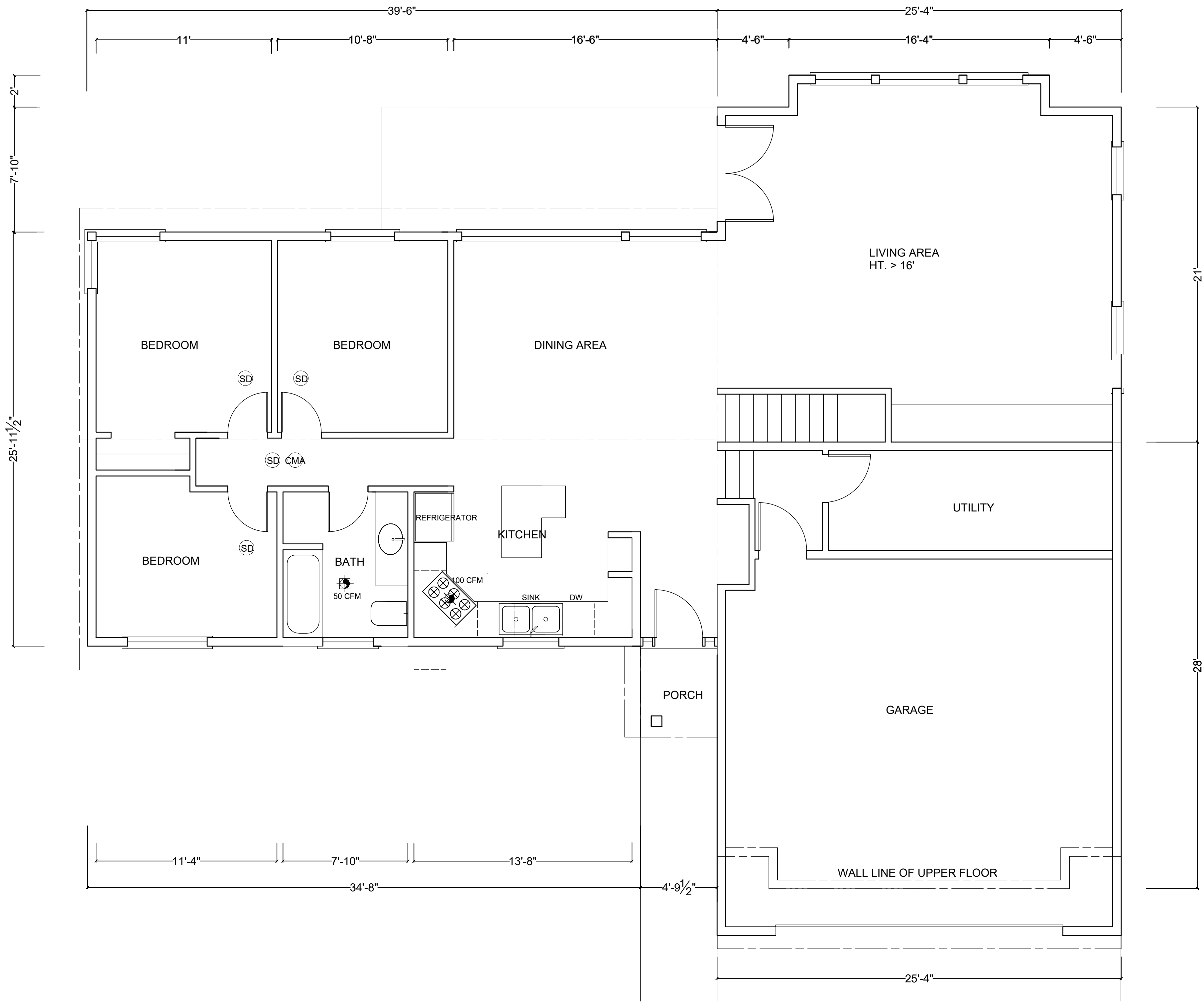




A1.01



EXISTING MAIN LEVEL FLOOR PLAN

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

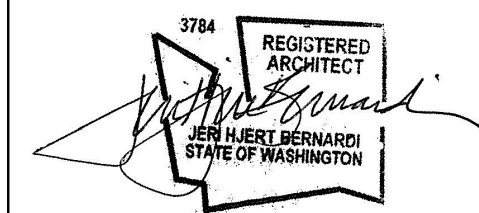
SQUARE FOOTAGE:

MAIN LEVEL (8' HT.)	1024 SQ. FT.	968 G.F.A.
MAIN LEVEL (16' HT.)	564 SQ. FT. X 1.5	864 SQ. FT.
GARAGE, UTILITY	784 SQ.FT.	724 G.F.A.

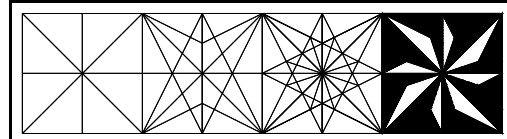
SYMBOLS:

	EXISTING WALLS
	ROOF LINE

	FAN
	SMOKE DETECTOR
	CARBON MONOXIDE ALARM



ADDITION TO THE RESIDENCE OF
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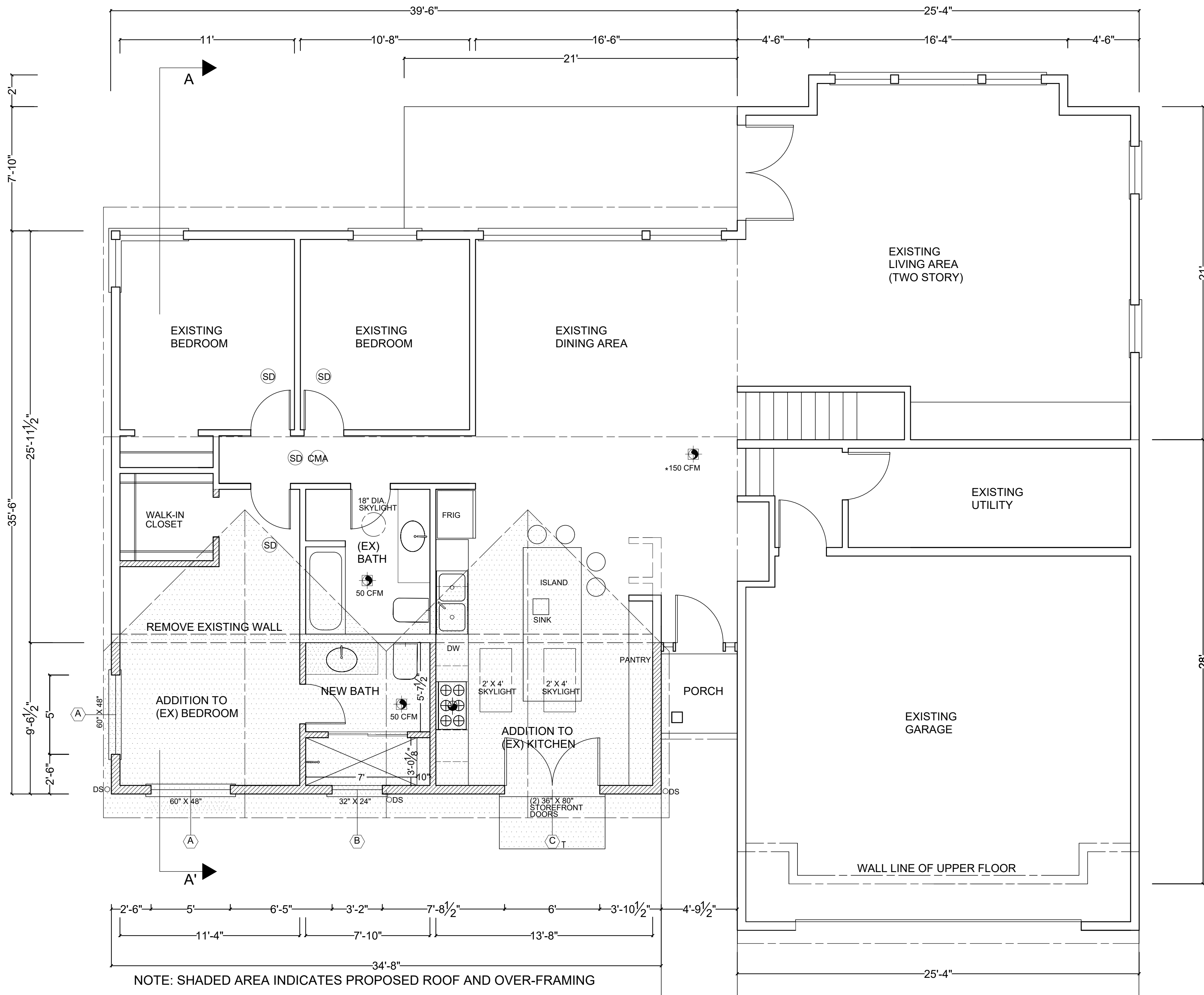
9228 39TH AVENUE SO.
SEATTLE, WA 98118
(206) 632-0287

PROJECT NO.

DATE: _____
5/10/2024
REVISIONS: _____

EXISTING
MAIN LEVEL
FLOOR PLAN

A2.01



EXISTING, PROPOSED MAIN LEVEL FLOOR PLAN

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

SQUARE FOOTAGE:

MAIN LEVEL (8' HT.)	1024 SQ. FT.	968 G.F.A.
MAIN LEVEL (16' HT.)	564 SQ. FT. X 1.5	846 SQ. FT.
MAIN LEVEL (16' HT.)	526 SQ. FT. X 1.5	
GARAGE, UTILITY	784 SQ.FT.	789 G.F.A.
ADDITION TO MAIN LEVEL	330 SQ. FT.	724 G.F.A.
COVERED PORCH	24 SQ.FT.	301 G.F.A.

SYMBOLS:

	WALL TO BE REMOVED		DOOR / WINDOW SCHEDULE, SEE SHEET A5.01
	NEW WALLS		DOOR / WINDOWS WITH TEMPERED GLASS
	EXISTING WALLS		GAS CONNECTION
	ROOF LINE		
	FAN		
	SMOKE DETECTOR		
	CARBON MONOXIDE ALARM		

NOTES:

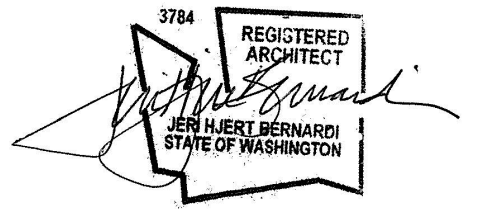
- SMOKE DETECTORS, CARBON MONOXIDE ALARMS SHALL BE INSTALLED PER CODE - SEE GENERAL NOTES.
- MEASUREMENTS FOR WINDOW AND DOOR OPENINGS ARE GIVEN FOR THE ACTUAL SIZE OF THE WINDOW OR DOOR. THE CONTRACTOR MUST VERIFY THE ACTUAL ROUGH OPENING REQUIRED FOR EACH.
- ALL INTERIOR DOORS ARE 30" X 80" U.N.O. DOORS ARE TO BE SELECTED BY OWNER.
- RECEPTACLE OUTLETS SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY SPACE IS ONE MORE THAN 6 FEET, MEASURED HORIZONTALLY, FROM ANOTHER OUTLET IN THAT SPACE, INCLUDING ANY WALL SPACE 2' OR MORE IN WIDTH.
- EXTERIOR WALL PENETRATIONS BY PIPES, DUCTS OR CONDUITS SHALL BE CAULKED AND SLEEVED.
- A MINIMUM OF 100% OF ALL PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.
- OUTDOOR AIR SHALL BE PROVIDED TO EACH HABITABLE SPACE BY INDIVIDUAL AIR INLETS WHICH MAY INCLUDE GRILLS, VENTS, WINDOW FRAME TRICKLE VENTS, DOORS
- VENTING FOR EXHAUST FOR ALL SANITARY SHALL BE THROUGH THE ROOF WITH FLASHING AND STORM COLLAR SEALED AND CAULKED AS REQUIRED BY CODE.
- U VALUES AND R VALUES AS PER WASHINGTON STATE ENERGY CODE 2021:

U VALUES AND R VALUES AS PER WASHINGTON STATE ENERGY CODE 2015:
CLIMATE ZONE 5 and MARINE 4, TABLE R402.1.1 and R402.1.3.

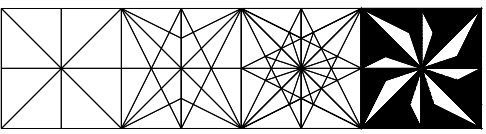
	GLAZING		DOOR		RAFTER/JOIST CEILINGS		WALLS ABOVE GRADE	WALLS BELOW GRADE	FLOOR OVER UNHEATED SPACE	SLAB ON GRADE
	VERTICAL	OVERHEAD	U=0.28	U=0.50	U=0.30	R-40	INTERIOR R-21	R-10 CI EXTERIOR OR R-15 CI INTERIOR OR R-5 CI+R-13 BATT OR R-21 BATT W/ 1B @ SLAB	R-30	R-10 2 FT.
U or R-FACTOR	U=0.28	U=0.50	U=0.30	0.026	0.026	0.056	0.042			
EQUIVALENT U-FACTOR	U=0.28	U=0.50	U=0.30	0.026	0.026	0.056	0.042	0.029	N/A	

ALL FINESTRATION SHALL BE NFRC CERTIFIED.

- 2 ENERGY EQUALIZATION CREDITS ARE REQUIRED AS PER TABLE R406 OF THE 2021 WASHINGTON STATE ENERGY CODE FOR AN ADDITION LESS THAN 500 SQ. FT.
EFFICIENT BUILDING ENVELOPE AS PER OPTION 1.4 BASED ON TABLE 402.1.2.WITH THE FOLLOWING MODIFICATIONS:
 - VERTICAL FINESTRATION WITH U = 0.18;
 - CEILING JOINT VAULTED WITH R - 60 INSULATION;
 - WOOD FRAMED WALLS WITH R-21 + R-16 ci INSULATION;
 - FLOOR WITH R-48 INSULATION.
- WINDOW AND DOOR HEADERS SHALL BE INSULATED WITH A MINIMUM OF R-10 INSULATION.
- WHOLE HOUSE VENTILATION:
AS PER TABLES M1505.4.3., 4 BEDROOMS, 3001-3500 SQ. FT., REQUIRES AN AIRFLOW IN CFM = 75.
INTERMITTANT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS RESULT IN A FACTOR OF 2 FOR A FAN RUNNING 50% OF THE TIME IN EACH 4 HOUR PERIOD.
75 X 2 = 150 CFM FN RUNNING 2 HOURS OF EACH 4 HOUR PERIOD OF TIME.
- GUTTERS SHOULD BE MOUNTED WITH A SLOPE OF 1/16" PER FOOT FOR DRAINAGE.
- DOWNSPOUT CAPACITY = 1 INCH / 400 SQ. FT. OF ROOF AREA
533 SQ. FT. / 400 SQ. FT. , THUS 2 DOWNSPOUTS ARE REQUIRED FOR THE ROOF.
- MAKEUP AIR SHALL BE PROVIDED IF EF >= TO 401 cfm AS PER WSRC M1503.6.
AS PER M1505.4.4, KITCHENS SHALL HAVE AN EXHAUST RATE OF 100 cfm INTERMITTENT, OR 25 cfm CONTINUOUS.
BATHROOMS HALL HAVE A MECHANICAL EXHAUST CAPACITY OF 50cfm INTERMITTENT, OR 20 cfm CONTINUOUS.



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HJERT-BERNARDI /
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PROJECT NO.

DATE:

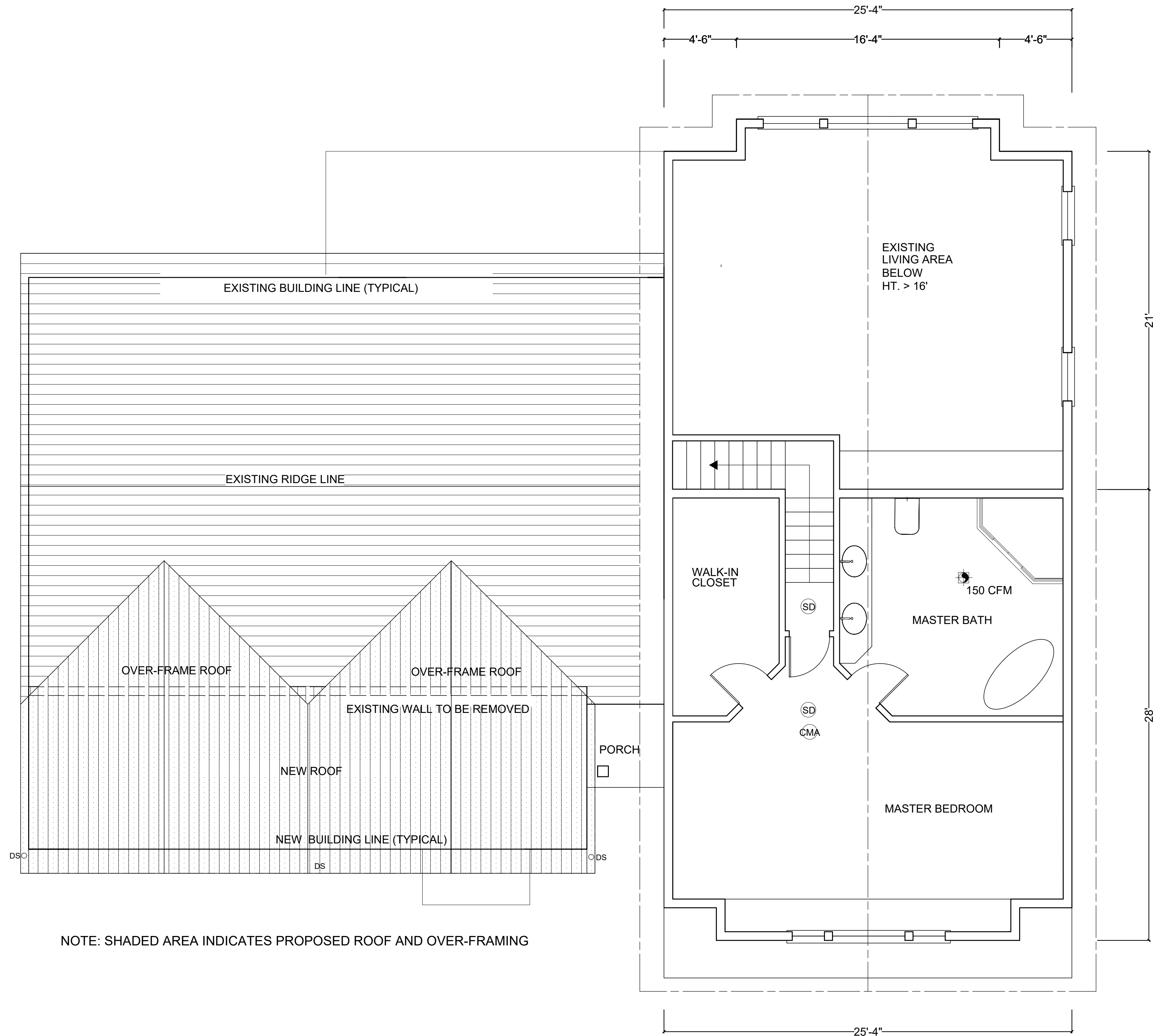
5/10/2024

REVISIONS:

V2 8/5/2024

EXISTING,
PROPOSED
MAIN LEVEL
FLOOR PLAN

A2.02



EXISTING UPPER LEVEL FLOOR PLAN

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

SQUARE FOOTAGE:

UPPER LEVEL

696 SQ.FT.

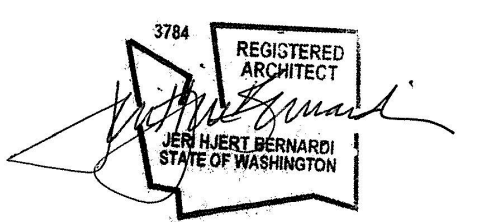
639 G.F.A.

SYMBOLS:

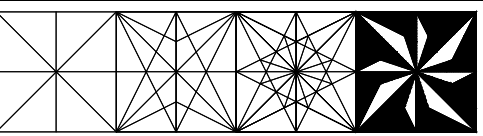
- EXISTING WALLS
- ROOF LINE
- FAN
- SMOKE DETECTOR
- CARBON MONOXIDE ALARM

NOTES:

- GUTTERS SHOULD BE MOUNTED WITH A SLOPE OF 1/16" PER FOOT FOR DRAINAGE.
- DOWNSPOUT CAPACITY = 1 INCH / 400 SQ. FT. OF ROOF AREA
533 SQ. FT. / 400 SQ. FT. , THUS 2 DOWNSPOUTS ARE REQUIRED FOR THE ROOF.



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ARCHITECT

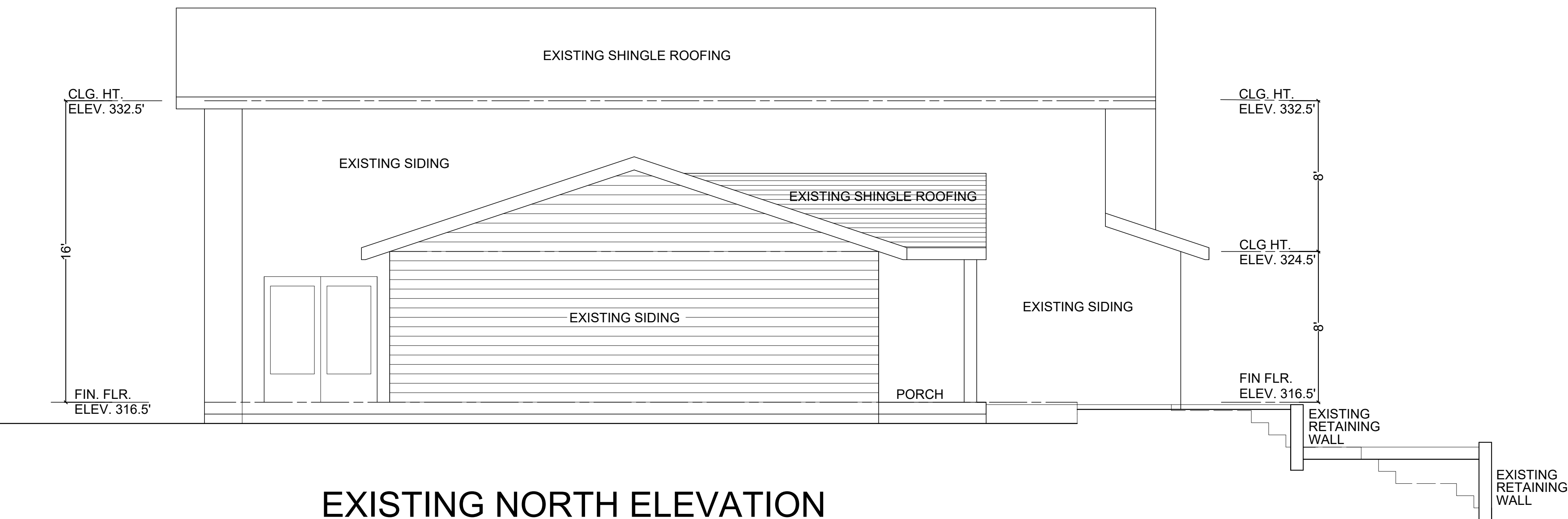
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DATE:
5/10/2024
REVISIONS:

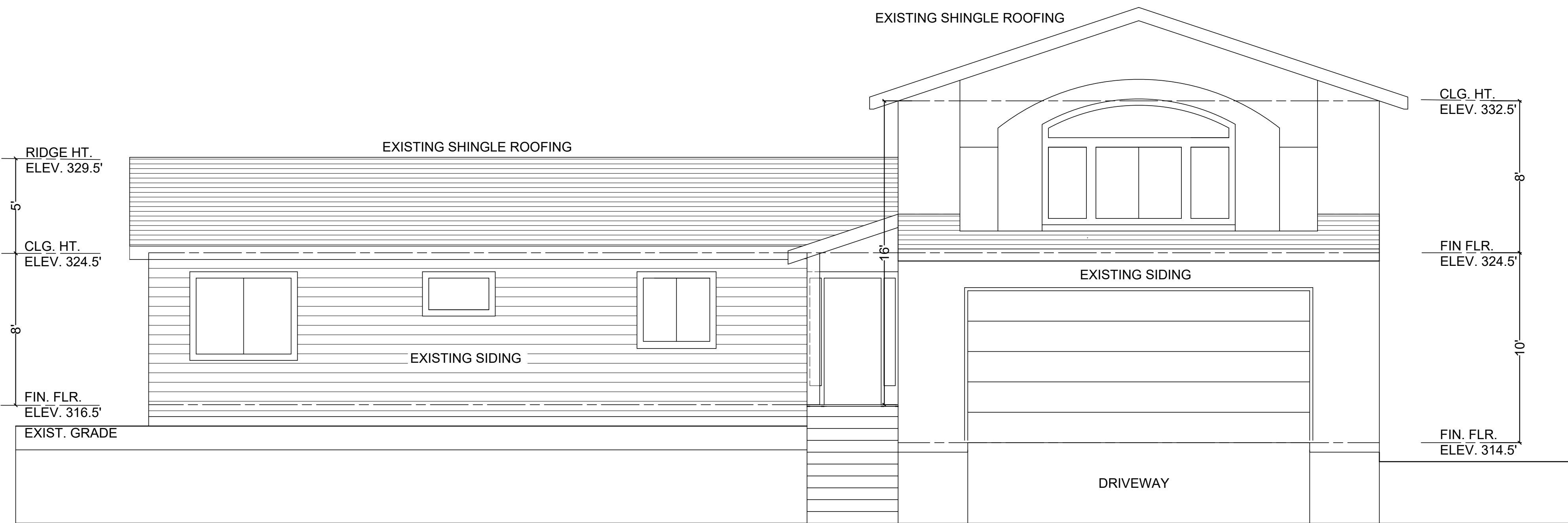
EXISTING
UPPER LEVEL
FLOOR PLAN

A2.03



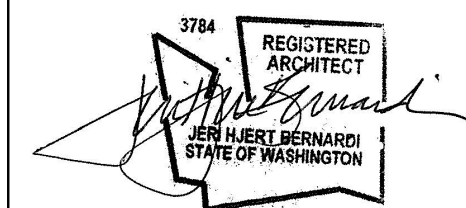
EXISTING NORTH ELEVATION

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

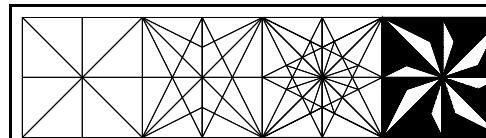


EXISTING WEST ELEVATION

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



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PROJECT NO.

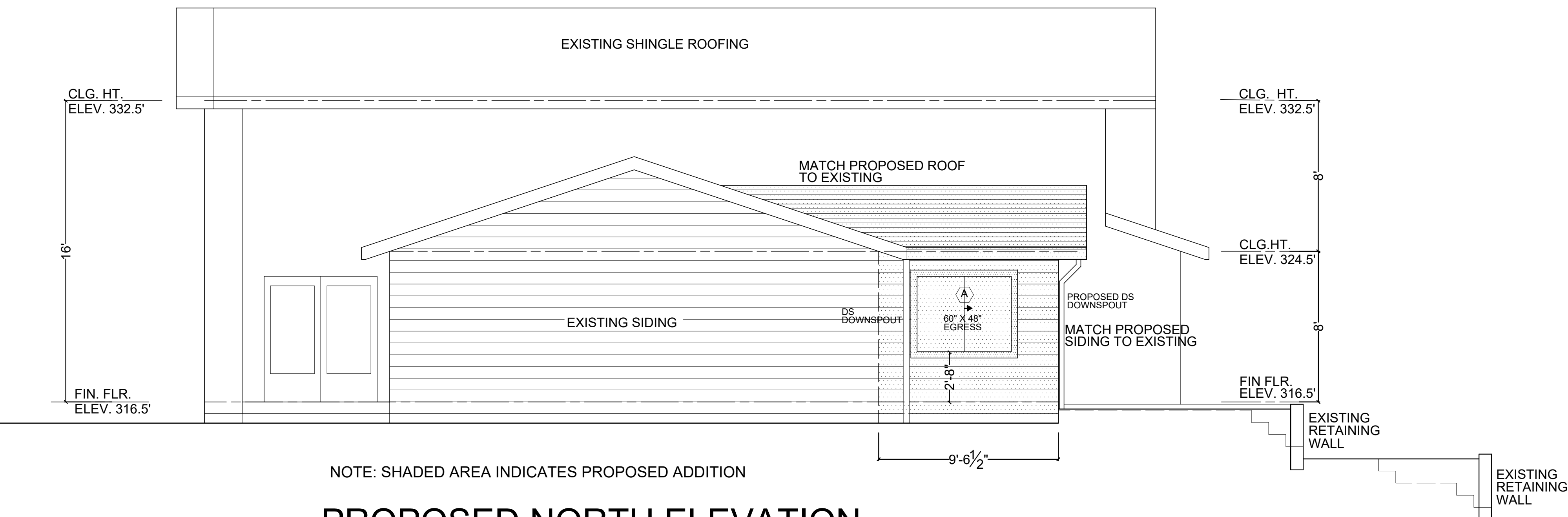
DATE:

5/10/2024

REVISIONS:

EXISTING
WEST &
NORTH
ELEVATIONS

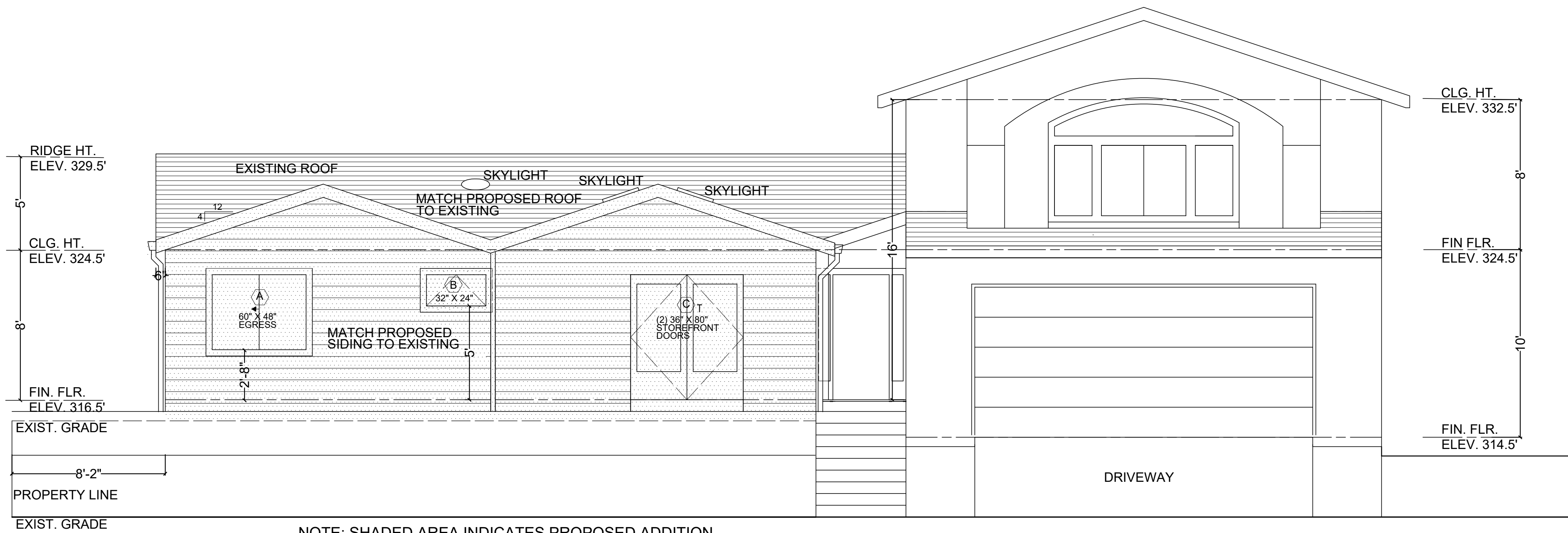
A3.01



NOTE: SHADED AREA INDICATES PROPOSED ADDITION

PROPOSED NORTH ELEVATION

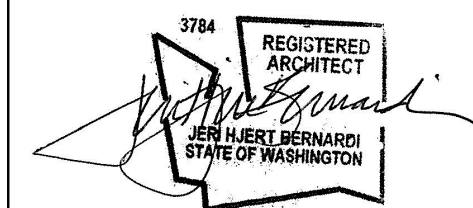
SCALE: 1/4" = 1'-0"



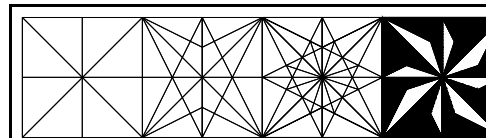
NOTE: SHADED AREA INDICATES PROPOSED ADDITION

PROPOSED WEST ELEVATION

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



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PROJECT NO.

DATE:

5/10/2024

REVISIONS:

V2 8/5/2024

PROPOSED
WEST &
NORTH
ELEVATIONS

A3.02

A4.01

GENERAL NOTES:

1. THE CONTRACTOR (SUB-CONTRACTORS) SHALL BE RESPONSIBLE TO VERIFY THAT ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND ORDINANCES.
2. THE CONTRACTOR (SUB-CONTRACTOR) SHALL VERIFY ALL DIMENSIONS GIVEN, EXISTING GRADES AND CONDITIONS AT THE JOB SITE AND SHALL BE RESPONSIBLE FOR NOTIFYING THE ARCHITECT IN WRITING OF ANY DIMENSIONAL ERRORS, OMISSIONS OR DISCREPANCIES BEFORE PRECEEDING WITH CONSTRUCTION OR BEGINNING OR FABRICATING ANY WORK.
3. THE CONTRACTOR (SUB-CONTRACTORS) SHALL CONSULT PLANS OF ALL TRADES AND PROVIDE FOR PIPING, CONDUITS, EQUIPMENT AND SHALL VERIFY SIZE AND LOCATION OF OPENINGS THRU FLOORS AND WALLS WITH OTHER TRADES. CONTRACTOR (SUB-CONTRACTOR) SHALL PROVIDE ACCESS DOORS, FURRING, CURBS, ANCHORS, INSERTS, ROUGH BUCKS AND BACKING FOR SURFACE MOUNTED ITEMS.
4. THE CONTRACTOR (SUB-CONTRACTOR) SHALL VERIFY ALL ROUGH-IN DIMENSIONS FOR EQUIPMENT FURNISHED BY HIMSELF OR OTHERS.
5. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
6. REPETITIVE FEATURES MAY BE DRAWN ONLY ONCE AND REMAIN AS IF DRAWN IN FULL.
7. THE CONTRACTOR (SUB-CONTRACTORS) SHALL BE RESPONSIBLE FOR ALL PERMITS AND INSPECTIONS REQUIRED FOR THE PERFORMANCE OF THE WORK.
8. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE MANUFACTURER'S LATEST RECOMMENDATIONS OR WRITTEN DIRECTIONS.
9. THE CONTRACTOR (SUB-CONTRACTORS) SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE OCCUPANTS AND WORKERS AT ALL TIMES.
10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR (SUB-CONTRACTOR) TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR (SUB-CONTRACTOR) SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGE BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THIS WORK.
11. CONTRACTOR (SUB-CONTRACTORS) SHALL INDIVIDUALLY WARRANT FOR ONE YEAR ALL MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE AGREED UPON.
12. ALL DEBRIS SHALL BE REMOVED FROM THE PREMISES AND ALL AREAS SHALL BE LEFT IN A "BROOM CLEAN" CONDITION AT ALL TIMES.
13. SEE PLANS FOR LOCATIONS OF ROUGH-IN FOR ALL SANITARY AND FOOD SERVICE LOCATIONS OF STUBS AND SLEEVES. EXACT LOCATION OF SLEEVES FOR INCOMING SERVICES TO BE DETERMINED BY SITE CONDITIONS.
14. THE CONTRACTOR (OR SUB-CONTRACTOR) SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL EPA REQUIREMENTS.
15. ALL WINDOW AND DOOR SIZES SHOWN ON DRAWINGS ARE ACTUAL DIMENSIONS, NOT ACTUAL ROUGH-IN DIMENSIONS. THE CONTRACTOR SHOULD VERIFY ACTUAL ROUGH-IN DIMENSIONS FOR ALL DOORS AND WINDOWS.
16. ALL INTERIOR DOORS ARE 30" X 80" H.C., UNLESS OTHERWISE NOTED.
17. DIMENSIONS ARE GIVEN FROM FINISHED SURFACES.
18. EMERGENCY EGRESS AND RESCUE OPENINGS REQUIRED:
EMERGENCY EGRESS AND RESCUE OPENING SHALL BE OPERATIONAL FROM THE INSIDE WITHOUT THE USE OF KEYS OR TOOLS, HAVE A MINIMUM NET OPENING AREA OF 5.7 SQ. FT. AND MINIMUM NET CLEAR HT. OF 24", AND MINIMUM NET CLEAR WIDTH OF 20".
AT LEAST ONE OPENING SHALL BE PROVIDED FROM EVERY SLEEPING ROOM AND FROM BASEMENTS WITH HABITABLE SPACE.
THE OPENING PROVIDED MUST HAVE A MAXIMUM SILL HEIGHT OF 44" ABOVE THE FLOOR, WHERE AN OPENING HAS A FINISHED SILL HEIGHT BELOW THE ADJACENT GROUND ELEVATION, A WINDOW WELL MUST BE PROVIDED WITH A MINIMUM HORIZONTAL AREA OF 9 SQ. FT., MINIMUM HORIZONTAL PROJECTION AND WIDTH OF 36" ALLOWING FOR THE OPENING OF THE EMERGENCY EGRESS TO BE FULLY OPENED.
NOT LESS THAN ONE EXIT DOOR, 3' IN WIDTH AND 6'-8" IN HEIGHT SHALL BE PROVIDED.
19. SAFETY GLAZING SHALL BE REQUIRED IN THE FOLLOWING CIRCUMSTANCES:
GLAZING IN SWINGING DOORS, AND IN ANY OPERABLE OR FIXED PANEL WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24" ARC OF THE DOOR IN A CLOSED POSITION AND IS LESS THAN 60" ABOVE THE FIN. FLOOR,
IN ENCLOSURES FOR TUBS, SHOWERS AND WHERE THE BOTTOM OF ANY GLAZED AREA IN A SURROUNDING WALL IS LESS THAN 60" ABOVE THE FIN. FLOOR,
GLAZING ADJACENT TO STAIRWAYS WITHIN 60" HORIZONTALLY OF THE BOTTOM TREAD OF A STAIRWAY IN ANY DIRECTION WHEN THE EXPOSED SURFACE OF THE GLASS IS LESS THAN 60" ABOVE THE NOSE OF THE TREAD.
GLAZING IN FIXED OR OPERABLE PANELS, MEETING ALL OF THE FOLLOWING -
THE EXPOSED AREA OF THE INDIVIDUAL PANE IS GREATER THAN 9 SQ. FT.
THE BOTTOM EDGE IS LESS THAN 18" ABOVE THE FIN. FLOOR
THE TOP EDGE IS GREATER THAN 36" ABOVE THE FIN. FLOOR
ONE OF MORE WALKING SURFACES IS WITHIN 36" HORIZONTALLY OF THE GLAZING
- AS PER R312.2.1, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72" ABOVE THE FINISHED GRADE OR SURFACE BELOW, AND THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW IS LESS THAN 24" ABOVE THE FINISHED GRADE OF THE ROOM IN WHICH THE WINDOW IS LOCATED, THE WINDOW SHALL HAVE OPENABLE SECTIONS THAT DO NOT ALLOW THE PASSAGE OF A 4" DIAMETER SPHERE.
20. ONE SMOKE DETECTOR SHALL BE INSTALLED IN EACH SLEEPING ROOM AND IN THE IMMEDIATE VICINITY OF EACH, WITH AT LEAST ONE SMOKE DETECTOR INSTALLED ON EACH FLOOR OF THE DWELLING.
ALL SMOKE DETECTORS ARE TO BE HARD-WIRED AND INTERCONNECTED SUCH THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL ALARMS. ALARMS MUST BE AUDIBLE OVER BACKGROUND NOISE AND WITH DOORS CLOSED. SMOKE ALARMS MUST RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING, BUT IN THE CASE OF INTERRUPTION OF POWER, THEY SHALL RECEIVE POWER FROM A BATTERY.
21. AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, AND ON EACH LEVEL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CARBON MONOXIDE DETECTION SYSTEMS AS PER IRC 315.2 THAT INCLUDES CARBON MONOXIDE DETECTION AND AUDIBLE NOTIFICATION APPLIANCES, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THIS SECTION AND NFPA 720-2012 SHALL BE PERMITTED.
THE CARBON MONOXIDE DETECTOR SHALL BE LISTED AS COMPLYING WITH UL2075, WHERE A HOUSEHOLD CARBON MONOXIDE SYSTEM IS INSTALLED, IT SHALL BECOME A PERMANENT FEATURE OF THE OCCUPANCY.
ALL CARBON MONOXIDE ALARMS ARE TO BE HARD-WIRED AND INTERCONNECTED SUCH THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL ALARMS. ALARMS MUST BE AUDIBLE OVER BACKGROUND NOISE AND WITH DOORS CLOSED. CARBON MONOXIDE ALARMS MUST RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING, BUT IN THE CASE OF INTERRUPTION OF POWER, THEY SHALL RECEIVE POWER FROM A BATTERY.

22. U-VALUES AND R-VALUES AS PER WASHINGTON STATE ENERGY CODE 2018:

U VALUES AND R VALUES AS PER WASHINGTON STATE ENERGY CODE 2021: CLIMATE ZONE 5 and MARINE 4, TABLE R402.1.1 and R402.1.3.								
	GLAZING		DOOR	RAFTER/JOIST CEILINGS	WALLS ABOVE GRADE	WALLS BELOW GRADE	FLOOR OVER UNHEATED SPACE	SLAB ON GRADE
	VERTICAL	OVERHEAD			INTERIOR	R-10/15/21 INTERIOR + 5/8		
U or R-FACTOR	U=0.30	U=0.50	U=0.30	R-60		R-20+5 OR 15+10	R-30	R-10 # FT.
EQUIVALENT U-FACTOR	U=0.30	U=0.50	U=0.30	0.026	0.026	0.056	0.042	N/A

WINDOW AND DOOR HEADERS SHALL BE INSULATED WITH A MINIMUM R-10 INSULATION.

- ALL FINESTRATION SHALL BE NFRC CERTIFIED.
TB REFERS TO A THERMAL BREAK BETWEEN FLOOR SLAB AND BASEMENT WALL.
FIBERGLASS BATT INSULATION OR RIGID INSULATION SHALL BE PROVIDED FOR ALL AREAS AS REQUIRED IN TABLE .
EXTERIOR WALLS BELOW GRADE TO HAVE R-10 INSULATION.
ALL HEADERS TO HAVE R-10 INSULATION.
ALL EXTERIOR OPENINGS TO BE FULLY CAULKED AND WEATHERSTRIPPED
ALL ELECTRIC WATER HEATERS IN UNHEATED SPACES OR ON CONCRETE FLOORS SHALL BE PLACED ON AN INCOMPRESSIBLE, INSULATED SURFACE WITH A MINIMUM THERMAL RESISTANCE OF R-10.
- WASHINGTON STATE ENERGY CODE (WSEC) - ENERGY CODE COMPLIANCE:
THE PROJECT WILL MEET THE REQUIREMENTS OF THE ENERGY CODE WITH ALL CONSTRUCTION COMPLYING WITH THE CODE.
THE APPLICABLE PRESCRIPTIVE APPROACH OF THE WSEC.
THE PROJECT IS R3 OCCUPANCY.
CONSTRUCTION IS WOOD FRAME, TYPE VB.
ALL BUILDING COMPONENTS WILL MEET THE REQUIREMENTS LISTED IN OPTION II TABLE 402.1.1.
THE PROJECT WILL MEET ALL OTHER PROVISIONS OF THE WSEC AND VIAQ.

23. 2.0 ENERGY CREDITS ARE REQUIRED AS PER TABLE R406.2 OF THE 2021 WASHINGTON STATE ENERGY CODE FOR AN ADDITION 150 SQ. FT. TO 500 SQ. FT.
- EFFICIENT BUILDING ENVELOPE AS PER OPTION 1.4 BASED ON TABLE 402.1.2 WITH THE FOLLOWING MODIFICATIONS:
VERTICAL FINESTRATION WITH U = 0.18;
CEILING JUNT VEAULTED WITH R - 60 INSULATION;
WOOD FRAMED WALLS WITH R-21 + R-16 @ INSULATION;
FLOOR WITH R-48 INSULATION.
24. MAXIMUM PERMISSIBLE ENVIRONMENTAL NOISE LEVELS AS PER CODE, RCW 70.107, REVISED CODE OF WASHINGTON, CHAPTER 173-600 WAC, WASHINGTON ADMINISTRATION CODE.
REFER TO WAC 173.60.040 (2) (a) FOR MAXIMUM NOISE LIMITATION IN CLASS A (RESIDENTIAL) NOISE SOURCE IS EQUAL TO 55 dBA. (2) (b) THE NOISE LIMITATION SHALL BE REDUCED BY 10dBA DURING THE HOURS OF 10:00 pm and 7:00a FOR THE RECEIVING PROPERTY WITHIN CLASS A (RESIDENTIAL); (2) (c) AT ANY HOUR OF THE DAY OR NIGHT THE APPLICABLE NOISE MAY BE EXCEEDED FOR ANY RECEIVING PROPERTY BY NO MORE THAN (i) 5dBA FOR A TOTAL OF 15 MINUTES IN AN HOUR PERIOD; (ii) 10dBA FOR A TOTAL OF 5 MINUTES IN ANY ONE-HOUR PERIOD; (iii) 15dBA FOR A TOTAL OF 1.5 MINUTES IN A ONE-HOUR PERIOD.
25. THE 2021 IRC IS USED FOR STRUCTURAL, AND THE 2021 IRC IS USED FOR ARCHITECTURAL. AND 2021 WASHINGTON STATE ENERGY CODE (WSEC)

- * 26. WHOLE HOUSE VENTILATION:
AS PER TABLES M1505.4.3, 4 BEDROOMS, 3001-3500 SQ. FT., REQUIRES AN AIRFLOW IN CFM = 75. INTERMITTANT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS RESULT IN A FACTOR OF 2 FOR A FAN RUNNING 50% OF THE TIME IN EACH 4 HOUR PERIOD.
75 X 2 = 150 CFM FAN RUNNING 2 HOURS OF EACH 4 HOUR PERIOD OF TIME.

CONTROLS SHALL BE READILY ACCESSIBLE BY THE OCCUPANT.
INSTRUCTIONS SHALL BE PROVIDED TO THE OCCUPANT BY THE INSTALLER OF THE WHOLE HOUSE VENTILATION SYSTEM.
CONTROLS SHALL BE CAPABLE OF OPERATING THE WHOLE SYSTEM WITHOUT ENERGING OTHER ENERGY CONSUMING APPLIANCES.
A LABEL SHALL BE AFFIXED TO THE CONTROLS THAT READS "WHOLE HOUSE VENTILATION - SEE OPERATING INSTRUCTIONS".
INTERMITTENT WHOLE HOUSE VENTILATION SYSTEMS SHALL COMPLY WITH THE FOLLOWING:
THEY SHALL BE CAPABLE OF FUNCTIONING INTERMITTENTLY OR CONTINUOUSLY
THEY SHALL BE DESIGNED SO THAT THEY CAN OPERATE AUTOMATICALLY BASED ON THE TYPE OF OF CONTROL TIMER.
AT THE TIME OF THE FINAL INSPECTION THE AUTOMATIC CONTROL SHALL BE SET TO OPERATE THE WHOLE HOUSE FAN ACCORDING TO THE SCHEDULE USED TO CALCULATE THE WHOLE HOUSE FAN SIZING.
FAN FLOW RATING AND FAN NOISE ARE DETERMINED ACCORDING TO HM 916 HOME VENTILATING INSTITUTE AIRFLOW TEST PROVIDING A FLOW RATING AT 0.25" WATERGAUGE, OR AMA 210 LABORATORY METHODS OF TESTING FANS FOR CERTIFIED AERODYNAMIC PERFORMANCE RATE.

27. PRESCRIPTIVE SUPPLY FAN DUCT SIZING PER TABLE M1507.3.6.2:
50 CFM FANS ARE REQUIRED FOR BATHROOMS AND LAUNDRY ROOMS, 100 CFM FANS FOR KITCHENS.
SPECIFIED VOLUME MIN. SMOOTH DUCT DIA. MIN. FLEXIBLE DUCT DIA.
50 - 90 CFM 4 INCH 5 INCH
90 - 150 CFM 5 INCH 6 INCH
150 - 250 CFM 6 INCH 7 INCH
28. OUTDOOR AIR INLETS SHALL PROVIDE NOT LESS THAN 4 SQ. IN. OF NET FREE AREA OF OPENING FOR EACH HABITABLE SPACE.
29. OUTDOOR AIR SHALL BE PROVIDED TO EACH HABITABLE SPACE BY INDIVIDUAL AIR INLETS AS PER IRC M1507.3.4 (4)
THE OUTDOOR AIR INLETS MAY INCLUDE GRILLS, VENTS, WINDOW FRAME TRICKLE VENTS, DOORS CUT 1/2" ABOVE THE SURFACE OF A FINISH FLOOR COVERING PROVIDED THAT THE OPENINGS BE PROTECTED SO AS NOT TO COMPROMISE THE THERMAL INTEGRITY OF THE WALL.
OUTDOOR AIR INLETS SHALL PROVIDE NOT LESS THAN 4 SQ. IN. OF NET FREE AREA OF OPENING FOR EACH HABITABLE SPACE.
OUTDOOR AIR INLETS SHALL NOT BE CLOSER THAN 10 FT. FROM APPLIANCE VENT OUTLETS UNLESS THE VENT IS 3 FT. ABOVE THE AIR INLET, WHERE THE INLET WOULD PICK UP OBJECTIONABLE ODORS, FUMES OR FLAMMABLE VAPORS; IN A HAZARDOUS OR UNSAFE LOCATION; IN A SPACE HAVING ANY FUEL-BURNING APPLIANCES, OR CLOSER THAN THAN 10 FT. FROM A VENT OPENING FOR A PLUMBING DRAIN SYSTEM, UNLESS THE VENT IS 3 FT. ABOVE THE AIR INLET.

30. AIR BARRIER AND INSULATION INSTALLATION SHALL BE PROVIDED AS PER TABLE R402.4.1.1:
ALL CAVITIES IN THE THERMAL ENVELOPE SHALL BE FILLED WITH INSULATION;
CORNERS AND HEADERS, RIM JOISTS OR ANY VOID SPACES SHALL ALSO HAVE INSULATION.
THE JUNCTION OF THE SILL PLATE AND FOUNDATION, THE TOP PLATE AND TOP OF THE EXTERIOR WALL, THE SPACE BETWEEN WINDOW/DOOR JAMBS AND FRAMING, AND SKYLIGHTS AND FRAMING, KNEE WALLS, DUCT SHAFTS AND UTILITY PENETRATIONS, FLUE SHAFTS OPENING TO THE EXTERIOR, HVAC REGISTER BOOTTS SHALL ALL BE SEALED.
31. DUCT TESTING FOR NEW CONSTRUCTION AND ADDITIONS AS PER SEC R403.2.2
DUCT LEAKAGE SHALL BE TESTED PER WSU RS-33.
A COPY OF THE "DUCT LEAKAGE AFFIDAVIT FOR NEW CONSTRUCTION" SHALL BE PROVIDED TO THE BUILDING INSPECTOR PRIOR TO APPROVAL OF THE FINAL INSPECTION.

32. INSULATION CERTIFICATE AS PER WSEC R401.3:
THE CONTRACTOR SHALL COMPLETE AND POST AN "INSULATION CERTIFICATE FOR RESIDENTIAL CONSTRUCTION" WITHIN 3' OF THE ELECTRICAL PANEL PRIOR TO FINAL INSPECTION.
33. VENTILATION SHALL BE PROVIDED FOR ALL CRAWL SPACES WITH A NET FREE VENTILATING AREA NOT LESS THAN 1 SQ. FT. FOR EVERY 150 SQ. FT. OF UNDER-FLOOR SPACE AREA, WITH ONE SUCH OPENING LOCATED WITHIN 3 FT. OF EACH CORNER OF THE BUILDING.
VENTILATION OPENINGS SHALL BE COVERED FOR THEIR HEIGHT AND WIDTH WITH ANY OF THE FOLLOWING:
HARDWARE CLOTH OF 0.035INCH (0.89MM) WIRE OR HEAVIER;
CORROSION-RESISTANT WIRE MESH WITH THE DIMENSION BEING 1/8" (3.2MM);
OR OTHER APPROVED IN SECTION R408 OF THE IRC 2006 EDITION.
A 24" X 30" ACCESS SHALL BE PROVIDED TO ALL CRAWL SPACES.

34. LIGHT, VENTILATION AND HEATING

A MINIMUM OF 100% OF ALL PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.
THE MAIN AND UPPER LEVELS OF THE RESIDENCE WILL BE PROVIDED WITH A PROGRAMMABLE THERMOSTAT FOR THE REGULATION OF TEMPERATURE.

VENTILATION SHALL COMPLY WITH THE SEATTLE RESIDENTIAL CODE.

HABITABLE ROOMS SHALL BE PROVIDED WITH AN AGGREGATE GLAZING AREA OF NOT LESS THAN 8% OF THE TOTAL FLOOR AREA OF SUCH ROOMS.
THE GLAZED AREAS NEED NOT BE INSTALLED IN ROOMS WHERE ARTIFICIAL LIGHT IS PROVIDED CAPABLE OF PRODUCING AN AVERAGE ILLUMINATION OF 6 FOOT-CANDLES (65 LUX) OVER THE AREA OF THE ROOM AT A HEIGHT OF 30" ABOVE THE FLOOR LEVEL.

FOR THE PURPOSE OF DETERMINING LIGHT REQUIREMENTS, ANY ROOM SHALL BE CONSIDERED AS A PORTION OF AN ADJOINING ROOM WHEN AT LEAST ONE-HALF OF THE AREA OF THE COMMON WALL IS OPEN AND UNOBSTRUCTED AND PROVIDES AN OPENING OF NOT LESS THAN ONE-TENTH OF THE FLOOR AREA OF THE INTERIOR ROOM, BUT NOT LESS THAN 25 SQ. FT.

BATHROOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAR ROOMS SHALL BE PROVIDED WITH AN AGGREGATE GLAZING AREA IN WINDOWS OF NOT LESS THAN 3 SQ. FT., ONE HALF OF WHICH MUST BE OPERABLE.

STAIRWAY ILLUMINATION:
INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIRS INCLUDING THE LANDINGS AND TREADS.
FOR INTERIOR STAIRS THE ARTIFICIAL LIGHT SOURCES SHALL BE CAPABLE OF ILLUMINATING TREADS AND LANDINGS TO NOT LESS THAN 1 FOOT-CANDLE (11 LUX) MEASURED AT THE CENTER OF TREADS AND LANDINGS.
EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF THE STAIRWAY.
AN ARTIFICIAL LIGHT SOURCE IS NOT REQUIRED AT THE TOP AND BOTTOM LANDING, PROVIDED AN ARTIFICIAL LIGHT SOURCE IS LOCATED DIRECTLY OVER EACH STAIR SECTION.
LIGHT ACTIVATION - WHERE LIGHTING OUTLETS ARE INSTALLED IN INTERIOR STAIRWAYS, THERE SHALL BE A WALL SWITCH AT EACH FLOOR LEVEL TO CONTROL THE LIGHTING OUTLET WHERE THE STAIRWAY HAS SIX OR MORE RISERS. THE ILLUMINATION OF EXTERIOR STAIRWAYS SHALL BE CONTROLLED FROM INSIDE THE DWELLING UNIT.

REQUIRED HEATING:
EVERY DWELLING UNIT SHALL BE PROVIDED WITH HEATING FACILITIES CAPABLE OF MAINTAINING A MINIMUM ROOM TEMPERATURE OF 68 DEGREES FAHRENHEIT AT A POINT 3 FEET ABOVE THE FLOOR AND 2 FEET FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS, BATHS AND TOILET ROOMS. PORTABLE SPACE HEATERS SHALL NOT BE USED TO ACHIEVE COMPLIANCE WITH THE CODE.
NO USED SOLID-FUEL-BURNING DEVICE SHALL BE INSTALLED IN NEW OR EXISTING BUILDINGS UNLESS SUCH DEVICE IS UNITED STATES ENVIRONMENTAL PROTECTION AGENCY CERTIFIED.

35. ELECTRICAL:

RECEPTACLE OUTLETS SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY WALL SPACES IS MORE THAN 6 FEET, MEASURED HORIZONTALLY, FROM AN OUTLET IN THAT SPACE, INCLUDING ANY SPACE 2 FEET OR MORE IN WIDTH.

OUTLET BOXES ON OPPOSITE SIDE OF THE WALL SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.

PROVIDE A WALL MOUNTED GFCI PROTECTED RECEPTACLE WITHIN 36" OF THE GFCI BATHROOM SINKS.

PROVIDE GFCI PROTECTION FOR RECEPTACLES WITHIN 6' OF ALL OTHER SINKS OR BASINS.
ALL CIRCUITS SUPPLYING RECEPTACLE OUTLETS IN BEDROOMS SHALL BE AFCI PROTECTED.

STEEL ELECTRICAL BOXES MAY BE INSTALLED IF NO BOX HAS AN AREA IN ACCESS OF 16 SQ. IN., AND THE TOTAL AREA OF SUCH OPENINGS DOES NOT EXCEED 100 SQ. IN. FOR ANY 100 SQ. FT. OF WALL AREA. OUTLET BOXES ON OPPOSITE SIDES OF THE WALL SHALL BE SEPARATED AS FOLLOWS:

BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 IN.
BY A HORIZONTAL DISTANCE OF NOT LESS THAN THE DEPTH OF THE WALL CAVITY WHEN THE WALL; CAVITY IS FILLED WITH CELLULOSE LOOSE-FILL, ROCKWOOL OR SLAG MINERAL WOOL INSULATION; OR BY SOLID FIRE BLOCKING AS PER SECTION R602.8.1;
OR BY PROTECTING BOTH OUTLET BOXES BY LISTED PUTTY PADS;
OR BY OTHER LISTED MATERIALS AND METHODS.

CAULK, TAPE AND SEAL ALL INTERIOR AND EXTERIOR WALLS, INCLUDING MECHANICAL AND ELECTRICAL PENETRATIONS, IN RATED WALLS AS REQUIRED TO PROVIDE A SOUND-PROOF, WATERPROOF ENCLOSURE. WHERE MECHANICAL AND ELECTRICAL PENETRATES RATED WALLS, SEAL TO COMPLY WITH CODE REQUIREMENTS.

36. MOISTURE CONTROL:
VAPOR BARRIERS SHALL BE INSTALLED ON THE INTERIOR OR WARM IN WINTER SIDE OF THE BUILDING ENVELOPE.
ALL PLUMBING, ELECTRICAL AND HVAC PENETRATIONS IN FLOORS, WALLS AND CEILINGS SHALL BE CAULKED AND SEALED WITH SEALANTS APPROVED FOR THESE LOCATIONS.
ELECTRICAL OUTLET AND LIGHT SWITCH BOXES ON EXTERIOR WALLS SHALL BE SEALED AT THE BACK OF THE RECEPTACLE WITH A FACE-PLATE GASKET.
SOLE-PLATE SHALL BE GLUED OR CAULKED TO SUBFLOOR. CAULK, SEAL RIM JOISTS BETWEEN STORIES, ALL SEALANTS AND GLUES SHALL BE APPROVED FOR EACH SPECIFIC LOCATION AND APPLICATION.
APPROVED FLASHING SHALL BE INSTALLED AT ALL DOOR AND WINDOW HEADS, DOOR SILLS, WALL TO DECK CONNECTIONS, ROOF VALLEYS, ROOF RAKE AND EAVE EDGES, CHIMNEY CAPS, AND AT WALL AND ROOF PENETRATIONS.
REVIEW ALL FLASHING SOLUTIONS WITH ARCHITECT PRIOR TO INSTALLATION.

37. FLASHING:

APPROVED CORROSION-RESISTANT FLASHING SHALL BE APPLIED SHINGLE-FASHION IN SUCH A MANNER TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OR PENETRATION OF WATER TO THE BUILDING STRUCTURAL FRAMING COMPONENTS. THE FLASHING SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL FINISH.

APPROVED CORROSION-RESISTANT FLASHINGS SHALL BE INSTALLED AT ALL OF THE FOLLOWING LOCATIONS:

EXTERIOR WINDOW AND DOOR OPENINGS. FLASHING AT EXTERIOR WINDOW AND DOOR OPENINGS SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL FINISH OR TO THE WATER-RESISTIVE BARRIER FOR SUBSEQUENT DRAINAGE.
UNDER AND AT THE ENDS OF MASONRY, WOOD OR METAL COPINGS AND SILLS;
CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM;
WHERE EXTERIOR PORCHES, DECK OR STAIRS ATTACH TO A WALL OR FLOOR ASSEMBLY OF WOOD-FRAME CONSTRUCTION;
AT WALL AND ROOF INTERSECTIONS;
AT BUILT-IN GUTTERS.

GENERAL FLASHING NOTES:

ALL FLASHING SYSTEMS SHALL CONFORM WITH APPLICABLE CODES AND SMACNA STANDARDS. ALL MATERIALS USED SHALL BE APPROVED FOR SUCH USE. ALL METALS USED SHALL BE OF APPROPRIATE COMPOSITION AND THICKNESS. ALL FLASHING FABRICATION SHALL BE PERFORMED BY A SMACNA APPROVED PROFESSIONAL CONTRACTOR/ FABRICATOR. ALL FLASHINGS SHALL BE REVIEWED AND APPROVED BY THE PROJECT ARCHITECT PRIOR TO FABRICATION. ALL SOLDERED JOISTS SHALL BE PROTECTED PRIOR TO FLASHING INSTALLATION.

DOOR AND WINDOW HEAD FLASHING:

FLASHING EXTENDS UP THE WALL A MINIMUM OF 4 INCHES AND BEYOND THE OPENING OF A MINIMUM OF 4 INCHES EACH SIDE. FLASHING SHALL EXTEND OUT OVER FRAME OF WINDOW OR DOOR TRIM WITH A SLOPED SECTION HAVING END DAMS AND CONTINUE DOWN THE FACE OF THE FRAME OR TRIM A MINIMUM OF 1 INCH. FLASHING SHALL TERMINATE WITH A CLEAT OR HEMMED DRIP EDGE. ALL FLASHING SHALL BE BENT OR SOLDERED AT ALL INTERSECTIONS.

ONE LAYER OF SELF ADHERING FLASHING SHALL PRECEDE THE INSTALLATION OF METAL FLASHING LAPPING WINDOW FLANGE OR DOOR FRAME AND EXTEND ABOVE THE TOP OF METAL FLASHING 1 INCH AND BEYOND THE SIDES OF THE METAL FLASHING BY 1 INCH.
ONCE METAL FLASHING HAS BEEN INSTALLED A SECOND LAYER OF SELF ADHERING FLASHING SHALL BE APPLIED. THIS FLASHING SHALL LAP METAL FLASHING A MINIMUM OF 3 INCHES AND LAP UP THE WALL 3 INCHES AND 3 INCHES BEYOND EACH SIDE.

TWO LAYERS OF BUILDING PAPER OR APPROVED HOUSE WRAP SHALL THEN BE APPLIED TO THE EXTERIOR.

DOOR AND WINDOW JAM FLASHING:

JAMB FLASHING SHALL BE MADE UP ON SELF ADHERING FLEXIBLE FLASHING. THIS SHALL TUCK UNDER HEAD FLASHING ABOVE AND OVER SILL FLASHING BELOW. JAM FLASHING WILL LAP OVER THE EXTERIOR FACE OF THE WALL A MINIMUM OF 2 INCHES OVER TWO LAYERS OF BUILDING PAPER AND ONE LAYER OF AN ADHESIVE FLEXIBLE FLASHING HAVING A MINIMUM WIDTH OF 9 INCHES. AT WINDOWS A SECOND LAYER OF SELF ADHERING FLEXIBLE FLASHING SHALL BE APPLIED OVER THE WINDOW FLANGE LAPPING FLOOR AND EXTENDING BEYOND THE FIRST LAYER OF FLASHING BY TWO INCHES HORIZONTALLY.

BLOCKING USE AT DOOR OR WINDOW JAMBS SHALL BE THE FULL DEPTH OF THE FRAME AND SLOPE TO THE EXTERIOR.

DOOR AND WINDOW SILL FLASHING:

FLASHING SILL SHALL BE SLOPED 1/8" PER INCH OF DEPTH TOWARD THE EXTERIOR. THE DEPTH OF FLASHING SHALL BE THE DEPTH OF THE WINDOW OR DOOR FRAME, 1 INCH TO ALLOW FOR SEALANT AT THE LOCATION, DEPTH OF FLASHING SHALL BE DETERMINED BY THE DEPTH OF THE DOOR THRESHOLD. WITH THE SILL FLASHING TERMINATING UNDER THE THRESHOLD. SILL FLASHING SHALL HAVE A MINIMUM OF 5/8 INCH UP-TURN DAM AT THE INTERIOR EDGE. SILL FLASHING SHALL LAP UP SIDES OF OPENING A MINIMUM OF 2 INCHES, AND OVER THE EXTERIOR FACE OF OPENING SIDES AND BOTTOMS 2 INCHES.

IT IS RECOMMENDED THAT THIS SILL FLASHING BE INSTALLED OVER THE TWO LAYERS OF BUILDING PAPER. ONE LAYER OF UN-ADHESIVE FLEXIBLE FLASHING WITH A MINIMUM HEIGHT OF 9 INCHES TO BE APPLIED TO WINDOW OPENING THE WALL BELOW FLASHING. ONE LAYER OF SELF ADHESIVE SHALL BE APPLIED LAP WINDOW OPENINGS DOWN WALL OVER THE FIRST LAYER OF FLEXIBLE FLASHING A MINIMUM OF 2 INCHES.

ROOF TO WALL FLASHING:

THE FLASHING MUST EXTEND UP THE WALL AND ONTO THE ROOF A MINIMUM OF 4 INCHES. NAIL THE FLASHING PIECES TO THE ROOF SHEATHING ABOVE THE TOP OF EACH SHINGLE COURSE. FLASHINGS ARE GENERALLY FORMED IN 10 FT. SECTIONS. SECTIONS SHOULD BE LAPPED 8 INCHES MINIMUM IN THE DIRECTION OF FLOW. THE TOP OF EACH SECTION SHOULD BE FASTENED WITH NAILS OF MATERIAL COMPATIBLE WITH THE FLASHING.

ROOF VALLEY FLASHING:

THE VALLEY FLASHING SHOWN ON DRAWINGS IS OF AN OPEN TYPE, WHERE SOME OF THE FLASHING IS EXPOSED TO VIEW. THE OPEN PORTION OF THE VALLEY SHOULD BE A MINIMUM OF 5 INCHES AND THE SHINGLES SHOULD LAP THE FLASHING A MINIMUM OF 5". (THE FLASHING SHOULD LAP EACH SECTION OF THE ROOF A MINIMUM OF 10 INCHES). THE EDGES OF THE VALLEY FLASHING SHOULD BE FORMED WITH A HOOK ON THE EDGE AND CLEATED ON 24 INCH CENTERS.

FLASHINGS ARE GENERALLY FORMED IN 10 FOOT SECTIONS, WHICH SECTIONS SHOULD BE LAPPED 8 INCHES IN THE DIRECTION OF FLOW. THE TOP OF EACH SECTION SHOULD BE FASTENED WITH NAILS OF MATERIAL COMPATIBLE WITH THE FLASHING. A 30 INCH WIDE FELT IS PLACED IN THE VALLEY THE FELT IN THE VALLEY SHOULD LAP 8 INCHES OVER THE UPPER END OF THE VALLEY FLASHING PIECES. ROOFING FELT SHOULD LAP OVER THE CLEATED EDGES OF THE FLASHING. COPPER (MINIMUM 160Z) OR STAINLESS STEEL (MINIMUM OF 0.018 INCHES) IS RECOMMENDED FOR VALLEY FLASHINGS.

ROOF EDGE FLASHING:

THE METHOD FOR GABLE AND RAKE END FLASHING FOR A SHINGLE ROOF IS AS FOLLOWS. FLASHING IS FORMED IN SECTIONS AND IS LAPPED IN THE DIRECTION OF THE FLOW. FLASHING EXTENDING 4 INCH ON THE ROOF IS NAILED TO THE SHEATHING 18" ON CENTER. A HEM IN THE ROOF FLANGE IS RECOMMENDED FOR SHAKE AND TILE ROOFING. FLASHING TO EXTEND A MINIMUM OF 1 1/2 INCH DOWN THE FACE OF THE FASCIA ENDING WITH A CONTINUOUS CLEATED OR HEMMED DRIP EDGE. FELT IS LAPPED OVER THE FLASHINGS IN THIS APPLICATION.

ROOF PENETRATION FLASHING:

MANY APPROVED PRE-MANUFACTURED ROOF PENETRATION FLASHINGS ARE READILY AVAILABLE FOR A VARIETY OF ROOF PENETRATIONS. THESE SHALL BE USED FOR APPROVED LOCATIONS INTENDED BY THE MANUFACTURER AND INSTALLED PER SPECIFICATIONS PROVIDED BY THE MANUFACTURER, HOWEVER, IF A CUSTOM FLASHING IS REQUIRED FOR A ROOF PENETRATION THE FOLLOWING SHALL APPLY. A SUITABLE COMPATIBLE METAL SHALL BE USED. THE METHOD OF FLASHING SHALL EXTEND INTO THE ROOF A MINIMUM OF 4 INCHES. ALL SEAMS AND JOINTS SHALL BE FUL SOLDERED THE FLASHING SHALL FORM A SHAPE THAT PREVENTS WATER INTRUSION - REFER TO SMACNA STANDARDS.

38. WEATHER STRIPPING SHOULD BE CONTINUOUS AROUND THE ENTIRE PERIPHERY OF ALL DOORS OR WINDOWS. THIS MAY INCLUDE FELT, NEOPRENE, PLEBUSH, KERF-IN FOAM, SPONGE NEOPRENE, SILICONE, BUTYL AND VINYL.
39. STAIRWAYS:
THE WIDTH OF A STAIRWAY SHALL NOT BE LESS THAN 36" IN CLEAR WIDTH. HANDRAILS SHALL NOT PROJECT MORE THAN 4 1/2" ON EITHER SIDE OF THE STAIRWAY WITH A CLEAR WIDTH OF 31 1/2" WHERE IS INSTALLED ON ONE SIDE AND 27" WHERE HANDRAILS ARE PROVIDED ON BOTH SIDES. HANDRAILS MUST BE 34" MINIMUM TO 38" MAXIMUM ABOVE THE NOSING OF THE STAIRWAY. HANDRAILS MUST BE A MINIMUM DISTANCE OF 1 1/2" AND MAXIMUM DISTANCE OF 2 1/4" FROM THE WALL. THE GREATEST RISER HEIGHT AND TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST RISER HEIGHT AND TREAD DEPTH BY MORE THAN 38".

40. GUARDRAILS:

PORCHES, BALCONIES OR RAISED FLOOR SURFACES LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE SHALL HAVE GUARDRAILS NOT LESS THAN 36" IN HEIGHT.
REQUIRED GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR AN ORNAMENTAL PATTERN SUCH THAT A SPHERE 4 INCHES IN DIAMETER CANNOT PASS THROUGH.
THE TRIANGULAR OPENINGS FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF THE GUARDRAIL AT THE BOTTOM END OF A STAIRWAY ARE PERMITTED TO BE OF SUCH A SIZE THAT A 6 INCH DIAMETER SPHERE CAN PASS THROUGH THE OPENING.
OPENINGS OF REQUIRED GUARDRAILS ON THE SIDES OF STAIR TREADS SHALL NOT ALLOW A SPHERE 4 3/8 INCH TO PASS THROUGH.

41. SECURITY REQUIREMENTS:

BUILDING ENTRANCE LOCKS: BUILDING ENTRANCE DOORS, INCLUDING GARAGE DOORS, SHALL BE PROVIDED WITH A DEAD-LOCKING LATCH BOLT WITH AT LEAST A 1/2" THROW THAT PENETRATES THE STRIKER NOT LESS THAN 14". DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE.

EXCEPTION - GARAGE TO EXTERIOR DOORS ARE PERMITTED TO BE EQUIPPED WITH AN ELECTRO-MAGNETICALLY OPERATED REMOTE CONTROL DEVICE FOR OPENING AND CLOSING IN LIEU OF A DEAD-LOCKING LATCH BOLT. WHEN GARAGE TO EXTERIOR DOORS ARE EQUIPPED WITH REMOTE CONTROL DEVICES, GARAGE TO BUILDING DOORS NEED NOT BE CAPABLE OF LOCKING.

OBSERVATION PORTS - EVERY BUILDING ENTRANCE DOOR, OTHER THAN THE GARAGE DOOR, SHALL HAVE A VISITOR OBSERVATION PORT OR GLASS SIDE LIGHT. OBSERVATIONS PORTS SHALL BE INSTALLED AT A HEIGHT OF NOT LESS THAN 54", AND NOT MORE THAN 66" FROM THE FLOOR.
WINDOWS AND SLIDING DOORS - DEAD BOLTS OR OTHER APPROVED LOCKING DEVICES SHALL BE PROVIDED ON ALL SLIDING DOORS AND OPERABLE WINDOWS. THE LOCK SHALL BE INSTALLED SO THAT THAT THE MOUNTING SCREWS FOR THE LOCK CASE ARE INACCESSIBLE FROM THE OUTSIDE.

EXCEPTION - WINDOWS WITH SILLS LOCATED 10 FT. OR MORE ABOVE GRADE, OR 10 FT. ABOVE A DECK, BALCONY OR PORCH THAT IS NOT READILY ACCESSIBLE FROM GRADE EXCEPT THROUGH THE RESIDENTIAL UNIT NEED TO HAVE OPERABLE INSIDE LATCHING DEVICES.

ALTERNATE SECURITY DEVICES - SUBJECT TO THE APPROVAL OF THE BUILDING OFFICIAL, ALTERNATE SECURITY DEVICES ARE PERMITTED TO SUBSTITUTE THOSE REQUIRED. ALTERNATE DEVICES MUST HAVE EQUAL CAPABILITY TO TO RESIST ILLEGAL ENTRY. THE INSTALLATION OF THE DEVICE SHALL NOT CONFLICT WITH ANY REQUIREMENTS OF THE CODE REGARDING EGRESS.

42. FIREBLOCKING REQUIRED:

FIREBLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS, BOTH VERTICALLY AND HORIZONTALLY, AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN, AND BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE.

FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS IN CONCEALED SPACE OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS AS FOLLOWS -
VERTICAL AT THE CEILING AND FLOOR LEVELS
HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET:
AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCURS AT SOFFITS, DROP CEILINGS AND COVE CEILINGS;

IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R311.2.2 AS FOLLOWS -
ENCLOSED ACCESSIBLE SPACE UNDER THE STAIRS SHALL HAVE WALLS, UNDER STAIR SURFACES AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD. AT OPENINGS AROUND VENTS, PIPES AND DUCTS AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES AS PER SECT. R1003.19.

FIREBLOCKING MATERIALS, AS PER R602.8.1, EXCEPT AS PROVIDED IN SECTION R602.8, ITEM 4, SHALL CONSIST OF THE FOLLOWING:

2-INCH NOMINAL LUMBER, OR TWO THICKNESSES OF 1 INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS, OR ONE THICKNESS OF 2X3/2 INCH WOOD STRUCTURAL PANELS WITH JOINTS BACKED BY 2X3/2 INCH WOOD STRUCTURAL PANELS, OR ONE THICKNESS OF 3/4 INCH PARTICLE BOARD WITH JOINTS BACKED BY 3/4 INCH PARTICLE BOARD, 1/2" GYPSUM BOARD, OR 1/2" CEMENT BASED MILLBOARD;
BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS, UNFACED FIBERGLASS BATT INSULATION USED AS FIREBLOCKING SHALL FILL THE ENTIRE CROSS SECTION OF THE WALL CAVITY TO A MINIMUM HEIGHT OF 16 INCHES MEASURED VERTICALLY; WHEN PIPING, CONDUIT OR SIMILAR OBSTRUCTIONS ARE ENCOUNTERED, THE INSULATION SHALL BE PACKED TIGHTLY AROUND THE OBSTRUCTION.
FIREBLOCKING INTEGRITY:
THE INTEGRITY OF ALL FIREBLOCKS SHALL BE MAINTAINED.

43. ALL EARTH EXPOSED IN CRAWL SPACES TO BE COVERED WITH 6-MIL VAPOR BARRIER. MIN. SPACE FROM EXPOSED EARTH TO BOTTOM OF JOISTS NOT TO EXCEED 18".
44. PROTECTION OF WOOD MEMBERS FROM DECAY:
ALL WOOD SHALL BE PRESSURE TREATED, OR OF OTHER SPECIES OR GRADE OF LUMBER APPROVED BY CODE WHERE:
THE BOTTOM OF WOOD JOISTS ARE LESS THAN 18" ABOVE, OR WOOD BEAMS ARE LESS THAN 12" FROM THE EXPOSED GROUND IN CRAWL SPACES, OR UNEXCAVATED AREA LOCATED WITHIN THE PERIPHERY OF THE BUILDING FOUNDATION;
WOOD FRAMING MEMBERS REST ON CONCRETE OR MASONRY EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 18 INCHES FROM THE EXPOSED GROUND;
SILLS AND SLEEPERS ON A CONCRETE OR MASONRY SLAB THAT IS IN DIRECT CONTACT WITH THE GROUND UNLESS SEPARATED FROM SUCH SLAB BY AN IMPERVIOUS MOISTURE BARRIER.
THE ENDS OF WOOD GIRDERS ENTERING EXTERIOR MASONRY OR CONCRETE WALLS HAVING CLEARANCE OF LESS THAN 0.5 INCH ON TOPS, SIDES AND ENDS;
WOOD STRUCTURAL MEMBERS SUPPORTING MOISTURE PERMEABLE FLOORS OR ROOFS THAT ARE EXPOSED TO THE WEATHER, SUCH AS CONCRETE OR MASONRY SLABS, UNLESS SEPARATED FROM SUCH FLOORS OR ROOFS BY AN IMPERVIOUS MOISTURE BARRIER.
ALL WOOD SIDING, SHEATHING AND WALL FRAMING ON THE EXTERIOR OF A BUILDING SHALL HAVE A CLEARANCE OF LESS THAN 6 INCHES ABOVE THE GRADE LEVEL;
WOOD FURRING STRIPS OR OTHER WOOD FRAMING MEMBERS ATTACHED DIRECTLY TO THE INTERIOR OF EXTERIOR MASONRY WALLS OR CONCRETE WALLS BELOW GRADE EXCEPT WHERE AN APPROVED VAPOR RETARDER IS APPLIED BETWEEN THE WALL AND THE FURRING STRIPS OF FRAMING MEMBERS.

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GENERAL RESIDENTIAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE SEATTLE BUILDING CODE (2015 EDITION).
2. DESIGN LOADING CRITERIA
- | | |
|---|---------------------------------------|
| SNOW..... | PH=25 PSF, Is=1.0, Ce=1.0, Ct=1.1 |
| FLOOR LIVE LOAD (RESIDENTIAL)..... | 40 PSF |
| DECK LIVE LOAD (RESIDENTIAL)..... | 60 PSF |
| WIND..... | V3= 85 MPH, Exp B, bwh=1.0, Kzt= 1.30 |
| EARTHQUAKE (EQUIVALENT LATERAL FORCE ANALYSIS)..... | Ss=1.397, Sds=0.537 |
- (BASED ON USGS "EARTHQUAKE GROUND MOTION PARAMETERS V5.0")
Ie=1.0, SITE CLASS D, SEISMIC DESIGN CATEGORY = D
R = 6.5 FOR LIGHT FRAMED WOOD SHEAR WALLS
C1 = 0.143 W/ BASE SHEAR =8.1 KIPS
3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ANY WORK AND DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO COMMENCING EXCAVATION, AND NOTIFY ARCHITECT OF DISCREPANCIES AND CONFLICTS.
5. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING, TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.
9. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.
10. FOUNDATION NOTES: ALLOWABLE SOIL PRESSURE AND LATERAL EARTH PRESSURE ARE ASSUMED AND THEREFORE MUST BE VERIFIED BY A QUALIFIED SOILS ENGINEER OR BUILDING DEPARTMENT. IF SOILS ARE FOUND TO BE OTHER THAN ASSUMED, NOTIFY THE STRUCTURAL ENGINEER FOR POSSIBLE FOUNDATION REDESIGN.
- FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED EARTH AT LEAST 18" BELOW ADJACENT FINISHED GRADE. UNLESS NOTED OTHERWISE, FOOTINGS SHALL BE CENTERED BELOW COLUMNS OR WALLS ABOVE.
- BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING, GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE.
- | | |
|-------------------------------|-----------|
| ALLOWABLE SOIL PRESSURE | 2,000 PSF |
| LATERAL EARTH PRESSURE | 35 PCF |

RENOVATION

11. DEMOLITION: CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. EXISTING REINFORCING SHALL BE RETAINED UNDAMAGED WHERE NOTED ON THE PLANS. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING INCLUDING DEMOLITION DEBRIS ON EXISTING FLOOR SYSTEMS TO 40 PSF.
- A. ALL NEW OPENINGS THROUGH EXISTING CONCRETE OR MASONRY WALLS, SLABS AND BEAMS SHALL BE ACCOMPLISHED BY SAW CUTTING WHEREVER POSSIBLE.
- B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATION OF MEMBERS PRIOR TO CUTTING ANY OPENINGS.
- C. WHERE NEW REINFORCING TERMINATES AT EXISTING CONCRETE OR MASONRY, THREADED BARS INTO THREADED EXPANSION INSERTS IN THE EXISTING TO MATCH HORIZONTAL REINFORCING, UNLESS OTHERWISE NOTED ON PLANS.
12. CONTRACTOR SHALL CHECK FOR DRYROT AT ALL EXTERIOR WALLS, EXISTING TOILET ROOM FLOORS AND WALLS, AREAS SHOWING WATER STAINS, WOOD IN CONTACT WITH EARTH, MASONRY AND CONCRETE AND ALL WOOD MEMBERS IN DAMP BASEMENT AND CRAWL SPACES. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE STRUCTURAL ENGINEER OR ARCHITECT.
13. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. THE CONTRACTOR SHALL BRING ALL CONFLICTS AND DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER.

CONCRETE

14. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED, AND PLACED IN ACCORDANCE WITH IBC SECTION 1905 AND ACI 301. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF F_c = 3,000 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. CONCRETE HAS BEEN DESIGNED USING F_c=2,500 PSI PER IBC 1704.4 EXCEPTION 2.3, TO AVOID SPECIAL INSPECTIONS.
- THE MINIMUM AMOUNTS OF CEMENT AND MAXIMUM AMOUNTS OF WATER MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE CONCRETE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER/CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH IBC 1905.3. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OR RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.
- ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494M, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 1904.2.2 OF THE SEATTLE BUILDING CODE.
15. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 40, F_y = 40,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.
16. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI SP-44-04 AND 318. LAP ALL CONTINUOUS REINFORCEMENT 30 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS 30 BAR DIAMETERS OR 2'-0" MINIMUM. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 9" AT SIDES AND ENDS.
17. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
- | | |
|---|--------|
| FOOTINGS AND OTHER UNFORMED SURFACES, EARTH FACE..... | 3" |
| FORMED SURFACES EXPOSED TO EARTH (I.E. WALLS BELOW GROUND) OR WEATHER: (6# BARS OR LARGER)..... | 2" |
| (#5 BARS OR SMALLER)..... | 1-1/2" |
| SLABS AND WALLS (INTERIOR FACE), (GREATER OF)..... | 3/4" |
| OR BAR DIAMETER PLUS..... | 1/8" |
18. SLABS ON GRADE SHALL BE 4" CONCRETE, REINFORCED WITH 6 X 6 W/1.4 X W/1.4 WELDED WIRE FABRIC CENTERED ON A 6 MIL VAPOR BARRIER OVER 4" COMPACTED SAND OR GRAVEL.
19. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES.
20. NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3,000 PSI MINIMUM).
21. EPOXY-GROUTED ITEMS SPECIFIED ON THE DRAWINGS SHALL BE GROUTED WITH SET-22 EPOXY BY SIMPSON STRONG-TIE CO., INC., INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORT NO. ESR-1772. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED.

STEEL

22. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON THE LATEST EDITIONS OF THE A.I.S.C. SPECIFICATIONS AND CODES:
1. SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
2. CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, AMENDED BY THE DELETION OF THE FOLLOWING SENTENCE IN PARAGRAPH 4.2.1: "THIS APPROVAL CONSTITUTES THE OWNER'S ACCEPTANCE OF ALL RESPONSIBILITY FOR THE DESIGN ADEQUACY OF ANY DETAIL CONFIGURATION OF CONNECTIONS DEVELOPED BY THE FABRICATOR AS PART OF HIS PREPARATION OF THESE SHOP DRAWINGS."
3. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
23. STRUCTURAL STEEL, INCLUDING PLATES AND ROLLED SHAPES (EXCLUDING WF SHAPES), SHALL CONFORM TO ASTM A36, F_y = 36 KSI. WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, F_y = 50KSI. STEEL PIPE SHALL CONFORM TO ASTM A-53, TYPE E OR S, GRADE B, F_y = 35 KSI. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B, F_y = 46 KSI. ANCHOR BOLTS AND CONNECTION BOLTS SHALL CONFORM TO ASTM A307.

WOOD

24. FRAMING LUMBER SHALL BE KILN DRIED OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH W.C.L.L.B. STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 17, LATEST EDITION. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:
- | | |
|---|---|
| JOISTS AND BEAMS:
(2X, 3X, AND 4X MEMBERS) | HEM-FIR NO. 2
MINIMUM BASE VALUE, F _b = 850 PSI |
| BEAMS AND STRINGERS:
(INCLUDING 6 X AND LARGER MEMBERS) | DOUGLAS FIR NO. 1
MINIMUM BASIC DESIGN STRESS, F _b = 1350 PSI |
| POSTS AND TIMBERS:
(6X6 AND LARGER MEMBERS) | DOUGLAS FIR NO. 1
MINIMUM BASIC DESIGN STRESS, F _c = 1000 PSI |
| STUDS, PLATES & MISCELLANEOUS LIGHT FRAMING: DOUGLAS FIR OR HEM-FIR NO. 2 | |
25. PARALLEL STRAND LUMBER (PSL) BOARD SHALL BE MANUFACTURED UNDER A PROCESS APPROVED BY THE NATIONAL RESEARCH BOARD. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, THE NATIONAL RESEARCH BOARD NUMBER, AND THE QUALITY CONTROL AGENCY. ALL PARALLEL STRAND LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH ICC ES ESR-1387 GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. F_b = 2900 PSI, E = 2.0 x 10⁶ PSI, F_v = 290 PSI.

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY THE TRUS-JOIST CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE I.C.C. APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.

LAMINATED VENEER LUMBER (LVL) SHALL BE MANUFACTURED UNDER A PROCESS APPROVED BY THE NATIONAL RESEARCH BOARD. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, THE NATIONAL RESEARCH BOARD NUMBER, AND THE QUALITY CONTROL AGENCY. ALL LAMINATED VENEER LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH ICC ES ESR-1387 USING DOUGLAS FIR VENEER GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. F_b = 2600 PSI, E = 1.8 x 10⁶ PSI, F_v = 285 PSI (FOR 1.8E MEMBERS)

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY THE TRUS-JOIST CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE I.C.C. APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.

27. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1-07 OR PS 2-04. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD. SEE PLANS FOR THICKNESS, PANEL IDENTIFICATION INDEX AND NAILING REQUIREMENTS.
28. ALL WOOD PLATES IN DIRECT CONTACT WITH CONCRETE OR MASONRY, OR EXPOSED TO WEATHERING, SHALL BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE. PROVIDE 2 LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER BETWEEN UNTREATED LEDGERS, BLOCKING, ETC. AND CONCRETE OR MASONRY.
29. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NO. C-2009 EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE I.C.C. APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE COMMON; ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED; ALL JOISTS SHALL BE CONNECTED TO FLUSH WOOD BEAMS WITH "LUS" SERIES JOIST HANGERS; ALL JOISTS SHALL BE CONNECTED TO FLUSH STEEL BEAMS WITH "B" SERIES JOIST HANGERS; ALL BEAMS SHALL BE CONNECTED TO FLUSH WOOD BEAMS WITH "HGU" SERIES HANGERS; ALL BEAMS SHALL BE CONNECTED TO FLUSH STEEL BEAMS WITH "HW" SERIES HANGERS; ALL BEAMS SHALL BE CONNECTED TO STUD STACKS WITH AC CAPS.
30. ALL CONNECTIONS IN CONTACT WITH PRESSURE TREATED WOOD, SHALL BE OF HOT DIPPED GALVANIZED STEEL OR STAINLESS STEEL. HOT DIPPED GALVANIZED FASTENERS SHOULD CONFORM TO ASTM STANDARD 153, AND HOT DIPPED GALVANIZED CONNECTORS SHOULD CONFORM TO ASTM STANDARD A653 (CLASS G-185). STAINLESS STEEL FASTENERS AND CONNECTORS SHOULD BE TYPE 304 OR 316. NOTE: ELECTROPLATED GALVANIZED FASTENERS AND CONNECTORS ARE NOT TO BE USED WITH PRESSURE TREATED WOOD. SIMPSON PRODUCT FINISHES CORRESPONDING TO THE ABOVE REQUIREMENTS ARE ZMAX (HOT DIPPED GALVANIZED) AND SST300 (STAINLESS STEEL).

WOOD FASTENERS-

- A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
6d	2"	0.113"
8d	2-1/2"	0.131"
10d	2-1/2"	0.148"
16d	3-1/2"	0.162"

IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.

- B. NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.

32. WOOD FRAMING NOTES- THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

- A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE. MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO TABLE 2304.9.1 OF THE INTERNATIONAL BUILDING CODE. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE AS SPECIFIED ABOVE. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.

- B. WALL FRAMING: ALL STUD WALLS SHOWN AND NOT OTHERWISE NOTED SHALL BE 16" O.C. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS. TWO 2 x 8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE SOLID BLOCKING BETWEEN STUDS AT MID_HEIGHT OF ALL STUD WALLS OVER 10' IN HEIGHT.

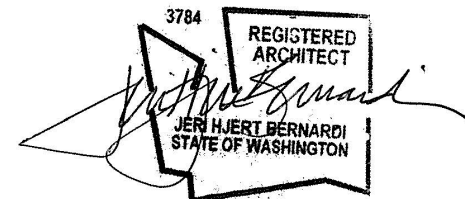
WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d AT 12" O.C. AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE SIX 16d NAILS AT 4" O.C. EACH SIDE OF JOINT.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS AT 12" O.C. STAGGERED OR BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS (WITH 7" MINIMUM EMBEDMENT)@ 4'-0" O.C. UNLESS INDICATED OTHERWISE. PROVIDE 3" x 3" x 1/4" HOT-DIPPED GALVANIZED PLATE WASHERS AT ALL ANCHOR BOLTS. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH 16d @ 12" O.C. STAGGERED. REFER TO THE PLANS AND SHEAR WALL SCHEDULE FOR REQUIRED SHEATHING AND NAILING. WHEN NOT OTHERWISE NOTED, PROVIDE GYPSUM WALLBOARD ON INTERIOR SURFACES NAILED TO ALL STUDS, TOP AND BOTTOM PLATES AND BLOCKING WITH NAILS AT 7" O.C. USE 5d COOLER NAILS FOR 1/2" GWB AND 6d COOLER NAILS FOR 5/8" GWB. PROVIDE 1/2" (NOM.) APA RATED SHEATHING (SPAN RATING 24/0) ON EXTERIOR SURFACES NAILED AT ALL PANEL EDGES (BLOCK UNSUPPORTED EDGES), TOP AND BOTTOM PLATES WITH NAILS @ 6" O.C. AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH NAILS @ 12" O.C. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS.

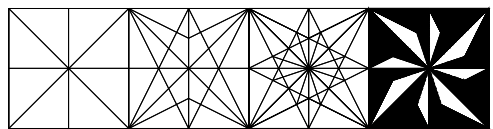
- C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS.

TOENAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH 16d @ 12" O.C. STAGGERED. ATTACH RAFTERS AT BEARING LINES WITH H2.5 @ 48" O.C. UNLESS OTHER METAL CONNECTIONS ARE PROVIDED.

UNLESS OTHERWISE NOTED ON THE PLANS, APA RATED ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH STRENGTH AXIS PERPENDICULAR TO SUPPORTS AND NAILED WITH NAILS @ 6" O.C. TO FRAMED PANEL EDGES AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" O.C. TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE, AND, GROOVE JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF ALL ROOF AND FLOOR SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12" O.C. UNLESS OTHERWISE NOTED. AT BLOCKED FLOOR AND ROOF DIAPHRAGMS PROVIDE FLAT 2X BLOCKING AT ALL UNFRAMED PLYWOOD PANEL EDGES AND NAIL WITH EDGE NAILING SPECIFIED.



ADDITION TO THE RESIDENCE OF
FEI GAO AND ZHILIANG SU
3914 88TH AVENUE S.E.
MERCER ISLAND, WASHINGTON 98040



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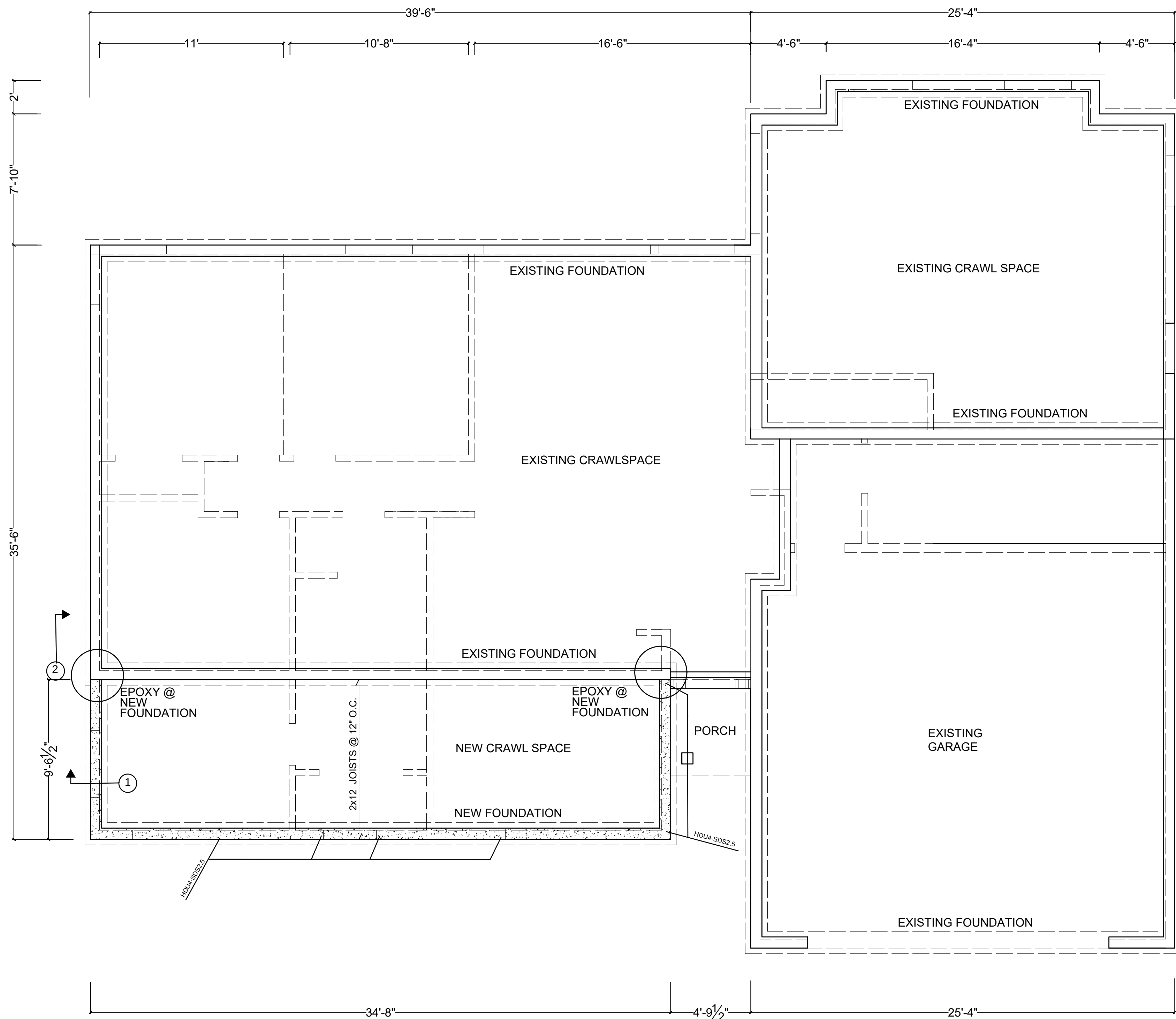
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SEATTLE, WA 98118
(206) 632-0287

PROJECT NO.

DATE:
5/10/2024
REVISIONS:

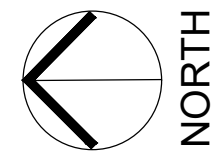
STRUCTURAL
DETAILS,
GENERAL
NOTES

S1.00



FOUNDATION AND MAIN FLOOR FRAMING PLAN

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



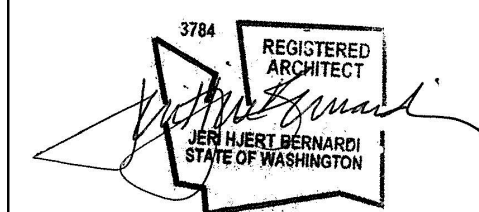
SYMBOLS

- WALL ABOVE
- NEW FOUNDATION WALLS

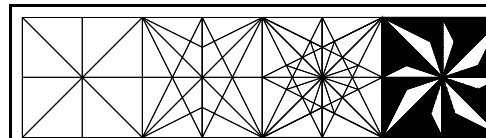
FOUNDATION Wood Framing Plan Notes

- Floor sheathing shall be 23/32" APA, Sturd-I-Floor with a panel index of 40/20. Nail to framing with 10d common nails at 6" oc at panel edges and 12" oc in field unless noted otherwise on plans.
- All slabs-on-grade shall be 4" reinforced with WWF6x6 W1.4xW1.4 u.n.o. Provide minimum 6-mil polypropylene vapor barrier under all slabs. Slabs shall rest on a minimum 4 inches of free draining material.
- 2x12 continuous ledger with (3) 3/8" Ø x 5" lag screws @ 16"oc into solid wood.
- At holdowns provide the following anchor bolts:

Holdown	Anchor
HDU2	SSTB16 (or 5/8" diameter bolt, epoxy embed 10")
HDU4	SSTB20 (or 5/8" diameter bolt, epoxy embed 10")
HDU5	SSTB24 (or 5/8" diameter bolt, epoxy embed 10")
HDU8	SSTB34 (or 7/8" diameter bolt, epoxy embed 14")
HDU11	SB1x30 (or 1" diameter bolt, epoxy embed 15")
HDU14	SB1x30 (or 1" diameter bolt, epoxy embed 15") w/6x6 posts
- All anchors to be installed as required by manufacturer. Minimum (2) 2x studs unless otherwise noted on plans.



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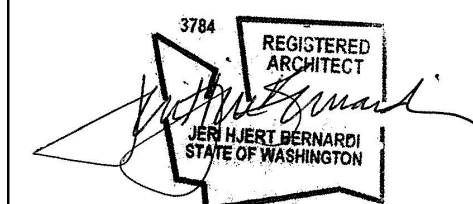
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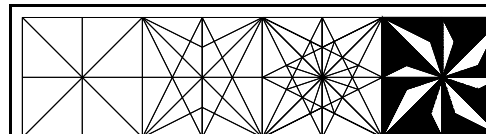
DATE:
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REVISIONS:

FOUNDATION
MAIN FLOOR
FRAMING
PLANS

S1.01



ADDITION TO THE RESIDENCE OF
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3914 88TH AVENUE S.E.
MERCER ISLAND, WASHINGTON 98040



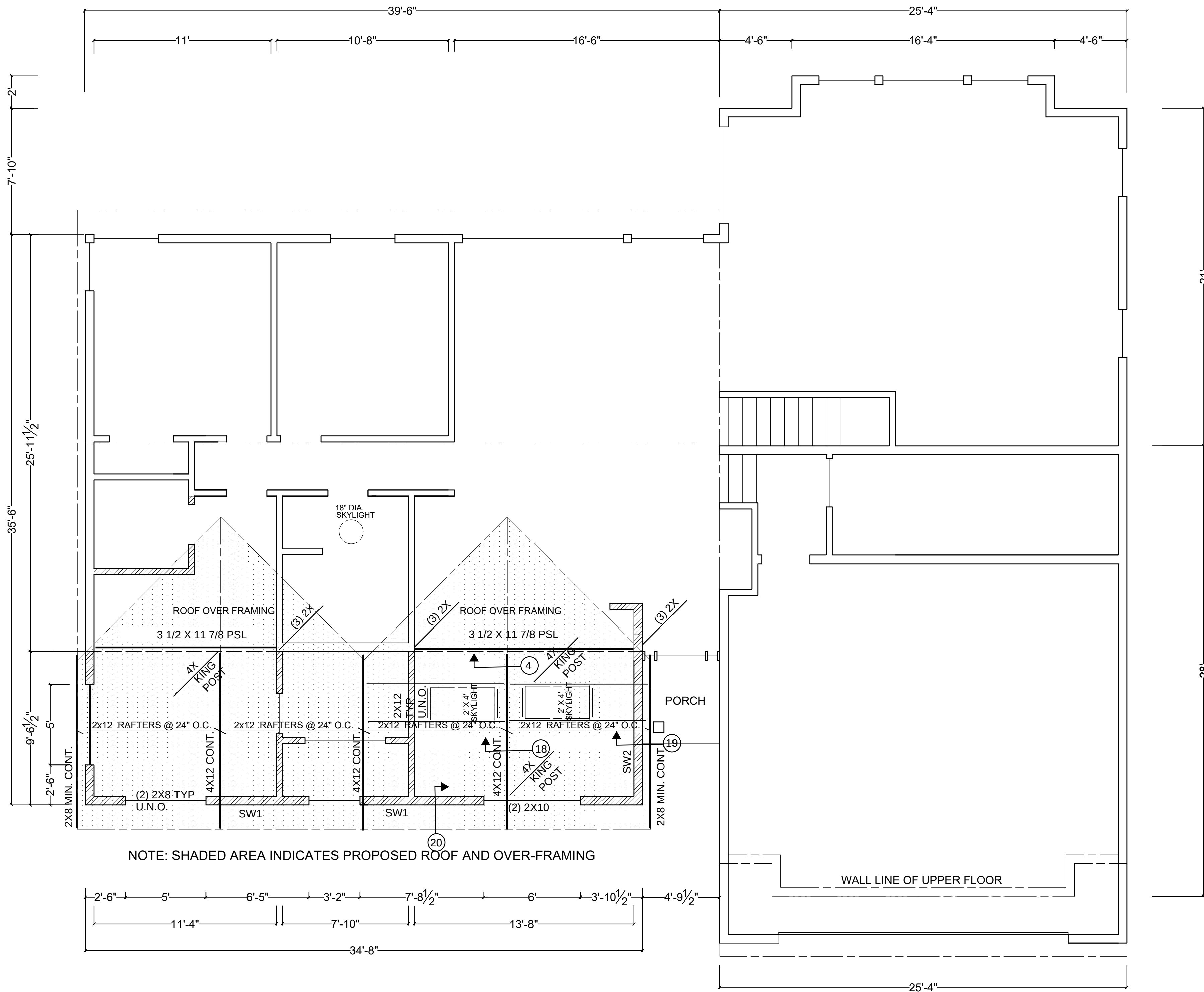
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DATE:
5/10/2024
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MAIN FLOOR
PROPOSED
ROOF
FRAMING
S1.02



MAIN LEVEL FLOOR PLAN WITH PROPOSED ROOF FRAMING

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

SYMBOLS:

- WALL TO BE REMOVED
- NEW WALLS
- EXISTING WALLS
- ROOF LINE

ROOF Wood Framing Plan Notes

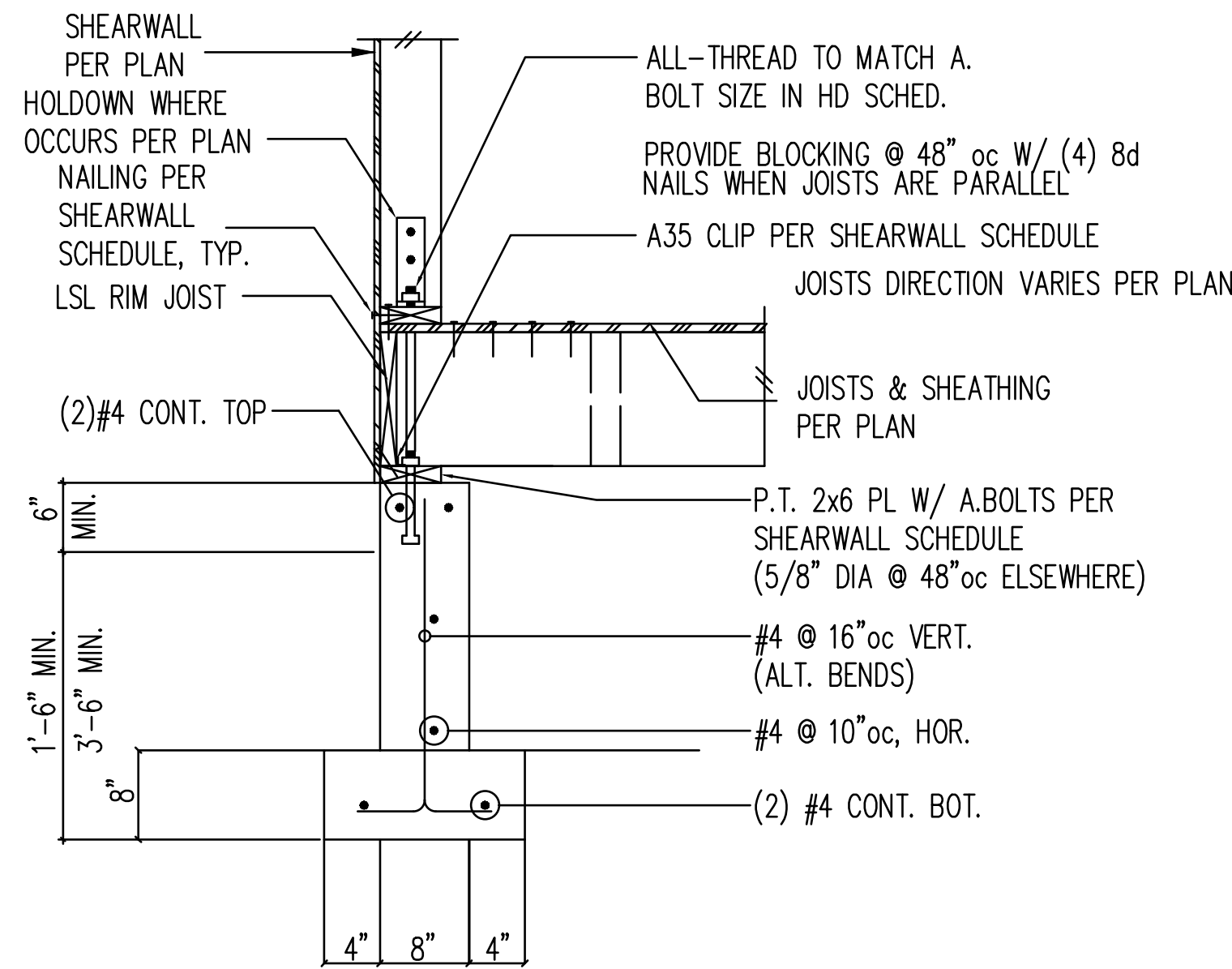
- Roof sheathing shall be 15/32" APA Rated sheathing with a panel index of 24/16. Nail to framing with 8d common nails at 6" oc at panel edges and 12" oc in field unless noted otherwise on plans. Where noted on the plans all panel edges shall be blocked with minimum 2x material.
- All headers and beams shall be (2) 2x8 minimum, u.n.o. Refer to note 3 for support requirements.
- All columns shall be double stud minimum, u.n.o., with the beam or header bearing fully on the column. Individual studs shall be nail together per the general structural notes.
- Exterior wall sheathing shall be 15/32" APA Rated sheathing with a panel index of 24/0 (Oriented strand board of equivalent thickness, exposure rating, and panel index may be used in lieu of plywood at contractors option).
- 2x12 continuous ledger with (3) 3/8" ϕ x 5" lag screws @ 16" oc into solid wood.

Shear Wall Schedule

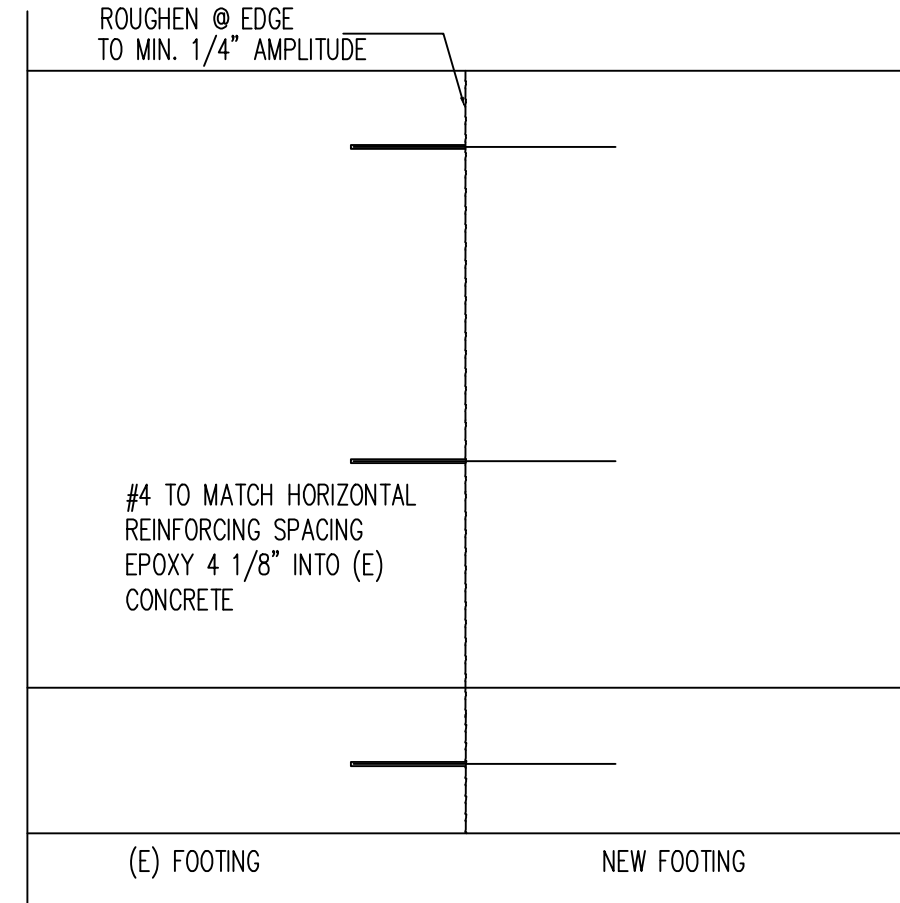
Mark	Sheathing	Bld'g	Panel Nailing ¹	Attachment to top plate	Bottom Plate Attachment		Capacity (plf) wind	Capacity (plf) seismic
					Nailing to wood below	A-Bolts to concrete below		
SW 1	15/32" APA Sheathing	Yes	8d @ 6" oc	A35 @ 16" oc	16d @ 6" oc	5/8" @ 24" oc	314	224
SW 2	15/32" APA Sheathing	Yes	8d @ 4" oc	A35 @ 16" oc	16d @ 4" oc	5/8" @ 20" oc	458	327
SW 3	15/32" APA Sheathing	Yes	8d @ 3" oc	A35 @ 13 1/2" oc	(2) Rows 16d @ 6" oc	5/8" @ 16" oc	589	421
SW 4	15/32" APA Sheathing	Yes	8d @ 2" oc	A35 @ 10" oc	(2) Rows 16d @ 4" oc	5/8" @ 12" oc	770	550

¹ Nails shall be 8d common. Nailing applies to all panel edges (block all unsupported panel edges), top & bottom plates and blocking. Nail to intermediate framing members w/ 8d @ 12" oc.

² Framing at adjoining panel edges shall be 3-inch nominal or wider and nails shall be staggered.



1 TYPICAL SECTION
Scale: 3/4"=1'-0"

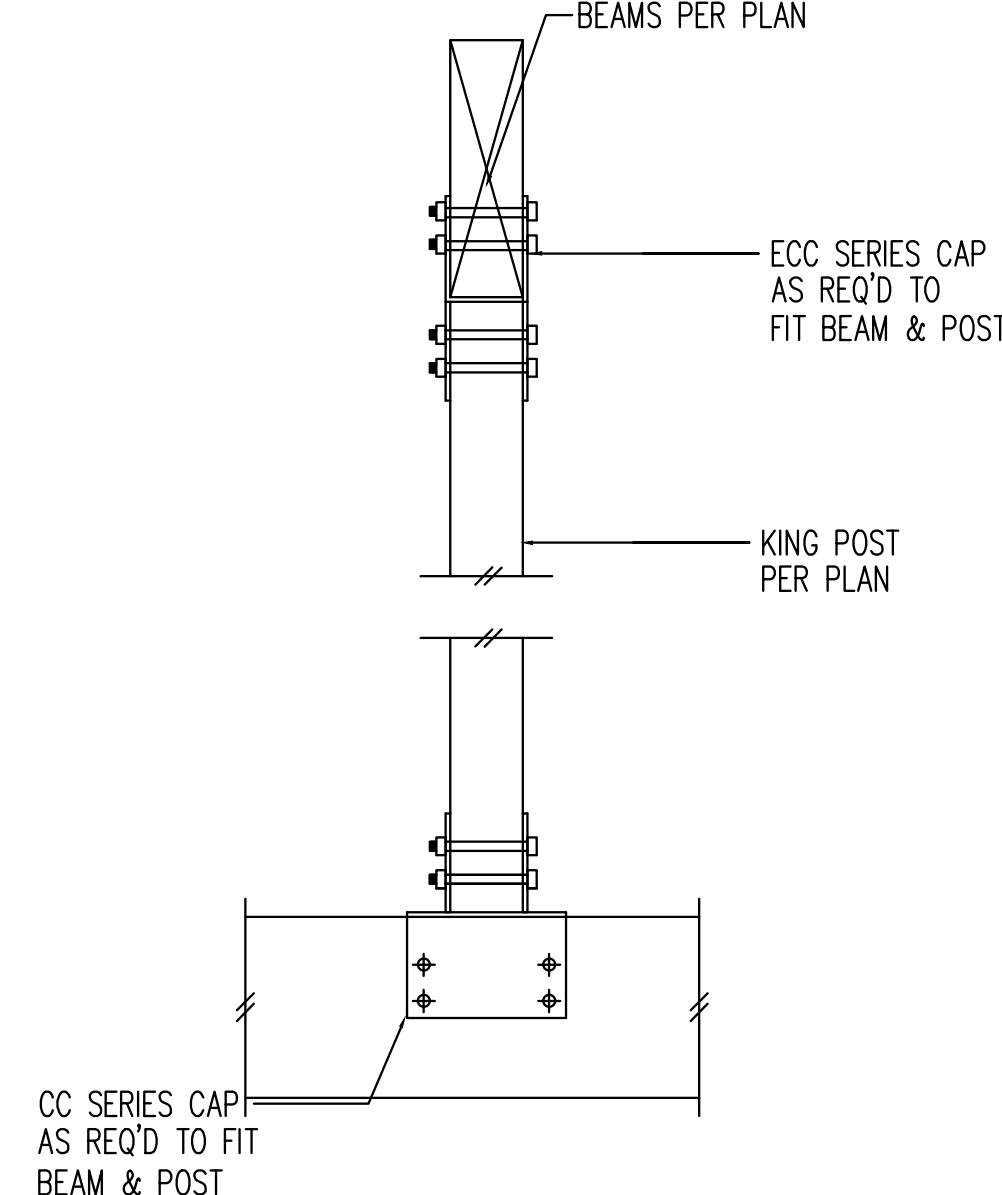


2 TYPICAL

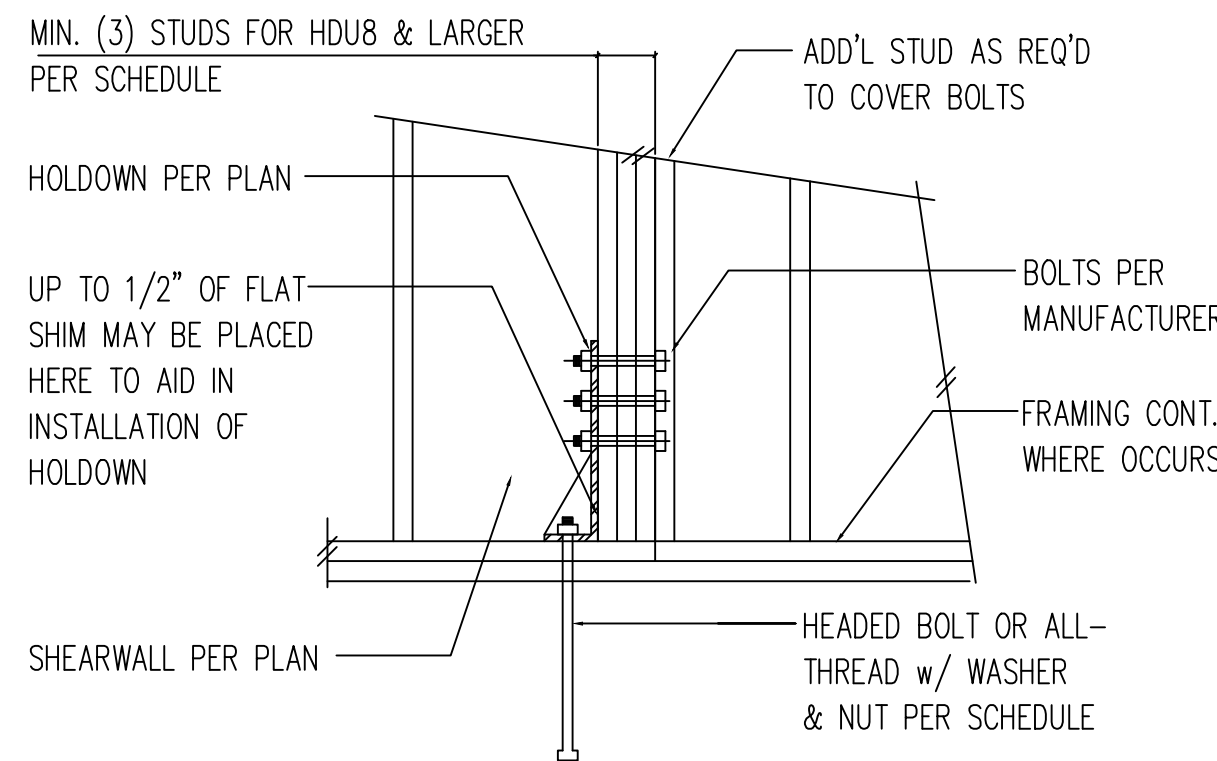
HOLDOWN SCHEDULE				
PLAN MARK	SCREWS	ANCHOR BOLT	A.B. EMBED	MIN. NO. OF END STUDS ^①
HDU2	SDS2.5	5/8"Ø	10"	2
HDU4	SDS2.5	5/8"Ø	10"	2
HDU8	SDS2.5	7/8"Ø	14"	3
HDU11	SDS2.5	1"Ø	15"	3
HDU14	SDS2.5	1"Ø	15"	3

① MINIMUM NO. OF STUDS AT END OF WALL UNLESS OTHERWISE NOTED ON FRAMING PLANS.

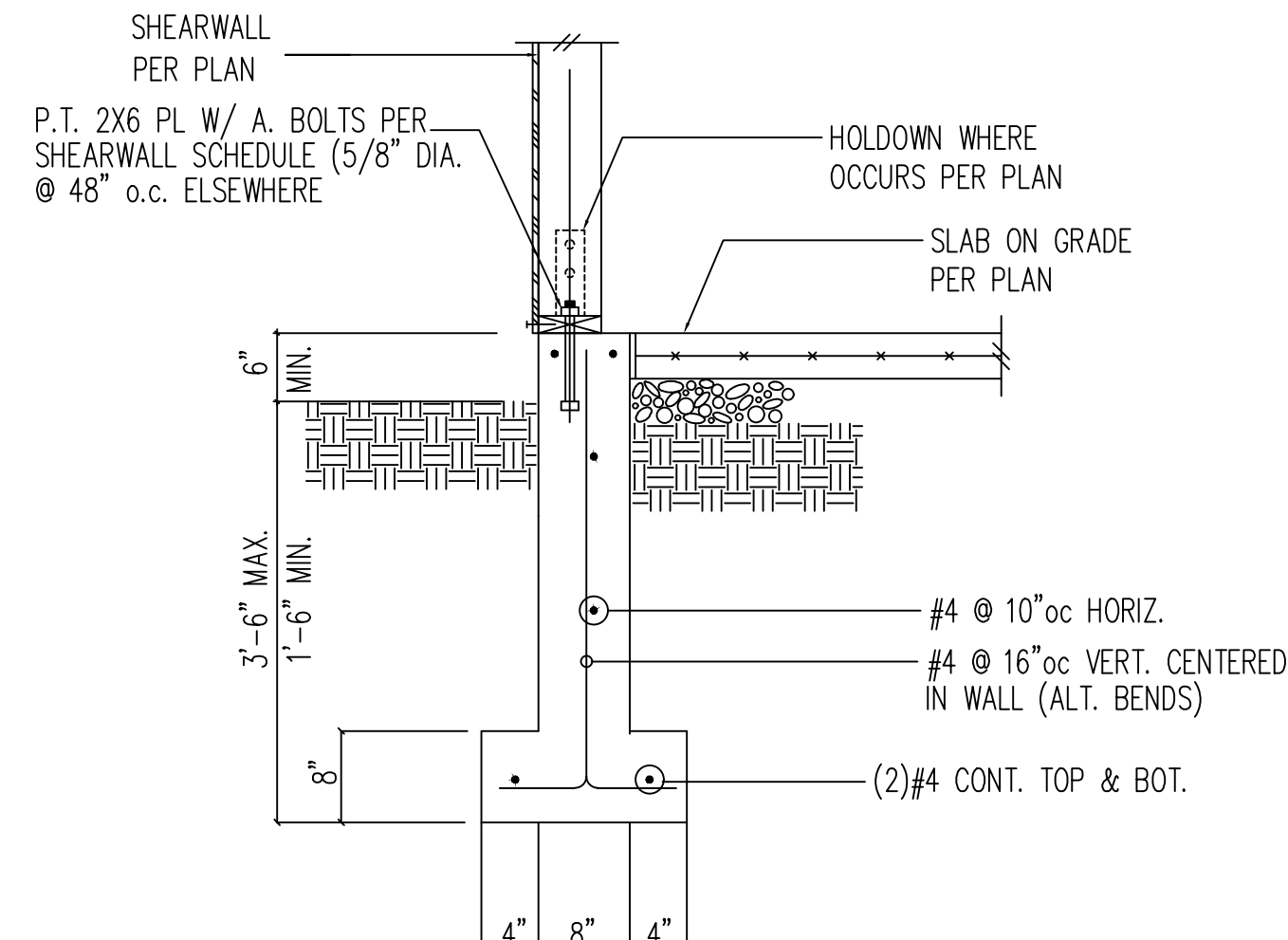
3 Typical Holdown Detail And Schedule



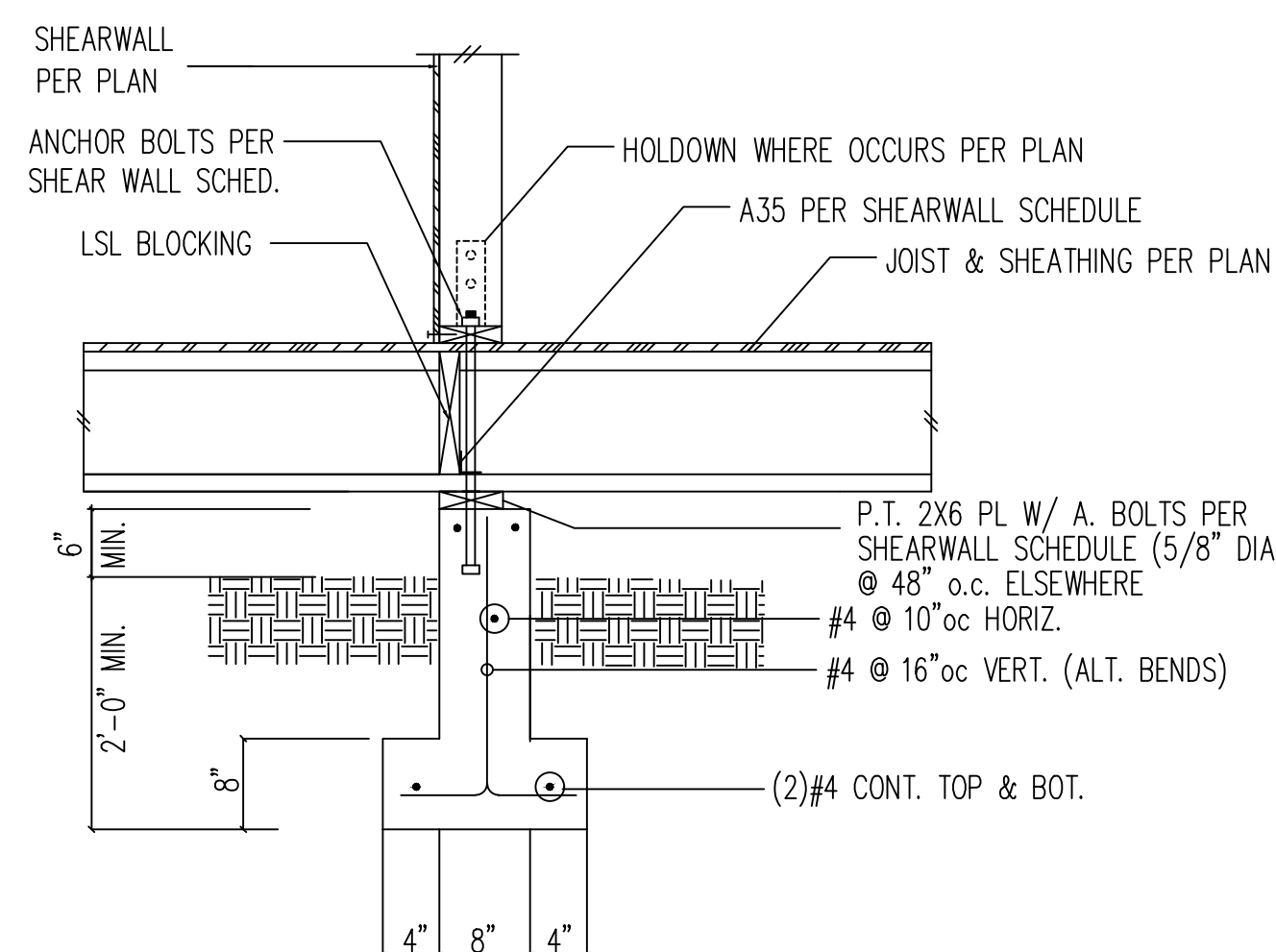
4 TYPICAL



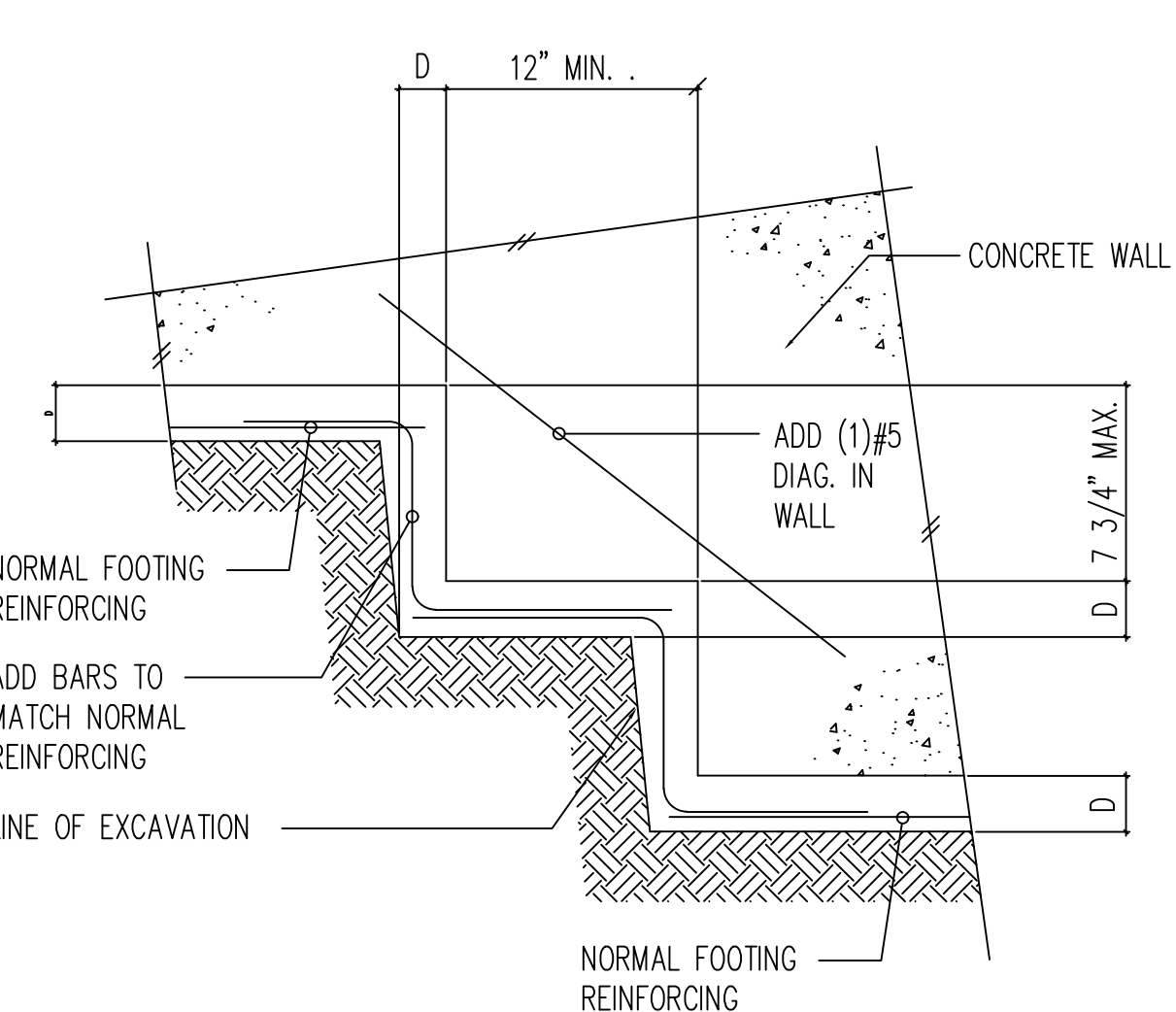
5 TYPICAL SECTION



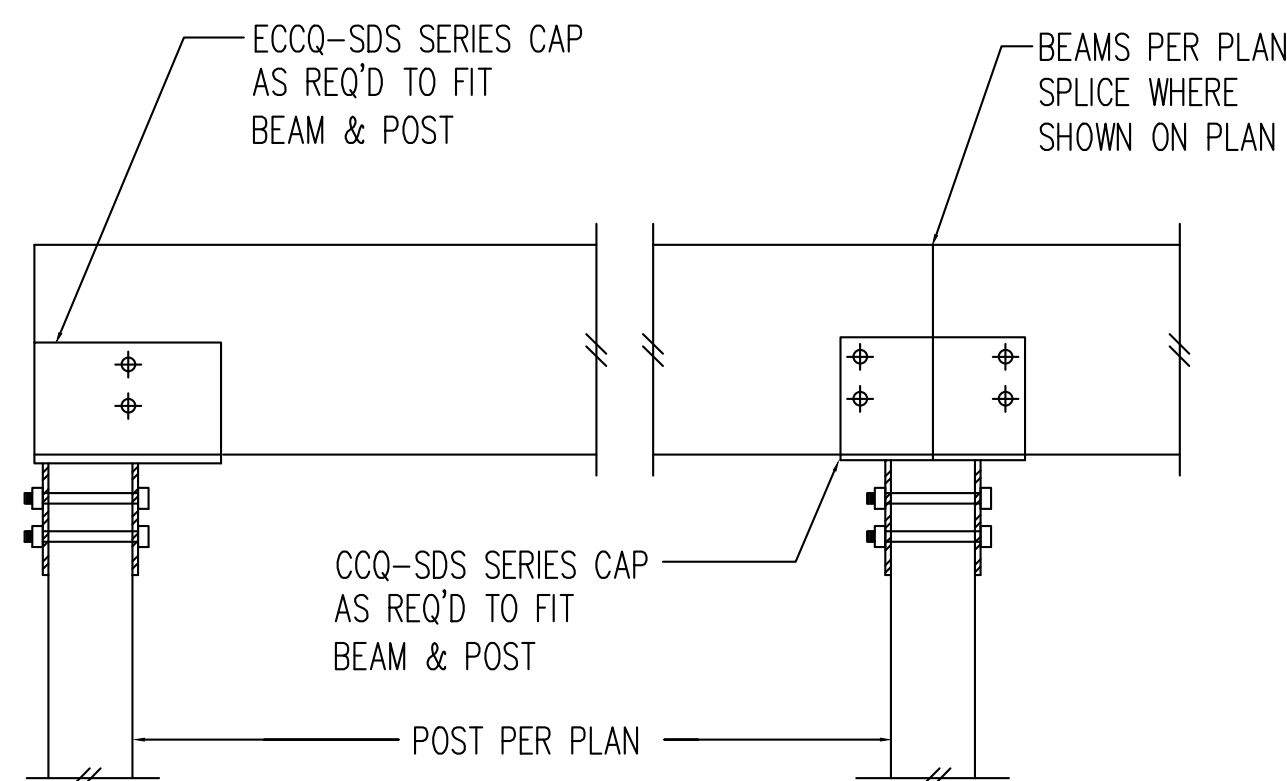
6 TYPICAL SECTION



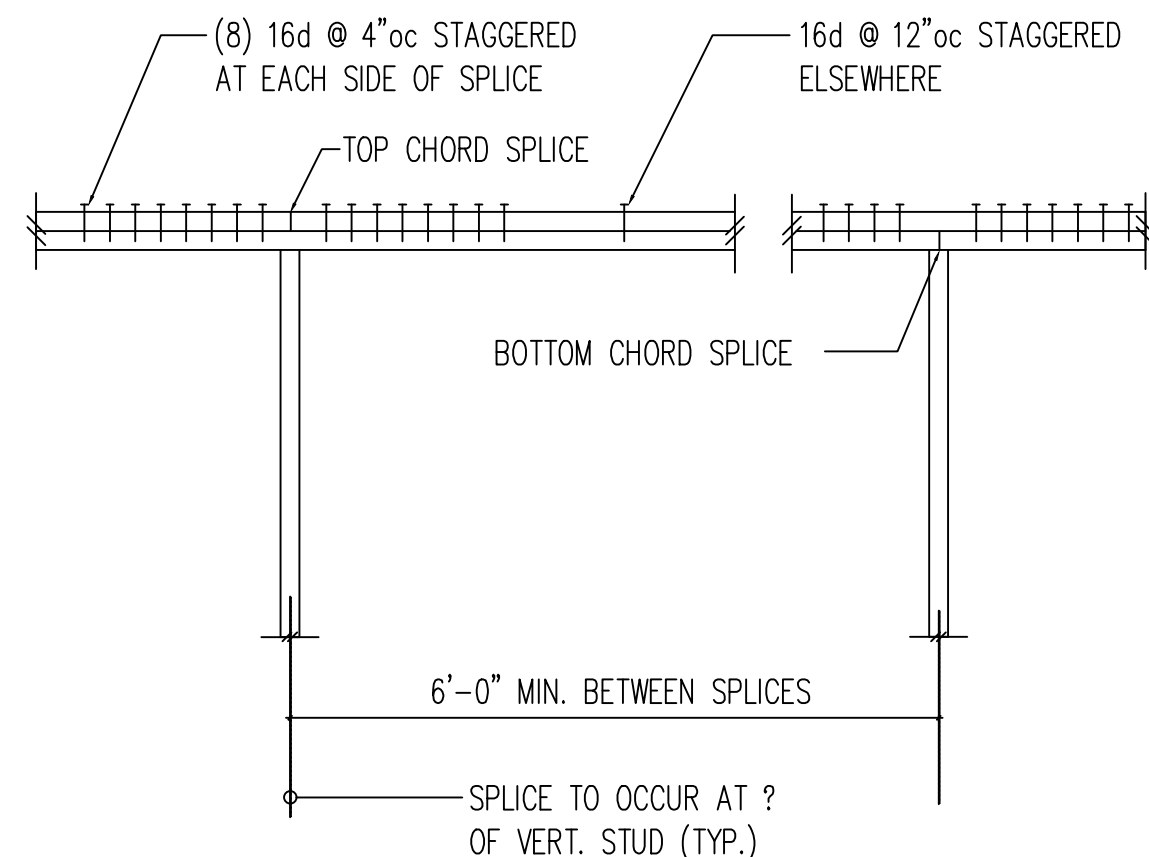
7 TYPICAL SECTION
Scale: 3/4"=1'-0"



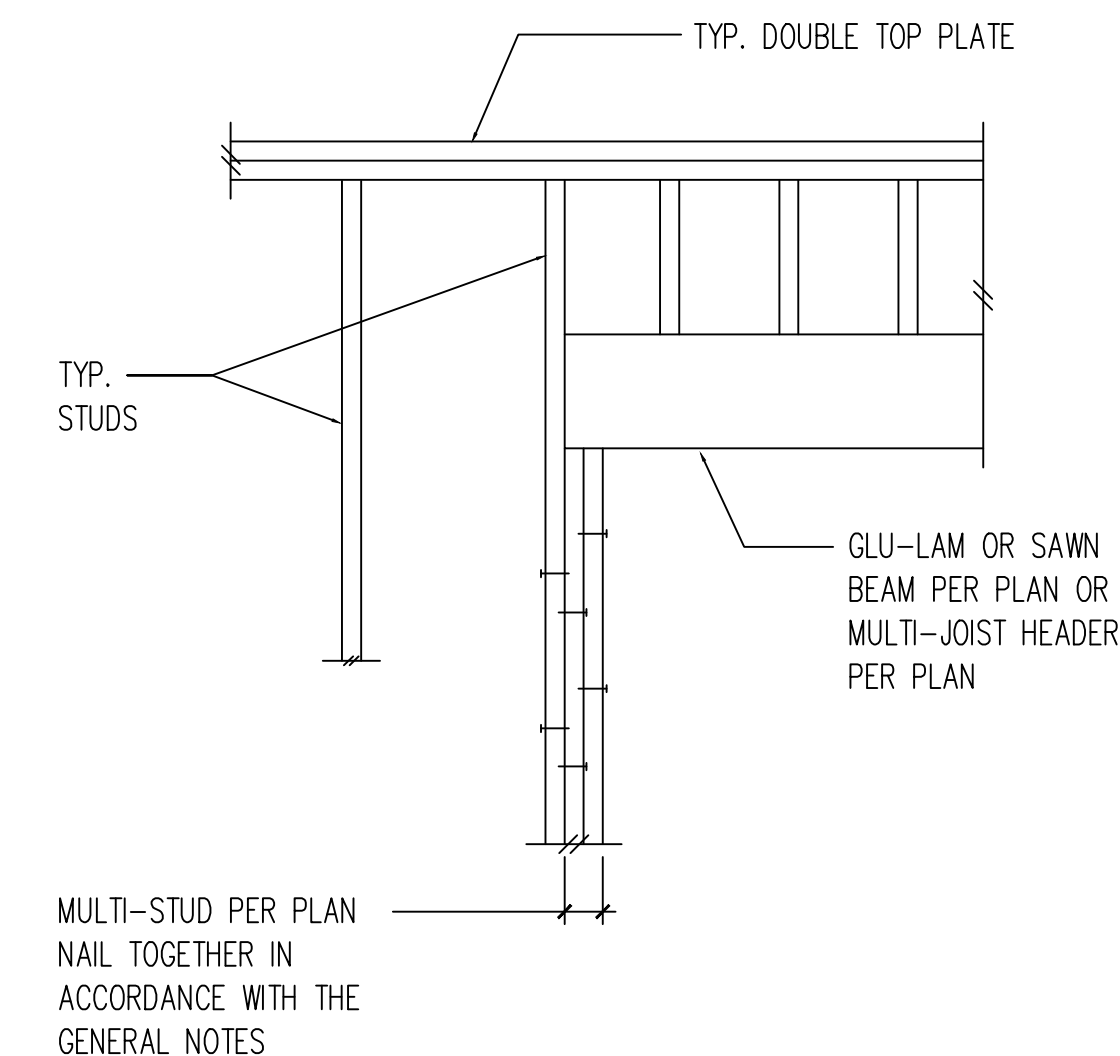
8 TYPICAL STEPPED FOOTING
Scale: 3/4"=1'-0"



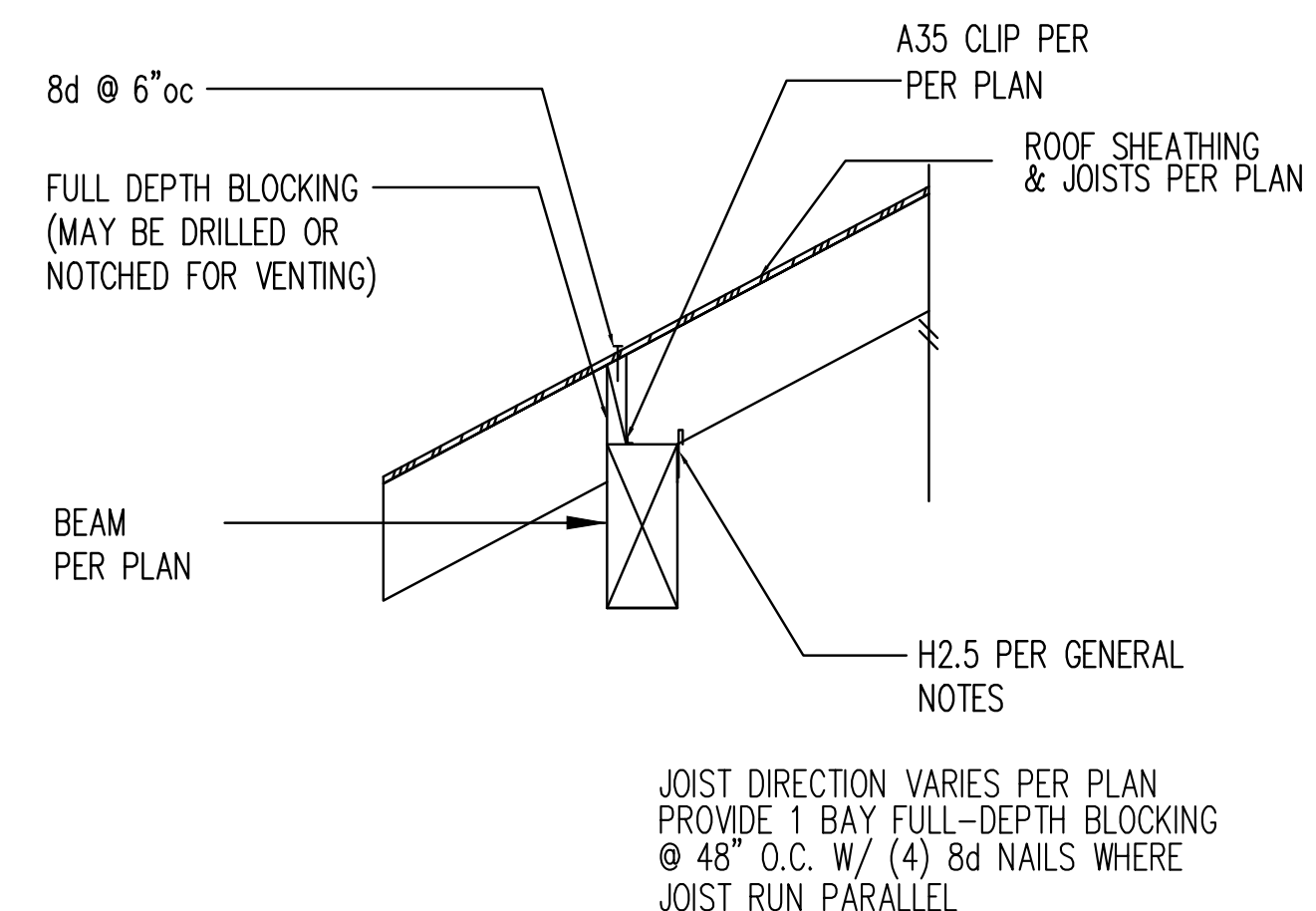
9 TYPICAL



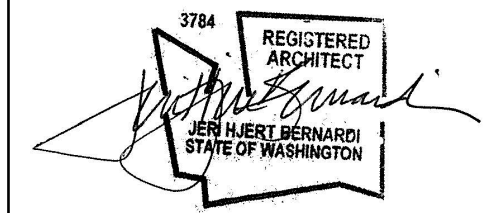
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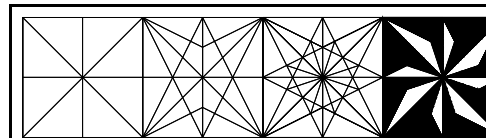
11 TYPICAL



12 TYPICAL



ADDITION TO THE RESIDENCE OF
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ARCHITECT

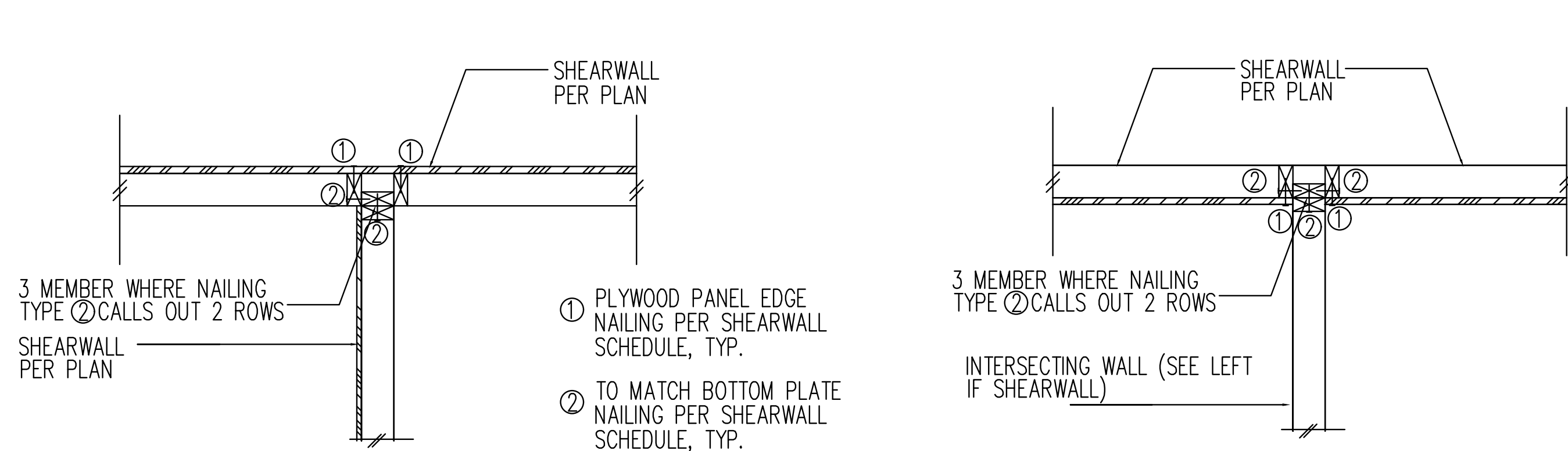
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SEATTLE, WA 98118
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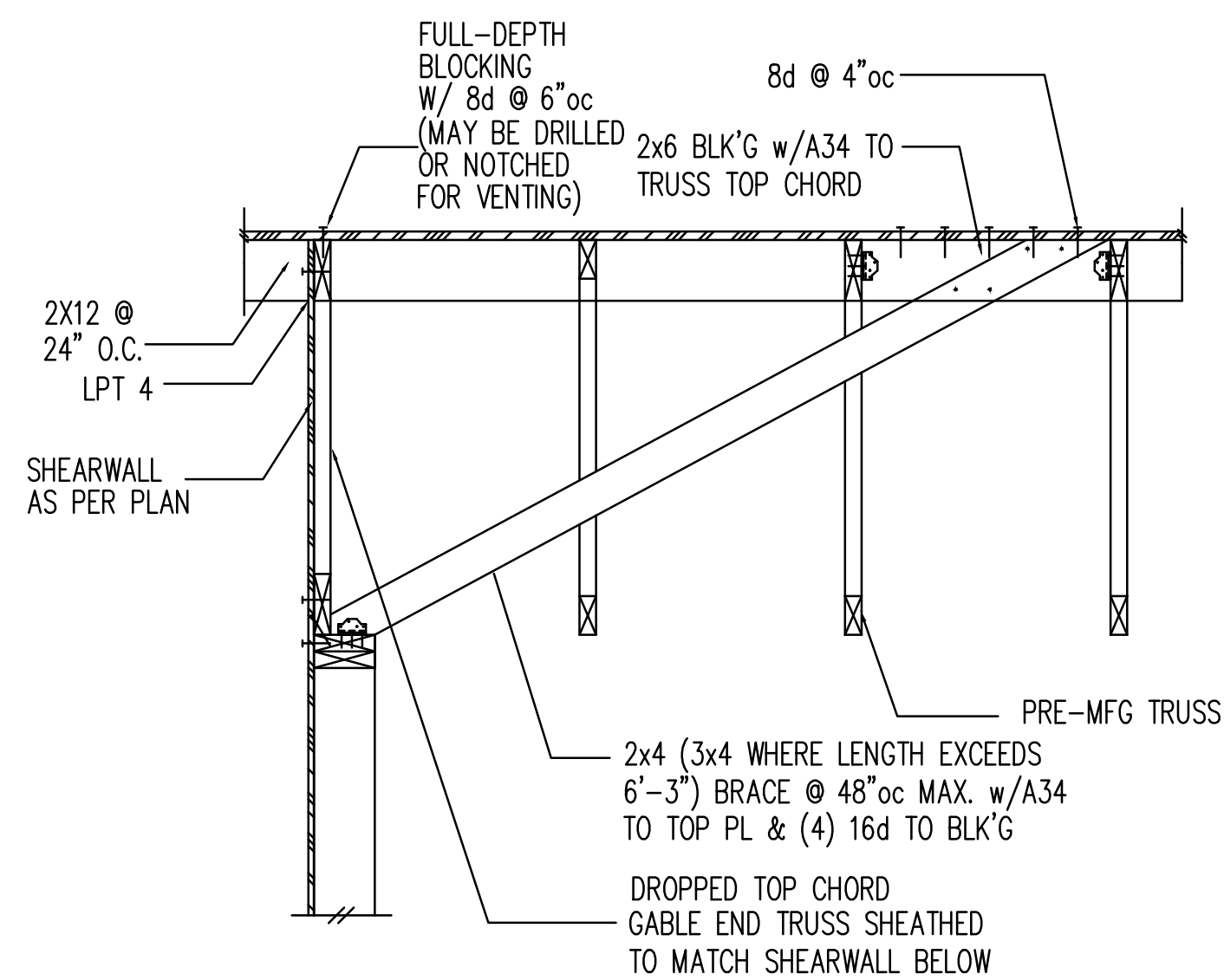
DATE:
5/10/2024
REVISIONS:

STRUCTURAL
DETAILS,
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NOTES

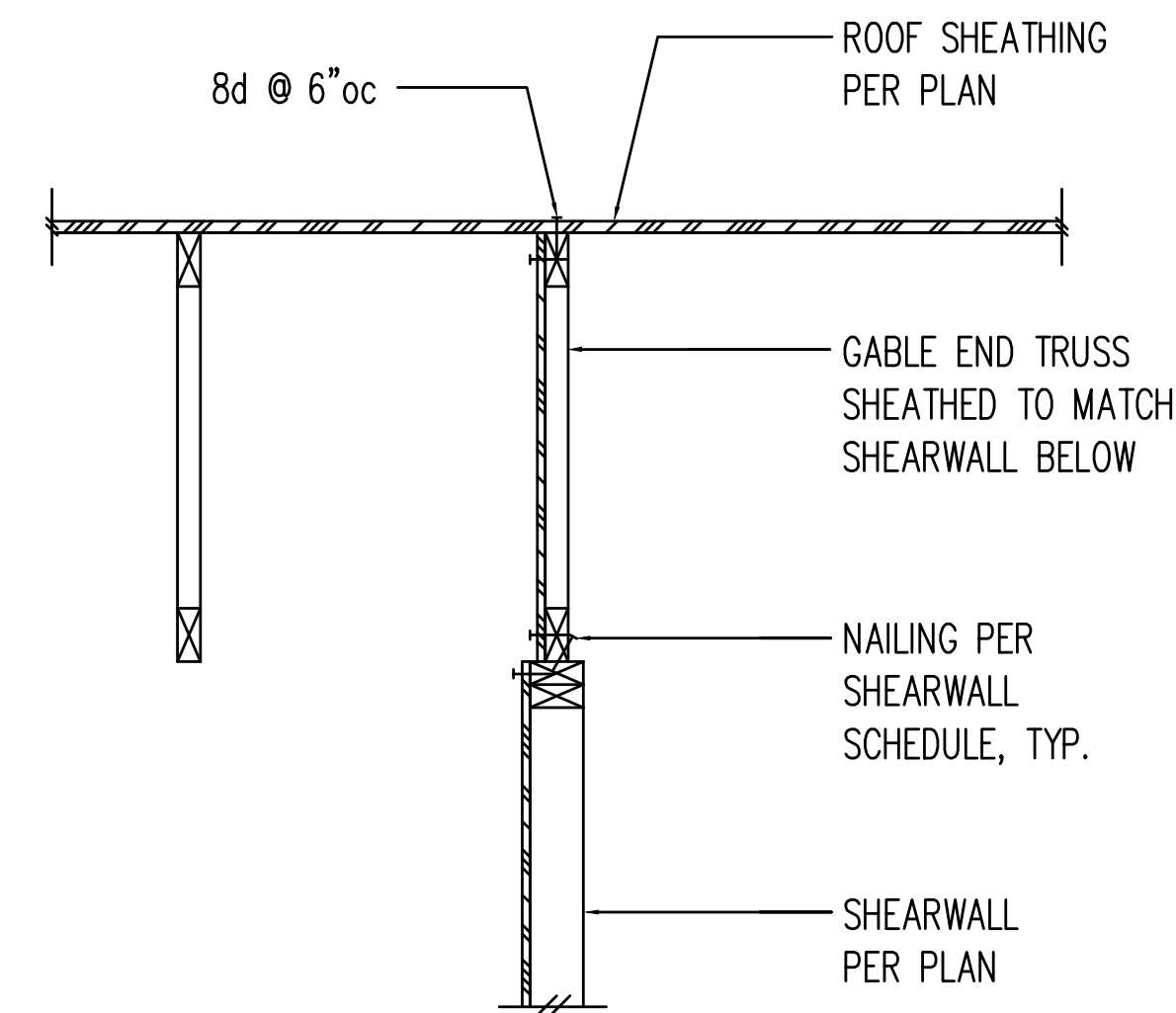
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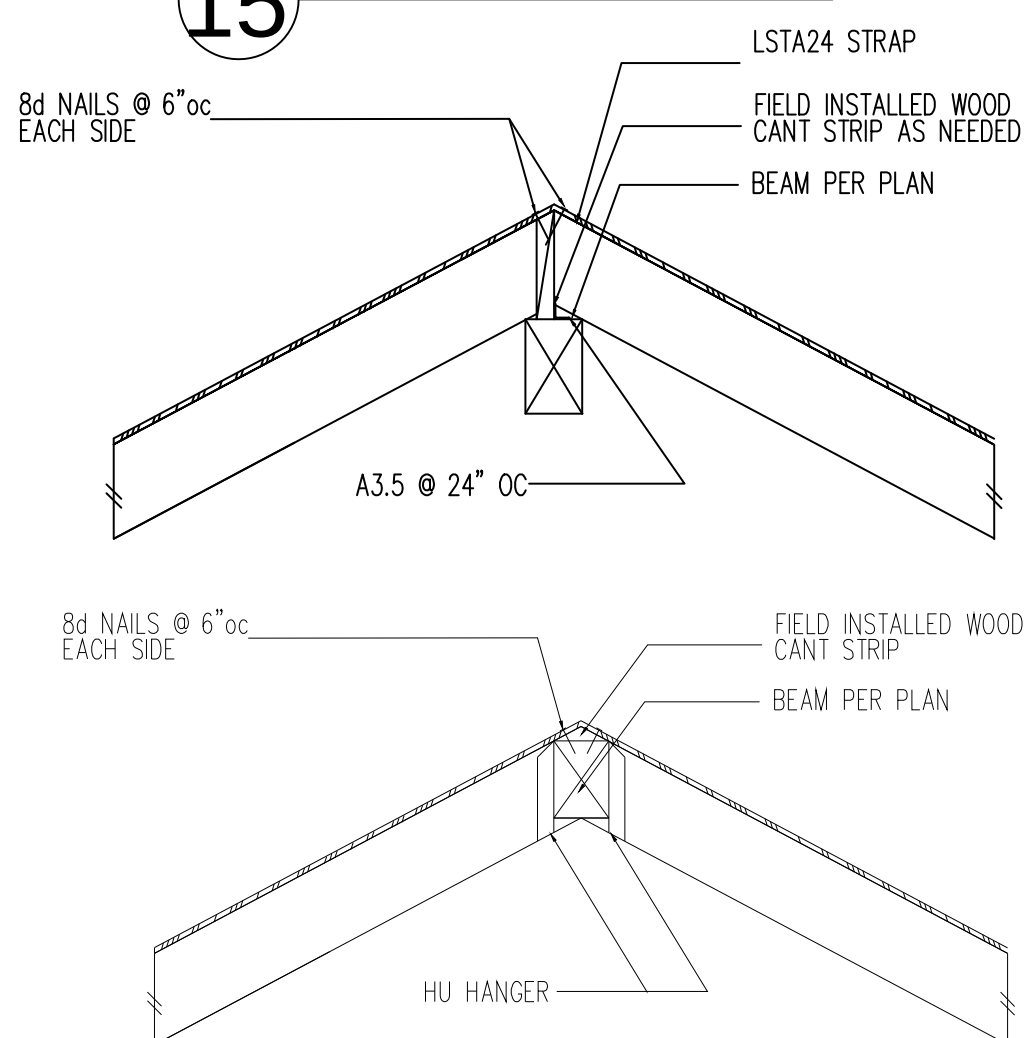
13 Shearwall Intersection



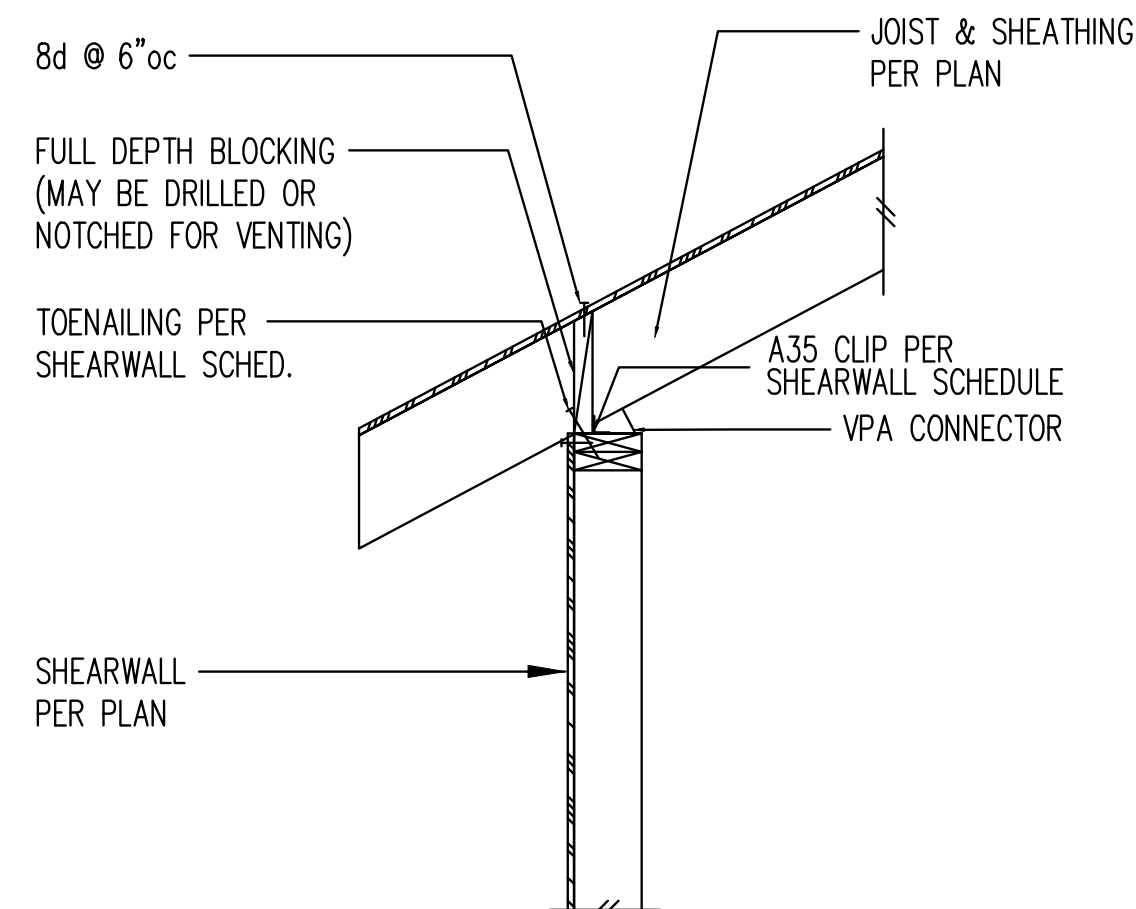
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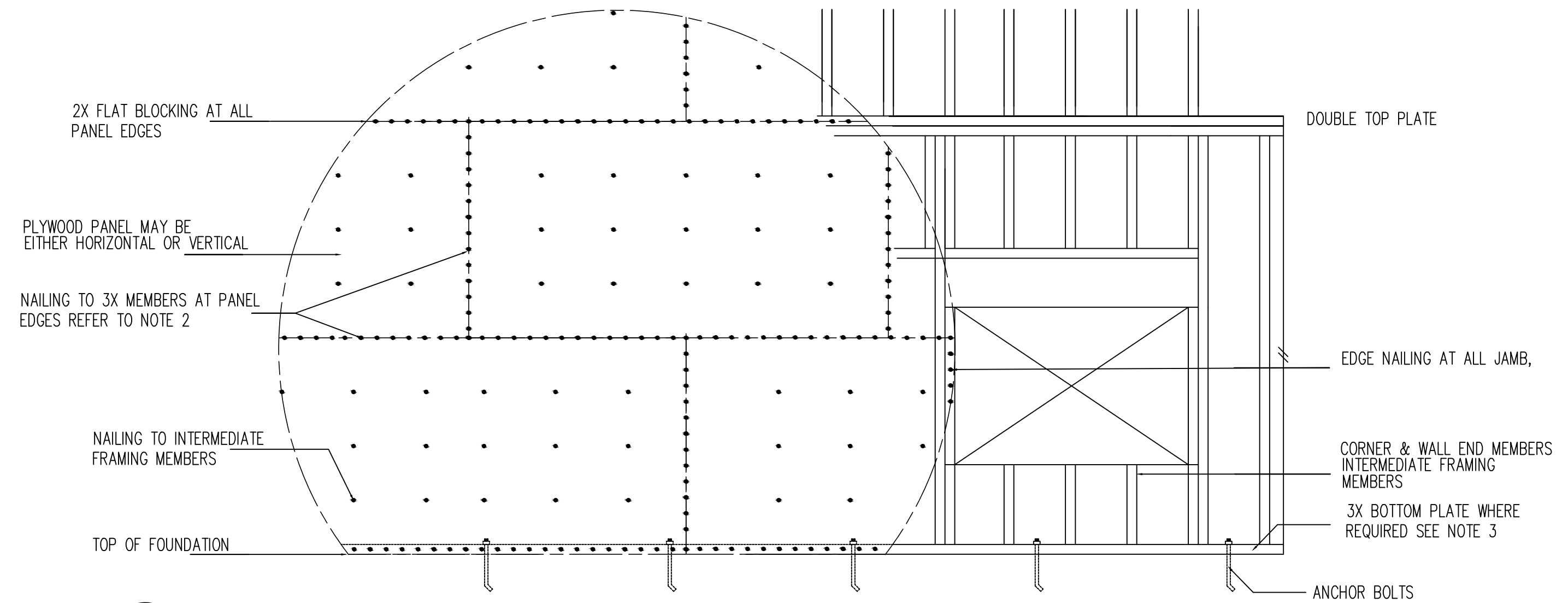
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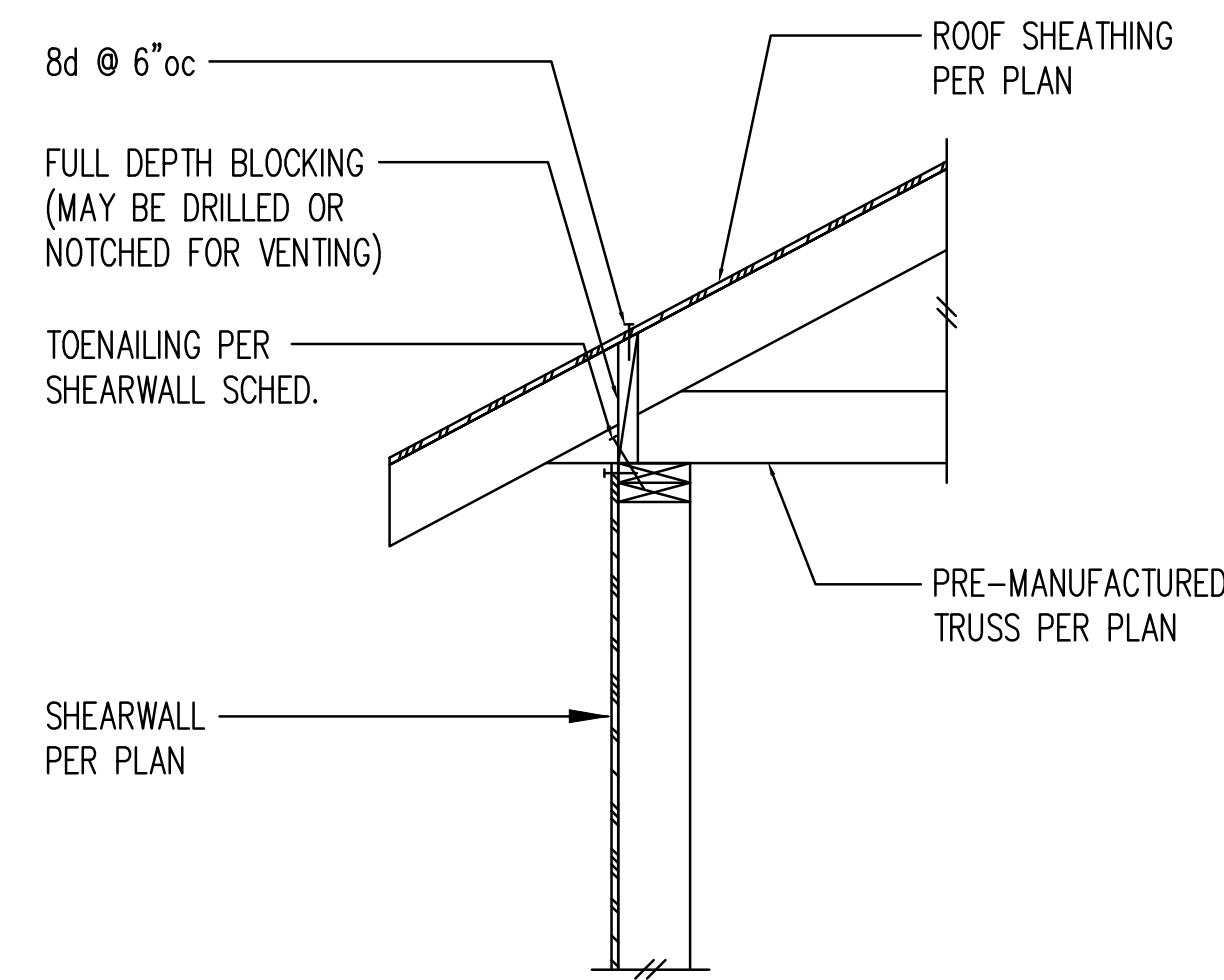
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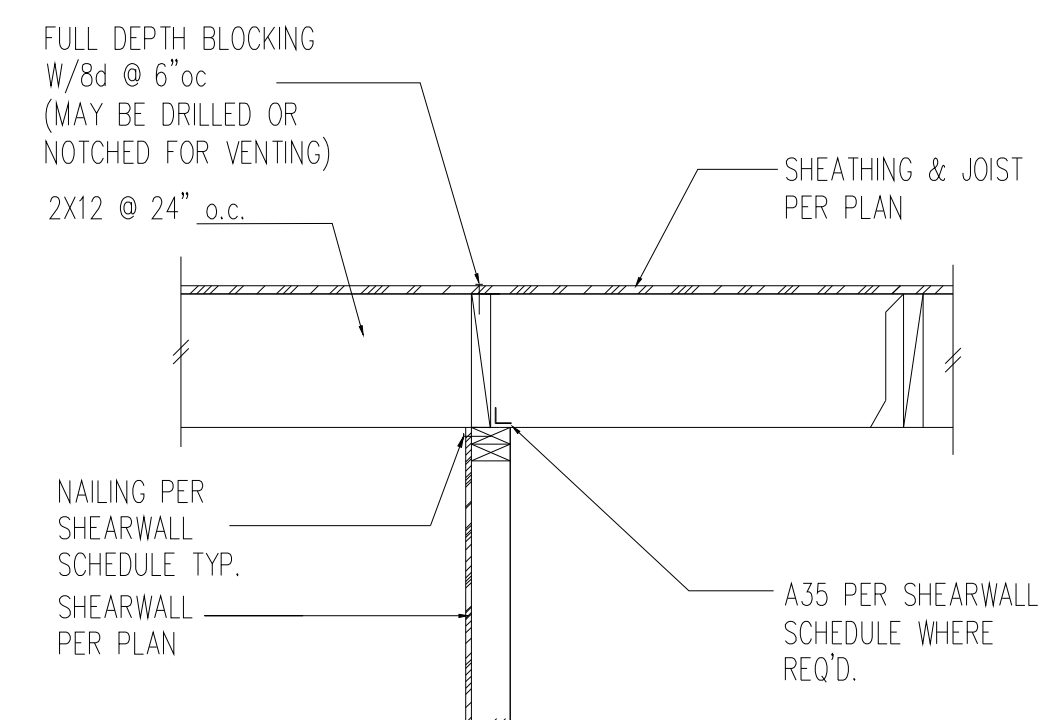
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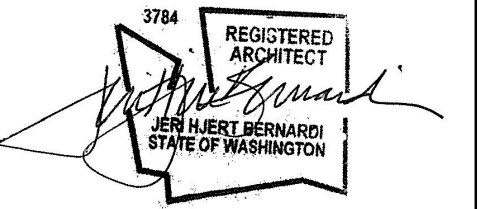
14 TYPICAL



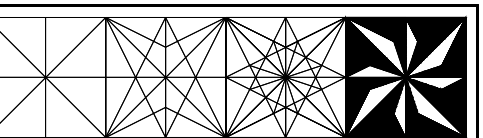
17 TYPICAL



20



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