (TECTUM) ROOF DECKING ON EXISTING STEEL JOISTS. FIELD VERIFY.

ROOF SYSTEM 4 (SLOPED WOOD FIBER PANEL):
- 60 MIL FULLY ADHERED EPDM ROOF MEMBRANE.
- INSULATION PROTECTION BOARD.
- +/- 5" MINIMUM R-30 POLYISO RIGID BOARD INSULATION.
- EXISTING WOOD FIBER PANEL (TECTUM) ROOF DECKING ON EXISTING STEEL JOISTS. FIELD VERIFY.

ROOF INSULATION NOTE:

1. PROVIDE FOUR-WAY TAPERED INSULATION AS DEPICTED.
2. INSULATION SHALL HAVE A MINIMUM OF +/-5" R-30 POLYISO RIGID INSULATION.
3. A BASE THICKNESS OF 2" AT THE LOWEST POINT (ROOF DRAIN) WITH A ADDITIONAL TAPERED INSULATION AT A MINIMUM 1/4" PER FOOT SLOPE AS DEPICTED.

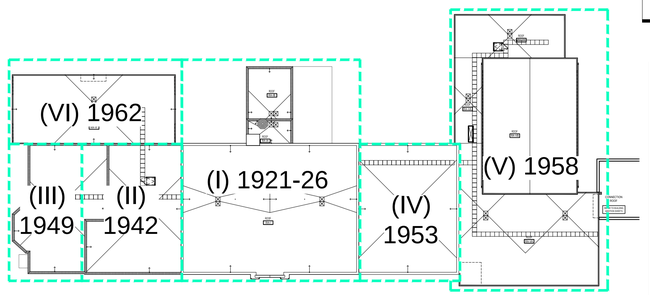
ROOF PLAN NOTES LEGEND:

1. NEW ROOFING AND INSULATION
2. INDICATES A 1/4" MINIMUM SLOP HIGH POINT (RIDGE), TYPICAL.
3. INDICATES A 1/2" MINIMUM SLOP ADDITIONAL TAPERED INSULATION SADDLE TO DIVERT WATER AWAY FROM CURB / EQUIPMENT. TYPICAL.
4. PARAPET: PRE-FINISHED SNAP-ON METAL COPPING WITH HEMMED DRIP EDGE. SLOP 1" DOWN TOWARDS ROOF.
5. ROOF EDGE: PRE-FINISHED SNAP-ON METAL ROOF EDGE FLAHSING WITH DRIP EDGE. TYPICAL.
6. PARAPET: EXISTING STONE COPING. EXTEND MEMBRANE TO UNDERSIDE OF EXISTING COPING WITH A REGLET CUT AT THE BASE OF THE EXISTING STONE COPING. DAMAGED STONE THAT COMPROMISES WATER TIGHT CONDITION TO BE REPLACED AS NEEDED.
7. SLOPED ROOF EDGE: PRE-FINISHED SNAP-ON METAL ROOF EDGE FLAHSING WITH DRIP EDGE. TYPICAL.
8. ROOF PROTECTION TRAFFIC PADS. PROVIDE PER ROOF MEMBRANE MANUFACTURER REQUIREMENTS, TYPICAL.
9. ROOF ACCESS HATCH - THERMALLY BROKEN AND INSULATED. BILCO S-50TB AND CLEAR OPENING AS INDICATED WITH INTEGRATED GUARD RAILS AND SELF CLOSING GATE WITH LATCH. SEE DETAIL 2 ON SHEET A-501
10. ROOF DRAINS: COMBINED UNIT FOR PRIMARY AND SECONDARY. REFER TO MECHANICAL. TYPICAL.
11. PREFINISHED METAL GUTTERS AND DOWNSPOUTS.
12. EXHAUST FANS. REFER TO MECHANICAL. TYPICAL.
13. CONDENSING UNITS. REFER TO MECHANICAL. TYPICAL.
14. SANITARY RISER. REFER TO MECHANICAL. TYPICAL
15. NEW MEHCANICAL EQUIPMENT ROOF CURB. REFER TO MECHANICAL.

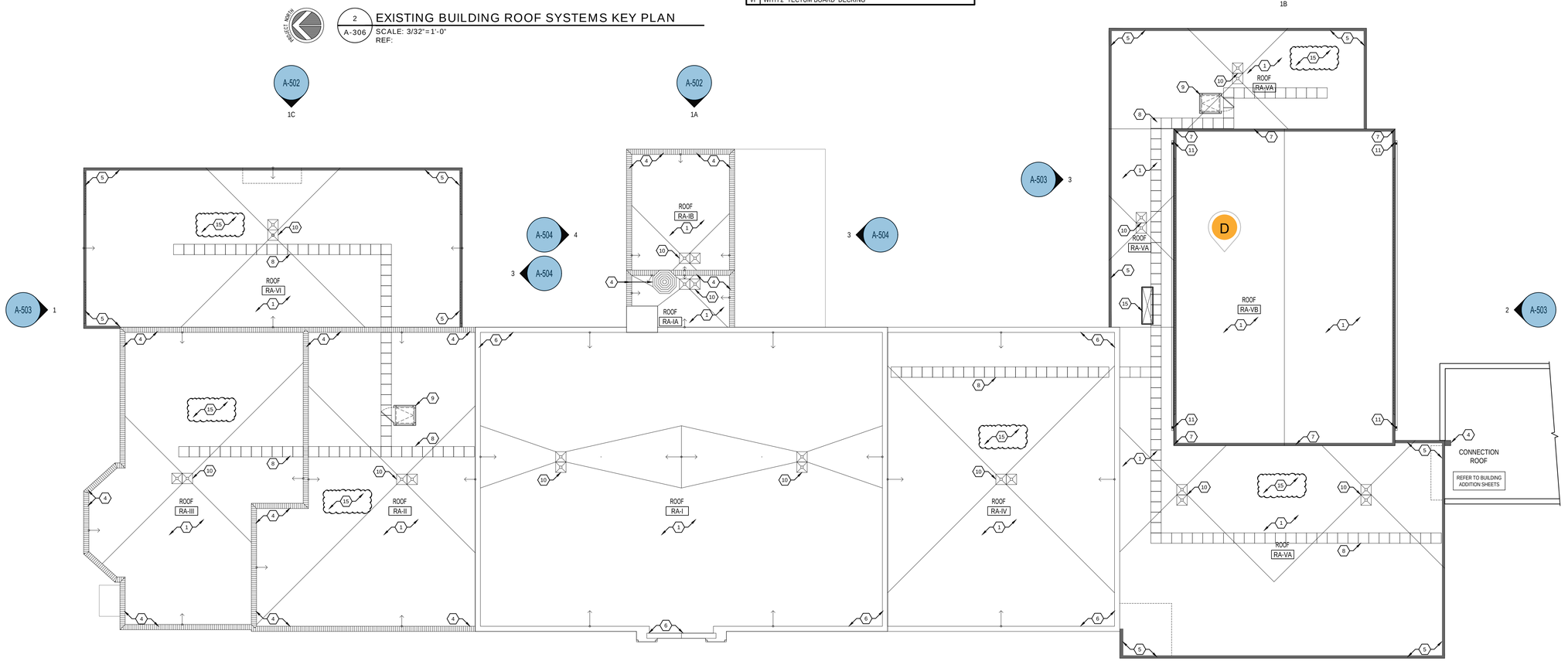
EXISTING BUILDING CONSTRUCTION

FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS

ZONE	ROOF CONSTRUCTION
I	OBSERVED 10" JOISTS AT 30" OR 36" O.C. WITH 1x WOOD DECKING
II	OBSERVED 2x12 WOOD JOISTS @16" O.C. WITH 1x WOOD DECKING
III	FIELD VERIFY. UNABLE TO OBSERVE.
IV	FIELD VERIFY. UNABLE TO OBSERVE.
V	UNABLE TO OBSERVE. EXISTING GYMNASIUM - LONG SPAN METAL CEILING PANEL BEARING ON STEEL A-FRAME STRUCTURE.
VI	PER ORIGINAL BUILDING DRAWINGS: STEEL BEAMS WITH 2" TECTUM BOARD DECKING



2 A-306 EXISTING BUILDING ROOF SYSTEMS KEY PLAN
SCALE: 3/32"=1'-0"
REF:



2 A-306 PROPOSED ROOF PLAN - EXISTING BUILDING
SCALE: 3/32"=1'-0"
REF:

10' 0 5' 10'
SCALE: 3/32"=1'-0"

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-8000
Fax:313-964-3233

REGISTRATION SEAL

KEY PLANS

SHEET TITLE

PROPOSED
ROOF PLAN
EXISTING BUILDING

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
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EBH
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JA
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APPROVED

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FILE NO.

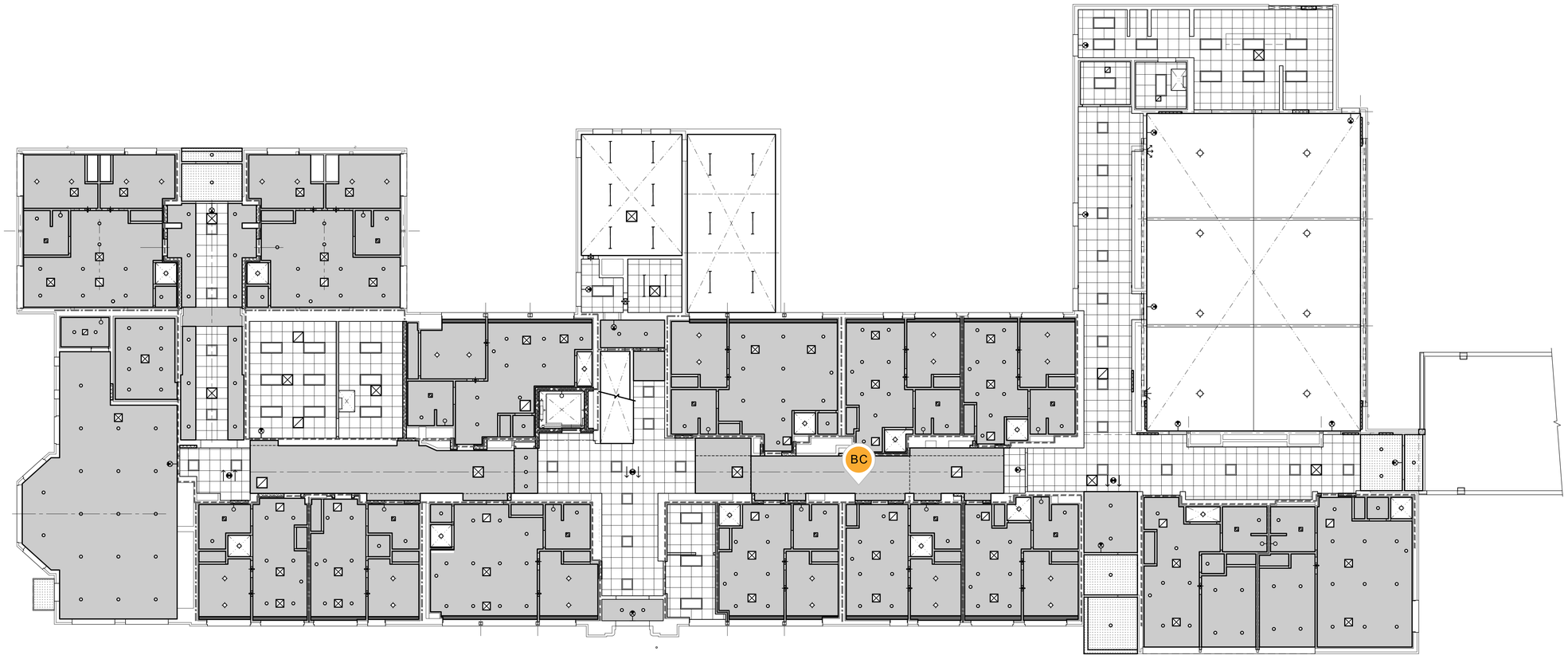
A-306
SHEET NO.

REFLECTED CEILING PLANS NOTES:

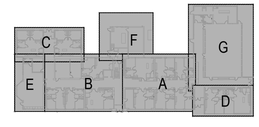
1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.
4. REFER TO AND COORDINATE WITH SPECIFICATIONS FOR ADDITION INFORMATION.
5. ALL INTERIOR FINISHES SHALL COMPLY WITH THE 2015 MBC AND ANY APPLICABLE CODES.
6. COORDINATE ALL CEILING HEIGHT WITH MECHANICAL, ELECTRICAL AND FIRE PROTECTION DRAWINGS AND CONTRACTORS. NOTIFY ARCHITECT / ENGINEER OF ANY DISCREPANCIES.
7. COORDINATE ALL CEILING HEIGHTS WITH WINDOW SIZES AND WINDOW CONTRACTOR. NOTIFY ARCHITECT / ENGINEER OF ANY DISCREPANCIES.
8. INSTALL IN THE DIRECTION AND SPACING SHOWN ON THESE PLANS. NOTIFY ARCH./ENGINEER OF ANY DISCREPANCIES.
9. NOT ALL CEILING ITEMS ARE SHOWN. ITEMS SHOWN ARE CRITICAL TO VISUAL EFFECT AND REQUIRE COORDINATION AMONG TRADES TO MEET ARCHITECTURAL CRITERIA.
10. CENTER ALL CEILING ITEMS, RECESSED LIGHT FIXTURES, DIFFUSERS, ETC. WITHIN CEILING TILE UNLESS NOTED OTHERWISE (U.N.O.).
11. ANY CEILING ITEMS TO BE SUPPORTED / HUNG FROM A STRUCTURAL MEMBER OR STEEL UNI-STRUTS AND NOT FROM FLOOR OR ROOF DECKING MATERIAL.
12. PROVIDE ACCESS DOORS WITH RECESSED FRONT PANEL FOR GYPSUM BOARD INSTALLATIONS AS REQUIRED FOR MECHANICAL, PLUMBING, ELECTRICAL AND / OR OTHERS ITEMS ABOVE CEILING. CONTRACTOR TO SUBMIT CEILING ACCESS DOOR PLAN AND PRODUCT INFORMATION TO ARCHITECT FOR APPROVAL.
13. ALL CEILINGS TO HAVE STC 55 SOUND INSULATION AND CHECK FIRE RATINGS PER MBC.

REFLECTED CEILING PLANS LEGEND:

- ACT-1: 2' X 2' LAY-IN ACOUSTICAL TILE CEILING ACT-1W = VINYL CLAD MOISTURE RESISTANT ACOUSTICAL TILE
- ACT-2: 2' X 4' LAY-IN ACOUSTICAL TILE CEILING ACT-2W = VINYL CLAD MOISTURE RESISTANT ACOUSTICAL TILE
- EXPOSED CEILING
- INTERIOR CEILINGS: GYPSUM CEILING ON METAL SUSPENSION SYSTEM - 1/2" GYPSUM BOARD ON 18 GA - 3-5/8" METAL FRAMING AT 16" O.C., TYPICAL.
- EXTERIOR CEILINGS: DEFS ON 5/8" EXTERIOR GRADE SHEATHING CEILING SYSTEM ON COLD FORMED METAL FRAMING.
- 2'x4' LED LIGHT FIXTURE.
- 2'x2' LED LIGHT FIXTURE.
- RECESSED CEILING LED LIGHT FIXTURE WITH TRIM-LESS LESS OPTION FOR DRYWALL OR SUSPENDED CEILING.
- CEILING MOUNTED LED LIGHT FIXTURE.
- WALL MOUNTED LED LIGHT FIXTURE
- 4' LED LIGHT FIXTURE
- WALL MOUNTED COMBINATION EXIT SIGN / EMERGENCY LIGHT FIXTURE
- CEILING MOUNTED EMERGENCY EXIT LIGHT FIXTURE
- SUPPLY AIR DIFFUSERS
- RETURN AIR DIFFUSERS
- EXPOSED SUPPLY / RETURN AIR DUCTS
- 9'-0" (10'-0") A.F.F. PROPOSED AND EXISTING (IN PARENTHESIS) CEILING ELEVATIONS



1 / A-307 EXISTING BUILDING GROUND LEVEL REFLECTED CEILING PLAN
SCALE: 3/32"=1'-0"
REF:



KEY PLAN

10' 0 5' 10'
SCALE: 3/32"= 1'-0"

John Grace Arms
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REGISTRATION SEAL

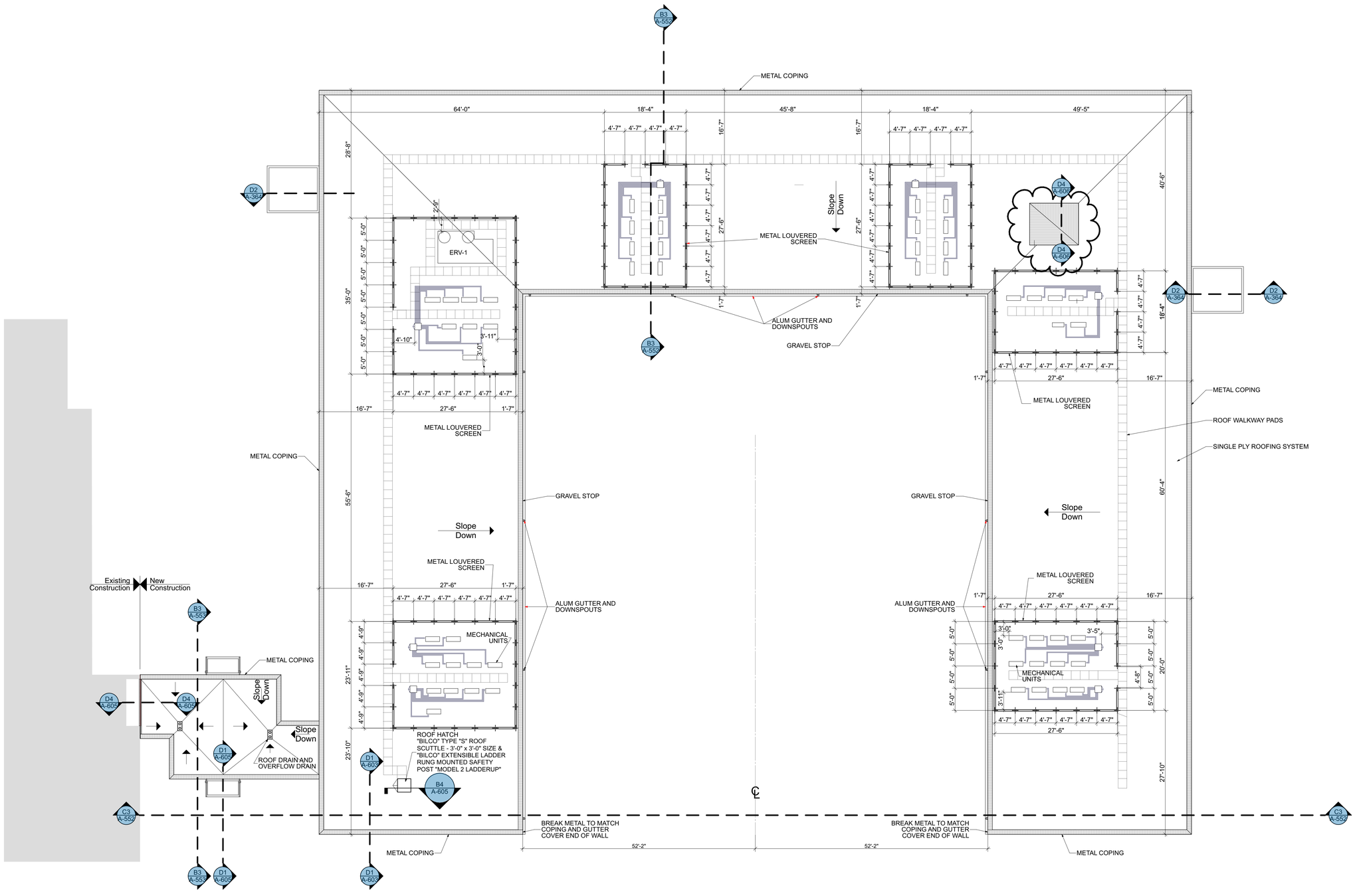
KEY PLANS

STATE OF MICHIGAN
THADDEUS C ZARZEWSKI
License No. 1301020315
LICENSED ARCHITECT
12/19/2024

SHEET TITLE
EXISTING BUILDING GROUND LEVEL REFELECTED CEILING PLAN
SCALE:

ISSUED FOR	DATE
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024

DRAWN BY: EBH
CHECKED: JA
APPROVED:
FILE NO.: 21026.00
SHEET NO.: A-307



Roof Plan

SCALE: 3/32" = 1'-0"

0 8" 16" 24"

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REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAWRZEWSKI
License No. 1301026315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

SHEET TITLE

Roof Plan

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1	02.19.2025

DWP
DRAWN BY

JA
CHECKED

APPROVED

21026.00
FILE NO.

A-331
SHEET NO.

/Volumes/enright/Shared/Projects/-SDG/23-460_SDG_John_Grace_Housing/5_Disciplines-Design/Architectural/CAD/CD/John_Grace_CD_6.5.pln
Printed: Monday, February 17, 2025

FLOOR PLANS NOTES:

1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. REFER TO AND COORDINATE WITH STRUCTURAL DRAWINGS
4. REFER TO AND COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
5. MATCH EXISTING BRICK AND CMU FINISH AND COLOR AND IS SUBJECT TO ARCHITECT APPROVAL OF SAMPLE SUBMITTALS. FIELD VERIFY AND MATCH MASONRY PATTERN AND COURSING. TOOTH IN ALL NEW WORK INTO EXISTING COURSING.
6. PROVIDE 9 GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. SPACED VERTICALLY FOR ALL CMU WALLS.
7. PROVIDE 9 GA LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. WITH ADJUSTABLE VENEER TIES AT 16" O.C. STAGGERED FOR ALL CMU WITH BRICK VENEER WALLS.
8. UNLESS NOTED OTHERWISE, EXTEND ALL WALLS TO UNDER SIDE OF FLOOR / ROOF METAL DECK FOR SMOKE TIGHT CONSTRUCTION. CLOSE ALL OPENINGS WITH GROUT MATERIAL TO MEET CODE REQUIREMENTS FOR A THE INDICATED RATED CONSTRUCTION. REFER TO FLOOR PLANS FOR LOCATIONS.
9. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.

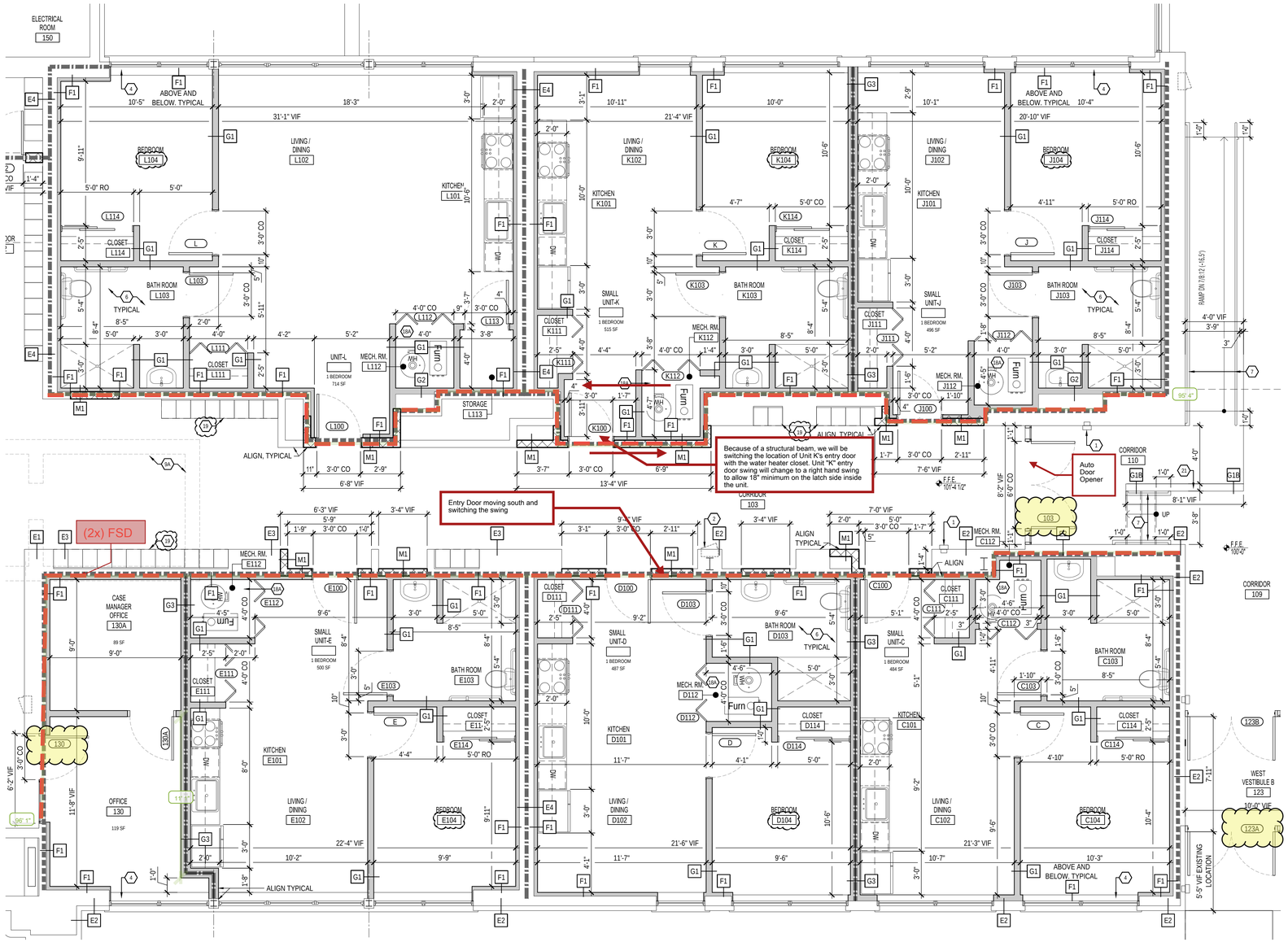
FLOOR PLANS NOTES LEGEND:

1. BARRIER FREE POWER ASSIST DOOR ACTUATOR. PROVIDE POST AS NEEDED (1A).
2. EXISTING FIRE EXTINGUISHER CABINET TO REMAIN. PROVIDE NEW EXTINGUISHER.
3. PATCH AND REPAIR WALL WITH MATCHING EXISTING MATCHING.
4. NEW SOLID SURFACE SILL AND WINDOW SHADES AT ALL WINDOW. COORDINATE SHADE SELECTION WITH OWNER. TYPICAL.
5. ELEVATOR DISCONNECT SWITCH. COORDINATE WITH ELECTRICAL AND ELEVATOR SUPPLIER
6. REFER TO SHEET A-503 FOR TYPICAL MOUNTING DIMENSIONS PER ANSI A117.1-2009
7. NEW HAND AND GUARD RAILS AT ALL STAIRS AND RAMPS. TYPICAL.
8. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS. REFER TO AND COORDINATE WITH BUILDING AND GLAZING ELEVATIONS.
9. TUNNEL AND CRAWL SPACE AREAS. ALL SLAB ON GRADE AREAS TO INSPECTED FOR POSSIBLE SUPPORTED SLAB CONDITION.
   9A = BASEMENT AREA.
   9B = EXTERIOR TUNNEL TO BE REMOVED AND BACK FILLED. CLOSE WITH CMU AT BUILDING
   9C = EXISTING TUNNEL ACCESS TO BE CLOSED SEALED WITH CONCRETE AND RELOCATED TO STORAGE ROOM 131A. COORDINATE WITH OWNER.
10. ROOF ACCESS LADDER AND HATCH. SEE DETAIL 2 ON SHEET A-601
11. ELEVATOR SUMP PUMP. COORDINATE & VERIFY LOCATION WITH ELEVATOR MANUF. AND FOOTINGS AND ELEC. / MECH.
12. COORDINATE LOCATION OF PROPOSED KNOX BOX LOCATION WITH LOCAL AUTHORITY
13. EXISTING FIRE DEPARTMENT CONNECTION (F.D.C.). COORDINATE WITH CIVIL AND MECHANICAL.
14. FIRE PROTECTION ASSEMBLY. REFER TO MECHANICAL
15. EXISTING GAS METER. COORDINATE WITH CIVIL AND MECHANICAL.
16. NEW ELECTRICAL TRANSFORMER CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
17. NEW GENERATOR CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
18. ELEVATOR SUMP PUMP CONTROL PANEL. COORDINATE LOCATION WITH ELEVATOR MANUFACTURER.
19. FLOOR DRAIN: 18A = NOT SHOWN. REFER TO MECHANICAL FOR LOCATION. TYPICAL
20. EXISTING CASEWORK. LOCKERS TO BE PROTECTED
21. REFER TO BUILDING ADDITION DRAWING. TYPICAL.
22. SOLID WOOD OR SOLID SURFACE MATERIAL WALL SILL.
23. 22A = RECESSED OR SEMI-RECESSED ELECTRIC UNIT HEATER (ECUH)
    22B = WALL SURFACE MOUNTED ELECTRIC UNIT HEATER (ECUH)
    IN FILL EXISTING WALL OPENING WITH MATCHING MATERIAL. SEE WALL TYPE V1
24. EXISTING RECESSED METAL POCKET: CLEAN AND REMOVE ANY SHARP EDGES AND PREP FOR PAINTING TO MATCH EXISTING COLOR. PROVE A 2x TREADED WOOD AT THE BASE AND COVER WITH 1/2" SOLID SURFACE MATERIAL. TYPICAL AT ALL LOCATIONS.
25. NEW SUMP PUMP AND 30" ROUND x 24" DEEP PIT. FIELD VERIFY EXIST LOCATION WITH ELEVATOR AND COORDINATE WITH AND ELEC. / MECH. REFER TO SIMILAR ELEVATOR DETAIL AND PROVIDE UNI-STRUT FROM FLOOR TO CEILING PIPE SUPPORT. SEE DETAIL 5 ON SHEET A-701.
26. "HISTORIC PRESERVATION" ITEMS / AREAS (REFER TO EXISTING FLOOR PLANS SHEETS):
    25A: EXISTING BLACK CHALKBOARD TO BE PRESERVED AND INSTALLED OVER NEW FURRED WALL.

FLOOR PLANS WALL LEGEND:

- 1 HOUR FIRE BARRIER WALL CONSTRUCTION (ELEVATOR / STAIRS)
- 1 HOUR FIRE PARTITION WALL CONSTRUCTION (DWELLING SEPARATION)
- 1/2 HOUR FIRE PARTITION WALL CONSTRUCTION (CORRIDORS)

- E1 — EXISTING MULTI WYTHE EXTERIOR MASONRY WALL
- E2 — EXISTING SINGLE WYTHE INTERIOR MASONRY PARTITION WALL. EXISTING CMU WALLS VARY IN WIDTH OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS.
- E3 — EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU.
- E4 — ONE HOUR FIRE PARTITION WALL: EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU. GC/CM TO VERIFY AND CONFIRM WALL IS EXTENDED TO UNDER SIDE DECK AND EXTEND AND PATCH EXISTING WALL AS NECESSARY TO MEET A ONE HOUR FIRE RATED PARTITION WALL.
  OTHERWISE PROVIDE A NEW FIRE PARTITION WALL TYPE G3
- M1 — 6" C.M.U. WALL. EXISTING CMU WALLS VARY IN WIDTHS OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS AND REFER TO PLANS FOR INTERIOR WALL FURRING.
  - M1A = 8" CMU
  - M1B = 4" CMU
  - M1C = THICKNESS VARIES AS NOTED WITH FULL THICKNESS OF CMU.
  - M1F = 8" CMU ONE HOUR RATED FIRE BARRIER WALL
- F1 — 5/8" GYPSUM BOARD ON 20 GA. 2-1/2" METAL STUDS @ 16" O.C . EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH 2 1/2" R8 FIBER GLASS INSULATION
- F2 — 5/8" GYPSUM BOARD ON 20 GA. 4" METAL STUDS @ 16" O.C . EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH MINIMUM 4" R13 FIBER GLASS INSULATION.
- G1 — 5/8" GYPSUM BOARD ON BOTH SIDES OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.
  - G1A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS
  - G1B = PARTIAL HEIGHT WALL: MINIMUM OF 3'-6" ABOVE TOP LANDING (5'-0" TOTAL HEIGHT) 4"-18 GA METAL STUD FRAMING AT 16" O.C WITH 5/8" GYPSUM BOARD ON BOTH SIDES: STUD TYPE CS3-400S200-43 (18). BRACE TO EXISTING PLATFORM OR TWO PROVIDE PONY WALL STEEL POSTS.
- G2 — 5/8" GYPSUM BOARD ON ONE SIDE OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.
- G-3 — 1 HOUR FIRE PARTITION WALL: 5/8" GYPSUM BOARD ON BOTH SIDES OF TWO STAGGERED ROWS 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY. UL DESIGN U493.
  G3A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS
- V1 / V2 — BRICK AND CMU INFILL AREAS: PATCH AND REPAIR ALL WALL OPENING AFTER REMOVAL OF RECESSED ITEMS. FIELD VERIFY AND MATCH BRICK, CMU, GLAZED CMU AND SUBMIT SAMPLES FOR APPROVAL. COORDINATE WITH MECHANICAL IF EXISTING OPENING IS UTILIZED FOR NEW EQUIPMENT. TYPICAL.
  V2 = NEW MASONRY INFILL (BRICK AND CMU) TO MATCH EXISTING. NEW **BRICK AND CMU TO BE TOOTHED INTO EXISTING.**



PROJECT NORTH

1 / A-304 — PROPOSED ELARGED GROUND LEVEL PLAN - EXISTING BUILDING

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

REF:



KEY PLAN

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

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
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SDG
Architects + Planners
607 Shelby Street
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REGISTRATION SEAL

KEY PLANS

SHEET TITLE

PROPOSED ENLARGED GROUND LEVEL PLAN EXISTING BUILDING

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
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HUD Submission	12.13.2024
Permits	12.20.2024
Issued	10.16.2025

DRAWN BY: EBH

CHECKED: JA

APPROVED

FILE NO. 21026.00

SHEET NO. A-351

FLOOR PLANS NOTES:

1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. REFER TO AND COORDINATE WITH STRUCTURAL DRAWINGS
4. REFER TO AND COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
5. MATCH EXISTING BRICK AND CMU FINISH AND COLOR AND IS SUBJECT TO ARCHITECT APPROVAL OF SAMPLE SUBMITTALS. FIELD VERIFY AND MATCH MASONRY PATTERN AND COURSING. TOOTH IN ALL NEW WORK INTO EXISTING COURSING.
6. PROVIDE 9 GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. SPACED VERTICALLY FOR ALL CMU WALLS.
7. PROVIDE 9 GA LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. WITH ADJUSTABLE VENEER TIES AT 16" O.C. STAGGERED FOR ALL CMU WITH BRICK VENEER WALLS.
8. UNLESS NOTED OTHERWISE, EXTEND ALL WALLS TO UNDER SIDE OF FLOOR / ROOF METAL DECK FOR SMOKE TIGHT CONSTRUCTION. CLOSE ALL OPENINGS WITH GROUT MATERIAL TO MEET CODE REQUIREMENTS FOR A THE INDICATED RATED CONSTRUCTION. REFER TO FLOOR PLANS FOR LOCATIONS.
9. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.

FLOOR PLANS NOTES LEGEND:

1. BARRIER FREE POWER ASSIST DOOR ACTUATOR. PROVIDE POST AS NEEDED (1A).
2. EXISTING FIRE EXTINGUISHER CABINET TO REMAIN. PROVIDE NEW EXTINGUISHER.
3. PATCH AND REPAIR WALL WITH MATCHING EXISTING MATCHING.
4. NEW SOLID SURFACE SILL AND WINDOW SHADES AT ALL WINDOW. COORDINATE SHADE SELECTION WITH OWNER. TYPICAL.
5. ELEVATOR DISCONNECT SWITCH. COORDINATE WITH ELECTRICAL AND ELEVATOR SUPPLIER
6. REFER TO SHEET A-603 FOR TYPICAL MOUNTING DIMENSIONS PER ANSI A117.1-2009
7. NEW HAND AND GUARD RAILS AT ALL STAIRS AND RAMPS. TYPICAL.
8. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS. REFER TO AND COORDINATE WITH BUILDING AND GLAZING ELEVATIONS.
9. TUNNEL AND CRAWL SPACE AREAS. ALL SLAB ON GRADE AREAS TO INSPECTED FOR POSSIBLE SUPPORTED SLAB CONDITION.
   9A = BASEMENT AREA.
   9B = EXTERIOR TUNNEL TO BE REMOVED AND BACK FILLED. CLOSE WITH CMU AT BUILDING
   9C = EXISTING TUNNEL ACCESS TO BE CLOSED SEALED WITH CONCRETE AND RELOCATED TO STORAGE ROOM 131A. COORDINATE WITH OWNER.
10. ROOF ACCESS LADDER AND HATCH. SEE DETAIL 2 ON SHEET A-601
11. ELEVATOR SUMP PUMP. COORDINATE & VERIFY LOCATION WITH ELEVATOR MANUF. AND FOOTINGS AND ELEC. / MECH.
12. COORDINATE LOCATION OF PROPOSED KNOX BOX LOCATION WITH LOCAL AUTHORITY
13. EXISTING FIRE DEPARTMENT CONNECTION (F.D.C.). COORDINATE WITH CIVIL AND MECHANICAL.
13. FIRE PROTECTION ASSEMBLY. REFER TO MECHANICAL
14. EXISTING GAS METER. COORDINATE WITH CIVIL AND MECHANICAL.
15. NEW ELECTRICAL TRANSFORMER CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
16. NEW GENERATOR CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
17. ELEVATOR SUMP PUMP CONTROL PANEL. COORDINATE LOCATION WITH ELEVATOR MANUFACTURER.
18. FLOOR DRAIN: 18A = NOT SHOWN. REFER TO MECHANICAL FOR LOCATION. TYPICAL
19. EXISTING CASEWORK. LOCKERS TO BE PROTECTED
20. REFER TO BUILDING ADDITION DRAWING. TYPICAL.
21. SOLID WOOD OR SOLID SURFACE MATERIAL WALL SILL.
22. 22A = RECESSED OR SEMI-RECESSED ELECTRIC UNIT HEATER (ECUH)
    22B = WALL SURFACE MOUNTED ELECTRIC UNIT HEATER (ECUH)
    IN FILL EXISTING WALL OPENING WITH MATCHING MATERIAL. SEE WALL TYPE V1
23. EXISTING RECESSED METAL POCKET: CLEAN AND REMOVE ANY SHARP EDGES AND PREP FOR PAINTING TO MATCH EXISTING COLOR. PROVE A 2x TREADED WOOD AT THE BASE AND COVER WITH 1/2" SOLID SURFACE MATERIAL. TYPICAL AT ALL LOCATIONS.
24. NEW SUMP PUMP AND 30" ROUND x 24" DEEP PIT. FIELD VERIFY EXIST LOCATION WITH ELEVATOR AND COORDINATE WITH AND ELEC. / MECH. REFER TO SIMILAR ELEVATOR DETAIL AND PROVIDE UNI-STRUT FROM FLOOR TO CEILING PIPE SUPPORT. SEE DETAIL 5 ON SHEET A-701.
25. "HISTORIC PRESERVATION" ITEMS / AREAS (REFER TO EXISTING FLOOR PLANS SHEETS):
    25A. EXISTING BLACK CHALKBOARD TO BE PRESERVED AND INSTALLED OVER NEW FURRED WALL.

FLOOR PLANS WALL LEGEND:

- 1 HOUR FIRE BARRIER WALL CONSTRUCTION (ELEVATOR / STAIRS)
- 1 HOUR FIRE PARTITION WALL CONSTRUCTION (DWELLING SEPARATION)
- 1/2 HOUR FIRE PARTITION WALL CONSTRUCTION (CORRIDORS)

E1 — EXISTING MULTI WYTHE EXTERIOR MASONRY WALL

E2 — EXISTING SINGLE WYTHE INTERIOR MASONRY PARTITION WALL. EXISTING CMU WALLS VARY IN WIDTH OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS.

E3 — EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU.

E4 — ONE HOUR FIRE PARTITION WALL: EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU. GC/CM TO VERIFY AND CONFIRM WALL IS EXTENDED TO UNDER SIDE DECK AND EXTEND AND PATCH EXISTING WALL AS NECESSARY TO MEET A ONE HOUR FIRE RATED PARTITION WALL.
OTHERWISE PROVIDE A NEW FIRE PARTITION WALL TYPE G3

M1 — 6" C.M.U. WALL. EXISTING CMU WALLS VARY IN WIDTHS OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS AND REFER TO PLANS FOR INTERIOR WALL FURRING.
- M1A = 8" CMU
- M1B = 4" CMU
- M1C = THICKNESS VARIES AS NOTED WITH FULL THICKNESS OF CMU.
- M1F = 8" CMU ONE HOUR RATED FIRE BARRIER WALL

F1 — 5/8" GYPSUM BOARD ON 20 GA. 2-1/2" METAL STUDS @ 16" O.C. EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH 2 1/2" R9 FIBER GLASS INSULATION

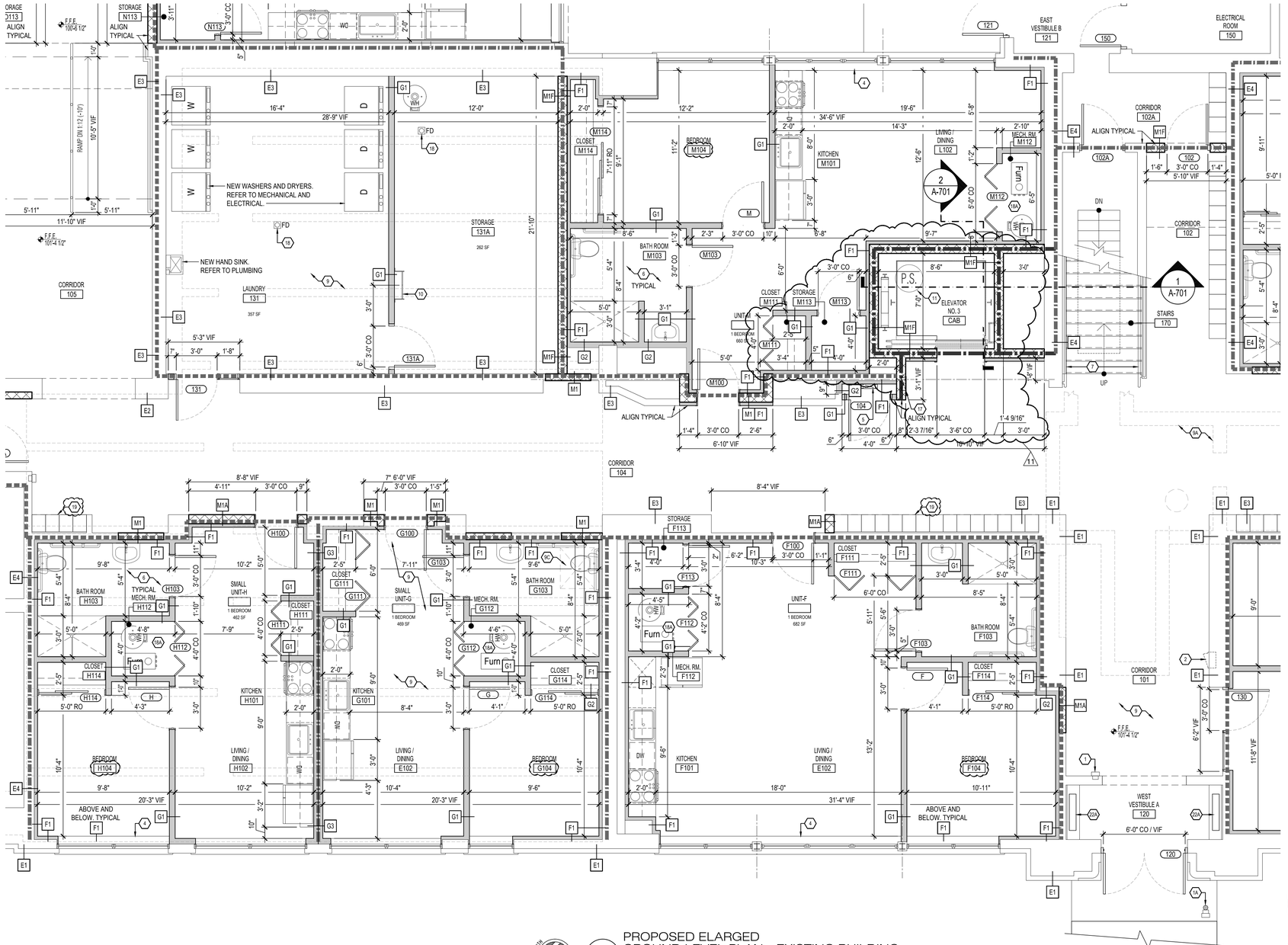
F2 — 5/8" GYPSUM BOARD ON 20 GA. 4" METAL STUDS @ 16" O.C.. EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH MINIMUM 4" R13 FIBER GLASS INSULATION.

G1 — 5/8" GYPSUM BOARD ON BOTH SIDES OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.
- G1A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS
- G1B = PARTIAL HEIGHT WALL: MINIMUM OF 3'-6" ABOVE TOP LANDING (5'-0" TOTAL HEIGHT) 4"-18 GA METAL STUD FRAMING AT 16" O.C WITH 5/8" GYPSUM BOARD ON BOTH SIDES: STUD TYPE CS3-400S200-43 (18). BRACE TO EXISTING PLATFORM OR TWO PROVIDE PONY WALL STEEL POSTS.

G2 — 5/8" GYPSUM BOARD ON ONE SIDE OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.

G3 — 1 HOUR FIRE PARTITION WALL: 5/8" GYPSUM BOARD ON BOTH SIDES OF TWO STAGGERED ROWS 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY. UL DESIGN U493.
G3A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS

V1 / V2 — BRICK AND CMU INFILL AREAS: PATCH AND REPAIR ALL WALL OPENING AFTER REMOVAL OF RECESSED ITEMS. FIELD VERIFY AND MATCH BRICK, CMU, GLAZED CMU AND SUBMIT SAMPLES FOR APPROVAL COORDINATE WITH MECHANICAL IF EXISTING OPENING IS UTILIZED FOR NEW EQUIPMENT. TYPICAL.
V2 = NEW MASONRY INFILL (BRICK AND CMU) TO MATCH EXISTING. NEW **BRICK AND CMU TO BE TOOTHED INTO EXISTING.**



1 A-304 — PROPOSED ELARGED GROUND LEVEL PLAN - EXISTING BUILDING
SCALE: 1/4"=1'-0"
REF:



KEY PLAN

4' 0 2' 4'
SCALE: 1/4"= 1'-0"

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-9000
Fax:313-964-3233

REGISTRATION SEAL

KEY PLANS

SHEET TITLE

PROPOSED ENLARGED GROUND LEVEL PLAN EXISTING BUILDING

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024
Issued	10.16.2025
Bulletin - 011	07.27.2026

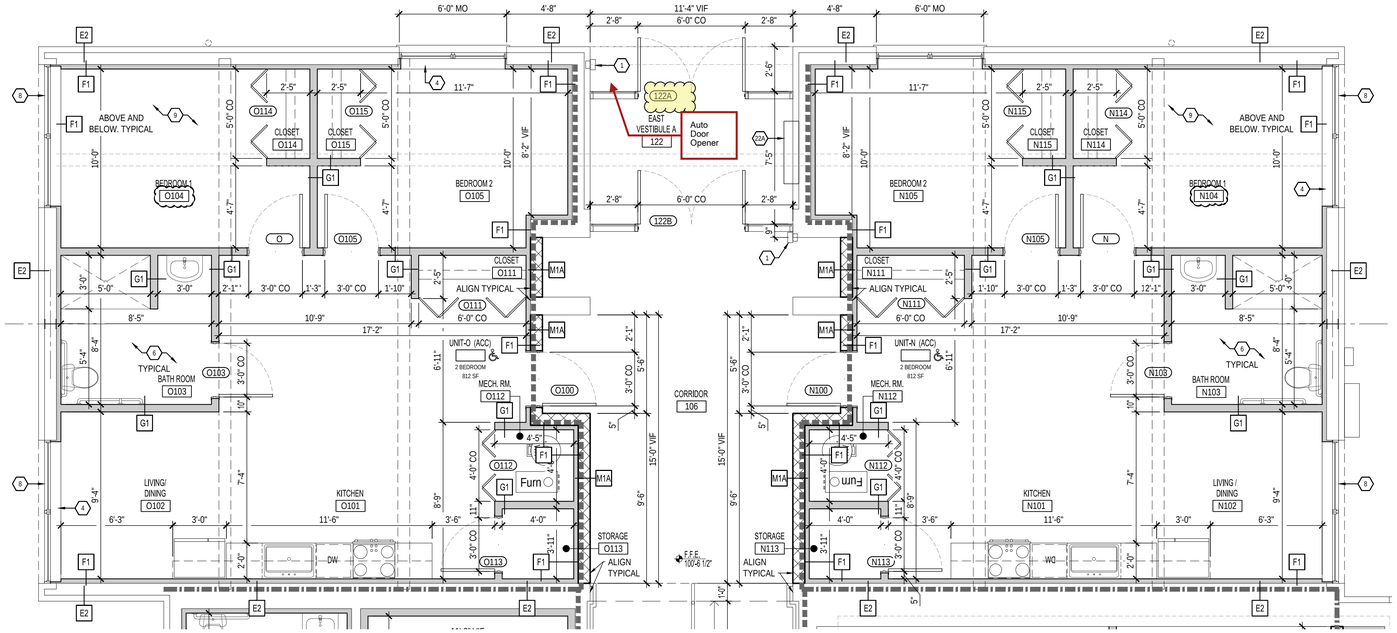
DRAWN BY: EBH
CHECKED: JA
APPROVED:

FILE NO. 21026.00

SHEET NO. A-352

FLOOR PLANS NOTES:

1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. REFER TO AND COORDINATE WITH STRUCTURAL DRAWINGS
4. REFER TO AND COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
5. MATCH EXISTING BRICK AND CMU FINISH AND COLOR AND IS SUBJECT TO ARCHITECT APPROVAL OF SAMPLE SUBMITTALS. FIELD VERIFY AND MATCH MASONRY PATTERN AND COURSING. TOOTH IN ALL NEW WORK INTO EXISTING COURSING.
6. PROVIDE 9 GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. SPACED VERTICALLY FOR ALL CMU WALLS.
7. PROVIDE 9 GA LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. WITH ADJUSTABLE VENEER TIES AT 16" O.C. STAGGERED FOR ALL CMU WITH BRICK VENEER WALLS.
8. UNLESS NOTED OTHERWISE, EXTEND ALL WALLS TO UNDER SIDE OF FLOOR / ROOF METAL DECK FOR SMOKE TIGHT CONSTRUCTION. CLOSE ALL OPENINGS WITH GROUT MATERIAL TO MEET CODE REQUIREMENTS FOR A THE INDICATED RATED CONSTRUCTION. REFER TO FLOOR PLANS FOR LOCATIONS.
9. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.

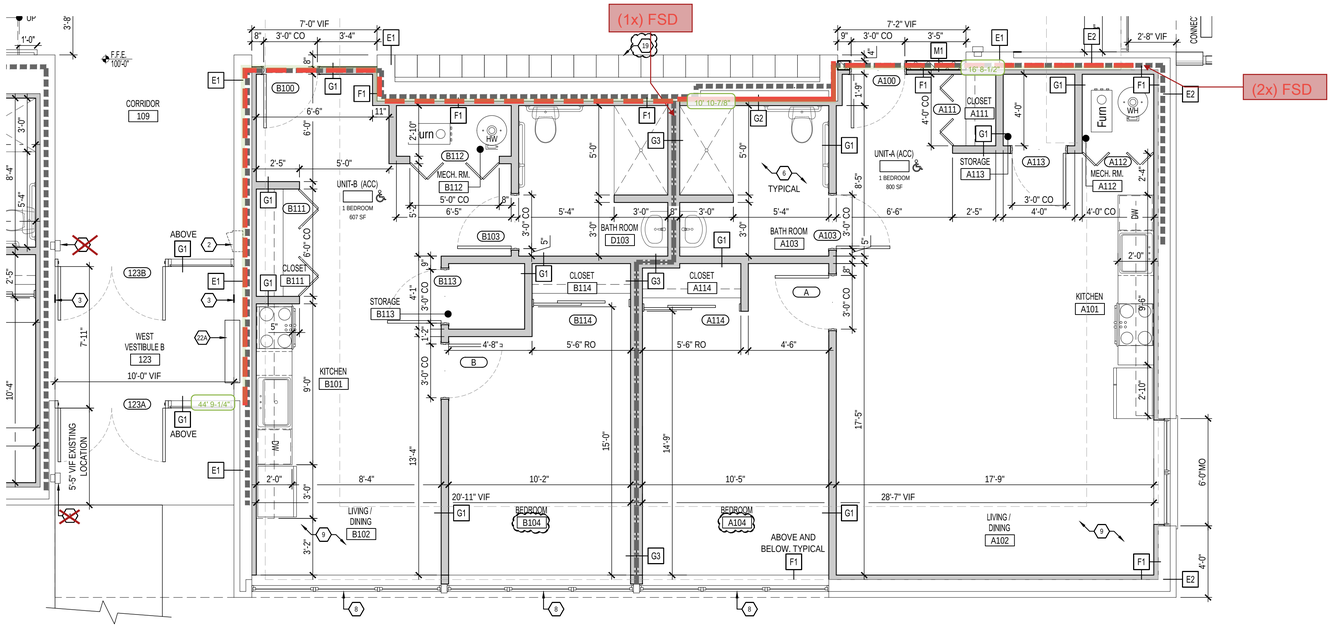


PROPOSED ELARGED GROUND LEVEL PLAN - EXISTING BUILDING

2 / A-304

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

REF:



PROPOSED ELARGED GROUND LEVEL PLAN - EXISTING BUILDING

1 / A-304

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

REF:

FLOOR PLANS NOTES LEGEND:

1. BARRIER FREE POWER ASSIST DOOR ACTUATOR. PROVIDE POST AS NEEDED (1A).
2. EXISTING FIRE EXTINGUISHER CABINET TO REMAIN. PROVIDE NEW EXTINGUISHER.
3. PATCH AND REPAIR WALL WITH MATCHING EXISTING MATCHING.
4. NEW SOLID SURFACE SILL AND WINDOW SHADES AT ALL WINDOW. COORDINATE SHADE SELECTION WITH OWNER. TYPICAL.
5. ELEVATOR DISCONNECT SWITCH. COORDINATE WITH ELECTRICAL AND ELEVATOR SUPPLIER
6. REFER TO SHEET A-603 FOR TYPICAL MOUNTING DIMENSIONS PER ANSI A117.1-2009
7. NEW HAND AND GUARD RAILS AT ALL STAIRS AND RAMPS. TYPICAL.
8. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS. REFER TO AND COORDINATE WITH BUILDING AND GLAZING ELEVATIONS.
9. TUNNEL AND CRAWL SPACE AREAS. ALL SLAB ON GRADE AREAS TO INSPECTED FOR POSSIBLE SUPPORTED SLAB CONDITION.
   9A = BASEMENT AREA.
   9B = EXTERIOR TUNNEL TO BE REMOVED AND BACK FILLED. CLOSE WITH CMU AT BUILDING
   9C = EXISTING TUNNEL ACCESS TO BE CLOSED SEALED WITH CONCRETE AND RELOCATED TO STORAGE ROOM 131A. COORDINATE WITH OWNER.
10. ROOF ACCESS LADDER AND HATCH. SEE DETAIL 2 ON SHEET A-601
11. ELEVATOR SUMP PUMP. COORDINATE & VERIFY LOCATION WITH ELEVATOR MANUF. AND FOOTINGS AND ELEC. / MECH.
12. COORDINATE LOCATION OF PROPOSED KNOX BOX LOCATION WITH LOCAL AUTHORITY
13. EXISTING FIRE DEPARTMENT CONNECTION (F.D.C.). COORDINATE WITH CIVIL AND MECHANICAL.
14. FIRE PROTECTION ASSEMBLY. REFER TO MECHANICAL
15. EXISTING GAS METER. COORDINATE WITH CIVIL AND MECHANICAL.
16. NEW ELECTRICAL TRANSFORMER CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
17. NEW GENERATOR CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
18. ELEVATOR SUMP PUMP CONTROL PANEL. COORDINATE LOCATION WITH ELEVATOR MANUFACTURER.
19. FLOOR DRAIN: 18A = NOT SHOWN. REFER TO MECHANICAL FOR LOCATION. TYPICAL
20. EXISTING CASEWORK. LOCKERS TO BE PROTECTED
21. REFER TO BUILDING ADDITION DRAWING. TYPICAL.
22. SOLID WOOD OR SOLID SURFACE MATERIAL WALL SILL.
23. 22A = RECESSED OR SEMI-RECESSED ELECTRIC UNIT HEATER (ECUH)
    22B = WALL SURFACE MOUNTED ELECTRIC UNIT HEATER (ECUH)
    IN FILL EXISTING WALL OPENING WITH MATCHING MATERIAL. SEE WALL TYPE V1
24. EXISTING RECESSED METAL POCKET: CLEAN AND REMOVE ANY SHARP EDGES AND PREP FOR PAINTING TO MATCH EXISTING COLOR. PROVE A 2x TREADED WOOD AT THE BASE AND COVER WITH 1/2" SOLID SURFACE MATERIAL. TYPICAL AT ALL LOCATIONS.
25. NEW SUMP PUMP AND 30" ROUND x 24" DEEP PIT. FIELD VERIFY EXIST LOCATION WITH ELEVATOR AND COORDINATE WITH AND ELEC. / MECH. REFER TO SIMILAR ELEVATOR DETAIL AND PROVIDE UNI-STRUT FROM FLOOR TO CEILING PIPE SUPPORT. SEE DETAL 5 ON SHEET A-701.
26. "HISTORIC PRESERVATION" ITEMS / AREAS (REFER TO EXISTING FLOOR PLANS SHEETS):
    25A: EXISTING BLACK CHALKBOARD TO BE PRESERVED AND INSTALLED OVER NEW FURRED WALL.

FLOOR PLANS WALL LEGEND:

- 1 HOUR FIRE BARRIER WALL CONSTRUCTION (ELEVATOR / STAIRS)
- 1 HOUR FIRE PARTITION WALL CONSTRUCTION (DWELLING SEPARATION)
- 1/2 HOUR FIRE PARTITION WALL CONSTRUCTION (CORRIDORS)

VIF **E1** — EXISTING MULTI WYTHE EXTERIOR MASONRY WALL

VIF **E2** — EXISTING SINGLE WYTHE INTERIOR MASONRY PARTITION WALL. EXISTING CMU WALLS VARY IN WIDTH OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS.

VIF **E3** — EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU.

VIF **E4** — ONE HOUR FIRE PARTITION WALL: EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU. GC/CM TO VERIFY AND CONFIRM WALL IS EXTENDED TO UNDER SIDE DECK AND EXTEND AND PATCH EXISTING WALL AS NECESSARY TO MEET A ONE HOUR FIRE RATED PARTITION WALL.
OTHERWISE PROVIDE A NEW FIRE PARTITION WALL TYPE G3

6" **M1** — 6" C.M.U. WALL. EXISTING CMU WALLS VARY IN WIDTHS OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS AND REFER TO PLANS FOR INTERIOR WALL FURRING.
- M1A = 8" CMU
- M1B = 4" CMU
- M1C = THICKNESS VARIES AS NOTED WITH FULL THICKNESS OF CMU.
- M1F = 8" CMU ONE HOUR RATED FIRE BARRIER WALL

5" **F1** — 5/8" GYPSUM BOARD ON 20 GA. 2-1/2" METAL STUDS @ 16" O.C. EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH 2 1/2" R8 FIBER GLASS INSULATION

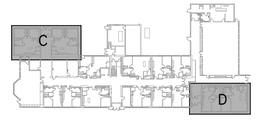
4" **F2** — 5/8" GYPSUM BOARD ON 20 GA. 4" METAL STUDS @ 16" O.C. EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH MINIMUM 4" R13 FIBER GLASS INSULATION.

5" **G1** — 5/8" GYPSUM BOARD ON BOTH SIDES OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.
- G1A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS
- G1B = PARTIAL HEIGHT WALL: MINIMUM OF 3'-6" ABOVE TOP LANDING (5'-0" TOTAL HEIGHT) 4"-18 GA METAL STUD FRAMING AT 16" O.C WITH 5/8" GYPSUM BOARD ON BOTH SIDES: STUD TYPE CS3-400S200-43 (18). BRACE TO EXISTING PLATFORM OR TWO PROVIDE PONY WALL STEEL POSTS.

4" **G2** — 5/8" GYPSUM BOARD ON ONE SIDE OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.

8" **G3** — 1 HOUR FIRE PARTITION WALL: 5/8" GYPSUM BOARD ON BOTH SIDES OF TWO STAGGERED ROWS 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY. UL DESIGN U493.
G3A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS

V1 / V2 — BRICK AND CMU INFILL AREAS: PATCH AND REPAIR ALL WALL OPENING AFTER REMOVAL OF RECESSED ITEMS. FIELD VERIFY AND MATCH BRICK, CMU, GLAZED CMU AND SUBMIT SAMPLES FOR APPROVAL. COORDINATE WITH MECHANICAL IF EXISTING OPENING IS UTILIZED FOR NEW EQUIPMENT. TYPICAL.
V2 = NEW MASONRY INFILL (BRICK AND CMU) TO MATCH EXISTING. NEW **BRICK AND CMU TO BE TOOTHED INTO EXISTING.**



KEY PLAN

4' 0 2' 4'

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

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-8000
Fax:313-961-3233

REGISTRATION SEAL

KEY PLANS

SHEET TITLE

PROPOSED ENLARGED GROUND LEVEL PLAN EXISTING BUILDING

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024
Issued	10.16.2025

DRAWN BY: EBH

CHECKED: JA

APPROVED

FILE NO.: 21026.00

SHEET NO.: A-353

FLOOR PLANS NOTES:

1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. REFER TO AND COORDINATE WITH STRUCTURAL DRAWINGS
4. REFER TO AND COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
5. MATCH EXISTING BRICK AND CMU FINISH AND COLOR AND IS SUBJECT TO ARCHITECT APPROVAL OF SAMPLE SUBMITTALS. FIELD VERIFY AND MATCH MASONRY PATTERN AND COURSING. TOOTH IN ALL NEW WORK INTO EXISTING COURSING.
6. PROVIDE 9 GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. SPACED VERTICALLY FOR ALL CMU WALLS.
7. PROVIDE 9 GA LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. WITH ADJUSTABLE VENEER TIES AT 16" O.C. STAGGERED FOR ALL CMU WITH BRICK VENEER WALLS.
8. UNLESS NOTED OTHERWISE, EXTEND ALL WALLS TO UNDER SIDE OF FLOOR / ROOF METAL DECK FOR SMOKE TIGHT CONSTRUCTION. CLOSE ALL OPENINGS WITH GROUT MATERIAL TO MEET CODE REQUIREMENTS FOR A THE INDICATED RATED CONSTRUCTION. REFER TO FLOOR PLANS FOR LOCATIONS.
9. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.

FLOOR PLANS WALL LEGEND:

- 1 HOUR FIRE BARRIER WALL CONSTRUCTION (ELEVATOR / STAIRS)
- 1 HOUR FIRE PARTITION WALL CONSTRUCTION (DWELLING SEPARATION)
- 1/2 HOUR FIRE PARTITION WALL CONSTRUCTION (CORRIDORS)

E1 — EXISTING MULTI WYTHE EXTERIOR MASONRY WALL

E2 — EXISTING SINGLE WYTHE INTERIOR MASONRY PARTITION WALL. EXISTING CMU WALLS VARY IN WIDTH OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS.

E3 — EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU.

E4 — ONE HOUR FIRE PARTITION WALL: EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU. GC/CM TO VERIFY AND CONFIRM WALL IS EXTENDED TO UNDER SIDE DECK AND EXTEND AND PATCH EXISTING WALL AS NECESSARY TO MEET A ONE HOUR FIRE RATED PARTITION WALL.
OTHERWISE PROVIDE A NEW FIRE PARTITION WALL TYPE G3

M1 — 6" C.M.U. WALL. EXISTING CMU WALLS VARY IN WIDTHS OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS AND REFER TO PLANS FOR INTERIOR WALL FURRING.
- M1A = 8" CMU
- M1B = 4" CMU
- M1C = THICKNESS VARIES AS NOTED WITH FULL THICKNESS OF CMU.
- M1F = 8" CMU ONE HOUR RATED FIRE BARRIER WALL

F1 — 5/8" GYPSUM BOARD ON 20 GA. 2-1/2" METAL STUDS @ 16" O.C . EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH 2 1/2" R8 FIBER GLASS INSULATION

F2 — 5/8" GYPSUM BOARD ON 20 GA. 4" METAL STUDS @ 16" O.C . EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH MINIMUM 4" R13 FIBER GLASS INSULATION.

G1 — 5/8" GYPSUM BOARD ON BOTH SIDES OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.
- G1A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS
- G1B = PARTIAL HEIGHT WALL: MINIMUM OF 3'-6" ABOVE TOP LANDING (5'-0" TOTAL HEIGHT) 4"-18 GA METAL STUD FRAMING AT 16" O.C WITH 5/8" GYPSUM BOARD ON BOTH SIDES: STUD TYPE CS3-400S200-43 (18). BRACE TO EXISTING PLATFORM OR TWO PROVIDE PONY WALL STEEL POSTS.

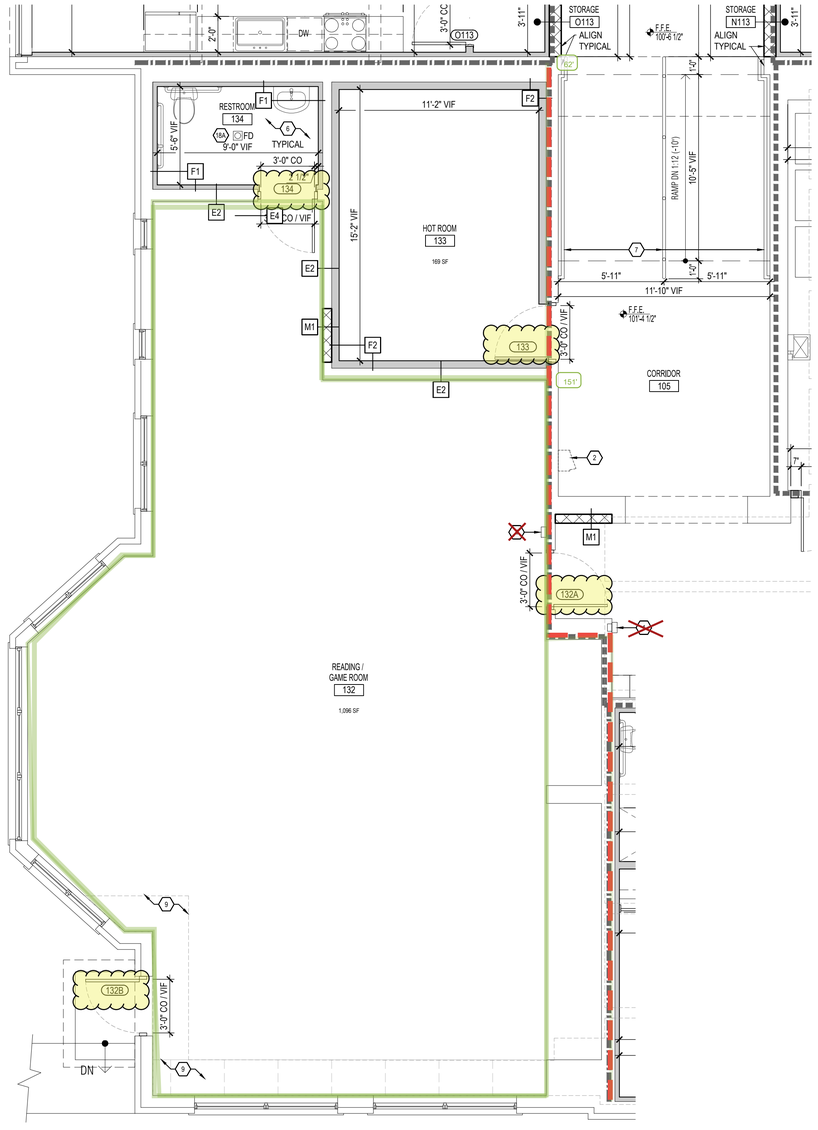
G2 — 5/8" GYPSUM BOARD ON ONE SIDE OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.

G3 — 1 HOUR FIRE PARTITION WALL: 5/8" GYPSUM BOARD ON BOTH SIDES OF TWO STAGGERED ROWS 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY. UL DESIGN U493.
G3A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS

V1 / V2 — BRICK AND CMU INFILL AREAS: PATCH AND REPAIR ALL WALL OPENING AFTER REMOVAL OF RECESSED ITEMS. FIELD VERIFY AND MATCH BRICK, CMU, GLAZED CMU AND SUBMIT SAMPLES FOR APPROVAL. COORDINATE WITH MECHANICAL IF EXISTING OPENING IS UTILIZED FOR NEW EQUIPMENT. TYPICAL.
V2 = NEW MASONRY INFILL (BRICK AND CMU) TO MATCH EXISTING. NEW **BRICK AND CMU TO BE TOOTHED INTO EXISTING.**

FLOOR PLANS NOTES LEGEND:

1. BARRIER FREE POWER ASSIST DOOR ACTUATOR. PROVIDE POST AS NEEDED (1A).
2. EXISTING FIRE EXTINGUISHER CABINET TO REMAIN. PROVIDE NEW EXTINGUISHER.
3. PATCH AND REPAIR WALL WITH MATCHING EXISTING MATCHING.
4. NEW SOLID SURFACE SILL AND WINDOW SHADES AT ALL WINDOW. COORDINATE SHADE SELECTION WITH OWNER. TYPICAL.
5. ELEVATOR DISCONNECT SWITCH. COORDINATE WITH ELECTRICAL AND ELEVATOR SUPPLIER
6. REFER TO SHEET A-503 FOR TYPICAL MOUNTING DIMENSIONS PER ANSI A117.1-2009
7. NEW HAND AND GUARD RAILS AT ALL STAIRS AND RAMPS. TYPICAL.
8. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS. REFER TO AND COORDINATE WITH BUILDING AND GLAZING ELEVATIONS.
9. TUNNEL AND CRAWL SPACE AREAS. ALL SLAB ON GRADE AREAS TO INSPECTED FOR POSSIBLE SUPPORTED SLAB CONDITION.
   9A = BASEMENT AREA.
   9B = EXTERIOR TUNNEL TO BE REMOVED AND BACK FILLED. CLOSE WITH CMU AT BUILDING
   9C = EXISTING TUNNEL ACCESS TO BE CLOSED SEALED WITH CONCRETE AND RELOCATED TO STORAGE ROOM 131A. COORDINATE WITH OWNER.
10. ROOF ACCESS LADDER AND HATCH. SEE DETAIL 2 ON SHEET A-601
11. ELEVATOR SUMP PUMP. COORDINATE & VERIFY LOCATION WITH ELEVATOR MANUF. AND FOOTINGS AND ELEC. / MECH.
12. COORDINATE LOCATION OF PROPOSED KNOX BOX LOCATION WITH LOCAL AUTHORITY
13. EXISTING FIRE DEPARTMENT CONNECTION (F.D.C.). COORDINATE WITH CIVIL AND MECHANICAL.
13. FIRE PROTECTION ASSEMBLY. REFER TO MECHANICAL
14. EXISTING GAS METER. COORDINATE WITH CIVIL AND MECHANICAL.
15. NEW ELECTRICAL TRANSFORMER CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
16. NEW GENERATOR CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
17. ELEVATOR SUMP PUMP CONTROL PANEL. COORDINATE LOCATION WITH ELEVATOR MANUFACTURER.
18. FLOOR DRAIN: 18A = NOT SHOWN. REFER TO MECHANICAL FOR LOCATION. TYPICAL
19. EXISTING CASEWORK. LOCKERS TO BE PROTECTED
20. REFER TO BUILDING ADDITION DRAWING. TYPICAL.
21. SOLID WOOD OR SOLID SURFACE MATERIAL WALL SILL.
22. 22A = RECESSED OR SEMI-RECESSED ELECTRIC UNIT HEATER (ECUH)
    22B = WALL SURFACE MOUNTED ELECTRIC UNIT HEATER (ECUH)
    IN FILL EXISTING WALL OPENING WITH MATCHING MATERIAL. SEE WALL TYPE V1
23. EXISTING RECESSED METAL POCKET: CLEAN AND REMOVE ANY SHARP EDGES AND PREP FOR PAINTING TO MATCH EXISTING COLOR. PROVE A 2x TREADED WOOD AT THE BASE AND COVER WITH 1/2" SOLID SURFACE MATERIAL. TYPICAL AT ALL LOCATIONS.
24. NEW SUMP PUMP AND 30" ROUND x 24" DEEP PIT. FIELD VERIFY EXIST LOCATION WITH ELEVATOR AND COORDINATE WITH AND ELEC. / MECH. REFER TO SIMILAR ELEVATOR DETAIL AND PROVIDE UNI-STRUT FROM FLOOR TO CEILING PIPE SUPPORT. SEE DETAIL 5 ON SHEET A-701.



1 A-304 PROPOSED ELARGED GROUND LEVEL PLAN - EXISTING BUILDING
SCALE: 1/4"= 1'-0"
REF:

1 A-304 PROPOSED ELARGED GROUND LEVEL PLAN - EXISTING BUILDING
SCALE: 1/4"= 1'-0"
REF:

KEY PLAN

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

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-8000
Fax:313-964-3233

REGISTRATION SEAL

KEY PLANS

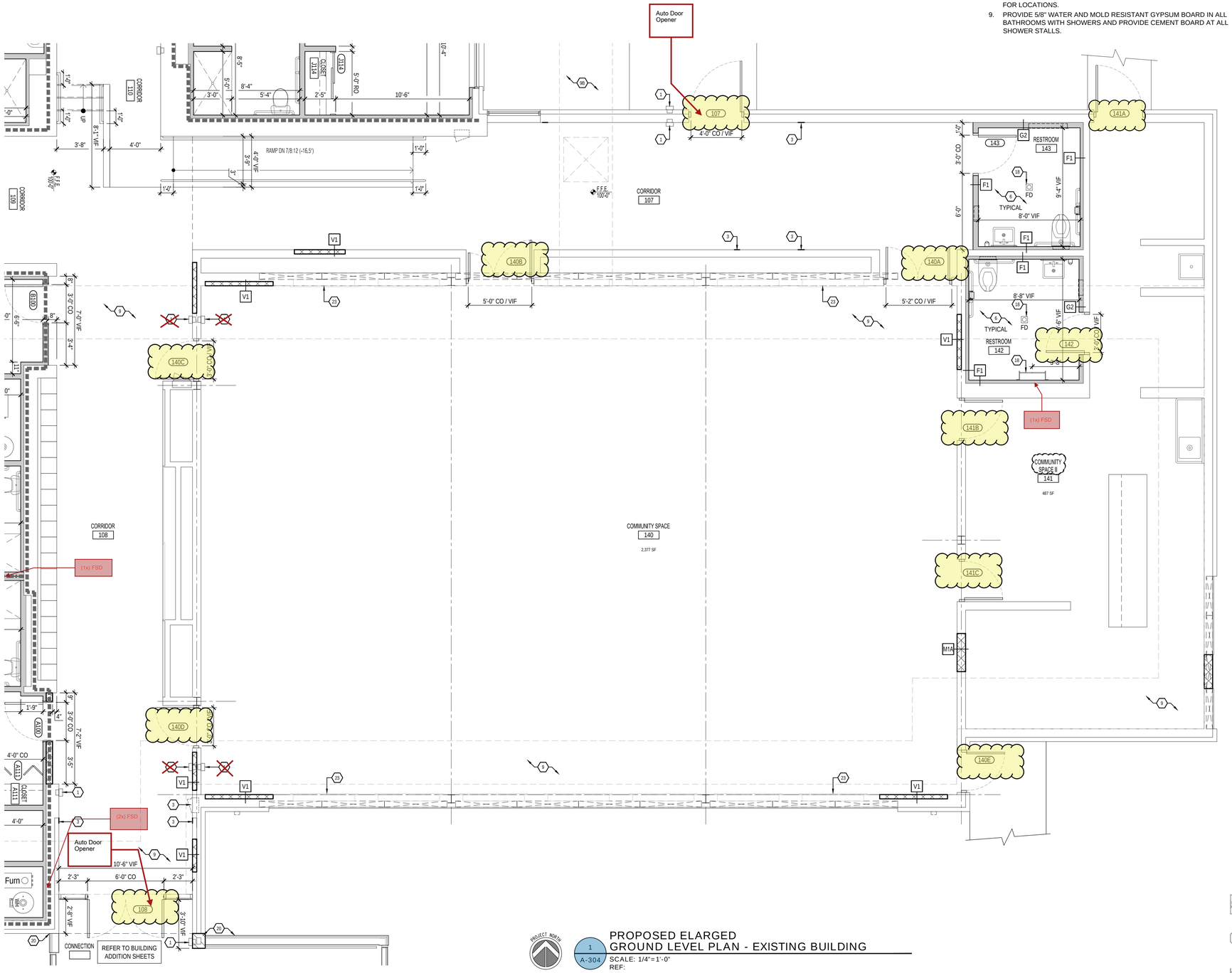
STATE OF MICHIGAN
THADDEUS C ZAKRZEWSKI
License No. 1301020315
LICENSED ARCHITECT
12/19/2024

SHEET TITLE
PROPOSED ENLARGED GROUND LEVEL PLAN EXISTING BUILDING

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024

DRAWN BY: EBH
CHECKED: JA
APPROVED:
FILE NO.: 21026.00
SHEET NO.: A-354



PROJECT NORTH

1 / A-304

PROPOSED ELARGED GROUND LEVEL PLAN - EXISTING BUILDING

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

REF:

FLOOR PLANS NOTES:

1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. REFER TO AND COORDINATE WITH STRUCTURAL DRAWINGS
4. REFER TO AND COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
5. MATCH EXISTING BRICK AND CMU FINISH AND COLOR AND IS SUBJECT TO ARCHITECT APPROVAL OF SAMPLE SUBMITTALS. FIELD VERIFY AND MATCH MASONRY PATTERN AND COURSING. TOOTH IN ALL NEW WORK INTO EXISTING COURSING.
6. PROVIDE 9 GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. SPACED VERTICALLY FOR ALL CMU WALLS.
7. PROVIDE 9 GA LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. WITH ADJUSTABLE VENEER TIES AT 16" O.C. STAGGERED FOR ALL CMU WITH BRICK VENEER WALLS.
8. UNLESS NOTED OTHERWISE, EXTEND ALL WALLS TO UNDER SIDE OF FLOOR / ROOF METAL DECK FOR SMOKE TIGHT CONSTRUCTION. CLOSE ALL OPENINGS WITH GROUT MATERIAL TO MEET CODE REQUIREMENTS FOR A THE INDICATED RATED CONSTRUCTION. REFER TO FLOOR PLANS FOR LOCATIONS.
9. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.

FLOOR PLANS NOTES LEGEND:

1. BARRIER FREE POWER ASSIST DOOR ACTUATOR. PROVIDE POST AS NEEDED (1A).
2. EXISTING FIRE EXTINGUISHER CABINET TO REMAIN. PROVIDE NEW EXTINGUISHER.
3. PATCH AND REPAIR WALL WITH MATCHING EXISTING MATCHING.
4. NEW SOLID SURFACE SILL AND WINDOW SHADES AT ALL WINDOW. COORDINATE SHADE SELECTION WITH OWNER. TYPICAL.
5. ELEVATOR DISCONNECT SWITCH. COORDINATE WITH ELECTRICAL AND ELEVATOR SUPPLIER
6. REFER TO SHEET A-503 FOR TYPICAL MOUNTING DIMENSIONS PER ANSI A117.1-2009
7. NEW HAND AND GUARD RAILS AT ALL STAIRS AND RAMPS. TYPICAL.
8. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS. REFER TO AND COORDINATE WITH BUILDING AND GLAZING ELEVATIONS.
9. TUNNEL AND CRAWL SPACE AREAS. ALL SLAB ON GRADE AREAS TO INSPECTED FOR POSSIBLE SUPPORTED SLAB CONDITION.
   9A = BASEMENT AREA.
   9B = EXTERIOR TUNNEL TO BE REMOVED AND BACK FILLED. CLOSE WITH CMU AT BUILDING
   9C = EXISTING TUNNEL ACCESS TO BE CLOSED SEALED WITH CONCRETE AND RELOCATED TO STORAGE ROOM 131A. COORDINATE WITH OWNER.
10. ROOF ACCESS LADDER AND HATCH. SEE DETAIL 2 ON SHEET A-601
11. ELEVATOR SUMP PUMP. COORDINATE & VERIFY LOCATION WITH ELEVATOR MANUF. AND FOOTINGS AND ELEC. / MECH.
12. COORDINATE LOCATION OF PROPOSED KNOX BOX LOCATION WITH LOCAL AUTHORITY
13. EXISTING FIRE DEPARTMENT CONNECTION (F.D.C.). COORDINATE WITH CIVIL AND MECHANICAL.
14. FIRE PROTECTION ASSEMBLY. REFER TO MECHANICAL
15. EXISTING GAS METER. COORDINATE WITH CIVIL AND MECHANICAL.
16. NEW ELECTRICAL TRANSFORMER CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
17. NEW GENERATOR CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
18. ELEVATOR SUMP PUMP CONTROL PANEL. COORDINATE LOCATION WITH ELEVATOR MANUFACTURER.
19. FLOOR DRAIN: 18A = NOT SHOWN. REFER TO MECHANICAL FOR LOCATION. TYPICAL
20. EXISTING CASEWORK. LOCKERS TO BE PROTECTED
21. REFER TO BUILDING ADDITION DRAWING. TYPICAL.
22. SOLID WOOD OR SOLID SURFACE MATERIAL WALL SILL.
23. 22A = RECESSED OR SEMI-RECESSED ELECTRIC UNIT HEATER (ECUH)
    22B = WALL SURFACE MOUNTED ELECTRIC UNIT HEATER (ECUH)
    IN FILL EXISTING WALL OPENING WITH MATCHING MATERIAL. SEE WALL TYPE V1
24. EXISTING RECESSED METAL POCKET: CLEAN AND REMOVE ANY SHARP EDGES AND PREP FOR PAINTING TO MATCH EXISTING COLOR. PROVE A 2x TREADED WOOD AT THE BASE AND COVER WITH 1/2" SOLID SURFACE MATERIAL. TYPICAL AT ALL LOCATIONS.
25. NEW SUMP PUMP AND 30" ROUND x 24" DEEP PIT. FIELD VERIFY EXIST LOCATION WITH ELEVATOR AND COORDINATE WITH AND ELEC. / MECH. REFER TO SIMILAR ELEVATOR DETAIL AND PROVIDE UNI-STRUT FROM FLOOR TO CEILING PIPE SUPPORT. SEE DETAIL 5 ON SHEET A-701.
26. "HISTORIC PRESERVATION" ITEMS / AREAS (REFER TO EXISTING FLOOR PLANS SHEETS):
    25A: EXISTING BLACK CHALKBOARD TO BE PRESERVED AND INSTALLED OVER NEW FURRED WALL.

FLOOR PLANS WALL LEGEND:

- 1 HOUR FIRE BARRIER WALL CONSTRUCTION (ELEVATOR / STAIRS)
- 1 HOUR FIRE PARTITION WALL CONSTRUCTION (DWELLING SEPARATION)
- 1/2 HOUR FIRE PARTITION WALL CONSTRUCTION (CORRIDORS)

E1 — EXISTING MULTI WYTHE EXTERIOR MASONRY WALL

E2 — EXISTING SINGLE WYTHE INTERIOR MASONRY PARTITION WALL. EXISTING CMU WALLS VARY IN WIDTH OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS.

E3 — EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU.

E4 — ONE HOUR FIRE PARTITION WALL: EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU. GC/CM TO VERIFY AND CONFIRM WALL IS EXTENDED TO UNDER SIDE DECK AND EXTEND AND PATCH EXISTING WALL AS NECESSARY TO MEET A ONE HOUR FIRE RATED PARTITION WALL.
OTHERWISE PROVIDE A NEW FIRE PARTITION WALL TYPE G3

M1 — 6" C.M.U. WALL. EXISTING CMU WALLS VARY IN WIDTHS OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS AND REFER TO PLANS FOR INTERIOR WALL FURRING.
- M1A = 8" CMU
- M1B = 4" CMU
- M1C = THICKNESS VARIES AS NOTED WITH FULL THICKNESS OF CMU.
- M1F = 8" CMU ONE HOUR RATED FIRE BARRIER WALL

F1 — 5/8" GYPSUM BOARD ON 20 GA. 2-1/2" METAL STUDS @ 16" O.C . EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH 2 1/2" R8 FIBER GLASS INSULATION

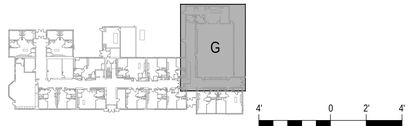
F2 — 5/8" GYPSUM BOARD ON 20 GA. 4" METAL STUDS @ 16" O.C . EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH MINIMUM 4" R13 FIBER GLASS INSULATION.

G1 — 5/8" GYPSUM BOARD ON BOTH SIDES OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.
- G1A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS
- G1B = PARTIAL HEIGHT WALL: MINIMUM OF 3'-6" ABOVE TOP LANDING (5'-0" TOTAL HEIGHT) 4"-18 GA METAL STUD FRAMING AT 16" O.C WITH 5/8" GYPSUM BOARD ON BOTH SIDES: STUD TYPE CS3-400S200-43 (18). BRACE TO EXISTING PLATFORM OR TWO PROVIDE PONY WALL STEEL POSTS.

G2 — 5/8" GYPSUM BOARD ON ONE SIDE OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.

G3 — 1 HOUR FIRE PARTITION WALL: 5/8" GYPSUM BOARD ON BOTH SIDES OF TWO STAGGERED ROWS 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY. UL DESIGN U493.
G3A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS

V1 / V2 — BRICK AND CMU INFILL AREAS: PATCH AND REPAIR ALL WALL OPENING AFTER REMOVAL OF RECESSED ITEMS. FIELD VERIFY AND MATCH BRICK, CMU, GLAZED CMU AND SUBMIT SAMPLES FOR APPROVAL. COORDINATE WITH MECHANICAL IF EXISTING OPENING IS UTILIZED FOR NEW EQUIPMENT. TYPICAL.
V2 = NEW MASONRY INFILL (BRICK AND CMU) TO MATCH EXISTING. NEW **BRICK AND CMU TO BE TOOTHED INTO EXISTING.**



KEY PLAN

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-8000
Fax:313-964-3233

REGISTRATION SEAL

KEY PLANS

SHEET TITLE

PROPOSED ENLARGED GROUND LEVEL PLAN EXISTING BUILDING

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024
Issued	10.16.2025

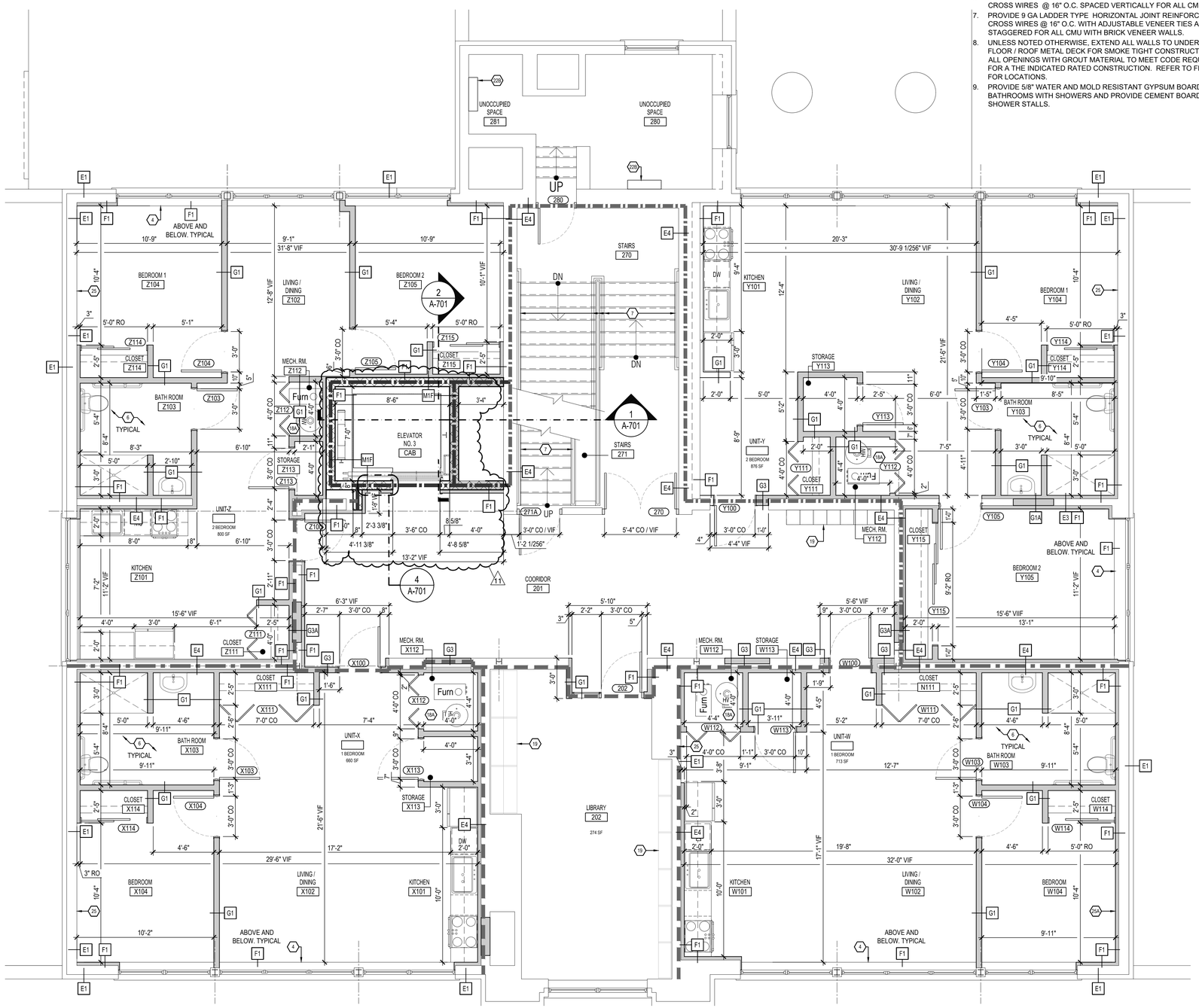
DRAWN BY: EBH

CHECKED: JA

APPROVED

FILE NO.: 21026.00

SHEET NO.: A-355



PROJECT NORTH

1 A-305 PROPOSED ELARGED SECOND LEVEL PLAN - EXISTING BUILDING

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

REF:

4' 0 2' 4'

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

FLOOR PLANS NOTES:

1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. REFER TO AND COORDINATE WITH STRUCTURAL DRAWINGS
4. REFER TO AND COORDINATE WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
5. MATCH EXISTING BRICK AND CMU FINISH AND COLOR AND IS SUBJECT TO ARCHITECT APPROVAL OF SAMPLE SUBMITTALS. FIELD VERIFY AND MATCH MASONRY PATTERN AND COURSING. TOOTH IN ALL NEW WORK INTO EXISTING COURSING.
6. PROVIDE 9 GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. SPACED VERTICALLY FOR ALL CMU WALLS.
7. PROVIDE 9 GA LADDER TYPE HORIZONTAL JOINT REINFORCEMENT WITH CROSS WIRES @ 16" O.C. WITH ADJUSTABLE VENEER TIES AT 16" O.C. STAGGERED FOR ALL CMU WITH BRICK VENEER WALLS.
8. UNLESS NOTED OTHERWISE, EXTEND ALL WALLS TO UNDER SIDE OF FLOOR / ROOF METAL DECK FOR SMOKE TIGHT CONSTRUCTION. CLOSE ALL OPENINGS WITH GROUT MATERIAL TO MEET CODE REQUIREMENTS FOR A THE INDICATED RATED CONSTRUCTION. REFER TO FLOOR PLANS FOR LOCATIONS.
9. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.

FLOOR PLANS NOTES LEGEND:

1. BARRIER FREE POWER ASSIST DOOR ACTUATOR. PROVIDE POST AS NEEDED (1A).
2. EXISTING FIRE EXTINGUISHER CABINET TO REMAIN. PROVIDE NEW EXTINGUISHER.
3. PATCH AND REPAIR WALL WITH MATCHING EXISTING MATCHING.
4. NEW SOLID SURFACE SILL AND WINDOW SHADES AT ALL WINDOW. COORDINATE SHADE SELECTION WITH OWNER. TYPICAL.
5. ELEVATOR DISCONNECT SWITCH. COORDINATE WITH ELECTRICAL AND ELEVATOR SUPPLIER
6. REFER TO SHEET A-603 FOR TYPICAL MOUNTING DIMENSIONS PER ANSI A117.1-2009
7. NEW HAND AND GUARD RAILS AT ALL STAIRS AND RAMPS. TYPICAL.
8. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS. REFER TO AND COORDINATE WITH BUILDING AND GLAZING ELEVATIONS.
9. TUNNEL AND CRAWL SPACE AREAS. ALL SLAB ON GRADE AREAS TO INSPECTED FOR POSSIBLE SUPPORTED SLAB CONDITION.
   9A = BASEMENT AREA.
   9B = EXTERIOR TUNNEL TO BE REMOVED AND BACK FILLED. CLOSE WITH CMU AT BUILDING
   9C = EXISTING TUNNEL ACCESS TO BE CLOSED SEALED WITH CONCRETE AND RELOCATED TO STORAGE ROOM 131A. COORDINATE WITH OWNER.
10. ROOF ACCESS LADDER AND HATCH. SEE DETAIL 2 ON SHEET A-601
11. ELEVATOR SUMP PUMP. COORDINATE & VERIFY LOCATION WITH ELEVATOR MANUF. AND FOOTINGS AND ELEC. / MECH.
12. COORDINATE LOCATION OF PROPOSED KNOX BOX LOCATION WITH LOCAL AUTHORITY
13. EXISTING FIRE DEPARTMENT CONNECTION (F.D.C.). COORDINATE WITH CIVIL AND MECHANICAL.
13. FIRE PROTECTION ASSEMBLY. REFER TO MECHANICAL
14. EXISTING GAS METER. COORDINATE WITH CIVIL AND MECHANICAL.
15. NEW ELECTRICAL TRANSFORMER CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
16. NEW GENERATOR CONCRETE PAD. COORDINATE WITH CIVIL AND ELECTRICAL.
17. ELEVATOR SUMP PUMP CONTROL PANEL. COORDINATE LOCATION WITH ELEVATOR MANUFACTURER.
18. FLOOR DRAIN: 18A = NOT SHOWN. REFER TO MECHANICAL FOR LOCATION. TYPICAL
19. EXISTING CASEWORK. LOCKERS TO BE PROTECTED
20. REFER TO BUILDING ADDITION DRAWING. TYPICAL.
21. SOLID WOOD OR SOLID SURFACE MATERIAL WALL SILL.
22. 22A = RECESSED OR SEMI-RECESSED ELECTRIC UNIT HEATER (ECUH)
    22B = WALL SURFACE MOUNTED ELECTRIC UNIT HEATER (ECUH)
    IN FILL EXISTING WALL OPENING WITH MATCHING MATERIAL. SEE WALL TYPE V1
23. EXISTING RECESSED METAL POCKET: CLEAN AND REMOVE ANY SHARP EDGES AND PREP FOR PAINTING TO MATCH EXISTING COLOR. PROVE A 2x TREADED WOOD AT THE BASE AND COVER WITH 1/2" SOLID SURFACE MATERIAL. TYPICAL AT ALL LOCATIONS.
24. NEW SUMP PUMP AND 30" ROUND x 24" DEEP PIT. FIELD VERIFY EXIST LOCATION WITH ELEVATOR AND COORDINATE WITH AND ELEC. / MECH. REFER TO SIMILAR ELEVATOR DETAIL AND PROVIDE 1 UNI-STRUT FROM FLOOR TO CEILING PIPE SUPPORT. SEE DETAIL 5 ON SHEET A-701
25. "HISTORIC PRESERVATION" ITEMS / AREAS (REFER TO EXISTING FLOOR PLANS SHEETS):
    25A: EXISTING BLACK CHALKBOARD TO BE PRESERVED AND INSTALLED OVER NEW FURRED WALL

FLOOR PLANS WALL LEGEND:

- 1 HOUR FIRE BARRIER WALL CONSTRUCTION (ELEVATOR / STAIRS)
- 1 HOUR FIRE PARTITION WALL CONSTRUCTION (DWELLING SEPARATION)
- 1/2 HOUR FIRE PARTITION WALL CONSTRUCTION (CORRIDORS)

VIF **E1** EXISTING MULTI WYTHE EXTERIOR MASONRY WALL

VIF **E2** EXISTING SINGLE WYTHE INTERIOR MASONRY PARTITION WALL. EXISTING CMU WALLS VARY IN WIDTH OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS.

VIF **E3** EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU.

VIF **E4** ONE HOUR FIRE PARTITION WALL: EXISTING PLASTER AND LATH WALLS OVER WOOD STUDS OR CMU. VERIFY ALL AFFECTED WORK AREAS AND MATCH EXISTING CONSTRUCTION WITH METAL STUDS OR CMU. GC/CM TO VERIFY AND CONFIRM WALL IS EXTENDED TO UNDER SIDE DECK AND EXTEND AND PATCH EXISTING WALL AS NECESSARY TO MEET A ONE HOUR FIRE RATED PARTITION WALL.
OTHERWISE PROVIDE A NEW FIRE PARTITION WALL TYPE G3

6" **M1** 6" C.M.U. WALL. EXISTING CMU WALLS VARY IN WIDTHS OF 4", 6" AND 8". VERIFY ALL AFFECTED WORK AREAS AND REFER TO PLANS FOR INTERIOR WALL FURRING.
- M1A = 8" CMU
- M1B = 4" CMU
- M1C = THICKNESS VARIES AS NOTED WITH FULL THICKNESS OF CMU.
- M1F = 8" CMU ONE HOUR RATED FIRE BARRIER WALL

3" **F1** 5/8" GYPSUM BOARD ON 20 GA. 2-1/2" METAL STUDS @ 16" O.C.. EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH 2 1/2" R8 FIBER GLASS INSULATION

4" **F2** 5/8" GYPSUM BOARD ON 20 GA. 4" METAL STUDS @ 16" O.C.. EXTEND GYPSUM BOARD 6" ABOVE SUSPENDED CEILING WHERE PRESENT U.N.O. AND METAL STUDS TO UNDERSIDE OF FLOOR / ROOF DECK WITH MINIMUM 4" R13 FIBER GLASS INSULATION.

5" **G1** 5/8" GYPSUM BOARD ON BOTH SIDES OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.
- G1A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS
- G1B = PARTIAL HEIGHT WALL: MINIMUM OF 3'-6" ABOVE TOP LANDING (5'-0" TOTAL HEIGHT) 4"-18 GA METAL STUD FRAMING AT 16" O.C WITH 5/8" GYPSUM BOARD ON BOTH SIDES: STUD TYPE CS3-400S200-43 (18). BRACE TO EXISTING PLATFORM OR TWO PROVIDE PONY WALL STEEL POSTS.

4" **G2** 5/8" GYPSUM BOARD ON ONE SIDE OF 20 GA 3 5/8" METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY.

8" **G3** 1 HOUR FIRE PARTITION WALL: 5/8" GYPSUM BOARD ON BOTH SIDES OF TWO STAGGERED ROWS 20 GA 3 5/8". METAL STUD FRAMING AT 16" O.C. EXTENDED TO UNDERSIDE OF EXISTING FLOOR / ROOF DECK U.N.O. PROVIDE DEFLECTION TRACK AT FLOOR DECK TO WALL CONNECTION AND CROSS BRIDGING AT 4'-0" O.C.VERTICALLY. UL DESIGN U493.
G3A = IN-FILLS OF EXISTING WALLS. SAME AS G1 WITH LARGER, 5 1/2 OR 6" METAL STUDS TO MATCH EXISTING WALL THICKNESS

V1 V1 BRICK AND CMU INFILL AREAS: PATCH AND REPAIR ALL WALL OPENING AFTER REMOVAL OF RECESSED ITEMS. FIELD VERIFY AND MATCH BRICK, CMU, GLAZED CMU AND SUBMIT SAMPLES FOR APPROVAL. COORDINATE WITH MECHANICAL IF EXISTING OPENING IS UTILIZED FOR NEW EQUIPMENT. TYPICAL.
V2 = NEW MASONRY INFILL (BRICK AND CMU) TO MATCH EXISTING. NEW **BRICK AND CMU TO BE TOOTHED INTO EXISTING.**

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Developed by
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SDG
Architects + Planners
607 Shelby Street
Suite 704
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Tel: 313-961-9000
Fax:313-964-3233

REGISTRATION SEAL

KEY PLANS

SHEET TITLE

PROPOSED ENLARGED SECOND LEVEL PLAN EXISTING BUILDING

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024
Bulletin No. 1	02.19.2025
Bulletin - 011	07.27.2026

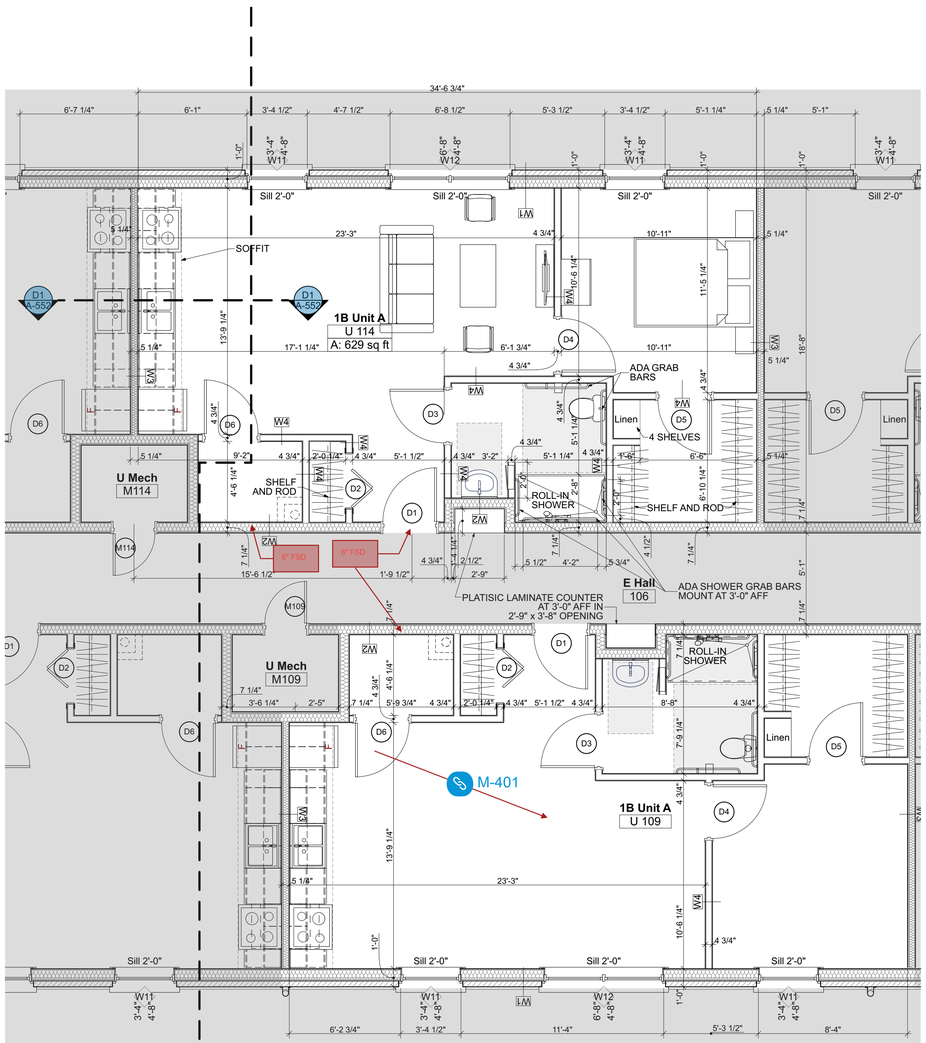
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CHECKED: JA

APPROVED

FILE NO.: 21026.00

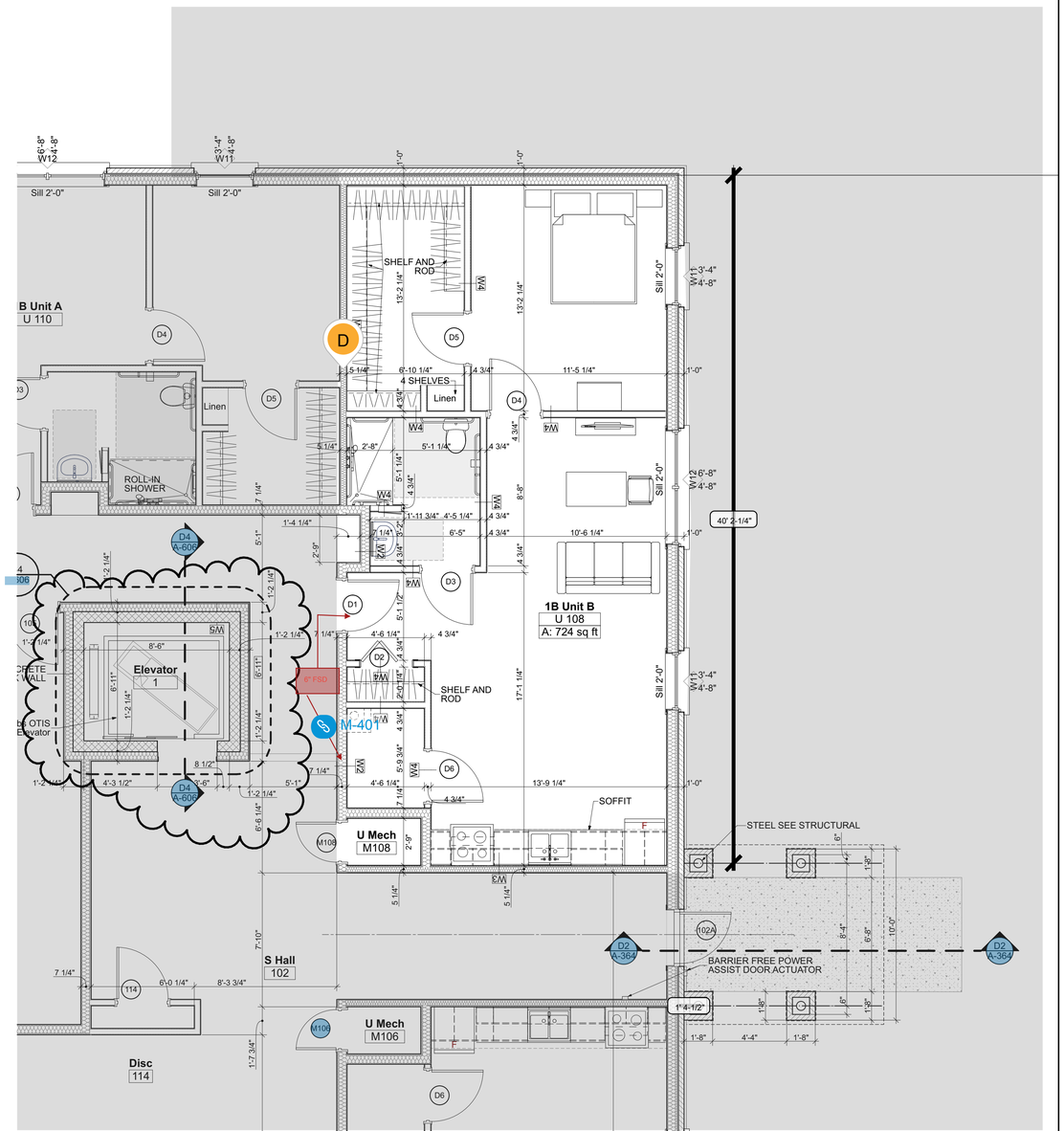
SHEET NO.: A-356



B3 A-552

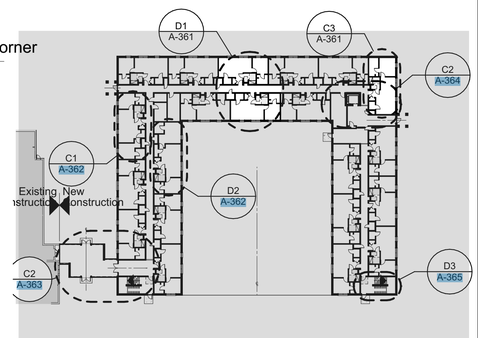
Z D1 A-361 **1B Unit A** - Typical 1 Bedroom unit

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



Z C3 A-361 **1B Unit B** - 1 Bedroom Corner

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



Z 1st Floor Key Plan

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REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAWRZEWSKI
License No. 1301026315
LICENSED ARCHITECT
12/18/2025

KEY PLANS

SHEET TITLE

1B Unit Plans

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1 1	02.19.2025

DRAWN BY: DWP

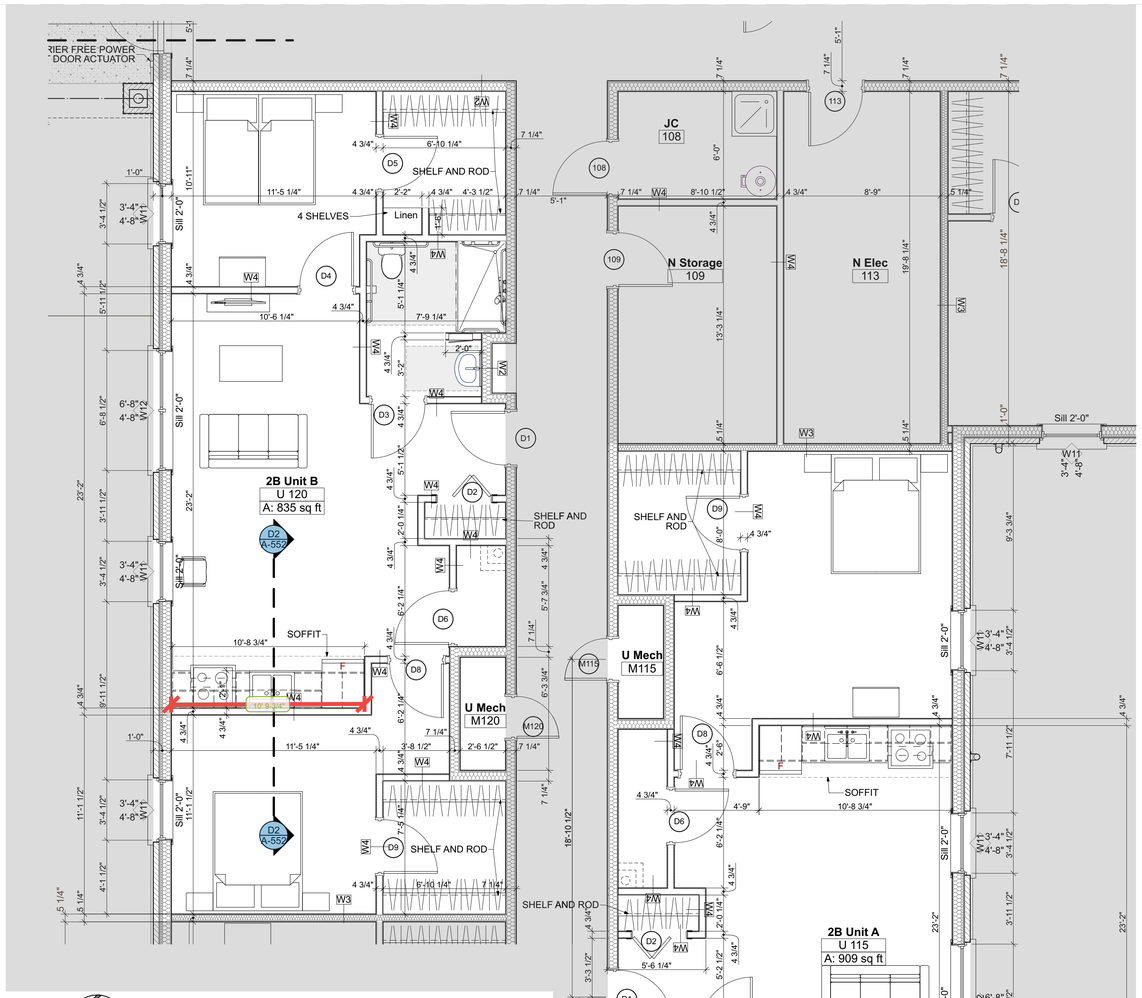
CHECKED: JA

APPROVED

FILE NO. 21026.00

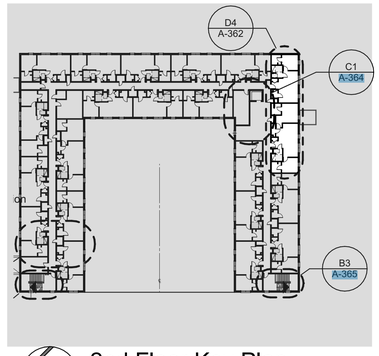
SHEET NO. A-361

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Printed: Monday, February 17, 2025

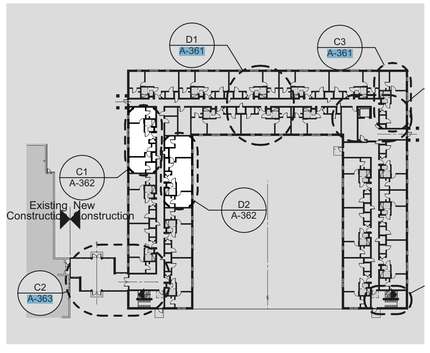


C1 A-362 — 2B Unit B - 2 Bedroom

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



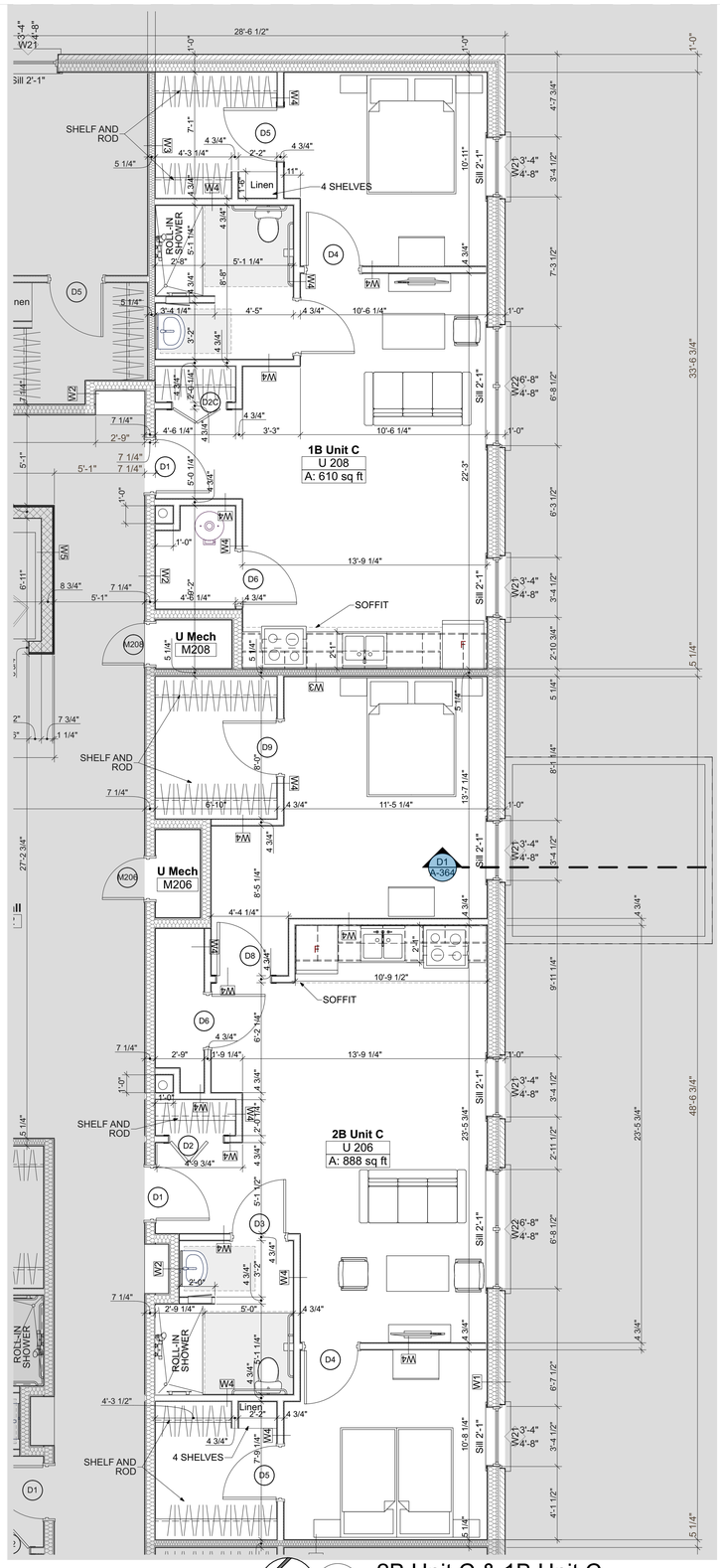
2nd Floor Key Plan



1st Floor Key Plan

D2 A-362 — 2B Unit A - 2 Bedroom

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



D4 A-362 — 2B Unit C & 1B Unit C

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

/Volumes/enright/Shared/Projects/-SDG/23-460_SDG_John_Grace_Housing/5_Disciplines-Design/Architectural/CAD/CD/John_Grace_CD_6.4.pln

Printed: Tuesday, January 7, 2025

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
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REGISTRATION SEAL

KEY PLANS

STATE OF MICHIGAN
THADDEUS C ZAJEWSKI
License No. 1301029315
LICENSED ARCHITECT
01/07/2025

SHEET TITLE

2B Unit Plans

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024

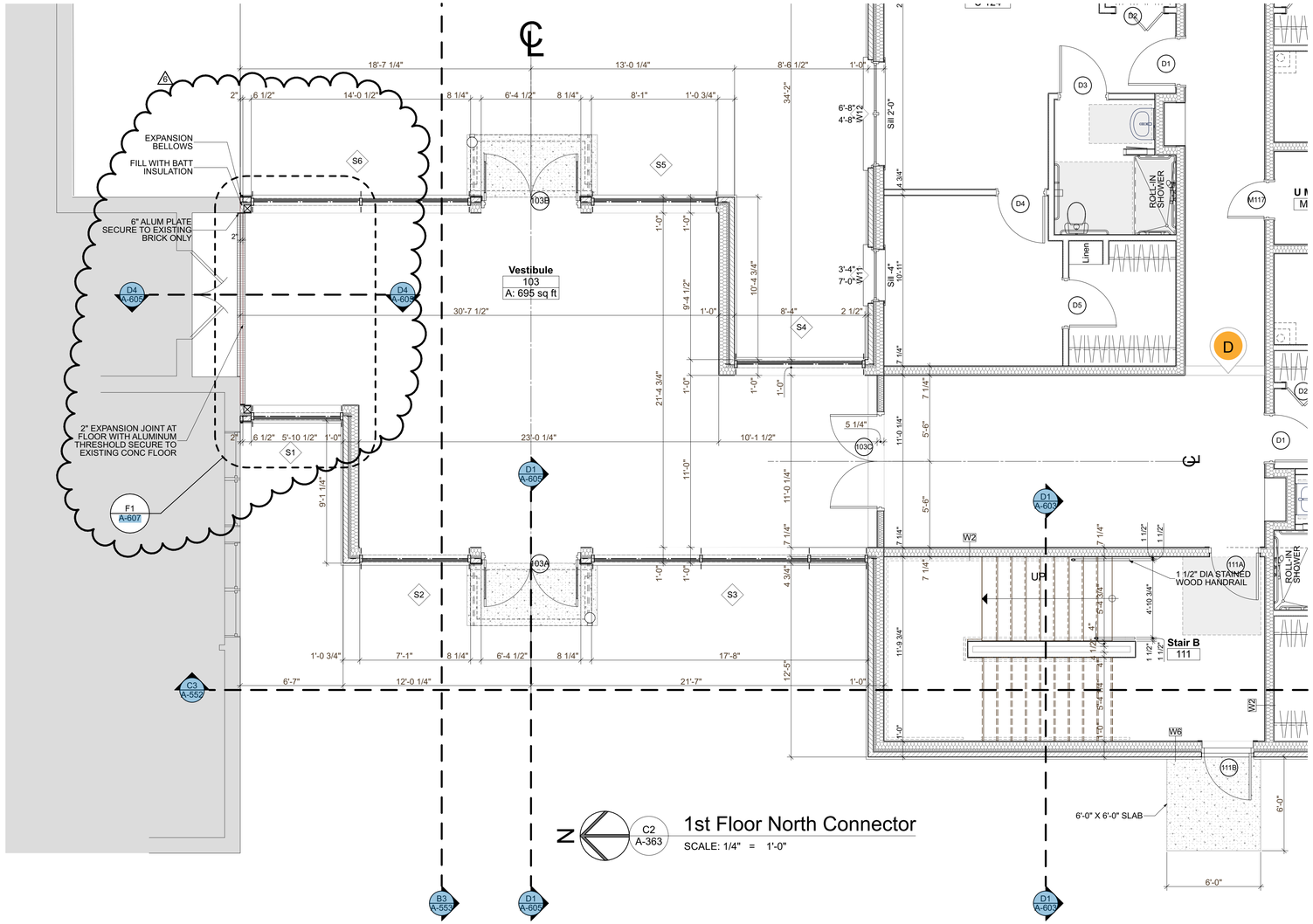
DRAWN BY: DWP

CHECKED: JA

APPROVED

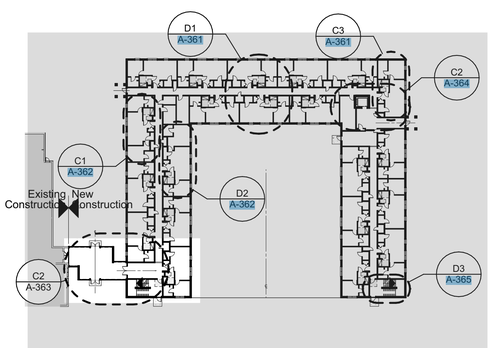
FILE NO. 21026.00

SHEET NO. A-362



1st Floor North Connector

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



1st Floor Key Plan

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

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607 Shelby Street
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REGISTRATION SEAL

KEY PLANS

SHEET TITLE

North Connector Area Plans

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1 (1)	02.19.2025
BULLETIN #6 (6)	12.12.2025

DRAWN BY: DWP

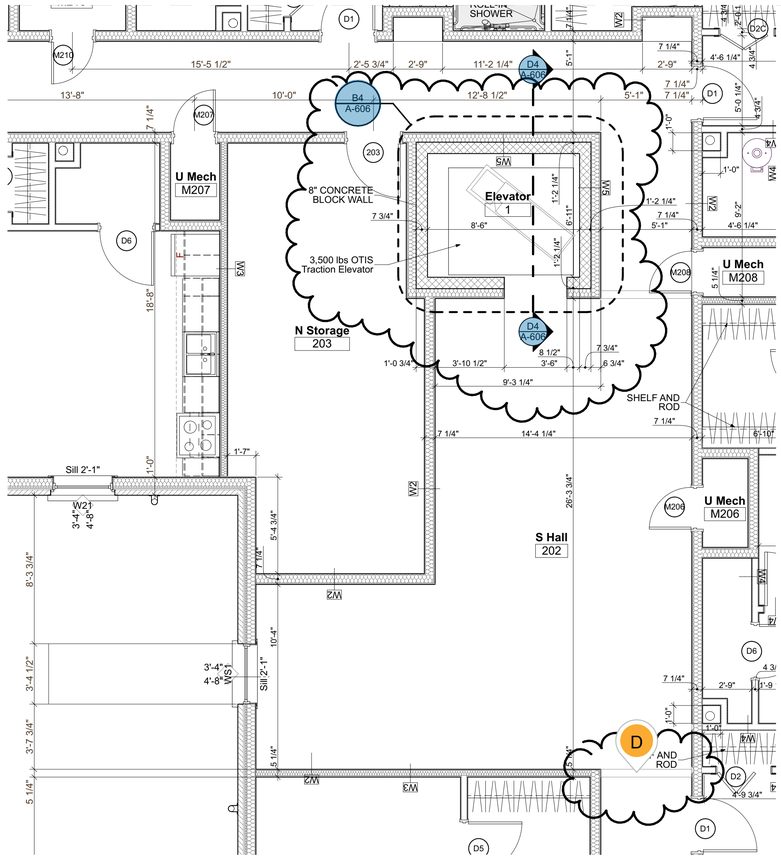
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APPROVED

FILE NO.: 21026.00

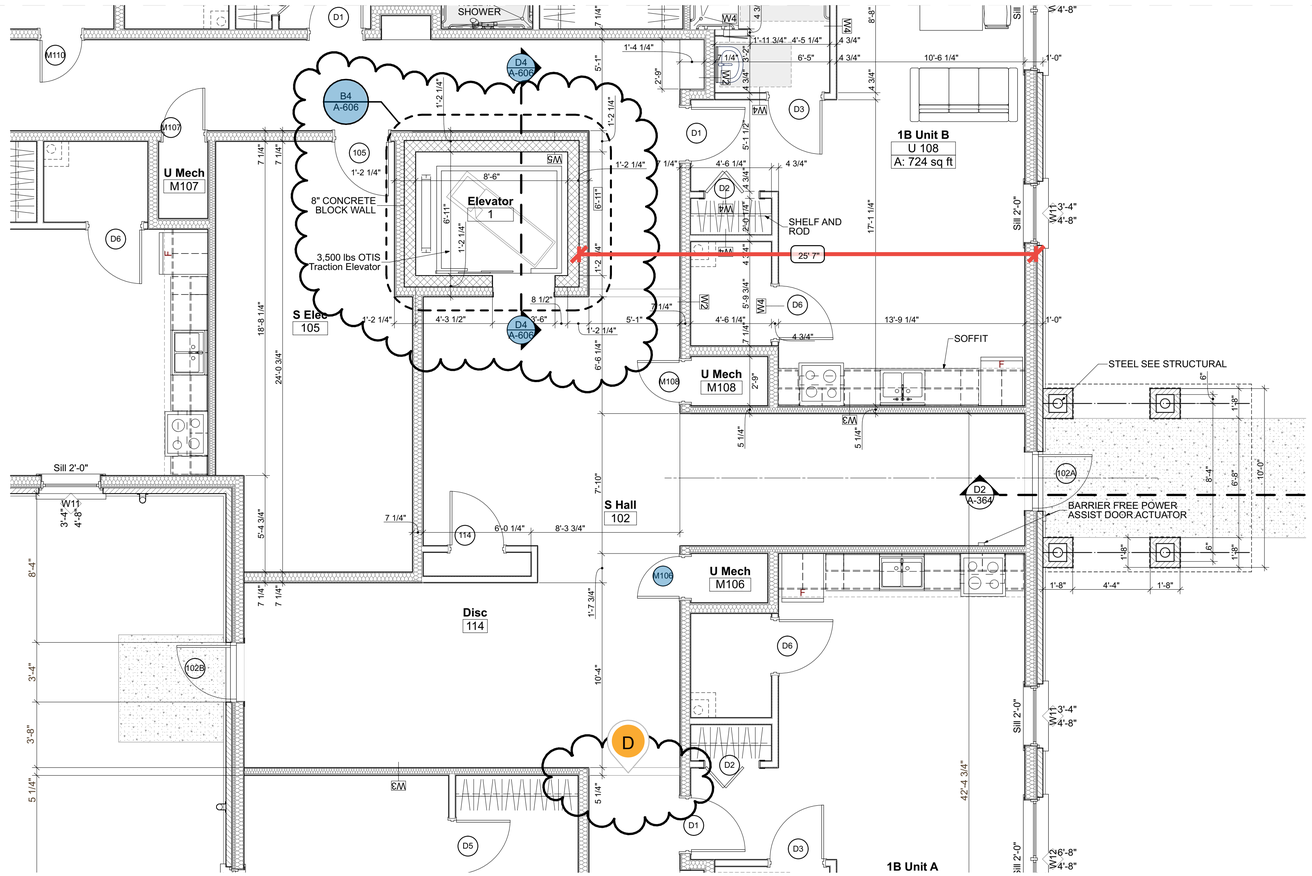
SHEET NO.: A-363

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Printed: Thursday, December 11, 2025



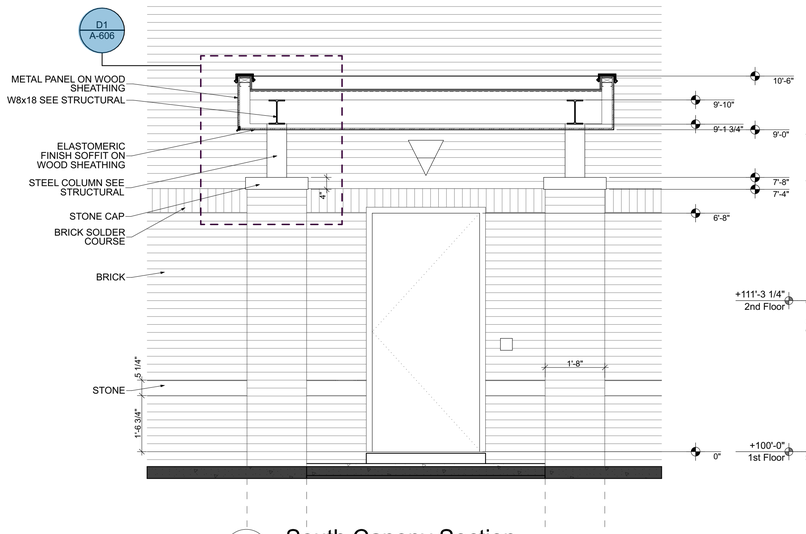
2nd Floor South Common

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



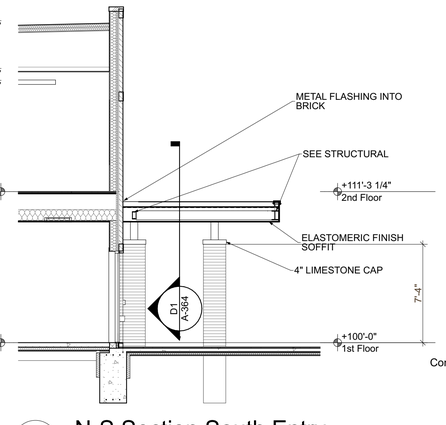
1st Floor South Common

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



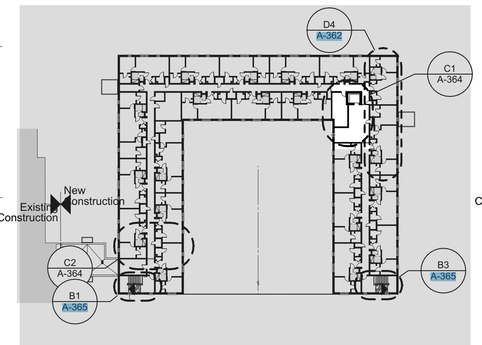
D1 A-364 South Canopy Section

SCALE: 1/2" = 1'-0"

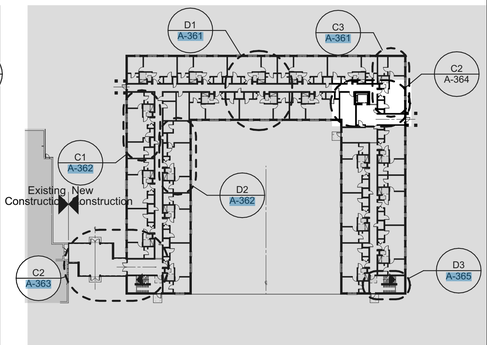


D2 A-364 N-S Section South Entry

SCALE: 3/16" = 1'-0"



2nd Floor Key Plan



1st Floor Key Plan

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REGISTRATION SEAL

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THADDEUS
C
ZAWRZEWSKI
License No.
1301026315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

SHEET TITLE

South Common Area Plans

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1	02.19.2025

DRAWN BY: DWP

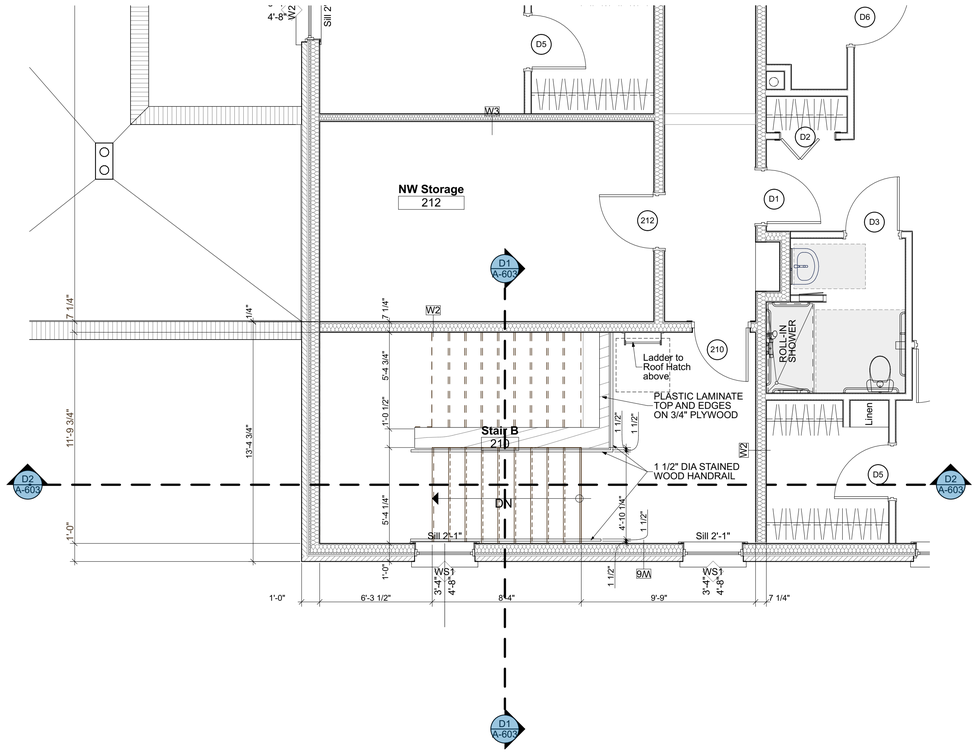
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APPROVED

FILE NO. 21026.00

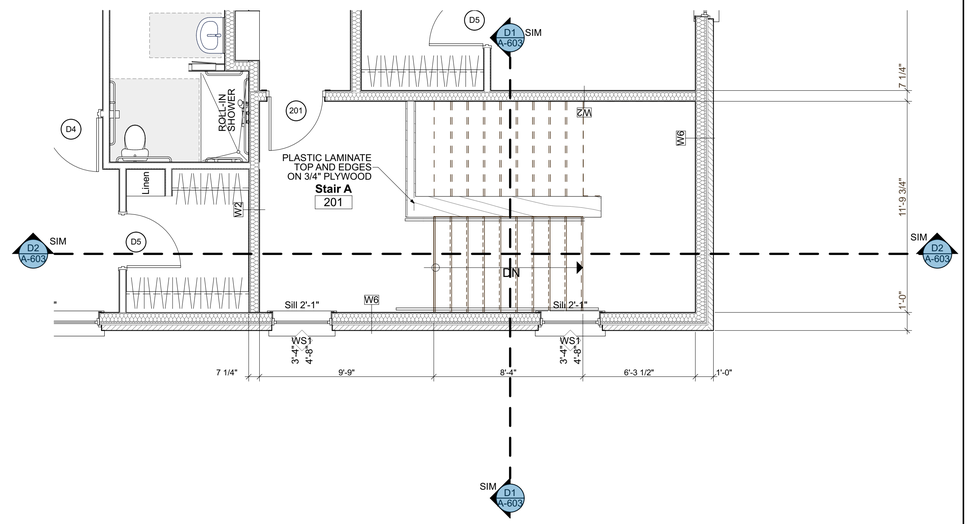
SHEET NO. A-364

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Printed: Monday, February 17, 2025



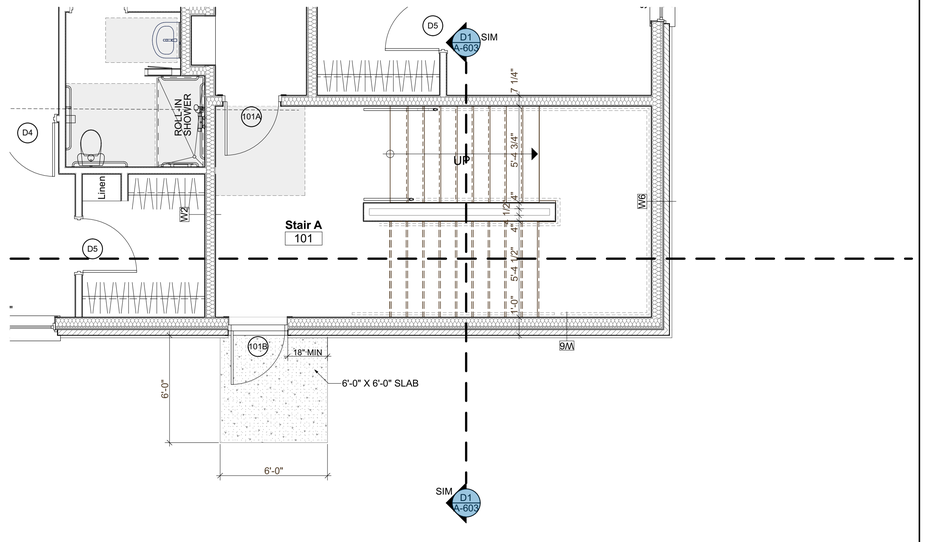
2nd Floor West Stair

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



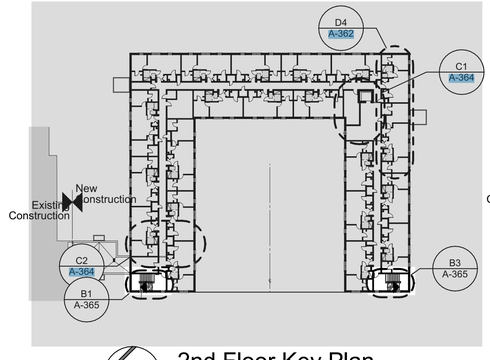
2nd Floor West Stair

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

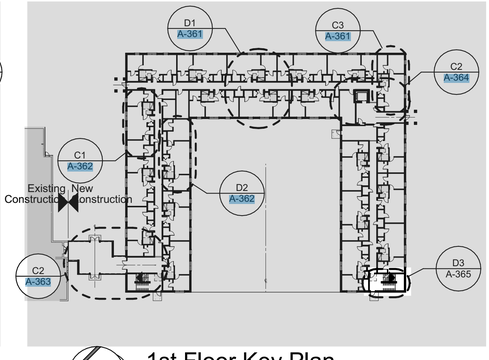


1st Floor West Stair

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



2nd Floor Key Plan



1st Floor Key Plan

John Grace Arms
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Developed by
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STATE OF MICHIGAN
THADDEUS C ZAKRZEWSKI
License No. 1301026315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

SHEET TITLE

West Stair Plans

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1 1	02.19.2025

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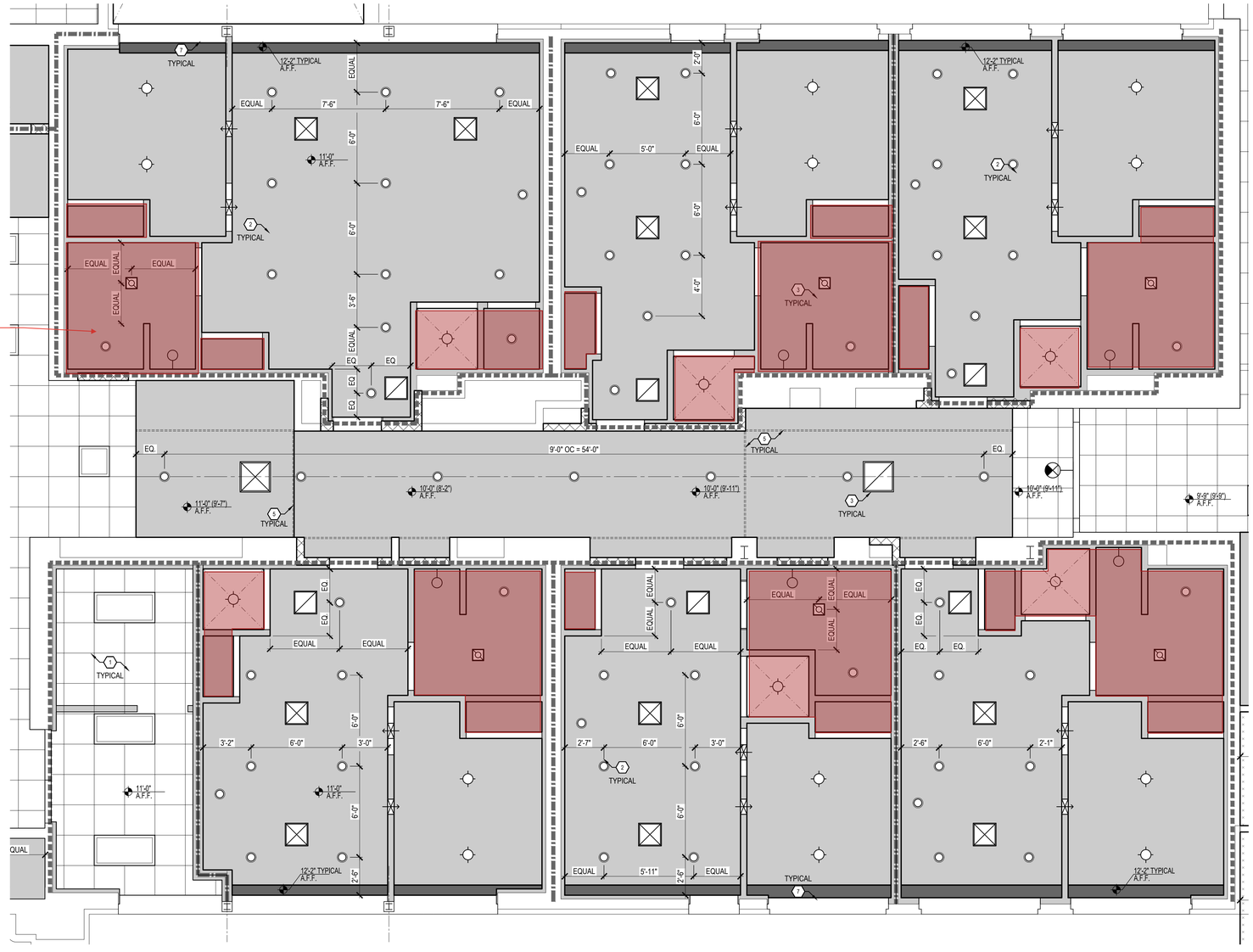
FILE NO. 21026.00

SHEET NO. A-365

/Volumes/enright/Shared/Projects/-SDG/23-460_SDG_John_Grace_Housing/5_Disciplines-Design/Architectural/CAD/CD/John_Grace_CD_6.5.pln
Printed: Monday, February 17, 2025

RFI #59

Bathroom & Closets to be lowered to 8' ceiling heights



1 A-304

EXISTING BUILDING
GROUND LEVEL REFLECTED CEILING PLAN

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

REF:

REFLECTED CEILING PLANS LEGEND:

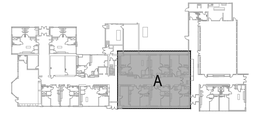
- ACT-1: 2' X 2' LAY-IN ACOUSTICAL TILE CEILING ACT-1W = VINYL CLAD MOISTURE RESISTANT ACOUSTICAL TILE
- ACT-2: 2' X 4' LAY-IN ACOUSTICAL TILE CEILING ACT-2W = VINYL CLAD MOISTURE RESISTANT ACOUSTICAL TILE
- EXPOSED CEILING
- INTERIOR CEILINGS: GYPSUM CEILING ON METAL SUSPENSION SYSTEM - 1/2" GYPSUM BOARD ON 18 GA - 3-5/8" METAL FRAMING AT 16" O.C., TYPICAL.
- EXTERIOR CEILINGS: DEFS ON 5/8" EXTERIOR GRADE SHEATHING CEILING SYSTEM ON COLD FORMED METAL FRAMING.
- 2'x4' LED LIGHT FIXTURE.
- 2'x2' LED LIGHT FIXTURE.
- RECESSED CEILING LED LIGHT FIXTURE WITH TRIM-LESS LESS OPTION FOR DRYWALL OR SUSPENDED CEILING.
- CEILING MOUNTED LED LIGHT FIXTURE.
- WALL MOUNTED LED LIGHT FIXTURE
- 4' LED LIGHT FIXTURE
- WALL MOUNTED COMBINATION EXIT SIGN / EMERGENCY LIGHT FIXTURE
- CEILING MOUNTED EMERGENCY EXIT LIGHT FIXTURE
- SUPPLY AIR DIFFUSERS
- RETURN AIR DIFFUSERS
- EXPOSED SUPPLY / RETURN AIR DUCTS
- 0'-0" (0'-0") A.F.F. PROPOSED AND EXISTING (IN PARENTHESIS) CEILING ELEVATIONS

REFLECTED CEILING PLANS NOTES:

1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.
4. REFER TO AND COORDINATE WITH SPECIFICATIONS FOR ADDITION INFORMATION.
5. ALL INTERIOR FINISHES SHALL COMPLY WITH THE 2015 MBC AND ANY APPLICABLE CODES.
6. COORDINATE ALL CEILING HEIGHT WITH MECHANICAL, ELECTRICAL AND FIRE PROTECTION DRAWINGS AND CONTRACTORS. NOTIFY ARCHITECT / ENGINEER OF ANY DISCREPANCIES.
7. COORDINATE ALL CEILING HEIGHTS WITH WINDOW SIZES AND WINDOW CONTRACTOR. NOTIFY ARCHITECT / ENGINEER OF ANY DISCREPANCIES.
8. INSTALL IN THE DIRECTION AND SPACING SHOWN ON THESE PLANS. NOTIFY ARCH./ENGINEER OF ANY DISCREPANCIES.
9. NOT ALL CEILING ITEMS ARE SHOWN. ITEMS SHOWN ARE CRITICAL TO VISUAL EFFECT AND REQUIRE COORDINATION AMONG TRADES TO MEET ARCHITECTURAL CRITERIA.
10. CENTER ALL CEILING ITEMS, RECESSED LIGHT FIXTURES, DIFFUSERS, ETC. WITHIN CEILING TILE UNLESS NOTED OTHERWISE (U.N.O.).
11. ANY CEILING ITEMS TO BE SUPPORTED / HUNG FROM A STRUCTURAL MEMBER OR STEEL UNI-STRUTS AND NOT FROM FLOOR OR ROOF DECKING MATERIAL.
12. PROVIDE ACCESS DOORS WITH RECESSED FRONT PANEL FOR GYPSUM BOARD INSTALLATIONS AS REQUIRED FOR MECHANICAL, PLUMBING, ELECTRICAL AND / OR OTHERS ITEMS ABOVE CEILING. CONTRACTOR TO SUBMIT CEILING ACCESS DOOR PLAN AND PRODUCT INFORMATION TO ARCHITECT FOR APPROVAL.
13. ALL CEILINGS TO HAVE STC 55 SOUND INSULATION AND CHECK FIRE RATINGS PER MBC.

REFLECTED CEILING PLANS NOTE LEGEND:

1. CENTER GRID EQUALLY WITHIN A ROOM, TYPICAL.
2. CENTER AND ALIGN WITH LIGHT FIXTURES OR CENTER WITHIN THE SPACE EQUALLY AS DEPICTED U.N.O. TYPICAL.
3. CENTER DIFFUSERS / GRILL ALONG EXPOSED DUCT OR WALL SURFACE EQUALLY. TYPICAL.
4. EXPOSED DUCTWORK. REFER TO AND COORDINATE WITH MECHANICAL.
5. PRE-FABRICATED 1/2" GYPSUM BOARD CONTROL JOINT REVEAL.
6. PRE-FABRICATED 2" CONTINUOUS EXTRUDED ALUMINUM SOFFIT VENT. REFER TO SECTION DETAILS.
7. GYPSUM HEADER / SOFFIT. TYPICAL.
8. CEILING MOUNTED HEATING & COOLING MECHANICAL EQUIPMENT. REFER TO MECHANICAL.
9. CEILING WITH A MINIMUM 4" R13 FIBER GLASS INSULATION.



KEY PLAN

4' 0 2' 4'

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

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
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Tel: 313-961-9000
Fax:313-964-3233

REGISTRATION SEAL

KEY PLANS

STATE OF MICHIGAN
JHADDEUS C ZARZEWSKI
License No. 1301026315
LICENSED ARCHITECT
12/19/2024

SHEET TITLE

EXISTING BUILDING GROUND LEVEL REFELECTED CEILING PLAN

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024

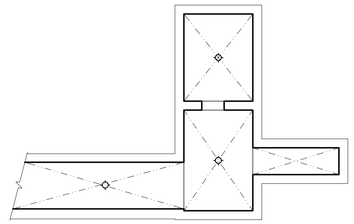
DRAWN BY: EBH

CHECKED: JA

APPROVED

FILE NO. 21026.00

SHEET NO. A-371



RFI #59

Bathroom and closets to have 8" ceilings

2 / A-201 EXISTING BUILDING BASEMENT REFLECTED CEILING PLAN

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

REF:



1 / A-304 EXISTING BUILDING GROUND LEVEL REFLECTED CEILING PLAN

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

REF:

REFLECTED CEILING PLANS LEGEND:

- ACT-1: 2' X 2' LAY-IN ACOUSTICAL TILE CEILING; ACT-1W = VINYL CLAD MOISTURE RESISTANT ACOUSTICAL TILE
- ACT-2: 2' X 4' LAY-IN ACOUSTICAL TILE CEILING; ACT-2W = VINYL CLAD MOISTURE RESISTANT ACOUSTICAL TILE
- EXPOSED CEILING
- INTERIOR CEILINGS: GYPSUM CEILING ON METAL SUSPENSION SYSTEM - 1/2" GYPSUM BOARD ON 18 GA - 3-5/8" METAL FRAMING AT 16" O.C., TYPICAL.
- EXTERIOR CEILINGS: DEFS ON 5/8" EXTERIOR GRADE SHEATHING CEILING SYSTEM ON COLD FORMED METAL FRAMING.
- 2'x4' LED LIGHT FIXTURE.
- 2'x2' LED LIGHT FIXTURE.
- RECESSED CEILING LED LIGHT FIXTURE WITH TRIM-LESS LESS OPTION FOR DRYWALL OR SUSPENDED CEILING.
- CEILING MOUNTED LED LIGHT FIXTURE.
- WALL MOUNTED LED LIGHT FIXTURE
- 4' LED LIGHT FIXTURE
- WALL MOUNTED COMBINATION EXIT SIGN / EMERGENCY LIGHT FIXTURE
- CEILING MOUNTED EMERGENCY EXIT LIGHT FIXTURE
- SUPPLY AIR DIFFUSERS
- RETURN AIR DIFFUSERS
- EXPOSED SUPPLY / RETURN AIR DUCTS
- 8'-0" (10'-0") A.F.F. PROPOSED AND EXISTING (IN PARENTHESIS) CEILING ELEVATIONS

REFLECTED CEILING PLANS NOTES:

1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.
4. REFER TO AND COORDINATE WITH SPECIFICATIONS FOR ADDITION INFORMATION.
5. ALL INTERIOR FINISHES SHALL COMPLY WITH THE 2015 MBC AND ANY APPLICABLE CODES.
6. COORDINATE ALL CEILING HEIGHT WITH MECHANICAL, ELECTRICAL AND FIRE PROTECTION DRAWINGS AND CONTRACTORS. NOTIFY ARCHITECT / ENGINEER OF ANY DISCREPANCIES.
7. COORDINATE ALL CEILING HEIGHTS WITH WINDOW SIZES AND WINDOW CONTRACTOR. NOTIFY ARCHITECT / ENGINEER OF ANY DISCREPANCIES.
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12. PROVIDE ACCESS DOORS WITH RECESSED FRONT PANEL FOR GYPSUM BOARD INSTALLATIONS AS REQUIRED FOR MECHANICAL, PLUMBING, ELECTRICAL AND / OR OTHERS ITEMS ABOVE CEILING. CONTRACTOR TO SUBMIT CEILING ACCESS DOOR PLAN AND PRODUCT INFORMATION TO ARCHITECT FOR APPROVAL.
13. ALL CEILINGS TO HAVE STC 55 SOUND INSULATION AND CHECK FIRE RATINGS PER MBC.

REFLECTED CEILING PLANS NOTE LEGEND:

1. CENTER GRID EQUALLY WITHIN A ROOM, TYPICAL.
2. CENTER AND ALIGN WITH LIGHT FIXTURES OR CENTER WITHIN THE SPACE EQUALLY AS DEPICTED U.N.O. TYPICAL.
3. CENTER DIFFUSERS / GRILL ALONG EXPOSED DUCT OR WALL SURFACE EQUALLY. TYPICAL.
4. EXPOSED DUCTWORK. REFER TO AND COORDINATE WITH MECHANICAL.
5. PRE-FABRICATED 1/2" GYPSUM BOARD CONTROL JOINT REVEAL.
6. PRE-FABRICATED 2" CONTINUOUS EXTRUDED ALUMINUM SOFFIT VENT. REFER TO SECTION DETAILS.
7. GYPSUM HEADER / SOFFIT. TYPICAL.
8. CEILING MOUNTED HEATING & COOLING MECHANICAL EQUIPMENT. REFER TO MECHANICAL.
9. CEILING WITH A MINIMUM 4" R13 FIBER GLASS INSULATION.



KEY PLAN

8' 0 4' 8'
SCALE: 1/8"= 1'-0"

4' 0 2' 4'
SCALE: 1/4"= 1'-0"

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REGISTRATION SEAL

KEY PLANS

STATE OF MICHIGAN
JHADDEUS C ZAJKOWSKI
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12/19/2024

SHEET TITLE

EXISTING BUILDING GROUND LEVEL REFELECTED CEILING PLAN

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
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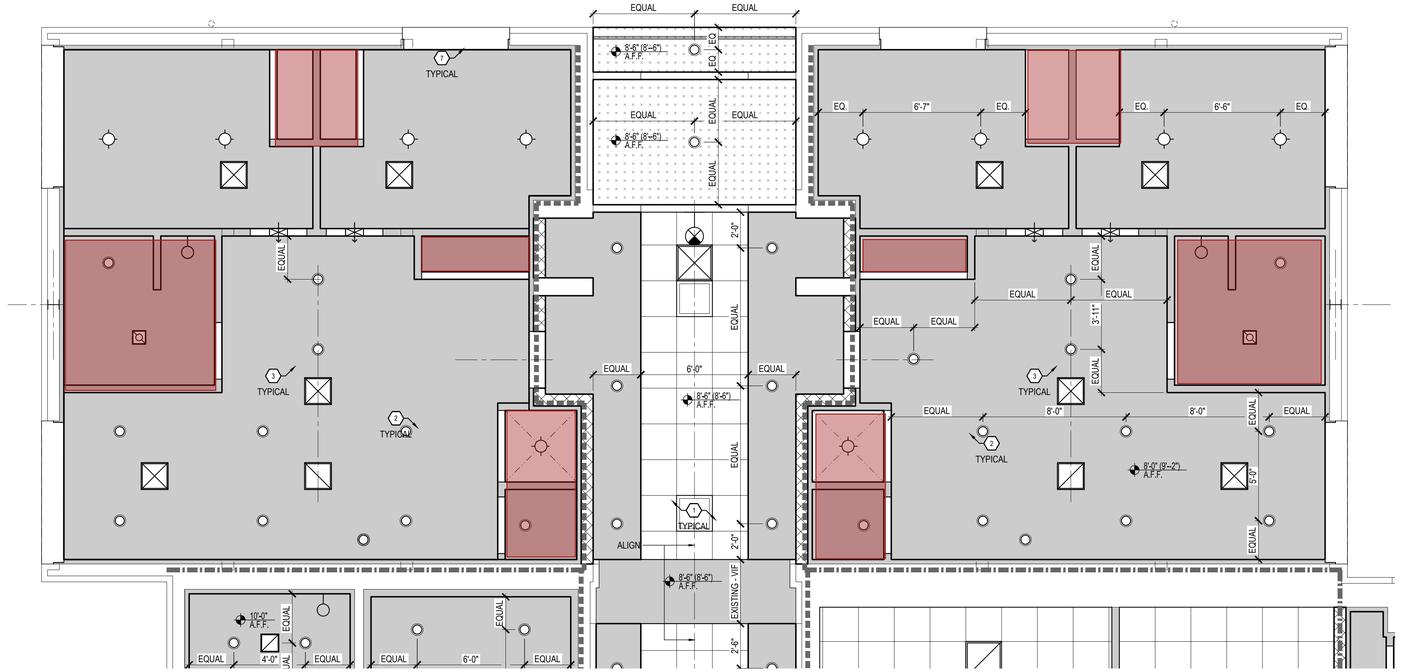
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CHECKED: JA

APPROVED

FILE NO.: 21026.00

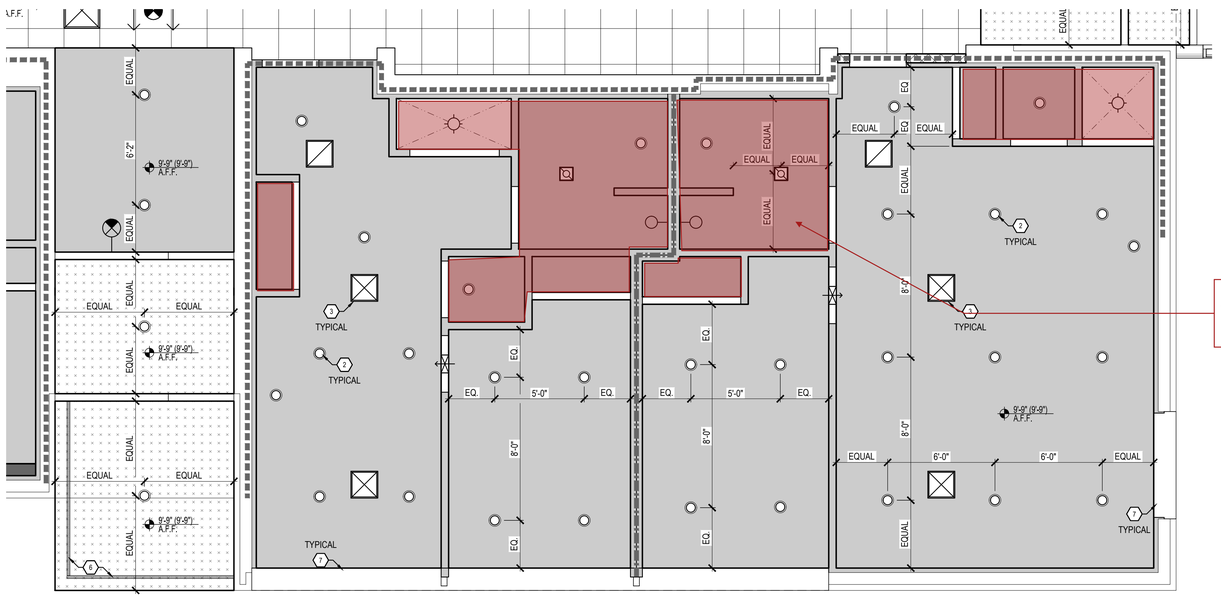
SHEET NO.: A-372



PROPOSED ELARGED
GROUND LEVEL PLAN - EXISTING BUILDING

2 A-304

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



EXISTING BUILDING
GROUND LEVEL REFLECTED CEILING PLAN

1 A-304

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

REFLECTED CEILING PLANS LEGEND:

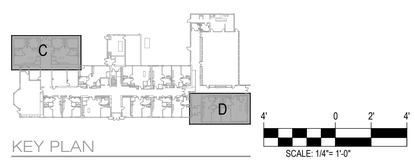
- ACT-1: 2' X 2' LAY-IN ACOUSTICAL TILE CEILING. ACT-1W = VINYL CLAD MOISTURE RESISTANT ACOUSTICAL TILE
- ACT-2: 2' X 4' LAY-IN ACOUSTICAL TILE CEILING. ACT-2W = VINYL CLAD MOISTURE RESISTANT ACOUSTICAL TILE
- EXPOSED CEILING
- INTERIOR CEILINGS: GYPSUM CEILING ON METAL SUSPENSION SYSTEM - 1/2" GYPSUM BOARD ON 18 GA - 3-5/8" METAL FRAMING AT 16" O.C., TYPICAL.
- EXTERIOR CEILINGS: DEFS ON 5/8" EXTERIOR GRADE SHEATHING CEILING SYSTEM ON COLD FORMED METAL FRAMING.
- 2'x4' LED LIGHT FIXTURE.
- 2'x2' LED LIGHT FIXTURE.
- RECESSED CEILING LED LIGHT FIXTURE WITH TRIM-LESS LESS OPTION FOR DRYWALL OR SUSPENDED CEILING.
- CEILING MOUNTED LED LIGHT FIXTURE.
- WALL MOUNTED LED LIGHT FIXTURE
- 4' LED LIGHT FIXTURE
- WALL MOUNTED COMBINATION EXIT SIGN / EMERGENCY LIGHT FIXTURE
- CEILING MOUNTED EMERGENCY EXIT LIGHT FIXTURE
- SUPPLY AIR DIFFUSERS
- RETURN AIR DIFFUSERS
- EXPOSED SUPPLY / RETURN AIR DUCTS
- (7'-0" (07'-0") A.F.F.) PROPOSED AND EXISTING (IN PARENTHESIS) CEILING ELEVATIONS

REFLECTED CEILING PLANS NOTES:

1. REFER TO LIFE SAFETY SHEET FOR FIRE SAFETY AND RATED CONSTRUCTION INFORMATION.
2. REFER TO BUILDING ELEVATIONS AND INTERIOR ELEVATION FOR ADDITIONAL INFORMATION.
3. PROVIDE 5/8" WATER AND MOLD RESISTANT GYPSUM BOARD IN ALL BATHROOMS WITH SHOWERS AND PROVIDE CEMENT BOARD AT ALL SHOWER STALLS.
4. REFER TO AND COORDINATE WITH SPECIFICATIONS FOR ADDITION INFORMATION.
5. ALL INTERIOR FINISHES SHALL COMPLY WITH THE 2015 MBC AND ANY APPLICABLE CODES.
6. COORDINATE ALL CEILING HEIGHT WITH MECHANICAL, ELECTRICAL AND FIRE PROTECTION DRAWINGS AND CONTRACTORS. NOTIFY ARCHITECT / ENGINEER OF ANY DISCREPANCIES.
7. COORDINATE ALL CEILING HEIGHTS WITH WINDOW SIZES AND WINDOW CONTRACTOR. NOTIFY ARCHITECT / ENGINEER OF ANY DISCREPANCIES.
8. INSTALL IN THE DIRECTION AND SPACING SHOWN ON THESE PLANS. NOTIFY ARCH./ENGINEER OF ANY DISCREPANCIES.
9. NOT ALL CEILING ITEMS ARE SHOWN. ITEMS SHOWN ARE CRITICAL TO VISUAL EFFECT AND REQUIRE COORDINATION AMONG TRADES TO MEET ARCHITECTURAL CRITERIA.
10. CENTER ALL CEILING ITEMS, RECESSED LIGHT FIXTURES, DIFFUSERS, ETC. WITHIN CEILING TILE UNLESS NOTED OTHERWISE (U.N.O.).
11. ANY CEILING ITEMS TO BE SUPPORTED / HUNG FROM A STRUCTURAL MEMBER OR STEEL UNI-STRUTS AND NOT FROM FLOOR OR ROOF DECKING MATERIAL.
12. PROVIDE ACCESS DOORS WITH RECESSED FRONT PANEL FOR GYPSUM BOARD INSTALLATIONS AS REQUIRED FOR MECHANICAL, PLUMBING, ELECTRICAL AND / OR OTHERS ITEMS ABOVE CEILING. CONTRACTOR TO SUBMIT CEILING ACCESS DOOR PLAN AND PRODUCT INFORMATION TO ARCHITECT FOR APPROVAL.
13. ALL CEILINGS TO HAVE STC 55 SOUND INSULATION AND CHECK FIRE RATINGS PER MBC.

REFLECTED CEILING PLANS NOTE LEGEND:

1. CENTER GRID EQUALLY WITHIN A ROOM, TYPICAL.
2. CENTER AND ALIGN WITH LIGHT FIXTURES OR CENTER WITHIN THE SPACE EQUALLY AS DEPICTED U.N.O. TYPICAL.
3. CENTER DIFFUSERS / GRILL ALONG EXPOSED DUCT OR WALL SURFACE EQUALLY. TYPICAL.
4. EXPOSED DUCTWORK. REFER TO AND COORDINATE WITH MECHANICAL.
5. PRE-FABRICATED 1/2" GYPSUM BOARD CONTROL JOINT REVEAL.
6. PRE-FABRICATED 2" CONTINUOUS EXTRUDED ALUMINUM SOFFIT VENT. REFER TO SECTION DETAILS.
7. GYPSUM HEADER / SOFFIT. TYPICAL.
8. CEILING MOUNTED HEATING & COOLING MECHANICAL EQUIPMENT. REFER TO MECHANICAL.
9. CEILING WITH A MINIMUM 4" R13 FIBER GLASS INSULATION.



KEY PLAN

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-9000
Fax:313-964-3233

REGISTRATION SEAL

KEY PLANS

STATE OF MICHIGAN
THADDEUS C ZAJDZEWICZ
License No. 1301020315
LICENSED ARCHITECT
12/19/2024

SHEET TITLE

EXISTING BUILDING GROUND LEVEL REFELECTED CEILING PLAN

SCALE:

ISSUED FOR	DATE
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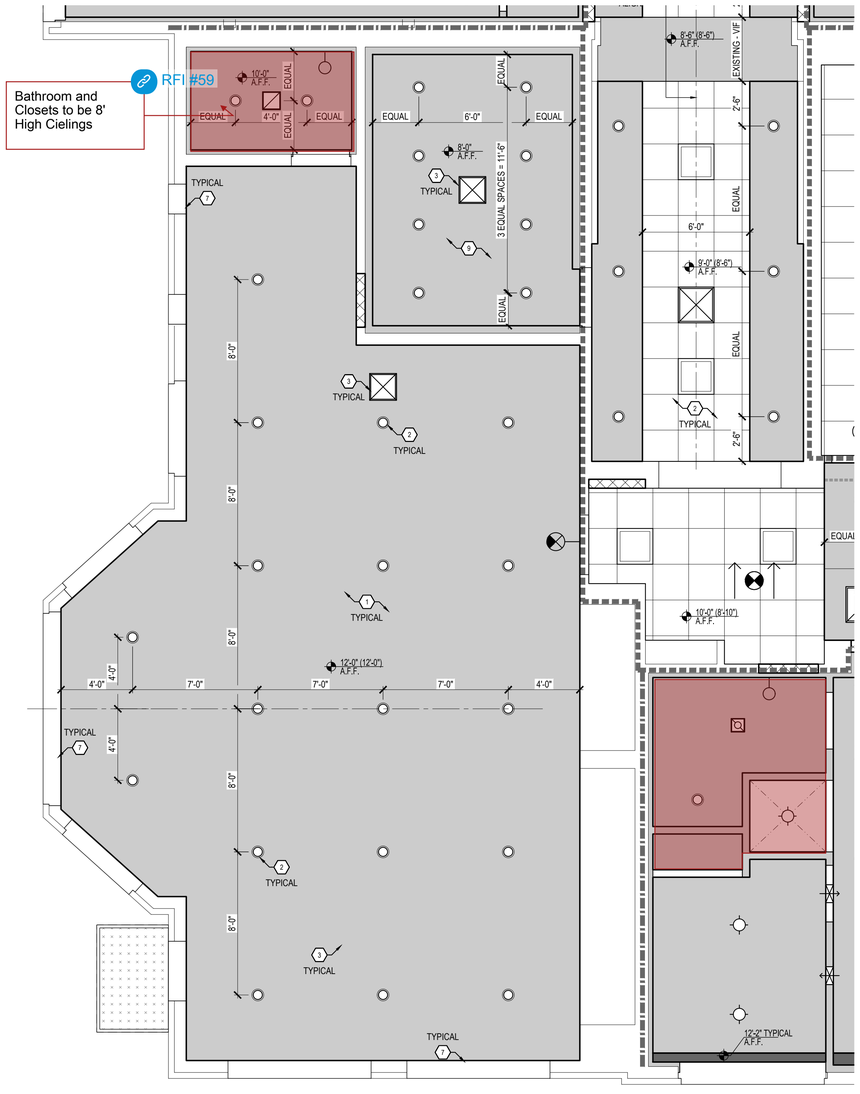
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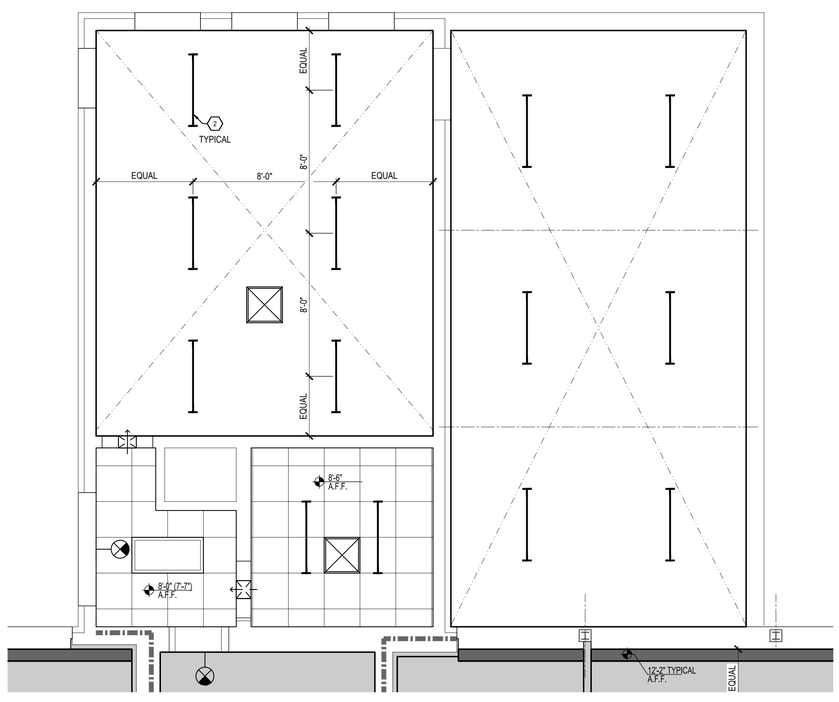
JA
CHECKED

APPROVED

21026.00
FILE NO.

A-373
SHEET NO.





REFLECTED CEILING PLANS LEGEND:

- ACT-1: 2' X 2' LAY-IN ACOUSTICAL TILE CEILING; ACT-1W = VINYL CLAD MOISTURE RESISTANT ACOUSTICAL TILE
- ACT-2: 2' X 4' LAY-IN ACOUSTICAL TILE CEILING; ACT-2W = VINYL CLAD MOISTURE RESISTANT ACOUSTICAL TILE
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- 2'x4' LED LIGHT FIXTURE.
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- RECESSED CEILING LED LIGHT FIXTURE WITH TRIM-LESS LESS OPTION FOR DRYWALL OR SUSPENDED CEILING.
- CEILING MOUNTED LED LIGHT FIXTURE.
- WALL MOUNTED LED LIGHT FIXTURE
- 4' LED LIGHT FIXTURE
- WALL MOUNTED COMBINATION EXIT SIGN / EMERGENCY LIGHT FIXTURE
- CEILING MOUNTED EMERGENCY EXIT LIGHT FIXTURE
- SUPPLY AIR DIFFUSERS
- RETURN AIR DIFFUSERS
- EXPOSED SUPPLY / RETURN AIR DUCTS
- (0'-0" (0'-0") A.F.F.) PROPOSED AND EXISTING (IN PARENTHESIS) CEILING ELEVATIONS

REFLECTED CEILING PLANS NOTES:

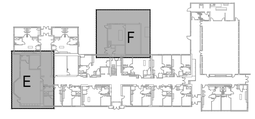
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9. CEILING WITH A MINIMUM 4" R13 FIBER GLASS INSULATION.

2 A-304 EXISTING BUILDING GROUND LEVEL REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"
REF:

1 A-304 EXISTING BUILDING GROUND LEVEL REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"
REF:



KEY PLAN

4' 0 2' 4'
SCALE: 1/4"= 1'-0"

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Developed by
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SDG
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REGISTRATION SEAL

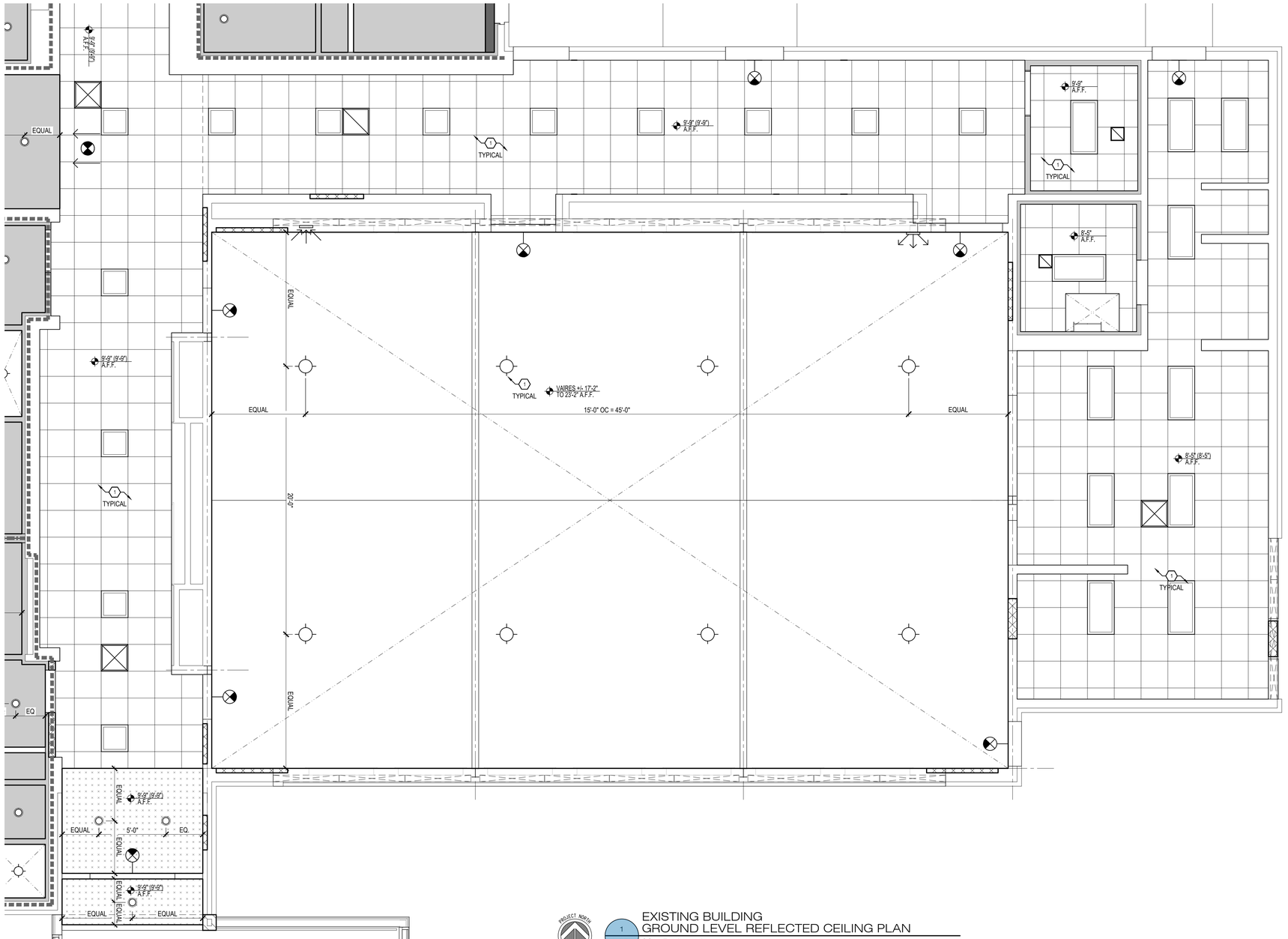
KEY PLANS

STATE OF MICHIGAN
THADDEUS C ZAJDZEWICZ
License No. 1301020315
LICENSED ARCHITECT
12/19/2024

SHEET TITLE
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SCALE:

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Permits	12.20.2024

DRAWN BY: EBH
CHECKED: JA
APPROVED:
FILE NO.: 21026.00
SHEET NO.: A-374



PROJECT NORTH

1 / A-304

EXISTING BUILDING
GROUND LEVEL REFLECTED CEILING PLAN

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

REF:

REFLECTED CEILING PLANS LEGEND:

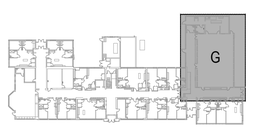
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8. CEILING MOUNTED HEATING & COOLING MECHANICAL EQUIPMENT. REFER TO MECHANICAL.
9. CEILING WITH A MINIMUM 4" R13 FIBER GLASS INSULATION.



KEY PLAN

4' 0 2' 4'

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

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REGISTRATION SEAL

KEY PLANS

STATE OF MICHIGAN
THADDEUS C ZAJDZEWICZ
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SHEET TITLE

EXISTING BUILDING
GROUND LEVEL
REFELECTED
CEILING PLAN

SCALE:

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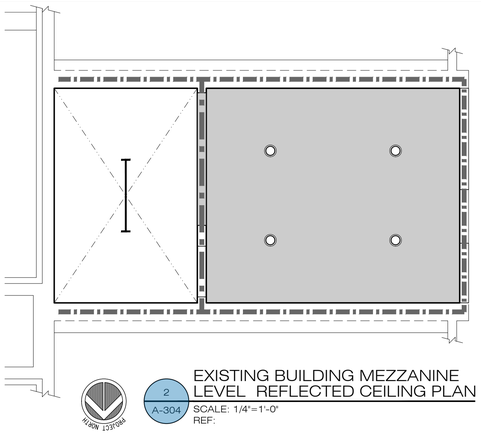
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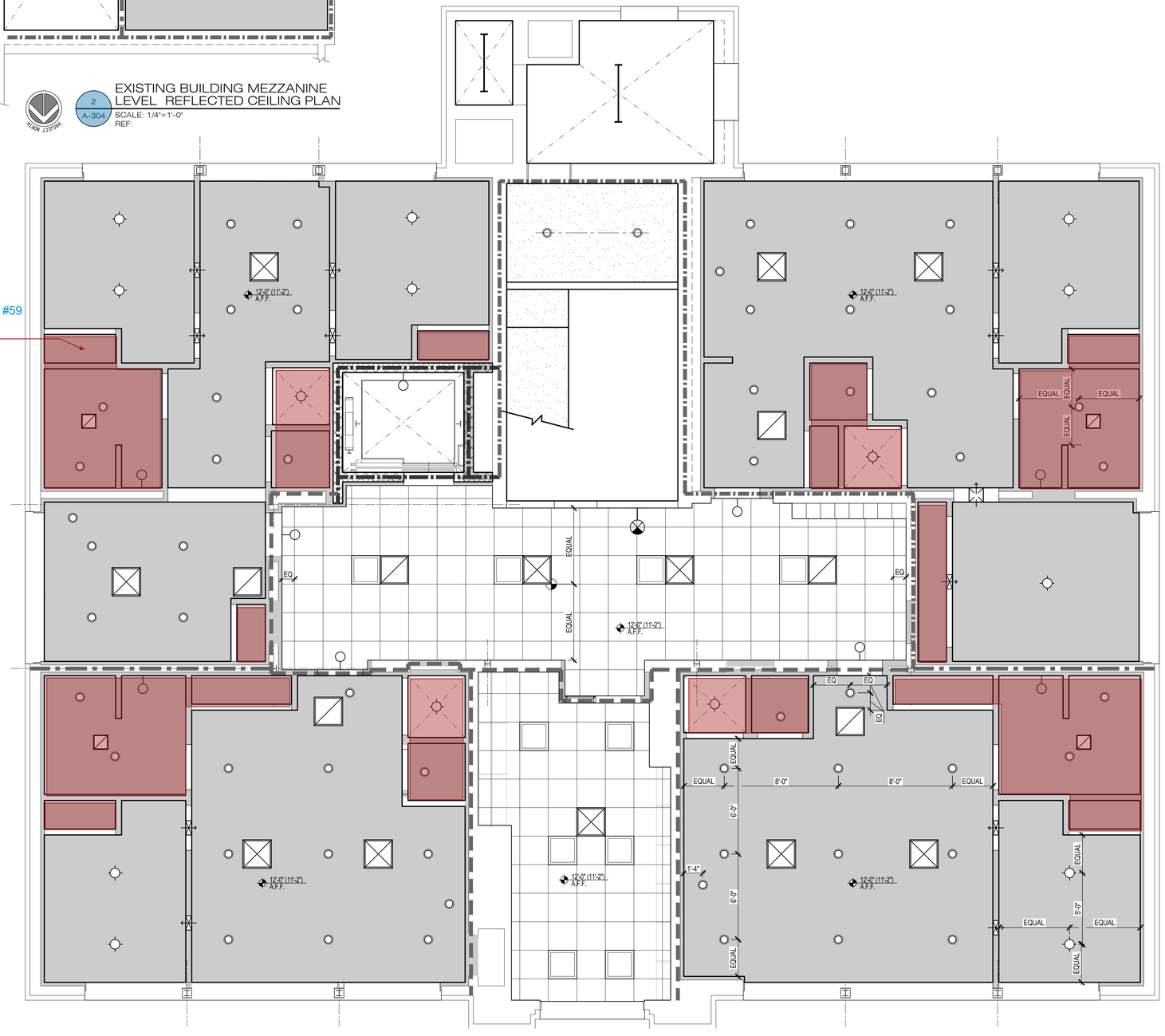
A-375
SHEET NO.



2 A-304 EXISTING BUILDING MEZZANINE LEVEL REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"
REF:

RFI #59

Bathroom and Closets to be 8' ceilings



1 A-304 EXISTING BUILDING SECDOND LEVEL REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"
REF:

4' 0 2' 4'
SCALE: 1/4"= 1'-0"

REFLECTED CEILING PLANS LEGEND:

- ACT-1: 2' X 2' LAY-IN ACOUSTICAL TILE CEILING ACT-1W = VINYL CLAD MOISTURE RESISTANT ACOUSTICAL TILE
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- CEILING MOUNTED LED LIGHT FIXTURE.
- WALL MOUNTED LED LIGHT FIXTURE
- 4' LED LIGHT FIXTURE
- WALL MOUNTED COMBINATION EXIT SIGN / EMERGENCY LIGHT FIXTURE
- CEILING MOUNTED EMERGENCY EXIT LIGHT FIXTURE
- SUPPLY AIR DIFFUSERS
- RETURN AIR DIFFUSERS
- EXPOSED SUPPLY / RETURN AIR DUCTS
- 12'-0" (11'-2") A.F.F. PROPOSED AND EXISTING (IN PARENTHESIS) CEILING ELEVATIONS

REFLECTED CEILING PLANS NOTES:

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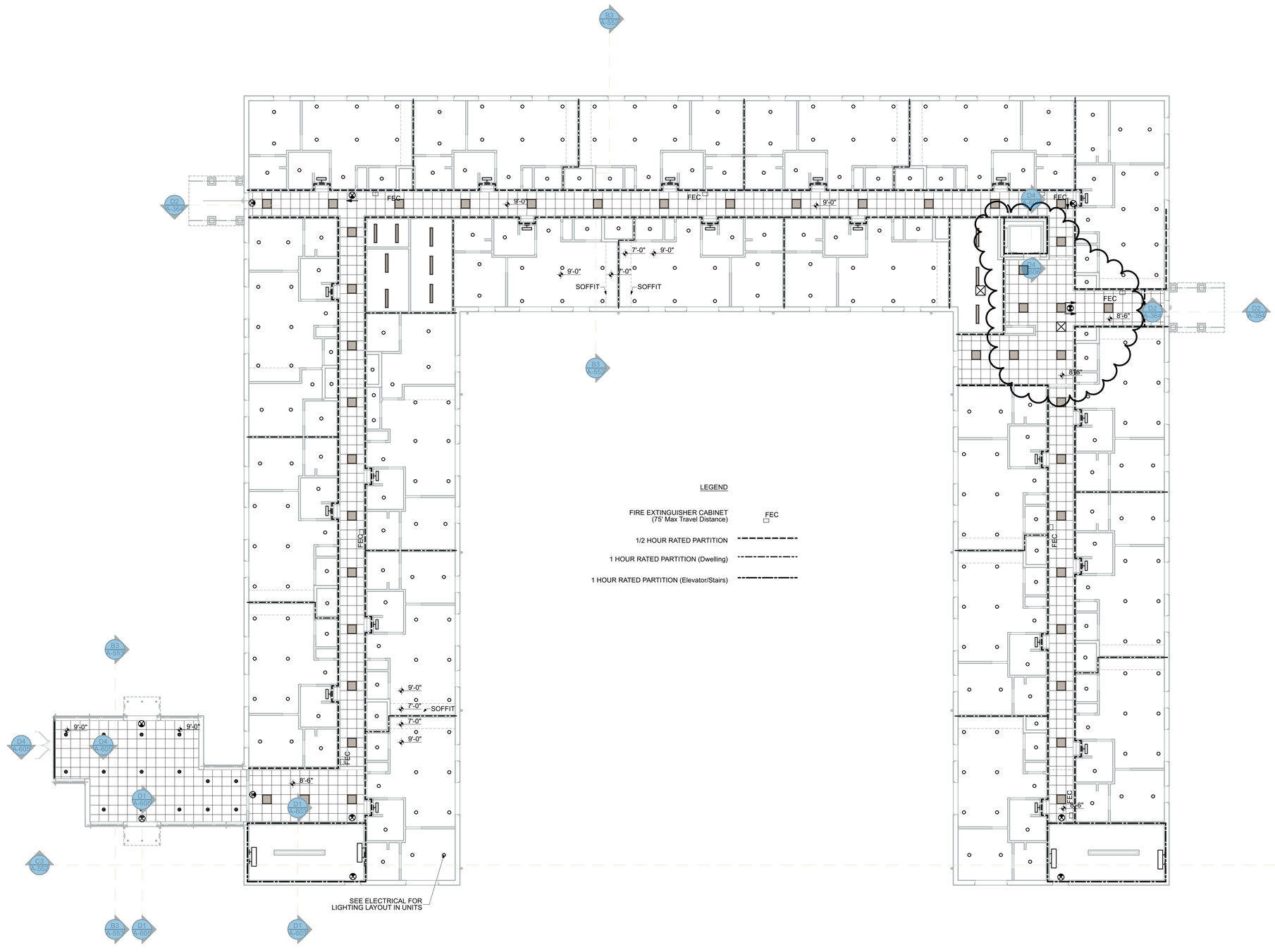
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License No. 1301020315
LICENSED ARCHITECT
12/19/2024

SHEET TITLE
EXISTING BUILDING SECOND LEVEL REFELECTED CEILING PLAN
SCALE:

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DRAWN BY: EBH
CHECKED: JA
APPROVED:
FILE NO.: 21026.00
SHEET NO.: A-376



N

1st Floor Ceiling Plan

SCALE: 3/32" = 1'-0"

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THADDEUS C ZAWRZEWSKI
License No. 1301020315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

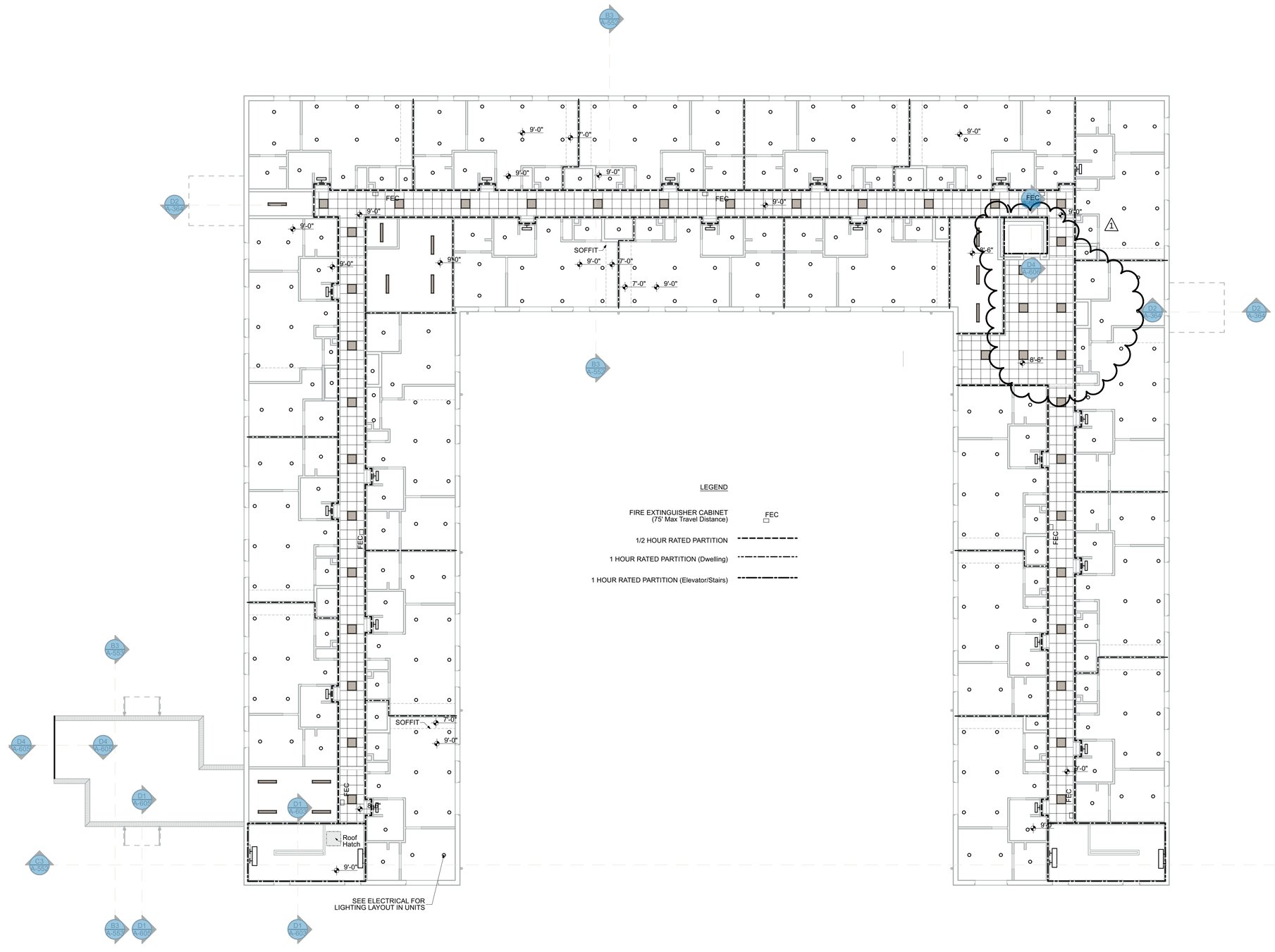
SHEET TITLE
1st Floor Ceiling Plan

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1 (1)	02.19.2025

DRAWN BY: DWP
CHECKED: JA
APPROVED:
FILE NO.: 21026.00
SHEET NO.: A-461

/Volumes/enright/Shared/Projects/-SDG/23-460_SDG_John_Grace_Housing/5_Disciplines-Design/Architectural/CAD/CD/John_Grace_CD_6.5.pln
Printed: Monday, February 17, 2025



2nd Floor Ceiling Plan

SCALE: 3/32" = 1'-0"

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-9000
Fax: 313-964-3233

REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAWRZEWSKI
License No. 1301026315
LICENSED ARCHITECT
12/18/2025

KEY PLANS

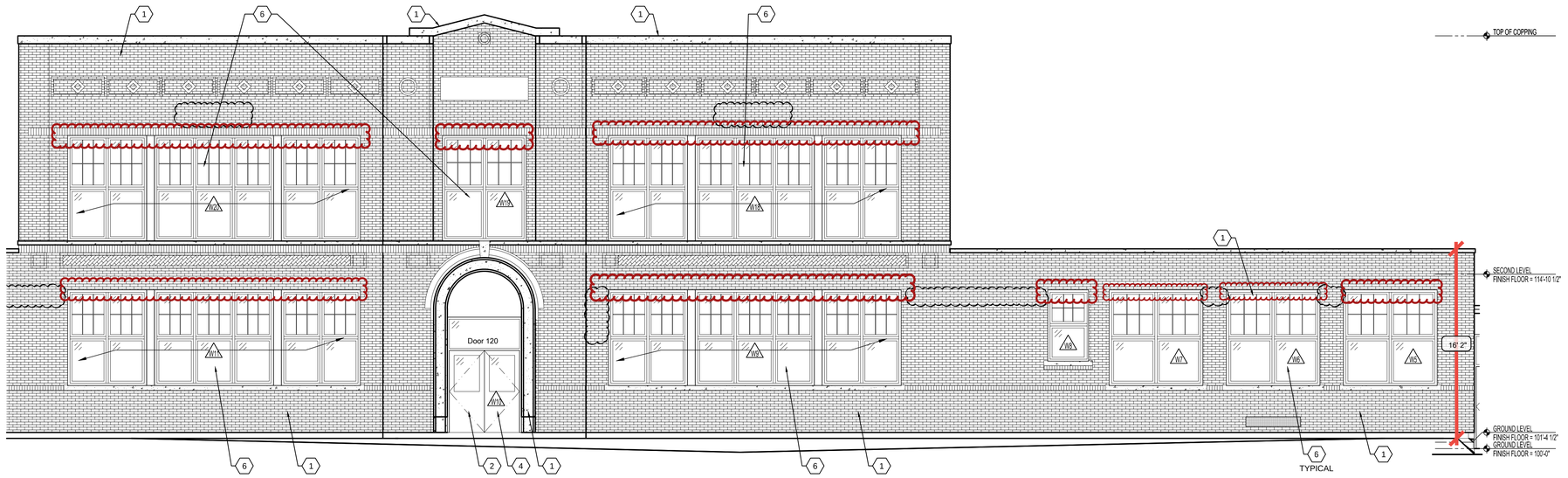
SHEET TITLE
2nd Floor Ceiling Plan

SCALE:

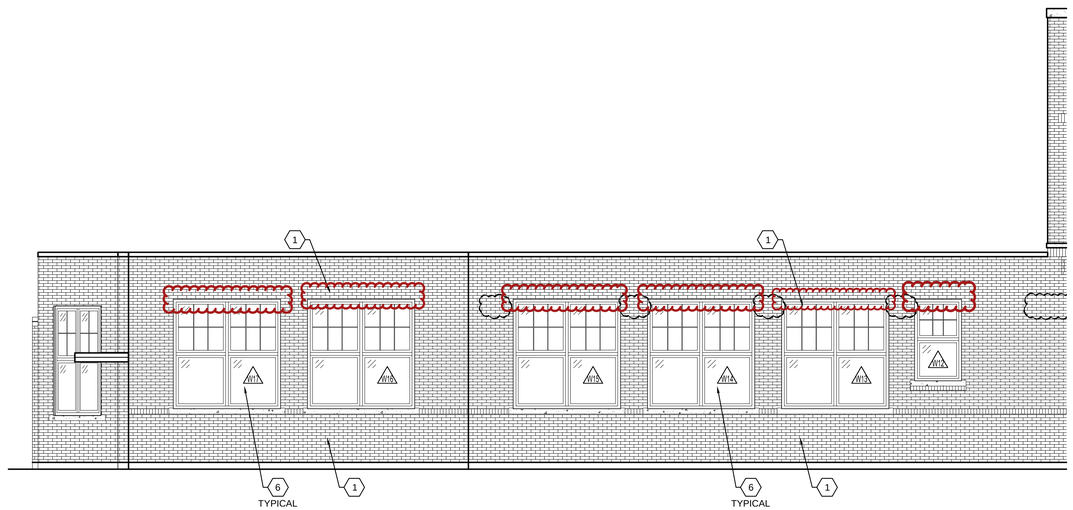
ISSUED FOR	DATE
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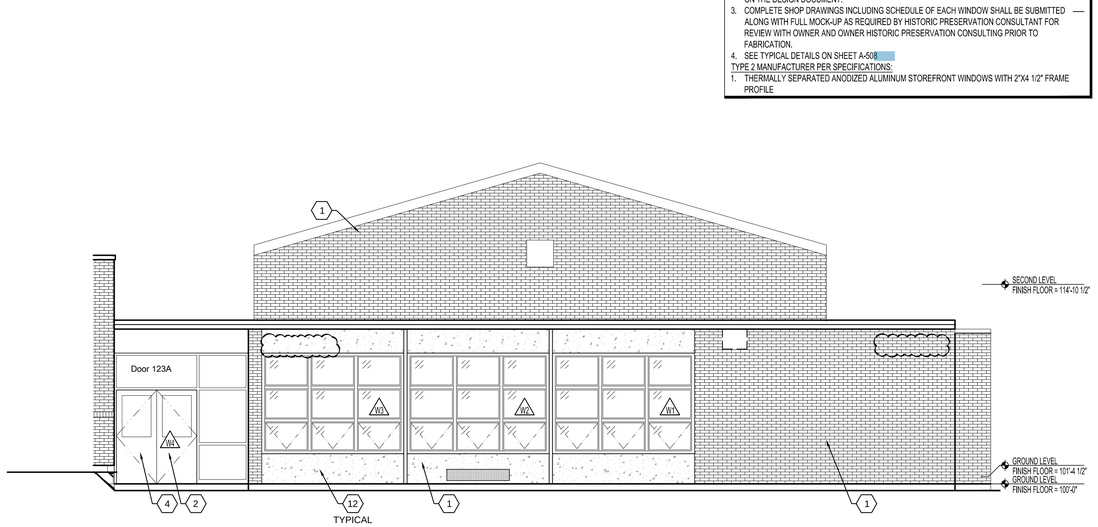
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Printed: Monday, February 17, 2025



1A / A-501 PARTIAL WEST BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:



1C / A-501 PARTIAL WEST BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:



1B / A-501 PARTIAL WEST BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:



1 / A-201 WEST BUILDING ELEVATION
SCALE: 3/32"=1'-0"
REF:

EXTERIOR ELEVATIONS NOTE LEGEND:

1. REFER TO BRICK REPORT
2. ANODIZED ALUMINUM STOREFRONT GLASS ENTRY UNIT AS SCHEDULED
3. DOOR AS SCHEDULED
4. BARRIER FREE POWER ASSIST DOOR ACTUATOR
5. FIRE DEPARTMENT CONNECTION (F.D.C.) REFER TO MECHANICAL
6. NEW GLAZING UNIT TO REPLACE EXISTING AS SCHEDULED
7. GAS METER REFER TO MECHANICAL
8. TRANSFORMER, ELECTRICAL METER, ELECTRICAL PANELS REFER TO MECHANICAL
9. NEW MASONRY INFILL TO MATCH EXISTING. NEW BRICK TO BE TOOTHED INTO EXISTING.
10. NEW STONE SILL TO MATCH EXISTING
11. REPAIR, PATCH AND REPLACE BRICK AS NECESSARY AFTER THE REMOVAL OF THE STAIRS.
12. EXISTING "AGGREGATE SURFACED SPANDRELL" PANEL PER ORIGINAL BUILDING DRWINGS. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS.
13. PRE-FINISHED METAL GUTTERS AND DOWNSPOUT MATCHING EXISTING PROFILE AND COLOR. SUBMIT SAMPLES FOR APPROVAL.
14. NEW INTAKE AND EXHAUST REGISTER. COORDINATE WITH MECHANICAL. PROVIDE FLASHING AND SEAL ALL AROUND PER MANUFACTURER SPECIFICATIONS. TYPICAL.

EXTERIOR ELEVATIONS NOTES:

1. REFER TO AND COORDINATE WITH SPECIFICATIONS AND DETAILS FOR ADDITION SPECIFIC INFORMATION.
2. MATCH EXISTING BRICK COURSING AND PATTERN. TOOTH IN EACH BRICK COURSE.
3. EXTEND WINDOW FLASHING 8" BEYOND OPENING.
4. ALL ROUGH OPENINGS AROUND WINDOWS AND DOORS SHALL BE PROPERLY AND FULLY FLASHED AND AIR SEALED ALL AROUND OPENINGS AND FROM BOTH SIDES (INTERIOR AND EXTERIOR).
5. ALL DOORS AND WINDOWS SHALL MEET THE FOLLOWING THERMAL REQUIREMENTS:

OPAQUE:	U-0.17	SHGC-ANY
≤ 1/2 LITE:	U-0.25	SHGC-0.25
> 1/2 LITE:	U-0.25	SHGC-0.40

WINDOWS SELECTION:

TYPE 1 MANUFACTURER: QUAKER COMMERCIAL
1. CUSTOM MADE WINDOWS FROM QUAKER COMMERCIAL WINDOWS H-650 AND M-600.
2. CONFIGURATION SUCH AS 6-1-1, 1-1-1, 6-1, 1-1, ETC, SHALL MATCH EXISTING AND AS DEPICTED ON THE DESIGN DOCUMENT.
3. COMPLETE SHOP DRAWINGS INCLUDING SCHEDULE OF EACH WINDOW SHALL BE SUBMITTED ALONG WITH FULL MOCK-UP AS REQUIRED BY HISTORIC PRESERVATION CONSULTANT FOR REVIEW WITH OWNER AND OWNER HISTORIC PRESERVATION CONSULTING PRIOR TO FABRICATION.
4. SEE TYPICAL DETAILS ON SHEET A-501

TYPE 2 MANUFACTURER PER SPECIFICATIONS:
1. THERMALLY SEPARATED ANODIZED ALUMINUM STOREFRONT WINDOWS WITH 2"X4 1/2" FRAME PROFILE

5' 0 3' 6'
SCALE: 3/16"= 1'-0"

10' 0 5' 10'
SCALE: 3/32"= 1'-0"

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REGISTRATION SEAL

KEY PLANS

SHEET TITLE
BUILDING ELEVATIONS
EXISTING

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024
Bulletin No. 1	02.19.2025
Bulletin No. 6 (6)	12.04.2025

DRAWN BY: EBH
CHECKED: JA
APPROVED:
FILE NO.: 21026.00
SHEET NO.: A-501

EXTERIOR ELEVATIONS NOTES:

1. REFER TO AND COORDINATE WITH SPECIFICATIONS AND DETAILS FOR ADDITION SPECIFIC INFORMATION.
2. MATCH EXISTING BRICK COURSING AND PATTERN. TOOTH IN EACH BRICK COURSE.
3. EXTEND WINDOW FLASHING 8" BEYOND OPENING.
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> 1/2 LITE:	U-0.25	SHGC-0.40

WINDOWS SELECTION:

TYPE 1 MANUFACTURER: QUAKER COMMERCIAL

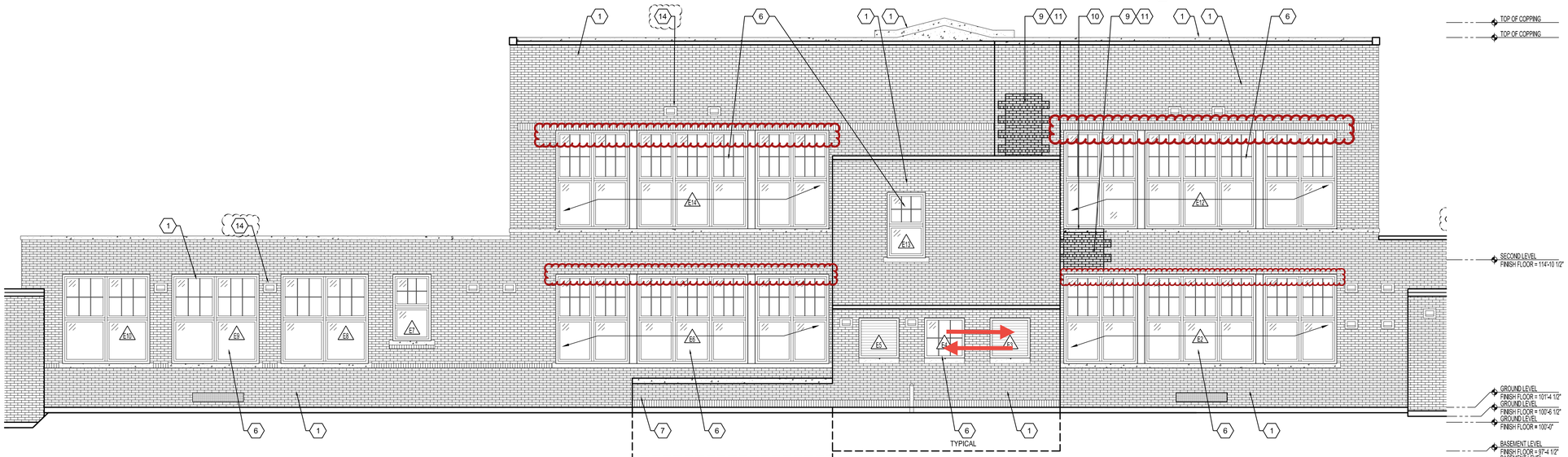
1. CUSTOM MADE WINDOWS FROM QUAKER COMMERCIAL WINDOWS H-650 AND M-600.
2. CONFIGURATION SUCH AS C-1-1, 1-1-1, C-1, 1-1, ETC, SHALL MATCH EXISTING AND AS DEPICTED ON THE DESIGN DOCUMENT.
3. COMPLETE SHOP DRAWINGS INCLUDING SCHEDULE OF EACH WINDOW SHALL BE SUBMITTED ALONG WITH FULL MOCK-UP AS REQUIRED BY HISTORIC PRESERVATION CONSULTANT FOR REVIEW WITH OWNER AND OWNER HISTORIC PRESERVATION CONSULTING PRIOR TO FABRICATION.
4. SEE TYPICAL DETAILS ON SHEET A-508

TYPE 2 MANUFACTURER PER SPECIFICATIONS:

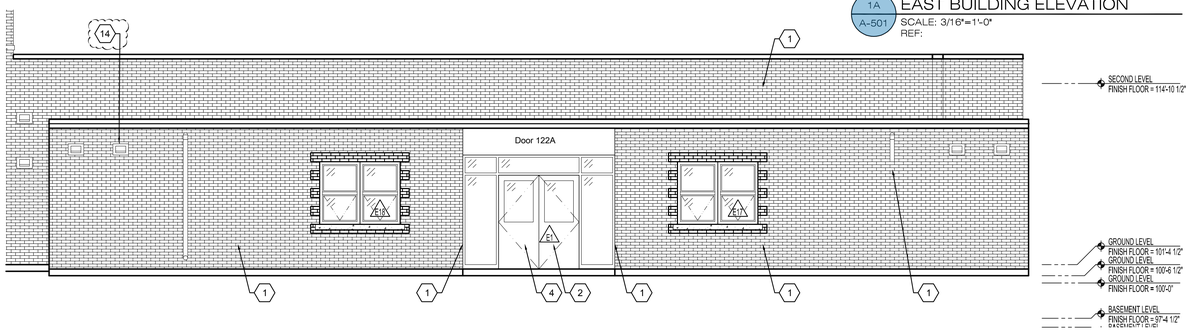
1. THERMALLY SEPARATED ANODIZED ALUMINUM STOREFRONT WINDOWS WITH 2"X4 1/2" FRAME PROFILE

EXTERIOR ELEVATIONS NOTE LEGEND:

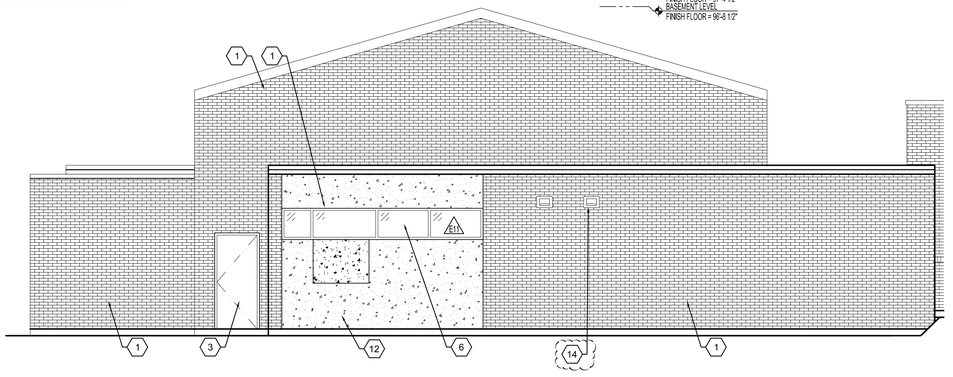
1. REFER TO BRICK REPORT
2. ANODIZED ALUMINUM STOREFRONT GLASS ENTRY UNIT AS SCHEDULED
3. DOOR AS SCHEDULED
4. BARRIER FREE POWER ASSIST DOOR ACTUATOR
5. FIRE DEPARTMENT CONNECTION (F.D.C.) REFER TO MECHANICAL
6. NEW GLAZING UNIT TO REPLACE EXISTING AS SCHEDULED
7. GAS METER REFER TO MECHANICAL
8. TRANSFORMER, ELECTRICAL METER, ELECTRICAL PANELS REFER TO MECHANICAL
9. NEW MASONRY INFILL TO MATCH EXISTING. NEW BRICK TO BE TOOTHED INTO EXISTING.
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13. PRE-FINISHED METAL GUTTERS AND DOWNSPOUT MATCHING EXISTING PROFILE AND COLOR. SUBMIT SAMPLES FOR APPROVAL.
14. NEW INTAKE AND EXHAUST REGISTER. COORDINATE WITH MECHANICAL. PROVIDE FLASHING AND SEAL ALL AROUND PER MANUFACTURER SPECIFICATIONS. TYPICAL.



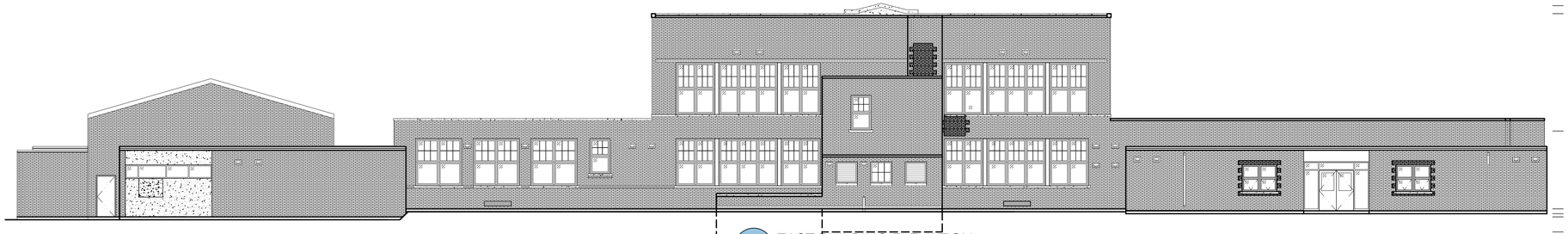
1A / A-501 PARTIAL EAST BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:



1C / A-501 PARTIAL EAST BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:



1B / A-501 PARTIAL EAST BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:



1 / A-201 EAST BUILDING ELEVATION
SCALE: 3/32"=1'-0"
REF:

6' 0 3' 6'
SCALE: 3/16"= 1'-0'

10' 0 5' 10'
SCALE: 3/32"= 1'-0'

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REGISTRATION SEAL

KEY PLANS

SHEET TITLE

BUILDING ELEVATIONS
EXISTING

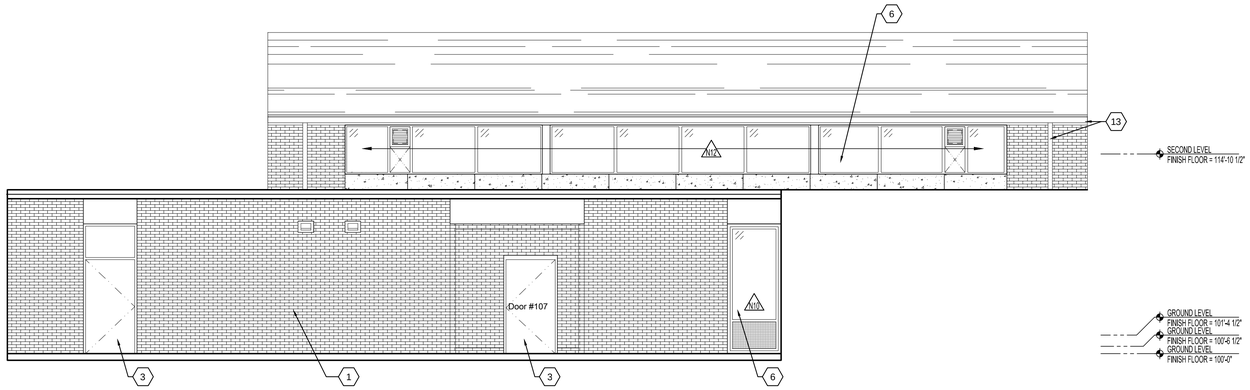
SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
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HUD Submission	12.13.2024
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Bulletin No. 1	02.19.2025
Bulletin No. 6 (6)	12.04.2025

DRAWN BY: EBH
CHECKED: JA
APPROVED:

FILE NO. 21026.00

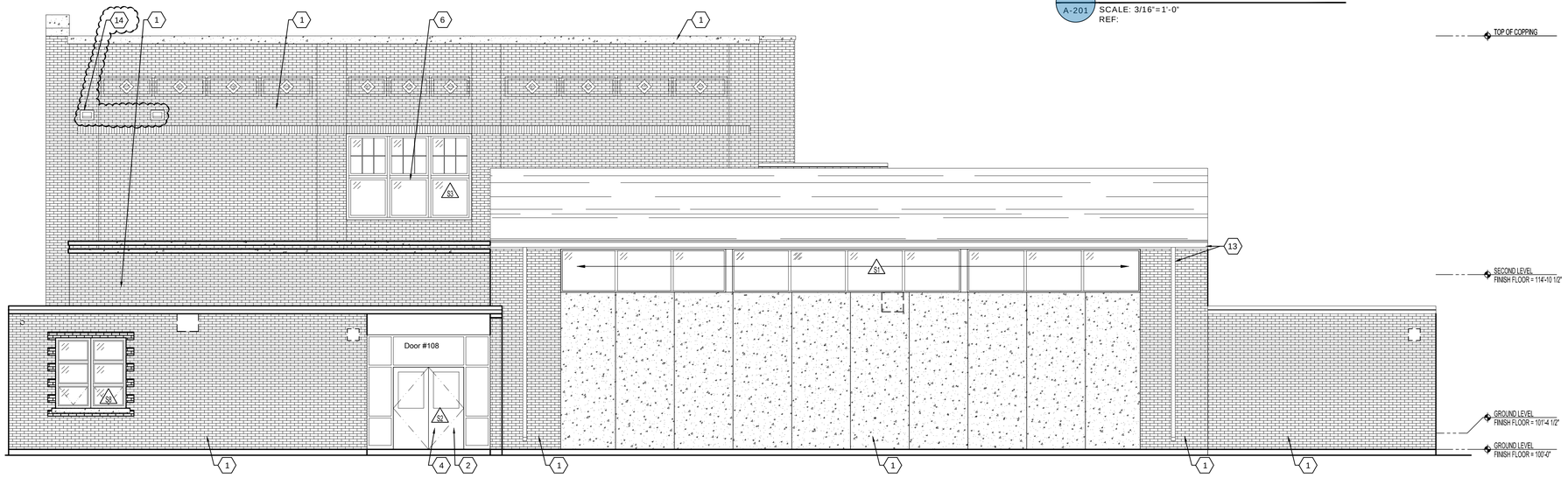
SHEET NO. A-502



3 A-201 NORTH BUILDING ELEVATION

SCALE: 3/16"=1'-0"

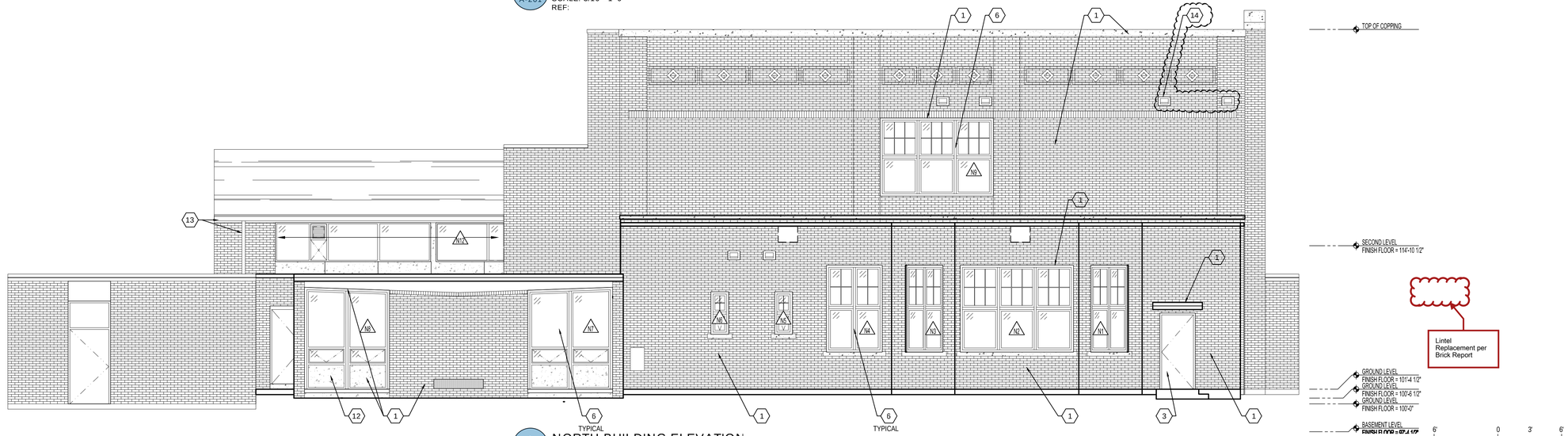
REF:



2 A-201 SOUTH BUILDING ELEVATION

SCALE: 3/16"=1'-0"

REF:



1 A-201 NORTH BUILDING ELEVATION

SCALE: 3/16"=1'-0"

REF:

EXTERIOR ELEVATIONS NOTE LEGEND:

1. REFER TO BRICK REPORT
2. ANODIZED ALUMINUM STOREFRONT GLASS ENTRY UNIT AS SCHEDULED
3. DOOR AS SCHEDULED
4. BARRIER FREE POWER ASSIST DOOR ACTUATOR
5. FIRE DEPARTMENT CONNECTION (F.D.C.) REFER TO MECHANICAL
6. NEW GLAZING UNIT TO REPLACE EXISTING AS SCHEDULED
7. GAS METER REFER TO MECHANICAL
8. TRANSFORMER, ELECTRICAL METER, ELECTRICAL PANELS REFER TO MECHANICAL
9. NEW MASONRY INFILL TO MATCH EXISTING. NEW BRICK TO BE TOOTHED INTO EXISTING.
10. NEW STONE SILL TO MATCH EXISTING
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12. EXISTING "AGGREGATE SURFACED SPANDRELL" PANEL PER ORIGINAL BUILDING DRWINGS. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS.
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EXTERIOR ELEVATIONS NOTES:

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> 1/2 LITE:	U-0.25	SHGC-0.40

WINDOWS SELECTION:

TYPE 1 MANUFACTURER: QUAKER COMMERCIAL

1. CUSTOM MADE WINDOWS FROM QUAKER COMMERCIAL WINDOWS H-650 AND M-600.
2. CONFIGURATION SUCH AS 6-1-1, 1-1-1, 6-1, 1-1, ETC, SHALL MATCH EXISTING AND AS DEPICTED ON THE DESIGN DOCUMENTS.
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4. SEE TYPICAL DETAILS ON SHEET A-503

TYPE 2 MANUFACTURER PER SPECIFICATIONS:

1. THERMALLY SEPARATED ANODIZED ALUMINUM STOREFRONT WINDOWS WITH 2"X4 1/2" FRAME PROFILE

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
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REGISTRATION SEAL

KEY PLANS

SHEET TITLE

BUILDING ELEVATIONS
EXISTING

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
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HUD Submission	12.13.2024
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Bulletin No. 1	02.19.2025
Bulletin No. 6 (6)	12.04.2025

DRAWN BY: EBH

CHECKED: JA

APPROVED

FILE NO.: 21026.00

SHEET NO.: A-503

6' 0 3' 6'
SCALE: 3/16"= 1'-0"

EXTERIOR ELEVATIONS NOTE LEGEND:

1. REFER TO BRICK REPORT
2. ANODIZED ALUMINUM STOREFRONT GLASS ENTRY UNIT AS SCHEDULED
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OPAQUE:	U-0.17	SHGC-ANY
≤ 1/2 LITE:	U-0.25	SHGC-0.25
> 1/2 LITE:	U-0.25	SHGC-0.40

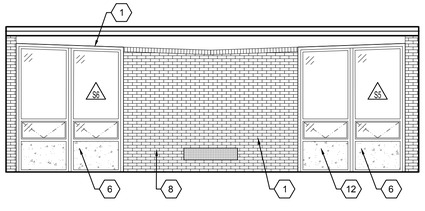
WINDOWS SELECTION:

TYPE 1 MANUFACTURER: QUAKER COMMERCIAL

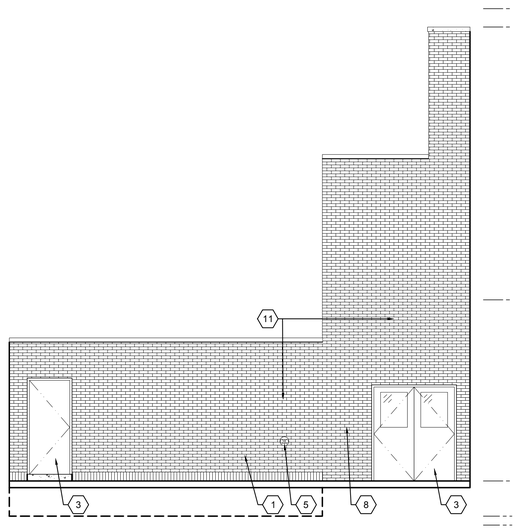
1. CUSTOM MADE WINDOWS FROM QUAKER COMMERCIAL WINDOWS H-650 AND M-600.
2. CONFIGURATION SUCH AS 6-1=1, 1=1-1, 6-1, 1=1, ETC, SHALL MATCH EXISTING AND AS DEPICTED ON THE DESIGN DOCUMENTS.
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4. SEE TYPICAL DETAILS ON SHEET A-504

TYPE 2 MANUFACTURER PER SPECIFICATIONS:

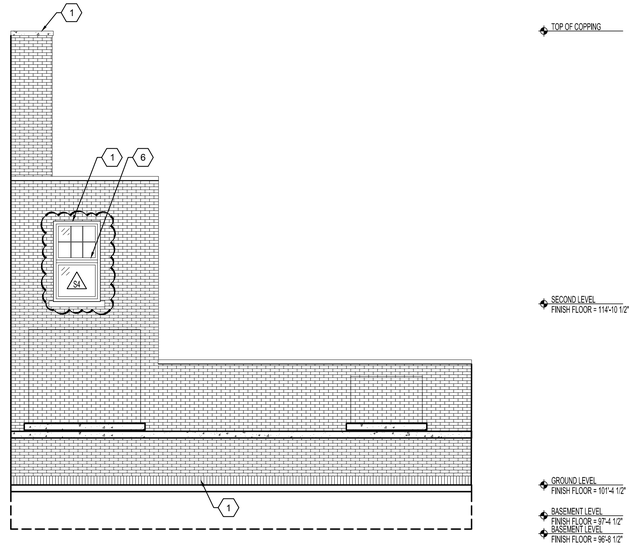
1. THERMALLY SEPARATED ANODIZED ALUMINUM STOREFRONT WINDOWS WITH 2"X4 1/2" FRAME PROFILE



3 A-201 SOUTH BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:



2 A-201 SOUTH BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:



1 A-201 SOUTH BUILDING ELEVATION
SCALE: 3/16"=1'-0"
REF:

10' 0 5' 10'
SCALE: 3/32"= 1'-0"

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REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAJDZIENSKI
License No. 1301026315
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KEY PLANS

SHEET TITLE

BUILDING ELEVATIONS
EXISTING

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Bulletin No. 1 1	02.19.2025

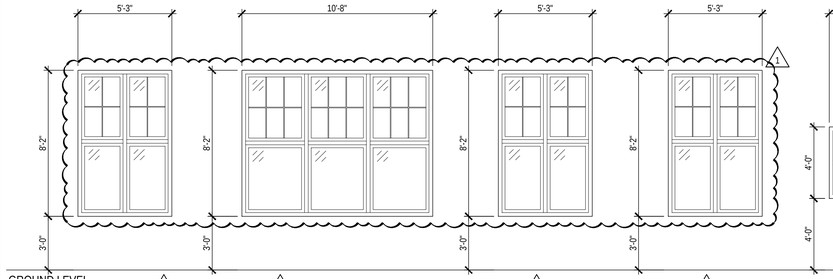
EBH
DRAWN BY

JA
CHECKED

APPROVED

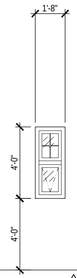
21026.00
FILE NO.

A-504
SHEET NO.

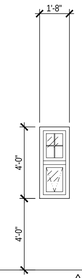


GROUND LEVEL
TYPE 1 (RESIDENTIAL)

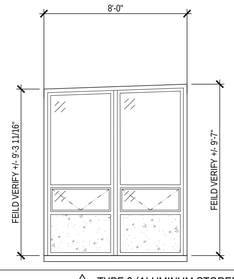
N1 N2 N3



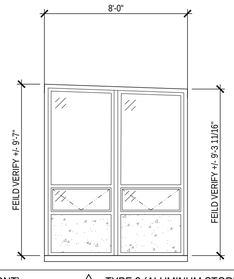
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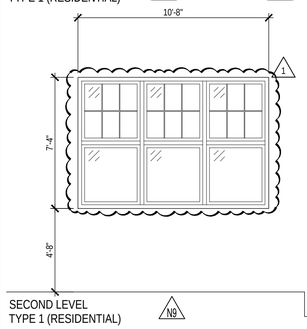
N5



N6 N7 TYPE 2 (ALUMINUM STOREFRONT)

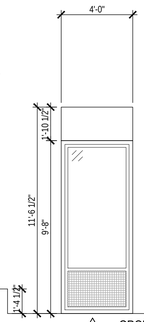


N8 TYPE 2 (ALUMINUM STOREFRONT)

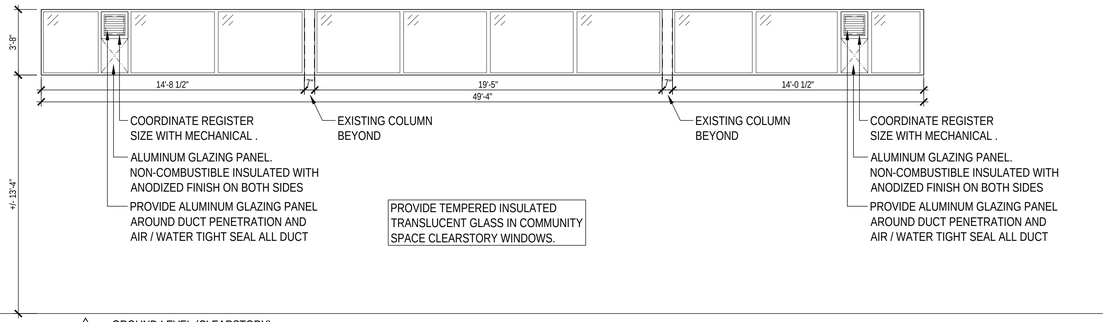


SECOND LEVEL
TYPE 1 (RESIDENTIAL)

N9



N10 GROUND LEVEL
TYPE 2 (ALUMINUM STOREFRONT)



N12 GROUND LEVEL (CLEARSTORY)
TYPE 2 (ALUMINUM STOREFRONT)

GROUND LEVEL
TYPE 2 (ALUMINUM STOREFRONT)

S1

S2 SEE DOOR SCHEDULE
SHEET A.902

SECOND LEVEL
TYPE 1 (RESIDENTIAL)

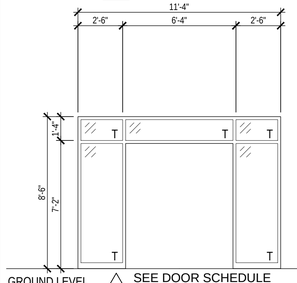
S3

S4

GROUND LEVEL
TYPE 2 (ALUMINUM STOREFRONT)

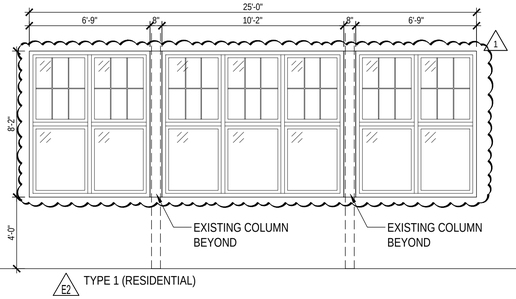
S5

S6 TYPE 2 (ALUMINUM STOREFRONT)

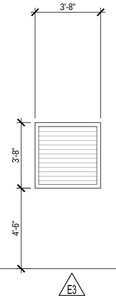


GROUND LEVEL

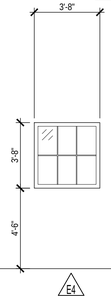
E1 SEE DOOR SCHEDULE
SHEET A.902



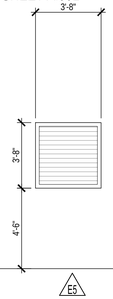
E2 TYPE 1 (RESIDENTIAL)



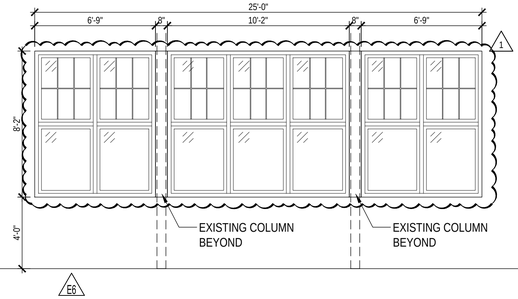
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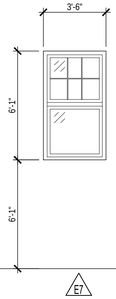
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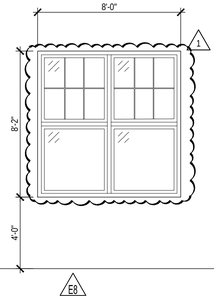
E5



E6



E7



E8

GROUND LEVEL
TYPE 1 (RESIDENTIAL)

E9 E10

GROUND LEVEL E11 TYPE 2 (ALUMINUM STOREFRONT)

SECOND LEVEL
TYPE 1 (RESIDENTIAL)

E12

E13

E14

EXTERIOR ELEVATIONS NOTES:

1. REFER TO AND COORDINATE WITH SPECIFICATIONS AND DETAILS FOR ADDITION SPECIFIC INFORMATION.
2. MATCH EXISTING BRICK COURSING AND PATTERN. TOOTH IN EACH BRICK COURSE.
3. EXTEND WINDOW FLASHING 8" BEYOND OPENING.
4. ALL ROUGH OPENINGS AROUND WINDOWS AND DOORS SHALL BE PROPERLY AND FULLY FLASHED AND AIR SEALED ALL AROUND OPENINGS AND FROM BOTH SIDES (INTERIOR AND EXTERIOR).
5. ALL DOORS AND WINDOWS SHALL MEET THE FOLLOWING THERMAL REQUIREMENTS:

OPAQUE:	U-0.17	SHGC-ANY
≤ 1/2 LITE:	U-0.25	SHGC-0.25
> 1/2 LITE:	U-0.25	SHGC-0.40

WINDOWS SELECTION:

TYPE 1 MANUFACTURER: QUAKER COMMERCIAL

1. CUSTOM MADE WINDOWS FROM QUAKER COMMERCIAL WINDOWS H-650 AND M-600.
2. CONFIGURATION SUCH AS 6-1-1, 1-1-1, 6-1, 1-1, ETC, SHALL MATCH EXISTING AND AS DEPICTED ON THE DESIGN DOCUMENTS.
3. COMPLETE SHOP DRAWINGS INCLUDING SCHEDULE OF EACH WINDOW SHALL BE SUBMITTED ALONG WITH FULL MOCK-UP AS REQUIRED BY HISTORIC PRESERVATION CONSULTANT FOR REVIEW WITH OWNER AND OWNER HISTORIC PRESERVATION CONSULTING PRIOR TO FABRICATION. 1
4. SEE TYPICAL DETAILS ON SHEET A-506

TYPE 2 MANUFACTURER PER SPECIFICATIONS:

1. THERMALLY SEPARATED ANODIZED ALUMINUM STOREFRONT WINDOWS WITH 2"X4 1/2" FRAME PROFILE

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-8000
Fax:313-964-3233

REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAJESKI
License No. 1301026315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

SHEET TITLE

WINDOW ELEVATIONS AND SCHEDULE

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024
Bulletin No. 1	12.20.2024

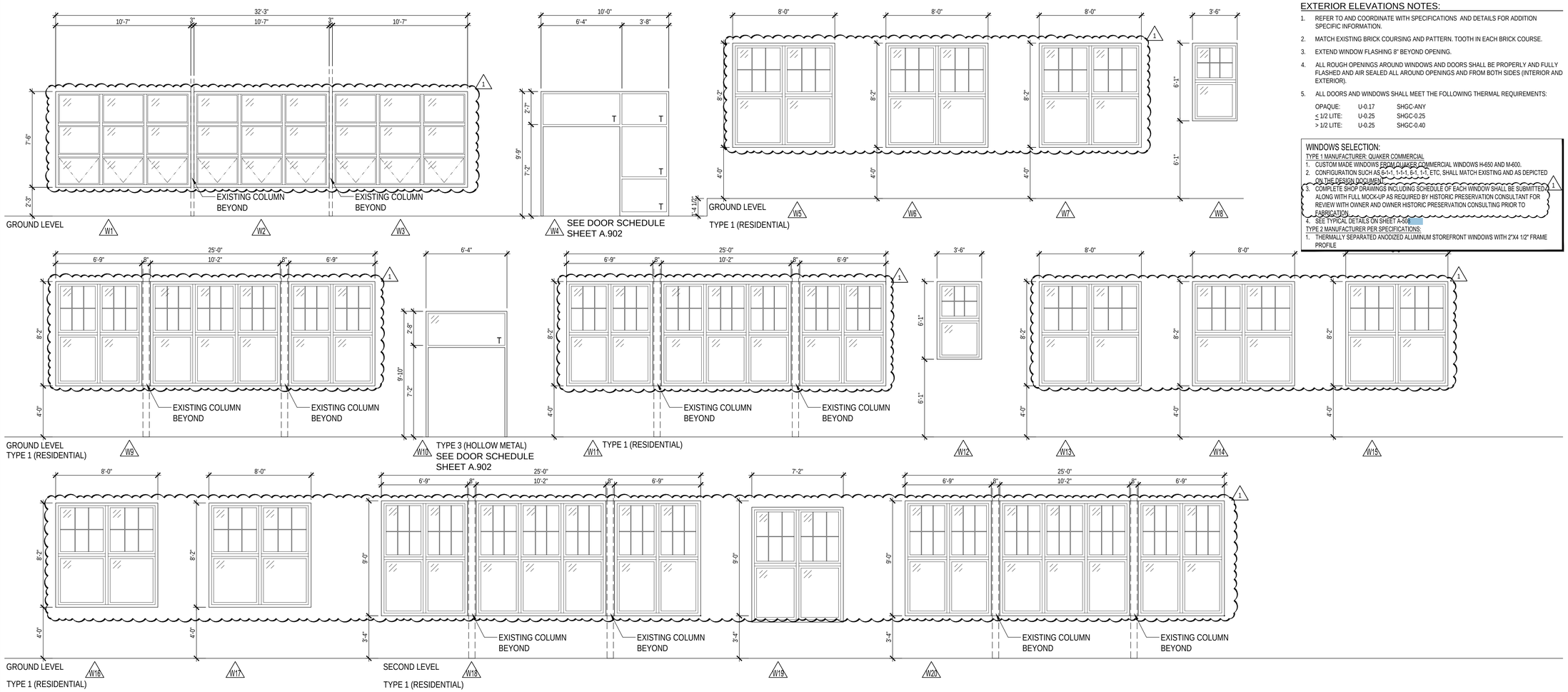
EBH
DRAWN BY

JA
CHECKED

APPROVED

21026.00
FILE NO.

A-506
SHEET NO.



EXTERIOR ELEVATIONS NOTES:

1. REFER TO AND COORDINATE WITH SPECIFICATIONS AND DETAILS FOR ADDITION SPECIFIC INFORMATION.
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≤ 1/2 LITE:	U-0.25	SHGC-0.25
> 1/2 LITE:	U-0.25	SHGC-0.40

WINDOWS SELECTION:

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4. SEE TYPICAL DETAILS ON SHEET A-501

TYPE 2 MANUFACTURER PER SPECIFICATIONS:

1. THERMALLY SEPARATED ANODIZED ALUMINUM STOREFRONT WINDOWS WITH 2"X4 1/2" FRAME PROFILE

OBS

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-8000
Fax:313-964-3233

REGISTRATION SEAL

STATE OF MICHIGAN
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02/18/2025

KEY PLANS

SHEET TITLE

WINDOW ELEVATIONS AND SCHEDULE

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024
Bulletin No. 1 (1)	02.19.2025

DRAWN BY: EBH

CHECKED: JA

APPROVED

FILE NO.: 21026.00

SHEET NO.: A-507

1	ELEVATION	EXISTING OPENINGS - REFER TO ELEVATIONS	NEW OPENINGS - REFER ELEVATIONS	TYPE
1	NORTH	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	NORTH	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	NORTH	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	NORTH	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	NORTH	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	NORTH	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	NORTH	EXISTING WINDOW	NEW WINDOW	TYPE 2 (ALUMINUM STOREFRONT)
1	NORTH	EXISTING WINDOW	NEW WINDOW	TYPE 2 (ALUMINUM STOREFRONT)
1	NORTH	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	NORTH	EXISTING WINDOW	NEW WINDOW	TYPE 2 (ALUMINUM STOREFRONT)
1	NORTH	EXISTING WINDOW	NEW WINDOW	TYPE 2 (ALUMINUM STOREFRONT)
1	SOUTH	EXISTING WINDOW	NEW WINDOW	TYPE 2 (ALUMINUM STOREFRONT)
1	SOUTH	EXISTING ENTRANCE	NEW ENTRANCE	TYPE 2 (ALUMINUM STOREFRONT)
1	SOUTH	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	SOUTH	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	SOUTH	EXISTING WINDOW	NEW WINDOW	TYPE 2 (ALUMINUM STOREFRONT)
1	SOUTH	EXISTING WINDOW	NEW WINDOW	TYPE 2 (ALUMINUM STOREFRONT)
1	SOUTH	NEW OPENING	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	EAST	EXISTING ENTRANCE	NEW ENTRANCE	**TYPE 3 (ALUMINUM STOREFRONT)**
1	EAST - INTERIOR	EXISTING ENTRANCE	NEW ENTRANCE	TYPE 3 (ALUMINUM STOREFRONT)
1	EAST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	EAST	EXISTING LOUVER	NEW LOUVER	TYPE 1 (RESIDENTIAL)
1	EAST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	EAST	EXISTING LOUVER	NEW LOUVER	TYPE 1 (RESIDENTIAL)
1	EAST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	EAST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	EAST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	EAST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	EAST	EXISTING WINDOW	NEW WINDOW	TYPE 2 (ALUMINUM STOREFRONT)
1	EAST	EXISTING ENTRANCE	NEW WINDOW (REMOVE DOOR)	TYPE 1 (RESIDENTIAL)
1	EAST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	EAST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	EAST	NEW OPENING	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	EAST	NEW OPENING	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING ENTRANCE	NEW ENTRANCE	TYPE 2 (ALUMINUM STOREFRONT)
1	WEST - INTERIOR	EXISTING ENTRANCE	NEW ENTRANCE	TYPE 2 (ALUMINUM STOREFRONT)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING ENTRANCE	NEW ENTRANCE	TYPE 2 (ALUMINUM STOREFRONT)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)
1	WEST	EXISTING WINDOW	NEW WINDOW	TYPE 1 (RESIDENTIAL)

EXTERIOR ELEVATIONS NOTES:

1. REFER TO AND COORDINATE WITH SPECIFICATIONS AND DETAILS FOR ADDITION SPECIFIC INFORMATION.
2. MATCH EXISTING BRICK COURSING AND PATTERN. TOOTH IN EACH BRICK COURSE.
3. EXTEND WINDOW FLASHING 8" BEYOND OPENING.
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5. ALL DOORS AND WINDOWS SHALL MEET THE FOLLOWING THERMAL REQUIREMENTS:

OPAQUE:	U-0.17	SHGC-ANY
≤ 1/2 LITE:	U-0.25	SHGC-0.25
> 1/2 LITE:	U-0.25	SHGC-0.40

WINDOWS SELECTION:

TYPE 1 MANUFACTURER: QUAKER COMMERCIAL

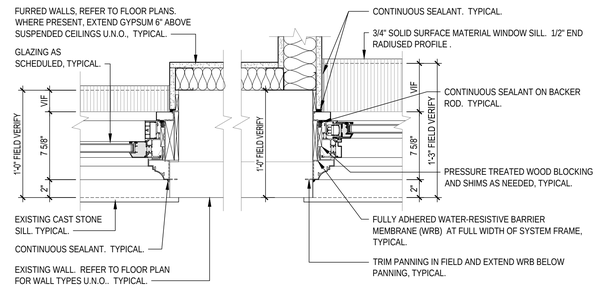
1. CUSTOM MADE WINDOWS FROM QUAKER COMMERCIAL WINDOWS H-650 AND M-600.
2. CONFIGURATION SUCH AS 1-1-1, 1-1-1, 1-1, 1-1, 1-1 ETC, SHALL MATCH EXISTING AND AS DEPICTED ON THE DESIGN DOCUMENTS.
3. COMPLETE SHOP DRAWINGS INCLUDING SCHEDULE OF EACH WINDOW SHALL BE SUBMITTED ALONG WITH FULL MOCK-UP AS REQUIRED BY HISTORIC PRESERVATION CONSULTANT FOR REVIEW WITH OWNER AND OWNER HISTORIC PRESERVATION CONSULTING PRIOR TO FABRICATION.
4. SEE TYPICAL DETAILS ON SHEET A-508

TYPE 2 MANUFACTURER PER SPECIFICATIONS:

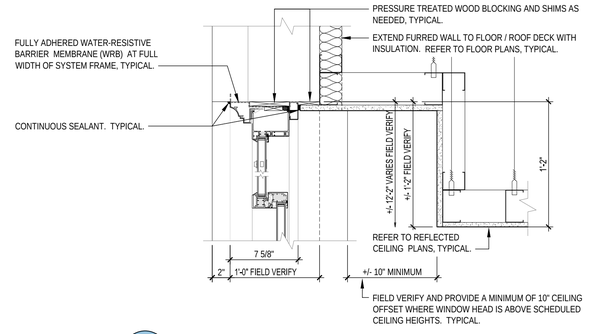
1. THERMALLY SEPARATED ANODIZED ALUMINUM STOREFRONT WINDOWS WITH 2"X4 1/2" FRAME PROFILE

EXTERIOR ELEVATIONS NOTE LEGEND:

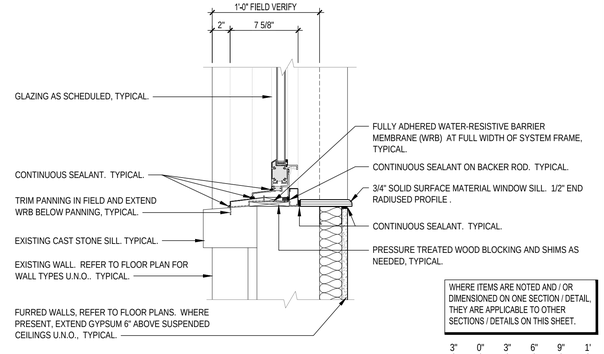
1. REFER TO BRICK REPORT
2. ANODIZED ALUMINUM STOREFRONT GLASS ENTRY UNIT AS SCHEDULED
3. DOOR AS SCHEDULED
4. BARRIER FREE POWER ASSIST DOOR ACTUATOR
5. FIRE DEPARTMENT CONNECTION (F.D.C.) REFER TO MECHANICAL
6. NEW GLAZING UNIT TO REPLACE EXISTING AS SCHEDULED
7. GAS METER REFER TO MECHANICAL
8. TRANSFORMER, ELECTRICAL METER, ELECTRICAL PANELS REFER TO MECHANICAL
9. NEW MASONRY INFILL TO MATCH EXISTING. NEW BRICK TO BE TOOTHED INTO EXISTING.
10. NEW STONE SILL TO MATCH EXISTING
11. REPAIR, PATCH AND REPLACE BRICK AS NECESSARY AFTER THE REMOVAL OF THE STAIRS.
12. EXISTING "AGGREGATE SURFACED SPANDRELL" PANEL PER ORIGINAL BUILDING DRWINGS. IF NEEDED, GC/CM TO COORDINATE THE NEED FOR A NEW 4" COLD FORM STUD WALL BELOW AND ABOVE THE EXISTING WINDOWS.
13. PRE-FINISHED METAL GUTTERS AND DOWNSPOUT MATCHING EXISTING PROFILE AND COLOR. SUBMIT SAMPLES FOR APPROVAL.



3 A-501 **TYPICAL WINDOW JAMB**
SCALE: 1 1/2" = 1'-0"
REF:



2 A-501 **TYPICAL WINDOW HEAD**
SCALE: 1 1/2" = 1'-0"
REF:



WHERE ITEMS ARE NOTED AND / OR DIMENSIONED ON ONE SECTION / DETAIL, THEY ARE APPLICABLE TO OTHER SECTIONS / DETAILS ON THIS SHEET.

3" 0" 3" 6" 9" 1'
SCALE: 1 1/2" = 1'-0"

1 A-501 **TYPICAL WINDOW SILL**
SCALE: 1 1/2" = 1'-0"
REF:

4' 0 2' 4'
SCALE: 1/4"= 1'-0"

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
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607 Shelby Street
Suite 704
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Tel: 313-961-9000
Fax:313-964-3233

REGISTRATION SEAL

STATE OF MICHIGAN
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License No. 1301026315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

SHEET TITLE

WINDOW ELEVATIONS AND SCHEDULE

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
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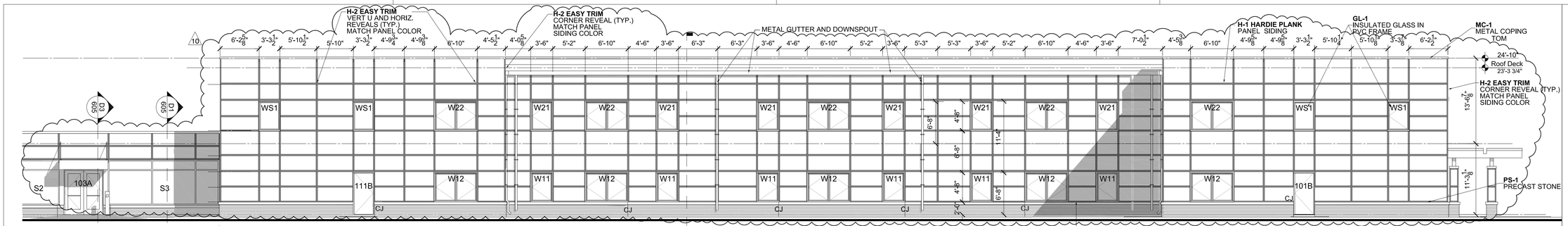
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21026.00
FILE NO.

A-508
SHEET NO.

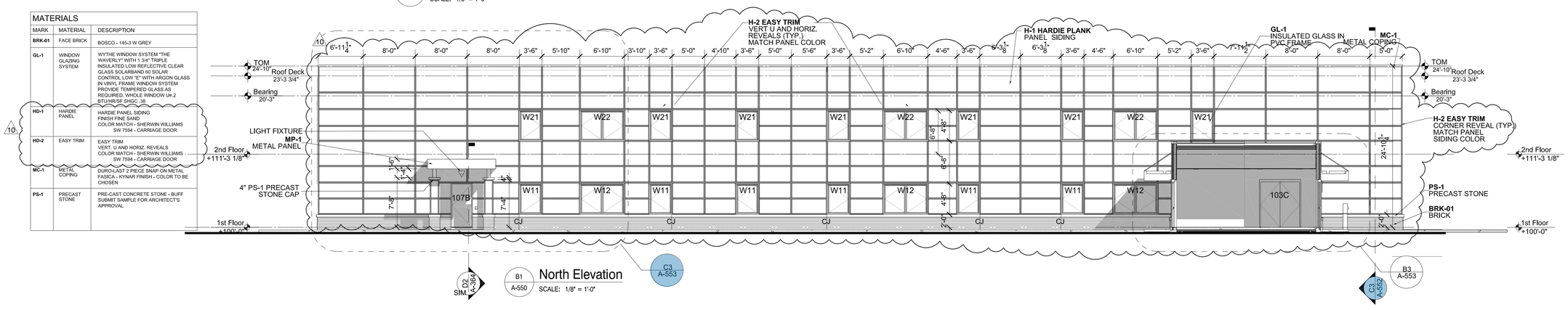


A1 A-550 **West Elevation**
SCALE: 1/8" = 1'-0"

B3 A-553

PS-1
PRECAST STONE

MATERIALS		
MARK	MATERIAL	DESCRIPTION
BRK-01	FACE BRICK	BOSCO - 145-3 W GREY
GL-1	WINDOW GLAZING SYSTEM	WYTHE WINDOW SYSTEM "THE WAVERLY" WITH 1 3/4" TRIPLE INSULATED LOW REFLECTIVE CLEAR GLASS SOLARBAND 60 SOLAR CONTROL LOW "E" WITH ARGON GLASS IN VINYL FRAME WINDOW SYSTEM PROVIDE TEMPERED GLASS AS REQUIRED. WHOLE WINDOW U=.2 BTU/HR/SF SHGC .38
HD-1	HARDIE PANEL	HARDIE PANEL SIDING FINISH FINE SAND COLOR MATCH - SHERWIN WILLIAMS SW 7594 - CARRIAGE DOOR
HD-2	EASY TRIM	EASY TRIM VERT. U AND HORIZ. REVEALS COLOR MATCH - SHERWIN WILLIAMS SW 7594 - CARRIAGE DOOR
MC-1	METAL COPING	DURO-LAST 2 PIECE SNAP ON METAL FASICA - KYNAR FINISH - COLOR TO BE CHOSEN
PS-1	PRECAST STONE	PRE-CAST CONCRETE STONE - BUFF SUBMIT SAMPLE FOR ARCHITECT'S APPROVAL



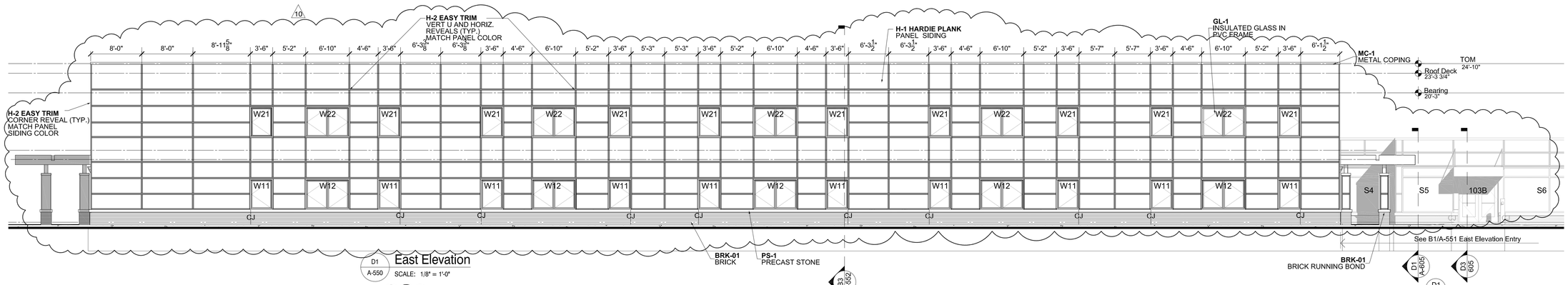
D2 SIM. A-364

B1 A-550 **North Elevation**
SCALE: 1/8" = 1'-0"

C3 A-553

B3 A-553

C3 A-552



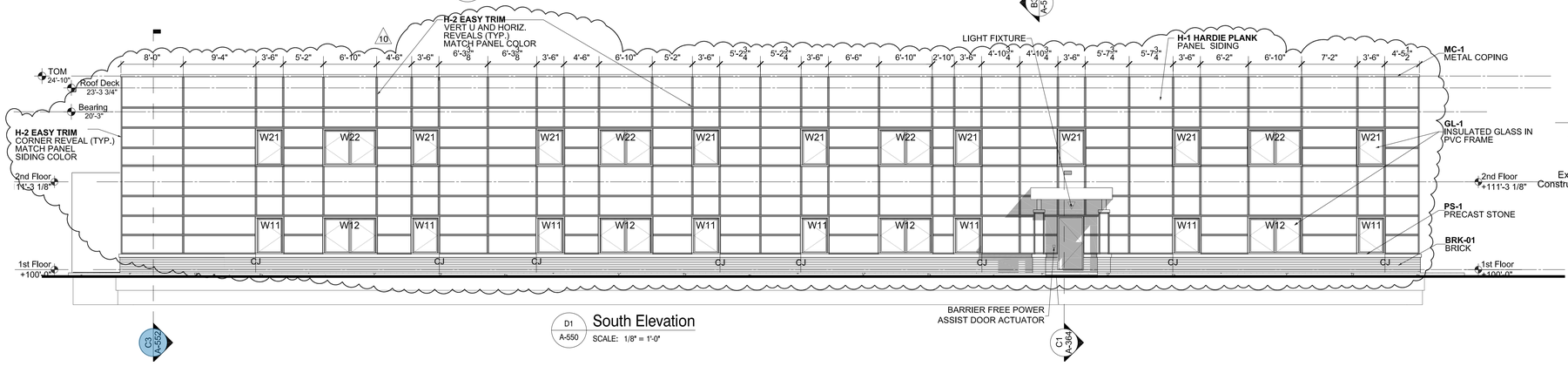
D1 A-550 **East Elevation**
SCALE: 1/8" = 1'-0"

B3 A-553

D1 A-605

D3 605

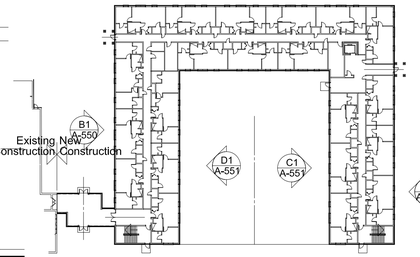
D1 A-550



D1 A-550 **South Elevation**
SCALE: 1/8" = 1'-0"

C3 A-552

C1 A-360



1st Floor Key Elevations
SCALE: 1"=50'-0"
REF:

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-9000
Fax: 313-964-3233

REGISTRATION SEAL

KEY PLANS

SHEET TITLE
Elevations

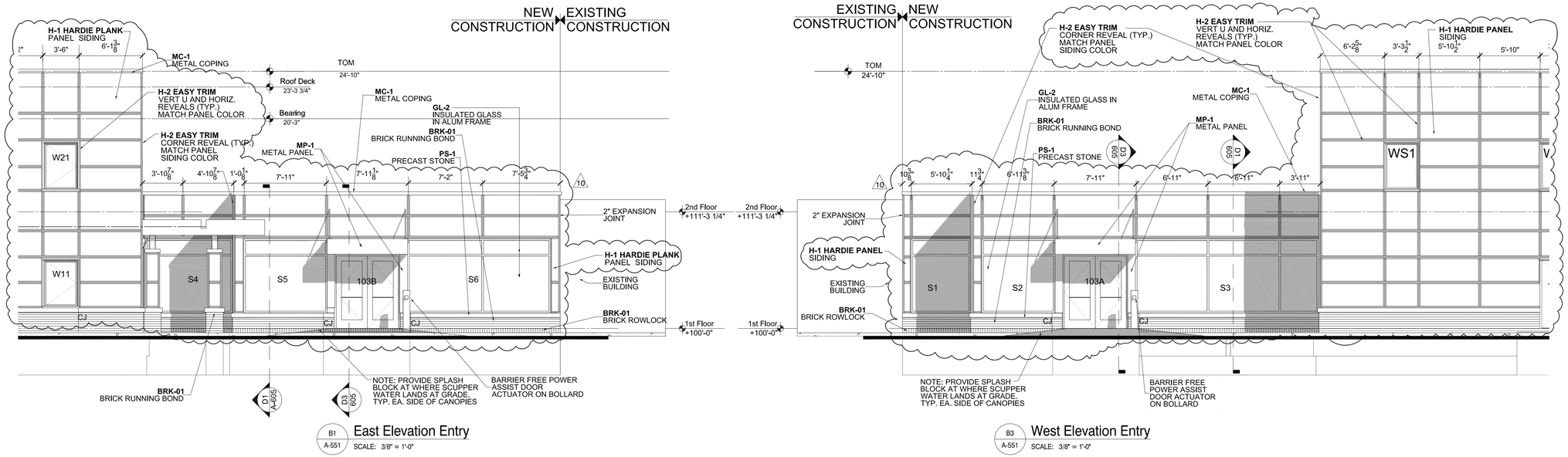
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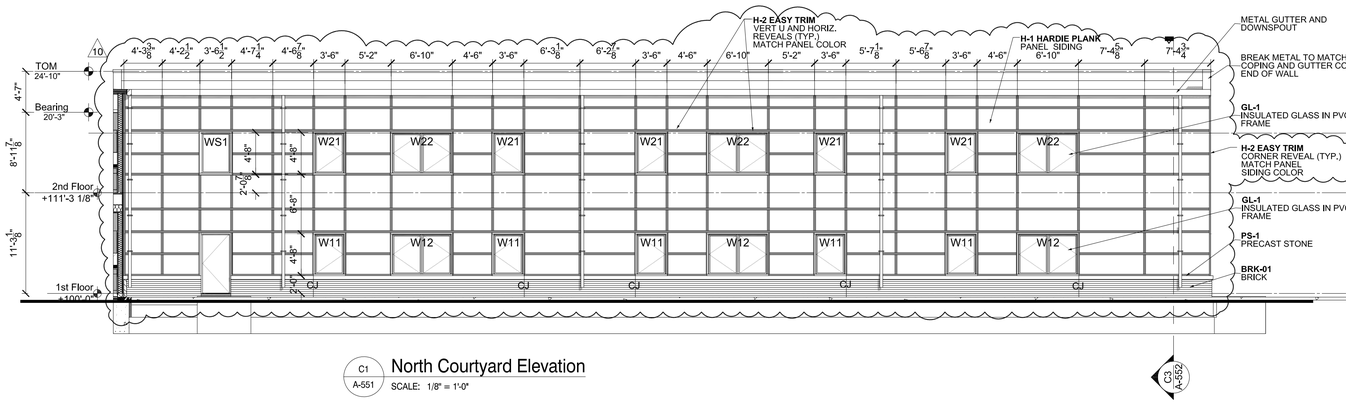
ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1 (1)	02.19.2025
BULLETIN #8 (8)	05.01.2026
BULLETIN #10 (10)	06.26.2026

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CHECKED: JA
APPROVED:

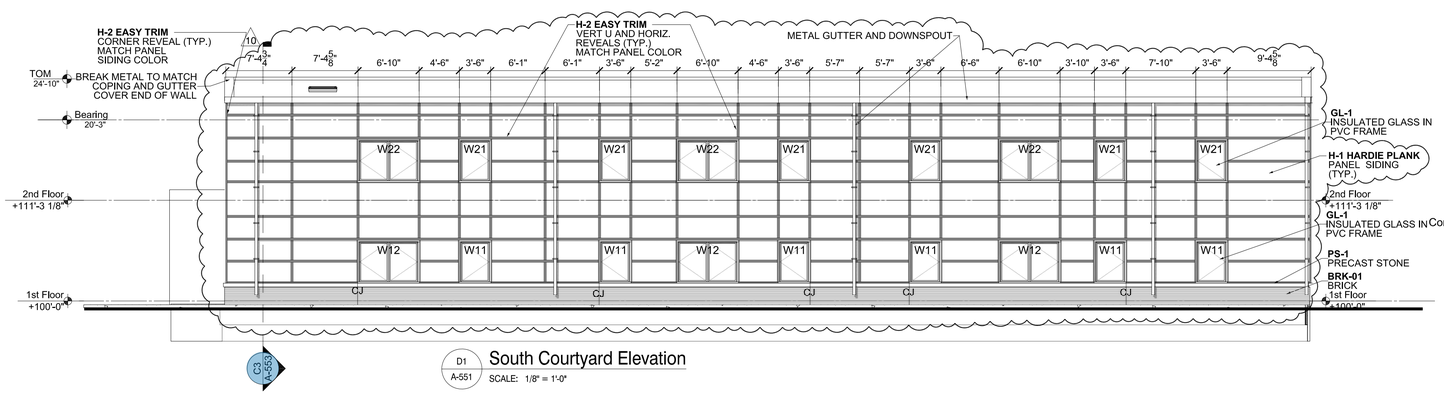
FILE NO. 21026.00

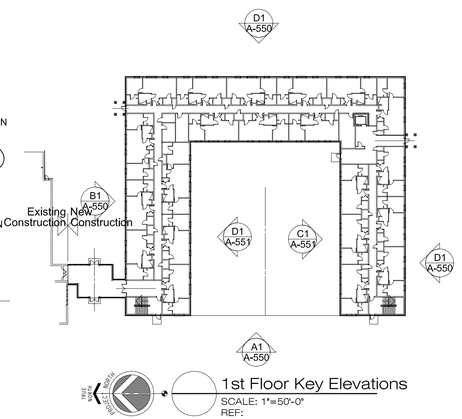
SHEET NO. A-550





MATERIALS		
MARK	MATERIAL	DESCRIPTION
BRK-01	FACE BRICK	BOSCO - 145-3 W GREY
GL-1	WINDOW GLAZING SYSTEM	WYTHE WINDOW SYSTEM "THE WAVERLY" WITH 1 3/4" TRIPLE INSULATED LOW REFLECTIVE CLEAR GLASS SOLARBAND 60 SOLAR CONTROL LOW "E" WITH ARGON GLASS IN VINYL FRAME WINDOW SYSTEM PROVIDE TEMPERED GLASS AS REQUIRED. WHOLE WINDOW U=.2 R1/HOUSE SHGC .28
HD-1	HARDIE PANEL	HARDIE PANEL SIDING FINISH FINE SAND COLOR MATCH - SHERWIN WILLIAMS SW 7594 - CARRIAGE DOOR
HD-2	EASY TRIM	EASY TRIM VERT. U AND HORIZ. REVEALS COLOR MATCH - SHERWIN WILLIAMS SW 7594 - CARRIAGE DOOR
MC-1	METAL COPING	DURO-LAST 2 PIECE SNAP ON METAL FASICA - KYNAR FINISH - COLOR TO BE CHOSEN
PS-1	PRECAST STONE	PRE-CAST CONCRETE STONE - BUFF SUBMIT SAMPLE FOR ARCHITECT'S APPROVAL





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REGISTRATION SEAL

KEY PLANS

SHEET TITLE

Elevations Courtyard

SCALE:

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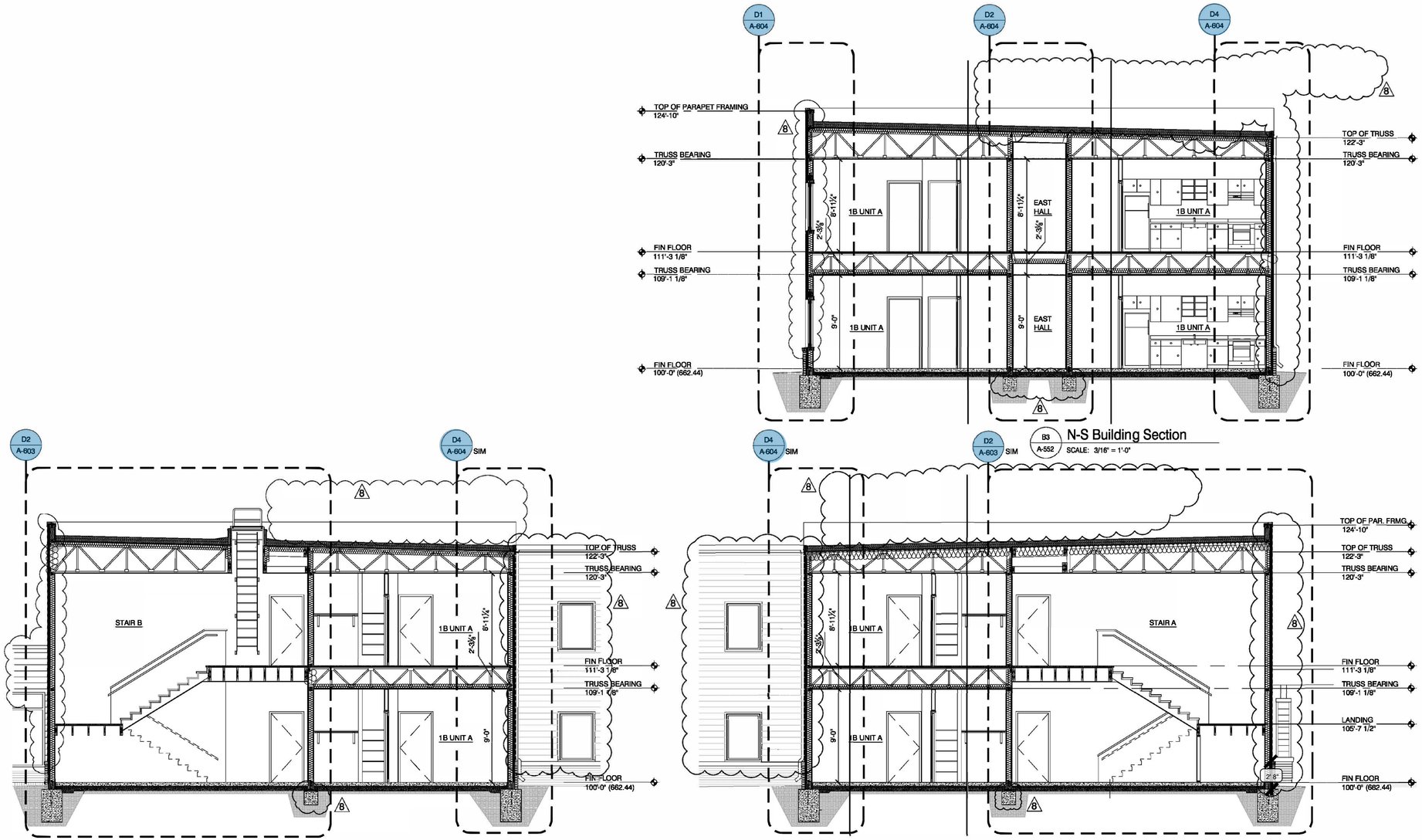
DRAWN BY: DWP

CHECKED: JA

APPROVED

FILE NO. 21026.00

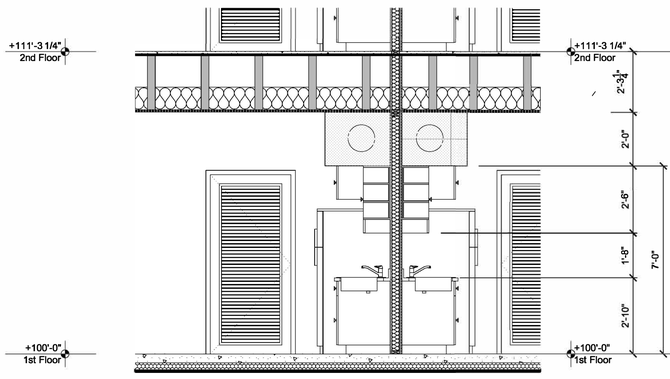
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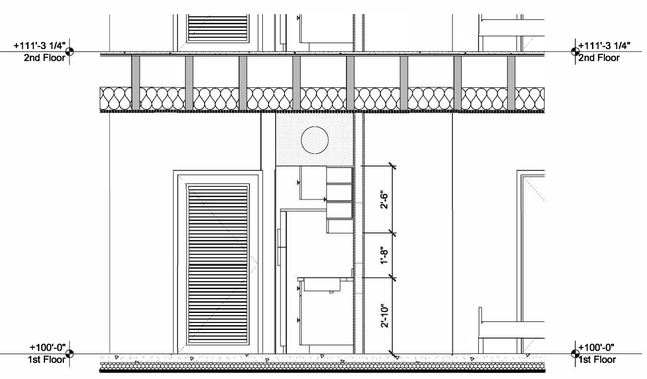
B3 A-552 **N-S Building Section**
SCALE: 3/16" = 1'-0"

C1 A-552 **N-S Building Section**
SCALE: 3/16" = 1'-0"

C3 A-552 **N-S Building Section**
SCALE: 3/16" = 1'-0"

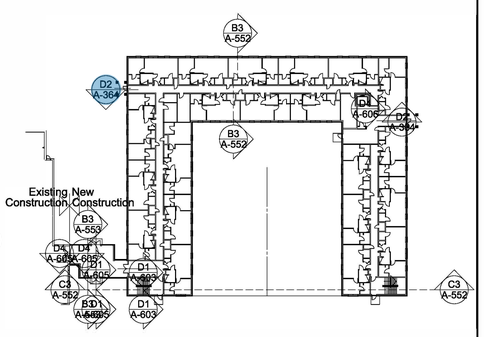


D1 A-552 **Building Section at Kitchen**
SCALE: 3/ 8"= 1'-0"



D2 A-552 **Section at Kitchen 2B**
SCALE: 3/ 8"= 1'-0"

MATERIALS		
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BRK-01	FACE BRICK	BOSCO - 145-3 W GREY
GL-1	WINDOW GLAZING SYSTEM	WYTHE WINDOW SYSTEM "THE WAVERLY" WITH 1 3/4" TRIPLE INSULATED LOW REFLECTIVE CLEAR GLASS SOLARBAND 60 SOLAR CONTROL LOW "E" WITH ARGON GLASS IN VINYL FRAME WINDOW SYSTEM PROVIDE TEMPERED GLASS AS REQUIRED, WHOLE WINDOW U=.2 SHUNUSE SHGC=.28
HD-1	HARDIE PLANK	HARDIE PLANK LAP SIDING FINISH FINE SAND COLOR MATCH - SHERWIN WILLIAMS SW 7594 - CARRIAGE DOOR
HD-2	HARDIE PLANK	HARDIE TRIM BOARDS FINISH FINE SAND COLOR MATCH - SHERWIN WILLIAMS SW 7594 - CARRIAGE DOOR
MC-1	METAL COPING	DURO-LAST 2 PIECE SNAP-ON METAL FASICA - KYNAR FINISH - COLOR TO BE CHOSEN
PS-1	PRECAST STONE	PRE-CAST CONCRETE STONE - BUFF SUBMIT SAMPLE FOR ARCHTECT'S APPROVAL



1st Floor Key Elevations
SCALE: 1" = 50'-0"
REF:

John Grace Arms
21030 Indian St, So ut hfi eld MI 48033
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REGIST RATIONSEAL

STATE OF MICHIGAN
THADDEUS C ZAGRZEWSKI
License No. 1301026315
LICENSED ARCHITECT

KEY PLANS

SHEET TITLE
Sections

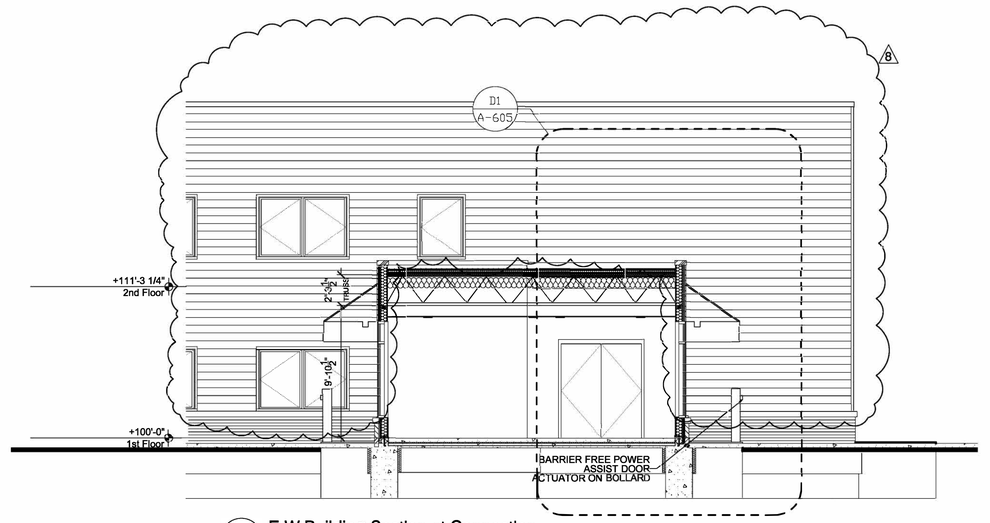
SCALE:

ISSUED FOR		DATE
HUD Submission		12.13.2024
PERMIT		12.20.2024
BULLETIN #1	1	02.19.2025
BULLETIN #8	8	05.01.2026

DRAWN BY: DWP
CHECKED: JA
APPROVED:

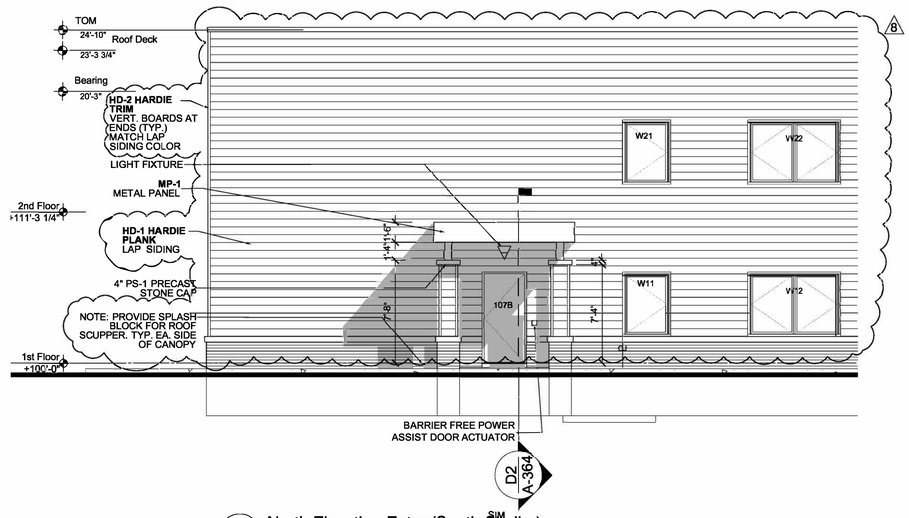
FILE NO. 21026.00

SHEET NO. A-552



B3 / A-553 — E-W Building Section at Connection

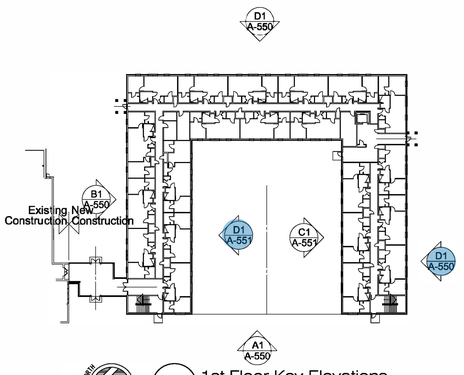
SCALE: 3/16" = 1'-0"



C3 / A-553 — North Elevation Entry (South Similar)

SCALE: 3/16" = 1'-0"

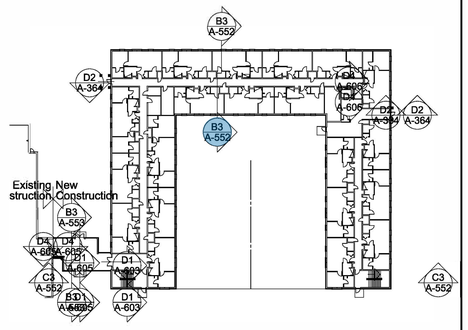
MATERIALS		
MARK	MATERIAL	DESCRIPTION
BRK-01	FACE BRICK	BOSCO - 145-3 W GREY
GL-1	WINDOW GLAZING SYSTEM	WYTHE WINDOW SYSTEM "THE WAVERLY" WITH 1 3/4" TRIPLE INSULATED LOW REFLECTIVE CLEAR GLASS SOLARBAND 60 SOLAR CONTROL LOW "E" WITH ARGON GLASS IN VINYL FRAME WINDOW SYSTEM PROVIDE TEMPERED GLASS AS REQUIRED. WHOLE WINDOW/U-.2 STUHRSF SHGC .38
HD-1	HARDIE PLANK	HARDIE PLANK LAP SIDING FINISH FINE SAND COLOR MATCH - SHERWIN WILLIAMS SW 7594 - CARRIAGE DOOR
HD-2	HARDIE PLANK	HARDIE TRIM BOARDS FINISH FINE SAND COLOR MATCH - SHERWIN WILLIAMS SW 7594 - CARRIAGE DOOR
MC-1	METAL COPING	DURO-LAST 2 PIECE SNAP ON METAL FASICA - KYNAR FINISH - COLOR TO BE CHOSEN
PS-1	PRECAST STONE	PRE-CAST CONCRETE STONE - BUFF SUBMIT SAMPLE FOR ARCHITECT'S APPROVAL



1st Floor Key Elevations

SCALE: 1"=50'-0"

REF:



1st Floor Key Elevations

SCALE: 1"=50'-0"

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REGIST RATIONSEAL

STATE OF MICHIGAN
THADDEUS C ZAKRZEWSKI
License No. 1301020315
LICENSED ARCHITECT

KEY PLANS

SHEET TITLE

Entry Elevations and Sections

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1 (1)	02.19.2025
BULLETIN #8 (8)	05.01.2026

DRAWN BY: DWP

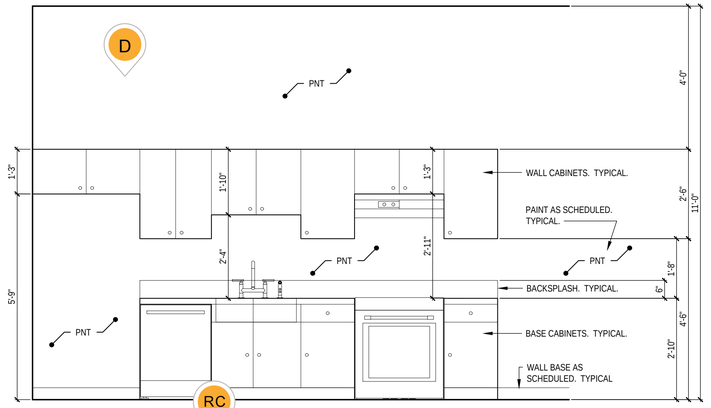
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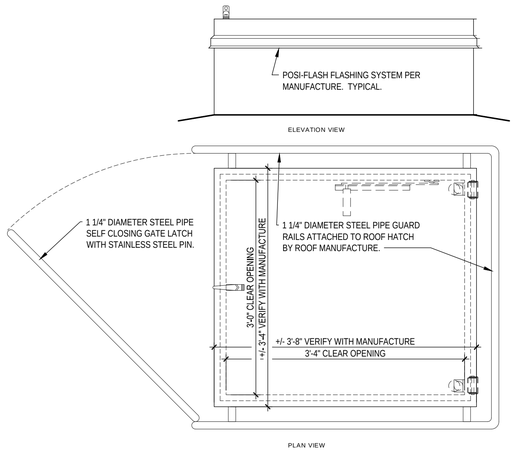
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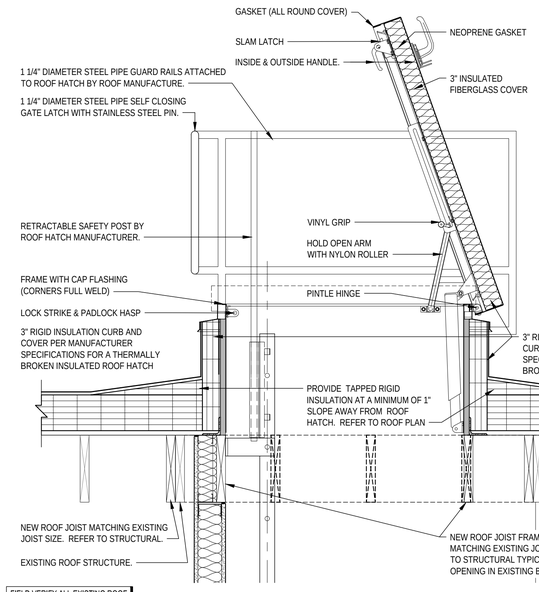
UNIT KITCHEN LAYOUTS DIFFER IN EACH UNIT. REFER TO FLOOR PLANS AND COORDINATE ALL KITCHEN ITEMS (INCLUDING APPLIANCES AND ACCESSORIES) WITH OWNER PRIOR TO BIDDING AND INSTALLATION. FINAL SELECTION OF ALL EQUIPMENT/APPLIANCES MUST BE COORDINATE WITH MECHANICAL AND ELECTRICAL.



(UNIT K) TYPICAL K...EN ELEVATION
SCALE: 1"=1/2'-0"
REF:



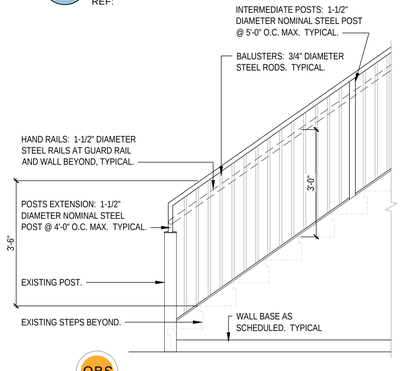
3 A-306 DETAIL
SCALE: 1/2"=1'-0"
REF:



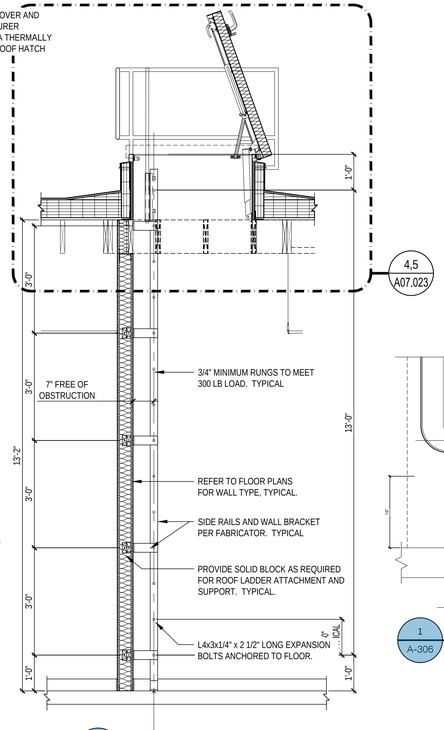
FIELD VERIFY ALL EXISTING ROOF CONSTRUCTION AND CONDITIONS INCLUDING HEIGHTS PRIOR TO BIDDING AND CONSTRUCTION.

3 A-306 DETAIL
SCALE: 1/2"=1'-0"
REF:

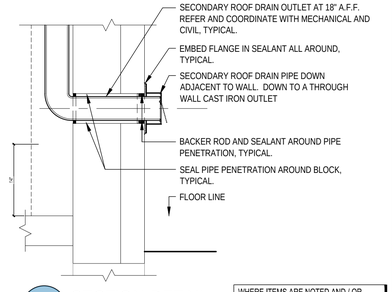
OBS 4 A-351 DETAIL
SCALE: 1/2"=1'-0"
REF: EXISTING RAMP - CORRIDOR 110



OBS 3 A-304 DETAIL
SCALE: 1/2"=1'-0"
REF: EXISTING STAIR 170



2 A-306 SECTION DETAIL
SCALE: 1/2"=1'-0"
REF:



1 A-306 SECTION DETAIL
SCALE: 1"=1'-0"
REF:

WHERE ITEMS ARE NOTED AND / OR DIMENSIONED ON ONE SECTION / DETAIL, THEY ARE APPLICABLE TO OTHER SECTIONS / DETAILS ON THIS SHEET.

2' 0 2'
SCALE: 1/2"=1'-0"

12" 8" 4" 0 6" 1'
SCALE: 1"=1'-0"

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
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Architects + Planners
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Fax:313-964-3233

REGISTRATION SEAL

KEY PLANS

SHEET TITLE
SECTIONS AND DETAILS

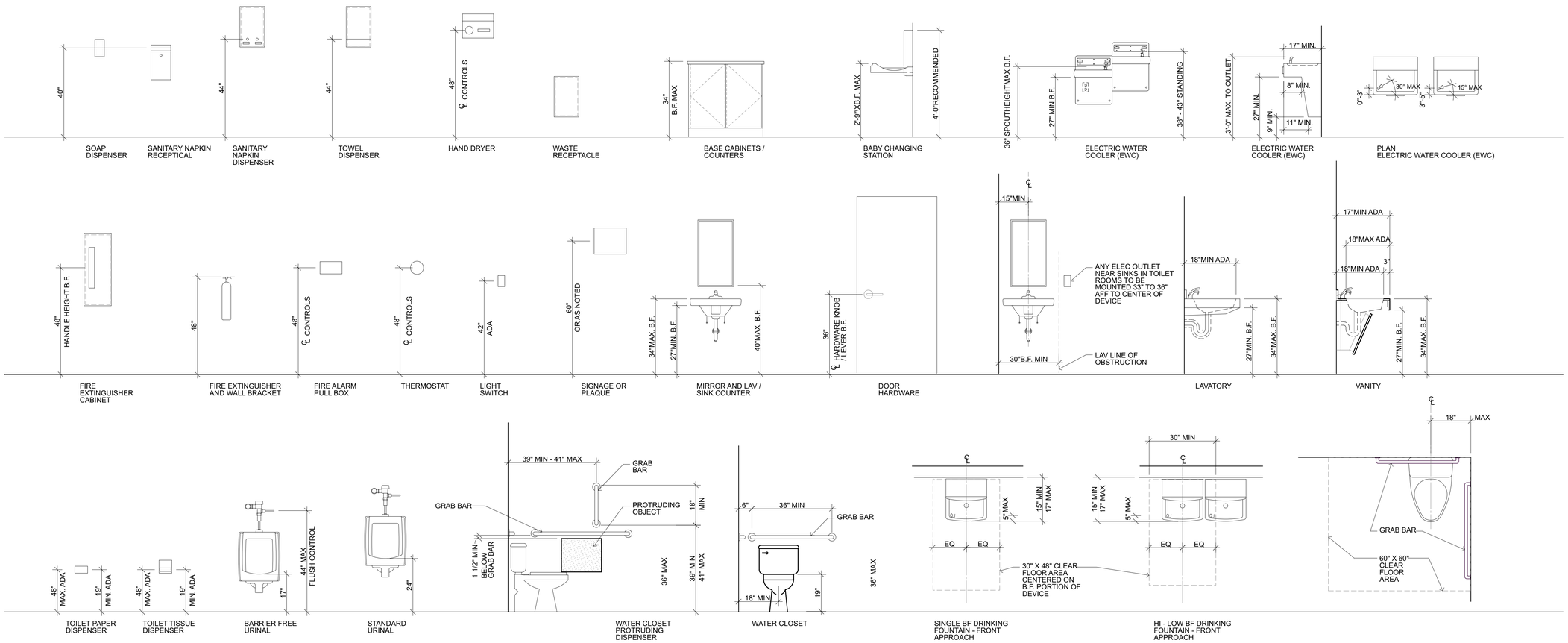
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ISSUED FOR	DATE
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024
Issued	10.16.2025

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CHECKED: JA
APPROVED:

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SHEET NO. A-601



C1
A-602

Typical Mounting Heights ANSI A117.1-2009

SCALE: 1/2" = 1'-0"

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REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAWRZEWSKI
License No. 1301020315
LICENSED ARCHITECT
02/18/2025

KEY PLANS

SHEET TITLE

Typical Mounting Details

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1 ⚠1	02.19.2025

DWP
DRAWN BY

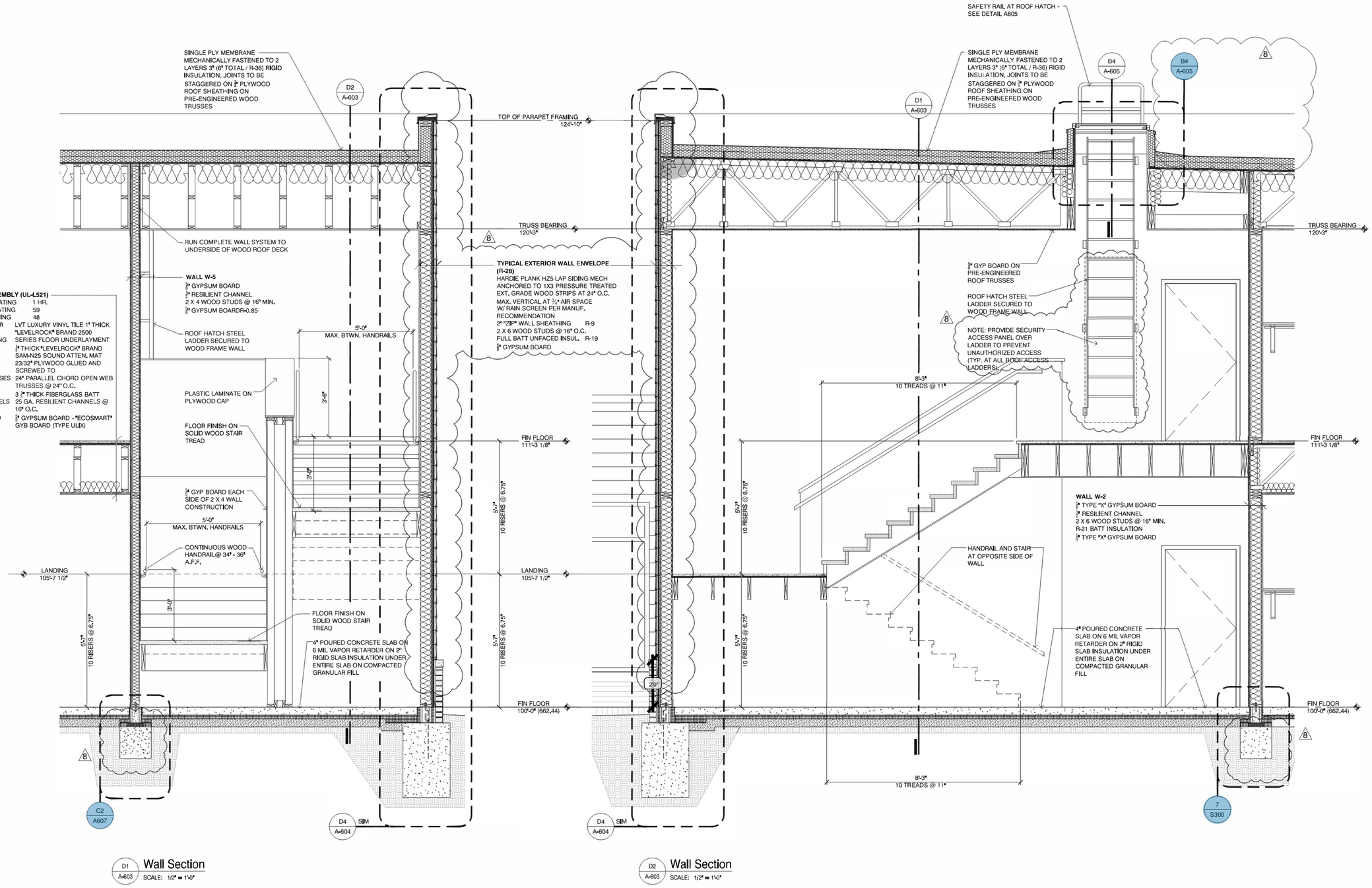
JA
CHECKED

APPROVED

21026.00
FILE NO.

A-602
SHEET NO.

/Volumes/enright/Shared/Projects/-SDG/23-460_SDG_John_Grace_Housing/5_Disciplines-Design/Architectural/CAD/CD/John_Grace_CD_6.5.pln
Printed: Monday, February 17, 2025



D1 Wall Section
SCALE: 1/2" = 1'-0"

D2 Wall Section
SCALE: 1/2" = 1'-0"

FLOOR ASSEMBLY (UL-L521)

FIRE RATING	1 HR.
STC RATING	59
IIC RATING	48
FINISH FLOOR	LVT LUXURY VINYL TILE 1" THICK
SUBFLOOR TOPPING	"LEVELROCK" BRAND 2500 SERIES FLOOR UNDERLAYMENT
SOUND MAT.	¼" THICK "LEVELROCK" BRAND SAM-N25 SOUND ATTEN. MAT
SUB-FLOOR	23/32" PLYWOOD GLUED AND SCREWED TO
WOOD TRUSSES	24" PARALLEL CHORD OPEN WEB TRUSSES @ 24" O.C.
INSULATION RES. CHANNELS	3 ½" THICK FIBERGLASS BATT 25 GA. RESILIENT CHANNELS @ 16" O.C.
WALL BOARD	½" GYPSUM BOARD - "ECOSMART" GYB BOARD (TYPE ULIX)

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REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS S ZARZEWSKI
License No. 1301026315
LICENSED ARCHITECT

KEY PLANS

SHEET TITLE
Wall Sections

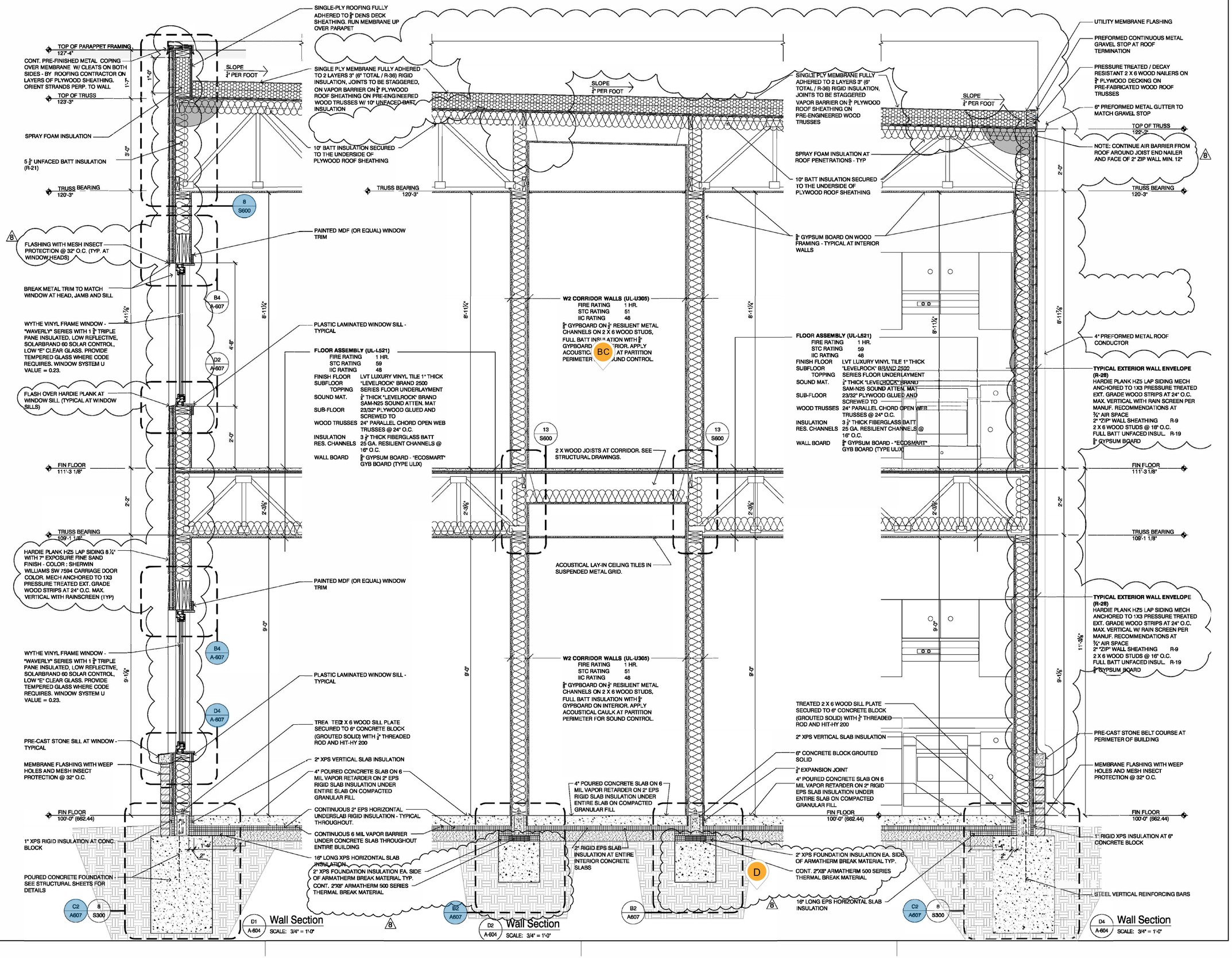
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ISSUED FOR	DATE
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BULLETIN #8 (8)	05.01.2026

DRAWN BY: DWP
CHECKED: JA
APPROVED:

FILE NO. 21026.00

SHEET NO. A-603



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REGISTRATION SEAL

STATE OF MICHIGAN
THADDEUS C ZAWRZYKRAJ
License No. 1301026315
LICENSED ARCHITECT

KEY PLANS

SHEET TITLE
Wall Sections

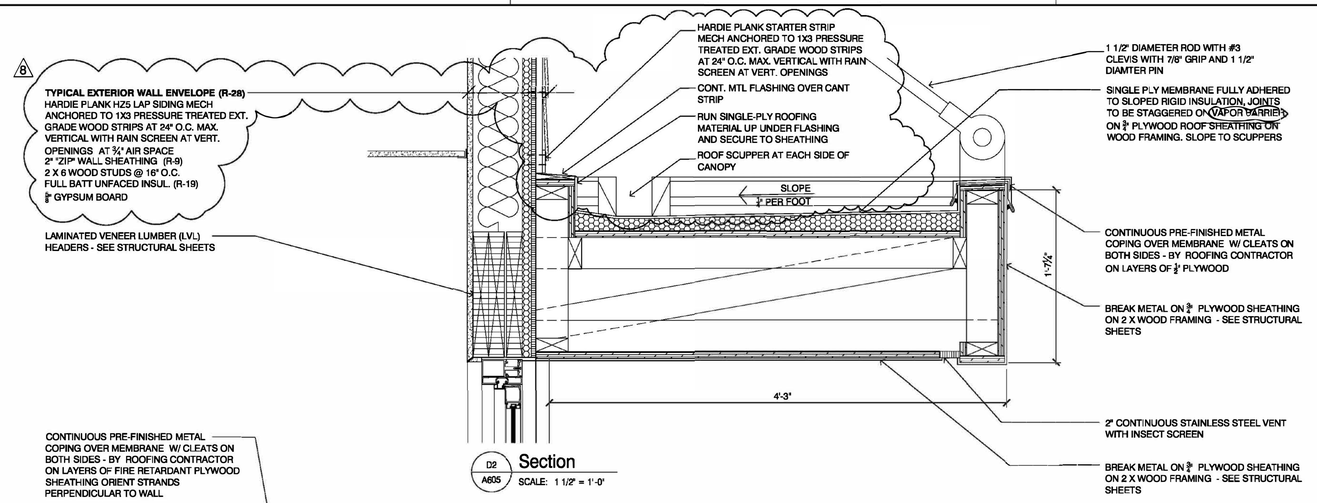
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BULLETIN #7 (7)	01.14.2026
BULLETIN #8 (8)	05.01.2026

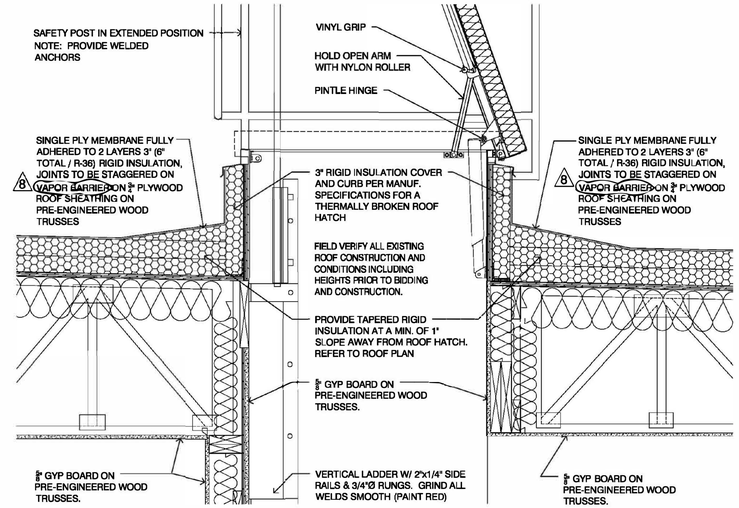
CE DWP
DRAWN BY
JA
CHECKED
APPROVED

21026.00
FILE NO.

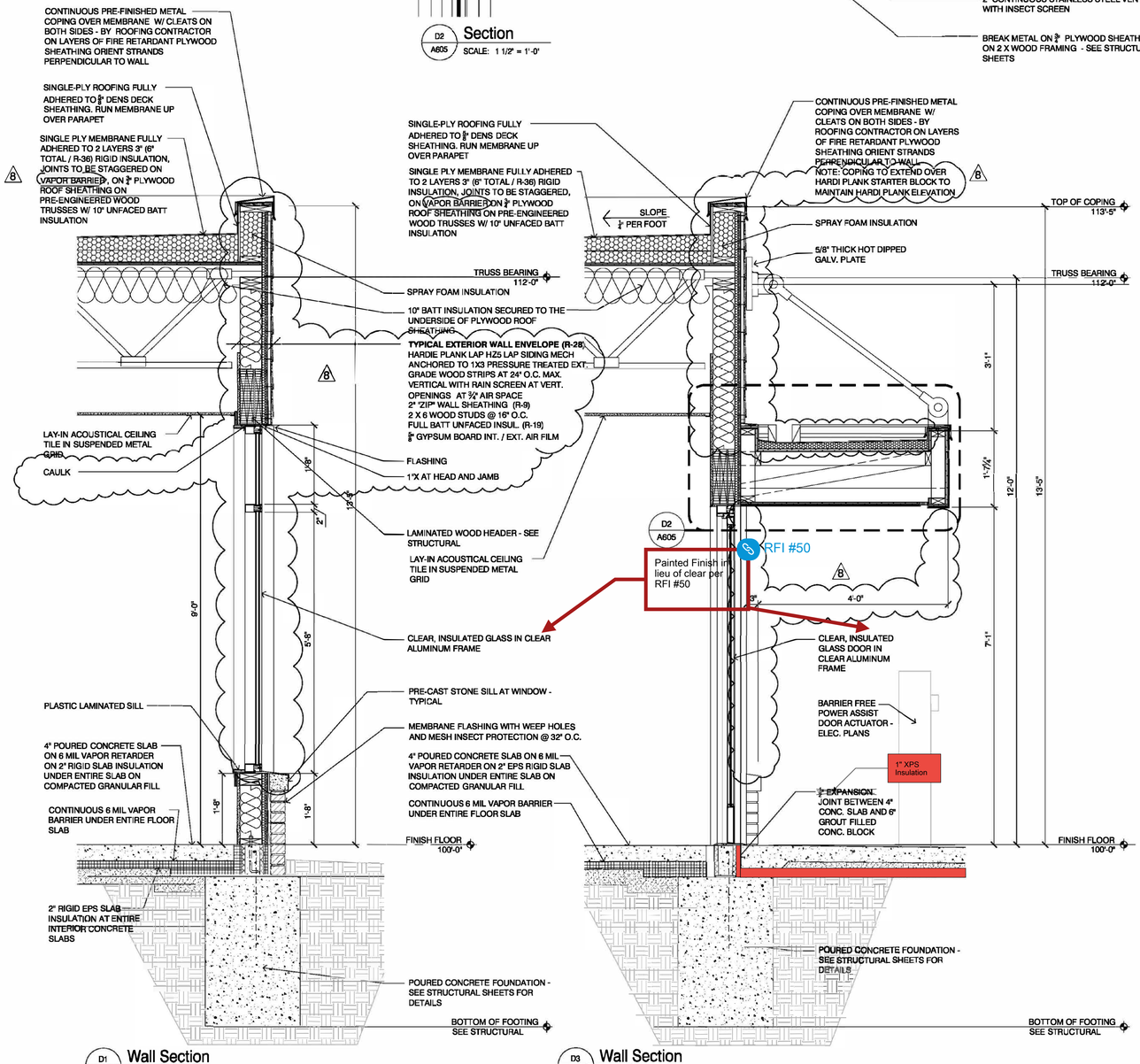
A-604
SHEET NO.



D2 / A605 **Section**
SCALE: 1 1/2" = 1'-0"



B4 / A-605 **Wall Section**
SCALE: 1" = 1'-0"



D1 / A605 **Wall Section**
SCALE: 3/4" = 1'-0"

D3 / A605 **Wall Section**
SCALE: 3/4" = 1'-0"

D4 / A-605 **Wall Section**
SCALE: 3/4" = 1'-0"

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License No. 1301026315
LICENSED ARCHITECT

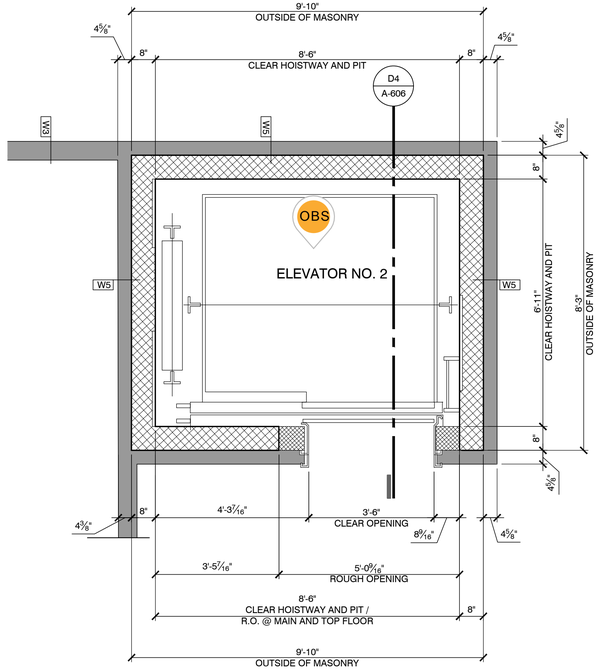
KEY PLANS

SHEET TITLE
Details

SCALE:

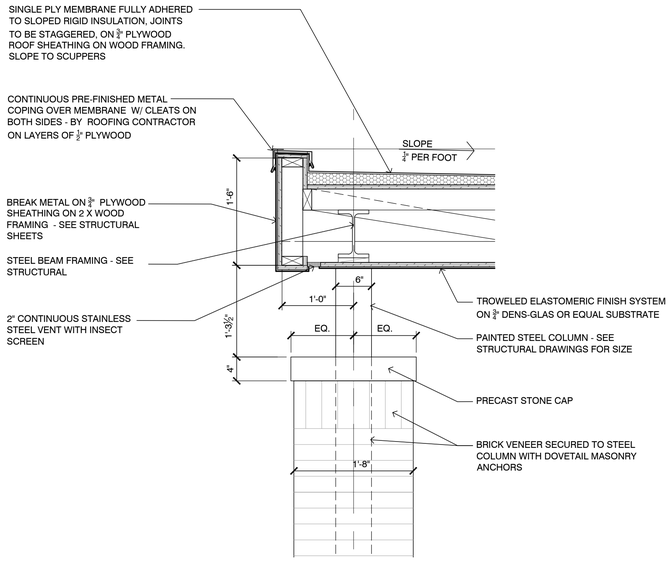
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21026.00
FILE NO.
A-605
SHEET NO.

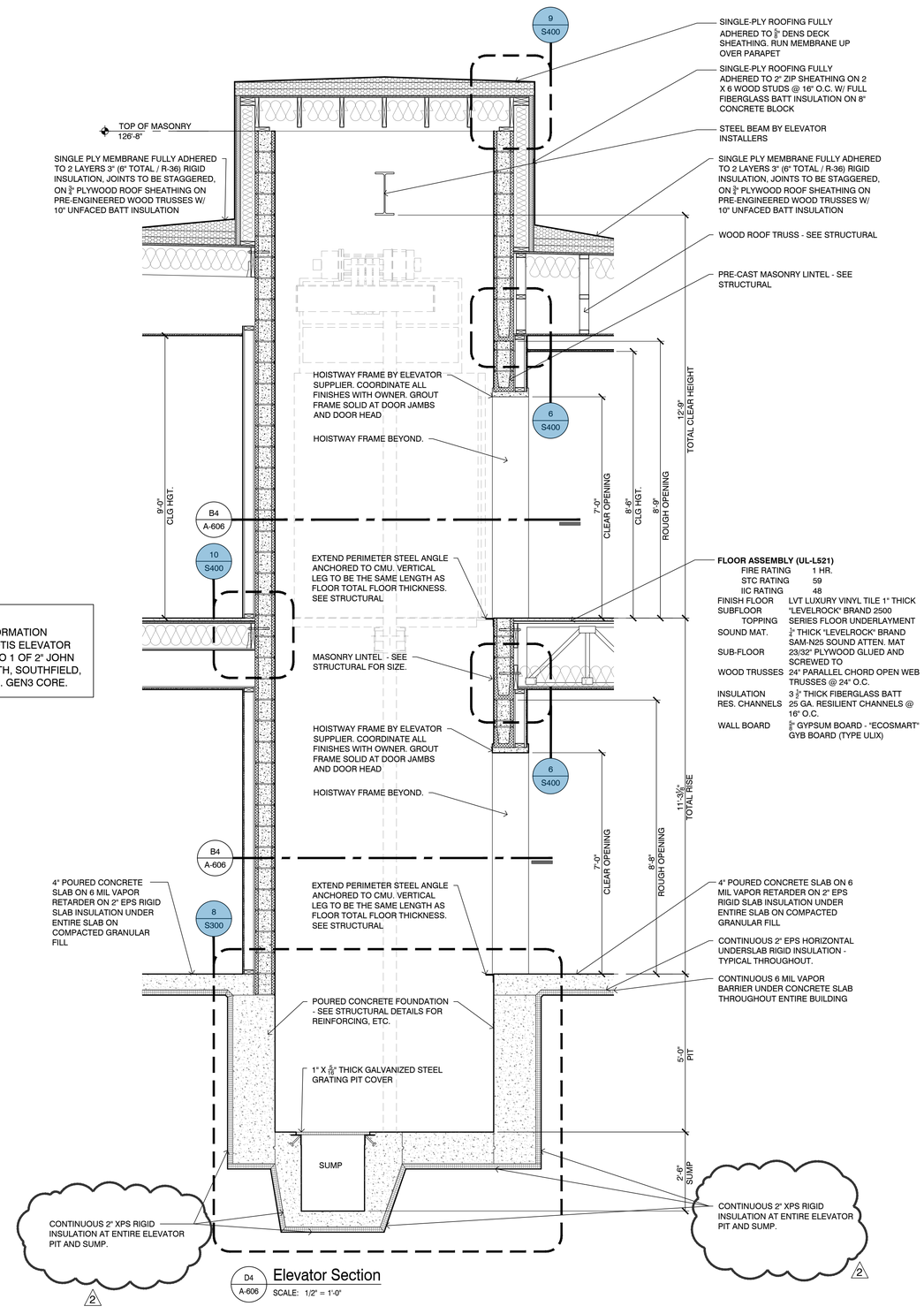


B4 / A-606 **Elevator Plan**
SCALE: 1/2" = 1'-0"

NOTE:
ALL ELEVATOR INFORMATION INDICATED IS PER OTIS ELEVATOR DRAWING NO. "PWBO 1 OF 2" JOHN GRACE ARMS -NORTH, SOUTHFIELD, MI. DATED 2/29/2024. GEN3 CORE.



D1 / A-606 **South Canopy Section**
SCALE: 1" = 1'-0"



D4 / A-606 **Elevator Section**
SCALE: 1/2" = 1'-0"

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John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
Suite 704
Detroit, MI 48226
Tel: 313-961-9000
Fax: 313-964-3233

REGISTRATION SEAL

KEY PLANS

SHEET TITLE
Details

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1 (1)	02.19.2025
BULLETIN #2 (2)	03.05.2025

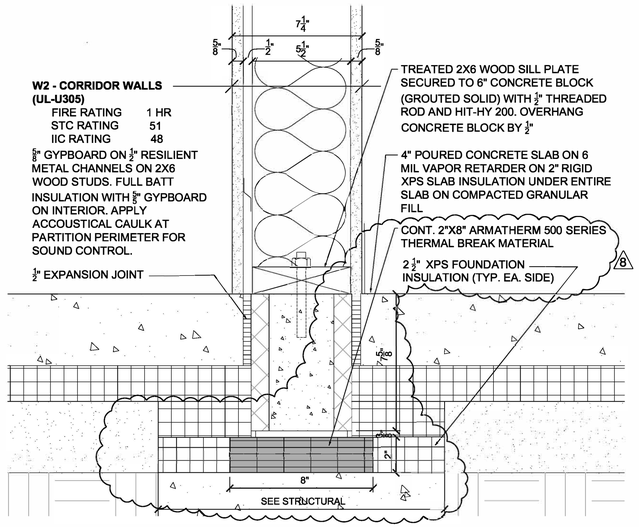
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DRAWN BY: DWP
CHECKED: JA
APPROVED:

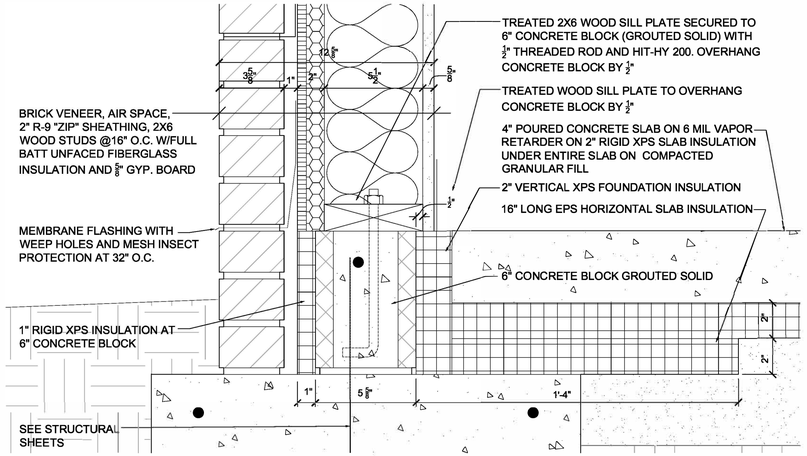
FILE NO. 21026.00

SHEET NO. A-606

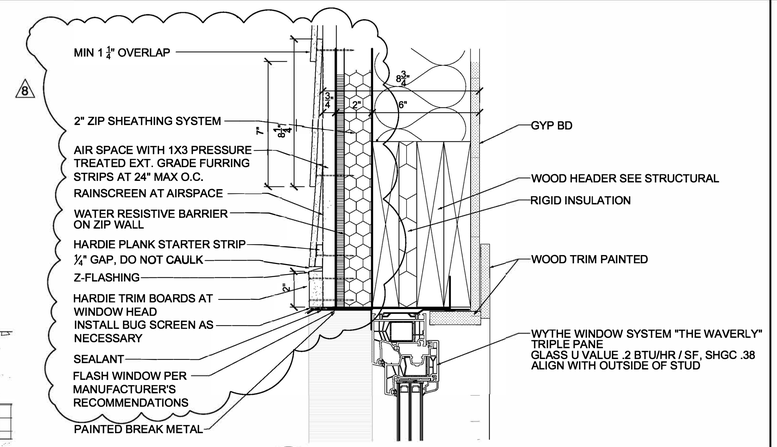
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Printed: Thursday, March 6, 2025



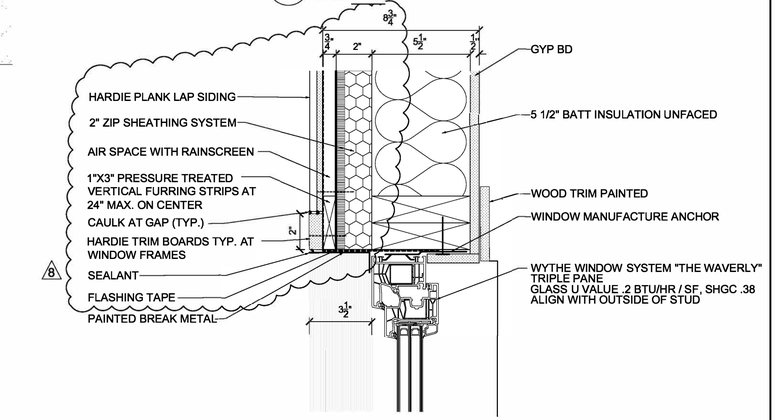
B2 A-607 **Wall Section**
SCALE: 3" = 1'-0"



C2 A-607 **Wall Section**
SCALE: 3" = 1'-0"



B4 A-607 **Window Head**
SCALE: 3" = 1'-0"



C4 A-607 **Window Jamb**
SCALE: 3" = 1'-0"

F1 A607 **Plan Section**
SCALE: 1 1/2" = 1'-0"

D2 A-607 **Window Sill at Second Floor**
SCALE: 3" = 1'-0"

D4 A-607 **Window Sill**
SCALE: 3" = 1'-0"

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REGIST RATIONSEAL

STATE OF MICHIGAN
THADDEUS C ZAKRZEWSKI
License No. 1301026315
LICENSED ARCHITECT

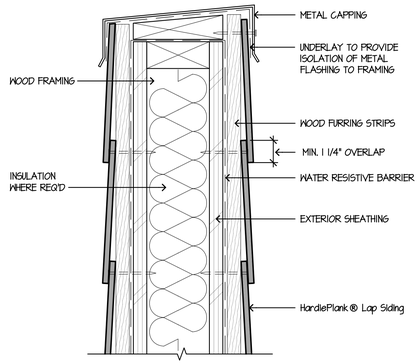
KEY PLANS

SHEET TITLE
Window Details

SCALE:

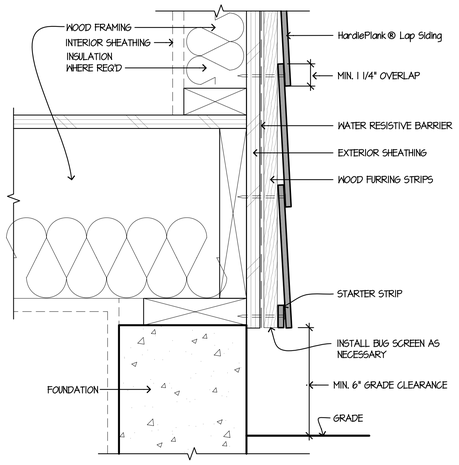
ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1 (1)	02.19.2025
BULLETIN #8 (8)	05.01.2026

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APPROVED
21026.00
FILE NO.
A-607
SHEET NO.



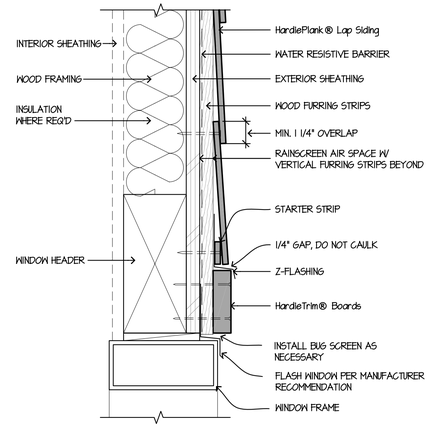
9 PARAPET - RAINSCREEN

SCALE: 3"=1'-0"



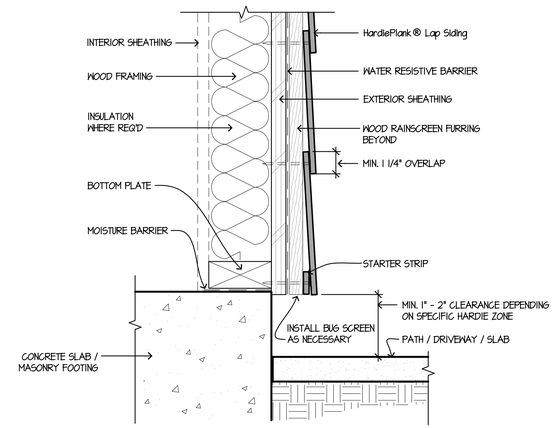
6 GRADE CLEARANCE - RAINSCREEN

SCALE: 3"=1'-0"



3 WINDOW/DOOR HEAD - RAINSCREEN

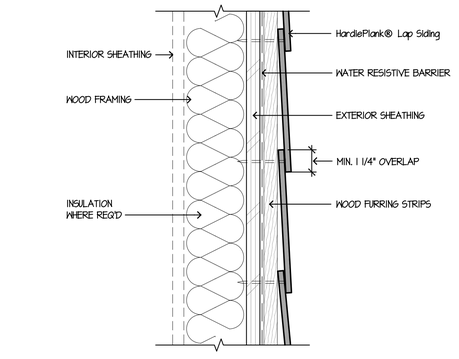
SCALE: 3"=1'-0"



HARDSCAPE CLEARANCES, RAINSCREEN, DECKS, PORCHES, PATIOS, WALKWAYS, ROOFS, ETC.

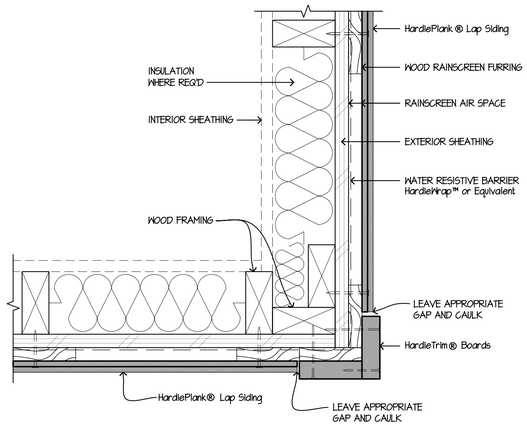
8

SCALE: 1/2"=1'-0"



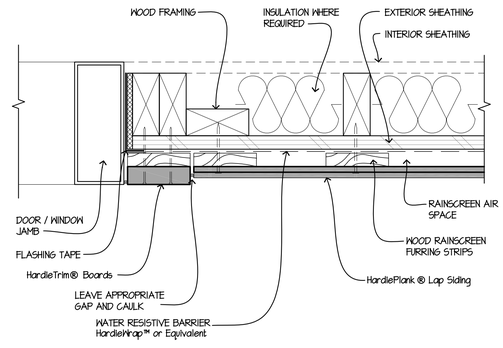
5 HORIZONTAL LAP VIEW - RAINSCREEN

SCALE: 3"=1'-0"



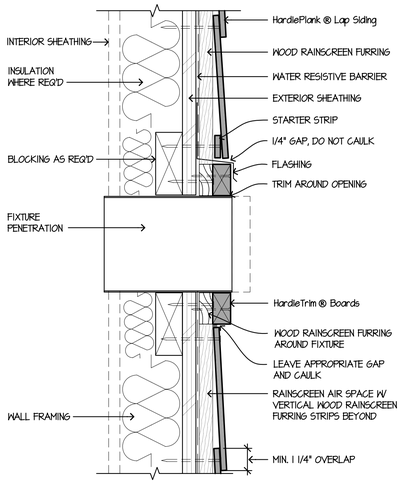
2 OUTSIDE CORNER - RAINSCREEN

SCALE: 3"=1'-0"



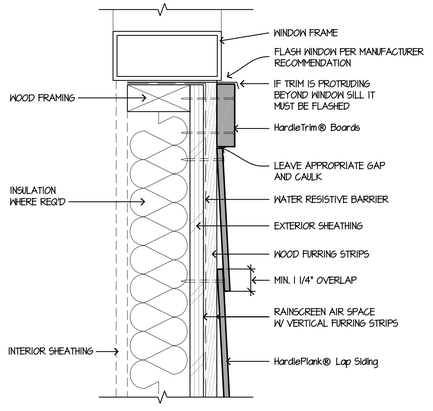
10 DOOR / WINDOW JAMB - RAINSCREEN

SCALE: 3"=1'-0"



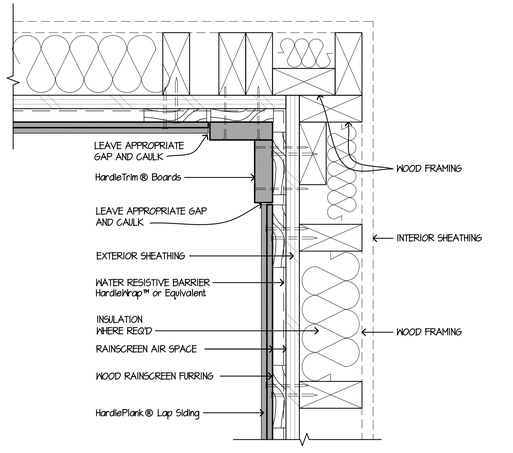
7 FIXTURE PENETRATION - RAINSCREEN

SCALE: 3"=1'-0"



4 WINDOW SILL - RAINSCREEN

SCALE: 3"=1'-0"



1 INSIDE CORNER - RAINSCREEN

SCALE: 3"=1'-0"

These drawings are published as an information guide only. These CAD drawings are intended as templates to assist the designer. They do not contain the full details required for construction and must be read in conjunction with the installation instructions on www.jameshardie.com. You should obtain architectural, engineering or other technical advice to assess the suitability of these drawings to the requirements of your particular project. James Hardie accepts no liability in respect to the use of these drawings.

For fastener specifications and complete installation instructions refer to appropriate documentation at www.JamesHardie.com

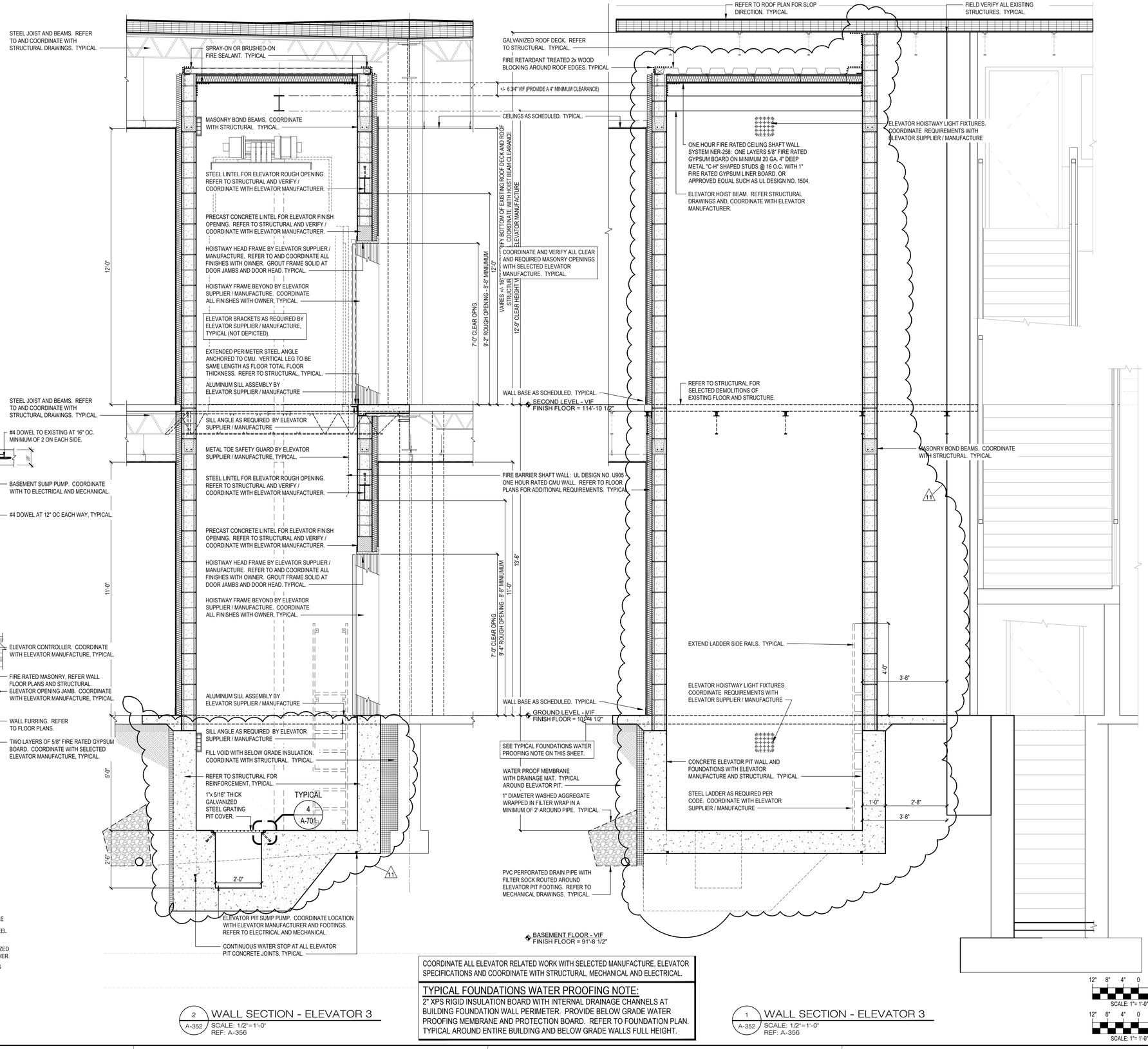
JamesHardie®

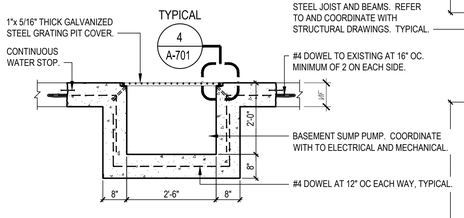
HardiePlank® Lap Siding Details

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing
- Shown with Siding Nails Blind Fastened into Framing

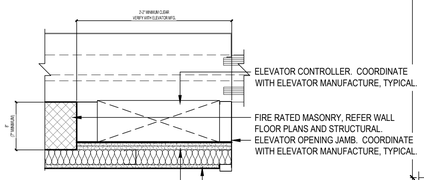
DRAWN	JamesHardie
CHECKED	JW
DATE	March 1, 2010
SCALE	AS NOTED
JOB NO.	-
SHEET	PLANK-3

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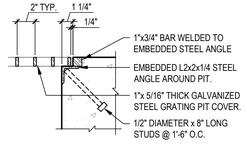




5 A-701 DETAIL
SCALE: 1"=1'-0"
REF: (EXISTING BASEMENT)



4 A-701 DETAIL
SCALE: 1"=1'-0"
REF:



3 A-701 TYPICAL DETAIL
SCALE: 1 1/2"=1'-0"
REF:

2 A-352 WALL SECTION - ELEVATOR 3
SCALE: 1/2"=1'-0"
REF: A-356

1 A-352 WALL SECTION - ELEVATOR 3
SCALE: 1/2"=1'-0"
REF: A-356

COORDINATE ALL ELEVATOR RELATED WORK WITH SELECTED MANUFACTURE, ELEVATOR SPECIFICATIONS AND COORDINATE WITH STRUCTURAL, MECHANICAL AND ELECTRICAL.

TYPICAL FOUNDATIONS WATER PROOFING NOTE:
2" XPS RIGID INSULATION BOARD WITH INTERNAL DRAINAGE CHANNELS AT BUILDING FOUNDATION WALL PERIMETER. PROVIDE BELOW GRADE WATER PROOFING MEMBRANE AND PROTECTION BOARD. REFER TO FOUNDATION PLAN. TYPICAL AROUND ENTIRE BUILDING AND BELOW GRADE WALLS FULL HEIGHT.

12" 8" 4" 0 6" 1'
SCALE: 1"= 1'-0"

12" 8" 4" 0 6" 1'
SCALE: 1"= 1'-0"

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REGISTRATION SEAL

KEY PLANS

SHEET TITLE
ELEVATOR 3
WALL SECTIONS

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
Permits	04.12.2024
Permits	10.25.2024
HUD Submission	12.13.2024
Permits	12.20.2024
Bulletin - 011	07.27.2026

DRAWN BY: EBH
CHECKED: JA
APPROVED:

FILE NO. 21026.00

SHEET NO. A-701

GROUND LEVEL GENERAL SPACES ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	WALL BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING FINISH	CEILING HEIGHT	REMARKS
	GROUND LEVEL									
101	CORRIDOR	LVT-1	WB-1					ACT-1 / GYP PNT	VARIES	NOTE #1 & #3
102	CORRIDOR	LVT-1	WB-1					ACT-1 / GYP PNT	VARIES	NOTE #1 & #3
102A	CORRIDOR	LVT-1	WB-1					ACT-1 / GYP PNT	VARIES	NOTE #1 & #3
103	CORRIDOR	LVT-1	WB-1					ACT-1 / GYP PNT	VARIES	NOTE #1 & #3
104	CORRIDOR	LVT-1	WB-1					ACT-1 / GYP PNT	VARIES	NOTE #1 & #3
105	CORRIDOR	LVT-1	WB-1					ACT-1 / GYP PNT	VARIES	NOTE #1 & #3
106	CORRIDOR	LVT-1	WB-1					ACT-1 / GYP PNT	VARIES	NOTE #1 & #3
107	CORRIDOR	LVT-1	WB-1					ACT-1 / GYP PNT	VARIES	NOTE #1 & #3
108	CORRIDOR	LVT-1	WB-1					ACT-1 / GYP PNT	VARIES	NOTE #1 & #3
109	CORRIDOR	LVT-1	WB-1					ACT-1 / GYP PNT	VARIES	NOTE #1 & #3
110	CORRIDOR	LVT-1	WB-1					ACT-1 / GYP PNT	VARIES	NOTE #1 & #3
120	WEST VESTIBULE A	LVT-1	WB-1					DEFS / PNT-10	EXIST	NOTE #2
121	EAST VESTIBULE B	LVT-1	WB-1					DEFS / PNT-10	EXIST	NOTE #2
122	EAST VESTIBULE A	LVT-1	WB-1					DEFS / PNT-10	EXIST	NOTE #2
123	WEST VESTIBULE B	LVT-1	WB-1					DEFS / PNT-10	EXIST	NOTE #2
130	OFFICE	CPT-2	WB-4	PNT-9	PNT-9	PNT-9	PNT-9	ACT-1	EXIST	PNT-7 TRIM & ACCESSORIES
131	LAUNDRY	LVT-1	WB-2	PNT-1	PNT-1	PNT-1	PNT-1	ACT-2		
131A	STORAGE	CONC	WB-4	PNT-9	PNT-9	PNT-9	PNT-9	ACT-2		PNT-7 TRIM & ACCESSORIES
132	READING / GAME ROOM	CPT-2	WB-4	PNT-9	PNT-9	PNT-9	PNT-9	ACT-1	EXIST	PNT-7 TRIM & ACCESSORIES
133	HOT ROOM	CPT-1	WB-1	PNT-1	PNT-1	PNT-1	PNT-1	PNT-1		
134	RESTROOM	CT-1	WB-3	PNT-1	PNT-1	PNT-1	PNT-1	PNT-1	10'-0"	
140	COMMUNITY SPACE	EXST	EXST	EXST	EXST	EXST	EXST	EXST	EXST	NOTE #4
141	COMMUNITY SPACE II	EXST	EXST	EXST	EXST	EXST	EXST	ACT-1	8'-5"	NOTE #4
142	RESTROOM	CT-1	WB-3	PNT-1	PNT-1	PNT-1	PNT-1	ACT-1	8'-5"	
143	RESTROOM	CT-1	WB-3	PNT-1	PNT-1	PNT-1	PNT-1	ACT-1	9'-9"	
150	ELECTRICAL ROOM	CONC	WB-1	PNT-1	PNT-1	PNT-1	PNT-1	ACT-1	8'-8"	SEALED CONCRETE FLOOR
151	MECHANICAL ROOM	CONC	WB-1	PNT-1	PNT-1	PNT-1	PNT-1	EXP		
152	UNOCCUPIED SPACE									
170	STAIRS	EXST	WB-1	PNT-10	PNT-10	PNT-10	PNT-10	EXIST		
	SECOND LEVEL									
201	CORRIDOR	LVT-1	WB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1	12'-0"	NOTE #1 & #3
202	LIBRARY	CPT-3	WB-4	PNT-6	PNT-6	PNT-6	PNT-6	ACT-1	12'-0"	NOTE #1 & #3
280	UNOCCUPIED SPACE									
270	STAIRS									
271	STAIRS									

TYPICAL GROUND LEVEL ROOM FINISH SCHEDULE - UNIT "A" (ACC)

ROOM NO.	ROOM NAME	FLOOR	WALL BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING FINISH	CEILING HEIGHT	REMARKS
	GROUND LEVEL									
A101	KITCHEN	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	9'-9"	
A102	LIVING / DINING	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	9'-9"	
A103	BATH ROOM	CT-1	WB-2	PT-8	PT-8	PT-8	PT-8	PT-1	9'-9"	
A104	BEDROOM	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	9'-9"	
A111	CLOSET	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	9'-9"	
A112	MECH. RM.	CT-2	WB-3	PT-8	PT-8	PT-8	PT-8	EXP		
A113	STORAGE	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	9'-9"	
A114	CLOSET	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	9'-9"	

TYPICAL SECOND LEVEL ROOM FINISH SCHEDULE - UNIT "Z"

ROOM NO.	ROOM NAME	FLOOR	WALL BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING FINISH	CEILING HEIGHT	REMARKS
	GROUND LEVEL									
Z101	KITCHEN	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	12'-0"	
Z102	LIVING / DINING	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	12'-0"	
Z103	BATH ROOM	CT-1	WB-2	PT-8	PT-8	PT-8	PT-8	PT-1	12'-0"	
Z104	BEDROOM 1	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	12'-0"	
Z105	BEDROOM 2	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	12'-0"	
Z111	CLOSET	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	12'-0"	
Z112	MECH. RM.	CT-2	WB-3	PT-8	PT-8	PT-8	PT-8	EXP		
Z113	STORAGE	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	12'-0"	
Z114	CLOSET	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	12'-0"	
Z115	CLOSET	LVT-2	WB-1	PT-10	PT-10	PT-10	PT-10	PT-1	12'-0"	

MATERIALS SCHEDULE AND LEGEND

MATERIAL	MANUFACTURER AND MATERIAL: MANUFACTURER	BASE	ALTERNATE NO. 1	DESCRIPTION AND COMMENTS
BRK-01	-	BOSCO - 145-3 W GREY MORTAR	BOSCO - 130-6 W GREY MORTAR	BUILDING ADDITION ONLY
BRK-02				EXISTING BUILDING: FIELD VERIFY AND SUBMIT SAMPLE MATCHING EXISTING BRICK. BRICK INFILLS AT EXISTING BUILDING SHALL MATCH EXISTING BRICK COLOR, FINISH AND COURSING.
LVT-1	SHAW CONTRACT: COMMERCIAL LUXURY VINYL TILE	STYLE NAME: FUNCTION 5.0 STYLE NUMBER: 4388V COLOR NAME: TRANSITION COLOR NUMBER: 86501 SIZE: 18"x18"	STYLE NAME: FUNCTION 5.0 STYLE #: 4388V COLOR NAME: COMPOSITE COLOR # 86506 SIZE: 18"x18"	LOBBY & HALLWAY:
LVT-2		STYLE NAME: STRAND STYLE #: 0516V COLOR NAME: CLAY COLOR #: 16761 SIZE: 18"x36"	STYLE NAME: STRAND STYLE #: 0516V COLOR NAME: CLAY COLOR #: 16761 SIZE: 18"x36"	UNITS:
			STYLE NAME: COMPOUND STYLE #: 4074V COLOR NAME: BISQUE COLOR #: 77620 SIZE: 24"x24"	UNITS ALTERNATE NO. 2
			STYLE NAME: COMPOUND STYLE #: 4074V COLOR NAME: FOUNDATION COLOR #: 77530 SIZE: 24"x24"	UNITS ALTERNATE NO. 3
CPT-1	SHAW CONTRACT: CARPET TILE	STYLE NAME: CROSS WEAVE STYLE #: 5T526 COLOR NAME: VIBRANO MAIZ COLOR #: 25210 SIZE: 18"x36"		UNITS
CPT-2		STYLE NAME: UPBEAT STYLE #: 5T490 COLOR NAME: EMPOWERED COLOR #: 90555 SIZE: 18"x36"		UNITS
CPT-3		STYLE NAME: SCRIPT STYLE NUMBER: 5T514 COLOR NAME: SYMBOLISM COLOR #: 75770 SIZE: 18"x36"		Reading Room / Library
ACT-1	ARMSTRONG			2'x2' ACOUSTICAL CEILING TILE
ACT-2				2'x4' ACOUSTICAL CEILING TILE
ACT-3				2'x4' MOISTURE RESISTANT ACOUSTICAL CEILING TILE
CT-1	Daltile	STYLE NAME: COLOR WHEEL CLASSIC COLOR NAME: MATTE - ARTIC WHITE COLOR #: 0790 SIZE: 4"x4"-6"x6" BULLNOSE: S4449 SIZE: 4"x4" BULNOSE: S4269 SIZE: 2"x6"		CERAMIC TILE - BATHROOMS
		STYLE NAME: CORE FUNDAMENTALS COLOR NAME: STAMINA GREY RECTANGLE COLOR #: RL23 SIZE: 4"x16" BULLNOSE: P43F9 SIZE: 3"x24"		CERAMIC TILE - COMMUNITY LAUNDRY ROOM:

MATERIALS SCHEDULE AND LEGEND

MATERIAL	MANUFACTURER AND MATERIAL: MANUFACTURER	BASE	ALTERNATE NO. 1	DESCRIPTION
CT-1	Daltile			
PNT-1	BENJAMIN MOORE PAINT	COLOR: WHITE COLOR #: OC-151		CEILING
PNT-2	COLOR PALETTE 01	COLOR: SMOKY ASH COLOR #: 986		
PNT-3		COLOR: BEACHCOMBER COLOR #: 993		
PNT-4		COLOR: ROCKPORT GRAY COLOR #: HC-105		
PNT-5		COLOR: FAIRVIEW TAUPE COLOR: HC-85		
PNT-6	COLOR PALETTE 02	COLOR: STEEL WOOL COLOR #: 2121-20		
PNT-7		COLOR: BREWSTER GRAY COLOR #: HC-162		
PNT-8		COLOR: MARILYN'S DRESS COLOR #: 2125-60		
PNT-9		COLORS: LEIGH BELLS COLOR #: 1480		
PNT-10		COLORS: CLOUD COVER COLOR #: OC-25		
WB-1	SHAW CONTRACT: THERMOPLASTIC RUBBER	STYLE NUMBER: 174CA COLOR: 00066 NIGHT		6" WALL BASE
WB-2		STYLE NUMBER: 168CA COLOR: 00066 NIGHT		4" WALL BASE
WB-3		STYLE NUMBER: 168CA COLOR: 00011 LINEN		4" WALL BASE
WB-4		STYLE NUMBER: 168CA COLOR: 00039 SHADOW		4" WALL BASE

ROOM FINISH SCHEDULE REMARKS NOTE LEGEND:

1. PUBLIC CORRIDOR WALLS TO BE PNT-10 INCLUDING STAIRS AND EXISTING LOCKERS. EXISTING WAINSCOT TO BE PNT-9. WALLBASE: WB-1 AND WB-2. WHERE NO WALL BASE EXISTS, WALL BASE TO BE WB-1
2. VESTIBULES: ANY EXISTING WALL TILES, BRICK, GLAZED OR ARCHITECTURAL CMU AND FLOOR TILE TO BE REPAIRED AND RESTORED; OTHERWISE PAINTED GYPSUM BOARD WITH PNT-10.
3. SEE REFLECTED CEILING PLANS FOR CEILINGS.
4. EXISTING FLOOR, WALL AND WALL BASE TO BE CLEANED AND REPAIRED AS NEEDED.

EXISTING FINISHES:

1. "HISTORIC PRESERVATION" ITEMS / AREAS: G.C. TO COORDINATE WITH OWNER AND PROTECT SUCH AREAS PRIOR TO COMMENCING AND ANY DEMOLITION AND / OR CONSTRUCTION. NOTIFY ARCHITECT / ENGINEER, OWNER AND OWNER HISTORIC PRESERVATION CONSULTING OF ANY DISCREPANCIES FOR CLARIFICATION.
1. WHEREVER INTERIOR BRICK AND TILE IS PRESENT SURFACE IS TO BE CLEANED AND REPAIRED AS NEEDED.
2. TERRAZZO FLOORING IS TO REPAIRED AND RESTORED, INCLUDING TERRAZZO STAIRS AND WALL BASE.

ROOM FINISH SCHEDULE GENERAL NOTES:

1. ALL EXPOSED "CONCRETE BLOCK" (CMU) SHALL BE INSTALLED WITH TOOLED JOINTS.
2. ALL EXPOSED "CMU" WALLS CORNERS SHALL BE "BULLNOSED" UNITS.
3. REFER TO FLOOR PLAN FOR GYPSUM TYPE AND PROVIDE MOLD-RESISTANT GYPSUM BOARD AT ALL WET LOCATIONS SUCH AS KITCHENS AND RESTROOM. PROVIDE CEMENT BOARD AT ALL SHOWER STALLS AND TILED WALLS.
4. BUILD ALL CONCRETE BLOCK WALLS AND OTHER INTERIOR PARTITIONS TO UNDERSIDE OF STRUCTURE WITH COMPRESSIBLE FILL MATERIAL AND SEALED TIGHT ON BOTH SIDES FOR SMOKE TIGHT CONSTRUCTION UNLESS OTHERWISE INDICATED.
5. WHERE "CONCRETE" IS INDICATED IN SCHEDULE A FINISHED "CONCRETE FINISH" IS REQUIRED.
6. ALL METAL STUD PARTITIONS SHALL BE HORIZONTALLY BRACED AT 4'-0" O.C. MAXIMUM SPACING AND STUDS SPACED 16" O.C. UNLESS OTHERWISE NOTED.
7. PROVIDE REDUCER STRIP AT ALL FLOOR MATERIAL TRANSITIONS UNLESS OTHERWISE NOTED.

ABBREVIATIONS:

ACT	ACOUSTIC CEILING TILE
CMT	CEMENTITIOUS BACKER BOARD
CMU	CONCRETE MASONRY UNIT
CPT	CARPET TILE
CT	CERAMIC TILE
CTB	CERAMIC TILE WALL BASE
DEFS	DIRECT APPLIED EXTERIOR FINISH SYSTEM
EXP	EXPOSED
EXIST	EXISTING
FRP	FIBERGLASS REINFORCED PANELS
GLZ	GLAZING
GYP	GYPSUM BOARD (PRIMED)
GYP-1	HIGH IMPACT GYPSUM BOARD (PRIMED)
GYP-2	MOLD AND MOISTURE RESISTANT GYPSUM BOARD
GYP-3	HIGH IMPACT MOLD AND MOISTURE RESISTANT GYPSUM BOARD
PLC	POLISHED CONCRETE
PNT	PRIME AND PAINT
PRM	PRIME PAINT AND TAPPED
RST	RUBBER STAIR TREAD WITH INTEGRATED RISER AND AT LANDINGS. WITH VISUALLY IMPAIRED AND SAFETY STRIP.
SLC	SEAMLESS SEALED CONCRETE
SLCI	SEAMLESS SEALED CONCRETE - INSULATED DEPRESSED FLOOR
SSP	STAINLESS STEEL PANEL
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE

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REGISTRATION SEAL

KEY PLANS

SHEET TITLE

ROOM
FINISH SCHEDULES

SCALE:

ISSUED FOR	DATE
Review	03.28.2024
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TYPICAL GROUND LEVEL DOOR SCHEDULE - UNIT "A" (ACC)

DOOR NO.	DOOR SIZE WxHxT	FIRE (MIN.)	DOOR TYPE	DOOR MAT	DOOR FINSIH	FRAME TYPE	FRAME MAT	FRAME FINSIH				HDWR SET	REMARKS
A100	3'-0"x7'-0"		A	SCW	PRF	PREFAB	WD	PNT				10, 10A	NOTE #5
A103	3'-0"x7'-0"		A	WD	PRF	PREFAB	WD	PNT				13	
A104	3'-0"x7'-0"		A	WD	PRF	PREFAB	WD	PNT				13	
A111	4'-0"x7'-0" BIFOLD		F	WD	PRF	PREFAB	WD	PNT					NOTE #9
A112	4'-0"x7'-0" BIFOLD		E	WD	PRF	PREFAB	WD	PNT					NOTE #6, #9
A113	3'-0"x7'-0"		A	WD	PRF	PREFAB	WD	PNT				13	NOTE #10
A114	5'-6"x7'-0" SLIDING		A	WD	PRF	PREFAB	WD	PNT					

TYPICAL SECOND LEVEL DOOR SCHEDULE - UNIT "Z"

DOOR NO.	DOOR SIZE WxHxT	FIRE (MIN.)	DOOR TYPE	DOOR MAT	DOOR FINSIH	FRAME TYPE	FRAME MAT	FRAME FINSIH				HDWR SET	REMARKS
Z100	3'-0"x7'-0"		A	SCW	PRF	PRF	WD	PNT				10, 10A	NOTE #5
Z103	3'-0"x7'-0"		A	WD	PRF	PREFAB	WD	PNT				13	
Z104	3'-0"x7'-0"		A	WD	PRF	PREFAB	WD	PNT				13	
Z105	3'-0"x7'-0"		A	WD	PRF	PREFAB	WD	PNT				13	
Z111	4'-0"x7'-0" BIFOLD		F	WD	PRF	PREFAB	WD	PNT					NOTE #9
Z112	4'-0"x7'-0" BIFOLD		E	WD	PRF	PREFAB	WD	PNT					NOTE #6, #9
Z113	3'-0"x7'-0"		A	WD	PRF	PREFAB	WD	PNT				13	
Z114	5'-6"x7'-0" SLIDING		A	WD	PRF	PREFAB	WD	PNT					NOTE #10
Z115	5'-0"x7'-0" BIFOLD		F	WD	PRF	PREFAB	WD	PNT					NOTE #9

GROUND LEVEL GENERAL SPACES DOOR SCHEDULE

DOOR NO.	DOOR SIZE WxHxT	FIRE (MIN.)	DOOR TYPE	DOOR MAT	DOOR FINSIH	FRAME TYPE	FRAME MAT	FRAME FINSIH				HDWR SET	REMARKS
GROUND LEVEL													
102	3'-0"x7'-0"		B	HM	PNT	1	HM	PNT					NOTE #5
102A	3'-0"x7'-0"	60	A	HM	PNT	1	HM	PNT					NOTE #1, #5
103	3'-0"x7'-0" - PR		C	AL	AA	F1	AL	AA					NOTE #1, #8
104	3'-0"x7'-0"		A	HM	PNT	1	HM	PNT					NOTE #5
107	4'-0"x7'-0"		B	HM	PNT	2	HM	PNT					NOTE #1, #8
108	3'-0"x7'-0" - PR		C	AL	AA	S2	AL	AA					NOTE #1, #2, #5, #8
120	3'-0"x7'-0" - PR		B	AL	AA	W10	AL	AA					NOTE #1, #2, #8
121	3'-0"x7'-0" - PR		A	HM	PNT	1	HM	PNT					NOTE #1
122A	3'-0"x7'-0" - PR		B	AL	AA	E1	AL	AA					NOTE #1, #2, #8
122B	3'-0"x7'-0" - PR		B	AL	AA	E1i	AL	AA					NOTE #1, #2, #8
123A	3'-0"x7'-0" - PR		B	AL	AA	W1	AL	AA					NOTE #1, #2, #8
123B	3'-0"x7'-0" - PR		B	AL	AA	W1i	AL	AA					NOTE #1, #2, #8
130	3'-0"x7'-0"		B	AL	AA	F2	AL	AA					NOTE #1, #5
131	3'-0"x7'-0"		B	AL	AA	F3	AL	AA					NOTE #1, #3, #5
131A	3'-0"x7'-0"		A	HM	PNT	1	HM	PNT					
132A	3'-0"x7'-0"		C	AL	AA	1	AL	AA					NOTE #1, #5, #8
132B	3'-0"x7'-0"		B	AL	AA	1	AL	AA					NOTE #1, #5
133	3'-0"x7'-0"		A	HM	PNT	1	HM	PNT					NOTE #1
134	3'-0"x7'-0"		A	HM	PNT	1	HM	PNT					NOTE #1, #3, #4
140A	2'-6"x7'-0" - PR		B	HM	PNT	1	HM	PNT					NOTE #1, #5
140B	3'-0"x7'-0"+2'-0"x7'-0" - PR		B	HM	PNT	1	HM	PNT					NOTE #1, #5
140C	3'-0"x7'-0"		B	HM	PNT	1	HM	PNT					NOTE #1, #5, #8
140D	3'-0"x7'-0"		B	HM	PNT	1	HM	PNT					NOTE #1, #5, #8
140E	3'-0"x7'-0"		A	HM	PNT	1	HM	PNT					NOTE #1
141A	3'-8"x7'-0"		A	HM	PNT	F5	HM	PNT					NOTE #1
141B	3'-0"x7'-0"		A	HM	PNT	1	HM	PNT					NOTE #1
141C	3'-0"x7'-0"		A	HM	PNT	1	HM	PNT					NOTE #1
142	3'-0"x7'-0"		A	HM	PNT	1	HM	PNT					NOTE #1, #4
143	3'-0"x7'-0"		A	HM	PNT	1	HM	PNT					NOTE #1, #4
150	3'-0"x7'-0"	60	A	HM	PNT	1	HM	PNT					NOTE #1, #3
151A	3'-0"x7'-0"		A	HM	PNT	1	HM	PNT					NOTE #1
151B	2'-6"x7'-0"	60	A	HM	PNT	1	HM	PNT					NOTE #1
152	EXISTING												
SECOND LEVEL													
202	3'-0"x7'-0"		B	AL	AA	F3	AL	AA					
270	3'-0"x7'-0" - PR	60	A	HM	PNT	1	HM	PNT					NOTE #1, #5
271A	3'-0"x7'-0"	60	A	HM	PNT	1	HM	PNT					NOTE #1, #5
271B	2'-6"x7'-0"	60	A	HM	PNT	1	HM	PNT					NOTE #1, #5
280	2'-8"x7'-0"	60	A	HM	PNT	1	HM	PNT					NOTE #1, #5

North East Unit Entry Door

EXTERIOR ELEVATIONS NOTES:

1. REFER TO AND COORDINATE WITH SPECIFICATIONS AND DETAILS FOR ADDITION SPECIFIC INFORMATION.
2. MATCH EXISTING BRICK COURSING AND PATTERN. TOOTH IN EACH BRICK COURSE.
3. EXTEND WINDOW FLASHING 8" BEYOND OPENING.
4. ALL ROUGH OPENINGS AROUND WINDOWS AND DOORS SHALL BE PROPERLY AND FULLY FLASHED AND AIR SEALED ALL AROUND OPENINGS AND FROM BOTH SIDES (INTERIOR AND EXTERIOR).
5. ALL DOORS AND WINDOWS SHALL MEET THE FOLLOWING THERMAL REQUIREMENTS:

OPAQUE:	U-0.17	SHGC-ANY
≤ 1/2 LITE:	U-0.25	SHGC-0.25
> 1/2 LITE:	U-0.25	SHGC-0.40

WINDOWS SELECTION:

TYPE 1 MANUFACTURER: QUAKER COMMERCIAL

1. CUSTOM MADE WINDOWS FROM QUAKER COMMERCIAL WINDOWS H-650 AND M-600.
2. CONFIGURATION SUCH AS 6-1-1, 1-1-1, 6-1, 1-1, ETC, SHALL MATCH EXISTING AND AS DEPICTED ON THE DESIGN DOCUMENT.
3. COMPLETE SHOP DRAWINGS INCLUDING SCHEDULE OF EACH WINDOW SHALL BE SUBMITTED ALONG WITH FULL MOCK-UP AS REQUIRED BY HISTORIC PRESERVATION CONSULTANT FOR REVIEW WITH OWNER AND OWNER HISTORIC PRESERVATION CONSULTING PRIOR TO FABRICATION.
4. SEE TYPICAL DETAILS ON SHEET A-508

TYPE 2 MANUFACTURER PER SPECIFICATIONS:

1. THERMALLY SEPARATED ANODIZED ALUMINUM STOREFRONT WINDOWS WITH 2"X4 1/2" FRAME PROFILE

REMARKS:

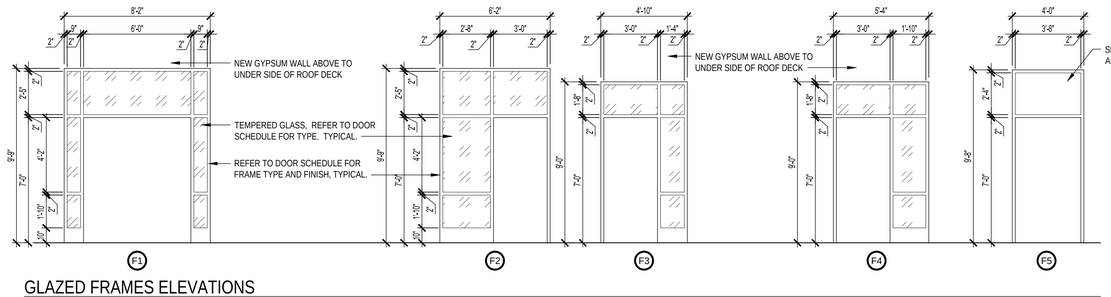
1. FIELD VERIFY ALL EXISTING WALL OPENINGS.
2. SEE WINDOW ELEVATIONS AND SCHEDULE SHEETS A-506 AND A-507
3. EXISTING WALL OPENING TO BE ENLARGED.
4. HARDWARE INTEGRATED PRIVACY / OCCUPANCY INDICATOR.
5. PROVIDE SMOKE AND SOUND SEAL WITH CLOSURES
6. LOUVERED DOORS. COORDINATE WITH MECHANICAL FOR REQUIREMENTS.
7. VERIFY ACCESS CONTROL READER WITH GC/CM AND OWNER.
8. BARRIER FREE DOOR ACTUATOR. VERIFY ACCESS CONTROL READER WITH GC/CM AND OWNER.
9. BI-FOLD DOOR: PROVIDE CUSTOM MADE SIZES AS NEEDED TO MATCH PROVIDED DIMENSIONS. REFER TO FLOOR PLAN DIMENSION FOR VARIOUS SIZES.
10. SLIDING DOOR: PROVIDE CUSTOM MADE SIZES AS NEEDED TO MATCH PROVIDED DIMENSIONS. REFER TO FLOOR PLAN DIMENSION FOR VARIOUS SIZES.
11. 180 DEGREE DOOR SWING.

ABBREVIATIONS:

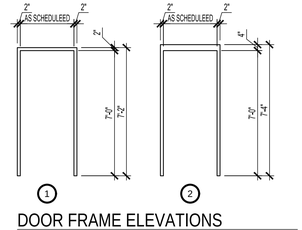
AL	ALUMINUM
AA	ANODIZED ALUMINUM
HM	HOLLOW METAL
FRP	FIBERGLASS REINFORCED DOORS
PNT	PAINTED
PRF	PRE-FINISHED
PREFAB	PRE-FABRICAED DOOR FRAME
SS1	STAINLESS STEEL - SATIN FINISH
SS2	STAINLESS STEEL - POLISHED FINISH
SCW	SOLID CORE WOOD
WD	WOOD DOORS

GENERAL DOOR INFORMATION:

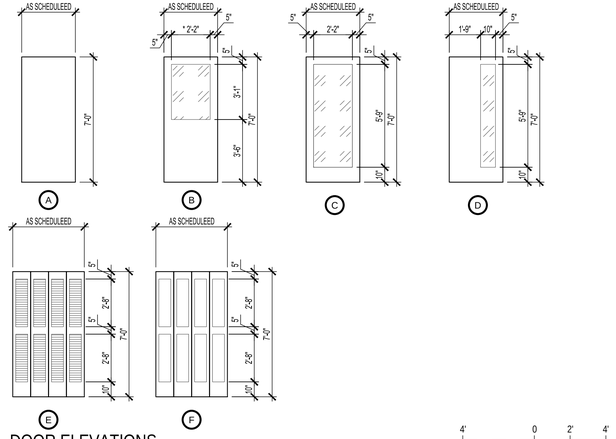
1. PR = PAIR OF DOORS
4. PROVIDE SMOKE AND SOUND SEAL WITH CLOSOURS TO ALL UNITS ENTRY DOORS PER MANUFACTURER.
5. THICKNESS OF DOORS ARE 1 3/4 " UNLESS NOTED OR DETAILED.
6. GLASS DESIGNATION WITH "T" INDICATES WITH TEMPERED GLASS PER SPECIFICATIONS. I.E. GL-1T = TEMPERED GL-1 IN SPECIFICATIONS.
7. ALL DOORS IN THE UNITS LEADING TO A MECHANICAL CLOSET SHALL BE FULLY LOUVERED DOORS. COORDINATE WITH MECHANICAL FOR REQUIEMENTS.
8. ALL DOOR SIZES SCHEDULED ARE BASED ON ACTUAL FRAME OPENINGS, SIZES NOTED ON SCHEDULE ARE CLEAR JAMB TO JAMB FRAME DIMENSIONS AND FROM REFERENCE FLOOR LINE TO HEAD FRAME OPENING. DIMENSION TOLERANCES MUST BE CONSIDERED FOR FLOORING MATERIALS TO ACTUAL DOOR DIMENSIONS.
9. ALL DOOR NUMBERS ARE THE SAME AS THE ROOM NUMBER NOTED ON PLANS - IF MORE THAN ONE DOOR IS INDICATED AT A ROOM, ALL DOORS WILL BE NUMBERED FOR THAT ROOM.
10. FIRE RATED DOORS AND FRAMES ARE LISTED IN HOUR(S) AND / OR MINUETES. SEE DOOR SCHEDULE.
11. DOOR UNDERCUTS FOR MECHANICAL REQUIREMENTS REQUIRE A 5/8" MAX. CLEAR DISTANCE MEASURED FROM THE TOP OF THE FINISHED FLOOR MATERIAL OR THRESHOLD TO THE BOTTOM OF THE DOOR. STANDARD TOLERANCES OF UNDERCUTTING OF DOORS FOR THRESHOLDS AND OTHER FLOOR COVERING MATERIALS ARE NOT NOTED AND MUST BE CONSIDERED IN DETERMINING THE ACTUAL OVERALL DIMENSIONS OF THE DOOR. COORDINATE WITH AFFECTED TRADES.
12. LOCATION OF DOORS NOTED ON PLANS ARE DIMENSIONED TO THE FACE OF DOOR JAMB UNLESS OTHERWISE NOTED OR DETAILED. IF DOOR LOCATION IS NOT DIMENSIONED - FACE OF JAMB SHALL BE 4" TO THE WALL.
13. REINFORCE ALL DOORS AND MILLWORK FOR HARDWARE.
14. ALL HOLLOW METAL AND WOOD DOORS INCLUDING ALL FIRE LABELED DOORS SHALL HAVE SPECIAL INTERNAL BLOCKING TO ALLOW SURFACE MOUNTED CLOSURES AND OTHER HARDWARE TO BE CONNECTED TO THE DOORS WITHOUT THE USE OF THROUGH BOLTS.
15. ALL HOLLOW METAL DOOR FRAMES MUST BE GROUTED SOLID UNLESS SPECIFICALLY NOTED OTHERWISE. NOTE: COORDINATE CAVITIES FOR HARDWARE ITEMS.
16. ALL WOOD DOORS SHALL HAVE SOLID CORES.



GLAZED FRAMES ELEVATIONS
SCALE: 1/4"=1'-0"



DOOR FRAME ELEVATIONS
SCALE: 1/4"=1'-0"



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

4' 0 2' 4'
SCALE: 1/4"= 1'-0"

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REGISTRATION SEAL

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DOOR SCHEDULE

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SHEET NO. A-902

Finish Schedule

	NUMBER	NAME	FLOOR	WALLS				BASE				CEILING	REMARKS
				NORTH	EAST	SOUTH	WEST	NORTH	EAST	SOUTH	WEST		
	1	Elevator	---					---	---	---	---	NA	
1st Floor Common Rooms	101	Stair A	---					---	---	---	---	GB PNT-1	
	102	S Hall	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	ACT-1	
	103	Vestibule	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	ACT-1	
	105	S Elec	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	GB P-1	
	106	E Hall	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	ACT-1	
	108	JC	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	GB PNT-1	
	109	N Storage	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	GB PNT-1	
	110	N Hall	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	ACT-1	
	111	Stair B	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	GB PNT-1	
	113	N Elec	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	GB PNT-1	
	114	Disc	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	GB PNT-1	
	201	Stair A	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	GB PNT-1	
2nd Floor Common Rooms	202	S Hall	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	ACT-1	
	203	N Storage	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	ACT-1	
	205	E Hall	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	ACT-1	
	207	JC	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	GB PNT-1	
	208	S Storage	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	GB PNT-1	
	209	N Hall	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	ACT-1	
	210	Stair B	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	GB PNT-1	
	211	NE Storage	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	GB PNT-1	
	212	NW Storage	LVT-1	PNT-2	PNT-2	PNT-2	PNT-2	VB-1	VB-1	VB-1	VB-1	GB PNT-1	
1st Floor Mechanical	M101	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M102	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M103	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M106	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M107	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M108	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M109	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M110	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M114	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M115	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M117	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M118	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M120	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M122	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
2nd Floor Mechanical	M201	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M202	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M203	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M206	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M207	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M208	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M209	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M210	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M214	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M215	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M217	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M218	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M220	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
	M222	U Mech	LVT-1	GB	GB	GB	GB	---	---	---	---	GB	
1st Floor Units	U 101	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 102	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 103	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 104	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 105	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 106	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 107	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 108	1B Unit B	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 109	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 110	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 111	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 112	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 114	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 115	2B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 116	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 117	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 118	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 119	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 120	2B Unit B	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 122	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 124	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
2nd Floor Units	U 201	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 202	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 203	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 204	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 205	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 206	2B Unit C	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 207	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 208	1B Unit C	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 209	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 210	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 211	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 212	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 214	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 215	2B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 216	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 217	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 218	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 219	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 220	2B Unit B	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 222	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	
	U 224	1B Unit A	LVT-2	PNT-2	PNT-2	PNT-2	PNT-2	VB-2	VB-2	VB-2	VB-2	GB PNT-1	

See Sheet A-901 for the Material Schedule

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REGISTRATION SEAL

KEY PLANS

STATE OF MICHIGAN
THADDEUS C ZAJDZEWICZ
License No. 1301020315
LICENSED ARCHITECT
01/07/2025

SHEET TITLE
Room Finish Schedule

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024

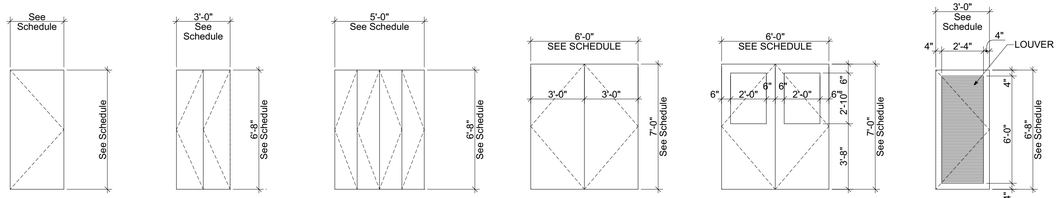
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CHECKED: JA
APPROVED:
FILE NO.: 21026.00
SHEET NO.: A-903

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Printed: Tuesday, January 7, 2025

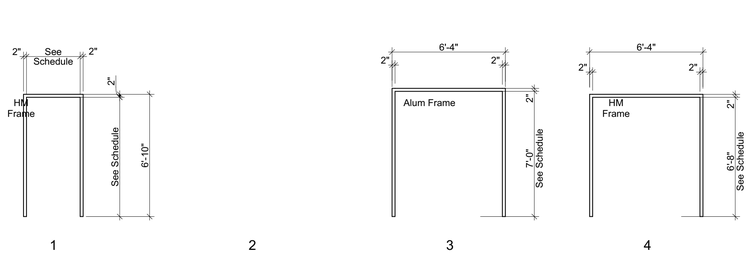
Typical Unit Doors (D)

Number	Quantity	DOOR LEAF					FRAME			HDWR. SET	ACCESORIES	RATINGS		REMARKS
		NOMINAL WIDTH	NOMINAL HEIGHT	LEAF THICKNESS	MATL	TYPE	TYPE	DETAIL HEAD	DETAIL JAMB			FIRE	STC	
D1	42	3'-0"	6'-8"	1 3/8"	WOOD	A	1			10, 10A		20 minutes		SELF CLOSING W/ PEEPHOLE, SMOKE SEAL AND DOOR BOTTOM SWEEP
D2	41	3'-0"	6'-8"	1 3/8"	WOOD	B	None			11		Unrated		
D2C	1	3'-0"	6'-8"	1 3/8"	WOOD	B	None			11		Unrated		
D3	42	3'-0"	6'-8"	1 3/8"	WOOD	A	1			13		Unrated		
D4	42	3'-0"	6'-8"	1 3/8"	WOOD	A	1			13		Unrated		
D5	42	3'-0"	6'-8"	1 3/8"	WOOD	A	1			13		Unrated		
D6	42	3'-0"	6'-8"	1 3/8"	WOOD	F	1			13		Unrated		
D8	5	3'-0"	6'-8"	1 3/8"	WOOD	A	1			13		Unrated		
D9	5	3'-0"	6'-8"	1 3/8"	WOOD	A	1			13		Unrated		
	262													

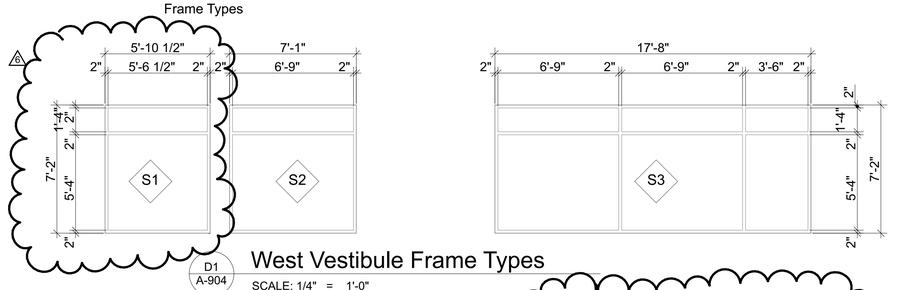
See Specs 087100 for Hardware Set Descriptions



Door Types



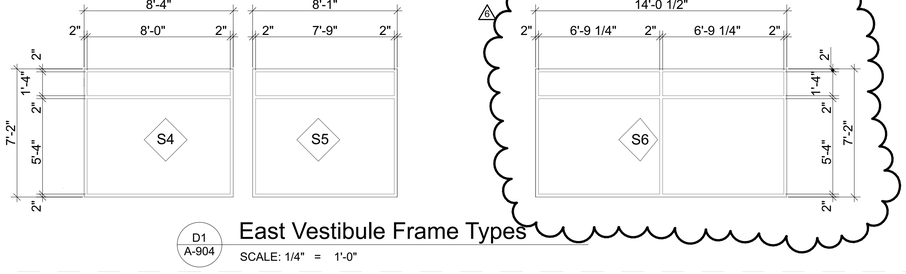
Frame Types



D1
A-904

West Vestibule Frame Types

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



D1
A-904

East Vestibule Frame Types

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

Door Schedule (non typical)

ID	ROOM NAME	DOOR LEAF					FRAME			HDWR. SET	ACCESORIES	RATINGS		REMARKS
		NOMINAL WIDTH	NOMINAL HEIGHT	LEAF THICKNESS	MATL	TYPE	TYPE	DETAIL HEAD	DETAIL JAMB			FIRE	STC	
101A	Stair A	3'-0"	6'-8"	1 3/8"	WOOD	A	1			1		1 hour		SELF CLOSING W/ SMOKE SEAL
101B	Stair A	3'-0"	6'-8"	1 3/8"	HM	A	1			2		Unrated		EXTERIOR INSULATED
102A	S Hall	3'-0"	6'-8"	1 3/8"	HM	A	1			8		Unrated		EXTERIOR INSULATED
102B	S Hall	3'-0"	6'-8"	1 3/8"	HM	A	1			8		Unrated		EXTERIOR INSULATED
103A	Vestibule	(2) 3'-0"	7'-0"	1 3/8"	ALUM / GLASS	E	3			xx		Unrated		STORE FRONT ALUM
103B	Vestibule	(2) 3'-0"	7'-0"	1 3/8"	ALUM / GLASS	E	3			xx		Unrated		STORE FRONT ALUM
103C	Vestibule	(2) 3'-0"	7'-0"	1 3/8"	HM	D	4			4		1 hour		HOLD OPEN DOORS
105	S Elec	3'-0"	6'-8"	1 3/8"	SC WOOD	A	1			5		20 minutes		SELF CLOSING W/ SMOKE SEAL
107B	E Hall	3'-0"	6'-8"	1 3/8"	HM	A	1			8		Unrated		EXTERIOR INSULATED
108	JC	3'-0"	6'-8"	1 3/8"	SC WOOD	A	1			9		20 minutes		SELF CLOSING W/ SMOKE SEAL
109	N Hall	3'-0"	6'-8"	1 3/8"	SC WOOD	A	1			9		20 minutes		SELF CLOSING W/ SMOKE SEAL
111A	Stair B	3'-0"	6'-8"	1 3/8"	HM	A	1			1		1 hour		SELF CLOSING W/ SMOKE SEAL
111B	Stair B	3'-0"	6'-8"	1 3/8"	HM	A	1			2		Unrated		EXTERIOR INSULATED
113	N Elec	3'-0"	6'-8"	1 3/8"	SC WOOD	A	1			5		20 minutes		SELF CLOSING W/ SMOKE SEAL
114	Disc	3'-0"	6'-8"	1 3/8"	SC WOOD	A	1			5		Unrated		
201	Stair A	3'-0"	6'-8"	1 3/8"	HM	A	1			1		20 minutes		SELF CLOSING W/ SMOKE SEAL
203	N Storage	3'-0"	6'-8"	1 3/8"	SC WOOD	A	1			9		20 minutes		SELF CLOSING W/ SMOKE SEAL
207	JC	3'-0"	6'-8"	1 3/8"	SC WOOD	A	1			9		20 minutes		SELF CLOSING W/ SMOKE SEAL
208	N Hall	3'-0"	6'-8"	1 3/8"	SC WOOD	A	1			9		20 minutes		SELF CLOSING W/ SMOKE SEAL
210	Stair B	3'-0"	6'-8"	1 3/8"	SC WOOD	A	1			1		1 hour		SELF CLOSING W/ SMOKE SEAL
211	NE Storage	3'-0"	6'-8"	1 3/8"	-	A	1			10, 10A		20 minutes		SELF CLOSING W/ PEEPHOLE, SMOKE SEAL AND DOOR BOTTOM SWEEP
212	NW Storage	3'-0"	6'-8"	1 3/8"	-	A	1			10, 10A		20 minutes		SELF CLOSING W/ PEEPHOLE, SMOKE SEAL AND DOOR BOTTOM SWEEP
M101	S Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M102	S Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M103	U Mech	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M106	S Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M107	E Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M108	S Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M109	E Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M110	E Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M114	E Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M115	U Mech	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M117	U Mech	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M118	E Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M120	N Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M122	N Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M201	U Mech	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M202	S Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M203	U Mech	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M206	S Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M207	E Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M208	S Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M209	E Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M210	E Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M214	E Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M215	U Mech	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M217	U Mech	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M218	E Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M220	N Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL
M222	N Hall	2'-4"	6'-8"	1 3/8"	SC WOOD	A	1			15		20 minutes		SELF CLOSING W/ SMOKE SEAL

Window Schedule

ID	Quantity	Unit Size	ModelL	Manufacture	Frame Material	Operable	Remarks
W11	41	3'-4"×4'-8"	Waverly	Wythe	Vinyl	True	Triple Pane
W11	1	3'-4"×7'-0"	Waverly	Wythe	Vinyl	True	Triple Pane
W12	23	6'-8"×4'-8"	Waverly	Wythe	Vinyl	True	Triple Pane
W21	43	3'-4"×4'-8"	Waverly	Wythe	Vinyl	True	Triple Pane
W22	23	6'-8"×4'-8"	Waverly	Wythe	Vinyl	True	Triple Pane
WS1	4	3'-4"×4'-8"	Waverly	Wythe	Vinyl	False	Triple Pane
WS1	1	3'-4"×4'-8"	Waverly	Wythe	Vinyl	True	Triple Pane
	136						

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Developed by
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REGISTRATION SEAL

KEY PLANS

SHEET TITLE

Door and Window Scheudle

SCALE:

ISSUED FOR	DATE
HUD Submission	12.13.2024
PERMIT	12.20.2024
BULLETIN #1 (1)	02.19.2025
BULLETIN #6 (6)	12.12.2025

DRAWN BY: DWP

CHECKED: JA

APPROVED

FILE NO.: 21026.00

SHEET NO.: A-904

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Printed: Thursday, December 11, 2025

ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
ADD	ADDENDUM
AF	AMPERES,FRAME (BREAKER RATING)
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AG	ABOVE GROUND
AL	ALUMINUM
AM	AMMETER
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
AS	AMMETER SWITCH
ASR	AUTOMATIC SPRINKLER RISER
AT	AMPERE TRIP (BREAKER SETTING)
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BC	BOTTOM CHORD
BD	BUS DUCT
BLDG	BUILDING
BRK	BREAKER
C	CONDUIT
CAS	CONTROLLED ACCESS SYSTEM
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CLF	CURRENT LIMITING FUSE
CLG	CEILING
CKT	CIRCUIT
COAX	COAXIAL CABLE
COL	COLUMN
CONT	CONTINUATION (CONTINUOUS)
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CTB	CURRENT TEST BLOCK
CU	COPPER
DC	DIRECT CURRENT
DEG	DEGREE
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DISC	DISCONNECT
DN	DOWN
DP	DISTRIBUTION PANEL
DT	DOUBLE THROW
DWG	DRAWING
EA	EACH
EDP	EMERGENCY POWER DISTRIBUTION PANEL
EF	EXHAUST FAN
EL	ELEVATION
ELEC	ELECTRIC (ELECTRICAL)
ELP	EMERGENCY LIGHTING PANEL
ELR	END-OF-LINE RESISTOR
EMCC	EMERGENCY MOTOR CONTROL CENTER
EMT	ELECTRIC METALLIC TUBING
EO	ELECTRIC OPERATED
EPO	EMERGENCY POWER OFF
EQPT	EQUIPMENT
ERP	EMERGENCY RECEPTACLE PANEL
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EXST	EXISTING
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FDR	FEEDER
FIN	FINISH
FIXT	FIXTURE
FL	FLOOR
FU	FUSE
FUT	FUTURE
G	GROUND
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
HID	HIGH INTENSITY DISCHARGE
HGT	HEIGHT
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
HVAC	HEATING VENTILATING AND AIR CONDITIONING
IAC	INTERLOCKING ARMOR CABLE
IC	INTERCOM
IE	INVERT ELEVATION
INC	INCANDESCENT, INCORPORATE
ISO	ISOLATED NEUTRAL
JB	JUNCTION BOX
kcmil	THOUSAND CIRCULAR MIL(S)
KV	KILOVOLT
KVA	KILOVOLT-AMPERES
KVAR	KILOVOLT-AMPERES REACTIVE
KW	KILOWATT
KWH	KILOWATT-HOUR
LA	LIGHTNING ARRESTOR
LDP	LIGHTING DISTRIBUTION PANEL
LP	LIGHTING PANEL
LT	LIGHT
LTG	LIGHTING
LV	LOW VOLTAGE
M	METER
MA	MILLIAMPERE
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MEZZ	MEZZANINE
MFG	MANUFACTURING
MFR	MANUFACTURER
MH	MANHOLE, METAL HALIDE
	MOUNTING HEIGHT
MIC	MICROPHONE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUG ONLY
MO	MOTOR OPERATED
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
N	NEUTRAL, NORTH
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NF	NOT FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN, NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OFF	OFFICE
OL	OVERLOAD
OPNG	OPENING
PA	PUBLIC ADDRESS SYSTEM
PB	PULLBOX
PBS	PUSH BUTTON STATION
PDP	POWER DISTRIBUTION PANEL
PF	POWER FACTOR
PH	PHASE
PIV	POST INDICATOR VALVE
PL	PILOT LIGHT
PNL	PANEL
PP	POWER PANEL
PR	PAIR
PRI	PRIMARY
PS	PULL SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
PWR	POWER
RC	REMOTE CONTROL
RECPT	RECEPTACLE
RP	RECEPTACLE PANEL
RSC	RIGID STEEL CONDUIT
SD	SMOKE DETECTOR
SEC	SECONDARY
SHLD	SHIELDED
SHT	SHEET
SIG	SIGNAL
SP	SINGLE POLE
SPEC	SPECIFICATION
SPKR	SPEAKER
SS	SELECTION SWITCH
ST	SINGLE THROW
STP	SHIELDED TWISTED PAIR
STP/OS	SHIELDED TWISTED PAIR W/ OVERALL SHIELD
STRUCT	STRUCTURAL
SUBST	SUBSTATION
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYS	SYSTEM
T	THERMOSTAT
TB	TERMINAL BLOCK
TEL	TELEPHONE
TRP	POWER FACTOR TRANSDUCER
TOS	TOP OF STEEL
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UTP	UNSHIELDED TWISTED PAIR
UTP/OS	UNSHIELDED TWISTED PAIR W/ OVERALL SHIELD
V	VOLT OR VOLTAGE
VM	VOLTMETER
VP	VAPOR PROOF
VS	VOLTMETER SWITCH
VTR	VOLTAGE TRANSDUCER
W	WATT
WH	WATT-HOUR METER
WHD	WATT-HOUR DEMAND METER
WP	WEATHER PROOF
WR	WELDING RECEPTACLE
W/	WITH
W/O	WITHOUT
XFMR	TRANSFORMER
XP	EXPLOSION PROOF

SYMBOLS

POWER

- DUPLEX RECEPTACLE - MOUNTED 18" AFF, UON
- DUPLEX RECEPTACLE - MOUNTED OVER COUNTER
- GFCI RECEPTACLE - MOUNTED 18" AFF, UON
- GFCI RECEPTACLE - MOUNTED OVER COUNTER
- QUAD RECEPTACLE
- SPECIAL RECEPTACLE
- SINGLE RECEPTACLE
- DUPLEX RECEPTACLE - FLOOR MOUNTED
- NON-FUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- DISTRIBUTION PANEL - SURFACE MOUNTED
- EMERGENCY DISTRIBUTION PANEL - SURFACE MOUNTED
- POWER PANEL - SURFACE MOUNTED
- RECEPTACLE PANEL - SURFACE MOUNTED
- EMERGENCY LIGHTING OR RECEPTACLE PANEL - SURFACE MOUNTED
- RECEPTACLE PANEL - FLUSH MOUNTED
- RECEPTACLE PANEL - FLUSH MOUNTED
- $X — MOTORIZED SWITCH
- T — TRANSFORMER
- SD — SMOKE DETECTOR
- CM — CARBON MONOXIDE DETECTOR

LIGHTING

- 2X4 RECESSED
- 2X2 RECSSED
- 1X4 RECESSED
- 1X1 RECESSED
- RECESSED CAN
- SURFACE CAN
- 1X8 WALL MOUNT LINEAR
- 1X6 WALL MOUNT LINEAR
- 1X4 WALL MOUNT LINEAR
- WALL MOUNT ROUND
- 1X8 PENDANT MOUNT
- 1X6 PENDANT MOUNT
- 1X4 PENDANT MOUNT
- ROUND PENDANT
- 4FT SUSPENDED UTILITY STRIP
- Sx — LIGHT SWITCH
  3 - INDICATES THREE-WAY
  D - INDICATES DIMMING
  x - INDICATES CONTROL ZONE
- XXX — LIGHTING FIXTURE TAG
  X - INDICATES TYPE
- WALL MOUNT EXIT SIGN
- SINGLE FACE EXIT
- SINGLE FACE EXIT WITH LEFT ARROW
- SINGLE FACE EXIT WITH RIGHT ARROW
- SINGLE FACE EXIT WITH DOUBLE ARROW
- DOUBLE FACE EXIT
- DOUBLE FACE EXIT WITH DOUBLE SIDE, SINGLE DIRECTION ARROW
- DOUBLE FACE EXIT WITH DOUBLE SIDE, DOUBLE DIRECTION ARROW
- M / X — CEILING MOUNT OCCUPANCY SENSOR
  DT - INDICATES TYPE DUAL TECHNOLOGY
- 2-HEAD EMERGENCY LIGHT
- 2-HEAD EMERGENCY LIGHT (REMOTE)

SITE LIGHTING

- LIGHT POLE WITH SQUARE FIXTURE
- LIGHT POLE WITH TWO SQUARE FIXTURES
- LIGHTED BOLLARD
- LIGHT POST

GENERAL NOTES

1. PROVIDE 1#12 + 1#12N + 1#12G FOR 20A BRANCH CIRCUITING, UON; MAXIMUM OF THREE CIRCUITS PER CONDUIT; MINIMUM CONDUIT SIZE OF 3/4" C, UON.
2. PROVIDE A DEDICATED NEUTRAL WIRE FOR EACH BRANCH CIRCUIT. COORDINATE DEVICE LOCATIONS AND MOUNTING HEIGHTS WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
3. PROVIDE FIRE STOPPING FOR CONDUITS AND ELECTRICAL EQUIPMENT FOR FLOOR SLABS, WALLS AND CEILINGS TO MAINTAIN FIRE RATING.
4. INSTALL ELECTRICAL WORK IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL BUILDING AND FIRE CODES, IN A NEAT AND WORKMANLIKE MANNER.
5. LIMIT VOLTAGE DROP TO 2% FOR FEEDERS AND 3% FOR BRANCH CIRCUITS. INCLUDE DERATING FACTOR FOR ROOF-MOUNTED CONDUITS.
6. REFER TO ARCH. REFLECTED CEILING PLANS FOR EXACT LOCATION OF CEILING MOUNTED DEVICES AND LIGHT FIXTURES, UNLESS OTHERWISE INDICATED.
7. WHERE MULTIPLE SWITCHES, RECEPTACLES, AND OTHER OUTLETS (EXCEPT WALL PHONES) ARE INDICATED PROVIDE MULTI-GANG BACK BOXES WITH GANG BARRIERS AND A COMMON FACEPLATE.
8. WHERE DIFFERENT RECESSED ELECTRICAL DEVICES WITH THE SAME MOUNTING
9. HEIGHTS ARE INDICATED SIDE-BY-SIDE, MOUNT THE DEVICES SO THAT THERE IS FOUR INCHES BETWEEN ADJACENT VERTICAL EDGES OF THE FACEPLATES, UON.
10. WHERE ELECTRICAL DEVICES WITH DIFFERENT MOUNTING HEIGHTS ARE LOCATED IN THE SAME AREA ALIGN DEVICES VERTICALLY THROUGH THEIR CENTERLINES, UON.
11. PROVIDE FEEDERS AND BRANCH CIRCUITS WHICH HAVE AN AMPACITY EQUAL TO OR GREATER THAN THE CIRCUIT OVERCURRENT PROTECTIVE DEVICE RATING, U.O.N.
12. FURNITURE LAYOUTS ARE FOR REFERENCE ONLY. COORDINATE THE FINAL LOCATION OF ELECTRICAL DEVICES AND OUTLETS WITH ARCHITECT, OWNER AND FINALFURNITURE PLANS PRIOR TO INSTALLATION.
13. IN AREAS WITH FINISHED CEILINGS, ALL BRANCH CIRCUIT AND DATA SYSTEM WIRING SHALL BE CONCEALED ABOVE CEILING.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REINSTALLING CEILING TILES AS REQUIRED TO COMPLETE THE WORK; ANY CEILING
15. WHERE PAINTED, PAINT NEW CONDUIT AND BOXES TO MATCH EXISTING WALL OR CEILING COLOR.
16. THE DRAWINGS REPRESENT ELECTRICAL DESIGN INTENT. THEY ARE DIAGRAMMATIC.
17. PROVIDE ALL COMPONENTS NECESSARY FOR COMPLETE OPERATING ELECTRICAL SYSTEMS.

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CITY STAMP

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REGISTRATION SEAL

STATE OF MICHIGAN
MATTHEW J. JOSEPH
LICENSED PROFESSIONAL ENGINEER
6201064269

KEY PLANS

SHEET TITLE

ELECTRICAL SYMBOLS AND ABBREVIATIONS

SCALE: AS NOTED

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PERMITS	12.20.24

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COPPER FEEDER SCHEDULE

FEEDER (AMPS)	COND. SIZE	2-WIRE W/ GROUND	FEEDER (AMPS)	COND. SIZE	3-WIRE W/ GROUND	FEEDER (AMPS)	COND. SIZE	4-WIRE W/ GROUND
15S	12	2#12, 1#12G IN 3/4"C	15	12	3#12, 1#12G IN 3/4"C	15N	12	4#12, 1#12G IN 3/4"C
20S	12	2#12, 1#12G IN 3/4"C	20	12	3#12, 1#12G IN 3/4"C	20N	12	4#12, 1#12G IN 3/4"C
30S	10	2#10, 1#10G IN 3/4"C	30	10	3#10, 1#10G IN 3/4"C	30N	10	4#10, 1#10G IN 3/4"C
35S	8	2#8, 1#10G IN 3/4"C	35	8	3#8, 1#10G IN 3/4"C	35N	8	4#8, 1#10G IN 3/4"C
40S	8	2#8, 1#10G IN 3/4"C	40	8	3#6, 1#10G IN 3/4"C	40N	8	4#6, 1#10G IN 3/4"C
45S	6	2#6, 1#10G IN 3/4"C	45	6	3#6, 1#10G IN 3/4"C	45N	6	4#6, 1#10G IN 3/4"C
50S	6	2#6, 1#10G IN 3/4"C	50S	6	3#6, 1#10G IN 3/4"C	50N	6	4#6, 1#10G IN 3/4"C
60S	4	2#4, 1#10G IN 3/4"C	60S	4	3#4, 1#10G IN 1"C	60N	4	4#4, 1#10G IN 1"C
70S	4	2#4, 1#8G IN 1"C	70	4	3#4, 1#10G IN 1"C	70N	4	4#4, 1#10G IN 1"C
80S	3	2#3, 1#8G IN 1"C	80	3	3#3, 1#8G IN 1"C	80N	3	4#3, 1#8G IN 1"C
90S	2	2#2, 1#8G IN 1"C	90	2	3#2, 1#8G IN 1 1/4"C	90N	2	4#2, 1#8G IN 1 1/4"C
100S	1	2#1, 1#8G IN 1 1/4"C	100	1	3#1, 1#8G IN 1 1/4"C	100N	1	4#1, 1#8G IN 1 1/4"C
			110	2	3#2, 1#6G IN 1 1/4"C	110N	2	4#2, 1#6G IN 1 1/4"C
			125	1	3#1, 1#6G IN 1 1/4"C	125N	1	4#1, 1#6G IN 3/4"C
			150	1/0	3#1/0, 1#6G IN 1 1/4"C	150N	1/0	4#1/0, 1#6G IN 1 1/4"C
			175	2/0	3#2/0, 1#6G IN 1 1/2"C	175N	2/0	4#2/0, 1#6G IN 1 1/2"C
			200	3/0	3#3/0, 1#6G IN 2"C	200N	3/0	4#3/0, 1#6G IN 2"C
			225	4/0	3#4/0, 1#4G IN 2"C	225N	4/0	4#4/0, 1#4G IN 2"C
			250	250	3#250 KCMIL, 1#4G IN 2"C	250N	250	4#250 KCMIL, 1#4G IN 2"C
			300	350	3#350 KCMIL, 1#4G IN 2"C	300N	350	4#350 KCMIL, 1#4G IN 2"C
			350	500	3#500 KCMIL, 1#3G IN 3"C	350N	500	4#500 KCMIL, 1#3G IN 3"C
			400	600	3#600 KCMIL, 1#3G IN3"C	400N	600	4#600 KCMIL, 1#3G IN3"C
			450	2-3/0	(2) 3#3/0 KCMIL, 1#2G IN 2"C	450N	2-3/0	(2) 4#3/0 KCMIL, 1#2G IN 2"C
			500	2-250	(2) 3#250 KCMIL, 1#2G IN 2 1/2"C	500N	2-250	(2) 4#250 KCMIL, 1#2G IN 2 1/2"C
			600	2-300	(2) 3#300 KCMIL, 1#1G IN 2 1/2"C	600N	2-300	(2) 4#300 KCMIL, 1#1G IN 2 1/2"C
			700	2-500	(2) 3#500 KCMIL, 1#1/0G IN 3"C	700N	2-500	(2) 4#500 KCMIL, 1#1/0G IN 3"C
			800	2-600	(2) 3#600 KCMIL, 1#1/0G IN 3"C	800N	2-600	(2) 4#600 KCMIL, 1#1/0G IN 3"C
			1000	3-500	(3) 3#500 KCMIL, 1#1/0G IN 3"C	1000N	3-500	(3) 4#500 KCMIL, 1#1/0G IN 3"C
			1200	3-600	(3) 3#600 KCMIL, 1#3/0G IN 4"C	1200N	3-600	(3) 4#600 KCMIL, 1#3/0G IN 4"C
			1600	4-600	(4) 3#600 KCMIL, 1#4/0G IN 4"C	1600N	4-600	(4) 4#600 KCMIL, 1#4/0G IN 4"C
			1900	5-500	(5) 3#500 KCMIL, 1#250 KCMIL IN 4"C	1900N	5-500	(5) 4#500 KCMIL, 1#250 KCMIL IN 4"C
						2000N	5-600	(5) 4#600 KCMIL, 1#250 KCMIL IN 4"C

3

120V SINGLE-PHASE CIRCUIT LENGTH TABLE

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT CURRENT (AMPS)	MAX. CIRCUIT LOAD (VA)	MAXIMUM LENGTH IN FEET				
			#12AWG	#10AWG	#8AWG	#6AWG	#4AWG
20	4	480	220	349	556	882	-
	8	960	110	174	278	441	701
	12	1440	73	116	185	294	467
	16	1920	55	87	139	221	350
30	24	2880	-	58	93	147	234
40	32	3840	-	-	70	110	175
50	40	4800	-	-	-	88	140
60	48	5760	-	-	-	-	117

208V SINGLE-PHASE CIRCUIT LENGTH TABLE

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT CURRENT (AMPS)	MAX. CIRCUIT LOAD (VA)	MAXIMUM LENGTH IN FEET				
			#12AWG	#10AWG	#8AWG	#6AWG	#4AWG
20	4	832	380	605	964	-	-
	8	1664	190	302	482	765	-
	12	2496	127	202	321	510	810
	16	3328	95	151	241	382	607
30	24	4992	-	101	161	255	405
40	32	6656	-	-	121	191	304
50	40	8320	-	-	-	153	243
60	48	9984	-	-	-	-	202

208V THREE-PHASE CIRCUIT LENGTH TABLE

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT CURRENT (AMPS)	MAX. CIRCUIT LOAD (VA)	MAXIMUM LENGTH IN FEET				
			#12AWG	#10AWG	#8AWG	#6AWG	#4AWG
20	4	1440	439	698	1113	-	-
	8	2880	220	349	557	883	-
	12	4320	127	233	371	589	935
	16	5760	95	175	278	442	701
30	24	8640	-	116	186	294	468
40	32	11520	-	-	139	221	351
50	40	14400	-	-	-	177	281
60	48	16200	-	-	-	-	234

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REGISTRATION SEAL

STATE OF MICHIGAN
MATTHEW J. JOSEPH
ENGINEER
No.
6201064269
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE
ELECTRICAL & LIGHTING SCHEDULES

SCALE: AS NOTED

ISSUED FOR	DATE
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SHEET NO.: E-002

LIGHTING FIXTURE SCHEDULE - INTERIOR

TYPE	DESCRIPTION	MANUFACTURER	MODEL	WATTAGE	LAMP	VOLTAGE	COMMENTS
R1	4" RECESSED LED CAN WITH WHITE TRIM	PROGRESS LIGHTING	P807-000-028-30	10W		120V	
R2	4" ROUND WET LISTED	PROGRESS LIGHTING	P810027-028-30	12.5W		120V	
T1	2'X2' RECESSED LED TROFFER	SUNCO	PN_SM2X2	40W		120-277V	
V1	24" VANITY LIGHT	PROGRESS LIGHTING	P300408-009-30	22W		120V	
W1	4' WALL MOUNT LED STRIP	PROGRESS LIGHTING	P730001-030-30	40W		120V	
U1	4' SUSPENDED LED UTILITY STRIP	PROGRESS LIGHTING	PCINS-LED-4-40K	45W		120-277V	
U2	2' SUSPENDED LED UTILITY STRIP	PROGRESS LIGHTING	PCINS-LED-2-40K	18W		120-277V	
C1	4' UNDERCOUNTER KITCHEN LIGHT	PROGRESS LIGHTING	#P700025-028-CS	5W		120V	
C2	2' UNDERCOUNTER KITCHEN LIGHT	PROGRESS LIGHTING	#P700027-028-CS	8.5W		120V	
P1	VAPOR TIGHT PIT LIGHT	LITHONIA	VAPOR TIGHT	15W		120-277V	
L1	HIGH BAY ROUND LED	HUBBELL	CRN-40MV-EDU	200W		120-277V	MOUNT 18'-0" AFF
X1	LED EXIT SIGN WITH RED ARROWS. QUANTITY OF FACES AND DIRECTIONAL ARROWS INDICATED ON PLANS.	ENVISIONEDLED LTG	LED-EM-EXT-R-WH	4W			

LIGHTING FIXTURE SCHEDULE - SITE

TYPE	DESCRIPTION	MANUFACTURER	MODEL	WATTAGE	LAMP	VOLTAGE	COMMENTS
P1	20FT ALUMINUM LIGHT POLE BASE WITH TYPE 3 DISTRIBUTION FIXTURE, SILICONE LENS, AND BLACK FINISH; 12000 LUMENS; 4000K CCT	LSI INDUSTRIES	SLICE MEDIUM	85W		120-277V	
P2	10FT DECORATIVE LIGHT POLE; 3000 LUMENS; 4000K CCT	STREETWORKS	UTR TRADITIONAIRE LED	29W		120V	
W1	LED WALL PACK WITH PHOTOCELL AND CARBON BRONZE FINISH; 3000K CCT	LUMARK	XTOR2B	18W		120V	

LIGHTING CONTROL MATRIX

SPACE TYPE	MANUAL ON	MANUAL OFF	DIMMER SWITCH	OCCUPANCY SENSOR ON	OCCUPANCY SENSOR OFF	TIME CLOCK ON	TIMECLOCK OFF	PHOTOCELL ON	PHOTOCELL OFF	CONTROL DESCRIPTION
PARKING LOT POLES								●	●	WHEN PHOTOCELL SENSES LIGHT LEVEL BELOW LIGHT LEVEL SETPOINT, LIGHTS SHALL AUTOMATICALLY TURN ON; WHEN LIGHT LEVEL IS ABOVE LIGHT LEVEL SETPOINT, LIGHTS SHALL AUTOMATICALLY SHUT OFF.
WALL PACKS								●	●	WALL PACKS ON EMERGENCY TO OVERRIDE PHOTOCELL IN THE EVENT OF A POWER OUTAGE.
CORRIDOR				●						
MECHANICAL/ELECTRICAL ROOM	●	●								
JANITOR CLOSET	●				●					
STORAGE	●				●					
LAUNDRY ROOM	●				●					
1BR/2BR - KITCHEN			●							DIMMING CONTROL ZONES INDICATED ON PLANS
1BR/2BR - BATHROOM	●	●								LIGHT SWITCH INTERLOCKS WITH COMBINATION EXHAUST FAN/LIGHT
1BR/2BR - BEDROOM	●	●	●							

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KEY PLANS

SHEET TITLE

ELECTRICAL & LIGHTING SCHEDULES

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

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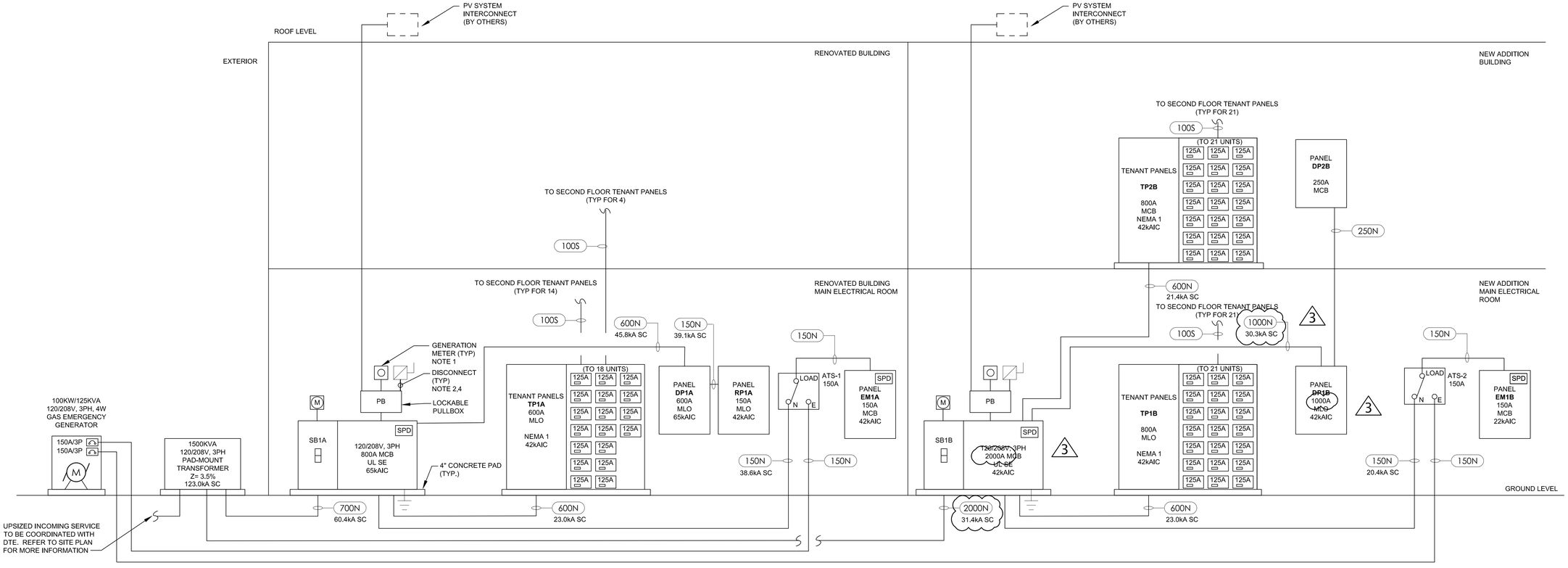
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PV SYSTEM NOTES

1. COORDINATE UTILITY METERING REQUIREMENTS WITH LOCAL UTILITY. METER SHALL BE LABELED 'PV-SYSTEM' FOR THE RESPECTIVE METER.
2. PV DISCONNECTS SHALL BE PROVIDED IN ACCORDANCE WITH NEC ARTICLE 690. FUSED DISCONNECT SHALL BE LOCKABLE. DISCONNECT SHALL BE LABELED 'PV SYSTEM DISCONNECT' FOR THE RESPECTIVE DISCONNECT.
3. LOCKABLE PULLBOX REQUIRES 7/16" LOCKHOLE. SIZE PULLBOX AS REQUIRED.
4. COORDINATE PV SYSTEM CAPACITY AND ASSOCIATED FEEDER/DISCONNECT SIZES WITH PV SYSTEM DESIGNER PRIOR TO INSTALLATION.



1 ELECTRICAL RISER DIAGRAM

SCALE: NO SCALE

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KEY PLANS

D

SHEET TITLE

ELECTRICAL RISER DIAGRAM - EXISTING & NEW ADDITION

SCALE: AS NOTED

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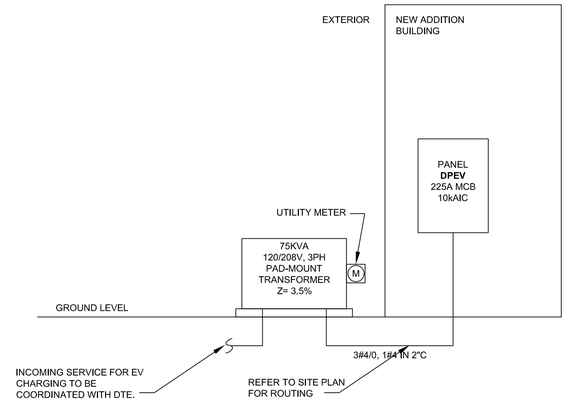
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FILE NO.

E-004
SHEET NO.

PANELBOARD DP-EV SCHEDULE

VOLTAGE: 208Y/120 MAINS: 225A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY 10k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	B	C	BRKR P	TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	1-PORT EV CHARGER						3.1	40	2	X			2	40	6.2						2-PORT EV CHARGER	2
3							3.1				X				6.2							4
5	2-PORT EV CHARGER						6.2	40	2			X	2	40	6.2						2-PORT EV CHARGER	6
7							6.2			X					6.2							8
9	2-PORT EV CHARGER						6.2	40	2		X		2	40	6.2						2-PORT EV CHARGER	10
11							6.2					X			6.2							12
13	SPARE							40	2	X			1								SPACE	14
15											X		1								SPACE	16
17	SPACE								1			X	1								SPACE	18
19	SPACE								1	X			1								SPACE	20
21	SPACE								1		X		1								SPACE	22
23	SPACE								1			X	1								SPACE	24
															68.2	0.0	0.0	0.0	0.0	0.0	CONNECTED KVA	68.2
															68.2	0.0	0.0	0.0	0.0	0.0	DEMAND KVA	68.2
																					DEMAND AMPS	189



1 ELECTRICAL RISER DIAGRAM - EV CHARGING

SCALE: NO SCALE

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KEY PLANS

SHEET TITLE
ELECTRICAL RISER DIAGRAM AND PANEL SCHEDULE - EV

SCALE: AS NOTED

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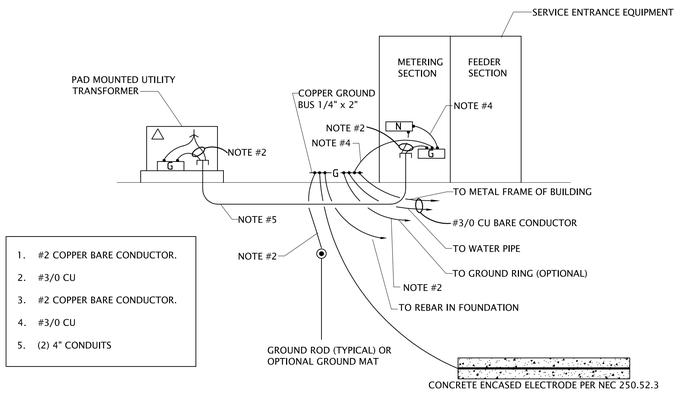
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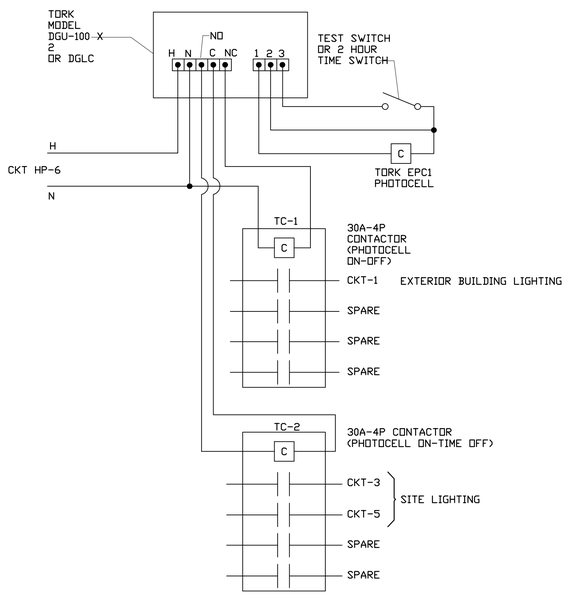
FILE NO. 21026.00

SHEET NO. E-005



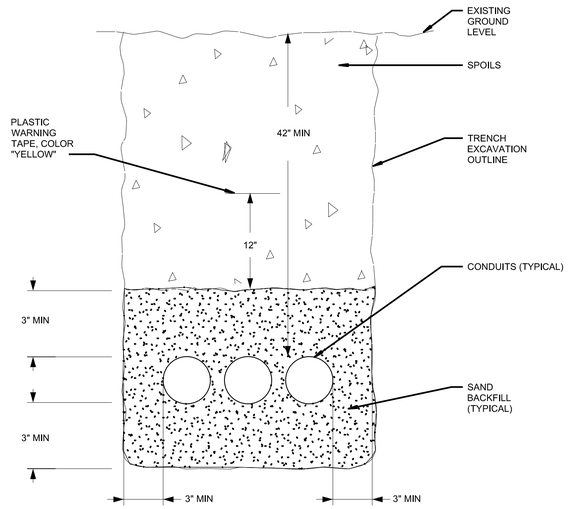
1 SERVICE ENTRANCE DETAIL

SCALE: NO SCALE



2 LIGHTING CONTACTOR DIAGRAM

SCALE: NO SCALE



3 DIRECT BURIAL CONDUIT DETAIL

SCALE: NO SCALE

John Grace Arms
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CITY OF _____ STAMP

CITY STAMP

DO NOT PLACE ANYTHING IN THIS AREA

REGISTRATION SEAL



KEY PLANS

SHEET TITLE

ELECTRICAL DETAILS

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

DRAWN BY: SC

CHECKED: MT

APPROVED:

FILE NO.: 21026.00

SHEET NO.: E-300

PROVIDE ARC FAULT PROTECTION IN BEDROOMS, LIVING ROOMS, DINING, AND KITCHEN AREAS.

3PH PANELBOARD SB1A SCHEDULE

VOLTAGE: 208Y/120 MAINS: 1000 MCB MOUNTING: SURFACE
BUS SIZE: 1000 AMP FAULT DUTY 65k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	B	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	TP1A	0.4	18.6	0.2	12.1	10.4	2.7	600	3	X			3	600	7.3	16.7	33.0	0.0	3.5	0.9	DP1A	2
3		0.4	18.6	0.2	12.1	10.4	2.7				X				7.3	16.7	33.0	0.0	3.5	0.9		4
5		0.4	18.6	0.2	12.1	10.4	2.7					X			7.3	16.7	33.0	0.0	3.5	0.9		6
7										X					1.5	0.0	0.0	2.1	0.2	0.3	EM1A (VIA ATS-1)	8
9								3			X		3	150	1.5	0.0	0.0	2.1	0.2	0.3		10
11												X			1.5	0.0	0.0	2.1	0.2	0.3		12
13										X												14
15								3			X		3									16
17												X										18
															34.3	81.4	135.4	6.8	66.9	4.8	CONNECTED KVA	329.6
															34.3	81.4	135.4	8.5	38.5	6.1	DEMAND KVA	222.7
																					DEMAND AMPS	618

PANELBOARD TP1A SCHEDULE

VOLTAGE: 208Y/120 MAINS: 600A MLO MOUNTING: SURFACE
BUS SIZE: 600 AMP FAULT DUTY 65k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	B	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	UNIT-0 (2BR)	0.1	8.3	0.0	2.7	2.3	0.7	125	2	X			2	125	0.7	2.3	2.7	0.0	8.2	0.1	UNIT-N (2BR)	2
3		0.1	8.3	0.0	2.7	2.3	0.7				X				0.7	2.3	2.7	0.0	8.2	0.1		4
5	UNIT-H (1BR)	0.1	7.7	0.0	2.7	2.3	0.6	125	2			X	2	125	0.6	2.3	2.7	0.0	7.7	0.1	UNIT-G (1BR)	6
7		0.1	7.7	0.0	2.7	2.3	0.6			X					0.6	2.3	2.7	0.0	7.7	0.1		8
9	UNIT-F (1BR)	0.1	7.7	0.0	2.7	2.3	0.6	125	2		X		2	125	0.6	2.3	2.7	0.0	7.7	0.1	UNIT-M (1BR)	10
11		0.1	7.7	0.0	2.7	2.3	0.6					X			0.6	2.3	2.7	0.0	7.7	0.1		12
13	UNIT-L (1BR)	0.1	7.7	0.0	2.7	2.3	0.6	125	2	X			2	125	0.6	2.3	2.7	0.0	7.7	0.1	UNIT-E (1BR)	14
15		0.1	7.7	0.0	2.7	2.3	0.6				X				0.6	2.3	2.7	0.0	7.7	0.1		16
17	UNIT-K (1BR)	0.1	7.7	0.0	2.7	2.3	0.6	125	2			X	2	125	0.6	2.3	2.7	0.0	7.7	0.1	UNIT-D (1BR)	18
19		0.1	7.7	0.0	2.7	2.3	0.6			X					0.6	2.3	2.7	0.0	7.7	0.1		20
21	UNIT-J (1BR)	0.1	7.7	0.0	2.7	2.3	0.6	125	2		X		2	125	0.6	2.3	2.7	0.0	7.7	0.1	UNIT-C (1BR)	22
23		0.1	7.7	0.0	2.7	2.3	0.6					X			0.6	2.3	2.7	0.0	7.7	0.1		24
25	UNIT-B (1BR)	0.1	7.7	0.0	2.7	2.3	0.6	125	2	X			2	125	0.6	2.3	2.7	0.0	7.7	0.1	UNIT-A (1BR)	26
27		0.1	7.7	0.0	2.7	2.3	0.6				X				0.6	2.3	2.7	0.0	7.7	0.1		28
29	UNIT-Z, 2ND FLR (2BR)	0.1	8.5	0.0	2.7	2.3	0.7	125	2			X	2	125	0.7	2.3	2.7	0.0	8.4	0.1	UNIT-Y, 2ND FLR (2BR)	30
31		0.1	8.5	0.0	2.7	2.3	0.7			X					0.7	2.3	2.7	0.0	8.4	0.1		32
33	UNIT-X, 2ND FLR (1BR)	0.1	7.7	0.0	2.7	2.3	0.6	125	2		X		2	125	0.6	2.3	2.7	0.0	7.7	0.1	UNIT-W, 2ND FLR (1BR)	34
35		0.1	7.7	0.0	2.7	2.3	0.6					X			0.6	2.3	2.7	0.0	7.7	0.1		36
37									2	X			2									38
39											X											40
41								1				X	1									42
															21.0	82.8	95.4	0.0	283.4	2.4	CONNECTED KVA	485.0
															8.0	31.5	36.3	0.0	55.7	1.1	DEMAND KVA X 38%	132.6
																					DEMAND AMPS	368

3PH PANELBOARD DP1A SCHEDULE

VOLTAGE: 208Y/120 MAINS: MLO MOUNTING: SURFACE
BUS SIZE: 600 AMP FAULT DUTY 42k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	B	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	ECUH-3 - 122					3.0		35	2	X			2	25			1.8				ACCU-8 (ROOF) - 101	2
3						3.0					X						1.8					4
5	ACCU-7 (ROOF) - 106				1.0			15	2			X	2	25			1.8				ACCU-8 (ROOF) - 130	6
7					1.0					X							1.8					8
9	ERV-2 - 104				0.1			15	1		X		1	15			0.1				ERV-2 - 130	10
11	ELECTRIC STRIKE - 122, 105						0.6	20	1			X	1	20	0.6						ELECTRIC STRIKE - 120,123	12
13	ACCU-8 (ROOF) - 104				1.8			25	2	X			25	20		2.0					ECUH-2 - 120	14
15					1.8						X					2.0						16
17	ACCU-3 (ROOF) - 131				1.7			20	2			X	2	25			1.8				ACCU-8 (ROOF) - 103	18
19					1.7					X							1.8					20
21	ERV-3 - 131A				0.1			15	1		X		2	35		3.0					ECUH-3 - 123	22
23	ELECTRIC STRIKE - 107, 108						0.9	20	1			X				3.0						24
25	DWH-4 - 131A					2.2		30	2	X			2	25			1.8				ACCU-8 (ROOF) - 108	26
27						2.2					X						1.8					28
29	ACCU-8 (ROOF) - 107				1.8			25	2			X	2	30			2.5				ACCU-6 (ROOF) - 140	30
31					1.8					X							2.5					32
33	ERV-2 - 107				0.1			15	1		X		2	30			2.5				ACCU-6 (ROOF) - 140	34
35	ELECTRIC STRIKE - 140						0.9	20	1			X					2.5					36
37	ACCU-5 (ROOF) - 141				1.4			20	2	X			2	15			1.2				ERV-4 - 141	38
39					1.4						X						1.2					40
41	DWH-1 - 141					2.2		30	2			X	2	20			1.7				ACCU-3 (ROOF) - 151	42
43						2.2				X							1.7					44
45	ERV-3 - 132				0.1			15	1		X		2	35			2.7				ERV-1 - 151	46
47	GFCI - ROOF		1.300					20	1			X					2.7					48
49	ACCU-6 (ROOF) - 132				2.5			30	2	X			2	35			2.7				ERV-1 - 201	50
51					2.5						X						2.7					52
53	ACCU-3 (ROOF) - 201				1.7			25	2			X	2	45		3.5					ECUH-4 - 280	54
55					1.7					X						3.5						56
57	ECUH-5 - 281					1.5		20	2		X		2	35		3.0					ECUH-1 - 280 UPPER	58
59						1.5						X				3.0						60
61	CCU-1 - 120				10.0			125	2	X			2	15			1.0				ACCU-7 (ROOF) - 133	62
63					10.0						X						1.0					64
65	ACCU-8 (ROOF) - 109				1.8			20	2			X	2	25			2.1				DWH-3 - 133	66
67					1.8					X							2.1					68
69	RADON (ROOF)					0.6		20	1		X		2	15			1.0				ERV-3 (ROOF)	70
71	RADON (ROOF)					0.6		20	1			X					1.0					72
73	RADON (ROOF)					0.6		20	1	X			2	15			1.0				DH-1 (ROOF	74
75	GFCI - ROOF		0.900					20	1		X						1.0					76
77	DWH-3					2.0		25	2			X	1	20							SPARE	78
79						2.0				X												80
81	SPACE										X		3	150	6.3	2.5	0.0	0.0	3.2	0.9	RP1E	82
83	SPACE											X			6.3	2.5	0.0	0.0	3.2	0.9		84
															21.9	54.2	99.1	0.0	11.9	2.8	CONNECTED KVA	189.9
															21.9	54.2	99.1	0.0	11.0	3.5	DEMAND KVA	135.5
																					DEMAND AMPS	376

3PH PANELBOARD RP1A SCHEDULE

VOLTAGE: 208Y/120 MAINS: MLO MOUNTING: SURFACE
BUS SIZE: 225 AMP FAULT DUTY 42k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	B	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	RECEPTACLES - 104,105,106		0.720					20	1	X			1	20					0.720		RECEPTACLES - 103,102,101	2
3	RECEPTACLES - 107,108		0.540					20	1		X		1	20					0.360		RECEPTACLES - 142, 143	4
5	RECEPTACLES - 141		0.720					20	1			X	1	20					0.900		RECEPTACLES - 141	6
7	RECEPTACLES - 140		0.900					20	1	X			1	20					0.900		RECEPTACLES - 140	8
9	BIDET & GFCI -		0.180				0.3	20	1		X		1	20					0.900		RECEPTACLES - 132	10
11	RECEPTACLES - 132		0.720					20	1			X	1	20		1.9					HOT ROOM POWER - 133	12
9	COUNTERTOP RECEPTACLES		0.4					20	1	X			1	20		1.9					HOT ROOM POWER - 133	14
15	HOT ROOM POWER - 133					1.9		20	1		X		2	30	2.5						DRYER - 131	16
17	DRYER - 131						2.5	30	2			X			2.5							18
19							2.5			X			2	30	2.5						DRYER - 131	20
21	WASHER - 131						1.2	20	1		X				2.5							22
23	WASHER - 131						1.2	20	1			X	1	20	1.2						WASHER - 131	24
25	RECEPTACLES - 131,131A		0.900					20	1	X			1	20					0.540		RECEPTACLES - 150,151	26
27	RECEPTACLES - 201		0.360					20	1		X		2	20						0.5	EXTERIOR LIGHTS	28
29	RECEPTACLES - 202		0.360					20	1			X								0.5		30
31	LIGHTS	0.6						20	1	X			1	20							SPARE	32
33	LIGHTS	0.6						20	1		X		1	20							SPARE	34
35	LIGHTS	0.6						20	1			X	1	20							SPARE	36
37	SPARE							20	1	X			1	20							SPARE	38
39	SPARE							20	1		X		1	20							SPARE	40
41	SPARE							20	1			X	1	20							SPARE	42
															18.9	7.6	0.0	0.0	9.7	2.8	CONNECTED KVA	39.0
															18.9	7.6	0.0	0.0	9.7	3.5	DEMAND KVA	39.7
																					DEMAND AMPS	110

3PH PANELBOARD EM1A SCHEDULE

VOLTAGE: 208Y/120 MAINS: 150A MCB MOUNTING: SURFACE REMARKS:
BUS SIZE: 225 AMP FAULT DUTY 42k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	B	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	FACP		0.300					20	1	X			1	20						0.8	EM LIGHTS - 1ST FLR NORTH & 2ND FLR	2
3	MAG SYSTEM		0.300					20	1		X		1	20						0.7	EM LIGHTS - 1ST FLR SOUTH	4
5	(5) ELECTRIC STRIKE						1.2	20	1			X	1	20						0.2	EXIT LIGHTS	6
7	(4) ELECTRIC STRIKE						1.2	20	1	X			1	20							SPARE	8
9				3.6								X	1	20	1.5						GENERATOR BLOCK HEATER	10
11	ELEVATOR DISC SW			3.6				40	3			X	1	20	0.5						GENERATOR BATTERY CHARGER	12
13				3.6								X	1	20				1.7			SP-1	14
15	SPARE							20	1			X	1	20				0.1			RP-1	16
17	SPARE							20	1			X	1	20							SPARE	18
19	SPARE							20	1	X			1	20							SPARE	20
21	SPARE							20	1		X		1	20							SPARE	22
23	SPACE								1			X	1	20							SPARE	24
25	SPACE								1	X			1	20							SPARE	26
27	SPACE								1		X		1	20							SPARE	28
29	SPACE								1			X	1	20							SPARE	30
															4.4	0.0	0.0	12.6	0.6	1.7	CONNECTED KVA	19.3
															4.4	0.0	0.0	15.8	0.6	2.1	DEMAND KVA	22.9
																					DEMAND AMPS	63

1PH PANEL SCHEDULE: UNIT-Y (2BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	B	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.7				ACCU-4 (ROOF)	2
3			5.0								X					1.7					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					0.7		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20					1.0		BEDROOM 2 RECEPTACLES	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.9	20	1	X		1	20						0.2	LIGHTING	18
19	ERV-2			0.1				15	1		X	1	20					0.7		LIVING ROOM RECEPTACLES	20
21	BIDET		0.3					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.4	4.6	3.5	0.0	17.2	0.2	CONNECTED KVA	26.9
														1.4	4.6	3.5	0.0	13.6	0.2	DEMAND KVA	19.8
																				DEMAND AMPS	95

1PH PANEL SCHEDULE: UNIT-W (2BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	B	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	30			2.6				ACCU-3 (ROOF)	2
3			5.0								X					2.6					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	BIDET & SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2			0.1				15	1		X	1	20							SPARE	20
21	BIDET		0.3					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	5.3	0.0	15.8	0.1	CONNECTED KVA	26.9
														1.1	4.6	5.3	0.0	12.9	0.1	DEMAND KVA	19.4
																				DEMAND AMPS	93

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CITY OF _____ STAMP

CITY STAMP

DO NOT PLACE ANYTHING IN THIS AREA

REGISTRATION SEAL

STATE OF MICHIGAN
MATTHEW J. JOSEPH
ENGINEER
6201048269
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE
ELECTRICAL PANEL SCHEDULES - EXISTING

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

DRAWN BY: SC
CHECKED: MT
APPROVED:

FILE NO. 21026.00

SHEET NO. E-400

1PH PANEL SCHEDULE: UNIT-O (2BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.7				ACCU-4 (ROOF)	2
3			5.0								X					1.7					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.1		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20					1.1		BEDROOM 2 RECEPTACLES	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.9	20	1	X		1	20						0.2	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.4	4.6	3.5	0.0	16.9	0.2	CONNECTED KVA	26.5
														1.4	4.6	3.5	0.0	13.4	0.2	DEMAND KVA	19.6
																				DEMAND AMPS	94

1PH PANEL SCHEDULE: UNIT-K (1BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.4				ACCU-1 (ROOF)	2
3			5.0								X					1.4					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2					0.1		15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	2.9	0.0	15.7	0.1	CONNECTED KVA	24.4
														1.1	4.6	2.9	0.0	12.8	0.1	DEMAND KVA	18.6
																				DEMAND AMPS	90

1PH PANEL SCHEDULE: UNIT-H (1BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.4				ACCU-1 (ROOF)	2
3			5.0								X					1.4					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	2.9	0.0	15.7	0.1	CONNECTED KVA	24.4
														1.1	4.6	2.9	0.0	12.8	0.1	DEMAND KVA	18.6
																				DEMAND AMPS	90

1PH PANEL SCHEDULE: UNIT-J (1BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.4				ACCU-1 (ROOF)	2
3			5.0								X					1.4					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	2.9	0.0	15.7	0.1	CONNECTED KVA	24.4
														1.1	4.6	2.9	0.0	12.8	0.1	DEMAND KVA	18.6
																				DEMAND AMPS	90

1PH PANEL SCHEDULE: UNIT-F (1BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.7				ACCU-3 (ROOF)	2
3			5.0								X					1.7					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	3.5	0.0	15.7	0.1	CONNECTED KVA	25.0
														1.1	4.6	3.5	0.0	12.8	0.1	DEMAND KVA	18.6
																				DEMAND AMPS	90

1PH PANEL SCHEDULE: UNIT-B (1BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.7				ACCU-3 (ROOF)	2
3			5.0								X					1.7					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	3.5	0.0	15.7	0.1	CONNECTED KVA	25.0
														1.1	4.6	3.5	0.0	12.8	0.1	DEMAND KVA	18.6
																				DEMAND AMPS	90

1PH PANEL SCHEDULE: UNIT-L (1BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.7				ACCU-3 (ROOF)	2
3			5.0								X					1.7					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	3.5	0.0	15.7	0.1	CONNECTED KVA	25.0
														1.1	4.6	3.5	0.0	12.8	0.1	DEMAND KVA	18.6
																				DEMAND AMPS	90

1PH PANEL SCHEDULE: UNIT-Z (2BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.7				ACCU-4 (ROOF)	2
3			5.0								X					1.7					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					0.9		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20					1.0		BEDROOM 2 RECEPTACLES	14
15	SINK GFCI		0.2				0.8	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.9	20	1	X		1	20						0.2	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20					0.7		LIVING ROOM RECEPTACLES	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.4	4.6	3.5	0.0	17.3	0.2	CONNECTED KVA	27.0
														1.4	4.6	3.5	0.0	13.6	0.2	DEMAND KVA	19.8
																				DEMAND AMPS	95

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SCALE: AS NOTED

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PERMITS	12.20.24

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APPROVED:

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1PH PANEL SCHEDULE: UNIT-X (2BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	BRKR P	TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.7				ACCU-3 (ROOF)	2
3			5.0								X					1.7					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					0.9		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.2	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	3.5	0.0	15.6	0.2	CONNECTED KVA	25.0
														1.1	4.6	3.5	0.0	12.8	0.2	DEMAND KVA	18.7
																				DEMAND AMPS	90

1PH PANEL SCHEDULE: UNIT-N (2BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	BRKR P	TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.7				ACCU-4 (ROOF)	2
3			5.0								X					1.7					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20					1.0		BEDROOM 2 RECEPTACLES	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.9	20	1	X		1	20						0.2	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.4	4.6	3.5	0.0	16.7	0.2	CONNECTED KVA	26.4
														1.4	4.6	3.5	0.0	13.3	0.2	DEMAND KVA	19.5
																				DEMAND AMPS	94

1PH PANEL SCHEDULE: UNIT-G (1BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	BRKR P	TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.7				ACCU-4 (ROOF)	2
3			5.0								X					1.7					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	3.5	0.0	15.7	0.1	CONNECTED KVA	25.0
														1.1	4.6	3.5	0.0	12.8	0.1	DEMAND KVA	18.6
																				DEMAND AMPS	90

1PH PANEL SCHEDULE: UNIT-M (1BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	BRKR P	TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.4				ACCU-1 (ROOF)	2
3			5.0								X					1.4					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	2.9	0.0	15.7	0.1	CONNECTED KVA	24.4
														1.1	4.6	2.9	0.0	12.8	0.1	DEMAND KVA	18.6
																				DEMAND AMPS	90

1PH PANEL SCHEDULE: UNIT-E (1BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	BRKR P	TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.4				ACCU-1 (ROOF)	2
3			5.0								X					1.4					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	2.9	0.0	15.7	0.1	CONNECTED KVA	24.4
														1.1	4.6	2.9	0.0	12.8	0.1	DEMAND KVA	18.6
																				DEMAND AMPS	90

1PH PANEL SCHEDULE: UNIT-D (1BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	BRKR P	TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.7				ACCU-1 (ROOF)	2
3			5.0								X					1.7					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	3.5	0.0	15.7	0.1	CONNECTED KVA	25.0
														1.1	4.6	3.5	0.0	12.8	0.1	DEMAND KVA	18.6
																				DEMAND AMPS	90

1PH PANEL SCHEDULE: UNIT-C (1BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	BRKR P	TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.4				ACCU-1 (ROOF)	2
3			5.0								X					1.4					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	2.9	0.0	15.7	0.1	CONNECTED KVA	24.4
														1.1	4.6	2.9	0.0	12.8	0.1	DEMAND KVA	18.6
																				DEMAND AMPS	90

1PH PANEL SCHEDULE: UNIT-A (1BR)

VOLTAGE: 208Y/120 MAINS: 125A MCB MOUNTING: RECESSED REMARKS:
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	BRKR P	TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.7				ACCU-3 (ROOF)	2
3			5.0								X					1.7					4
5	HOOD FAN		0.3					20	1	X		2	30		2.3					DWH-1	6
7	REFRIGERATOR (GFCI BRKR)		0.6					20	1		X				2.3						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.0		LIVING ROOM RECEPTACLES	10
11	GARBAGE DISPOSAL (GFCI BRKR)		0.8					20	1		X	1	20					1.0		BEDROOM 1 RECEPTACLES	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2				0.5	20	1		X	1	20							SPARE	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20						0.1	LIGHTING	18
19	ERV-2				0.1			15	1		X	1	20							SPARE	20
21	BIDET		0.2					20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.1	4.6	3.5	0.0	15.7	0.1	CONNECTED KVA	25.0
														1.1	4.6	3.5	0.0	12.8	0.1	DEMAND KVA	18.6
																				DEMAND AMPS	90

PROVIDE ARC FAULT PROTECTION IN BEDROOMS, LIVING ROOMS, DINING, AND KITCHEN AREAS.

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PANEL SCHEDULES - EXISTING

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

DRAWN BY: SC
CHECKED: MT
APPROVED:

FILE NO. 21026.00

SHEET NO. E-402

3PH PANELBOARD SB1B SCHEDULE

VOLTAGE: 208Y/120 MAINS: 2000 MCB (3) MOUNTING: SURFACE
BUS SIZE: 2000 AMP FAULT DUTY 42k (3)

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	B	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1							62.0			X					45.4	0.8	48.1	0.0	2.0	1.7		2
3	TP2B						62.0	800	3		X		3	1000	45.4	0.8	48.1	0.0	2.0	1.7	DP1B	4
5							62.0					X			45.4	0.8	48.1	0.0	2.0	1.7		6
7							62.0			X					0.7	0.0	0.0	3.0	0.2	0.3		8
9	TP1B						62.0	800	3		X		3	150	0.7	0.0	0.0	3.0	0.2	0.3	EM1B (VIA ATS-B)	10
11							62.0					X			0.7	0.0	0.0	3.0	0.2	0.3		12
13										X												14
15									3		X		3									16
17												X										18
															510.2	2.4	144.4	9.0	6.5	6.0	CONNECTED KVA 678.5	
															510.2	2.4	144.4	11.3	6.5	7.5	DEMAND KVA 679.9	
																					DEMAND AMPS 1887	

(D) PANELBOARD DP1B SCHEDULE

VOLTAGE: 208Y/120 MAINS: MLO MOUNTING: SURFACE
BUS SIZE: 1000 AMP FAULT DUTY 42k

No.	SERVES (3)	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	B	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	ECUH-1 - 111				3.0			35	2	X			2	35			3.0				ECUH-1 -101	2
3					3.0						X						3.0					4
5	FC-12 (VIA ACCU-12 ON ROOF) - 1FL N.				1.8			25	2			X	2	25			1.8				FC-12 (VIA ACCU-12 ON ROOF) - 1ST S.	6
7	CORRIDOR				1.8					X							1.8				CORRIDOR	8
9	FC-13 (VIA ACCU-13 ON ROOF) - 113				1.0			15	2		X		2	20			1.6				ECUH-2 - 109	10
11					1.0							X					1.6					12
13	FC-12 (VIA ACCU-12 ON ROOF) - 1FL N.				1.8			25	2	X			2	15			1.0				FC-13 (VIA ACCU-12 ON ROOF) - 105	14
15	CORRIDOR				1.8						X						1.0					16
17	LIGHTING - NORTH	1.0						20	1			X	1	20						0.6	EXTERIOR LIGHTING - WALL PACKS & BOLLARD	18
19	LIGHTING - SOUTH	0.9						20	1	X			1				(3)				SPARE	20
21	DWH-2 - 108					1.2		20	2		X		2	80	12.4						2-PORT EV CHARGER	22
23						1.2						X			12.4							24
25	EXTERIOR LIGHTING - LIGHT POLES	0.4						20	2	X			2	25			1.9				FC-9 (VIA ACCU-9 ON ROOF) - CONNECTOR	26
27		0.4									X						1.9					28
29	DOAS-1 (MOTOR/CTRL) - ROOF				8.8			80	3	X			3	225			21.6				DOAS-1 (COIL) - ROOF	30
31					8.8						X						21.6					32
33					8.8					X							21.6					34
35	RECEPTACLES - 103		0.7					20	1			X	1	20							SPARE	36
37	RECEPTACLES - EXTERIOR		1.3					20	1	X			1	20							SPARE	38
39	RECEPTACLES - 110,106		0.7			(3)		20	1		X		3	250	0.0	0.0	7.7	0.0	0.8	0.6	DP2B	40
41	RECEPTACLES - 110,102		0.9					20	1			X			0.0	0.0	7.7	0.0	0.8	0.6		42
43	1-PORT EV CHARGER						6.2	40	2	X			2	80	12.4						2-PORT EV CHARGER	44
45							6.2				X				12.4		(3)					46
47	2-PORT EV CHARGER						12.4	80	2			X	2	80	12.4						2-PORT EV CHARGER	48
49							12.4			X					12.4							50
51	SPACE								1			X	2	80	12.4						2-PORT EV CHARGER	52
53	SPACE								1		X				12.4							54
55	SPACE								1	X			1								SPACE	56
57	SPACE								1			X	1								SPACE	58
59	SPACE								1		X		1								SPACE	60
															136.4	2.4	148.2	0.0	5.9	5.1	CONNECTED KVA 298.0	
															136.4	2.4	148.2	0.0	5.9	6.4	DEMAND KVA 296.9	
																					DEMAND AMPS 824	

3PH PANELBOARD DP2B SCHEDULE

VOLTAGE: 208Y/120 MAINS: 250A MCB MOUNTING: SURFACE
BUS SIZE: 250 AMP FAULT DUTY 10k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	B	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	FC-12 (VIA ACCU-12 ON ROOF) - 2FL N.				1.8			25	2	X			2	25			1.8				FC-12 (VIA ACCU-12 ON ROOF) - 2FL S.	2
3	CORRIDOR				1.8						X						1.8				CORRIDOR	4
5	FC-13 (VIA ACCU-13 ON ROOF) - 208				1.0			15	2			X	2	15			1.0				FC-13 (VIA ACCU-12 ON ROOF) - 203	6
7					1.0					X							1.0					8
9	FC-12 (VIA ACCU-12 ON ROOF) - 211				1.8			25	2		X		2	20							SPARE	10
11					1.8							X										12
13	SPARE							20	2	X			2	20							SPARE	14
15											X											16
17	SPACE							2				X	2								SPACE	18
19										X												20
21	RECEPTACLES - 203,208		0.5					20	1			X	1	20					1,100		RECEPTACLES - ROOF	22
23	RECEPTACLES - NORTH		0.9					20	1				X	1	20					0,900		RECEPTACLES - SOUTH	24
25	LIGHTING - NORTH	0.9						20	1	X			1	20						0.9	LIGHTING - SOUTH	26
27	SPACE								1			X	1								SPACE	28
29	SPACE								1		X		1								SPACE	30
															0.0	0.0	14.8	0.0	3.4	1.8	CONNECTED KVA 20.0	
															0.0	0.0	14.8	0.0	3.4	2.3	DEMAND KVA 20.5	
																					DEMAND AMPS 57	

3PH PANELBOARD EM1B SCHEDULE

VOLTAGE: 208Y/120 MAINS: 150A MCB MOUNTING: SURFACE REMARKS:
BUS SIZE: 225 AMP FAULT DUTY 42k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	B	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1					3.6					X			1	20						0.8	EM LIGHTS - 1ST & 2ND FLOOR	2
3	ELEVATOR DISC SW				3.6			40	3		X		1	20						0.1	EXIT LIGHTS - 1ST & 2ND FLOOR	4
5					3.6							X	1	20							SPARE	6
7	SP-1				1.7			20	1	X			1	20							SPARE	8
9	SPARE							20	1		X		1	20							SPARE	10
11	SPARE							20	1			X	1	20							SPARE	12
13	SPARE							20	1	X			1	20							SPARE	14
15	SPARE							20	1		X		1	20							SPARE	16
17	SPARE							20	1			X	1	20							SPARE	18
19	SPARE							20	1	X			1	20							SPARE	20
21	SPARE							20	1		X		1	20							SPARE	22
23	SPACE								1			X	1	20							SPARE	24
25	SPACE								1	X			1	20							SPARE	26
27	SPACE								1		X		1	20							SPARE	28
29	SPACE								1			X	1	20							SPARE	30
															0.0	0.0	0.0	12.5	0.0	0.9	CONNECTED KVA 13.4	
															0.0	0.0	0.0	15.6	0.0	1.1	DEMAND KVA 16.8	
																					DEMAND AMPS 46	

General Lighting, Small Appliance, and Laundry Loads

Qty	Room Type		
1	All 1BR & 2BR at 14674 sqft ea x 3W/sqft	44022 VA	44022
Qty	Load Type		
21	(1) Small Appliances at 1500VA ea	3000 VA	63000
		Subtotal	**107,022 VA**

Appliance Load

Qty	Appliance Type	Load	
21	Dishwasher	1200 VA	25200
21	Range	10200 VA	214200
21	Disposal	800 VA	16800
21	Hood	300 VA	6300
21	Water Heater	4600 VA	96600
		Subtotal	**359,100 VA**

HVAC Loads

Qty	Appliance Type	Load	
19	ACCU-10 (1BR)	2912 VA	55328
2	ACCU-11 (2BR)	2912 VA	5824
		Subtotal	**61,152 VA**
		Total	**527,274 VA**
		37% Demand Factor for 21 Dwelling Units	**195,091 VA**
		Total Meter Bank Load	**195,091 VA**
		Total Meter Bank Ampacity 120/208V, 3-Phase, 4-Wire	**542 AMPS**

New Addition - TP2B (2nd Floor)

General Lighting, Small Appliance, and Laundry Loads

Qty	Room Type		
1	All 1BR & 2BR at 14892 sqft ea x 3W/sqft	44676 VA	44676
Qty	Load Type		
21	(2) Small Appliances at 1500VA ea	3000 VA	63000
		Subtotal	**107,676 VA**

Appliance Load

Qty	Appliance Type	Load	
21	Dishwasher	1200 VA	25200
21	Range	10200 VA	214200
21	Disposal	800 VA	16800
21	Hood	300 VA	6300
21	Water Heater	4600 VA	96600
		Subtotal	**359,100 VA**

HVAC Loads

Qty	Appliance Type	Load	
19	ACCU-10 (1BR)	2912 VA	55328
2	ACCU-11 (2BR)	2912 VA	5824
		Subtotal	**61,152 VA**
		Total	**527,928 VA**
		37% Demand Factor for 21 Dwelling Units	**195,333 VA**
		Total Meter Bank Load	**195,333 VA**
		Total Meter Bank Ampacity 120/208V, 3-Phase, 4-Wire	**543 AMPS**

TYPICAL 1PH PANEL SCHEDULE (2BR/1BA)

VOLTAGE: 208Y/120 MAINS 125A MCB MOUNTING: RECESSED REMARK PROVIDE TVSS
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.5				ACCU-11 (ROOF)	2
3			5.0								X					1.5					4
5	HOOD FAN		0.3					20	1	X		2	30		2.2					DVH-1 (OR DWH-4)	6
7	REFRIGERATOR (GFCI BREAKER)		0.6					20	1		X				2.2						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					1.2		LIVING ROOM RECEPTACLES (AFCI BRKR)	10
11	GARBAGE DISPOSAL (GFCI BREAKER)		0.8					20	1		X	1	20					1.4		BEDROOM 1 RECEPTACLES (AFCI BRKR)	12
13	DISHWASHER		1.2					20	1	X		1	20					1.1		BEDROOM 2 RECEPTACLES (AFCI BRKR)	14
15	SINK GFCI		0.2					20	1		X	1	20	0.3						TF-1	16
17	SMOKE DETECTOR						0.6	20	1	X		1	20	0.3						FIRE DAMPER	18
19	BIDET							30	1		X	1	20						0.2	LIGHTING	20
21	SPARE							20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.2	4.4	3.0	0.0	17.2	0.2	CONNECTED KVA 26.0	
														1.2	4.4	3.0	0.0	13.6	0.2	DEMAND KVA 19.4	
																				DEMAND AMPS 81	

TYPICAL 1PH PANEL SCHEDULE (1BR/1BA)

VOLTAGE: 208Y/120 MAINS 125A MCB MOUNTING: RECESSED REMARKS: PROVIDE TVSS
BUS SIZE: 225 AMP FAULT DUTY: 22k

No.	SERVES	LOAD (KVA) LTG	RCPT	MTR	A/C	HTG	MISC	BRKR TRIP	P	PH A	C	P	BRKR TRIP	LOAD (KVA) MISC	HTG	A/C	MTR	RCPT	LTG	SERVES	No.
1	STOVE		5.0					60	2	X		2	20			1.5				ACCU-10 (ROOF)	2
3			5.0								X					1.5					4
5	HOOD FAN		0.3					20	1	X		2	30		2.2					DVH-1 (OR DWH-4)	6
7	REFRIGERATOR (GFCI BREAKER)		0.6					20	1		X				2.2						8
9	COUNTERTOP RECEPTACLES		0.4					20	1	X		1	20					0.9		LIVING ROOM RECEPTACLES (AFCI BRKR)	10
11	GARBAGE DISPOSAL (GFCI BREAKER)		0.8					20	1		X	1	20					1.4		BEDROOM 1 RECEPTACLES (AFCI BRKR)	12
13	DISHWASHER		1.2					15	1	X		1	20							SPARE	14
15	SINK GFCI		0.2					20	1		X	1	20	0.3						TF-1	16
17	SMOKE DETECTOR						0.4	20	1	X		1	20	0.3						FIRE DAMPER	18
19	BIDET							30	1		X	1	20						0.2	LIGHTING	20
21	SPARE							20	1	X		1	20							SPARE	22
23	SPARE							20	1		X	1	20							SPARE	24
25	SPARE							20	1	X		1	20							SPARE	26
27	SPACE							-	1		X	1	-							SPACE	28
29	SPACE							-	1	X		1	-							SPACE	30
														1.0	4.4	3.0	0.0	15.8	0.2	CONNECTED KVA 24.4	
														1.0	4.4	3.0	0.0	12.9	0.2	DEMAND KVA 18.5	
																				DEMAND AMPS 77	

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STATE OF MICHIGAN
MATTHEW J. JOSEPH
ENGINEER
No. 6201064269
LICENSED PROFESSIONAL ENGINEER

REGISTRATION SEAL

KEY PLANS

SHEET TITLE
ELECTRICAL PANEL SCHEDULES - NEW ADDITION

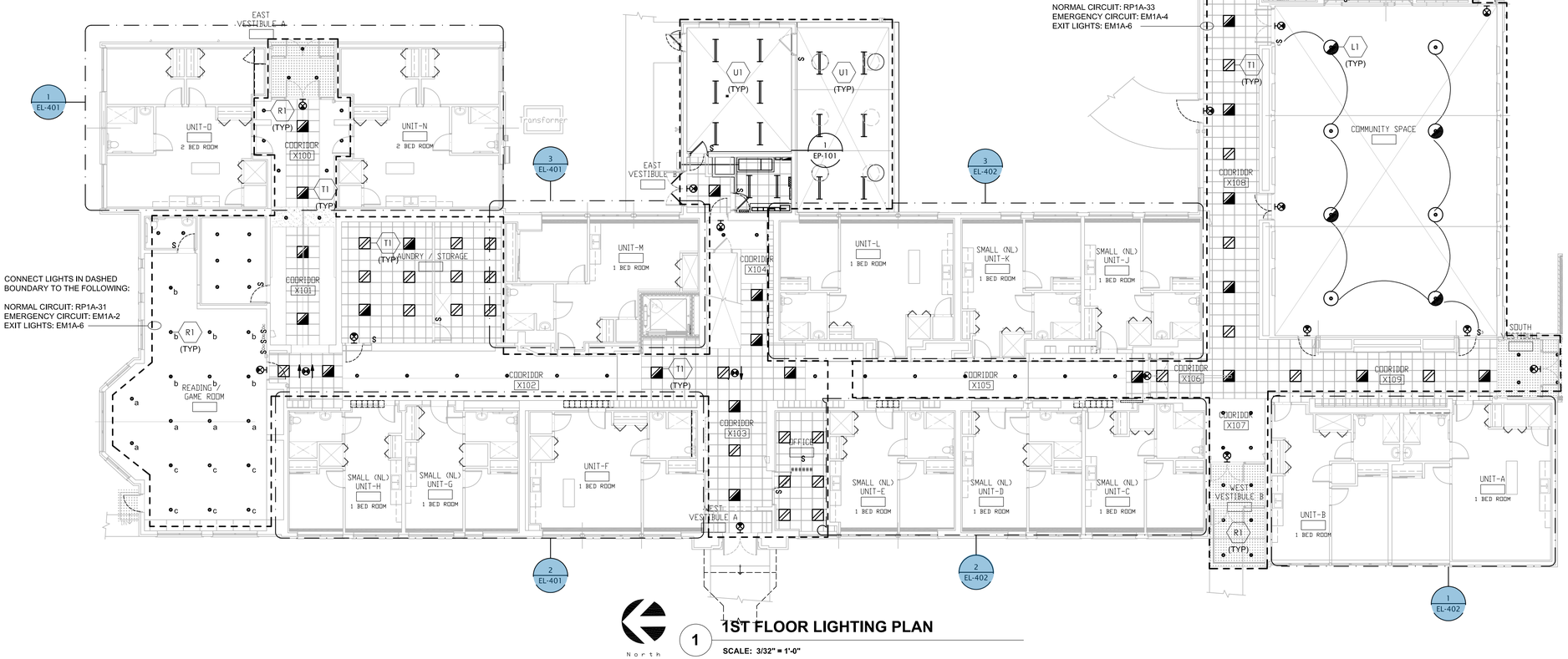
SCALE: AS NOTED

ISSUED FOR	DATE
Permits	12.20.2024
Bulletin No. 1	02.19.2025
Bulletin No. 2	03.05.2025
Bulletin No. 3	06.03.2025

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CHECKED
APPROVED

21026.00
FILE NO.

E-403
SHEET NO.



North

1 1ST FLOOR LIGHTING PLAN

SCALE: 3/32" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT CEILING TYPES AND HEIGHTS. CONTRACTORS TO COORDINATE LOCATIONS OF LIGHTING, SPEAKERS, AIR DIFFUSERS, GRILLES, SPRINKLER HEADS WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS.
3. LIMIT THE VOLTAGE DROP TO 3% FOR ALL LIGHTING BRANCH CIRCUITS AND 2% FOR ALL FEEDERS.
4. PROVIDE DEDICATED NEUTRALS FOR EACH DIMMING CIRCUIT. SHARED NEUTRALS WILL NOT BE PERMITTED FOR MULTI-CIRCUIT INSTALLATIONS. WHERE MULTIPLE CIRCUITS ARE RUN IN A COMMON RACEWAY, THE AMPACITY OF THE CONDUCTORS SHALL BE PROPERLY DERATED & CONDUIT SHALL BE SIZED PER CODE. UNDER NO CIRCUMSTANCES SHALL MORE THAN SIX (6) CURRENT CARRYING CONDUCTORS BE RUN IN A SINGLE CONDUIT. REFERENCE NEC ARTICLE AND TABLE 310.15(B) (3)(a).
5. LOWERCASE ALPHABETICAL SUBSCRIPT ON FIXTURES/DEVICES INDICATES SWITCHING ZONE WITHIN SPACE.
6. WHERE MORE THAN ONE SWITCH IS SHOWN AT ANY ONE LOCATION, GANG ALL SWITCHES UNDER ONE PLATE. PROVIDE BARRIERS BETWEEN SWITCHES CONNECTED TO DIFFERENT CIRCUITS. WHERE MORE THAN ONE DIMMER IS SHOWN AT ANY ONE LOCATION, MOUNT IN A MANNER TO GIVE THE APPEARANCE OF GANG MOUNTED UNDER ONE PLATE.
7. THE LIGHTING CIRCUITING IS DIAGRAMMATIC. PROVIDE SWITCH LEGS, UNSWITCHED PHASE WIRES AND TRAVELLERS AS NECESSARY.
8. FINAL CONNECTIONS TO LIGHT FIXTURES SHALL BE MADE WITH FLEXIBLE CONDUIT. MAXIMUM LENGTH OF FLEXIBLE CONDUIT SHALL BE 6'-0".

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STATE OF MICHIGAN
MATTHEW J. JOSEPH
ENGINEER
9201064269
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

1ST FLOOR LIGHTING PLAN
EXISTING BUILDING

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

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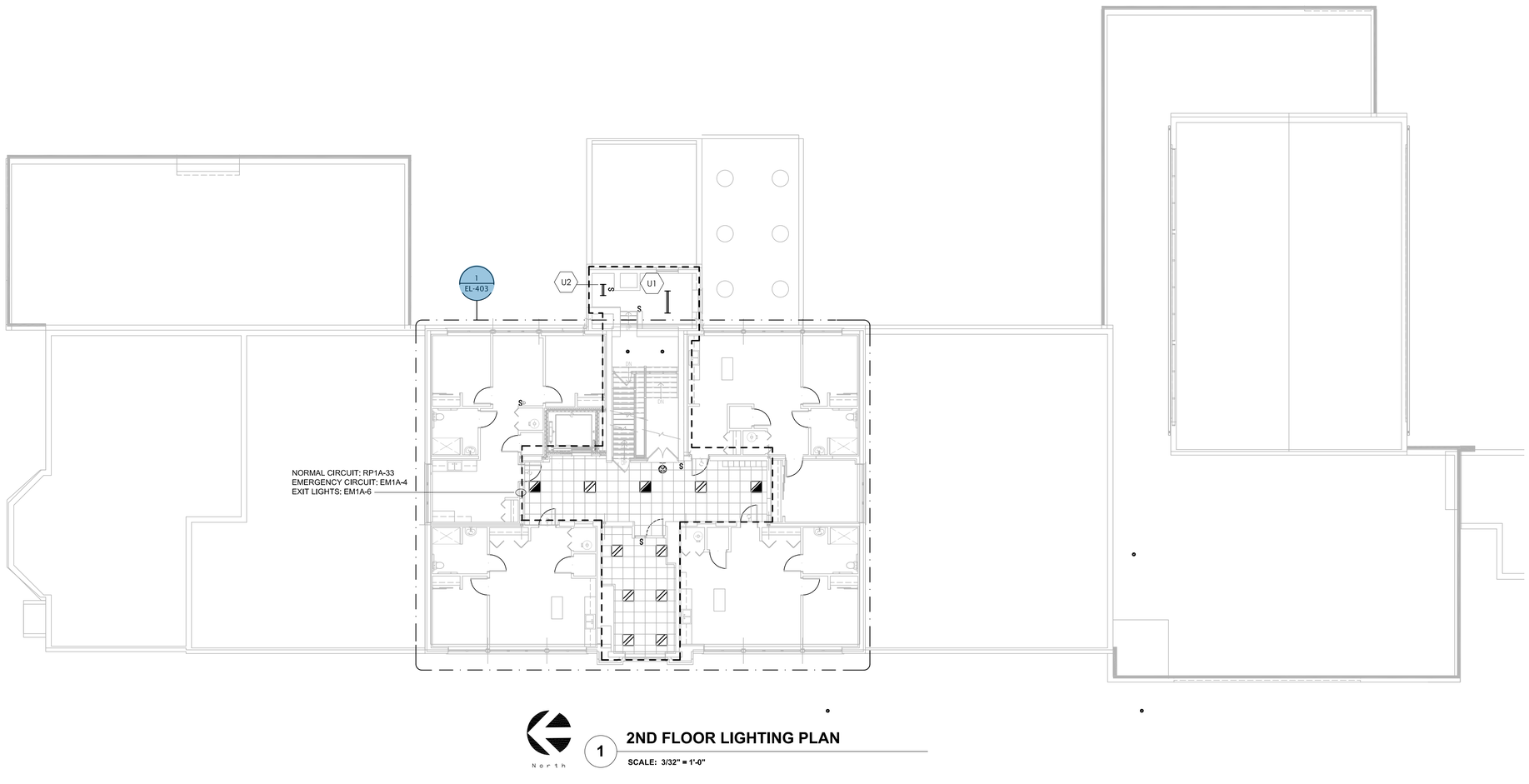
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FILE NO. 21026.00

SHEET NO. EL-101

/Volumes/emright/Shared/Projects/-SDG/23-460_SDG_John_Grace_Housing/5_Disciplines-Design/Architectural/CAD/_SD/John_Grace_SD_1.1.pln



North

1 2ND FLOOR LIGHTING PLAN

SCALE: 3/32" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT CEILING TYPES AND HEIGHTS. CONTRACTORS TO COORDINATE LOCATIONS OF LIGHTING, SPEAKERS, AIR DIFFUSERS, GRILLES, SPRINKLER HEADS WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS.
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STATE OF MICHIGAN
MATTHEW J. JOSEPH
ENGINEER
6201058269
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

2ND FLOOR LIGHTING PLAN
EXISTING BUILDING

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

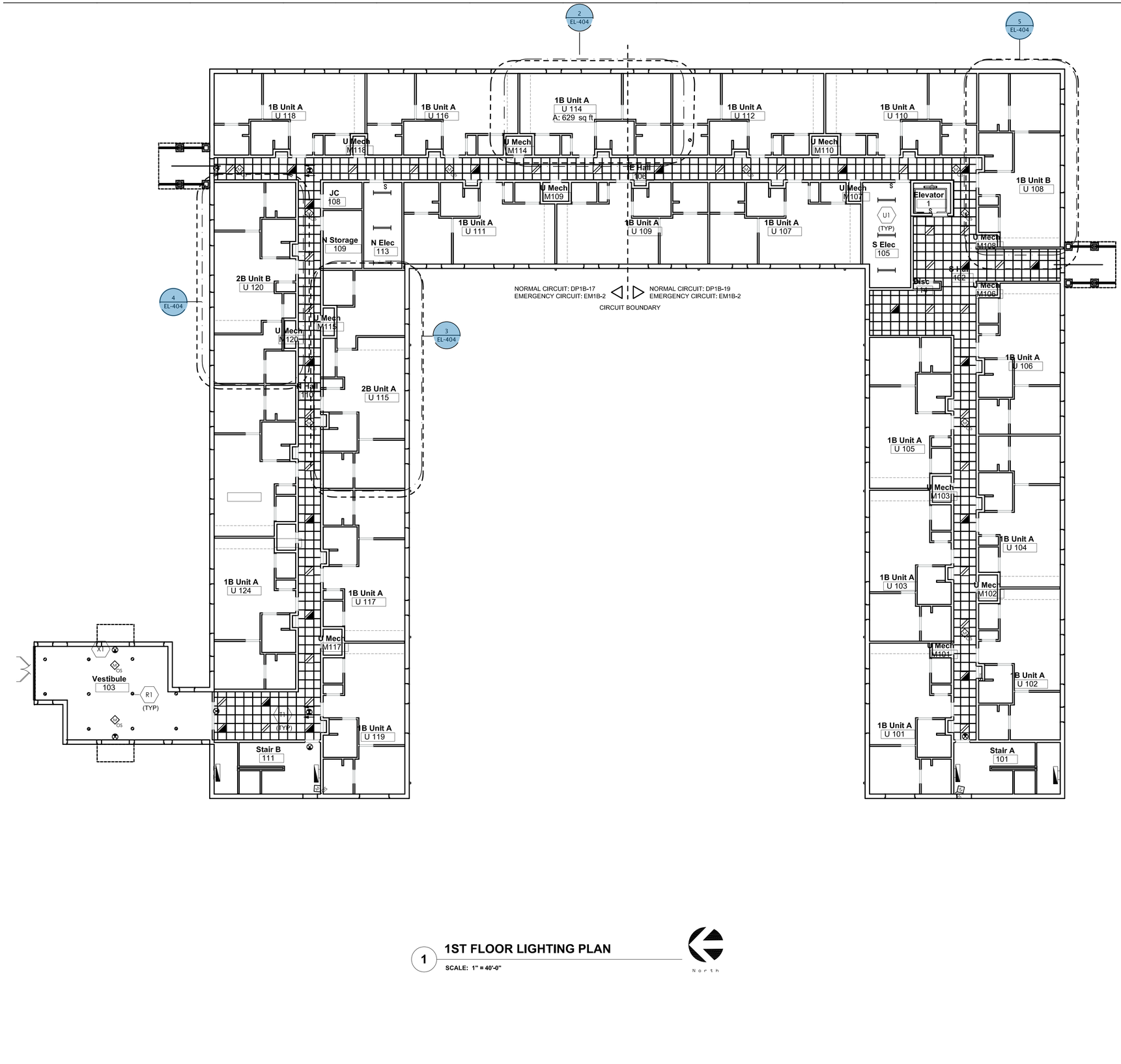
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FILE NO. 21026.00

SHEET NO. EL-102



1 1ST FLOOR LIGHTING PLAN

SCALE: 1" = 40'-0"

North

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT CEILING TYPES AND HEIGHTS. CONTRACTORS TO COORDINATE LOCATIONS OF LIGHTING, SPEAKERS, AIR DIFFUSERS, GRILLES, SPRINKLER HEADS WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS.
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MATTHEW J. JOSEPH
ENGINEER
LICENSED PROFESSIONAL ENGINEER
6201064269

KEY PLANS

SHEET TITLE
1st FLOOR LIGHTING PLA
ADDITION

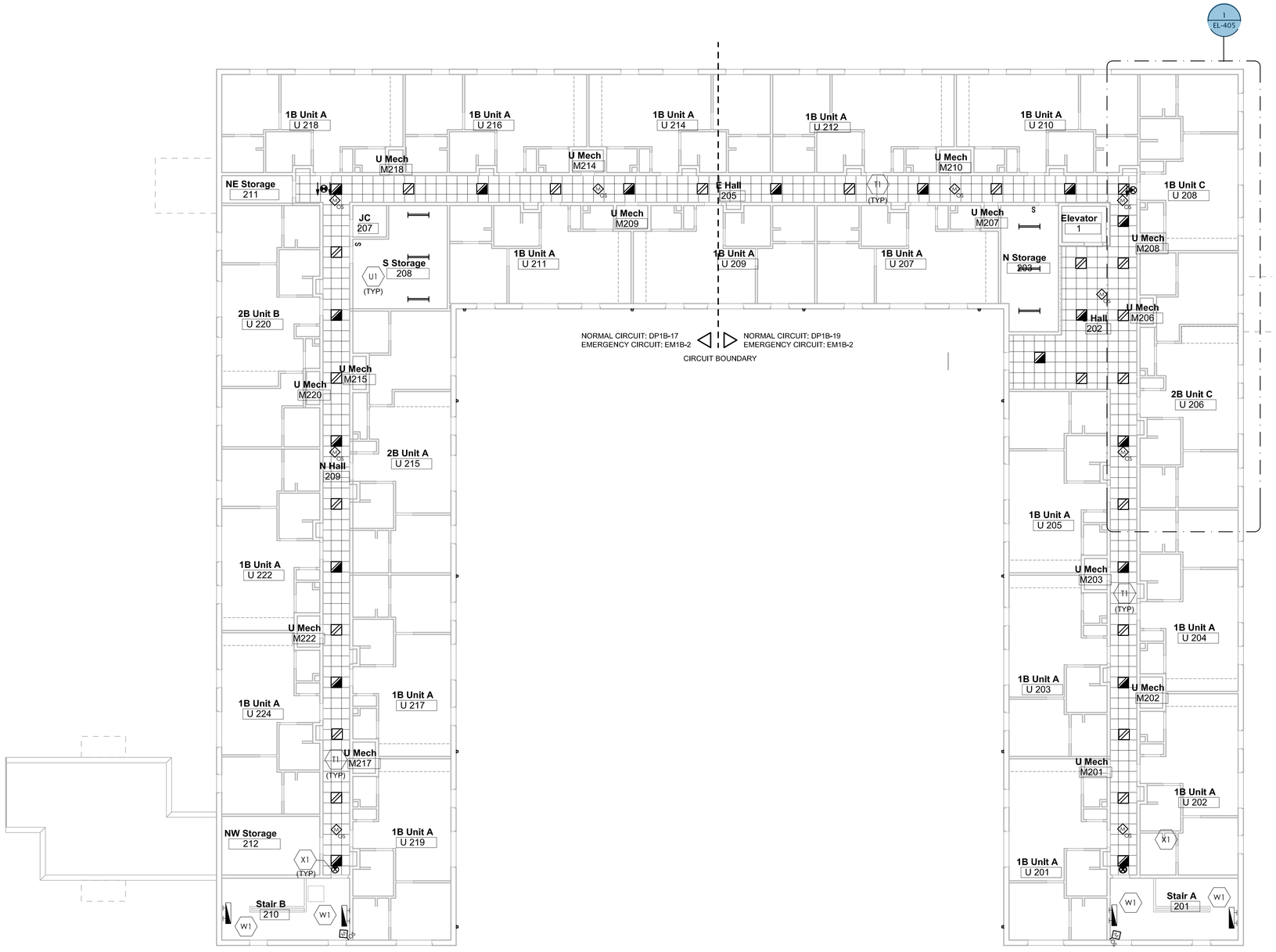
SCALE: AS NOTED

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PERMITS	12.20.24

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APPROVED:

FILE NO. 21026.00

SHEET NO. EL-103



1 1ST FLOOR LIGHTING PLAN

SCALE: 1" = 40'-0"

North

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT CEILING TYPES AND HEIGHTS. CONTRACTORS TO COORDINATE LOCATIONS OF LIGHTING, SPEAKERS, AIR DIFFUSERS, GRILLES, SPRINKLER HEADS WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS.
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MATTHEW J. JOSEPH
LICENSED PROFESSIONAL ENGINEER
6201068269

KEY PLANS

SHEET TITLE

2ND FLOOR LIGHTING PLAN - ADDITION

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

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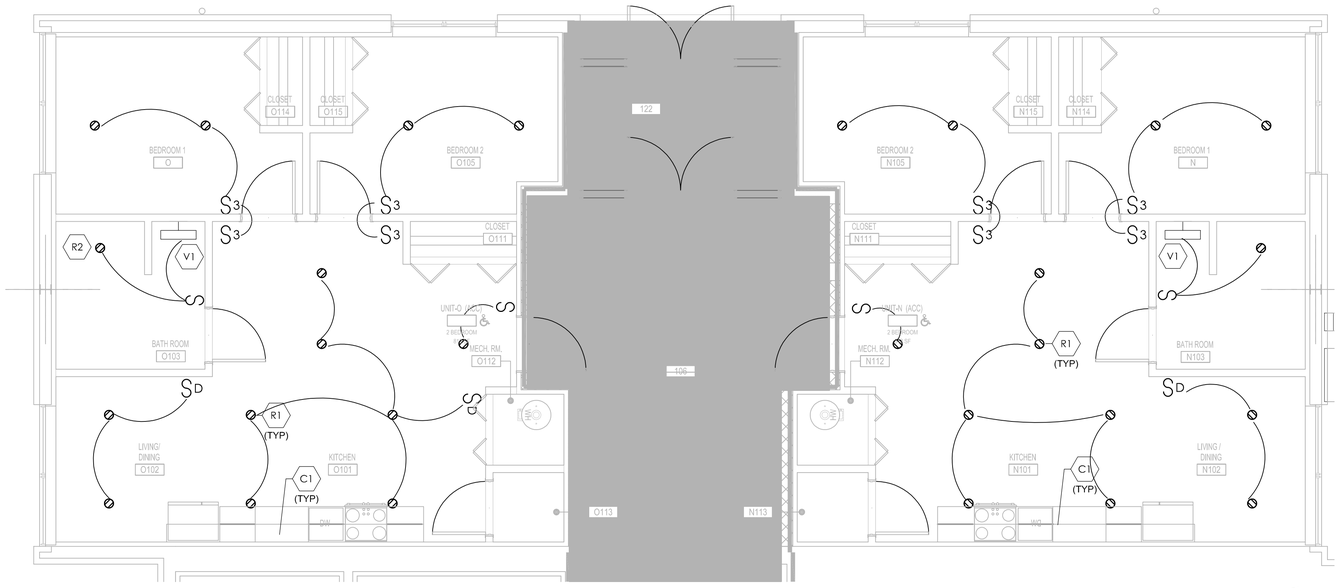
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FILE NO. 21026.00

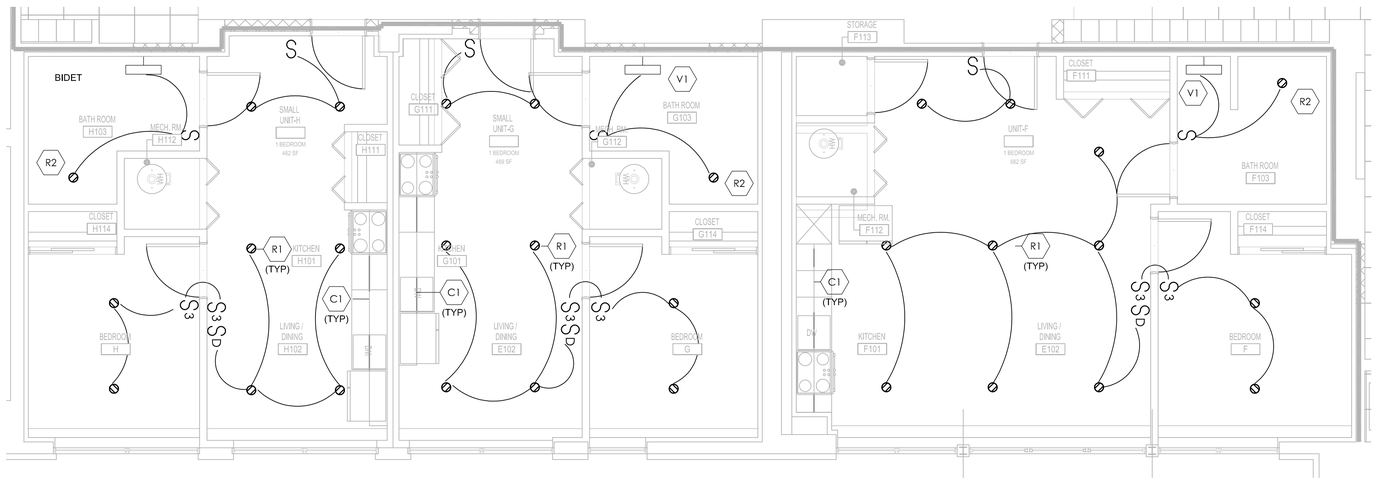
SHEET NO. EL-104

ALL LIGHTS IN EACH UNIT TO CONNECT TO CIRCUIT #18 ON UNIT PANEL



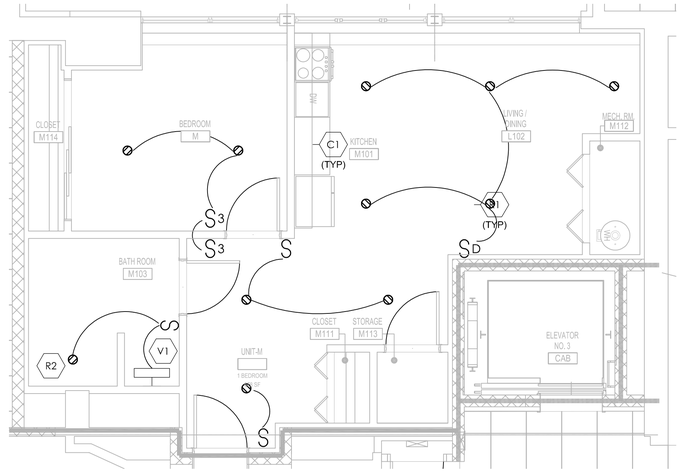
1 ENLARGED LIGHTING PLAN

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



2 ENLARGED LIGHTING PLAN

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



3 ENLARGED LIGHTING PLAN

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

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO SHEET FOR RISER DIAGRAM.
3. REFER TO SHEET SERIES FOR PANELBOARD SCHEDULES WITH CIRCUITING INFORMATION.
4. COORDINATE ALL DEVICE LOCATIONS AND MOUNTING HEIGHTS FOR APPLIANCES AND EQUIPMENT WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
5. COORDINATE FINAL LOCATION AND ANY POWER CONNECTION REQUIREMENTS OF MECHANICAL AND PLUMBING EQUIPMENT PRIOR TO INSTALLATION.
6. VOLTAGE DROP SHALL BE LIMITED TO LESS THAN 3% FOR ALL BRANCH CIRCUITS AND 2% FOR ALL FEEDERS.

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23660 Vista Way, South Lyon, MI 48178

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KEY PLANS

SHEET TITLE

1st FLOOR ENLARGED LIGHTING PLANS - NORTH UNITS

SCALE: AS NOTED

ISSUED FOR	DATE

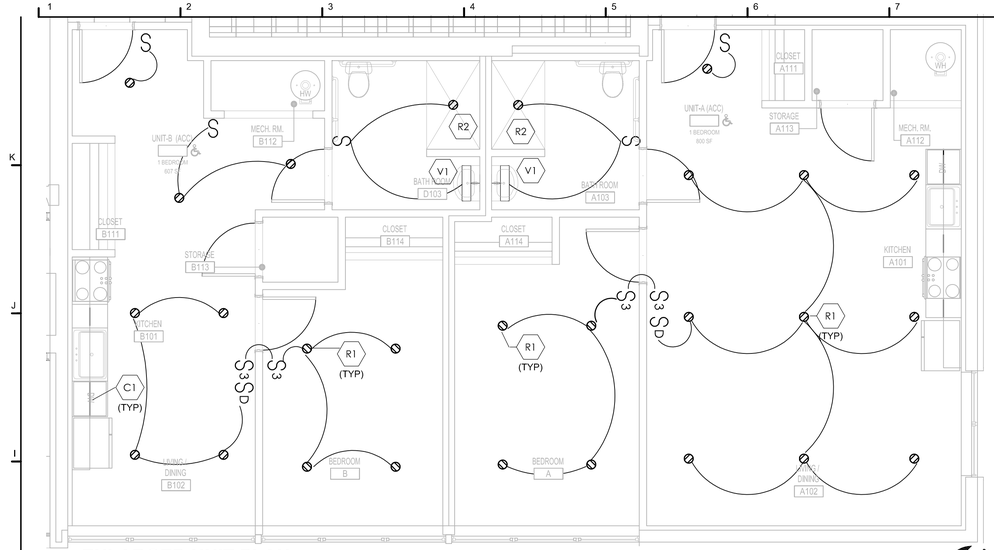
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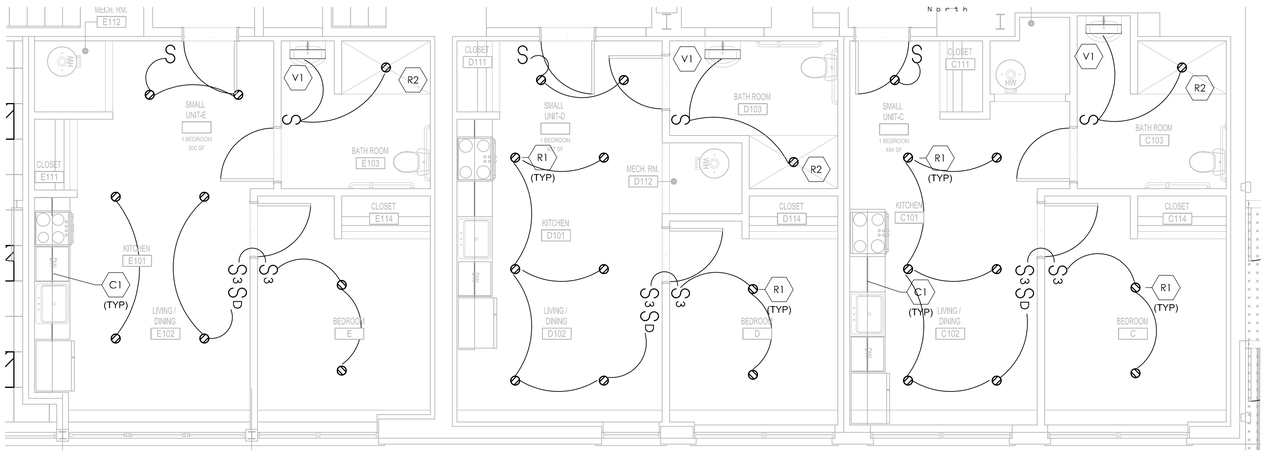
SHEET NO. EL-401



1 ENLARGED UNIT PLAN

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

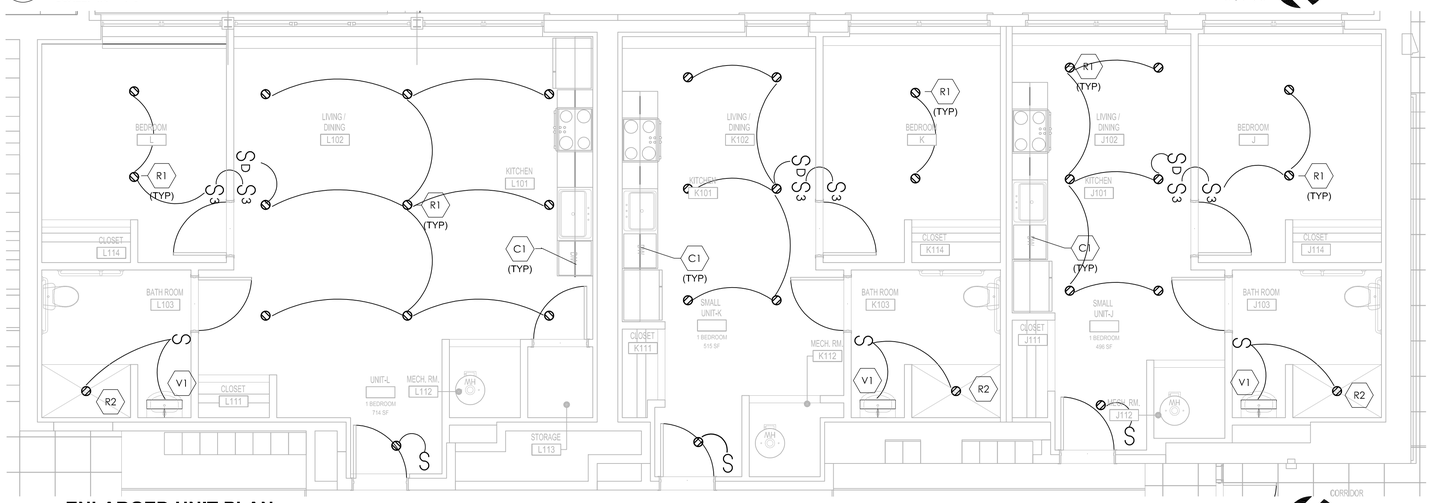
North



2 ENLARGED UNIT PLAN

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

North



3 ENLARGED UNIT PLAN

GENERAL NOTES

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2. REFER TO SHEET FOR RISER DIAGRAM.
3. REFER TO SHEET SERIES FOR PANELBOARD SCHEDULES WITH CIRCUITING INFORMATION.
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ALL LIGHTS IN EACH UNIT TO CONNECT TO CIRCUIT #18 ON UNIT PANEL

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STATE OF MICHIGAN
MATTHEW J. JOSEPH
ENGINEER
6201061269
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

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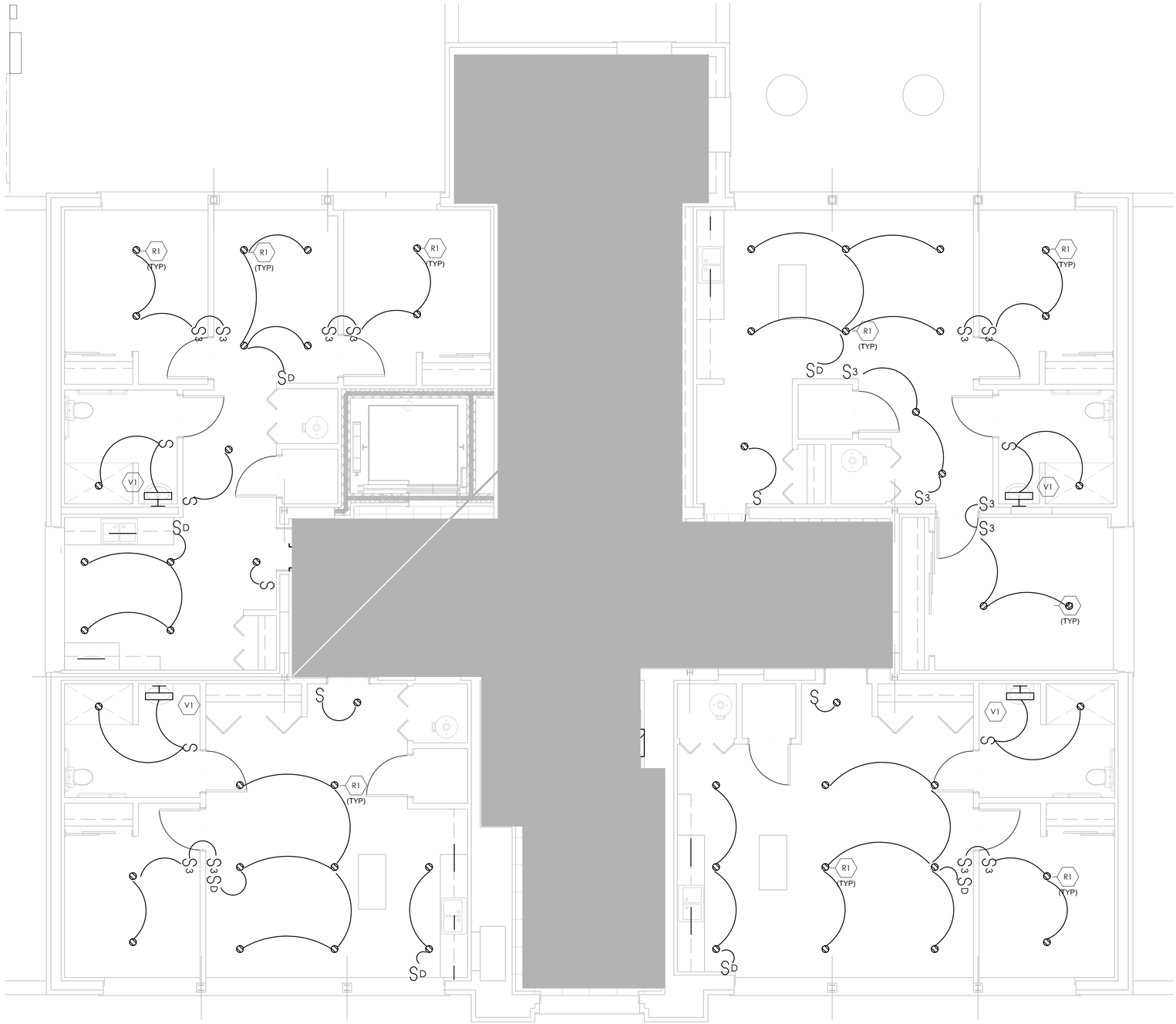
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FILE NO.

SHEET NO.



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GENERAL NOTES

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1 ENLARGED UNIT PLAN

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

North

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6201064269
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE
2ND FLOOR ENLARGED LIGHTING PLANS

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

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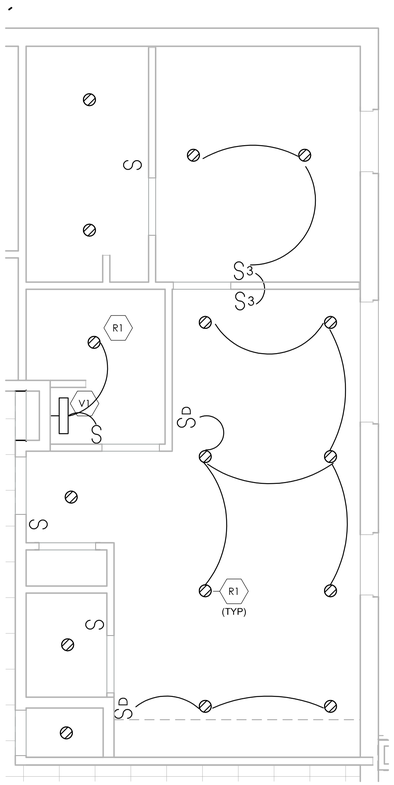
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FILE NO. 21026.00

SHEET NO. EL-403

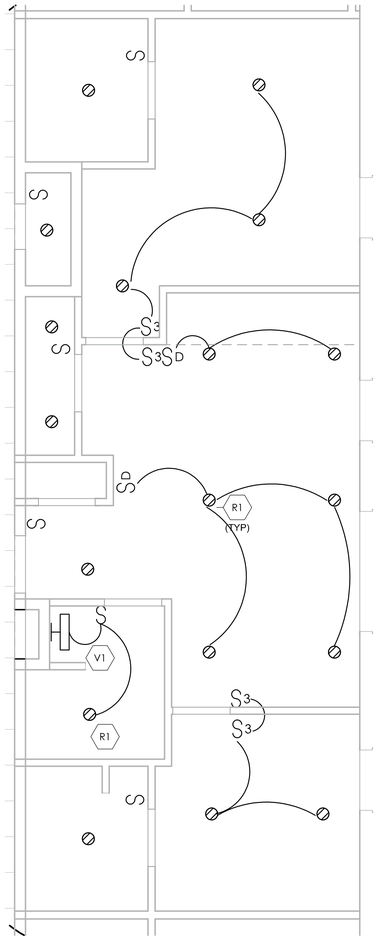
ALL LIGHTS IN EACH UNIT TO CONNECT TO CIRCUIT #20 ON UNIT PANEL



North

1 1B UNIT B - 1BR CORNER

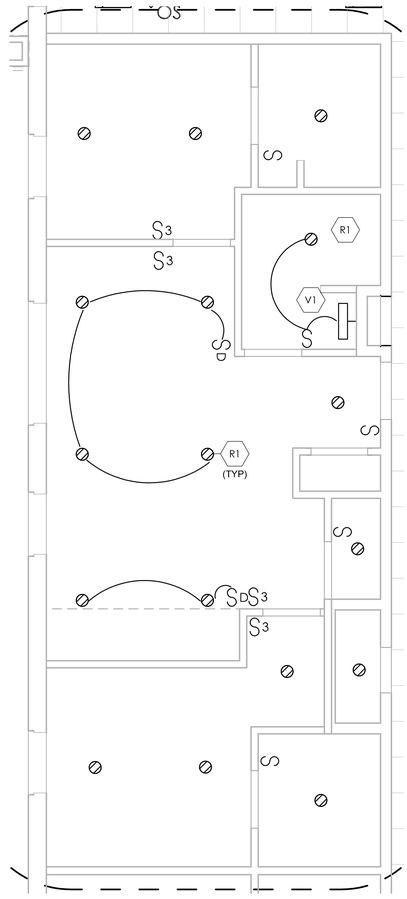
SCALE: 1/4" = 1'-0"



North

3 2B UNIT A - 2BR

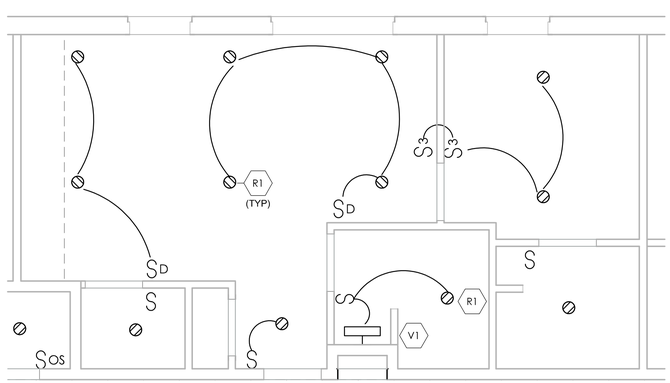
SCALE: 1/4" = 1'-0"



North

4 2B UNIT B - 2BR

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



North

2 1B UNIT A - 1BR

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

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT CEILING TYPES AND HEIGHTS. CONTRACTORS TO COORDINATE LOCATIONS OF LIGHTING, SPEAKERS, AIR DIFFUSERS, GRILLES, SPRINKLER HEADS WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS.
3. LIMIT THE VOLTAGE DROP TO 3% FOR ALL LIGHTING BRANCH CIRCUITS AND 2% FOR ALL FEEDERS.
4. PROVIDE DEDICATED NEUTRALS FOR EACH DIMMING CIRCUIT. SHARED NEUTRALS WILL NOT BE PERMITTED FOR MULTI-CIRCUIT INSTALLATIONS. WHERE MULTIPLE CIRCUITS ARE RUN IN A COMMON RACEWAY, THE AMPACITY OF THE CONDUCTORS SHALL BE PROPERLY DERATED & CONDUIT SHALL BE SIZED PER CODE. UNDER NO CIRCUMSTANCES SHALL MORE THAN SIX (6) CURRENT CARRYING CONDUCTORS BE RUN IN A SINGLE CONDUIT. REFERENCE NEC ARTICLE AND TABLE 310.15(B) (3)(a).
5. LOWERCASE ALPHABETICAL SUBSCRIPT ON FIXTURES/DEVICES INDICATES SWITCHING ZONE WITHIN SPACE.
6. WHERE MORE THAN ONE SWITCH IS SHOWN AT ANY ONE LOCATION, GANG ALL SWITCHES UNDER ONE PLATE. PROVIDE BARRIERS BETWEEN SWITCHES CONNECTED TO DIFFERENT CIRCUITS. WHERE MORE THAN ONE DIMMER IS SHOWN AT ANY ONE LOCATION, MOUNT IN A MANNER TO GIVE THE APPEARANCE OF GANG MOUNTED UNDER ONE PLATE.
7. THE LIGHTING CIRCUITING IS DIAGRAMMATIC. PROVIDE SWITCH LEGS, UNSWITCHED PHASE WIRES AND TRAVELLERS AS NECESSARY.
8. FINAL CONNECTIONS TO LIGHT FIXTURES SHALL BE MADE WITH FLEXIBLE CONDUIT. MAXIMUM LENGTH OF FLEXIBLE CONDUIT SHALL BE 6'-0".

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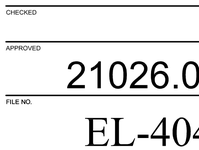
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23048 Vista Way, South Lyon, MI 48178

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KEY PLANS

SHEET TITLE

TYPICAL UNIT LIGHTING PLANS - ADDITION

SCALE: AS NOTED

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PERMITS	12.20.24

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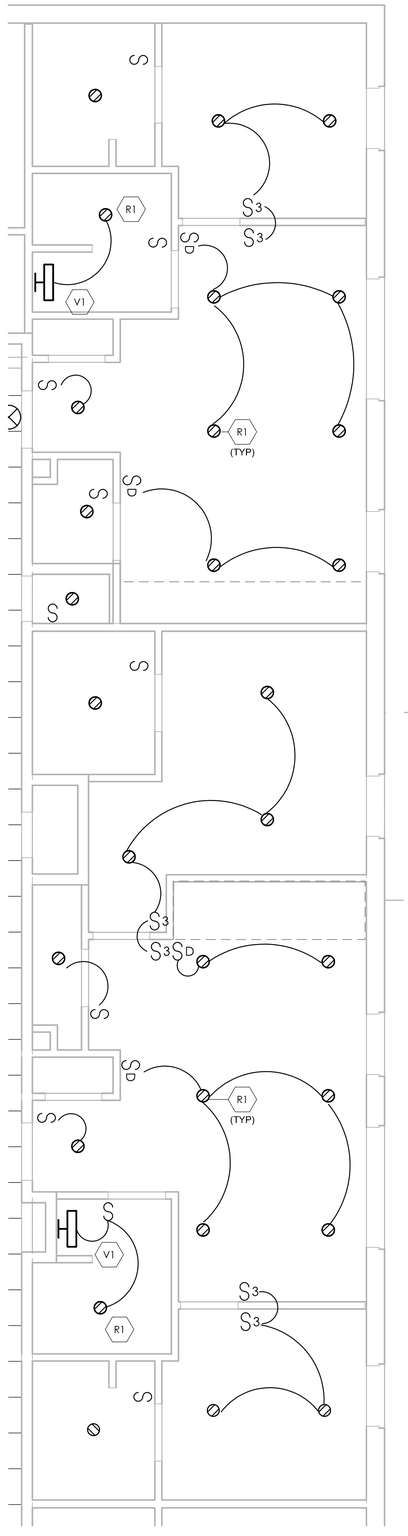
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FILE NO.

EL-404
SHEET NO.

ALL LIGHTS IN EACH UNIT TO CONNECT TO CIRCUIT #20 ON UNIT PANEL



North

1 **2B UNIT B - 2BR**

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

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO SHEET FOR RISER DIAGRAM.
3. REFER TO SHEET SERIES FOR PANELBOARD SCHEDULES WITH CIRCUITING INFORMATION.
4. COORDINATE ALL DEVICE LOCATIONS AND MOUNTING HEIGHTS FOR APPLIANCES AND EQUIPMENT WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
5. COORDINATE FINAL LOCATION AND ANY POWER CONNECTION REQUIREMENTS OF MECHANICAL AND PLUMBING EQUIPMENT PRIOR TO INSTALLATION.
6. VOLTAGE DROP SHALL BE LIMITED TO LESS THAN 3% FOR ALL BRANCH CIRCUITS AND 2% FOR ALL FEEDERS.

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MATTHEW J. JOSEPH
ENGINEER
LICENSED PROFESSIONAL ENGINEER
No. 6201062269

KEY PLANS

SHEET TITLE
ENLARGED LIGHTING PLANS - ADDITION

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

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SHEET NO.

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KEYNOTES

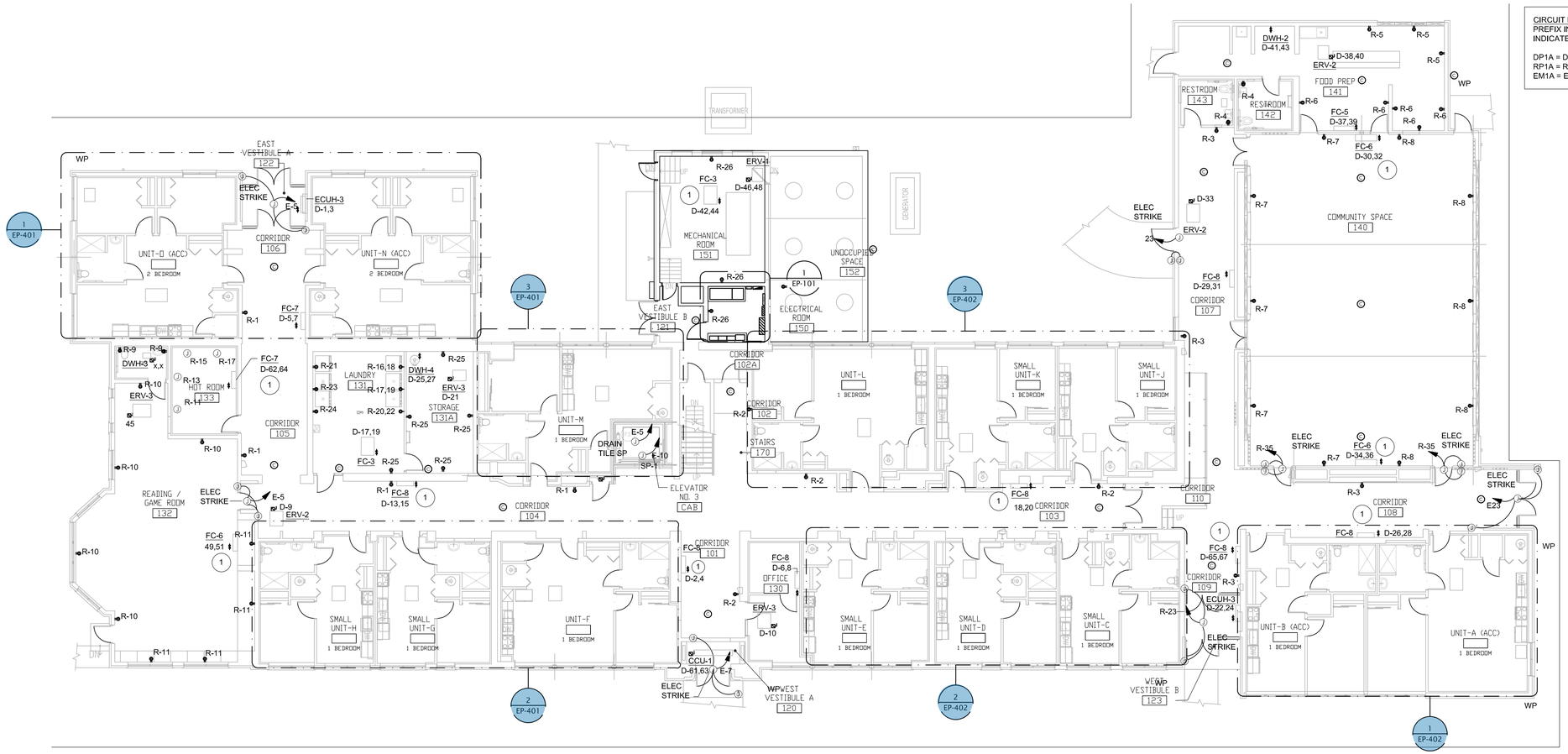
(1) FC IS SERVED BY ACCU ON ROOF TOP. POWER AND CONTROL CABLING FROM ACCU TO FC WITHIN IS PROVIDED BY MECHANICAL TRADES. ASSOCIATED ROOF ACCU IS FED FROM UNIT PANEL

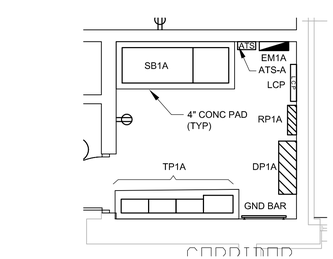
GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO SHEET FOR RISER DIAGRAM.
3. REFER TO SHEET SERIES FOR PANELBOARD SCHEDULES WITH CIRCUITING INFORMATION.
4. COORDINATE ALL DEVICE LOCATIONS AND MOUNTING HEIGHTS FOR APPLIANCES AND EQUIPMENT WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
5. COORDINATE FINAL LOCATION AND ANY POWER CONNECTION REQUIREMENTS OF MECHANICAL AND PLUMBING EQUIPMENT PRIOR TO INSTALLATION.
6. VOLTAGE DROP SHALL BE LIMITED TO LESS THAN 3% FOR ALL BRANCH CIRCUITS AND 2% FOR ALL FEEDERS.

CIRCUIT LEGEND:
PREFIX INDICATES PANEL AND "x" INDICATES CIRCUIT NUMBER

DP1A = D-x
RP1A = R-x
EM1A = E-x





North

1 ENLARGED ELEC RM

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

North

1 1ST FLOOR POWER PLAN

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

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MATTHEW J. JOSEPH
LICENSED PROFESSIONAL ENGINEER
6201061269

KEY PLANS

SHEET TITLE
1st FLOOR PLAN - EXISTING

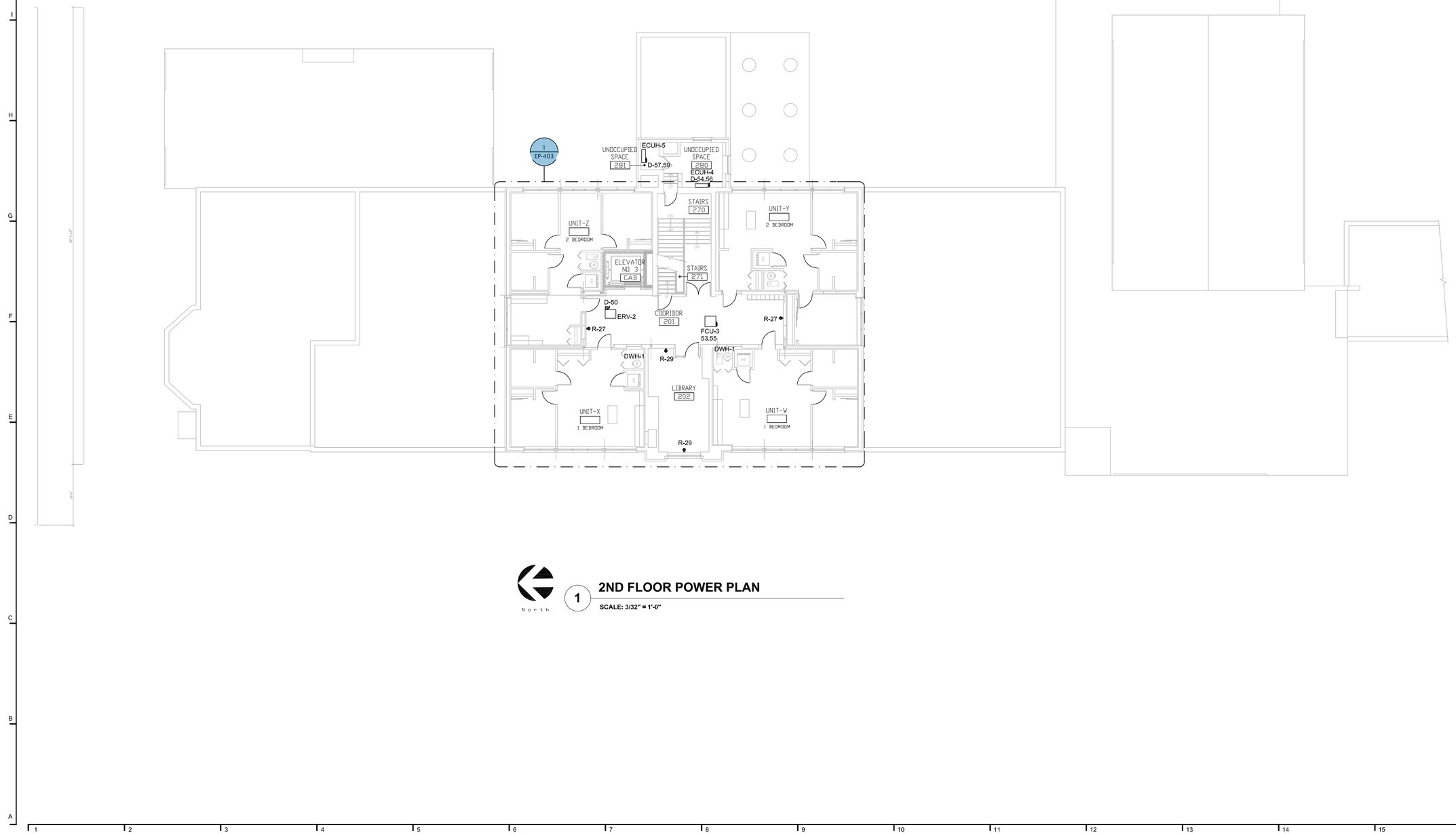
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SHEET NO. EP-101



CIRCUIT LEGEND:
PREFIX INDICATES PANEL AND "x" INDICATES CIRCUIT NUMBER

DP1A = D-x
RP1A = R-x
EM1A = E-x

North

1 2ND FLOOR POWER PLAN

SCALE: 3/32" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER
6201063269

KEY PLANS

SHEET TITLE
2nd FLOOR POWER PLAN EXISTING

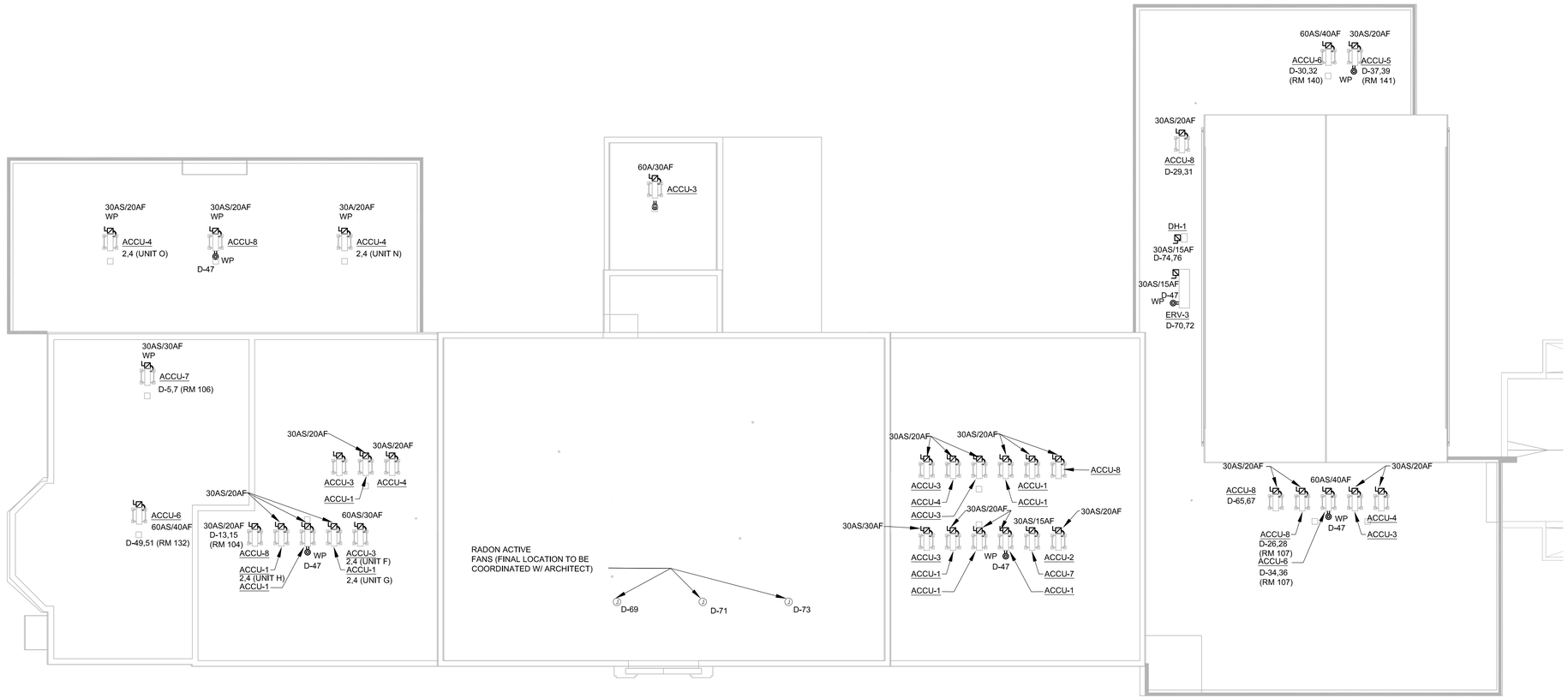
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SHEET NO. EP-102



North

1 ROOF POWER PLAN

SCALE: 3/32" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. AIR-COOLED CONDENSING UNIT (ACCU) NUMBERING TO CORRESPOND WITH FAN COIL (FC) SERVING SPACE. ACCU TO BE FED FROM EITHER TENANT OR HOUSE PANEL. CONNECTION FROM ELECTRICAL PANEL TO BE ROUTED IN PARALLEL WITH INTERCONNECTING REFRIGERANT, POWER, CONTROL CABLING/PIPING BY MECHANICAL TRADES. REFER TO MECHANICAL 500 SERIES SHEETS FOR MORE INFORMATION.

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ENGINEER
6201064269
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

ROOF POWER PLAN

SCALE: AS NOTED

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PERMITS	12.20.24

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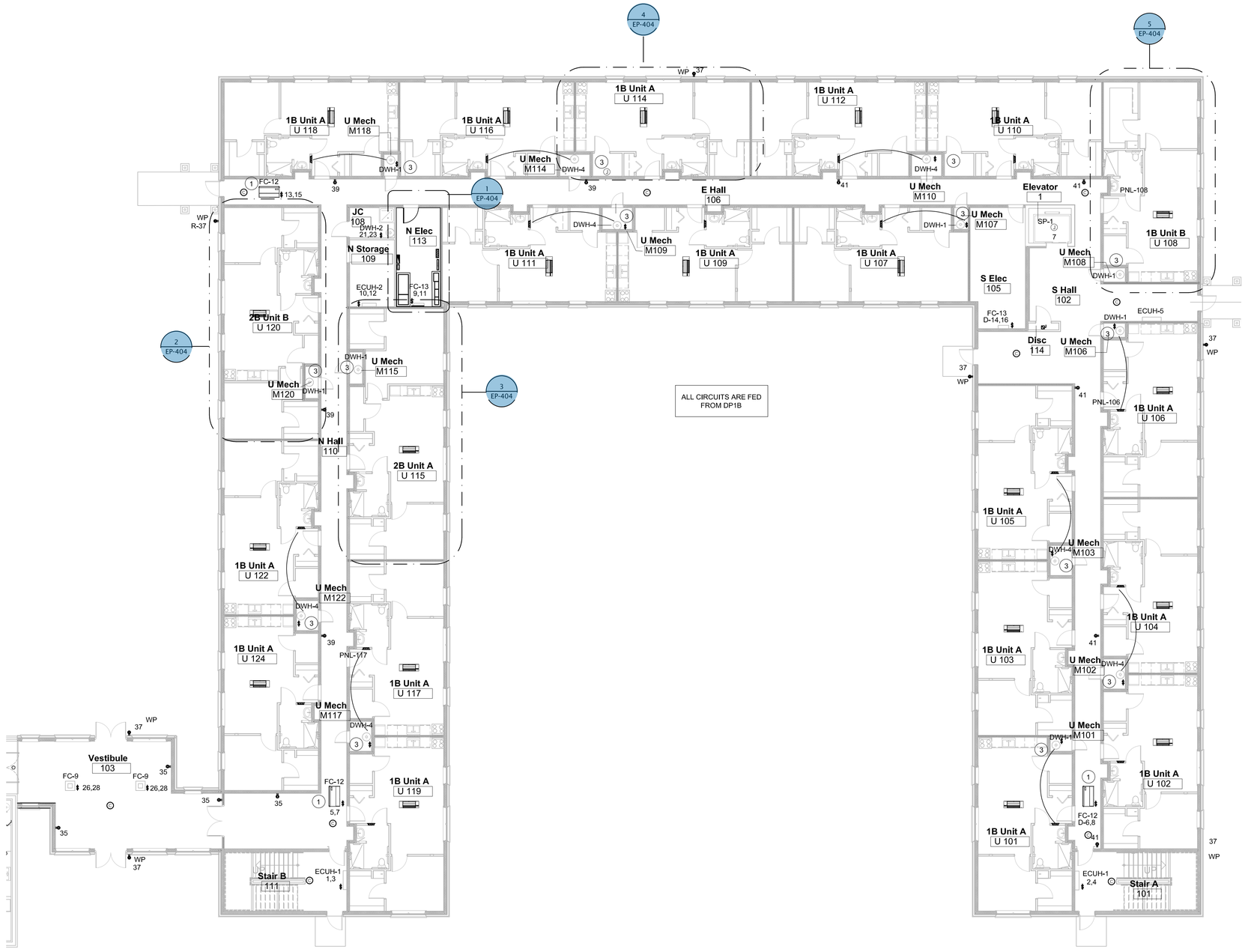
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SHEET NO.

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1 1ST FLOOR POWER PLAN

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

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO SHEET E-004 FOR RISER DIAGRAM.
3. REFER TO "400" SERIES SHEETS FOR PANELBOARD SCHEDULES WITH CIRCUITING INFORMATION.
4. COORDINATE ALL DEVICE LOCATIONS AND MOUNTING HEIGHTS FOR APPLIANCES AND EQUIPMENT WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
5. COORDINATE FINAL LOCATION AND ANY POWER CONNECTION REQUIREMENTS OF MECHANICAL AND PLUMBING EQUIPMENT PRIOR TO INSTALLATION.
6. VOLTAGE DROP SHALL BE LIMITED TO LESS THAN 3% FOR ALL BRANCH CIRCUITS AND 2% FOR ALL FEEDERS.

KEYNOTES

1. FC IS SERVED BY ACCU ON ROOF TOP. POWER AND CONTROL CABLING FROM ACCU TO FC WITHIN IS PROVIDED BY MECHANICAL TRADES. ASSOCIATED ROOF ACCU IS FED FROM UNIT PANEL
2. COORDINATE ACCU ROUTING TO ASSOCIATED FC UNIT ON SECOND AND FIRST LEVELS. ROUTING TO RUN IN PARALLEL WITH ACCU CONTROL AND POWER CABLING BY MECHANICAL TRADES.
3. FEED DWH FROM PANEL AS SHOWN. (SOME DWHs, SUCH AS DWH-4 SERVES TWO UNITS; CIRCUIT TO UNIT PANEL AS SHOWN.

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ENGINEER
NO. 6201062669
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE
1st FLOOR POWER PLAN ADDITION

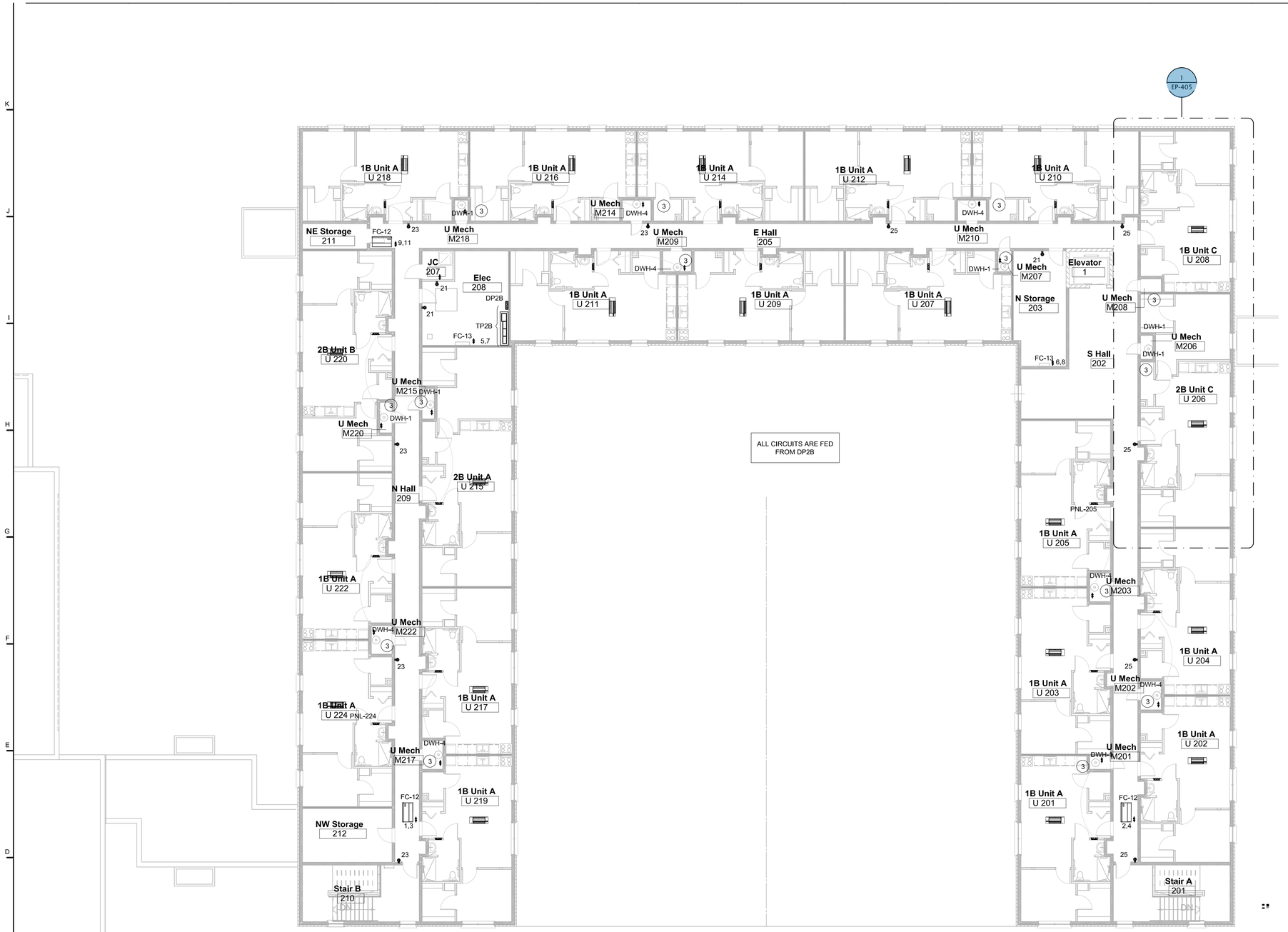
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1 **2ND FLOOR POWER PLAN**

SCALE: 3/32" = 1'-0"

North

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO SHEET E-004 FOR RISER DIAGRAM.
3. REFER TO "400" SERIES SHEETS FOR PANELBOARD SCHEDULES WITH CIRCUITING INFORMATION.
4. COORDINATE ALL DEVICE LOCATIONS AND MOUNTING HEIGHTS FOR APPLIANCES AND EQUIPMENT WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
5. COORDINATE FINAL LOCATION AND ANY POWER CONNECTION REQUIREMENTS OF MECHANICAL AND PLUMBING EQUIPMENT PRIOR TO INSTALLATION.
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KEYNOTES

1. FC IS SERVED BY ACCU ON ROOF TOP. POWER AND CONTROL CABLING FROM ACCU TO FC WITHIN IS PROVIDED BY MECHANICAL TRADES. ASSOCIATED ROOF ACCU IS FED FROM UNIT PANEL
2. COORDINATE ACCU ROUTING TO ASSOCIATED FC UNIT ON SECOND AND FIRST LEVELS. ROUTING TO RUN IN PARALLEL WITH ACCU CONTROL AND POWER CABLING BY MECHANICAL TRADES.
3. FEED DWH FROM PANEL AS SHOWN. (SOME DWHs, SUCH AS DWH-4 SERVES TWO UNITS; CIRCUIT TO UNIT PANEL AS SHOWN.

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LICENSED PROFESSIONAL ENGINEER
6201064269

KEY PLANS

SHEET TITLE

2nd FLOOR POWER PLAN ADDITION

SCALE: AS NOTED

ISSUED FOR	DATE

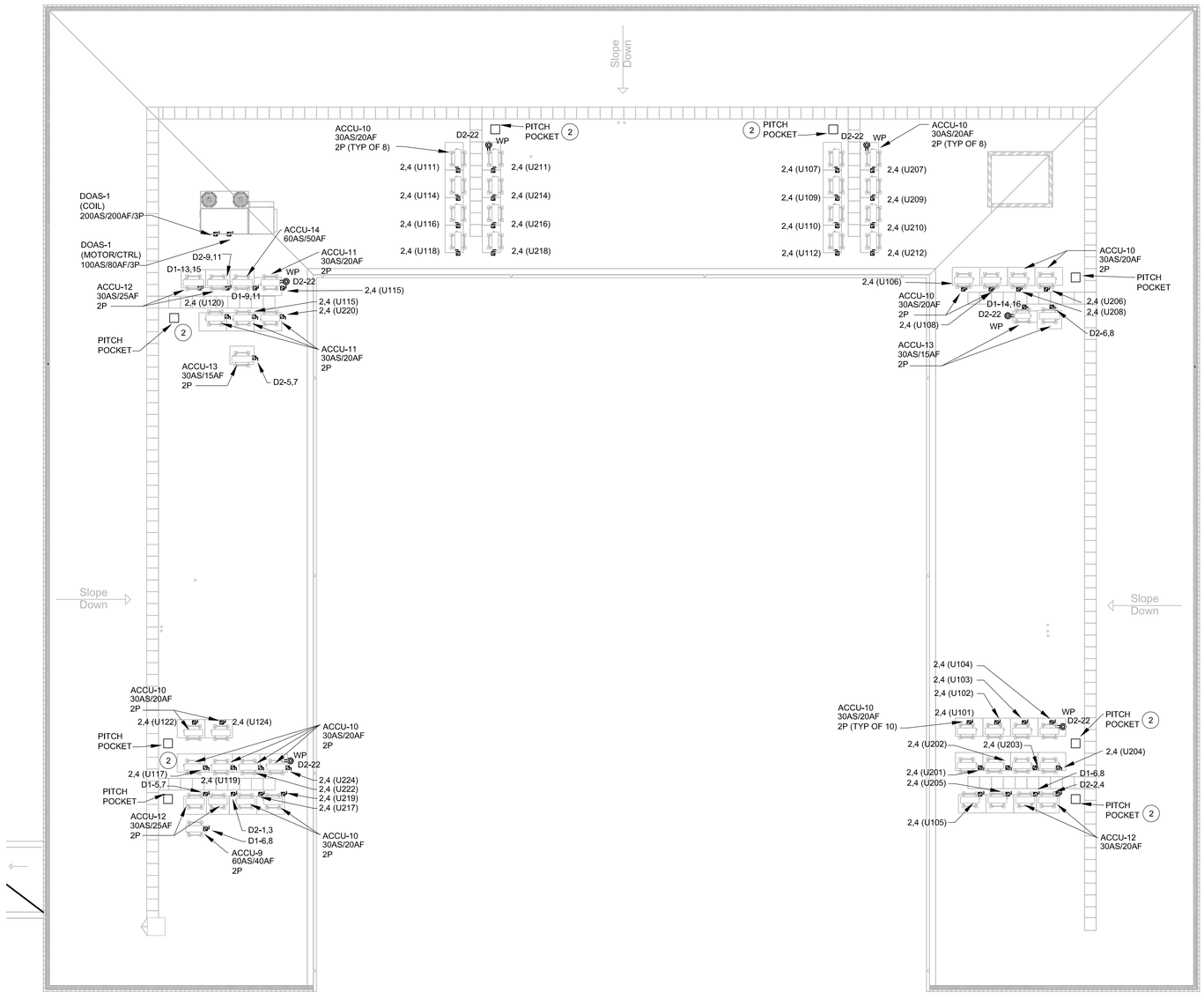
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FILE NO.

EP-105
SHEET NO.



North

1 ROOF POWER PLAN

SCALE: 3/32" = 1'-0"

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO SHEET E-004 FOR RISER DIAGRAM.
3. REFER TO "400" SERIES SHEETS FOR PANELBOARD SCHEDULES WITH CIRCUITING INFORMATION.
4. COORDINATE ALL DEVICE LOCATIONS AND MOUNTING HEIGHTS FOR APPLIANCES AND EQUIPMENT WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
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6. VOLTAGE DROP SHALL BE LIMITED TO LESS THAN 3% FOR ALL BRANCH CIRCUITS AND 2% FOR ALL FEEDERS.

CIRCUIT LEGEND:
PREFIX INDICATES PANEL AND "x" INDICATES CIRCUIT NUMBER

DP1B = D1-x
DP2B = D2-x
EM1B= E-x

"2,4" INDICATES CIRCUIT ON UNIT PANELBOARD AND "xxx" INDICATES THE UNIT ROOM NUMBER.

2,4 (Uxxx)

KEYNOTES

1. FC IS SERVED BY ACCU ON ROOF TOP. POWER AND CONTROL CABLING FROM ACCU TO FC WITHIN IS PROVIDED BY MECHANICAL TRADES. ASSOCIATED ROOF ACCU IS FED FROM UNIT PANEL
2. COORDINATE ACCU ROUTING TO ASSOCIATED FC UNIT ON SECOND AND FIRST LEVELS. ROUTING TO RUN IN PARALLEL WITH ACCU CONTROL AND POWER CABLING BY MECHANICAL TRADES.
3. FEED DWH FROM PANEL AS SHOWN. (SOME DWHs, SUCH AS DWH-4 SERVES TWO UNITS; CIRCUIT TO UNIT PANEL AS SHOWN.

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ENGINEER
6201061269
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

ROOF POWER PLAN ADDITION

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

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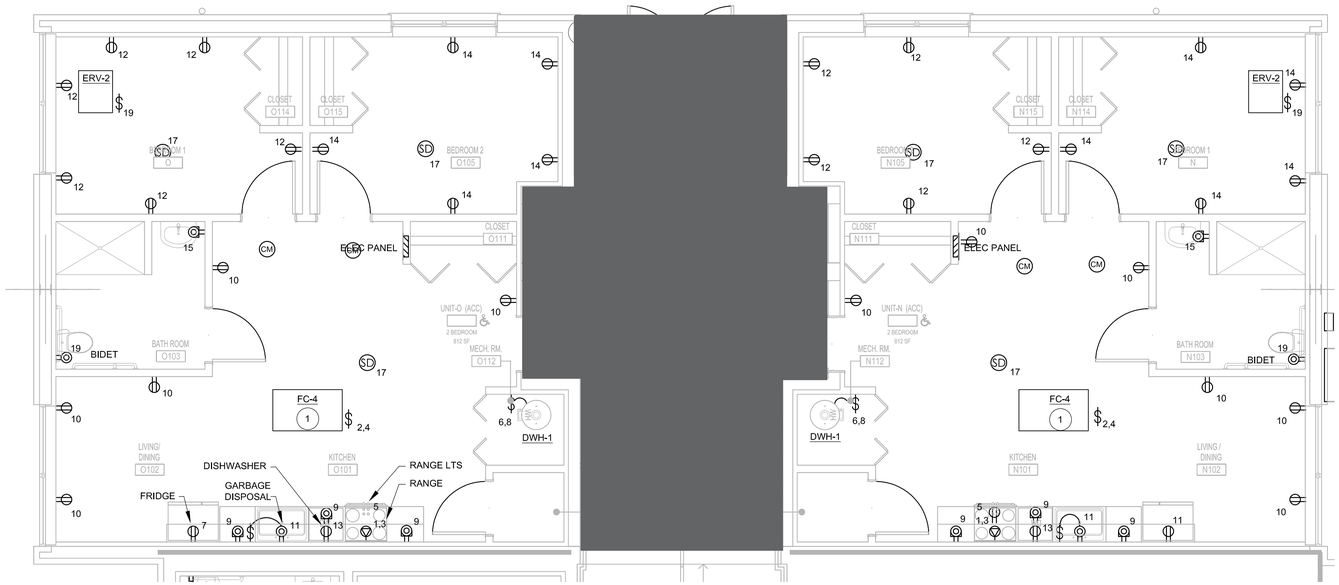
SHEET NO. EP-106

KEYNOTES

1. FC IS SERVED BY ACCU ON ROOF TOP. POWER AND CONTROL CABLING FROM ACCU TO FC WITHIN IS PROVIDED BY MECHANICAL TRADES. ASSOCIATED ROOF ACCU IS FED FROM UNIT PANEL

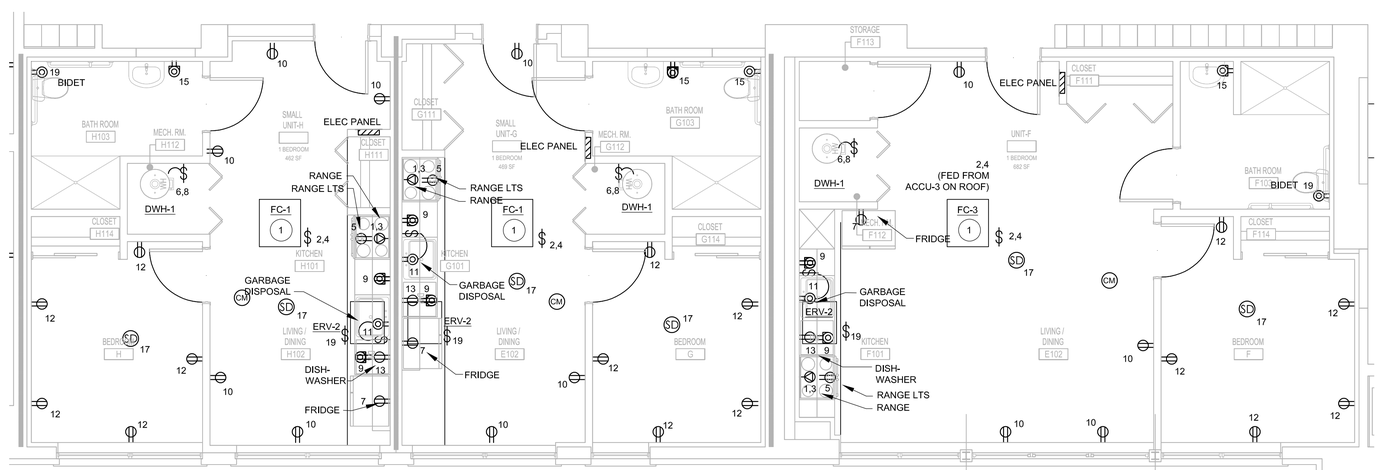
GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO SHEET FOR RISER DIAGRAM.
3. REFER TO SHEET SERIES FOR PANELBOARD SCHEDULES WITH CIRCUITING INFORMATION.
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5. COORDINATE FINAL LOCATION AND ANY POWER CONNECTION REQUIREMENTS OF MECHANICAL AND PLUMBING EQUIPMENT PRIOR TO INSTALLATION.
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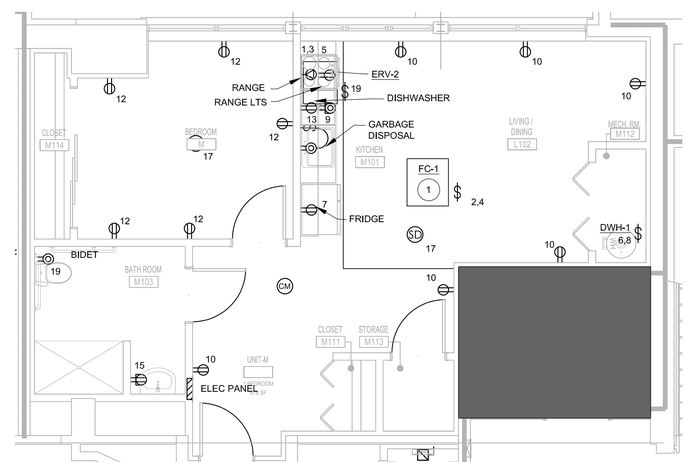
1 ENLARGED ROOMS

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



2 ENLARGED ROOMS

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



3 ENLARGED ROOMS

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

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MATTHEW J. JOSEPH
LICENSED PROFESSIONAL ENGINEER
6201068269

KEY PLANS

SHEET TITLE

1st FLOOR ENLARGED POWER PLANS - NORTH UNITS

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

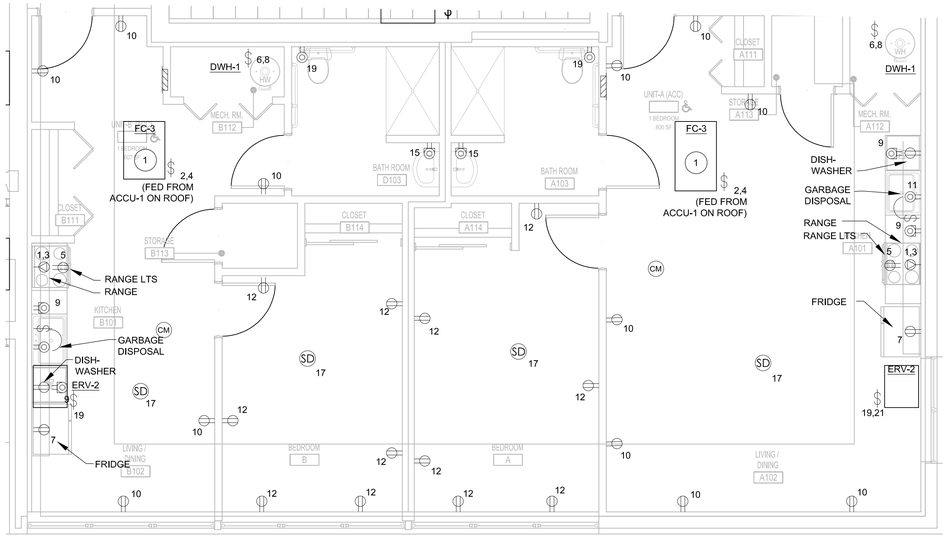
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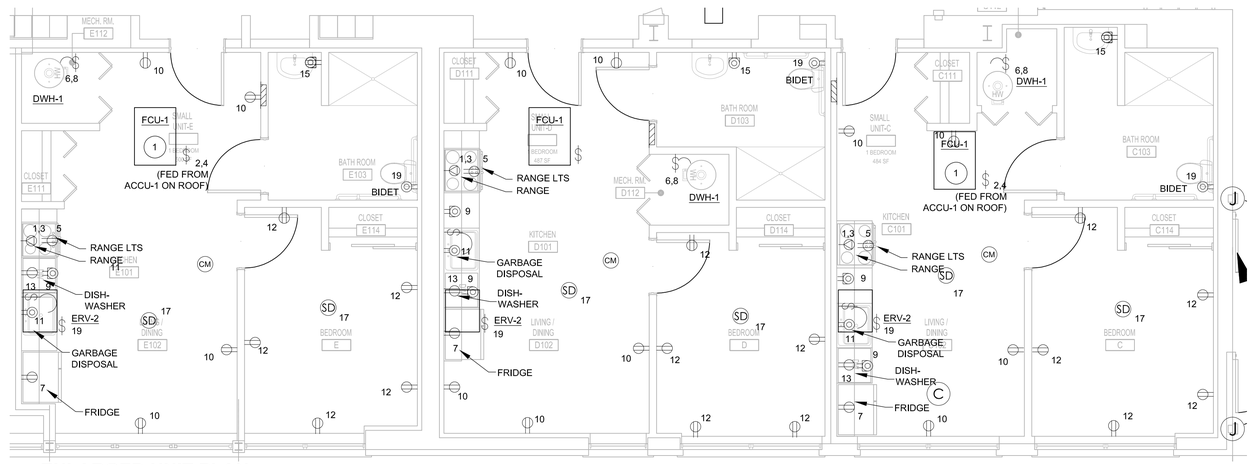
FILE NO. 21026.00

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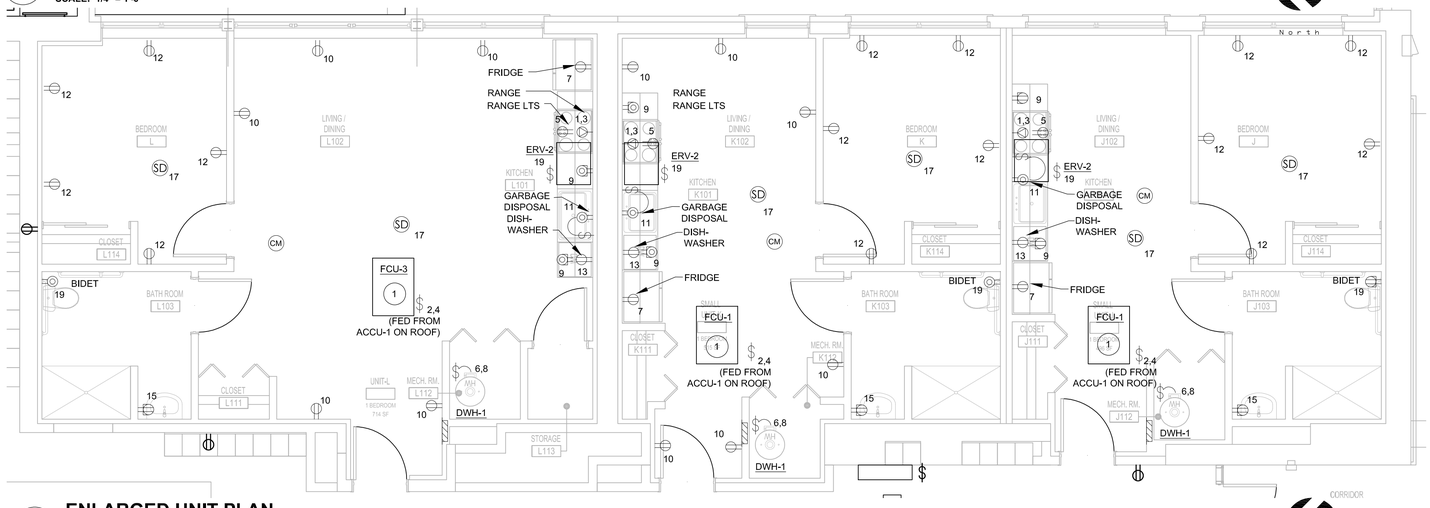
1 ENLARGED UNIT PLAN

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



2 ENLARGED UNIT PLAN

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



3 ENLARGED UNIT PLAN

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

GENERAL NOTES

1. REFER TO SHEET E-001 FOR ELECTRICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES.
2. REFER TO SHEET FOR RISER DIAGRAM.
3. REFER TO SHEET SERIES FOR PANELBOARD SCHEDULES WITH CIRCUITING INFORMATION.
4. COORDINATE ALL DEVICE LOCATIONS AND MOUNTING HEIGHTS FOR APPLIANCES AND EQUIPMENT WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
5. COORDINATE FINAL LOCATION AND ANY POWER CONNECTION REQUIREMENTS OF MECHANICAL AND PLUMBING EQUIPMENT PRIOR TO INSTALLATION.
6. VOLTAGE DROP SHALL BE LIMITED TO LESS THAN 3% FOR ALL BRANCH CIRCUITS AND 2% FOR ALL FEEDERS.

KEYNOTES

1. FC IS SERVED BY ACCU ON ROOF TOP. POWER AND CONTROL CABLING FROM ACCU TO FC WITHIN IS PROVIDED BY MECHANICAL TRADES. ASSOCIATED ROOF ACCU IS FED FROM UNIT PANEL

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

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Architects + Planners
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Fax: 313-964-3233

A & A Engineering & Consulting
23660 Vista Way, South Lyon, MI 48178

CITY OF _____ STAMP

CITY STAMP

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REGISTRATION SEAL



KEY PLANS

SHEET TITLE

1st FLOOR ENLARGED POWER PLANS - NORTH UNITS

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

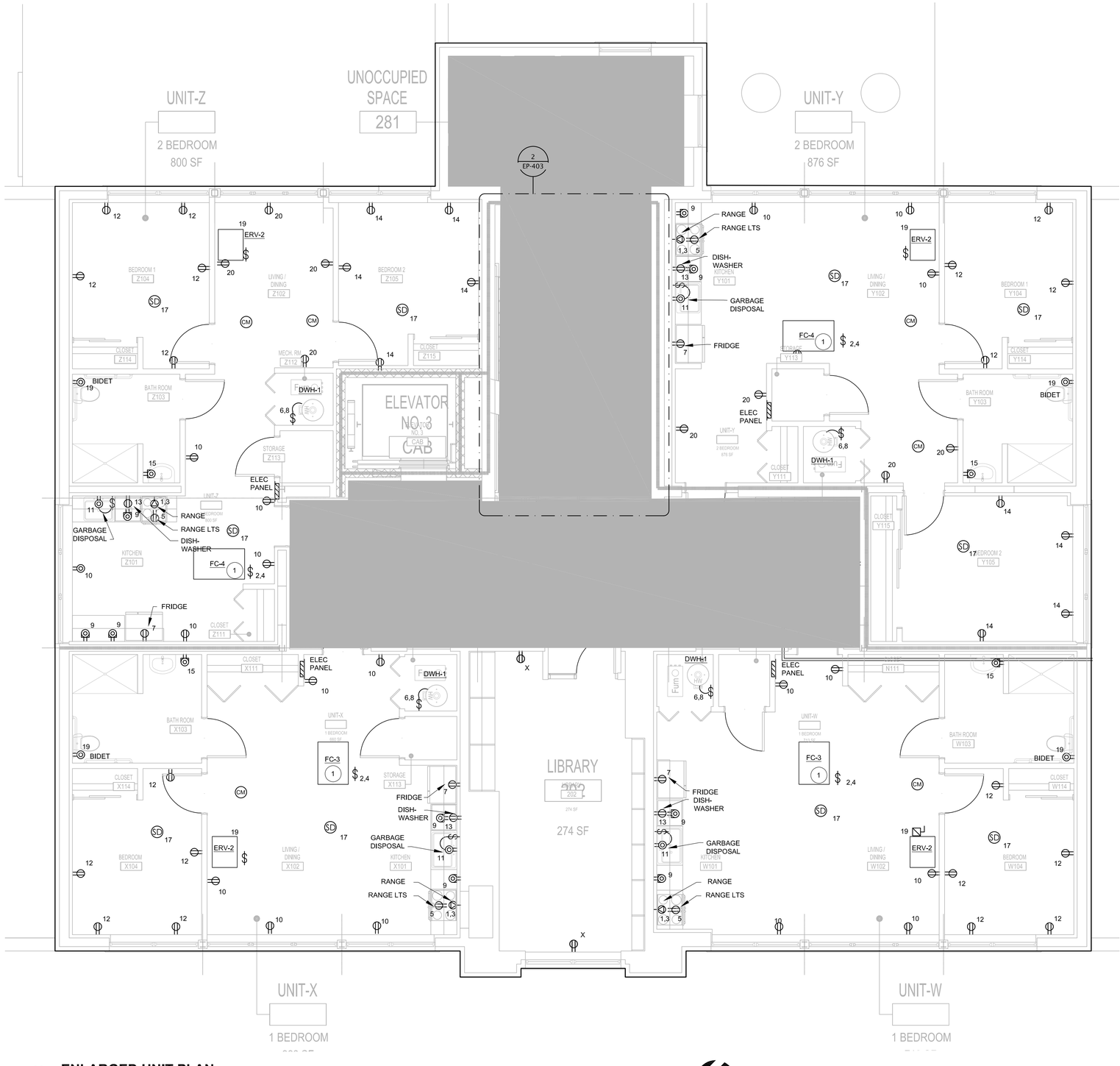
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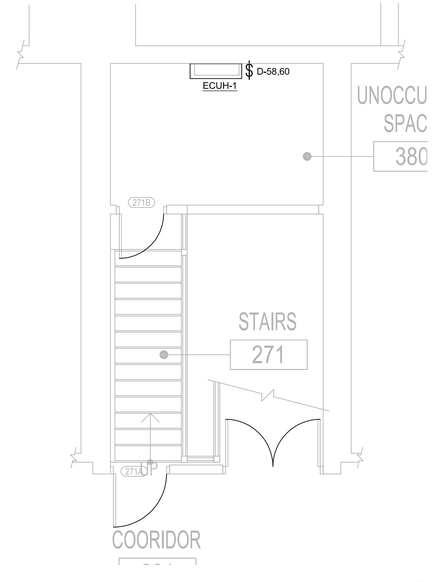
SHEET NO. EP-402



1 ENLARGED UNIT PLAN

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

North



2 ENLARGED PLAN - ROOM 380

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

North

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STATE OF MICHIGAN
MATTHEW J. JOSEPH
ENGINEER
LICENSED PROFESSIONAL ENGINEER
6201064269

KEY PLANS

SHEET TITLE

2ND FLOOR ENLARGED POWER PLANS

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

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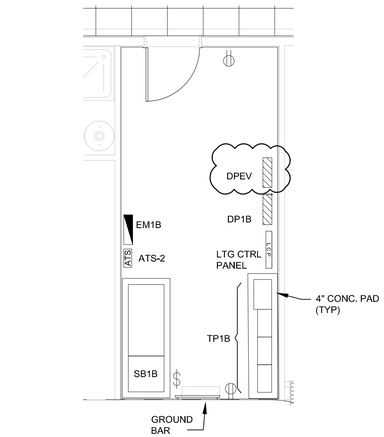
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FILE NO. 21026.00

SHEET NO. EP-403

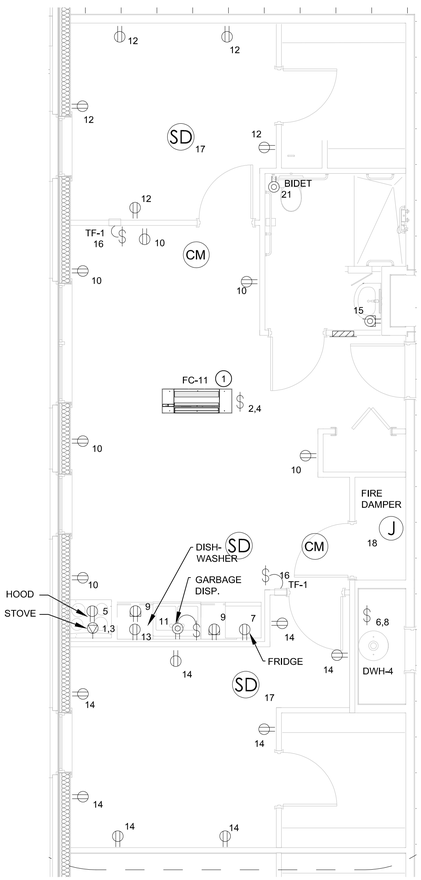
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North

1 ENLARGED ELEC RM

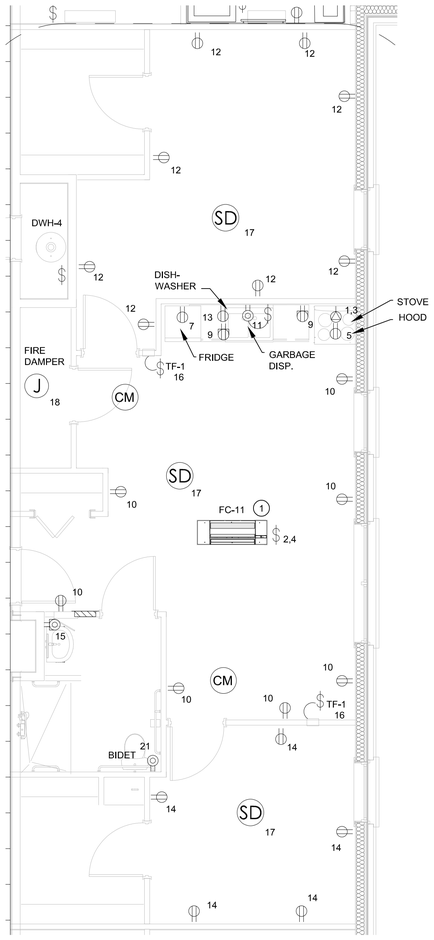
SCALE: 1/4" = 1'-0"



North

2 2B UNIT B - 2BR

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



North

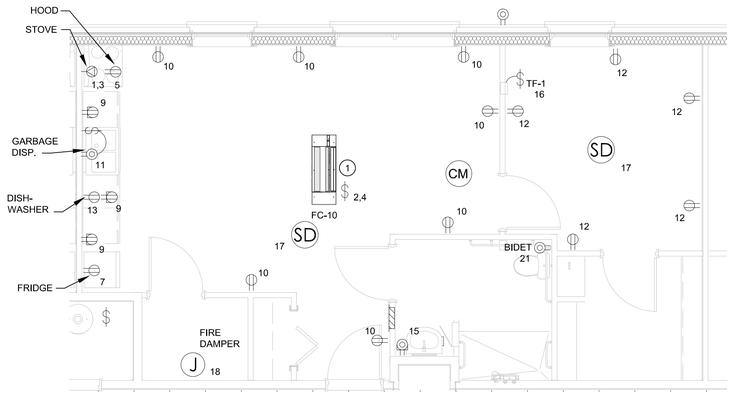
3 2B UNIT A - 2BR

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

North

5 1B UNIT B - 1BR CORNER

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



North

4 1B UNIT A - 1BR

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

GENERAL NOTES

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2. REFER TO SHEET E-004 FOR RISER DIAGRAM.
3. REFER TO "400" SERIES SHEETS FOR PANELBOARD SCHEDULES WITH CIRCUITING INFORMATION.
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REGISTRATION SEAL

KEY PLANS

SHEET TITLE

ENLARGED POWER PLANS - ADDITION

SCALE: AS NOTED

ISSUED FOR	DATE
Permits	12.20.202
Bulletin No. 6	11.21.202

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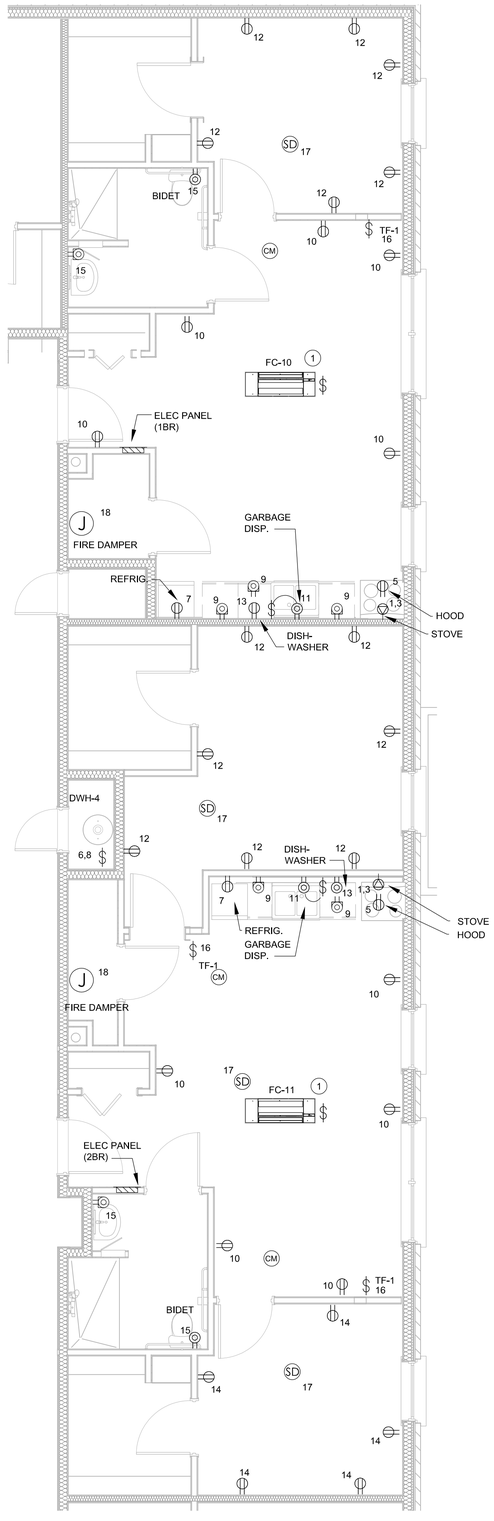
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SHEET NO. EP-404

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1 **1B & 2B - UNIT C**

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

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CITY OF _____ STAMP

CITY STAMP

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REGISTRATION SEAL

STATE OF MICHIGAN
MATTHEW J. JOSEPH
LICENSED PROFESSIONAL ENGINEER
No. 6201043269

KEY PLANS

SHEET TITLE

ENLARGED POWER PLANS - ADDITION

SCALE: AS NOTED

ISSUED FOR	DATE
PERMITS	12.20.24

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21026.00
FILE NO.

EP-405
SHEET NO.

GENERAL NOTES

1. LAYOUT SHOWN FOR SITE UTILITIES IS FOR REFERENCE ONLY AND SHOWSDESIGN INTENT. COORDINATE ALL NEW UNDERGROUND ELECTRICAL WORK WITH NEW AND EXISTING UTILITIES ON THE SITE.
2. THE CONTRACTOR SHALL INCLUDE IN THEIR BID ALL COSTS ASSOCIATED WITH NEW UTILITY SERVICES FOR POWER, TELEPHONE, DATA, ETC. TO BE BROUGHT TO THE BUILDING.
3. UNDERGROUND SERVICE CONDUITS SHALL BE DIRECT BURIED PLASTIC CONDUIT 40 PVC OR EQUAL. PROVIDE A MINIMUM OF 48" OF COVER.
4. REFER TO CIVIL DRAWINGS FOR APPROXIMATE LOCATION OF ALL OTHER UTILITIES THAT ARE BELOW GRADE.

(E) DTE LIGHT COBRAHEAD LIGHT POLE
(E) DTE LIGHT COBRAHEAD LIGHT POLE
(E) DTE LIGHT COBRAHEAD LIGHT POLE
FENCE POST 0.5' N. 0.4' W.
S00°22'00"W 696.00'
EMMETT ST. (50' WIDE)
HOUSE #20850
HOUSE #20851
FENCE ON-LINE
311.5'
S00°22'00"W 696.00'
FENCE POST 1.3' N. 0.4' E.
DP1B-25,27 IN NEW ADDITION ELEC ROOM
NEW 1500KVA 120/208V, 3PH, 4W PAD-MOUNT TRANSFORMER
NEW 75KVA 120/208V, 3PH, 4W PAD-MOUNT TRANSFORMER FOR EV CHARGING
(1) 2"C
(5) 4"C
(1) 1 1/2"C
(E) DTE LIGHT COBRAHEAD LIGHT POLE
NEW ADDITION
NEW ADDITION MAIN ELEC ROOM
DP1B-18
(E) DTE LIGHT COBRAHEAD LIGHT POLE
(E) DTE LIGHT COBRAHEAD LIGHT POLE
TO EXIST. DTE OVER-HEAD UTILITY POLE
RP1A-28
(E) DTE LIGHT COBRAHEAD LIGHT POLE
EXISTING MAIN ELEC ROOM
100kW/125kVA 120/208V, 3PH, 4W NATURAL GAS EMERGENCY GENERATOR
EXISTING BUILDING
1 STORY BRICK BLDG.
2 STORY BRICK BLDG.
EXISTING BUILDING
ROUTE INCOMING CONDUITS BELOW GRADE TO NEW ADDITION MAIN ELEC ROOM
ROUTE (1) 1"C ABOVE CEILING SPACE TO FEED EV CHARGING PEDESTAL
ROUTE (1) 1"C TO JUNCTION BOX FOR EV CAPABLE STATIONS (TYP OF 5)
DP1B-18
P2 (TYP)
DP-EV-1,3
DP-EV-5,7
DP-EV-9,11
DP-EV-2,4
DP-EV-6,8
DP-EV-10,12
CAMERA (TYP)
ROUTE (1) 1"C UNDERGROUND TO EV CHARGING PEDESTAL
ROUTE (5) 1"C UNDERGROUND TO EV-CAPABLE CHARGING SPOTS FOR FUTURE CHARGERS.
EV CHARGING PEDESTAL WITH 2 CHARGERS
SOUTHFIELD COMMUNITY CHURCH #21122 INDIAN 2 STORY BRICK BLDG.
S88°39'00"E 289.25'
N88°39'00"W 289.25'
GARAGE
HOUSE #20904
INV=459.58
INV=456.84
N00°22'00"E 696.00'
N00°22'00"E 696.00'
INDIAN ST. (50' WIDE)
INDIAN ST. (50' WIDE)
EMMETT ST. (50' WIDE)
25' WIDE HIGHWAY EASEMENT (L.438, P.169)
North

1 ELECTRICAL SITE PLAN

SCALE: 1" = 40'-0"

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REGISTRATION SEAL

KEY PLANS

SHEET TITLE

ELECTRICAL SITE PLAN

SCALE: AS NOTED

ISSUED FOR	DATE
Bulletin No. 1	02.19.2025
Bulletin No. 2	03.05.2025
Bulletin No. 5	10.13.2025
Bulletin No. 6	11.21.2025

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MJ
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21026.00
FILE NO.

ES-101
SHEET NO.

ABBREVIATIONS

ABV.	ABOVE
AC	AIR CONDITIONER
ACT	AIR CURTAIN
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AL	ACOUSTICAL LINING
ALD	AUTOMATIC LOUVER DAMPER (MOTORIZED)
ATC	AUTOMATIC TEMPERATURE CONTROL
B.D.D.	BACK DRAFT DAMPER
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DUCT
BOIL	BOILER
BHP	BRAKE HORSE POWER
BRD	BAROMETRIC RELIEF DAMPER
BTU	BRITISH THERMAL UNIT
CC	COOLING COIL
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
CO2	CARBON DIOXIDE
CHW	CHILLED WATER
CHWLG	CHILLED WATER LOW GRADE (RADIANT SYSTEM)
CO	CLEAN OUT
COD	CABLE OPERATED VOLUME DAMPER
CDP	CONDENSATE DRAIN PIPING
CWP	CONDENSER WATER
CP	CONDENSATE PUMP RETURN
CAV	CONSTANT AIR VOLUME TERMINAL
DN	DOWN
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EHC	ELECTRIC HEATING COIL
ET	EXPANSION VESSEL/EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
EXTK	EXPANSION TANK
FC	FLEXIBLE CONNECTION
FC	FAN COIL UNIT
FD/AD	FIRE DAMPER/ACCESS DOOR
FD/GA	FIRE DAMPER/GRILLE ACCESS
FTR	FIN TUBE RADIATOR

ABBREVIATIONS

FL	FLOOR
FLA	FULL LOAD AMPS
FSD	FIRE SMOKE DAMPER
FSD/AD	FIRE SMOKE DAMPER/ACCESS DOOR
FSD/GA	FIRE SMOKE DAMPER/GRILLE ACCESS
FFSD/AD	FLOOR FIRE SMOKE DAMPER/ACCESS DOOR
GPM	GALLONS PER MINUTE
GX	GENERAL EXHAUST
SPF	STAIR PRESSURIZATION FAN
HC	HEATING COIL
HHW	HEATING HOT WATER
HP	HORSE POWER
HTEX	HEAT EXCHANGER
ID	INSIDE DIMENSION
KW	KILOWATT
KX	KITCHEN EXHAUST
LAT	LEAVING AIR TEMPERATURE
LED	LINEAR EXHAUST DIFFUSER
LRD	LINEAR RETURN DIFFUSER (CEILING, WALL, SILL, OR FLOOR)
LSD	LINEAR SUPPLY DIFFUSER (CEILING, WALL, SILL, OR FLOOR)
LTHW	LOW TEMPERATURE HOT WATER
LVL	LEVEL
LWS	LOUVER WITH WIRE SCREEN
LWT	LEAVING WATER TEMPERATURE
MAT	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MBTU	BRITISH THERMAL UNIT (1000 BTU)
MIN	MINIMUM
MD	MOTORIZED DAMPER
NC	NORMALLY CLOSED
NFA	NET FREE AREA
NIC	NOT IN THIS CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OED	OPEN ENDED DUCT
P	PUMP
PHC	PRE-HEAT COIL

ABBREVIATIONS

PHX	PLATE & FRAME HEAT EXCHANGE
PSI	POUNDS PER SQUARE INCH (GAUGE)
RA	RETURN AIR
RF	RETURN FAN
RHC	REHEAT COIL
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
SA	SUPPLY AIR
SCHW	SECONDARY CHILLED WATER
SD	SMOKE DAMPER
SD/ALD	SMOKE DAMPER AND AUTOMATIC LOUVER COMBINATION
SF	SUPPLY FAN
SG	SUPPLY GRILLE
ST	SOUND TRAP
SEF	SMOKE EXHAUST FAN
TOD	TOP OF DUCT
TF	TRANSFER FAN
TG	TOP GRILLE
TR	TOP REGISTER
TD	TRANSFER DUCT
TRX	TRASH EXHAUST
TX	TOILET EXHAUST
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VRV	VARIABLE REFRIGERANT VOLUME
WMS	WIRE MESH SCREEN
(300)	CUBIC FEET OF AIR PER MINUTE OR GALLONS PER MINUTE

GENERAL MECHANICAL NOTES

1. SHOULD THERE BE ANY DISCREPANCIES BETWEEN CONTRACT DOCUMENTS AND SPECIFICATIONS THE GREATER QUALITY OR QUANTITY OF WORK SHALL BE PERFORMED. THIS WORK MUST BE SUBMITTED IN WRITING TO ENGINEER PRIOR TO FINAL BID APPROVAL. NO EXTRAS SHALL BE ALLOWED AFTER THAT TIME. THIS SHALL ALSO PERTAIN TO ANY DISCREPANCIES IN THE CONTRACT DOCUMENTS OR BETWEEN TRADES.
2. NO MODIFICATIONS TO THE SPECIFICATIONS, CONSTRUCTION DOCUMENTS, OR INTENT OF THE SCOPE OF WORK SHALL BE ALLOWED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE ENGINEER. ALL MODIFICATIONS, CHANGE ORDERS, ALTERNATES AND VALUE ENGINEERING SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND ENGINEER FOR REVIEW.
3. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL TRADES RESPONSIBLE FOR FINAL CONNECTION OR ALL EQUIPMENT.
4. CONTRACTORS ARE RESPONSIBLE UNDERSTANDING AND BEING EDUCATED ON THE REQUIREMENTS TO OBTAIN NGBS NET ZERO CERTIFICATION AND PHIUS CERTIFICATION, AS WELL AS ALL PREREQUISITE CERTIFICATIONS NEEDED TO OBTAIN PHIUS. RESPONSIBILITY OF THE GENERAL CONTRACTOR AND TRADES TO PROVIDE REQUIRED FIELD TESTING REQUIRED TO OBTAIN CERTIFICATIONS. ALSO, ANY MODIFICATIONS NEEDED TO SYSTEMS AFTER INITIAL TESTING TO PASS RETESTING IF REQUIRED.
5. IECC 2021 MECHANICAL COMCHECK PERFROMED AND IS IN COMPLIANCE. REFERENCE JOB NAME JOHN GRACE ARMS IN COMCHECK DATABASE FOR REFERENCE

△

HVAC GENERAL NOTES

1. COORDINATE DUCTWORK WITH EXISTING AND NEW SITE CONDITIONS, EQUIPMENT MANUFACTURE AND ALL OTHER TRADES TO PREVENT INTERFERENCES. RESIZE AND FIELD ROUT AS REQUIRED, USE EQUIVALENT DUCT SIZING.
2. PROVIDE ACCESS AROUND ALL NEW EQUIPMENT PER MANUFACTURER RECOMMENDATIONS AND CODE REQUIREMENTS.
3. ALL CORING THROUGH FLOORS SHALL BE DONE BY MECHANICAL CONTRACTOR.
4. ALL DUCTWORK SHALL BE ROUTED AS HIGH AS POSSIBLE, UNLESS OTHERWISE NOTED ON THE DRAWINGS. COORDINATE ROUTING WITH OTHER TRADES TO PREVENT INTERFERENCES.
5. BALANCE HVAC SYSTEMS AND DISTRIBUTION INCLUDING SUPPLY, RETURN AND OUTDOOR AIR TO INDICATED FLOW RATES, REFER TO VENTILATION SCHEDULE AND HVAC PLAN. IF NOT INDICATED ON DRAWING OR DETAIL PROVIDE PROPER EQUIPMENT ON THE FIELD TO PROPERLY BALANCE SYSTEMS.
6. DUCT SIZES TO DIFFUSERS SHALL MATCH NECK OR DIMENSIONS REQUIRED, REFER TO SCHEDULES.
7. ALL CONCEALED SUPPLY AIR DUCTWORK SHALL BE INSULATED PER SPECIFICATIONS.
8. SEAL ALL PENETRATIONS THROUGH WALLS PER SPECIFICATION.
9. COORDINATE EXACT LOCATION OR DIFFUSERS AND RETURN GRILLS WITH ARCHITECTURAL AND ELECTRICAL REFLECTED CEILING PLANS.
10. COORDINATE THERMOSTAT LOCATIONS WITH ARCHITECT.
11. PROVIDE SPIN-IN DAMPERS AT ALL ROUND BRANCH DUCT CONNECTIONS TO DIFFUSERS. PROVIDE MANUAL VOLUME DAMPERS AS EACH BRANCH DUCT AT CONNECTION TO MAIN AS WELL AS IN EACH DUCT AFTER BRANCH DUCT SPLITS. THESE ARE NOT INDICATED ON PLANS BUT ARE REQUIRED. CONTRACTOR TO DETERMINE PROPER LOCATIONS TO PROPERLY BALANCE THE SYSTEM.

GENERAL PIPING NOTES:

1. COORDINATE NEW PIPING WITH EXISTING SITE CONDITIONS, EQUIPMENT, MANUFACTURER, AND ALL OTHER TRADES TO PREVENT INTERFERENCES.
2. PROVIDE ACCESS AROUND ALL NEW EQUIPMENT PER MANUFACTURER RECOMMENDATIONS AND CODE REQUIREMENTS.
3. ALL CORING THROUGH FLOORS AND FLOOR TRENCHING SHALL BE BY MECHANICAL CONTRACTOR.
4. ALL PIPING SHALL BE ROUTED AS HIGH AS POSSIBLE, COORDINATE ALL ROUTING WITH OTHER TRADES TO PREVENT INTERFERENCES.
5. BALANCE WATER SYSTEMS TO INDICATED FLOW RATES REQUIRED BY MANUFACTURER OF EQUIPMENT IN EQUIPMENT SCHEDULES.
6. ALL PIPING SHALL BE INSULATED PER SPECIFICATIONS.
7. ALL PIPING SHALL BE CONCEALED IN WALLS OR CEILINGS SPACE.
8. SEAL ALL PENETRATIONS THROUGH WALLS. REFER TO SPECIFICATIONS.
9. EXPANSION LOOPS (JOINTS) AND GUIDES ARE TO BE USED ON ALL HOT WATER AND HOT WATER RETURN PIPING.

GENERAL SHEET MECHANICAL NOTES

1. SEE M-001 FOR ADDITIONAL NOTES
2. THE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS AND COORDINATION WITH OTHER TRADES WILL BE REQUIRED. PROVIDE ADDITIONAL FITTINGS AND OFFSETS THAT MAY BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS AND ANY OTHER EXISTING SPACE CONSTRAINTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH ALL TRADES FOR UTILIZATION OF SPACE CONSTRAINTS.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATION OF LIGHTS, CEILING DROPS AND ELEVATIONS.
4. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL EXISTING ABOVE CEILING EQUIPMENT INCLUDING STRUCTURAL TO AVOID INTERFERENCES.
5. ALL SUPPLY DUCT WORK SHALL BE INSULATED PER SPECIFICATIONS.
6. ROUND DUCT BRANCH CONNECTIONS TO DIFFUSERS TO BE SAME SIZE AS DIFFUSER NECK.
7. PROVIDE DUCT TAP WITH VOLUME DAMPER AT EACH BRANCH TO DIFFUSER DUCT CONNECTION, SPIN -IN FITTINGS MAY BE USED WHERE ROUND DUCTS ARE CONNECTING TO RECTANGULAR DUCTS.
8. BALANCING THE AIR SYSTEM IS REQUIRED REFER TO HVAC SPECIFICATIONS, NOTES AND DRAWINGS.

MECHANICAL KEYED SHEET NOTES

1. KITCHEN EXHAUST HOODS PROVIDED BY ARCHITECT, TRADES TO COORDINATE EXHAUST CONNECTIONS SIZE AND CFM WITH HOOD MANUFACTURER. INSTALL EXHAUST DUCT PER MANUFACTURERS RECOMMENDATIONS, INSTALL CEILING RADIATION DAMPER PER CODE. EXHAUST ROUTING CAN NOT TIE INTO ERV EXHAUST SYSTEM, ROUTE IN MANNER THAT IT DOES NOT INTERFERE WITH ERV DUCT WORK.
2. TRANSISTION TO SUPPY/RETURN GRILL FOR INLAY OF WINDOW GRILL HEIGHT WILL BE 12" X WIDTH OF EXISTING WINDOW OPENING.
3. ALL REFRIGERATION LINE SETS RUNNING ALONG EXPOSED EXTERIOR BRICK HAS TO HAVE UV RESISTANT PLASTIC COVERS. COLOR TO MATCH BRICK AS APPROVED BY ARCHITECT.
4. ERV EXHAUST DUCT TO SIDE WALL, TERMINATE WITH VENT CAP, BUILT IN BACKDRAFT DAMPER AND BIRD SCREEN. INSTALL DUCT IN TRUSS SPACE WHICH IS NOT KNOWN AT THIS TIME AND NEEDS TO COORDINATE WITH TRUSS MANUFACTURER.
5. ERV OUTSIDE AIR DUCT TO SIDEWALL TERMINATE WITH OA LOUVER, INSULATE DUCT FROM LOUVER TO ERV UNIT. COORDINATE DUCT ROUTING WITH TRUSS MANUFACTURER AND ARCHITECTURAL DRAWINGS, ALSO INCLUDE RADIATION DAMPER.
6. REFRIGERANT PIPING UP TO ROOF THROUGH PITCH BOX TO ASSOCIATED CONDENSER. ADHERE TO MANUFACTURER REQUIREMENTS FOR TOTAL LENGTH OF PIPING FOR HEAT PUMP SYSTEM, DO NOT EXCEED LENGTH. ROUTE NEEDED POWER AND CONTROL WIRING FROM HEAT PUMP CONDENSER IN SAME LOCATION WITH REFRIGERANT PIPING.
7. PROVIDE RETURN AIR FILTER AND RETURN GRILL COMBINATION AND PROVIDE FILTER (MERV 8) AT REQUIRED SIZE.
8. 4 " DRYER EXHAUST TO ROOF OR SIDE WALL, TERMINATE WITH VENT CAP WITH INTEGRAL BACKDRAFT DAMPER. COORDINATE LOCATION WITH OTHER TRADES AND EQUIPMENT TO AVOID INTERFERENCE.
9. FAN COIL UNIT TO BE HANG ABOVE CEILING WITH PROPER ACCESS PANEL AND CLEARANCE PROVIDED. COORDINATE CONDENSATE DRAIN ROUTING TO NEAREST MECHANICAL FLOOR DRAIN.
10. THERMOSTAT LOCATION, PROVIDE PROPER CONTROL WIRING BACK TO FAN COIL UNIT.
11. ERV UNIT, TO BE INTERLOCKED WITH FAN COIL UNIT, SEE MANUFACTURER REQUIREMENTS FOR WIRING.
12. EXHAUST FAN AND LIGHT COMBO UNIT, ROUTE 6 IN DUCT WORK TO EXHAUST PORT OF THE ERV UNIT. UNIT TO BE CONTROLLED OCCUPANCY, REFER TO ELECTRICAL.

HVAC SYMBOLS (DUCTWORK)

	RECTANGULAR DUCT SUPPLY
	RECTANGULAR DUCT RETURN
	RECTANGULAR DUCT EXHAUST
	ROUND DUCT SUPPLY
	ROUND DUCT RETURN
	ROUND DUCT EXHAUST
	DUCT WITH ACOUSTIC LINING
	DUCT WRAPPED WITH FIRE RATED INSULATION
X" TH	BRANCH DUCT WITH RADIUSED SIDE SPLIT - RECTANGULAR DUCT
	BRANCH DUCT TAP, SINGLE BOOT - RECTANGULAR DUCT
	BRANCH DUCT TAP, DOUBLE BOOT - RECTANGULAR DUCT
	BRANCH DUCT TAP, SINGLE BOOT - ROUND & FLAT OVAL DUCT
	BRANCH DUCT TAP, DOUBLE BOOT - ROUND & FLAT OVAL DUCT
	FLEXIBLE DUCT
	FLEXIBLE CONNECTION
AD	ACCESS DOOR
C.O.	CLEAN OUT
	DUCT THROUGH BEAM PENETRATION
	AUTOMATIC DAMPER - OPPOSED BLADE
	AUTOMATIC DAMPER - PARALLEL BLADE
FSD	FIRE SMOKE DAMPER
FD	FIRE DAMPER
BD.D	BACKDRAFT DAMPER
BR.D	BAROMETRIC DAMPER
A2	SQUARE CEILING DIFFUSER (SHADED SECTORS INDICATE BLANK OFFS)
B2	ROUND CEILING DIFFUSER (SHADED SECTORS INDICATE BLANK OFFS)
C2	ROUND FLOOR DIFFUSER (UFAD)
	REGISTER - SIDEWALL/CEILING/FLOOR - SUPPLY
	REGISTER/GRILLE - SIDEWALL/CEILING/FLOOR - RETURN/EXHAUST
	WALL TRANSFER GRILLES
	LINEAR DIFFUSER/GRILLE - SUPPLY/RETUN/EXHAUST
	PLENUM FOR LINEAR DIFFUSER/GRILLE
SD	DUCT SMOKE DETECTOR
FS	DUCT FIRESTAT
AFS	AIRFLOW STATION
TR.D.	ACOUSTIC TRANSFER DUCT
	TERMINAL UNIT - VAV BOX - WITH/WITHOUT HEATING COIL
	TERMINAL UNIT - FAN COIL UNIT
	UNIT HEATER
	DUCT MOUNTED COIL
	DUCT MOUNTED HUMIDIFIER

HVAC SYMBOLS (PIPING)

	PIPE TURNING UP
	PIPE TURNING DOWN
	SLOPE RISE IN DIRECTION OF FLOW
	SLOPE DROP IN DIRECTION OF FLOW
	PIPE THROUGH BEAM PENETRATION
	WALL SLEEVE WITH WATER STOP
	ELBOW
	TEE
	BRANCH PIPE TOP CONNECTION
	BRANCH PIPE BOTTOM CONNECTION
	REDUCER/INCREASER CONCENTRIC
	REDUCER/DECREASER ECCENTRIC
	UNION (SCREWED)
	UNION (FLANGED)
	BLIND FLANGE
	END CAP
	BUTTERFLY VALVE
	PIPE ANCHOR
	BALL VALVE - MANUAL (LEVER HANDLE)
	BALL VALVE - MANUAL (TEE HANDLE)
	BALL VALVE - MOTORIZED
	ISOLATION VALVE (SEE SPEC FOR TYPE)
	BALANCING VALVE
	GLOBE VALVE
	TRIPLE DUTY VALVE
	PIPE GUIDE
	FLOWSETTER VALVE (BALANCING)
	CARTRIDGE FLOW BALANCER
	PRESSURE REDUCING VALVE
	PLUG VALVE
	CHECK VALVE (SWING TYPE)
	CHECK VALVE (SILENT TYPE, CENTER GUIDED)
	PRESSURE INDEPENDENT CONTROL VALVE (PICV)
	2 WAY CONTROL VALVE
	3 WAY CONTROL VALVE (MIXING TYPE)
	3 WAY CONTROL VALVE (DIVERTING TYPE)
S	SOLENOID VALVE
	RELIEF VALVE
BFP	BACKFLOW PREVENTOR
RPZ	BACKFLOW PREVENTER (RPZ TYPE)
	AIR VENT (AUTOMATIC)
	TEMPERATURE GAUGE (DUCT MOUNTED)
	PRESSURE GAUGE W/ PIGTAIL AND PETCOCK

HVAC SYMBOLS (PIPING)

	SIGHTGLASS
	FILTER-DRYER
LD	LEAK DETECTOR, PROBE TYPE
LD	LEAK DETECTOR, CABLE TYPE
M	METER
	AIR VENT (MANUAL)
	STRAINER WITH BLOW OFF
FS	FLOW SWITCH
	Y-STRAINER
	DRAIN VALVE WITH CAPPED HOSE END
	DUPLEX BASKET STRAINER
	TEMPERATURE GAUGE
	PRESSURE GAUGE W/ PIGTAIL AND PETCOCK
	FLEXIBLE COUPLING
	PIPE IN PIPE (FUEL OIL)
	HEAT TRACED PIPE
AS	AIR SEPARATOR
ET	EXPANSION TANK
	CHEM SHOT FEEDER
	PLATE AND FRAME HEAT EXCHANGER
	PUMP
	FLEX CONNECTORS

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KEY PLANS

SHEET TITLE

MECHANICAL SYMBOLS AND ABBREVIATIONS

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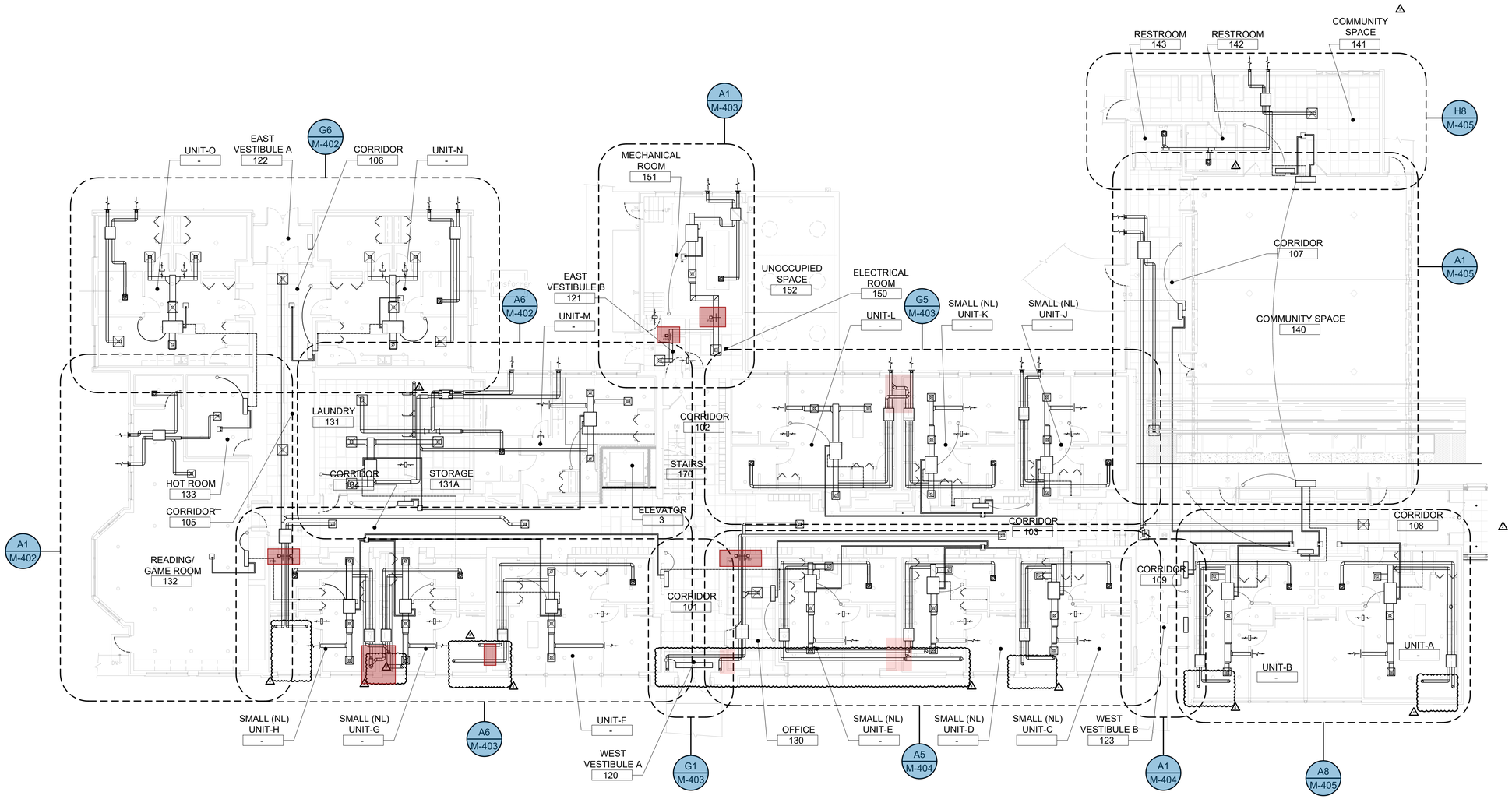
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SHEET NO. M-001

5/18/2025 7:51:49 PM

1. SEE SHEET NOTES AND SHEET KEYED NOTES ON M-001



A1 FIRST FLOOR MECHANICAL HVAC PLAN

M-101 | SCALE: 3/32" = 1'-0"

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SHEET TITLE
FIRST FLOOR MECHANICAL HVAC PLAN

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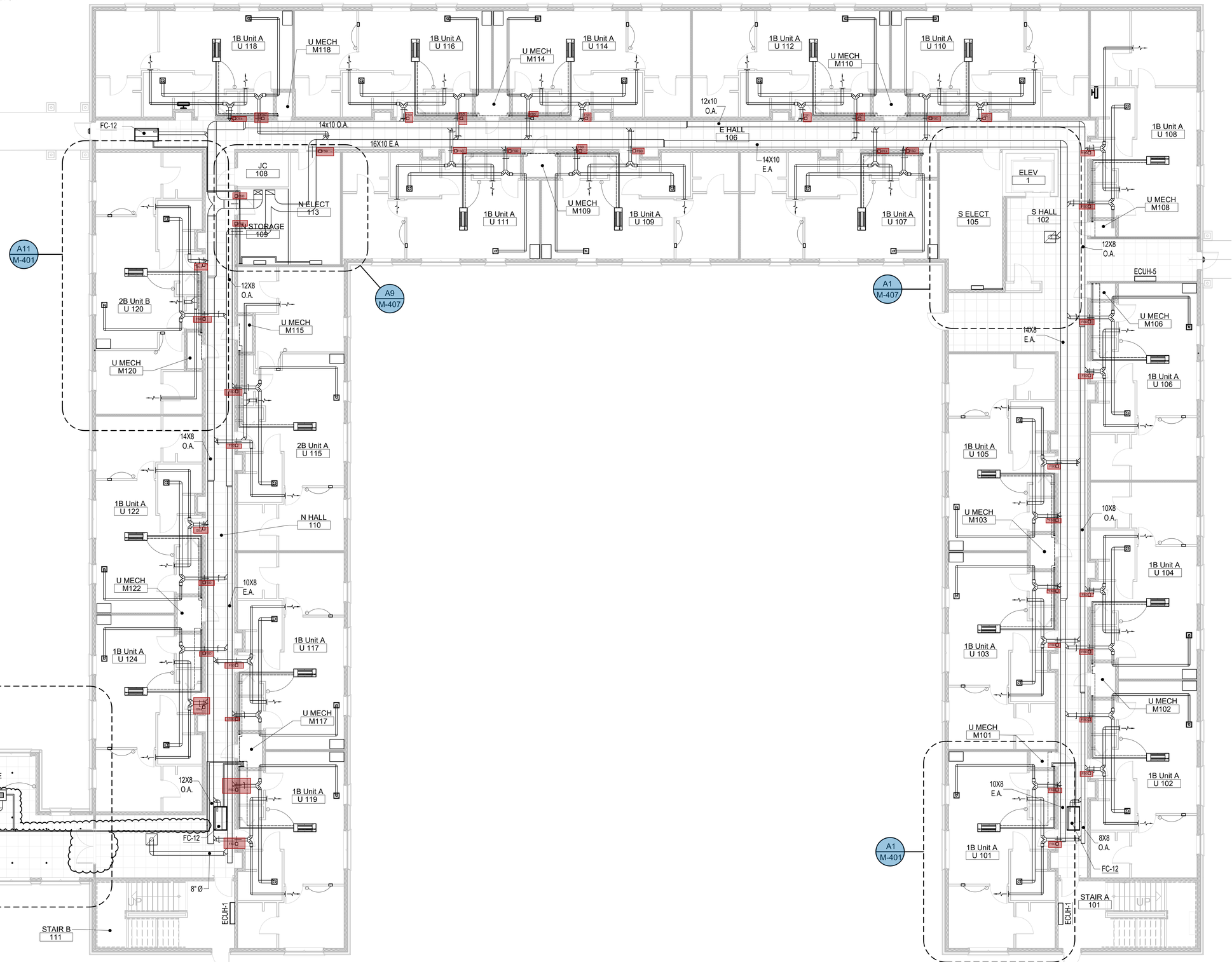
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M-101
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A1 FIRST FLOOR - ADDITION MECHANICAL HVAC PLAN

M-102 SCALE" ⅛" = 1'-0"

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FIRST FLOOR - ADDITION MECHANICAL HVAC PLAN

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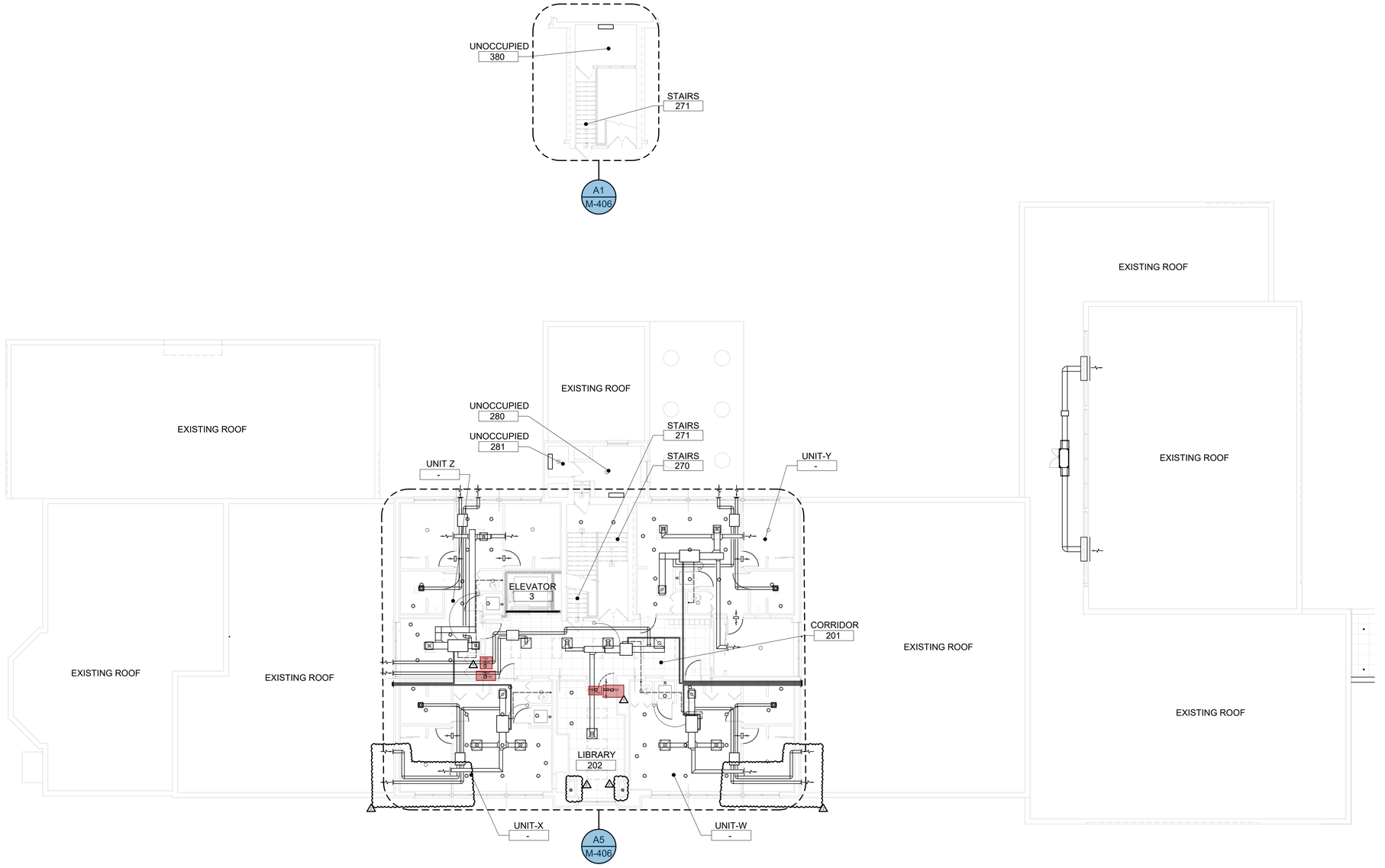
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M-102
SHEET NO.

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1. SEE SHEET NOTES AND SHEET KEYED NOTES ON M-001



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SHEET TITLE
SECOND FLOOR - MECHANICAL HVAC PLAN

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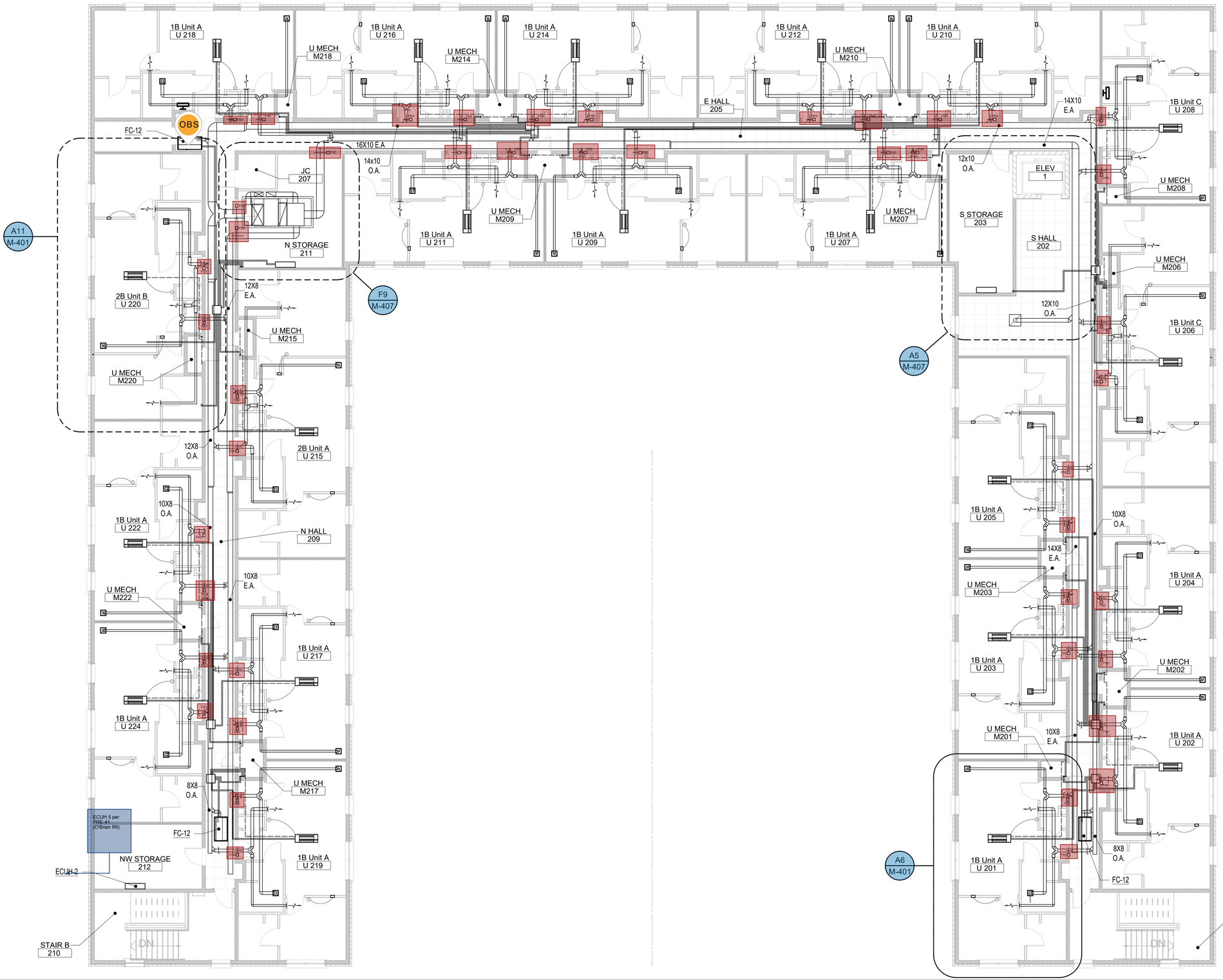
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SHEET NO. M-103

A1 | **SECOND FLOOR - MECHANICAL HVAC PLAN**
M-103 | SCALE: 3/32" = 1'-0"

12/2/2025 7:06:56 PM

1. SEE SHEET NOTES AND SHEET KEYED NOTES ON M-001



A1 SECOND FLOOR - ADDITION MECHANICAL HVAC PLAN

M-104 SCALE: 1/8" = 1'-0"

12/19/2024 6:22:22 PM

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SECOND FLOOR - ADDTION MECHANICAL HVAC PLAN

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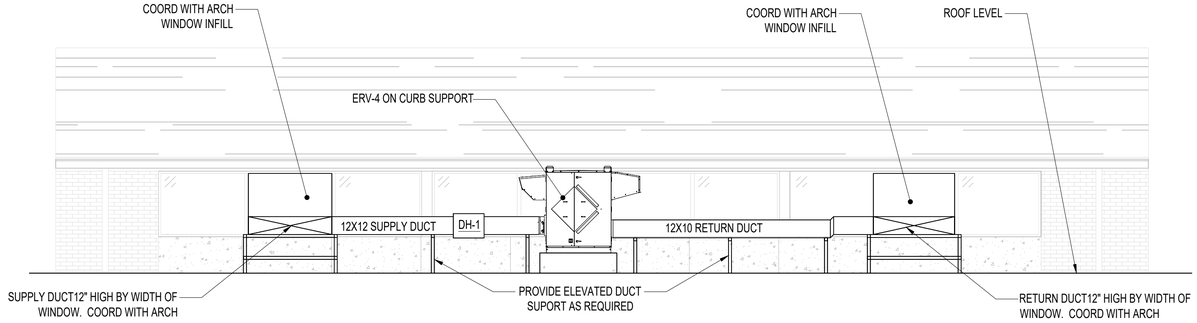
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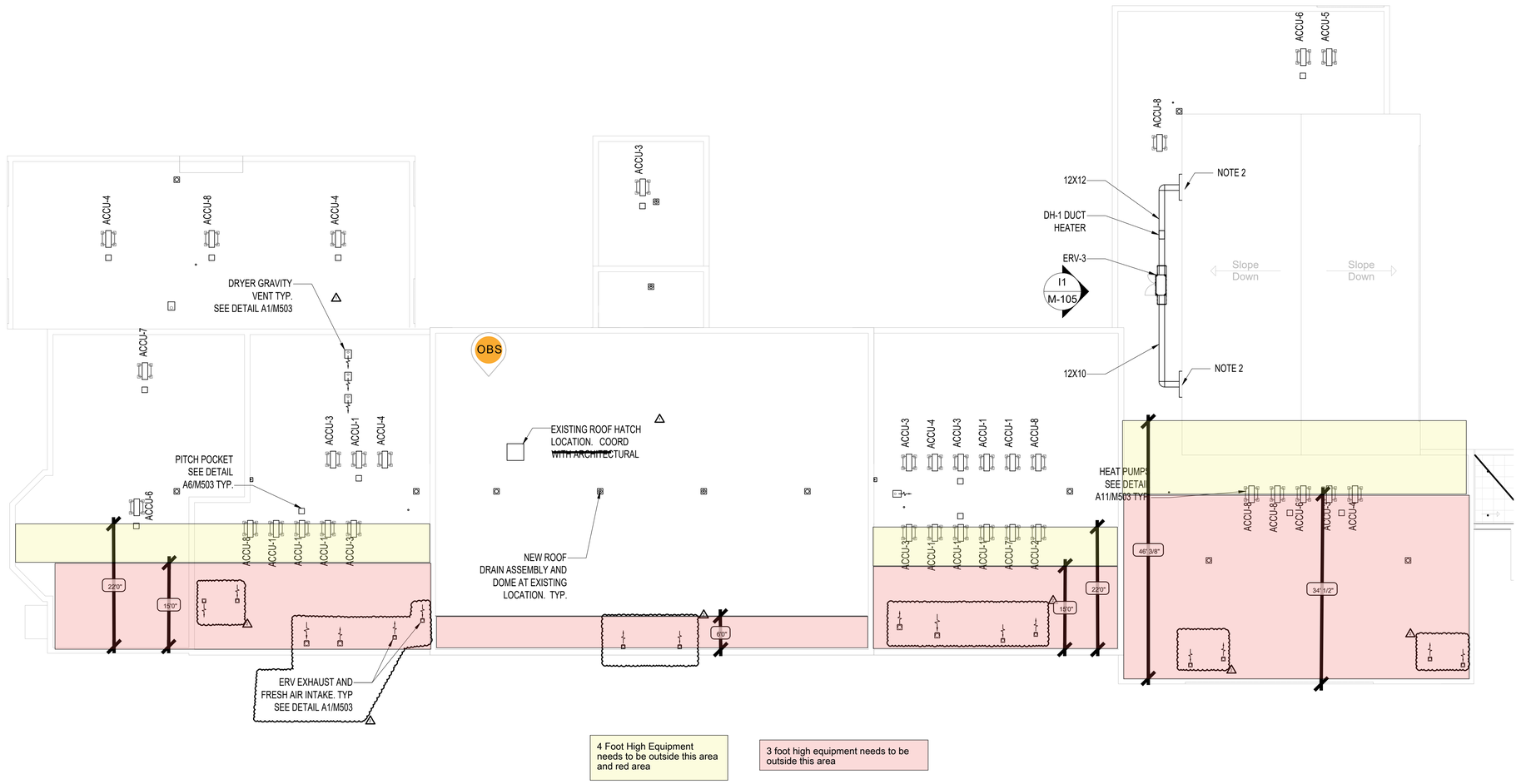
SHEET NO. M-104



1. SEE SHEET NOTES AND SHEET KEYED NOTES ON M-001

I1 ERV-4 ELEVATION

M-105 | SCALE: 1/4" = 1'-0"



A1 ROOF - EXISTING MECHANICAL PLAN

M-105 | SCALE: 3/32" = 1'-0"

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ROOF PLAN - EXISTING MECHANICAL PLAN

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△BULLETIN 6	12.03.25

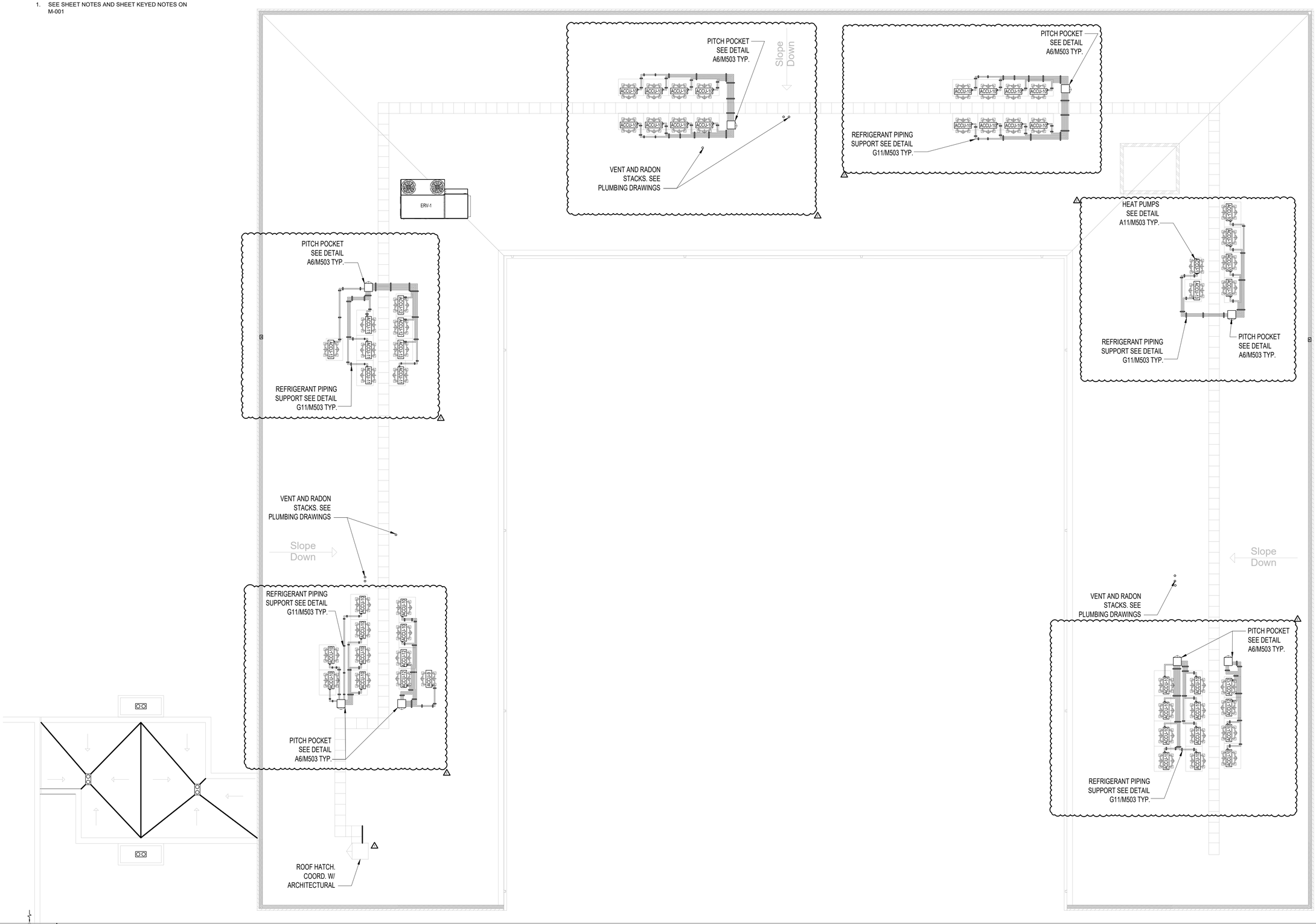
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SHEET NO. M-105

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ROOF - ADDITION MECHANICAL PLAN

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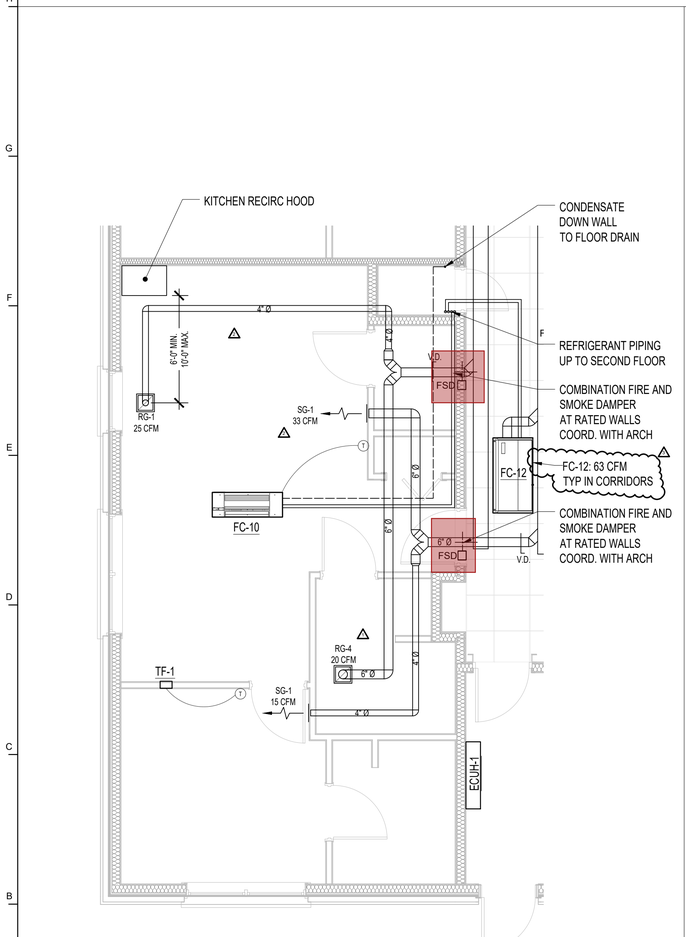
M-106
SHEET NO.

A1 | **ROOF - ADDITION MECHANICAL PLAN**

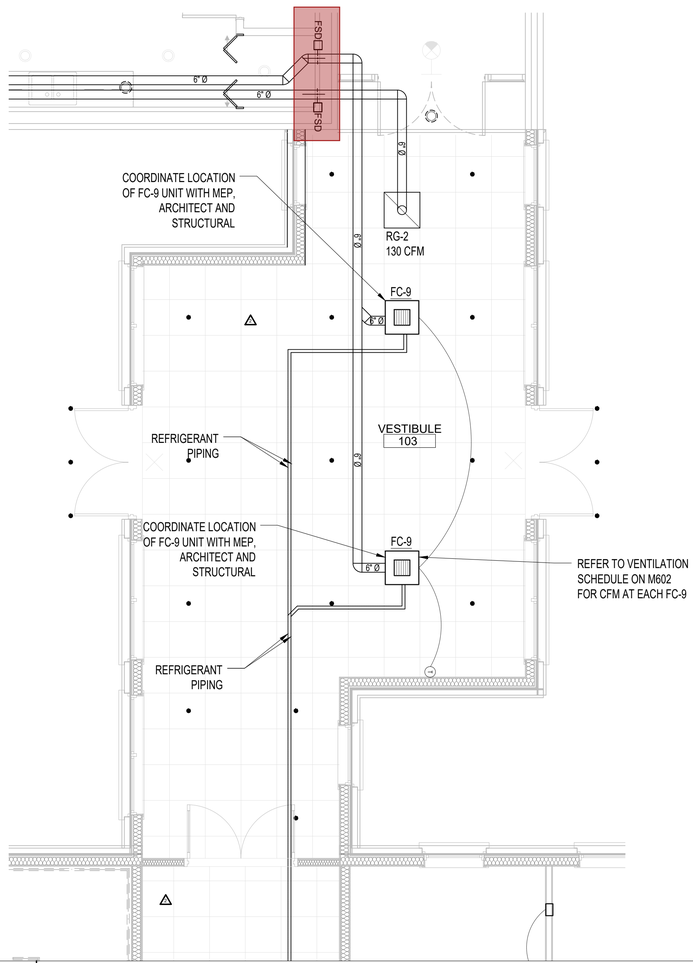
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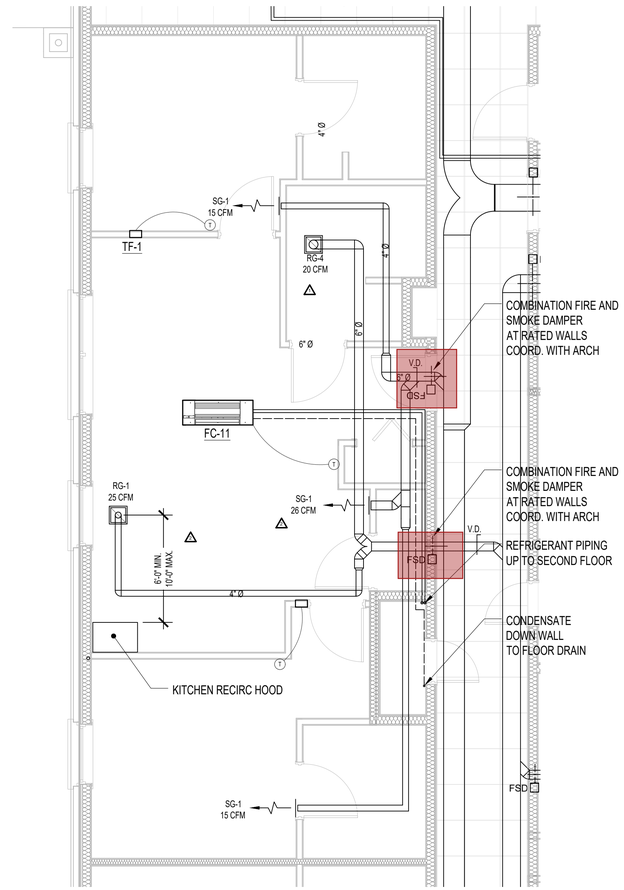
1. SEE SHEET NOTES AND SHEET KEYED NOTES ON M-001



A6 | **1B UNIT A - HVAC PLAN**
M-401 | 1/4" = 1'-0"



A6 | **ENLARGED HVAC PLAN**
M-401 | 1/4" = 1'-0"



A11 | **2B UNIT B (A SIM) - HVAC PLAN**
M-401 | 1/4" = 1'-0"

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KEY PLANS

SHEET TITLE
MECHANICAL HVAC ENLARGED PLANS

SCALE: AS NOTED

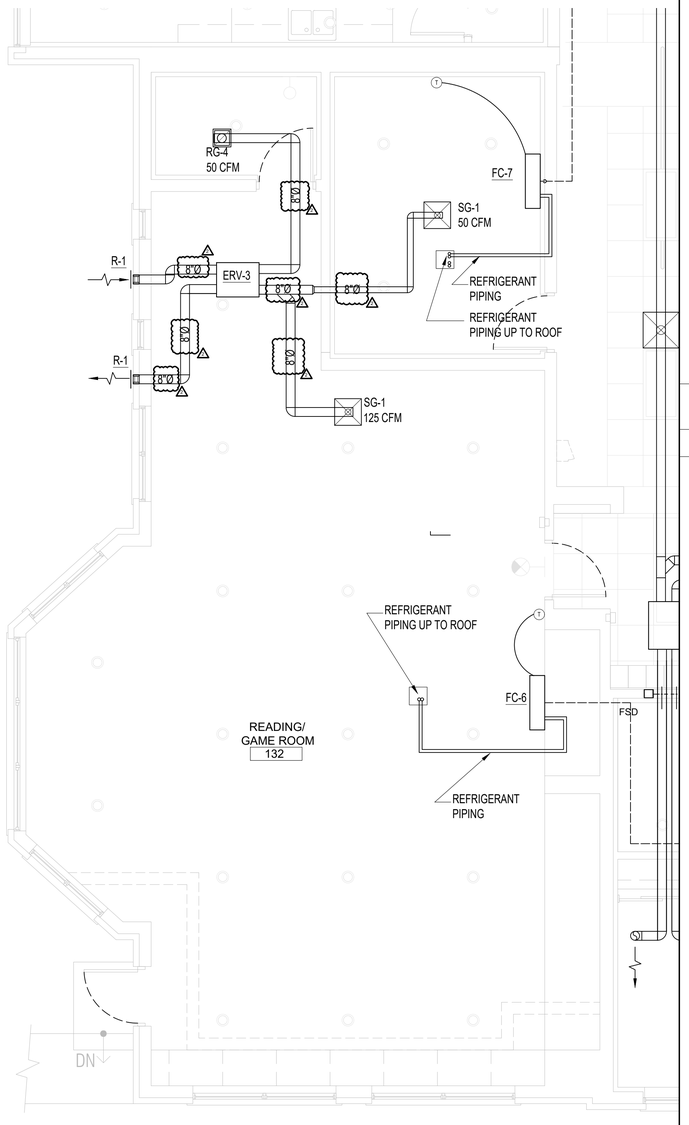
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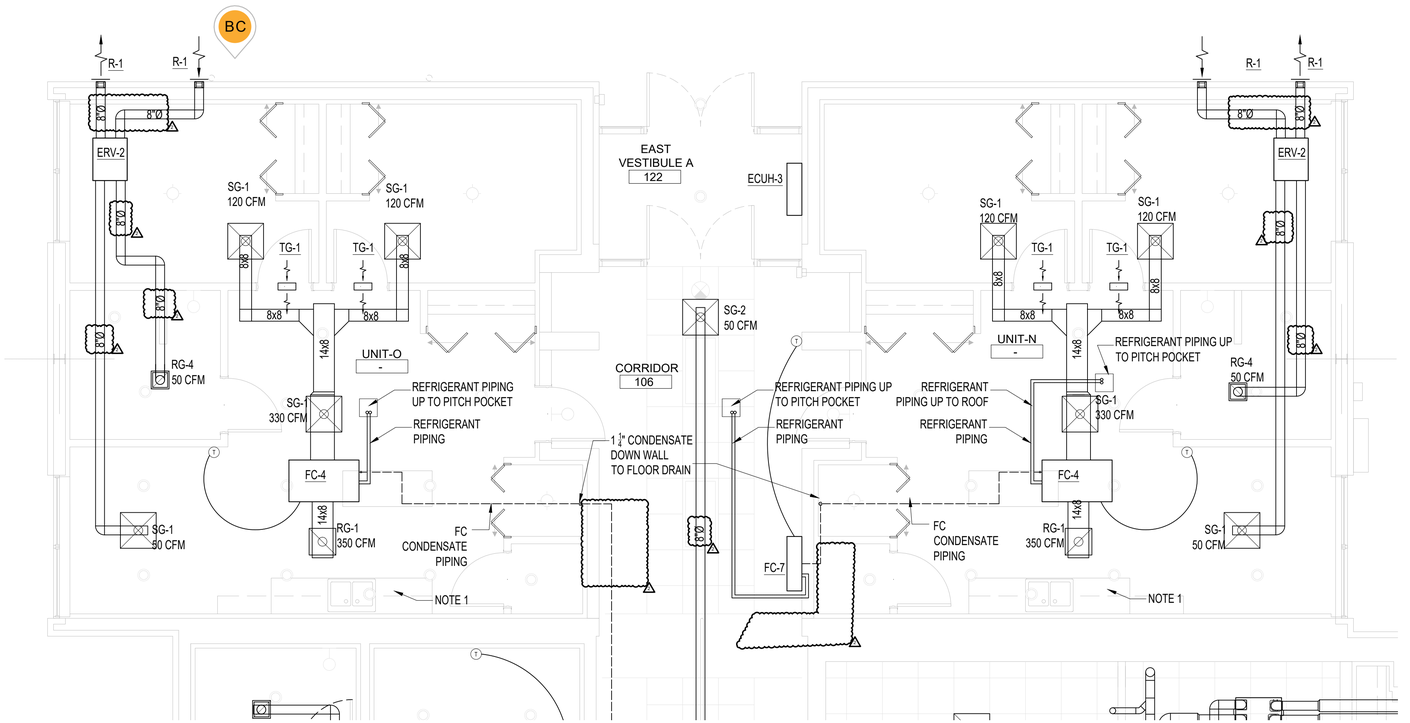
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A1 ENLARGED HVAC PLAN

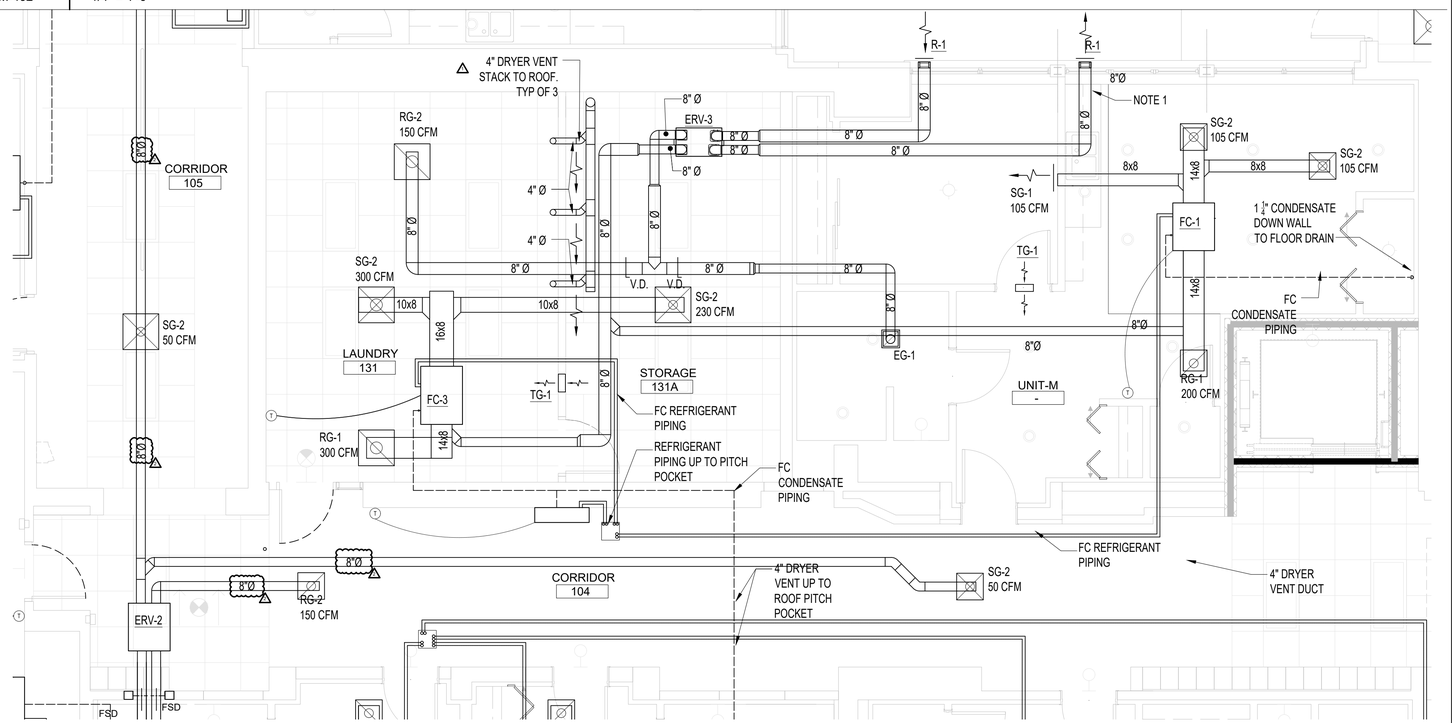
M-402 | 1/4" = 1'-0"

1. SEE SHEET NOTES AND SHEET KEYED NOTES ON M-001



G6 ENLARGED HVAC PLANS

M-402 | 1/4" = 1'-0"



A6 ENLARGED HVAC PLANS

M-402 | 1/4" = 1'-0"

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KEY PLANS

SHEET TITLE

MECHANICAL HVAC
ENLARGED PLANS

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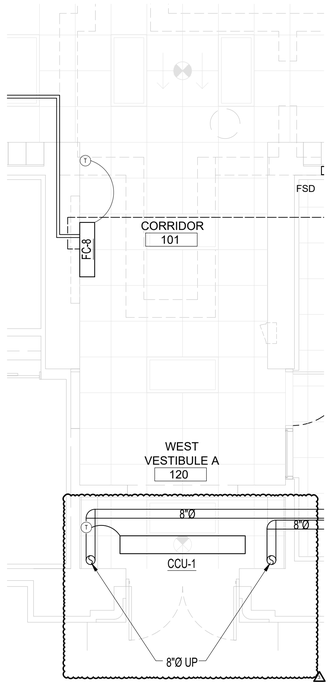
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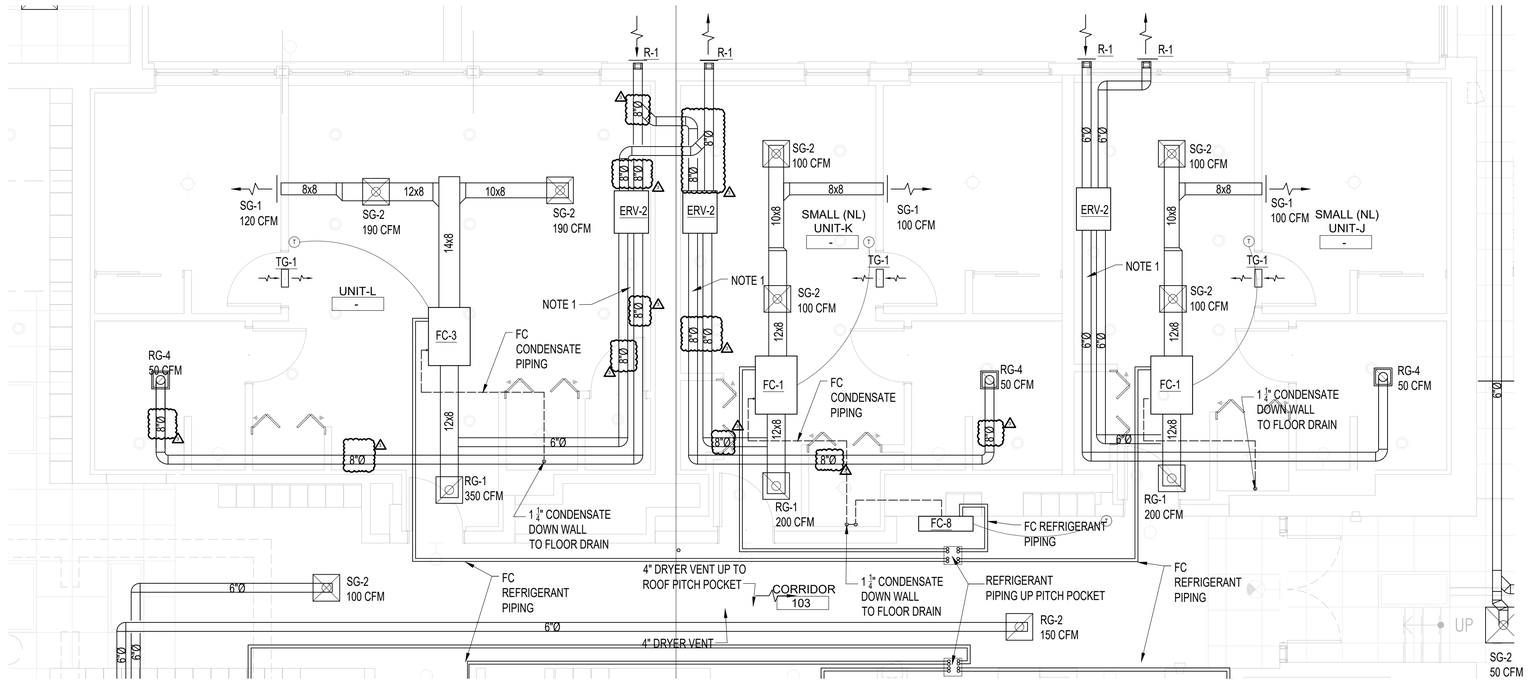
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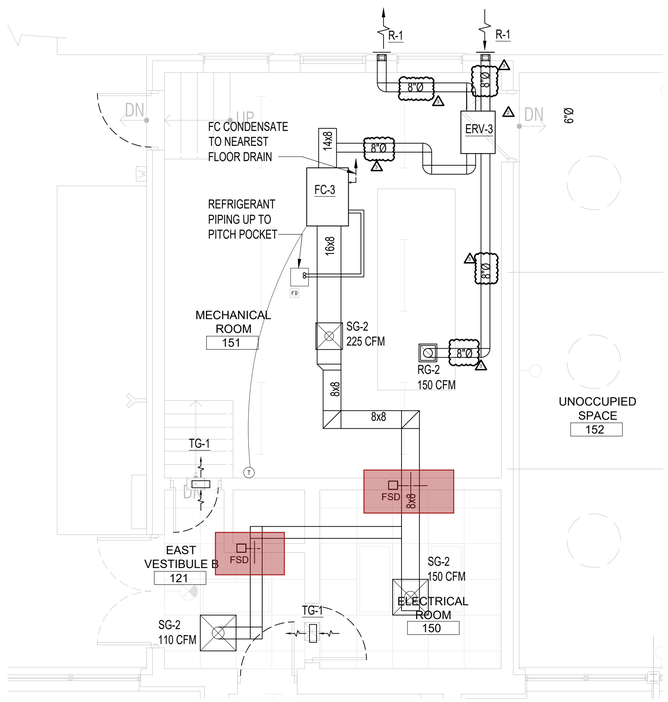
G1 ENLARGED HVAC PLANS

M-403 | 1/4" = 1'-0"



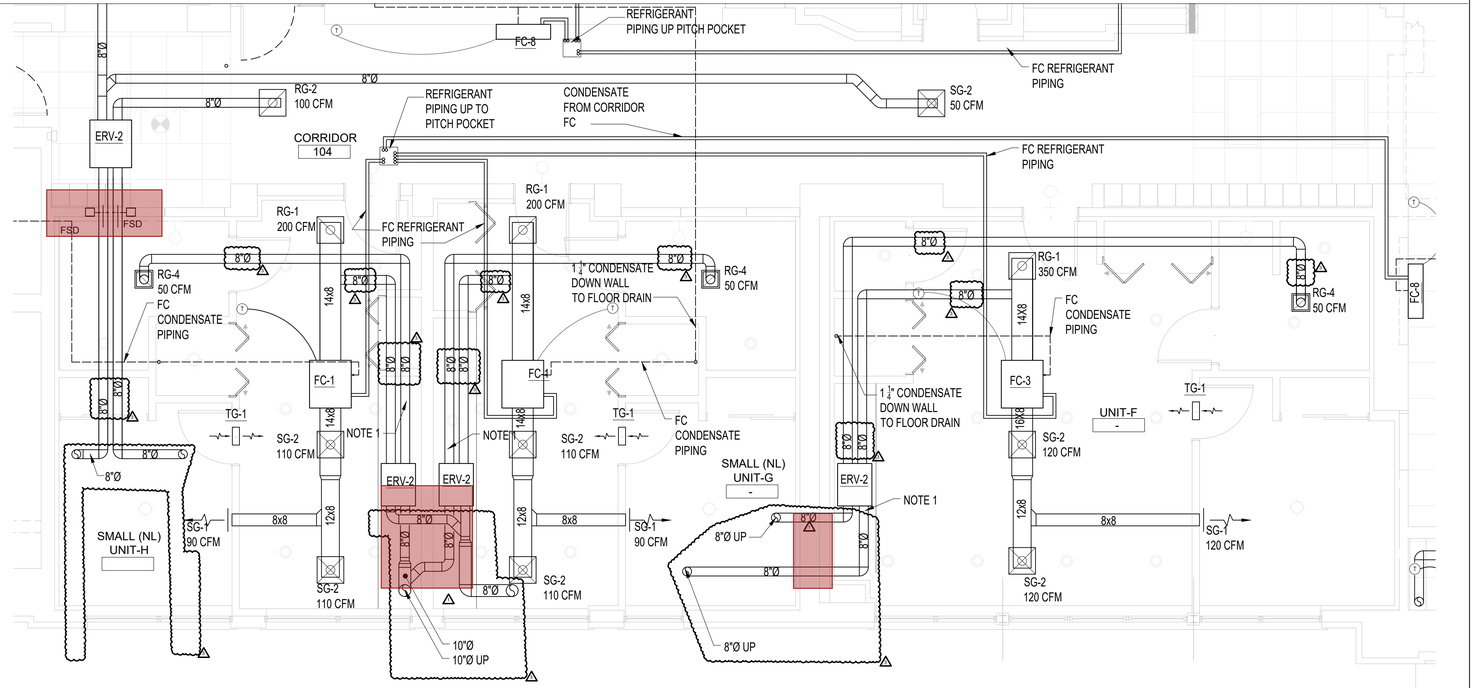
G5 ENLARGED HVAC PLANS

M-403 | 1/4" = 1'-0"



A1 ENLARGED HVAC PLAN

M-403 | 1/4" = 1'-0"



A6 ENLARGED HVAC PLANS

M-403 | 1/4" = 1'-0"

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KEY PLANS

SHEET TITLE

MECHANICAL HVAC
ENLARGED PLANS

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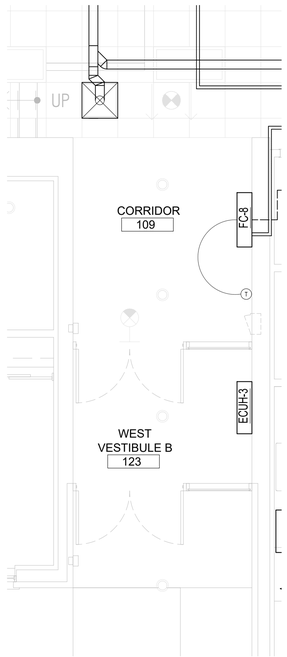
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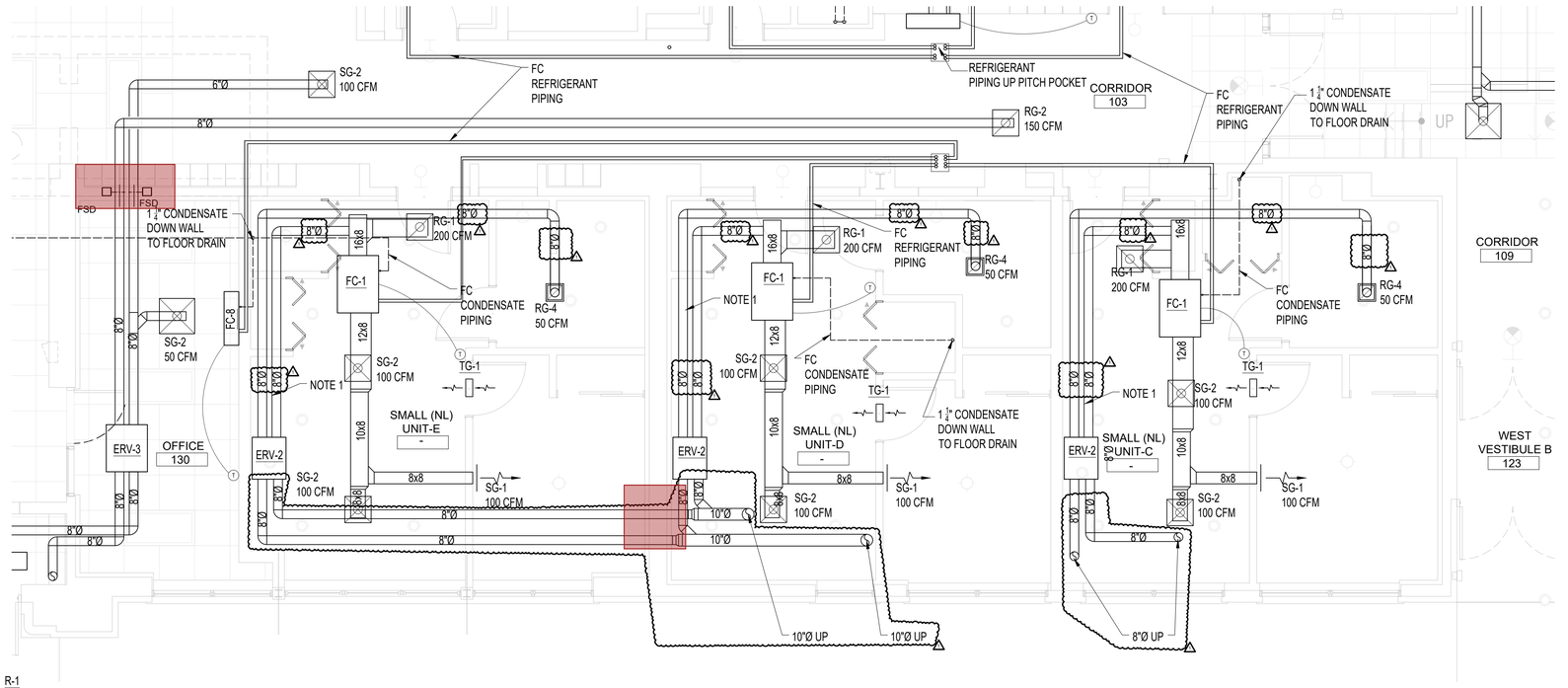
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SHEET NO. M-403

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1. SEE SHEET NOTES AND SHEET KEYED NOTES ON M-001





A1	ENLARGED HVAC PLAN
M-404	1/4" = 1'-0"

A5	ENLARGED HVAC PLANS
M-404	1/4" = 1'-0"

12/2/2025 7:05:47 PM

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
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STATE OF MICHIGAN
STEPHEN M. HENNARD
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NO. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

MECHANICAL HVAC ENLARGED PLANS

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24
△BULLETIN 6	12.03.25

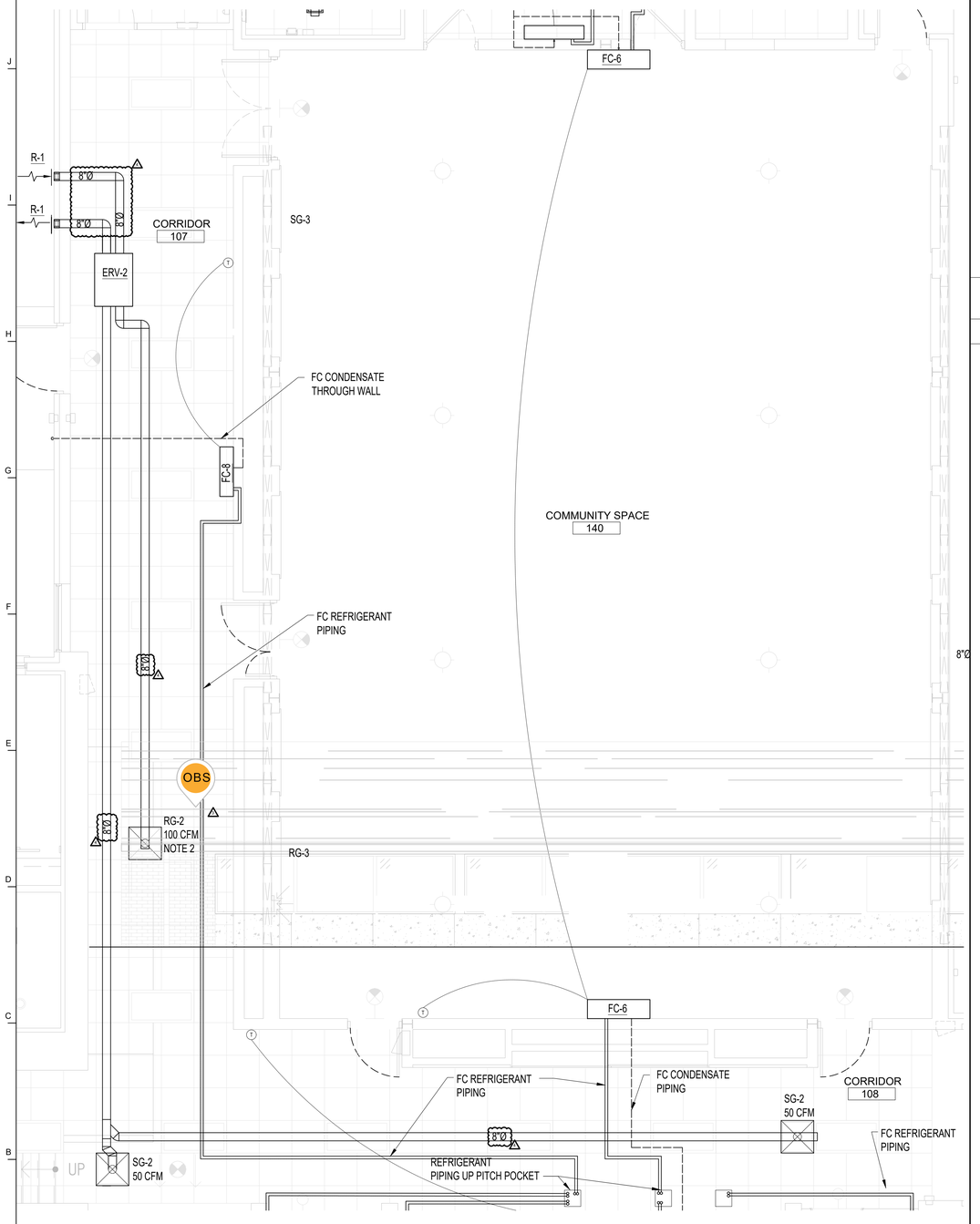
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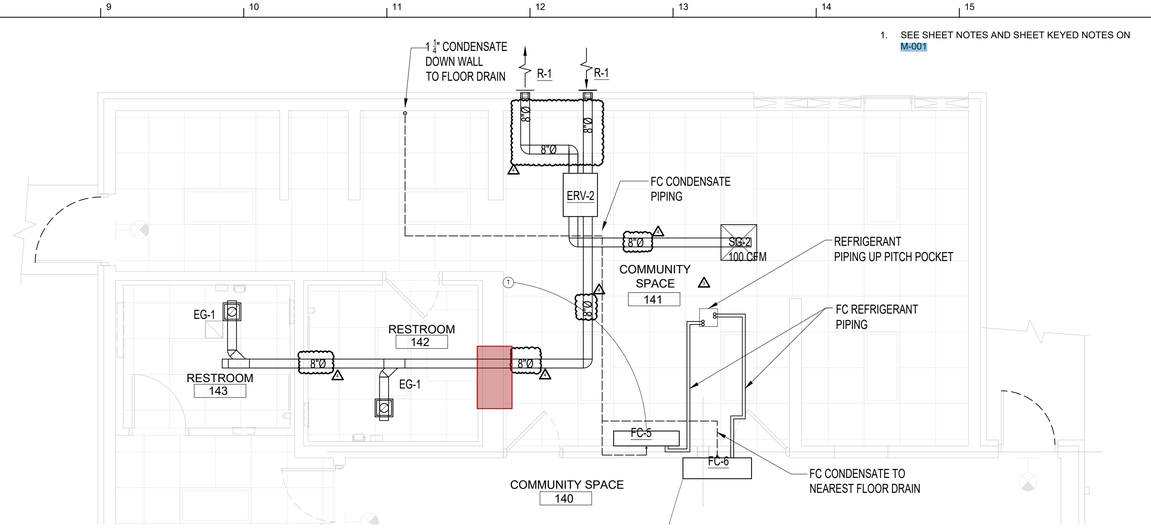
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FILE NO.

M-404
SHEET NO.



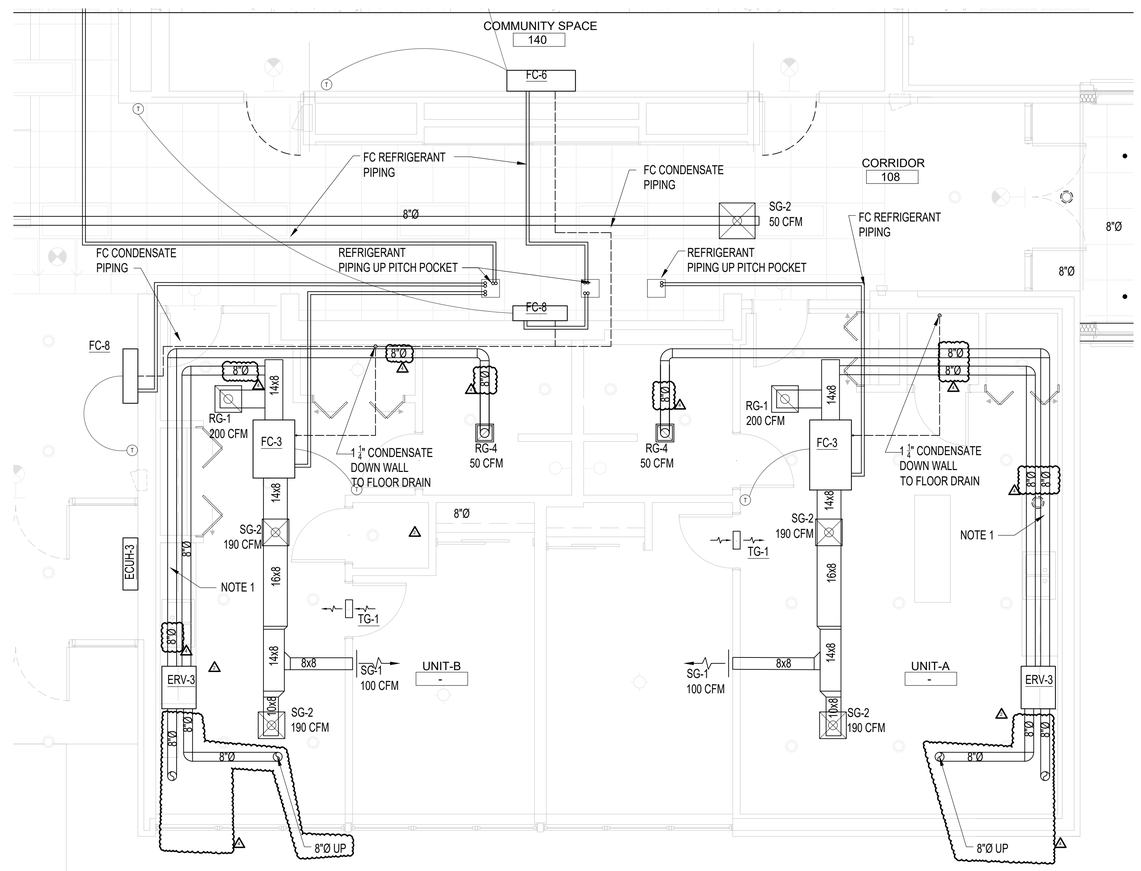
A1 ENLARGED HVAC PLANS

M-405 | 1/4" = 1'-0"



H8 ENLARGED HVAC PLANS

M-405 | 1/4" = 1'-0"



A8 ENLARGED HVAC PLANS

M-405 | 1/4" = 1'-0"

1. SEE SHEET NOTES AND SHEET KEYED NOTES ON M-001

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SHEET TITLE

MECHANICAL HVAC
ENLARGED PLANS

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△BULLETIN 3	5.19.25
△BULLETIN 6	12.03.25

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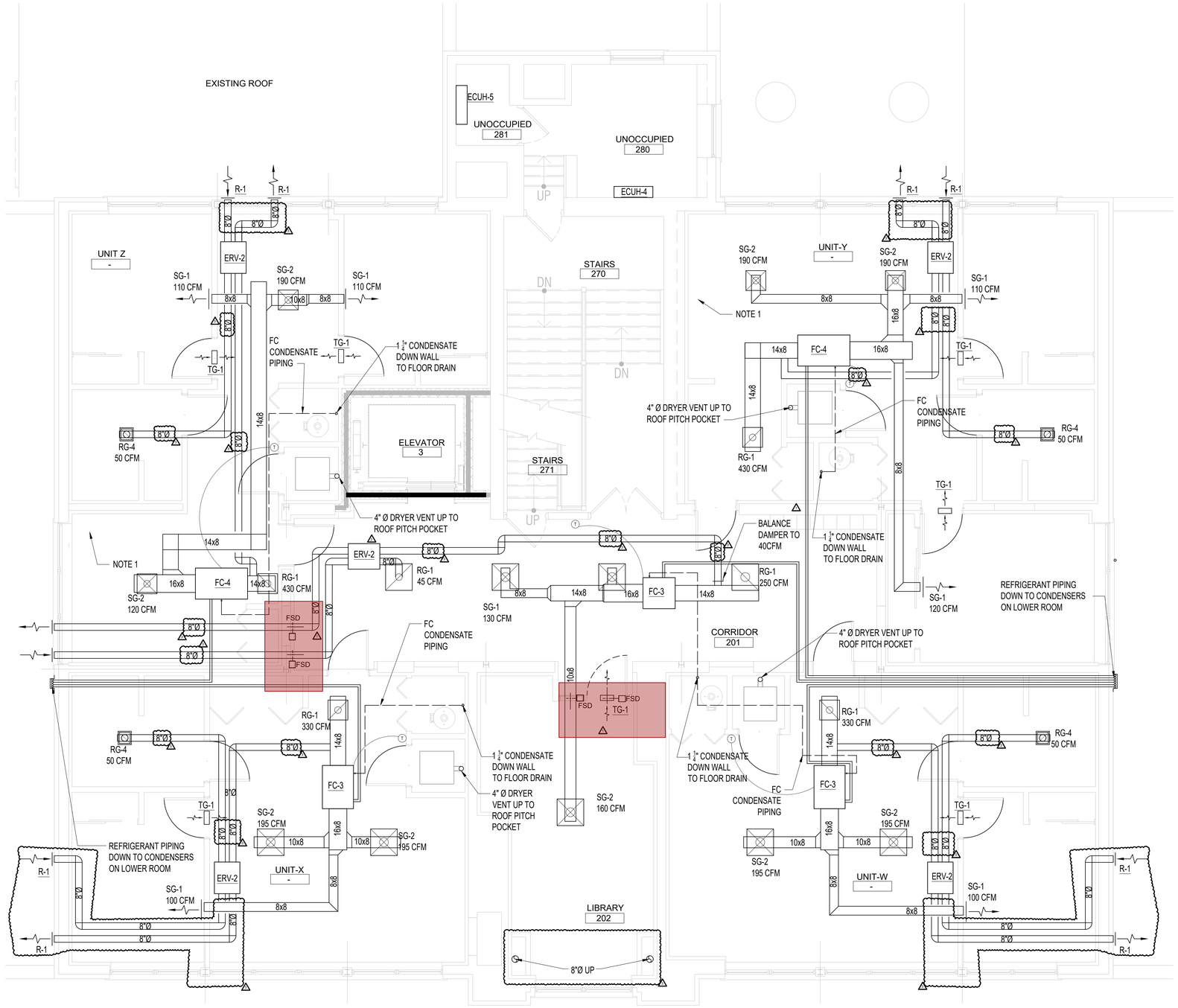
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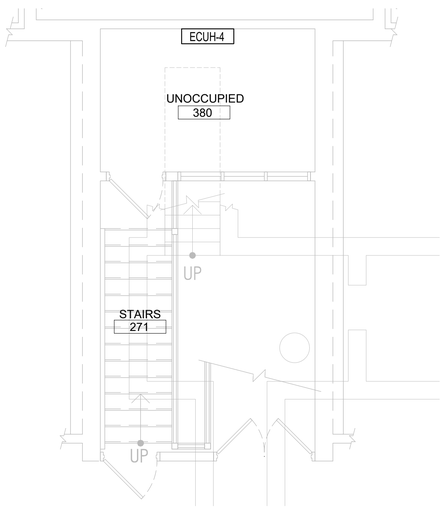
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FILE NO.

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SHEET NO.

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1. SEE SHEET NOTES AND SHEET KEYED NOTES ON M-001





A1	**ENLARGED HVAC PLANS**	**A5**	**ENLARGED HVAC PLANS**
M-406	1/4" = 1'-0"	M-406	1/4" = 1'-0"

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SHEET TITLE

MECHANICAL HVAC ENLARGED PLANS

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PERMIT	10.20.24
△BULLETIN 3	5.19.25
△BULLETIN 5	10.13.25
△BULLETIN 6	12.03.25

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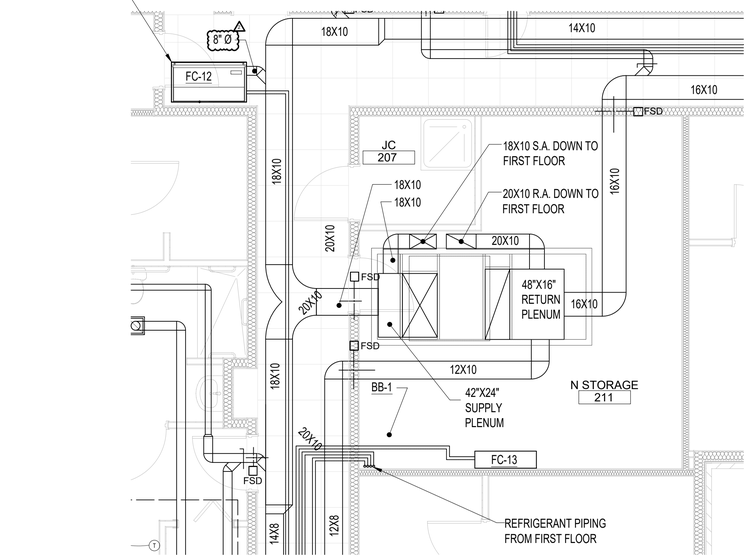
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APPROVED

21026.00
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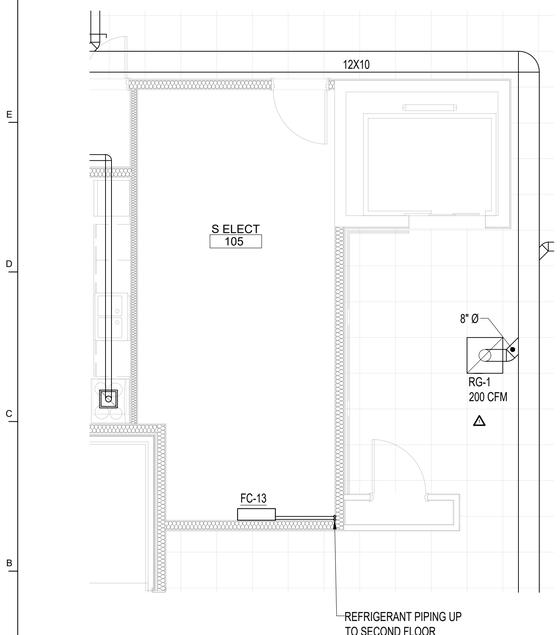
M-406
SHEET NO.

1. SEE SHEET NOTES AND SHEET KEYED NOTES ON M-001



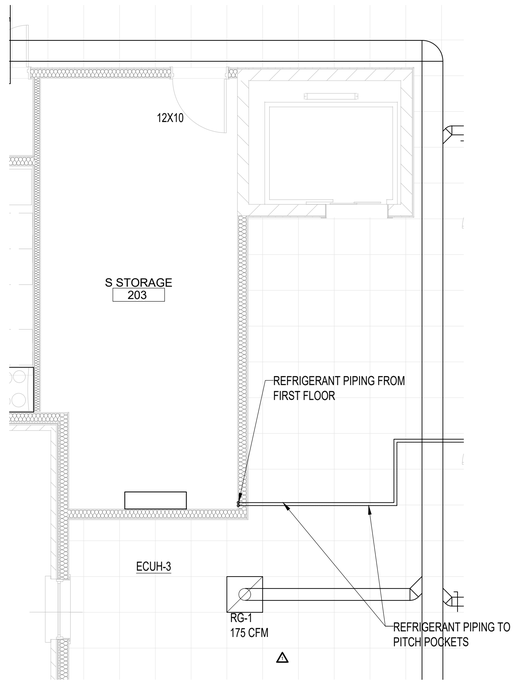
F9 ENLARGED SECOND FLOOR HVAC PLAN

M-407 | 1/4" = 1'-0"



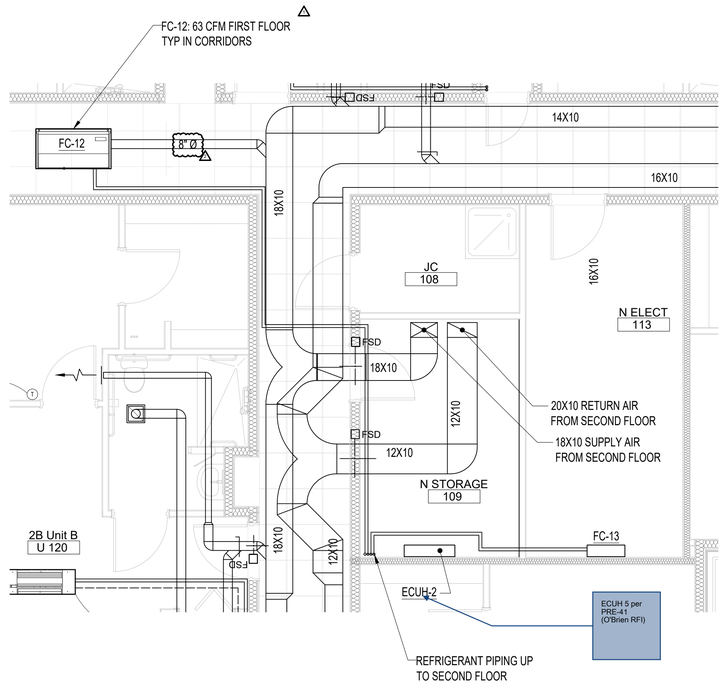
A1 ENLARGED HVAC PLANS

M-407 | 1/4" = 1'-0"



A5 ENLARGED HVAC PLANS

M-407 | 1/4" = 1'-0"



A9 ENLARGED FIRST FLOOR HVAC PLAN

M-407 | 1/4" = 1'-0"

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MECHANICAL HVAC ENLARGED PLANS

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△BULLETIN 6	12.03.25

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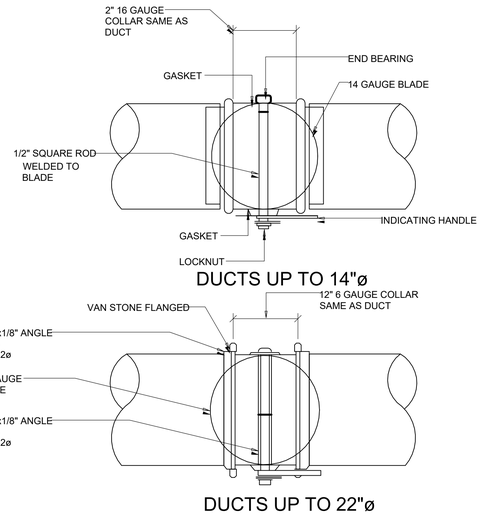
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FILE NO.

M-407
SHEET NO.

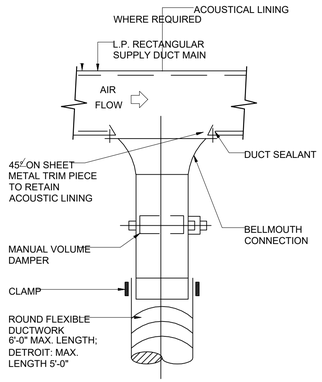
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NOTES:
1. WHEREVER POSSIBLE, DAMPER BLADE SHALL, BE INSTALLED IN VERTICAL POSITION.
2. FOR DUCTS OVER 22ø USE OPPOSED BLADE VOLUME DAMPER.
3. ALL QUADRANT OPERATORS SHALL BE EXTENDED TO OUTSIDE OF INSULATION

G1 ROUND VOLUME DAMPER

M-501 | NTS

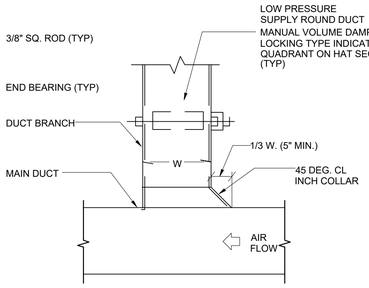


NOTES:

1. FLEXIBLE DUCT CONNECTIONS ARE ONLY PERMITTED IN AREAS WITH PNC-35 OR GREATER.

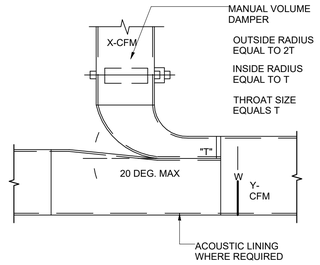
G6 LOW PRESSURE SUPPLY CONNECTION DETAILS

M-501 | NTS



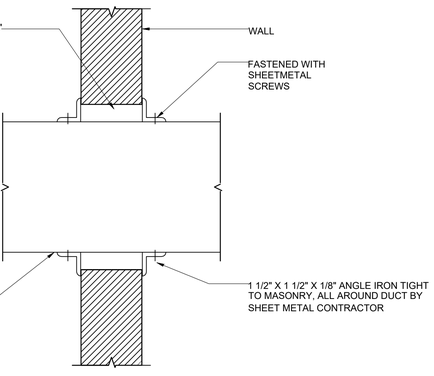
NOTES:

1. FURNISH THIS TYPE CONNECTION WHEN SINGLE-LINE DUCTWORK IS INDICATED AS THIS FOR BRANCHES WITH LESS THAN 25% OF THE TOTAL AIR FLOW.



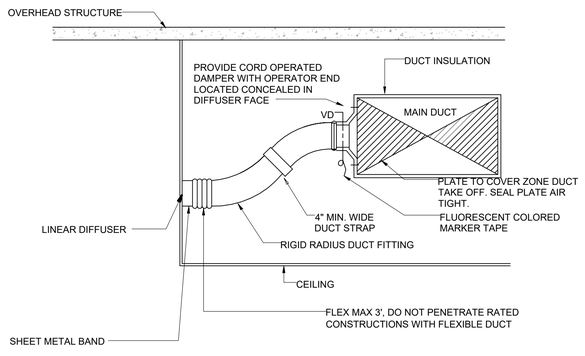
NOTES:

1. FURNISH THIS TYPE CONNECTION WHEN SINGLE-LINE DUCTWORK IS INDICATED AS THIS FOR BRANCHES WITH LESS THAN 25% OF THE TOTAL AIR FLOW.
2. THIS TYPE OF CONNECTION MUST BE USED WHEN W 36 IN.
3. T=X (BRANCH DUCT)x W
   Y (TOTAL CFM)



A1 DUCT PENETRATION - NON RATED WALL

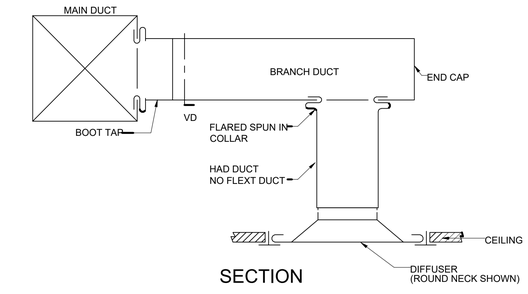
M-501 | NTS



NOTE:
1. FLEX DUCT INSTALLED PER MANUFACTURERS LISTING.

A6 LINEAR DIFFUSER DETAIL

M-501 | NTS



A11 CEILING DIFFUSER DETAIL

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KEY PLANS

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MECHANICAL TYPICAL DETAILS

SCALE: AS NOTED

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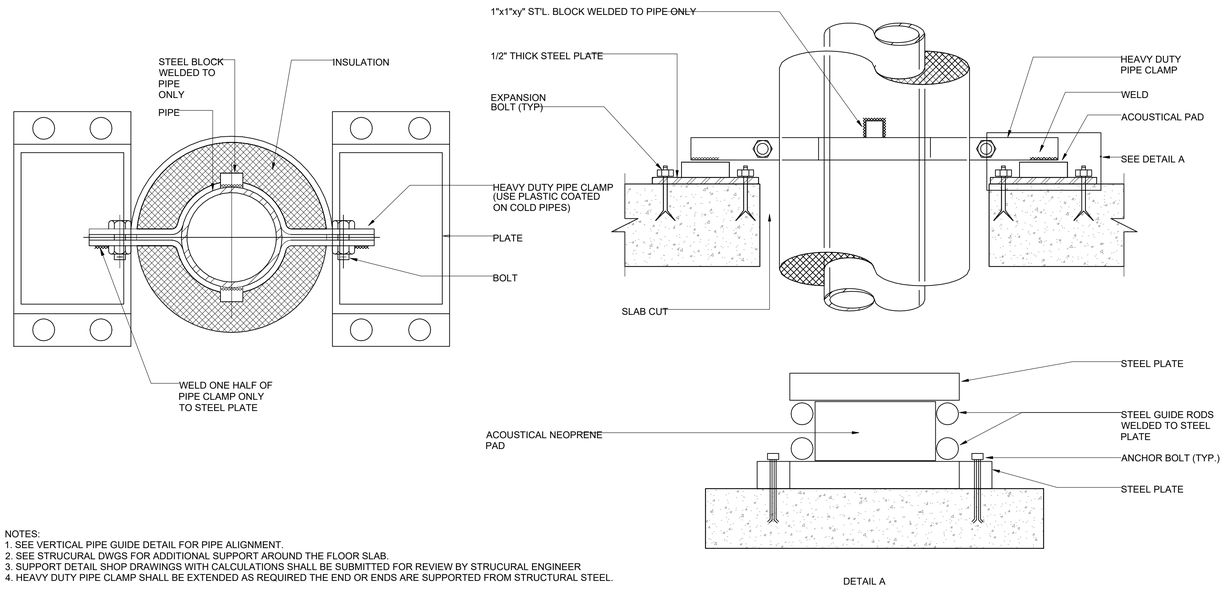
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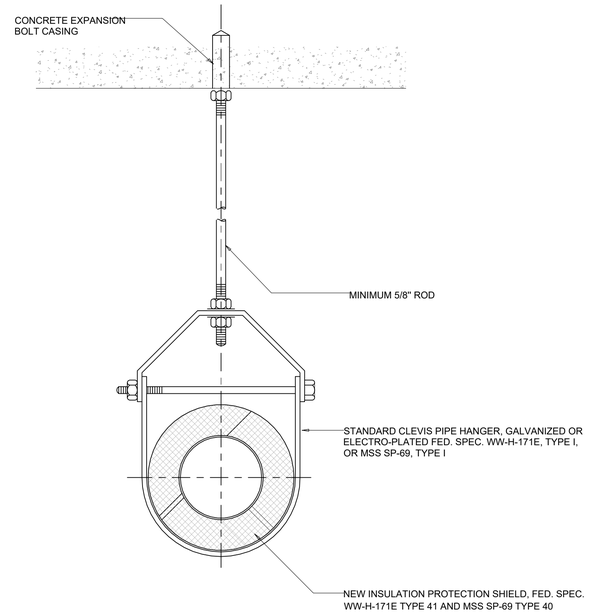
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NOTES:
1. SEE VERTICAL PIPE GUIDE DETAIL FOR PIPE ALIGNMENT.
2. SEE STRUCURAL DWGS FOR ADDITIONAL SUPPORT AROUND THE FLOOR SLAB.
3. SUPPORT DETAIL SHOP DRAWINGS WITH CALCULATIONS SHALL BE SUBMITTED FOR REVIEW BY STRUCURAL ENGINEER
4. HEAVY DUTY PIPE CLAMP SHALL BE EXTENDED AS REQUIRED THE END OR ENDS ARE SUPPORTED FROM STRUCTURAL STEEL.

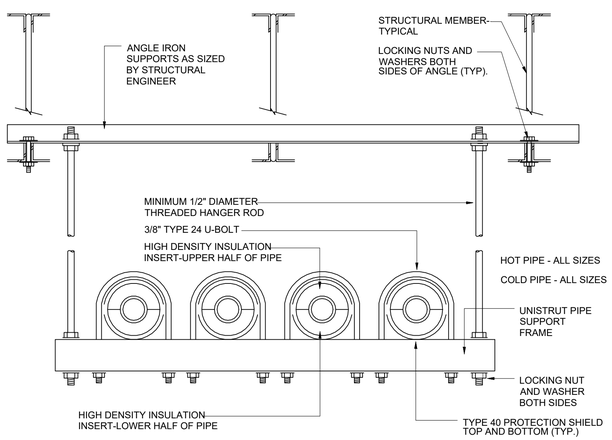
G1 VERTICAL PIPE SUPPORT

M-502 | NTS



G11 SUPPORT SYSTEM FOR INSULATED PIPES

M-502 | NTS

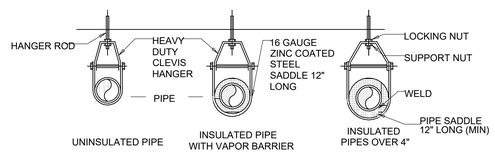


INDIVIDUAL PIPE HANGER ROD & SPACING SCHEDULE											
NOMINAL PIPE OR TUBE SIZE-INCHES	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8	--
HANGER ROD SIZE-INCHES	3/8	3/8	3/8	3/8	1/2	1/2	5/8	5/8	7/8	7/8	--
MAXIMUM SPACING BETWEEN INCHES	6	7	9	10	11	12	14	16	17	19	--
MAXIMUM SPACING BETWEEN CU, TUBE SUPPORT IN FEET	6	6	8	9	10	10	12	14	14	16	--

NOTES:
1. TRAPEZE SPACING SHALL BE BASED ON SPACING OF SMALLEST PIPE ON TRAPEZE.
2. TRAPEZE SHALL BE DESIGNED WITH A FACTOR OF SAFETY 5 FOR CENTER OF SPAN CONCENTRATED LOAD.
3. METHOD OF HANGING, TYPE OF INSERT, BEAM CLAMP, ROD, ETC. MUST BE APPROVED BY STRUCTURAL ENGINEER PER SHOP DRAWINGS.
4. FOR ALL UNINSULATED COPPER PIPING, HANGERS SHALL MATCH IN MATERIAL TYPE SO AS TO AVOID DISSIMILAR METAL CORROSION. THE USE OF NEOPRENE OR PVC SADDLES IS UNACCEPTABLE.

A1 TRAPEZE PIPE HANGERS

M-502 | NTS

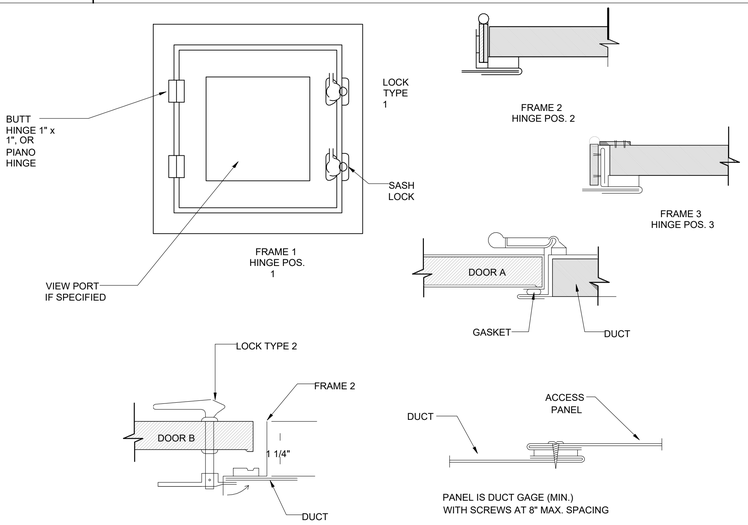


INDIVIDUAL PIPE HANGER ROD & SPACING SCHEDULE											
NOMINAL PIPE OR TUBE SIZE-INCHES	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8	--
HANGER ROD SIZE-INCHES	3/8	3/8	3/8	3/8	1/2	1/2	5/8	5/8	7/8	7/8	--
MAXIMUM SPACING BETWEEN PIPE SUPPORT-FEET	6	7	9	10	11	12	14	16	17	19	--
MAXIMUM SPACING BETWEEN CU, TUBE SUPPORT-FEET	6	6	8	9	10	10	12	14	14	16	--

NOTES:
1. TRAPEZE SPACING SHALL BE BASED ON SPACING OF SMALLEST PIPE ON TRAPEZE.
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4. FOR ALL UNINSULATED COPPER PIPING, HANGERS SHALL MATCH IN MATERIAL TYPE SO AS TO AVOID DISSIMILAR METAL CORROSION. THE USE OF NEOPRENE OR PVC SADDLES IS UNACCEPTABLE.

A6 TYPICAL CLEVIS HANGER SUPPORTS

M-502 | NTS



	DOOR SIZE	NO. HINGES	NO. LOCKS	METAL GAGE		
				FRAME	DOOR	BACK
2" W.G. STATIC AND LESS	12" x 12" 16" x 20" 24" x 24"	2 2 3	1-S 2-S 2-S	24 22 22	26 24 22	26 26 26
3" W.G. STATIC	12" x 12" 16" x 20" 24" x 24"	2 2 3	1-S 1-S, 1-T, 1-B 2-S, 1-T, 1-B	22 20 20	22 20 20	26 26 24
4" W.G. TO 10" W.G.	12" x 12" 16" x 20" 24" x 24"	2 3 3	1-S,1-T,1-B 2-S, 1-T, 1-B 2-S, 2-T, 2-B	20 18 18	20 18 18	26 24 24
S = SIDE OPPOSITE HINGES, T = TOP, B = BOTTOM						

A11 DUCT ACCESS DOORS

M-502 | NTS

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KEY PLANS

SHEET TITLE
MECHANICAL TYPICAL DETAILS

SCALE: AS NOTED

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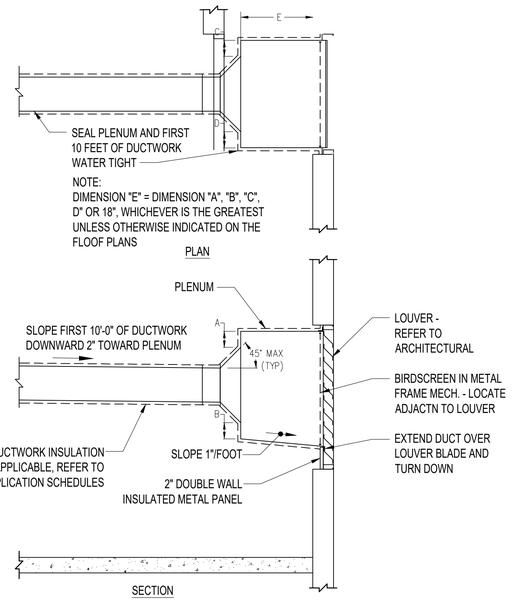
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SHEET NO.

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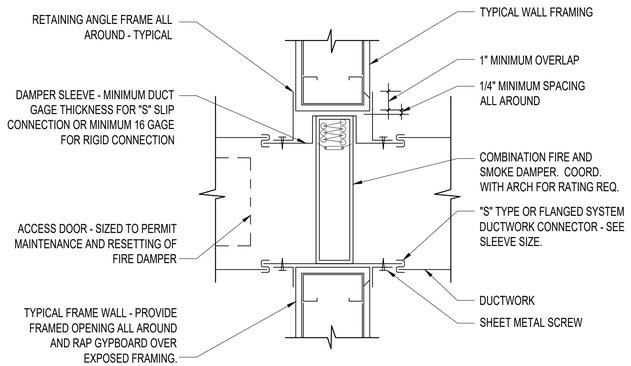
NOTE:

1. DUCTWORK INSULATION ON OA AND EA INCLUDING PLENUM TO BE FIBERGLASS BLANKET 2.25 LB/CU FT AT 1.5 INCHES THICK, IN ALL MECHANICAL ROOMS
2. DIMENSION "E" = DIMENSION "A", "B", "C",D" OR 18", WHICHEVER IS THE GREATESTUNLESS OTHERWISE INDICATED ON THE FLOOR PLANS
3. MOTORIZED DAMPER AT ERV



G1 INTAKE AND EXHAUST OUTDOOR LOUVER DETAIL

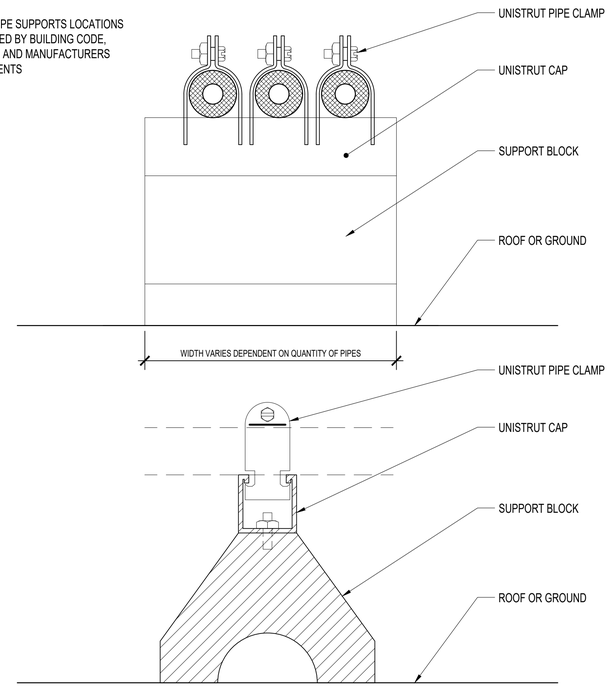
M-504 | NTS



G6 DUCT THROUGH FIRE PARTITION

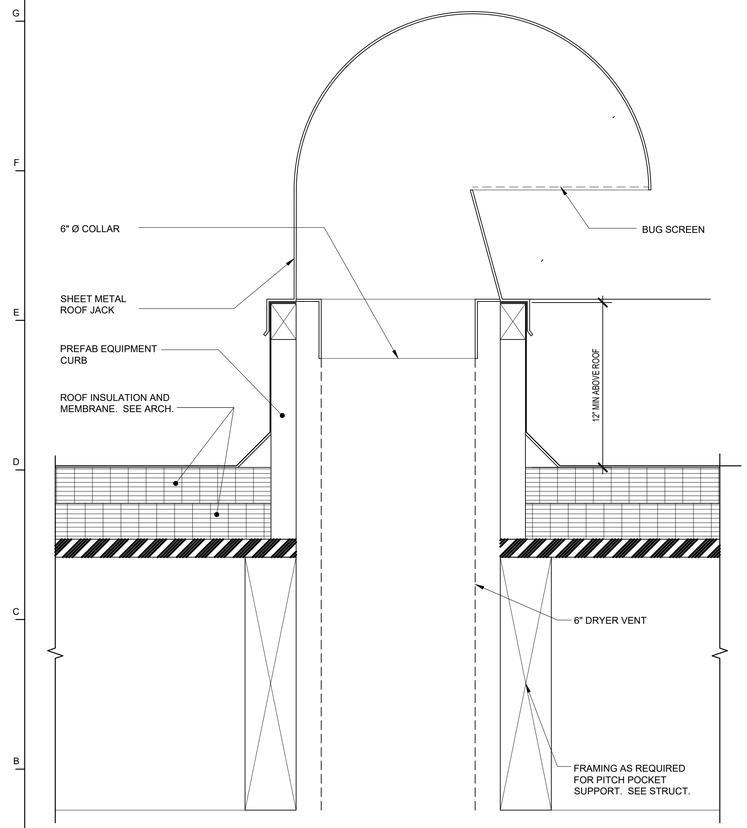
M-504 | NTS

NOTE:
PROVIDE PIPE SUPPORTS LOCATIONS AS REQUIRED BY BUILDING CODE, LOCAL AHJ AND MANUFACTURERS REQUIREMENTS



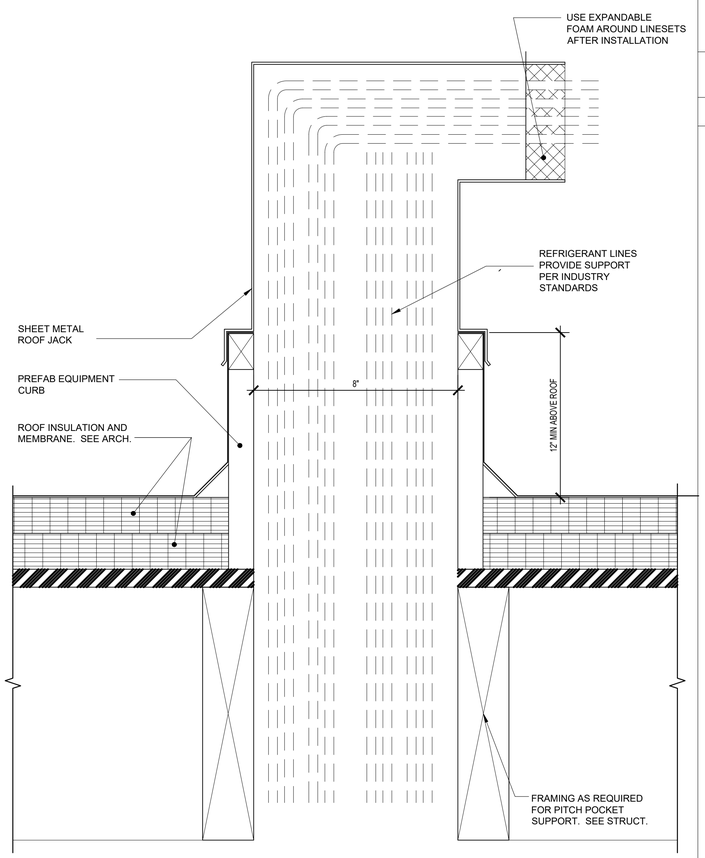
G11 PIPING SUPPORT DETIAL

M-503 | NTS



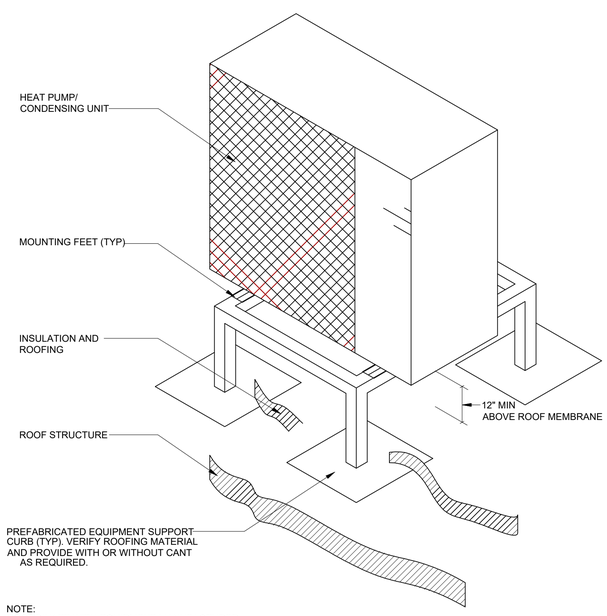
A1 DRYER VENT ROOF PENETRATION

M-503 | NTS



A6 REFRIGERANT LINE ROOF PENETRATION

M-503 | NTS



NOTE:
COORDINATE WITH EQUIPMENT MANUFACTURER FOR SUPPORT REQUIRED

A11 HEAT PUMP/CONDENSING UNIT ROOF RAILS

M-503 | NTS

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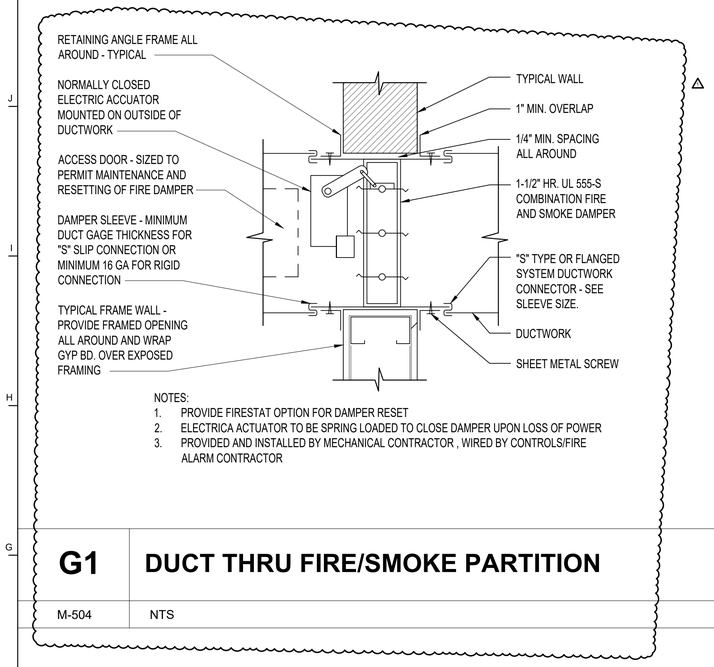
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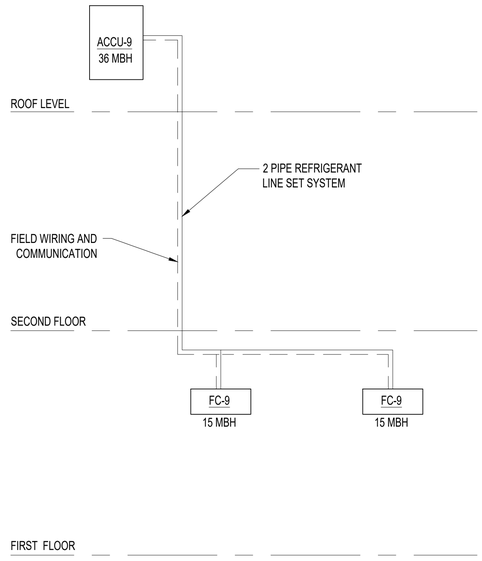
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NOTES:
1. PROVIDE FIRESTAT OPTION FOR DAMPER RESET
2. ELECTRICA ACTUATOR TO BE SPRING LOADED TO CLOSE DAMPER UPON LOSS OF POWER
3. PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR , WIRED BY CONTROLS/FIRE ALARM CONTRACTOR

G1 DUCT THRU FIRE/SMOKE PARTITION

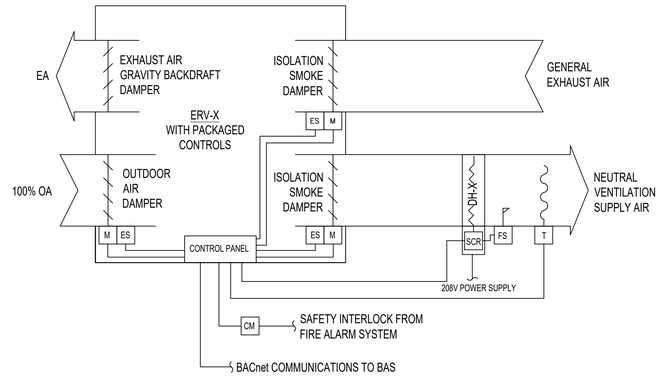
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MULTI-ZONE HEAT PUMP SYSTEM

G6 DESIGN SYSTEM BUILDER DIAGRAM - VESTIBULE

M-504 | NTS



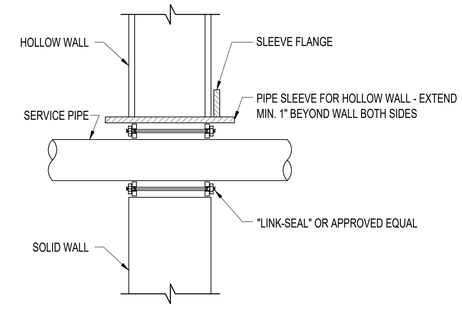
1. ERV SHALL BE SUPPLIED TO INCLUDE DAMPERS, FIRE ALARM INTERFACE CONTROLS AND ELECTRIC DUCT HEATER CONTROLS. UNIT SUPPLIED WITH 208V AND SEPARATE 120V FOR CONTROL PANEL. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD WIRING REQUIRED FOR OPERATION AND CONTROL OF ERV.
2. CONTRACTOR SHALL PROVIDE ALL FIRE ALARM COMPONENTS AND WIRING TO TIE ERV INTO FIRE ALARM PANEL. COORDINATE WITH FIRE ALARM CONTRACTOR FOR SEQUENCE AND FINAL TIE INTO FIRE ALARM SYSTEM.

SEQUENCE OF OPERATION:

1. ERV SHALL MAINTAIN A NEUTRAL AND CONSTANT DISCHARGE AIR TEMPERATURE AND CFM FOR BUILDING VENTILATION REQUIREMENTS.
2. SUPPLY FAN AND EXHAUST FAN SPEEDS TO BE SET AT CONSTANT SPEED TO ACHIEVE CFM RATING REQUIRED, SEE DRAWING AND VENTILATION SCHEDULE FOR SETPOINTS.
3. DUCT ELECTRIC COIL SCR SHALL BE MODULATED BY A DUCT MOUNTED TEMPERATURE SENSOR TO MAINTAIN A DISCHARGE AIR TEMPERATURE OF 60 DEGREES F, TEMPERATURE TO BE ADJUSTABLE.
4. DUCT SMOKE DETECTORS SHALL DEACTIVATE ERV UNIT THRU FIRE ALARM SYSTEM CONTROL MODULE.

G11 DEDICATED OA SUPPLY UNIT ERV-X

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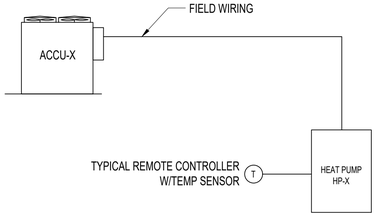


D11 PIPE SLEEVE THRU EXTERIOR WALL

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APARTMENT UNIT HEAT PUMP SEQUENCE OF OPERATION:

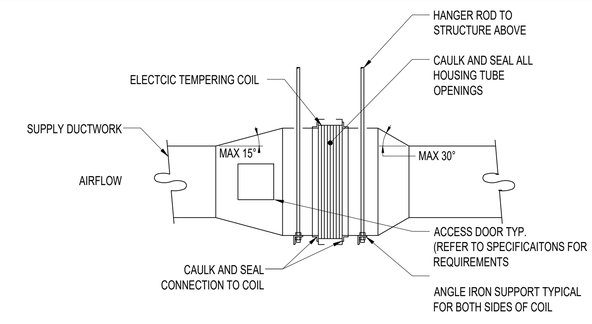
1. INDIVIDUAL FAN COIL UNITS OCCUPIED MODE: FAN OPERATION SHALL BE CYCLED ON/OFF AS REQUIRED TO ACHIEVE OCCUPIED COOLING SETPOINT OF 73F (LOCALLY ADJUSTABLE) AND HEATING SETPOINT OF 70F (LOCALLY ADJUSTABLE). ROOM THERMOSTAT/CONTROLLER SHALL CONTROL COMMUNICATION TO FCU COOLING AND HEATING DEMAND REQUIREMENTS TO CONTROL ASSOCIATED CONDENSING UNIT MODE OF OPERATION.
2. INDIVIDUAL FAN COIL UNITS UNOCCUPIED MODE: FAN OPERATION SHALL BE CYCLED ON/OFF AS REQUIRED TO ACHIEVE OCCUPIED COOLING SETPOINT OF 78F (LOCALLY ADJUSTABLE) AND HEATING SETPOINT OF 65F (LOCALLY ADJUSTABLE). ROOM THERMOSTAT/CONTROLLER SHALL CONTROL COMMUNICATION TO FCU COOLING AND HEATING DEMAND REQUIREMENTS TO CONTROL ASSOCIATED CONDENSING UNIT MODE OF OPERATION.
3. WHEN APPLICABLE WHEN HEAT PUMP FCU IS IN HEATING MODE, FCU CONTROLLER SHALL ACTIVATE ASSOCATED DUCT HEATER, FOR BACK UP HEATING OPERATION. THERMOSTAT SHALL CYCLE FAN AND HEATER OPERATION IN HEATING MODE TO MAINTAIN MIMIMUM DISCHARGE AIR OF 60F (FIELD ADJUSTABLE). THIS OPERATION IS TO PREVENT FREEZING IN THE EVENT HEAT PUMP IS NOT PROPERLY OPERATING OR IS IN ALARM.
4. COORDINATE WITH FIRE ALARM CONTRACTOR AND PROVIDE REQUIRED DEVISES AND WIRING TO TIE FAN COIL UNIT AND OR BRANCH BOX TO FIRE ALARM DEVICE REQUIRED TO DEACTIVATE PROPER FAN COIL UNIT UPON ACTIVATION OR GENERAL ALARM.



APARTMENT HEAT PUMP DIAGRAM

A1 APARTMENT HEAT PUMP AND VRF SYSTEM DETAILS AND NOTES

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A11 DUCT MOUNTED TEMPERING COIL DETAIL

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28962 Vista Way, South Lyon, MI 48178

REGISTRATION SEAL

STATE OF MICHIGAN
STEPHEN M. HENNARD
ENGINEER
NO. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

MECHANICAL TYPICAL DETAILS

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24
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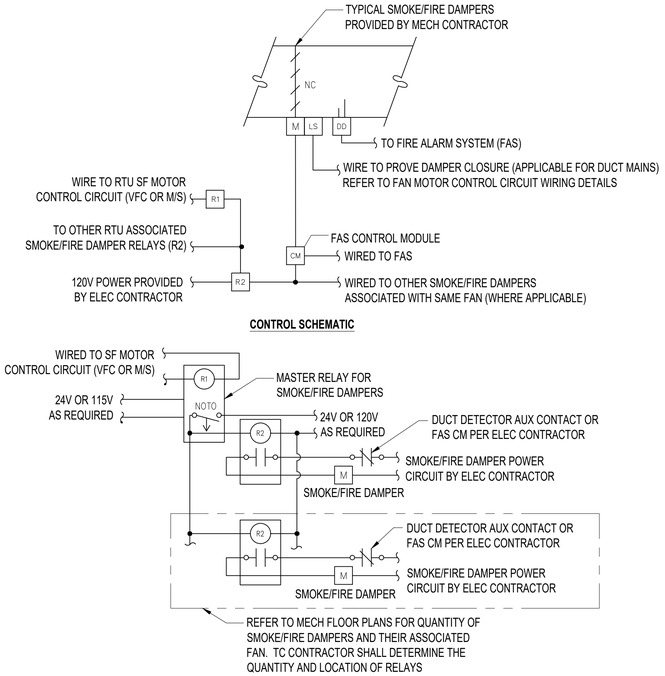
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CONTROL SCHEMATIC

CONTROL WIRING

NOTES:
1. REFER TO FLOOR PLANS FOR QUANTITY 7 LOCATION OF THE SMOKE/FIRE DAMPERS AND ASSOCIATED HEAT PUMP UNIT
2. ELECTRICAL CONTRACT SHALL PROVIDE 120V POWER REQUIREMENT FOR SMOKE/FIRE DAMPER ACTUATOR(S)
3. TC CONTRACTOR SHALL PROVIDE CONTROL RELAY IN ENCLOSURE FOR SMOKE/FIRE DAMPER CONTROL. IF MULTIPLE POWER CIRCUITS ARE USED FOR SMOKE/FIRE DAMPERS ASSOCIATED WITH COMMON FAN, MULTIPLE CONTROL RELAYS SHALL BE USED AND WIRED IN PARALLEL.
4. SMOKE/FIRE DAMPERS SHALL BE SHIPPED AS AN ASSEMBLY FOR INSTALLATION ON SITE AND BEAR THE UL LISTING LABEL

SEQUENCE OF OPERATION

1. SMOKE/FIRE DAMPERS SHALL BE HARDWIRE INTERLOCKED TO ASSOCIATE FAN CONTROLS AND SHALL OPEN WHEN FAN IS ACTIVATED AND CLOSE WHEN FAN IS DEACTIVATED.
2. WHEN PRODUCTS OF COMBUSTION ARE DETECTED AT DUCT SMOKE/FIRE DETECTOR, FIRE ALARM SYSTEM SHALL CLOSE RESPECTIVE SMOKE/FIRE DAMPERS AND DEACTIVATE ASSOCIATED FAN
3. WHERE APPLICABLE, FIRE/SMOKE/FIRE DAMPER LIMIT (ES) SWITCH SHALL BE HARDWIRE INTERLOCKED TO RESPECTIVE FAN CONTROL CIRCUIT TO PREVENT FAN FROM OPERATING UNTIL DAMPER(S) ARE PROVEN OPEN.

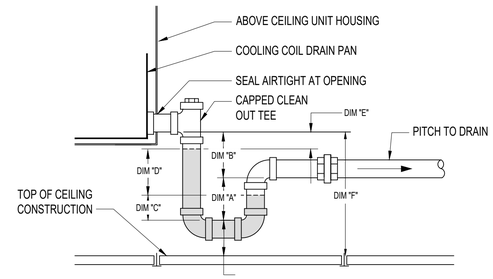
A1 DOAS 1 SMOKE/FIRE CONTROL WIRING

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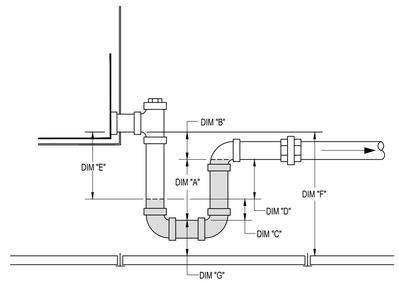
TRAP DIMENSION TABLE

TYPE OF SYSTEM		DIMENSIONS "A" (INCHES) MIN.	DIMENSIONS "B" (INCHES)	DIMENSIONS "C" (INCHES) (TRAP SEAL)	DIMENSIONS "D" (INCHES)	DIMENSIONS "E" (INCHES)	DIMENSIONS "F" (INCHES) DRAIN PIPE SIZE (INCHES)			
							1 1/2"	2"	2 1/2", 3"	4"
DRAW THROUGH	-2.1 TO -3	3.5	3.5	2	3	2	10.0	11.0	12.0	13.0
	UP TO -2	3.0	3.0	2	2	2	9.0	10.0	11.0	12.0
BLOW THROUGH	UP TO +2	4.0	2.0	2	2	4	9.0	10.0	11.0	12.0
	+2.1 TO +3	5.0	2.0	2	3	5	10.0	11.0	12.0	13.0

NOTES: A. REFER TO TERMINAL DEVICES USED FOR COOLING, COMPUTER ROOM AIR CONDITIONING UNITS, FAN COIL UNITS SPLIT SYSTEM AIR CONDITIONING UNIT ETC. FOR (-) OR (+) STATIC PRESSURE AT COIL DRAIN PAN
B. DIMENSION "G" IS MIN: 3" FOR UP TO 1 1/2" DRAIN PIPE
4" FOR 2" DRAIN PIPE
5" FOR 2 1/2" OR 3" DRAIN PIPE
6" FOR 4" DRAIN PIPE



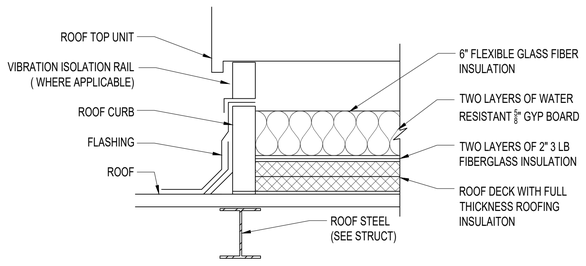
DRAW THROUGH



BLOW THROUGH

E6 CONDENSATE DRAIN PAN TRAP DETAIL (ABOVE CEILING UNITS)

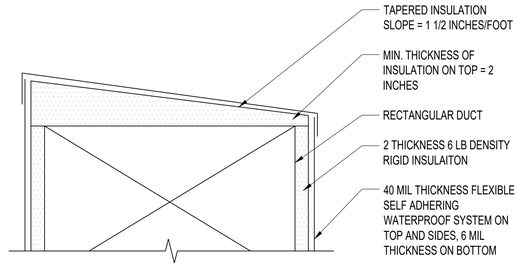
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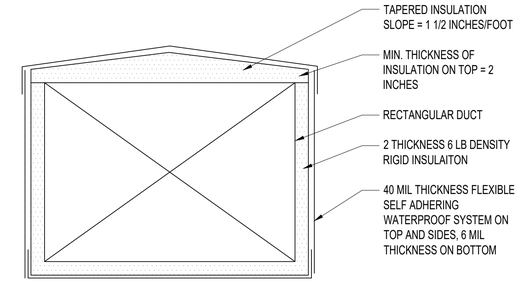
NOTE: ALL DUCT, PIPING, OR ELECTRICAL CONNECTIONS TO UNIT BELOW CURB SHALL HAVE FLEXIBLE CONNECTIONS. CUT INSULATION, GYP BOARD, ROOFING INSULATION, AND METAL DECKING PENETRATIONS TIGHT TO ITEM PENETRATING ROOF. PACK ALL PENETRATION OPENINGS WITH FLEXIBLE GLASS FIBER

A6 ROOF TOP UNIT CURB DETAIL

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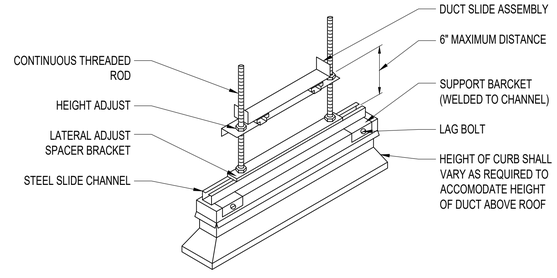
SOPED IN ONE DIRECTION
OPTIONAL FOR DUCTS 30" AND SMALLER



SOPED IN TWO DIRECTIONS

E11 OUTDOOR DUCT INSULATION DETAIL

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A11 DUCT MOUNTING PEDESTAL DETAIL

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REGISTRATION SEAL



KEY PLANS

SHEET TITLE
MECHANICAL
TYPICAL DETAILS

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24
△BULLETIN 3	5.19.25

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ENERGY RECOVERY VENTILATOR & FAN SCHEDULE

IDENTIFIER	SERVICE	LOCATION	DESIGN AIR FLOW (CFM)		SUPPLY FAN			EXHAUST FAN			HEAT EXCHANGER										ELECTRICAL DATA			DIMENSIONS (IN)			WEIGHT (LBS)	BASIS OF DESIGN		NOTES
											SUMMER						WINTER													
			OUTDOOR AIR	EXHAUST AIR	QTY.	ESP (IN. WC)	MOTO R (HP)	QTY.	ESP (IN. WC)	MOTOR (HP)	EAT (°F)		LAT (°F)		RA (°F)		SENSIBLE EFFECTIVENESS %	LATENT EFFECTIVENESS %	EAT DB (°F)	LAT DB (°F)	RA (°F)	SENSIBLE EFFECTIVENESS %	LATENT EFFECTIVENESS %	MCA	MOCP	VOLTS/PH/HZ	L	W	H		MANUFACTURER	MODEL	
											DB	WB	DB	WB	DB	WB					DB WB									
ERV -1	Addition – Floor 1 & 2	Roof	2180	1890	1	1.4	1.7	1	1.3	1.9	90	△			75	△	73.4% △		0	△	70	△	77.0% △	56	70	240/3/60	156 1/4	65 1/4	69	3227	Ventacity	VS3000RTe	1, 3, 4, 6, 7
ERV -2	Residential units	Residential units	50-100	50-100	1	.1-.4	1	1	.1-.4		95						60%			32		84%		△		120/1/60	28 ½"	23"	8 7/8"		Panasonic	Intelli-Balance PV-10VEC2	1, 3
ERV -3	Hallways & Library Room	Various	60-200	60-200	1	0.4	1	1	0.4		95						61%			32		86%				120/1/60	27 ½"	30 ½"	19 ½"		Panasonic	Intelli-Balance PV-20VEC1	1, 3
ERV -4	Community Room (Gym)	Existing Roof	892	720	1	0.85	0.77	2	0.85	0.70	90.7	73.4	80.3	68.8	75.0	62.5	66.2%	44.4	0	46.3	51.3	68.2	66.0	11.3	15	208-230/1/60	81 7/8"	22"	58 ½"	261-415	RenewAire	HE10-3RTH-S15AA-DGFT-L	1, 2, 3
TF - 1	Addition	Residential Units	60	0	1	0.03																				120/1/60	3"	15 3/4	7 3/4		Tjernlund	AS1	5

NOTES:
1. Refer to manufacturer cut sheets for effectiveness for various cfm and temperature ranges.
2. Refer to manufacturer cut sheet for roof mounting detail and curb dimensions. △
3. Provide access panel in location to access filters and units for proper maintenance and service.
4. Coordinate with architectural and electrical for placement in ceiling and routing of duct work. Refer to additional details and control sequence..
5. Provide 24v relay/transformer FC24 and provide necessary wiring to a 24v adjustable thermostat that meets PHIUS requirements. Coordinate location and finish with other trades and architectural plans.
6. Provide and install roof as required refer to architectural and structural drawings.
7. Unit comes pre packaged with electric pre heater at 480V 3P, MOP 30A, MCA 32.7A. Requires separate circuit △

HEAT PUMP - FCU SCHEDULE

IDENTIFIER	SERVICE	TYPE	CONDENSING UNIT	SUPPLY FAN				SOUND PRESSURE LEVEL (dBA)	COOLING				HEATING	ELECTRICAL DATA				DIMENSIONS (IN)			WEIGHT (LBS)	BASIS OF DESIGN		NOTES
				SPEED	AIR FLOW (CFM)	OUTSIDE AIR (CFM)	ESP (IN WC)		TON	TOTAL MBH	SENSIBLE MBH	SHR	TOTAL MBH	VOLTAGE	PHASE	MCA	MOCP	W	H	D		MANUFACTURER	MODEL	
FC -1	Residential units, library, offices,	Ducted	ACCU -1		317		0.2	30	0.75	9			12.5	208	1	0.74	15	31 1/8	7 7/8	27 9/16	42	Mitsubishi	SEZ-KD09NA4R1.TH	1, 2
FC -2	Residential units, Corridors, Mechanical	Ducted	ACCU -2		388		0.2	33	1	12			15	208	1	0.90	15	39	7 7/8	27 9/16	50	Mitsubishi	SEZ-KD12NA4R1.TH	1, 2
FC -3	Residential units, Laundry	Ducted	ACCU -3		529		0.2	33	1.25	15			18	208	1	1.11	20	39	7 7/8	27 9/16	54	Mitsubishi	SEZ-KD15NA4R1.TH	1, 2
FC -4	Residential units, Custodial	Ducted	ACCU -4		635		0.2	38	1.5	18			21.6	208	1	1.13	20	46 7/8	7 7/8	27 9/16	62	Mitsubishi	SEZ-KD18NA4R1.TH	1, 2
FC -5	Prep Space	Wall Mounted	ACCU -5		701			34	1.87	22.4			21.2	208	1	1	20	43 5/16	12 13/16	9 3/8	37	Mitsubishi	MSZ-GS24NA	1, 2
FC -6	Community Gym, Reading Room	Wall Mounted	ACCU -6		775			39	2.5	30			32	208	1	1	35	48 1/16	14 3/8	11 5/8	46	Mitsubishi	PKA-A30KA8	1, 2, 3
FC - 7	Offices, Hot Room	Wall Mounted	ACCU -7		437			36	0.75	9			9.6	208	1	1	15	36 7/16	12 11/16	9 3/16	29	Mitsubishi	MUZ-FS09NA	1, 2
FC - 8	Corridors - Existing	Wall Mounted	ACCU - 8		514			46	1.5	19			24	208	1	1	20	36 7/16	12 11/16	9 3/16	29	Mitsubishi	MUZ-FS15NA	1, 2
FC – 9	Addition - Lobby	Ceiling Mount	ACCU – 9		570-880			38	2.5	30			34	208	1	1	40	33 1/16	11 3/4	33 1/16	57	Mitsubishi	PLA-A30EA8	1,2,3
FC – 10	Residential Units – Living Area	Ceiling Mount	ACCU – 10		325			38	0.75	9			12	208	1	1	15	43 3/8	7 5/16	14 3/16	34	Mitsubishi	MLZ-KP09NA2	1,3,4,5,6
FC – 11	Residential Units – Living Area	Ceiling Mount	ACCU - 11		350			40	0.5	6			7.2	208	1	1	15	43 3/8	7 5/16	14 3/16	34	Mitsubishi	MLZ-KP12NA2	1,3,4,5,6
FC - 12	Corridor - Addition	Ceiling Mount	ACCU - 12		530-670			35	2.0	24			28	208	1	1	27	50 3/8	9 1/16	26 3/4	31	Mitsubishi	PCA-A24KA8	1,2,3
FC - 13	Mechanical & Storage Rooms	Wall Mount	Various		117-437			40	0.5	9			14	208	1	1	15	36 7/16	12	9 3/16	29	Mitsubishi	MSZ-FS06NA	1,2,3,4,5

NOTES:
1. Utilize Mitsubishi Touch MA Controller PAR-CT01MAU-SB, provide routing to location on mechanical drawings and associated wiring per manufacturer specifications.
2. Receive power and communication from associated ACCU on roof. Mechanical contractor to coordinate install and routing.
3. PROVIDE CONDENSATE PUMP IF REQUIRED FOR ROUTING OF CONDENSATE DRAIN TO NEAREST AVAILABLE FLOOR DRAIN, REFER TO MANUFACTURER SPECIFICATIONS.
4. INCLUDE SYSTEM CONTOL INTERFERENCE, TEMPERATURE SENSOR AND ALL CONTROLS TO ALLOW OPERATION IN MULTI-ZONE SETUP.
5. PROVIDE ALL WIRING AND PIPING NEEDED TO CONNECT TO BRANCH BOX AS SHOWN ON DRAWINGS.
6. INCLUDE GRILLE MLP-448WU AS REQUIRED.

ELECTRIC DUCT HEATER SCHEDULE+B33:AR58B33:A33:CM62

IDENTIFIER	MANUFACTURER	MODEL	QUANTITY	DESCRIPTION	NOTES
DH - 1	RenewAire	EK-1212005SCCHR--21-1SV-N	1	Ducted electric heater	1,2,3,4
DH - 2	RenewAire	EK-XXXX010SCCHL--21-1S-N	1	Ducted electric heater	1,2,3,5

NOTES:
1. Voltage for heater is 208/230/1/60, coordinate with electrical contractor.
2. Provide duct thermostat sensor kit for SCR control. Install per manufacturer specifications for location and wiring. Duct temperature sensor to be in supply side of duct work.
3. Interlock duct heater with fan proof from ERV, do not run duct heater without supply fan running.
4. Protect heater and heater control panel from elements, Refer to mechanical details.
5. Match duct size on drawing to duct heater size to fit properly in duct layout, model number with xxxx designates duct work dimensions.

OUTDOOR HEAT PUMP UNIT SCHEDULE

IDENTIFIER	TYPE	LOCATION	SERVICE	COOLING		HEATING		Refrigerant Type	ELECTRICAL DATA			DIMENSIONS (IN.)			WEIGHT (LBS)	BASIS OF DESIGN		NOTES
				TOTAL MBH	EER	TOTAL MBH	COP @ 47° F		MOCP	RLA	VOLTS/PH/HZ	H	W	D		MFGR.	MODEL	
ACCU -1	Heat Pump Air Cooled Condenser	Roof	FC -1	9	13	12	4.03	R410A	24	13	208/230/1/60	34 5/8	38 9/16	13	129	Mitsubishi	SUZ-KA09NAHZ	1, 2, 3, 4
ACCU -2	Heat Pump Air Cooled Condenser	Roof	FC -2	12	13	15	3.90	R410A	24	13	208/230/1/60	34 5/8	38 9/16	13	129	Mitsubishi	SUZ-KA12NAHZ	1, 2, 3, 4
ACCU -3	Heat Pump Air Cooled Condenser	Roof	FC -3	15	12.5	18	2.70	R410A	31	16	208/230/1/60	34 5/8	38 9/16	13	131	Mitsubishi	SUZ-KA15NAHZ	1, 2, 3, 4
ACCU -4	Heat Pump Air Cooled Condenser	Roof	FC -4	18	13.1	21.6	3.40	R410A	31	16	208/230/1/60	34 5/8	38 9/16	13	131	Mitsubishi	SUZ-KA18NAHZ	1, 2, 3, 4
ACCU -5	Heat Pump Air Cooled Condenser	Roof	FC -5	22.4	12.6	21.2	4.03	R410A	20	13.6	208/230/1/60	34 5/8	33 1/16	13	120	Mitsubishi	MUZ-GS24NAHZ	1,2, 3, 4
ACCU -6	Heat Pump Air Cooled Condenser	Roof	FC -6	30	12.8	32	3.38	R410A	40	18	208/230/1/60	52 11/16	41 5/16	14 3/16	261	Mitsubishi	PUZ-HA30NKA	1,2, 3, 4
ACCU -7	Heat Pump Air Cooled Condenser	Roof	FC -7	09	16	9.6	4.54	R410A	15	10	208/230/1/60	21 5/8	31 1/2	11 1/4	82	Mitsubishi	MUZ-FS09NA	1,2, 3, 4
ACCU - 8	Heat Pump Air Cooled Condenser	Roof	FC - 8	15	14	16	4.06	R410A	20	17	208/230/1/60	34 5/8	33 1/16	13	117	Mitsubishi	MUZ-FS15NA	1,2, 3, 4
ACCU – 9	Heat Pump Air Cooled Condenser	Roof	FC – 9	30	14.1	24	4.1	R410A	40	18	208/230/1/60	52 43/64	41 11/32	12 63/64	261	Mitsubishi	PUZ-HA30NKA	1, 2, 4, 5
ACCU – 10	Heat Pump Air Cooled Condenser	Roof	FC – 10	9	12.5	14	4.1	R410A	24	10	208/230/1/60	34 5/8	38 1/16	13	129	Mitsubishi	SUZ-KA09NAHZ	1, 2, 4, 5
ACCU - 11	Heat Pump Air Cooled Condenser	Roof	FC – 11	12	12.7	18	3.8	R410A	24	10	208/230/1/60	34 5/8	33 1/16	13	129	Mitsubishi	SUZ-KA12NAHZ	1, 2, 4, 5
ACCU - 12	Heat Pump Air Cooled Condenser	Roof	FC – 12	24	12.5	28	3.71	R410A	27	9	208/230/1/60	37 1/8	37 13/32	13	190	Mitsubishi	PUZ-HA24NHA1-R1	1, 2, 4, 5
ACCU – 13	Heat Pump Air Cooled Condenser	Roof	FC - 13	9	19	14	4.68	R410A	15	9.2	208/230/1/60	21 5/8	31 1/2	11 1/4	82	Mitsubishi	MUZ-FS06NA	1, 2, 4, 5
ACCU -14	Heat Pump Air Cooled Condenser	Roof	FC - 13	36	15	42	4.0	R410A	86		208/230/1/60	52 11/16	41 11/32	13	278	Mitsubishi	MXZ-SM36NAMHZ2	1, 2, 4, 5. 6

NOTES:
1. 12 IN CONDENSER STAND TO BE SUPPLIED QSMS1201M
2. UTILIZE MICROPARTICULATE FILTER PM2.5 (part number MAC-EMF615FT-E)
3. INSTALL 2-PIECE WIND BAFFLE WB-PA3
4. PROVIDE ALL NECESSARY LINE SETS AT CORRECT SIZE TO CONNECT TO INDOOR UNIT.
5. INSTALL WIND BAFFLE LOW AMBIENT KIT
6. PIPE TO BRANCH BOX (BB-1) PART NUMBER PAC-MKA52BC. SUPPORT BRANCH BOX VIA ALL THREAD AND MOUNTING APPROVED BY STRUCTURAL. POWER FOR BRANCH BOX FROM OUTDOOR UNIT, REFER TO MANUFACTURER SPECIFICATIONS FOR WIRING, PIPING PRACTICES AND MOUNTING.

DIFFUSER AND GRILLE SCHEDULE

IDENTIFIER	TYPE	SYSTEM	LOCATION	FRAME	DAMPER	MAX NC	MANUF	MODEL #	REMARKS
TG -1	Wall mounted transfer grill	Wall Transfer Return	Apartments		N		Price	520Z	Baked White Enamel, 2, 3
SG -1	Soffit supply air register	Supply Air	Various		Y		Price	540 Series	White Finish, 2, 3,
SG -2	Ceiling supply air 24x24 face	Supply Air	Various		Y		Price	ASCD	Baked White Enamel,1, 2, 3
SG -3	Supply air register	Supply Air	Community Space		Y		Price	99-L-A-B12	2, 3
RG -1	Filter housed return grille	Return Air	Apartments		N		Price	535FF-HL	White B12, 2, 3, 4, 8
RG -2	Ceiling return air 24x24 face	Return Air	Various		N		Price	PDDR Series	White finish, 2, 3,
RG -3	Return air register	Return Air	Community Space		N		Price	97--L-A-B12	2, 3
RG-4	Exhaust return grille	Return Air	Apartments		N		Price	530-535	White B12, 2, 3, 4
R-1	Intake & Exhaust Register	OA & Exhaust	Exterior		Y		Primex	WCX	2, 3, 5, 6
L-1	Intake & Exhaust Register	OA & Exhaust	Exterior		N		Louver & Damper	ACL Series	2, 3, 5, 7

1. FRONT BLADES PARALLEL TO SHORT DIMENSION
2. COORDINATE INSTALL LOCATION WITH ARCHITECTUAL PLANS. FOR LAYIN DIFFUSERS COORDINATE WITH REFLECTED CEILING PLAN FOR PROPER MOUNTING.
3. COORDINATE NECK SIZE WITH MECHANICAL DRAWING DUCT SIZING.
4. SURFACE MOUNTING (SM) FOR SOFFIT OR CEILING INSTALLATION
5. PAINT TO MATCH EXTERIOR BRICK
6. IF USED AS INTAKE REMOVE DAMPER
7. INTERGRATE BIRD SCREEN OPTION FROM MANUFACTURER
8. WHEN LOCATED IN KITCHEN PROVIDE MERV3 1 IN FILTER TO FIT. SIZE TO BE 10IN X 10IN IN KITCHEN AREA AND LOCATED WITH 6FT FROM HOOD SYSTEM.

ELECTRIC UNIT HEATER SCHEDULE

Tag	Location	Type	CFM	Power	Voltage	Phase	Mounting Height	Length	Width	Height	Weight (lbs)	Manufacturer	Model	Remarks
ECUH -1	Addition Stairwells	Wall Mounted	500	6.0 KW	208 V	1	6" ABOVE FF	45 "	9 3/4 "	26 3/8 "	160	Qmark	CU945	CU945-06-20-1-B-F-2B-2-C-S-S-P-K-O-W, 1, 2
ECUH -2	109 and Corridor 212 △	Wall Mounted	250	5.0 KW	208 V	1	6" ABOVE FF	35 "	9 3/4 "	26 3/8 "	120	Qmark	CU935	CU935-05-20-1-B-F-2B-2-C-S-S-P-K-O-W, 1, 2
ECUH -3	Vestibules - West B & East A	Wall Mounted	250	6.0KW	208 V	1	6" ABOVE FF	35 "	9 3/4 "	26 3/8 "	120	Qmark	CU935	CU935-06-20-1-B-F-2B-2-C-S-S-P-K-O-W 1, 2
ECUH -4	~~East Vestibule B~~, Unoccupied rooms 280 & 380	Wall Mounted	250	7.0KW	208 V	1	6" ABOVE FF	35 "	9 3/4 "	26 3/8 "	120	Qmark	CU935	CU935-07-20-1-B-F-2B-2-C-S-S-P-K-O-W 1, 2
ECUH -5	Existing room 281 & Addition Entrance	Wall Mounted	250	3.0 KW	208 V	1	6" ABOVE FF	35 "	9 3/4 "	26 3/8 "	120	Qmark	CU935	CU935-03-20-1-B-F-2B-2-C-S-S-P-K-O-W 1, 2
CCU-1	West Vestibule A - 120	Ceiling Mounted	3903	20 KW	208 V	1	Ceiling Height	20 1/4"	75"	16 ¾"	364	Powered Aire	CHD-E-2-72	3, 4, 5, 6

1.

1. SURFACE MOUNT ELECTRIC CABINET HEATERS TO BLOCK OR BRICK WALL WITH PROPER CLEARANCE PER MANUFACTURER SPECIFIACTIONS.
2. INTERNAL MOUNTED THERMOSTAT, VERIFY FIELD DETTING TO 60 DEGREES.
3. SUPPLY 24V LINE THERMOSTAT WITH LOCKABLE COVER
4. SUPPORT VIA MANUFACTUER SPECIFICATIONS, SUBMIT MOUNTING AND SUPPORT STRATEGY TO STRUCTUREAL ENGINEER PRIOR TO INSTALLATION FOR APPROVAL.
5. WHITE IN COLOR.
6. COORDINATE WITH ARCHITECT AND FINISH CONTRACTOR OPENING NEEDED IN CEILING TO PROVIDE PROPER REVEAL.

10/11/2025 6:27:53 AM

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REGISTRATION SEAL

STATE OF MICHIGAN
STEPHEN M. HENNARD
ENGINEER
NO. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

MECHANICAL SCHEDULES

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24
△BULLETIN 1	2.19.25
△BULLETIN 5	10.13.25

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SHEET NO. M-601

Apartment/Room Notation	Occupancy Classification	Floor Area (SF)	Quantity	Code Occupent Density / 1000SF	Calculated Occupancy	Number of Plumbing Fixtures	TABLE 403.3 2015 Michigan Mech Code & ASHRE 62.2 Requirements						Design Air Balance				
							Outdoor Air			Calculated Min outdoor air required (cfm)	Zone Air Dist. Eff.	Calculated Min Exhaust Air (cfm)	Minimum room supply air (cfm)	Minimum exhaust air (cfm)	Minimum unit %OA	Outdoor ventilation air (cfm) delivered to space	Supply Air Units
							CFM / SF	CFM / PERSON	CFM / FIXTURE OF SF								
H	Private Dwelling - 1 bedroom, 1 bathroom, living areas	462	1		2			15		38	0.8	0	see plan	50		50	FC 1
G	Private Dwelling - 1 bedroom, 1 bathroom, living areas	469	1		2			15		38	0.8	0	see plan	50		50	FC 1
F	Private Dwelling - 1 bedroom, 1 bathroom, living areas	682	1		2			15		56	0.8	0	see plan	50		60	FC 3
M	Private Dwelling - 1 bedroom, 1 bathroom, living areas	678	1		2			15		56	0.8	0	see plan	50		60	FC 3
C	Private Dwelling - 1 bedroom, 1 bathroom, living areas	484	1		2			15		38	0.8	0	see plan	50		50	FC 1
D	Private Dwelling - 1 bedroom, 1 bathroom, living areas	487	1		2			15		38	0.8	0	see plan	50		50	FC 1
E	Private Dwelling - 1 bedroom, 1 bathroom, living areas	500	1		2			15		38	0.8	0	see plan	50		50	FC 2
B	Private Dwelling - 1 bedroom, 1 bathroom, living areas	607	1		2			15		56	0.8	0	see plan	50		60	FC 3
A	Private Dwelling - 1 bedroom, 1 bathroom, living areas	800	1		2			15		56	0.8	0	see plan	50		60	FC 4
J	Private Dwelling - 1 bedroom, 1 bathroom, living areas	495	1		2			15		38	0.8	0	see plan	50		50	FC 1
K	Private Dwelling - 1 bedroom, 1 bathroom, living areas	513	1		2			15		38	0.8	0	see plan	50		50	FC 1
L	Private Dwelling - 1 bedroom, 1 bathroom, living areas	714	1		2			15		56	0.8	0	see plan	50		60	FC 3
X	Private Dwelling - 1 bedroom, 1 bathroom, living areas	660	1		2			15		56	0.8	0	see plan	50		60	FC 3
W	Private Dwelling - 1 bedroom, 1 bathroom, living areas	713	1		2			15		56	0.8	0	see plan	50		60	FC 3
N, O	Private Dwelling - 2 bedroom, 1 bathroom, living areas	812	1		3			15		56	0.8	0	see plan	50		60	FC 4
Y	Private Dwelling - 2 bedroom, 1 bathroom, living areas	876	1		3			15		56	0.8	0	see plan	50		60	FC 4
Z	Private Dwelling - 2 bedroom, 1 bathroom, living areas	795	1		3			15		56	0.8	0	see plan	50		60	FC 4
141	Breakroom	487	1	25	13	1	0.06	5		110	0.8		701			100	FC 5
131 / 131A	Laundry	628	1	20	13	1	0.06	7.5		160			529	150		150	FC 3
133	Storage	178	1				0.06						437			50	FC 7
132	Breakroom	1096	1	25	28		0.06	5		241			775	175		250	FC 6
140	Conference/meeting	2377	1	50	119		0.06	5		886			1550		100	900	ERV 3, FC 6 (2)
130	Office	212	1	5	1		0.06	5		19			437			50	FC 7
150	Electrical Room	121	1		0												FC 3
151	Storage	414	1		0												FC 3
142, 143	Toilet	78	1		0	1			70			70	0				
101 - 110	Cooridor	3831	1				0.06			230	0.8	0	257	400		350	FC 8
202	Office	274	1	5	2		0.06	5		29			160		16	40	FC 3
201	Cooridor	528	1				0.06			32	0.8	0	260	45	18	40	FC 3
103	Lobby	1040	1	10	11		0.06	7.5		166			1040		18	175	FC 9
1B Unit A & C	Private Dwelling - 1 bedroom, 1 bathroom, living areas		19		2			15		38	0.8	0	See plan	45		48	FC 10 & FC 11
2B Unit A,B & C	Private Dwelling - 2 bedroom, 1 bathroom, living areas		2		3			15		56	0.8	0	See plan	45		△56	FC 10 & FC 11
Various	Cooridor	3156	1				0.06			189	0.8	0	900	200		190	FC 12
105	Electrical room		1														FC 13
113	Electrical room		1														FC 13
109	Storage		1											△			FC 13
115	Mechanical room		1														FC 13
108	Storage		1														FC 13
	Total For Floor 1													**1145**		**1214**	
											△						
1B Unit A & C	Private Dwelling - 1 bedroom, 1 bathroom, living areas		18		2			15		38	0.8	0	See plan	45△		48	FC 10 & FC 11
2B Unit A,B & C	Private Dwelling - 2 bedroom, 1 bathroom, living areas		3		3			15		56	0.8	0	See plan	45		△56	FC 10 & FC 11
Various	Cooridor	2610	1		0		0.06			157	0.8	0	900	175		162	FC 12
203	Storage		1		0												FC 13
208	Storage		1		0									△			FC 13
211	Mechanical room		1		0												FC 13
207	Storage		1		0												FC 13
	Total For Floor 2										△			**1120△**		**1194**	

△

VIBRATION ISOLATOR APPLICATION SCHEDULE

EQUIPMENT TYPE	EQUIPMENT CATEGORY	HORESPOWER AND OTHER	RPM	EQUIPMENT LOCATION						KEYED NOTES
				SLAB ON GRADE			UP TO 40 FT (12M) FLOOR SPAN			
				BASE TYPE	ISOLATOR TYPE	MIN. DEFL., IN. (MM)	BASE TYPE	ISOLATOR TYPE	MIN. DEFL., IN. (MM)	
SUSPEND HEAT PUMPS, FAN COILS, LOCATED INDOORS	ALL	ALL	ALL				A OR B	8a or 8b	1.50 (38)	NOTES 1, 3, 4
BASE MOUNTED CONDENSING UNITS	ALL ALL	≤1HP >1HP	ALL ALL	A OR B A OR B	2 2	0.25 (6) 0.25 (6)	A OR B A OR B	2 4	.25 (64) 2.50 (64)	NOTES 3
SUSPEND DUCTED ROTATING EQUIP.	SMALL FANS, FAN-POWERED BOXES	≤600 CFM >600 CFM	ALL ALL				A A	8a or 8b 8a or 8b	0.50 (13) 0.75 (19)	NOTES 3, 4

NOTES:

1. THRUST RESTRAINTS: PROVIDE THRUST RESTRAINTS BETWEEN FAN DISCHARGE AND DUCT (IN PAIRS, LOCATED ON THE CENTER LINE OF THE DISCHARGE OUTLET OF THE FAN, BRIDGING THE FLEXIBLE DUCT CONNECTOR) FOR ALL FAN HEADS, FOR AXIAL AND CENTRIFUGAL FANS UNITS OPERATING AT 2 INCHES OR GREATER TOTAL STATIC PRESSURE AND AS SHOWN ON DRAWINGS. SPRING DEFLECTION SHALL BE SAME AS THE SUPPORT ISOLATORS.
2. PIPING RISER ISOLATION: PROVIDE PIPE RISER RESILIENT ANCHORS, SPRING MOUNTS AND RESILIENT PIPE GUIDES CAPABLE OF DISTRIBUTING THE LOADS WITHIN THE BUILDING DESIGN LIMITS AT THE SUPPORT POINTS.
3. HORIZONTAL PIPING VIBRATION ISOLATION: PROVIDE TYPE 8a OR 8b SPRING HANGERS FOR PIPING CONNECTED TO VIBRATION ISOLATED EQUIPMENT FOR ALL PIPING IN MECHANICAL ROOMS OR THE FOLLOWING MINIMUM HORIZONTAL DISTANCES FROM THE ISOLATED EQUIPMENT: UP TO 6" - 50 FEET (1 1/2" MINIMUM DEFLECTION). 8" AND LARGER - 100 FEET (2 1/2" MINIMUM DEFLECTION), WHICHEVER IS GREATER, AND AS SHOWN ON DRAWINGS. THE FIRST 4 HANGERS FROM THE ISOLATED EQUIPMENT SHALL BE TYPE 8b.
4. DUCTWORK VIBRATION ISOLATION: PROVIDE TYPE 8a OR 8b SPRING HANGERS FOR DUCTWORK WITH A CROSS SECTION OF 2 SQUARE FEET OR GREATER CONNECTED TO AIR HANDLING UNITS, RETURN OR RELIEF FANS, AND VIBRATION ISOLATED EQUIPMENT, WHICHEVER IS GREATER, AND AS SHOWN ON DRAWINGS (3/4" MINIMUM DEFLECTION)

BASE TYPES:

BASE TYPE A - NO BASE, ISOLATORS ATTACHED DIRECTLY TO EQUIPMENT
BASE TYPE B - STRUCTURAL STEEL RAILS OR BASE
BASE TYPE C - CONCRETE INERTIA BASE
BASE TYPE D - CURB - MOUNTED ALUMINUM BASE WITH 1" DEFL. SPRING ISOLATORS
BASE TYPE E - CURB - MOUNTED STEEL BASE WITH ADJUSTABLE 1", 2" OR 3" DEFL. SPRING ISOLATORS

ISOLATOR TYPES:

ISOLATOR TYPE 1a - ELASTOMERIC ISOLATION PAD
ISOLATOR TYPE 1b - ELASTOMERIC ISOLATION PAD WITH STEEL LOAD BEARING PLATE
ISOLATOR TYPE 2 - ELASTOMERIC FLOOR ISOLATOR
ISOLATOR TYPE 3 - FREE STANDING SPRING FLOOR ISOLATOR
ISOLATOR TYPE 4 - RESTRAINED SPRING ISOLATOR
ISOLATOR TYPE 5 - THRUST RESTRAINT
ISOLATOR TYPE 6 - AIR SPRING
ISOLATOR TYPE 7 - ELASTORMERIC HANGERS
ISOLATOR TYPE 8a - SPRING HANGERS
ISOLATOR TYPE 8b - SPRING HANGERS WITH VERTICAL - LIMIT STOP

DUCT SYSTEM INSULATION APPLICATION SCHEDULE

	INSULATION MATERIAL & THICKNESS (INCHES)							FIELD APPLIED JACKET MATERIAL		KEYED NOTES
	FIBERGLASS BLANKET .75 LB/CU FT.	FIBERGLASS BLANKET 1.0 LB/CU FT.	FIBERGLASS BOARD 2.25 LB/CU FT.	FIBERGLASS BOARD 6.0 LB/CU FT.	FLEXIBLE ELASTOMERIC	ASTM E2336 2-HOUR FIRE RATED BLANKET	2-HOUR FIRE RATED BLANKET	ALUMINUM	SELF-ADHESIVE (FOR OUTDOOR APPLICATIONS)	
DUCT SYSTEMS LOCATED INDOORS										
SUPPLY AIR, EXCEPT AS NOTED BELOW		1.5								a
RECTANGULAR SUPPLY AIR IN MECHANICAL ROOMS			1.5							
OUTSIDE AIR AND MIXED AIR, EXCEPT AS NOTED BELOW		1.5								

GENERAL NOTES:
1. THE FOLLOWING PLENUMS, DUCTS AND DUCT ACCESSORIES NOT REQUIRING INSULATION

a. DOUBLE WALL METAL DUCTS WITH SUFFICIENT INSULATION TO MEET ASHRAE 62.2
b. EXPOSED SUPPLY DUCT IN CONDITIONED SPACE SERVED BY THAT SYSTEM
c. FACTORY-INSULATED FLEXIBLE DUCTS
d. FLEXIBLE CONNECTORS
e. VIBRATION - CONTROL DEVICES
f. FACTORY - INSULATED ACCESS PANELS AND DOORS.

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No. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

MECHANICAL VENTILATION SCHEDULE

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24
△BULLETIN 1	2.19.25
△BULLETIN 2	3.05.25
△BULLETIN 3	5.19.25

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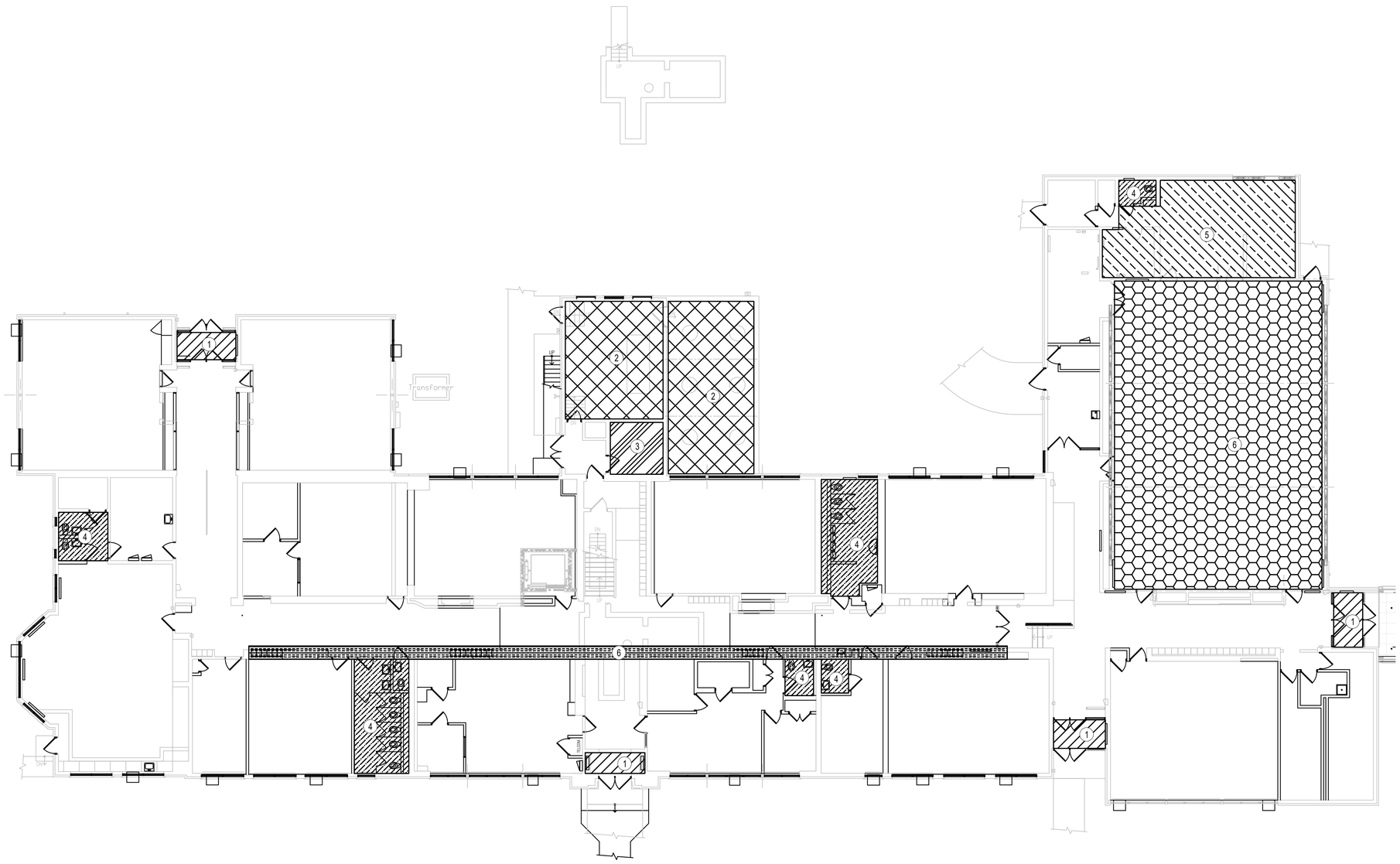
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GENERAL DEMO NOTES

1. IN ALL EXISTING ROOMS AND CORRIDORS, COORDINATE WITH ARCHITECUAL PLANS AND REMOVE ALL EXISTING STEAM RADIATORS, DRAINS, WATER DISTRIBUTION, DUCTWORK, PNEUMATICS, THERMOSTATS, REGISTERS THAT WILL NOT BE NECESSARY TO BE REUSED FOR HISTORIC PRESERVATION. IF ANY ITEMS ARE TO BE DEEMED HISTORIC FOR EXISTING MECHANICAL OR PLUMBING SYSTEMS CARE AND PROTECTION SHALL BE PROVIDED THROUGHOUT THE DEMO AND CONSTRUCTION PROCESS TO ENSURE ITEMS ARE NOT DAMAGED.

DEMO NOTES

1. IN ALL VESTIBULES, DEMO EXISTING RADIATORS. REMOVE ALL ASSOCIATED STEAM AND DRAIN LINES BACK TO SOURCE
2. DEMO ALL MECHANICAL AND ELECTRICAL EQUIPMENT. IF EQUIPMENT HAS VENTING THROUGH ROOF MATCH NEW ROOF DETAIL TO PATCH. SEE ROOF PLAN. ABANDON ALL FIRE SUPPRESSION AND WATER SERVICES. EXISTING FLOOR DRAIN TO REMAIN, SCOPE TO FIND ROUTING AND CONNECT WITH NEW SANITARY SYSTEM. EXISTING PATHWAY IS NOT KNOWN AT TIME OF DRAWINGS.
3. THIS ROOM COULD NOT BE ACCESSED AT TIME OF DRAWINGS, DEMO ANY AND ALL ELECTRICAL, MECHANICAL AND PLUMBING IN THIS ROOM. IF EXISTING FLOOR DRAIN IN THE ROOM KEEP IN PLACE AND TIE INTO NEW SANITARY LEAD ON THE NEW PLUMBING DRAWINGS
4. DEMO PLUMBING AND MECHANICAL EQUPIMENT, INCLUDING ANY DISTRIBUTION BACK TO SOURCE. DEMO EXISTING FUME HOOD SYSTEM PATCH ROOF AS REQUIRED PER ROOF PLAN.
5. DEMO PLUMBING AND MECHANICAL EQUPIMENT, INCLUDING ANY DISTRIBUTION BACK TO SOURCE. DEMO EXISTING FUME HOOD SYSTEM PATCH ROOF AS REQUIRED PER ROOF PLAN.
6. DEMO ALL SUPPLY DUCT WORK IN EXISTING GYM.
7. DEMO ALL EXISTING CAST ROOF DRAINS BACK TO ROOF. COORDINATE DEMO WITH NEW INSTALL TO PREVENT OPEN ROOF DRAINS WITHIN THE BUILDING. AT THE POINT OF DESIGN ALL ROOF CONDUCTOR PATHWAYS COULD NOT BE IDENTIFIED OR VERIFIED. IF ADDTTIONAL ROOF CONDUCTORS ARE DISCOVERED, THESE WILL ALSO NEED TO BE DEMOED AND REPLACED. CHASES ALSO INCLUDE STEAM LINE DISTRIBUTION WHICH WILL ALSO BE DEMOED AND REMOVED BACK TO SOURCE. PRIOR TO REMOVALL OF ANY PIPE INSULATION, HAVE QUALIFIED TESTING AGENCY TEST FOR ASBESTOS. REMOVE ALL PIPE INSULATION AND DISPOSE OF PER LAW.

A1 | **FIRST FLOOR MECHANICAL DEMOLITION PLAN**

MD-101 | SCALE: 3/32" = 1'-0"

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KEY PLANS

SHEET TITLE

FIRST FLOOR MECHANICAL DEMOLIITION PLAN

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24

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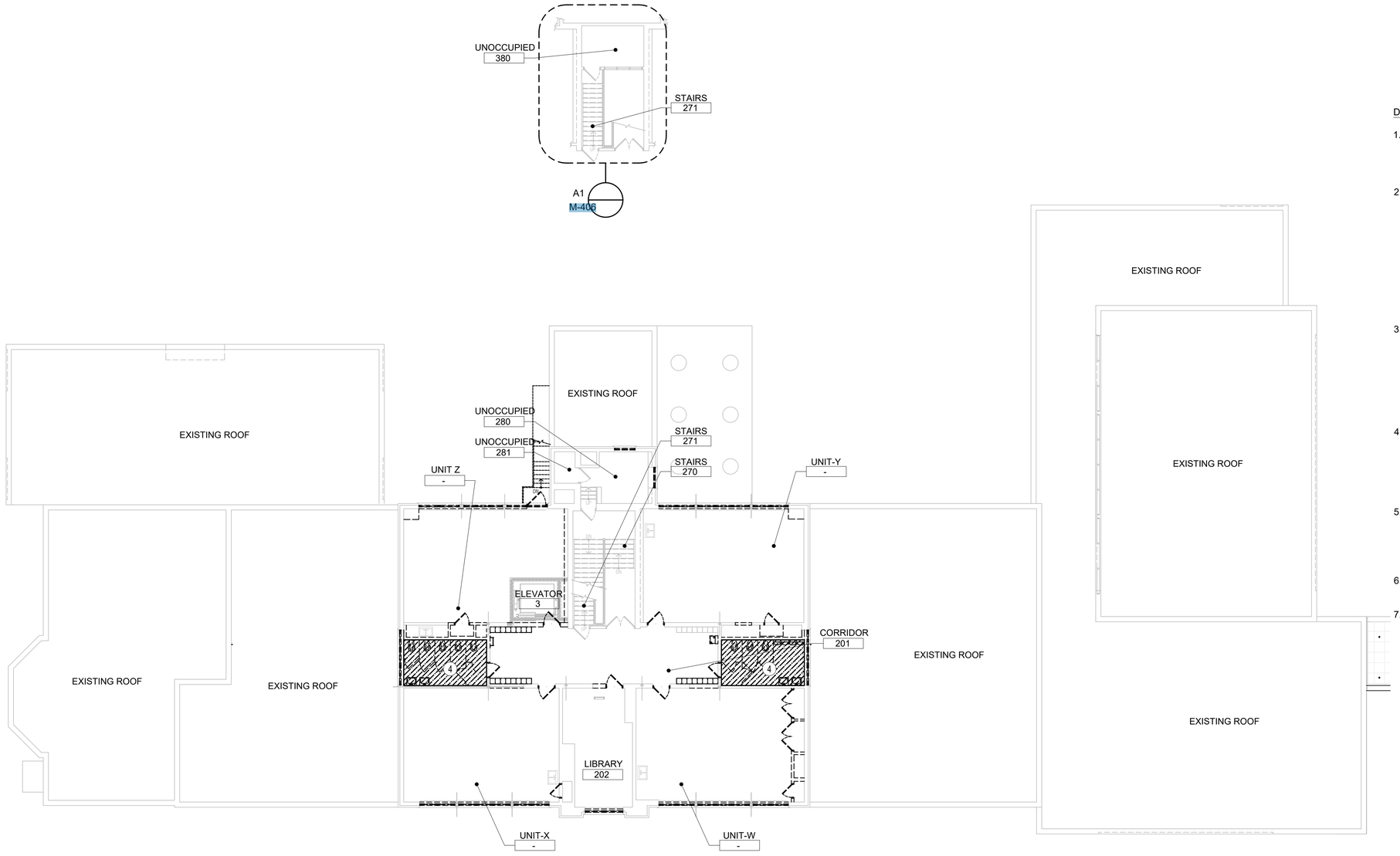
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GENERAL DEMO NOTES

1. IN ALL EXISTING ROOMS AND CORRIDORS, COORDINATE WITH ARCHITECUAL PLANS AND REMOVE ALL EXISTING STEAM RADIATORS, DRAINS, WATER DISTRIBUTION, DUCTWORK, PNEUMATICS, THERMOSTATS, REGISTERS THAT WILL NOT BE NECESSARY TO BE REUSED FOR HISTORIC PRESERVATION. IF ANY ITEMS ARE TO BE DEEMED HISTORIC FOR EXISTING MECHANICAL OR PLUMBING SYSTEMS CARE AND PROTECTION SHALL BE PROVIDED THROUGHOUT THE DEMO AND CONSTRUCTION PROCESS TO ENSURE ITEMS ARE NOT DAMAGED.

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5. DEMO PLUMBING AND MECHANICAL EQUPIMENT, INCLUDING ANY DISTRIBUTION BACK TO SOURCE. DEMO EXISTING FUME HOOD SYSTEM PATCH ROOF AS REQUIRED PER ROOF PLAN.
6. DEMO ALL SUPPLY DUCT WORK IN EXISTING GYM.
7. DEMO ALL EXISTING CAST ROOF DRAINS BACK TO ROOF. COORDINATE DEMO WITH NEW INSTALL TO PREVENT OPEN ROOF DRAINS WITHIN THE BUILDING. AT THE POINT OF DESIGN ALL ROOF CONDUCTOR PATHWAYS COULD NOT BE IDENTIFIED OR VERIFIED. IF ADDTTIONAL ROOF CONDUCTORS ARE DISCOVERED, THESE WILL ALSO NEED TO BE DEMOED AND REPLACED. CHASES ALSO INCLUDE STEAM LINE DISTRIBUTION WHICH WILL ALSO BE DEMOED AND REMOVED BACK TO SOURCE. PRIOR TO REMOVALL OF ANY PIPE INSULATION, HAVE QUALIFIED TESTING AGENCY TEST FOR ASBESTOS. REMOVE ALL PIPE INSULATION AND DISPOSE OF PER LAW.

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KEY PLANS

SHEET TITLE
SECOND FLOOR MECHANICAL DEMOLITION PLAN

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24

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FILE NO.

M-102
SHEET NO.

A1 SECOND FLOOR MECHANICAL DEMOLITION PLAN

M-103 SCALE: 3/32" = 1'-0"

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GENERAL MECHANICAL NOTES

1. SHOULD THERE BE ANY DISCREPANCIES BETWEEN CONTRACT DOCUMENTS AND SPECIFICATIONS THE GREATER QUALITY OR QUANTITY OF WORK SHALL BE PERFORMED. THIS WORK MUST BE SUBMITTED IN WRITING TO ENGINEER PRIOR TO FINAL BID APPROVAL. NO EXTRAS SHALL BE ALLOWED AFTER THAT TIME. THIS SHALL ALSO PERTAIN TO ANY DISCREPANCIES IN THE CONTRACT DOCUMENTS OR BETWEEN TRADES.
2. NO MODIFICATIONS TO THE SPECIFICATIONS, CONSTRUCTION DOCUMENTS, OR INTENT OF THE SCOPE OF WORK SHALL BE ALLOWED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE ENGINEER. ALL MODIFICATIONS, CHANGE ORDERS, ALTERNATES AND VALUE ENGINEERING SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND ENGINEER FOR REVIEW.
3. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL TRADES RESPONSIBLE FOR FINAL CONNECTION OR ALL EQUIPMENT.
4. CONTRACTORS ARE RESPONSIBLE UNDERSTANDING AND BEING EDUCATED ON THE REQUIREMENTS TO OBTAIN NGBS NET ZERO CERTIFICATION AND PHIUS CERTIFICATION, AS WELL AS ALL PREREQUISITE CERTIFICATIONS NEEDED TO OBTAIN PHIUS. RESPONSIBILITY OF THE GENERAL CONTRACTOR AND TRADES TO PROVIDE REQUIRED FIELD TESTING REQUIRED TO OBTAIN CERTIFICATIONS. ALSO, ANY MODIFICATIONS NEEDED TO SYSTEMS AFTER INITIAL TESTING TO PASS RETESTING IF REQUIRED.

PLUMBING GENERAL NOTES

1. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES.
2. COORDINATE ALL LOCATIONS, SIZES, AND ELEVATIONS OF ALL SLEEVES THROUGH WALLS AND SLABS WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
3. ALL OUTLETS FOR FUTURE CONNECTIONS SHALL BE VALVES, CAPPED AND INSTALLED TO PERMIT EASY ACCESS AND CONNECTION FOR FUTURE USE.
4. VERIFY DEPTHS, SIZES AND LOCATIONS OF EXISTING UTILIZES IN THE FIELD. INCLUDING POINTS OF CONNECTIONS PRIOR TO START OF WORK.
5. FAUCETS AND PLUMBING FIXTURES SHALL MEET WATER SENSE REQUIREMENTS AND STATE ENERGY STANDARDS.
6. RUN ALL SANITARY PIPING AT 1/8" PER FOOT MINIMUM SLOPE AND 1-1/2" TO 2-1/2" PIPES SHALL BE AT 1/4" PER FOOT.
7. REFER TO ARCHITECTURAL DRAWINGS FOR PHASING LIMITATIONS ON SEQUENCE OF CONSTRUCTION.
8. CONTRACTOR SHALL MAINTAIN ADEQUATE CLEARANCES ABOVE AND AROUND ELECTRICAL PANELS, EQUIPMENT AND TRANSFORMERS WHEN ROUTING DOMESTIC WATER, SANITARY AND STORM PIPING.
9. CONTRACTOR SHALL COMPLETE ALL MANUFACTURER REQUIRED MAINTENANCE THROUGHOUT THE DURATION OF CONSTRUCTION AS WELL AS ANY TEMPORARY MEASURES TO PREVENT DAMAGE AND PRESERVE EQUIPMENT.
10. OVERFLOW RAIN CONDUCTORS SHALL BE ROUTED TO EXTERIOR WALLS AND SPILL TO GRADE.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH STATE AND COUNTRY DEPARTMENT OF HEALTH CROSS CONTAMINATION CODE REQUIREMENTS.
12. PROVIDE CLEANOUTS AT THE BASE OF ALL STACKS.
13. ALL VENTS THROUGH THE ROOF MUST BE A MINIMUM OF 10' CLEARANCE FROM OUTDOOR AIR INTAKES AND 12" ABOVE THE ROOF.

GENERAL FIRE PROTECTION NOTES:

1. UNLESS OTHERWISE NOTED THE ENTIRE BUILDING SHALL BE PROVIDED WITH WET SPRINKLER FIRE PROTECTION COVERAGE IN ACCORDANCE WITH NFPA 13R. THE SYSTEM SHALL BE HYDRAULICALLY DESIGN. FIRE PROTECTION TRADE SHALL OBTAIN HYDRANT FLOW TEST AS REQUIRED FROM CITY OF SOUTHFIELD.
2. FIRE PROTECTION BRANCH MAINS SERVING ELECTRICAL EQUIPMENT ROOMS AND ROOMS INDICATED ON THE PLAN SHALL BE PROVIDED WITH A SUPERVISED O.S- & Y VALVE IN A WALL BOX IMMEDIATELY OUTSIDE THE ROOM. VALVE SHALL BE ON THE INCOMING LINE SIDE PRIOR TO DISTRIBUTION TO HEADS.
3. REFER TO SPECIFICATIONS FOR SPRINKLER HEAD TYPES INTENDED FOR USE IN EACH SPACE.
4. FIRE PROTECTION TRADE SHALL SUBMIT PLANS AND CALCULATIONS TO THE CITY OF SOUTHFIELD FIRE MARSHALS OFFICE AND THE BUILDING'S INSURING AGENCY FOR APPROVAL. CONTRACTOR SHALL MAKE ALL NECESSARY CHANGES AND CORRECTIONS AS INSTRUCTED AND RE-SUBMIT PLANS AND CALCULATIONS FOR RECORD TO THE ARCHITECT AS WELL AS THE FIRE MARSHAL OFFICE.
5. FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE TO SURVEY THE EXISTING SYSTEM & DESIGN/BUILD MODIFICATIONS AS REQUIRED FOR EXISTING AND NEW SPACES.
6. COORDINATE WITH ARCHITECTURAL FLOOR PLANS AND REFLECTED CEILING PLANS. OBTAIN NEEDED DRAWINGS FROM THE ARCHITECT FOR DESIGN PURPOSED IF NEEDED.

GENERAL UTILITY NOTES:

1. DURING CONSTRUCTION CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY OVERHEAD OR UNDERGROUND UTILITIES.
2. PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. UTILITY INFORMATION AS SHOWN INDICATES APPROXIMATE LOCATIONS AND NO GUARANTEES IS GIVEN AS TO THE COMPLETENESS OR ACCURACY.

PLUMBING SHEET NOTES:

1. THE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS AND COORDINATION WITH OTHER TRADES WILL BE REQUIRED. PROVIDE ADDITIONAL FITTINGS AND OFFSETS THAT MAY BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS AND ANY OTHER EXISTING SPACE CONSTRAINTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH ALL TRADES FOR UTILIZATION OF SPACE CONSTRAINTS.
2. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATION OF LIGHTS, CEILING DROPS AND ELEVATIONS.
3. A SPRINKLER SYSTEM IS REQUIRED FOR THE BUILDING, LOCATE SEMI-RECESSED PENDANT MOUNTED SPRINKLER HEADS TO SUIT THE CEILING CONFIGURATION. SPRINKLER HEADS SHALL BE STANDARD SEMI-RECESSED PENDANT TYPE WITH CHROME PLATED FINISH.
4. SNAKE OUT ALL SEWERS AND VERIFY ADEQUATE FLOW. TO PROVIDE ADEQUATE FLOW, THE CONTRACTOR SHALL SNAKE OUT AND THOROUGHLY FLUSH ALL SANITARY SEWERS FROM THE START POINT OF ALL BRANCHES ALL THE WAY TO THE FIRST TURN OUTSIDE OF THE BUILDING, ON ALL LEADS.
5. REFER TO PLUMBING FIXTURE SCHEDULE FOR ROUGH IN PIPE SIZES TO FIXTURES.
6. CONDENSATE DRAINS (INSULATED) TO BE ROUTED TO NEAREST FLOOR DRAIN, AND ROUTED IN A MANNER THAT DOES NOT PROVIDE A TRIP HAZARD AND HAS THE LEAST AMOUNT OF PIPING ON THE FLOOR.
7. CAP PIPING ABOVE CEILING, BELOW FLOOR OR INSIDE WALL (TYP).

ABBREVIATIONS

AD	AREA DRAIN
BFP	BACKFLOW PREVENTOR
BT	BATHTUB
CD	CONDENSATE DRAIN
CI	CAST IRON
CL	CENTER LINE
CLG	CEILING
CO	CLEANOUT
CODP	CLEANOUT DECK PLATE
COWP	CLEAN OUT WALL PLATE
COL	COLUMN
CP	CONTROL PANEL
CW	DOMESTIC COLD WATER
DCV	DOUBLE CHECK VALVE
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DIA	DIAMETER
DN	PIPE DOWN THRU FLOOR
DR	DRAIN
DT	DRAINTILE
DW	DISH WASHER
DWG	DRAWING
EL	ELEVATION
ELEC	ELECTRIC
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EX.	EXISTING
F	FIRE SERVICE
FAI	FRESH AIR INTAKE
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
FL	FLOOR
FU	FIXTURE UNIT
FS	FLOOR SINK
G	GAS
GAL	GALLON
GC	GENERAL CONTRACTOR
GI	GREASE INTERCEPTOR
GM	GAS METER
GV	GATE VALVE
GW	GRAY WASTE
HB	HOSE BIB
HC	HANDICAPPED
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HWH	HOT WATER HEATER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
HZ	HIGH ZONE
IG	IRRIGATION PIPING
IE	INVERT ELEVATION
IW	INDIRECT WASTE
JS	JANITOR SINK

KS	KITCHEN SINK
L	LEADER
LAV	LAVATORY
LP	LOW PRESSURE
LZ	LOW ZONE
MAX	MAXIMUM
MIN	MINIMUM
MGCV	MASTER GAS CONTRAL VALVE
MICV	METER INLET CONTROL VALVE
MS	MOP SINK
MZ	MID ZONE
NFWH	NON-FREEZE WALL HYDRANT
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OD	OVERFLOW DRAIN
OS&Y	OUTSIDE SCREW & YOKE
PG	PRESSURE GAUGE
PLMB	PLUMBING
PO	PLUGGED OUTLET
POE	POINT OF ENTRY
PS	PANTRY SINK
RD	ROOF DRAIN
REF	REFRIGERATOR
RPZ	REDUCED PRESSURE ZONE
RM	ROOM
S	SOIL
SA	SHOCK OBSORBER
S, SAN	SANITARY
ST	STORM DRAIN
SE	SEWAGE EJECTOR
SP	SUMP PUMP
SH	SHOWER
SPEC	SPECIFICATIONS
SQ. FT.	SQUARE FEET
TD	TRENCH DRAIN
TMV	THERMOSTATIC MIXING VALVE
T	TRAP
TYP	TYPICAL
UR	URINAL
V	VENT
VTR	VENT THROUGH ROOF
VB	VACUUM BREAKER
W	WASTE
WC	WATER CLOSET
WH	WALL HUNG
WHA	WATER HAMMER ARRESTER
WSFU	WATER SUPPLY FIXTURE UNIT

PLUMBING SYMBOLS

SYMBOL	DESCRIPTION
SAN	SANITARY WASTE (S OR W)
ST	STORM DRAINAGE PIPING (ST)
OD	OVERFLOW STORM DRAINAGE PIPING
ED	ELEVATOR DRAIN PIPING (9)
EPD	EJECTOR PUMP DISCHARGE PIPING
PD	PUMP DISCHARGE PIPING
DT	DRAINTILE
V	VENT PIPING
CW	DOMESTIC COLD WATER PIPING
HW	DOMESTIC HOT WATER PIPING
	DOMESTIC HOT WATER RETURN PIPING
IW	INDIRECT WASTE PIPING
G	NATURAL GAS SUPPLY
X X X	REMOVE EXISTING PIPING
	PIPING WITH ELECTRIC TRACE HEATING
	PIPING INTERRUPTED OR TO BE CONTINUED
	CAP OR END OF PIPE
P400 XXX	SECTION SHEET No. SECTION NUMBER
P #	SYSTEM DESCRIPTION RISER NUMBER — SANITARY RISER
ST #	SYSTEM DESCRIPTION RISER NUMBER — STORM RISER
G #	SYSTEM DESCRIPTION RISER NUMBER — GAS RISER
	POINT OF DISCONNECT
	CONNECT NEW TO EXISTING
	CLEANOUT
	CLEANOUT DECK PLATE
	DRAIN
	P-TRAP
	SHOCK ABSORBER
TP	TRAP PRIMER
	ARROW INDICATES DIRECTION OF FLOW
	ELBOW UP OR RISE
	ELBOW DN OR DROP
	BALANCING VALVE

PLUMBING SYMBOLS

SYMBOL	DESCRIPTION
	BOTTOM CONNECTION
	TOP CONNECTION
	UNION SCREWED
	PIPE SLEEVE
	WATERPROOF PIPE SLEEVE
	NON FREEZE WALL HYDRANT
	VALVE ON PIPE RISE
	BACK FLOW PREVENTER
	CHECK VALVE
	GATE VALVE
	BALL VALVE
	GAS VALVE
	PRESSURE REDUCING VALVE
	TEMPERATURE & PRESSURE RELIEF VALVE
	PRESSURE REGULATING VALVE
	THERMOSTATIC MIXING VALVE
	VALVED CAPPED OUTET
S	SOLENOID VALVE
	OUTSIDE STEM AND YOKE VALVE W/ TAMPER SWITCH
	STRAINER
P	PRESSURE GAUGE
	HOSE BIB
	VACUUM BREAKER
	THERMOMETER
	PUMP
	CIRCULATOR PUMP
	SCHEMATIC PUMP
	FLOOR SINK
	VENT THRU ROOF
M	METER
F	FILTER
	FAI
	VENT INCREASER

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KEY PLANS

SHEET TITLE

PLUMBING NOTES, SYMBOLS AND ABBREVIATIONS

SCALE: AS NOTED

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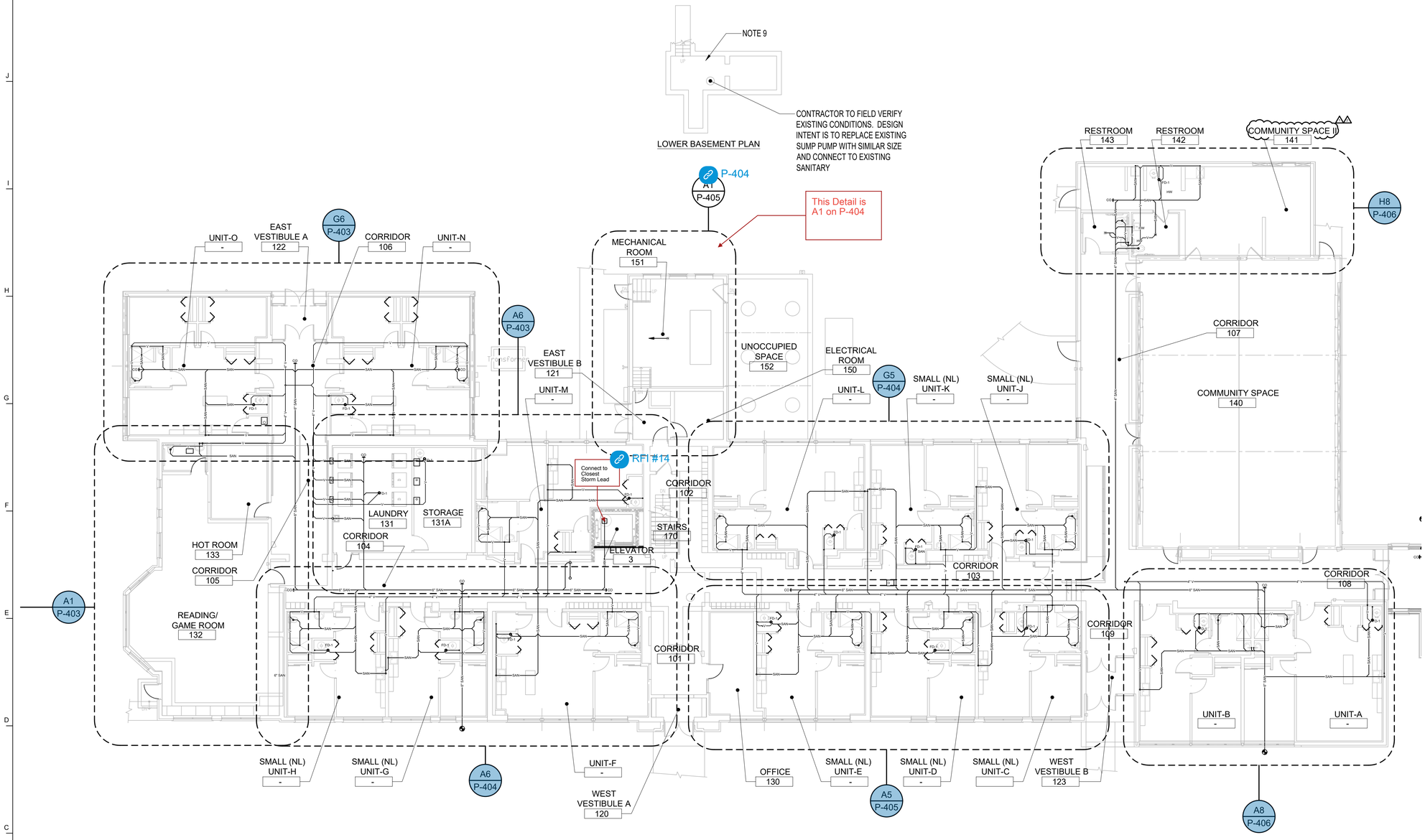
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SHEET NO. P-001

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GENERAL

1. SEE SHEET P-001 FOR PLUMBING NOTES

PLUMBING SHEET KEYED NOTES:

1. EXTEND CONDENSATE DRAIN TO NEAREST FLOOR DRAIN IN WATER HEATER ROOM.
2. EXISTING NATURAL GAS METER AND REGULATOR BY UTILITY COMPANY. VERIFY EXISTING REGULATOR PRESSURE AND COORDINATE TO ENSURE PROPER PRESSURE IS PROVIDE FOR SERVICE TO NATURAL GAS GENERATOR.
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4. SANITARY UP AND DOWN AND PROVIDE VERTICAL CLEANOUT.
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6. CONTRACTOR TO CONTACT MISS DIG PRIOR TO START OF ANY UNDERGROUND WORK, COORDINATE WORK WITH CIVIL PLANS.
7. HEAT PUMP HOT WATER, REFER TO MANUFACTURER DRAWINGS FOR PROPER VENTILATION REQUIREMENTS FOR DOOR CLEARANCES AND SPACE REQUIREMENTS. REFER TO PLUMBING DETAILS FOR HEAT PUMP WATER HEATER PIPING AND EQUIPMENT REQUIRED.
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10. IF UNIT IS CONISDERED ADA SUBSTITUTE FIXTURES TO ADA TYPE. COORDINATE WITH ARCH DRAWINGS.
11. DISHWASHER - PROVIDE HOT WATER

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KEY PLANS

SHEET TITLE

FIRST FLOOR - SANITARY, VENTING AND STORM WATER PLAN

SCALE: AS NOTED

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△BULLETIN 4	07.01.25

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P-101
SHEET NO.

A1 | **FIRST FLOOR - SANITARY, VENTING AND STORM WATER PLAN**

P-101 | 3/32" = 1'-0"

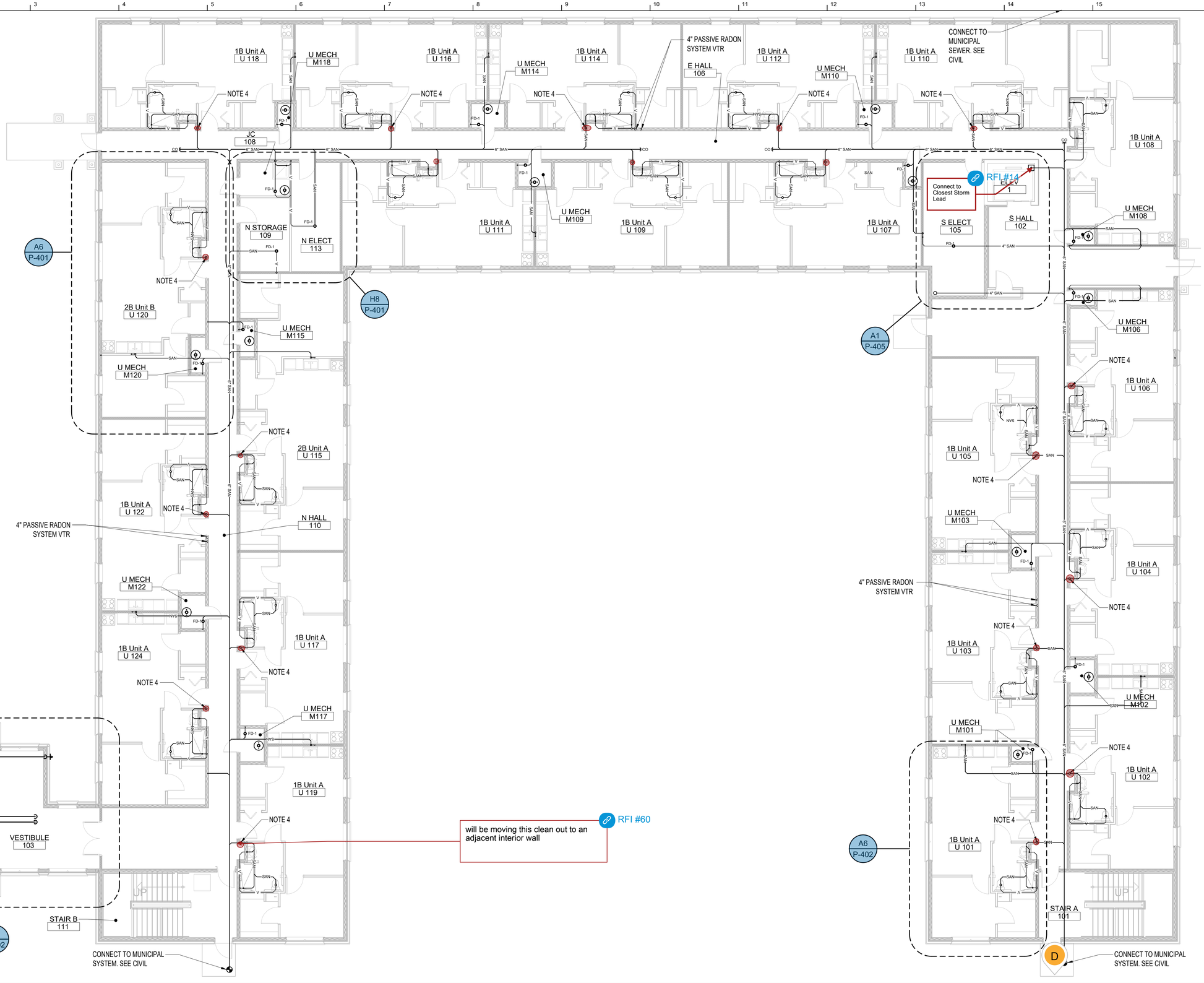
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GENERAL

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A1 FIRST FLOOR - ADDITION SANITARY, VENTING AND STORM WATER PLAN

P-102 SCALE: 1/8" = 1'-0"

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KEY PLANS

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FIRST FLOOR - ADDITION SANITARY, VENTING AND STORM WATER PLAN

SCALE: AS NOTED

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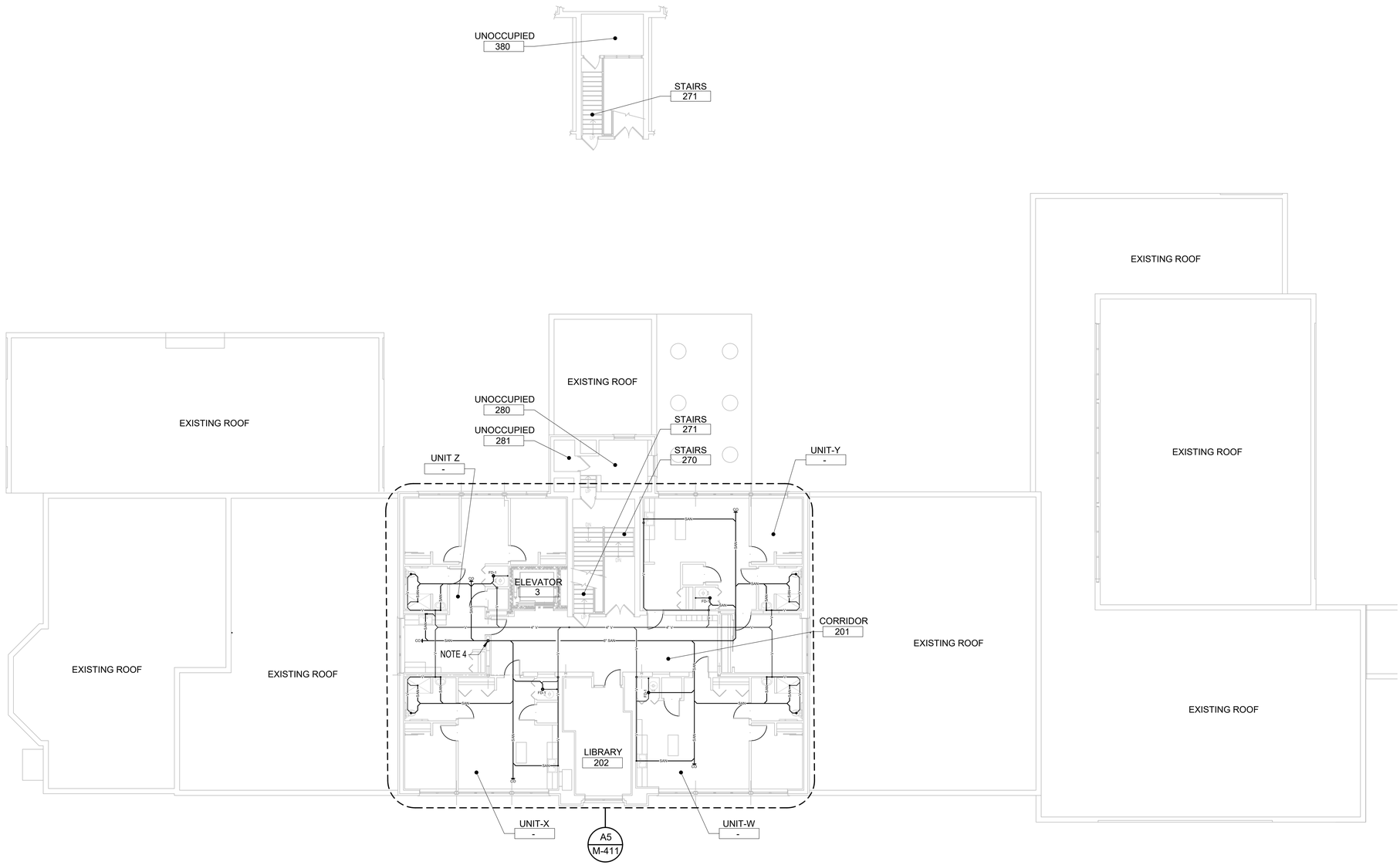
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GENERAL

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A1 | **SECOND FLOOR - SANITARY, VENTING AND STORM WATER PLAN**

P-103 | SCALE: 3/32" = 1'-0"

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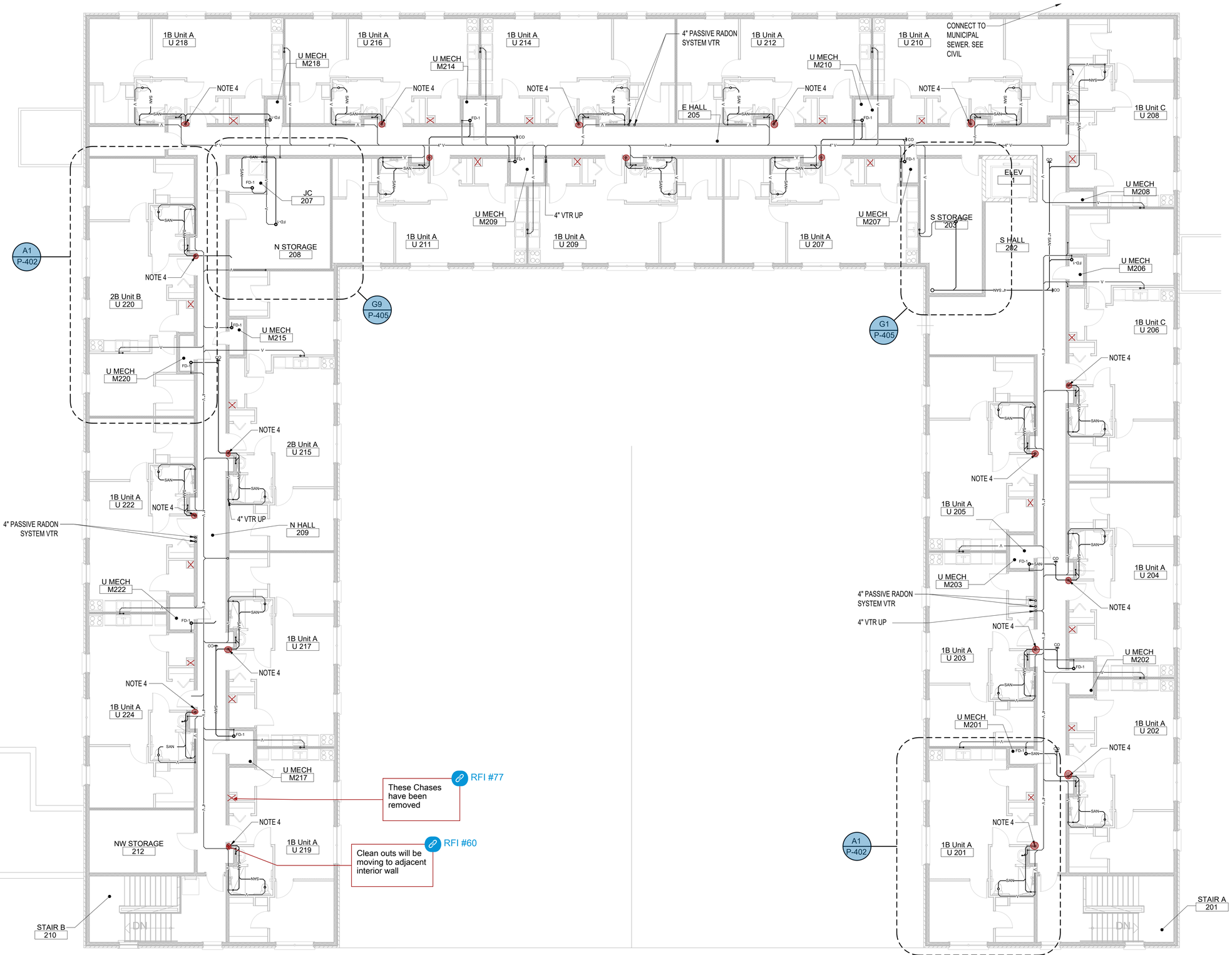
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11. DISHWASHER - PROVIDE HOT WATER SUPPLY AND SHUT OFF FROM SINK SUPPLY. PROVIDE SANITARY TO GARBAGE DISPOSAL. COORDINATE LOCATION WITH ARCHITECTURAL.



A1 SECOND FLOOR - ADDITION SANITARY, VENTING AND STORM WATER PLAN

P-104 | SCALE: 1/8" = 1'-0"

12/19/2024 6:28:22 PM

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
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REGISTRATION SEAL

STATE OF MICHIGAN
STEPHEN M. HENNARD
ENGINEER
NO. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

SECOND FLOOR SANITARY, VENTING AND STORM WATER PLAN

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24

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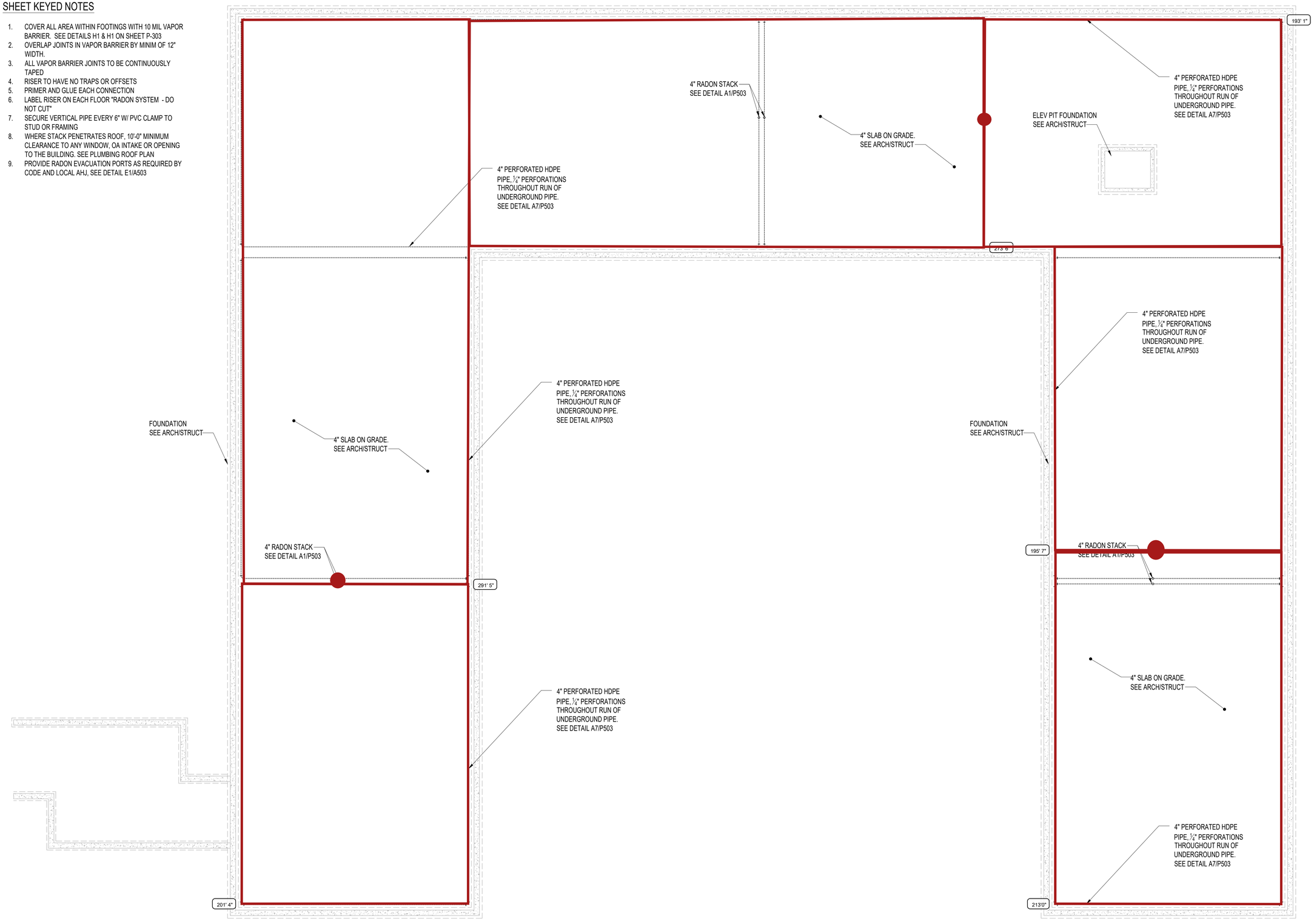
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FILE NO.

P-104
SHEET NO.

SHEET KEYED NOTES

1. COVER ALL AREA WITHIN FOOTINGS WITH 10 MIL VAPOR BARRIER. SEE DETAILS H1 & H1 ON SHEET P-303
2. OVERLAP JOINTS IN VAPOR BARRIER BY MINIM OF 12" WIDTH.
3. ALL VAPOR BARRIER JOINTS TO BE CONTINUOUSLY TAPED
4. RISER TO HAVE NO TRAPS OR OFFSETS
5. PRIMER AND GLUE EACH CONNECTION
6. LABEL RISER ON EACH FLOOR "RADON SYSTEM - DO NOT CUT"
7. SECURE VERTICAL PIPE EVERY 6" W/ PVC CLAMP TO STUD OR FRAMING
8. WHERE STACK PENETRATES ROOF, 10'-0" MINIMUM CLEARANCE TO ANY WINDOW, OA INTAKE OR OPENING TO THE BUILDING. SEE PLUMBING ROOF PLAN
9. PROVIDE RADON EVACUATION PORTS AS REQUIRED BY CODE AND LOCAL AHJ, SEE DETAIL E1/A503



A1 PASSIVE RADON SYSTEM PLAN

P-105 SCALE: 1/8" = 1'-0"

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NO. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE
PASSIVE RADON SYSTEM PLAN

SCALE: AS NOTED

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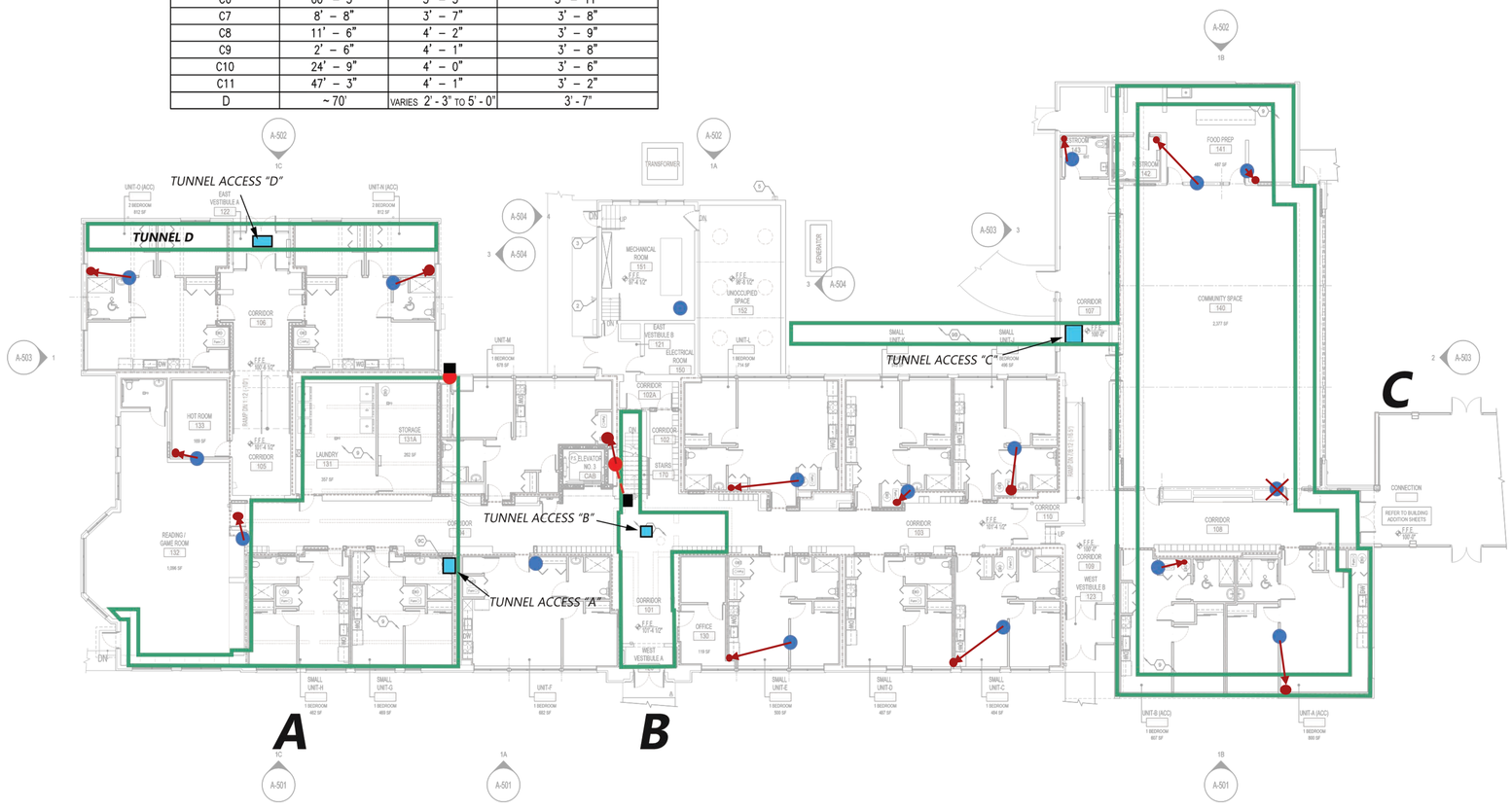
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McDowell & Associates

JOB NUMBER: 24-16496

PASSIVE/ACTIVE RADON LOCATION MAP

TUNNEL DIMENSIONS			
LOCATION	LENGTH	WIDTH	HEIGHT
A1	31' – 8"	5'–0"	VARIES (2'–5" TO 3'–1")
A2	31' – 8"	5'–1"	VARIES (1'–11" TO 3'–1")
A3	31' – 8"	4' – 11"	VARIES (1'–11" TO 3'–1")
A4	31' – 8"	4'–9"	VARIES (1'11" TO 2'–11")
A5	42'–3"	5'–5"	VARIES (1'–11" TO 3'–2")
A6	42'–3"	5' – 6"	VARIES (1'–11" TO 3'–2")
A7	42'–3"	4' – 8"	VARIES (2'–0" TO 3'–1")
A8	42'–3"	6' – 1"	VARIES (1'–11" TO 3'–1")
A9	42'–3"	5' – 3"	VARIES (1'–11" TO 3'–5")
A10	65' – 11"	4' – 10"	VARIES (1'–11" TO 3'–8")
A11	9' – 3"	2' – 0"	3' – 9"
A12	3' – 8"	2' – 0"	3' – 9"
B1	22' – 8"	11' – 6"	VARIES
B2	11' – 3"	7' – 8"	8' – 8"
B3	10' – 0"	7' – 8"	8' – 8"
C1	68' – 5"	4' – 2"	3' – 7"
C2	116' – 5"	4' – 2"	3' – 7"
C3	31' – 8"	3' – 7"	3' – 7"
C4	19' – 9"	4' – 0"	3' – 9"
C5	4' – 4"	3' – 7"	3' – 6"
C6	60' – 5"	3' – 5"	3' – 11"
C7	8' – 8"	3' – 7"	3' – 8"
C8	11' – 6"	4' – 2"	3' – 9"
C9	2' – 6"	4' – 1"	3' – 8"
C10	24' – 9"	4' – 0"	3' – 6"
C11	47' – 3"	4' – 1"	3' – 2"
D	~ 70'	VARIES 2' - 3" TO 5' - 0"	3' - 7"



LEGEND

- *PASSIVE RADON VENT*
- *ACTIVE RADON VENT*
- *T-CONNECT TO TUNNEL "B"*
- *NEMA BOX WITH GAUGE*

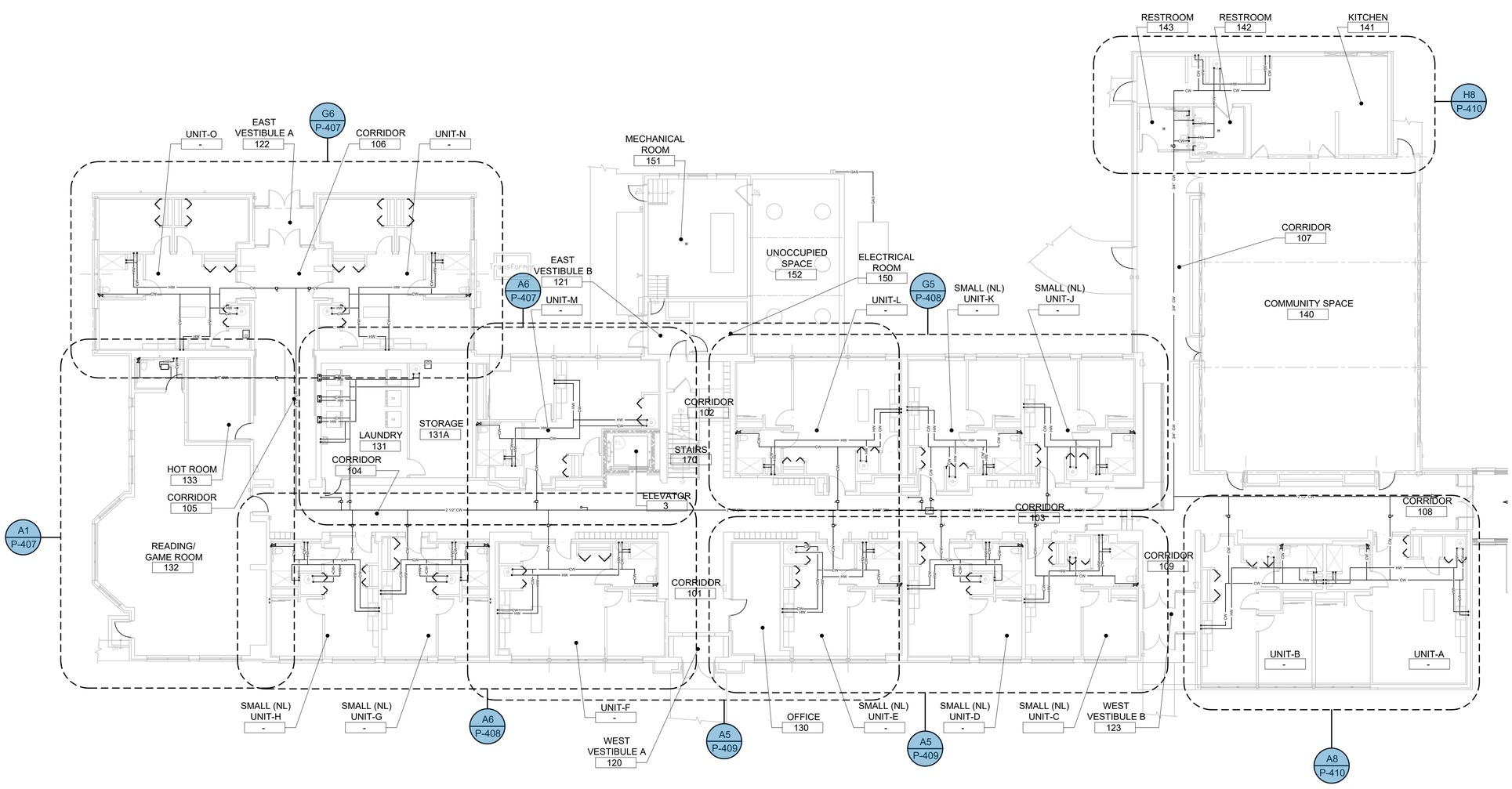
NOTES:

- *ALL LOCATIONS APPROXIMATE*
- *BASE DRAWING BY SDG ARCHITECTS & PLANNERS*
- *MPK 11/11/24*

N

1" = 30'

0 *30'*



GENERAL

1. SEE SHEET P-001 FOR PLUMBING NOTES

PLUMBING SHEET KEYED NOTES:

1. EXTEND CONDENSATE DRAIN TO NEAREST FLOOR DRAIN IN WATER HEATER ROOM.
2. EXISTING NATURAL GAS METER AND REGULATOR BY UTILITY COMPANY. VERIFY EXISTING REGULATOR PRESSURE AND COORDINATE TO ENSURE PROPER PRESSURE IS PROVIDE FOR SERVICE TO NATURAL GAS GENERATOR.
3. VENT UP AND DOWN
4. SANITARY UP AND DOWN AND PROVIDE VERTICAL CLEANOUT.
5. REFER TO TYPICAL APARTMENT WATER RISER DIAGRAM FOR PIPING ARRANGEMENT AND SIZES.
6. CONTRACTOR TO CONTACT MISS DIG PRIOR TO START OF ANY UNDERGROUND WORK, COORDINATE WORK WITH CIVIL PLANS.
7. HEAT PUMP HOT WATER, REFER TO MANUFACTURER DRAWINGS FOR PROPER VENTILATION REQUIREMENTS FOR DOOR CLEARANCES AND SPACE REQUIREMENTS. REFER TO PLUMBING DETAILS FOR HEAT PUMP WATER HEATER PIPING AND EQUIPMENT REQUIRED.
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KEY PLANS

SHEET TITLE

FIRST FLOOR
PLUMBING PLAN

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24

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FILE NO.

P-201
SHEET NO.

A1 | **FIRST FLOOR - PLUMBING PLAN**

P-201 | 3/32" = 1'-0"

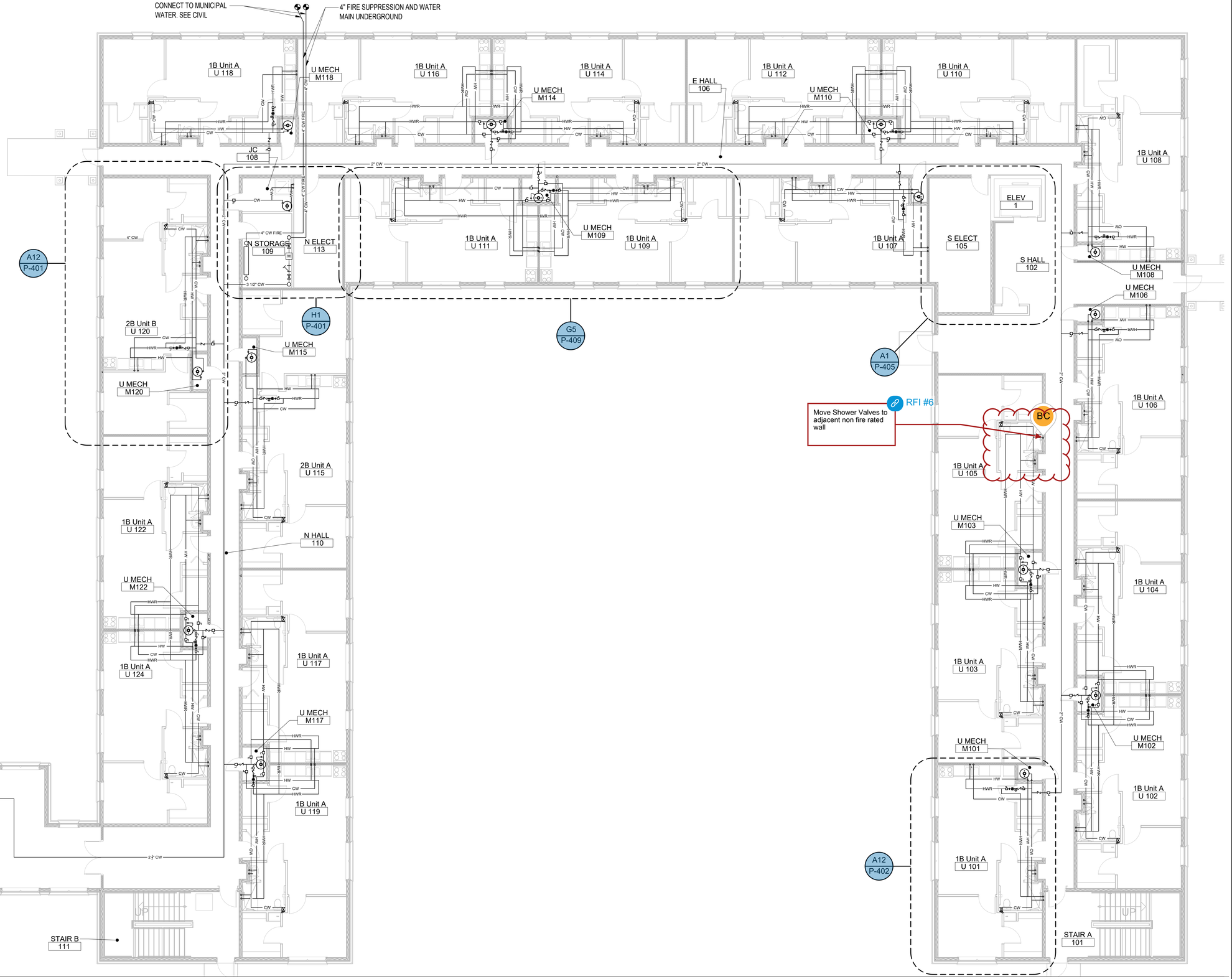
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GENERAL

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A1 FIRST FLOOR - ADDITION PLUMBING PLAN

P-202 | 1/8" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE
FIRST FLOOR - ADDITION PLUMBING PLAN

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24

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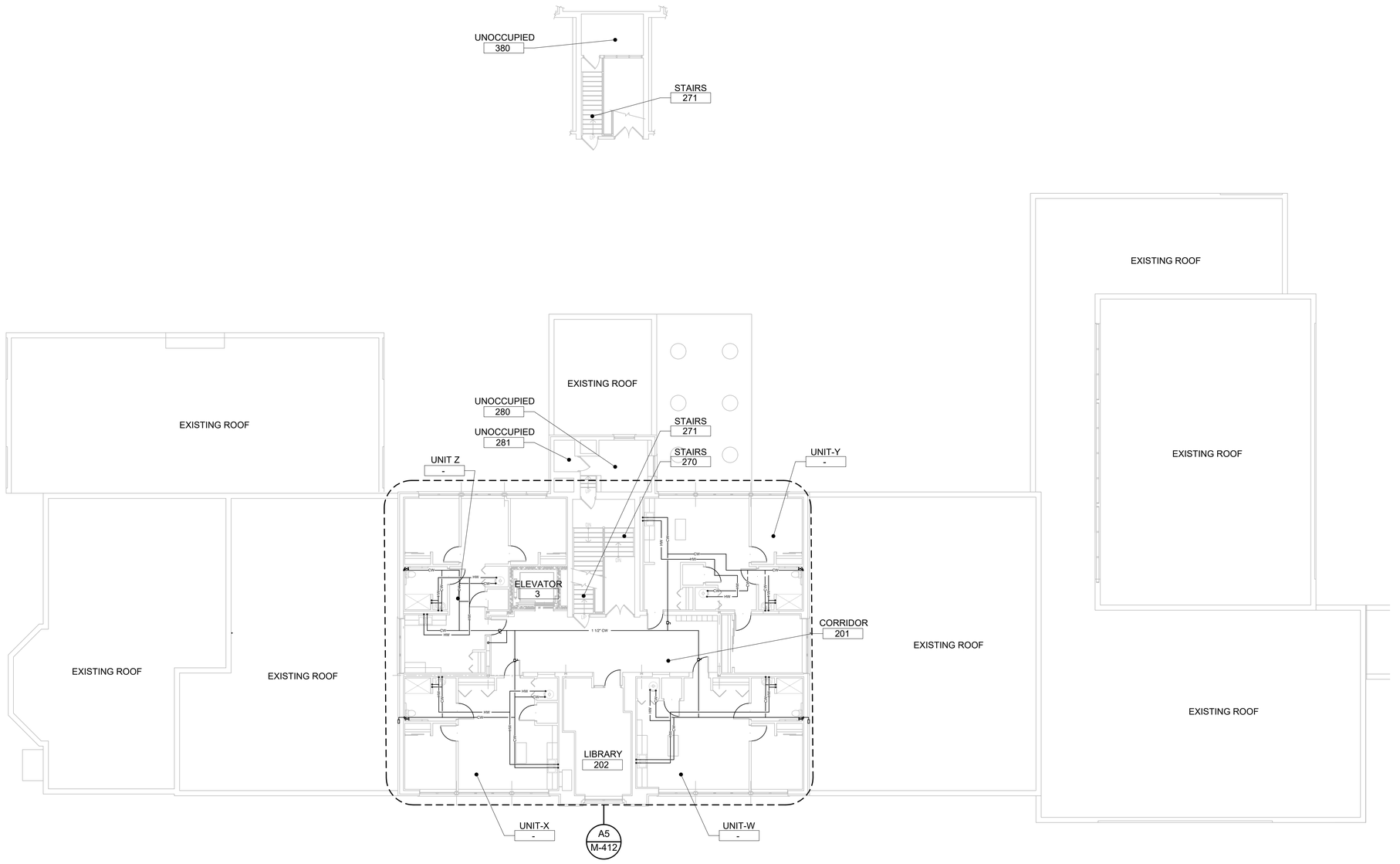
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FILE NO.

P-202
SHEET NO.

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GENERAL

1. SEE SHEET P-001 FOR PLUMBING NOTES

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LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

SECOND FLOOR - PLUMBING PLAN

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24

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21026.00
FILE NO.

P-203
SHEET NO.

A1 | **SECOND FLOOR - PLUMBING PLAN**

P-203 | 3/32" = 1'-0"

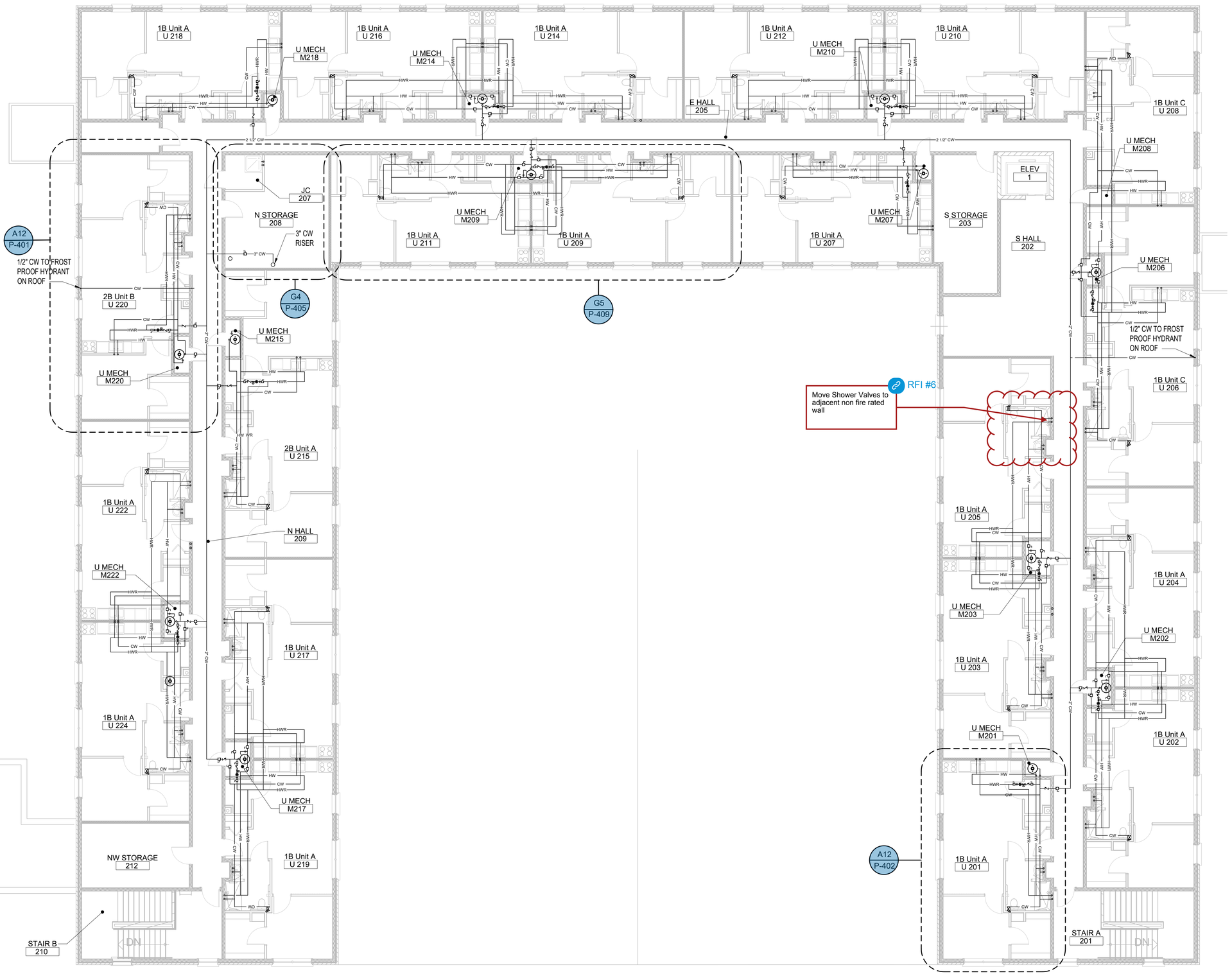
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GENERAL

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3. VENT UP AND DOWN
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A1 SECOND FLOOR - ADDITION PLUMBING PLAN

P-202 1/8" = 1'-0"

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KEY PLANS

SHEET TITLE
SECOND FLOOR - ADDITION PLUMBING PLAN

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24

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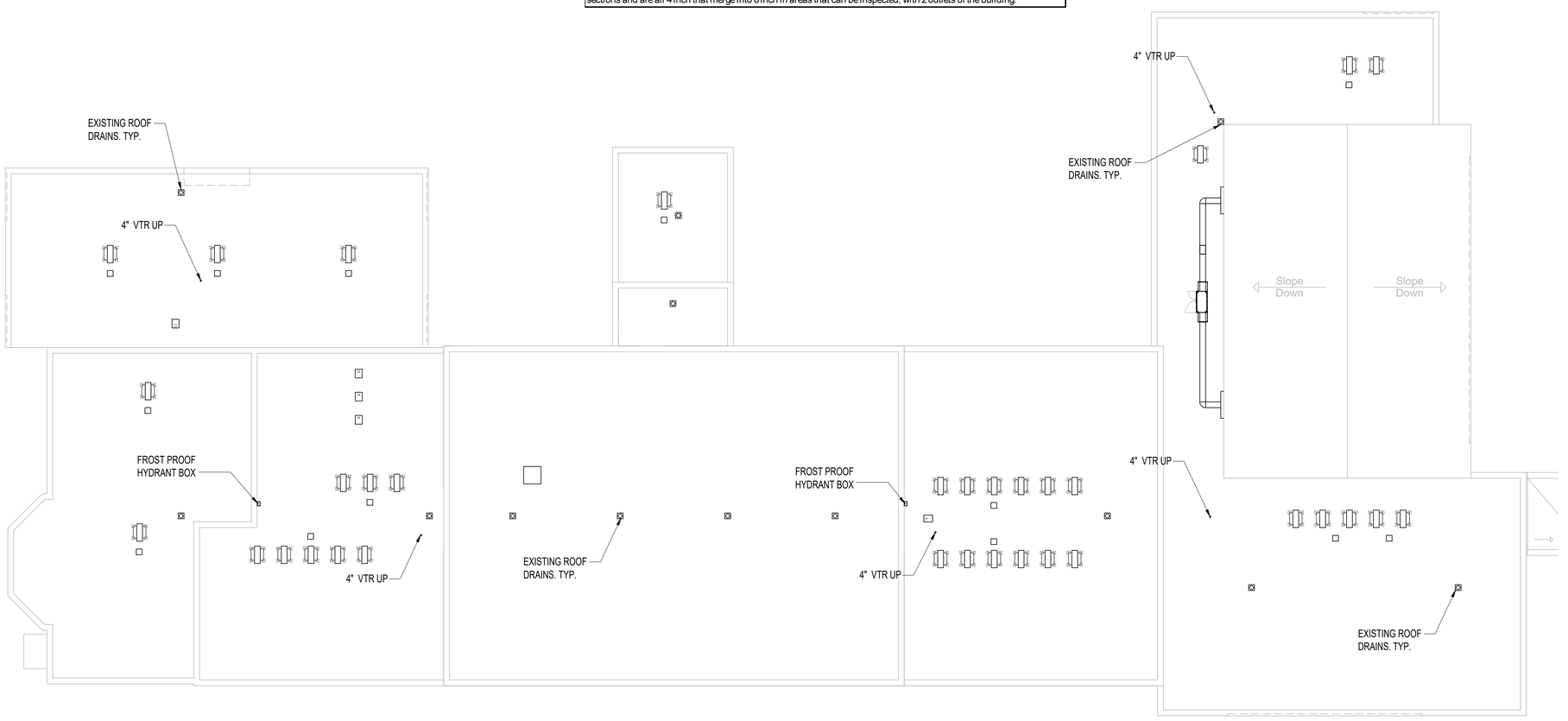
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SHEET NO. P-204

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John Grace Arms - Existing Upper Roof Storm Drains Calculations
Design Location - Southfield, MI
MPC 2021 Figure 1106.1(2) - 100-year 1-hour rain fall =2.75in
Total Flat Roof SF = 4597 SF
Roof slope 1/4 for flat roof
2 story veritcal elevation (34 ft)
Flat Roof
GPM=R* A * 0.0104
GPM= 2.75 * 4597 * .0104
GPM= 131.5 GPM
Based on table 1106.2 in 2021 Michigan Plumbing Code would require minimum combined size of 4 in pipe size. Existing roof has a total of 4 conductors and are 4 inches.

John Grace Arms - Existing Lower Roof Storm Drains Calculations
Design Location - Southfield, MI
MPC 2021 Figure 1106.1(2) - 100-year 1-hour rain fall =2.75in
Total Flat Roof SF = 15560 SF
Roof slope 1/4 for flat roof
Single story veritcal elevation (15 ft)
Flat Roof
GPM=R* A * 0.0104
GPM= 2.75 * 15560 * .0104
GPM= 445 GPM
Based on table 1106.2 in 2021 Michigan Plumbing Code would require minimum combined size of 8 in pipe size for all sections of roof. Existing lowered roof has a total of 9 roof conductors for various sections and are all 4 inch that merge into 8 inch in areas that can be inspected, with 2 outlets of the building.



GENERAL

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2. EXISTING NATURAL GAS METER AND REGULATOR BY UTILITY COMPANY. VERIFY EXISTING REGULATOR PRESSURE AND COORDINATE TO ENSURE PROPER PRESSURE IS PROVIDE FOR SERVICE TO NATURAL GAS GENERATOR.
3. VENT UP AND DOWN
4. SANITARY UP AND DOWN AND PROVIDE VERTICAL CLEANOUT. IF RISER IS IN A FIRE RATED WALL, CLEANOUT COVER MUST BE RATED FOR SAME RATED AS WALL ASSEMBLY
5. REFER TO TYPICAL APARTMENT WATER RISER DIAGRAM FOR PIPING ARRANGEMENT AND SIZES.
6. CONTRACTOR TO CONTACT MISS DIG PRIOR TO START OF ANY UNDERGROUND WORK, COORDINATE WORK WITH CIVIL PLANS.
7. HEAT PUMP HOT WATER, REFER TO MANUFACTURER DRAWINGS FOR PROPER VENTILATION REQUIREMENTS FOR DOOR CLEARANCES AND SPACE REQUIREMENTS. REFER TO PLUMBING DETAILS FOR HEAT PUMP WATER HEATER PIPING AND EQUIPMENT REQUIRED.
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11. DISHWASHER - PROVIDE HOT WATER SUPPLY AND SHUT OFF FROM SINK SUPPLY. PROVIDE SANITARY TO GARBAGE DISPOSAL. COORDINATE LOCATION WITH ARCHITECTURAL.
12. ALL EXISTING ROOF CONDUCTORS ARE TO BE IDENTIFIED AND REPLACED. ROUTING OF THE ROOF CONDUCTORS IS INTENDED TO HAVE THE SAME PATHWAY AND SIZES AS EXISTING. COORDINATE WITH ARCHITECTURAL FOR ROUTING OF ANY POTENTIAL INTERFERENCES OR ADDITIONAL DEMO NEEDED TO COMPLETE REPLACEMENT. COORDINATE WITH CIVIL FOR LOCATIONS OF COMBINED ROOF DRAINAGE PIPING LEAVING THE BUILDING. EXISTING ROUTING OF ROOF CONDUCTORS WERE UNABLE TO BE IDENTIFIED DURING THE TIME OF DESIGN. RESPONSIBILITY OF THE GENERAL CONTRACTOR TO IDENTIFY, REPLACE AND PHASE IN A MANNER TO AVOID ANY OPEN ROOF CONDUCTORS THAT WOULD ALLOW WATER INTO THE BUILDING. △1

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KEY PLANS

SHEET TITLE

ROOF - PLUMBING PLAN

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24
△BULLETIN 3	5.19.25
△BULLETIN 5	10.13.25

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21026.00
FILE NO.

P-301
SHEET NO.

A1 | **ROOF - PLUMBING PLAN**

P-301 | 3/32" = 1'-0"

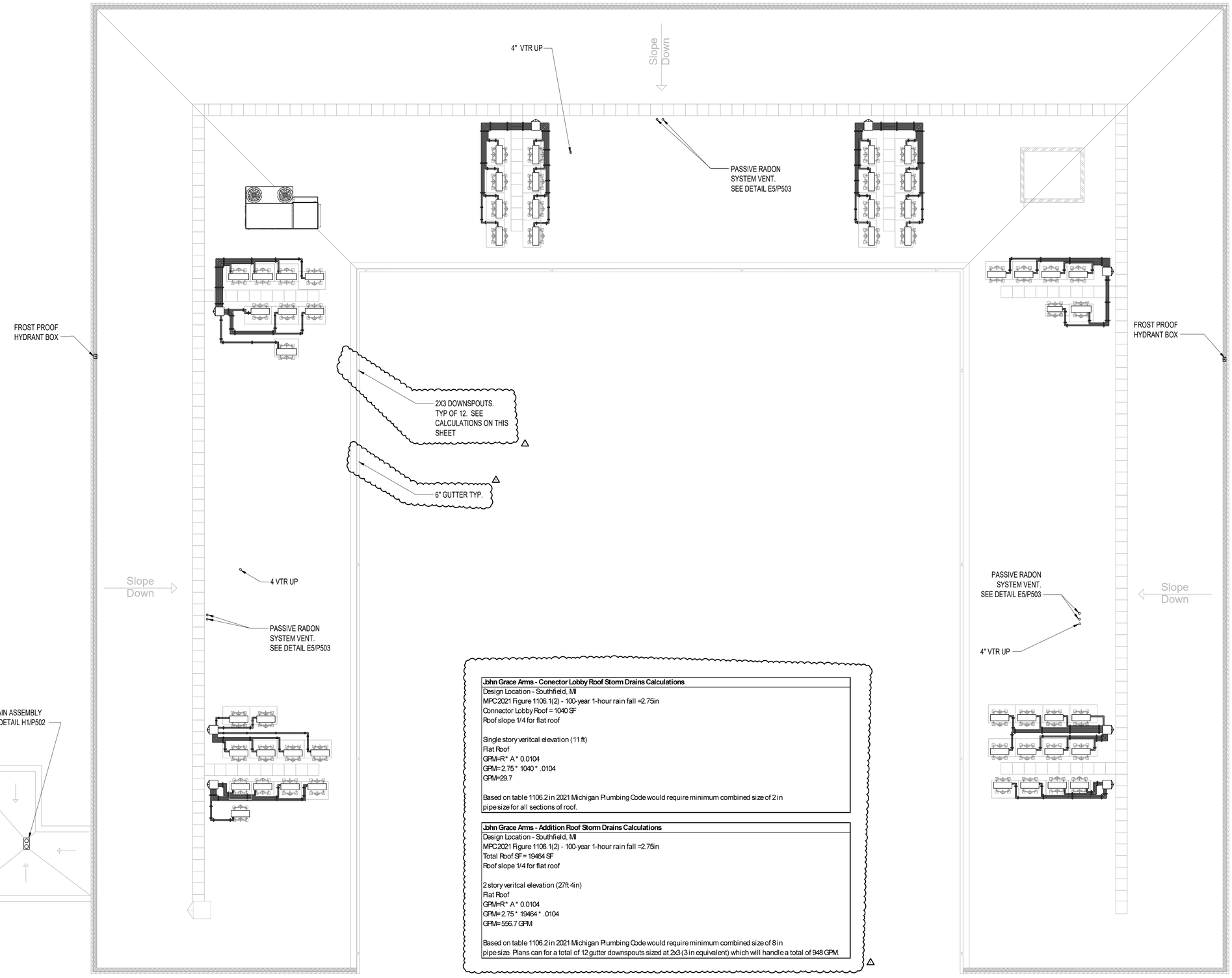
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5. REFER TO TYPICAL APARTMENT WATER RISER DIAGRAM FOR PIPING ARRANGEMENT AND SIZES.
6. CONTRACTOR TO CONTACT MISS DIG PRIOR TO START OF ANY UNDERGROUND WORK, COORDINATE WORK WITH CIVIL PLANS.
7. HEAT PUMP HOT WATER, REFER TO MANUFACTURER DRAWINGS FOR PROPER VENTILATION REQUIREMENTS FOR DOOR CLEARANCES AND SPACE REQUIREMENTS. REFER TO PLUMBING DETAILS FOR HEAT PUMP WATER HEATER PIPING AND EQUIPMENT REQUIRED.
8. GARBAGE DISPOSAL, SEE PLUMBING SCHEDULE FOR SPECIFICATIONS AND INSTALL FOR MANUFACTURER REQUIREMENTS. TO BE CONTROLLED BY SWITCH LOCATED ABOVE COUNTER SEE ELECTRICAL.
9. ALL SANITARY LINES ARE BELOW FLOOR ELEVATION TO ALLOW FOR PROPER PITCH AND NEEDED FLOW. EXACT LOCATION OF TUNNEL AND BASEMENT ARE UNKNOWN AND SANITARY COULD BE IN BASEMENT OR TUNNEL. ROUTE IN A WAY TO MINIMIZE CORING. ALL VENTING AND WATER DISTRIBUTION ABOVE FINISH CEILING AS HIGH AS POSSIBLE WITHOUT INTERFERING WITH OTHER TRADES.
10. IF UNIT IS CONISDERED ADA SUBSTITUTE FIXTURES TO ADA TYPE. COORDINATE WITH ARCH DRAWINGS.
11. DISHWASHER - PROVIDE HOT WATER SUPPLY AND SHUT OFF FROM SINK SUPPLY. PROVIDE SANITARY TO GARBAGE DISPOSAL. COORDINATE LOCATION WITH ARCHITECTURAL.
12. SUB BASEMENT, WHICH IS LOCATION OF ELEVATOR PIT WAS NOT SAFETY ACCESSIBLE AT TIME OF DESIGN AND CANNOT FIELD VERIFY



John Grace Arms - Conector Lobby Roof Storm Drains Calculations
Design Location - Southfield, MI
MPC 2021 Figure 1106.1(2) - 100-year 1-hour rain fall =2.75in
Connector Lobby Roof = 1040 SF
Roof slope 1/4 for flat roof
Single story veritcal elevation (11 ft)
Flat Roof
GPM=R* A * 0.0104
GPM= 2.75 * 1040 * .0104
GPM=29.7
Based on table 1106.2 in 2021 Michigan Plumbing Code would require minimum combined size of 2 in pipe size for all sections of roof.

John Grace Arms - Addition Roof Storm Drains Calculations
Design Location - Southfield, MI
MPC 2021 Figure 1106.1(2) - 100-year 1-hour rain fall =2.75in
Total Roof SF = 19464 SF
Roof slope 1/4 for flat roof
2 story veritcal elevation (27ft 4in)
Flat Roof
GPM=R* A * 0.0104
GPM= 2.75 * 19464 * .0104
GPM= 556.7 GPM
Based on table 1106.2 in 2021 Michigan Plumbing Code would require minimum combined size of 8 in pipe size. Plans can for a total of 12 gutter downspouts sized at 2x3 (3 in equivalent) which will handle a total of 948 GPM.

△

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ENGINEER
NO. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

ROOF - ADDITION PLUMBING PLAN

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24
△BULLETIN 3	5.19.25

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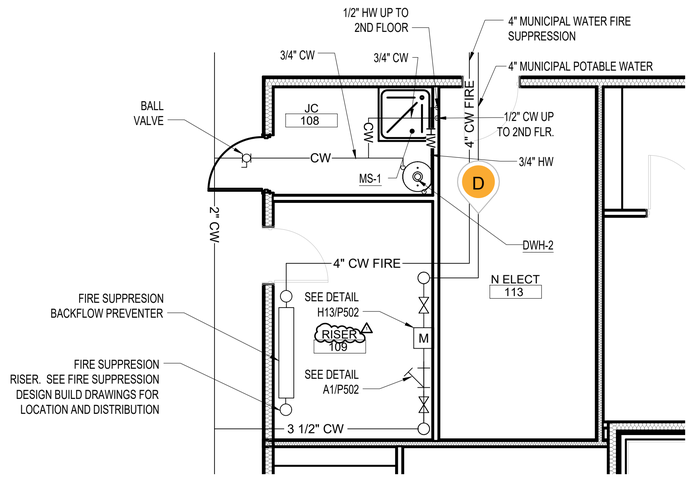
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SHEET NO. P-302

A1 | **ROOF - ADDITION PLUMBING PLAN**

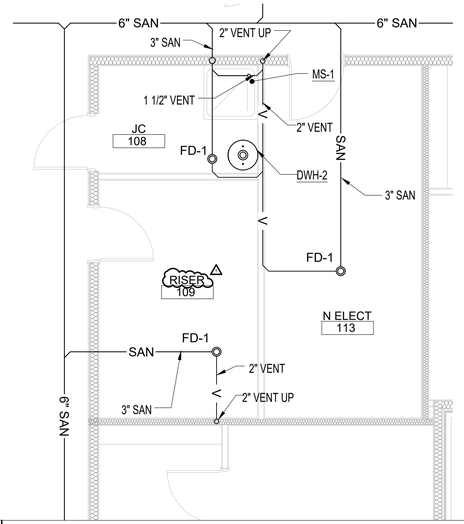
P-302 | 1/8" = 1'-0"

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H1 ENLARGED SANITARY/VENTING PLAN

P-401 | 1/4" = 1'-0"



H8 ENLARGED SANITARY/VENTING PLAN

P-401 | 1/4" = 1'-0"

GENERAL

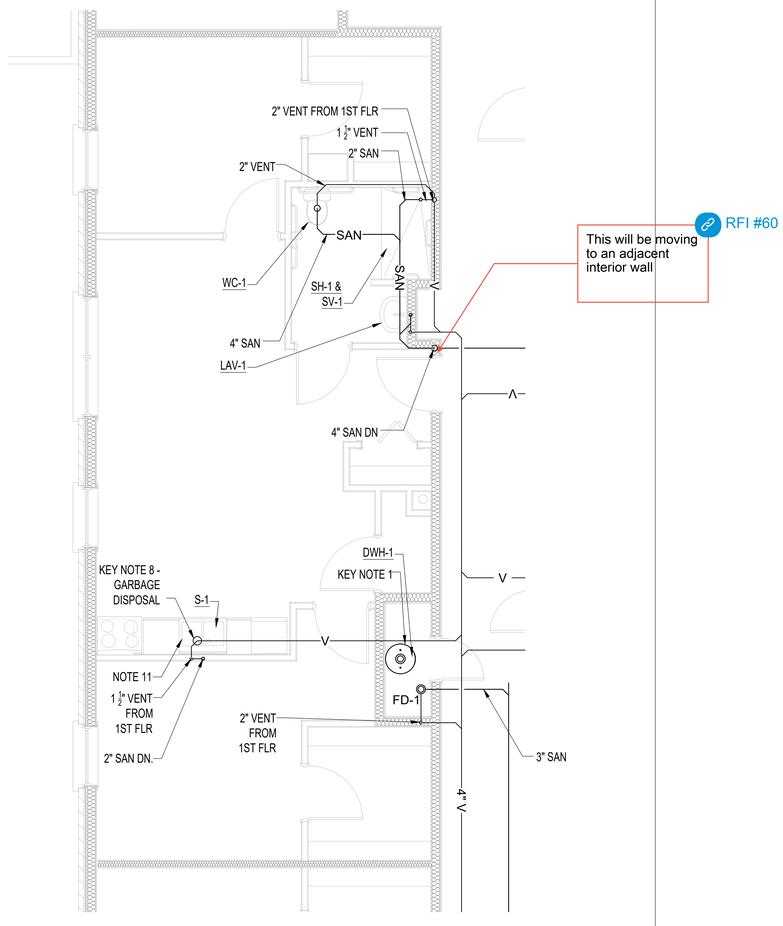
SEE SHEET P-001 FOR PLUMBING NOTES

PLUMBING SHEET KEYED NOTES:

1. EXTEND CONDENSATE DRAIN TO NEAREST FLOOR DRAIN IN WATER HEATER ROOM.
2. EXISTING NATURAL GAS METER AND REGULATOR BY UTILITY COMPANY. VERIFY EXISTING REGULATOR PRESSURE AND COORDINATE TO ENSURE PROPER PRESSURE IS PROVIDE FOR SERVICE TO NATURAL GAS GENERATOR.
3. VENT UP AND DOWN
4. SANITARY UP AND DOWN AND PROVIDE VERTICAL CLEANOUT.
5. REFER TO TYPICAL APARTMENT WATER RISER DIAGRAM FOR PIPING ARRANGEMENT AND SIZES.
6. CONTRACTOR TO CONTACT MISS DIG PRIOR TO START OF ANY UNDERGROUND WORK, COORDINATE WORK WITH CIVIL PLANS.
7. HEAT PUMP HOT WATER, REFER TO MANUFACTURER DRAWINGS FOR PROPER VENTILATION REQUIREMENTS FOR DOOR CLEARANCES AND SPACE REQUIREMENTS. REFER TO PLUMBING DETAILS FOR HEAT PUMP WATER HEATER PIPING AND EQUIPMENT REQUIRED.

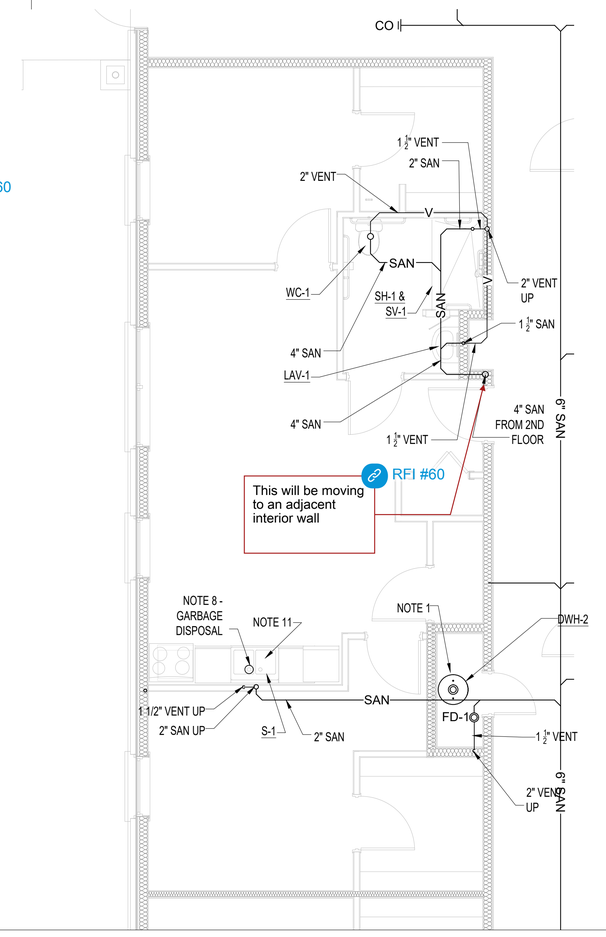
PLUMBING SHEET KEYED NOTES (CONT):

8. GARBAGE DISPOSAL, SEE PLUMBING SCHEDULE FOR SPECIFICATIONS AND INSTALL TO MANUFACTUER REQUIREMENTS. TO BE CONTROLLED BY SWITCH LOCATED ABOVE COUNTER SEE ELECTRICAL.
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11. DISHWASHER - PROVIDE HOT WATER SUPPLY AND SHUT OFF FROM SINK SUPPLY. PROVIDE SANITARY TO GARBAGE DISPOSAL. COORDINATE LOCATION WITH ARCHITECTURAL.



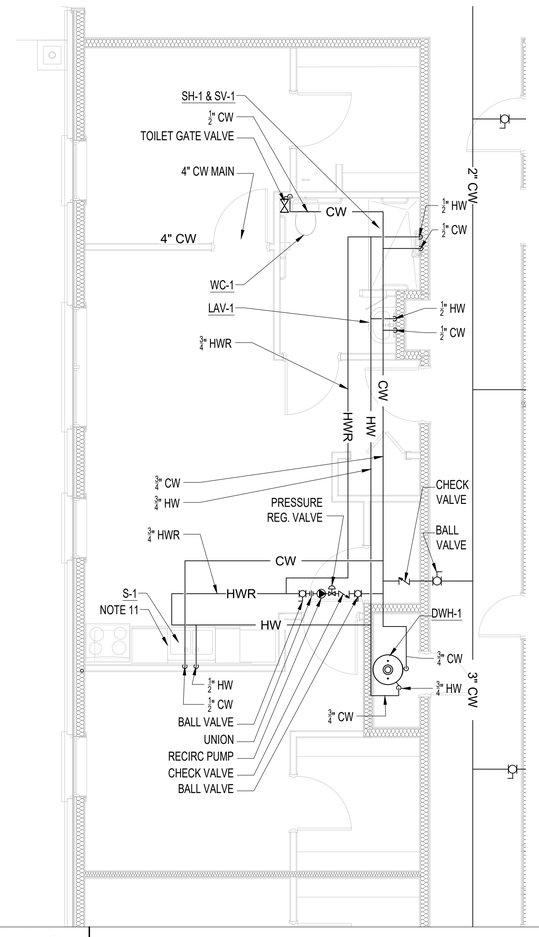
A1 2B UNIT B (A SIM) - 2ND FLR SANITARY/VENTING PLAN

P-401 | 1/4" = 1'-0"



A6 2B UNIT B (A SIM) - 1ST FLR SANITARY/VENTING PLAN

P-401 | 1/4" = 1'-0"



A12 2B UNIT B (A SIM) PLUMBING PLAN

P-401 | 1/4" = 1'-0"

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KEY PLANS

SHEET TITLE

ENLARGED PLUMBING PLANS

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24
△BULLETIN 7	01.14.26

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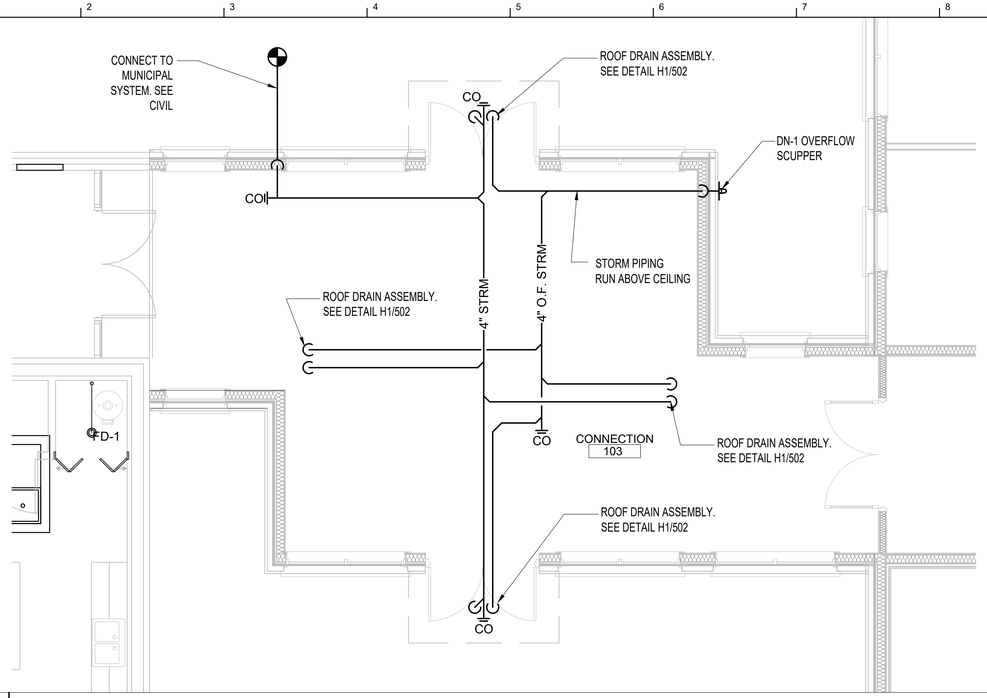
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FILE NO.

P-401
SHEET NO.

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G1 CONNECTION 103 - STORM WATER PLAN

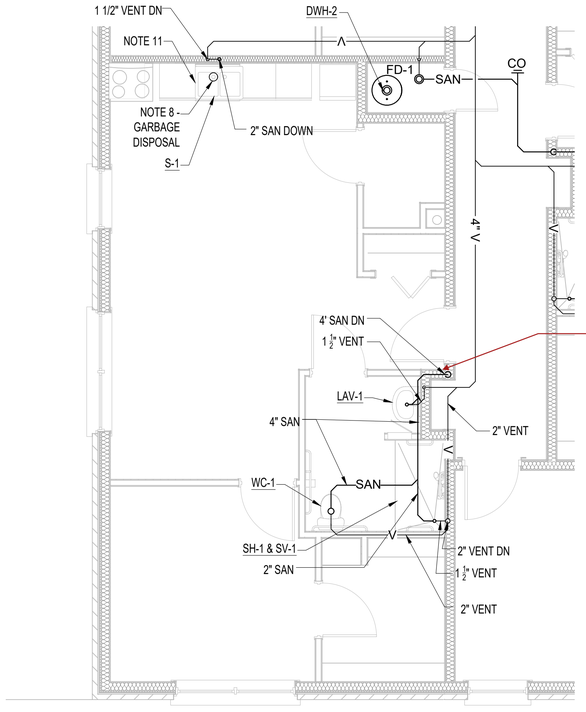
P-402 | 1/4" = 1'-0"

GENERAL

1. SEE SHEET P-001 FOR PLUMBING NOTES

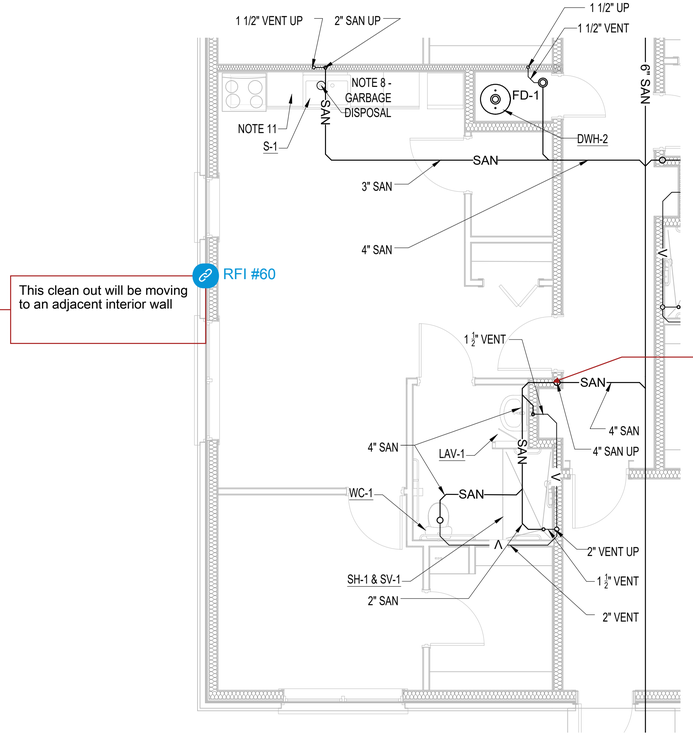
PLUMBING SHEET KEYED NOTES:

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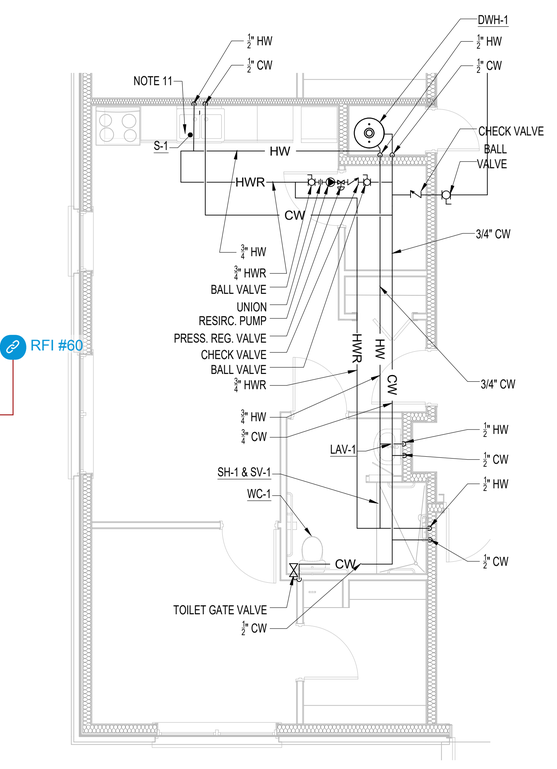
A1 1B UNIT A - 2ND FLR SANITARY/VENTING PLAN

P-402 | 1/4" = 1'-0"



A6 1B UNIT A - 1ST FLR SANITARY/VENTING PLAN

P-402 | 1/4" = 1'-0"



A12 1B UNIT A - PLUMBING PLAN

P-402 | 1/4" = 1'-0"

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NO. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

ENLARGED PLUMBING PLANS

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24

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FILE NO.

P-402
SHEET NO.

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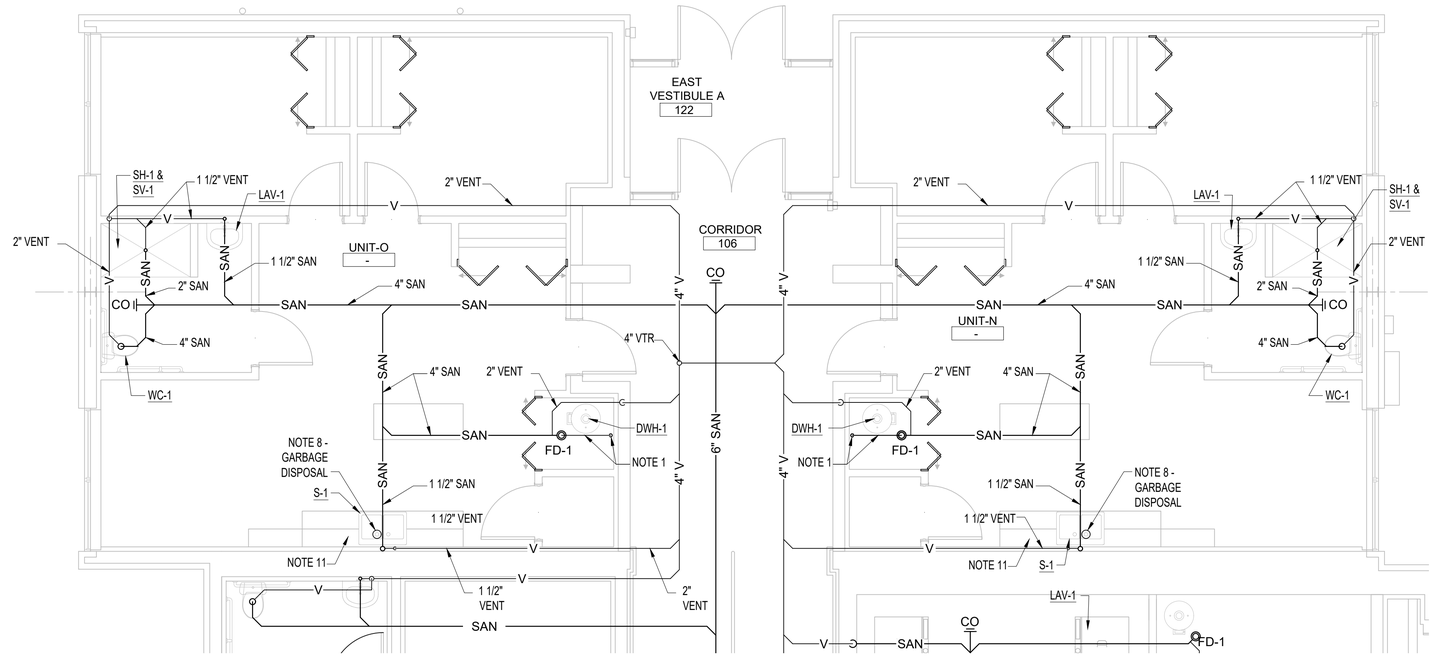
GENERAL

1. SEE SHEET P-001 FOR PLUMBING NOTES

PLUMBING SHEET KEYED NOTES:

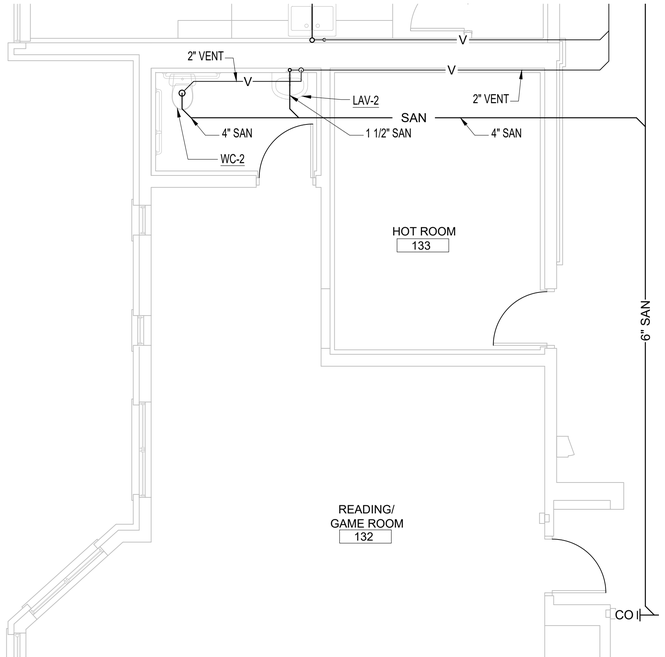
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12. SUB BASEMENT, WHICH IS LOCATION OF ELEVATOR PIT WAS NOT SAFETY ACCESSIBLE AT TIME OF DESIGN AND CANNOT FIELD VERIFY EXISTING CONDITIONS AT SUMP OR DRAWING TILE SYSTEM. IN ADDITION EXISTING STORM SYSTEM CANNOT BE FIELD VERIFIED AT TIME OF DESIGN DUE TO SAFE ACCESS NOT AVAILABLE. △

1. SEE PLUMBING SHEET NOTES AND SHEET KEYED NOTES ON P-001



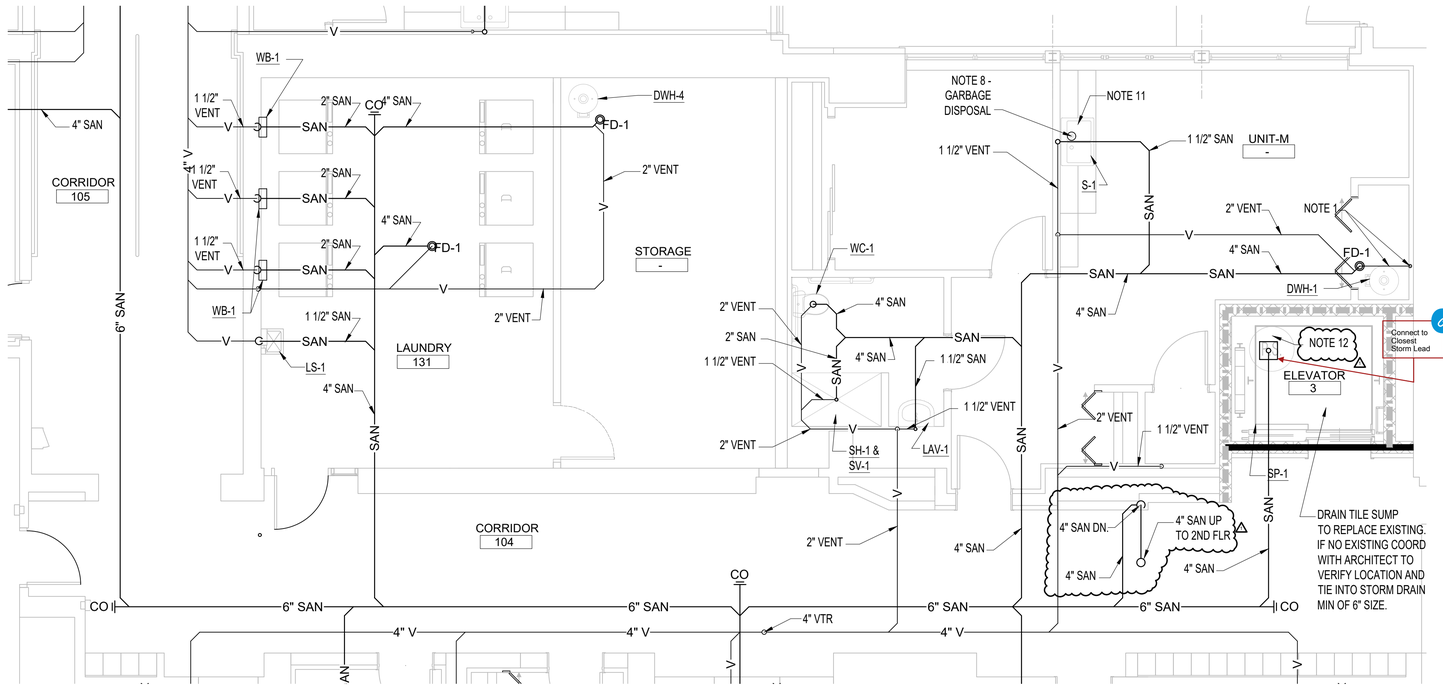
G6 ENLARGED PLUMBING PLANS

P-403 | 1/4" = 1'-0"



A1 ENLARGED PLUMBING PLANS

P-403 | 1/4" = 1'-0"



A6 ENLARGED PLUMBING PLANS

P-403 | 1/4" = 1'-0"

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KEY PLANS

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RFI #14

SCALE: AS NOTED

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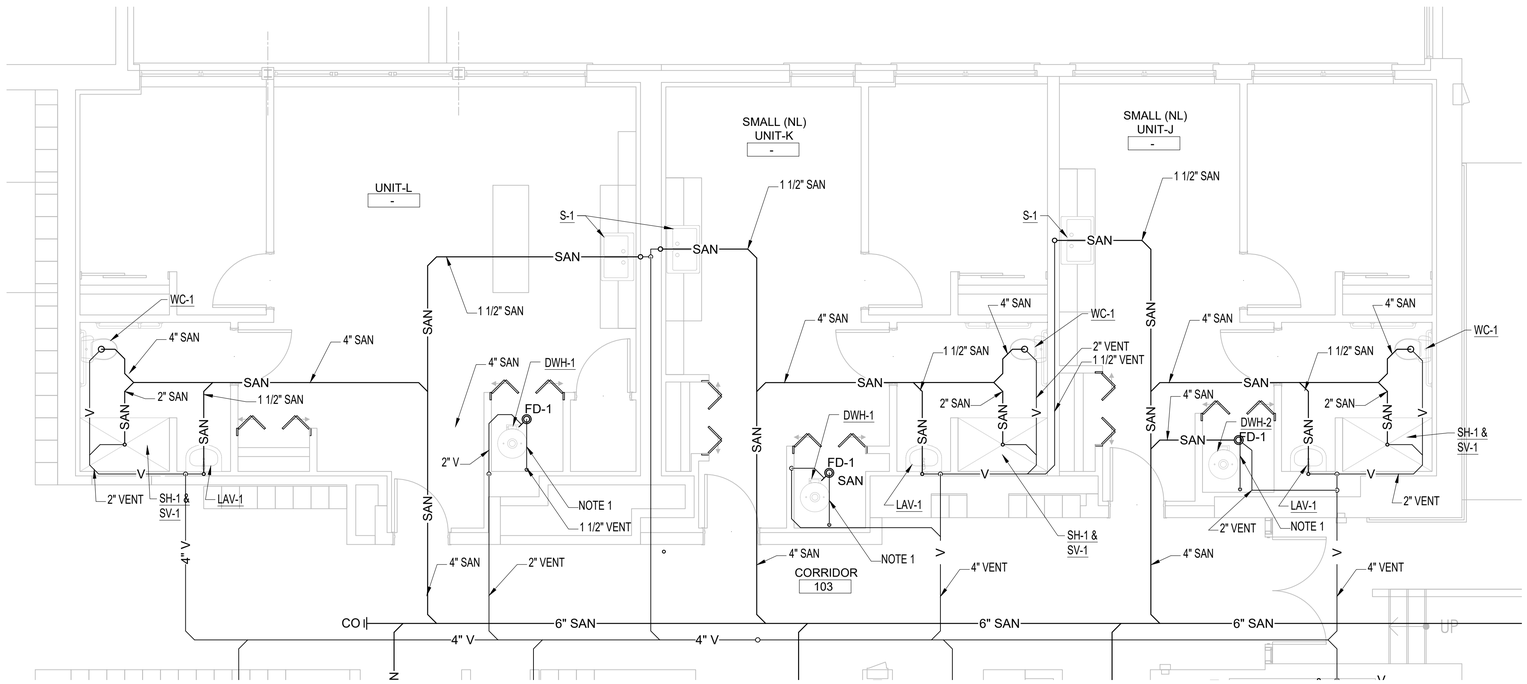
GENERAL

1. SEE SHEET P-001 FOR PLUMBING NOTES

PLUMBING SHEET KEYED NOTES:

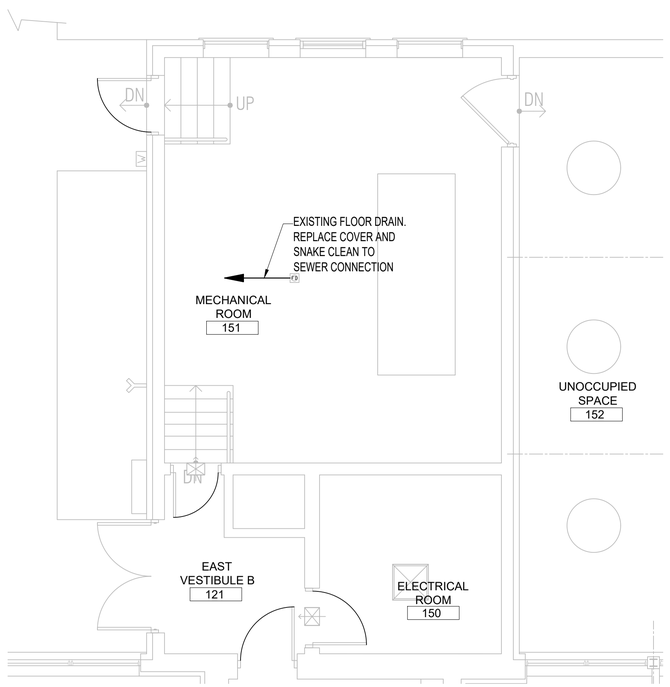
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1. SEE PLUMBING SHEET NOTES AND SHEET KEYED NOTES ON P-001



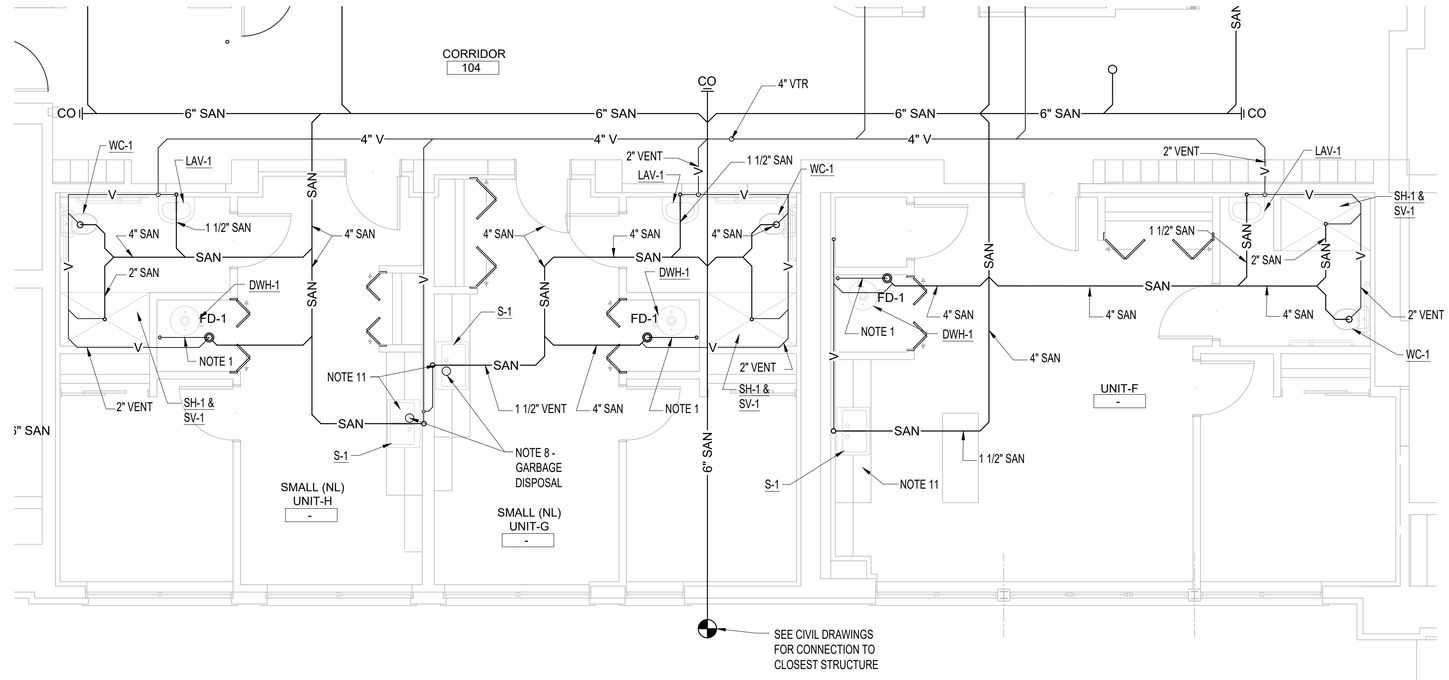
G5 ENLARGED PLUMBING PLANS

P-404 | 1/4" = 1'-0"



A1 ENLARGED PLUMBINGPLANS

P-404 | 1/4" = 1'-0"



A6 ENLARGED PLUMBING PLANS

P-404 | 1/4" = 1'-0"

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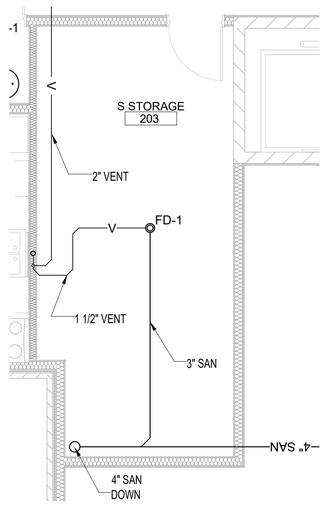
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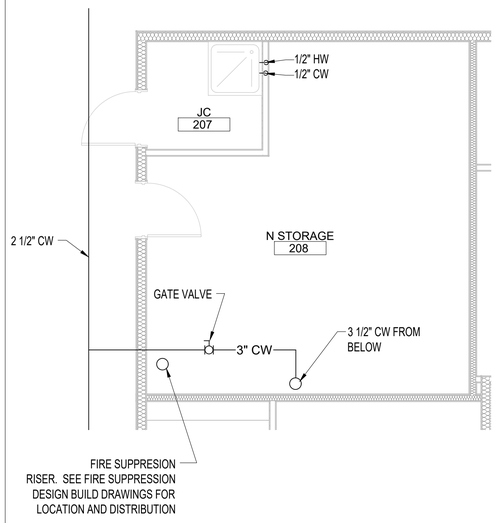
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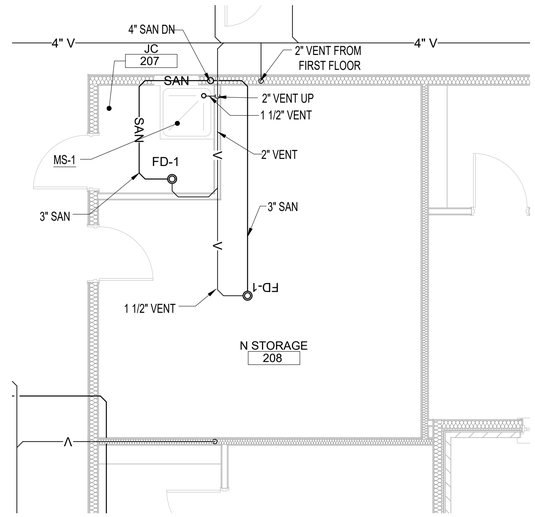
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G1	ENLARGED PLUMBING PLANS
P-405	1/4" = 1'-0"



G4	ENLARGED PLUMBING PLANS
P-405	1/4" = 1'-0"



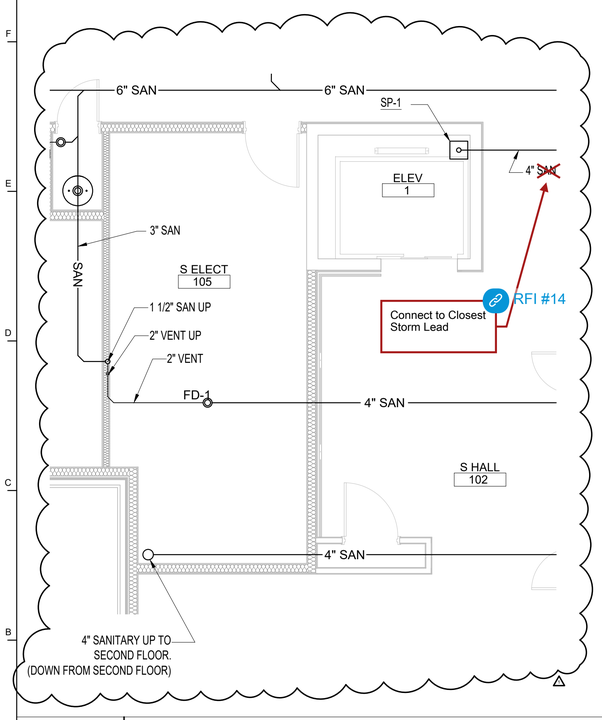
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P-405	1/4" = 1'-0"

GENERAL

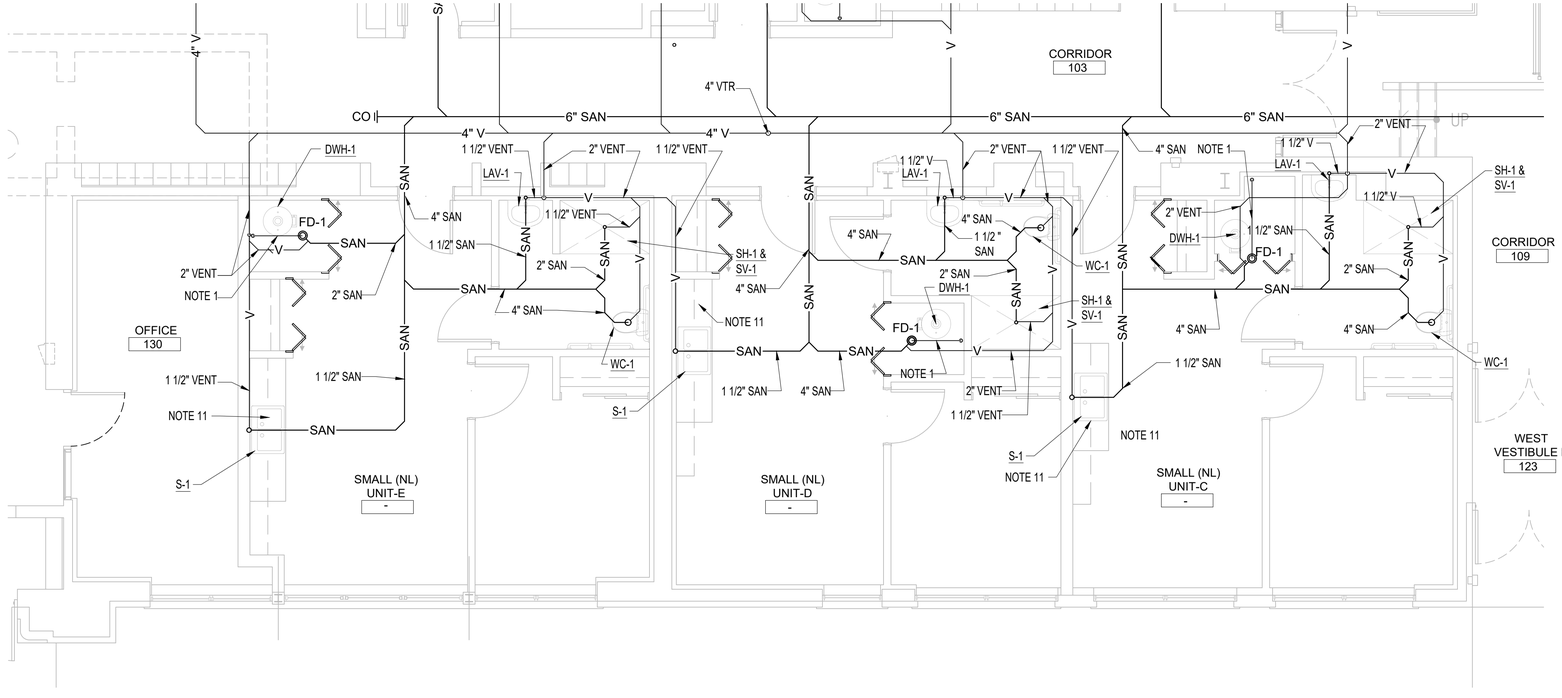
1. SEE SHEET P-001 FOR PLUMBING NOTES

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11. DISHWASHER - PROVIDE HOT WATER SUPPLY AND SHUT OFF FROM SINK SUPPLY. PROVIDE SANITARY TO GARBAGE DISPOSAL. COORDINATE LOCATION WITH ARCHITECTURAL.



A1	ENLARGED PLUMBING PLANS
P-405	1/4" = 1'-0"



A5	ENLARGED PLUMBING PLANS
P-405	1/4" = 1'-0"

John Grace Arms
21030 Indian St, Southfield MI 48033
Developed by
John Grace Arms LDHA LLC

SDG
Architects + Planners
607 Shelby Street
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Detroit, MI 48226
Tel: 313-961-9000
Fax: 313-964-3233

A & A Engineering & Consulting
28962 Vista Way, South Lyon, MI 48178

REGISTRATION SEAL

STATE OF MICHIGAN
STEPHEN M. HENNARD
ENGINEER
NO. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

ENLARGED PLUMBING PLANS

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24
△BULLETIN 1	2.19.25

DRAWN BY

CHECKED

APPROVED

21026.00
FILE NO.

P-405
SHEET NO.

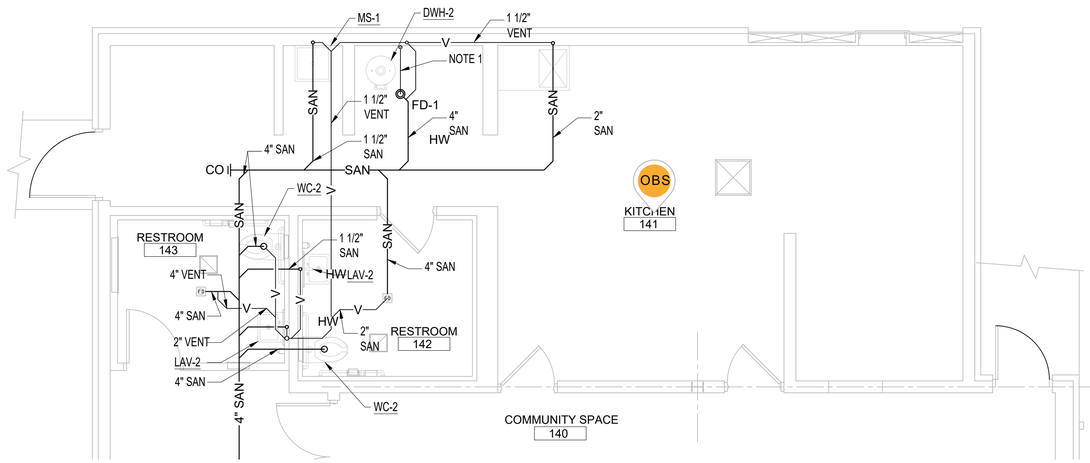
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GENERAL

1. SEE SHEET P-001 FOR PLUMBING NOTES

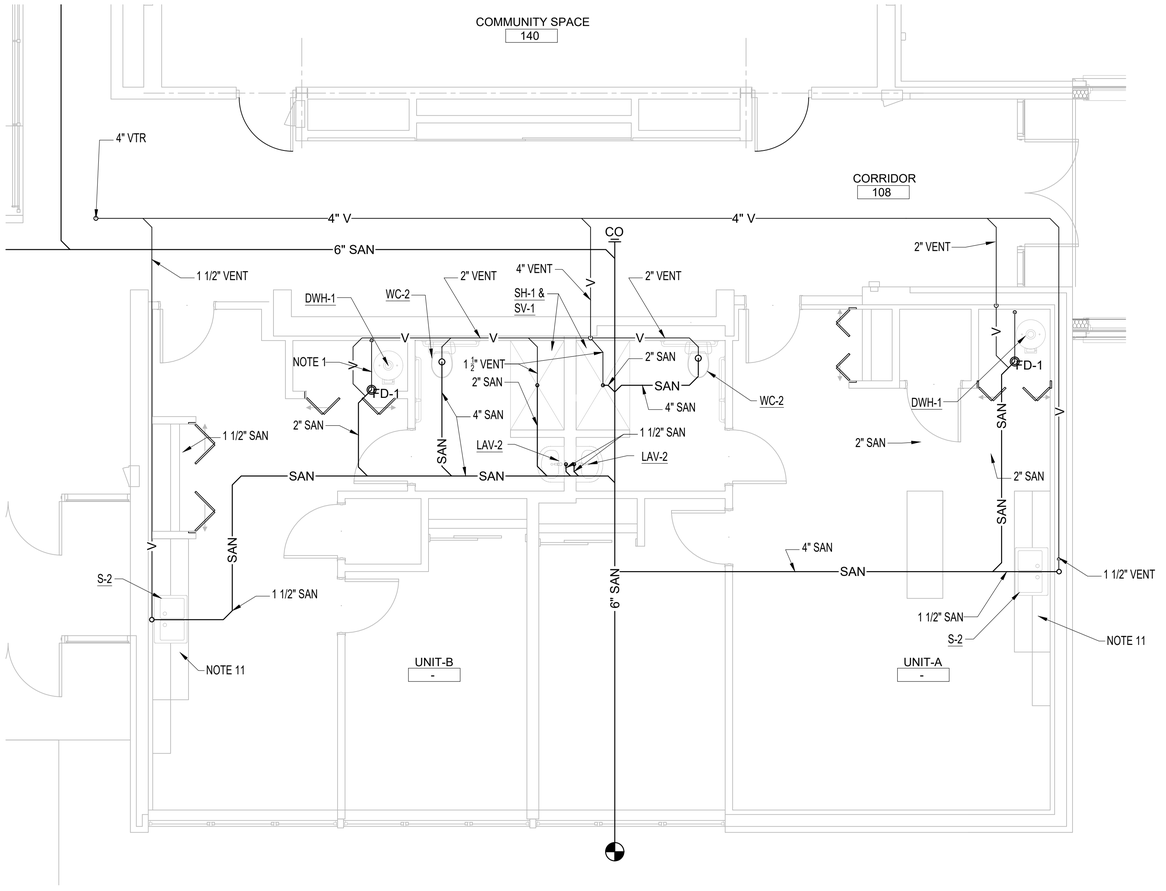
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H8 ENLARGED PLUMBING PLANS

P-406 | 1/4" = 1'-0"



A5 ENLARGED PLUMBING PLANS

P-406 | 1/4" = 1'-0"

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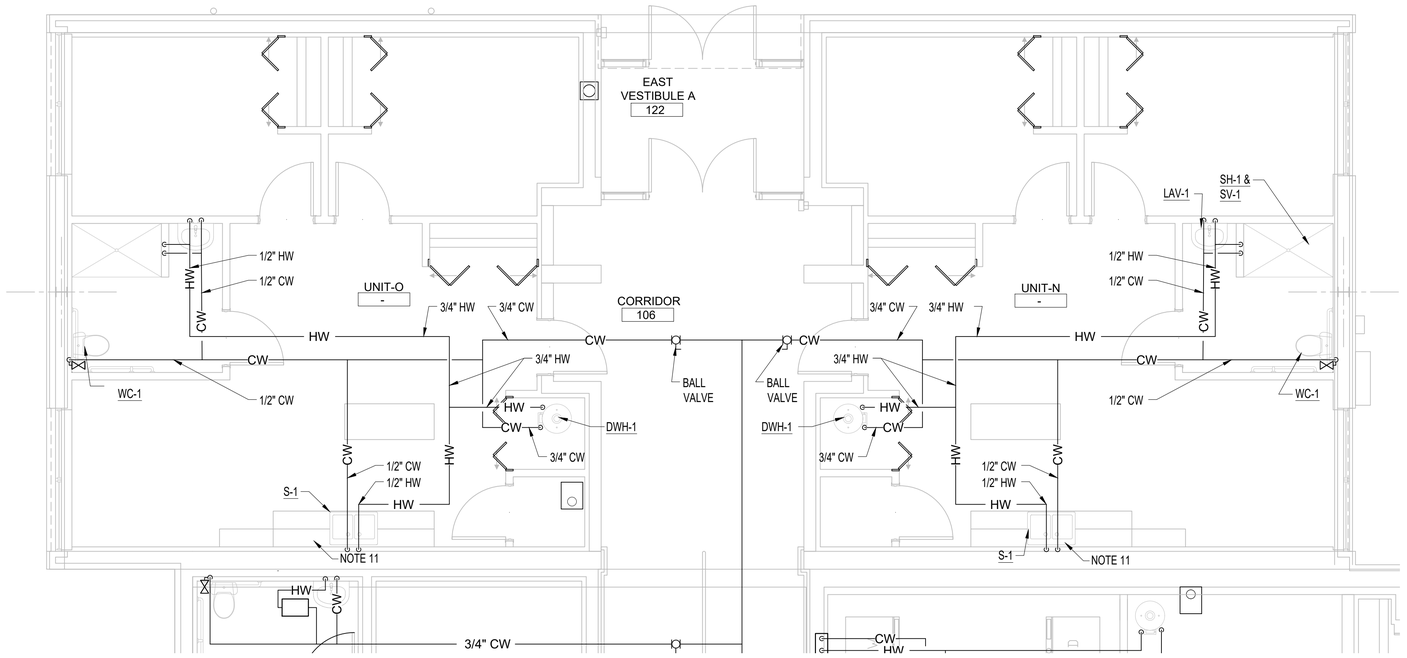
GENERAL

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PLUMBING SHEET KEYED NOTES:

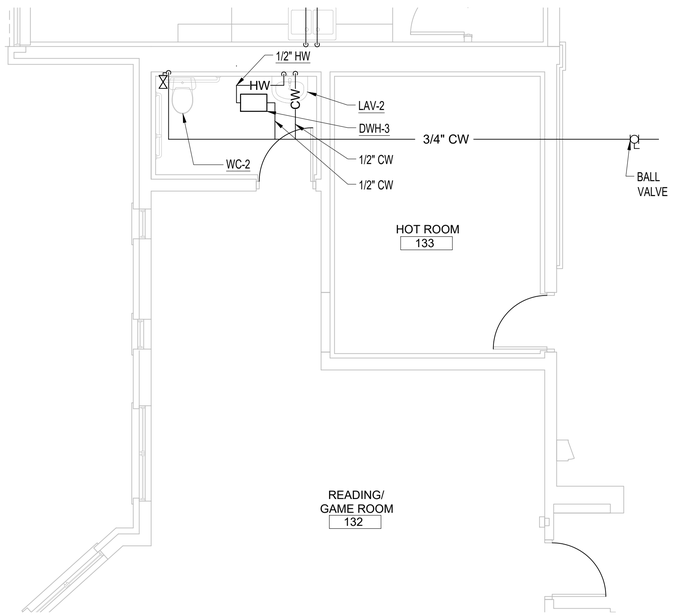
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1. SEE PLUMBING SHEET NOTES AND SHEET KEYED NOTES ON P-001



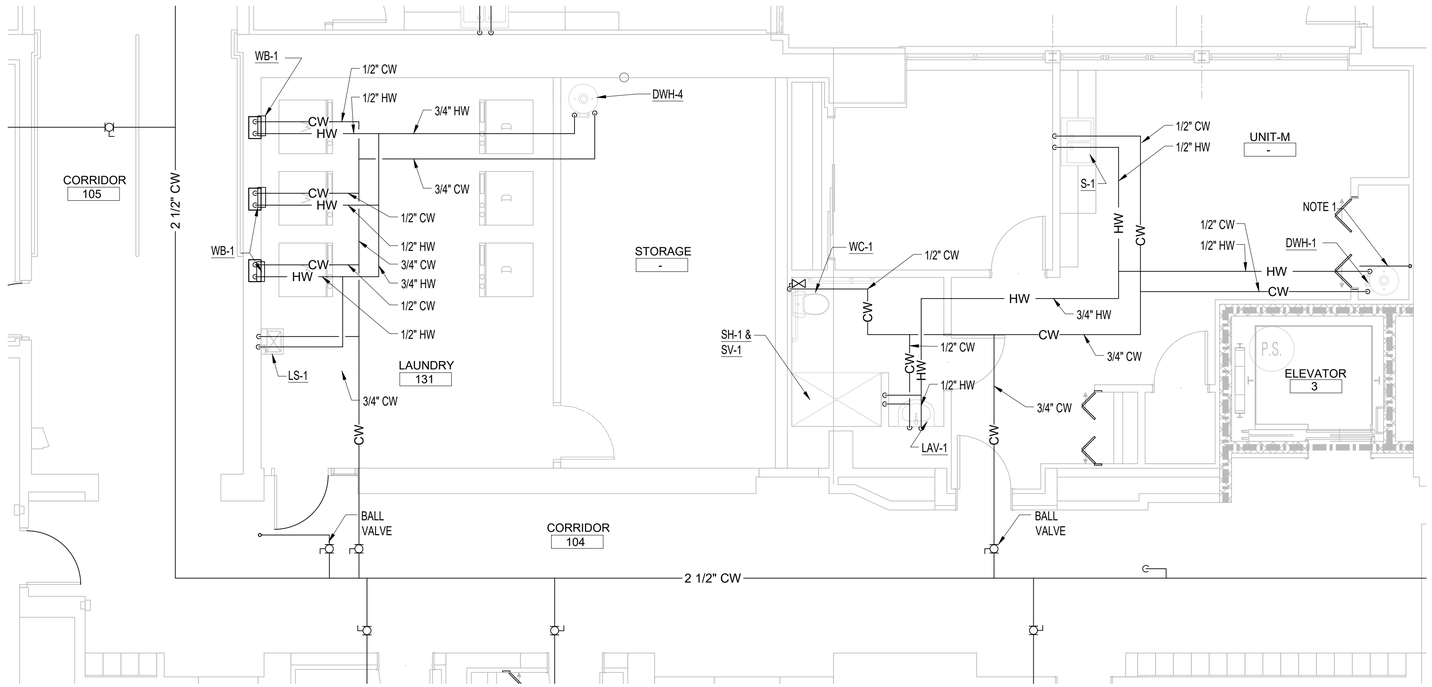
G6 ENLARGED PLUMBING PLANS

P-407 | 1/4" = 1'-0"



A1 ENLARGED PLUMBING PLANS

P-407 | 1/4" = 1'-0"



A6 ENLARGED PLUMBING PLANS

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REGISTRATION SEAL

STATE OF MICHIGAN
STEPHEN M. HENNARD
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LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE
ENLARGED PLUMBING PLANS

SCALE: AS NOTED

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PERMIT	10.20.24

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FILE NO.

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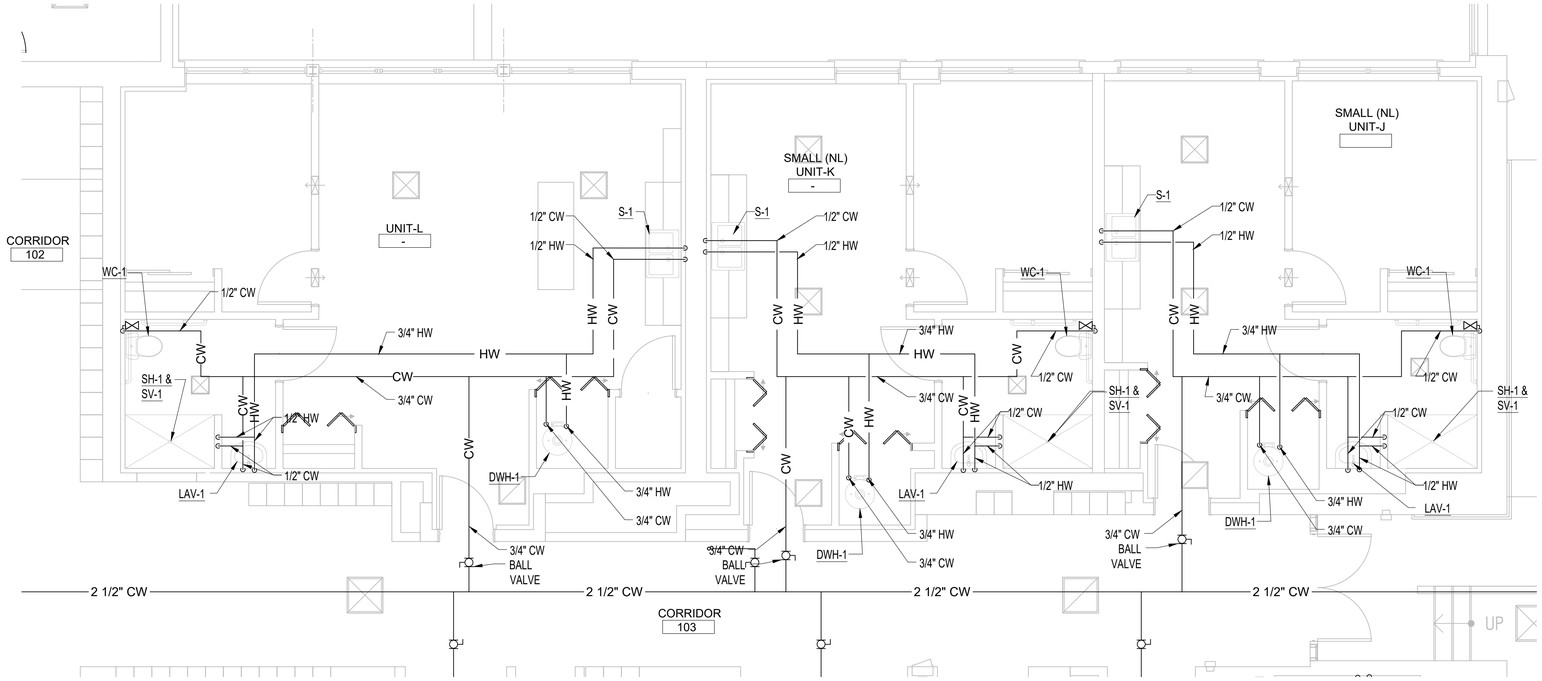
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GENERAL

1. SEE SHEET P-001 FOR PLUMBING NOTES

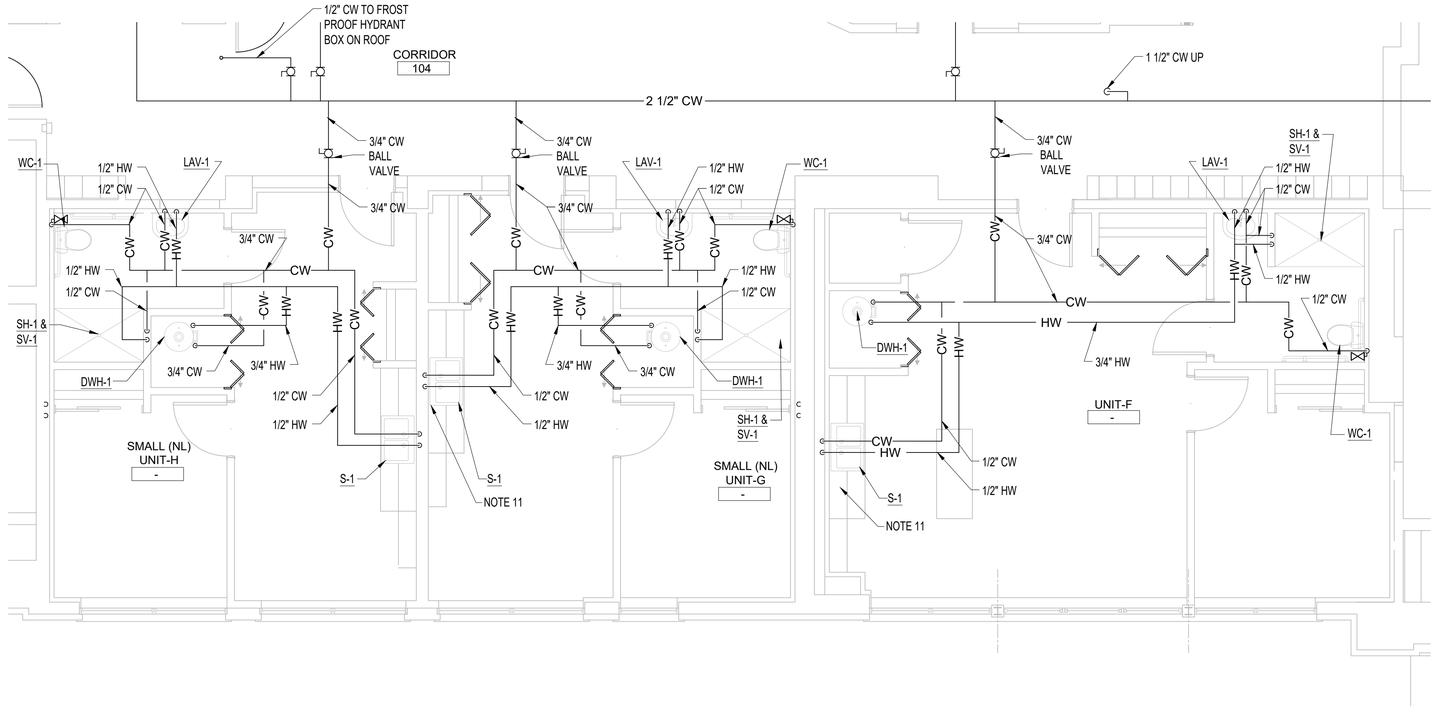
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G5 ENLARGED PLUMBING PLANS

P-408 | 1/4" = 1'-0"



A6 ENLARGED PLUMBING PLANS

P-408 | 1/4" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE
ENLARGED PLUMBING PLANS

SCALE: AS NOTED

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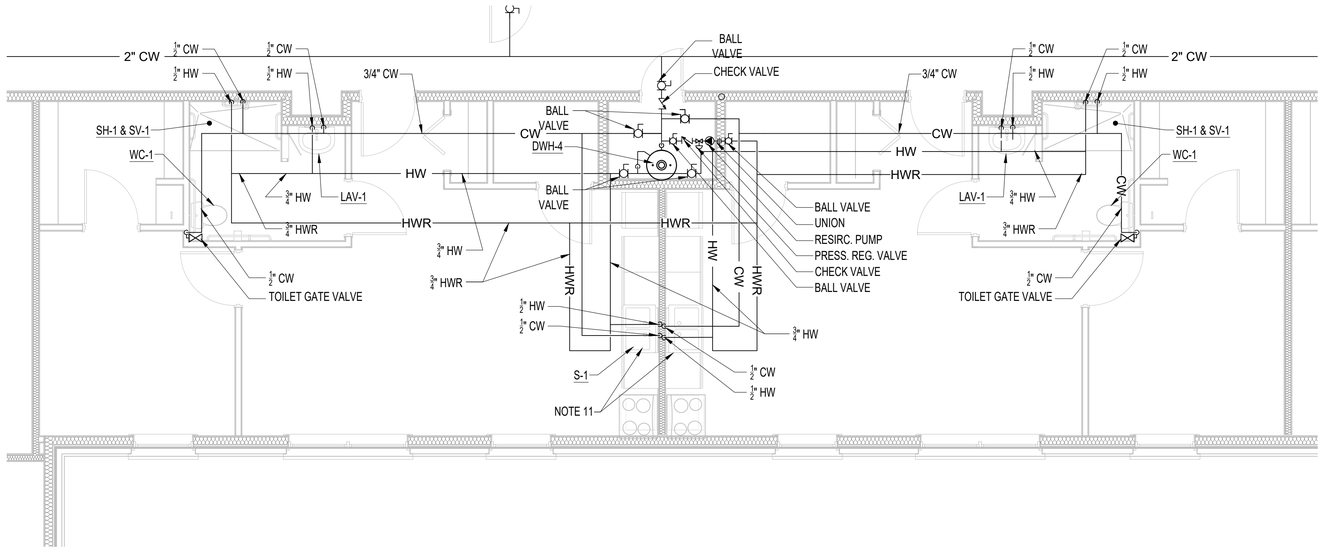
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FILE NO.

P-408
SHEET NO.

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G5 ENLARGED PLUMBING PLANS

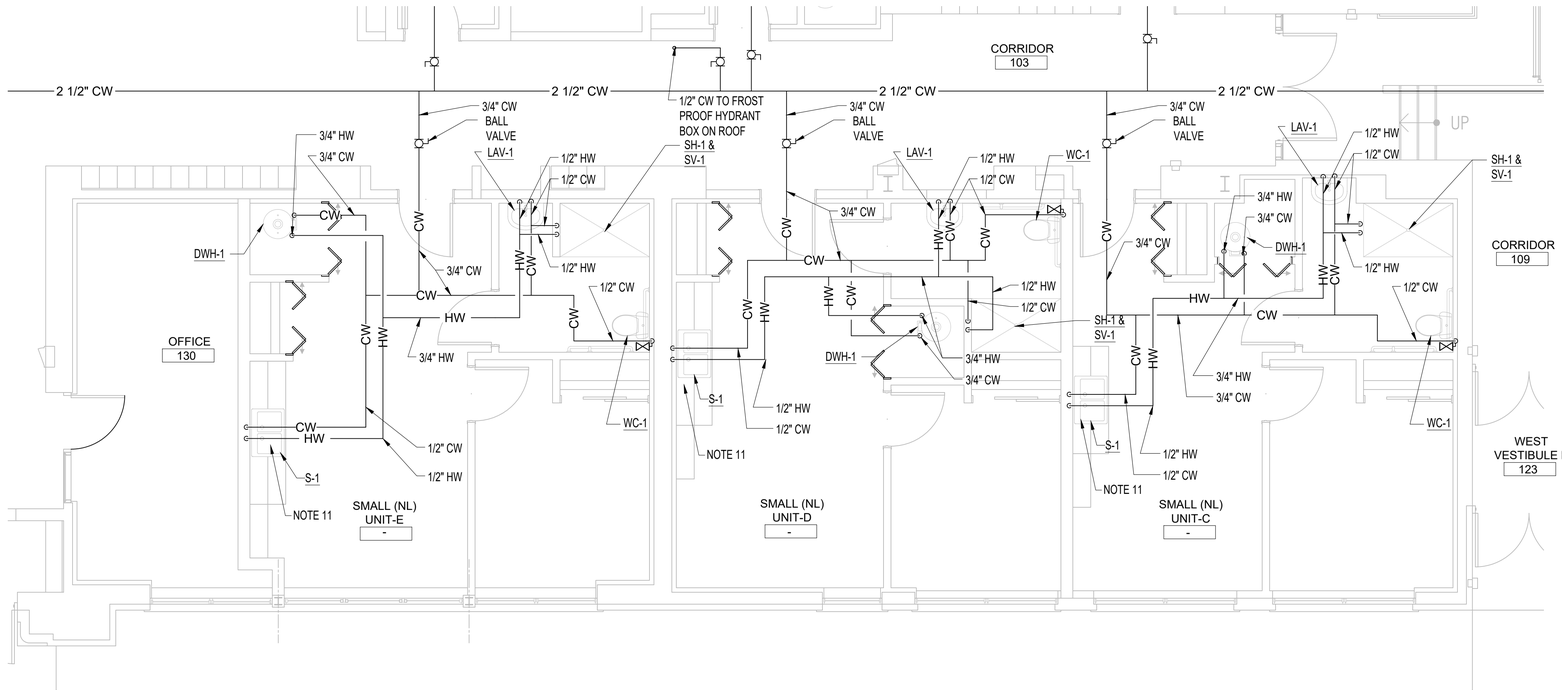
P-409 | 1/4" = 1'-0"

GENERAL

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A5 ENLARGED PLUMBING PLANS

P-409 | 1/4" = 1'-0"

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KEY PLANS

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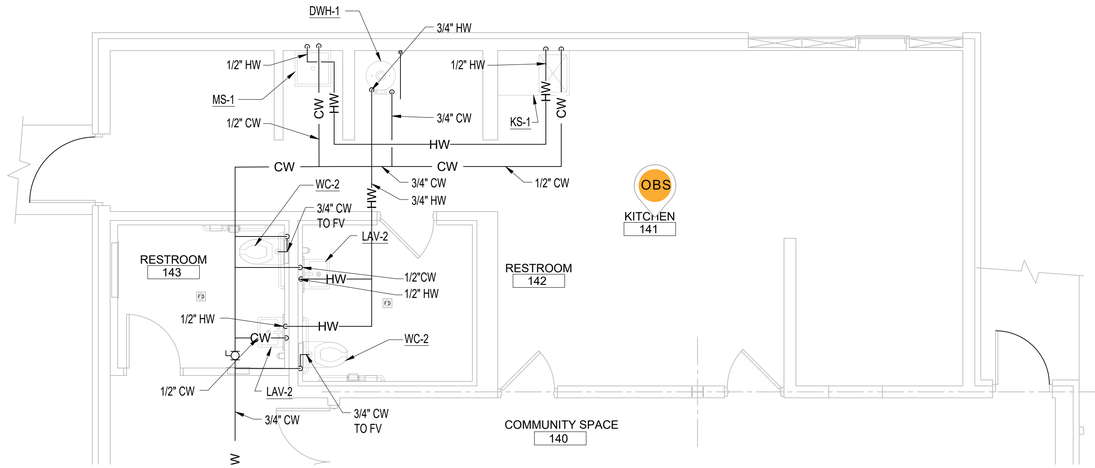
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GENERAL

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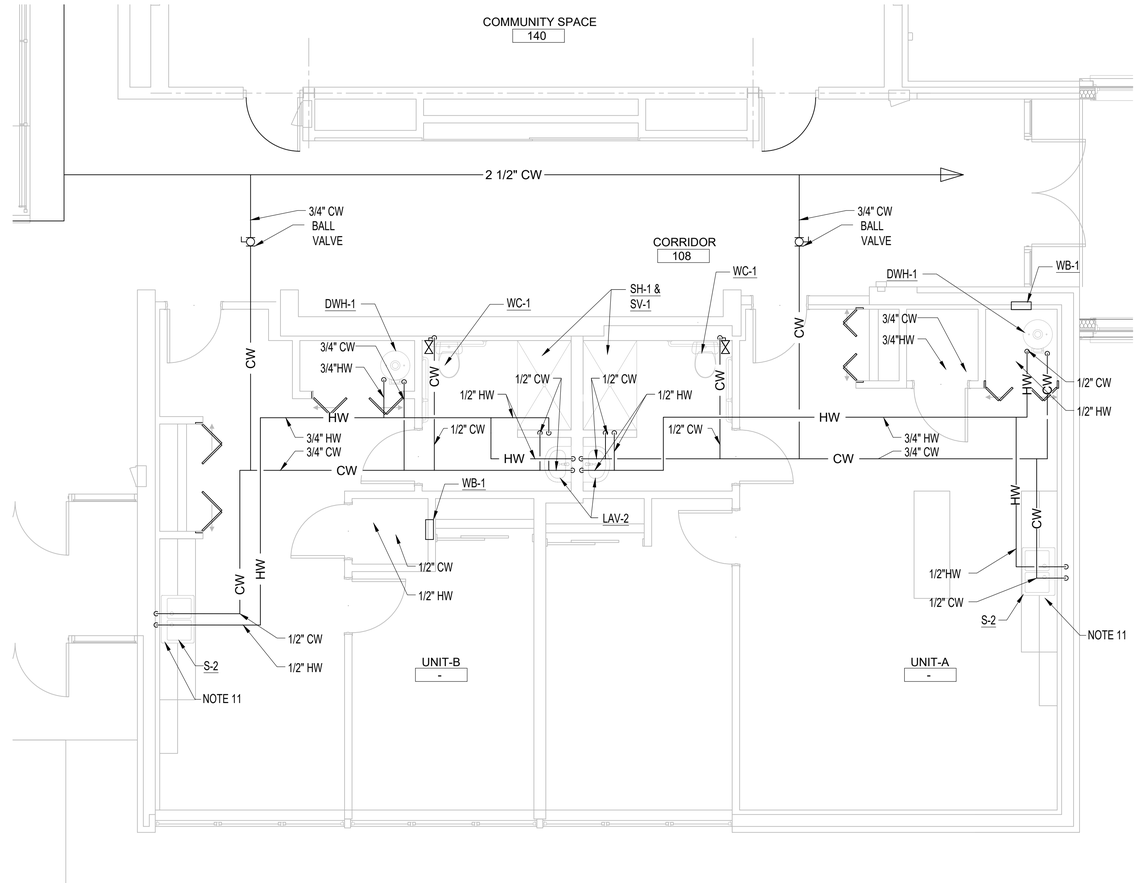
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H8 ENLARGED PLUMBING PLANS

P-410 | 1/4" = 1'-0"



A5 ENLARGED PLUMBING PLANS

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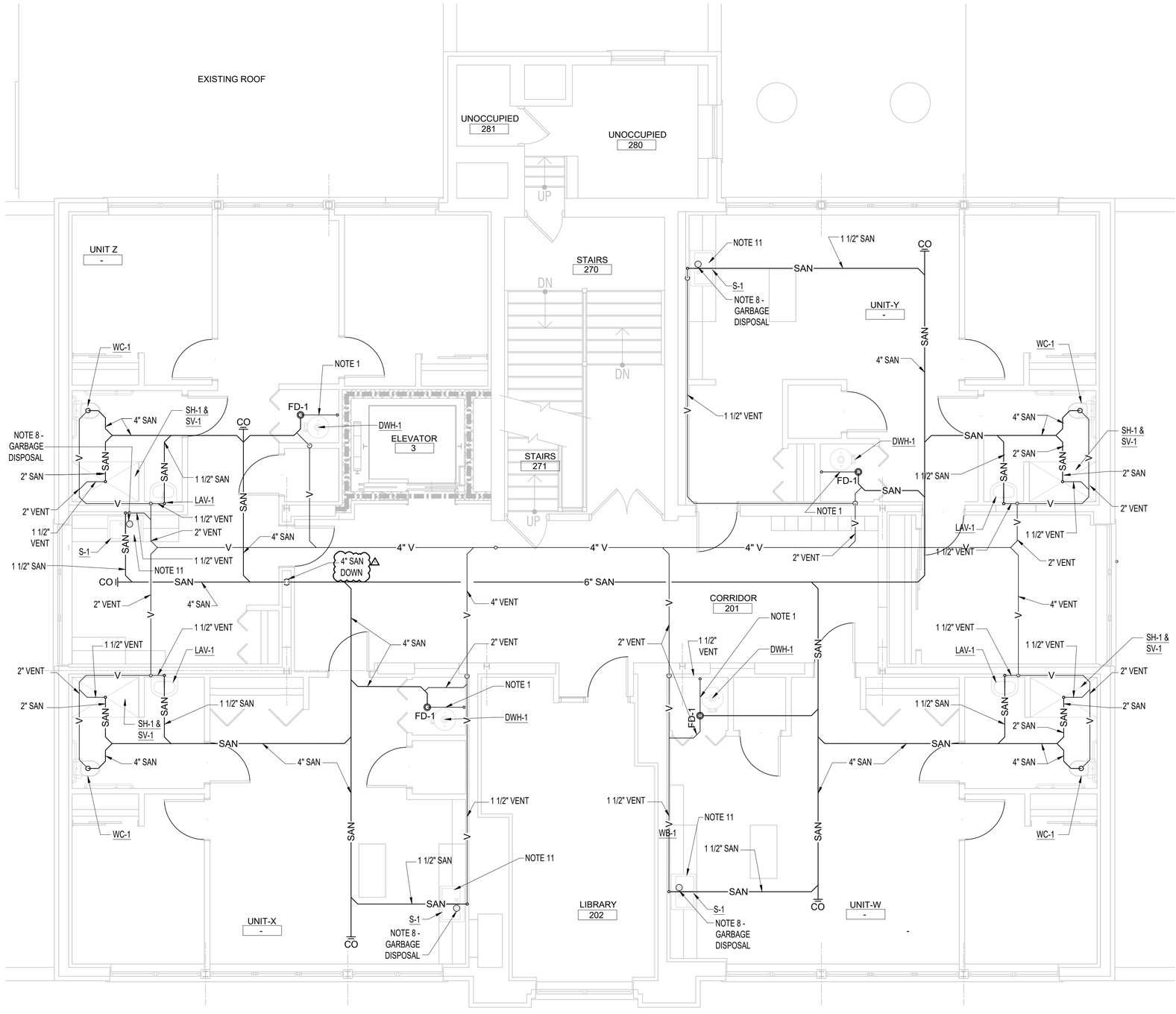
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A5 SECOND FLOOR - SANITARY AND VENTING PLANS

P-411 | 1/4" = 1'-0"

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△BULLETIN 3	5.19.25

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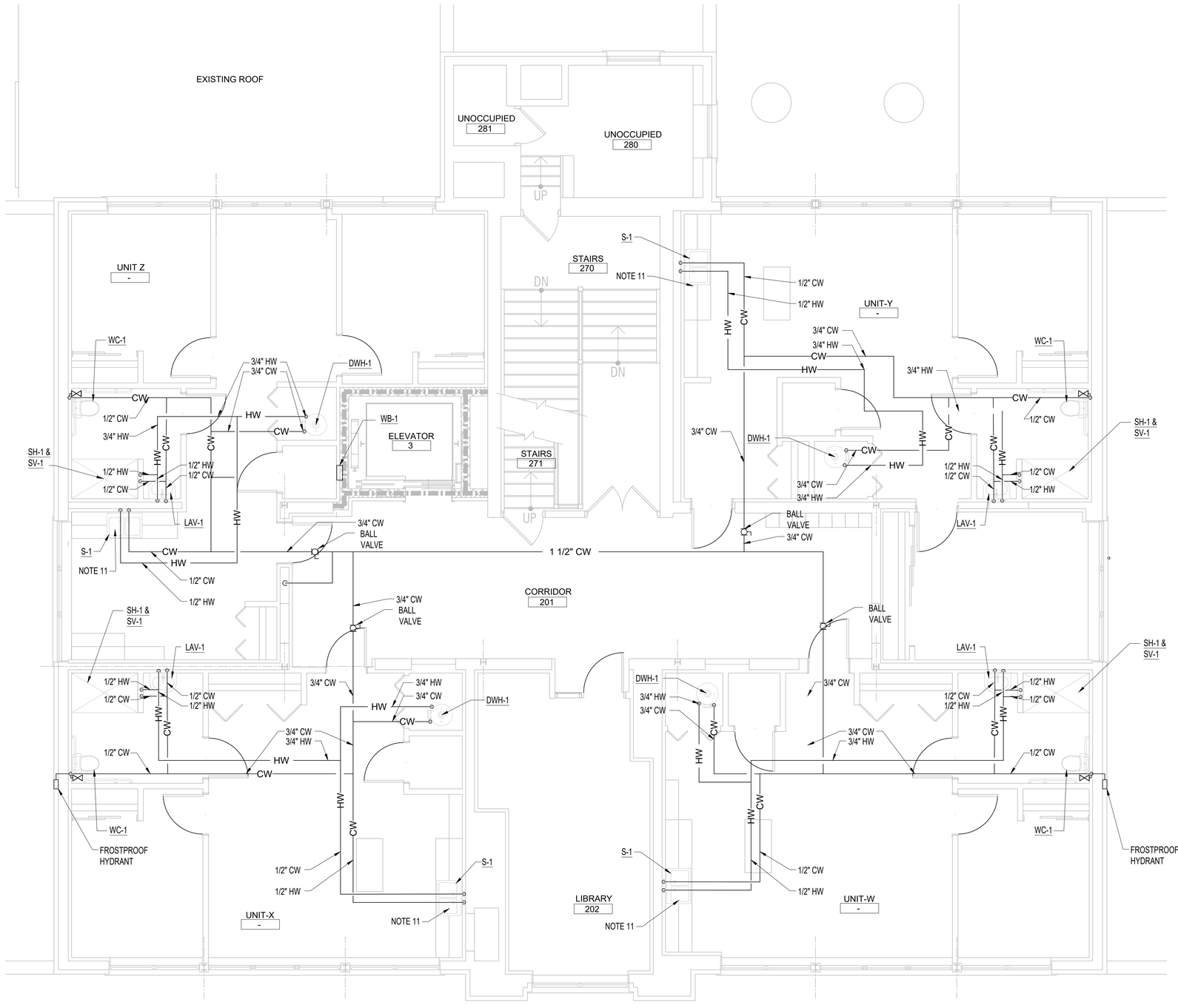
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7. HEAT PUMP HOT WATER, REFER TO MANUFACTURER DRAWINGS FOR PROPER VENTILATION REQUIREMENTS FOR DOOR CLEARANCES AND SPACE REQUIREMENTS. REFER TO PLUMBING DETAILS FOR HEAT PUMP WATER HEATER PIPING AND EQUIPMENT REQUIRED.
8. GARBAGE DISPOSAL, SEE PLUMBING SCHEDULE FOR SPECIFICATIONS AND INSTALL FOR MANUFACTURER REQUIREMENTS. TO BE CONTROLLED BY SWITCH LOCATED ABOVE COUNTER SEE ELECTRICAL.
9. ALL SANITARY LINES ARE BELOW FLOOR ELEVATION TO ALLOW FOR PROPER PITCH AND NEEDED FLOW. EXACT LOCATION OF TUNNEL AND BASEMENT ARE UNKNOWN AND SANITARY COULD BE IN BASEMENT OR TUNNEL. ROUTE IN A WAY TO MINIMIZE CORING. ALL VENTING AND WATER DISTRIBUTION ABOVE FINISH CEILING AS HIGH AS POSSIBLE WITHOUT INTERFERING WITH OTHER TRADES.
10. IF UNIT IS CONISDERED ADA SUBSTITUTE FIXTURES TO ADA TYPE. COORDINATE WITH ARCH DRAWINGS.
11. DISHWASHER - PROVIDE HOT WATER SUPPLY AND SHUT OFF FROM SINK SUPPLY. PROVIDE SANITARY TO GARBAGE DISPOSAL. COORDINATE LOCATION WITH ARCHITECTURAL.



A5	ENLARGED PLUMBING PLANS
P-412	1/4" = 1'-0"

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REGISTRATION SEAL

STATE OF MICHIGAN
STEPHEN M. HENNARD
ENGINEER
NO. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE
ENLARGED PLUMBING PLANS

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24

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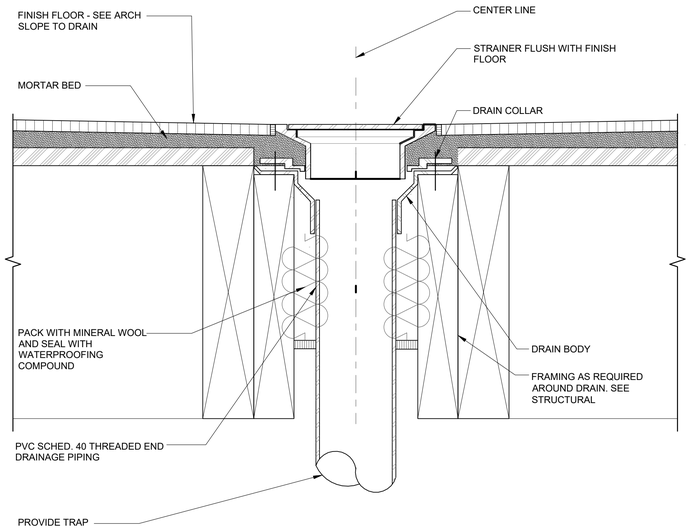
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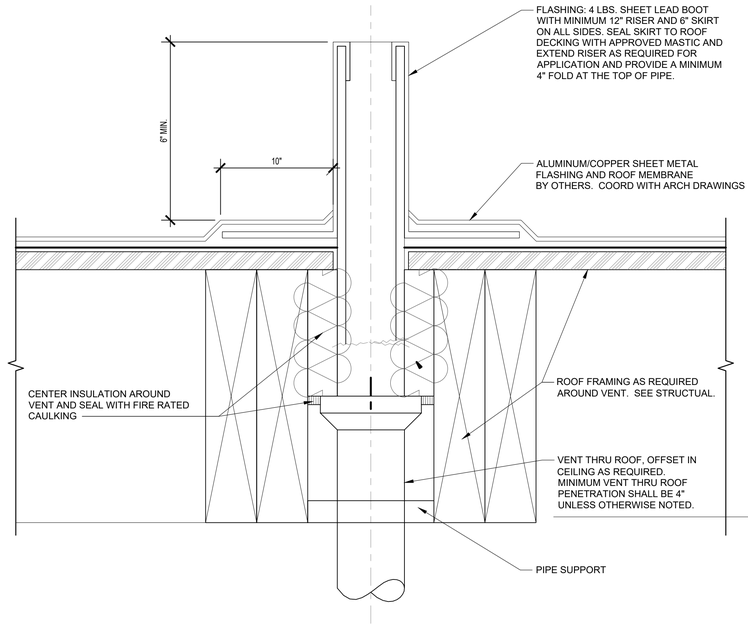


NOTES:

1. WATERPROOF EXISTING FLOOR OF ROOM WHERE FLOOR DRAIN IS TO BE LOCATED USING THOROSEAL SEALANT OR APPROVED EQUAL.

F1 TYPICAL FLOOR DRAIN INSTALLATION

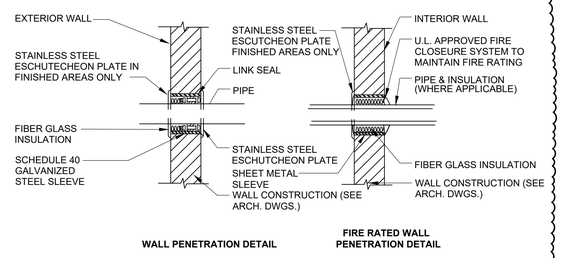
P-501 NTS



NOTE:
ALL VENT THRU ROOF PENETRATIONS SHALL BE LOCATED A MINIMUM OF 10'-0" IN ALL DIRECTIONS FROM ALL FRESH AIR INTAKES AND/OR OPERABLE DOORS AND WINDOWS.

F8 VENT THRU ROOF DETAIL

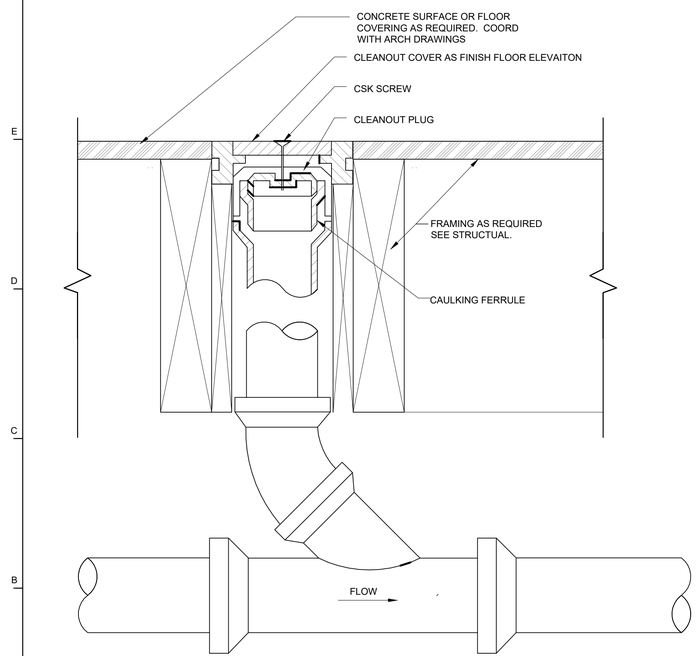
P-501 NTS



WALL PENETRATION DETAIL — FIRE RATED WALL PENETRATION DETAIL

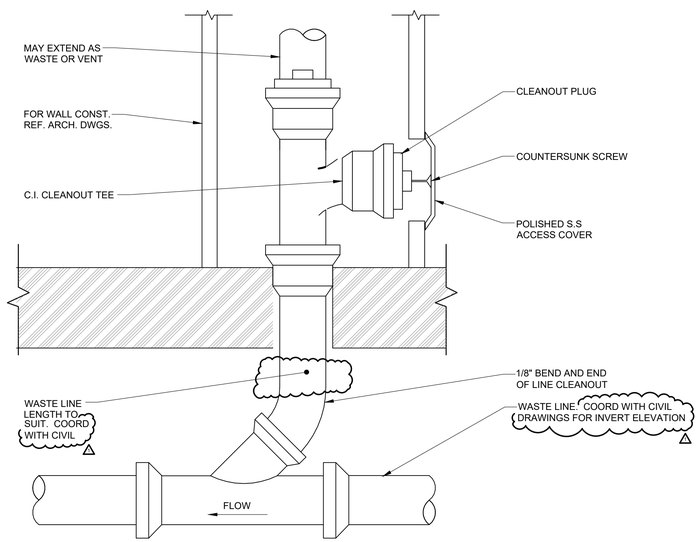
A8 WALL PENETRATIONS

P-501 NTS



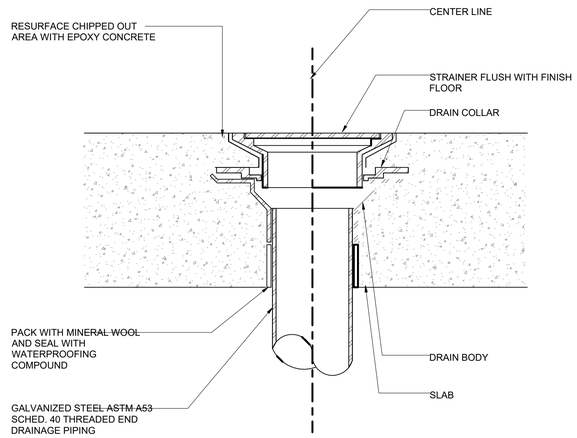
A1 FLOOR CLEANOUT - FINISHED ROOMS

P-501 NTS



A8 WALL CLEANOUT - FINISHED ROOMS

P-501 NTS



NOTES:

1. WATERPROOF EXISTING FLOOR OF ROOM WHERE FLOOR DRAIN IS TO BE LOCATED USING THOROSEAL SEALANT OR APPROVED EQUAL.
2. FOR EXISTING FLOOR DRAINS INSTALL CORRECT SIZE WATER LESS SEAL PROTECTION SYSTEM. BASIS OF DESIGN: GREEN DRAIN MODEL GD125

A13 FLOOR DRAIN IN CONCRETE

P-501 NTS

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KEY PLANS

SHEET TITLE
PLUBMING
TYPICAL DETAILS

SCALE: AS NOTED

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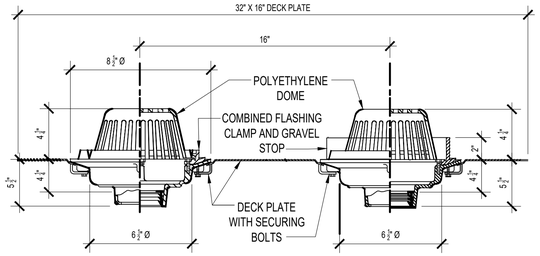
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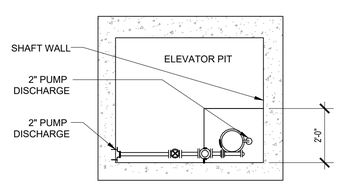
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JOHN GRACE ARMS - VESTIBULE STORM DRAINS CALCULATIONS
DESIGN LOCATION - SOUTHFIELD, MI
MPC 2021 FIGURE 1106.1(2) - 100-YEAR 1-HOUR RAIN FALL =2.75IN
TOTAL ROOF SF = 1237 SF
ROOF SLOPE 1/16 TO CONDUCTOR & SINGLE STORY VERITCAL ELEVATION (11FT)
GPM=R * A * 0.0104
GPM= 2.75 * 1237 * .0104
GPM=35.4
BASED ON TABLE 1106.2 IN 2021 MICHIGAN PLUMBING CODE RIGHT UNDER SIZE REQUIREMENTS FOR 3IN CONDUCTOR UPSIZING TO 4 IN PRIMARY AND OVERFLOW CONDUCTOR.

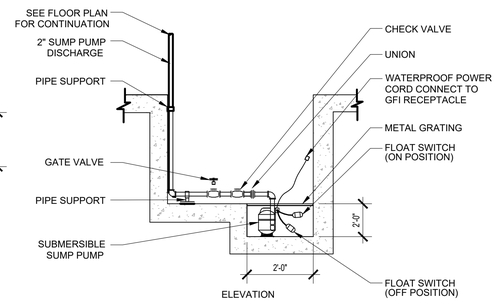


H1 ROOF AND OVERFLOW DRAIN DETAIL

P-502 | NTS



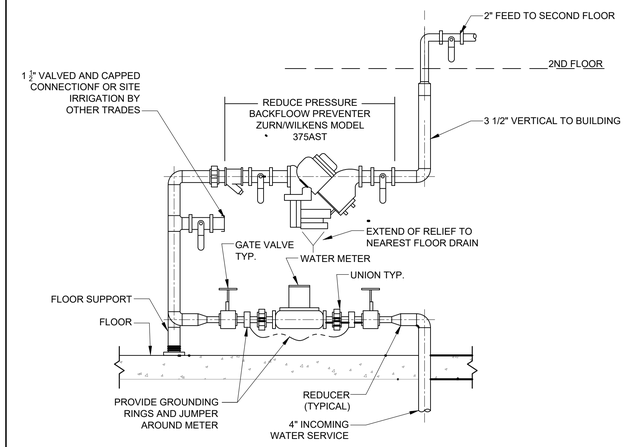
PLAN



ELEVATION

H8 ELEVATOR SUMP DETAIL

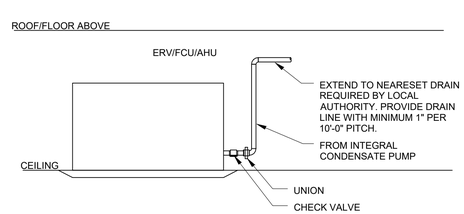
P-502 | NTS



NOTE:
WATER MEETER SHALL BE MOUNTED ON WALL

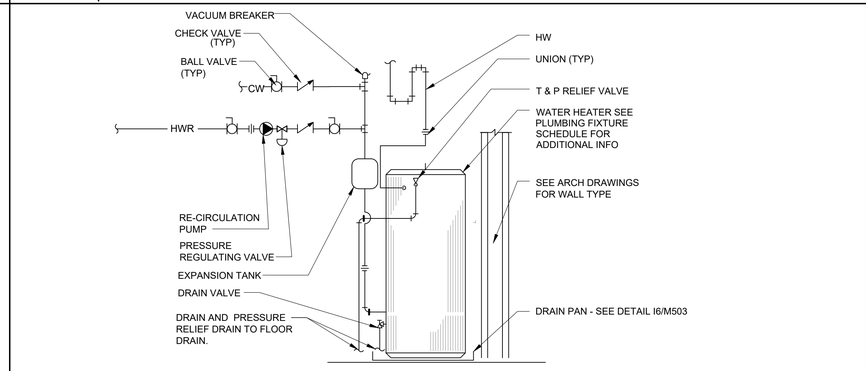
H13 WATER METER DETAIL

P-502 | NTS



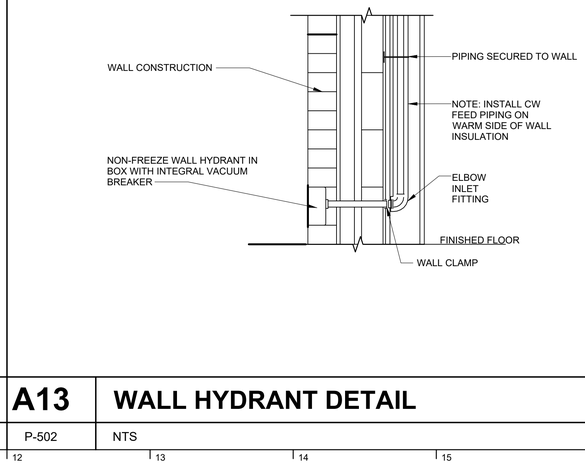
E1 CONDENSATE DRAIN DETAIL

P-502 | NTS



E8 WATER HEATER WITH RECIRCULATION PUMP

P-502 | NTS

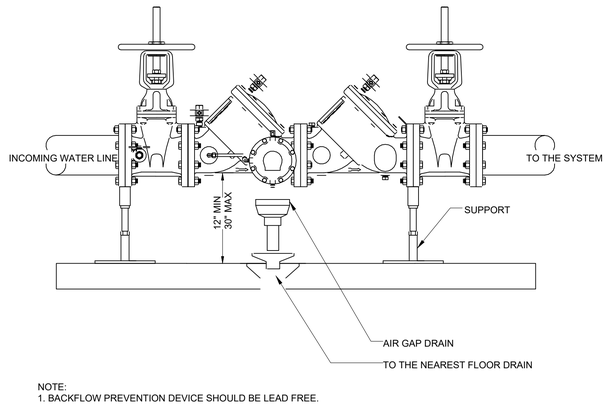


WALL PENETRATION DETAIL

FIRE RATED WALL PENETRATION DETAIL

E13 WALL PENETRATIONS

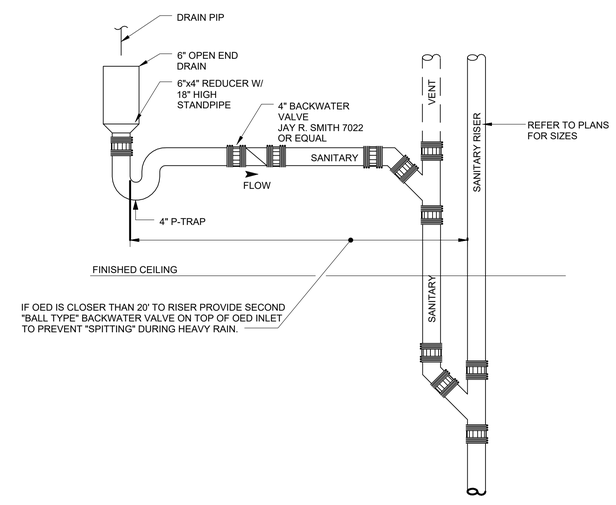
P-502 | NTS



NOTE:
1. BACKFLOW PREVENTION DEVICE SHOULD BE LEAD FREE.

A1 BACK FLOW PREVENTOR DETAIL

P-502 | NTS



A8 OPEN ENDED DRAIN (OED)

P-502 | NTS

A13 WALL HYDRANT DETAIL

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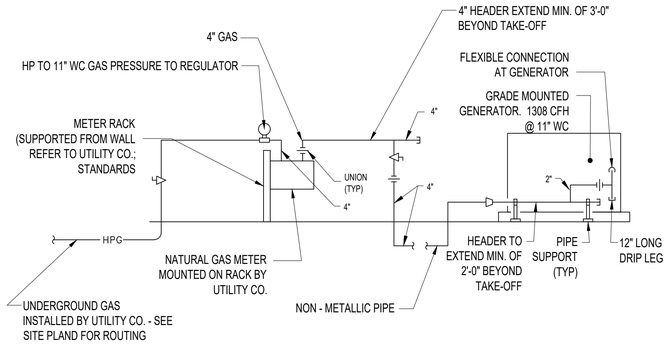
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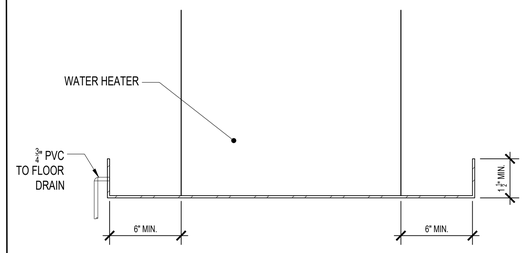
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I11	NATURAL GAS RISER AT GENERATOR
P-503	NTS



NOTE: PAN TO BE MADE OF GLAVANIZE STEEL OR ALUMINUM, MIN. .0236" THICK

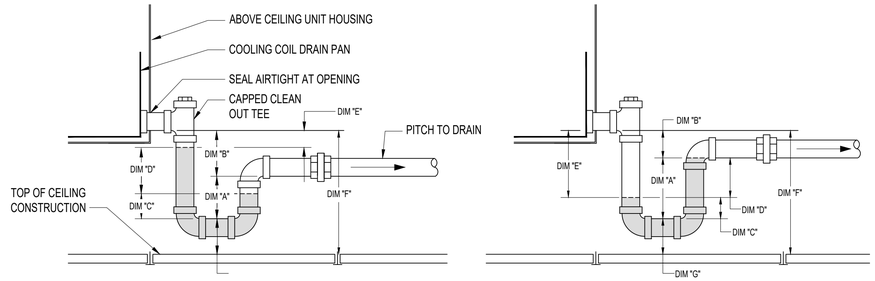
I6	DRAIN PAN FOR W.H.
P-503	NTS

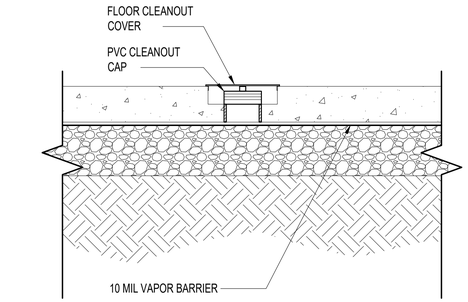
TRAP DIMENSION TABLE

TYPE OF SYSTEM		DIMENSIONS "A" (INCHES) MIN.	DIMENSIONS "B" (INCHES)	DIMENSIONS "C" (INCHES) (TRAP SEAL)	DIMENSIONS "D" (INCHES)	DIMENSIONS "E" (INCHES)	DIMENSIONS "F" (INCHES) DRAIN PIPE SIZE (INCHES)			
							1 1/2"	2"	2 1/2", 3"	4"
DRAW THROUGH	-2.1 TO -3	3.5	3.5	2	3	2	10.0	11.0	12.0	13.0
	UP TO -2	3.0	3.0	2	2	2	9.0	10.0	11.0	12.0
BLOW THROUGH	UP TO +2	4.0	2.0	2	2	4	9.0	10.0	11.0	12.0
	+2.1 TO +3	5.0	2.0	2	3	5	10.0	11.0	12.0	13.0

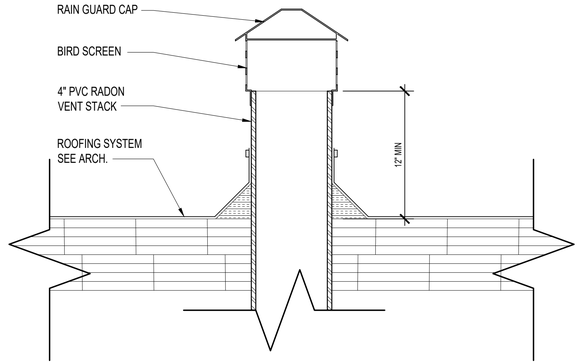
NOTES: A. REFER TO TERMINAL DEVICES USED FOR COOLING, COMPUTER ROOM AIR CONDITIONING UNITS, FAN COIL UNITS SPLIT SYSTEM AIR CONDITIONING UNIT ETC. FOR (-) OR (+) STATIC PRESSURE AT COIL DRAIN PAN

B. DIMENSION "G" IS MIN: 3" FOR UP TO 1 1/2" DRAIN PIPE
4" FOR 2" DRAIN PIPE
5" FOR 2 1/2" OR 3" DRAIN PIPE
6" FOR 4" DRAIN PIPE



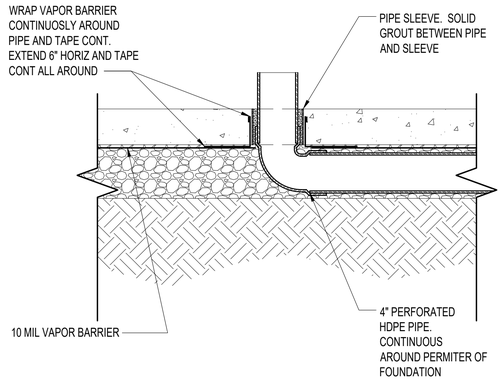


E1	RADON EVACUATION PORT
P-503	SCALE: 1" = 1'-0"

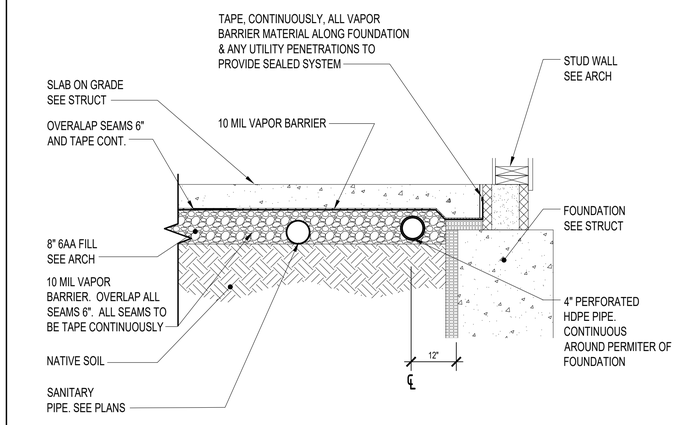


E5	PASSIVE RADON SYSTEM STACK CAP DETAIL
P-503	SCALE:3" = 1'-0"

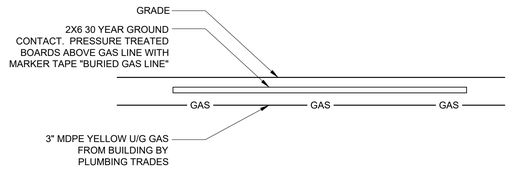
G9	CONDENSATE DRAIN PAN TRAP DETAIL (ABOVE CEILING UNITS)
P-503	NTS



A1	UNDER SLAB RADON SYSTEM PIPE SLEEVE
P-503	SCALE: 1 1/2" = 1'-0"



A7	UNDER SLAB RADON PIPING DETAIL
P-503	SCALE: 1" = 1'-0"



A13	NATURAL GAS DETAIL
P-503	NTS

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DOMESTIC WATER HEATER SCHEDULE

Tag	Item	Make	Model Number	Description	Pipe Sizing Cold Water	Pipe Sizing Hot Water	Notes
DWH-1	Heat Pump Water Heater	Rheem	PROPH40 T2 RH375-30	40 gallon heat pump w ater heater. 3.83 UEF rating. 10 year limited parts and tank w arranty	3/4 "	3/4 "	1, 2, 3, 8, REFER TO DETAILS
DWH-2	Heat Pump Water Heater	Rheem	PROPH40 T2 RH375-15	40 gallon heat pump w ater heater. 3.88 UEF rating. 10 year limited parts and tank w arranty	3/4 "	3/4 "	1, 2, 3, 8, REFER TO DETAILS
DWH-3	Electric Water Heater	Eemax	SPEX4208T ML	Electric tankless w ater heater	3/8"	3\8"	1, 5, 8, 9, 10
DWH-4	Heat Pump Water Heater	Rheem	PROPH50 T2 RH375-30	50 gallon heat pump w ater heater. 3.88 UEF rating. 10 year limited parts and tank w arranty	1"	1"	1, 2, 3, 8, REFER TO DETAILS
CV-1	Check Valve	Zurn Wilkins	40XL2	Lead-free brass soft seated check valve w ith stainless steel spring. Rated for 210 degrees and 400 psi			Size and locate for incoming cold w ater line.
ET-1	Potable Expansion Tank	Calefactio	HGTE-1	Bladded type lead free thermal expansion tank w ith 100% exceptance factor. 1/2 FNPT stainless steel connection	1/2"		Total volume and acceptance .4 gallons. Precharged to 50 psi. 200 Degrees max temperature. 150 Maximum operating pressure.

Notes

1 INTERNAL PRESSURE SENSOR, RELIEF PIPED TO NEAREST FLOOR DRAIN
2 SEE MANUFACTURER GUIDELINES FOR ROOM VENITATION, COORDINATE WITH ARCHITECT AND GENERAL CONTRACTOR PROPER DOOR CLEARANCE OR DUCTED SYSTEM.
3 RECIRCULATION PUMP TO HAVE SMART CONTROL FEATURE THAT DOES NOT REQUIRE EXTERNAL AQUASTAT.
4 TOTAL VOLUME 21 GALLONS, PRE-CHARGED TO 12 PSI AND MAX TEMP OF 240 F.
5 WALL MOUNTED WITH BACKING BOARD.
6 INSTALL EXPANSION TANK BRACKET AND SUPPORT TO SOLID WALL- BRACKET200MM
7 TOTAL VOLUME 2.1 GALLONS, PRE-CHARGED TO 50 PSI AND MAX TEMP OF 200 F.
8 COORDINATE FINAL LOCATION WITH ELECTRICAL CONTRACTOR AND PROVIDE LOCAL DISCONNECT.
9 PROVIDE AND INSTALL SERVICE/ISOLATION VALVES AND PRESSURE RELIEF PART NUMBER RTG20326
10 LOW FLOW ACTIVATION, ADJUSTABLE THERMOSTAT, VOLTAGE 208V AND 4.1 KW

RECIRCULATION PUMP SCHEDULE

Tag	Item	Make	Model Number	Number of Pumps	Capacity - GPM	Motor H.P.	Motor Amps	Voltage/Phase	Width	Notes
RC -1	Hot water return recirculaton pump	Taco	006-IQBC4	1	11.5	1/40	0.52	115/1	3 3/4	1/2 Sweat connection, self learning function

Notes

1 FLANGED CONNECTION, SMART MODEL WITH PROVIDED THERMOSTAT.
2 COORDINATE FINAL LOCATION WITH ELECTRICAL CONTRACTOR FOR ELECTRICAL OUTLET- 115V.

SUMP PUMP SCHEDULE

Tag	Item	Make	Model Number	Number of Pumps	Capacity - GPM	Motor H.P.	Motor Amps	Voltage/Phase	Sump Basin Width	Sump Basin Depth	Notes
SP-1	Elevator Pit Drainage	Bell & Gossett	2WF0511	1	50	0.5	14.5	115 / 1	18 in	30 in	1,2,3
SP-2	Basement sump pump	Bell & Gossett	ST51AV	1	61	0.5	7.5	115 / 1			1,2,3

Notes

1 Provide SJE pumpmaster plus pump sw itch. Plug and pow er cord connection to 120V receptecale. Provide severe durt oil & w ater resistant pow er and control cords
2 Provide a full flow check valve and gate valve on the discharge pipe from sump pump.
3 Sump cover to be open grate type.

PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE	ROUGH-IN SERVICES COLD WATER	HOT WATER	WASTE	VENT	MANUFACTURER	MODEL	FAUCET MANUF	FAUCET MODEL	FLOW RATE	ACCESSORIES	REMARKS
LAV -1	LAVATORY COUNTERTOP SINK	½	½	1 ½	1 ½	SLOAN	SS-3002 – DROP IN OVAL	-	-	-	1,2,4,5,7,8, 9, 10, 11	-
LAV -2	LAVATORY SINK -ADA WALL WOUNT	½	½	1 ½	1 ½	SLOAN	SS-3003	-	-	-	1, 2, 4, 5, 7, 8, 9, 10, 11	-
S-1	SINK – 2 COMP	½	½	1 ½	1 ½	ELKAY	LR-3322 – LUSTERTONE	-	-	-	1, 2, 4, 6, 10, 12, 13, 14	-
S- 2	SINK – 2 COMP ADA	½	½	1 ½	1 ½	ELKAY	LRAD-332265 - LUSTERTONE	-	-	-	1, 2, 4, 6, 10, 12, 13, 14	-
SH- 1	SHOWER INSERT – ONE PIECE			2	1 ½	CLARION	RE6036NS-WH				1, 2, 15, 16	
SV -1	SHOWER MIXING VALVE	½	½			DELTA	T13290			2.0 GPM	1, 2,	LEVER HANDLE ONLY
SV – 2	SHOWER MIXING VALVE ADA	½	½			DELTA	T13H152			2.0 GPM	1, 2,	HANDHELD ADA W/ 60" HOSE SLIDE BAR, LEVER HANDLE ONLY
WC -1	WATER CLOSET	½		4	2	PROFLO	PF1400T			1.28		1, 2, 3, 4
FD -1	FLOOR DRAIN			SEE PLANS		PROFLO	PF42873					1, 2, 18, 19
MS – 1	MOP SINK	½	½	3	1 ½	PROFLO	PFMB2424				1, 2, 20	
WB -1	WASHING MACHINE WALL BOX	½	½	2		GUY GRAY	B200				1, 2	
WH - 1	WALL HYDRANT NON FREEZE	¾				WOODFORD	B67					WALL BOX, DOUBLE CHECK BACKFLOW
DN -1	DOWNSPOUT NOZZLE			SEE PLANS		MIFAB	R1940				1, 2	STAINLESS STEEL SCREEN
LS-1	LAUNDRY ROOM SINK FAUCET	½	½	2	1 ½	TEHILA	LUXE 040US9000DRSS				1, 2, 4,5 6, 17	
KS-1	PREP SINK & TABLE COMBO	½	½	SEE PLANS		ULINE	H-9652L				1, 2	PROVIDE ALL NECESSARY TRAP & CONNECTIONS

1. Verify color/finish w ith Architect.
2. Provide all sleeve, templates as required for rough-in of fixtures. Coordinate w ith Architect and trades.
3. Provide compatible seat, preferred PROFLO PFTSCOF2000WH w ith sta-tite fasteners.
4. Provide Brasscraft commercial angle supply w ith riser.
5. Provide w rap on supply and w aste piping equal to Keeney trap w rap.
6. Provide Brasscraft 1 -1/2 brass cast P trap
7. Provide Brasscraft 1 -1/4 brass cast P trap
8. Provide 1 – 1/4 offset drain w ith tailpiece
9. Provide chair carrier w ith foot supports, mount per ADA requirements.
10. Tempering valve: Pow ers LFE480, ASSE 1070
11. Lavatory faucet: Profio PFWSC4744CP
12. Drain outlet w ith tailpiece: Jones Stephens Corp S14-014T
13. Sink faucet: Kohler K-30615 single lever
14. Garbage Disposer: In -sink erator Badger 5, w ith cord and plug, ½ hp, 120V, 1 phase, 6.9amps
15. Show er drain: Proflo PF42940 w / deep seal trap fit to size.
16. Install Clarion E-Z w all trim on perimeter, use mildew resistant silicone caulk to seal show er insert.

BACKFLOW SCHEDULE

TAG	SERVICE	TYPE	SIZE	LOCATION	MANUF	MODEL #	REMARKS
BF - 1	DOMESTIC WATER	PRESSURE REGULATING	4 IN	MECHANCIAL ROOM	ZURN	375AST	EXTEND DRAIN TO NEAREST FLOOR DRAIN
BF - 2	FIRE PROTECTION	-	-	-	-	-	TO BE INCLUDED IN FIRE SUPPRESSION MODELING

△

John Grace Arms
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REGISTRATION SEAL

STATE OF MICHIGAN
STEPHEN M. HENNARD
ENGINEER
NO. 6201059975
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE
PLUMBING SCHEDULES

SCALE: AS NOTED

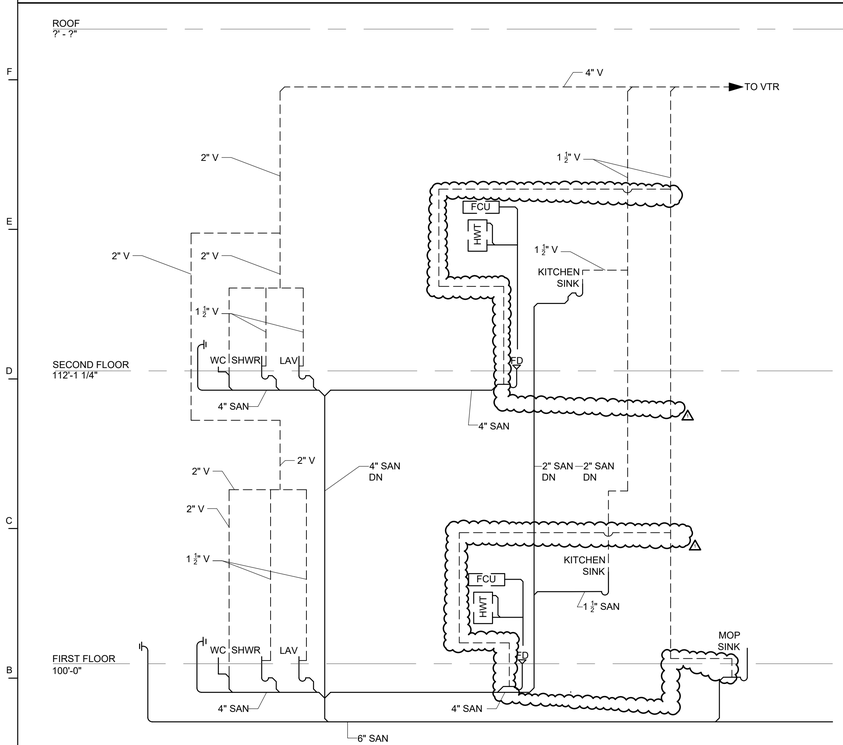
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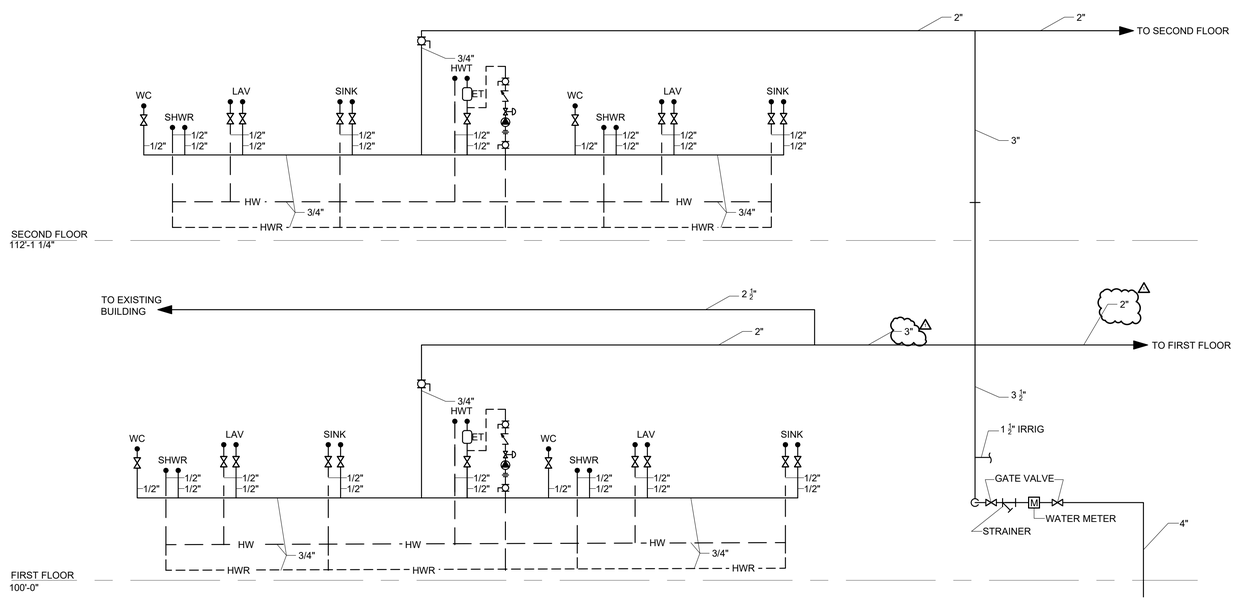
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A1 SANITARY SCHEMATIC RISER DIAGRAM

P-701 | NTS



A7 DOMESTIC SCHEMATIC WATER RISER DIAGRAM

P-701 | NTS

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SCHEMATIC PLUMBING RISER DIAGRAMS

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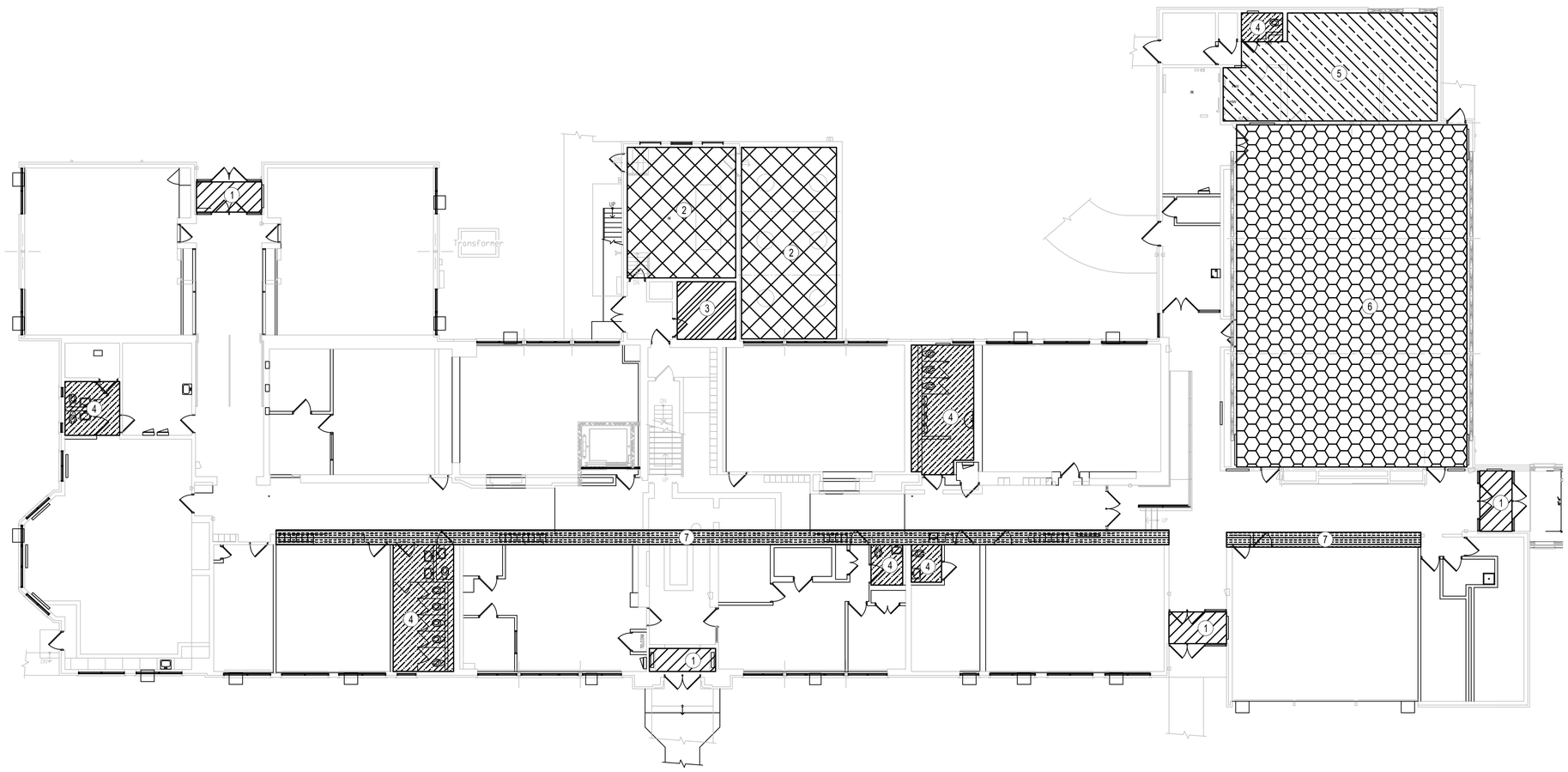
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DEMO NOTES

1. IN ALL VESTIBULES, DEMO EXISTING RADIATORS. REMOVE ALL ASSOCIATED STEAM AND DRAIN LINES BACK TO SOURCE
2. DEMO ALL MECHANICAL AND ELECTRICAL EQUIPMENT. IF EQUIPMENT HAS VENTING THROUGH ROOF MATCH NEW ROOF DETAIL TO PATCH. SEE ROOF PLAN. ABANDON ALL FIRE SUPPRESSION AND WATER SERVICES. EXISTING FLOOR DRAIN TO REMAIN, SCOPE TO FIND ROUTING AND CONNECT WITH NEW SANITARY SYSTEM. EXISTING PATHWAY IS NOT KNOWN AT TIME OF DRAWINGS.
3. THIS ROOM COULD NOT BE ACCESSED AT TIME OF DRAWINGS, DEMO ANY AND ALL ELECTRICAL, MECHANICAL AND PLUMBING IN THIS ROOM. IF EXISTING FLOOR DRAIN IN THE ROOM KEEP IN PLACE AND TIE INTO NEW SANITARY LEAD ON THE NEW PLUMBING DRAWINGS
4. DEMO PLUMBING AND MECHANICAL EQUIPMENT, INCLUDING ANY DISTRIBUTION BACK TO SOURCE. DEMO EXISTING FUME HOOD SYSTEM PATCH ROOF AS REQUIRED PER ROOF PLAN.
5. DEMO PLUMBING AND MECHANICAL EQUIPMENT, INCLUDING ANY DISTRIBUTION BACK TO SOURCE. DEMO EXISTING FUME HOOD SYSTEM PATCH ROOF AS REQUIRED PER ROOF PLAN.
6. DEMO ALL SUPPLY DUCT WORK IN EXISTING GYM.
7. DEMO ALL EXISTING CAST ROOF DRAINS BACK TO ROOF. COORDINATE DEMO WITH NEW INSTALL TO PREVENT OPEN ROOF DRAINS WITHIN THE BUILDING. AT THE POINT OF DESIGN ALL ROOF CONDUCTOR PATHWAYS COULD NOT BE IDENTIFIED OR VERIFIED. IF ADDTTIONAL ROOF CONDUCTORS ARE DISCOVERED, THESE WILL ALSO NEED TO BE DEMOLISHED AND REPLACED. CHASES ALSO INCLUDE STEAM LINE DISTRIBUTION WHICH WILL ALSO BE DEMOLISHED AND REMOVED BACK TO SOURCE. PRIOR TO REMOVAL OF ANY PIPE INSULATION, HAVE QUALIFIED TESTING AGENCY TEST FOR ASBESTOS. REMOVE ALL PIPE INSULATION AND DISPOSE OF PER LAW.
8. ALL EXISTING ROOF CONDUCTORS ARE TO BE IDENTIFIED AND REPLACED. ROUTING OF THE ROOF CONDUCTORS IS INTENDED TO HAVE THE SAME PATHWAY AND SIZES AS EXISTING. COORDINATE WITH ARCHITECTURAL FOR ROUTING OF ANY POTENTIAL INTERFERENCES OR ADDITIONAL DEMO NEEDED TO COMPLETE REPLACEMENT. COORDINATE WITH CIVIL FOR LOCATIONS OF COMBINED ROOF DRAINAGE PIPING LEAVING THE BUILDING. EXISTING ROUTING OF ROOF CONDUCTORS WERE UNABLE TO BE IDENTIFIED DURING THE TIME OF DESIGN. RESPONSIBILITY OF THE GENERAL CONTRACTOR TO IDENTIFY, REPLACE AND PHASE IN A MANNER TO AVOID ANY OPEN ROOF CONDUCTORS THAT WOULD ALLOW WATER INTO THE BUILDING.

GENERAL DEMO NOTES

1. IN ALL EXISTING ROOMS AND CORRIDORS, COORDINATE WITH ARCHITECUAL PLANS AND REMOVE ALL EXISTING STEAM RADIATORS, DRAINS, WATER DISTRIBUTION, DUCTWORK, PNEUMATICS, THERMOSTATS, REGISTERS THAT WILL NOT BE NECESSARY TO BE REUSED FOR HISTORIC PRESERVATION. IF ANY ITEMS ARE TO BE DEEMED HISTORIC FOR EXISTING MECHANICAL OR PLUMBING SYSTEMS CARE AND PROTECTION SHALL BE PROVIDED THROUGHOUT THE DEMO AND CONSTRUCTION PROCESS TO ENSURE ITEMS ARE NOT DAMAGED.
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LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

FIRST FLOOR PUMBING DEMOLITION PLAN

SCALE: AS NOTED

ISSUED FOR	DATE
PERMIT	10.20.24
△BULLETIN 5	10.13.25

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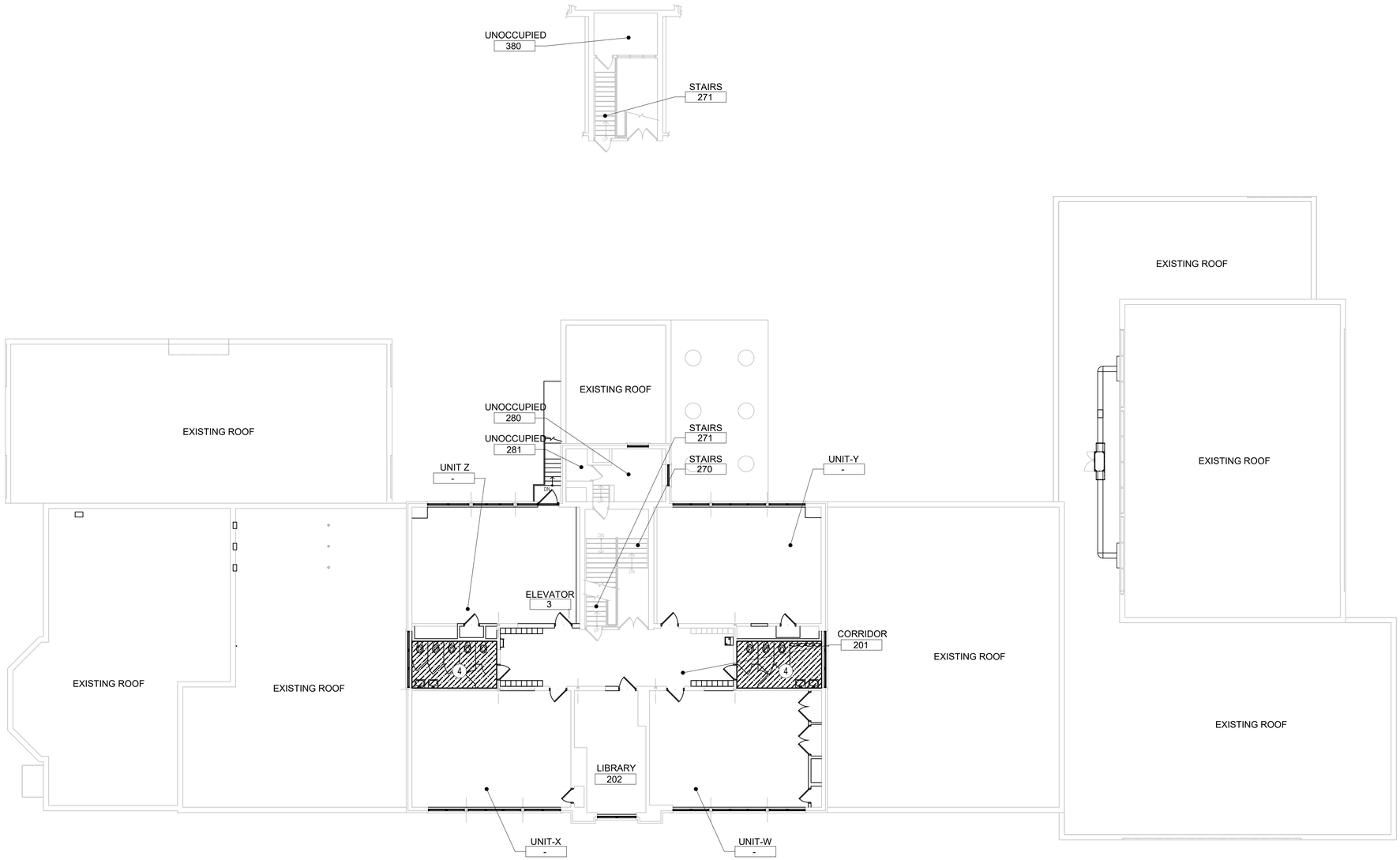
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FILE NO.

PD-101
SHEET NO.

A1 | **FIRST FLOOR PLUMBING DEMOLITION PLAN**

P-101 | 3/32" = 1'-0"

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GENERAL DEMO NOTES

1. IN ALL EXISTING ROOMS AND CORRIDORS, COORDINATE WITH ARCHITECUAL PLANS AND REMOVE ALL EXISTING STEAM RADIATORS, DRAINS, WATER DISTRIBUTION, DUCTWORK, PNEUMATICS, THERMOSTATS, REGISTERS THAT WILL NOT BE NECESSARY TO BE REUSED FOR HISTORIC PRESERVATION. IF ANY ITEMS ARE TO BE DEEMED HISTORIC FOR EXISTING MECHANICAL OR PLUMBING SYSTEMS CARE AND PROTECTION SHALL BE PROVIDED THROUGHOUT THE DEMO AND CONSTRUCTION PROCESS TO ENSURE ITEMS ARE NOT DAMAGED.

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A1 SECOND FLOOR PLUMBING DEMOLITION PLAN

PD-102 | SCALE: 3/32" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER

KEY PLANS

SHEET TITLE

SECOND FLOOR PLUMBING DEMOLITION PLAN

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DESIGN CRITERIA

1. STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH:
   MBC 2015
   MI RHC 2015
   ASCE 7-10
   ASCE 41-13
   ACI 318-14
   ACI 530-13
   AISC 360-10
   AISC 341-10
   AISI S100
   AWS D1.1, D1.3 AND D1.8
   NDS-15 AND SDPWS-15
2. RISK CATEGORY II
3. DEAD LOADS ARE LISTED ON PLANS.
4. LIVE LOADS: SEE S004 FOR LOADING PLANS
5. SNOW: SEE S004 FOR LOADING PLANS
6. SEISMIC: SEE S004 FOR LOADING PLANS
7. WIND LOADS: SEE S004 FOR LOADING PLANS
8. ICC 500 SHELTER WIND DESIGN LOADS: SEE S004 FOR LOADING PLANS
9. ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED BY MASONRY WALLS IN EACH ORTHOGONAL DIRECTION. SEE PLANS FOR LOCATIONS. THE DECKING SERVE AS HORIZONTAL DIAPHRAGMS DISTRIBUTING THE LATERAL FORCES TO THE VERTICAL LATERAL ELEMENTS WHICH IN TURN CARRY THE LOAD TO THE BUILDING FOUNDATIONS.

GENERAL

1. DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
2. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
3. STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. SUPPLIER SHALL PROVIDE SEALED DESIGN CALCULATIONS OR SUITABLE PRODUCT LITERATURE FOR THE COMPONENTS.
4. ALL DIMENSIONS AND SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOBSITE PRIOR TO CONSTRUCTION, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
5. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
6. STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW ALL DETAIL DIMENSIONS TO FIT INTRICATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL SO CONSTRUCT THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL AND ELECTRICAL DESIGN.
7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
8. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION WITH ARCHITECT.
9. TYPICAL DETAILS SHALL APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
10. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE.
11. SEE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILS, CONDITIONS, PITS, TRENCHES, PADS, DEPRESSIONS, ROOF/FLOOR OPENINGS, STAIRS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS.
12. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADE CONTRACTORS. OPENING SIZES AND LOCATIONS SHOWN FOR DUCTS, PIPE, INSERTS AND OTHER PENETRATIONS WHEN SHOWN ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED PRIOR TO FORMING.
13. NO HOLES, NOTCHES, BLOCK-OUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
14. PENETRATIONS SHALL BE CAST-IN-PLACE AND SHALL NOT BE PERMITTED EXCEPT AS SHOWN IN THE STRUCTURAL DRAWINGS.
15. BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, EACH PARTY SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH CONDITIONS IN FIELD, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE PROPOSAL SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK.

SUBMITTALS

1. SUBMITTALS ARE:
   a. CONCRETE MIX DESIGNS
   b. MATERIAL PRODUCT DATA FOR STRUCTURAL MATERIALS
   c. CONCRETE AND MASONRY REINFORCING
   d. ENGINEERED LUMBER
   e. PANELIZED WALLS FOR WOOD BUILDINGS
   f. STEEL FABRICATION AND MISCELLANEOUS METALS
   g. STEEL DECK
2. SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE ARCHITECT/STRUCTURAL ENGINEER.
3. SUBMITTALS SHALL BE REVIEWED BY THE ARCHITECT/STRUCTURAL ENGINEER FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE ARCHITECT/STRUCTURAL ENGINEER ON THE SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
4. FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

DELEGATED DESIGN

1. DELEGATED DESIGNS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
2. DELEGATED DESIGNS ARE:
   a. EXCAVATION, SHORING, AND UNDERPINNING
   b. PREMANUFACTURED WOOD JOISTS AND TRUSSES
   c. STRUCTURAL STEEL CONNECTIONS
   d. CURTAIN WALL AND STOREFRONT SYSTEMS
   e. COLD FORMED STEEL FRAMING
   f. ROOFTOP EQUIPMENT ANCHORAGE AND CURBS
   g. STAIRS, ACCESS LADDERS, HANDRAILS, GUARDRAILS, AND GRATING
3. ALL DELEGATED DESIGNS SHALL BEAR THE STAMP AND SIGNATURE OF THE QUALIFIED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED, RESPONSIBLE FOR THE PREPARATION OF THESE DOCUMENTS.

EXISTING CONDITIONS / DEMOLITION

1. EXISTING CONDITIONS:
   a. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM EXISTING DRAWINGS:
      i. DATED 6-15-1962 BY DOLGNER, ROLLASON & ROKICKI ARCHITECTS & ENGINEERS.
      ii. DATED 12-1-1949 BY JENSEN & KEOUCH ARCHITECTS & ENGINEERS.
      iii. DATED 5-14-1927 BY VAN LEYEN, SCHILLING & KEOUCH ARCHITECTS & ENGINEERS.
   b. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM FIELD TAKE-OFF BY IMEG AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.
   c. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE. CONTRACTOR TO VERIFY EXISTING INFORMATION, DIMENSIONS AND SIZES AS REQUIRED TO COMPLETE THEIR WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ARCHITECT OR STRUCTURAL ENGINEER SO PROPER CLARIFICATION MAY BE MADE. MODIFICATION OF CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT OR STRUCTURAL ENGINEER.
2. EXISTING BUILDING MATERIAL PROPERTIES:
   a. REFER TO DRAWINGS
3. ALL DEMOLITION SHALL BE CARRIED OUT IN SUCH A WAY SO AS TO NOT DAMAGE EXISTING ELEMENTS WHICH ARE TO REMAIN.
4. ALL ELEMENTS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDED COST. EXISTING ELEMENTS ARE TO BE PROTECTED TO THE FULLEST EXTENT POSSIBLE TO REDUCE SUCH DAMAGE TO A MINIMUM.

EARTHWORK

1. FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT DATED SEPTEMBER 26, 2023 BY McDOWEL & ASSOCIATES. REPORT IS ON FILE WITH THE ARCHITECT.
2. SOIL PROPERTIES PER THE GEOTECHNICAL REPORT:

ALLOWABLE NET SOIL BEARING PRESSURE:	
FOOTINGS	3000 PSF
FROST DEPTH	3.5 FT (UNHEATED)

3. ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING/BASEMENT WALLS BEFORE CONCRETE HAS ATTAINED SPECIFIED COMPRESSIVE STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL WALLS BELOW GRADE FROM LATERAL LOADS UNTIL SUPPORTING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED 7-DAY STRENGTH MINIMUM. BACKFILLING IS NOT PERMITTED FOR FOUNDATION WALLS UNTIL SUPPORTED SLAB TOP AND BOTTOM IS IN PLACE OR THE WALL IS ADEQUATELY BRACED TO RESIST LATERAL LOADS. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS, AND INSTALLATION OR SHORING AND/OR SHEETING.
4. CONTRACTOR SHALL PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER OR SEEPAGE. FREE GROUND WATER WAS NOT ENCOUNTERED IN THE BORINGS. DETAILS OF GROUND WATER INFORMATION CAN BE OBTAINED FROM THE ABOVE-MENTIONED GEOTECHNICAL REPORT. IF GROUND WATER SHOULD OCCUR DURING EXCAVATION, SPECIAL PROCEDURES SHALL BE IMPLEMENTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
5. WHERE THERE IS NOT SUFFICIENT SPACE FOR SLOPED EMBANKMENTS, SHORING WILL BE REQUIRED. SEE THE GEOTECHNICAL REPORT FOR INFORMATION REGARDING THE DESIGN AND INSTALLATION OF THE SHORING. SHORING THAT IS NOT PART OF THE PERMANENT BUILDING SUPPORT IS THE CONTRACTOR'S RESPONSIBILITY AND OUTSIDE THIS PERMIT.
6. CARE SHALL BE EXERCISED WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES OR IMPROVEMENTS TO NOT DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.
7. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILL MATERIAL OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS AND FOUNDATIONS. IF ANY SUCH MATERIAL OR STRUCTURES ARE FOUND, ARCHITECT/ENGINEER SHALL BE NOTIFIED IMMEDIATELY. ALL ABANDONED FOUNDATIONS, UTILITIES AND OTHER STRUCTURES THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
8. ALL FOOTINGS AND SLABS ON GRADE SHALL BE PLACED ONTO FIRM UNDISTURBED SOIL OR CONTROLLED COMPACTED FILL, REMOVING ANY EXISTING FILL, ORGANIC MATERIAL, OR UNSUITABLE SOILS, AS RECOMMENDED BY THE GEOTECHNICAL REPORT. EXPOSED NATURAL SOIL SHALL BE PROOF ROLLED BELOW SLABS ON GRADE.
9. THE PREPARATION OF THE SUBGRADE FOR THE SLAB ON GRADE SHALL BE IN STRICT ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT REFERENCED ABOVE. THE CONTRACTOR SHALL DIRECT QUESTIONS REGARDING THE SUBGRADE PREPARATION REQUIREMENTS TO THE GEOTECHNICAL ENGINEER.
10. FOUNDATION ELEVATIONS SHOWN DESIGNATE A MINIMUM DEPTH WHERE AN ADEQUATE SOIL BEARING PRESSURE IS EXPECTED. FOOTINGS, PIERS AND/OR WALLS SHALL BE LOWERED OR EXTENDED AS REQUIRED TO REACH SOIL MEETING THE DESIGN BEARING PRESSURE.
11. ALL REQUIRED BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN 6" LAYERS TO 95% MAXIMUM DRY DENSITY PER ASTM D1557 AND TO THE APPROVAL OF THE INSPECTION AGENCY.
12. THE MOISTURE CONTENT OF ONSITE CLAYEY SOILS AT THE TIME OF COMPACTION SHALL BE BETWEEN 2-3% ABOVE OPTIMUM MOISTURE CONTENT.
13. ANY REQUIRED IMPORT FILL SOIL SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO IMPORTING.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE AMERICAN CONCRETE INSTITUTE "ACI DETAILING MANUAL" (SP-066) EXCEPT AS OTHERWISE SHOWN, NOTED OR SPECIFIED.
2. CONCRETE REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO THE FOLLOWING STANDARDS:

DEFORMED BARS	ASTM A615, GR 60	Fy = 60 KSI
DEFORMED BARS IN SFRS	ASTM A706, GR 60	Fy = 60 KSI
WELDED WIRE REINFORCING	ASTM A1064	Fy = 65 KSI
DEFORMED EPOXY-COATED BARS	ASTM A775	Fy = 60 KSI
DEFORMED GALVANIZED-COATED BARS	ASTM A767	Fy = 60 KSI
STEEL WIRE	ASTM A1064	Fy = 60 KSI
DEFORMED BAR ANCHORS	ASTM A1064	Fy = 70 KSI
WELDABLE BARS, DEFORMED	ASTM A706, GR 60	Fy = 60 KSI

3. MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:

CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	3"
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	
#6 BARS OR LARGER	2"
#5 BARS OR SMALLER	1 1/2"

4. ALL REINFORCING IN CONCRETE USED FOR THE CONTAINMENT OF WATER SHALL BE HOT-DIP GALVANIZED OR EPOXY-COATED.
5. DEFORMED BAR ANCHORS (DBA) SHALL BE AUTOMATICALLY END WELDED WITH SUITABLE WELDING EQUIPMENT IN THE SHOP OR IN THE FIELD. WELDING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER.
6. SUPPORTS FOR REINFORCEMENT SHALL HAVE CLASS 2 PROTECTION AS DEFINED IN THE CRSI MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED.
7. SUPPORTS FOR COATED REINFORCEMENT SHALL HAVE CLASS 1 PROTECTION AS DEFINED IN THE CRSI MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED.
8. ALL WELDED WIRE REINFORCING (WWR) SHALL BE LAPPED 2 PANELS AT EDGES AND ENDS.
9. CONTINUOUS HORIZONTAL REINFORCING SHALL BE LAPPED AT MIDSPAN FOR TOP BARS AND DIRECTLY OVER SUPPORTS FOR BOTTOM BARS. AT DISCONTINUOUS ENDS, THE TOP STEEL SHALL BE BENT DOWN 12 BAR DIAMETERS OR 12" MINIMUM, WHICHEVER IS GREATER.
10. FOR MAT FOUNDATIONS, REINFORCING FOR TOP BARS SHALL BE LAPPED UNDER STRUCTURAL COLUMNS AND WALLS ABOVE AND AT MIDSPAN FOR BOTTOM BARS. AT DISCONTINUOUS ENDS, THE TOP STEEL SHALL BE BENT DOWN 12 BAR DIAMETERS OR 12" MINIMUM, WHICHEVER IS GREATER.
11. WHERE REINFORCEMENT LENGTH IS SPECIFIED, NO SPLICES ARE PERMITTED WITHIN THE SPECIFIED LENGTH WITHOUT APPROVAL BY THE STRUCTURAL ENGINEER.
12. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY, UNLESS OTHERWISE NOTED. PROVIDE FOUNDATION DOWELS TO MATCH SIZE AND SPACING OF WALL OR COLUMN REINFORCEMENT. EXTEND DOWELS A LAP SPLICE LENGTH INTO WALL OR COLUMN AND TERMINATE WITH STANDARD HOOK AT BOTTOM OF FOOTING, UNLESS OTHERWISE NOTED.
13. REINFORCING IN WALL FOOTINGS AND GRADE BEAMS BETWEEN COLUMNS SHALL BE DEVELOPED (Ld) INTO COLUMN FOOTINGS.
14. CUTTING OF REINFORCING WHICH CONFLICTS WITH EMBEDDED OBJECTS OR SLEEVES IS NOT ACCEPTABLE.
15. REINFORCING BARS SHALL BE BENT COLD, AND NO METHOD OF FABRICATION SHALL BE USED WHICH WOULD BE INJURIOUS TO THE MATERIAL. HEATING OF BARS FOR BENDING IS NOT PERMITTED.
16. FIELD WELDING OR BENDING OF REINFORCING IS NOT PERMITTED EXCEPT AS INDICATED ON THE DRAWINGS OR AS APPROVED BY THE STRUCTURAL ENGINEER.
17. USE TEMPLATES TO SET ALL EMBEDDED ANCHOR BOLTS, LEVELING PLATES, AND DOWEL BARS AS REQUIRED OR INDICATED ON THE DRAWINGS.
18. SUBMIT SHOP DRAWINGS FOR FABRICATION AND PLACEMENT OF REINFORCING STEEL. INCLUDE SCHEDULES AND DIAGRAMS OF BENT BARS AND SHOW ARRANGEMENT OF REINFORCEMENT, INCLUDING CONCRETE COVER. STRUCTURAL ENGINEER'S REVIEW WILL BE FOR COMPLIANCE WITH DESIGN REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DIMENSIONS AND QUANTITIES.
19. ALL CONCRETE NOT OTHERWISE SPECIFIED SHALL BE REINFORCED TO THE MINIMUM REQUIREMENT OF ACI 318.
20. REINFORCE ALL ARCHITECTURAL CONCRETE TOPPING SLABS WITH 6x6-W1.4xW1.4 WWR UNLESS OTHERWISE NOTED.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE CORRESPONDING EDITION OF THE AMERICAN CONCRETE INSTITUTE PUBLICATIONS: ACI 117, ACI 301, ACI 305.1, ACI 306.1, ACI 308.1, ACI 318 AND SP-066, UNLESS OTHERWISE NOTED.
2. CONCRETE MATERIALS SHALL CONFORM TO:

CEMENT	ASTM C150, TYPE I OR II
FLY ASH	ASTM C618, TYPE C OR F
FINE AND COARSE AGGREGATE	ASTM C33
LIGHTWEIGHT AGGREGATE	ASTM C330
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C260
WATER REDUCING ADMIXTURE	ASTM C494

3. CONCRETE STRENGTHS SHALL CONFORM TO:

INTENDED USE	STRENGTH (PSI)	EXPOSURE CLASS
FOUNDATIONS	4000	N/A
SLAB ON GRADE	4000	N/A
UNLESS OTHERWISE NOTED	4000	N/A

NORMAL-WEIGHT 28-DAY STRENGTH UNLESS OTHERWISE NOTED.

4. THE MODULUS OF ELASTICITY OF ALL CONCRETE SHALL EXCEED 57,000 SQRT(f'c) FOR NORMAL-WEIGHT CONCRETE OR wc1.5 33 SQRT(f'c).
5. DRYPACK OR GROUT SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 7000 PSI.
6. SLAB-ON-GRADE CONSTRUCTION: LOCATE SAW-CUT CONTROL JOINTS ALONG COLUMN LINES WITH INTERMEDIATE JOINTS SPACED PER THE TABLE BELOW, UNLESS OTHERWISE NOTED. SLAB PANELS SHALL HAVE A MAXIMUM LENGTH TO WIDTH RATIO OF 1.5:1. PROVIDE ADDITIONAL CONTROL JOINTS AT ALL RE-ENTRANT CORNERS. SEE PLAN FOR SPECIAL CASES.

THICKNESS (IN)	MAXIMUM JOINT SPACING EACH WAY (FT)
4	12
5	13
6	15
8	18
10	20
12	22

7. CROSS REFERENCE ARCHITECTURAL AND STRUCTURAL DRAWINGS TO ENSURE PROPER DIMENSIONS AND PLACEMENT OF ALL ANCHOR BOLTS, INSERTS, NOTCHES, AND EDGES OF WALLS/FOUNDATIONS PRIOR TO PLACING CONCRETE.
8. UNLESS OTHERWISE NOTED, ALL FOOTINGS SHALL BE CENTERED UNDER WALLS, PIERS OR COLUMNS.
9. CONSTRUCTION JOINTS SHALL BE THOROUGHLY ROUGHENED TO 1/4" AMPLITUDE BY SAND BLASTING OR MECHANICAL MEANS. CLEAN BEFORE POUR. LOCATION TO BE APPROVED BY THE STRUCTURAL ENGINEER. SUBMIT LOCATION PLAN OF ALL PROPOSED JOINTS NOT INDICATED ON DRAWINGS FOR APPROVAL PRIOR TO BEGINNING WORK.
10. PRIOR TO PLACING CONCRETE, THE CONTRACTOR SHALL ENSURE ALL REINFORCING AND EMBEDMENTS, INCLUDING COLUMN ANCHOR BOLTS, ARE PROPERLY LOCATED AND SECURELY TIED IN PLACE.
11. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL PENETRATIONS THROUGH CONCRETE BEFORE PLACING. SECURE SLEEVES TO PREVENT MOVEMENT DURING PLACING OPERATIONS. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS.
12. CONFIRM WITH ARCHITECT THAT MATERIALS TO BE EMBEDDED ARE SUITABLE FOR EMBEDMENT IN CONCRETE.
13. CONDUIT, PIPES, AND SLEEVES EMBEDDED IN CONCRETE SHALL CONFORM TO REQUIREMENTS OF ACI 318, SECTIONS 20.7 AND 26.8.
14. DO NOT PLACE VERTICAL CONDUIT IN CONCRETE COLUMNS WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.
15. NO ALUMINUM SHALL BE ALLOWED IN THE CONCRETE WORK UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION.
16. WATERSTOPS SHALL BE A FLEXIBLE BENTONITE PRODUCT. ACCEPTABLE PRODUCTS INCLUDE: CETCO WATERSTOP-RX AND GREENSTREAK SWELLSTOP WESTIC BARRIER TECHNOLOGIES TPE-R WATERSTOP AND GREENSTREAK PVC WATERSTOP.
17. PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC., SHALL BE FORMED WITH A 3/4 INCH CHAMFER, UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS.
18. SLOPE SLABS TO DRAINS OR FOR POSITIVE DRAINAGE IF NO DRAINS ARE PRESENT AND PROVIDE DEPRESSIONS WHERE SHOWN ON THE STRUCTURAL AND/OR ARCHITECTURAL DRAWINGS WITHOUT REDUCING THE THICKNESS OF SLAB INDICATED. FOR SLAB-ON-GRADE DEPRESSIONS GREATER THAN 1 INCH, SEE DETAILS FOR ADDITIONAL REINFORCING.
19. INTERNALLY VIBRATE ALL CAST-IN-PLACE CONCRETE EXCEPT SLABS-ON-GRADE WHICH NEED ONLY BE VIBRATED AROUND UNDER FLOOR DUCTS AND OTHER EMBEDDED ITEMS. VIBRATE TOPS OF COLUMNS.
20. PROVIDE VERTICAL CONTROL JOINTS IN EXPOSED CONCRETE WALLS AT A MINIMUM UNIFORM SPACING NOT TO EXCEED 25 FEET PER ACI 224.3. COORDINATE JOINT LOCATIONS WITH ARCHITECTURAL DRAWINGS.
21. CONCRETE SHALL NOT BE PERMITTED TO DROP MORE THAN 5 FEET.
22. IF CONCRETE IS PLACED BY PUMPING, SUPPORT SHALL BE PROVIDED FOR THE HOSE. THE HOSE SHALL NOT BE ALLOWED TO RIDE ON THE REINFORCING AND OTHER EMBEDDED ITEMS.
23. CONCRETE SLABS SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR 7 DAYS. FORMS FOR CONCRETE WALLS SHALL BE LEFT IN PLACE FOR 7 DAYS OR MAY BE STRIPPED AFTER 3 DAYS AND COATED WITH AN APPROVED CURING COMPOUND.
24. NO LOADS SHALL BE PLACED ON STRUCTURAL CONCRETE SLABS WITHIN 7 DAYS AFTER CONCRETE IS PLACED. AFTER CONCRETE IS PLACED, IN NO CASE SHALL THE SUPERIMPOSED CONSTRUCTION LOADS BE GREATER THAN SPECIFIED DESIGN LIVE LOADS, UNLESS THE WORK IS SHORED.
25. NOTIFY THE ARCHITECT/STRUCTURAL ENGINEER 48 HOURS MINIMUM PRIOR TO ALL POURS.
26. CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.
27. THE DESIGN AND ENGINEERING OF FORMWORK, SHORING AND RESHORING, AS WELL AS THEIR CONSTRUCTION, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. FORMS SHALL BE DESIGNED TO HAVE SUFFICIENT STRENGTH TO SAFELY WITHSTAND THE LOADS RESULTING FROM PLACEMENT AND VIBRATION OF THE CONCRETE AND SHALL ALSO BE DESIGNED FOR SUFFICIENT RIGIDITY TO MAINTAIN SPECIFIED TOLERANCES. CONTRACTOR SHALL SUBMIT DETAILED FORMWORK SHOP DRAWINGS TO THE ARCHITECT TO BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN CONCEPT ONLY.
28. SHORING OF ELEVATED CONCRETE TO REMAIN UNTIL CONCRETE TESTS, CURED UNDER JOB-SITE CONDITIONS HAVE BEEN TESTED AND INDICATE 80% OF THE DESIGN MODULUS OF ELASTICITY. GENERAL CONTRACTOR TO PROVIDE THE STRUCTURAL ENGINEER WITH MODULUS OF ELASTICITY TEST RESULTS. SHORING OF THE STRUCTURAL BAY CONTAINING CONSTRUCTION JOINTS AND/OR POUR STRIPS TO REMAIN IN PLACE UNTIL SLAB CONSTRUCTION IS COMPLETE.
29. CONCRETE FILL THICKNESS SHOWN ON FRAMING PLANS AND DETAIL SHEETS IS MINIMUM THICKNESS. NO ALLOWANCES HAVE BEEN SHOWN FOR ADDITIONAL CONCRETE FILL REQUIRED TO COMPENSATE FOR BEAM OR DECK DEFLECTIONS AND TO MAINTAIN SURFACE TOLERANCES SPECIFIED.
30. PROVIDE LIGHTWEIGHT SELF-LEVELING MATERIAL AT ELEVATED CONCRETE SLABS AND SLABS ON STEEL DECK AS REQUIRED TO MEET FLOOR FLATNESS AND LEVELNESS REQUIREMENTS. SUBMIT PROPOSED LOCATIONS AND LEVELING MATERIAL DATA FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT.
31. CORING OF CONCRETE IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
32. NO CONCRETE SHALL BE PLACED ONTO OR AGAINST SUBGRADES CONTAINING FREE WATER, FROST, ICE OR SNOW.
33. DURING WINTER CONSTRUCTION, ALL FOOTINGS SHALL BE PROTECTED FROM FROST PENETRATION UNTIL THE BUILDING IS ENCLOSED AND TEMPORARY HEAT IS PROVIDED.
34. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE TESTING AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE APPLICABLE CODE. MIX DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.
35. PROVIDE SLAB COORDINATION DRAWING SUBMITTAL INDICATING COORDINATED LOCATIONS OF: MEP PENETRATIONS, SLEEVES, OPENINGS, IN-SLAB CONDUIT/DUCT (IF ALLOWED), EMBEDS, CAST-IN ANCHORS, AND OTHER ITEMS EMBEDDED OR PENETRATING STRUCTURAL ELEVATED SLABS.

MASONRY

1. CMU CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ACI 530/530.1 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES".
2. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f'm	1500 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	1900 PSI
GROUT	2000 PSI

3. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f'm	2000 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	2800 PSI
GROUT	2000 PSI

4. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f'm	2500 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	3250 PSI
GROUT	2500 PSI

5. CMU MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:

CONCRETE MASONRY UNITS	ASTM C90, NORMAL WEIGHT
MORTAR	ASTM C270, TYPE N
GROUT	ASTM C476
JOINT REINFORCING	ASTM A82

6. WIRE REINFORCING PER ASTM A82 FOR SINGLE-WYTHE CMU WALLS, CMU CAVITY WALLS, AND MULTI-WYTHE COMPOSITE CMU WALLS SHALL BE HOT-DIP GALVANIZED PER ASTM A153, CORROSION RESISTANT HORIZONTAL JOINT REINFORCING WITH THE FOLLOWING GAUGE AND VERTICAL SPACING:

RUNNING BOND	9 GA @ 16" OC (ALL WIDTHS)
BELOW GRADE WALLS	9 GA @ 8" OC
OTHER THAN RUNNING BOND	9 GA @ 16" OC (6"-8" WIDTH) 9 GA @ 8" OC (10"-16" WIDTH)

7. ALL LOAD BEARING CMU WALLS TO HAVE FULL MORTAR BED, HEAD, AND COLLAR JOINTS.
8. GROUT SOLID ALL JAMBS FULL HEIGHT IN LOAD BEARING CMU WALLS TO UNDERSIDE OF LINTEL PLUS ONE CELL BEYOND BEARING LENGTH.
9. PROVIDE MINIMUM 1 INCH GROUT BETWEEN MAIN REINFORCING AND/OR BOLTS AND CMU UNIT FACE. VERTICAL REINFORCEMENT SHALL BE CENTERED IN WALL, UNLESS OTHERWISE NOTED. VERTICAL REINFORCING BARS SHALL SECURELY BE HELD IN POSITION BY WIRE TIES OR OTHER APPROVED MEANS TO ENSURE DESIGN LOCATION AND LAP. PLACE BARS AND LAP PRIOR TO GROUTING.
10. HORIZONTAL BOND BEAM AND VERTICAL REINFORCING SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED.
11. CELLS SHALL BE IN VERTICAL ALIGNMENT. DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH VERTICAL REINFORCING STEEL.
12. ALL CELLS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT.
13. GROUT CELLS SOLID IN ALL WALLS, UNLESS OTHERWISE NOTED. GROUT IN 4'-0" MAXIMUM LIFTS.
14. LIFTS OF GROUT SHALL BE KEYED 1 1/2 INCHES INTO THE PREVIOUS COURSE BELOW.
15. HORIZONTAL BAR REINFORCEMENT SHALL BE FULLY EMBEDDED IN GROUT IN AN UNINTERRUPTED POUR.
16. EXCEPT FOR WALL PILASTERS, VERTICAL REINFORCEMENT SHALL BE FIELD CUT FOR 4'-0" LIFTS AND LAP SPLICED PER LAP LENGTH SCHEDULE.
17. COORDINATE ANY UNIDENTIFIED PIPE OR DUCT PASSING THROUGH STRUCTURAL CMU WALLS WITH TYPICAL DETAILS, UNLESS OTHERWISE NOTED.
18. SEE ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN, AND JOINT TYPE. ALL BLOCK SHALL BE LAID IN RUNNING BOND, UNLESS OTHERWISE NOTED.
19. ALL MULTIPLE WYTHE CMU WALLS SHALL BE GROUTED SOLID BETWEEN EACH WYTHE.
20. PROVIDE HORIZONTAL TIES WHERE CMU ABUTS CONCRETE.

LINTELS

1. PROVIDE LINTELS OVER ALL OPENINGS AND RECESSES IN MASONRY CONSTRUCTION. LINTELS ARE NOT REQUIRED OVER OPENINGS 12" WIDE OR LESS THAT IS AT LEAST 1 COURSE BELOW THE BOND BEAM AT THE TOP OF WALL.
2. PENETRATIONS NOT IDENTIFIED ON THE DOCUMENTS ARE TO BE TREATED IN A MANNER SIMILAR TO THE IDENTIFIED LOCATIONS.
3. LINTELS IN NON-BEARING WALLS SHALL BE SIZED PER THE FOLLOWING:

SPAN, L	STEEL OPTION (FOR EA 4" OF MASONRY) *
0' < L ≤ 4'-0"	L3 1/2x3 1/2x1/4
4'-0" < L ≤ 6'-0"	L4x3 1/2x5/16 (LLV)
6'-0" < L ≤ 8'-0"	L5x3 1/2x5/16 (LLV)
8'-0" < L ≤ 10'-0"	L6x3 1/2x3/8 (LLV)

SPAN, L	CMU OPTIONS			
	6" BLOCK	8" BLOCK	10" BLOCK	12" BLOCK
0' < L ≤ 4'-0"	8" DEEP W/ (1) # 4 BOTT	8" DEEP W/ (1) # 4 BOTT	8" DEEP W/ (1) #5 BOTT	8" DEEP W/ (1) # 5 BOTT
4'-0" < L ≤ 6'-0"	8" DEEP W/ (1) # 4 BOTT	8" DEEP W/ (1) # 4 BOTT	8" DEEP W/ (1) #5 BOTT	8" DEEP W/ (1) # 5 BOTT
6'-0" < L ≤ 8'-0"	16" DEEP W/ (1) #4 BOTT	16" DEEP W/ (1) #4 BOTT	16" DEEP W/ (1) #5 BOTT	16" DEEP W/ (1) #5 BOTT
8'-0" < L ≤ 10'-0"	16" DEEP W/ (1) #5 BOTT	16" DEEP W/ (2) #5 BOTT	16" DEEP W/ (2) #5 BOTT	16" DEEP W/ (2) #5 BOTT

*ALL ANGLES THAT ARE BACK-TO-BACK SHALL BE WELDED TOP AND BOTTOM 3" @ 12" OC MINIMUM.

4. ALL LINTELS SHALL HAVE A MINIMUM OF 8" END BEARING AND DO NOT REQUIRE BEARING PLATES, UNLESS OTHERWISE NOTED.
5. TEMPORARY SHORING OF MASONRY LINTELS MUST BE PROVIDED UNTIL MASONRY HAS REACHED 75% OF DESIGN STRENGTH.
6. ALL STEEL LINTELS IN EXTERIOR WALL CONSTRUCTION SHALL BE HOT-DIP GALVANIZED, UNLESS OTHERWISE NOTED.

SPAN, L	PRECAST CONCRETE LINTEL (f'c = 3000 PSI MIN)
0' < L ≤ 4'-0"	8" DEEP W/ (1) #4 T&B
4'-0" < L ≤ 6'-0"	8" DEEP W/ (1) #4 T&B
6'-0" < L ≤ 8'-0"	8" DEEP W/ (1) #4 T&B
8'-0" L ≤ 10'-0"	8" DEEP W/ (1) #5 T&B

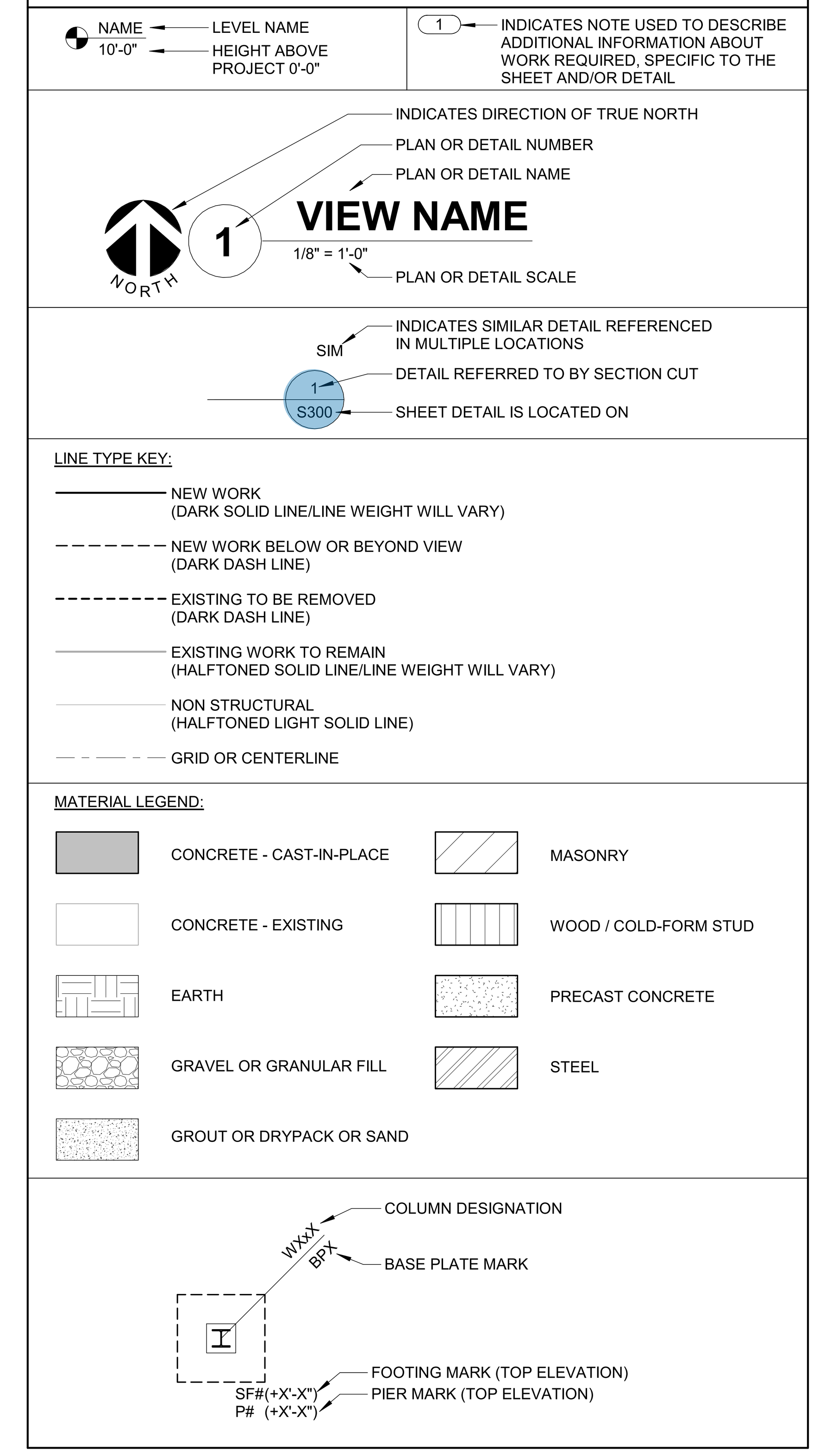
STEEL

1. STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "DETAILING FOR STEEL CONSTRUCTION" AND FABRICATED AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
2. STRUCTURAL STEEL SHALL CONFORM TO ASTM STANDARDS AS NOTED BELOW:

WIDE FLANGE SHAPES	ASTM A992	Fy = 50 KSI
OTHER ROLLED SHAPES	ASTM A36	Fy = 36 KSI
PIPE SECTIONS	ASTM A53, GR B	Fy = 35 KSI
HSS SECTIONS, ROUND	ASTM A500, GR C	Fy = 46 KSI
HSS SECTION, SQ/RECT	ASTM A500, GR C	Fy = 50 KSI
BASE AND CONNECTION PLATES	ASTM A36	Fy = 36 KSI
ANCHOR RODS	ASTM F1554, GR 36	Fy = 36 KSI
HIGH STRENGTH BOLTS	ASTM F3125, GR A325	Fv = 120 KSI
HEAVY HEX NUTS	ASTM A563	
WASHERS	ASTM F436	
HEADED STUD ANCHORS	ASTM A108, TYPE B	
ELECTRODES FOR ARC WELDING	AWS 5.1, E70XX	

3. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS". SEE DETAILS FOR BOLT SIZE AND MATERIAL ASTM DESIGNATION.
4. ALL BOLTED CONNECTIONS SHALL BE GRADE A325N BEARING TYPE BOLTS, UNLESS OTHERWISE NOTED. ALL BOLTS SHALL BE INSTALLED TO A MINIMUM "SNUG TIGHT" CONDITION, UNLESS OTHERWISE NOTED.
5. EXCEPT WHERE DETAILED OTHERWISE, FABRICATOR SHALL SELECT LRFD BOLTED (OR WELDED EQUIVALENT) SIMPLE SHEAR CONNECTIONS PER AISC 360 PART 10 TO SUPPORT LOADS INDICATED ON THE STRUCTURAL DRAWINGS. WHEN LOADS ARE NOT SHOWN, CONNECTION SHALL SUPPORT 60% OF THE TOTAL UNIFORM LOAD CAPACITY FOR EACH GIVEN BEAM SIZE AND SPAN AS LISTED IN AISC 360 TABLE 3-6.
6. BEAM REACTIONS GIVEN ON THE CONTRACT DOCUMENTS SHALL SUPERSEDE THE PREVIOUS NOTE. IN NO CASE SHALL THE CONNECTIONS BE DESIGNED FOR AN UNFACTORED END REACTION LESS THAN 12 KIPS.
7. WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.
8. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING CALLED FOR. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES" OF THE AMERICAN WELDING SOCIETY (AWS).
9. HEADED STUD ANCHORS (HSA): SHALL BE INSTALLED IN ACCORDANCE WITH AWS D1.1 AND SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE HSA AND THE STEEL SHAPE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE HSA AND THE STEEL SHAPE. THE HSA SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8"ø AND SMALLER AND 3/16" FOR LARGER THAN 5/8"ø.
10. BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE DRAWINGS. WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.
11. SPLICING OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE AND CONNECTION TO BE MADE.
12. ALL STEEL EXPOSED TO WEATHER OR AS NOTED ON PLAN SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 G60. ABRADED AREAS TO BE TOUCHED UP WITH COLD GALVANIZING COMPOUND IN ACCORDANCE WITH ASTM A780.
13. ALL GALVANIZED HOLLOW SECTIONS SHALL HAVE WELDED CAP PLATES TO SEAL EXPOSED ENDS.
14. CUTS, HOLES, OPENINGS, ETC., REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OF HOLES AND CUTS IN THE FIELD SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.
15. FURNISH AND INSTALL MISCELLANEOUS STEEL (CURBS, HANGERS, EXPANSION JOINT ANGLES, STRUTS, ETC.) AS CALLED FOR OR AS NECESSARY PER ARCHITECTURAL AND MECHANICAL/ELECTRICAL DRAWINGS.
16. GROUT FOR BASE AND BEARING PLATES SHALL BE A NON-SHRINK, NON-METALLIC PRODUCT. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 7000 10,000 PSI. INSTALL GROUT PRIOR TO APPLYING SIGNIFICANT LOADING TO MEMBER.
17. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STRUCTURAL STEEL FOR ARCHITECT/STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION.

VIEW KEY



STRUCTURAL ABBREVIATION KEY

ABBR:	DESCRIPTION:	ABBR:	DESCRIPTION:
#	NUMBER OR POUNDS	KSF	KIPS PER SQUARE FOOT
@	AT	KSI	KIPS PER SQUARE INCH
°	DEGREE	L	LENGTH
ø	DIAMETER	LBS	POUNDS
(E)	EXISTING	LL	LIVE LOAD
A.B.	ANCHOR BOLT	LLH	LONG LEG HORIZONTAL
ARCH	ARCHITECT, -URE, -URAL	LLV	LONG LEG VERTICAL
B.O.	BOTTOM OF	LONG.	LONGITUDINAL
bf	BEAM FLANGE WIDTH	LSH	LONG SIDE HORIZONTAL
BF	BRACE FRAME	LSV	LONG SIDE VERTICAL
BM	BEAM	LT WT	LIGHTWEIGHT
B.N.	BOUNDARY NAILING	MAX	MAXIMUM
BOTT	BOTTOM	MECH	MECHANICAL
BTWN	BETWEEN	MANUF	MANUFACTURER
CFSF	COLD FORM STEEL FRAMING	MIN	MINIMUM
CGS	CENTER OF GRAVITY OF THE TENDON	NIC	NOT IN CONTRACT
CJP	COMPLETE JOINT PENETRATION WELD	NTS	NOT TO SCALE
CLR	CLEAR	OC	ON CENTER
CL	CENTERLINE	OH	OPPOSITE HAND
CMU	CONCRETE MASONRY UNIT	OPNG	OPENING
COL	COLUMN	OSB	ORIENTED STRAND BOARD
CONC	CONCRETE	PCF	POUNDS PER CUBIC FOOT
CONN	CONNECTION	P.H.	PENTHOUSE
CONST	CONSTRUCTION	PJP	PARTIAL JOINT PENETRATION WELD
CONT	CONTINUOUS	PL	PLATE
COORD	COORDINATION	PLF	POUNDS PER LINEAR FOOT
DIA	DIAMETER	PSF	POUNDS PER SQUARE FOOT
DL	DEAD LOAD	PSI	POUNDS PER SQUARE INCH
DET	DETAIL	PT	POST-TENSION, -ED, -ING
DWG	DRAWING	R	RADIUS
DWL	DOWEL	REINF	REINFORCING, -MENT, -ED
EA	EACH	REQD	REQUIRED
EF	EACH FACE	RTU	ROOF TOP UNIT
EFF	EFFECTIVE	SC	SLIP CRITICAL
EL	ELEVATION	SCHED	SCHEDULE
ELEC	ELECTRICAL	SFRS	SEISMIC FORCE-RESISTING SYSTEM
EMBED	EMBEDMENT	SIM	SIMILAR
E.N.	EDGE NAILING	SL	SNOW LOAD
EOD	EDGE OF DECK	S.M.S.	SHEET METAL SCREW
EOS	EDGE OF SLAB	SP	SPACE(S)
EQ	EQUAL	SPECS	SPECIFICATION(S)
EQUIP	EQUIPMENT	SQ	SQUARE
ETC	ETCETERA	STIFF	STIFFENER
EW	EACH WAY	STL	STEEL
EXP	EXPANSION	SYM	SYMMETRICAL
EXT	EXTERIOR	T&B	TOP AND BOTTOM
f 'c	CONCRETE COMPRESSIVE STRENGTH	T.O.	TOP OF
FDN	FOUNDATION	TC	PRE-TENSIONED BOLT
F.N.	FIELD NAILING	TEMP	TEMPERATURE
FT	FOOT	tf	BEAM FLANGE THICKNESS
FTG	FOOTING	THK	THICK
Fy	YIELD STRESS	TRANS	TRANSVERSE
GA	GAGE OR GAUGE	TYP	TYPICAL
GALV	GALVANIZED	UON	UNLESS OTHERWISE NOTED
GLB	GLULAM BEAM	VERT	VERTICAL
GT	GIRDER TRUSS	VIF	VERIFY IN FIELD
HORIZ	HORIZONTAL	w/	WITH
HSA	HEADED STUD ANCHOR	WP	WORK POINT
HSB	HIGH STRENGTH BOLT	WT	WEIGHT
JT	JOINT	WWR	WELDED WIRE REINFORCING
K, KIP	KILOPOUND (1,000 POUNDS)		

STRUCTURAL SHEET INDEX

SHEET NUMBER	SHEET NAME	CURRENT ISSUE DATE	CURRENT ISSUE DESCRIPTION
S000	COVER & GENERAL NOTES	01/14/2026	Bulletin No. 7
S001	GENERAL NOTES	12/20/2024	Permit
S002	SPECIAL INSPECTIONS	12/20/2024	Permit
S003	LOADING DIAGRAMS	12/20/2024	Permit
S004	SCHEDULES	01/14/2026	Bulletin No. 7
S100-E	EXISTING FOUNDATION / FLOOR PLAN	10/13/2025	Bulletin No. 5
S101-E	EXISTING 2ND FLOOR FRAMING PLAN	12/20/2024	Permit
S102-E	EXISTING ROOF FRAMING PLAN	12/20/2024	Permit
S100-A	ADDITION FOUNDATION / FLOOR PLAN	01/14/2026	Bulletin No. 7
S101-A	ADDITION 2ND FLOOR FRAMING PLAN	01/14/2026	Bulletin No. 7
S102-A	ADDITION ROOF FRAMING PLAN	01/14/2026	Bulletin No. 7
S300	TYPICAL CONCRETE DETAILS	02/19/2025	Bulletin No. 1
S400	TYPICAL MASONRY DETAILS	02/19/2025	Bulletin No. 1
S430	MASONRY SECTIONS	12/20/2024	Permit
S500	TYPICAL STEEL DETAILS & SECTIONS	12/20/2024	Permit
S600	TYPICAL WOOD SECTIONS & DETAILS	12/20/2024	Permit
S602	TYPICAL WOOD SECTIONS & DETAILS	02/19/2025	Bulletin No. 1
GRAND TOTAL: 17			

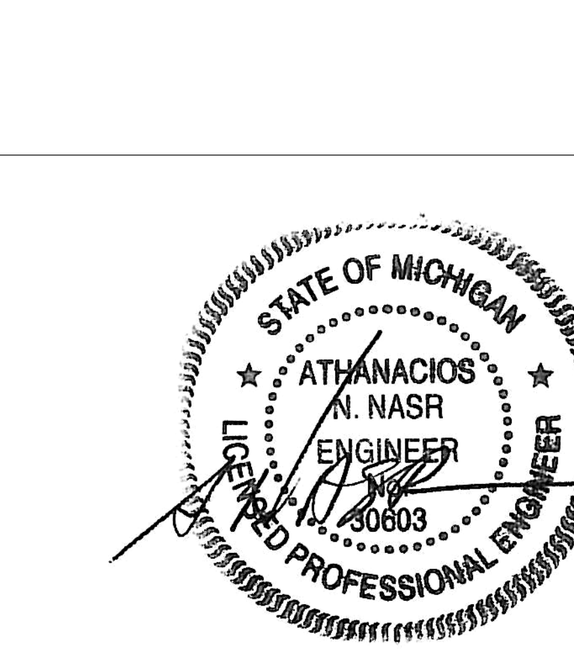
JOHN GRACE ARMS

21030 Indian St. Southfield, MI 48033

SDG Architects

The FUTURE. Built Smarter www.imegcorp.com
33533 W. TWELVE MILE
SUITE 200
FARMINGTON HILLS, MI 48331
P: 248.344.2800 F: 248.344.1650
PROJECT #23008275.00

PROFESSIONAL SEAL



CONSULTANT

KEY PLAN

AGENCY APPROVAL

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<<<State Registration Number>>>
0 1 2 3
REF. SCALE IN INCHES PROJECT #23008275.00

REVISIONS

No.	Date	Revision / Issue
3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
6	12/13/2024	HUD Submission
7	12/20/2024	Permit
8	02/19/2025	Bulletin No. 1
9	10/13/2025	Bulletin No. 5
10	01/14/2026	Bulletin No. 7

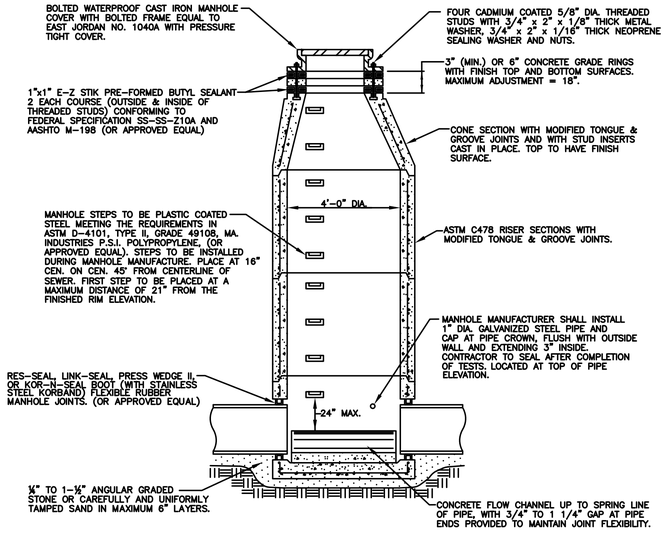
SHEET INFORMATION

Issue	Issued for Permit
Date	10/30/2024
Project #	23008275.00
Drawn	GHW
Checked	GFM
Approved	-

SHEET TITLE
COVER & GENERAL NOTES

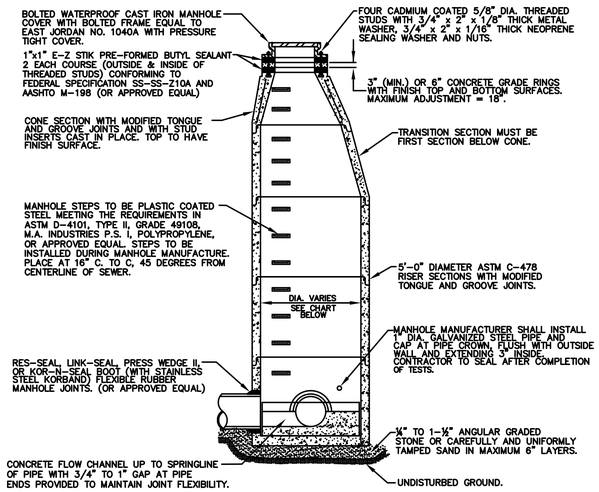
SCALE
Scale: As indicated

SHEET NUMBER
S000



STANDARD MANHOLE

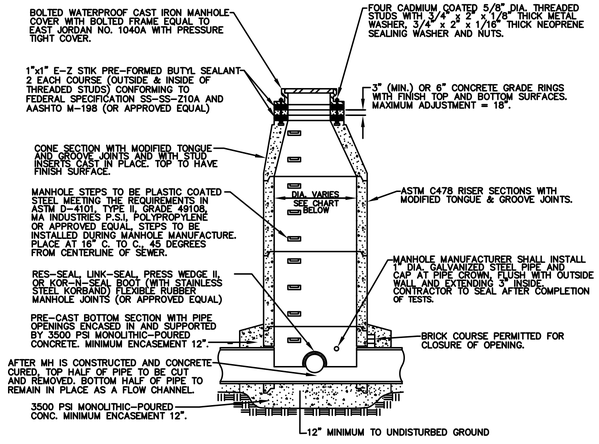
MAX. PIPE SIZE FOR STRAIGHT THRU INSTALLATION	MAX. PIPE SIZE FOR RIGHT ANGLE INSTALLATION
24"	18"



STANDARD OVERSIZED MANHOLE

MANHOLE SIZING CHART

MANHOLE DIAMETER	MAX. PIPE SIZE FOR STRAIGHT THRU INST.	MAX. PIPE SIZE FOR RIGHT ANGLE INST.
5'	36"	24"
6'	42"	36"
7'	60"	42"



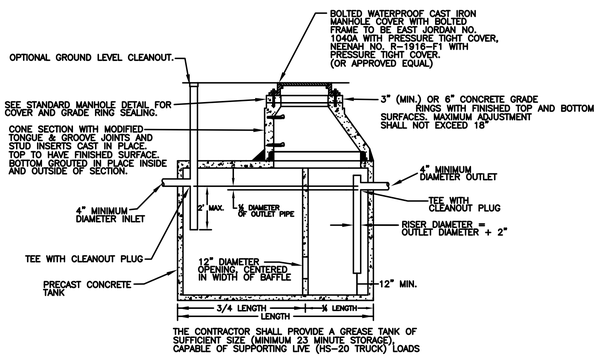
MANHOLE CONSTRUCTED OVER EXISTING SEWER

MANHOLE SIZING CHART

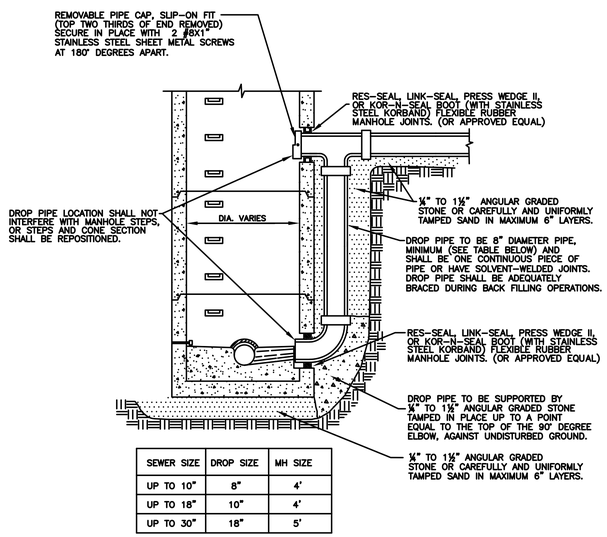
MANHOLE DIAMETER	MAX. PIPE SIZE FOR STRAIGHT THRU INST.
4'	24"
5'	36"
6'	42"
7'	60"

SANITARY SEWER CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE LOCAL UNIT OF GOVERNMENT AND THE WATER RESOURCES COMMISSIONER (WRC). ALL SANITARY SEWER CONSTRUCTION SHALL HAVE FULL-TIME INSPECTION SUPERVISED BY A STATE OF MICHIGAN LICENSED PROFESSIONAL ENGINEER PROVIDED BY, OR CAUSED TO BE PROVIDED BY, THE LOCAL UNIT OF GOVERNMENT.
2. AT ALL CONNECTIONS TO WRC SEWERS OF EXTENSIONS, AND BEFORE START OF CONSTRUCTION, THE CONTRACTOR MUST OBTAIN A SEWER INSPECTION PERMIT ISSUED BY WRC. GRAVITY SEWER PERMIT CHANGES ARE $250 FOR EACH CONNECTION PLUS $25 FOR EACH MANHOLE CONSTRUCTED. PRESSURE SEWER PERMIT CHARGES ARE $250 PER 2,460 L.F. OF FORCE MAIN WITH A MINIMUM PERMIT FEE OF $250. FAILURE TO PASS ANY TEST SEGMENT WILL RESULT IN AN ADDITIONAL CHARGE TO THE CONTRACTOR FOR EACH RETEST, IN ACCORDANCE WITH THE ABOVE PRICE SCHEDULE. THE CONTRACTOR SHALL ALSO HAVE POSTED WITH WRC A $5,000 SURETY BOND AND $500 CASH DEPOSIT. THE CONTRACTOR SHALL NOTIFY THE LOCAL UNIT OF GOVERNMENT AND WRC (248-858-1105) 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. FINAL ACCEPTANCE TESTS MUST BE WITNESSED BY COUNTY PERSONNEL AND MUST BE SCHEDULED BY MUNICIPALITY OR IT'S CONSULTANT IN ADVANCE WITH 24 HOUR NOTICE AT 248-858-1105.
3. NO SEWER INSTALLATION SHALL HAVE AN INFILTRATION EXCEEDING 100 GALLONS PER INCH DIAMETER PER MILE OF PIPE IN A 24 HOUR PERIOD, AND NO SINGLE RUN OF SEWER BETWEEN MANHOLES SHALL EXCEED 100 GALLONS PER INCH DIAMETER PER MILE. AIR TESTS IN LIEU OF INFILTRATION TESTS SHALL BE AS SPECIFIED IN THE WATER RESOURCES COMMISSIONER STANDARDS. ONLY PIPE AND PIPE JOINTS APPROVED BY WRC MAY BE USED FOR SANITARY SEWER CONSTRUCTION.
4. LOCATED IN THE FIRST MANHOLE UPSTREAM FROM THE POINT OF ALL CONNECTIONS TO AN EXISTING WRC SEWER, OR EXTENSION THERETO, A TEMPORARY 12-INCH DEEP SUMP SHALL BE PROVIDED IN THE FIRST MANHOLE ABOVE THE CONNECTION WHICH WILL BE FILLED IN AFTER SUCCESSFUL COMPLETION OF ANY ACCEPTANCE TEST UP TO THE STANDARD FILLET PROVIDED FOR THE FLOW CHANNEL. A WATERTIGHT BULKHEAD SHALL BE PROVIDED ON THE DOWNSTREAM SIDE OF THE SUMP MANHOLE.
5. AT ALL TIMES WHEN LAYING OF NEW PIPE IS NOT ACTUALLY IN PROGRESS, THE UPSTREAM OPEN END OF THE PIPE SHALL BE CLOSED BY TEMPORARY WATERTIGHT PLUGS OR BY OTHER APPROVED MEANS. IF WATER IS IN THE TRENCH WHEN WORK IS RESUMED, THE PLUG SHALL NOT BE REMOVED UNTIL THE DANGER OF WATER ENTERING THE PIPE HAS PASSED.
6. ALL BUILDING LEADS AND RISERS SHALL BE SIX INCH SDR 23.5 ABS PIPE WITH CHEMICALLY FUSED JOINTS OR AN APPROVED EQUAL PIPE AND JOINT. BUILDING LEADS TO BE FURNISHED WITH REMOVABLE AIRTIGHT AND WATERTIGHT STOPPERS.
7. ALL RIGID SEWER PIPE SHALL BE INSTALLED IN CLASS "B" BEDDING OR BETTER. ALL FLEXIBLE, SEMI-FLEXIBLE, OR COMPOSITE SEWER PIPE SHALL BE INSTALLED IN CONFORMANCE TO WRC SPECIFICATIONS.
8. ALL NEW MANHOLES SHALL HAVE WRC APPROVED FLEXIBLE, WATERTIGHT SEALS WHERE PIPES PASS THROUGH WALLS. MANHOLES SHALL BE OF PRE CAST SECTIONS WITH MODIFIED GROOVE TONGUE AND RUBBER GASKET TYPE JOINTS. PRE CAST MANHOLE CONE SECTIONS SHALL BE WRC APPROVED MODIFIED ECCENTRIC CONE TYPE. ALL MANHOLES SHALL BE PROVIDED WITH BOLTED, WATERTIGHT COVERS.
9. AT ALL CONNECTIONS TO MANHOLES ON WRC SEWERS, OR EXTENSIONS THERETO, DROP CONNECTIONS WILL BE REQUIRED WHEN THE DIFFERENCE IN INVERT ELEVATIONS EXCEEDS 18 INCHES.
10. TAPS TO EXISTING MANHOLES SHALL BE MADE BY CORING. THE CONTRACTOR SHALL PLACE A KOR-N-SEAL BOOT (OR WRC APPROVED EQUAL) AFTER CORING IS COMPLETED. BLIND DRILLING WILL ONLY BE PERMITTED IN LIEU OF CORING WITH PRIOR WRC APPROVAL.
11. MANHOLES CONSTRUCTED DIRECTLY ON WRC SEWERS SHALL BE PROVIDED WITH COVERS READING "WATER RESOURCES COMMISSIONER-SANITARY" IN RAISED LETTERS.
12. NO GROUND WATER, STORM WATER, CONSTRUCTION WATER, DOWN SPOUT DRAINAGE OR WEEP TILE DRAINAGE SHALL BE ALLOWED TO ENTER ANY SANITARY SEWER INSTALLATION.
13. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL TELEPHONE MISS DIG (800-482-7171) FOR THE LOCATION OF UNDERGROUND PIPELINE AND CABLE FACILITIES AND SHALL ALSO NOTIFY REPRESENTATIVES OF OTHER UTILITIES LOCATED IN THE VICINITY OF THE WORK.
14. AN 18 INCH MINIMUM VERTICAL SEPARATION AND A 10 FOOT MINIMUM HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN SANITARY SEWER AND WATER MAIN.
15. NEW MANHOLES BUILT OVER AN EXISTING SANITARY SEWER SHALL HAVE MONOLITHIC POURED BOTTOMS.
16. IF THE STRUCTURE FALLS WITHIN THE ROADBED OF A GRAVEL ROAD OR WITHIN THE UNPAVED SHOULDER OF A PAVED ROAD, THE COVER SHALL BE SIX (6") INCHES BELOW THE FINISHED GRAVEL SURFACE.



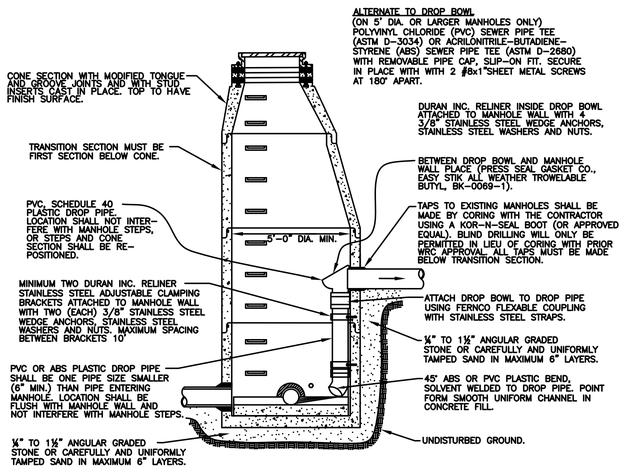
DOUBLE-COMPARTMENT GREASE INTERCEPTOR TANK FOR OUTLET PIPE BURIAL 42" AND DEEPER



SEWER SIZE	DROP SIZE	MH SIZE
UP TO 10"	8"	4'
UP TO 18"	10"	4'
UP TO 30"	18"	5'

EXTERIOR DROP CONNECTION

(REQUIRES ADVANCED APPROVAL BY WRC)



INTERIOR DROP CONNECTION

REVISION BLOCK			
Parcel Base / Source Date: N/A			
Rev. No.:	Rev. By:	Rev. Date:	Description:
1	RRH	8-31-10	FIXED NOTES THAT HAD "GROOVE TONGUE" TO READ "TONGUE AND GROOVE"
2	DS	3-23-11	REMOVED STANDARD MONITORING MANHOLE
3	KB	6-21-16	ADDED NOTE "REQUIRES ADVANCED APPROVAL BY WRC" AND UPDATE PHONE # IN NOTE #2
4	KB	7-22-20	UPDATED MH STEPS TO ASTM# D-4101

SANITARY SEWER DETAILS AND NOTES

ORIG. DATE:	08/21/02
SCALE:	NO SCALE
DESIGNED BY:	WRC
DRAWN BY:	WRC Mapping

WRC WATER RESOURCES COMMISSIONER
Jim Nash

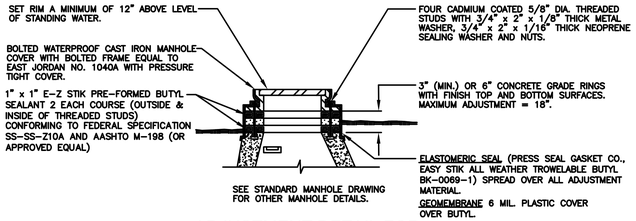
ONE PUBLIC WORKS DRIVE, BLDG 95 WEST
WATERFORD, MICHIGAN
48328-1907

SHEET NO.: 1 of 2

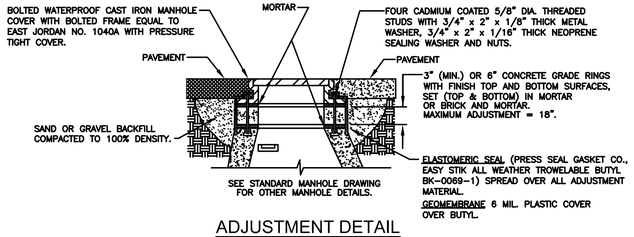
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File Location: J:\Drafti\Mapping\cad\STANDARDS\ETANDARDS\Products\Standard Sheets\dwg\d3SDtn.dwg

MANHOLE RIM ADJUSTMENT CHART

MANHOLE LOCATION	SET RIM ELEVATION
DITCH	12" ABOVE FINISH GRADE
FLOOD PLAIN	12" ABOVE STANDING WATER
GRAVEL ROAD / SHOULDER	6" BELOW FINISH GRADE
PAVEMENT / GREENBELT	FLUSH WITH FINISH GRADE



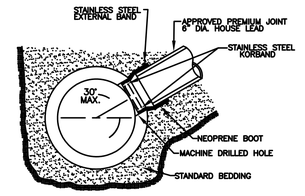
ADJUSTMENT DETAIL FOR
MANHOLE TOPS WITHIN FLOOD PRONE AREAS



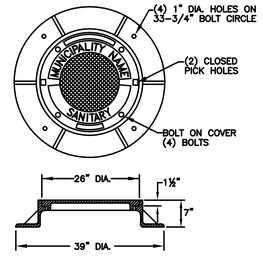
ADJUSTMENT DETAIL
MANHOLE TOPS WITHIN PAVEMENT AREAS

WATER RESOURCES COMMISSIONER
GRAVITY BUILDING LEAD REQUIREMENTS AND DETAILS

1. ALL BUILDING LEAD WORK MUST BE PERFORMED UNDER WATER RESOURCES COMMISSIONER (WRC) AND/OR LOCAL UNIT OF GOVERNMENT INSPECTION.
2. FOR ALL WRC-OPERATED SYSTEMS, CALL 248-858-1110 24-HOURS IN ADVANCE OR WORK TO SCHEDULE INSPECTION.
3. NO SANITARY SEWER MAY BE USED AS A CLEANOUT OF DEWATERING OUTLET.
4. WHERE AN EXISTING BUILDING LEAD IS BEING EXTENDED, DISSIMILAR TYPES AND SIZES OF PIPE SHALL BE JOINED USING AN WRC APPROVED ADAPTER.
5. APPROVED BUILDING LEAD PIPE FOR GRAVITY SEWER LEADS:
   A. ABS PLASTIC, ASTM D2751, SDR 23.5.
   B. PVC PLASTIC, ASTM D3034, SDR 23.5 OR ASTM D2665, SCHEDULE 40.
   C. DUCTILE IRON PIPE, AMERICAN WATER WORKS ASSOCIATION (AWWA) C-104/A21.4, CLASS 54. JOINTS SHALL BE SUPER BEL TITE, TYTON, TY-SEAL, MULTI-TITE, DUAL-TITE, OR VERI-TITE.
   D. ANY DEVIATIONS FROM SPECIFIED ABOVE REQUIRE APPROVAL BY WRC.
6. ALLOWABLE TYPES OF SEWER PIPE ADAPTERS:
   A. FERNCO ADAPTER/REDUCER DONUTS.
   B. FERNCO FLEXIBLE COUPLING.
   C. MISSION CLAY BAND-SEAL COUPLING.
   D. SMITH-BLAIR STAINLESS STEEL REPAIR CLAMP.
   E. HURON-CLINTON O-RING ADAPTER.
   F. HAMILTON-KENT GEAR GRIP ADAPTER.
   G. PLANT FABRICATED JOINT CONVERSION PIPE.

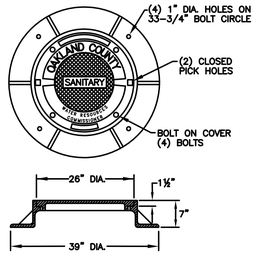


KOR-N-TEE TAP FOR CONCRETE PIPE



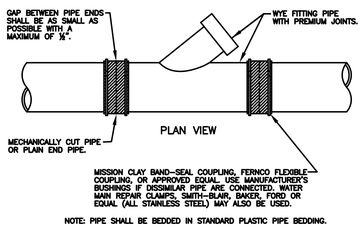
EAST JORDAN IRON WORKS
HEAVY DUTY MATERIAL ASTM A48 CL.35
COVER WT., 150 LBS., CATALOG NO. 1040A
PATTERN NO. 1040A, PRODUCT NO. 1040XX OAKCOSTD.
2" RAISED LETTERS, 1" RAISED LETTERS
ALL RECESSED FLUSH.

LOCAL MUNICIPALITIES MANHOLE COVER

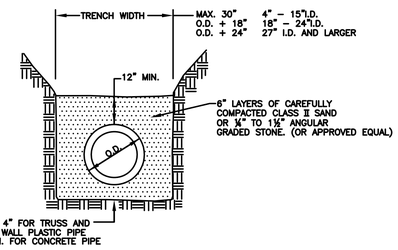


EAST JORDAN IRON WORKS
HEAVY DUTY MATERIAL ASTM A48 CL.35
COVER WT., 150 LBS., CATALOG NO. 1040APT
PATTERN NO. 1040A, PRODUCT NO. NCR09-1280 C
2" RAISED LETTERS, 1" RAISED LETTERS, 3/4" RAISED LETTERS
ALL RECESSED FLUSH.

W.R.C. LETTERED MANHOLE COVER

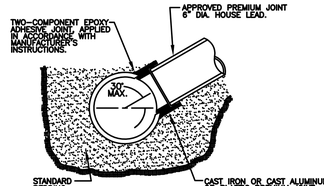


WYE PIPE INSERTION WITH FLEXIBLE COUPLINGS
(RIGID PIPE)



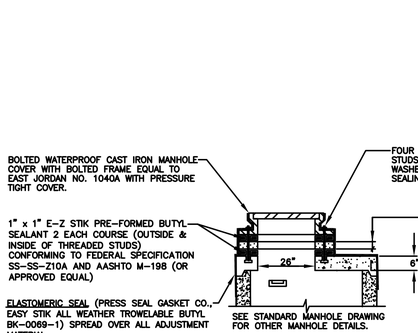
NOTE:
APPROVAL MAY BE GIVEN TO ALTERNATE MATERIALS AND METHODS TO ACHIEVE CLASS B BEDDING.

STANDARD BEDDING
(CLASS B)

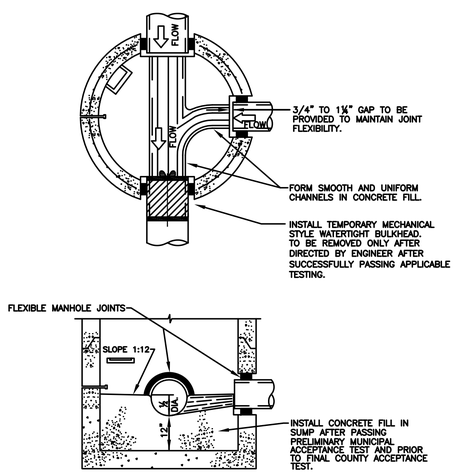


NOTE: SURFACE OF MAIN SEWER SHALL BE CLEANED WITH AN ABRASIVE GRINDER PRIOR TO EPOXY APPLICATION. DUE TO VARIATION OF SET-UP TIME OF EPOXY ADHESIVE WITH TEMPERATURE, ANCHOR STRAPS SHALL BE USED TO SECURE SADDLE IN POSITION IN COLD WEATHER OR WHENEVER WORK IS TO PROCEED PRIOR TO COMPLETE CURE OF EPOXY.

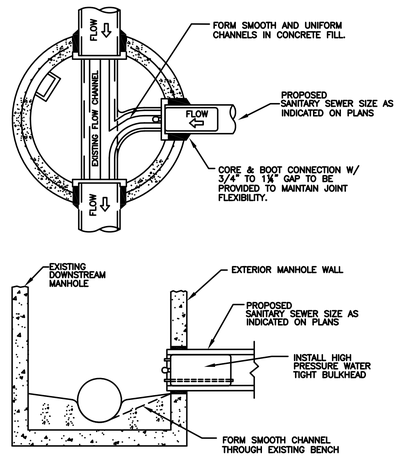
SEWER TAP-ALL SIZES OF MAIN SEWER PIPES
VITRIFIED CLAY



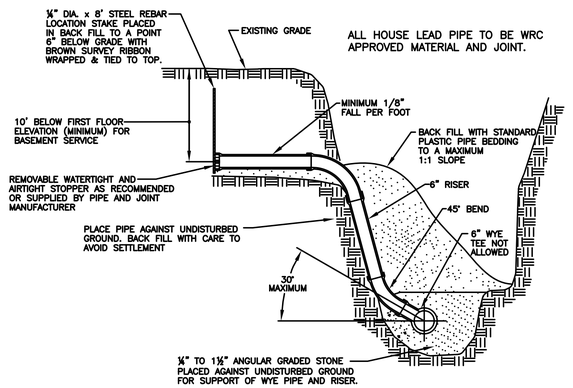
FLAT TOP MANHOLE



SUMP MANHOLE FOR TESTING,
CLEANING AND DEWATERING



TESTING BULKHEAD WITH PIPE TAP



HOUSE LEAD DETAIL

REVISION BLOCK			
Parcel Base / Source Date: N/A			
Rev. No.:	Rev. By:	Rev. Date:	Description:
1	DS	06/28/06	ADDED TESTING BULKHEAD WITH PIPE TAP DETAIL
2	tz	05/28/09	MOVED DETAILS FROM SHEET 1 ONTO SHEET 2
3	tz	07/14/09	STANDARDS COMMITTEE APPROVAL FOR DETAIL CHANGES
4	DS	02/03/14	REPLACE/UPDATE OCDC WITH WRC FOR THE MANHOLE COVER DETAIL

SANITARY SEWER DETAILS AND NOTES

ORIG. DATE:	05-09-03
SCALE:	NO SCALE
DESIGNED BY:	MWD
DRAWN BY:	Mapping Staff

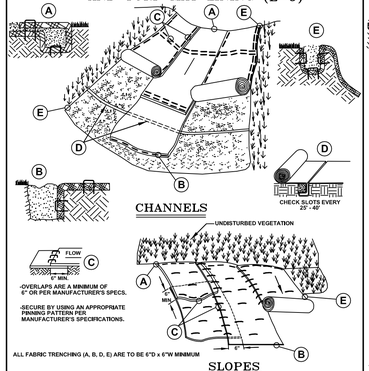
WRC WATER RESOURCES COMMISSIONER
Jim Nash

ONE PUBLIC WORKS DRIVE, BLDG 95 WEST
WATERFORD, MICHIGAN
48328-1907

SHEET NO.: 2 of 2

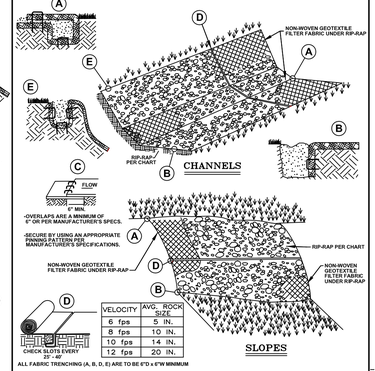
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EROSION CONTROL BLANKETS AND TURF MAT LINING (E-9)



DEPENDING ON THE VELOCITY, SLOPE, SOILS, USE PROPER BLANKET OR TURF MAT LINING PER MANUFACTURER'S SPECIFICATIONS TO HANDLE THE SHEER STRESSES OF THE SLOPE/CHANNEL.

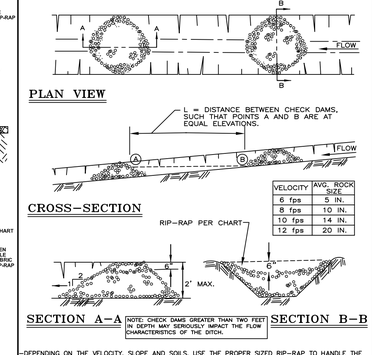
RIP-RAP: CHANNELS AND SLOPES (E-10)



VELOCITY	AVG. ROCK SIZE
5 fps	5 IN.
8 fps	10 IN.
10 fps	14 IN.
12 fps	20 IN.

DEPENDING ON THE VELOCITY, SLOPE AND SOILS, USE THE PROPER SIZED RIP-RAP AND NON-WOVEN GEOTEXTILE FABRIC TO HANDLE THE SHEER STRESS OF THE SLOPE/CHANNEL.

CHECK DAMS (E-3)



VELOCITY	AVG. ROCK SIZE
6 fps	5 IN.
8 fps	10 IN.
10 fps	14 IN.
12 fps	20 IN.

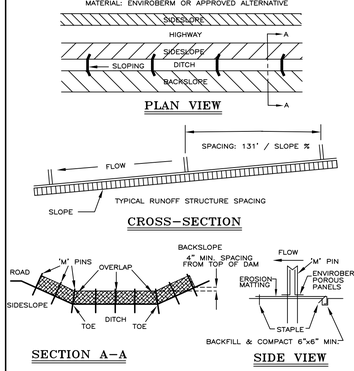
NOTE: CHECK DAMS GREATER THAN TWO FEET IN DEPTH MAY SERIOUSLY IMPACT THE FLOW CHARACTERISTICS OF THE DITCH.

-DEPENDING ON THE VELOCITY, SLOPE AND SOILS, USE THE PROPER SIZED RIP-RAP TO HANDLE THE SHEER STRESS OF THE SLOPE/CHANNEL.

-FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

CHECK DAMS ALTERNATIVE "A" (E-3A)

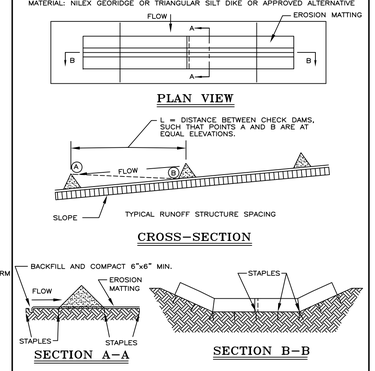
MATERIAL: ENVIROBERM OR APPROVED ALTERNATIVE



-FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

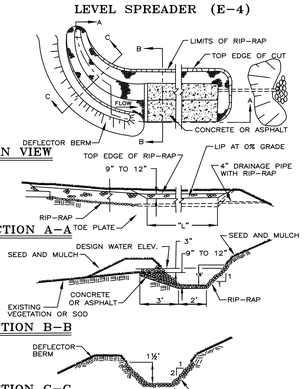
CHECK DAMS ALTERNATIVE "B" (E-3B)

MATERIAL: NILEX GEORIDGE OR TRIANGULAR SILT DIKE OR APPROVED ALTERNATIVE

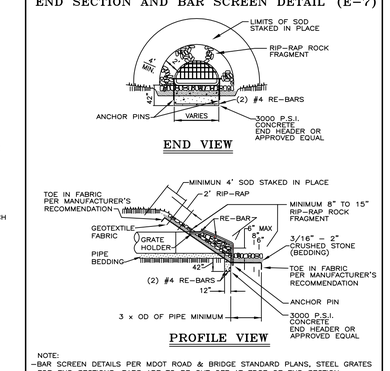


-FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

LEVEL SPREADER (E-4)



RIP-RAP, END SECTION AND BAR SCREEN DETAIL (E-7)

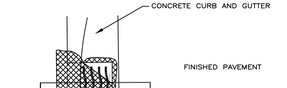


NOTE:
-BAR SCREEN DETAILS PER MDOT ROAD & BRIDGE STANDARD PLANS, STEEL GRATES FOR END SECTIONS. BARS ARE TO BE CUT OFF AT EDGE OF END SECTION.
-FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

VEGETATIVE BUFFER ZONE (SP-1)

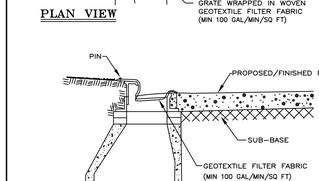
THE GRAPH SHOWN BELOW IS USED TO DETERMINE THE ADEQUACY OF AN EXISTING VEGETATIVE BUFFER ZONE FOR USE AS A SEDIMENT FILTER. THIS GRAPH IS ONLY APPLICABLE IF THE VEGETATION IS 90% DENSE AND AT LEAST 1" IN LENGTH OVER EVERY SQUARE FOOT OF DISTURBED SOIL. AN AREA COVERED WITH WEEDS, OR BUSHES AND TREES WITHOUT A GOOD GROUND COVER IS NOT ACCEPTABLE.

EXAMPLE



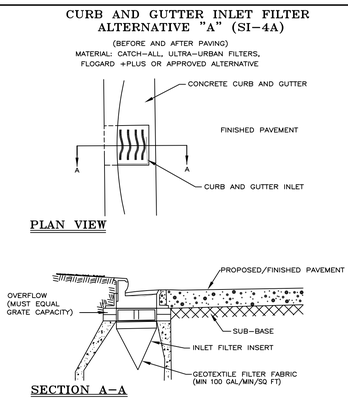
LENGTH OF BUFFER ZONE = ?
% OF SLOPE OF BUFFER ZONE = 5%
WHAT IS THE ACCEPTABLE LENGTH OF THE BUFFER ZONE?

PLOT IN GRAPH BELOW
BUFFER ZONE IS ACCEPTABLE AT 65'



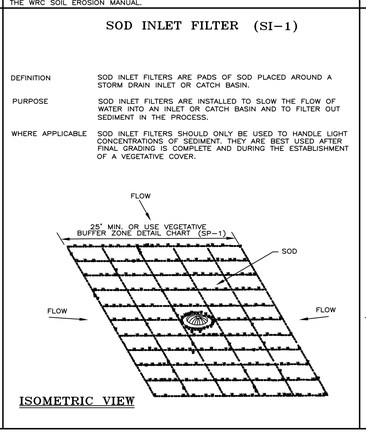
SILT FENCE (SP-2)

(MATERIAL: AMOCO PRO PEX 2130 OR APPROVED EQUIVALENT)



SILT FENCE ALTERNATIVE "A" (SP-2A)

(MATERIAL: SILT SHIELD OR APPROVED EQUIVALENT)



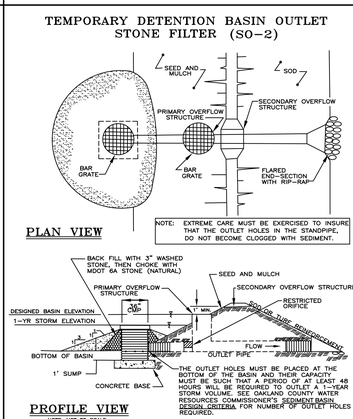
2% GRADE MAXIMUM SLOPE

Splicing Procedure:
Splicing EXTRUDED SEDIMENT FILTER FENCE is achieved beginning with an overlap of a min. of 8" of the EXTRUDED SEDIMENT FILTER FENCE ends being spliced. Place one plastic retainer post push-in fastener to locate those ends with one directly vertically, at least 1" from each edge of the splice.

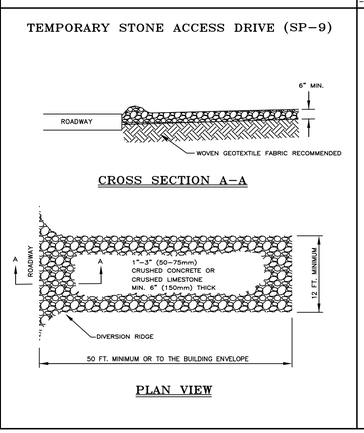
Optional Heat Splicing:
Overlap a minimum of eight inches. Melt a thin layer of EXTRUDED SEDIMENT FILTER FENCE with torch from top to bottom, immediately press both layers together for a minimum of 5 second. Check for total lamination from top to bottom of material. (Do not apply heat to filter)

WINTER/FROZEN GROUND SILT FENCE (SP-2W)

(MATERIAL: AMOCO PRO PEX 2130 OR APPROVED EQUIVALENT)

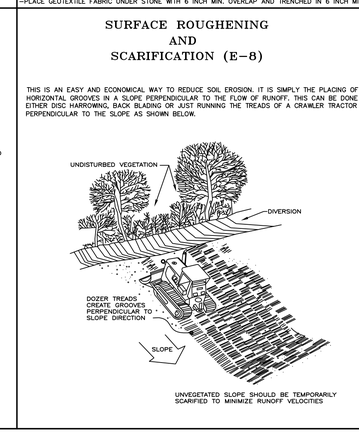


RYCB INLET FILTER (SI-3)



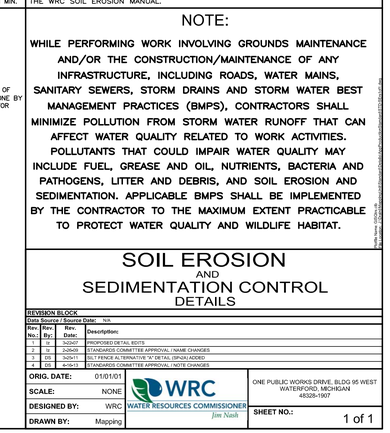
NOTE: MATERIAL IS NOT SILT FENCE MATERIAL

RYCB INLET FILTER ALTERNATIVE "A" (SI-3A)



RYCB INLET FILTER ALTERNATIVE "B" (SI-3B)

MATERIAL: SILT SAVER OR APPROVED ALTERNATIVE



(NOTE: NO PIT REQUIRED WHEN FRAME AND COVER OR GRATE AND COVER ARE IN PLACE.)

EARTH DIVERSION BERM WITH STONE OUTLET FILTER (SP-4)

EARTH DIVERSION BERM (E-2)

GRAVEL INTERCEPTOR DIKE (SP-6)

-PLACE GEOTEXTILE FABRIC UNDER STONE WITH 6 INCH MIN. OVERLAP AND TRENCHED IN 6 INCH MIN. -FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THIS SHEET OR IN THE WRC SOIL EROSION MANUAL.

LOW POINT INLET FILTER (SI-2)

ALTERNATIVE INLET FILTER MUST BE USED IN AREAS THAT MAY BECOME A SAFETY HAZARD DUE TO FLOODING OR FREEZING.

LOW POINT INLET FILTER ALT. "A" (SI-2A)

MATERIAL: CATCH-ALL, ULTRA-URBAN FILTERS, FLOGARD +PLUS OR APPROVED ALTERNATIVE

SILT FENCE GRAVEL FILTER (SP-3)

-PLACE GEOTEXTILE FABRIC UNDER STONE WITH 6 INCH MIN. OVERLAP AND TRENCHED IN 6 INCH MIN.

DITCH SEDIMENT TRAP (SO-4)

NOTE:
FOR SLOPE AND/OR CHANNEL PROTECTION SEE OTHER BMP'S ON THE SHEET OR IN THE WRC SOIL EROSION MANUAL.

CURB AND GUTTER INLET FILTER (SI-4)

(BEFORE AND AFTER PAVING)

ALTERNATIVE INLET FILTER MUST BE USED IN AREAS THAT MAY BECOME A SAFETY HAZARD DUE TO FLOODING OR FREEZING.

CURB AND GUTTER INLET FILTER ALTERNATIVE "A" (SI-4A)

(BEFORE AND AFTER PAVING)

MATERIAL: CATCH-ALL, ULTRA-URBAN FILTERS, FLOGARD +PLUS OR APPROVED ALTERNATIVE

SOD INLET FILTER (SI-1)

DEFINITION	SOD INLET FILTERS ARE PADS OF SOD PLACED AROUND A STORM DRAIN INLET OR CATCH BASIN.
PURPOSE	SOD INLET FILTERS ARE INSTALLED TO SLOW THE FLOW OF WATER INTO AN INLET OR CATCH BASIN AND TO FILTER OUT SEDIMENT IN THE PROCESS.
WHERE APPLICABLE	SOD INLET FILTERS SHOULD ONLY BE USED TO HANDLE LIGHT CONCENTRATIONS OF SEDIMENT. THEY ARE BEST USED AFTER FINAL GRADING IS COMPLETE AND DURING THE ESTABLISHMENT OF A VEGETATIVE COVER.

TEMPORARY DETENTION BASIN OUTLET STONE FILTER (SO-2)

TEMPORARY STONE ACCESS DRIVE (SP-9)

SURFACE ROUGHENING AND SCARIFICATION (E-8)

THIS IS AN EASY AND ECONOMICAL WAY TO REDUCE SOIL EROSION. IT IS SIMPLY THE PLACING OF HORIZONTAL GROOVES IN A SLOPE PERPENDICULAR TO THE FLOW OF RUNOFF. THIS CAN BE DONE BY EITHER DISC HARROWING, BACK BLADING OR JUST RUNNING THE TREADS OF A CRAWLER TRACTOR PERPENDICULAR TO THE SLOPE AS SHOWN BELOW.

UNVEGETATED SLOPE SHOULD BE TEMPORARILY SCARIFIED TO MINIMIZE RUNOFF VELOCITIES

NOTE:

WHILE PERFORMING WORK INVOLVING GROUNDS MAINTENANCE AND/OR THE CONSTRUCTION/MAINTENANCE OF ANY INFRASTRUCTURE, INCLUDING ROADS, WATER MAINS, SANITARY SEWERS, STORM DRAINS AND STORM WATER BEST MANAGEMENT PRACTICES (BMPS), CONTRACTORS SHALL MINIMIZE POLLUTION FROM STORM WATER RUNOFF THAT CAN AFFECT WATER QUALITY RELATED TO WORK ACTIVITIES. POLLUTANTS THAT COULD IMPAIR WATER QUALITY MAY INCLUDE FUEL, GREASE AND OIL, NUTRIENTS, BACTERIA AND PATHOGENS, LITTER AND DEBRIS, AND SOIL EROSION AND SEDIMENTATION. APPLICABLE BMPS SHALL BE IMPLEMENTED BY THE CONTRACTOR TO THE MAXIMUM EXTENT PRACTICABLE TO PROTECT WATER QUALITY AND WILDLIFE HABITAT.

SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

REVISION BLOCK			
Date Source / Source Date:		N/A	
Rev. No.:	Rev. By:	Rev. Date:	Description:
1	W	3-23-07	PROPOSED DETAIL EDITS
2	W	3-29-07	STANDARDS COMMITTEE APPROVAL / NAME CHANGES
3	SS	3-29-11	SILT FENCE ALTERNATIVE "A" DETAIL (SP-2A) ADDED
4	DS	4-16-13	STANDARDS COMMITTEE APPROVAL / NOTE CHANGES

ORIG. DATE:	01/01/01
SCALE:	NONE
DESIGNED BY:	WRC
DRAWN BY:	Mapping

WRC WATER RESOURCES COMMISSIONER
Jim Nash

ONE PUBLIC WORKS DRIVE, BLDG 95 WEST
WATERFORD, MICHIGAN
48328-1907

SHEET NO.: 1 of 1

DESIGN CRITERIA

1. STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH:
   MBC 2015
   MI RHC 2015
   ASCE 7-10
   ASCE 41-13
   ACI 318-14
   ACI 530-13
   AISC 360-10
   AISC 341-10
   AISI S100
   AWS D1.1, D1.3 AND D1.8
   NDS-15 AND SDPWS-15
2. RISK CATEGORY II
3. DEAD LOADS ARE LISTED ON PLANS.
4. LIVE LOADS: SEE S004 FOR LOADING PLANS
5. SNOW: SEE S004 FOR LOADING PLANS
6. SEISMIC: SEE S004 FOR LOADING PLANS
7. WIND LOADS: SEE S004 FOR LOADING PLANS
8. ICC 500 SHELTER WIND DESIGN LOADS: SEE S004 FOR LOADING PLANS
9. ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED BY MASONRY WALLS IN EACH ORTHOGONAL DIRECTION. SEE PLANS FOR LOCATIONS. THE DECKING SERVE AS HORIZONTAL DIAPHRAGMS DISTRIBUTING THE LATERAL FORCES TO THE VERTICAL LATERAL ELEMENTS WHICH IN TURN CARRY THE LOAD TO THE BUILDING FOUNDATIONS.

GENERAL

1. DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
2. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
3. STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. SUPPLIER SHALL PROVIDE SEALED DESIGN CALCULATIONS OR SUITABLE PRODUCT LITERATURE FOR THE COMPONENTS.
4. ALL DIMENSIONS AND SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOBSITE PRIOR TO CONSTRUCTION, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
5. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
6. STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW ALL DETAIL DIMENSIONS TO FIT INTRICATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL SO CONSTRUCT THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL AND ELECTRICAL DESIGN.
7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
8. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION WITH ARCHITECT.
9. TYPICAL DETAILS SHALL APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
10. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE.
11. SEE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILS, CONDITIONS, PITS, TRENCHES, PADS, DEPRESSIONS, ROOF/FLOOR OPENINGS, STAIRS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS.
12. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADE CONTRACTORS. OPENING SIZES AND LOCATIONS SHOWN FOR DUCTS, PIPE, INSERTS AND OTHER PENETRATIONS WHEN SHOWN ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED PRIOR TO FORMING.
13. NO HOLES, NOTCHES, BLOCK-OUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
14. PENETRATIONS SHALL BE CAST-IN-PLACE AND SHALL NOT BE PERMITTED EXCEPT AS SHOWN IN THE STRUCTURAL DRAWINGS.
15. BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, EACH PARTY SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH CONDITIONS IN FIELD, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE PROPOSAL SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK.

SUBMITTALS

1. SUBMITTALS ARE:
   a. CONCRETE MIX DESIGNS
   b. MATERIAL PRODUCT DATA FOR STRUCTURAL MATERIALS
   c. CONCRETE AND MASONRY REINFORCING
   d. ENGINEERED LUMBER
   e. PANELIZED WALLS FOR WOOD BUILDINGS
   f. STEEL FABRICATION AND MISCELLANEOUS METALS
   g. STEEL DECK
2. SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE ARCHITECT/STRUCTURAL ENGINEER.
3. SUBMITTALS SHALL BE REVIEWED BY THE ARCHITECT/STRUCTURAL ENGINEER FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE ARCHITECT/STRUCTURAL ENGINEER ON THE SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
4. FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

DELEGATED DESIGN

1. DELEGATED DESIGNS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
2. DELEGATED DESIGNS ARE:
   a. EXCAVATION, SHORING, AND UNDERPINNING
   b. PREMANUFACTURED WOOD JOISTS AND TRUSSES
   c. STRUCTURAL STEEL CONNECTIONS
   d. CURTAIN WALL AND STOREFRONT SYSTEMS
   e. COLD FORMED STEEL FRAMING
   f. ROOFTOP EQUIPMENT ANCHORAGE AND CURBS
   g. STAIRS, ACCESS LADDERS, HANDRAILS, GUARDRAILS, AND GRATING
3. ALL DELEGATED DESIGNS SHALL BEAR THE STAMP AND SIGNATURE OF THE QUALIFIED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED, RESPONSIBLE FOR THE PREPARATION OF THESE DOCUMENTS.

EXISTING CONDITIONS / DEMOLITION

1. EXISTING CONDITIONS:
   a. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM EXISTING DRAWINGS:
      i. DATED 6-15-1962 BY DOLGNER, ROLLASON & ROKICKI ARCHITECTS & ENGINEERS.
      ii. DATED 12-1-1949 BY JENSEN & KEOUCH ARCHITECTS & ENGINEERS.
      iii. DATED 5-14-1927 BY VAN LEYEN, SCHILLING & KEOUCH ARCHITECTS & ENGINEERS.
   b. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM FIELD TAKE-OFF BY IMEG AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.
   c. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE. CONTRACTOR TO VERIFY EXISTING INFORMATION, DIMENSIONS AND SIZES AS REQUIRED TO COMPLETE THEIR WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ARCHITECT OR STRUCTURAL ENGINEER SO PROPER CLARIFICATION MAY BE MADE. MODIFICATION OF CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT OR STRUCTURAL ENGINEER.
2. EXISTING BUILDING MATERIAL PROPERTIES:
   a. REFER TO DRAWINGS
3. ALL DEMOLITION SHALL BE CARRIED OUT IN SUCH A WAY SO AS TO NOT DAMAGE EXISTING ELEMENTS WHICH ARE TO REMAIN.
4. ALL ELEMENTS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDED COST. EXISTING ELEMENTS ARE TO BE PROTECTED TO THE FULLEST EXTENT POSSIBLE TO REDUCE SUCH DAMAGE TO A MINIMUM.

EARTHWORK

1. FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT DATED SEPTEMBER 26, 2023 BY McDOWEL & ASSOCIATES. REPORT IS ON FILE WITH THE ARCHITECT.
2. SOIL PROPERTIES PER THE GEOTECHNICAL REPORT:

ALLOWABLE NET SOIL BEARING PRESSURE:	
FOOTINGS	3000 PSF
FROST DEPTH	3.5 FT (UNHEATED)

3. ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING/BASEMENT WALLS BEFORE CONCRETE HAS ATTAINED SPECIFIED COMPRESSIVE STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL WALLS BELOW GRADE FROM LATERAL LOADS UNTIL SUPPORTING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED 7-DAY STRENGTH MINIMUM. BACKFILLING IS NOT PERMITTED FOR FOUNDATION WALLS UNTIL SUPPORTED SLAB TOP AND BOTTOM IS IN PLACE OR THE WALL IS ADEQUATELY BRACED TO RESIST LATERAL LOADS. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS, AND INSTALLATION OR SHORING AND/OR SHEETING.
4. CONTRACTOR SHALL PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER OR SEEPAGE. FREE GROUND WATER WAS NOT ENCOUNTERED IN THE BORINGS. DETAILS OF GROUND WATER INFORMATION CAN BE OBTAINED FROM THE ABOVE-MENTIONED GEOTECHNICAL REPORT. IF GROUND WATER SHOULD OCCUR DURING EXCAVATION, SPECIAL PROCEDURES SHALL BE IMPLEMENTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
5. WHERE THERE IS NOT SUFFICIENT SPACE FOR SLOPED EMBANKMENTS, SHORING WILL BE REQUIRED. SEE THE GEOTECHNICAL REPORT FOR INFORMATION REGARDING THE DESIGN AND INSTALLATION OF THE SHORING. SHORING THAT IS NOT PART OF THE PERMANENT BUILDING SUPPORT IS THE CONTRACTOR’S RESPONSIBILITY AND OUTSIDE THIS PERMIT.
6. CARE SHALL BE EXERCISED WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES OR IMPROVEMENTS TO NOT DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.
7. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILL MATERIAL OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS AND FOUNDATIONS. IF ANY SUCH MATERIAL OR STRUCTURES ARE FOUND, ARCHITECT/ENGINEER SHALL BE NOTIFIED IMMEDIATELY. ALL ABANDONED FOUNDATIONS, UTILITIES AND OTHER STRUCTURES THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
8. ALL FOOTINGS AND SLABS ON GRADE SHALL BE PLACED ONTO FIRM UNDISTURBED SOIL OR CONTROLLED COMPACTED FILL, REMOVING ANY EXISTING FILL, ORGANIC MATERIAL, OR UNSUITABLE SOILS, AS RECOMMENDED BY THE GEOTECHNICAL REPORT. EXPOSED NATURAL SOIL SHALL BE PROOF ROLLED BELOW SLABS ON GRADE.
9. THE PREPARATION OF THE SUBGRADE FOR THE SLAB ON GRADE SHALL BE IN STRICT ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT REFERENCED ABOVE. THE CONTRACTOR SHALL DIRECT QUESTIONS REGARDING THE SUBGRADE PREPARATION REQUIREMENTS TO THE GEOTECHNICAL ENGINEER.
10. FOUNDATION ELEVATIONS SHOWN DESIGNATE A MINIMUM DEPTH WHERE AN ADEQUATE SOIL BEARING PRESSURE IS EXPECTED. FOOTINGS, PIERS AND/OR WALLS SHALL BE LOWERED OR EXTENDED AS REQUIRED TO REACH SOIL MEETING THE DESIGN BEARING PRESSURE.
11. ALL REQUIRED BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN 6” LAYERS TO 95% MAXIMUM DRY DENSITY PER ASTM D1557 AND TO THE APPROVAL OF THE INSPECTION AGENCY.
12. THE MOISTURE CONTENT OF ONSITE CLAYEY SOILS AT THE TIME OF COMPACTION SHALL BE BETWEEN 2-3% ABOVE OPTIMUM MOISTURE CONTENT.
13. ANY REQUIRED IMPORT FILL SOIL SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO IMPORTING.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE AMERICAN CONCRETE INSTITUTE “ACI DETAILING MANUAL” (SP-066) EXCEPT AS OTHERWISE SHOWN, NOTED OR SPECIFIED.
2. CONCRETE REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO THE FOLLOWING STANDARDS:

DEFORMED BARS	ASTM A615, GR 60	Fy = 60 KSI
DEFORMED BARS IN SFRS	ASTM A706, GR 60	Fy = 60 KSI
WELDED WIRE REINFORCING	ASTM A1064	Fy = 65 KSI
DEFORMED EPOXY-COATED BARS	ASTM A775	Fy = 60 KSI
DEFORMED GALVANIZED-COATED BARS	ASTM A767	Fy = 60 KSI
STEEL WIRE	ASTM A1064	Fy = 60 KSI
DEFORMED BAR ANCHORS	ASTM A1064	Fy = 70 KSI
WELDABLE BARS, DEFORMED	ASTM A706, GR 60	Fy = 60 KSI

3. MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:

CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	3”
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	
#6 BARS OR LARGER	2”
#5 BARS OR SMALLER	1 1/2”

4. ALL REINFORCING IN CONCRETE USED FOR THE CONTAINMENT OF WATER SHALL BE HOT-DIP GALVANIZED OR EPOXY-COATED.
5. DEFORMED BAR ANCHORS (DBA) SHALL BE AUTOMATICALLY END WELDED WITH SUITABLE WELDING EQUIPMENT IN THE SHOP OR IN THE FIELD. WELDING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER.
6. SUPPORTS FOR REINFORCEMENT SHALL HAVE CLASS 2 PROTECTION AS DEFINED IN THE CRSI MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED.
7. SUPPORTS FOR COATED REINFORCEMENT SHALL HAVE CLASS 1 PROTECTION AS DEFINED IN THE CRSI MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED.
8. ALL WELDED WIRE REINFORCING (WWR) SHALL BE LAPPED 2 PANELS AT EDGES AND ENDS.
9. CONTINUOUS HORIZONTAL REINFORCING SHALL BE LAPPED AT MIDSPAN FOR TOP BARS AND DIRECTLY OVER SUPPORTS FOR BOTTOM BARS. AT DISCONTINUOUS ENDS, THE TOP STEEL SHALL BE BENT DOWN 12 BAR DIAMETERS OR 12” MINIMUM, WHICHEVER IS GREATER.
10. FOR MAT FOUNDATIONS, REINFORCING FOR TOP BARS SHALL BE LAPPED UNDER STRUCTURAL COLUMNS AND WALLS ABOVE AND AT MIDSPAN FOR BOTTOM BARS. AT DISCONTINUOUS ENDS, THE TOP STEEL SHALL BE BENT DOWN 12 BAR DIAMETERS OR 12” MINIMUM, WHICHEVER IS GREATER.
11. WHERE REINFORCEMENT LENGTH IS SPECIFIED, NO SPLICES ARE PERMITTED WITHIN THE SPECIFIED LENGTH WITHOUT APPROVAL BY THE STRUCTURAL ENGINEER.
12. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY, UNLESS OTHERWISE NOTED. PROVIDE FOUNDATION DOWELS TO MATCH SIZE AND SPACING OF WALL OR COLUMN REINFORCEMENT. EXTEND DOWELS A LAP SPLICE LENGTH INTO WALL OR COLUMN AND TERMINATE WITH STANDARD HOOK AT BOTTOM OF FOOTING, UNLESS OTHERWISE NOTED.
13. REINFORCING IN WALL FOOTINGS AND GRADE BEAMS BETWEEN COLUMNS SHALL BE DEVELOPED (Ld) INTO COLUMN FOOTINGS.
14. CUTTING OF REINFORCING WHICH CONFLICTS WITH EMBEDDED OBJECTS OR SLEEVES IS NOT ACCEPTABLE.
15. REINFORCING BARS SHALL BE BENT COLD, AND NO METHOD OF FABRICATION SHALL BE USED WHICH WOULD BE INJURIOUS TO THE MATERIAL. HEATING OF BARS FOR BENDING IS NOT PERMITTED.
16. FIELD WELDING OR BENDING OF REINFORCING IS NOT PERMITTED EXCEPT AS INDICATED ON THE DRAWINGS OR AS APPROVED BY THE STRUCTURAL ENGINEER.
17. USE TEMPLATES TO SET ALL EMBEDDED ANCHOR BOLTS, LEVELING PLATES, AND DOWEL BARS AS REQUIRED OR INDICATED ON THE DRAWINGS.
18. SUBMIT SHOP DRAWINGS FOR FABRICATION AND PLACEMENT OF REINFORCING STEEL. INCLUDE SCHEDULES AND DIAGRAMS OF BENT BARS AND SHOW ARRANGEMENT OF REINFORCEMENT, INCLUDING CONCRETE COVER. STRUCTURAL ENGINEER’S REVIEW WILL BE FOR COMPLIANCE WITH DESIGN REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DIMENSIONS AND QUANTITIES.
19. ALL CONCRETE NOT OTHERWISE SPECIFIED SHALL BE REINFORCED TO THE MINIMUM REQUIREMENT OF ACI 318.
20. REINFORCE ALL ARCHITECTURAL CONCRETE TOPPING SLABS WITH 6x6-W1.4xW1.4 WWR UNLESS OTHERWISE NOTED.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE CORRESPONDING EDITION OF THE AMERICAN CONCRETE INSTITUTE PUBLICATIONS: ACI 117, ACI 301, ACI 305.1, ACI 306.1, ACI 308.1, ACI 318 AND SP-066, UNLESS OTHERWISE NOTED.
2. CONCRETE MATERIALS SHALL CONFORM TO:

CEMENT	ASTM C150, TYPE I OR II
FLY ASH	ASTM C618, TYPE C OR F
FINE AND COARSE AGGREGATE	ASTM C33
LIGHTWEIGHT AGGREGATE	ASTM C330
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C260
WATER REDUCING ADMIXTURE	ASTM C494

3. CONCRETE STRENGTHS SHALL CONFORM TO:

INTENDED USE	STRENGTH (PSI)	EXPOSURE CLASS
FOUNDATIONS	4000	N/A
SLAB ON GRADE	4000	N/A
UNLESS OTHERWISE NOTED	4000	N/A

NORMAL-WEIGHT 28-DAY STRENGTH UNLESS OTHERWISE NOTED.

4. THE MODULUS OF ELASTICITY OF ALL CONCRETE SHALL EXCEED 57,000 SQRT(f’c) FOR NORMAL-WEIGHT CONCRETE OR wc1.5 33 SQRT(f’c).
5. DRYPACK OR GROUT SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 7000 PSI.
6. SLAB-ON-GRADE CONSTRUCTION: LOCATE SAW-CUT CONTROL JOINTS ALONG COLUMN LINES WITH INTERMEDIATE JOINTS SPACED PER THE TABLE BELOW, UNLESS OTHERWISE NOTED. SLAB PANELS SHALL HAVE A MAXIMUM LENGTH TO WIDTH RATIO OF 1.5:1. PROVIDE ADDITIONAL CONTROL JOINTS AT ALL RE-ENTRANT CORNERS. SEE PLAN FOR SPECIAL CASES.

THICKNESS (IN)	MAXIMUM JOINT SPACING EACH WAY (FT)
4	12
5	13
6	15
8	18
10	20
12	22

7. CROSS REFERENCE ARCHITECTURAL AND STRUCTURAL DRAWINGS TO ENSURE PROPER DIMENSIONS AND PLACEMENT OF ALL ANCHOR BOLTS, INSERTS, NOTCHES, AND EDGES OF WALLS/FOUNDATIONS PRIOR TO PLACING CONCRETE.
8. UNLESS OTHERWISE NOTED, ALL FOOTINGS SHALL BE CENTERED UNDER WALLS, PIERS OR COLUMNS.
9. CONSTRUCTION JOINTS SHALL BE THOROUGHLY ROUGHENED TO 1/4” AMPLITUDE BY SAND BLASTING OR MECHANICAL MEANS. CLEAN BEFORE POUR. LOCATION TO BE APPROVED BY THE STRUCTURAL ENGINEER. SUBMIT LOCATION PLAN OF ALL PROPOSED JOINTS NOT INDICATED ON DRAWINGS FOR APPROVAL PRIOR TO BEGINNING WORK.
10. PRIOR TO PLACING CONCRETE, THE CONTRACTOR SHALL ENSURE ALL REINFORCING AND EMBEDMENTS, INCLUDING COLUMN ANCHOR BOLTS, ARE PROPERLY LOCATED AND SECURELY TIED IN PLACE.
11. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL PENETRATIONS THROUGH CONCRETE BEFORE PLACING. SECURE SLEEVES TO PREVENT MOVEMENT DURING PLACING OPERATIONS. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS.
12. CONFIRM WITH ARCHITECT THAT MATERIALS TO BE EMBEDDED ARE SUITABLE FOR EMBEDMENT IN CONCRETE.
13. CONDUIT, PIPES, AND SLEEVES EMBEDDED IN CONCRETE SHALL CONFORM TO REQUIREMENTS OF ACI 318, SECTIONS 20.7 AND 26.8.
14. DO NOT PLACE VERTICAL CONDUIT IN CONCRETE COLUMNS WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.
15. NO ALUMINUM SHALL BE ALLOWED IN THE CONCRETE WORK UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION.
16. WATERSTOPS SHALL BE A FLEXIBLE BENTONITE PRODUCT. ACCEPTABLE PRODUCTS INCLUDE: CETCO WATERSTOP-RX AND GREENSTREAK SWELLSTOP WESTIC BARRIER TECHNOLOGIES TPE-R WATERSTOP AND GREENSTREAK PVC WATERSTOP.
17. PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC., SHALL BE FORMED WITH A 3/4 INCH CHAMFER, UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS.
18. SLOPE SLABS TO DRAINS OR FOR POSITIVE DRAINAGE IF NO DRAINS ARE PRESENT AND PROVIDE DEPRESSIONS WHERE SHOWN ON THE STRUCTURAL AND/OR ARCHITECTURAL DRAWINGS WITHOUT REDUCING THE THICKNESS OF SLAB INDICATED. FOR SLAB-ON-GRADE DEPRESSIONS GREATER THAN 1 INCH, SEE DETAILS FOR ADDITIONAL REINFORCING.
19. INTERNALLY VIBRATE ALL CAST-IN-PLACE CONCRETE EXCEPT SLABS-ON-GRADE WHICH NEED ONLY BE VIBRATED AROUND UNDER FLOOR DUCTS AND OTHER EMBEDDED ITEMS. VIBRATE TOPS OF COLUMNS.
20. PROVIDE VERTICAL CONTROL JOINTS IN EXPOSED CONCRETE WALLS AT A MINIMUM UNIFORM SPACING NOT TO EXCEED 25 FEET PER ACI 224.3. COORDINATE JOINT LOCATIONS WITH ARCHITECTURAL DRAWINGS.
21. CONCRETE SHALL NOT BE PERMITTED TO DROP MORE THAN 5 FEET.
22. IF CONCRETE IS PLACED BY PUMPING, SUPPORT SHALL BE PROVIDED FOR THE HOSE. THE HOSE SHALL NOT BE ALLOWED TO RIDE ON THE REINFORCING AND OTHER EMBEDDED ITEMS.
23. CONCRETE SLABS SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR 7 DAYS. FORMS FOR CONCRETE WALLS SHALL BE LEFT IN PLACE FOR 7 DAYS OR MAY BE STRIPPED AFTER 3 DAYS AND COATED WITH AN APPROVED CURING COMPOUND.
24. NO LOADS SHALL BE PLACED ON STRUCTURAL CONCRETE SLABS WITHIN 7 DAYS AFTER CONCRETE IS PLACED. AFTER CONCRETE IS PLACED, IN NO CASE SHALL THE SUPERIMPOSED CONSTRUCTION LOADS BE GREATER THAN SPECIFIED DESIGN LIVE LOADS, UNLESS THE WORK IS SHORED.
25. NOTIFY THE ARCHITECT/STRUCTURAL ENGINEER 48 HOURS MINIMUM PRIOR TO ALL POURS.
26. CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.
27. THE DESIGN AND ENGINEERING OF FORMWORK, SHORING AND RESHORING, AS WELL AS THEIR CONSTRUCTION, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. FORMS SHALL BE DESIGNED TO HAVE SUFFICIENT STRENGTH TO SAFELY WITHSTAND THE LOADS RESULTING FROM PLACEMENT AND VIBRATION OF THE CONCRETE AND SHALL ALSO BE DESIGNED FOR SUFFICIENT RIGIDITY TO MAINTAIN SPECIFIED TOLERANCES. CONTRACTOR SHALL SUBMIT DETAILED FORMWORK SHOP DRAWINGS TO THE ARCHITECT TO BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN CONCEPT ONLY.
28. SHORING OF ELEVATED CONCRETE TO REMAIN UNTIL CONCRETE TESTS, CURED UNDER JOB-SITE CONDITIONS HAVE BEEN TESTED AND INDICATE 80% OF THE DESIGN MODULUS OF ELASTICITY. GENERAL CONTRACTOR TO PROVIDE THE STRUCTURAL ENGINEER WITH MODULUS OF ELASTICITY TEST RESULTS. SHORING OF THE STRUCTURAL BAY CONTAINING CONSTRUCTION JOINTS AND/OR POUR STRIPS TO REMAIN IN PLACE UNTIL SLAB CONSTRUCTION IS COMPLETE.
29. CONCRETE FILL THICKNESS SHOWN ON FRAMING PLANS AND DETAIL SHEETS IS MINIMUM THICKNESS. NO ALLOWANCES HAVE BEEN SHOWN FOR ADDITIONAL CONCRETE FILL REQUIRED TO COMPENSATE FOR BEAM OR DECK DEFLECTIONS AND TO MAINTAIN SURFACE TOLERANCES SPECIFIED.
30. PROVIDE LIGHTWEIGHT SELF-LEVELING MATERIAL AT ELEVATED CONCRETE SLABS AND SLABS ON STEEL DECK AS REQUIRED TO MEET FLOOR FLATNESS AND LEVELNESS REQUIREMENTS. SUBMIT PROPOSED LOCATIONS AND LEVELING MATERIAL DATA FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT.
31. CORING OF CONCRETE IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
32. NO CONCRETE SHALL BE PLACED ONTO OR AGAINST SUBGRADES CONTAINING FREE WATER, FROST, ICE OR SNOW.
33. DURING WINTER CONSTRUCTION, ALL FOOTINGS SHALL BE PROTECTED FROM FROST PENETRATION UNTIL THE BUILDING IS ENCLOSED AND TEMPORARY HEAT IS PROVIDED.
34. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE TESTING AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR’S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE APPLICABLE CODE. MIX DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.
35. PROVIDE SLAB COORDINATION DRAWING SUBMITTAL INDICATING COORDINATED LOCATIONS OF: MEP PENETRATIONS, SLEEVES, OPENINGS, IN-SLAB CONDUIT/DUCT (IF ALLOWED), EMBEDS, CAST-IN ANCHORS, AND OTHER ITEMS EMBEDDED OR PENETRATING STRUCTURAL ELEVATED SLABS.

MASONRY

1. CMU CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ACI 530/530.1 “BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES”.
2. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f’m	1500 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	1900 PSI
GROUT	2000 PSI

3. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f’m	2000 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	2800 PSI
GROUT	2000 PSI

4. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f’m	2500 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	3250 PSI
GROUT	2500 PSI

5. CMU MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:

CONCRETE MASONRY UNITS	ASTM C90, NORMAL WEIGHT
MORTAR	ASTM C270, TYPE N
GROUT	ASTM C476
JOINT REINFORCING	ASTM A82

6. WIRE REINFORCING PER ASTM A82 FOR SINGLE-WYTHE CMU WALLS, CMU CAVITY WALLS, AND MULTI-WYTHE COMPOSITE CMU WALLS SHALL BE HOT-DIP GALVANIZED PER ASTM A153, CORROSION RESISTANT HORIZONTAL JOINT REINFORCING WITH THE FOLLOWING GAUGE AND VERTICAL SPACING:

RUNNING BOND	9 GA @ 16” OC (ALL WIDTHS)
BELOW GRADE WALLS	9 GA @ 8” OC
OTHER THAN RUNNING BOND	9 GA @ 16” OC (6”-8” WIDTH) 9 GA @ 8” OC (10”-16” WIDTH)

7. ALL LOAD BEARING CMU WALLS TO HAVE FULL MORTAR BED, HEAD, AND COLLAR JOINTS.
8. GROUT SOLID ALL JAMBS FULL HEIGHT IN LOAD BEARING CMU WALLS TO UNDERSIDE OF LINTEL PLUS ONE CELL BEYOND BEARING LENGTH.
9. PROVIDE MINIMUM 1 INCH GROUT BETWEEN MAIN REINFORCING AND/OR BOLTS AND CMU UNIT FACE. VERTICAL REINFORCEMENT SHALL BE CENTERED IN WALL, UNLESS OTHERWISE NOTED. VERTICAL REINFORCING BARS SHALL SECURELY BE HELD IN POSITION BY WIRE TIES OR OTHER APPROVED MEANS TO ENSURE DESIGN LOCATION AND LAP. PLACE BARS AND LAP PRIOR TO GROUTING.
10. HORIZONTAL BOND BEAM AND VERTICAL REINFORCING SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED.
11. CELLS SHALL BE IN VERTICAL ALIGNMENT. DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH VERTICAL REINFORCING STEEL.
12. ALL CELLS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT.
13. GROUT CELLS SOLID IN ALL WALLS, UNLESS OTHERWISE NOTED. GROUT IN 4’-0” MAXIMUM LIFTS.
14. LIFTS OF GROUT SHALL BE KEYED 1 1/2 INCHES INTO THE PREVIOUS COURSE BELOW.
15. HORIZONTAL BAR REINFORCEMENT SHALL BE FULLY EMBEDDED IN GROUT IN AN UNINTERRUPTED POUR.
16. EXCEPT FOR WALL PILASTERS, VERTICAL REINFORCEMENT SHALL BE FIELD CUT FOR 4’-0” LIFTS AND LAP SPLICED PER LAP LENGTH SCHEDULE.
17. COORDINATE ANY UNIDENTIFIED PIPE OR DUCT PASSING THROUGH STRUCTURAL CMU WALLS WITH TYPICAL DETAILS, UNLESS OTHERWISE NOTED.
18. SEE ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN, AND JOINT TYPE. ALL BLOCK SHALL BE LAID IN RUNNING BOND, UNLESS OTHERWISE NOTED.
19. ALL MULTIPLE WYTHE CMU WALLS SHALL BE GROUTED SOLID BETWEEN EACH WYTHE.
20. PROVIDE HORIZONTAL TIES WHERE CMU ABUTS CONCRETE.

LINTELS

1. PROVIDE LINTELS OVER ALL OPENINGS AND RECESSES IN MASONRY CONSTRUCTION. LINTELS ARE NOT REQUIRED OVER OPENINGS 12” WIDE OR LESS THAT IS AT LEAST 1 COURSE BELOW THE BOND BEAM AT THE TOP OF WALL.
2. PENETRATIONS NOT IDENTIFIED ON THE DOCUMENTS ARE TO BE TREATED IN A MANNER SIMILAR TO THE IDENTIFIED LOCATIONS.
3. LINTELS IN NON-BEARING WALLS SHALL BE SIZED PER THE FOLLOWING:

SPAN, L	STEEL OPTION (FOR EA 4” OF MASONRY) *
0’ < L ≤ 4’-0”	L3 1/2x3 1/2x1/4
4’-0” < L ≤ 6’-0”	L4x3 1/2x5/16 (LLV)
6’-0” < L ≤ 8’-0”	L5x3 1/2x5/16 (LLV)
8’-0” < L ≤ 10’-0”	L6x3 1/2x3/8 (LLV)

SPAN, L	CMU OPTIONS			
	6” BLOCK	8” BLOCK	10” BLOCK	12” BLOCK
0’ < L ≤ 4’-0”	8” DEEP W/ (1) # 4 BOTT	8” DEEP W/ (1) # 4 BOTT	8” DEEP W/ (1) #5 BOTT	8” DEEP W/ (1) # 5 BOTT
4’-0” < L ≤ 6’-0”	8” DEEP W/ (1) # 4 BOTT	8” DEEP W/ (1) # 4 BOTT	8” DEEP W/ (1) #5 BOTT	8” DEEP W/ (1) # 5 BOTT
6’-0” < L ≤ 8’-0”	16” DEEP W/ (1) #4 BOTT	16” DEEP W/ (1) #4 BOTT	16” DEEP W/ (1) #5 BOTT	16” DEEP W/ (1) #5 BOTT
8’-0” < L ≤ 10’-0”	16” DEEP W/ (1) #5 BOTT	16” DEEP W/ (2) #5 BOTT	16” DEEP W/ (2) #5 BOTT	16” DEEP W/ (2) #5 BOTT

*ALL ANGLES THAT ARE BACK-TO-BACK SHALL BE WELDED TOP AND BOTTOM 3” @ 12” OC MINIMUM.

4. ALL LINTELS SHALL HAVE A MINIMUM OF 8” END BEARING AND DO NOT REQUIRE BEARING PLATES, UNLESS OTHERWISE NOTED.
5. TEMPORARY SHORING OF MASONRY LINTELS MUST BE PROVIDED UNTIL MASONRY HAS REACHED 75% OF DESIGN STRENGTH.
6. ALL STEEL LINTELS IN EXTERIOR WALL CONSTRUCTION SHALL BE HOT-DIP GALVANIZED, UNLESS OTHERWISE NOTED.

SPAN, L	PRECAST CONCRETE LINTEL (f’c = 3000 PSI MIN)
0’ < L ≤ 4’-0”	8” DEEP W/ (1) #4 T&B
4’-0” < L ≤ 6’-0”	8” DEEP W/ (1) #4 T&B
6’-0” < L ≤ 8’-0”	8” DEEP W/ (1) #4 T&B
8’-0” L ≤ 10’-0”	8” DEEP W/ (1) #5 T&B

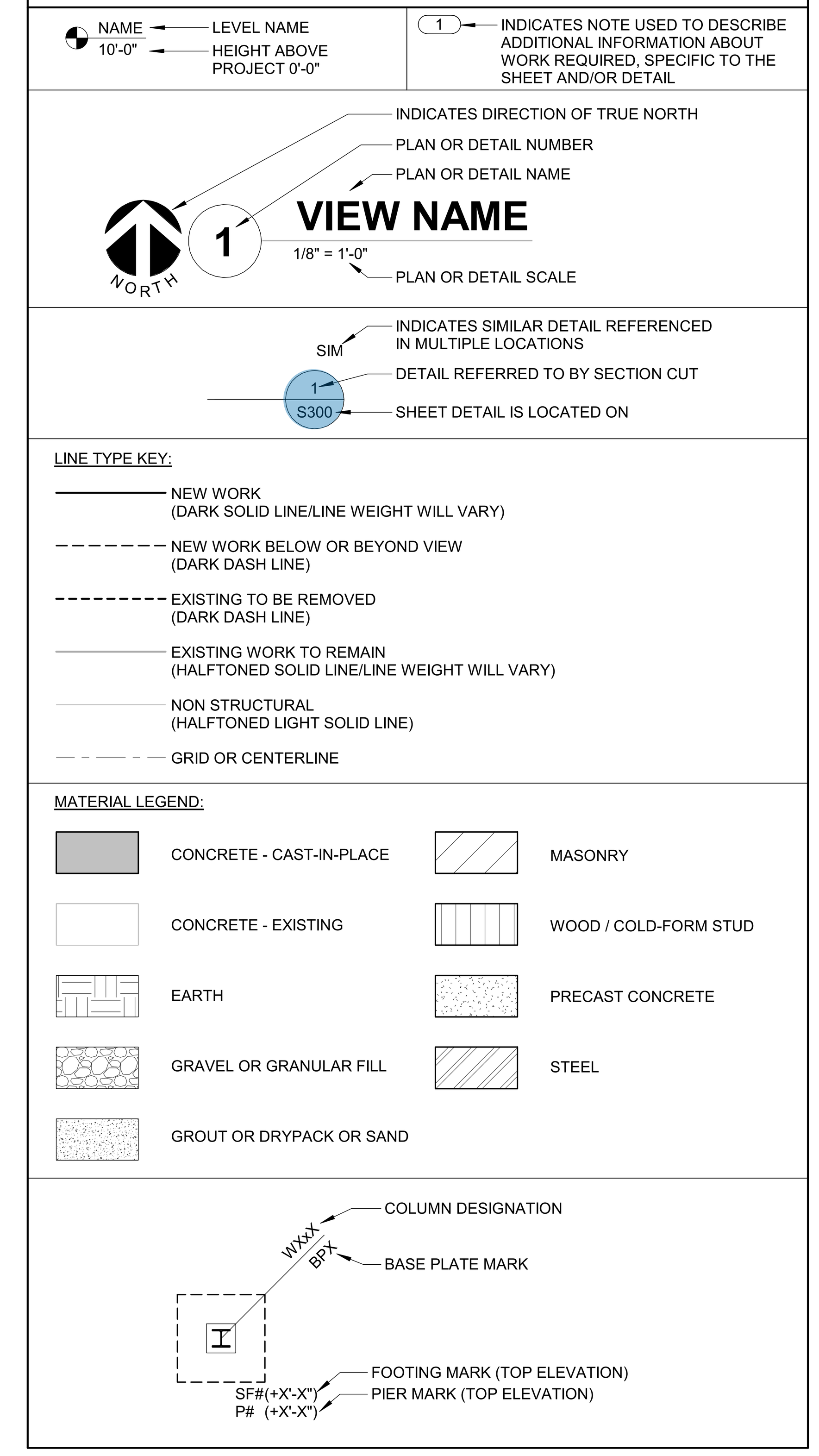
STEEL

1. STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) “DETAILING FOR STEEL CONSTRUCTION” AND FABRICATED AND ERECTED IN ACCORDANCE WITH THE “SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS”.
2. STRUCTURAL STEEL SHALL CONFORM TO ASTM STANDARDS AS NOTED BELOW:

WIDE FLANGE SHAPES	ASTM A992	Fy = 50 KSI
OTHER ROLLED SHAPES	ASTM A36	Fy = 36 KSI
PIPE SECTIONS	ASTM A53, GR B	Fy = 35 KSI
HSS SECTIONS, ROUND	ASTM A500, GR C	Fy = 46 KSI
HSS SECTION, SQ/RECT	ASTM A500, GR C	Fy = 50 KSI
BASE AND CONNECTION PLATES	ASTM A36	Fy = 36 KSI
ANCHOR RODS	ASTM F1554, GR 36	Fy = 36 KSI
HIGH STRENGTH BOLTS	ASTM F3125, GR A325	Fv = 120 KSI
HEAVY HEX NUTS	ASTM A563	
WASHERS	ASTM F436	
HEADED STUD ANCHORS	ASTM A108, TYPE B	
ELECTRODES FOR ARC WELDING	AWS 5.1, E70XX	

3. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC “SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS”. SEE DETAILS FOR BOLT SIZE AND MATERIAL ASTM DESIGNATION.
4. ALL BOLTED CONNECTIONS SHALL BE GRADE A325N BEARING TYPE BOLTS, UNLESS OTHERWISE NOTED. ALL BOLTS SHALL BE INSTALLED TO A MINIMUM “SNUG TIGHT” CONDITION, UNLESS OTHERWISE NOTED.
5. EXCEPT WHERE DETAILED OTHERWISE, FABRICATOR SHALL SELECT LRFD BOLTED (OR WELDED EQUIVALENT) SIMPLE SHEAR CONNECTIONS PER AISC 360 PART 10 TO SUPPORT LOADS INDICATED ON THE STRUCTURAL DRAWINGS. WHEN LOADS ARE NOT SHOWN, CONNECTION SHALL SUPPORT 60% OF THE TOTAL UNIFORM LOAD CAPACITY FOR EACH GIVEN BEAM SIZE AND SPAN AS LISTED IN AISC 360 TABLE 3-6.
6. BEAM REACTIONS GIVEN ON THE CONTRACT DOCUMENTS SHALL SUPERSEDE THE PREVIOUS NOTE. IN NO CASE SHALL THE CONNECTIONS BE DESIGNED FOR AN UNFACTORED END REACTION LESS THAN 12 KIPS.
7. WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.
8. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING CALLED FOR. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN “QUALIFICATION PROCEDURES” OF THE AMERICAN WELDING SOCIETY (AWS).
9. HEADED STUD ANCHORS (HSA): SHALL BE INSTALLED IN ACCORDANCE WITH AWS D1.1 AND SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER’S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE HSA AND THE STEEL SHAPE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE HSA AND THE STEEL SHAPE. THE HSA SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8” FOR 5/8”ø AND SMALLER AND 3/16” FOR LARGER THAN 5/8”ø.
10. BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE DRAWINGS. WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.
11. SPLICING OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE AND CONNECTION TO BE MADE.
12. ALL STEEL EXPOSED TO WEATHER OR AS NOTED ON PLAN SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 G60. ABRADED AREAS TO BE TOUCHED UP WITH COLD GALVANIZING COMPOUND IN ACCORDANCE WITH ASTM A780.
13. ALL GALVANIZED HOLLOW SECTIONS SHALL HAVE WELDED CAP PLATES TO SEAL EXPOSED ENDS.
14. CUTS, HOLES, OPENINGS, ETC., REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OF HOLES AND CUTS IN THE FIELD SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.
15. FURNISH AND INSTALL MISCELLANEOUS STEEL (CURBS, HANGERS, EXPANSION JOINT ANGLES, STRUTS, ETC.) AS CALLED FOR OR AS NECESSARY PER ARCHITECTURAL AND MECHANICAL/ELECTRICAL DRAWINGS.
16. GROUT FOR BASE AND BEARING PLATES SHALL BE A NON-SHRINK, NON-METALLIC PRODUCT. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 7000 10,000 PSI. INSTALL GROUT PRIOR TO APPLYING SIGNIFICANT LOADING TO MEMBER.
17. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STRUCTURAL STEEL FOR ARCHITECT/STRUCTURAL ENGINEER’S REVIEW BEFORE FABRICATION.

VIEW KEY



STRUCTURAL ABBREVIATION KEY			
ABBR:	DESCRIPTION:	ABBR:	DESCRIPTION:
#	NUMBER OR POUNDS	KSF	KIPS PER SQUARE FOOT
@	AT	KSI	KIPS PER SQUARE INCH
°	DEGREE	L	LENGTH
ø	DIAMETER	LBS	POUNDS
(E)	EXISTING	LL	LIVE LOAD
A.B.	ANCHOR BOLT	LLH	LONG LEG HORIZONTAL
ARCH	ARCHITECT, -URE, -URAL	LLV	LONG LEG VERTICAL
B.O.	BOTTOM OF	LONG.	LONGITUDINAL
bf	BEAM FLANGE WIDTH	LSH	LONG SIDE HORIZONTAL
BF	BRACE FRAME	LSV	LONG SIDE VERTICAL
BM	BEAM	LT WT	LIGHTWEIGHT
B.N.	BOUNDARY NAILING	MAX	MAXIMUM
BOTT	BOTTOM	MECH	MECHANICAL
BTWN	BETWEEN	MANUF	MANUFACTURER
CFSF	COLD FORM STEEL FRAMING	MIN	MINIMUM
CGS	CENTER OF GRAVITY OF THE TENDON	NIC	NOT IN CONTRACT
CJP	COMPLETE JOINT PENETRATION WELD	NTS	NOT TO SCALE
CLR	CLEAR	OC	ON CENTER
CL	CENTERLINE	OH	OPPOSITE HAND
CMU	CONCRETE MASONRY UNIT	OPNG	OPENING
COL	COLUMN	OSB	ORIENTED STRAND BOARD
CONC	CONCRETE	PCF	POUNDS PER CUBIC FOOT
CONN	CONNECTION	P.H.	PENTHOUSE
CONST	CONSTRUCTION	PJP	PARTIAL JOINT PENETRATION WELD
CONT	CONTINUOUS	PL	PLATE
COORD	COORDINATION	PLF	POUNDS PER LINEAR FOOT
DIA	DIAMETER	PSF	POUNDS PER SQUARE FOOT
DL	DEAD LOAD	PSI	POUNDS PER SQUARE INCH
DET	DETAIL	PT	POST-TENSION, -ED, -ING
DWG	DRAWING	R	RADIUS
DWL	DOWEL	REINF	REINFORCING, -MENT, -ED
EA	EACH	REQD	REQUIRED
EF	EACH FACE	RTU	ROOF TOP UNIT
EFF	EFFECTIVE	SC	SLIP CRITICAL
EL	ELEVATION	SCHED	SCHEDULE
ELEC	ELECTRICAL	SFRS	SEISMIC FORCE-RESISTING SYSTEM
EMBED	EMBEDMENT	SIM	SIMILAR
E.N.	EDGE NAILING	SL	SNOW LOAD
EOD	EDGE OF DECK	S.M.S.	SHEET METAL SCREW
EOS	EDGE OF SLAB	SP	SPACE(S)
EQ	EQUAL	SPECS	SPECIFICATION(S)
EQUIP	EQUIPMENT	SQ	SQUARE
ETC	ETCETERA	STIFF	STIFFENER
EW	EACH WAY	STL	STEEL
EXP	EXPANSION	SYM	SYMMETRICAL
EXT	EXTERIOR	T&B	TOP AND BOTTOM
f 'c	CONCRETE COMPRESSIVE STRENGTH	T.O.	TOP OF
FDN	FOUNDATION	TC	PRE-TENSIONED BOLT
F.N.	FIELD NAILING	TEMP	TEMPERATURE
FT	FOOT	tf	BEAM FLANGE THICKNESS
FTG	FOOTING	THK	THICK
Fy	YIELD STRESS	TRANS	TRANSVERSE
GA	GAGE OR GAUGE	TYP	TYPICAL
GALV	GALVANIZED	UON	UNLESS OTHERWISE NOTED
GLB	GLULAM BEAM	VERT	VERTICAL
GT	GIRDER TRUSS	VIF	VERIFY IN FIELD
HORIZ	HORIZONTAL	w/	WITH
HSA	HEADED STUD ANCHOR	WP	WORK POINT
HSB	HIGH STRENGTH BOLT	WT	WEIGHT
JT	JOINT	WWR	WELDED WIRE REINFORCING
K, KIP	KILOPOUND (1,000 POUNDS)		

STRUCTURAL SHEET INDEX

SHEET NUMBER	SHEET NAME	CURRENT ISSUE DATE	CURRENT ISSUE DESCRIPTION
S000	COVER & GENERAL NOTES	01/14/2026	Bulletin No. 7
S001	GENERAL NOTES	12/20/2024	Permit
S002	SPECIAL INSPECTIONS	12/20/2024	Permit
S003	LOADING DIAGRAMS	12/20/2024	Permit
S004	SCHEDULES	01/14/2026	Bulletin No. 7
S100-E	EXISTING FOUNDATION / FLOOR PLAN	10/13/2025	Bulletin No. 5
S101-E	EXISTING 2ND FLOOR FRAMING PLAN	12/20/2024	Permit
S102-E	EXISTING ROOF FRAMING PLAN	12/20/2024	Permit
S100-A	ADDITION FOUNDATION / FLOOR PLAN	01/14/2026	Bulletin No. 7
S101-A	ADDITION 2ND FLOOR FRAMING PLAN	01/14/2026	Bulletin No. 7
S102-A	ADDITION ROOF FRAMING PLAN	01/14/2026	Bulletin No. 7
S300	TYPICAL CONCRETE DETAILS	02/19/2025	Bulletin No. 1
S400	TYPICAL MASONRY DETAILS	02/19/2025	Bulletin No. 1
S430	MASONRY SECTIONS	12/20/2024	Permit
S500	TYPICAL STEEL DETAILS & SECTIONS	12/20/2024	Permit
S600	TYPICAL WOOD SECTIONS & DETAILS	12/20/2024	Permit
S602	TYPICAL WOOD SECTIONS & DETAILS	02/19/2025	Bulletin No. 1
GRAND TOTAL: 17			

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AGENCY APPROVAL

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REVISIONS

No.	Date	Revision / Issue
3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
6	12/13/2024	HUD Submission
7	12/20/2024	Permit
8	02/19/2025	Bulletin No. 1
9	10/13/2025	Bulletin No. 5
10	01/14/2026	Bulletin No. 7

SHEET INFORMATION

Issue	Issued for Permit
Date	10/30/2024
Project #	23008275.00
Drawn	GHW
Checked	GFM
Approved	-

SHEET TITLE
COVER & GENERAL NOTES

SCALE
Scale: As indicated

SHEET NUMBER
S000

STEEL DECK

1. MATERIAL, DETAILING, DESIGN, MANUFACTURE, AND ERECTION OF STEEL DECKS SHALL BE IN ACCORDANCE WITH THE STEEL DECK INSTITUTE (SDI) SPECIFICATION.
2. DECK SIZE AND GAUGE INDICATED ON THE DRAWINGS ARE BASED ON THE FOLLOWING:
   A. CURRENT VERSION OF VULCRAFT CATALOG FOR GRAVITY DESIGN LOADS AND UNSHORED CONSTRUCTION SPANS
   B. STEEL DECK INSTITUTE (SDI) DIAPHRAGM DESIGN MANUAL 4TH EDITION FOR DIAPHRAGM LOADS
3. STEEL DECK GALVANIZING SHALL CONFORM TO ASTM A653 WITH A MINIMUM COATING OF G60.
4. PAINTED STEEL ROOF DECK SHALL CONFORM TO ASTM A1008, GRADE C.
5. ALL FLOOR AND ROOF DECK SHALL BE VENTED.
6. PROVIDE MINIMUM DECK BEARING AND LAP LENGTHS PER MANUFACTURER'S RECOMMENDATIONS.
7. USE SUMP PANS AT ALL ROOF DRAINS. MINIMUM THICKNESS FOR SUMP PANS SHALL BE 14 GAUGE.
8. DECK MANUFACTURER SHALL FURNISH ALL RIDGE AND VALLEY PLATES, SUMP PANS, DRAIN PLATES, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION. DECK MANUFACTURER SHALL PROVIDE ALL CLOSURE PLATES AND POUR STOPS NOT PROVIDED BY THE STEEL FABRICATOR.
9. CUTTING AND FRAMING OF OPENINGS FOR OTHER TRADES SHALL BE THE RESPONSIBILITY OF THE TRADES INVOLVED. HOLES THAT ARE LOCATED AND DIMENSIONED ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE DECK ERECTOR.
10. CONDUITS SHOULD NOT BE PLACED IN CONCRETE SLAB ON STEEL DECK WITHOUT COORDINATION WITH THE STRUCTURAL ENGINEER, UNLESS OTHERWISE NOTED.
11. COORDINATE ALL PENETRATIONS, EMBEDS, AND RECESSES IN COMPOSITE FLOOR SYSTEMS WITH THE STRUCTURAL ENGINEER, UNLESS OTHERWISE NOTED.
12. DO NOT EXCEED 25 LBS PER HANGER AND A MINIMUM SPACING OF 2'-0" ON CENTER WHEN ATTACHING TO STEEL ROOF DECK. THIS 25 LBS LOAD AND 2'-0" SPACING INCLUDES ADJACENT MECHANICAL, ELECTRICAL, AND ARCHITECTURAL ITEMS HANGING FROM THE DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, SUPPLEMENTAL FRAMING SUPPORTED OFF STEEL FRAMING WILL NEED TO BE ADDED. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING LOCATION AND WEIGHT OF ALL THE ELEMENTS BEING HUNG WITH STRUCTURAL ENGINEER, UNLESS OTHERWISE NOTED.
13. CORRUGATED FORM DECK GAUGES SHOWN ON THE DRAWINGS ARE INTENDED TO SUPPORT THE WEIGHT OF THE WET CONCRETE PLUS A CONSTRUCTION LIVE LOAD OF 20 PSF WITHOUT INTERMEDIATE SHORING BASED ON A THREE-SPAN CONTINUOUS CONDITION. DECK MANUFACTURER SHALL EVALUATE OTHER SPAN CONDITIONS FOR DEFLECTION WHICH SHALL NOT EXCEED SPAN OVER 180 NOR 1/8 INCH UNDER UNIFORMLY DISTRIBUTED CONCRETE DEAD LOAD. PROVIDE SHORING OR ALTERNATE MEANS OF CONTROLLING DEFLECTION AND MEETING ALLOWABLE STRESSES.
14. SUBMIT SHOP DRAWINGS SHOWING ERECTION PROCEDURES, WELDING PROCEDURES, VERTICAL LOAD AND DIAPHRAGM SHEAR CAPACITY FURNISHED, DECK SHORING REQUIREMENTS, UNDERWRITER'S LABORATORIES (UL) FIRE RATING NUMBER AND COMPOSITE BEAM AND GIRDER STUD PROFILES TO THE ARCHITECT/STRUCTURAL ENGINEER FOR REVIEW. FABRICATION SHALL NOT BEGIN WITHOUT APPROVED SHOP DRAWINGS.

WOOD

1. STRUCTURAL SHEATHING
   A. ALL PANELS TO BE PLYWOOD OF MINIMUM 5 PLY CONSTRUCTION. EACH PANEL SHALL BEAR THE QUALITY TRADEMARK STAMP OF THE AMERICAN PLYWOOD ASSOCIATION (APA).
   B. ROOFS:
      i. GRADE:
         a. 1/2", "C-D", GROUP 1, SPAN INDEX 32/16, EXPOSURE 1
         b. 5/8", "C-D", GROUP 1, SPAN INDEX 40/20, EXPOSURE 1
         c. 3/4", "C-D", GROUP 1, SPAN INDEX 48/24, EXPOSURE 1
         d. 1 1/8", STURD-I-FLOOR, SPAN RATING 48" OC
      ii. PANEL EDGE SUPPORT SHALL BE EITHER TONGUE-AND-GROOVE EDGE, PANEL EDGE CLIP MIDWAY BETWEEN SUPPORTS, OR LUMBER BLOCKING (MIN 2x4 SIZE).
   C. FLOORS:
      i. GRADE:
         a. 5/8", "C-D", GROUP 1, SPAN INDEX 40/20, EXPOSURE 1
         b. 3/4", "C-D", GROUP 1, SPAN INDEX 48/24, EXPOSURE 1
         c. 7/8", "C-D", GROUP 1, SPAN INDEX 60/32, EXPOSURE 1
         d. 5/8", STURD-I-FLOOR, SPAN RATING 20" OC, EXPOSURE 1
         e. 3/4", STURD-I-FLOOR, SPAN RATING 24" OC, EXPOSURE 1
         f. 7/8", STURD-I-FLOOR, SPAN RATING 32" OC, EXPOSURE 1
         g. 1 1/8", STURD-I-FLOOR, SPAN RATING 48" OC, EXPOSURE 1
      ii. FLOORS SHALL BE NAILED AND GLUED PER APA GLUED FLOOR SYSTEM REQUIREMENTS. THE GLUE SHALL CONFORM TO PERFORMANCE SPECIFICATION ASTM D3498. FOLLOW MANUFACTURER'S SPECIFIC APPLICATION RECOMMENDATIONS.
   D. WALLS:
      i. SEE ARCHITECTURAL DRAWINGS FOR TYPICAL WALL SHEATHING, UNLESS OTHERWISE NOTED. SEE PLANS FOR SHEAR WALL SHEATHING.
   E. MINIMUM NAILING REQUIREMENTS UNLESS OTHERWISE NOTED:
      i. ROOF:
         a. NAIL SIZE: USE 0.148" x 2 1/4" GUN NAIL
         b. SPACING:
            1) PANEL EDGES @ 6" OC
            2) INTERIOR BEARINGS @ 12" OC
            3) GLULAM BEAMS AND SHEAR COLLECTORS @ 6" OC
      ii. FLOOR:
         a. NAIL SIZE: USE 0.148" x 2 1/4" GUN NAIL
         b. SPACING:
            1) PANEL EDGES @ 6" OC
            2) INTERIOR BEARINGS @ 12" OC
            3) GLULAM BEAMS AND SHEAR COLLECTORS @ 6" OC
      iii. WALL (AT SHEAR WALL, PROVIDE NAILING PER SCHEDULE OR MINIMUM LISTED BELOW):
         a. NAIL SIZE: USE 0.148" x 2 1/4" GUN NAIL
         b. SPACING:
            1) PANEL EDGES @ 6" OC
            2) INTERIOR BEARINGS @ 12" OC
      iv. PROVIDE MINIMUM 2x SOLID BLOCKING AT PANEL EDGES OF WALL SHEATHING WHERE REQUIRED BY SHEAR WALL SCHEDULE OR AT PANEL EDGES OF ROOF/FLOOR SHEATHING WHERE REQUIRED ON PLAN.
      v. SHEATHING FASTENERS SHALL BE DRIVEN FLUSH BUT SHALL NOT FRACTURE THE FACE PLY.
      vi. HOT-DIP GALVANIZED NAILS SHALL BE USED WHEN NAILING TO PRESSURE TREATED MEMBERS.
   F. PANEL LAYOUT:
      i. LONG DIMENSION OF PANEL TO BE PERPENDICULAR TO FRAMING MEMBERS, EXCEPT PANELS AT WALLS MAY BE INSTALLED WITH LONG DIMENSION PARALLEL TO STUDS UNLESS OTHERWISE NOTED.
      ii. END JOINTS IN ADJACENT RUNS SHALL BE STAGGERED 4 FEET.
      iii. MINIMUM PANEL WIDTH SHALL BE 12".
      iv. EDGES OF ALL PANELS LESS THAN 24" WIDE SHALL BE BACKED BY BLOCKING (MIN 2x4 SIZE).
      v. PROVIDE 1/8" GAP AT ALL SHEATHING JOINTS FOR FLOORS AND WALLS UNLESS OTHERWISE NOTED ON PLAN OR DETAILS.
   G. IF SHEATHING PANELS EXHIBIT SWELLING, NAIL HEAD PULL-THROUGH, SOFT SPOTS OR OTHER CONDITIONS WHEREBY REDUCING THE STRUCTURAL CAPACITY, REMOVE AND REPLACE.
2. LUMBER:
   A. COMPLY WITH ANSI/AWC NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION.
   B. ALL FRAMING LUMBER SHALL BE DOUGLAS FIR-LARCH, GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION. NOTED ALLOWABLE STRESSES ARE MINIMUMS AND FOR NONREPETITIVE USES PRIOR TO ALLOWABLE STRESS INCREASES AND CONFORMING TO THE NDS AS FOLLOWS:
      2" THICK - 4" TO 6" WIDE (WALL STUD ONLY) NO. 2 Fb = 900 PSI, E = 1,600,000 PSI
      2" TO 4" THICK - 6" AND WIDER NO. 2 FB = 900 PSI, E = 1,600,000 PSI
      5" THICK - 5" AND WIDER NO. 1 Fb = 1350 PSI, E = 1,600,000 PSI
   C. ALL FRAMING LUMBER SHALL BE HEM FIR, GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION. NOTED ALLOWABLE STRESSES ARE MINIMUMS AND FOR NONREPETITIVE USES PRIOR TO ALLOWABLE STRESS INCREASES AND CONFORMING TO THE NDS AS FOLLOWS:
      2" THICK - 4" TO 6" WIDE (WALL STUD ONLY) NO. 2 Fb = 850 PSI, E = 1,300,000 PSI
      2" TO 4" THICK - 6" AND WIDER NO. 2 Fb = 850 PSI, E = 1,300,000 PSI
      5" THICK - 5" AND WIDER NO. 1 Fb = 1050 PSI, E = 1,300,000 PSI
   D. ALL FRAMING LUMBER SHALL BE SPRUCE PINE FIR, GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION. NOTED ALLOWABLE STRESSES ARE MINIMUMS AND FOR NONREPETITIVE USES PRIOR TO ALLOWABLE STRESS INCREASES AND CONFORMING TO THE NDS AS FOLLOWS:
      2" THICK - 4" TO 6" WIDE (WALL STUD ONLY) NO. 2 Fb = 875 PSI, E = 1,400,000 PSI
      2" TO 4" THICK - 6" AND WIDER NO. 2 Fb = 875 PSI, E = 1,400,000 PSI
      5" THICK - 5" AND WIDER NO. 1 Fb = 900 PSI, E = 1,300,000 PSI
   E. ALL FRAMING LUMBER SHALL BE SOUTHERN PINE, GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION. NOTED ALLOWABLE STRESSES ARE MINIMUMS AND FOR NONREPETITIVE USES PRIOR TO ALLOWABLE STRESS INCREASES AND CONFORMING TO THE NDS AS FOLLOWS:
      2" THICK - 4" TO 6" WIDE (WALL STUD ONLY) NO. 2 Fb = 1100 PSI, E = 1,400,000 PSI
      2" TO 4" THICK - 6" AND WIDER NO. 2 Fb = 1100 PSI, E = 1,400,000 PSI
      5" THICK - 5" AND WIDER NO. 1 Fb = 1350 PSI, E = 1,500,000 PSI
   F. ALL FRAMING LUMBER SHALL BE WESTERN CEDAR, GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION. NOTED ALLOWABLE STRESSES ARE MINIMUMS AND FOR NONREPETITIVE USES PRIOR TO ALLOWABLE STRESS INCREASES AND CONFORMING TO THE NDS AS FOLLOWS:
      2" THICK - 4" TO 6" WIDE (WALL STUD ONLY) NO. 2 Fb = 700 PSI, E = 1,000,000 PSI
      2" TO 4" THICK - 6" AND WIDER NO. 2 Fb = 700 PSI, E = 1,000,000 PSI
      5" THICK - 5" AND WIDER NO. 1 Fb = 975 PSI, E = 1,000,000 PSI
   G. ALL LUMBER STRESSES SHOWN ABOVE ARE FOR VISUALLY STRESS-RATED LUMBER USED AT 19% MAXIMUM MOISTURE CONTENT WHEN BUILDING IS ENCLOSED, SINGLE MEMBER USE. ALL LUMBER SHALL BE GRADE MARKED.
   H. PROVIDE A MINIMUM OF 1 1/2" JOIST BEARING UNLESS OTHERWISE NOTED.
   I. NOTCHING OR DRILLING HOLES IN LUMBER FRAMING MEMBERS MUST BE AS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
3. MANUFACTURED WOOD PRODUCTS:
   A. WOOD I-JOISTS
      i. SIZES SHOWN ARE AS MANUFACTURED BY TRUS JOIST, BOISE CASCADE, LOUISIANA PACIFIC, ROSEBURG FOREST PRODUCTS, REDBUILT. MATERIALS, FABRICATION, HANDLING, AND INSTALLATION SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
      ii. JOISTS BY OTHER MANUFACTURERS MAY BE USED PROVIDED THEY HAVE THE SAME DEPTH AND EQUIVALENT ICC APPROVED LOAD CAPACITIES AND STIFFNESS. SUBMIT SUBSTITUTION REQUEST FOR STRUCTURAL ENGINEER APPROVAL.
      iii. FLANGES OF I-JOIST SHALL BE MANUFACTURED FROM LVL.
   B. LAMINATED VENEER LUMBER (LVL)
      i. SIZES SHOWN ARE AS MANUFACTURED BY TRUS JOIST, BOISE CASCADE, LOUISIANA PACIFIC, ROSEBURG FOREST PRODUCTS, REDBUILT. MATERIALS, FABRICATION, HANDLING, AND INSTALLATION SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
      ii. MATERIAL STRENGTHS:
         MODULUS OF ELASTICITY, E 2000 KSI
         BENDING STRENGTH, Fb 2900 PSI
         SHEAR STRENGTH, Fv 285 PSI
   C. LAMINATED STRAND LUMBER (LSL)
      i. SIZES SHOWN ARE AS MANUFACTURED BY TRUS JOIST, LOUISIANA PACIFIC. MATERIALS, FABRICATION, HANDLING, AND INSTALLATION SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
      ii. MATERIAL STRENGTHS:
         MODULUS OF ELASTICITY, E 1500 KSI
         BENDING STRENGTH, Fb 2250 PSI
         SHEAR STRENGTH, Fv 410 PSI
         AXIAL STRENGTH, Fc 1950 PSI
   D. PARALLEL STRAND LUMBER (PSL)
      i. SIZES SHOWN ARE AS MANUFACTURED BY WEYERHAEUSER. MATERIALS, FABRICATION, HANDLING, AND INSTALLATION SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
      ii. MATERIAL STRENGTHS:
         MODULUS OF ELASTICITY, E 2000 KSI
         BENDING STRENGTH, Fb 2900 PSI
         SHEAR STRENGTH, Fv 290 PSI
         AXIAL STRENGTH, Fc 2900 PSI
   E. NOTCHING OR DRILLING HOLES IN MANUFACTURED WOOD PRODUCTS THAT ARE DIFFERENT FROM THE MANUFACTURER'S GUIDELINES MUST BE AS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
   F. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION PER DETAILED INSTALLATION RECOMMENDATIONS AND GUIDELINES OF THE MANUFACTURER.
   G. NAILING INTO THE SIDE FACE OF AN I-JOIST TOP/BOTTOM CHORD IS NOT PERMITTED.
   H. PROVIDE SLOPED SEAT HANGERS FOR SLOPING I-JOIST INSTALLATIONS.
   I. ALL HANGERS SELECTED SHALL MATCH THE SIZE OF SUPPORTED MEMBER AND SHALL HAVE FULL NAILING AS SHOWN IN THE ICC REPORT.
   J. SUBSTITUTIONS MUST BE APPROVED BY THE STRUCTURAL ENGINEER AND HAVE ICC APPROVED LOAD CAPACITIES EQUAL TO OR GREATER THAN THE SIMPSON STRONG-TIE CONNECTORS.
   K. SIMPSON HANGERS AT PRESSURE TREATED MEMBERS SHALL HAVE ZMAX COATING.
   L. SEE ARCHITECTURAL DETAILS AND SPECIFICATIONS FOR MATERIAL TYPES AND FINISHES.
   M. PROVIDE STANDARD CAMBERS FOR ALL ROOF BEAMS AND PURLINS UNLESS OTHERWISE NOTED.
   N. SEE MANUFACTURER REQUIREMENTS FOR MINIMUM BEARING LENGTHS.
4. FASTENING:
   A. ALL NAILS SHALL BE COMMON WIRE NAILS. AT ALL EXPOSED NAILING TO WEATHER OR INSTALLED IN PRESSURE TREATED WOOD (E.G.-DECKING & SIDING), USE HOT-DIP GALVANIZED NAILS. USE OF PLASTIC COATED OR CASING NAILS IS NOT ALLOWED. NAIL DESIGNATIONS SHALL MEET THE FOLLOWING LENGTHS AND DIAMETERS:
      i. 6d - 2" x 0.113"
      ii. 8d - 2 1/2" x 0.131"
      iii. 10d - 3" x 0.148"
      iv. 12d - 3 1/4" x 0.148"
      v. 16d - 3 1/2" x 0.162"
      vi. 20d - 4" x 0.192"
   B. THE NAILING SCHEDULE AND STRUCTURAL DETAILS ARE BASED ON THE USAGE OF "COMMON" WIRE NAILS EXCEPT THAT 16d "SINKER" NAILS (3 1/4" x 0.148") MAY BE USED WHERE 16d IS SPECIFIED. IF GUN NAILS ARE USED, THE CONTRACTOR SHALL SUBMIT NAIL DATA FOR REVIEW PRIOR TO BEGINNING CONSTRUCTION.
   C. THE NUMBER AND SIZE OF NAILS CONNECTING WOOD MEMBERS SHALL NOT BE LESS THAN THE FOLLOWING SCHEDULE:

CONNECTION	FASTENING
JOIST TO SILL, TOP PLATE OR GIRDER	(3) 8d TOENAILS
BRIDGING OR BLOCKING BETWEEN JOISTS OR TRUSSES NOT AT WALL TOP PLATE	(2) 8d TOENAILS, EACH END OR (2) 16d END NAILS
SILL PLATE TO JOIST, RIM JOIST OR BLOCKING	16d @ 16" OC, FACE NAIL
TOP PLATE TO STUD AND STUD TO SILL PLATE	(2) 16d END NAILS FOR 2x (3) 16d END NAILS FOR 3x
2x STUD TO TOP OR SILL PLATE	(4) 8d TOENAILS OR (2) 16d END NAILS
3x STUD TO SOLE PLATE	(6) 8d TOENAILS OR (3) 16d END NAILS
STUD TO STUD	16d @ 24" OC, FACE NAIL
DOUBLE TOP PLATES	16d @ 16" OC, FACE NAIL
DOUBLE TOP PLATES, LAP SPLICE	(12) 16d EACH SIDE OF SPLICE
BLOCKING BETWEEN JOIST OR RAFTERS TO TOP PLATE	(3) 8d TOENAILS
RIM JOIST TO TOP PLATE OR FRAMING BELOW	8d @ 6" OC, TOENAIL
JOIST TO RIM JOIST	(3) 16d END NAILS
TOP PLATE LAPS AT CORNERS AND INTERSECTIONS	(2) 16d, FACE NAIL
BUILT-UP HEADER	16d @ 16" OC ALONG EACH EDGE
CEILING JOIST TO TOP PLATE	(3) 8d TOENAILS
CONTINUOUS HEADER TO STUD	(4) 8d, TOENAIL
CEILING JOIST, LAPS OVER PARTITIONS	(3) 16d FACE NAILS
CEILING JOISTS TO PARALLEL RAFTERS	SEE TABLE 2308.7.3.1
RAFTER OR ROOF TRUSS TO PLATE	(3) 10d TOENAILS
BUILT-UP CORNER STUDS	16d @ 24" OC
BUILT-UP GIRDER AND BEAMS, 2x LUMBER LAYERS	20d FACE NAILS @ 32" OC ALONG T&B, STAGGERED OPPOSITE SIDES, AND (2) 20d AT ENDS AND AT EACH SPLICE
FLAT BLOCKING TO TRUSS AND WEB FILLER	16d @ 16" OC, FACE NAIL
MULTI-PLY LAMINATED VENEER LUMBER (LVL)	SEE PLAN

   D. PILOT HOLES SHALL BE PROVIDED FOR ALL NAILS 20d AND LARGER. PILOT HOLES SHALL HAVE A DIAMETER OF APPROXIMATELY 75% OF THE NAIL SHANK DIAMETER.
   E. USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOBSITE DEMONSTRATION AND THE APPROVAL OF THE ARCHITECT/STRUCTURAL ENGINEER.
   F. CONTRACTOR TO AVOID SPLITTING WOOD MEMBERS DURING FASTENER INSTALLATION. NAIL HEADS SHOULD BE DRIVEN NO GREATER THAN 1/16 OF AN INCH BELOW WOOD SURFACE.
   G. ALL BOLTED WOOD CONNECTIONS SHALL BE MADE WITH A307 BOLTS CONFORMING TO THE REQUIREMENTS OF THE CURRENT VERSION OF ANSI/ASME UNLESS OTHERWISE NOTED. BOLT HOLES SHALL BE 1/32" TO 1/16" LARGER THAN THE BOLT. FORCIBLE DRIVING OF BOLTS IS NOT ALLOWED. RETIGHTEN ALL BOLTS BEFORE CONCEALING CONNECTION.
   H. USE STANDARD CUT WASHERS BETWEEN THE BOLTS HEADS, BOLT NUTS AND LAG SCREW HEADS AND WOOD FRAMING, UNLESS OTHERWISE NOTED.
   I. ALL WOOD CONNECTIONS MADE WITH LAG SCREWS SHALL BE MADE WITH SCREWS CONFORMING TO THE REQUIREMENTS OF THE CURRENT VERSION OF ANSI/ASME. LEAD HOLES FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK AND THE SAME DEPTH AS THE LENGTH OF UNTHREADED SHANK. THE LEAD HOLE SHALL HAVE A DIAMETER EQUAL TO 60-75% OF THE SHANK DIAMETER.
   J. WHERE THERE ARE CONNECTOR NAILING ALTERNATIVES LISTED IN THE MANUFACTURER'S CATALOG, THE NAILING PROVIDING THE HIGHEST LOAD CAPACITY SHALL BE USED, UNLESS OTHERWISE NOTED.
5. GENERAL CONSTRUCTION REQUIREMENTS:
   A. METAL FRAMING CONNECTORS NOTED ON THE DRAWINGS USE SIMPSON STRONG-TIE AS BASIS OF DESIGN, UNLESS OTHERWISE NOTED. SUBSTITUTIONS OF ALTERNATE MANUFACTURERS WILL BE ACCEPTABLE AS LONG AS LOAD CAPACITIES ARE MET OR EXCEEDED AND ARE SUBSTANTIATED BY AN ICC REPORT.
   B. FRAMING PLANS INDICATE GENERAL LAYOUT AND DIMENSIONAL CONTROL ONLY. SEE SHOP DRAWINGS FOR ENGINEERING AND ERECTION.
   C. SOLID-SAWN LUMBER BEAMS, RAFTERS AND JOISTS SHALL HAVE LATERAL SUPPORT PREVENTING ROTATION OR DISPLACEMENT BASED UPON SPAN-TO-DEPTH RATIOS AS FOLLOWS:
      i. 2:1, NO LATERAL SUPPORT IS REQUIRED.
      ii. 3:1 OR 4:1, THE ENDS SHALL BE HELD IN POSITION BY FULL-DEPTH BLOCKING, BRIDGING, NAILING, OR BOLTING TO OTHER FRAMING MEMBERS.
      iii. 5:1, ONE EDGE SHALL BE HELD IN LINE FOR ITS ENTIRE LENGTH.
      iv. 6:1, FULL-DEPTH BLOCKING, BRIDGING, OR CROSS-BRACING SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 8 FEET UNLESS BOTH EDGES ARE HELD IN LINE.
      v. 7:1, BOTH EDGES SHALL BE HELD IN LINE FOR THE ENTIRE LENGTH.
   D. ALL LUMBER, UNLESS NOTED, SHALL BE MILL SIZED AND SURFACED ON FOUR SIDES AND SHALL BE STRAIGHT STOCK, FREE FROM WARP OR CUP, AND SINGLE LENGTH PIECES.
   E. ALL ROUGH CARPENTRY SHALL PRODUCE JOINTS TRUE, TIGHT, AND WELL NAILED WITH MEMBERS ASSEMBLED IN ACCORDANCE WITH THE DRAWINGS AND ALL PERTINENT BUILDING CODES. THE SHIMMING OF SILLS, JOISTS, SHORT STUDS, TRIMMERS, HEADERS, OR OTHER FRAMING MEMBERS SHALL NOT BE PERMITTED. ALL WALLS AND PARTITIONS SHALL BE STRAIGHT, PLUMB, AND ACCURATELY LOCATED. CAREFULLY SELECT ALL STRUCTURAL MEMBERS SO KNOTS AND OBVIOUS MINOR DEFECTS WILL NOT INTERFERE WITH MAKING SOUND CONNECTIONS.
   F. INSTALL ALL BLOCKING AS REQUIRED TO SUPPORT ALL REQUIRED FINISHES AND EQUIPMENT. PROVIDE 2x FIRE BLOCKING TO CUT OFF ALL CONCEALED DRAFT OPENINGS, BOTH VERTICAL AND HORIZONTAL, BETWEEN CEILING AND FLOOR AREAS. VERIFY ALL REQUIRED BLOCKING WITH ARCHITECTURAL DRAWINGS AND LOCAL BUILDING OFFICIAL.
   G. ALL LUMBER AND PRODUCTS SHALL BE HANDLED AND STORED TO PREVENT MARRING AND MOISTURE ABSORPTION. NO DIRECT CONTACT WITH THE GROUND IS PERMITTED.
   H. PROTECTION AGAINST DECAY AND TERMITES:
      i. ALL LUMBER: WHEN IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE TREATED WOOD. BOTTOM OF SILLS AT EXTERIOR WALLS SHALL NOT BE LESS THAN 8" ABOVE OUTSIDE GRADE EXCEPT WHERE GRADE IS PAVED OVER FOR 18" MINIMUM WIDTH AND DRAINING AWAY FROM THE BUILDING. FOR THAT CONDITION, SILL MAY BE 2" ABOVE.
      ii. EXTERIOR COLUMNS AND POSTS: IN AREAS EXPOSED TO WATER SPLASH AND EXTERIOR CONDITIONS, COLUMN/POST SHALL BE SUPPORTED BY A METAL CONNECTOR AND BE TREATED IN ACCORDANCE WITH AWPA UC3.
      iii. STRUCTURAL SUPPORTS OF BALCONIES, PORCHES, OR SIMILAR APPURTENANCES: WHEN MEMBERS ARE EXPOSED TO THE WEATHER WITHOUT ADEQUATE ROOF PROTECTION PREVENTING WATER ACCUMULATION, THEY SHALL BE TREATED WOOD IN ACCORDANCE WITH AWPA UC3.
      iv. MOISTURE CONTENT: WHEN WOOD IS PRESSURE TREATED WITH A WATERBORNE PRESERVATIVE AND LOCATED IN ENCLOSED SPACES WHERE DRYING IN SERVICE CANNOT READILY OCCUR, SUCH WOOD SHALL BE AT A MOISTURE CONTENT OF 19% OR LESS BEFORE BEING COVERED.
      v. USE AWPA UC4 AT ALL WOOD IN CONTACT WITH SOIL.
   I. NOTCHES AND BORED HOLE PENETRATIONS IN WOOD STUD WALLS SHALL CONFORM TO SECTION 2308 OF THE IBC CBC AND TYPICAL DETAIL, WHICHEVER IS MORE RESTRICTIVE.
   J. ALL APPLICABLE FRAMING STANDARDS OR GRADING RULES SPECIFIED SHALL BE IDENTIFIED BY THE GRADE MARK OR A CERTIFICATE OF INSPECTION BY AN APPROVED AGENCY. ALL LUMBER AND PLYWOOD REQUIRED TO BE TREATED WOOD SHALL BE IDENTIFIED BY THE QUALITY MARK OF AN APPROVED INSPECTION AGENCY WHICH MAINTAINS CONTINUED SUPERVISION, TESTING, AND INSPECTION OVER THE QUALITY OF THE PRODUCT.
   K. ALL APPLICABLE FRAMING STANDARDS OR GRADING RULES SPECIFIED SHALL BE IDENTIFIED BY THE GRADE MARK OR A CERTIFICATE OF INSPECTION BY AN APPROVED AGENCY. ALL LUMBER AND PLYWOOD REQUIRED TO BE TREATED WOOD SHALL BE IDENTIFIED BY THE QUALITY MARK OF AN APPROVED INSPECTION AGENCY WHICH MAINTAINS CONTINUED SUPERVISION, TESTING, AND INSPECTION OVER THE QUALITY OF THE PRODUCT.
   L. WALL STUD CONSTRUCTION IS DESIGNED TO BE BRACED BY THE WALL SHEATHING (WOOD STRUCTURAL PANEL OR GYPSUM BOARD). CONTRACTOR TO PROVIDE TEMPORARY BRACING, AS REQUIRED, UNTIL SHEATHING IS INSTALLED.
   M. ALL DRYWALL, WINDOWS, EXTERIOR CLADDING, MEP, ETC. SHALL BE ARCHITECTURALLY DETAILED AND CONSTRUCTED BY THE CONTRACTOR TO ACCOMMODATE ESTIMATED VERTICAL MOVEMENT DUE TO CRUSHING, SHRINKAGE, AND CONSTRUCTION GAPS. STRUCTURAL ENGINEER SHALL NOT BE HELD LIABLE FOR ANY POST-CONSTRUCTION REMEDIATION REQUIRED AS A RESULT OF DIFFERENTIAL MOVEMENT.

FIRE-RETARDANT TREATED (FRT) LUMBER

1. SEE ARCHITECTURAL FOR ALL LOCATIONS REQUIRING FRT DIMENSIONAL LUMBER.
2. NO FIRE TREATED LUMBER TO BE INCISED. NO REDUCTION DUE TO INCISING HAS BEEN CONSIDERED.
3. THE REDUCTION FACTORS USED FOR DESIGN ASSUME FRT LUMBER SUPPLIED BY PYROGUARD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING PRIOR TO SUBMITTING A BID THAT THE ASSUMED FRT LUMBER STRENGTH REDUCTION FACTORS BELOW MEET THE REQUIREMENTS OF THE SUBMITTED FIRE-RETARDANT TREATMENT TO BE USED. ANY REVISIONS TO FRAMING MEMBERS AFTER BIDDING DUE TO FAILURE TO VERIFY THESE VALUES SHALL BE AT NO ADDITIONAL COST TO THE OWNER.

FIRE-RETARDANT TREATED LUMBER STRENGTH FACTORS		
DESIGN PROPERTY	REDUCTION IN VALUE (WALL/FLOOR)	REDUCTION IN VALUE (ROOF)
Fb	0.97	0.93
Ft	0.95	0.87
Fv	0.96	0.95
Fc perp	0.95	0.95
Fc parallel	1.00	0.98
E	0.96	0.96
FASTENERS	0.90	0.90

NOTE: THE REDUCTION VALUES ABOVE ARE FOR DOUGLAS FIR IN CLIMATE ZONE 1B.

4. FIRE-RETARDANT TREATMENT PER AWPA U1 STANDARD, USE CATEGORY UCFA FOR INTERIOR LUMBER PROTECTED FROM MOISTURE. FRT SILL PLATES PER UC2, SUBJECT TO MOISTURE. FRT SILL PLATES SHALL ALSO BE IDENTIFIED AS EXTERIOR PER [ENGR NOTE: FOR CALIFORNIA PROJECTS, UPDATE "IBC" TO "CBC"] IBC CBC 2303.2.6 .
5. FRT LUMBER TO BE LABELED WITH THE MARK OF THE APPROVAL AGENCY, TREATING MANUFACTURER, SPECIES OF WOOD, FLAME SPREAD AND SMOKE-DEVELOPED INDEX, AND METHOD OF DRYING PER THE APPLICABLE BUILDING CODE.
6. CUTTING FRT LUMBER TO LENGTH AND TYPICAL UTILITY HOLE DRILLING IS ALLOWED. NO FIELD TREATMENT OR PAINTING OF FRT LUMBER TO BE REQUIRED. DO NOT MILL, RESURFACE, OR RIP (CUT ALONG LENGTH) FRT LUMBER.
7. ALL FASTENERS INSTALLED IN FRT WOOD SHALL BE HOT-DIP GALVANIZED OR STAINLESS STEEL.

METAL PLATE CONNECTED WOOD TRUSSES

1. DESIGN, FABRICATE, TRANSPORT, AND ERECT METAL PLATE CONNECTED WOOD TRUSSES IN ACCORDANCE WITH LATEST STRUCTURAL BUILDING COMPONENTS ASSOCIATION (SBCA) STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
2. DESIGN FOR LOADS, IN ADDITION TO MEMBER WEIGHTS, AS NOTED ON THE DRAWINGS AND PER APPLICABLE CODE REQUIREMENTS.
3. PREFABRICATED PRE-ENGINEERED TRUSSES ARE PERFORMANCE SPECIFIED. WOOD GRADE, SECTION, BRACING, CONNECTIONS, AND SIMILAR DETAILS ARE THE RESPONSIBILITY OF THE MANUFACTURER BASED ON REQUIRED LOADING.
4. ALL TRUSS-T0-TRUSS CONNECTIONS ARE TO BE DESIGNED BY THE TRUSS MANUFACTURER.
5. ALL PERMANENT AND TEMPORARY BRACING SHALL BE DESIGNED BY THE TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
6. COMPONENT DESIGN SHALL BE SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL STRUCTURAL ENGINEER, REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS FOR REVIEW BY THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT. FABRICATION SHALL NOT BEGIN WITHOUT APPROVED SHOP DRAWINGS.
7. SHOP DRAWINGS SHALL SHOW THE TRUSS DESIGN LOADS, SIZE AND GRADE OF THE CHORDS AND WEBS, TRUSS DEFLECTION, LOCATIONS OF THE JOINTS AND CONNECTIONS, SIZE AND TYPE AND LOCATION OF THE METAL PLATES, AND ALL BRACING AND BLOCKING REQUIREMENTS.
8. ROOF TRUSS LIVE LOAD DEFLECTION SHALL NOT EXCEED SPAN/480. TOTAL LOAD DEFLECTION SHALL NOT EXCEED SPAN/360.
9. FLOOR TRUSS LIVE LOAD DEFLECTION SHALL NOT EXCEED SPAN/480. TOTAL LOAD DEFLECTION SHALL NOT EXCEED SPAN/360.
10. TRUSSES SUPPORTING MASONRY TO BE DESIGNED FOR A MAXIMUM TOTAL LOAD DEFLECTION OF SPAN/600 OR 3/8", WHICHEVER IS SMALLER.
11. MAXIMUM DIFFERENTIAL DEFLECTION SHALL BE 1/2" MAXIMUM BETWEEN ADJACENT TRUSSES (LIVE LOAD ONLY OR TOTAL LOAD).
12. TRUSS MANUFACTURER SHALL NOT EXCEED THE ALLOWABLE BEARING STRESS PERPENDICULAR TO GRAIN OF THE SUPPORTING MEMBER.
13. TRUSS MANUFACTURER TO CONFIRM CEILING SLOPES AND CONFIGURATION WITH ARCHITECTURAL DRAWINGS PRIOR TO FABRICATION.
14. TRUSS MANUFACTURER IS RESPONSIBLE FOR MAINTAINING WEB OPENING ALIGNMENT BETWEEN ADJACENT TRUSSES AT TYPICAL AND ATYPICAL SPANS. GENERAL CONTRACTOR SHALL COORDINATE WEB OPENING MIS-ALIGNMENT WITH MECHANICAL, ELECTRICAL AND PLUMBING ROUTING.

WOOD DECKING

1. ALL WOOD DECKING SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) STANDARDS FOR TONGUE-AND-GROOVE HEAVY TIMBER ROOF DECKING, AITC 112.
2. ALL ROOF DECKING SHALL BE A 2x6 NOMINAL WOOD DECKING WITH A MINIMUM 1 7/16" THICKNESS AND A MINIMUM MODULUS OF ELASTICITY (E) OF 1,600,000 PSI. PROVIDE DOUGLAS FIR-LARCH (DF) SELECT DEX WOOD DECKING WITH Fb = 1750 PSI MINIMUM. DECKING SHALL BE KILN DRIED WITH 15% MAXIMUM MOISTURE CONTENT.
3. ALL WOOD DECK IS TO BE INSTALLED IN ACCORDANCE WITH AITC 112 FOR CONTROLLED RANDOM LAYUP. NO FLOATERS ARE ALLOWED.
4. ALL WOOD DECKING SHALL BE NAILED IN ACCORDANCE WITH THE REQUIREMENTS OF AITC 112.
5. OVERLAY THE NOMINAL 2" WOOD DECKING WITH A 3/8" PLYWOOD DIAPHRAGM. SEE PLAN FOR FASTENING.
6. VERIFY SIZE, NUMBER, AND LOCATION OF ALL OPENINGS IN ROOF DECKING WITH ALL DISCIPLINES.

POST-INSTALLED ANCHORS

1. ANCHORS SERVING AS THE BASIS OF DESIGN ARE SHOWN ON THE DRAWINGS. ACCEPTABLE ALTERNATIVE ANCHORS MAY BE SUPPLIED PROVIDED THE QUANTITY AND CONFIGURATION MATCH THE CAPACITY OF THE DESIGN ANCHOR QUANTITY AND CONFIGURATION. ANY ALTERNATES ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. BELOW SUMMARIZES EACH ANCHOR TYPE USED ON THE PROJECT.
2. MECHANICAL ANCHORS:
   a. EXPANSION ANCHORS

ANCHORED INTO	BASIS OF DESIGN	ACCEPTABLE ALTERNATES
GROUTED MASONRY	HILTI KB3 (ESR-1385)	DEWALT POWER STUD+ SD1 (ESR-2966) SIMPSON WEDGE-ALL (ESR-1396)
UNCRACKED CONCRETE	HILTI KB3 (ESR-2302)	DEWALT POWER STUD+ SD2 (ESR-2502) RED HEAD TRUBOLT+ (ESR-2427) SIMPSON STRONG BOLT 2 (ESR-3037)
CRACKED CONCRETE	HILTI KBTZ (ESR-1917)	DEWALT POWER STUD+ SD2 (ESR-2502) RED HEAD TRUBOLT+ (ESR-2427) SIMPSON STRONG BOLT 2 (ESR-3037)

   b. THREADED SCREW ANCHORS

ANCHORED INTO	BASIS OF DESIGN	ACCEPTABLE ALTERNATES
GROUTED MASONRY	HILTI KWIK HUS-EZ (ESR-3056)	DEWALT WEDGE-BOLT+ (ESR-1678) SIMPSON TITEN HD (ESR-1056)
UNCRACKED CONCRETE	HILTI KWIK HUS-EZ (ESR-3027)	DEWALT POWER SCREW-BOLT+ (ESR-3889) SIMPSON TITEN HD (ESR-2713)
CRACKED CONCRETE	HILTI KWIK HUS-EZ (ESR-3027)	DEWALT POWER SCREW-BOLT+ (ESR-3889) SIMPSON TITEN HD (ESR-2713)

3. ADHESIVE ANCHORS: SHALL CONSIST OF DEFORMED REINFORCING BARS OR ASTM A193 GRADE B7 RODS, HEAVY DUTY NUTS AND WASHERS AND A TWO COMPONENT STRUCTURAL ADHESIVE. WHERE ANCHORING INTO HOLLOW MASONRY, A SCREEN TUBE SHALL BE PROVIDED.

ANCHORED INTO	BASIS OF DESIGN	ACCEPTABLE ALTERNATES
HOLLOW MASONRY	HILTI HIT-HY 270 (ESR-4143)	DEWALT AC 100+ GOLD (ESR-3200) SIMPSON SET-XP (ESR-0265)
GROUTED MASONRY	HILTI HIT-HY 270 (ESR-4143)	DEWALT AC 100+ GOLD (ESR-3200) RED HEAD A7 ACRYLIC (ESR-3951) SIMPSON SET-XP (ESR-0265)
CONCRETE	HILTI HIT-HY 200 (ESR-3187)	DEWALT AC 200+ (ESR-4027) SIMPSON SET-3G (ESR-4057)

4. CRACKED CONCRETE REPRESENTS ALL CONCRETE FOR PROJECTS LOCATED IN SEISMIC DESIGN CATEGORY C OR HIGHER, TENSILE ZONES SUCH AS BOTTOMS OF BEAMS AND SLABS, OR WHERE NOTED ON THE DRAWINGS.

EPOXY ANCHORS

1. INTENDED FOR USE WITH REINFORCING BARS AND THREADED RODS.
2. ALL EPOXY ON THE JOB, UNLESS OTHERWISE NOTED, SHALL BE 'SET-3G' AS MANUFACTURED BY SIMPSON STRONG-TIE (ICC ESR-4057) OR APPROVED EQUIVALENT.
3. WORKERS SHALL BE CERTIFIED FOR ANCHOR INSTALLATION EQUIPMENT AND PROCEDURES USING THEIR EPOXY.
4. CONTINUOUS INSPECTION IS REQUIRED FOR INSTALLATION OF REBAR OR THREADED RODS.
5. FOR REQUIRED HOLES, THE DIAMETERS SHALL BE PER MANUFACTURER'S REQUIREMENTS. MINIMUM HOLE LENGTH SHALL BE PER STRUCTURAL DRAWINGS, OR PER THE ICC MINIMUM (FOR MAXIMUM TENSION) IF NOT SHOWN.
6. FOR HORIZONTAL HOLES COMPLETELY THROUGH WALLS OR BEAMS AND FOR TIES AROUND COLUMNS, PROVIDE A DAM AT ONE END, FLOOD WITH EPOXY AND DAM THE OTHER SIDE. VIBRATE TIES TO ENSURE FULL COVERAGE. REMOVE DAMS ONCE FLUID EPOXY HAS SET. FILL ANY VOIDS WITH ADDITIONAL EPOXY.
7. ALL EPOXY ANCHORS WILL BE TESTED AS FOLLOWS:
   a. 25% OF FIRST 40 ANCHORS INSTALLED AND 10% OF ALL ANCHORS THEREAFTER.
   b. IF ANY FAILURES OCCUR, THE PREVIOUS 10 ANCHORS INSTALLED SHALL BE TESTED AS WELL AS THE NEXT 5 ANCHORS INSTALLED. NEW INSTALLED ANCHORS WILL CONTINUE TO BE TESTED UNTIL 5 SUCCESSIVE ANCHORS PASS, AT WHICH TIME NORMAL TESTING OF THE REMAINING ANCHORS SHALL RESUME.
   c. TEST VALUES:

ANCHOR TYPE	TEST TYPE	TEST LOAD (LBS)	BASE MATERIAL
5/8"ø THREADED ROD*	TENSION	6,000	CONCRETE
3/4"ø THREADED ROD*	TENSION	8,500	CONCRETE
7/8"ø THREADED ROD*	TENSION	11,500	CONCRETE
1"ø THREADED ROD*	TENSION	15,000	CONCRETE
#4 REBAR**	TENSION	4,800	CONCRETE
#5 REBAR**	TENSION	7,500	CONCRETE
#6 REBAR**	TENSION	10,500	CONCRETE

   * A307 ** GRADE 60
   d. ANCHORS SHALL BE ALLOWED TO CURE 48 HOURS PRIOR TO TESTING.
   e. TENSION TEST SHALL BE IN ACCORDANCE WITH ASTM E488.
   f. A MINIMUM OF TWO DOWELS PER WALL PER FLOOR SHALL BE TESTED.
   g. IF ANCHOR EDGE DISTANCE IS LESS THAN 6 ANCHOR DIAMETERS, USE 1/2 THE TEST VALUE SHOWN, UNLESS OTHERWISE NOTED.
8. WHEN INSTALLING DRILLED-IN EPOXY BARS OR ANCHORS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS.

POWDER ACTUATED FASTENERS

1. POWDER ACTUATED FASTENING SYSTEMS SHALL BE INSTALLED IN NORMAL WEIGHT AND LIGHTWEIGHT CONCRETE, MASONRY, AND STEEL PER THE REQUIREMENTS OF THE ICC ESR FOR THE SPECIFIC FASTENER AND AS REQUIRED BY THE MANUFACTURER.
2. WHEN INSTALLING POWDER ACTUATED FASTENERS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID HITTING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF 1" BETWEEN THE REINFORCEMENT AND THE FASTENER.
3. POWDER ACTUATED FASTENERS ARE NOT PERMITTED BY ASCE 7, SECTION 13.4.5 FOR SEISMIC TENSION LOAD APPLICATIONS. POWDER ACTUATED FASTENERS SHALL NOT BE USED TO CARRY SEISMIC TENSION LOADS, EXCEPT FOR VERTICAL SEISMIC LOAD PRODUCED BY SELF-WEIGHT OF THE COMPONENTS SUPPORTED, OR IN CRACKED CONCRETE UNLESS PREAPPROVED FOR SUCH LOADING BY THE ENFORCEMENT AGENCY.
4. POWDER ACTUATED FASTENERS MAY BE USED FOR SEISMIC SHEAR, WHEN THEY ARE SPECIFICALLY LISTED FOR SERVICE IN RESISTING LATERAL LOADS IN AREAS SUBJECT TO EARTHQUAKE.
5. MINIMUM EDGE DISTANCE FOR POWDER ACTUATED FASTENERS SHALL BE THE LARGER OF THE VALUES GIVEN IN ASTM E1190 OR THE APPLICABLE ICC ESR.
6. FASTENERS TO BE TESTED SHALL BE SELECTED AT RANDOM BY THE INSPECTION AGENCY.
7. TESTING OF POWDER ACTUATED FASTENERS USED TO ATTACH TRACKS OF INTERIOR NON-SHEAR WALL PARTITIONS FOR SHEAR ONLY, WHERE THERE ARE AT LEAST THREE FASTENERS, IS NOT REQUIRED.
8. IF ANY FASTENERS FAIL TESTING, TEST ALL FASTENERS OF THE SAME TYPE, INSTALLED BY THE SAME TRADE, NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE FASTENERS PASS, THEN RESUME THE INITIAL TEST FREQUENCY.
9. THE TEST LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION IN THE FASTENER, SUCH AS DIRECT PULL WITH A HYDRAULIC JACK, CALIBRATED SPRING-LOADED DEVICE, ETC. POWDER ACTUATED FASTENERS SHALL BE TENSION TESTED TO TWICE THE ALLOWABLE TENSION LOAD AS LISTED IN THE ICC ESR.
10. HILTI X-ENP-19 L15 SHOT PIN (ICC ESR-2776) CAN BE USED IN LIEU OF HILTI XU-0.157 AND XU-0.145 SHOT PINS FOR CONNECTION TO STEEL APPLICATION, AT CONTRACTOR'S OPTION.

ELEVATORS

1. THE ELEVATORS, ASSOCIATED EQUIPMENT, GUIDE RAILS, AND BRACKETS ARE A DEFERRED APPROVAL ITEM.
2. INSTALLATION OF ELEVATORS, ASSOCIATED EQUIPMENT, GUIDE RAILS, AND BRACKETS SHALL NOT BE STARTED UNTIL DETAILED PLANS AND ENGINEERING CALCULATIONS HAVE BEEN APPROVED BY THE ARCHITECT/STRUCTURAL ENGINEER.
3. ALLOWANCE FOR ELEVATORS, ASSOCIATED EQUIPMENT, GUIDE RAILS, AND BRACKETS HAS BEEN INCLUDED IN THE DESIGN OF THE STRUCTURE.

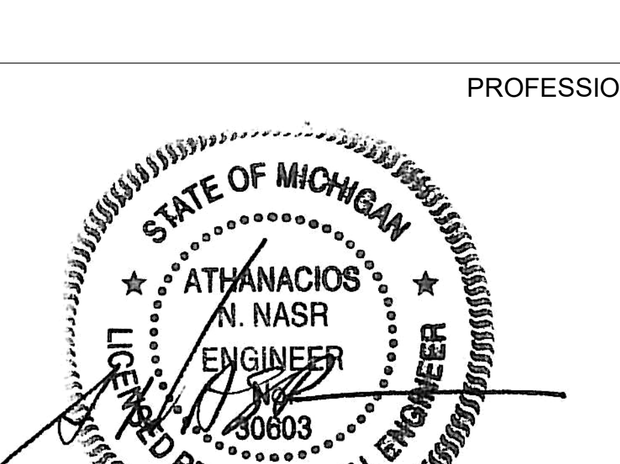
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KEY PLAN

AGENCY APPROVAL

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REVISIONS

No.	Date	Revision / Issue
3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
6	12/13/2024	HUD Submission
7	12/20/2024	Permit

SHEET INFORMATION

Issue	Issued for Permit
Date	10/30/2024
Project #	23008275.00
Drawn	GHW
Checked	GFM
Approved	-

SHEET TITLE
GENERAL NOTES

SCALE
Scale:

SHEET NUMBER
S001

23008275.00 12/19/2024 9:12:34 PM JOHN GRACE ARMS

TESTING, INSPECTIONS, AND OBSERVATIONS

1. THE STRUCTURAL ENGINEER DOES NOT PROVIDE INSPECTIONS OF CONSTRUCTION. STRUCTURAL ENGINEER MAY MAKE PERIODIC OBSERVATIONS OF THE CONSTRUCTION. SUCH OBSERVATIONS SHALL NOT REPLACE REQUIRED INSPECTIONS BY THE GOVERNING AUTHORITIES OR SERVE AS "SPECIAL INSPECTIONS" AS MAY BE REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
2. SEE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS OR SPECIFICATIONS FOR TESTING AND INSPECTION REQUIREMENTS OF NON-STRUCTURAL COMPONENTS.
3. DUTIES OF THE INSPECTION AGENCY PER IBC CHAPTER 17:
   a. SUBMIT A PROPOSED TESTING AND INSPECTION PROGRAM TO THE OWNER, THE ARCHITECT AND THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.
   b. PERFORM ALL TESTING AND INSPECTION REQUIRED PER APPROVED TESTING AND INSPECTION PROGRAM.
   c. FURNISH INSPECTION REPORT TO THE BUILDING OFFICIAL, THE OWNER, THE ARCHITECT, STRUCTURAL ENGINEER AND THE GENERAL CONTRACTOR. THE REPORTS SHALL BE COMPLETED AND FURNISHED WITHIN 48 HOURS OF INSPECTED WORK.
   d. SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTION AGENCY'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
4. SPECIAL INSPECTIONS AND TESTS ARE REQUIRED FOR MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN CHAPTER 17 OF THE IBC OR IN STANDARDS REFERENCED BY THE IBC. THESE ITEMS INCLUDE:
   a. POST-INSTALLED ANCHORS - INSPECTION
5. THE FOLLOWING WORK SHALL BE INSPECTED BY THE SPECIAL INSPECTOR UNLESS SPECIFICALLY WAIVED BY THE BUILDING OFFICIAL.

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
CONCRETE CONSTRUCTION				
1. INSPECT REINFORCEMENT AND VERIFY PLACEMENT		X	ACI 318: CH 20, 25.2, 25.3, 26.2.1-26.6.3	1908.4
2. MATERIAL IDENTIFICATION OF REINFORCING (TYPE/GRADE)		X	AISC 341: TABLE J9.1	
3. REINFORCING STEEL HAS NOT BEEN REBENT IN THE FIELD		X	AISC 341: TABLE J9.1	
4. REINFORCING STEEL HAS BEEN TIED AND SUPPORTED AS REQUIRED		X	AISC 341: TABLE J9.1	
5. REINFORCING STEEL CLEARANCES HAVE BEEN PROVIDED		X	AISC 341: TABLE J9.1	
6. INSPECT ANCHORS CAST IN CONCRETE		X	ACI 318: 17.8.2	
7. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:				
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X		ACI 318: 17.8.2.4	
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a		X	ACI 318: 17.8.2	
8. VERIFY USE OF REQUIRED DESIGN MIX		X	ACI 318: CH 19, 26.4.2, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
9. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X		ASTM C172, ASTM C31, ACI 318: 26.5, 26.12	1907.10
10. INSPECT CONCRETE FOR PROPER APPLICATION TECHNIQUES	X		ACI 318: 26.5	1908.6, 1908.7, 1908.8
11. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X	ACI 318: 26.5.3-26.5.5	1908.9
12. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X	ACI 318: 26.11.2(b)	

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	TMS 402	TMS 602
MASONRY CONSTRUCTION - LEVEL 1				
1. PRIOR TO CONSTRUCTION:				
a. VERIFICATION OF COMPLIANCE OF SUBMITTALS		X		ART. 1.5

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE
STRUCTURAL STEEL - FABRICATION			
1. FABRICATION FACILITY			X
2. CONNECTION ERECTION AND ASSEMBLY	X	X	
3. SINGLE PASS FILLET WELDS 5/16" OR LESS	X	X	X

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE
STRUCTURAL STEEL - ERECTION			
1. STRUCTURAL STEEL ERECTION	X	X	
2. CONNECTION ERECTION AND ASSEMBLY	X	X	
3. SINGLE PASS FILLET WELDS 5/16" OR LESS	X	X	X

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL PRIOR TO BOLTING - MINIMUM INSPECTION				
1. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P	TABLE C-N5.6-1	2.1, 9.1
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O	TABLE C-N5.6-1	6.5.1
3. CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)	O	O	TABLE C-N5.6-1	2.3.2, 2.7.2, 9.1
4. CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O	TABLE C-N5.6-1	4, 8
5. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O	TABLE C-N5.6-1	TABLE 6.1(2)
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P[1]	O[1]	TABLE C-N5.6-1	3, 9.1, 9.3
7. PROTECTION STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS	O	O	TABLE C-N5.6-1	2.2, 8, 9.1

1 DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE REPORTS NEED NOT PROVIDE DETAILED MEASUREMENTS FOR JOINT FIT-UPS, WPS SETTINGS, COMPLETED WELDS, OR OTHER INDIVIDUAL ITEMS LISTED IN THE TABLES. FOR SHOP FABRICATION, THE REPORT SHALL INDICATE THE PIECE MARK OF THE PIECE INSPECTED. FOR FIELD WORK, THE REPORT SHALL INDICATE THE REFERENCE GRID LINES AND FLOOR OR ELEVATION INSPECTED. WORK NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND WHETHER THE NONCOMPLIANCE HAS BEEN SATISFACTORILY REPAIRED SHALL BE NOTED IN THE INSPECTION.

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL AFTER BOLTING - MINIMUM INSPECTION				
1. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P	TABLE C-N5.6-3	N/A

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL PRIOR TO WELDING - MINIMUM INSPECTION				
1. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	P	P	TABLE C-N5.4-1	6.3
2. MANUFACTURER CERTIFICATES FOR WELDING CONSUMABLES AVAILABLE	P	P	TABLE C-N5.4-1	6.2
3. MATERIAL IDENTIFICATION	O	O	TABLE C-N5.4-1	6.2
4. WELDER IDENTIFICATION	O	O	TABLE C-N5.4-1	6.4 (WELDER QUALIFICATION)
5. FIT-UP OF FILLET WELDS	P/O[1]	O	TABLE C-N5.4-1	
a. DIMENSIONS (ALIGNMENT, GAPS AT ROOT)	P/O[1]	O	TABLE C-N5.4-1	5.21.1
b. CLEANLINESS (CONDITION OF STEEL SURFACES)	P/O[1]	O	TABLE C-N5.4-1	5.14
c. TACKING (TACK WELD QUALITY AND LOCATION)	P/O[1]	O	TABLE C-N5.4-1	5.17
6. CHECK WELDING EQUIPMENT	O	O	TABLE C-N5.4-1	6.2, 5.10

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL AFTER WELDING - MINIMUM INSPECTION				
1. WELDS CLEANED	O	O	TABLE C-N5.4-3	5.29.1
2. SIZE, LENGTH AND LOCATION OF WELDS	P	P	TABLE C-N5.4-3	6.5.1
3. WELDS MEET VISUAL ACCEPTANCE CRITERIA	P[2]	P[2]	TABLE C-N5.4-3	6.5.3
a. CRACK PROHIBITION	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(1)
b. WELD/BASE-METAL FUSION	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(2)
c. CRATER CROSS-SECTION	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(3)
d. WELD PROFILES	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(4), 5.24
e. WELD SIZE	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(6)
f. UNDERCUT	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(7)
g. POROSITY	P[2]	P[2]		TABLE 6.1(8)
4. ARC STRIKES	P	P	TABLE C-N5.4-3	5.28
5. K-AREA[3]	P[2]	P[2]	TABLE C-N5.4-3	N/A
6. WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES	P	P	TABLE C-N5.4-3	5.16, 6.5.2 (& SEE AISC 360 SECT. J1.6)
7. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P[2]	P[2]	TABLE C-N5.4-3	5.9, 5.30
8. REPAIR ACTIVITIES	P	P[2]	TABLE C-N5.4-3	6.5.3, 5.25
9. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P	TABLE C-N5.4-3	6.5.4, 6.5.5
10. PLACEMENT OF REINFORCING OR CONTOURING FILLET WELDS (IF REQUIRED)	P[2]	P[2]	TABLE C-N5.4-3	6.5.4, 6.5.5

1 FOLLOWING PERFORMANCE OF THIS INSPECTION TASK FOR TEN WELDS TO BE MADE BY A GIVEN WELDER, WITH THE WELDER DEMONSTRATING UNDERSTANDING OF REQUIREMENTS AND POSSESSION OF THE SKILLS TO VERIFY THESE ITEMS, THE PERFORM DESIGNATION OF THIS TASK SHALL BE REDUCED TO OBSERVE, AND THE WELDER SHALL PERFORM THIS TASK. SHOULD THE INSPECTOR DETERMINE THE WELDER HAS DISCONTINUED PERFORMANCE OF THIS TASK, THE TASK SHALL BE RETURNED TO PERFORM UNTIL SUCH TIME AS THE INSPECTOR HAS RE-ESTABLISHED ADEQUATE ASSURANCE THE WELDER WILL PERFORM THE INSPECTION TASKS LISTED.

2 DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE REPORT NEED NOT PROVIDE DETAILED MEASUREMENTS FOR JOINT FIT-UPS, WPS SETTINGS, COMPLETED WELDS, OR OTHER INDIVIDUAL ITEMS LISTED IN THE TABLES. FOR SHOP FABRICATION, THE REPORT SHALL INDICATE THE PIECE MARK OF THE PIECE INSPECTED. FOR FIELD WORK, THE REPORT SHALL INDICATE THE REFERENCE GRID LINES AND FLOOR OR ELEVATION INSPECTED. WORK NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND WHETHER THE NONCOMPLIANCE HAS BEEN SATISFACTORILY REPAIRED SHALL BE NOTED IN THE INSPECTION.

3 WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3" OF THE WELD. THE VISUAL INSPECTION SHALL BE PERFORMED NO SOONER THAN 48 HOURS FOLLOWING COMPLETION OF THE WELDING.

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
STRUCTURAL DECKING				
1. DECK PLACEMENT AND ATTACHMENT	X	X		

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
COLD-FORMED STEEL FRAMING				
1. EXTERIOR WALLS AND CONNECTIONS	X	X		
2. COLD-FORMED STEEL TRUSS SPANNING 60 FEET OR GREATER:				
a. TEMPORARY AND PERMANENT INSTALLATION RESTRAINT/BRACING		X		1705.2.4

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
WOOD FRAMING				
1. PREFABRICATED WOOD STRUCTURAL ELEMENTS		X		1704.2.5
a. METAL-PLATE-CONNECTED WOOD TRUSSES SPANNING 60 FEET OR GREATER:				
i. TEMPORARY AND PERMANENT INSTALLATION RESTRAINT/BRACING		X		1705.5.3
2. HIGH-LOAD DIAPHRAGMS:				
a. SHEATHING GRADE AND THICKNESS		X		1705.5.1
b. MEMBER SIZES AT ADJOINING PANEL EDGES		X		1705.5.1
c. DIAPHRAGM NAILING		X		1705.5.1
3. LATERAL FORCE RESISTING SYSTEM (SHEAR WALLS, DIAPHRAGMS, DRAG STRUTS, BRACES, AND HOLDOWNS, WHERE FASTENER SPACING AT PANEL EDGES IS 4" OR LESS):				
a. GLUING OF ELEMENTS OF THE LATERAL FORCE RESISTING SYSTEM	X			1705.12.1, 1705.13.2
b. NAILING, BOLTING, ANCHORING AND OTHER FASTENING TO OTHER ELEMENTS OF THE LATERAL FORCE RESISTING SYSTEM		X		1705.12.1, 1705.13.2

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
SOILS				
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X		
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X		
3. PERFORM CLASSIFICATIONS AND TESTING OF COMPACTED FILL MATERIAL		X		
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X			
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X		

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KEY PLAN

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PROJECT #23008275.00

REVISIONS

No.	Date	Revision / Issue
3	04/08/2024	CD Set
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6	12/13/2024	HUD Submission
7	12/20/2024	Permit

SHEET INFORMATION

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Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE

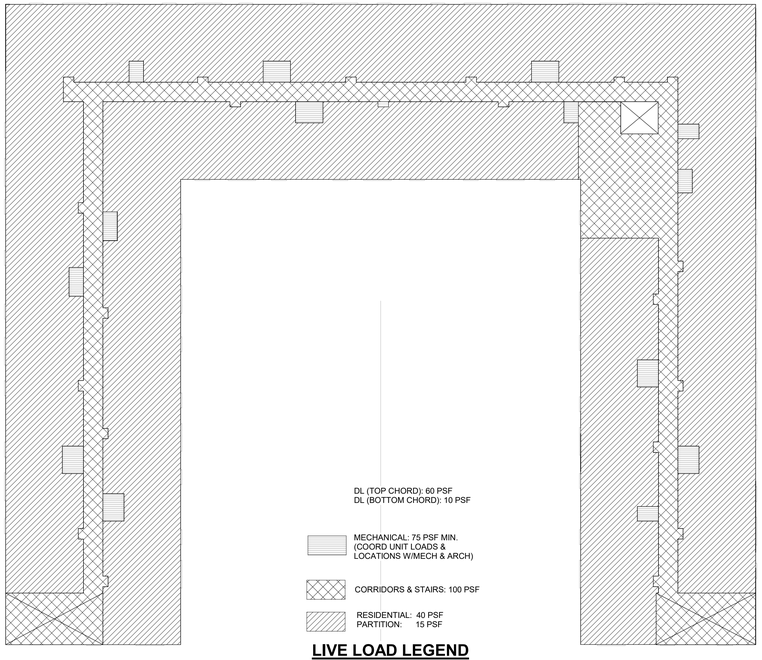
SPECIAL INSPECTIONS

SCALE

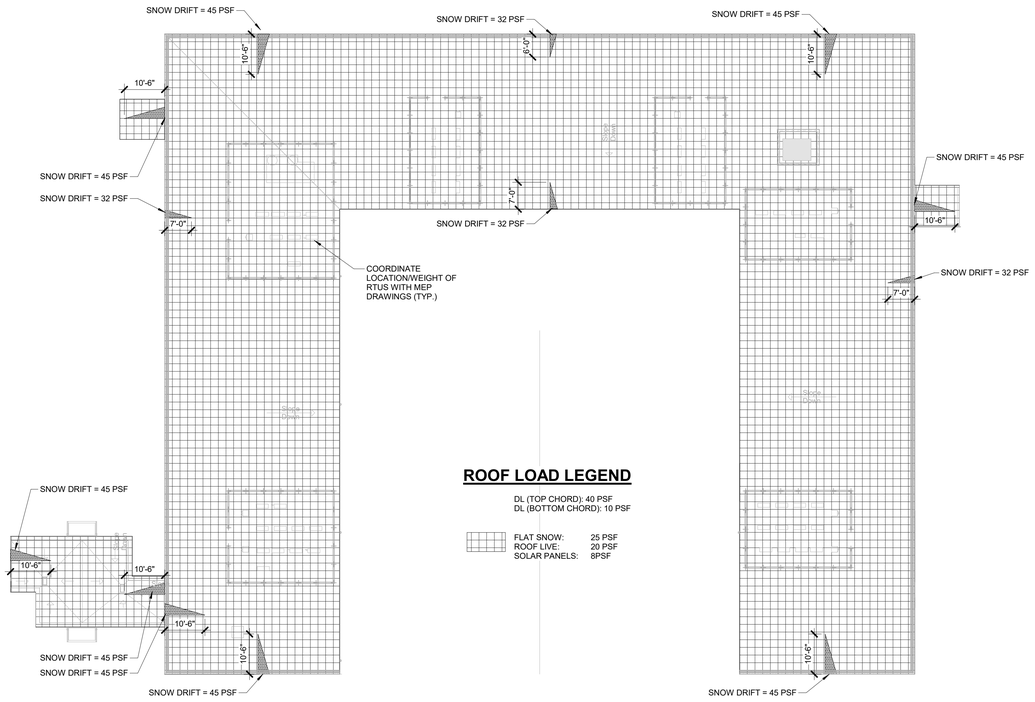
Scale:

SHEET NUMBER

S002



1 SECOND FLOOR ADDITION LOADING MAP
1/16" = 1'-0"



2 ROOF ADDITION LOADING MAP
1/16" = 1'-0"

DESIGN CRITERIA

The structure is designed for the following live loads, in addition to the lateral loads, super-imposed dead loads, and self weight of the structure. Where applicable, the live loads are reduced in accordance with the provisions of the governing Building Code.

		CODE REFERENCE
Risk Category	II	IBC Table 1604.5 ASCE Table 1.5-1

FLOOR LIVE LOADS

		CODE REFERENCE
Live	40 PSF	ASCE Table 4-1
Roof Live	20 PSF	ASCE Table 4-1
Partition	15 PSF	ASCE Table 4-1

SNOW LOADS

		CODE REFERENCE
Ground Snow Load	Pg = 20 PSF	ASCE Figure 7-1
Flat Roof Snow Load	Pf = 25 PSF (minimum)	ASCE Section 7.3
Exposure Factor	Ce = 1.0	ASCE Table 7-2
Importance Factor	I = 1.0	ASCE Table 1.5-2
Thermal Factor	Ct = 1.0	ASCE Table 7-3

Snow loads adjacent to vertical projections, on lower roofs adjacent to high roofs, or sloped roofs are increased for the effects of drifting.

WIND LOADS

				CODE REFERENCE
Ultimate Design Wind Speed (3 sec. gust)	Vult = 115 MPH			ASCE Figure 26.5-1A
Nominal Design Wind Speed	Vasd = 89 MPH			IBC Section 1609.3.1
Exposure Category	B			ASCE Section 26.7.3
Internal Pressure Coefficient	± 0.18 (Enclosed)			ASCE Section 26.11-1
Components and Cladding	Per Code Requirements Based on Above			ASCE Chapter 30
ROOF COMPONENTS				
	Zone 1	Zone 2	Zone 3	CODE REFERENCE
Support Beams (A > 100 SF)	+/-24 PSF	+/-28 PSF	+/-28 PSF	ASCE Table 30.7-2
Roof Sheathing (A = 50 SF)	+/-26 PSF	+/-35 PSF	+/-41 PSF	ASCE Table 30.7-2
Deck Fasteners (A < 10 SF)	+/-26 PSF	+/-43 PSF	+/-65 PSF	ASCE Table 30.7-2
WALL COMPONENTS				
	Zone 4	Zone 5		CODE REFERENCE
A = 100 SF	+/-24 PSF	+/-25 PSF		ASCE Table 30.7-2
A = 50 SF	+/-24 PSF	+/-27 PSF		ASCE Table 30.7-2
A = 10 SF	+/-26 PSF	+/-26 PSF		ASCE Table 30.7-2

Refer to ASCE 7-10 for zone definitions. Calculate wind load for tributary area of design component. Wind loads shown are for use with ASCE 7-10 load combinations (i.e. 0.6 factor for ASD and 1.0 factor for LRFD), and include directionality factor Kd = 0.85, per ASCE Table 26.6-1.

SEISMIC LOADS

		CODE REFERENCE
Seismic Importance Factor	Ie = 1.0	ASCE Table 1.5-2
Short Period Mapped Spectral Response Acceleration Parameter (5% of Critical Damping)	SS = 0.095 g	ASCE Section 11.4.1
1.0 sec. Mapped Spectral Response Acceleration Parameter (5% of Critical Damping)	S1 = 0.047 g	ASCE Section 11.4.1
Soil Site Class	E	ASCE Section 11.4.2
Design Spectral Response Acceleration Parameter (for short period)	SDS = 0.159 g	ASCE Section 11.4.4
Design Spectral Response Acceleration Parameter (1 sec. period)	SD1 = 0.109 g	ASCE Section 11.4.4
Seismic Design Category	B	ASCE Section 11.6
Seismic Force Resisting System	Wood shear walls sheathed with wood structural panels	ASCE Table 12.2-1
Seismic Response Coefficient	Cs = 0.024	ASCE Section 12.8.1.1
Response Modification Factor	R = 2.0	ASCE Table 12.2-1
Analysis Procedure	Equivalent Lateral Force	ASCE Section 12.8

EARTH PRESSURE LOADS

LATERAL EARTH EQUIVALENT FLUID PRESSURE	
Walls Unbraced at Top	40 PCF
Walls Braced at Top	55 PCF
Allowable Soil Bearing Capacity	3,000 PSF

1. Refer to Geotechnical Report for additional Information
2. Lateral earth pressure is based upon drained soil. Refer to drawings for foundation drainage.

MECHANICAL / ELECTRICAL LOADS

Typical Floors and Roof	125 PSF

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Drawn	**GHW**
Checked	**GFM**
Approved	-

SHEET TITLE

LOADING DIAGRAMS

SCALE

Scale: **1/16" = 1'-0"**

SHEET NUMBER

S003

23008275.00 12/19/2024 9:12:46 PM JOHN GRACE ARMS

WOOD BEARING WALL SCHEDULE

LOCATION	ROOF - 2ND	2ND - 1ST	REMARKS
TYPICAL - DEMISING WALL BETWEEN UNITS	(1) 2x4 @ 16" OC, STAGGERED ABOUT EACH SIDE OF WALL	(1) 2x4 @ 16" OC, STAGGERED ABOUT EACH SIDE OF WALL	-
CORRIDOR	(1) 2x6 @ 16" OC	(1) 2x6 @ 16" OC	-
EXTERIOR / PERIMETER	(1) 2x6 @ 16" OC	(1) 2x6 @ 16" OC	

NOTES:

1. WALLS LISTED ON SCHEDULE ARE FOR ALL WALLS SHOWN ON STRUCTURAL PLANS, UON.
2. STUDS TO ALIGN WITH FLOOR OR ROOF FRAMING MEMBERS, UON.

CMU WALL SCHEDULE

WALL ID	WALL THICKNESS	MAXIMUM HEIGHT	BAR SIZE AND SPACING EACH MAT		GROUTED	REMARKS
			VERTICAL	HORIZONTAL (SEE NOTE 4)		
MW1	8"	25'-0"	#5 @ 16" OC	STD LADDER @ 16" OC	PARTIAL	SINGLE MAT
MW2	8"	25'-0"	#5 @ 48" OC	STD LADDER @ 16" OC	PARTIAL	SINGLE MAT

NOTES:

1. THE ABOVE SCHED SHALL BE MIN REINF FOR ALL BUILDING CMU WALLS.
2. SINGLE MAT REINF SHALL BE IN THE CENTER OF WALL, UON.
3. PLACE HORIZ BAR IN BOND BEAM UNIT, TYP.
4. LOCATE FIRST LAYER OF HORIZ BARS AT 8" MAX FROM BASE OF WALLS AND FROM TOP AND BOTTOM OF WALL OPENINGS.

WOOD SHEAR WALL SCHEDULE

MARK	APA RATED SHEATHING			PANEL NAIL SIZE AND SPACING			FRAMING SIZE AT ADJOINING PANEL EDGES, MIN	JOIST/BLOCKING TO TOP PLATE CONN WITH SIMPSON A35 OR LTP4, UON	SILL PLATE CONN AT FLOOR WITH SIMPSON SCREWS	SILL PLATE ANCHORS AT CONCRETE		REMARKS
	THICKNESS	GRADE	SPAN RATING	SIZE	E.N.	F.N.				SIZE AND SPACING	EMBEDMENT (IN)	
SW1	1/2" ZIP SYSTEM	STRUCT 1	32/16	10d	@ 3" OC,	12" OC	2x	12" OC EA FACE	SDS25600 @ 6" OC	3/4"Ø @ 32" OC	12"	2X6 SPF STUDS @ 16" OC MAX;SEE HOLDOWN SCHEDULE
SW2	5/8" GYPSUM SHEATHING BOARD ON EACH SIDE	STRUCT 1	-	6d x 1 7/8"@	4" OC,	7" OC	2x	12" OC EA FACE	SDS25600 @ 6" OC	3/4"Ø @ 32" OC	12"	2X6 SPF STUDS @ 16" OC MAX;SEE HOLDOWN SCHEDULE
SW3	15/32" ONE SIDE	STRUCT 1	32/16	10d	@ 4" OC,	12" OC	2x	12" OC EA FACE	SDS25600 @ 6" OC	3/4"Ø @ 16" OC	12"	2X4 DFL STUDS @ 16" OC MAX;SEE HOLDOWN SCHEDULE
SW4	15/32" ONE SIDE	STRUCT 1	32/16	10d	@ 6" OC,	12" OC	2x	12" OC EA FACE	SDS25600 @ 6" OC	3/4"Ø @ 24" OC	12"	2X6 SPF STUDS @ 16" OC MAX;SEE HOLDOWN SCHEDULE

NOTES:

1. SHEATHING SHALL BE APA RATED, STRUCTURAL 1, 15/32" MIN. 5-PLY, EXPOSURE 1 OR APPROVED EXTERIOR GRADE OSB.SEE GENERAL NOTES FOR PLYWOOD INFORMATION.
2. PROVIDE BLOCKING IN SHEAR WALL PER TYP SHEAR WALL ELEVATION DETAIL. ALL PANEL EDGES ARE TO BE BLOCKED.
3. SILL PLATE ANCHORS ARE BASED UPON HILTI KWIK BOLT TZ2 OR HILTI HY-200 + HIT-Z.CONCRETE SHALL HAVE 75% OF SPECIFIED COMPRESSIVE STRENGTH AT TIME OF INSTALLATION.
4. SEE PLAN AND SCHEDULE FOR HOLDOWN ANCHOR AND POST SIZE.
5. ALL NAILS SHALL BE COMMON WIRE NAILS WITH 1 1/2" PENETRATION. SINKER OR BOX NAILS ARE NOT PERMITTED.
6. FOR TRANSFER NAILING, PREDRILL HOLES FOR NAILS WHERE NAILS TEND TO SPLIT WOOD.
7. OVERDRIVEN NAILS INTO SHEATHING ARE NOT ACCEPTABLE. ANY SHEATHING AND STUDS DAMAGED DUE TO OVERDRIVEN NAILS SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
8. WHERE PANELS ARE APPLIED TO BOTH SIDES AND NAIL SPACING IS LESS THAN 6", PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING, EACH SIDE OF WALL. CONTRACTOR OPTION TO PROVIDE NOMINAL 3" WIDE, OR GREATER, FRAMING MEMBERS WITH STAGGERED NAILS.
9. SEE S600 AND S601 FOR TYPICAL SHEAR WALL CONSTRUCTION DETAILS.
10. WHERE ROOF JOISTS ARE PERPENDICULAR TO SHEAR WALL, PROVIDE SIMPSON H8 CLIP FROM ROOF JOIST TO DOUBLE PLATE IN ADDITION TO CLIP SHOWN ON SHEAR WALL SCHED.
11. NUMBER OF ANCHOR BOLTS REQD EQUAL TO WALL LENGTH DIVIDED BY BOLT SPACING.
12. PLATE WASHERS AT SILL ANCHOR BOLTS IN SHEAR WALLS SHALL EXTEND TO WITHIN 1/2" OF THE PLATE EDGE ON THE SIDE(S) WITH SHEATHING. USE SIMPSON BPS3/4-6 OR EQUIVALENT AT 6 INCH NOMINAL WALLS. SEE S600 AND S601 FOR ADDITIONAL SILL BOLTING REQUIREMENTS.
13. 1/2" EDGE DISTANCE FROM THE PANEL EDGES AND 3/8" FROM THE EDGE OF CONNECTING MEMBERS. SEE S600 AND S601.
14. ALL WOOD STRUCTURAL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED AT ALL PANEL EDGES.
15. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. UON ON THE PLANS NAILING SHALL BE PER MARK SW4.
16. ZIP SYSTEM SHALL MEET THE REQUIREMENTS OF ICC-ES EVALUATION REPORT ESR-3373.
17. TOP AND SILL PLATES SHALL BE DOUGLAS-FIR-LARCH NO.1 UNLESS NOTED OTHERWISE.
18. PROVIDE MST48 STEEL STRAP @ 24" O.C. MAX. BETWEEN 1ST FLOOR AND 2ND FLOOR SHEAR WALL (ACCROSS THE LENGTH OF SW)
19. PROVIDE 2x STUDS OR 2x BLOCKING AT ADJOINING PANEL EDGES,
20. STAGGER VERTICAL JOINTS IN GYPSUM SHEETS WHERE SHEAR WALLS ARE SHEATHED ON BOTH SIDES.
21. HOLDOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS. HOLDOWNS SHALL BE FINGER TIGHT AND WRENCH TURNED JUST PRIOR TO COVERING THE WALL FRAMING. CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS ON THE POST ON THE OPPOSITE SIDE OF THE ANCHORAGE DEVICE. PLATE SIZE SHALL BE A MIN OF 0.299"x3" x 0'-3".
22. USE APA STRUC I WHERE FIRE TREATED PLYWOOD IS REQD. (REFER TO ARCH. DRAWINGS FOR FIRE RATING REQUIREMENTS)

Tighter nailing pattern per RFI

HOLDOWN SCHEDULE

MARK	LEVEL	MODEL	THREADED ROD ANCHOR	WOOD FASTENER	END POST IN 2x4 WALL	END POST IN 2x6 WALL
SW-1	GROUND	HTT5KT	5/8"ø	(26) #10x 2 1/2 SD	-	(3) 2x6 SPF
	2ND	DTT2Z	1/2"ø	(8) 1/4 x 1 1/2 SDS	-	(3) 2x6 SPF
SW-2	GROUND	DTT2Z	1/2"ø	(8) 1/4 x 1 1/2 SDS	-	(4) 2x6 SPF
	2ND	DTT1Z	3/8"ø	(8) 0.148 x 1 1/2	-	(4) 2x6 SPF
SW-3	GROUND	HD12	1"ø	(4) 1" STUD BOLTS	(6) 2X4 DFL SS	-
	2ND	HDU5-SDS2.5	5/8"ø	(14) 1/4 x 2 1/2 SDS	(6) 2X4 DFL SS	-
SW-4	GROUND	HTT5	5/8"ø	(26) 0.162x 2 1/2	-	(3) 2x6 SPF
	2ND	DTT2Z	1/2"ø	(8) 1/4 x 1 1/2 SDS	-	(3) 2x6 SPF

NOTES:

1. TYPICAL POST SIZE SHOWN IN SCHEDULE, UON ON PLAN.
2. EMBEDMENT FOR HOLDOWN AT GROUND LEVEL SHALL BE 16" MINIMUM.
3. INSTALL HOLDOWNS PER SIMPSON STRONG-TIE SPECIFICATIONS.
4. NOTCHES ARE NOT ALLOWED IN SHEAR WALL END POSTS.
5. SEE TYPICAL DETAIL 'SIMPSON HOLDOWNS (NON-ATS) FOR THREADED ROD HOLDOWN ANCHOR INFORMATION.
5. HOLD-DOWNS SHALL BE INSTALLED AT THE END OF EACH WALL SEGMENT AND SHALL BE ALIGNED FLOOR-TO-FLOOR; REFER TO PLAN
6. END POST SHALL BE DFL SELECT STRUCTURAL (1900 E; 625 FC PERP) & SPF NO.1/NO.2 MIN. (SEE SCHEDULE)

WOOD BEARING WALL SCHEDULE

LOCATION	ROOF - 2ND	2ND - 1ST	REMARKS
TYPICAL - DEMISING WALL BETWEEN UNITS	(1) 2x4 SPF @ 16" OC, ~~STAGGERED ABOUT EACH SIDE OF WALL~~	(1) 2x4 SPF @ 16" OC, ~~STAGGERED ABOUT EACH SIDE OF WALL~~	-
CORRIDOR	(1) 2x6 SPF @ 16" OC	(1) 2x6 SPF @ 16" OC	-
EXTERIOR / PERIMETER	(1) 2x6 SPF @ 16" OC	(1) 2x6 SPF @ 16" OC	

NOTES:

1. WALLS LISTED ON SCHEDULE ARE FOR ALL WALLS SHOWN ON STRUCTURAL PLANS, UON.
2. STUDS TO ALIGN WITH FLOOR OR ROOF FRAMING MEMBERS, UON.
3. REFER TO SHEAR WALL/ HOLDOWN SCHEDULE FOR THE END POSTS.

See RFI 64 (No staggered walls)

RFI #64

WOOD HEADER SCHEDULE

MARK	SIZE	REMARKS
H1	(3) 2x12 SPF	(2) 2X KING STUDS, (2) 2x TRIMMER
H2	(2) 2x12 SPF	(2) 2X KING STUDS, (2) 2x TRIMMER
H3	(2) 2x10 SPF	(2) 2X KING STUDS, (2) 2x TRIMMER
H4	(2) 2x8 SPF	(2) 2X KING STUDS, (2) 2x TRIMMER
H5	(3) 1 3/4x14 LVL	(2) 2X KING STUDS, (3) 2x TRIMMER

NOTE:

1. PROVIDE FULL BEARING ON TRIMMER END OF HEADER.
2. LINTELS NOT SPECIFICALLY SIZED BY DRAWINGS AND DETAIL SECTIONS AT 4" NON-BEARING WALLS SHALL BE COMPLY WITH THE FOLLOWING:
   - UP TO 4'-0" WIDE OPENING: (2) 2X6 SPF
   - OVER 4'-0" UP TO 7'-0" WIDE OPENING: H-3

LINTEL SCHEDULE

MARK	MEMBER SIZE	REFERENCE DETAIL	REMARKS
L1	L6x3-1/2x3/8" LLV	-	-
L2	L4x3-1/2x3/8" LLV	-	-
L3	16" DEEP BOND BEAM w/ (2) #5	6/S400	-
L4	L6x3-1/2x3/8" LLV ANCH. TO H5 W/ (2)1/2"ø LAG SCREW @ 24" OC	-	-

NOTE:

1. BEARING LENGTH EACH END = 8" MIN. UON.
2. WOOD HEADER U.N.O. REFER TO PLANS AND SCHEDULE.

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PROFESSIONAL SEAL

STATE OF MICHIGAN
ATHANACIOS M NASR
ENGINEER
6201 037 7
DATE 10/30/2024
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

KEY PLAN

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PROJECT #23008275.00

REVISIONS

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3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
6	12/13/2024	HUD Submission
7	12/20/2024	Permit
8	02/19/2025	Bulletin No. 1
9	10/13/2025	Bulletin No. 5
10	01/14/2026	Bulletin No. 7

SHEET INFORMATION

Issue: **Issued for Permit**
Date: **10/30/2024**
Project #: **23008275.00**
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Approved: **-**

SHEET TITLE

SCHEDULES

SCALE

Scale: **As indicated**

SHEET NUMBER

S004

FOUNDATION NOTES:

1. REFERENCE FINISHED FLOOR ELEVATION = 0'-0"
2. TOP OF FOOTING ELEVATION = -0'-8" FROM REFERENCE FINISHED FLOOR ELEVATION UNLESS NOTED OTHERWISE.
3. FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF.
4. REFER TO GEOTECHNICAL REPORT NO. 23-385 PREPARED BY THE McDOWELL & ASSOCIATES, (DATED 09-26-2023). THE CONTRACTOR MUST NOTIFY THE GEOTECHNICAL ENGINEER (MCDOWELL & ASSOCIATES) OF ANY VARIATION OF SOIL CONDITIONS FROM THE CONDITIONS INDICATED IN THE SOILS REPORT.
4. CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
5. REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING.
6. REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS.
8. DESIGNATIONS:

SOG1: 4" CONC SLAB ON GRADE w/6x6-W2.9xW2.9 WWF PLACED @ 2" FROM TOP OF SLAB ON VAPOR RETARDER ON MIN. 4" COMPACTED GRANULAR FILL ON PREPARED SUB-GRADE (TYP UNO)

W1: 2x6 SPF @ 16" OC WITH 4" BRICK

W2: 2x6 SPF @16" OC

W3: 2x4 SPF @16" OC

CFx: CONTINUIOUS FOOTING - REFER TO SCHEDULE

MWx MASONRY WALL - REFER TO SCHEDULE

SWx: SHEAR WALL - REFER TO SCHEDULE

P1: (2) 2X6 SPF WOOD POST

P2: (3) 2X6 SPF WOOD POST

P3: (4) 2X6 SPF WOOD POST

P4: (3) 2X4 SPF WOOD POST

C1: HSS4x4x1/4 w/ 12"x12"x3/4 BASE PL + (4)-3/4"ø ANCHOR BOLTS w/ 12" EMBED.

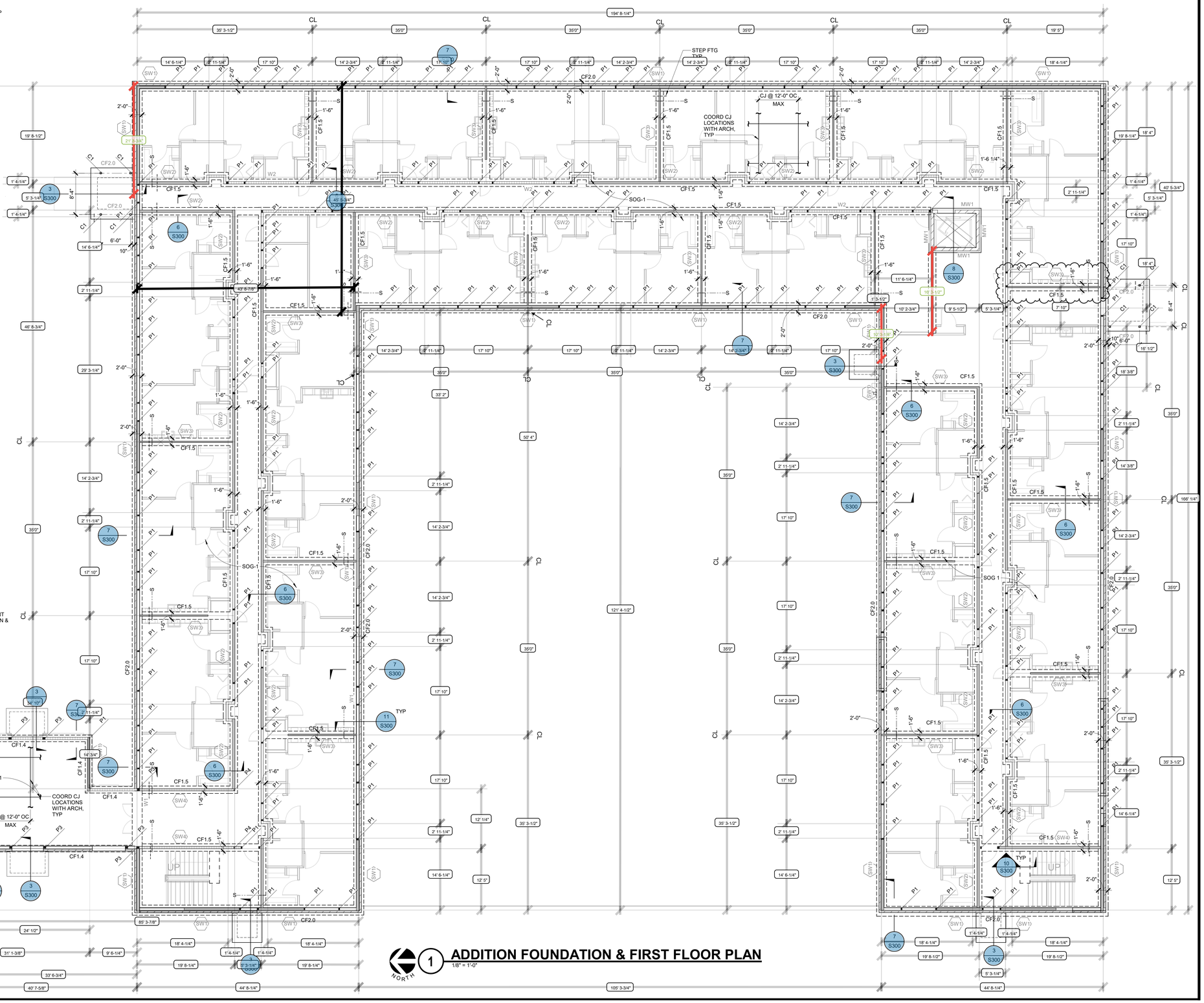
CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	MIN. THICKNESS	REINFORCING	
			LONG DIRECTION	SHORT DIRECTION
CF1.4	1'-4"	3'-4"	(2)#5 T&B	#3 TIES @ 24" OC
CF1.5	1'-6"	1'-6"	(2)#5 T&B	
CF2.0	2'-0"	3'-4"	(3)#5 T&B	#3 TIES @ 24" OC

CF SCHEDULE NOTES:

a. DEEPEN THE EXTERIOR FOOTINGS AS NECESSARY TO MAINTAIN THE BOTTOM OF FOOTINGS AT LEAST 3'-6" BELOW FINISHED GRADE (TYP.)

b. SCHEDULE APPLIES TO THE PROPOSED FOOTINGS IN THE EXISTING BUILDING FOUNDATION PLAN ON SHEET S100-E



ADDITION FOUNDATION & FIRST FLOOR PLAN

1/8" = 1'-0"

NORTH

OBS

RC

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PROJECT #23008275.00

REVISIONS

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3	04/08/2024	CD Set
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SHEET INFORMATION

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Project #	**23008275.00**
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Approved	**-**

SHEET TITLE

ADDITION FOUNDATION / FLOOR PLAN

SCALE

Scale: **As indicated**

SHEET NUMBER

S100-A

23008275.00 1/20/2026 2:53:58 PM JOHN GRACE ARMS

FOUNDATION NOTES:

1. REFERENCE FINISHED FLOOR ELEVATION = 0'-0"
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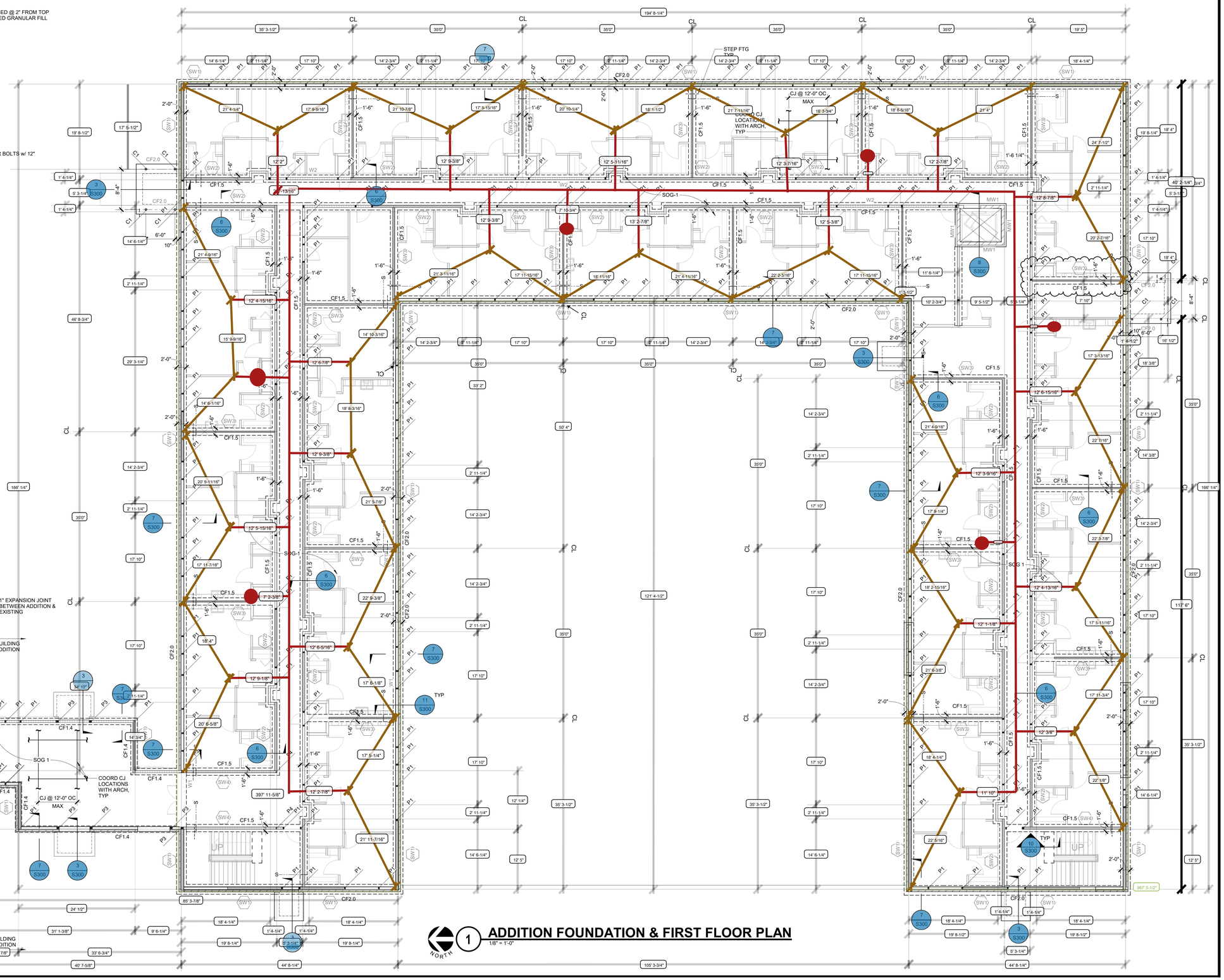
CONTINUOUS FOOTING SCHEDULE

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CF SCHEDULE NOTES:

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b. SCHEDULE APPLIES TO THE PROPOSED FOOTINGS IN THE EXISTING BUILDING FOUNDATION PLAN ON SHEET S100-E



1 ADDITION FOUNDATION & FIRST FLOOR PLAN

1/8" = 1'-0"

OBS

RC

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10	01/14/2026	Bulletin No. 7

SHEET INFORMATION

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SHEET TITLE

ADDITION FOUNDATION / FLOOR PLAN

SCALE

Scale: **As indicated**

SHEET NUMBER

S100-A

23008275.00 1/20/2026 2:53:58 PM JOHN GRACE ARMS

FOUNDATION NOTES:

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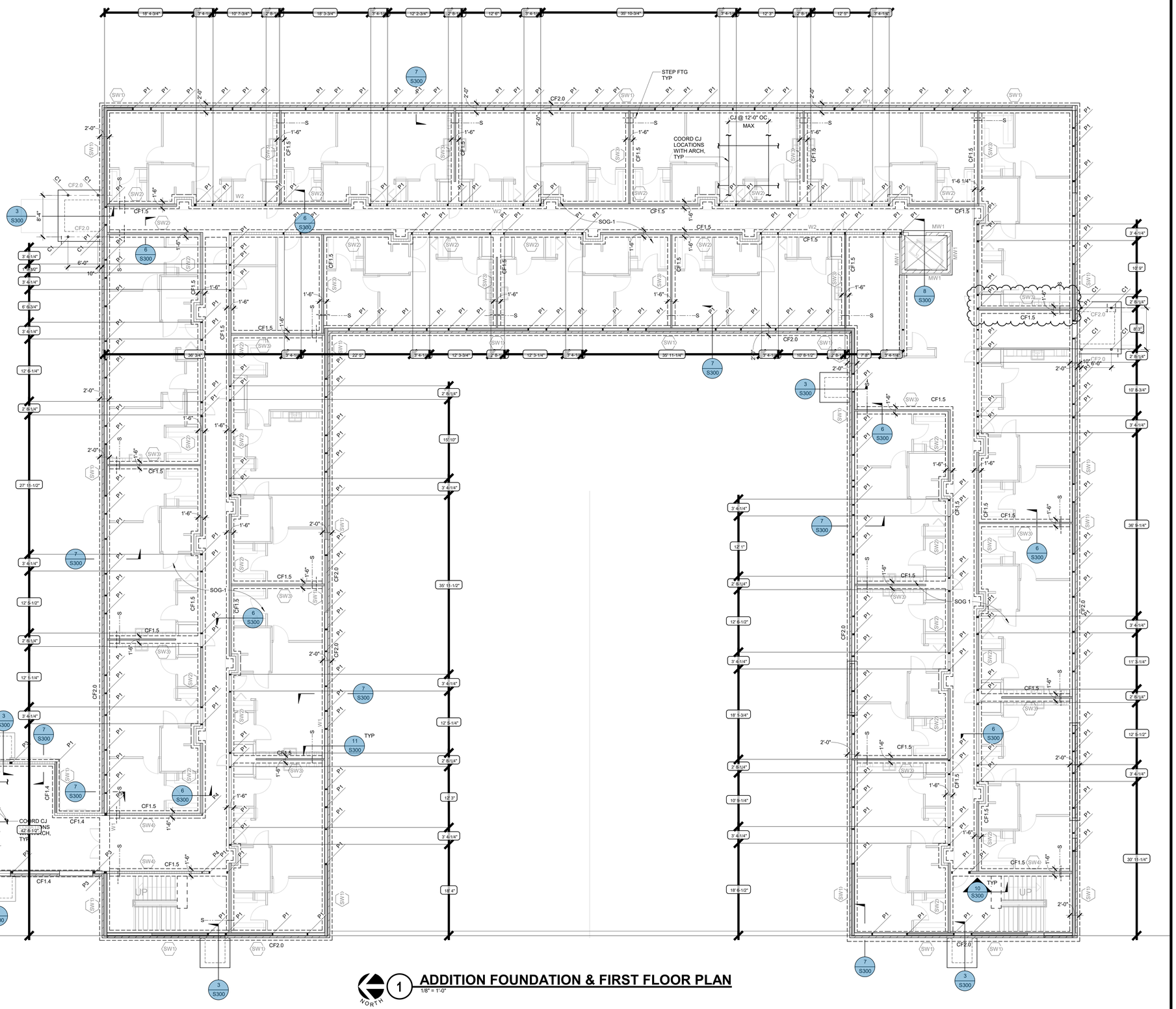
CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	MIN. THICKNESS	REINFORCING	
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CF SCHEDULE NOTES:

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b. SCHEDULE APPLIES TO THE PROPOSED FOOTINGS IN THE EXISTING BUILDING FOUNDATION PLAN ON SHEET S100-E



NORTH

1 ADDITION FOUNDATION & FIRST FLOOR PLAN

1/8" = 1'-0"

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SHEET TITLE

ADDITION FOUNDATION / FLOOR PLAN

SCALE

Scale: **As indicated**

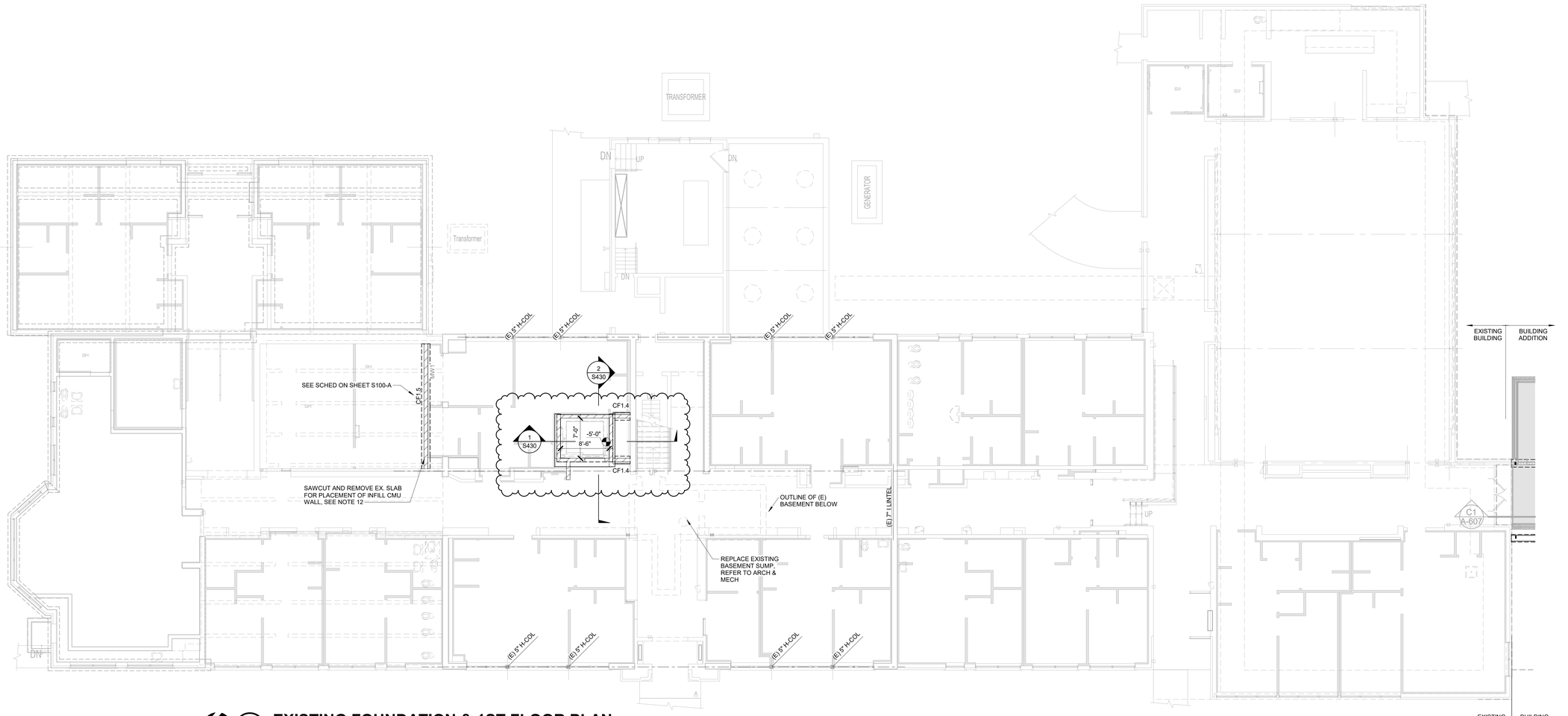
SHEET NUMBER

S100-A

23008275.00 1/20/2026 2:53:58 PM JOHN GRACE ARMS

EXISTING FOUNDATION & 1ST FLOOR NOTES:

1. FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF.
2. REFER TO GEOTECHNICAL REPORT NO. 23-385 PREPARED BY THE McDOWELL & ASSOCIATES, (DATED 09-26-2023).
3. GENERAL CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS LISTED IN SOILS REPORT. THE CONTRACTOR MUST NOTIFY THE GEOTECHNICAL ENGINEER (MCDOWELL & ASSOCIATES) OF ANY VARIATION OF SOIL CONDITIONS FROM THE CONDITIONS INDICATED IN THE SOILS REPORT.
4. MATCH ELEVATION OF ANY NEW AND/OR REPLACEMENT SLAB ON GRADE TO EXISTING ELEVATION.
5. SEE GENERAL NOTES SECTIONS FOR ADDITIONAL INFORMATION.
6. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH ARCH DRAWINGS.
7. CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS, FRAMING SIZES, AND CONDITIONS IN FIELD.
8. CONTRACTOR TO VERIFY ALL EXISTING FOUNDATION SIZES AND CONDITIONS IN FIELD.
9. CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
10. REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING.
11. REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS.
12. CONTRACTOR TO VERIFY EXISTANCE AND CONDITION OF FOOTING AND/OR THICKENED SLAB. IF NO THICKENED SLAB IS FOUND, REPLACE EXISTING SLAB WITH THICKENED SLAB.



1 **EXISTING FOUNDATION & 1ST FLOOR PLAN**
1/8" = 1'-0"

NORTH

23008275.00 7/29/2026 6:13:54 AM JOHN GRACE ARMS

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0 1 2 3
REF. SCALE IN INCHES PROJECT #23008275.00

REVISIONS

No.	Date	Revision / Issue
3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
6	12/13/2024	HUD Submission
7	12/20/2024	Permit
9	10/13/2025	Bulletin No. 5
12	07/27/2026	Bulletin No. 11

SHEET INFORMATION

Issue	**Issued for Permit**
Date	**10/30/2024**
Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE

EXISTING FOUNDATION / FLOOR PLAN

SCALE

Scale: **As indicated**

SHEET NUMBER

S100-E

SECOND FLOOR FRAMING NOTES:

1. FINISHED FLOOR REFERENCE ELEVATION = 11'-3 1/8"
2. DESIGNATIONS:

FD1: 2" GYPCRETE TOPPING (w/ SOUND ABSORBING MAT) OVER 3/4" THICK (MIN.) PLYWOOD UNLESS NOTED OTHERWISE. PLYWOOD SHALL BE GLUED AND NAILED TO FLOOR TRUSSES AND JOISTS, TYPICAL (U.N.O.). USE EXTERIOR GRADE PLYWOOD FOR BALCONIES AND TOILET ROOMS. REFER TO ARCH. DWGS FOR EXTENT OF TOILET ROOM AREA.

RD1: 3/4" PLYWOOD (ADD 1/2" PLYWOOD LAYER OVER INSULATION UNDER SOLAR PANEL LOCATIONS)

FT1: 24" DEEP PRE-ENGINEERED WOOD FLOOR TRUSSES AT 24" OC. REFER TO S-004 FOR DESIGN LOADS.

FJ1: 2x12 FLOOR JOIST @ 16" O.C.

RT1: 24" DEEP (AT LOW POINT) PRE-ENGINEERED ROOF TRUSSES AT 24" O.C. SLOPE TOP CHORD 1/4" PER FT. MIN. U.N.O.

B1: 3-PLY 2x12 PRE-ENGINEERED LVL BEAM

B2: 2-PLY 2x12 PRE-ENGINEERED LVL BEAM

B3: 2-PLY 2x12 PRE-ENGINEERED LVL BEAM

W1: 2x6 SPF @ 16" O.C. WITH 4" BRICK

W2: 2x6 SPF @16" O.C.

W3: 2x4 SPF @16" O.C.

P1: (2) 2X6 SPF WOOD POST

P2: (3) 2X6 SPF WOOD POST

P4: (3) 2X4 SPF WOOD POST

SWx: SHEAR WALL - REFER TO SCHEDULE

MWX: CMU WALL, REFER TO SCHEDULE

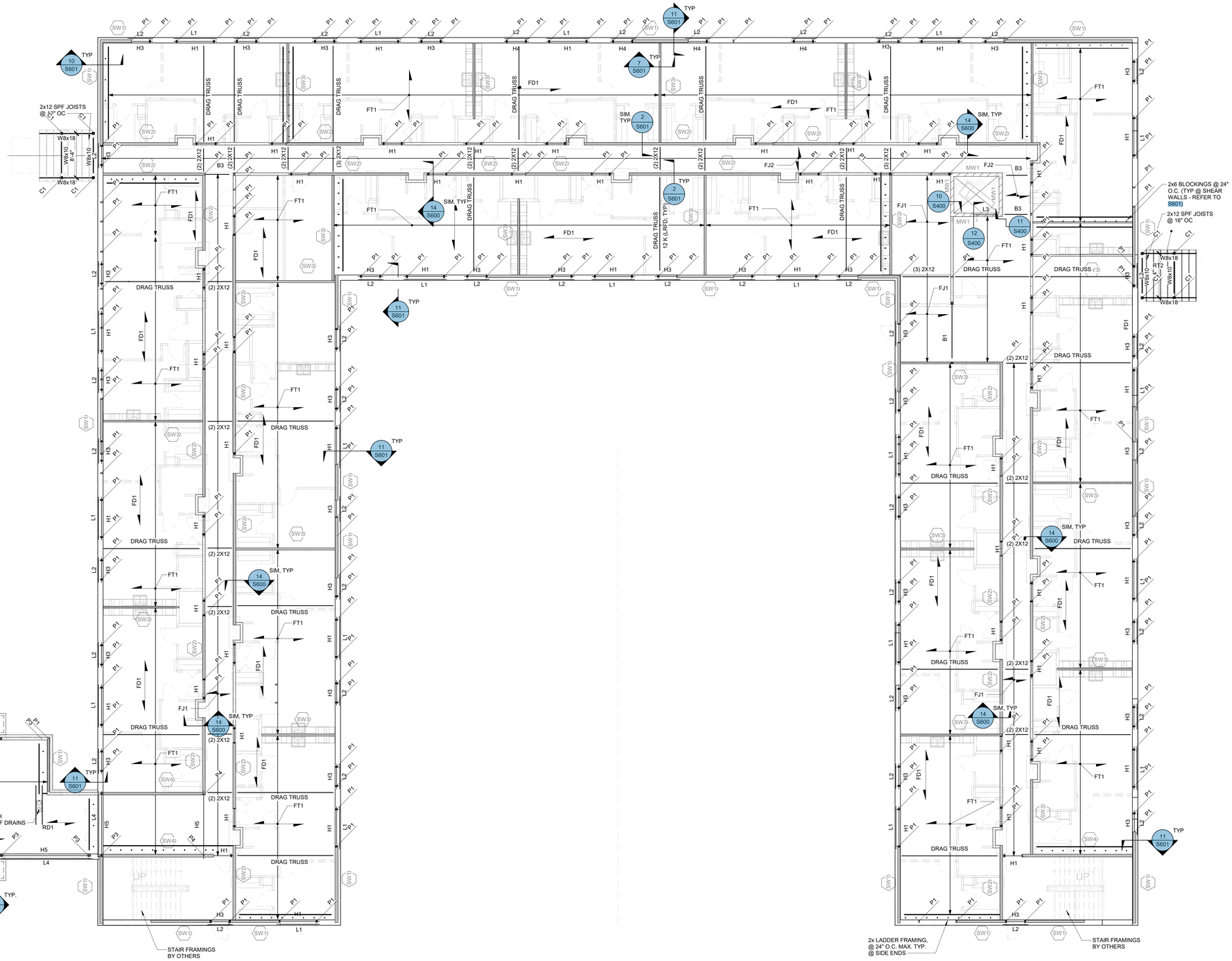
BPX: BEARING PLATE, REFER TO SCHEDULE

EPX: EMBED PLATE, REFER TO SCHEDULE

LX: LINTEL, REFER TO SCHEDULE

HX: HEADER, REFER TO SCHEDULE

3. VERIFY SIZE AND LOCATION OF OPENINGS WITH ARCHITECTURAL AND MEP DRAWINGS.



1 ADDITION 2ND FLOOR FRAMING PLAN

1/8" = 1'-0"

NORTH

23008275.00 1/20/2026 2:54:07 PM JOHN GRACE ARMS

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PROFESSIONAL SEAL

STATE OF MICHIGAN ATHANACIOS M. NASR ENGINEER 6201061202 LICENSED PROFESSIONAL ENGINEER

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KEY PLAN

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7	12/20/2024	Permit
10	01/14/2026	Bulletin No. 7

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Approved	**-**

SHEET TITLE

ADDITION 2ND FLOOR FRAMING PLAN

SCALE

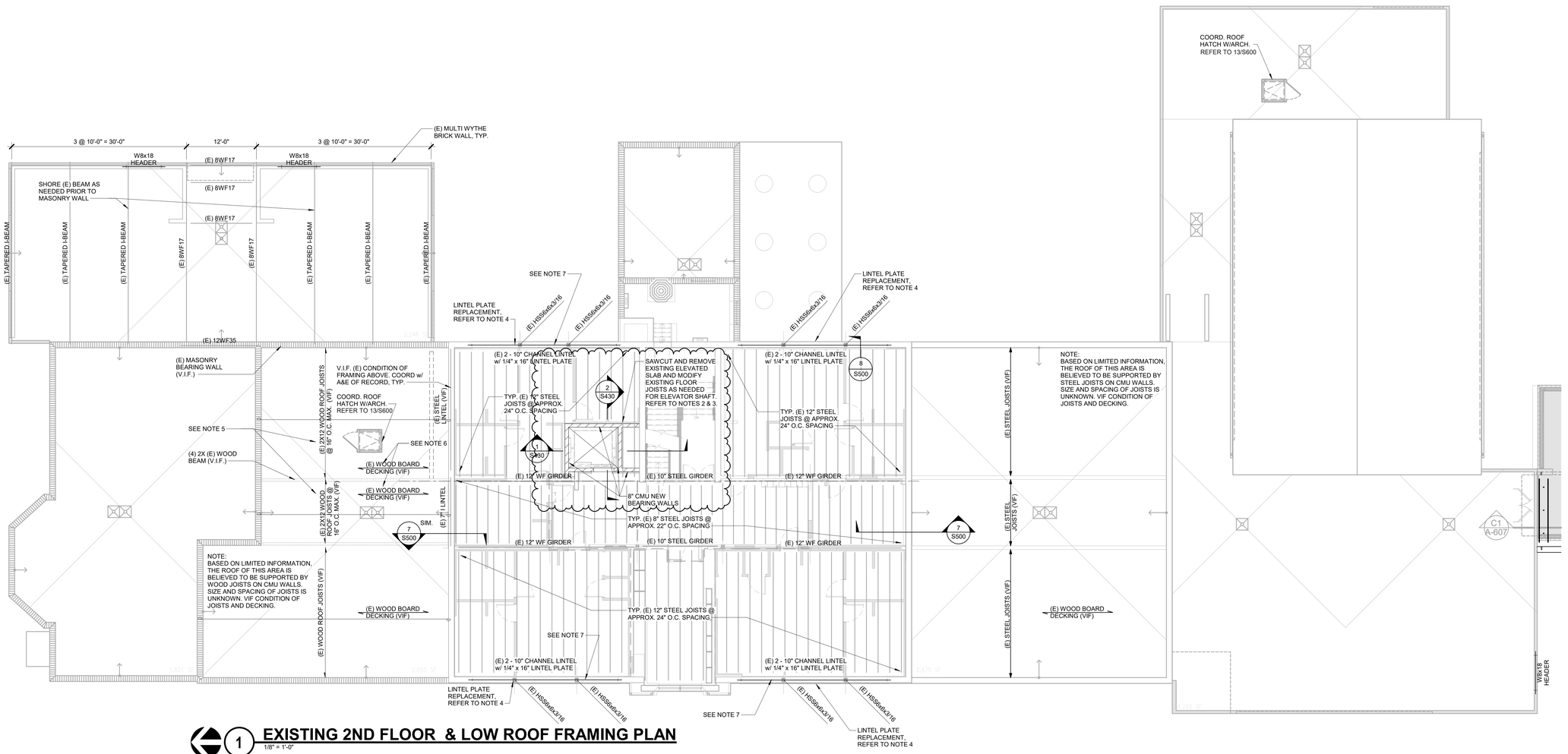
Scale: **As indicated**

SHEET NUMBER

S101-A

EXISTING SECOND FLOOR FRAMING PLAN NOTES:

1. VERIFY SIZE AND LOCATION OF OPENINGS WITH ARCHITECTURAL AND MEP DRAWINGS.
2. CONTRACTOR IS RESPONSIBLE FOR BRACING AND PROTECTING THE EXISTING STRUCTURAL ELEMENTS FROM DAMAGE, CORROSIION, OVERLOADING, ETC. DUE TO CONSTRUCTION OPERATIONS AND/OR WEATHER ELEMENTS.
3. TEMPORARY SHORING MUST BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN.
4. REMOVE DETERIORATED LINTEL COVER PLATE. VERIFY IN FIELD SIZE AND CONDITION OF EXISTING LINTEL AND INFORM ARCHITECT/ENGINEER IF LINTEL IS IN POOR CONDITION.
   INSTALL NEW STEEL LINTEL COVER PLATE. COORDINATE WITH ARCH FOR COATING COLOR.
5. SISTER EXIST. DETERIORATED/DAMAGED JOIST WITH 1 3/4"x11 7/8" LVL JOIST (FULL LENGTH) W/ 3 ROWS 1/4"dx3 1/2" SIMPSON SDS SCREWS @ 16" W/ MIT SIMPSON HANGER. NAIL THE DECKING TO NEW JOIST W/ 10d COMMON NAIL @ 6" O.C. MAX. REFER TO S600 THRU S602.
6. REMOVE AND REPLACE DETERIORATED/DAMAGED DECK W/ 3/4" EXTERIOR GRADE DECK. NAIL THE DECKING TO JOISTS W/ 10d COMMON NAIL @ 6" O.C. MAX.
7. PROVIDE SUPPORT/REPAIRS WHERE EXISTING JOIST SEATS ARE NOT SUPPORTED AND ARE RQUIRED. REFER TO 9/S500.



1 EXISTING 2ND FLOOR & LOW ROOF FRAMING PLAN

1/8" = 1'-0"

NORTH

JOHN GRACE ARMS

7/29/2026 8:13:56 AM

23008275.00

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PROFESSIONAL SEAL

STATE OF MICHIGAN
ATHANACIOS
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ENGINEER
6201
2026
LICENSED PROFESSIONAL ENGINEER

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11	06/25/2026	Bulletin No. 9 - Lintel Repairs
12	07/27/2026	Bulletin No. 11

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SHEET TITLE

EXISTING 2ND FLOOR FRAMING PLAN

SCALE

Scale: **As indicated**

SHEET NUMBER

S101-E

ROOF FRAMING NOTES:

1. TOP OF STRUCTURE ELEVATION (DECK BEARING ELEVATION) = REFER TO ARCH.(UNLESS NOTED OTHERWISE).

2. DESIGNATIONS:

   RD1: 3/4" PLYWOOD (ADD 1/2" PLYWOOD LAYER OVER INSULATION UNDER SOLAR PANEL LOCATIONS)

   RT1: 24" DEEP (AT LOW POINT) PRE-ENGINEERED ROOF TRUSSES AT 24" O.C. SLOPE TOP CHORD 1/4" PER FT. MIN. U.N.O.

   RT2: 24" DEEP (AT LOW POINT) PRE-ENGINEERED ROOF TRUSSES AT 24" O.C. SLOPE TOP CHORD 1/4" PER FT. MIN. INWARD ON EACH SIDE TO PROVIDE VALLEY AT CANTER.U.N.O.

   RT3: 24" DEEP (AT LOW POINT) PRE-ENGINEERED ROOF TRUSSES (WITH TAPERED CANTILEVER BOTH SIDES) AT 24" O.C. SLOPE TOP CHORD 1/4" PER FT. MIN. INWARD ON EACH SIDE TO PROVIDE VALLEY AT CANTER.U.N.O.

   RJ2: 2x12 SPF ROOF JOIST AT 16" O.C. U.N.O.

   RJ3: 2x6 PT SPF JOISTS @ 16" O.C.

   B1: 3-PLY 2x12 PRE-ENGINEERED LVL BEAM

   B2: 2-PLY 2x12 PRE-ENGINEERED LVL BEAM

   B3: 1-PLY 2x12 PRE-ENGINEERED LVL BEAM

   SWx: SHEAR WALL - REFER TO SCHEDULE

   W1: 2x6 SPF @ 16" OC w/ 4" BRICK

   W2: 2x6 SPF @16" OC

   W3: 2x4 SPF @16" OC

3. PRE-ENGINEERED WOOD ROOF TRUSS FRAMING SHALL BE DESIGNED BY THE TRUSS MANUFACTURER AND SHALL INCLUDE ALL INFORMATION INDICATED IN THE TRUSS NOTES SECTIONS OF THE GENERAL STRUCTURAL NOTE ON SHEET ON S004. SUBMIT CALCULATION AND SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN.

4. ALL ROOF TRUSSES SHALL BE DESIGNED FOR A NET UPLIFT OF 20 PSF (ASD), IN ADDITION TO OTHER LOAD CASES AND ANY OTHER NON-UNIFORM LOADS INDICATED ON THE DRAWINGS. ALL BRIDGING AND UPLIFT BRIDGING SHALL BE PER SJI REQUIREMENTS.

5. COORDINATE SIZES AND LOCATION OF ALL ROOF OPENINGS WITH ARCHITECTURAL AND MEP DRAWINGS. VERIFY SIZES, WEIGHTS, AND LOCATIONS OF ROOF TOP MECHANICAL EQUIPMENT WITH ARCHITECTURAL AND MEP DRAWINGS. REPORT ANY DISCREPANCIES WITH RESPECT TO SIZE AND WEIGHTS SHOWN ON THESE DRAWINGS TO THE ARCHITECT AND ENGINEER.

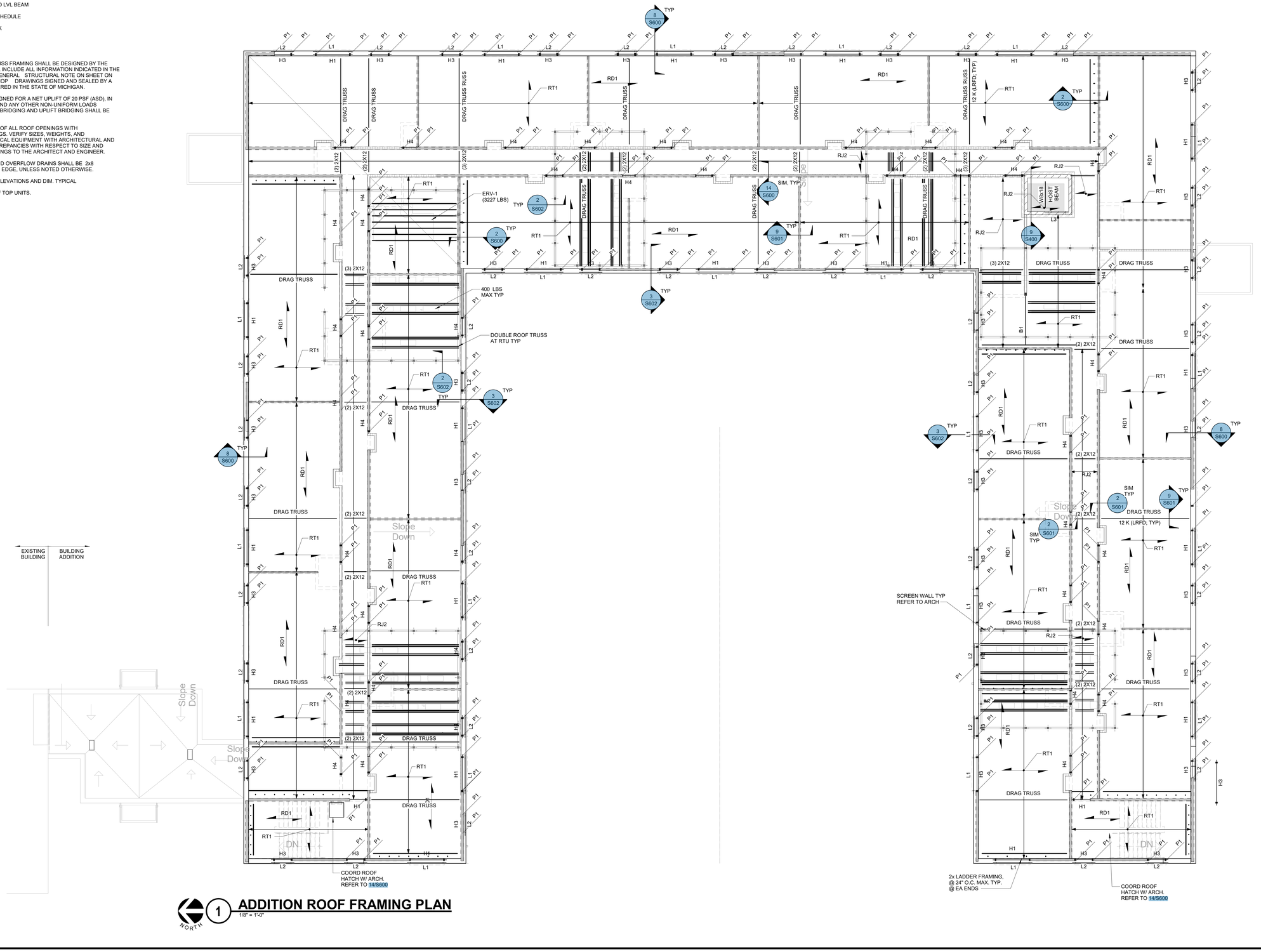
6. FRAMING FOR ALL ROOF DRAINS AND OVERFLOW DRAINS SHALL BE 2x8 TYPICAL, ALL SIDES OF SUPPORTED EDGE, UNLESS NOTED OTHERWISE.

7. REFER TO ARCH. DRAWINGS FOR ELEVATIONS AND DIM. TYPICAL

8. DOUBLE ROOF TRUSS UNDER ROOF TOP UNITS.

RFI #76

Dens Deck has been removed



1 **ADDITION ROOF FRAMING PLAN**
1/8" = 1'-0"

23008275.00 1/20/2026 2:54:25 PM JOHN GRACE ARMS

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Drawn	**GHW**
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Approved	**-**

SHEET TITLE

ADDITION ROOF FRAMING PLAN

SCALE

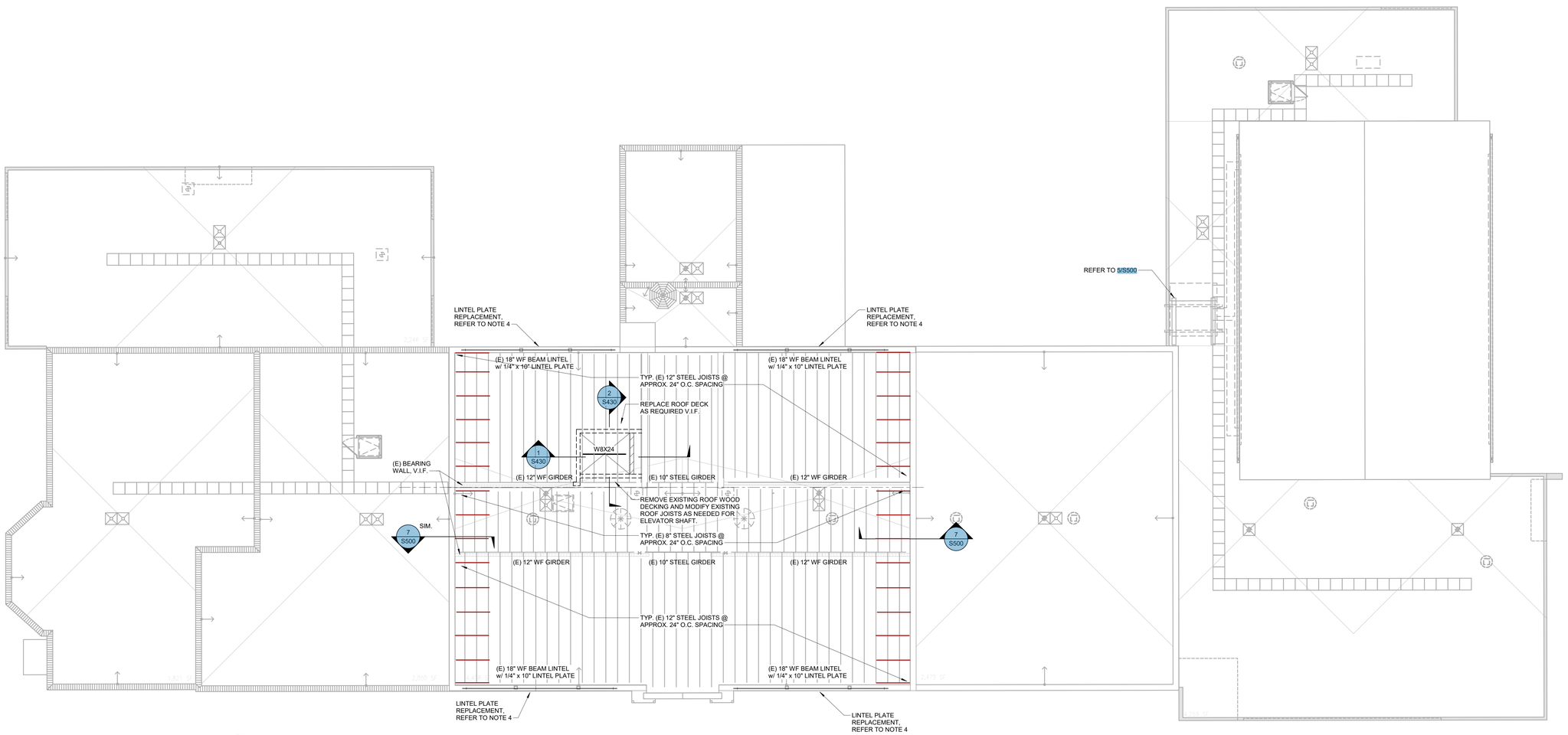
Scale: **As indicated**

SHEET NUMBER

S102-A

EXISTING ROOF FRAMING PLAN NOTES:

1. SECONDARY STEEL FRAMING PENDING MEP EQUIPMENT LOCATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR BRACING AND PROTECTING THE EXISTING STRUCTURAL ELEMENTS FROM DAMAGE, CORROSIION, OVERLOADING, ETC. DUE TO CONSTRUCTION OPERATIONS AND/OR WEATHER ELEMENTS.
3. TEMPORARY SHORING MUST BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN.
4. REMOVE DETERIORATED LINTEL COVER PLATE. VERIFY IN FIELD SIZE AND CONDITION OF EXISTING LINTEL AND INFORM ARCHITECT/ENGINEER IF LINTEL IS IN POOR CONDITION.INSTALL NEW STEEL LINTEL COVER PLATE. COORDINATE WITH ARCH FOR COATING COLOR.
5. CONTRACTOR SHALL COORDINATE SIZES AND LOCATIONS OF ALL ROOF DECK OPENINGS SHOWN AND NOT SHOWN ON PLANS WITH ARCH. AND MEP DRAWINGS. SEE TYPICAL ROOF OPENING FRAME DETAIL ON S500.
6. VERIFY SIZES, WEIGHTS, AND LOCATIONS OF ROOF TOP MECH. EQUIPMENT WITH ARCH. AND MEP DRAWINGS, REPORT ANY DISCREPANCIES WITH RESPECT TO SIZE AND WEIGHTS SHOWN ON THESE DRAWINGS TO THE ARCHITECT AND ENGINEER.
7. FRAMING FOR ALL ROOF DRAINS AND OVERFLOW DRAINS SHALL BE 2x8 TYPICAL, ALL SIDES OF SUPPORTED EDGE, UNLESS NOTED OTHERWISE.
8. REFER TO ARCH. DRAWINGS FOR ELEVATIONS AND DIM. TYPICAL



1 EXISTING ROOF FRAMING PLAN

1/8" = 1'-0"

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Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE

EXISTING ROOF FRAMING PLAN

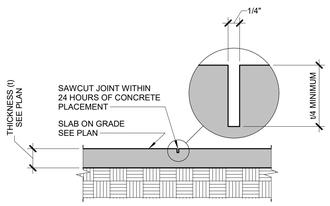
SCALE

Scale: **As indicated**

SHEET NUMBER

S102-E

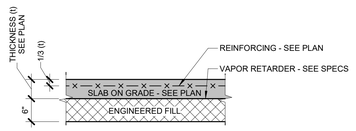
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NOTES:

1. SEE CAST-IN-PLACE CONCRETE GENERAL NOTES CONCERNING LOCATION OF JOINTS.

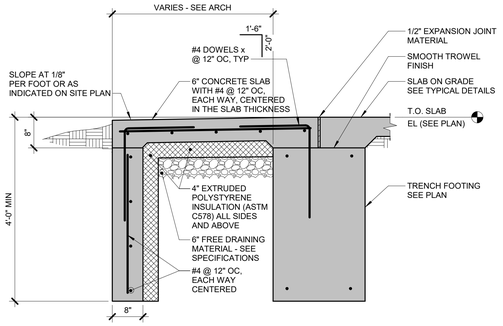
1 TYPICAL CONTROL JOINT
3/4" = 1'-0"



NOTES:

1. COMPACT ALL FILL MATERIAL TO 95% OF THE MAXIMUM DRY DENSITY PER ASTM D1557.
2. VAPOR RETARDER TO MEET ASTM E1745, CLASS A AND BE NOT LESS THAN 15 MILS THICK.

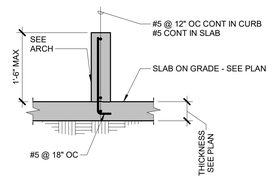
2 TYPICAL SLAB SECTION
3/4" = 1'-0"



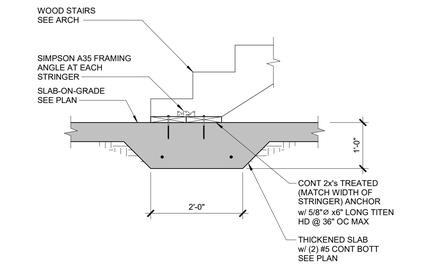
NOTE:

1. SEE ARCHITECTURAL DRAWINGS FOR EXACT STOOP LAYOUT AND LOCATIONS.

3 TYPICAL STOOP DETAIL
3/4" = 1'-0"

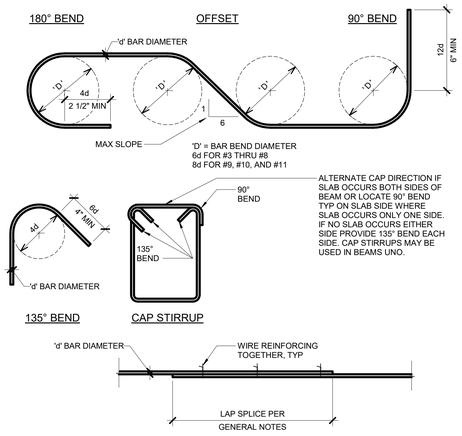


4 TYPICAL CURB DETAIL
3/4" = 1'-0"



NOTE: REFER TO ARCH. DRAWINGS FOR FIRE RATING REQUIREMENTS

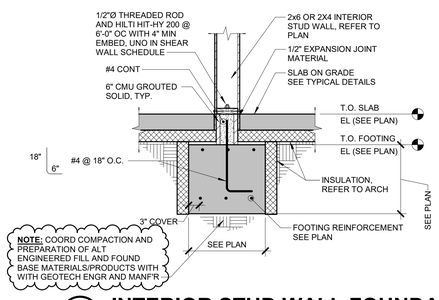
10 STAIR STRINGER CONNECTION TO SLAB-ON-GRADE
3/4" = 1'-0"
6611-09



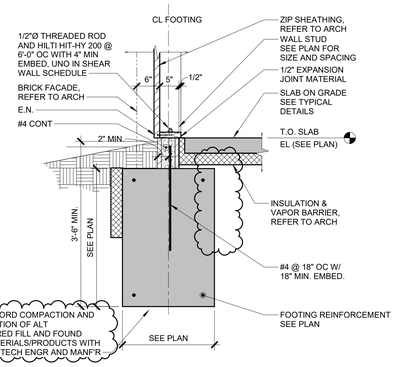
NOTE:

1. ALL HOOKS, BENDS AND LAPS SHALL BE AS INDICATED UNLESS SPECIFICALLY NOTED ON DETAIL. FOR LIGHTWEIGHT CONCRETE, MULTIPLY VALUE FROM THE GENERAL NOTES TABLE BY 1.18.

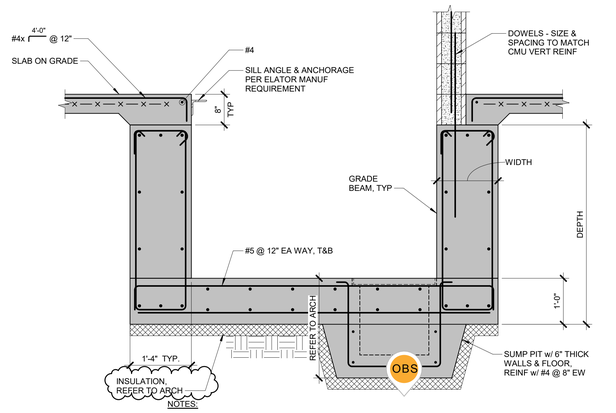
5 TYPICAL REINFORCING DETAILS
3/4" = 1'-0"



6 INTERIOR STUD WALL FOUNDATION
3/4" = 1'-0"



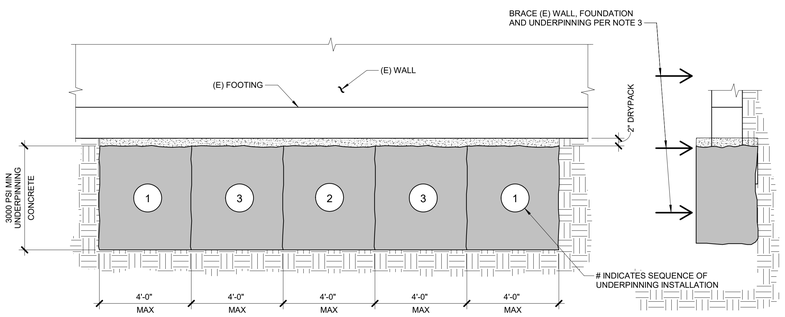
WOOD WALL AT CONT. FOOTING DETAIL
3/4" = 1'-0"



NOTES:

1. CONTRACTOR TO VERIFY PIT DEPTH WITH ELATOR MANUF DWGS.
2. SEE ARCH AND MECH DWGS FOR LOCATION, PIT SIZE, DEPTH AND COVER DETAILS OF SUMP PIT.
3. COORDINATE SLEEVE FOR PLUNGER WHERE OCCURRING.
4. INSULATION BELOW FOOTINGS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 25 PSI.

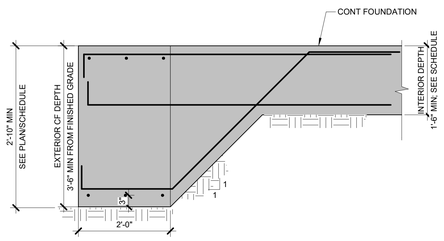
8 ELEVATOR PIT
3/4" = 1'-0"
2900-04



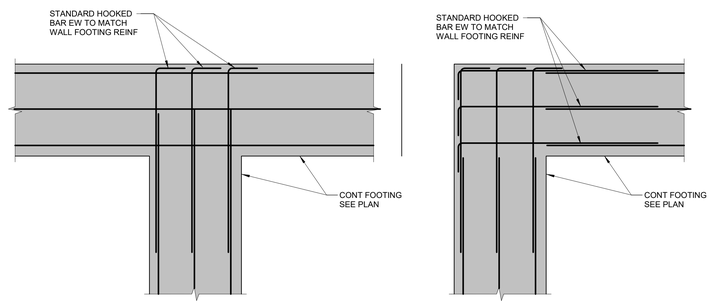
NOTES:

1. UNDERPINNING BELOW (E) FOUNDATIONS SHALL BE CONT AND SHALL BEAR ON UNDISTURBED SOIL.
2. BEARING STRATUM SHALL BE INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF UNDERPINNING CONCRETE. THE GEOTECHNICAL ENGINEER SHALL BE A LICENSED PROFESSIONAL ENGINEER IN THE PROJECT'S JURISDICTION.
3. THE (E) WALL AND FOUNDATION AND THE NEW UNDERPINNING SHALL BE BRACED TO RESIST LATERAL EARTH PRESSURE.
4. DESIGN OF THE UNDERPINNING AND DESIGN OF LATERAL BRACING REQD TO BRACE THE UNDERPINNING AND (E) FOUNDATION IS THE RESPONSIBILITY OF A PROFESSIONAL ENGINEER LICENSED IN THE PROJECT'S JURISDICTION WORKING FOR THE CONTRACTOR. DRAWINGS DOCUMENTING DESIGN OF THE UNDERPINNING AND BRACING AND DESIGN CALCULATIONS FOR THAT UNDERPINNING AND BRACING SHALL BE SUBMITTED PRIOR TO CONSTRUCTION. THOSE DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY THAT ENGINEER.
5. ALLOW UNDERPINNING CONCRETE TO CURE FOR 24 HOURS BEFORE DRYPACKING TO UNDERSIDE OF FOUNDATION.
6. DO NOT EXCAVATE BELOW (E) FOUNDATION UNTIL DRYPACK HAS BEEN INSTALLED ABOVE PREVIOUSLY INSTALLED SEGMENTS OF UNDERPINNING.
7. EXCAVATION FOR INDIVIDUAL SEGMENTS OF UNDERPINNING AND APPROACH EXCAVATION TO EACH SEGMENT SHALL BE DUG ONE SECTION AT A TIME.

9 UNDERPINNING BELOW EXISTING WALL FOUNDATION
3/4" = 1'-0"
2940-01



11 CONT FOUNDATION THICKNESS TRANSITION
3/4" = 1'-0"



12 FOOTING CORNER / INTERSECTION
3/4" = 1'-0"

JOHN GRACE ARMS

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PROJECT #23008275.00

PROFESSIONAL SEAL

STATE OF MICHIGAN
ATHANACIOS M NASR
ENGINEER
6611-09
LICENSED PROFESSIONAL ENGINEER

CONSULTANT

KEY PLAN

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0 1 2 3
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REVISIONS

No.	Date	Revision / Issue
3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
6	12/13/2024	HUD Submission
7	12/20/2024	Permit
8	02/19/2025	Bulletin No. 1

SHEET INFORMATION

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Date	**10/30/2024**
Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE

TYPICAL CONCRETE DETAILS

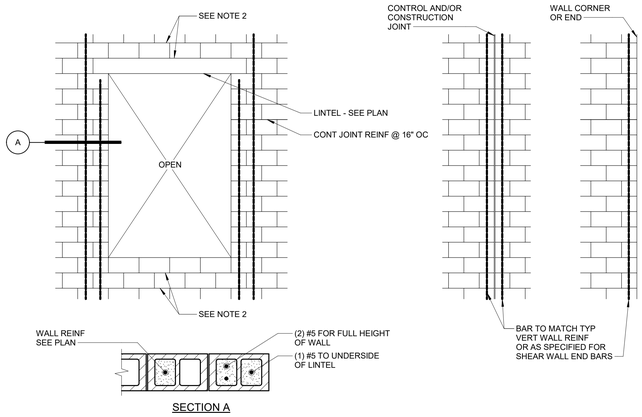
SCALE

Scale: **3/4" = 1'-0"**

SHEET NUMBER

S300

JOHN GRACE ARMS 2/18/2025 4:57:00 PM 23008275.00



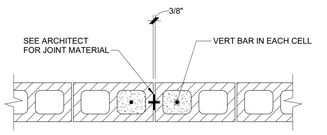
SECTION A

NOTES:

1. SEE ARCH ELEVATIONS FOR CONTROL JOINT LOCATIONS.
2. TWO COURSES OF JOINT REINF ARE REQUIRED ABOVE THE LINTEL AND BELOW THE SILL AND SHALL EXTEND A MIN OF 24 INCHES PAST THE OPENING.

1 TYPICAL CMU WALL OPENING DETAIL

3/4" = 1'-0"
S_M-003

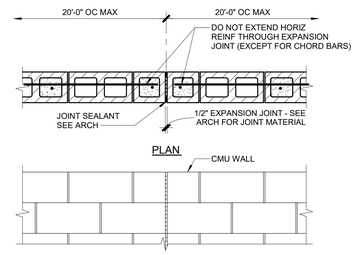


NOTES:

1. HORIZONTAL REINFORCING AND BOND BEAMS SHALL BE DISCONTINUOUS AT WALL JOINT. EXCEPT FOR CHORD REINFORCING.
2. DO NOT LOCATE JOINT OVER OPENING OR WITHIN JAMB.
3. REFERENCE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
4. COORDINATE LOCATION OF JOINTS WITH ARCHITECTURAL DRAWINGS.

2 WALL CONSTRUCTION JOINT

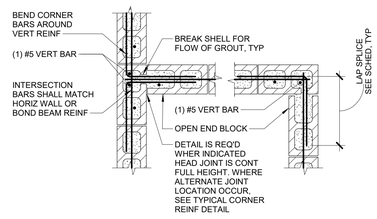
1" = 1'-0"
S_M-008



ELEVATION

3 CMU EXPANSION JOINT DETAIL

3/4" = 1'-0"
S_M-007



NOTES:

1. TYPICAL VERTICAL REINFORCING AND GROUT NOT SHOWN FOR CLARITY.
2. DETAIL ASSUMES CORNER IS CONSTRUCTED IN RUNNING BOND WITH UNITS INTERLOCKED.

4 CMU WALL INTERSECTION DETAIL

3/4" = 1'-0"
S_M-005

NOTES:

1. SEE ARCH DRAWINGS FOR INSULATION, THROUGH-WALL FLASHING, AND WEEP HOLES.
2. SHORE UNTIL GROUT FOR LINTEL HAS REACHED ITS SPECIFIED STRENGTH.

5 BOND BEAM LINTEL DETAIL

3/4" = 1'-0"
S_M-404

NOTE:

1. SHORE UNTIL GROUT FOR LINTEL HAS REACHED ITS SPECIFIED STRENGTH.

6 BOND BEAM LINTEL DETAIL

3/4" = 1'-0"
S_M-412

7 EXISTING BUILDING LINTEL PLATE REPAIR

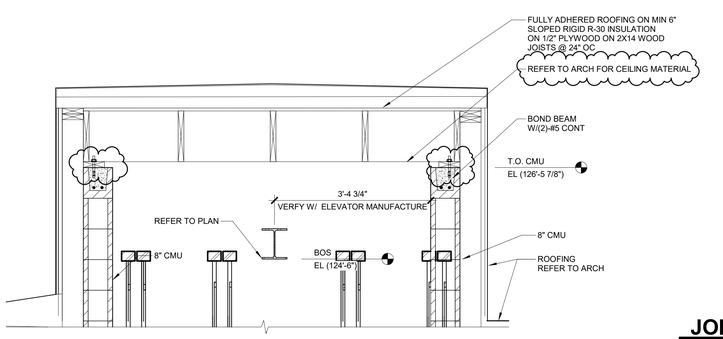
3/4" = 1'-0"

NOTES:

1. WALL BRACING (2)L3x3x3/16x0'-6" @ 4'-0".
2. PROVIDE THE BRACING ON ALL INTERIOR NON- STRUCTURAL CMU PARTITION WALLS. SEE ARCH DWGS FOR LOCATION OF ALL WALLS.

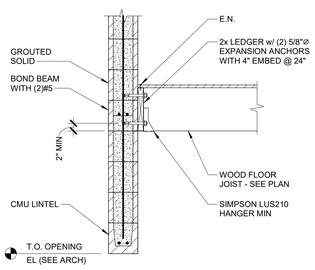
8 NON-STRUCTURAL CMU WALL BRACING TO DECK/SLAB

3/4" = 1'-0"
4220-01



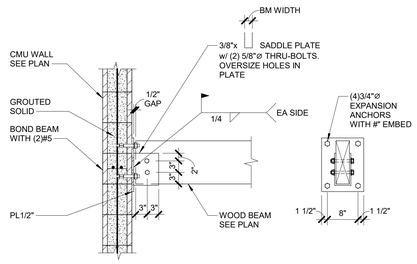
9 SECTION AT ELEVATOR

3/4" = 1'-0"



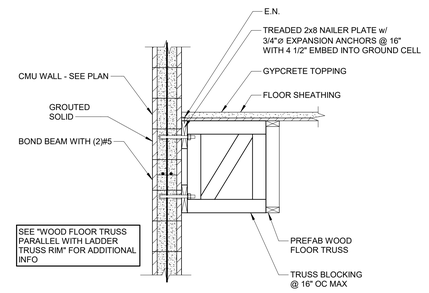
10 JOIST BEARING AT CMU CORE WALL

3/4" = 1'-0"
4330-07



11 EMBED PLATE IN CMU WALL AT WOOD BEAMS

3/4" = 1'-0"
4330-10



12 FLOOR TRUSS PARALLEL TO ELEVATOR WALL

3/4" = 1'-0"
4330-06

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7	12/20/2024	Permit
8	02/19/2025	Bulletin No. 1

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Approved	**-**

SHEET TITLE

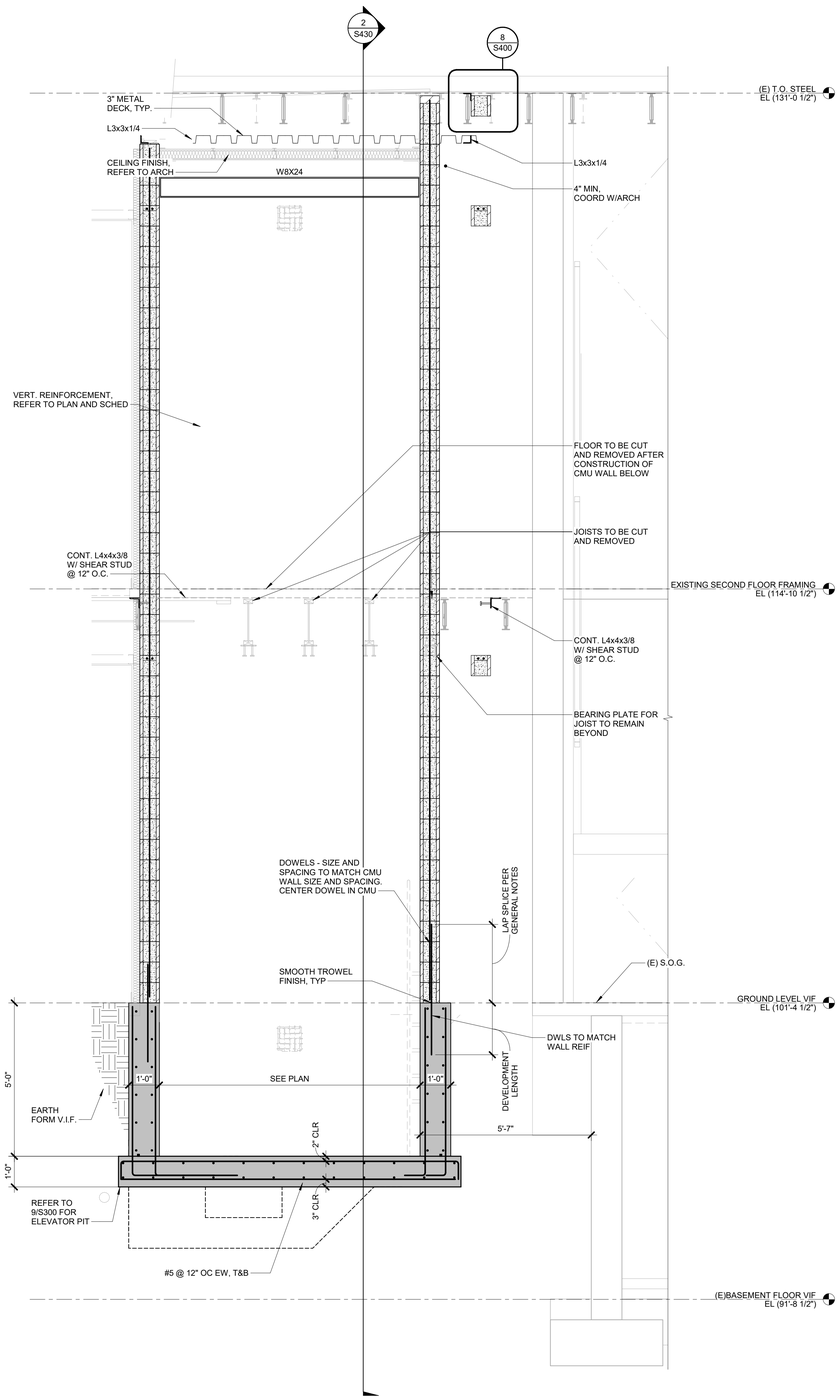
TYPICAL MASONRY DETAILS

SCALE

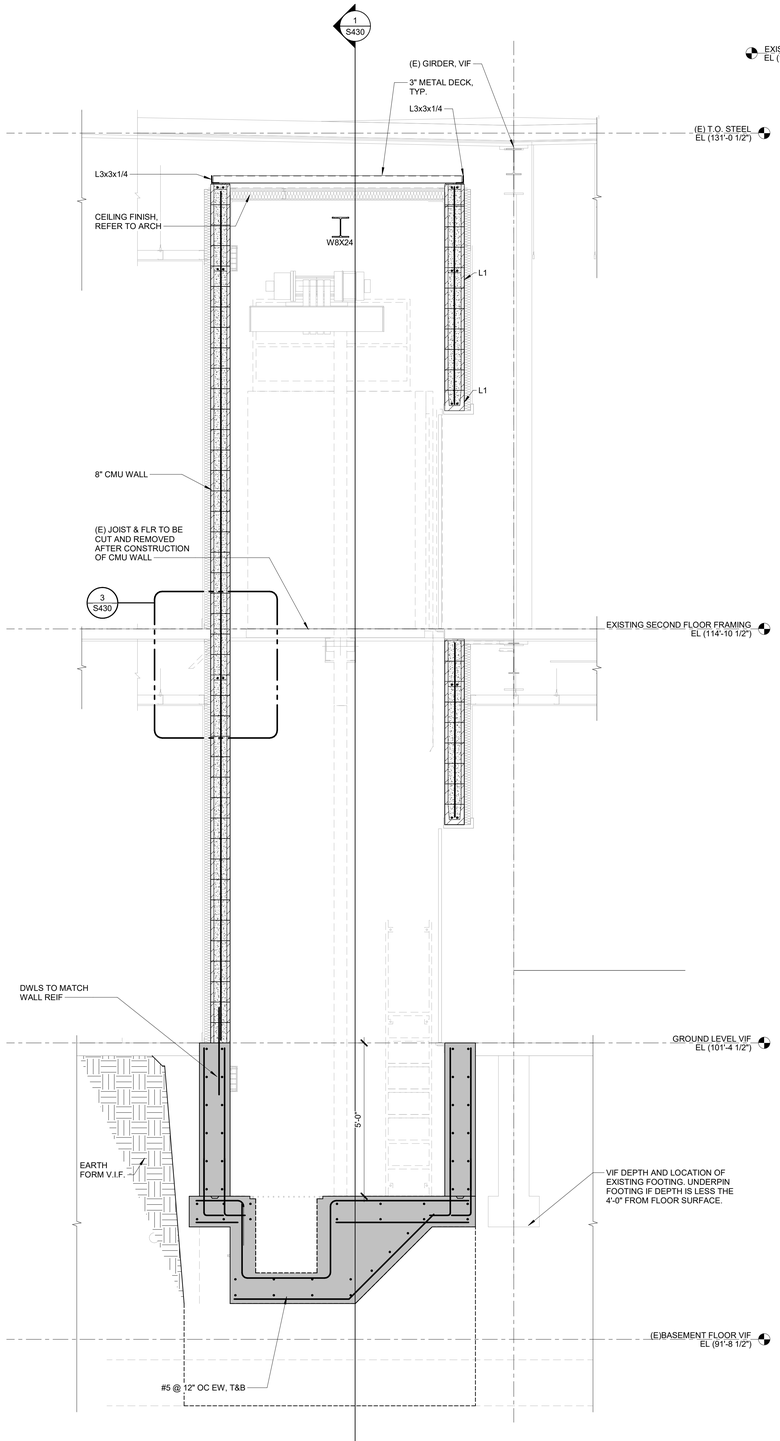
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SHEET NUMBER

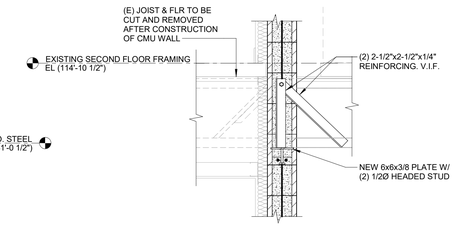
S400



1 ELEVATOR SECTION
1/2" = 1'-0"



2 ELEVATOR SECTION
1/2" = 1'-0"



3 (E) JOIST REINF. TYP DETAIL
3/4" = 1'-0"

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3	04/08/2024	CD Set
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12	07/27/2026	Bulletin No. 11

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Project #	**23008275.00**
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Approved	**-**

SHEET TITLE

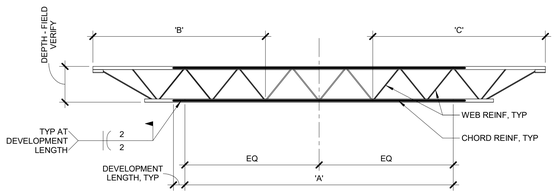
MASONRY SECTIONS

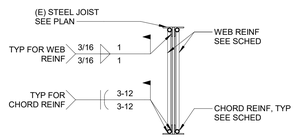
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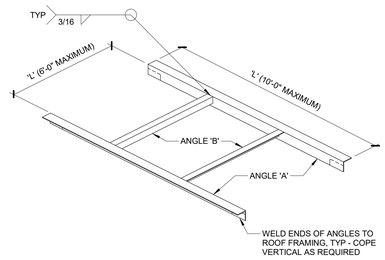
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SHEET NUMBER

S430







STEEL JOIST REINFORCING SCHEDULE

MARK	RTU #	CHORD REINFORCING			WEB REINFORCING			REMARKS
		SIZE	'A'	DEVELOPMENT LENGTH	SIZE	'B'	'C'	
A		(2) X"Ø GR50 RODS	X'-X"		(2) X"Ø GR50 RODS	X'-X"		
B								
C								

NOTES:

1. REMOVE AND REINSTALL JOIST BRIDGING AS NECESSARY TO INSTALL REINF MEMBERS.
2. JOIST REINF IS DUE TO NEW ROOF EQUIPMENT OR SNOW DRIFT. PRIOR TO PLACING EQUIPMENT OR BUILDING TALLER STRUCTURE, JOIST REINF MUST BE INSTALLED.
3. JOIST SHALL BE SHORED.
4. SPLICE CHORD REINF SEGMENTS TOGETHER TO DEVELOP FULL CAPACITY OF MEMBER. SPLICE DETAIL BY STEEL FABRICATOR.

1 JOIST REINFORCING DETAIL

3/4" = 1'-0"
S_S-313

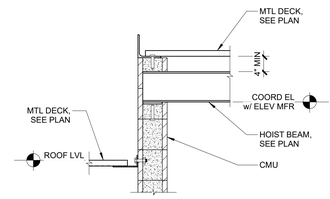
'L'	ANGLE 'A'	ANGLE 'B'
UP TO 1'-0"	NONE	NONE
1'-1" TO 4'-6"	L4x4x1/4	L4x4x1/4
4'-7" TO 6'-0"	L4x4x5/16	L4x4x1/4
6'-1" TO 8'-0"	L4x4x3/8	-
8'-1" TO 10'-0"	L6x4x3/8 (LLV)	-

NOTES:

1. SEE ARCHI AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS.
2. ROOF OPENING FRAMING NOT REQUIRED AT SIDE DISCHARGE ROOF DRAINS. COORDINATE WITH MECHANICAL CONTRACTOR.

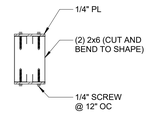
2 ROOF OPENING DETAIL

3/4" = 1'-0"
S_S-214



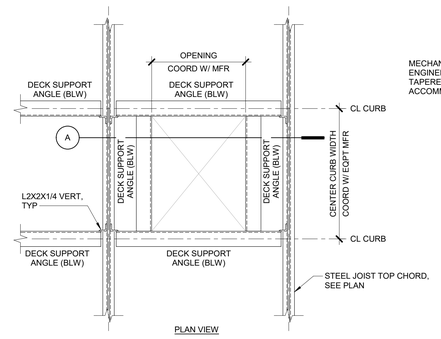
3 HOIST BEAM DETAIL

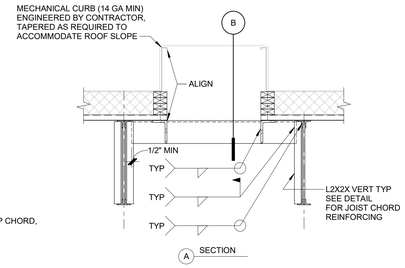
3/4" = 1'-0"

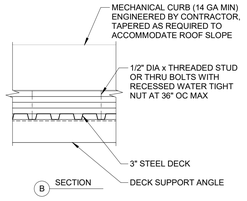


6 CFS BOX BEAM DETAIL

1 1/2" = 1'-0"



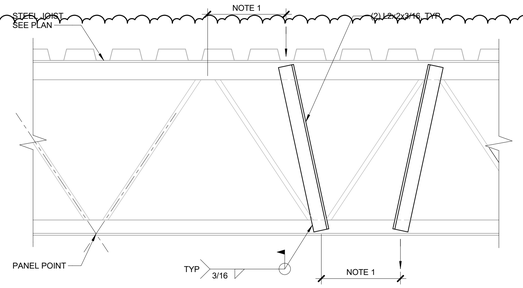




NOTE:
VERIFY ALL DIMENSIONS WITH MECHANICAL UNIT SUPPLIER AND MECH DRAWINGS PRIOR TO FABRICATION

5 RTU CURB SUPPORT @ EX. BUILDING

3/4" = 1'-0"
5335-02

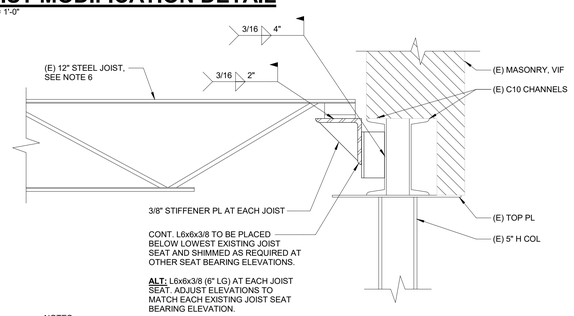


NOTE:

1. PROVIDE ANGLES TO CREATE PANEL POINT WHERE POINT LOADS DO NOT CONFORM TO SJI STANDARDS.

4 JOIST MODIFICATION DETAIL

1 1/2" = 1'-0"

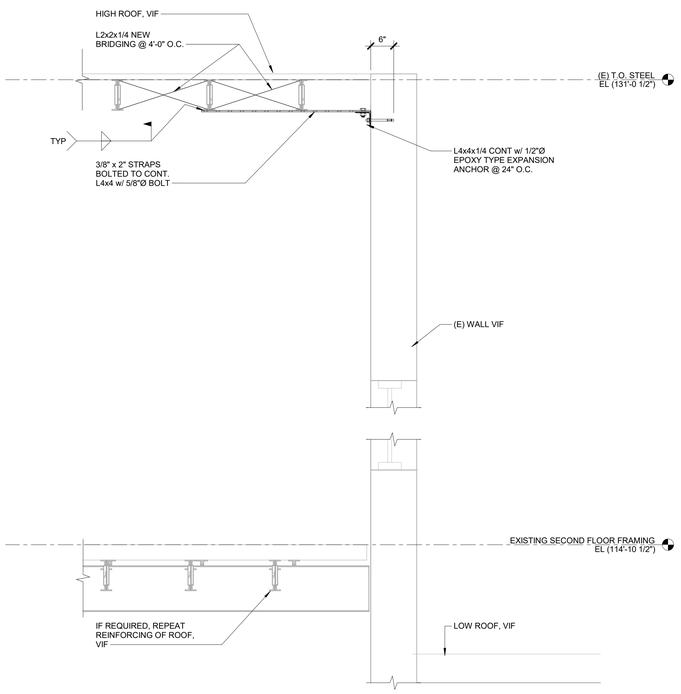


NOTES:

1. CONTRACTOR TO VIF ALL MEASUREMENTS AND CONDITIONS.
2. EX. BEARING MASONRY AND STEEL SHALL BE EXPOSED AND INSPECTED FOR ADEQUATE BEARING CONDITIONS. INFORM A/E IF THERE ARE DISCREPENCIES AND/OR DEFICIENCIES IN THE BEARING CONDITIONS.
3. COORDINATE LINTEL FLASHING AND WATERPROOFING WITH ARCH DRAWINGS.
4. ADJUST ANGLE ELEVATION OR PROVIDE SHIM AS REQUIRED FOR JOIST SEAT BEARING.
5. PROVIDE TEMPORARY SHORE EXISTING JOISTS, FLOOR, AND WALL AS REQUIRED. WHERE JOISTS BEAR ON SHORING, MODIFY JOISTS PER 4/S500.

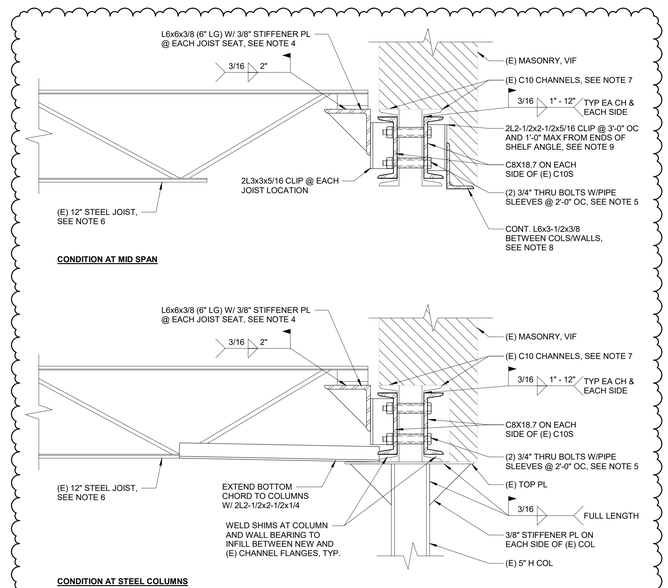
9 UNSUPPORTED JOIST SEAT REPAIRS

1 1/2" = 1'-0"
S_S-313



7 EXISTING BUILDING SECTION

3/4" = 1'-0"



NOTES:

1. CONTRACTOR TO VIF ALL MEASUREMENTS AND CONDITIONS.
2. EX. BEARING MASONRY AND STEEL SHALL BE EXPOSED AND INSPECTED FOR ADEQUATE BEARING CONDITIONS. INFORM A/E IF THERE ARE DISCREPENCIES AND/OR DEFICIENCIES IN THE BEARING CONDITIONS.
3. COORDINATE LINTEL FLASHING AND WATERPROOFING WITH ARCH DRAWINGS.
4. ADJUST ANGLE ELEVATION OR PROVIDE SHIM AS REQUIRED FOR JOIST SEAT TO BEARING.
5. TACK WELD BOLT HEAD AND TO CHANNEL AFTER TIGHTENING.
6. PROVIDE TEMPORARY SHORE EXISTING JOISTS, FLOOR, AND WALL AS REQUIRED. WHERE JOISTS BEAR ON SHORING, MODIFY JOISTS PER
7. CLEAN ALL CORROSION AND PACK RUST FROM EXISTING STEEL AND COAT WITH RUST INHIBITING PRIMER.
8. TOP OF SHELF ELEVATION TO BE FLUSH WITH ELEVATION OF EXISTING COL TOP PLATE AND EXISTING WALL BEARING.
9. ADJUST CLIP ANGLE SIZE AS NEEDED BASED ON SPACE BETWEEN CHANNEL AND MASONRY.

8 EX. 2C LINTEL REPAIR

1 1/2" = 1'-0"
S_S-313

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11	06/25/2026	Bulletin No. 9 - Lintel Repairs

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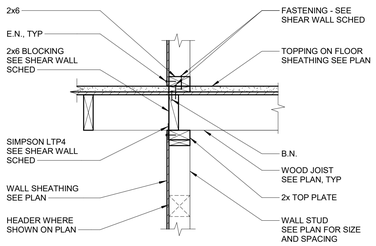
TYPICAL STEEL DETAILS & SECTIONS

SCALE

Scale: **As indicated**

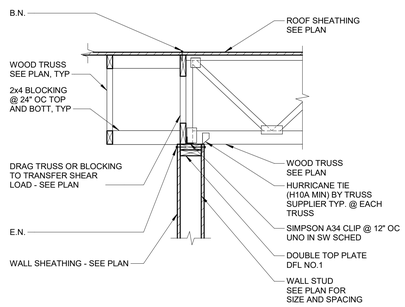
SHEET NUMBER

S500



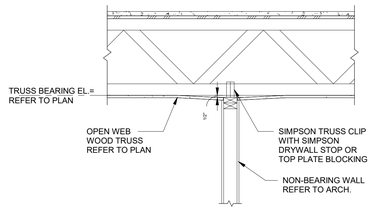
1 WOOD JOIST BEARING CHANGE IN DIRECTION

3/4" = 1'-0"
S_W-007



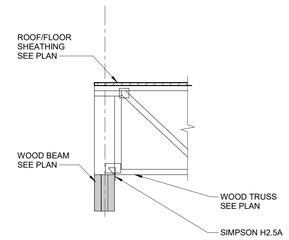
2 TRUSS BEARING AT INTERIOR WALL DETAIL

3/4" = 1'-0"
S_W-207



3 SECTION AT NON- BEARING WALL

3/4" = 1'-0"

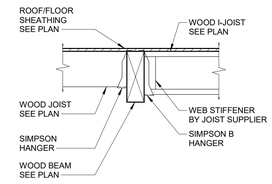


NOTE:

1. FOR MULTIPLE LAMINATIONS, SEE THE WOOD GENERAL NOTES FOR BEAM FASTENERS.

4 BEARING AT WOOD BEAM

3/4" = 1'-0"
S_W-212

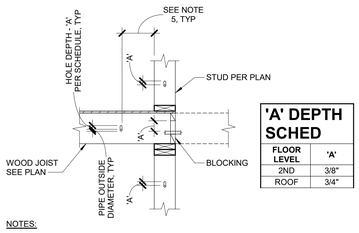


NOTE:

1. FOR MULTIPLE LAMINATIONS, SEE THE WOOD GENERAL NOTES FOR BEAM FASTENERS.

5 BEARING AT WOOD BEAM

3/4" = 1'-0"



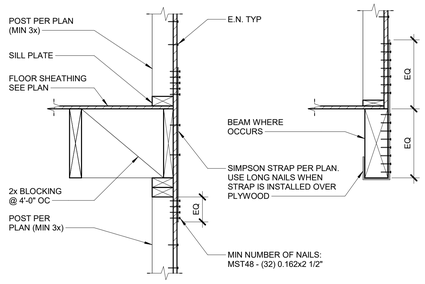
'A' DEPTH SCHED	
FLOOR LEVEL	'A'
2ND	3/8"
ROOF	3/4"

NOTES:

1. 'A' DENOTES REQUIRED CLEAR DISTANCE FROM TOP OF PIPE TO TOP OF OPENING.
2. DEPTH 'A' IS BASED UPON A MAXIMUM LUMBER MOISTURE CONTENT OF 19% AT TIME OF INSTALLATION OF PLUMBING.
3. HOLE DEPTH 'A' SHALL NOT EXCEED ALLOWABLE HOLE SIZES IN STRUCTURAL MEMBERS AS SHOWN IN TYPICAL DETAILS.
4. PLACE PIPE AT BOTTOM OF VERT SLOTTED HOLE.
5. LOCATION OF HOLES IN STRUCTURAL MEMBERS (STUDS, JOIST, BLOCKING, ETC.) SHALL BE PER STRUCTURAL DRAWINGS AND BUILDING CODE.

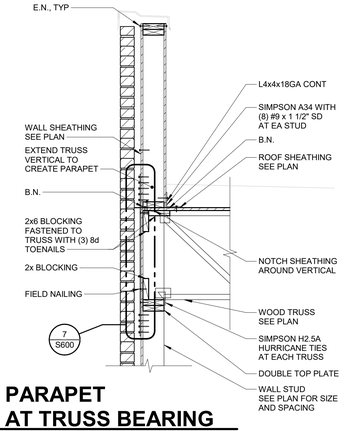
6 SHRINKAGE SLOTTED HOLES DETAIL

3/4" = 1'-0"
S_W-610



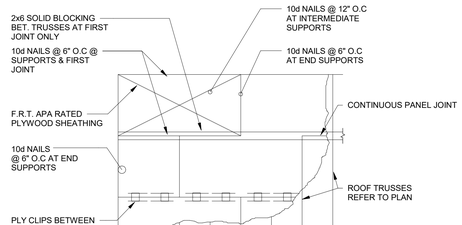
7 HOLDOWN DETAIL ACROSS FRAMING

3/4" = 1'-0"



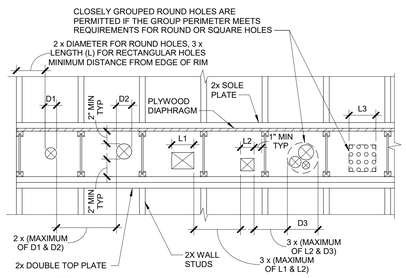
8 PARAPET AT TRUSS BEARING

3/4" = 1'-0"
S_W-204



9 TYPICAL ROOF SHEATHING DETAIL

1/4" = 1'-0"

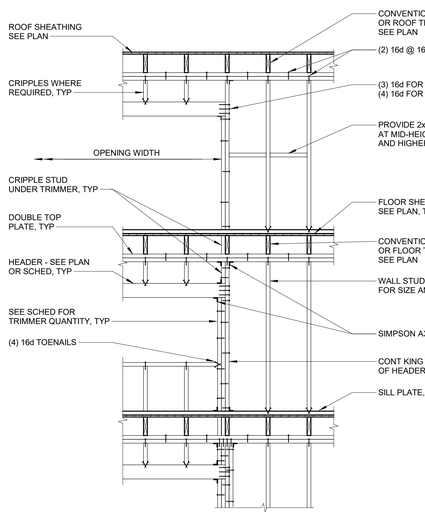


NOTES:

1. MAXIMUM HEIGHT OF ROUND OR RECTANGULAR HOLE SHALL NOT EXCEED RIM HEIGHT - 4".
2. MAXIMUM WIDTH OF RECTANGULAR HOLE SHALL NOT EXCEED 2/3 x JOIST SPACING.
3. DO NOT OVERCUT RECTANGULAR HOLES.
4. NOTIFY ENGINEER FOR REVIEW OF ANY PROPOSED PENETRATION THAT DOES NOT MEET THE REQUIREMENTS NOTED ABOVE.

10 ALLOWABLE HOLES IN SCL RIMBOARD

3/4" = 1'-0"

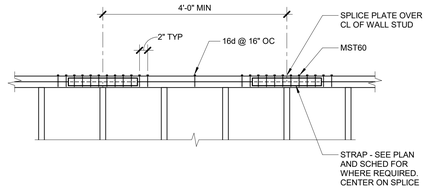


NOTES:

1. SEE PLANS FOR SPECIAL FRAMING REQUIREMENTS.
2. HEADER SIZES SHOWN IN SCHEDULES ABOVE ARE MINIMUM HEADER SIZES. SEE PLANS FOR WHERE LARGER HEADER SIZES ARE REQUIRED.
3. AT EXTERIOR WALLS WHERE OPENING WIDTH IS GREATER THAN 3'-6", PROVIDE DOUBLE STUD EACH END OF HEADER.
4. TRIMMERS TO BE SAME SIZE AS STUDS AT GIVEN FLOOR LEVEL UON. SEE PLANS FOR POSTS WHERE REQUIRED INSTEAD OF TRIMMERS.
5. NAIL TRIMMERS AND KING STUDS TOGETHER WITH 16d NAILS @ 12" OC, STAGGERED EACH FACE.
6. SEE PLANS FOR SHEAR WALL FRAMING REQUIREMENTS.
7. FRAMING IS SYMMETRICAL ABOUT OPENING.
8. WHERE TRIMMERS/KING STUDS ARE ADJACENT TO SILL PLATE BOLTING, PROVIDE 2" MIN CLEAR.

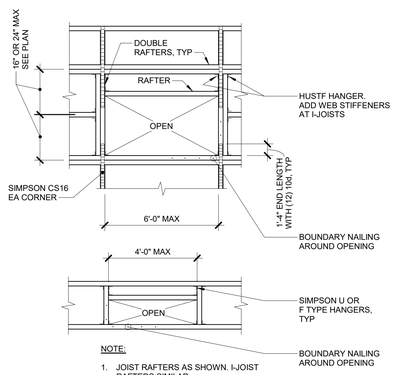
11 TYPICAL STUD WALL FRAMING DETAIL

1/2" = 1'-0"



12 TYPICAL TOP PLATE SPLICE DETAIL

3/4" = 1'-0"
S_W-415

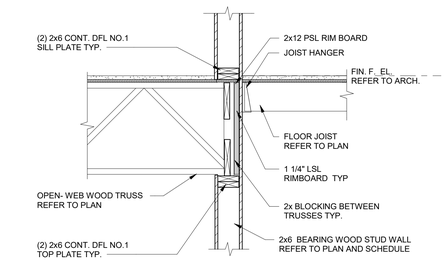


NOTE:

1. JOIST RAFTERS AS SHOWN. I-JOIST RAFTERS SIMILAR.

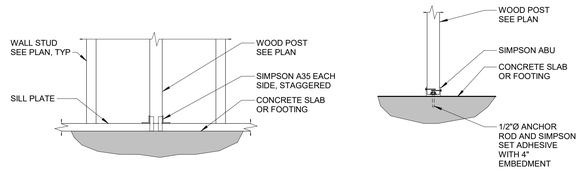
13 OPENING DETAIL

3/4" = 1'-0"
S_W-607



14 INTERIOR BEARING WALL DETAIL

3/4" = 1'-0"



B - POST AS PART OF WALL

A - ISOLATED POST

15 POST BASE CONNECTION DETAILS

3/4" = 1'-0"

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0 1 2 3
REF. SCALE IN INCHES

PROJECT #23008275.00

REVISIONS

No.	Date	Revision / Issue
3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
6	12/13/2024	HUD Submission
7	12/20/2024	Permit

SHEET INFORMATION

Issue	**Issued for Permit**
Date	**10/30/2024**
Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE

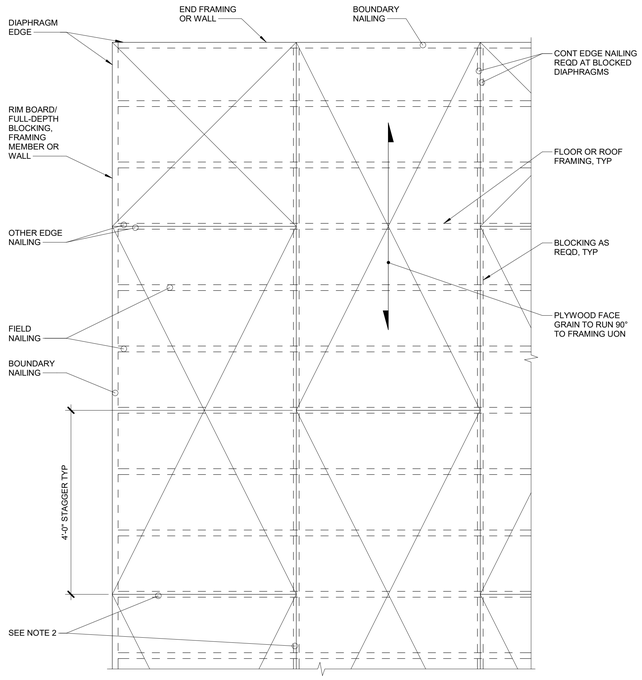
TYPICAL WOOD SECTIONS & DETAILS

SCALE

Scale: **As indicated**

SHEET NUMBER

S600



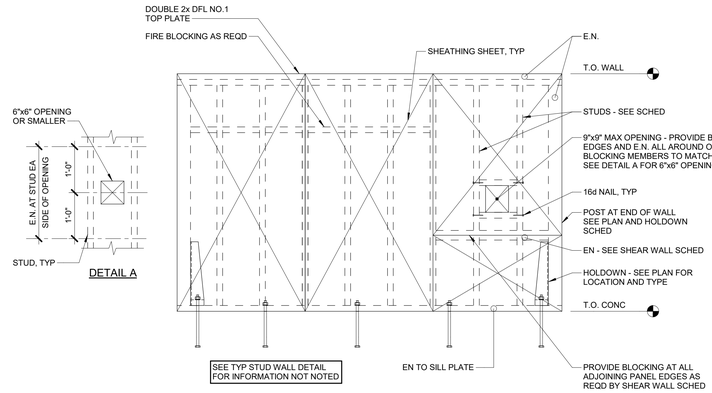
1 TYPICAL FLOOR AND ROOF DIAPHRAGM
3/4" = 1'-0"

PLYWOOD NAIL SPACING SCHEDULE

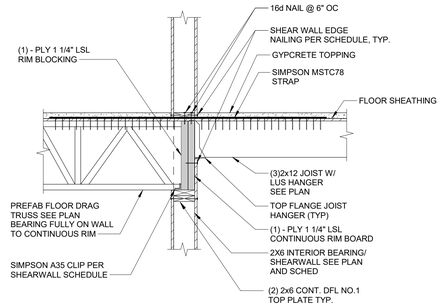
LOCATION	BOUNDARY NAILING	CONT EDGE NAILING	OTHER EDGE NAILING	FIELD NAILING	SOLID BLOCKING	REMARKS
ROOF	6"	6"	6"	12"	YES	-
FLOOR	6"	6"	6"	12"	YES	-

NOTES:

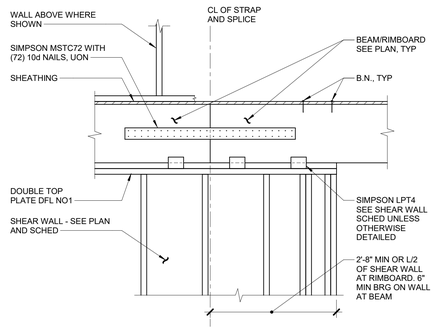
1. SHEATHING NAILS SHALL BE 10d NAILS, PENETRATING 1 1/2" INTO THE FRAMING MEMBER OR BLOCKING. ALL NAILS SHALL BE COMMON NAILS.
2. ALL INTERIOR PANEL EDGES SHOWN ON NAILING PLAN SHALL HAVE TWO ROWS OF BOUNDARY EDGE NAILING. ONE ROW EACH EDGE WHERE SHEATHING PANELS ABUT.
3. PLYWOOD THICKNESS AND GRADE PER PLAN AND GENERAL NOTES.
4. ALL SHEATHING PANELS TO BE 4'-0" x 8'-0" EXCEPT WHERE JOB CONDITIONS PROHIBIT. JOINTS FROM SUCCESSIVE ROWS SHALL BE STAGGERED 4'-0" AS SHOWN. MINIMUM PANEL SIZE TO BE 2'-0" x 2'-0".
5. THE OWNER SHALL APPROVE THE USE OF OSB SHEATHING IN LIEU OF PLYWOOD SPECIFIED ON THE APPROVED CONTRACT DOCUMENTS.



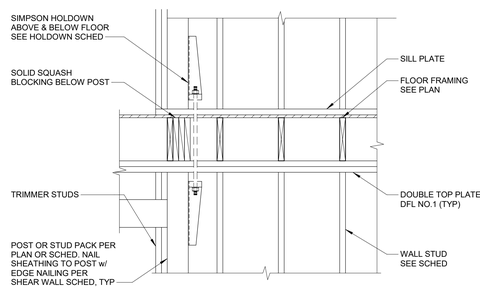
3 WOOD SHEAR WALL ELEVATION WITH HOLDOWNS
3/4" = 1'-0"



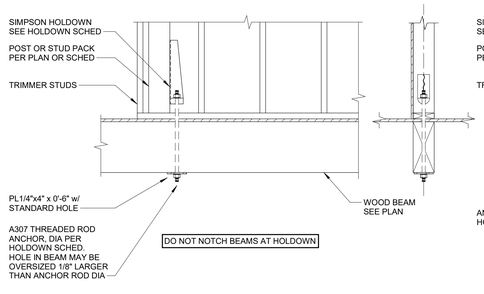
2 DRAG TRUSS CONNECTION DETAIL
3/4" = 1'-0"



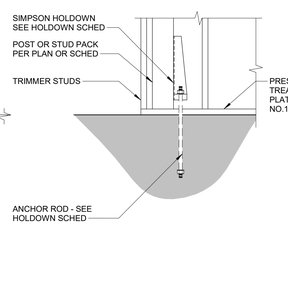
4 TYP BEAM/RIMBOARD SPLICE DETAIL
3/4" = 1'-0"



HOLDOWN ACROSS FLOOR FRAMING

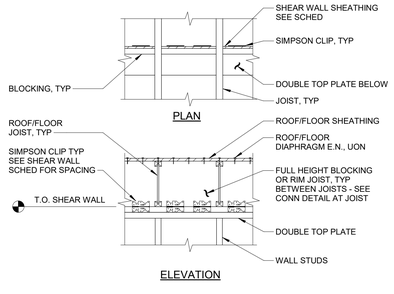


HOLDOWN AT BEAM BELOW SHEAR WALL



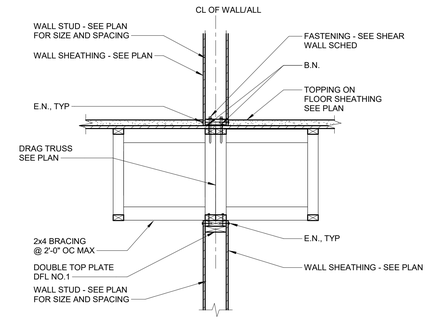
HOLDOWN AT CONCRETE SLAB/WALL

5 TYPICAL SIMPSON HOLDOWNS
3/4" = 1'-0"

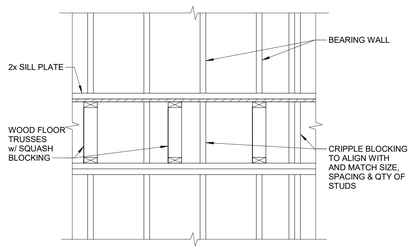


ELEVATION

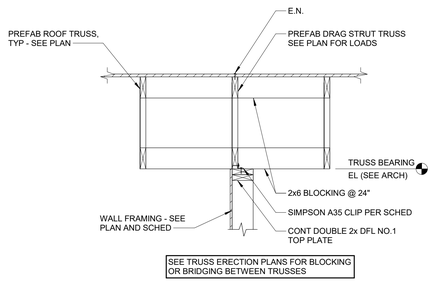
6 SHEAR WALL BLOCKING
3/4" = 1'-0"



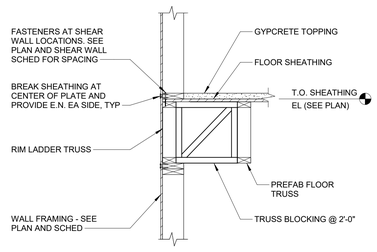
7 FLOOR TRUSSES PARALLEL TO SHEAR WALL
3/4" = 1'-0"



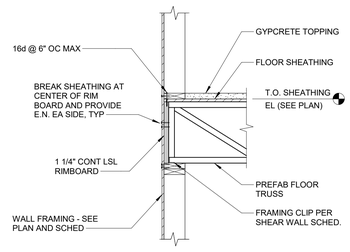
8 TYPICAL WALL CRIPPLE BLOCKING AT BEARING WALL
3/4" = 1'-0"



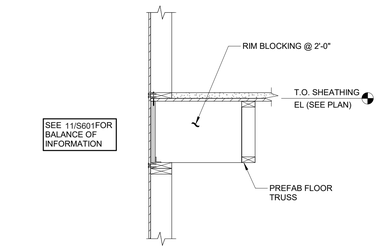
9 ROOF TRUSSES PARALLEL TO SHEAR WALL
3/4" = 1'-0"



10 WOOD FLOOR TRUSS PARALLEL WITH LADDER TRUSS RIM
3/4" = 1'-0"



11 WOOD FLOOR TRUSS BEARING WITH RIMBOARD
3/4" = 1'-0"



12 WOOD FLOOR TRUSS PARALLEL WITH RIMBOARD
3/4" = 1'-0"

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REVISIONS

No.	Date	Revision / Issue
6	12/13/2024	HUD Submission
7	12/20/2024	Permit

SHEET INFORMATION

Issue	Issued for Permit
Date	10/30/2024
Project #	23008275.00
Drawn	Author
Checked	Checker
Approved	Approver

SHEET TITLE

TYPICAL WOOD SECTIONS & DETAILS

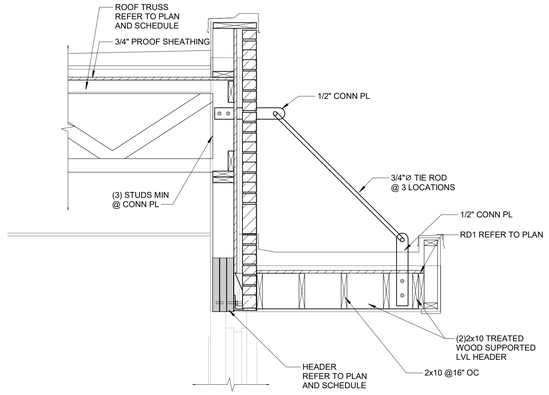
SCALE

Scale: 3/4" = 1'-0"

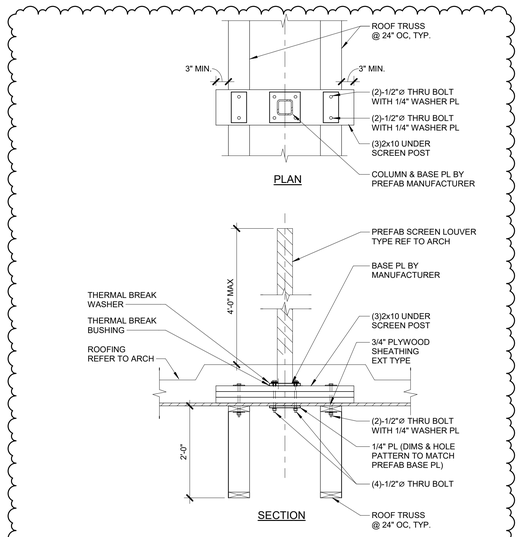
SHEET NUMBER

S601

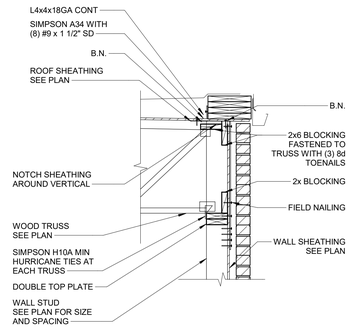
23008275.00 12/19/2024 9:13:33 PM JOHN GRACE ARMS



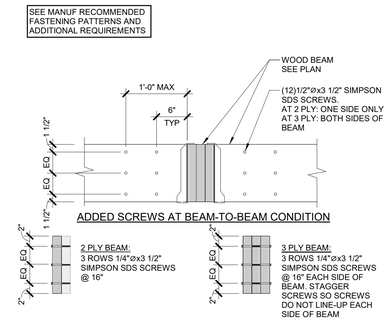
1 SECTION
3/4" = 1'-0"



2 TYP SCREEN WALL ATTACHMENT TO ROOF FRAMING
3/4" = 1'-0"



3 PARAPET AT TRUSS BEARING
3/4" = 1'-0"
S_W-204



4 BUILT-UP LVL BEAM / HEADER FASTENING
1" = 1'-0"

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REVISIONS

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3	04/08/2024	CD Set
5	10/30/2024	Issued for Permit
6	12/13/2024	HUD Submission
7	12/20/2024	Permit
8	02/19/2025	Bulletin No. 1

SHEET INFORMATION

Issue	**Issued for Permit**
Date	**10/30/2024**
Project #	**23008275.00**
Drawn	**GHW**
Checked	**GFM**
Approved	**-**

SHEET TITLE

TYPICAL WOOD SECTIONS & DETAILS

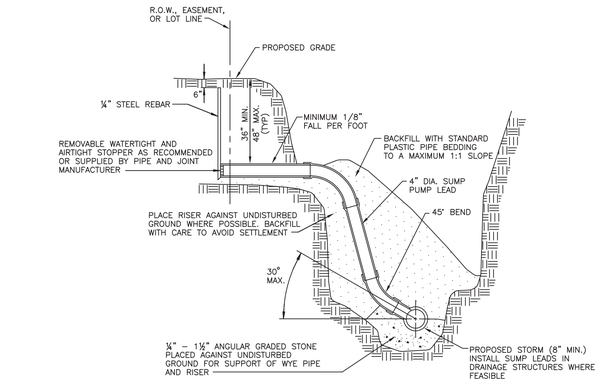
SCALE

Scale: **As indicated**

SHEET NUMBER

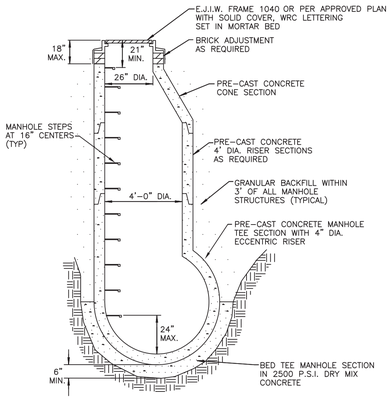
S602

23008275.00 2/18/2025 4:57:01 PM JOHN GRACE ARMS



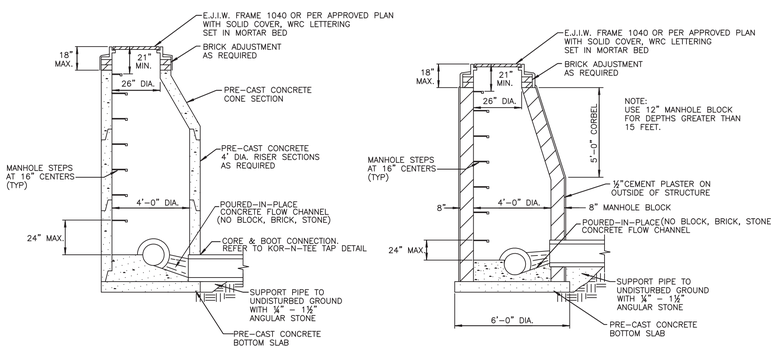
HOUSE LEAD DETAIL FOR 4" DIA. PLASTIC SUMP PUMP LEADS

NO SCALE



PRE-CAST TEE MANHOLE DETAIL

NO SCALE



STANDARD MANHOLE DETAILS

NO SCALE

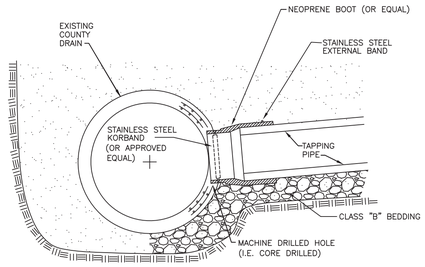
GENERAL NOTES

1. Type and class of pipe shall be as specified on plans.
2. Class "B" bedding shall be used throughout, unless otherwise specified on the plan.
3. All end sections 18" and larger shall be provided with a bar screen unless otherwise approved.
4. Standard rip-rap shall be 8"–15" fragmented rock, heavy rip-rap shall be 16"–24" fragmented rock. (No Broken Concrete)
5. MANHOLE REQUIREMENTS:
   - All new catch basins, inlets, and manholes are to be manufactured to ASTM C–478 specifications.
   - All new catch basins, inlets, and manholes shall have WRC approved flexible, watertight seals where pipes pass through walls. Manholes shall be of precast sections with modified groove tongue and rubber gasket type joints. Pre cast manhole cone sections shall be WRC approved modified eccentric cone type.
   - Taps through manhole joints or cone sections are prohibited unless otherwise approved.
   - Manhole steps to be plastic coated steel meeting the requirements in ASTM D 2146, Type II, Grade 49108, MA. Industries P.S.I. Polypropylene, (or approved equal). Steps to be installed during manhole manufacture. Place at 16" centers 45° from centerline of sewer.
   - Cone section with modified groove tongue joints and with stud inserts cast in place. Top to have flush surface.
   - ASTM C–478 riser section with modified groove tongue joints.
   - Res–seal, link–seal, press wedge II, or kor–n–seal boot (with stainless steel korband) flexible rubber manhole joints. (or approved equal).
   - The inside joints of manholes, catch basins, and pipe sizes over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.
6. CONCRETE PIPE REQUIREMENTS:
   - Concrete pipe to be per ASTM C76 standards.
   - It will be required to TV all pipe 30 days after installation
   - The contractor shall provide reinforced concrete pipe as specified on the plans.
   - All reinforced concrete pipe shall have modified grooved tongue joints with o–ring type rubber gasket, per A.S.T.M. specifications C443.
   - The inside joints of manholes, catch basins, and pipe sizes over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.
7. SUMP PUMP LEAD REQUIREMENTS:
   - All sump pump leads connected to a County Drain pipe shall be pre–manufactured.
   - Sump pump leads connected to a manhole shall be cored and booted. Refer to Kor–N–Tee Tap Detail.
   - Sump pump mains and leads shall be ABS (truss and solid wall), PVC (truss, solid wall , A2000), ADS N–12 WT with premium joints.
   - Ends of all 4" sump pump leads shall be temporarily capped and their location staked, witnessed and recorded.
   - All sump pump leads to be taken to the property line, easement line or as indicated on the plan.
   - Sump pump mains must have a cleanout with a minimum inside diameter of 24" and be constructed at changes of alignment, ends of sump pump mains or as indicated on the plan.
8. RESTORATION REQUIREMENTS:

   All disturbed area within the County Drain right–of–way shall be restored as follows:
   - Under roads, sidewalks, driveways and parking areas, backfill material shall be placed loosely into trenches in six (6) inch layers with each layer compacted to not less than 95% of maximum dry density as determined by the ASTM D 1557 Compaction Standard (modified proctor compaction test). All other areas shall have each layer compacted to not less than 90% of maximum dry density.
   - Finish subgrade
   - Place 3" thickness clean topsoil acceptable to the engineer to attain finished grade. Topsoil must not be contaminated and may not be a mixture of natural underlying soils, subbase materials, or other materials. It must consist of natural loam, sandy loam, silty loam or clay loam humus–bearing soil adapted to the sustenance of plant life. Topsoil must be neither excessively acidic nor excessively alkaline. It must be of mineral origin, exclusive of any peat or muck.
   - Apply seed and fertilizer as follows:*

Location	Seeding Requirements	Fertilizer Requirement
Slopes and Ditch, Banks, Etc.	M.D.O.T. "Roadside Mix" Turf Seed Mixture TGM (10% Kentucky Blue, 20% Perennial Rye, 30% Hard Fescue, 40% Creeping Red Fescue) applied at 220 lb/acre	M.D.O.T. Seeding and Sodding Fertilizers, Class A
Other Areas	M.D.O.T. "Roadside Mix" Turf Seed Mixture THM (30% Kentucky Blue, 20% Perennial Rye, 50% Creeping Red Fescue) applied at 220 lb/acre	M.D.O.T. Seeding and Sodding Fertilizers, Class A

   * Sod is required in maintained lawn areas. Refer to WRC General Specifications for additional requirements and information.
   - apply straw or marsh hay mulch in an air–dry condition to all seeded areas over the surface to a uniform thickness at 2 tons/acre.
   - mulch shall be anchored in place with biodegradable netting, not larger than 1½" by 2" nor smaller than ½" by ½".
   - The contractor shall be responsible to insure the growth of all seeded areas, and shall re–seed as necessary to accomplish this.
9. The Storm Drain Notes and Details Sheet shall be a supplement to WRC Standards and Specifications, which are available on the WRC website (www.oakgov.com/water).

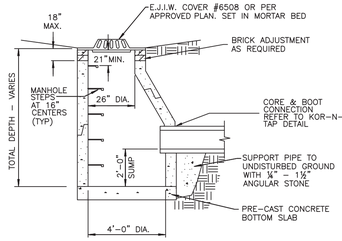


CONNECTION DETAIL FOR DIRECT TAPS TO PIPE WALL OF EXISTING COUNTY DRAINS.

KOR–N–TEE TAP (OR APPROVED EQUAL)

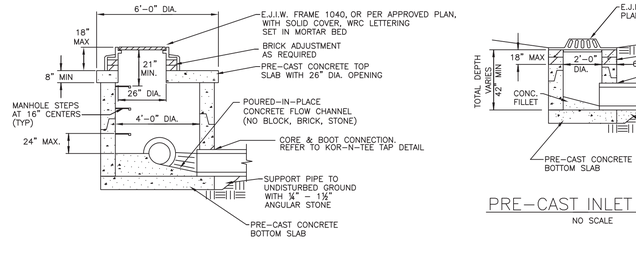
NO SCALE

* For non–concrete to concrete taps.
* Use link–seal, A–lock or approved equal for concrete to concrete taps.



PRE–CAST CATCH BASIN DETAIL

NO SCALE



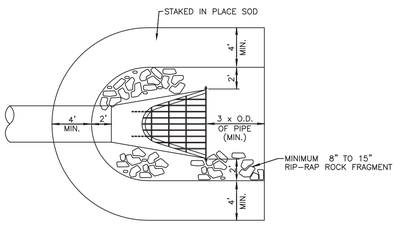
PRE–CAST LOW HEAD MANHOLE DETAIL

NO SCALE

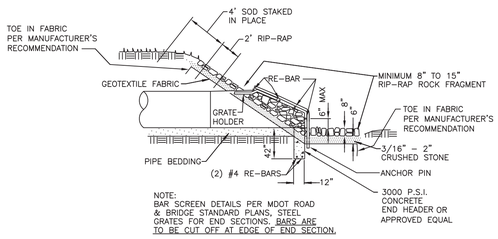
(PRIOR APPROVAL ONLY)

PRE–CAST INLET DETAIL

NO SCALE



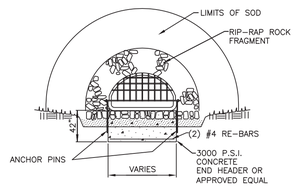
PLAN VIEW



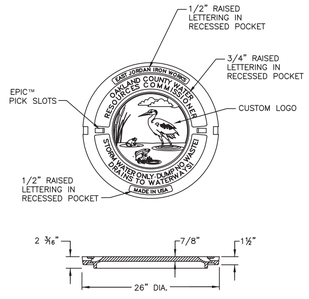
PROFILE VIEW

END SECTION AND BAR SCREEN DETAIL

NO SCALE



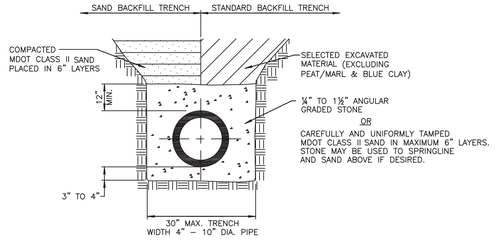
END VIEW



EAST JORDAN IRON WORKS OR APPROVED EQUAL
HEAVY DUTY MATERIAL ASTM A48 CL.35B
CATALOG NO. 1040A
PATTERN NO. 1040A, PRODUCT NO. 104718 OAKCOSTD.
2" HIGH RAISED LETTERS, 1" WIDE RAISED LETTERS
ALL IN RECESSED POCKET.

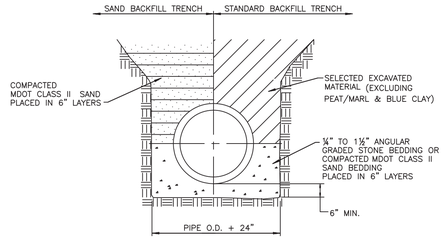
LETTERED MANHOLE COVER FOR WRC

NO SCALE



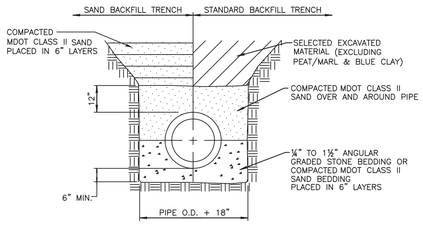
ABS (TRUSS AND SOLID WALL), PVC (TRUSS, SOLID WALL, A2000), ADS N–12 WT PIPE BEDDING DETAIL

NO SCALE



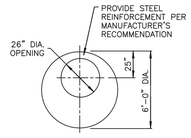
CLASS "B" BEDDING TRENCH DETAIL FOR 27" DIAMETER AND LARGER CONCRETE PIPE

NO SCALE



CLASS "B" BEDDING TRENCH DETAIL FOR 24" DIAMETER AND SMALLER CONCRETE PIPE

NO SCALE



PRECAST CONCRETE TOP SLAB DETAIL

STORM DRAIN NOTES AND DETAILS

REVISION BLOCK

Data Source / Source Date: N/A

Rev. No.:	Rev. By:	Rev. Date:	Description:
1	tb	3/17/09	PROPOSED DETAIL CHANGES / NEW LOGO
2	tb	06/12/09	APPROVAL PER STANDARDS COMMITTEE
3	tb	03/29/10	REVISED MH COVER DETAIL
4	SS	04/27/10	REVISED GENERAL NOTES

ORIG. DATE:	05/05/97
SCALE:	NONE
DESIGNED BY:	WRC
DRAWN BY:	Mapping

WRC WATER RESOURCES COMMISSIONER
Jim Nash

ONE PUBLIC WORKS DRIVE, BLDG 95 WEST
WATERFORD, MICHIGAN
48328-1907

SHEET NO.: 1 of 1

File Name: STORM.dft
Plot By: WRC - STORM.dft