LOT SLOPE

HIGHEST ELEVATION POINT OF LOT:	302.7 FT
LOWEST ELEVATION POINT OF LOT:	289.2 FT
ELEVATION DIFFERENCE:	**13.5 FT**
HORIZONTAL DIFFERENCE B/W HIGH AND LOW POINTS:	**170.00 FT**
LOT SLOPE	7.94 %

LOT COVERAGE

GROSS LOT AREA	13801 S.F.
NET LOT AREA	13801 S.F.
ALLOWED LOT COVERAGE AREA: 40%	5520 S.F.
EXISTING COVERAGE AREA	
ROOF AREA (HOUSE)	2610 S.F.
DRIVEWAY (EXCLUDING AREA UNDER ROOF)	3382 S.F.
TOTAL EXISTING COVERAGE AREA:	**5992 S.F.**
PROPOSED COVERAGE AREA	
ROOF AREA (HOUSE)	3195 S.F.
DRIVEWAY (EXCLUDING AREA UNDER ROOF)	1859 S.F.
TOTAL PROPOSED COVERAGE AREA:	**5054 S.F.**
	36.62%

BUILDING PAD

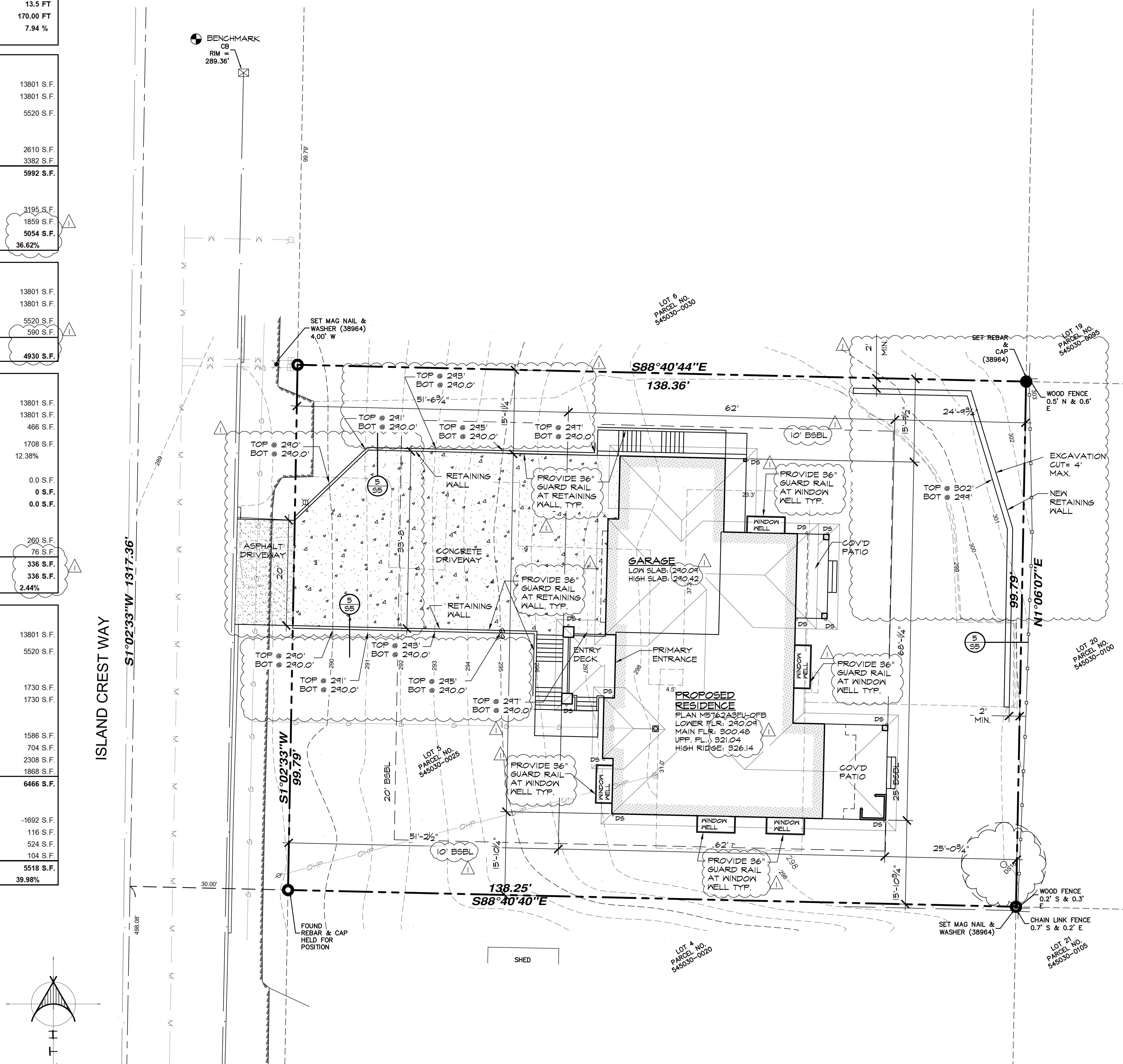
GROSS LOT AREA	13801 S.F.
NET LOT AREA	13801 S.F.
ALLOWED LOT COVERAGE AREA: 40%	5520 S.F.
DRIVEWAY IN FRONT SETBACK	590 S.F.
MAXIMUM BUILDING PAD AREA:	**4930 S.F.**

HARDSCAPE

GROSS LOT AREA	13801 S.F.
NET LOT AREA	13801 S.F.
AREA BORROWED FROM LOT COVERAGE	466 S.F.
ALLOWED HARDSCAPE AREA: 9% + AREA BORROWED	1708 S.F.
	12.38%
EXISTING HARDSCAPE	
	0.0 S.F.
TOTAL EXISTING HARDSCAPE:	**0 S.F.**
TOTAL HARDSCAPE REMOVED:	**0.0 S.F.**
PROPOSED HARDSCAPE	
STAIRS	260 S.F.
ROCKERIES AND RETAINING WALL	76 S.F.
TOTAL PROPOSED HARDSCAPE:	**336 S.F.**
TOTAL PROJECT HARDSCAPE:	**336 S.F.**
	2.44%

GROSS FLOOR AREA

LOT AREA	13801 S.F.
MAX GROSS FLOOR AREA ALLOWED: 40% (R-9.6)	5520 S.F.
EXISTING FLOOR AREA	
MAIN FLOOR	1730 S.F.
REMOVED FLOOR AREA	1730 S.F.
PROPOSED FLOOR AREA	
LOWER FLOOR	1586 S.F.
GARAGE	704 S.F.
MAIN FLOOR	2308 S.F.
UPPER FLOOR	1868 S.F.
TOTAL PROPOSED FLOOR AREA:	**6466 S.F.**
MODIFIED FLOOR AREA	
BASEMENT AREA EXCLUDED	-1692 S.F.
ROOFED DECKS	116 S.F.
CEILING HEIGHT OVER 16FT (200%)	524 S.F.
STAIRCASE FOR 3 STORIES	104 S.F.
TOTAL PROPOSED BUILDING FLOOR AREA:	**5518 S.F.**
	39.98%



SITE PLAN

SCALE : 1" = 10'-0"

0 10 20 40

SITE ADDRESS

4102 ISLAND CREST WAY, MERCER ISLAND, WA 98040

PARCEL NUMBER

545030-0025

13,801 S.F. (0.317 ACRES) AS SURVEYED

ZONING

R-9.6

OWNER

HIEN PHAN & TONY NGUYEN
6505 186TH ST SW / LYNNWOOD, WA 98037
PH: 206-350-4426 / EM: hein@southernbirch.com

ARCHITECT

ARCHITECTS NORTHWEST / SARAH WEIGHT, PM
18915-142ND AVE NE / #100; WOODINVILLE, WA 98072
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STRUCTURAL ENGINEER

ZVELT ENGINEERING DESIGN, PLLC / GABRIELA SIIA, P.E.
6619-132ND AVE NE / #126; KIRKLAND, WA 98033
PH: 425-242-8042 / EM: gabriela.siia@outlook.com

LEGAL DESCRIPTION

LOT 5, BLOCK A, MERCER CREST, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 42 OF PLATS, PAGE 26, RECORDS OF KING COUNTY, WASHINGTON;

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARING

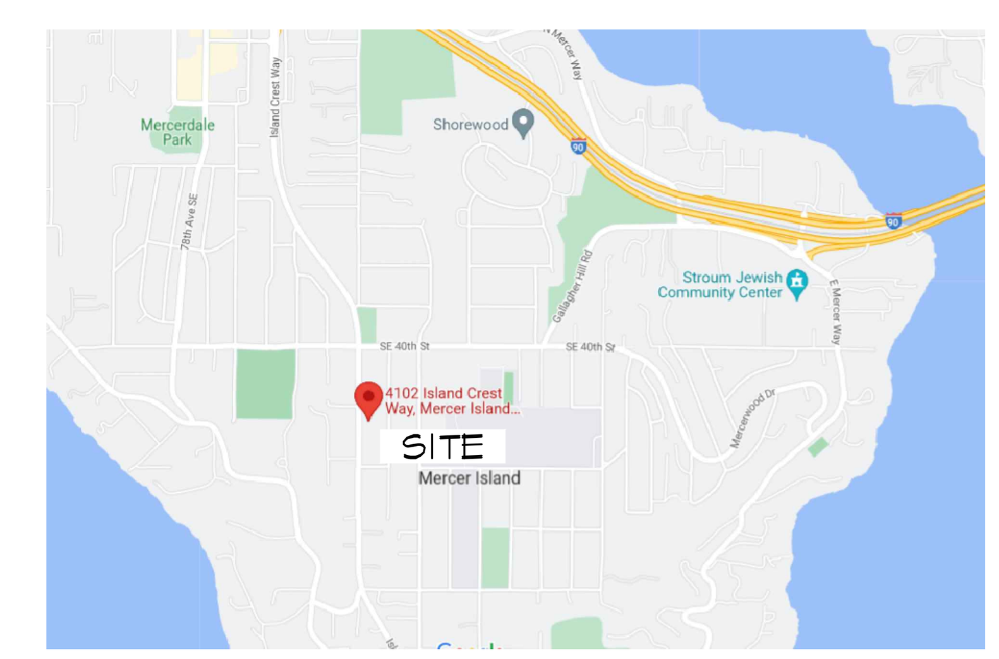
ACCEPTED A BEARING OF N01°02'33"E FOR THE CENTERLINE OF ISLAND CREST WAY BASED ON FOUND MONUMENTS.
RECORD OF SURVEY BY TERRANE FOR JULIE ROSS, RECORDED ON JULY 21, 2022 IN VOLUME 469 OF SURVEYS, PAGES 220 AND 221, UNDER RECORDING NO. 20220721900022, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM GPS OBSERVATION USING THE WSRN.

DATUM - NAVD 88

1.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 0.5' FOR THIS PROJECT.



VICINITY MAP (NTS)

ARCHITECTS NORTHWEST
18915-142nd AVENUE NE SUITE 100 WOODINVILLE, WA 98072
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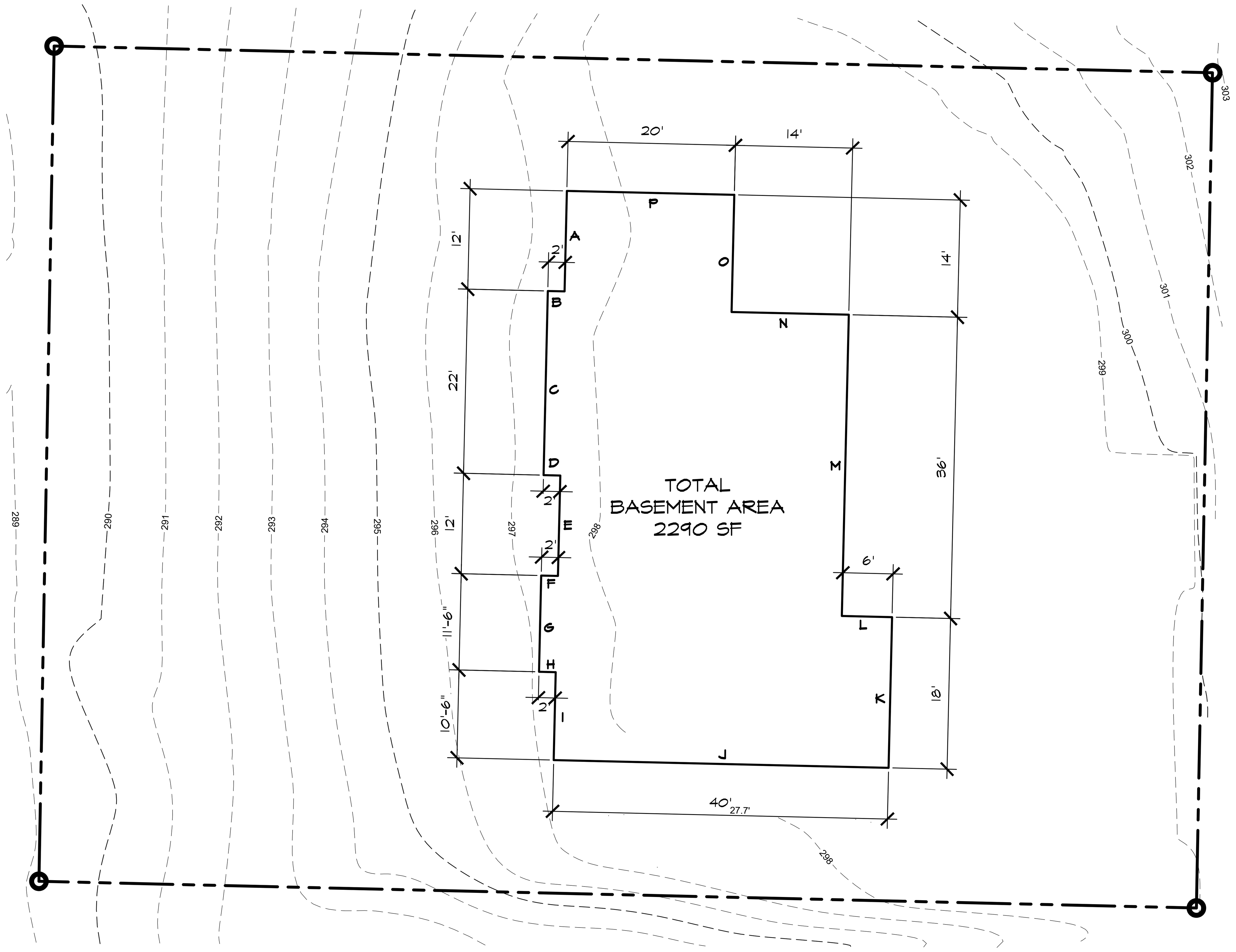
PHAN-NGUYEN RESIDENCE
4102 ISLAND CREST WAY, MERCER ISLAND, WA 98040
PLAN M5762A3FU-OFB

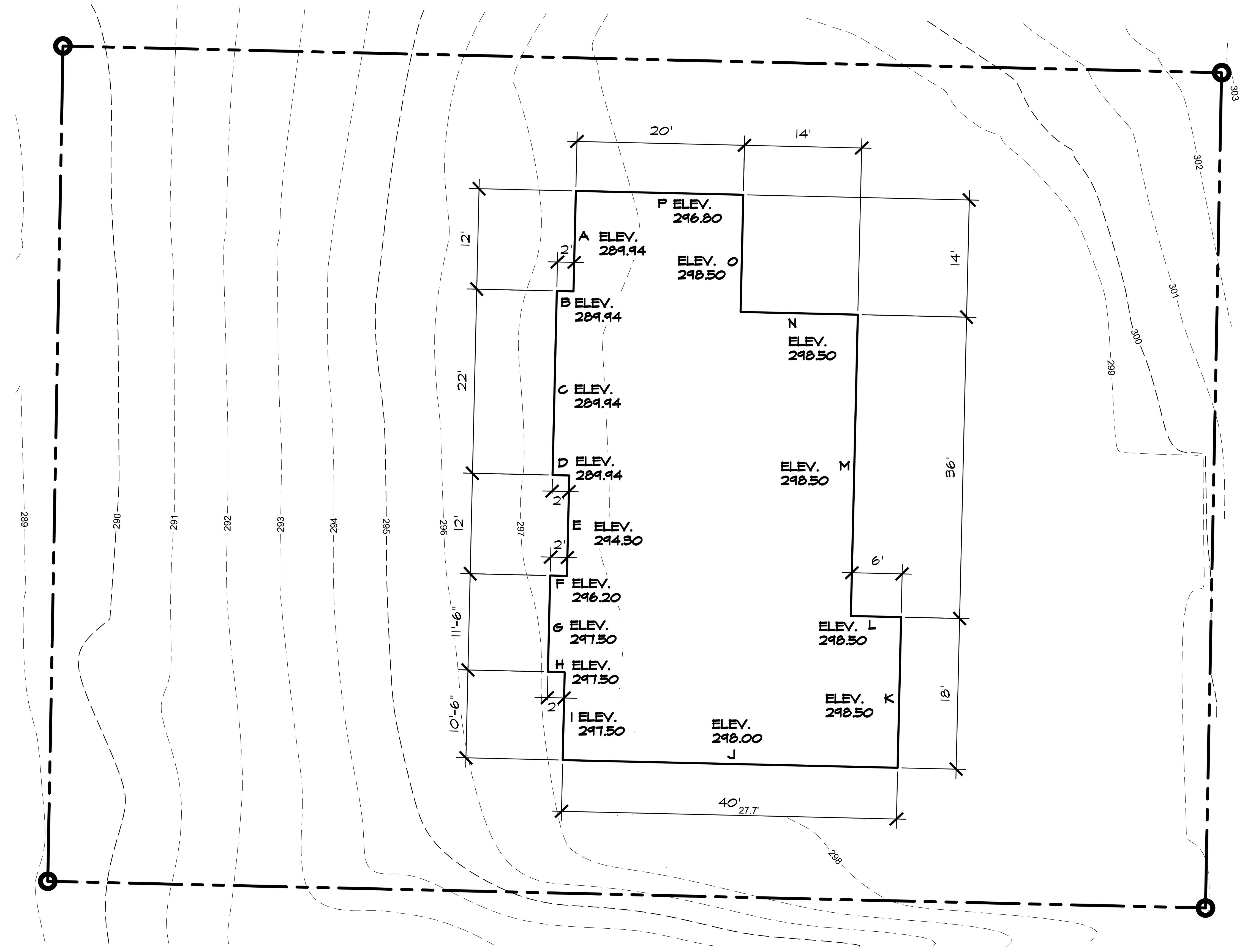
DESIGNED BY: SW	DATE: 12/2022
DRAWN BY: JSC	DATE: 3/21/23
PROJECT MANAGER: SARAH WEIGHT	
REVISED BY: JSC	DATE: 1 10/15/24
LATERAL BY: ZED	DATE: 3/2/23
LATERAL JOB NUMBER: 23-111	

A0
A14

ANW WOODINVILLE OFFICE JOB NUMBER:
220185



BASEMENT EXCLUSION CALCULATION



BUILDING HEIGHT CALCULATION

BASEMENT CALCULATION

WALL SEGMENT	WALL LENGTH (FT)	WALL AREA @ 9' HT (SF)	COVERAGE AREA (SF)	COVERAGE = COVERAGE AREA / WALL AREA (%)	=	RESULT = LENGTH x COVERAGE (%)
A	12.00	108.00	0.00	0.00		0.00
B	2.00	18.00	0.00	0.00		0.00
C	22.00	198.00	0.00	0.00		0.00
D	2.00	18.00	0.00	0.00		0.00
E	12.00	108.00	41.42	0.38		4.60
F	2.00	18.00	12.43	0.69		1.38
G	11.50	103.50	85.15	0.82		9.46
H	2.00	18.00	15.13	0.84		1.68
I	10.50	94.50	79.41	0.84		8.82
J	40.00	360.00	331.25	0.92		36.81
K	18.00	162.00	162.00	1.00		18.00
L	6.00	54.00	54.00	1.00		6.00
M	36.00	324.00	324.00	1.00		36.00
N	14.00	126.00	126.00	1.00		14.00
O	14.00	126.00	126.00	1.00		14.00
P	20.00	180.00	132.68	0.74		14.74
TOTALS:	224.00					165.50

EXCLUDED BASEMENT AREA = TOTAL BASEMENT FLOOR AREA x (RESULT / TOTAL WALL LENGTH):

TOTAL BASEMENT FLOOR AREA =					2290.00	S.F.
EXCLUDED BASEMENT AREA =	2290.00	x	165.50	/	224.00	
EXCLUDED BASEMENT AREA =					1691.91	S.F.

HEIGHT CALCULATION

WALL SEGMENT	WALL LENGTH	*	MIDPOINT ELEVATION	=	PRODUCT
A	12.00		289.94		3479.28
B	2.00		289.94		579.88
C	22.00		289.94		6378.68
D	2.00		289.94		579.88
E	12.00		294.30		3531.60
F	2.00		296.20		592.40
G	11.50		297.50		3421.25
H	2.00		297.50		595.00
I	10.50		297.50		3123.75
J	40.00		298.00		11920.00
K	18.00		298.50		5373.00
L	6.00		298.50		1791.00
M	36.00		298.50		10746.00
N	14.00		298.50		4179.00
O	14.00		298.50		4179.00
P	20.00		296.80		5936.00
TOTALS:	224.00				66405.72

AVERAGE EXG GRADE = TOTAL PRODUCTS/ TOTAL WALL LENGTHS:

	66405.7	/	224.00	=	296.45	AVG. BLDG ELEV.
MAX HT. ALLOWABLE =				+	30.00	
MAX ELEVATION @ RIDGE =					326.45	
PROPOSED RIDGE ELEVATION =				-	326.16	
PROPOSED RIDGE =					0.29	BELOW HT. LIMIT

NORTH

AREA DIAGRAMS

SCALE : 1" = 10'-0"

0 10 20 40

PHAN-NGUYEN RESIDENCE

4102 ISLAND CREST WAY, MERCER ISLAND, WA 98040

PLAN M5762A3FU-OFB

ARCHITECTS NORTHWEST

DESIGNED BY: SW DATE: 12/2022
DRAWN BY: JSC DATE: 3/21/23

PROJECT MANAGER: SARAH WEIGHT
REVISED BY: JSC DATE: 10/15/24

LATERAL BY: ZED DATE: 3/2/23
LATERAL JOB NUMBER: 23-111

A0.1 / A14

ANW WOODINVILLE OFFICE JOB NUMBER: 220185

ENERGY CODE

2018 WASHINGTON STATE ENERGY CODE/ IECC (WSEC)

TABLE R402.1.1

INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT [A]

CLIMATE ZONE	5 & MARINE 4	WITH USE OF CREDIT 1.3
FENESTRATION U-FACTOR [B]	0.30	0.28
SKYLIGHT [B] U-FACTOR	0.50	0.50
CEILING R-VALUE [E]	49	49
WOOD FRAME WALL [G,H] R-VALUE	21 INT	21 INT
FLOOR R-VALUE	30	38
BELOW GRADE [C,H] WALL R-VALUE	10/15/21 INT + 5TB	R-10 PERIMETER & ENTIRE SLAB
SLAB[D,F] R-VALUE & DEPTH	10, 2 FT.	R-10 PERIMETER & ENTIRE SLAB

TABLE R402.1.1 FOOTNOTES
FOR SI: 1 FOOT = 304.8 MM, CI = CONTINUOUS INSULATION, INT. = INTERMEDIATE FRAMING.

[A] R-VALUES ARE MINIMUMS. U-FACTORS AND SHGC ARE MAXIMUMS. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE COMPRESSED R-VALUE OF THE INSULATION FROM APPENDIX TABLE A101.4 SHALL NOT BE LESS THAN THE R-VALUE SPECIFIED IN THE TABLE.

[B] THE FENESTRATION U-FACTOR COLUMN EXCLUDES SKYLIGHTS.

[C] "10/15/21 +5TB" MEANS R-10 CONTINUOUS INSULATION ON THE EXTERIOR OF THE WALL, OR R-15 CONTINUOUS INSULATION ON THE INTERIOR OF THE WALL, OR R-21 CAVITY INSULATION PLUS A THERMAL BREAK BETWEEN THE SLAB AND THE BASEMENT WALL AT THE INTERIOR OF THE BASEMENT WALL. "10/15/21 +5TB" SHALL BE PERMITTED TO BE MET WITH R-13 CAVITY INSULATION ON THE INTERIOR OF THE BASEMENT WALL PLUS R-5 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE WALL. "5TB" MEANS R-5 THERMAL BREAK BETWEEN FLOOR SLAB AND BASEMENT WALL.

[D] R-10 CONTINUOUS INSULATION IS REQUIRED UNDER HEATED SLAB ON GRADE FLOORS. SEE R402.2.9.1.

[E] FOR SINGLE RAFTER- OR JOIST- VAULTED CEILINGS, THE INSULATION MAY BE REDUCED TO R-38 IF THE FULL INSULATION DEPTH EXTENDS OVER THE TOP PLATE OF THE EXTERIOR WALL.

[F] R-7.5 CONTINUOUS INSULATION INSTALLED OVER AN EXISTING SLAB IS DEEMED TO BE EQUIVALENT TO THE REQUIRED PERIMETER SLAB INSULATION WHEN APPLIED TO EXISTING SLABS COMPLYING WITH SECTION R503.1.1. IF FOAM PLASTIC IS USED, IT SHALL MEET THE REQUIREMENTS FOR THE THERMAL BARRIERS PROTECTING FOAM PLASTICS.

[G] FOR LOG STRUCTURES DEVELOPED IN COMPLIANCE WITH STANDARD ICC 400, LOG WALLS SHALL MEET THE REQUIREMENTS FOR CLIMATE ZONE 5 OF ICC 400.

[H] INT. (INTERMEDIATE FRAMING) DENOTES FRAMING AND INSULATION AS DESCRIBED IN SECTION A103.2.2 INCLUDING STANDARD FRAMING 16 INCHES ON CENTER, 78 PERCENT OF THE WALL CAVITY INSULATED AND HEADERS INSULATED WITH A MINIMUM OF R-10 INSULATION.

1. A CERTIFICATE COMPLYING WITH 2018 WSEC R401.3 IS REQUIRED TO BE COMPLETED BY THE BUILDER OR APPROVED PARTY AND PERMANENTLY POSTED.
2. AT LEAST ONE THERMOSTAT SHALL BE PROVIDED FOR EACH SEPARATE HEATING AND COOLING SYSTEM.
3. NOT LESS THAN 90 PERCENT OF LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.

WHOLE HOUSE VENTILATION

WHOLE HOUSE VENTILATION SYSTEM TO BE DESIGNED PER WSBC AMENDMENTS TO 2018 IRC SECTION M1505.4.4.

SEE "WHOLE HOUSE VENTILATION" ON THE SCHEDULE SHEET FOR SELECTED OPTION.

WHOLE-HOUSE MECHANICAL VENTILATION AIRFLOW RATE PER EQUATION 15-1 (M1505.4.3)

VENTILATION QUALITY ADJUSTMENT PER EQUATION 15-2 (M1505.4.3.1)

IRC TABLE M1505.4.3(2)

INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS [A,B]

RUN TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	50%	66%	75%	100%
FACTOR	2	1.5	1.3	1.0

A. FOR VENTILATION SYSTEM RUN TIME VALUES BETWEEN THOSE GIVEN, THE FACTORS ARE PERMITTED TO BE DETERMINED BY INTERPOLATION.
B. EXTRAPOLATION BEYOND THE TABLE IS PROHIBITED.

MECHANICAL

GENERAL
SOLID FUEL BURNING APPLIANCES INCLUDE AIRTIGHT STOVES, FIREPLACE STOVES, ROOM HEATERS, FACTORY BUILT FIREPLACES AND FIREPLACE INSERTS. ALL SOLID FUEL BURNING APPLIANCES SHALL COMPLY WITH THE PROVISIONS OF I.R.C. R1006

HEATING
EACH DWELLING UNIT SHALL BE PROVIDED WITH HEATING FACILITIES CAPABLE OF MAINTAINING A TEMPERATURE OF 68 DEGREES FAHRENHEIT AT A HEIGHT OF 3'-0" ABOVE THE FLOOR AND TWO FEET FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS WHEN THE OUTSIDE TEMPERATURE IS AS SET FORTH IN THE 2018 W.S.E.C.

DEFINITION OF BUILDING THERMAL ENVELOPE FROM THE 2018 WASHINGTON STATE ENERGY CODE:

THE BELOW-GRADE WALLS, ABOVE-GRADE WALLS, FLOORS, CEILINGS, ROOF, AND ANY OTHER BUILDING ELEMENT ASSEMBLIES THAT ENCLOSE CONDITIONED SPACE OR PROVIDES A BOUNDARY BETWEEN CONDITIONED SPACE AND EXEMPT OR UNCONDITIONED SPACE.

1. FUEL BURNING APPLIANCES LOCATED WITHIN THE BUILDING ENVELOPE SHALL OBTAIN AIR FROM OUTDOORS, MEETING THE PROVISIONS OF IRC G2407
2. FUEL BURNING APPLIANCES LOCATED OUTSIDE THE BUILDING ENVELOPE SHALL MEET THE PROVISIONS OF CHAPTER 24 OF THE 2018 IRC.
3. DUCTWORK LOCATION SHALL MEET THE PROVISIONS OF CHAPTER 24 OF THE 2018 IRC.
4. COMBUSTION AIR TO MEET THE REQUIREMENTS OF I.R.C. M1701.1

ALL WARM AIR FURNACES SHALL BE LISTED AND LABELED BY AN APPROVED AGENCY PER CHAPTER M1302 OF THE 2018 IRC.

NO WARM AIR FURNACE SHALL BE INSTALLED IN A ROOM USED OR DESIGNED TO BE USED AS A BEDROOM, BATHROOM, CLOSET OR IN ANY ENCLOSED SPACE WITH ACCESS ONLY THROUGH SUCH ROOM OR SPACE, EXCEPT PER EXCEPTIONS IN IRC G2406.2

LIQUEFIED PETROLEUM GAS BURNING APPLIANCES SHALL NOT BE INSTALLED IN A PIT, BASEMENT OR SIMILAR LOCATION WHERE HEAVIER THAN AIR GASES MIGHT COLLECT. APPLIANCES SO FUELED SHALL NOT BE INSTALLED IN AN ABOVE GRADE UNDER FLOOR SPACE OR BASEMENT UNLESS SUCH LOCATION IS PROVIDED WITH AN APPROVED MEANS FOR REMOVAL OF UNBURNED GAS.

HEATING AND COOLING APPLIANCES LOCATED IN A GARAGE AND WHICH GENERATE A GLOW, SPARK OR FLAME CAPABLE OF IGNITING FLAMMABLE VAPORS SHALL BE INSTALLED WITH THE PILOTS AND BURNERS OR HEATING ELEMENTS AND SWITCHES AT LEAST 18" ABOVE THE FLOOR SURFACE.

FIRE DAMPERS NEED NOT BE INSTALLED IN AIR DUCTS PASSING THROUGH THE WALL, FLOOR OR CEILING SEPARATING A RESIDENCE (R-3 OCCUPANCY) FROM A GARAGE, PROVIDED SUCH DUCTS WITHIN THE GARAGE ARE CONSTRUCTED OF STEEL HAVING A THICKNESS NOT LESS THAN 0.014" (NO. 26 GALVANIZED SHEET GAUGE) AND HAVE NO OPENINGS INTO THE GARAGE

EVERY APPLIANCE DESIGNED TO BE VENTED SHALL BE CONNECTED TO A VENTING SYSTEM COMPLYING WITH CHAPTER 18 OF THE 2018 IRC.

EVERY FACTORY BUILT CHIMNEY, TYPE L VENT, TYPE B GAS VENT OR TYPE BW GAS VENT SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF ITS LISTING, MANUFACTURERS INSTALLATION INSTRUCTIONS AND THE REQUIREMENTS PER CHAPTER 24 OF THE 2018 IRC.

A TYPE B OR BW GAS VENT SHALL TERMINATE PER CHAPTER 24 OF THE 2018 IRC.

VENT CONNECTORS SHALL BE INSTALLED WITHIN THE SPACE OR AREA IN WHICH THE APPLIANCE IS LOCATED AND SHALL BE CONNECTED TO A CHIMNEY OR VENT IN SUCH A MANNER AS TO MAINTAIN THE CLEARANCE TO COMBUSTIBLES PER SECTION M1803 OF THE 2018 IRC.

HEATING EQUIPMENT
ALL HEATING EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE NATIONAL APPLIANCE ENERGY CONSERVATION ACT (NAECA) AND BE SO LABELED. EQUIPMENT SHALL ALSO COMPLY WITH SECTION M1411 OF THE 2018 IRC

DUCTWORK
1. DUCT SYSTEMS OR FACTORY BUILT AIR DUCTS SHALL BE OF METAL AS SET FORTH BY TABLE 1601.1.1 OF THE 2018 IRC.
2. RECTANGULAR, FLAT, OVAL AND ROUND DUCT JOINTS AND SEAMS SHALL BE AIRTIGHT PER SECTION M1601.4.1 OF THE 2018 IRC.
3. INSTALLATION OF DUCTS SHALL COMPLY WITH SECTION M1601.4 OF THE 2018 IRC.
4. DUCT INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH SECTION M1601.3 OF THE 2018 IRC.
5. FINAL DUCT LEAKAGE AFFIDAVIT IS TO BE PROVIDED TO THE BUILDING INSPECTOR PRIOR TO FINAL INSPECTION. DUCT LEAKAGE AND SEALING REQUIREMENTS IN 2018 W.S.E.C. SECTION R403.3.2 TO BE MET.
6. DUCTS INSULATAED TO A MINIMUM R-8 INSULATION IN UNCONDITIONED SPACES PER W.S.E.C. SECTION R403.3.1

CARPENTRY

GENERAL
ALL FRAMING SHALL COMPLY WITH THE APPLICABLE SECTION(S) OF THE 2018 IBC/IRC. PRESSURE TREATED WOOD REQUIRED IN LOCATIONS LISTED IN IRC R317.1

2" MINIMUM VERTICAL CLEARANCE BETWEEN WOOD & CONCRETE STEPS, PORCH SLABS, PATIO SLABS & OTHER SIMILAR HORIZONTAL SURFACES EXPOSED TO THE WEATHER.
6" MINIMUM CLEARANCE BETWEEN WOOD AND EARTH.
8" MINIMUM CLEARANCE BETWEEN UNTREATED WOOD MUSILLS AND EARTH.
12" MINIMUM CLEARANCE BETWEEN FLOOR BEAMS AND EARTH.
18" MINIMUM CLEARANCE BETWEEN FLOOR JOISTS AND EARTH.

LOADING

ROOF	15 PSF DEAD LOAD	+	25 PSF LIVE LOAD	=	40 PSF
FLOOR TRUSSES	15 PSF DEAD LOAD	+	40 PSF LIVE LOAD	=	55 PSF
FLOOR	10 PSF DEAD LOAD	+	40 PSF LIVE LOAD	=	50 PSF
CEILING	5 PSF DEAD LOAD	+	10 PSF LIVE LOAD	=	15 PSF
DECK	10 PSF DEAD LOAD	+	60 PSF LIVE LOAD	=	70 PSF
INTERIOR PARTITION				=	7 PSF
EXTERIOR PARTITION				=	10 PSF

WOOD BEARING ON OR INSTALLED WITHIN ½" OF MASONRY OR CONCRETE TO BE TREATED WITH AN APPROVED PRESERVATIVE. SOLID BLOCKING OF NOT LESS THAN 2x THICKNESS SHALL BE PROVIDED AT ENDS AND AT ALL SUPPORT OF JOISTS AND RAFTERS. ANCHOR BOLTS TO BE PER SHEAR WALL SCHEDULE AND FOUNDATION PLAN. 7" MINIMUM EMBEDMENT. ALL METAL FRAMING ANCHORS AND HANGERS SHOWN ON DRAWINGS SHALL BE STRONG TIE CONNECTORS AS MANUFACTURED BY SIMPSON COMPANY.

PROVIDE FIREBLOCKING IN CONCEALED SPACES OF STUD WALLS & PARTITIONS, INCLUDING FURRED SPACES & PARALLEL ROWS OF STUDS OR STAGGERED STUDS AS FOLLOWS:

1. VERTICALLY AT THE CEILING & FLOOR LEVELS.
2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.

PROVIDE FIREBLOCKING AT OTHER LOCATIONS PER 2018 IRC R302.11.

INSULATION & MOISTURE PROTECTION

GENERAL
UNLESS NOTED OTHERWISE, INSULATION SHALL CONFORM TO THE WASHINGTON STATE ENERGY CODES. INSULATION BAFFLES TO MAINTAIN 1" CLEAR SPACE ABOVE INSULATION. BAFFLES TO EXTEND 6" ABOVE BATT INSULATION & 12" ABOVE LOOSE FILL INSULATION. INSULATE BEHIND BATHTUBS, SHOWERS, PARTITIONS AND CORNERS. PROVIDE FACE STAPLED BATTS OR FRICTION FIT FACED BATTS. PROVIDE 4 MIL (0.004") POLYETHYLENE VAPOR BARRIER AT WALLS OR USE CLASS II PVA PRIMER. PROVIDE R-10 INSULATION UNDER ELECTRIC WATER HEATERS.

INFILTRATION CONTROL
1. EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES, OPENINGS BETWEEN WALLS AND FOUNDATIONS, BETWEEN WALLS AND ROOF AND BETWEEN WALL PANELS, OPENINGS AT PENETRATIONS OF UTILITY SERVICES THROUGH WALLS, FLOORS, AND ROOF, AND ALL OTHERS SUCH OPENINGS IN THE BUILDING ENVELOPE, INCLUDING ACCESS PANELS INTO UNHEATED SPACES, SHALL BE SEALED, CAULKED, GASKETED OR WEATHER-STRIPPED TO LIMIT AIR INFILTRATION.
2. ALL EXTERIOR DOORS, OTHER THAN FIRE-RATED DOORS, SHALL BE DESIGNED TO LIMIT AIR INFILTRATION AROUND THEIR PERIMETER WHEN IN A CLOSED POSITION. DOORS BETWEEN RESIDENCE AND GARAGE ARE NOT CONSIDERED "FIRE-RATED" AND MUST MEET THE ABOVE REQUIREMENT.
3. ALL EXTERIOR WINDOWS SHALL BE DESIGNED TO ADMIT AIR INFILTRATION INTO OR FROM THE BUILDING ENVELOPE WHICH SHALL BE SUBSTANTIATED BY TESTING TO STANDARD ASTM E 283.73. SITE BUILT AND MILLWORK SHOP MADE WOODEN SASH ARE EXEMPT FROM TESTING BUT SHALL BE WEATHER-STRIPPED, CAULKED AND MORE TIGHTLY FITTING.
4. RECESSED LIGHT FIXTURES TO LIMIT AIR LEAKAGE PER W.S.E.C.

PIPING FOR HOT WATER / STEAM SYSTEMS OF PIPING FOR CONTINUOUSLY CIRCULATING HOT WATER SERVICE IS REQUIRED TO BE INSULATED PER THE W.S.E.C. HOT WATER PIPING SHALL BE INSULATED TO A MINIMUM OF R-3 PER W.S.E.C. R403.5.3. MECHANICAL SYSTEM PIPING SHALL BE INSULATED TO A MINIMUM R-6 PER W.S.E.C. R403.4

VAPOR BARRIERS / GROUND COVERS
AN APPROVED VAPOR BARRIER SHALL BE PROPERLY INSTALLED IN ROOF DECKS, IN ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, AND AT EXTERIOR WALLS. INSET STAPLED BATTS WITH A PERM RATING LESS THAN ONE MAY BE INSTALLED IF THE VAPOR BARRIER IS TO THE WARM SIDE, STAPLES SHALL BE PLACED NOT MORE THAN 8" O.C. AND GAPS BETWEEN THE FACING AND THE FRAMING SHALL NOT EXCEED 1/16"

VAPOR RETARDERS AT WALLS PER IRC R702.7

A GROUND COVER OF 6 MIL (0.006") BLACK POLYETHYLENE OR EQUIVALENT SHALL BE LAID OVER THE GROUND IN ALL CRAWL SPACES. THE GROUND COVER SHALL BE OVERLAPPED ONE FOOT AT EACH JOINT AND SHALL EXTEND TO THE FOUNDATION WALL.

DOORS, WINDOWS AND SKYLIGHTS

GENERAL
THE REQUIRED EGRESS DOOR MAY HAVE A MAXIMUM 7 ¾" STEP ON THE EXTERIOR SIDE FROM TOP OF THE THRESHOLD TO A MINIMUM 36" DEEP LANDING ON THE EXTERIOR SIDE OF THE DOOR. PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING, PER R311.3.1 OTHER EXTERIOR DOORS MAY HAVE A MAXIMUM (2) 7 ¾" STEPS TO A MIN. 36" DEEP LANDING. ALL GLAZING SHALL MEET THE REQUIREMENTS OF THE 2015 W.S.E.C. TABLE R402.1.1 UNLESS NOTED OTHERWISE. ALL SKYLIGHTS AND SKYWALLS SHALL HAVE LAMINATED GLASS UNLESS NOTED OTHERWISE. ALL BEDROOM EMERGENCY EGRESS WINDOWS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET. MINIMUM NET CLEAR OPERABLE WIDTH OF 20" AND A MINIMUM NET CLEAR OPENING HEIGHT OF 24", MAXIMUM SILL HEIGHT OF 44" MEASURED FROM THE FINISHED FLOOR TO THE BOTTOM OF THE CLEAR OPENING. OPERABLE WINDOWS WITH A SILL OF MORE THAN 72" ABOVE FINISHED THE GRADE OR SURFACE BELOW, TO BE A MINIMUM OF 24" ABOVE ADJACENT FINISHED FLOOR.

SAFETY GLAZING LOCATIONS PER 2018 IRC SECTION R308.4

R308.4.1 GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BI-FOLD DOORS.

R308.4.2 GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR & THE GLAZING IS EITHER WITHIN 24 INCHES OF EITHER SIDE OF THE DOOR IN THE PLANE OF THE DOOR IN A CLOSED POSITION OR ON A WALL LESS THAN 180 DEGREES FROM THE PLANE OF THE DOOR IN A CLOSED POSITION & WITHIN 24 INCHES OF THE HINGE SIDE OF AN IN-SWINGING DOOR.

R308.4.3 GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
1. THE EXPOSED AREA OF AN INDIVIDUAL PANEL IS LARGER THAN 9 SQUARE FEET;
2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18" ABOVE THE FLOOR;
3. THE TOP EDGE OF THE GLAZING IS MORE THAN 36" ABOVE THE FLOOR; AND
4. ONE OR MORE WALKING SURFACES ARE WITHIN 36" MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING.

R308.4.4 GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE.

R308.4.5 GLAZING IN WALLS, ENCLOSURES OR FENCES CONTAINING OR FACING HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND INDOOR OR OUTDOOR SWIMMING POOLS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE.

R308.4.6 GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36 INCHES (914 MM) ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS AND RAMPS.

R08.4.7 GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 36 INCHES ABOVE THE LANDING AND WITHIN A 60" HORIZONTAL ARC LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING.

FOR EXCEPTIONS SEE IRC SECTION R308.4

GENERAL

PLANS COMPLY WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE.

CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL PERMANENT CONNECTIONS HAVE BEEN MADE. IT IS THE CONTRACTORS RESPONSIBILITY TO IDENTIFY ALL DISCREPANCIES TO THE ARCHITECT AT THE TIME THEY ARE NOTED. DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS.

CODES:
ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION SHALL BE FOLLOWED
1. 2018 INTERNATIONAL RESIDENTIAL CODE (IRC) WITH WASHINGTON STATE AMENDMENTS (WSA) EXCEPT CHAPTERS 11 AND 25 THROUGH 42 ARE NOT ADOPTED. APPENDICES F,Q, & U ARE ADOPTED.
2. 2018 INTERNATIONAL BUILDING CODE (IBC) WITH WASHINGTON STATE AMENDMENTS (WSA)
3. 2018 INTERNATIONAL MECHANICAL CODE (IMC) WITH WASHINGTON STATE AMENDMENTS (WSA)
4. 2018 UNIFORM PLUMBING CODE (UPC) WITH WASHINGTON STATE AMENDMENTS.
5. 2018 INTERNATIONAL FIRE CODE WITH WASHINGTON STATE AMENDMENTS.
6. 2018 WASHINGTON STATE ENERGY CODE, RESIDENTIAL PROVISIONS (WSEC).

NFPA 13D FIRE SPRINKLER SYSTEM TO BE INSTALLED PER NFPA AND COMI STANDARDS. A SEPARATE FIRE PERMIT IS REQUIRED

☒ YES
☐ NO

SITE WORK

GENERAL
ALL FOOTINGS TO BEAR ON FIRM, UNDISTURBED EARTH BELOW ORGANIC SURFACE SOILS. ALL BACK FILL MATERIAL SHALL BE THOROUGHLY COMPACTED. FOUNDATION VENTS SHALL NOT INTERFERE WITH THE DIRECT LOAD PATH OF COLUMNS.

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

ROOF SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			OUTSIDE DESIGN TEMP HEAT/ COOL	ICE BARRIER UNDER-LAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP
	SPEED (MPH)	TOPO-GRAPHIC EFFECTS	SPECIAL WIND REGION	WIND-BORNE DEBRIS ZONE		WEATHERING	FROST LINE DEPTH	TERMITE					
25 psf	110	SEE NOTE 1			D2	MODERATE	12"	SLIGHT TO MODERATE	24/83	NO	N/A	113	53
EQUIVALENT FLUID PRESSURE = 35 P.C.F. (UNRESTRAINED WALLS) 50 P.C.F. (RESTRAINED WALLS)													

NOTES:
1. WIND EXPOSURE CATEGORY AND TOPOGRAPHIC EFFECTS (WIND SPEED-UP KZT FACTOR) SHALL BE DETERMINED ON A SITE-SPECIFIC BASIS BY THE ENGINEER OF RECORD (COMPONENTS AND CLADDING NEED NOT CONSIDER TOPOGRAPHIC EFFECTS UNLESS OTHERWISE DETERMINED BY THE ENGINEER OF RECORD).

SHEET INDEX

5046 REGISTERED ARCHITECT
JEFFREY P. GAROUTTE
STATE OF WASHINGTON
1/8/14

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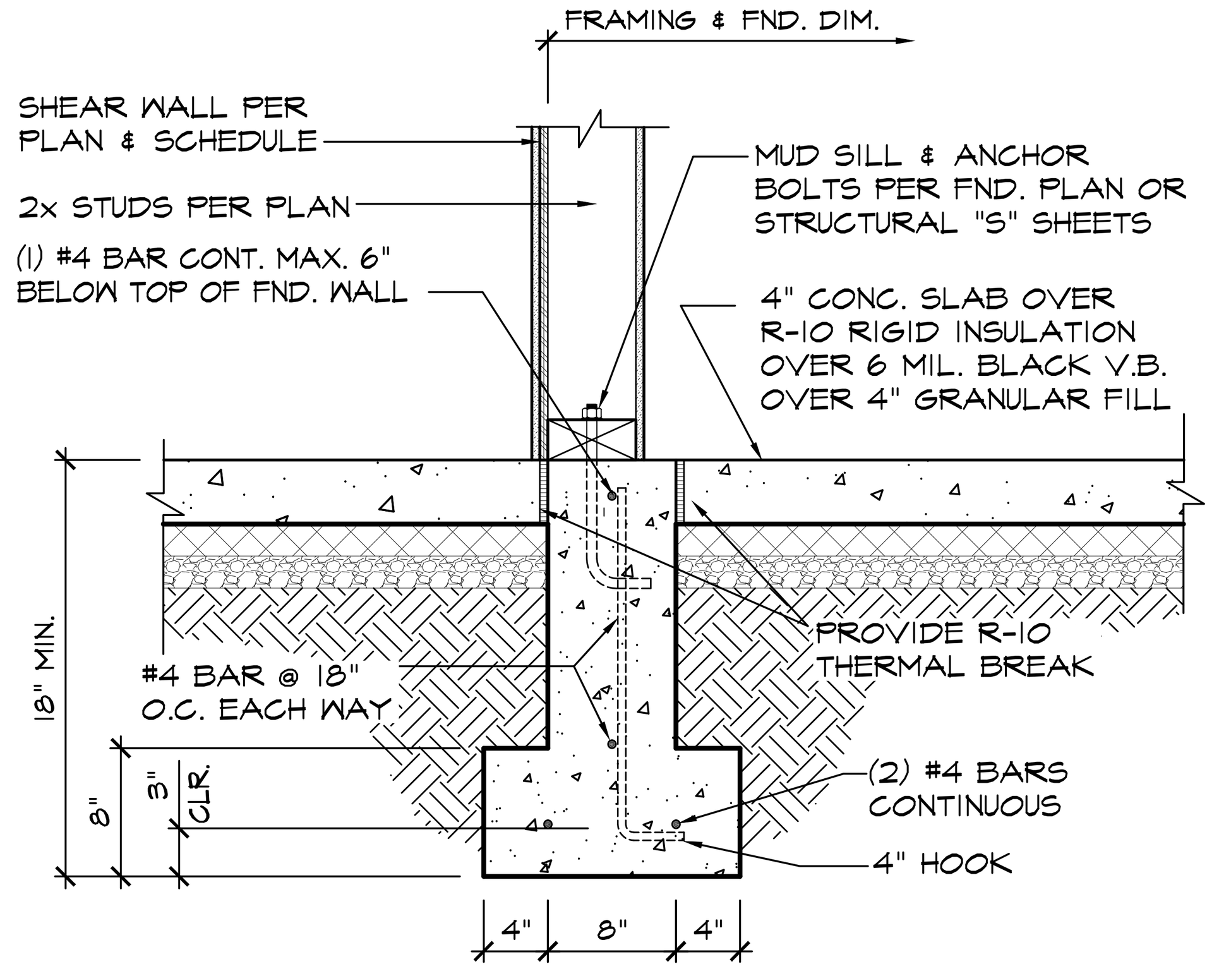
PHAN-NGUYEN RESIDENCE
4102 ISLAND CREST WAY, MERCER ISLAND, WA 98040
PLAN M5762A3FU-OFB

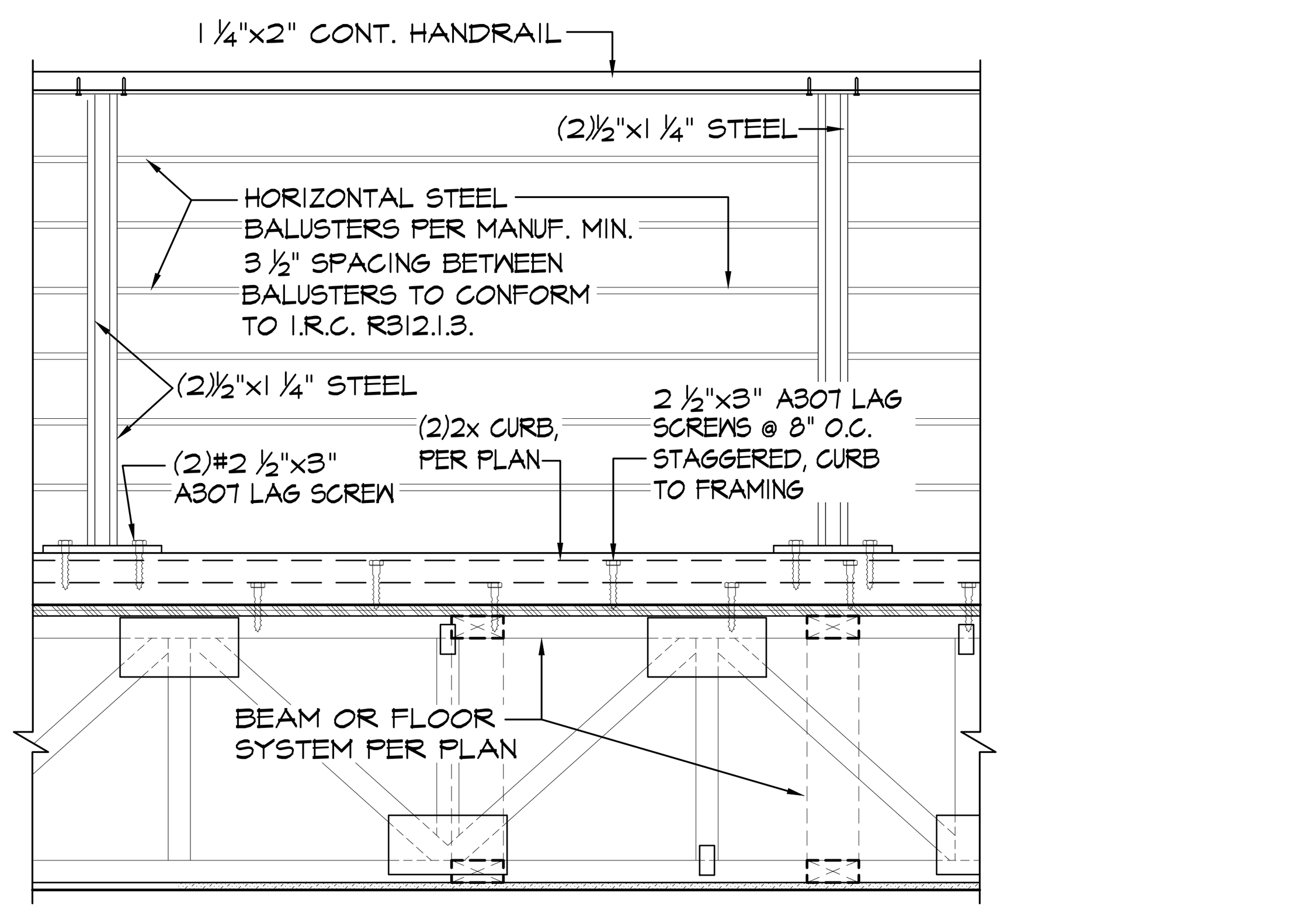
DESIGNED BY: SW DATE: 12/2022
DRAWN BY: JSC DATE: 3/21/23
PROJECT MANAGER: SARAH WEIGHT
REVISED BY: JSC DATE: △1 10/15/24
LATERAL BY: ZED DATE: 3/2/23
LATERAL JOB NUMBER: 23-111

A1 / A14

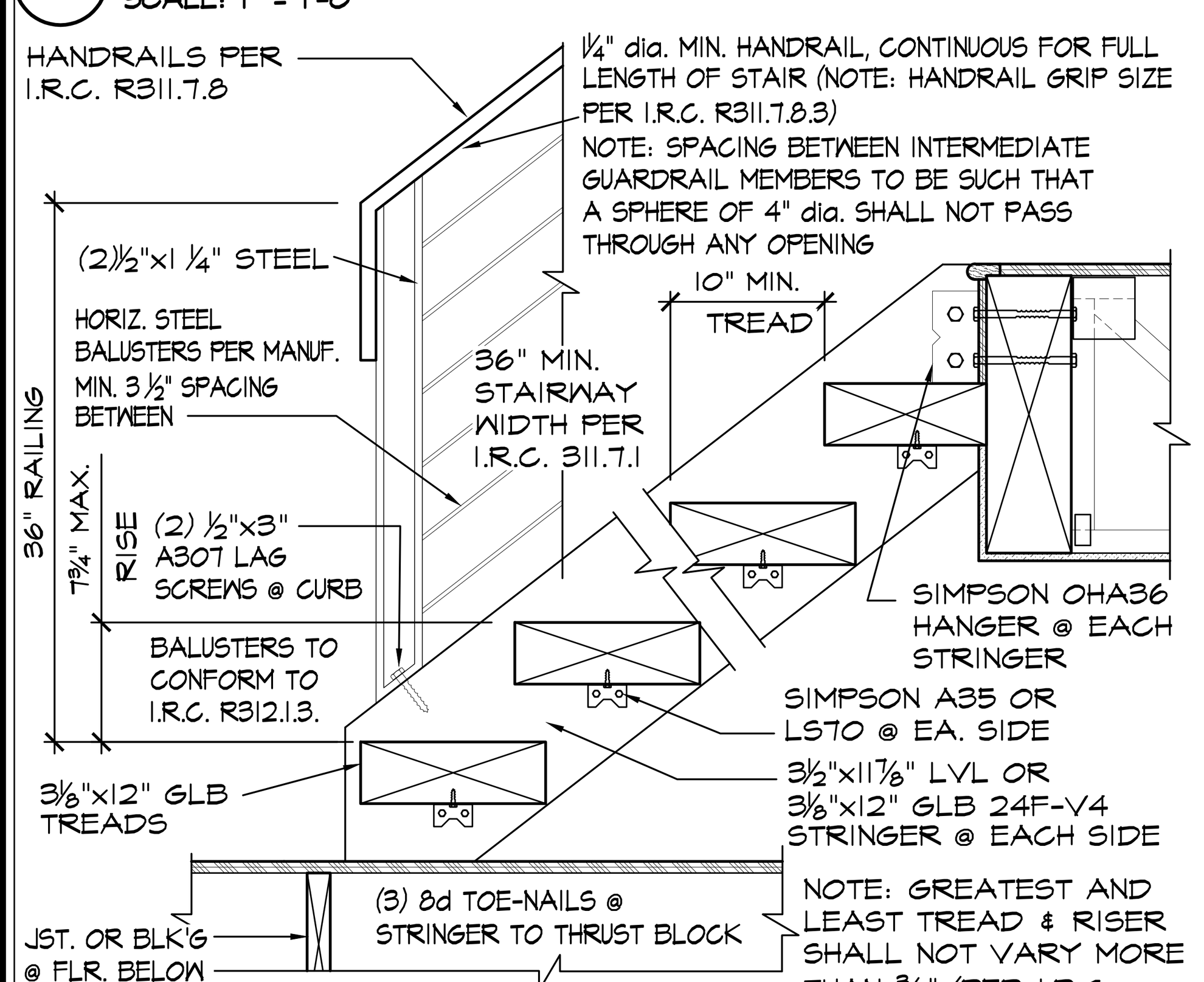
ANW WOODINVILLE OFFICE JOB NUMBER: 220185



1 8" INTERIOR FND. WALL — INSULATED
SCALE: 1" = 1'-0"



2 INTERIOR CONTEMPORARY METAL GUARD RAIL
SCALE: 1" = 1'-0"



3 INTERIOR STAIR
SCALE: 1" = 1'-0"

VAPOR RETARDER

FLOOR		4 MIL POLY		FACE STAPLED BACKED BATTS	X	PLYWOOD W/ EXT. GLUE
WALL		4 MIL POLY		FACE STAPLED BACKED BATTS	X	CLASS 2 PVA PRIMER
RIM JOIST		4 MIL POLY	X	FACE STAPLED BACKED BATTS		CLASS 2 PVA PRIMER
CEILING		4 MIL POLY		FACE STAPLED BACKED BATTS	X	CLASS 2 PVA PRIMER

WHOLE-HOUSE MECHANICAL VENTILATION (PRESCRIPTIVE)

WHOLE-HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS M1505.4.1 THROUGH M1505.4.4 (WASHINGTON STATE AMENDMENTS)

- ☑ WHOLE-HOUSE VENTILATION USING EXHAUST FANS (M1505.4.1.2)
- ☐ WHOLE-HOUSE VENTILATION USING SUPPLY FANS (M1505.4.1.3)
- ☐ WHOLE-HOUSE VENTILATION SYSTEM, BALANCED (M1505.4.1.4)
- ☐ WHOLE-HOUSE VENTILATION USING FURNACE INTEGRATED SUPPLY (M1505.4.1.5)

MECHANICAL VENTILATION AIRFLOW RATE PER EQUATION 15-1 (M1505.4.3) 117.62 CFM (CONTINUOUS)

VENTILATION QUALITY ADJUSTMENT PER EQUATION 15-2 (M1505.4.3.1)

- ☐ BALANCED & DISTRIBUTED (1.0 COEFFICIENT)
- ☐ BALANCED & NOT DISTRIBUTED (1.25 COEFFICIENT)
- ☐ NOT BALANCED & DISTRIBUTED (1.25 COEFFICIENT
- ☑ NOT BALANCED & NOT DISTRIBUTED (1.5 COEFFICIENT)

ADJUSTED MECHANICAL VENTILATION AIRFLOW RATE 176.43 CFM (CONTINUOUS)

INTERMITTENT OFF OPERATION (M1505.4.3.2)
RUN-TIME % IN EACH 4-HOUR SEGMENT

- ☐ 50 PERCENT
- ☐ 66 PERCENT
- ☑ 75 PERCENT
- ☐ 100 PERCENT

INTERMITTENT FLOW RATE 229.359 CFM

SIMPLE HEATING SYSTEM SIZE

This heating system sizing is based on the Prescriptive Requirements of the 2018 Washington State Energy Code. This is for heating only. ACCA procedures for sizing cooling systems should be used to determing cooling.

Indoor Design Temperature			70		
Outdoor Design Temperature			24		
Design Temperature Difference					
Indoor - Outdoor Design Temp			46		
Conditioned Floor Area			5762		
Conditioned Volume			53759.46		
Glazing					
Sum of UA from Glazing Schedule					384.0
Attic	U-Factor	X	Area	=	UA
R-49	0.026		2496		64.90
Other:					
Single Rafter or Joist Vaulted Ceilings					
	U-Factor	X	Area	=	UA
R-38	0.027				
Other:					
Above Grade Walls	U-Factor	X	Area	=	UA
R-21 + R-10 HEADERS	0.056		4535		253.96
Other:					
Floors	U-Factor	X	Area	=	UA
R-30	0.029				
Other: R-38	0.025		907		22.68
Below Grade Walls	U-Factor	X	Area	=	UA
R-21 Interior	0.042		1151		48.34
R-10 Continuous exterior	0.064				
Other:					
Slab Below Grade	F-factor	X	Length	=	UA
R-5 Thermal brk sl edge	0.57				
Other: R-10 full insul	0.303		192		58.18
Slab on Grade	F-factor	X	Length	=	UA
R-10 2' perimeter	0.54				
R-10 Fully insulated	0.36				
Other:					
Sum of UA					832.05
Envelope Heat Load (Sum of UA X Design Temperature Difference)					38274 Btu / Hour
Air Leakage Heat Load ((Volume X 0.6) X Design Outdoor Temp) X .018))					26708 Btu / Hour
Building Design Heat Load (Air Leakage + Envelope Heat Loss)					64982 Btu / Hour
Building and Duct Heat Load			1		64982 Btu / Hour
Maximum Heat Equipment Output			1.25		81228 Btu / Hour

Use 1.1 if ducts are located in unconditioned space: Sum of Building Heat Loss X 1.1
Use 1 if ducts are located in conditioned space: Sum of Building Heat Loss X 1
Use 1.4 for forced air furnace: Building & Duct Heat Loss x 1.4
Use 1.25 for heat pump: Building & Duct Heat Loss x 1.25

ROOF VENTILATION

Standard Truss / Scissor Truss Roof Framing Assembly:		
Roof Area : UPPER ROOF	**2612** s.f.	
Ventilation Required:	2612 s.f. x 144 / 300 =	1253.76 s.i. Req'd
Provide between 40% & 50% of the total required ventilation no more than 3 ft below the ridge or the highest point of the space. Remainder to be installed at eave vents.		
Upper Roof Ventilation:		
AF50 Roof Jack (10" x 7") =		50.00 s.i. each.
Upper Ventilation MINIMUM =	1253.76 s.i. x 0.4 / s.i. of each vent =	11 vents
Upper Ventilation MAXIMUM =	1253.76 s.i. x 0.5 / s.i. of each vent =	12 vents
Provide:	**12** -10"x7" roof jacks. Ventilation =	600.00 s.i.
Ventilation area remainder for eave vents =	653.76 s.i.	(Req'd vent-Upper vent)
Eave Ventilation:		
Birdblocking: (3)2.25" dia holes per bay =	5.96 s.i. per l.f. - 25% reduction =	4.47 s.i. per l.f.
Eave Ventilation Required =	653.76 s.i. / 4.47 s.i. per l.f. =	146.26 l.f.
Provide Minimum :	147 l.f. birdblocking. Ventilation =	657.09 s.i.
Minimum Ventilation Provided =	**1257.09 s.i. IS GREATER THAN :**	**1253.76 s.i. Req'd**

AIR LEAKAGE

Components of the building thermal envelope as listed in TABLE R402.4.1.1 shall be installed per manufacturer's specifications to limit air leakage rate to not exceed 2 air changes per hour (ACH)

AIR LEAKAGE CALCULATION (maximum blower test CFM)		$CFM_{50\text{-calc}}$		ACTUAL Blower test result	
maximum ACH	$CFM_{50\text{-calc}}$ = BLDG VOL (ft^3) X 2 ACH / 60 min =	1792	cfm		cfm

WINDOW, SKYLIGHT & DOOR SCHEDULE

CONDITIONED FLOOR AREA: 5762 — SUM OF UA FOR HEATING SYSTEM SIZING: 384.0
SUM OF ALL GLAZING AREAS FROM BELOW: 1193

EXEMPT DOOR AND WINDOW

ROOM		U-VAL	QTY	WIDTH	HEIGHT	AREA	UA
FOYER	EXEMPT SWING DR (24 S.F. MAX.)	0.46	1	3.00	8.00	24.00	11.04
FOYER	EXEMPT WINDOW (15 S.F. MAX.)	0.28	1	2.00	7.00	14.00	3.92
SUM OF AREA AND UA FOR HEATING SYSTEM SIZE ONLY:						**38.0**	**15.0**

EXTERIOR DOORS (OPAQUE)

ROOM	TYPE	DESCRIPTION	U-VAL	QTY	WIDTH	HEIGHT	AREA	UA
FOYER	DOOR		0.46	1	3.00	8.00	24.00	11.04
LIVING/DINING	DOOR		0.46	1	3.00	8.00	24.00	11.04
GARAGE	DOOR		0.46	1	2.67	6.67	17.81	8.19
SUM OF AREA AND UA:							**65.8**	**30.3**
AREA WEIGHTED U = UA/AREA:								**0.46**

VERTICAL GLAZING

ROOM	TYPE	DESCRIPTION	U-VAL	QTY	WIDTH	HEIGHT	AREA	UA
FOYER	PICTURE		0.28	1	2.00	7.00	14.00	3.92
STAIRS	PICTURE		0.28	1	6.00	6.00	36.00	10.08
PANTRY	CASE		0.28	1	2.50	4.50	11.25	3.15
PANTRY	SLIDER		0.28	1	6.00	4.50	27.00	7.56
KITCHEN	SLIDER		0.28	1	6.00	4.50	27.00	7.56
DINING	PICTURE		0.28	1	3.00	4.50	13.50	3.78
DINING	S.G.D.		0.33	1	12.00	8.00	96.00	31.68
GREAT RM	PICTURE		0.28	2	3.50	5.50	38.50	10.78
GREAT RM	PICTURE		0.28	2	3.50	1.50	10.50	2.94
GREAT RM	PICTURE		0.28	1	7.00	5.50	38.50	10.78
GREAT RM	SLIDER		0.28	1	7.00	1.50	10.50	2.94
DEN/PLAY	S.G.D.		0.28	1	8.00	8.00	64.00	17.92
BA 4	CASE		0.28	1	2.00	3.00	6.00	1.68
BR 6	SLIDER		0.28	1	8.00	5.00	40.00	11.20
LIVING/DINING	D.SLIDER		0.28	1	12.00	6.00	72.00	20.16
OPEN TO FOYER	PICTURE		0.28	2	2.00	6.00	24.00	6.72
OPEN TO FOYER	PICTURE		0.28	1	6.00	6.00	36.00	10.08
STAIRS	PICTURE		0.28	1	6.00	6.00	36.00	10.08
LAUNDRY	CASE		0.28	1	2.00	3.50	7.00	1.96
MBA	SLIDER		0.28	1	5.00	4.00	20.00	5.60
MSTR BDRM	CASE		0.28	2	2.00	4.00	16.00	4.48
MSTR BDRM	PICTURE		0.28	2	2.00	8.00	32.00	8.96
MSTR BDRM	FR DOOR		0.28	1	6.00	8.00	48.00	13.44
OPEN TO G.R.	PICTURE		0.28	2	3.50	5.50	38.50	10.78
OPEN TO G.R.	PICTURE		0.28	2	3.50	5.00	35.00	9.80
OPEN TO G.R.	PICTURE		0.28	1	7.00	5.50	38.50	10.78
OPEN TO G.R.	PICTURE		0.28	1	7.00	5.00	35.00	9.80
BEDRM 5	SLIDER		0.28	1	8.00	6.00	48.00	13.44
BEDRM 4	SLIDER		0.28	1	6.00	5.00	30.00	8.40
BEDRM 3	SLIDER		0.28	1	8.00	5.00	40.00	11.20
BEDRM 2	D.SLIDER		0.28	1	9.00	6.00	54.00	15.12
BR 7	SLIDER		0.28	1	6.00	5.00	30.00	8.40
OFFICE 2	SLIDER		0.28	1	6.00	5.00	30.00	8.40
GYM	SLIDER		0.28	1	6.00	5.00	30.00	8.40
REC RM	S.HUNG		0.28	2	3.00	5.00	30.00	8.40
OFFICE 1	SLIDER		0.28	1	6.00	5.00	30.00	8.40
							0.00	0.00
							0.00	0.00
							0.00	0.00
							0.00	0.00
							0.00	0.00
SUM OF AREA AND UA:							**1192.75**	**338.77**
AREA WEIGHTED U = UA/AREA:								**0.28**

OVERHEAD GLAZING

ROOM	TYPE		U-VAL	QTY	WIDTH	HEIGHT	AREA	UA
	SKYLIGHT		0.50				0.00	0.00
	SKYLIGHT		0.50				0.00	0.00
	SKYLIGHT		0.50				0.00	0.00
	SKYLIGHT		0.50				0.00	0.00
	SKYLIGHT		0.50				0.00	0.00
	SKYLIGHT		0.50				0.00	0.00
SUM OF AREA AND UA:							**0.00**	**0.00**
AREA WEIGHTED U = UA/AREA:								**0.00**

VERTICAL GLAZING IN UNHEATED SPACES

ROOM	TYPE	DESCRIPTION	U-VAL	QTY	WIDTH	HEIGHT	AREA
							0.00
							0.00
SUM OF VERTICAL GLAZING IN UNHEATED SPACES:							**0.00**

(not included in sum of all glazing above)

OVERHEAD GLAZING IN UNHEATED SPACES

ROOM	TYPE	DESCRIPTION	U-VAL	QTY	WIDTH	HEIGHT	AREA
	SKYLIGHT						0.00
	SKYLIGHT						0.00
SUM OF OVERHEAD GLAZING IN UNHEATED SPACES:							**0.00**

(not included in sum of all glazing above)

EXHAUST RATES

WSBC AMENDMENTS TO 2018 IRC SECTION M1505

SYMBOL	LOCATION	MINIMUM FAN REQUIREMENTS
A	Bath, Powder	Minimum 50 cfm Intermittent, 20 cfm Continuous (IRC TABLE M1505.4.4(1))
B	Kitchen	Minimum 100 cfm Intermittent, 30 cfm Continuous (IRC TABLE M1505.4.4(1)) (Range hood or down draft exhaust fan rated at min.100 cfm at 0.10" WG may be used for exhaust fan requirement.) **note**: fans in excess of 400 cfm shall provide make-up air per IRC section M1503.6
C	Whole House Fan	Flow rate per WHOLE-HOUSE MECHANICAL VENTILATION schedule

All fans to vent to outside. All other requirements of the 2018 WSEC and the WSBC amendments to the 2018 IRC section M1505 must be met.

ALARM SCHEDULE

2018 IRC SECTIONS R314 & R315

SYMBOL	DESCRIPTION	REQUIREMENTS
SA	Smoke Alarm	*110 V interconnected w/ battery backup. *Installed on each floor, in each sleeping area, and outside each separate sleeping area. Installed not less than 3 ft from the door of a bath which contains a tub or shower unless this prevents placement in a required location. *Listed in accordance with UL 217 and to comply with NFPA 72.
SA CM	Combination Smoke Alarm & Carbon Monoxide Alarm	*Installed on each floor, outside of each separate sleeping area in the immediate vicinity of the bedrooms, and in a bedroom that contains a gas fireplace in the bedroom or adjacent bathroom. *Smoke alarm requirements per above. *Combination smoke & carbon monoxide alarms listed in accordance with UL 217 & UL 2034.
HD	Heat Detector	*A heat detector or heat alarm to be installed in a central location in the garage and per the manufacturer's instructions. (WSBC amendments R314.2.1 & R314.2.3)

PRESCRIPTIVE ENERGY CODE COMPLIANCE

This project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. In addition, based on the size of the structure, the appropriate number of additional credits are checked.

CLIMATE ZONE 5 AND MARINE 4

	R-Value[a]	U-Factor[a]
Fenestration U-Factor[b]	n/a	0.30
Skylight U-Factor[b]	n/a	0.50
Ceiling	49	0.026
Wood Frame Wall[g,h]	21 int	0.056
Floor	30	0.029
Below Grade Wall[c,h]	10/15/21 int + 5TB	0.042
Slab[d,f] R-Value & Depth	10, 2 ft	n/a

For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38.

Table R402.1.1 footnotes included on Sheet A1.

Each dwelling unit in a residential building shall comply with sufficient options from Table R406.2 so as to achieve the following minimum number of credits:

- ☐ **1. Small Dwelling Unit: 3.0 points**
  Dwelling units less than 1500 square feet in conditioned floor area with less than 300 square feet of fenestration area. Additions to existing building that are greater than 500 square feet of heated floor area but less than 1500 square feet.
- ☐ **2. Medium Dwelling Unit: 6.0 points**
  All dwelling units that are not included in #1 or #3.
- ☑ **3. Large Dwelling Unit: 7.0 points**
  Dwelling units exceeding 5000 square feet of conditioned floor area.
- ☐ **4. Additions less than 500 square feet: 1.5 credits**

ENERGY CREDIT SUMMARY TABLES

Heating Options	Fuel Normalization Descriptions	Credits	
1	Combustion heating minimum NAECA	0.0	☐
2	Heat pump	1.0	☑
3	Electric resistance heat only - furnace or zonal	-1.0	☐
4	DHP with zonal electric resistance per option 3.4	0.5	☐
5	All other heating systems	-1.0	☐

Energy Options	Energy Credit Option Descriptions	Credits	
1.1	Efficient Building Envelope	0.5	☐
1.2	Efficient Building Envelope	1.0	☐
1.3	Efficient Building Envelope	0.5	☑
1.4	Efficient Building Envelope	1.0	☐
1.5	Efficient Building Envelope	2.0	☐
1.6	Efficient Building Envelope	3.0	☐
1.7	Efficient Building Envelope	0.5	☐
2.1	Air Leakage Control and Efficient Ventilation	0.5	☐
2.2	Air Leakage Control and Efficient Ventilation	1.0	☑
2.3	Air Leakage Control and Efficient Ventilation	1.5	☐
2.4	Air Leakage Control and Efficient Ventilation	2.0	☐
3.1	High Efficiency HVAC	1.0	☐
3.2	High Efficiency HVAC	1.0	☐
3.3	High Efficiency HVAC	1.5	☐
3.4	High Efficiency HVAC	1.5	☐
3.5	High Efficiency HVAC	1.5	☑
3.6	High Efficiency HVAC	2.0	☐
4.1	High Efficiency HVAC Distribution System	0.5	☑
4.2	High Efficiency HVAC Distribution System	1.0	☐
5.1	Efficient Water Heating	0.5	☐
5.2	Efficient Water Heating	0.5	☐
5.3	Efficient Water Heating	1.0	☐
5.4	Efficient Water Heating	1.5	☐
5.5	Efficient Water Heating	2.0	☑
5.6	Efficient Water Heating	2.5	☐
6.1	Renewable Electric Energy (3 credits max) 0	*1200 kwh	☐
7.1	Appliance Package	0.5	☑
Total Credits		**7.0**	

1 2018 W.S.E.C. SCHEDULES
SCALE: NOT TO SCALE

ARCHITECTS NORTHWEST
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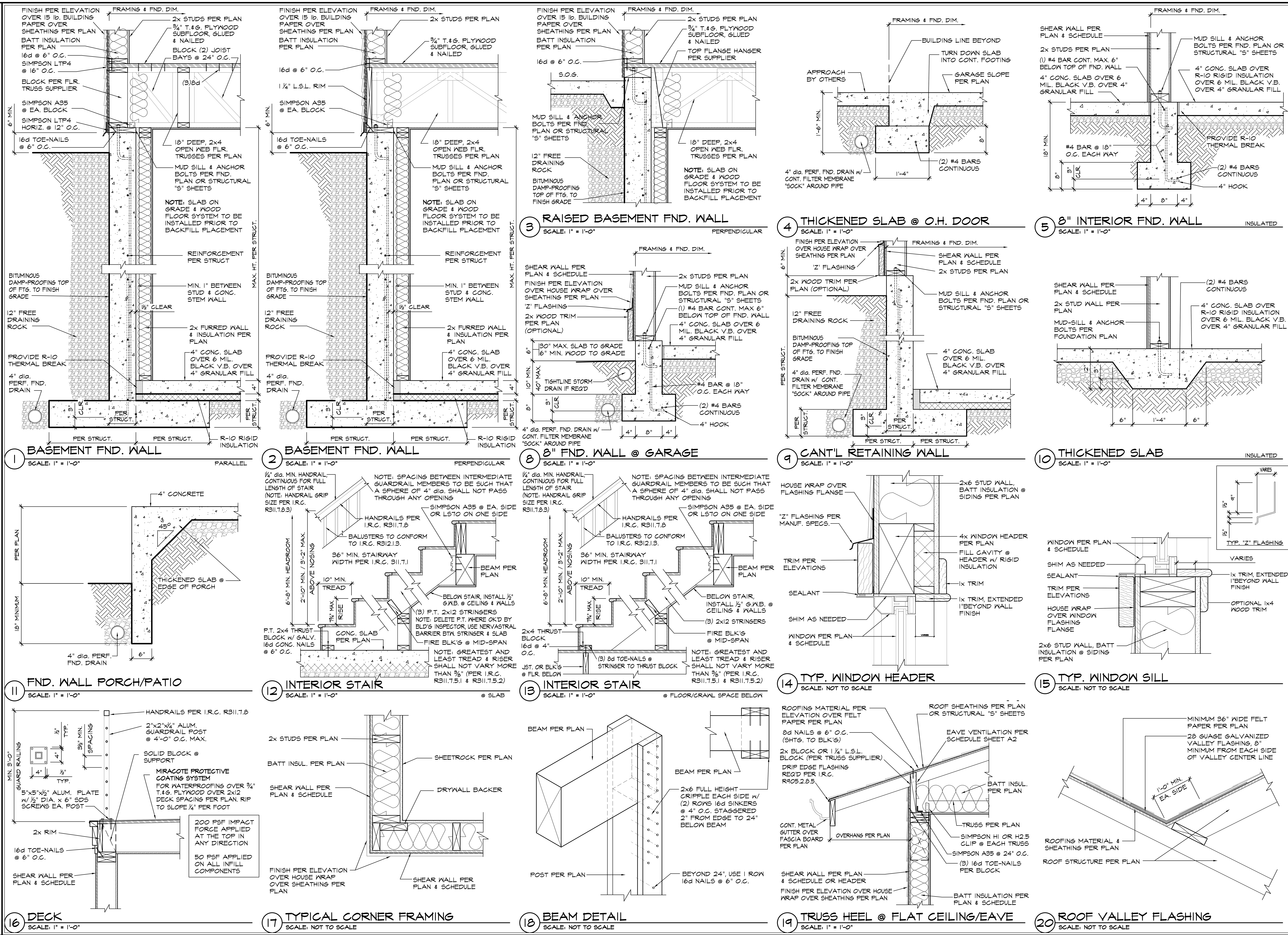
PHAN-NGUYEN RESIDENCE
4102 ISLAND CREST WAY, MERCER ISLAND, WA 98040
PLAN M5762A3FU-OFB

DESIGNED BY: SW — DATE: 12/2022
DRAWN BY: JSC — DATE: 3/21/23
PROJECT MANAGER: SARAH WEIGHT
REVISED BY: JSC — DATE: 1 10/15/24
LATERAL BY: ZED — DATE: 3/2/23
LATERAL JOB NUMBER: 23-111

A2 / A14

AW WOODINVILLE OFFICE JOB NUMBER: 220185



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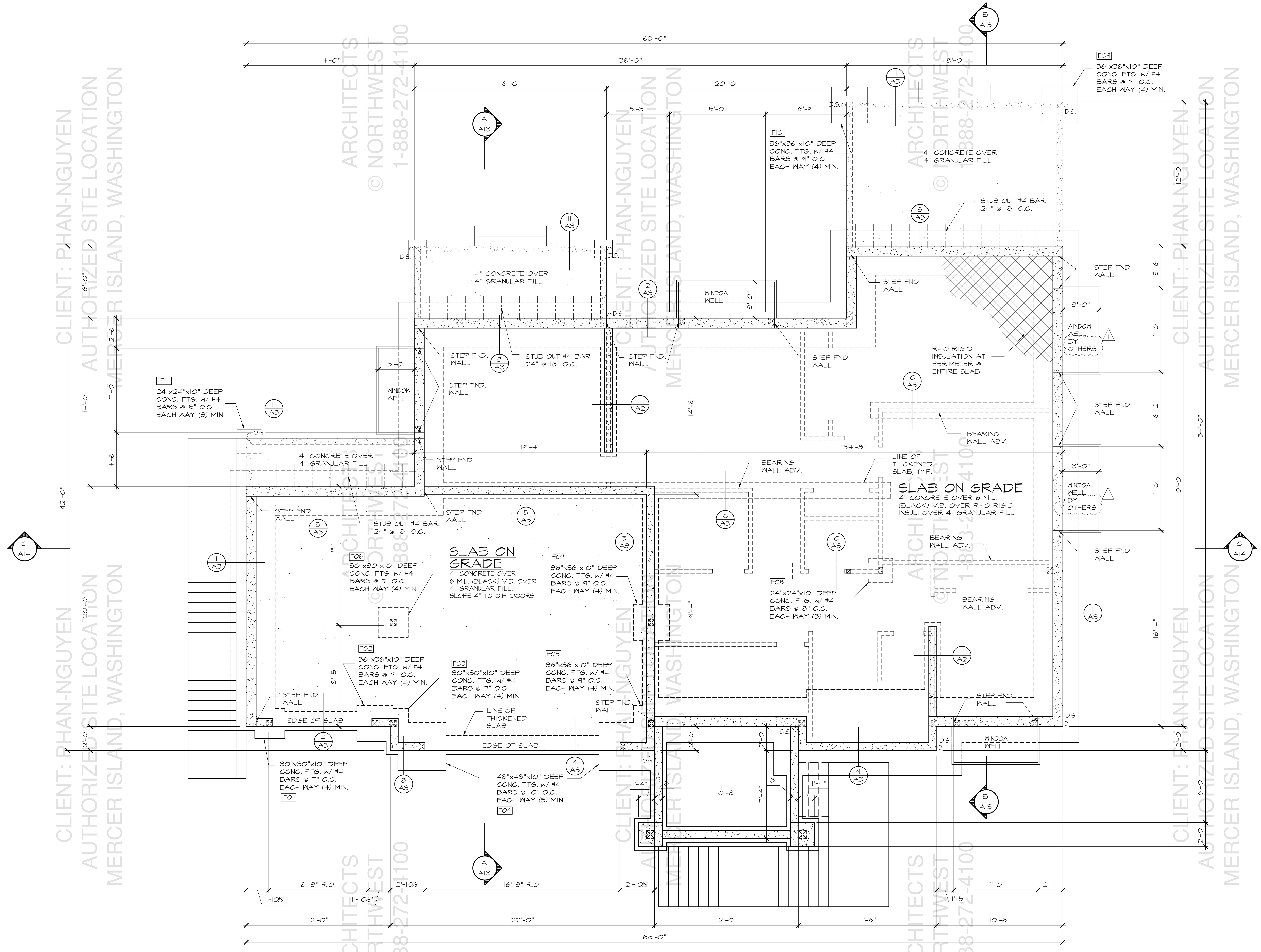
PHAN-NGUYEN RESIDENCE
4102 ISLAND CREST WAY, MERCER ISLAND, WA 98040
PLAN M5762A3FU-0FB

DESIGNED BY: SW DATE: 12/2022
DRAWN BY: JSC DATE: 3/21/23
PROJECT MANAGER: SARAH WEIGHT
REVISED BY: JSC DATE: 1 10/15/24
LATERAL BY: ZED DATE: 3/2/23
LATERAL JOB NUMBER: 23-111

A3
A14

AWW WOODINVILLE OFFICE JOB NUMBER:
220185



FOUNDATION PLAN

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

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

FOUNDATION NOTES:

1. CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
2. ALL FOOTINGS TO REST ON UNDISTURBED SOIL.
3. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED.
4. SOFFIT, VENT & INSULATE CANTILEVERED AREAS.
5. STEP FOUNDATION PER SITE CONDITIONS.
6. 1,500 P.S.F. ASSUMED SOIL BEARING CAPACITY SHALL BE VERIFIED IN FIELD.
7. SEE SHEET A1 FOR ADDITIONAL NOTES.
8. SEE SHEET A2 FOR FOUNDATION VENTILATION CALCULATION.

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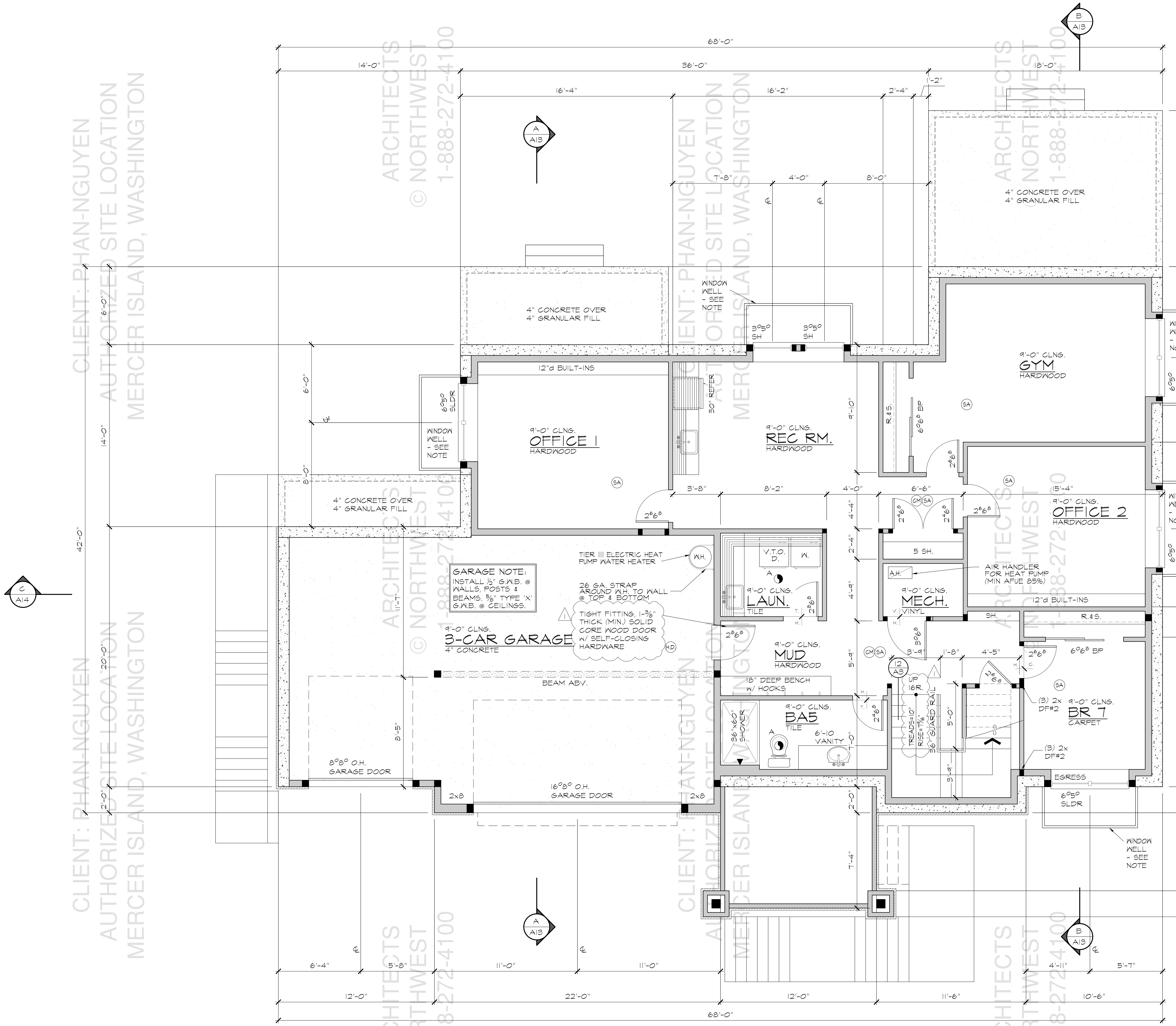
A14

ANW WOODINVILLE OFFICE JOB NUMBER: 220185



LOWER FLOOR PLAN

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

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

WINDOW WELL PER IRC R310.2.3, TO BE PROVIDED BY OTHERES.

1. MINIMUM 9 SQUARE FEET AREA WITH NO LESS THAN 3 FOOT HORIZONTAL DIMENSION (WINDOW MUST BE ABLE TO FULLY OPEN).
2. MAXIMUM 44 INCH DEPTH OR PROVIDE LADDER OR STAIRS IN COMPLIANCE WITH SRC R310.2.1.
3. CONNECTED TO THE BUILDING'S FOUNDATION DRAINAGE SYSTEM.

FLOOR PLAN NOTES:

1. CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
2. WINDOWS & DOORS ARE SHOWN & NOTED AS NOMINAL SIZES.
3. EXTERIOR WALLS TO BE 2x6 STUDS @ 16" O.C. U.N.O.
4. SOFFIT DOWN AREAS ARE SHADED.
5. ■ INDICATES POINT LOAD SUPPORTED BY (2) STUDS, U.N.O.
6. PROVIDE A VENTED WINDOW IN EACH HABITABLE ROOM. THE FOLLOWING ARE NOT CONSIDERED HABITABLE ROOMS: BATHROOMS, TOILET ROOMS, CLOSETS, HALLS, STORAGE OR UTILITY SPACES AND SIMILAR.
7. SEE SHEET A1 FOR ADDITIONAL NOTES.
8. SEE SHEET A2 FOR VENTILATION AND ALARM SCHEDULES.

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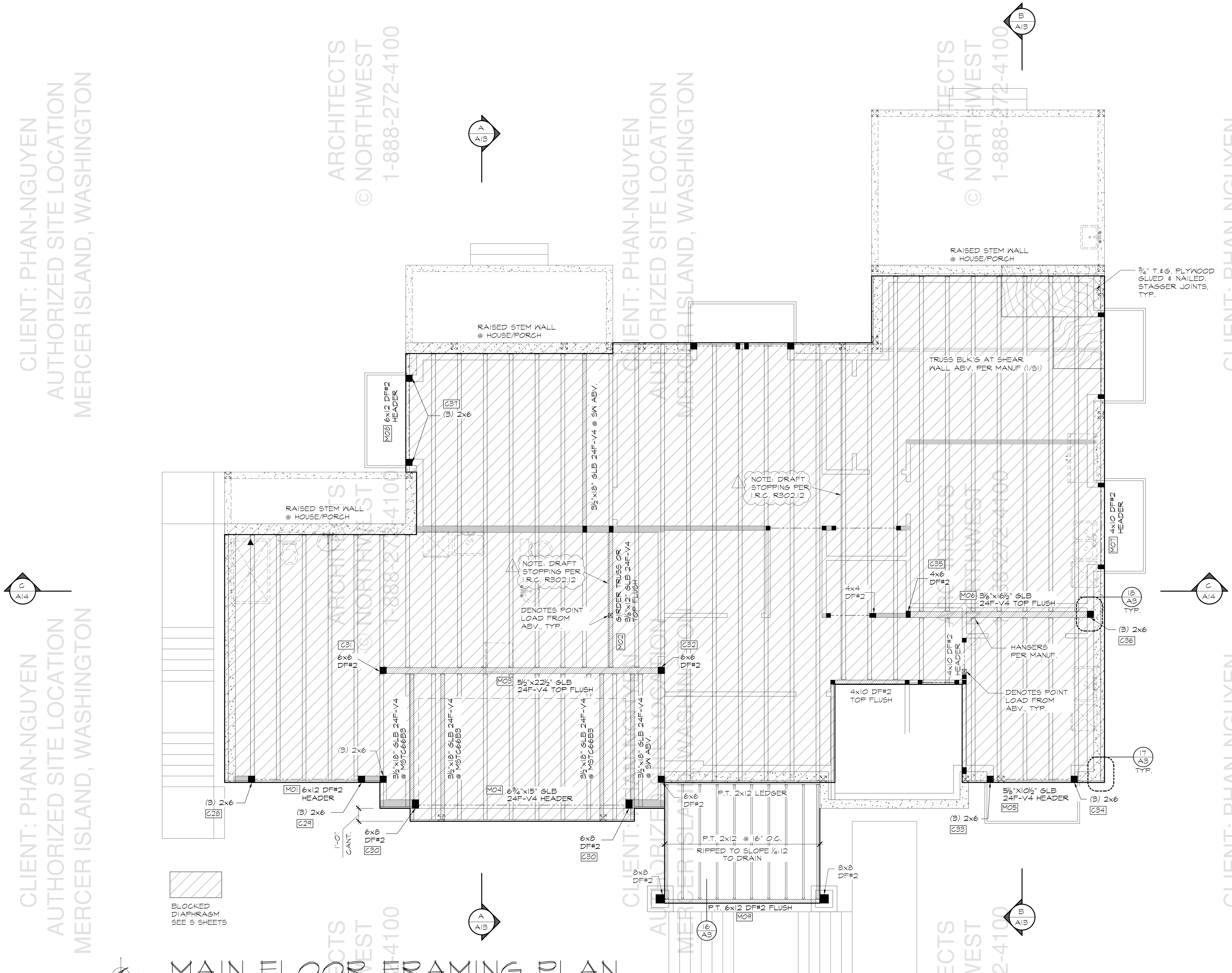
A5 / A14

ANW WOODINVILLE OFFICE JOB NUMBER: 220185



MAIN FLOOR FRAMING PLAN

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

NOTE: ROOF EAVES THAT ARE WITHIN 5'-0" OF THE PROPERTY LINE TO HAVE FIRE-BLOCKING FROM THE WALL TOP PLATE TO THE UNDERSIDE OF THE ROOF SHEATHING. PER I.R.C. TABLE R302.1(1) FOOTNOTE 'a'.

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

BEAM SCHEDULE

PLAN VIEW	DESCRIPTION
(dashed double line)	DROPPED BEAM DESIGNATED ON FLOOR PLANS.
(dash-dot line)	DROPPED BEAM DESIGNATED ON FRAMING PLANS.
(hatched bar)	FLUSH AND TOP FLUSH BEAM DESIGNATED ON FRAMING PLANS.

FLOOR FRAMING NOTES:

1. CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
2. ALL FLOOR JOISTS TO BE 18" DEEP, 2x4 OPEN WEB FLOOR TRUSSES @ 24" ON CENTER UNLESS NOTED OTHERWISE (U.N.O.)
3. ALL BEAMS & HEADERS TO BE 4x10 DF#2 U.N.O.
4. PROVIDE SOLID BLOCKING OVER SUPPORTS.
5. PROVIDE FIRE BLOCKING @ ALL PLUMBING PENETRATIONS.
6. BEARING WALLS ARE SHADED.
7. PLUMBING AND MECHANICAL FIXTURES ARE DASHED.
8. ■ INDICATES POINT LOAD SUPPORTED BY (2) STUDS, U.N.O.
9. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED.
10. SEE SHEET A1 FOR ADDITIONAL NOTES.

REGISTERED ARCHITECT
5046
JEFFREY P. GROULET
STATE OF WASHINGTON
1/8/14

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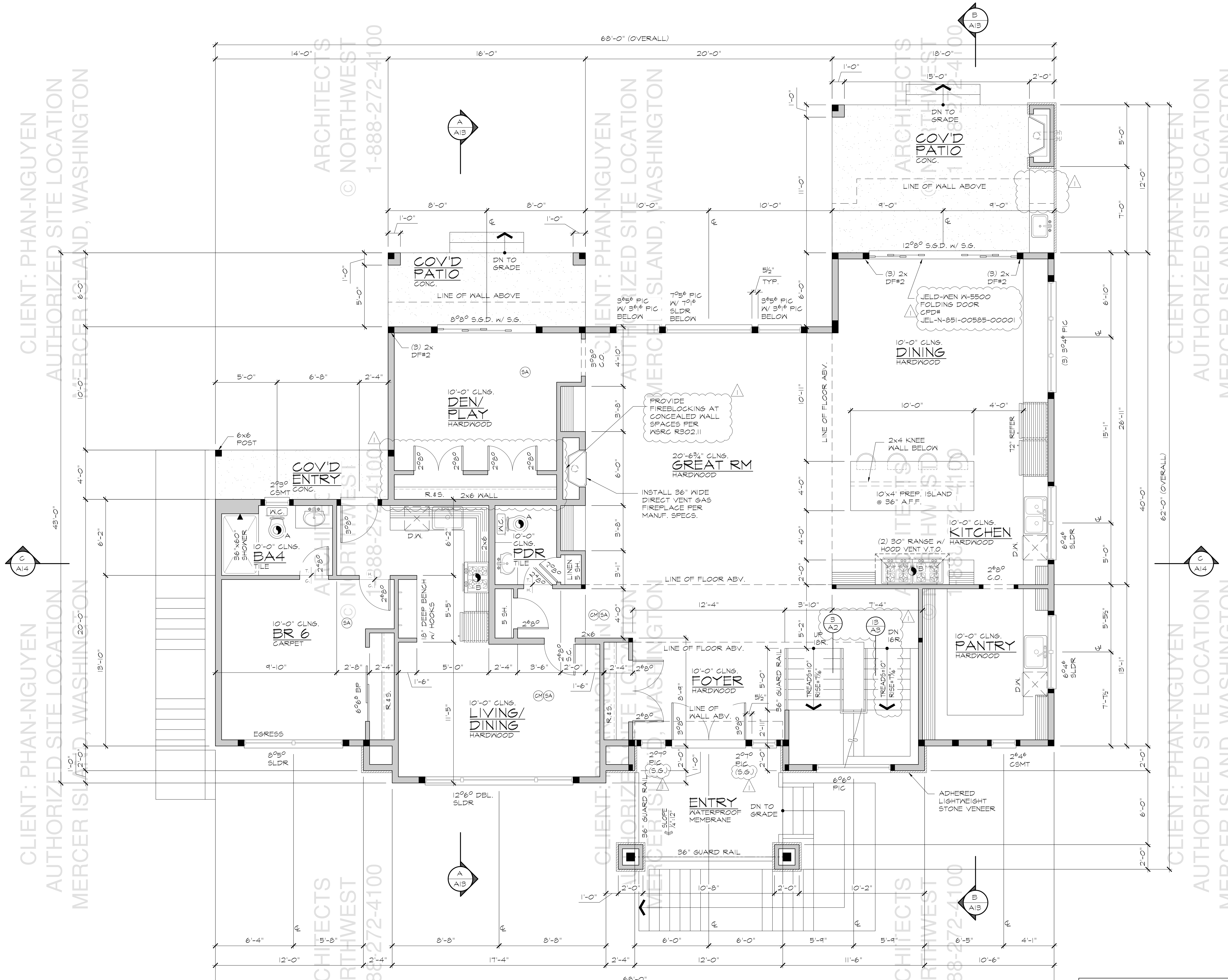
A6 / A14

ANW WOODINVILLE OFFICE JOB NUMBER: 220185



MAIN FLOOR PLAN

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

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

2018 W.S.E.C. CREDITS

FUEL NORMALIZATION (SYSTEM TYPE 2)
FOR AN INITIAL HEATING SYSTEM USING A HEAT PUMP THAT MEETS FEDERAL STANDARDS FOR THE EQUIPMENT LISTED IN TABLE C403.3.2(1)C OR C403.3.2(2)

EFFICIENT BUILDING ENVELOPE: (PER OPTION 1.3)
PRESCRIPTIVE COMPLIANCE IS BASED ON R402.1.1 WITH THE FOLLOWING MODIFICATIONS: VERTICAL FENESTRATION U=0.28, FLOOR R-38, SLAB ON GRADE R-10

AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTIONS: (PER OPTION 2.2)
COMPLIANCE BASED ON SECTION R402.4.1.2: REDUCE THE TESTED AIR LEAKAGE TO 2.0 AIR CHANGES PER HOUR MAXIMUM AT 50 PASCALS

HIGH EFFICIENCY HVAC EQUIPMENT: (PER OPTION 3.5)
AIR-SOURCE, CENTRALLY DUCTED HEAT PUMP WITH MINIMUM HSPF OF 11.0.

HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM OPTIONS: (PER OPTION 4.1)
ALL SUPPLY AND RETURN DUCTS LOCATED IN AN UNCONDITIONED ATTIC SHALL BE DEEPLY BURIED IN CEILING INSULATION IN ACCORDANCE WITH SECTION R403.3.7.

EFFICIENT WATER HEATING OPTIONS: (PER OPTION 5.5)
ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER III OF NEEA'S ADVANCED WATER HEATING SPECIFICATION

APPLIANCE PACKAGE OPTION: (PER OPTION 7.1)
ALL OF THE FOLLOWING APPLIANCES SHALL BE NEW AND INSTALLED IN THE DWELLING UNIT AND SHALL MEET THE FOLLOWING STANDARDS:
DISHWASHER – ENERGY STAR RATED
REFRIGERATOR (IF PROVIDED) – ENERGY STAR RATED
WASHING MACHINE – ENERGY STAR RATED
DRYER – ENERGY STAR RATED, VENTLESS DRYER WITH A MINIMUM CEF RATING OF 5.2.

AREA SUMMARY

LOWER FLOOR:	1586 S.F.
MAIN FLOOR:	1733 S.F.
MAIN FLOOR ADU:	575 S.F.
UPPER FLOOR:	1868 S.F.
TOTAL HEATED AREA:	5762 S.F.
GARAGE AREA:	704 S.F.
COVERED AREA:	0 S.F.

GFA SUMMARY

LOWER FLOOR:	1586 S.F.
GARAGE:	704 S.F.
MAIN FLOOR:	2308 S.F.
MAIN FLOOR (200% MOD)	524 S.F.
UPPER FLOOR:	1868 S.F.
UPPER COV'D DECK:	116 S.F.
UPPER STAIRS:	104 S.F.
TOTAL GFA:	7210 S.F.
BASEMENT EXCLUDED:	-1692 S.F.
TOTAL GFA:	5518 S.F.

REGISTERED ARCHITECT 5046 STATE OF WASHINGTON 1/8/14

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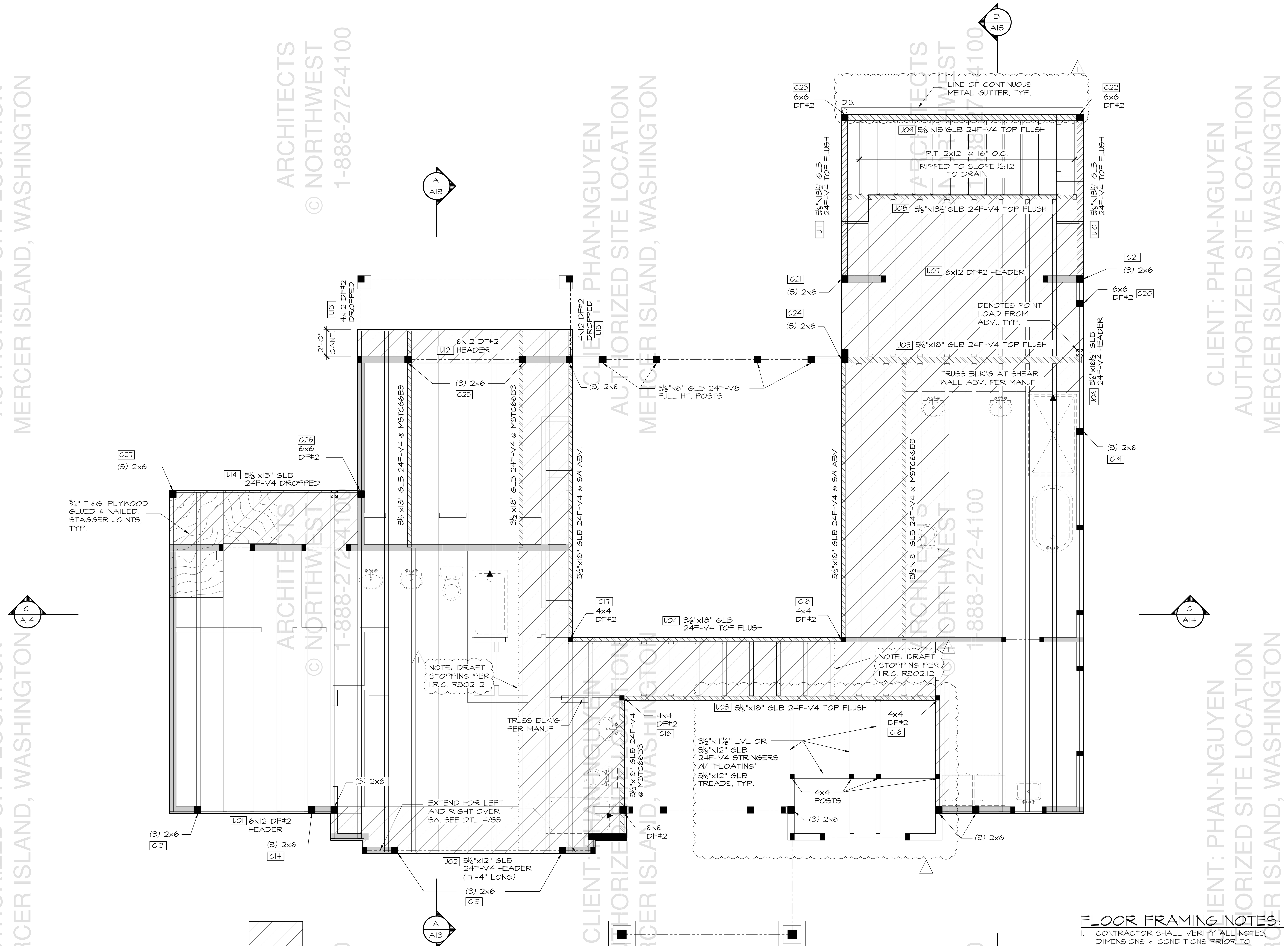
ANW WOODINVILLE OFFICE JOB NUMBER: 220185



BLOCKED DIAPHRAGM SEE S SHEETS

UPPER FLOOR FRAMING PLAN

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

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

BEAM SCHEDULE	
PLAN VIEW	DESCRIPTION
– – – – –	DROPPED BEAM DESIGNATED ON FLOOR PLANS.
—- - —- - —	DROPPED BEAM DESIGNATED ON FRAMING PLANS.
(hatched bar)	FLUSH AND TOP FLUSH BEAM DESIGNATED ON FRAMING PLANS.

FLOOR FRAMING NOTES:

1. CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
2. ALL FLOOR JOISTS TO BE 18" DEEP, 2x4 OPEN WEB FLOOR TRUSSES @ 24" ON CENTER UNLESS NOTED OTHERWISE (U.N.O.)
3. ALL BEAMS & HEADERS TO BE 4x10 DF#2 U.N.O.
4. PROVIDE SOLID BLOCKING OVER SUPPORTS.
5. PROVIDE FIRE BLOCKING @ ALL PLUMBING PENETRATIONS.
6. WINDOW HEADERS @ 8'-0" ABOVE FINISHED FLOOR @ MAIN FLOOR U.N.O. WINDOW HEADERS @ 8'-0" ABOVE FINISHED FLOOR @ UPPER FLOOR U.N.O.
7. BEARING WALLS ARE SHADED.
8. PLUMBING AND MECHANICAL FIXTURES ARE DASHED.
9. ■ INDICATES POINT LOAD SUPPORTED BY (2) STUDS, U.N.O.
10. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED.
11. ROOF EAVES THAT ARE WITHIN 5'-0" OF THE PROPERTY LINE TO HAVE FIRE-BLOCKING FROM THE WALL TOP PLATE TO THE UNDERSIDE OF THE ROOF SHEATHING, PER I.R.C. TABLE R302.1(1) FOOTNOTE 'a'.
12. SEE SHEET A1 FOR ADDITIONAL NOTES.

5046 REGISTERED ARCHITECT JEFFREY P. CROULET STATE OF WASHINGTON 1/8/14

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A8 / A14

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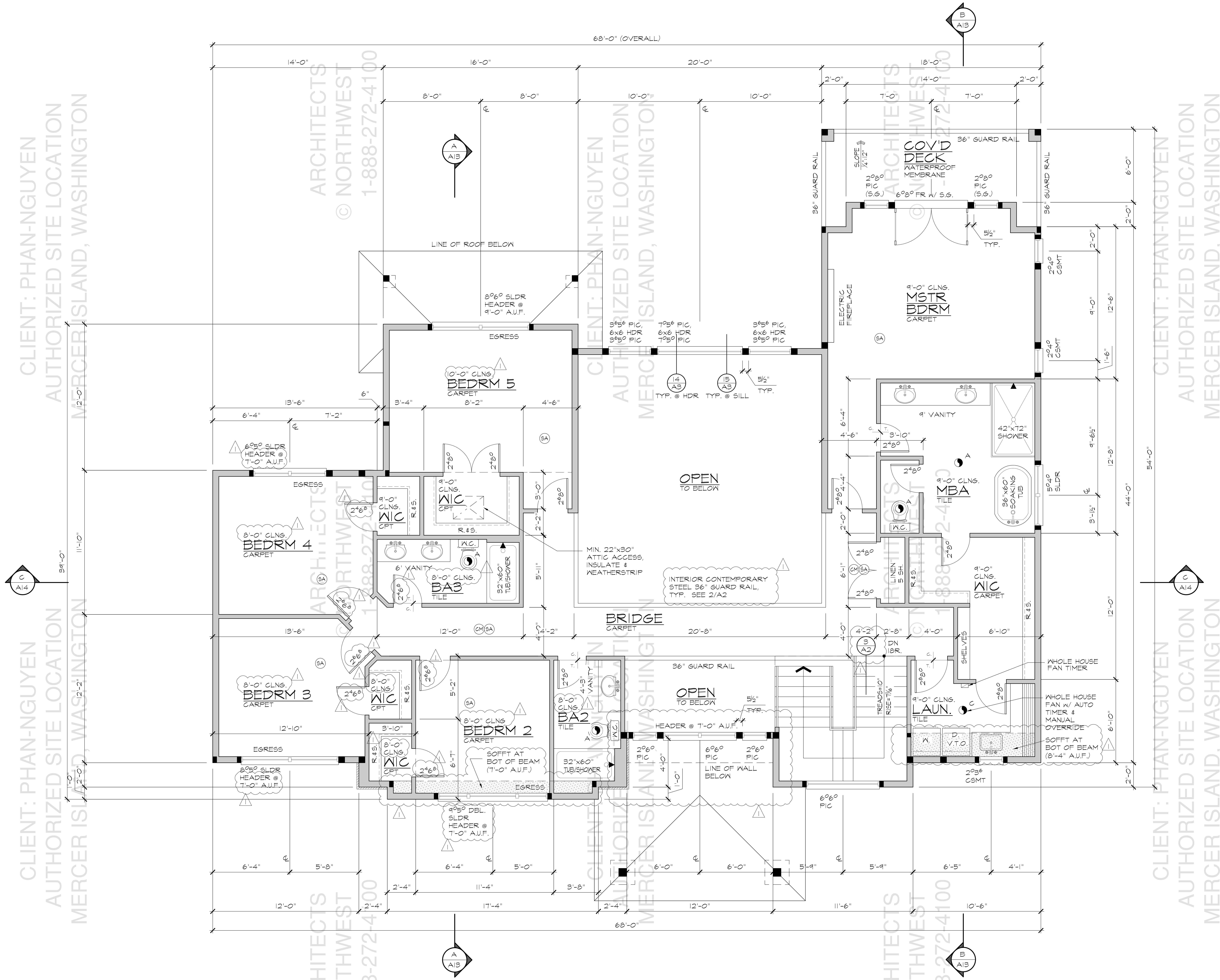

UPPER FLOOR PLAN

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

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

5046 REGISTERED ARCHITECT
JEFFREY P. CROULET
STATE OF WASHINGTON
1/8/14

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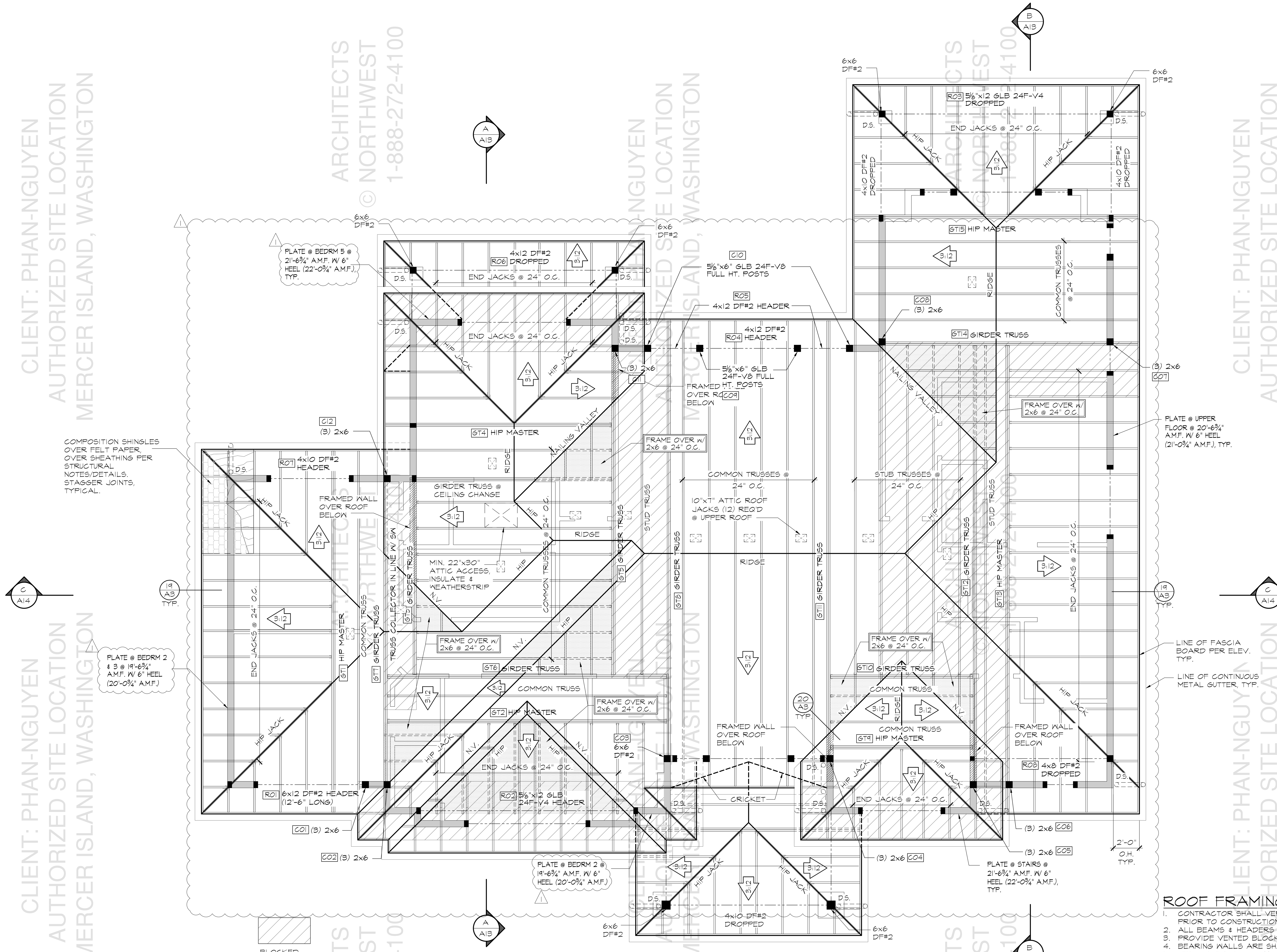

ROOF FRAMING PLAN

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

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

BEAM SCHEDULE	
PLAN VIEW	DESCRIPTION
— — — —	DROPPED BEAM DESIGNATED ON FLOOR PLANS.
—·—·—·—	DROPPED BEAM DESIGNATED ON FRAMING PLANS.
(shaded)	FLUSH AND TOP FLUSH BEAM DESIGNATED ON FRAMING PLANS.

ROOF FRAMING NOTES:

1. CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
2. ALL BEAMS & HEADERS TO BE 4x10 DF#2 U.N.O.
3. PROVIDE VENTED BLOCKING OVER SUPPORTS.
4. BEARING WALLS ARE SHADED.
5. WINDOW HEADERS @ 8'-0" ABOVE FINISHED FLOOR @ MAIN FLOOR U.N.O. WINDOW HEADERS @ 8'-0" ABOVE FINISHED FLOOR @ UPPER FLOOR U.N.O.
6. ALL TRUSSES:
   * SHALL CARRY MANUFACTURER'S STAMP.
   * SHALL BE INSTALLED & BRACED TO MANUFACTURERS SPECIFICATIONS.
   * SHALL HAVE DESIGN DETAILS & DRAWINGS ON SITE FOR FRAMING INSPECTION.
   * SHALL NOT BE FIELD ALTERED WITHOUT PRIOR BUILDING DEPARTMENT APPROVAL OF ENGINEERS CALCULATIONS.
   * TRUSS HANGERS SHALL BE SPECIFIED BY THE TRUSS ENGINEER.
7. ROOF EAVES THAT ARE WITHIN 5'-0" OF THE PROPERTY LINE TO HAVE FIRE-BLOCKING FROM THE WALL TOP PLATE TO THE UNDERSIDE OF THE ROOF SHEATHING, PER I.R.C. TABLE R302.1(1) FOOTNOTE 'a'.
8. ■ INDICATES POINT LOAD SUPPORTED BY (2) STUDS, U.N.O.
9. INSTALL SHEAR WALLS &/OR BLOCKING IN ROOF STRUCTURE BEFORE INSTALLING FINISH ROOFING.
10. SEE SHEET A1 FOR ADDITIONAL NOTES.
11. SEE SHEET A2 FOR ROOF VENTILATION CALCULATION(S).

REGISTERED ARCHITECT 5046 JEFFREY P. CROULET STATE OF WASHINGTON 1/8/14

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LATERAL BY: ZED DATE: 3/2/23
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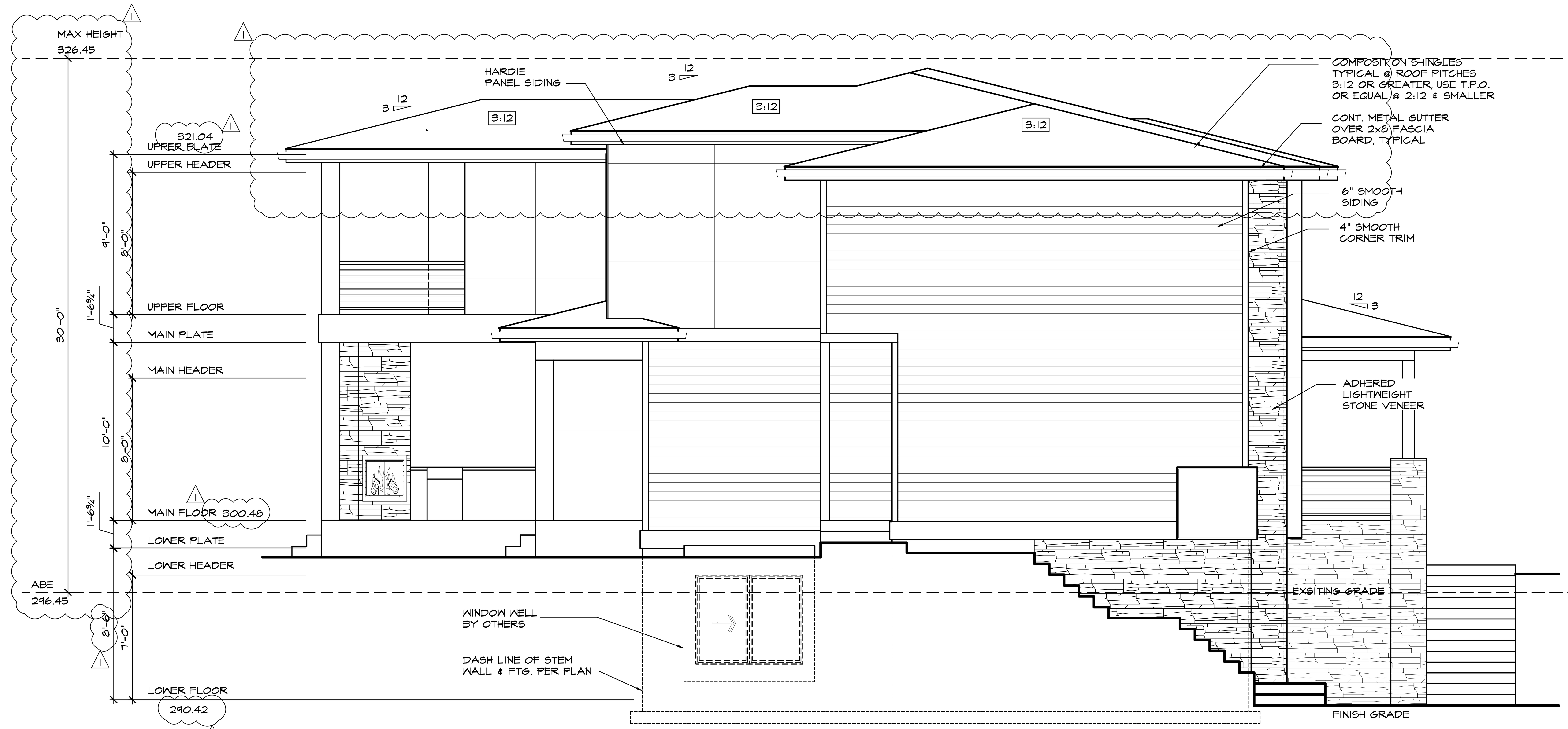
A10 / A14

ANW WOODINVILLE OFFICE JOB NUMBER: 220185

FRONT ELEVATION (WEST)

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



LEFT ELEVATION (NORTH)

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

ELEVATION NOTES:

1. VERIFY SHEAR WALL NAILING & HOLDOWNS PER PLAN PRIOR TO INSTALLING SIDING.
2. MASONRY & WOOD FRAME CHIMNEYS ARE TO BE CONSTRUCTED PER IRC CHAPTER 10.
3. CAULK ALL EXTERIOR JOINTS & PENETRATIONS.
4. PROVIDE APPROVED CORROSION RESISTANT FLASHING AT EXTERIOR WALL ENVELOPE PER IRC R703.8
5. PROVIDE FLASHING AT ROOF PENETRATIONS PER IRC R903.2 & R903.2.1
6. PROVIDE WEATHER STRIPPING AT ALL EXTERIOR & GARAGE-INTERIOR DOORS.
7. PROVIDE CONTINUOUS GUTTERS & DOWNSPOUTS @ ALL EAVES, TYP.
8. ADDRESS OR HOUSE NUMBER TO BE POSTED AND PLAINLY VISIBLE FROM THE STREET FRONTAGE. HUMBERS TO BE MIN. 4" HIGH WITH ½" WIDE STROKE & CONTRASTING BACKGROUND.
9. PROVIDE STAIRWAY ILLUMINATION PER IRC R303.7 & R303.8
10. SEE COVERSHEET FOR ADDITIONAL NOTES.

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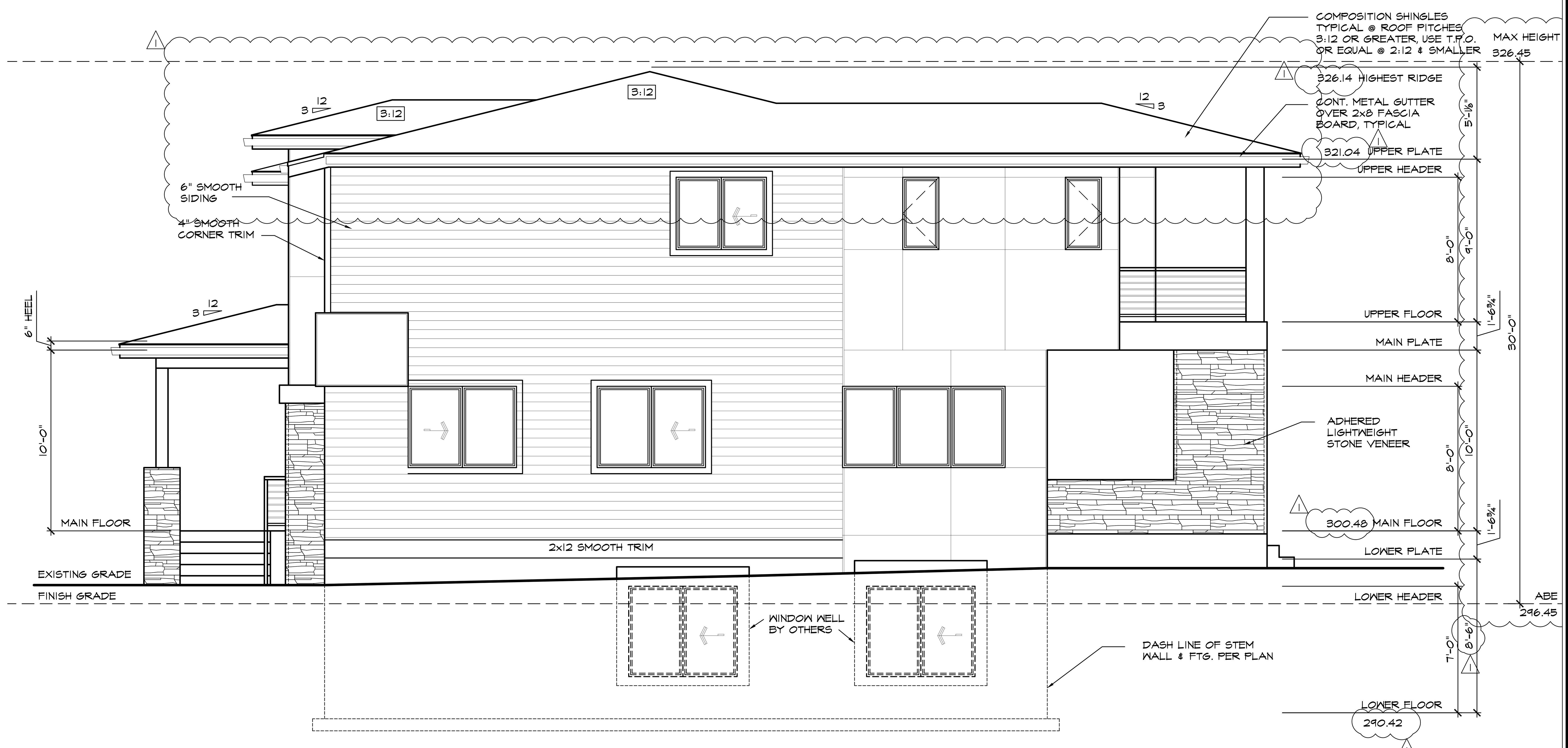
A11 / A14

ANW WOODINVILLE OFFICE JOB NUMBER: 220185

REAR ELEVATION (EAST)

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



RIGHT ELEVATION (SOUTH)

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

ELEVATION NOTES:

1. VERIFY SHEAR WALL NAILING & HOLDOWNS PER PLAN PRIOR TO INSTALLING SIDING.
2. MASONRY & WOOD FRAME CHIMNEYS ARE TO BE CONSTRUCTED PER IRC CHAPTER 10.
3. CAULK ALL EXTERIOR JOINTS & PENETRATIONS.
4. PROVIDE APPROVED CORROSION RESISTANT FLASHING AT EXTERIOR WALL ENVELOPE PER IRC R703.8
5. PROVIDE FLASHING AT ROOF PENETRATIONS PER IRC R903.2 & R903.2.1
6. PROVIDE WEATHER STRIPPING AT ALL EXTERIOR & GARAGE-INTERIOR DOORS.
7. PROVIDE CONTINUOUS GUTTERS & DOWNSPOUTS @ ALL EAVES, TYP.
8. ADDRESS OR HOUSE NUMBER TO BE POSTED AND PLAINLY VISIBLE FROM THE STREET FRONTAGE. NUMBERS TO BE MIN. 4" HIGH WITH ½" WIDE STROKE & CONTRASTING BACKGROUND.
9. PROVIDE STAIRWAY ILLUMINATION PER IRC R303.7 & R303.8
10. SEE COVERSHEET FOR ADDITIONAL NOTES.

5046 REGISTERED ARCHITECT JEFFREY P. ... STATE OF WASHINGTON 1/8/14

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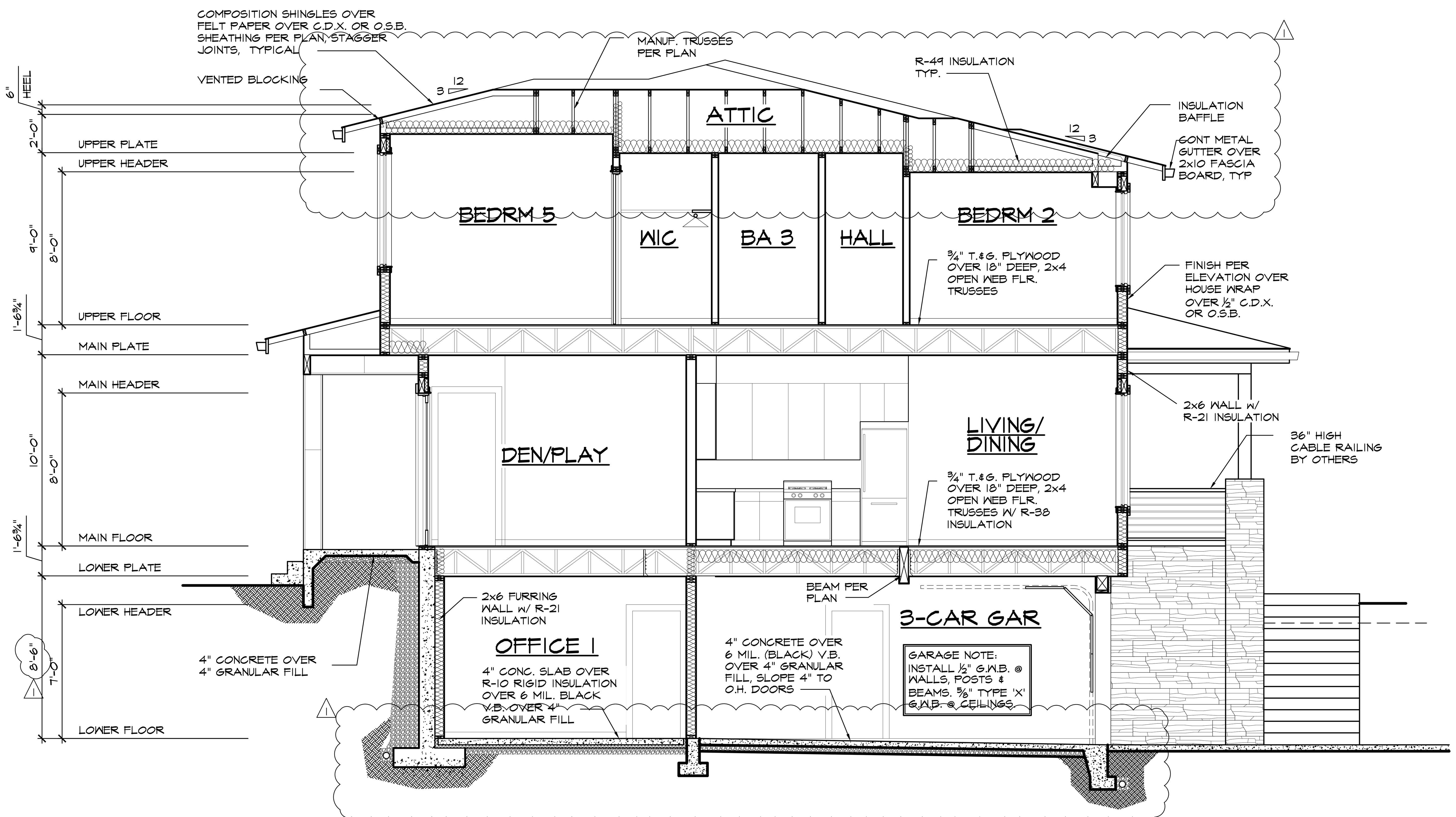
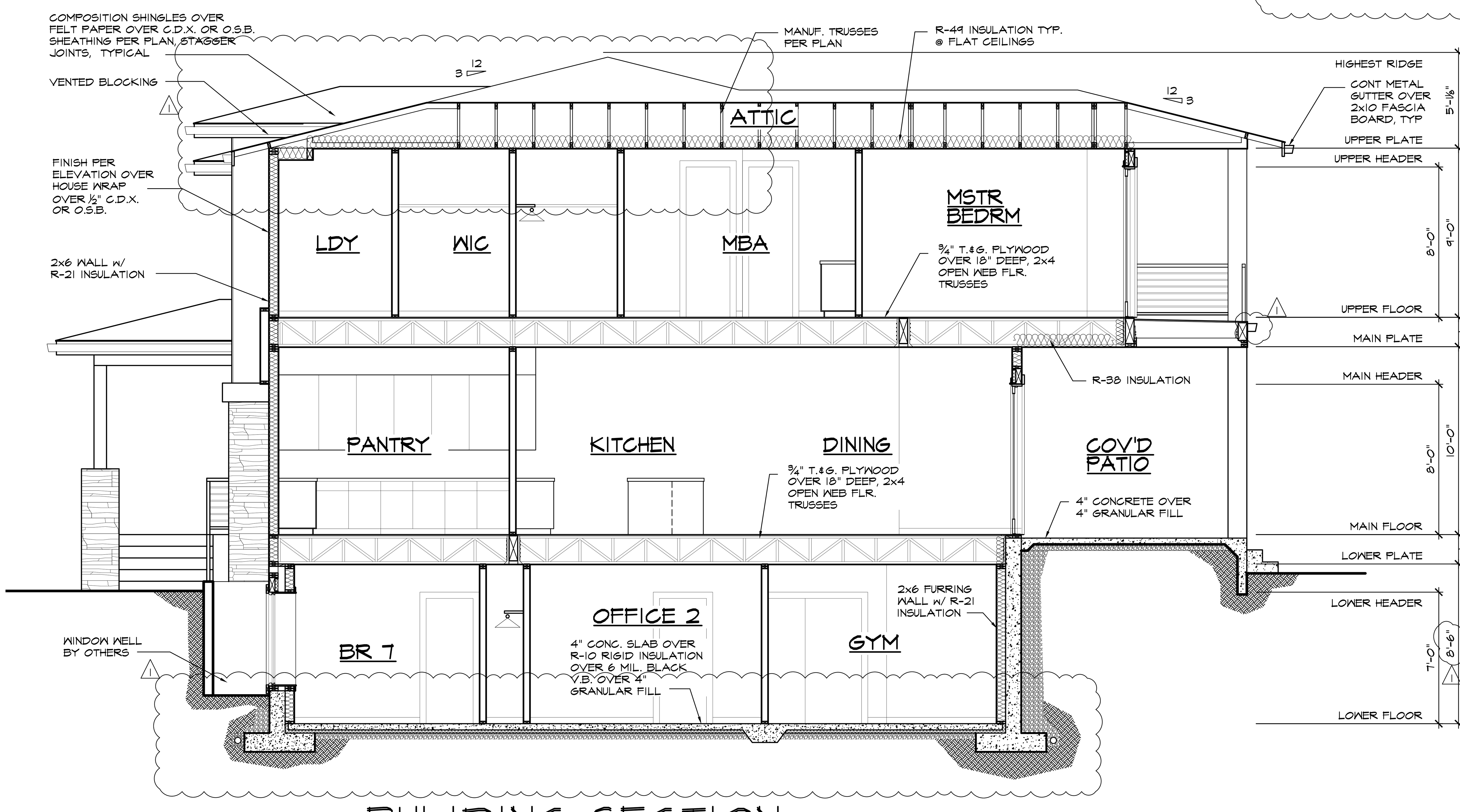


A BULIDING SECTION
SCALE: 1/4" = 1'-0"



B BULIDING SECTION
SCALE: 1/4" = 1'-0"

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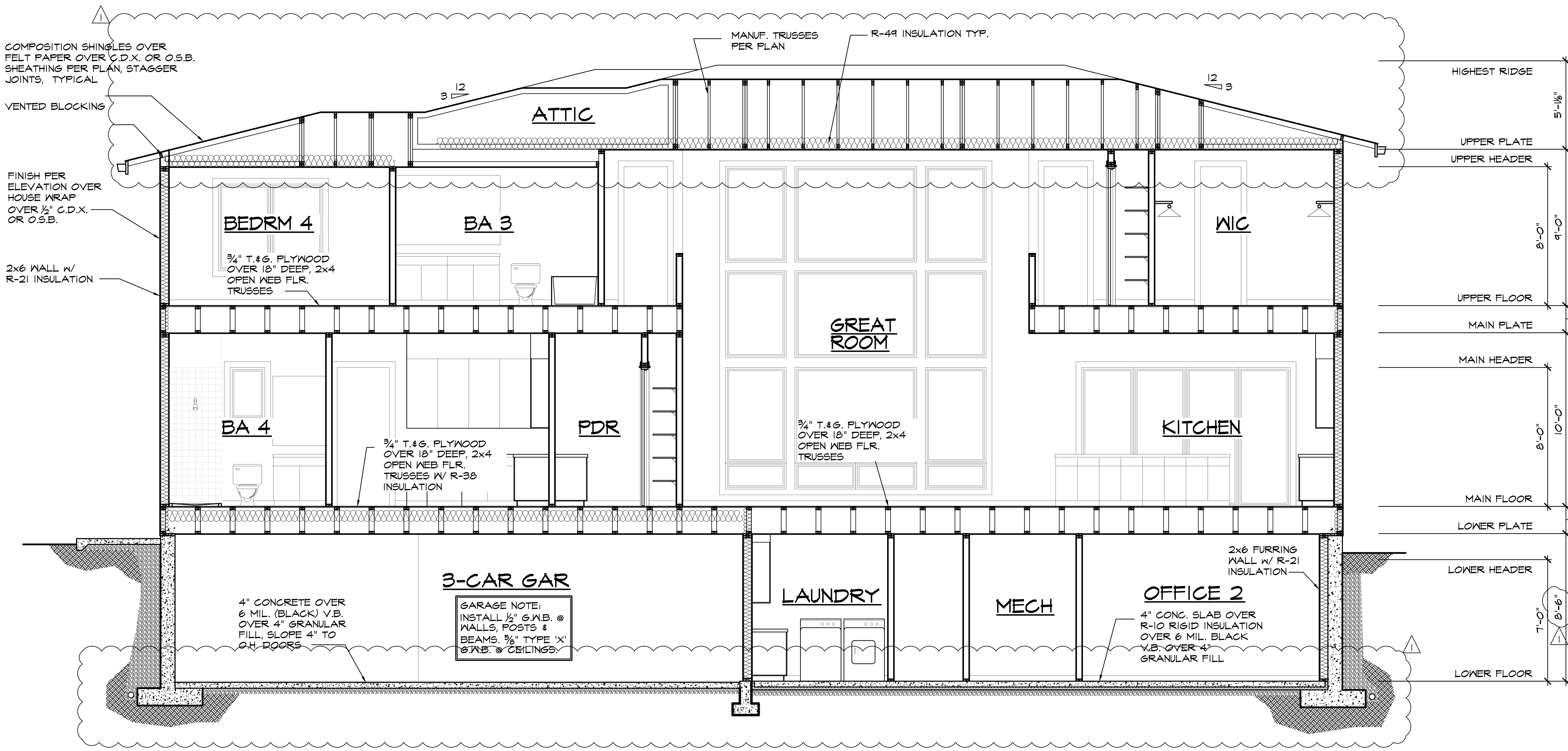
PLAN M5762A3FU-OFB

DESIGNED BY: SW	DATE: 12/2022
DRAWN BY: JSC	DATE: 3/21/23
PROJECT MANAGER: SARAH WEIGHT	
REVISED BY: JSC	DATE: 1 10/15/24
LATERAL BY: ZED	DATE: 3/2/23
LATERAL JOB NUMBER: 23-111	

A13
A14

ANW WOODINVILLE OFFICE JOB NUMBER: 220185



C BULIDING SECTION

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

5046 REGISTERED ARCHITECT JEFFREY P. GRC... STATE OF WASHINGTON 1/8/14

ARCHITECTS NORTHWEST
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PHAN-NGUYEN RESIDENCE

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GENERAL STRUCTURAL NOTES (GSN)

GOVERNING CODE: THE "INTERNATIONAL BUILDING CODE" (IBC) 2018 EDITION, AS ADOPTED AND MODIFIED BY THE CITY OF MERCER ISLAND, GOVERNS THE DESIGN, CONSTRUCTION, AND ALL MATERIALS WORKMANSHIP OF THIS PROJECT.
REFERENCE STANDARDS: WHERE OTHER STANDARDS ARE NOTED IN THE DRAWINGS, THE LATEST EDITION OF THE MATERIALS REFERENCE STANDARDS SHALL BE USED.THE CONTRACTOR SHALL CONFORM WITH THE SECTIONS REFERRED TO THE IBC AND WITH THE ENTIRE MATERIALS REFERENCE STANDARDS NOTED BELOW.
ARCHITECTURAL DRAWINGS: REFER TO THE ARCHITECTURAL DRAWINGS FOR INFORMATION INCLUDING, BUT NOT LIMITED TO: DIMENSIONS, ELEVATIONS, SLOPES, DOOR AND WINDOW OPENINGS, NON-BEARING WALLS, STAIRS, ELEVATORS, CURBS, DRAINS, DEPRESSIONS, RAILINGS, WATERPROOFING, FINISHES AND OTHER NONSTRUCTURAL ITEMS.
STRUCTURAL DETAILS: THE STRUCTURAL DRAWINGS ARE INTENDED TO SHOW THE GENERAL CHARACTER OF THE PROJECT AND ARE NOT INTENDED TO SHOW ALL DETAILS OF THE WORK. USE ALL DETAIL SHEETS AND ALL SPECIFIC DETAILS REFERENCED IN THE PLAN AS "TYPICAL" WHEREVER THEY APPLY.
INSPECTIONS: THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL INSPECTIONS REQUIRED. NOTIFY BUILDING DEPARTMENT FOR INSPECTIONS REQUIRED BY LOCAL JURISDICTION AND IN ACCORDANCE WITH CHAPTER 17 PER IBC.
DISCREPANCIES: ANY DISCREPANCY FOUND BETWEEN THE DRAWINGS, NOTES, SPECIFICATIONS, SITE CONDITIONS, AND PLANS SHALL BE REPORTED TO THE ARCHITECT AND ENGINEER WHO SHALL CORRECT THE DISCREPANCY IN WRITING. ANY WORK COMPLETED AFTER DISCOVERY OF THE DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S RISK. CONTRACTOR IS RESPONSIBLE FOR PROVIDING CORRECT SITE INFORMATION. ALL UNDERGROUND UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO EXCAVATION OR DRILLING.
SITE VERIFICATION: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE PRIOR TO FABRICATION AND/OR CONSTRUCTION. CONFLICTS BETWEEN THE DRAWINGS AND ACTUAL SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ALL UNDERGROUND UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO EXCAVATION OR DRILLING.
CONSTRUCTION LOADS: LOADS ON THE STRUCTURE DURING CONSTRUCTION SHALL NOT EXCEED THE DESIGN LOADS OR THE CAPACITY OF THE PARTIALLY COMPLETED CONSTRUCTION. 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. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS CONFORM TO ASCE 37-02 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION".

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.

CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-02 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION."

DESIGN CRITERIA: PER CITY OF MERCER ISLAND DESIGN CRITERIA

ROOF LOADS:	DEAD LOADS	15 PSF
	LIVE LOADS	25 PSF
FLOOR LOADS:	DEAD LOADS	13 PSF
	LIVE LOADS	40 PSF
	DECKS LIVE LOAD	60 PSF

SNOW LOAD: GROUND SNOW LOAD, Pg = 25 PSF; SNOW EXPOSURE FACTOR, Ce = 1.0; SNOW IMPORTANCE FACTOR, Is = 1.0; THERMAL FACTOR, Ct = 1.0.
WIND DESIGN: BASIC WIND SPEED (3-SECOND GUST), V = 110 MPH; WIND IMPORTANCE FACTOR, Iw = 1.0; OCCUPANCY CATEGORY = II; EXPOSURE CATEGORY = B; WIND SPEED-UP FACTOR Kzt=1.3 PER CITY OF MERCER ISLAND DESIGN CRITERIA;
SEISMIC DESIGN: SEISMIC IMPORTANCE FACTOR Ie = 1.0; OCCUPANCY CATEGORY = II; Ss = 1.417g; S1 = 0.493g; SEISMIC DESIGN CATEGORY = D; Sds = 1.134g; SEISMIC DESIGN CATEGORY = D; BASIC SEISMIC FORCE RESISTING SYSTEM (BEARING WALL SYSTEMS) LIGHT-FRAMED WALLS WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE AND FLEXIBLE DIAPHRAGMS; Cs =0.174; R =6.5; Cd=4; OMEGA=2.5; SEISMIC BASE SHEAR = 26.52 KIPS. ANALYSIS PROCEDURE=EQUIVALENT LATERAL FORCE PROCEDURE PER ASCE 7, SEC 12.8
DEFLECTIONS: TOTAL LOAD DEFLECTION LIMIT: L/240
LIVE LOAD DEFLECTION LIMIT: L/360

DEFERRED SUBMITTALS (DESIGN-BY-OTHERS): SUBMIT PRODUCT DATA AND PROOF OF ICC APPROVAL FOR FRAMING MEMBERS AND FASTENERS THAT HAVE BEEN PREPARED BY THE SPECIALTY STRUCTURAL ENGINEER (SSE) IN THE STATE OF WASHINGTON FOR ALL MEMBERS AND CONNECTIONS ALONG WITH SHOP DRAWINGS. DESIGN SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD (SER) FOR REVIEW PRIOR TO SUBMISSION TO THE JURISDICTION FOR APPROVAL. THE SSE SHALL SUBMIT TO THE ENGINEER FOR REVIEW CALCULATIONS AND SHOP DRAWINGS THAT ARE STAMPED AND SIGNED BY THE SSE. REVIEW OF THE SSE'S SHOP DRAWINGS IS FOR GENERAL COMPLIANCE WITH DESIGN CRITERIA AND COMPATIBILITY WITH THE DESIGN OF THE PRIMARY STRUCTURE AND DOES NOT RELIEVE THE SSE OF RESPONSIBILITY FOR THAT DESIGN. ALL NECESSARY BRIDGING, BLOCKING, BLOCKING PANELS AND WEB STIFFENERS SHALL BE DETAILED AND FURNISHED BY THE SUPPLIER. TEMPORARY AND PERMANENT BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S SPECIFICATIONS. DEFLECTION LIMITS SHALL BE AS NOTED UNDER DESIGN LOADS SECTION. THESE ELEMENTS INCLUDE BUT ARE NOT LIMITED TO:
-HANDRAILS & GUARDRAILS
-ENGINEERED WOOD BEAMS
-PREFABRICATED WOOD COMPONENETS-SHEAR WALLS/WOOD PANELS
-TEMPORARY SHORING SYSTEMS

-METAL PLATE CONNECTED ROOF TRUSSES (PREFABRICATED ROOF TRUSSES): SHOP DRAWINGS SHALL PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, HIPS, AND VALLEYS SHOWN ON THE DRAWINGS. THE MANUFACTURER SHALL PROVIDE TRUSS HANGERS, SPECIAL HIP, VALLEY AND INTERSECTION AREAS (STEP DOWN TRUSSES, JACK TRUSSES AND GIRDER TRUSSES) UNLESS SPECIFICALLY INDICATED ON THE PLANS. PROVIDE ALL TRUSS-TO-TRUSS AND TRUSS-TO-SUPPORT CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. SPECIFY TEMPORARY AND PERMANENT BRACING AND CONNECTIONS ON THE SHOP DRAWINGS. PROVIDE ALL TRUSS REACTIONS OVER 1000# ON SHOP DRAWINGS.
ALTERATION OF THE TRUSS LAYOUT INDICATED ON THE PLANS MAY REQUIRE SUPPORTING STRUCTURAL AND FOUNDATION CHANGES, THEREFORE PRIOR APPROVAL BY THE ARCHITECT/DESIGNER AND STRUCTURAL ENGINEER IS REQUIRED.

SOILS AND FOUNDATIONS

REFERENCE STANDARDS: CONFORM TO IBC CHAPTER 18 "SOILS AND FOUNDATIONS."
FOUNDATIONS: EXTEND FOOTINGS TO FIRM AND UNYIELDING NATIVE SOIL OR STRUCTURAL FILL WITH AN ALLOWABLE SOIL BEARING CAPACITY OF 1500 PSF (ASSUMED). BOTTOM OF EXTERIOR FOOTINGS SHALL BE 1'-6" MIN BELOW OUTSIDE FINISHED GRADE, UNLESS SPECIFIED BY THE JURISDICTION. MAINTAIN A MINIMUM 6" SEPARATION BETWEEN FINISH GRADE & UNTREATED WOOD FRAMING.
EXTERIOR PERIMETER FOOTINGS SHALL BEAR NOT LESS THAN 16 INCHES BELOW ADJACENT FINISHED GRADE, OR SPECIFIED BY THE BUILDING OFFICIAL. INTERIOR FOOTINGS SHALL BEAR NOT LESS THAN 12 INCHES BELOW FINISH FLOOR. FOOTINGS SHALL BE CENTERED BELOW COLUMNS OR WALLS ABOVE, U.N.O.
FOUNDATION STEM WALLS: THE HEIGHT OF THE STEM WALL SHALL BE AS NOTED ON THE DRAWINGS TO FIT THE HOLDOWN REQUIREMENTS. MAINTAIN A MINIMUM 6" SEPARATION BETWEEN FINISH GRADE & UNTREATED WOOD FRAMING.
BACKFILLING: UNLESS OTHERWISE SPECIFIED BY A GEOTECHNICAL ENGINEER, BACKFILL BEHIND FOUNDATION WALLS SHALL BE OF FREE-DRAINING MATERIAL PLACED IN MAXIMUM LOOSE LIFTS OF 12". BACKFILL SHALL BE COMPACTED USING HAND-OPERATED EQUIPMENT ONLY. THE CONTRACTOR SHALL REFRAIN FROM OPERATING HEAVY EQUIPMENT BEHIND FOUNDATION WALLS WITHIN A DISTANCE EQUAL TO OR GREATER THAN THE HEIGHT OF THE WALL.
STRUCTURAL FILL: UNLESS OTHERWISE SPECIFIED BY A GEOTECHNICAL ENGINEER, FOOTINGS SHALL BE PLACED ON COMPACTED MATERIAL AND SHALL BE WELL-GRADED GRANULAR MATERIAL WITH NO MORE THAN 5% PASSING A #2 SIEVE. FILLS PLACED SHALL BE IN MAXIMUM 8" LIFTS AND ALL BEARING SOILS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT USING THE MODIFIED PROCTOR TEST.
COMPACTION: UNLESS OTHERWISE SPECIFIED BY A GEOTECHNICAL ENGINEER, FOOTINGS SHALL BE PLACED ON COMPACTED MATERIAL AND SHALL BE WELL-GRADED GRANULAR MATERIAL WITH NO MORE THAN 5% PASSING A #2 SIEVE. FILLS PLACED SHALL BE IN MAXIMUM 8" LIFTS AND ALL BEARING SOILS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT USING THE MODIFIED PROCTOR TEST.

GEOTECHNICAL

ALLOWABLE SOIL PRESSURE AND LATERAL EARTH PRESSURE ARE ASSUMED AND THEREFORE MUST BE VERIFIED BY A QUALIFIED SOIL ENGINEER OR APPROVED BY BUILDING OFFICIAL. IF SOILS ARE FOUND TO BE OTHER THAN ASSUMED, NOTIFY THE STRUCTURAL ENGINEER FOR POSSIBLE FOUNDATION REDESIGN.
ALLOWABLE BEARING CAPACITY-STRUCTURAL FILL 1500 PSF (ASSUMED)

CAST-IN-PLACE CONCRETE

REFERENCE STANDARDS: CONFORM TO:
(1) ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY".
(2) IBC CHAPTER 19, CONCRETE.
FIELD REFERENCE: THE CONTRACTOR SHALL KEEP A COPY OF ACI FIELD REFERENCE MANUAL, SP-15, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301) WITH SELECTED ACI AND ASTM REFERENCES."
CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF f'c=3000 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. SPECIAL INSPECTION OF CONCRETE WALLS IS REQUIRED TO BE PROVIDED BY A WABO-CERTIFIED SPECIAL INSPECTION AGENCY FOUND AT WWW.WABO.ORG. RECOMMENDED "KRAZAN & ASSOCIATES, INC" HTTP:/WWW.KRAZAN.COM.
ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ASTM C666.
CONCRETE COVER: CONFORM TO THE FOLLOWING COVER REQUIREMENTS FROM ACI 301, TABLE 3.3.2.3:
CONCRETE CAST AGAINST EARTH 3"
CONCRETE EXPOSED TO EARTH OR WEATHER (#5 & SMALLER) 1-1/2"
CONCRETE EXPOSED TO EARTH OR WEATHER (#6 & LARGER) 2"
BARS IN SLABS AND STEM WALLS 3/4"

MATERIALS:
REINFORCING BARS ASTM A615, GRADE 60, DEFORMED BARS, fy=60000 PSI.
SMOOTH WELDED WIRE FABRIC ASTM A185
EXCEPTIONS ARE ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS. REINFORCING SHALL BE GRADE 40, fy=40000 PSI AND GRADE 60, fy=60000 PSI.
FORMWORK: CONFORM TO ACI 301 SEC 2 "FORMWORK AND FORM ACCESSORIES." REMOVAL OF FORMS SHALL CONFORM TO SEC 2.3.2 EXCEPT STRENGTH INDICATED IN SEC 2.3.2.5 SHALL BE 0.75 f'c.
MEASURING, MIXING, AND DELIVERY: CONFORM TO ACI 301 SEC 4.3.
HANDLING, PLACING, CONSTRUCTING AND CURING: CONFORM TO ACI 301 SEC 5 AND SEC 3.3.2 "PLACEMENT." PLACING TOLERANCES SHALL CONFORM TO SEC 3.3.2.1 "TOLERANCES."
EMBEDDED ITEMS: POSITION AND SECURE IN PLACE EXPANSION JOINT MATERIAL, ANCHORS AND OTHER STRUCTURAL AND NON-STRUCTURAL EMBEDDED ITEMS BEFORE PLACING CONCRETE. CONTRACTOR SHALL REFER TO MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL DRAWINGS AND COORDINATE ALL OTHER EMBEDDED ITEMS.
FABRICATION: CONFORM TO ACI 301, SEC 3.2.2 "FABRICATION", AND ACI SP-66 "ACI DETAILING MANUAL."
WELDING: CONFORM TO AWS D1.4/D1.4M. WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH (AWS AND WABO) REQUIREMENTS. USE E70 ELECTRODES OF TYPE REQUIRED FOR MATERIALS TO BE WELDED.
SPLICES: CONFORM TO ACI 301, SEC 3.3.2.7. REFER TO "LAP SPLICE SCHEDULE" OR PLANS FOR TYPICAL SPLICES. THE SPLICES INDICATED ON INDIVIDUAL SHEETS CONTROL OVER THE SCHEDULE. USE CLASS B SPLICES UNLESS OTHERWISE NOTED. MECHANICAL CONNECTIONS MAY BE USED WHEN APPROVED BY THE ENGINEER.
FIELD BENDING: CONFORM TO ACI 301 SEC 3.3.2.8. "FIELD BENDING OR STRAIGHTENING." BAR SIZES #3 THROUGH #5 MAY BE FIELD BENT COLD THE FIRST TIME , PROVIDED REINFORCING BAR TEMPERATURE IS ABOVE 32°F. FOR OTHER BARS SIZES REQUIRE PREHEATING BEFORE FIELD BENDING. DO NOT TWIST BARS.
NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT.
CORNERS BARS: PROVIDE MATCHING-SIZED "L" CORNER BARS FOR ALL HORIZONTAL WALL AND FOOTING BARS WITH THE APPROPRIATE SPLICE LENGTH, UNO.

ANCHORAGE

-EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-XP" EPOXY ADHESIVE AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ESREPORT ESR-2508. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED. RODS SHALL BE ASTM A36, UNO.
-HEAVY DUTY THREADED CONCRETE ANCHORS SPECIFIED ON THE DRAWINGS SHALL BE "TITAN HD SCREW ANCHOR" AS MANUFACTURED SY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-2713. INCLUDING MINIMUM EMBEDMENT AND EDGE DISTANCE REQUIREMENTS. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES.
-DRIVE PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE LOW VELOCITY TYPE (PDPWL- 300MG. 0.145' DIAMETER. UNO) AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY OR AN APPROVED EQUIVALENT IN STRENGTH AND EMBEDMENT. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-2138. MINIMUM EMBEDMENT IN CONCRETE SHALL BE 1", UNO. MAINTAIN AT LEAST 3" TO NEAREST CONCRETE EDGE.

WOOD FRAMING

REFERENCE STANDARDS: CONFORM TO:
(1) IBC CHAPTER 23 "WOOD",
(2) NDS AND NDS SUPPLEMENT - "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION",
IDENTIFICATION: ALL SAWN LUMBER AND PRE-MANUFACTURED WOOD PRODUCTS SHALL BE IDENTIFIED BY THE GRADE MARK OR A CERTIFICATE OF INSPECTION ISSUED BY THE CERTIFYING AGENCY.
MATERIALS:
SAWN LUMBER: ALL LUMBER SHALL BE KILN-DRIED OR MC-19 AND CONFORM TO GRADING RULES OF WWPA, WCLIB OR NLGA. FINGER JOINTED STUDS ACCEPTABLE AT INTERIOR WALLS ONLY.

MEMBER USE	SIZE	SPECIES	GRADE	MINIMUM BASE VALUE
STUDS, PLATES, MISC	2X, 3X (U.N.O.)	HEM-FIR(U.N.O.)	NO. 2	Fc=575 PSI
JOISTS 2X, 3X	2X6 - 2X12	HEM-FIR	NO. 2	Fb=850 PSI
BEAMS	4X8 - 4X12	DOUG-FIR	NO. 2	Fb=900 PSI
BEAMS	6X8 - 6X12	DOUG-FIR	NO. 2	Fb=875 PSI
POSTS	4X	DOUG-FIR	NO. 2	Fc=700 PSI
POSTS	6X, 8X	DOUG-FIR	NO. 1	Fc=1000 PSI

GLUED LAMINATED TIMBER: MANUFACTURED LUMBER, PSL. LVL, AND LSL, 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 NO OF THE MANUFACTURER, THE GRADE, THE NATIONAL RESEARCH BOARD NUMBER, AND THE QUALITY CONTROL AGENCY. ALL PSL, LVL, AND LSL LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH ICC-ESS REPORT 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. THE MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
GLUED LAMINATED MEMBER BEAMS SHALL NOT BE CAMBERED, UNLESS SHOWN OTHERWISE ON THE PLANS OR SPECIFICATIONS.
MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%. EXCESSIVE DEFLECTIONS MAY OCCUR IF MOISTURE CONTENT EXCEED THIS VALUE.

MEMBER USE	SIZES	SPECIES	STRESS CLASS	USES	Fb(PSI)	Fv(PSI)
GLB	ALL	DF/DF	24F-1.8E 24F-V4	SIMPLE SPANS	2400	265
	ALL	DF/DF	24F-1.8E 24F-V8	CANTILEVER SPANS	2400	265

PSL (2.2E) Fb=2900 PSI, Fv=290 PSI
LVL (2.0E) Fb=2600 PSI, Fv=285 PSI
LSL (1.55E) Fb=2325 PSI, Fv=310 PSI
PSL COLUMN (1.8E) Fc=2900 PSI,

PLYWOOD SHEATHING SHALL BE APA-RATED STRUCTURAL SHEATHING GRADE C-D EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH THE AMERICAN PLYWOOD ASSOCIATION (APA). ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.

MINIMUM APA RATING

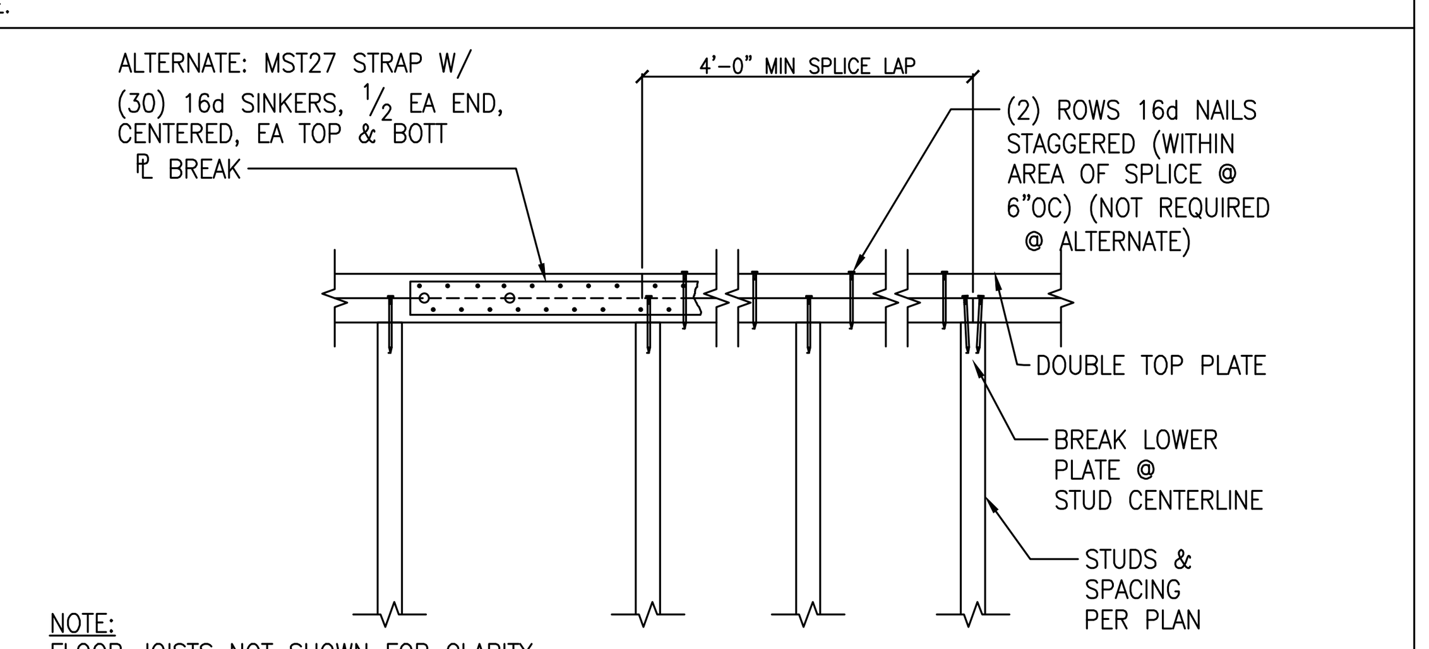
LOCATION	THICKNESS	SPAN RATING	PLYWOOD GRADE	EXPOSURE
ROOF	15/32"	32/16	C-D	1
FLOOR	23/32"	24 OC	STURD-I-FLOOR	1
WALLS	15/32"	32/16	C-D	1

PREFABRICATED PLYWOOD WEB JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE TRUS-JOIST CORPORATION. ALTERNATE PLYWOOD WEB JOIST MANUFACTURED BY THE TRUSS-JOIST CORPORATION, ALTERNATE PLYWOOD WEB JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. JOIST HANGERS AND CONNECTORS SHALL BE "SIMPSON STRONG-TIE" CATALOG C-C-2021-23. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH PLYWOOD WEB JOIST PROVIDED. ALL 2x JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJI JOIST SHALL BE CONNECTED TO FLUSH BEAMS WITH "IUS" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIU" SERIES JOIST HANGERS.WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE 1/2 OF THE NAILS OR BOLTS IN EACH MEMBER. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. UNLESS NOTED OTHERWISE ALL NAILS SHALL BE FULL LENGTH COMMON. NAIL STRAPS TO WOOD FRAMING AS LATE AS POSSIBLE IN THE FRAMING PROCESS TO ALLOW THE WOOD TO SHRINK AND THE BUILDING TO SETTLE.
ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.
NAILS AND STAPLES: CONFORM TO IBC SEC 2303.6 "NAILS AND STAPLES." UNLESS NOTED ON PLANS, NAIL PER IBC TABLE 2304.10.1. UNLESS NOTED OTHERWISE ALL NAILS SHALL BE COMMON. NAIL SIZES SPECIFIED ON THE DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER	TYPE
8d	2-1/2"	0.131"	COMMON
10d	3"	0.148"	GUN
12d	3-1/4"	0.148"	GUN
16d	3-1/2"	0.162"	GUN

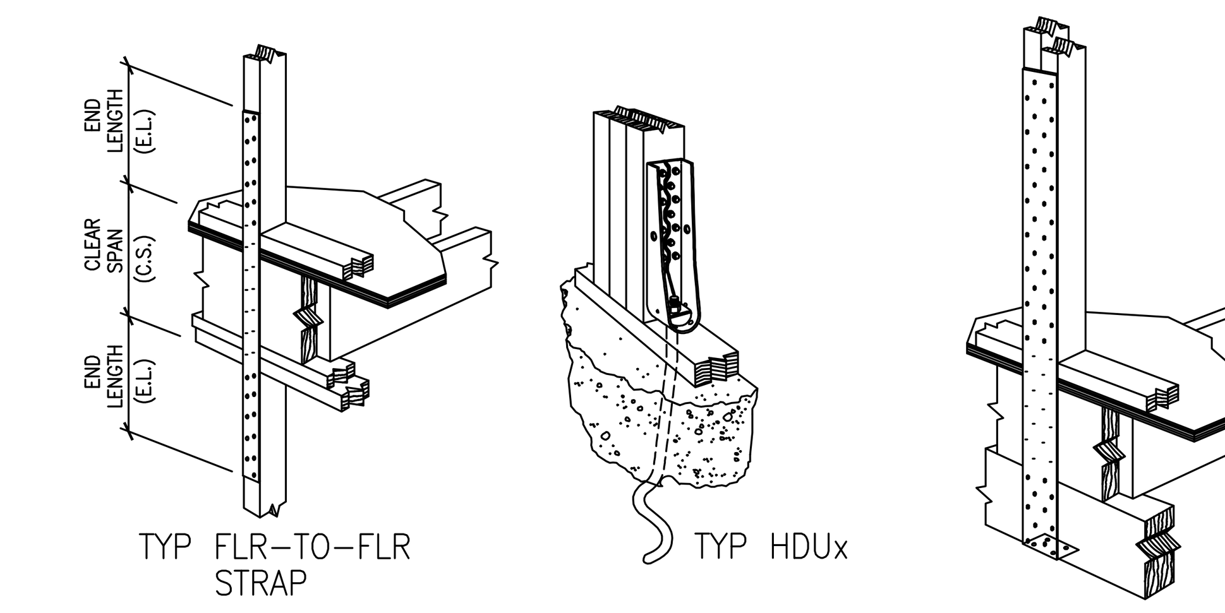
NAILING REQUIREMENTS: PROVIDE MINIMUM NAILING IN ACCORDANCE WITH IBC TABLE 2304.10.1 "FASTENING SCHEDULE" EXCEPT AS NOTED ON THE DRAWINGS. NAILING FOR ROOF/FLOOR DIAPHRAGMS/SHEAR WALLS SHALL BE PER DRAWINGS. NAILS SHALL BE DRIVEN FLUSH AND SHALL NOT FRACTURE THE SURFACE OF SHEATHING.
IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.
LAG BOLTS/BOLTS: CONFORM TO ASTM A307.
ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG SCREWS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (2018 EDITION) WITH A LEAD BORE HOLE OF 60-70% OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS. BOLT HOLES SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN THE BOLT DIAMETER. HOLES SHALL BE ACCURATELY ALIGNED IN MAIN MEMBERS AND SIDE PLATES/ MEMBERS. BOLTS SHALL NOT BE OVERDRIVEN.

SDS SERIES: WOOD SCREWS CALLED OUT ON PLAN SHALL BE "SIMPSON STRONG-DRIVE" WOOD SCREWS BY SIMPSON COMPANY, AND INSTALLED IN STRICT ACCORDANCE TO ICC-ES REPORT ESR-2236. EQUIVALENT SCREWS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. LAG SCREWS ARE NOT AN EQUIVALENT SUBSTITUTION.
WOOD HOLDOWNS: HOLDOWNS SPECIFIED ARE AS MANUFACTURED BY SIMPSON ANCHOR TIE-DOWN CO., INC. ADDITIONAL FRAMING MEMBERS SHALL BE PROVIDED PER THE SYSTEM REQUIREMENTS. ACCEPTABLE EQUIVALENT PRODUCT SUBSTITUTIONS ARE AVAILABLE FROM OTHER MANUFACTURERS WITH ENGINEER APPROVAL.
ENGINEERED WOOD PRODUCTS (I-LEVEL): THE FOLLOWING MATERIALS ARE BASED ON LUMBER MANUFACTURED BY I-LEVEL AND WERE USED FOR THE DESIGN AS SHOWN ON THE PLANS. ALTERNATE PRODUCTS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUIVALENT OR GREATER LOAD AND STIFFNESS PROPERTIES AND ARE REVIEWED AND APPROVED BY THE ENGINEER.
A) LAMINATED VENEER LUMBER (LVL): ICC ES REPORT NO. ER-4979
B) PARALLEL STRAND LUMBER (PSL): ICC ES REPORT NO. ER-4979
C) LAMINATED STRAND LUMBER (LSL): ICC ES REPORT NO. ER-4979
D) I-JOISTS: ICC ES REPORT NO. ER-4979, ESR-1153.
PRODUCTS SHALL BE TESTED AND EVALUATED IN ACCORDANCE WITH ASTM D5055. THE MANUFACTURER SHALL DESIGN THE JOISTS FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. JOISTS SHALL HAVE WOOD CHORDS AND SOLID WOOD WEBS.
STANDARD LIGHT-FRAME CONSTRUCTION: UNLESS NOTED ON THE PLANS, CONSTRUCTION SHALL CONFORM TO IBC 2018 SEC 2308 "CONVENTIONAL LIGHT-FRAME CONSTRUCTION" AND SEC 2304 "GENERAL CONSTRUCTION REQUIREMENTS", THE AITC "TIMBER CONSTRUCTION MANUAL", AND THE AF&PA "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". MINIMUM NAILING, UNLESS NOTED OTHERWISE SHALL CONFORM TO TABLE 2304.10.1. OF THE IBC. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
WALL FRAMING: UNLESS OTHERWISE NOTED, ALL INTERIOR WALLS SHALL BE 2X4 @ 16"OC AND ALL EXTERIOR WALLS SHALL BE 2X6 @ 16"OC. PROVIDE (2)BUNDLED STUDS MIN AT WALL ENDS AND EACH SIDE OF ALL OPENINGS. UNO, ALL SOLID SAWN LUMBER HEADERS SHALL BE SUPPORTED BY A MINIMUM OF (1)TRIM AND (1)KING STUD AND ALL GLULAM OR ENGINEERED WOOD HEADERS BY (2)TRIM AND (2)KING STUDS. AT FRAMED WALLS, UNO ALL SOLID SAWN LUMBER BEAMS SHALL BE SUPPORTED ON A MINIMUM OF (2) BUNDLED 2X STUDS AND ALL GLULAM OR ENGINEERED WOOD BEAMS ON A MINIMUM OF (3) BUNDLED 2X STUDS. STITCH-NAIL BUNDLED STUDS WITH (2)10D @ 12"OC. UNO, ALL INTERIOR AND EXTERIOR HEADERS SHALL BE 4X10 DF#2. PROVIDE SOLID BLOCKING THRU FLOORS TO SUPPORTS BELOW FOR BEARING WALLS AND POSTS. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.
ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE. END NAIL TOP PLATE AND BOTTOM PLATE TO EACH STUD WITH THREE 10d NAILS. FACE NAIL DOUBLE TOP PLATES WITH 10d AT 12"OC AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE TWELVE 10d NAILS AT 4"OC EACH SIDE OF JOINT. AT TOP PLATE INTERSECTIONS PROVIDE THREE 10d FACE NAILS.
ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH TWO ROWS OF 10d NAILS AT 16"OC, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS AT 4'-0"OC EMBEDDED 7" MINIMUM, UNO. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PLATE SECTION WITH ONE BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4 ½" FROM EACH END OF THE PLATE SECTION. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 10d AT 16"OC. UNLESS NOTED OTHERWISE, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH #6 x 1-1/4" TYPE S OR W SCREWS AT 8"OC. UNLESS NOTED OTHERWISE, ½" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAIL AT 6"OC AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UNSUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS AT 12"OC. ALLOW 1/8" SPACING AT ALL PANEL ENDS.
ROOF/FLOOR FRAMING: UNLESS OTHERWISE NOTED, PROVIDE DOUBLE JOISTS/RAFTERS UNDER ALL PARALLEL BEARING PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND SOLID BLOCKING AT ALL BEARING POINTS. PROVIDE DOUBLE JOISTS AROUND ALL ROOF/FLOOR OPENINGS.TOENAIL JOISTS TO SUPPORTS WITH THREE 10d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES PER PLAN. UNO, MULTI-JOISTS/RAFTERS SHALL BE STITCH-NAILED TOGETHER WITH (2)10d @ 12"OC. TOENAIL RIM JOIST TO TOP PLATE WITH 10d AT 6"OC. PROVIDE ROOF SHEATHING EDGE WITH APPROVED CLIPS CENTERED BETWEEN FRAMING AT UNBLOCKED PLYWOOD EDGES. ALL FLOOR SHEATHING SHALL HAVE TONGUE AND GROOVE JOINTS OR BE SUPPORTED BY SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF ROOF/FLOOR SHEATHING. ROOF/FLOOR SHEATHING SHALL BE LAID FACE GRAIN PERPENDICULAR TO FRAMING MEMBERS AND NAILED AT 6"OC WITH 8d NAILS TO FRAMED PANEL EDGES, DRUG-STRUTS, AND OVER STUD WALLS AS PER PLAN AND AT 12"OC TO INTERMEDIATE SUPPORTS..
MOISTURE CONTENT: WOOD MATERIAL USED FOR THIS PROJECT SHALL HAVE MAXIMUM MOISTURE CONTENT OF 19% EXCEPT FOR THE PRESSURE-TREATED WOOD SILL PLATE.
TRUSSES SHALL BE DESIGNED TO NOT ALLOW LIMITED STORAGE PER IBC TABLE 1607.1. WEBS SHALL CONFIGURED SO THAT ALL OPENINGS ARE SMALLER THAN 24" WIDE X 42" HIGH.
SIMPSON STRONG-WALLS TO BE PER SIMPSON CATALOG "C-L-SW17". WASHINGTON REPRESENTATIVE MICHELLE YEE AT MiYee@strongtie.com.
PRESERVATIVE TREATMENT/METAL CONNECTORS: WOOD MATERIALS ARE REQUIRED TO BE "TREATED WOOD" UNDER CERTAIN CONDITIONS IN ACCORDANCE WITH IBC SEC 2304.10.5 "FASTENERS AND CONNECTORS IN CONTACT WITH PRESERVATIVE -TREATED AND FIRE-RETARDANT-TREATED WOOD". CONFORM TO THE APPROPRIATE STANDARDS OF THE AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) FOR SAWN LUMBER, GLUED LAMINATED TIMBER, ROUND POLES, WOOD PILES AND MARINE PILES. FOLLOW AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) QUALITY ASSURANCE PROCEDURES. PRODUCTS SHALL BEAR THE APPROPRIATE MARK.
PRESSURE TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO RETENTION OF 0.25 PCF. WOOD IN CONTINOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO A RETENTION OF 0.40 PCF. SODIUM BORATE (SBX) TRATED WOOD SHALL NOT BE USED WHERE EXPOSED TO WEATHER. FASTENERS AND TIMBER CONNECTORS WITHOUT AMMONIA IN DIRECT CONTACT WITH ACQ-A (UP TO A RETENTION LEVEL OF 0.40 PCF), CBA-A (UP TO A RETENTION LEVEL OF 0.41 PCF), CA-B (UP TO A RETENTION LEVEL OF 0.21 PCF), SHALL BE G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653. FASTENERS AND TIMBER CONNECTORS WITH AMMONIA IN DIRECT CONTACT WITH ACQ-A (OVER A RETENTION LEVEL OF 0.40 PCF), CBA-A (OVER A RETENTION LEVEL OF 0.41 PCF), CA-B (OVER A RETENTION LEVEL OF 0.21 PCF), OR WITH ACZA TREATED WOOD SHALL BE TYPE 304 OR 316 STAINLESS STEEL.
HOT-DIPPED GALVANIZED METAL HARDWARE AND FASTENERS HAVE A MINIMUM ZINC CONTENT OF AT LEAST 1.85 OZ/SF AND ITS USE IS COORDINATED BY THE CONTRACTOR AND WOOD SUPPLIER FOR THE EXPECTED ENVIRONMENT AND MOISTURE EXPOSURE FOR APPROPRIATE USE BASED ON THE METHOD OF PRESERVATIVE TREATMENT OF THE WOOD.
CONTRACTOR INITIATED STRUCTURAL CHANGES SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION AND CONSTRUCTION.
NOTCHES AND HOLES IN WOOD FRAMING:
SAWN LUMBER JOISTS AND RAFTERS: NOTCHES ATTHE ENDS OF JOISTS SHALL NOT EXCEED 1/4 THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED 1/6 THE JOIST DEPTH BE LONGER THAN 1/3 THE JOIST DEPTH, OR BE LOCATED IN THE MIDDLE 1/3 OF THE SPAN. HOLES SHALL NOT BE WITHIN 2" OF THE TOP OR BOTTOM OF THE JOIST AND THE DIAMETER SHALL NOT EXCEED 1/3 THE JOIST DEPTH. SPACING BETWEEN HOLES SHALL BE A MINIMUM OF (2) TIMES THE DIAMETER OF THE LARGEST HOLE OR 2" AND SHALL BE LOCATED A MINIMUM OF 2" FROM ANY NOTCH.
EXTERIOR AND BEARING WALLS: WOOD STUDS ARE PERMITTED TO BE NOTCHED TO A DEPTH NOT EXCEEDING 1/4 OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40% OF THE STUD WIDTH IS PERMITTED IN WOOD STUDS. HOLES SHALL NOT BE WITHIN 5/8" TO THE EDGE OF THE STUD.
SPACING BETWEEN HOLES SHALL BE A MINIMUM OF (2) TIMES THE DIAMETER OF THE LARGEST HOLE OR 2" AND SHALL NOT BE LOCATED AT THE SAME SECTION AS A NOTCH.
CUTS, NOTCHES, AND HOLES IN MANUFACTURED LUMBER, PREFABRICATED PLYWOOD WEB JOIST AND PREFABRICATED TRUSSES ARE PROHIBITED EXCEPT WHERE NOTED ON STRUCTURAL PLANS OR PERMITTED BY MANUFACTURER'S RECOMMENDATIONS.
THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND ALL JOB RELATED SAFETY STANDARDS AND SILICA-DUST PROTECTION PER OSHA AND WSHA. THE CONTRACTOR IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION AND SHALL PROVIDE TEMPORARY SHORING, BRACING AND OTHER ELEMENTS REQUIRED TO MAINTAIN STABILITY UNTIL THE STRUCTURE IS COMPLETED. THE CONTRACTOR IS RESPONSIBLE TO BE FAMILIAR WITH THE WORK REQUIRED IN THE CONSTRUCTION DOCUMENTS AND THE REQUIREMENTS FOR EXECUTING IT PROPERLY.
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.
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 HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCY TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.



NOTE:
FLOOR JOISTS NOT SHOWN FOR CLARITY.

TYPICAL PLATE SPLICE DETAIL



SHEAR WALL HOLDOWN SCHEDULE

MODEL #	ANCHORAGE TYPE	FASTENERS	END STUD REQUIRED	CAPACITY (LBS)
CS16	FLR-TO-FLR STRAP, CS=14"	(26) 8d COMMON	(2)2x STUDS HF#2	1,705
MSTC40	FLR-TO-FLR STRAP, CS=18"	(28) 16d SINKERS	(2)2x STUDS HF#2	2,320
MSTC48B3	FLR-TO-FLR STRAP, CS=18"	(38) 10d SINKERS	(2)2x STUDS HF#2	3,420
MSTC52	FLR-TO-FLR STRAP, CS=18"	(44) 16d SINKERS	(2)2x STUDS HF#2	3,645
MSTC66	FLR-TO-FLR STRAP, CS=18"	(64) 16d SINKERS	(2)2x STUDS HF#2	5,495
MSTC66B3	FLR-TO-FLR STRAP, CS=18"	(38) 10d SINKERS	(2)2x STUDS HF#2	3,875
MSTC78	FLR-TO-FLR STRAP, CS=18"	(76) 16d SINKERS	(2)2x STUDS HF#2	5,860
HDU5	5/8"ø SSTB20 EMBED 21" MIN	(14) 1/4"øx2 1/2" SDS WOOD SCREWS	(2)2x STUDS HF#2	4,065
HDU8	7/8"ø SSTB28 EMBED 25" MIN	(20) 1/4"øx2 1/2" SDS WOOD SCREWS	(2)2x STUDS HF#2	4,870
			(3)2x STUDS HF#2	5,665
			4x STUDS HF#2	5,020
			(3)2x STUDS DF#2	7,870

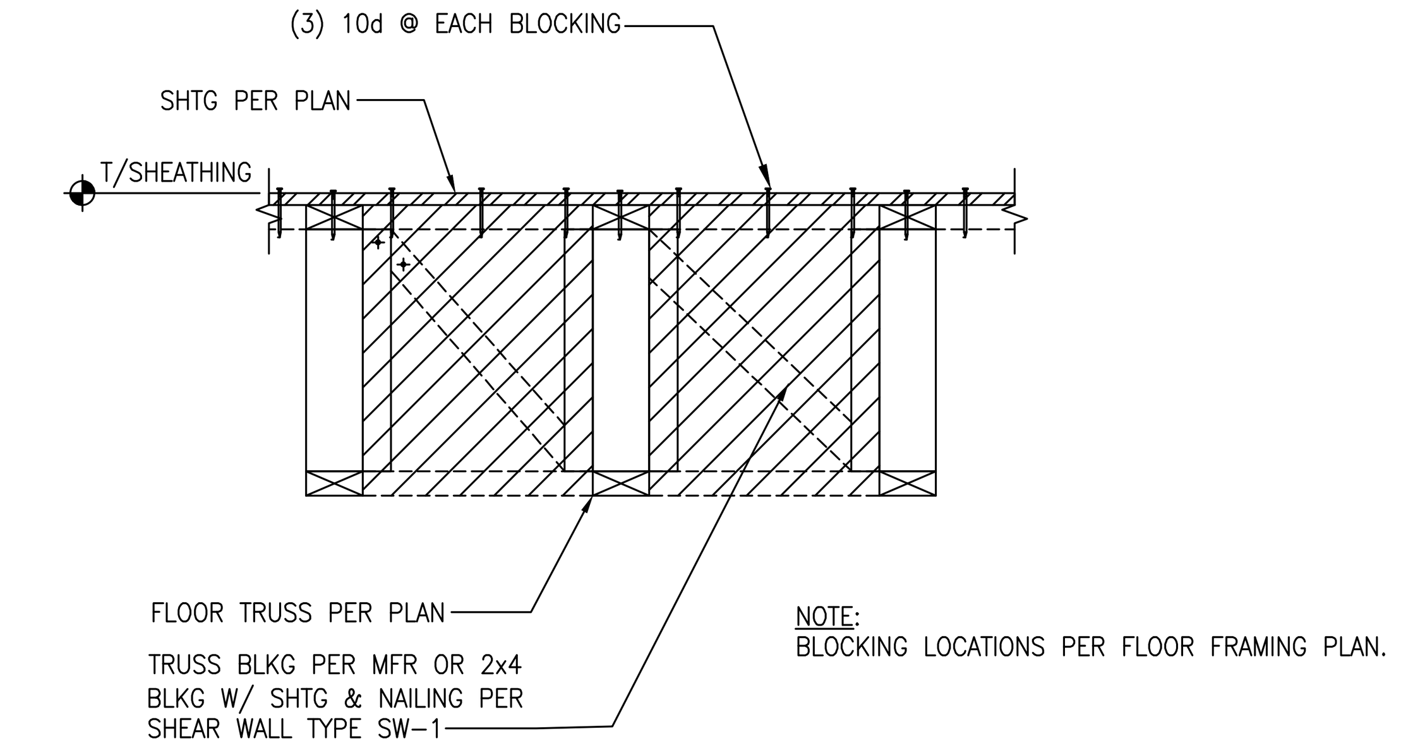
NOTES:
1. HOLDOWNS SPECIFIED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE CO. INC.; ACCEPTABLE EQUIVALENT PRODUCT SUBSTITUTIONS ARE AVAILABLE FROM OTHER MANUFACTURERS WITH THE ENGINEER APPROVAL.
2. LOCATE ALL HOLDOWNS AT ENDS OF ALL SHEAR WALLS & FASTEN TO BUNDLED HEM-FIR END STUDS.
3. BUNDLED END STUDS SHOULD BE STITCH-NAILED TOGETHER USING MINIMUM (2) 16d @ 10"OC, UNO.
4. LOCATE "HDU#" & "HDC#" HOLDOWNS AT CONCRETE FOUNDATION LEVEL. LOCATE "CMST#" & "MSTC#" STRAPS AT FLOOR-TO-FLOOR CONNECTIONS.
5. ALL HOLDOWN ANCHOR BOLTS SHALL BE MIN 4" FROM CONCRETE WALL ENDS.
6. USE "SSTB" FOR 2x SILL PLATES & "SSTBL" FOR 3x OR (2)2x SILL PLATES.
7. ADDITIONAL END STUD REQUIRED TO MEET MINIMUM 1 1/2" EDGE DISTANCE FROM CONCRETE CORNER TO "STHD" STRAP. USE "RJ" STYLE WITH "STHD" WHERE RIM JOIST IS PRESENT.
8. INSTALL ALL HOLDOWN HARDWARE PER MANUFACTURER'S INSTRUCTIONS & RECOMMENDATIONS.

WOOD-FRAMED DIAPHRAGM NAILING SCHEDULE

FOR HEM-FIR FRAMING MEMBER

LEVEL	DIA TYPE	SW SHEATHING APA-RATED	NAIL SIZE & SPACING @ PANEL EDGES AND FIELD	DIAPHRAGM BOUNDARY PANEL: NAILING PATTERN	DIAPHRAGM BOUNDARY PANEL: FRAMING MEMBER AT ABUTTING PANEL EDGES	SHEAR LOAD CAPACITY (PLF) (SEISMIC/WIND)
ROOF	DIA-1	15/32" CD-EXT	0.131"ø x 2 1/2" 8d @ 6"OC EDGE 8d @ 12"OC FIELD	–	2x	239 / 332
ROOF	DIA-1B	15/32" CD-EXT	0.131"ø x 2 1/2" 8d @ 6"OC EDGE 8d @ 12"OC FIELD	0.131"ø x 2 1/2" 8d @ 6"OC	2x	251 / 377
FLOOR	DIA-2	23/32" CD-EXT	0.148"ø x 3" 10d @ 6"OC EDGE 10d @ 12"OC FIELD	–	2x	265 / 298
FLOOR	DIA-2B	23/32" CD-EXT	0.148"ø x 3" 10d @ 6"OC EDGE 10d @ 12"OC FIELD STAGGERED	0.148"ø x 3" 10d @ 6"OC	2x	298 / 416

NOTES:
1. BLOCKED DIAPHRAGM SHALL APPLY TO UNSUPPORTED PANEL EDGES WHERE SHADED PER PLAN. "B" MEANS BLOCKED
2. T & G (TONGUE & GROOVE) SHEATHING EDGES IS NOT A SUBSTITUTE FOR THE FLAT BLOCKING.
3. H8 CLIP TO EACH TRUSS & EACH SIDE OF MULTIPLE TRUSSES.



NOTE:
BLOCKING LOCATIONS PER FLOOR FRAMING PLAN.

STRUCTURAL NOTES

1 TYPICAL SOLID BLOCKING BETWEEN FLOOR TRUSSES

PROJECT #: 23-111

DRAWN BY: GS
REVIEWED BY: GS

DATE: 3/2/23

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GABRIELA SIIA · STATE OF WASHINGTON · 52184 · REGISTERED PROFESSIONAL ENGINEER · 3/10/2023

PROJECT NAME:
Phan-Nguyen Residence
4102 Island Crest Way
Mercer Island, WA 98040

IBC 2018

GENERAL STRUCTURAL NOTES SCHEDULES AND DETAILS

ANW 220185
LATERAL DETAILS

SHEET NUMBER:
S 1

LAP SPLICE fc'=3000 PSI fy=40000 PSI

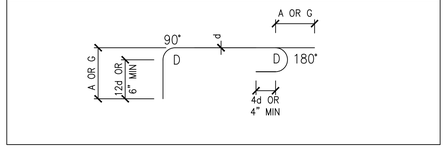
BAR SIZE	MISCELLANEOUS BARS		TOP BARS	
	Ld	LAP SPLICE	Ld	LAP SPLICE
#3	12"	16"	16"	21"
#4	15"	20"	20"	26"
#5	20"	26"	26"	34"
#6	24"	31"	31"	41"

LAP SPLICE fc'=3000 PSI fy=60000 PSI

BAR SIZE	MISCELLANEOUS BARS		TOP BARS	
	Ld	LAP SPLICE	Ld	LAP SPLICE
#3	16"	21"	21"	28"
#4	22"	28"	28"	37"
#5	27"	36"	36"	46"
#6	33"	43"	43"	56"

HOOK BARS

BAR SIZE	DIA	STANDARD 180 DEGREE HOOK			STANDARD 90 DEGREE HOOK	
		D	A OR G	J	D	A OR G
#3	6db	2 1/4"	5"	3"	2 1/4"	6"
#4	6db	3"	6"	4"	3"	8"
#5	6db	3 3/4"	7"	5"	3 3/4"	10"



NOTES:
1. VALUES FOR UNCOATED REINFORCING AND NORMAL WEIGHT CONCRETE WITH CLEAR SPACING > db, CLEAR COVER > db AND MINIMUM STIRRUPS OR TIES THROUGHOUT Ld OR CLEAR SPACING > 2db AND CLEAR COVER > db.
2. DEVELOP ALL REINFORCING IN STRUCTURAL SLABS WITH MINIMUM DEVELOPMENT LENGTH Ld.
3. TOP BAR = HORIZONTAL BAR WITH MORE THAN 12" OF FRESH CONCRETE BELOW OR AS NOTED ON DOCUMENTS AS "TOP BAR".
4. UNO, ALL LAPS SHALL BE MINIMUM CLASS B OR CLASS B (TOP BARS).
5. ALL TABULATED VALUES ARE IN INCHES.

SOLID LUMBER PROPERTIES

MEMBER SIZE	SIZE	SPECIES	GRADE
WALL STUD, BLOCKING	2X4, 3X4, 2X6, 3X6	HEMLOCK–FIR SPURCE–PINE–FIR	NR 2
SILL PLATE	2X4, 3X4, 2X6, 3X6	P.T. HEMLOCK–FIR	NR 2
TOP PLATES	2X4, 3X4, 2X6, 3X6	HEMLOCK–FIR SPURCE–PINE–FIR	NR 2
POST	4X4, 4X6, 4X8	DOUGLAS FIR–LARCH	NR 2
FLOOR JOIST OR ROOF RAFTER	2X8 THROUGH 2X12	HEMLOCK–FIR SPURCE–PINE–FIR	NR 2
BEAM	4X6 THROUGH 4X12	DOUGLAS FIR–LARCH	NR 2
BEAM	6X6 THROUGH 6X12	DOUGLAS FIR–LARCH	NR 1
POST OR TIMBER	6X6, 6X8	DOUGLAS FIR–LARCH	NR 1
LEDGER	2X AND 3X	DOUGLAS FIR–LARCH	NR 2
LEDGER	4X	DOUGLAS FIR–LARCH	NR 1

NOTES:
1. USE MINIMUM THICKNESS AND MINIMUM APA RATING.

GLUELAM TIMBER PROPERTIES

MEMBER	SIZE	SPECIES	COMB	USES
BEAMS	ALL	DF/DF	24F–V4	SIMPLE SUPPORT
BEAMS	ALL	DF/DF	24F–V8	CONTINUOUS OR WITH CANTILEVER END
COLUMNS	ALL	DF	C–D	POST OR TIMBER MEMBER

NOTES:
1. USE MINIMUM THICKNESS AND MINIMUM APA RATING.
2. ALL WEATHER EXPOSED MEMBERS TO BE PRESSURE TREATED
3. PRESSURE TREATED WOOD INCLUDES PRESERVATIVE AND FIRE TREATED

SHEATHING PROPERTIES

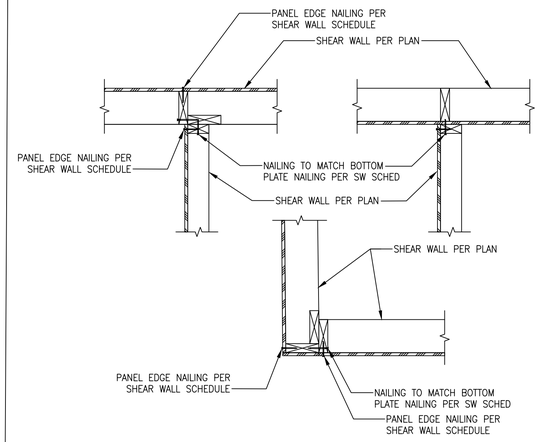
LOCATION	THICKNESS	SPAN RATING	PLYWOOD GRADE	EXPOSURE
ROOF	15/32	32/16	C–D	1
FLOOR	23/32 T&G	24 OC	STURD–I FLOOR	1
WALLS	15/32	32/16	C–D	1

NOTES:
1. USE MINIMUM THICKNESS AND MINIMUM APA RATING.

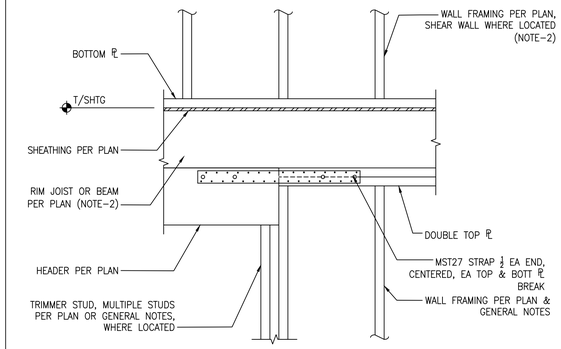
COMMON WIRE NAILS PROPERTIES

PENNY WEIGHT	8d	10d	12d	16d	20d
DIAMETER (IN)	0.131	0.148	0.148	0.162	0.192
LENGHT (IN)	2 1/2	3	3 1/4	3 1/2	4

NOTES:
1. ALL COMMON WIRE AND BOX NAILS SHALL CONFORM TO NOMINAL SIZES SPECIFIED IN ASTM F1667.

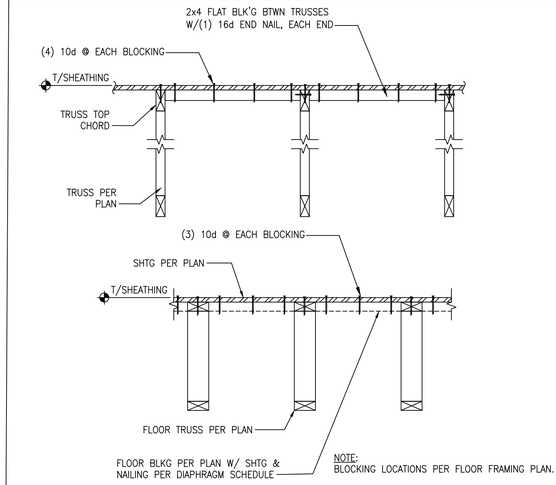


1 TYPICAL SHEAR WALL INTERSECTIONS



NOTES:
1. WALL SHEATHING NOT SHOWN FOR CLARITY
2. WHERE ROOF ABOVE, RAFTERS OR PRE–MANUFACTURED TRUSSES PER PLAN REPLACES RIM JOIST

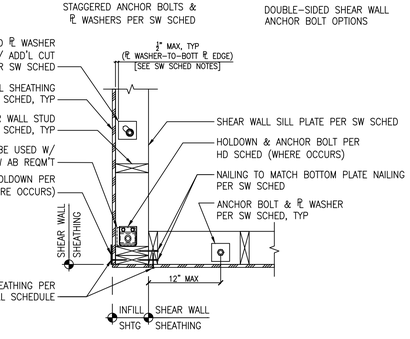
2 TYPICAL HEADER FRAMING FLUSH WITH BOTTOM OF JOIST



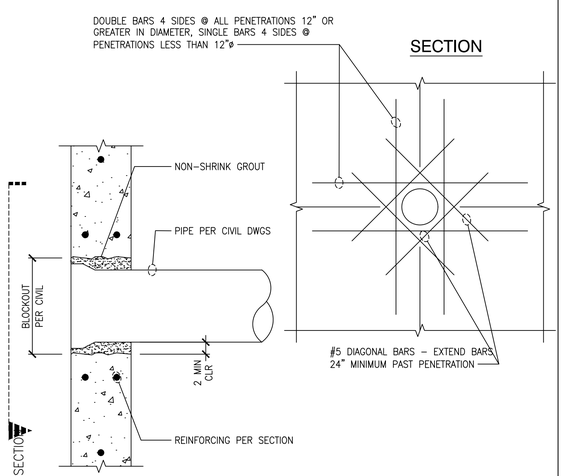
NOTE:
BLOCKING LOCATIONS PER FLOOR FRAMING PLAN.

3 BLOCKING BETWEEN FLOOR JOISTS

SIMPSON STRONG–TIE SLOTTED PLATE WASHERS W/ 5/8"ø ANCHOR BOLTS
3x3x0.229 BPS5⁄8–3
4.5x3x0.229BPS5⁄8–6



4 TYPICAL PLAN VIEW-SW HOLDOWNS & ANCHOR BOLTS



TYPICAL REINFORCEMENT AT WALL PENETRATIONS

NOTES:
1. WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2x FRAMING SHALL BE STAGGERED SO THAT JOINTS ON OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUDS.
2. BLOCKING IS REQUIRED AT ALL UNSUPPORTED PANEL EDGES.
3. PROVIDE SHEAR WALL SHEATHING AND NAILING FOR ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF FULL HEIGHT WALLS ARE DESIGNATED BY WINDOWS, OR DOORWAYS OR AS DESIGNATED ON PLANS. HOLDOWN REQUIREMENTS PER PLANS.
4. MINIMUM RIM BOARD OR BLOCKING WIDTH BELOW WALL SHALL BE 1–1/4" TIMBERSTRAND LSL FOR (1) SIDE WALL SHEATHING AND 3–1/2" TIMBERSTRAND LSL FOR (2) SIDES WALL SHEATHING.
5. SHEATHING EDGE NAILING IS REQUIRED AT ALL HOLDOWN POSTS. EDGE NAILING MAY ALSO BE REQUIRED TO EACH STUD USED IN BUILT–UP HOLDOWN POSTS. ADDITIONAL INFORMATION PER HOLDOWN SCHEDULE & DETAILS.
6. INTERMEDIATE FRAMING TO BE 2x MINIMUM MEMBERS. ATTACH SHEATHING TO INTERMEDIATE FRAMING WITH 0.131"ø x 2½" NAILS AT 12"OC WHERE STUDS ARE SPACED AT 16"OC AND 0.131"ø x 2½" NAILS AT 6"OC WHERE STUDS ARE SPACED AT 24"OC.
7. "LTP5" SHALL BE ORIENTED LENGTHWISE (HORIZONTAL) AT PLATE TO RIM.
8. BASED ON 0.131"ø x 1½" NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING, USE 0.131"ø x 2½" NAILS WHERE INSTALLED OVER SHEATHING.
9. SIMPSON "A35" MAY BE USED IN LIEU OF "LTP5".
10. WHERE JOISTS ARE HUNG FROM MUD SILL, USE P.T. 3x RIPPED TO STEM WALL WIDTH W/COUNTER–SUNK ANCHOR BOLTS PER SHEAR WALL SCHEDULE.
11. ANCHOR BOLTS SHALL BE PROVIDED WITH HOT–DIPPED GALVANIZED STEEL PLATE WASHERS 3"x3"x0.229"(MIN). THE HOLE IN THE PLATE WASHER MAY BE DIAGONALLY SLOTTED 13⁄16"x1¾" PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND NUT. PLATE WASHER TO EXTEND TO WITHIN ½" OF THE EDGE OF THE SILL PLATE ON THE SIDE(S) WITH SHEATHING. WHERE SHEAR WALLS ARE SHEATHED ON BOTH SIDES OF 2x6 WALL FRAMING, USE 4.5"x3"x0.229"(MIN) PLATE WASHERS. EMBED ANCHOR BOLTS 7" MINIMUM INTO THE CONCRETE.
12. PRESSURE TREATED MATERIAL CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS. PROVIDE HOT–DIPPED GALVANIZED (ELECTRO–PLATING IS NOT ACCEPTABLE) NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC.) FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED FRAMING MEMBERS. ADDITIONAL INFORMATION PER STRUCTURAL NOTES.
13. AT ADJOINING PANEL EDGES, (2) 2x STUDS NAILED TOGETHER MAY BE USED IN PLACE OF SINGLE 3x STUD. DOUBLE 2x STUDS SHALL BE CONNECTED TOGETHER BY NAILING THE STUDS TOGETHER WITH 3" LONG NAILS OF THE SAME SPACING AND DIAMETER AS THE PLATE NAILING.
14. WHERE ABUTTING PANELS OR SILL PLATES REQUIRE 3x MINIMUM, NAIL STUDS TO 3x BOTTOM/SILL PLATES WITH (3) 0.148"ø x 3¼" TOENAILS.

WOOD–FRAMED SHEAR WALL SCHEDULE

FOR HEM–FIR STUD FRAMING W/ 8d SHEATHING NAILS

	SW TYPE	SW SHEATHING APA–RATED	EDGE NAILING	BASE PLATE NAILING	RIM JOIST OR BLOCKING ATTACHMENT TO PLATE BELOW	FRAMING AT PANEL EDGES	BLOCKING AT PANEL EDGES	ANCHOR BOLT TO CONCRETE FOUNDATION	SILL PLATE AT FOUNDATION	SHEAR WALL CAPACITY (PLF) (SEISMIC)	SHEAR WALL CAPACITY (PLF) (WIND)
SINGLE–SIDED	SW–1	15⁄32" CD–EXT	0.131"ø x 2½" @ 6"OC	0.162"ø x 3½" @ 5"OC	CLIP @ 16"OC	2x	2x	5⁄8"ø @ 44"OC	P.T. 2x	242	339
								5⁄8"ø @ 44"OC	P.T. 3x		
	SW–2	15⁄32" CD–EXT	0.131"ø x 2½" @ 4"OC	0.162"ø x 3½" @ 4"OC	CLIP @ 12"OC	2x	3x or FLAT 2x	5⁄8"ø @ 28"OC	P.T. 2x	349	495
								5⁄8"ø @ 48"OC	P.T. 3x		
	SW–3	15⁄32" CD–EXT	0.131"ø x 2½" @ 3"OC, STAGGERED	0.162"ø x 3½" @ 3"OC	CLIP @ 8"OC	2x	3x or FLAT 2x	5⁄8"ø @ 20"OC	P.T. 2x	456	637
								5⁄8"ø @ 32"OC	P.T. 3x		
	SW–4	15⁄32" CD–EXT	0.131"ø x 2½" @ 2"OC, STAGGERED	0.162"ø x 3½" @ 2"OC	CLIP @ 6"OC	3x OR STAGGERED 2x	3x or FLAT 2x	5⁄8"ø @ 19"OC	P.T. 2x	595	832
								5⁄8"ø @ 24"OC	P.T. 3x		
DOUBLE–SIDED	SW–5	15⁄32" CD–EXT BOTH SIDES	0.131"ø x 2½" @ 4"OC, STAGGERED	0.162"ø x 3½" @ 4"OC STAGGERED	CLIP @ 5"OC	3x OR STAGGERED 2x	3x	5⁄8"ø @ 24"OC	P.T. 3x	707	990
	SW–6	15⁄32" CD–EXT BOTH SIDES	0.131"ø x 2½" @ 3"OC, STAGGERED	0.162"ø x 3½" @ 3"OC STAGGERED	CLIP @ 8"OC BOTH SIDES, STAGGERED	3x OR STAGGERED 2x	3x	5⁄8"ø @ 16"OC	P.T. 3x	911	1274

NOTE:
READ SHEAR WALL NOTES FOR ADDITIONAL INFORMATION.

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3/10/2023

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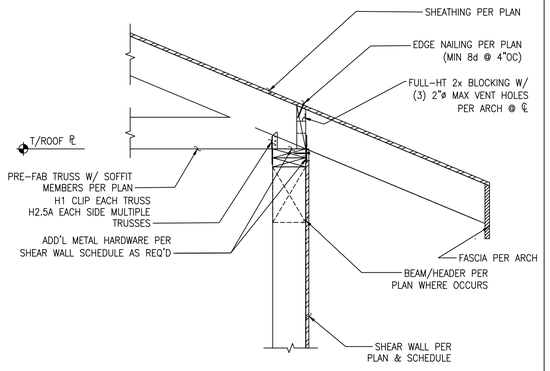
IBC 2018

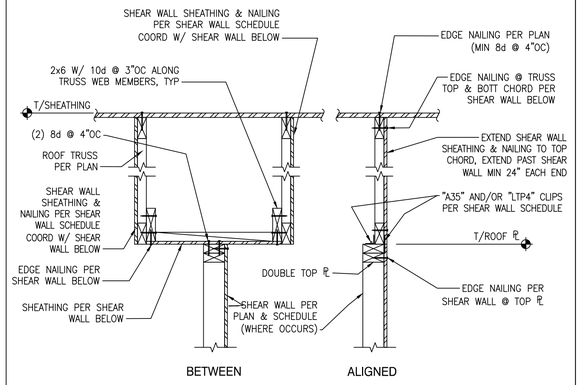
NOTES SCHEDULES AND DETAILS

ANW 220185
LATERAL DETAILS

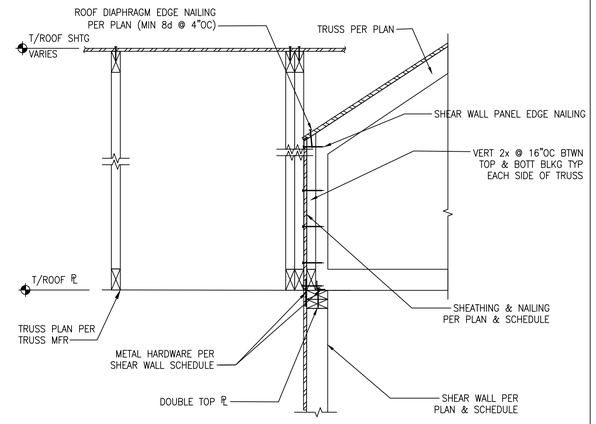
SHEET NUMBER:
S 2



1 TYPICAL EXT SHEAR WALL PERPENDICULAR TO ROOF TRUSS

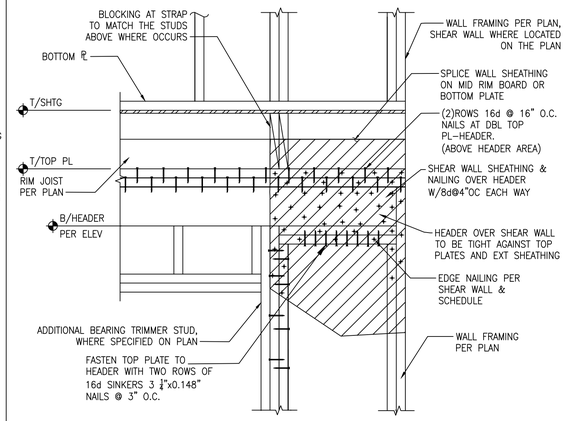


2 INTERIOR SHEAR WALL PARALLEL TO ROOF TRUSS



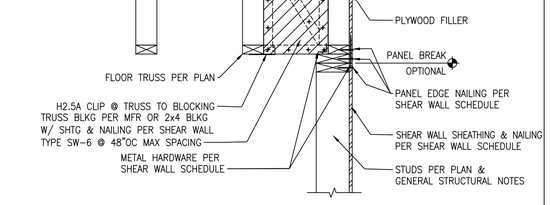
NOTES:
OVERFRAMING PER PLAN, DETAIL PER ARCHITECTURAL.

3 TYPICAL INT SHEAR WALL PERP. TO ROOF TRUSS

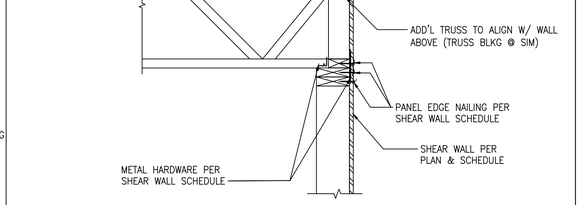


NOTES:
1. SHEAR WALL SHEATHING PER SCHEDULE. SHEATHING TO BE INSTALLED OVER HEADER.
2. FOR SOME LOCATIONS THIS DETAIL IS REVERSED.

4 TYPICAL HEADER EXTENDED OVER SHEAR WALL

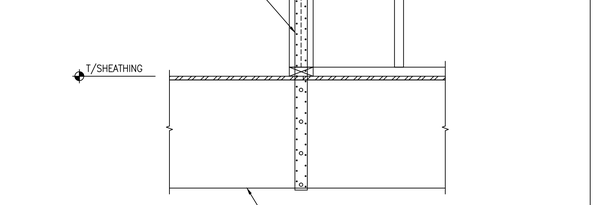


5 TYPICAL EXTERIOR WALL PARALLEL TO FLOOR JOISTS

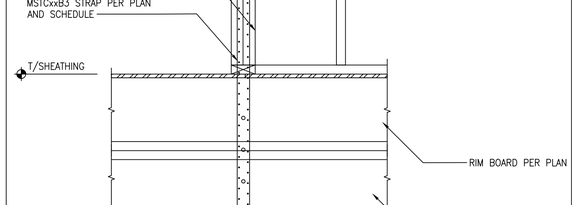


NOTE:
FLOOR TRUSS DIRECTION VARIES AT SIMILAR.

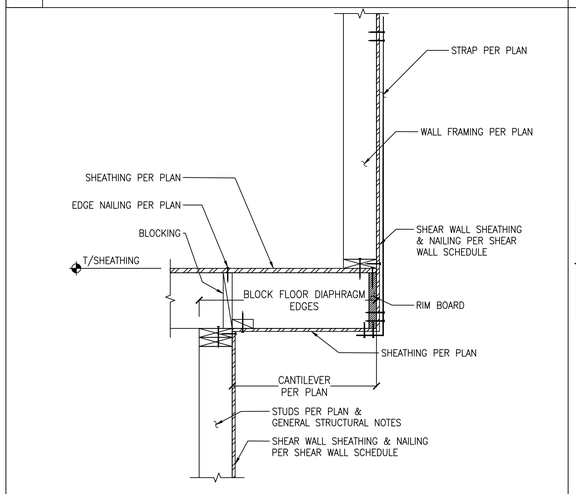
6 TYPICAL EXTERIOR WALL PERPENDICULAR TO FLOOR JOISTS



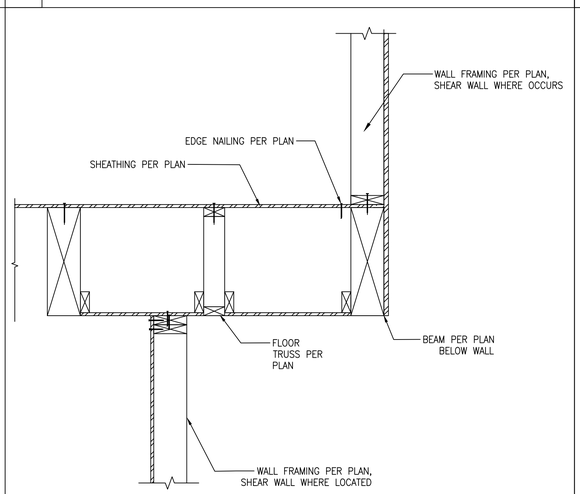
7 TYPICAL SHEAR WALL HOLDOWN AT FLOOR MEMBER



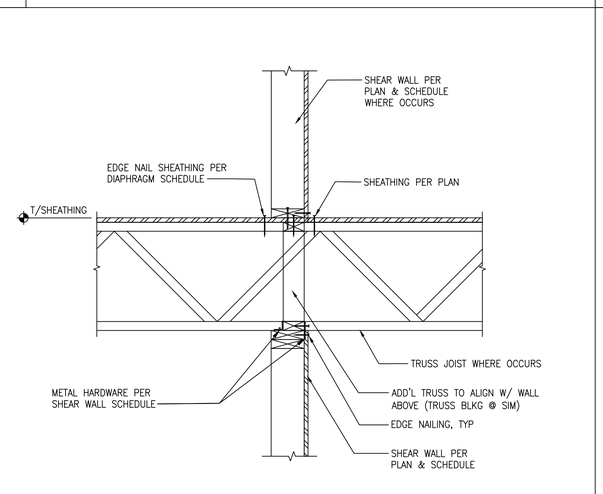
8 TYPICAL SHEAR WALL HOLDOWN AT FLOOR MEMBER



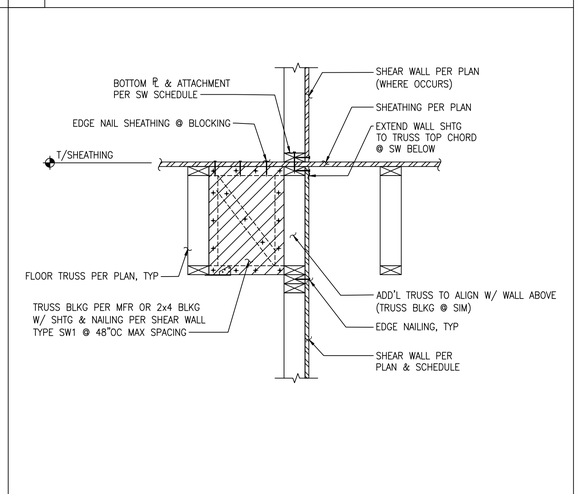
9 TYPICAL LOAD TRANSFER AT OFFSET SHEAR WALL



10 TYPICAL LOAD TRANSFER AT OFFSET SHEAR WALL



11 TYPICAL INTERIOR WALL PERPENDICULAR TO FLOOR JOISTS



12 TYPICAL INTERIOR SHEAR WALL PARALLEL TO FLOOR JOIST

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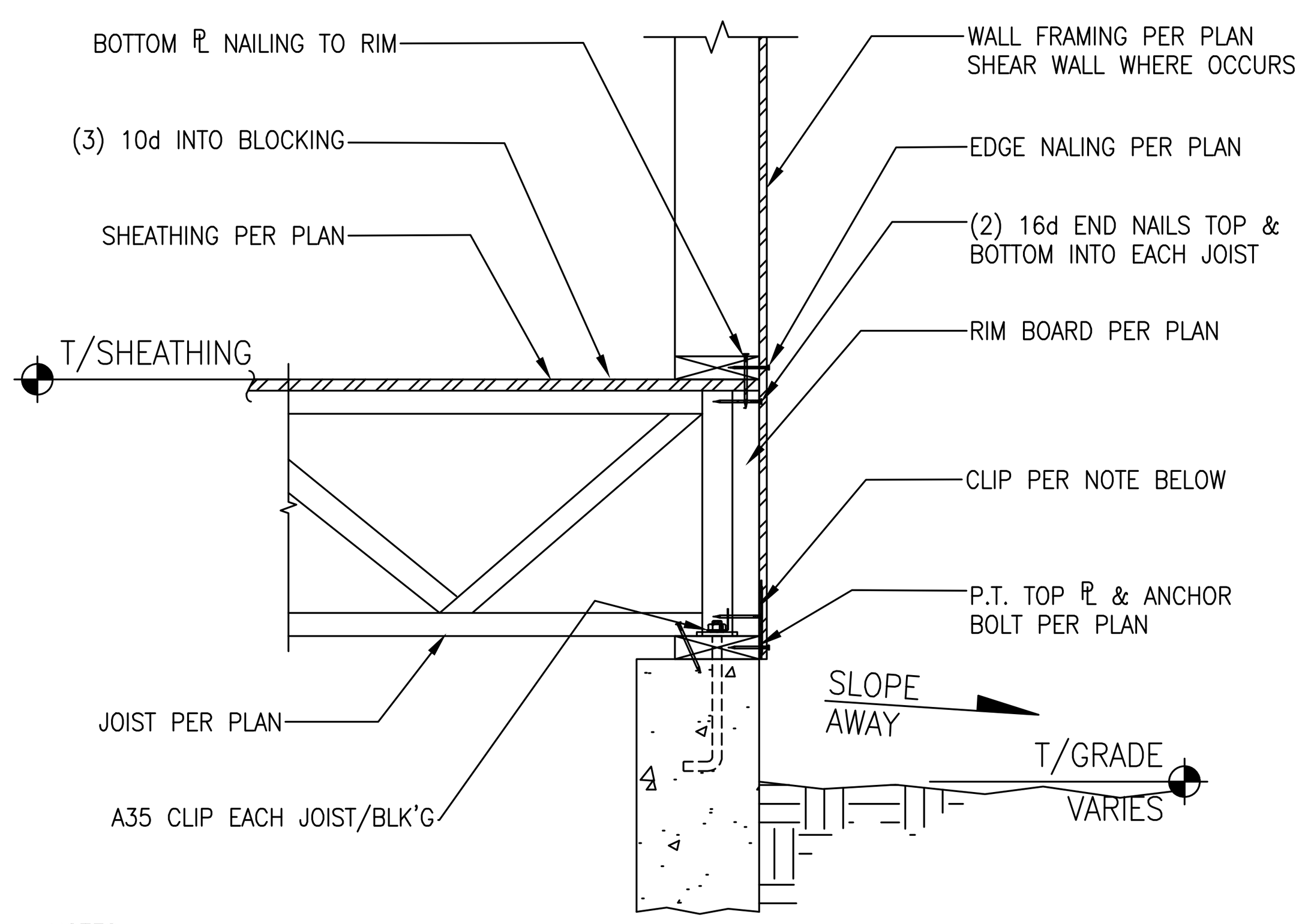
IBC 2018

LATERAL DETAILS

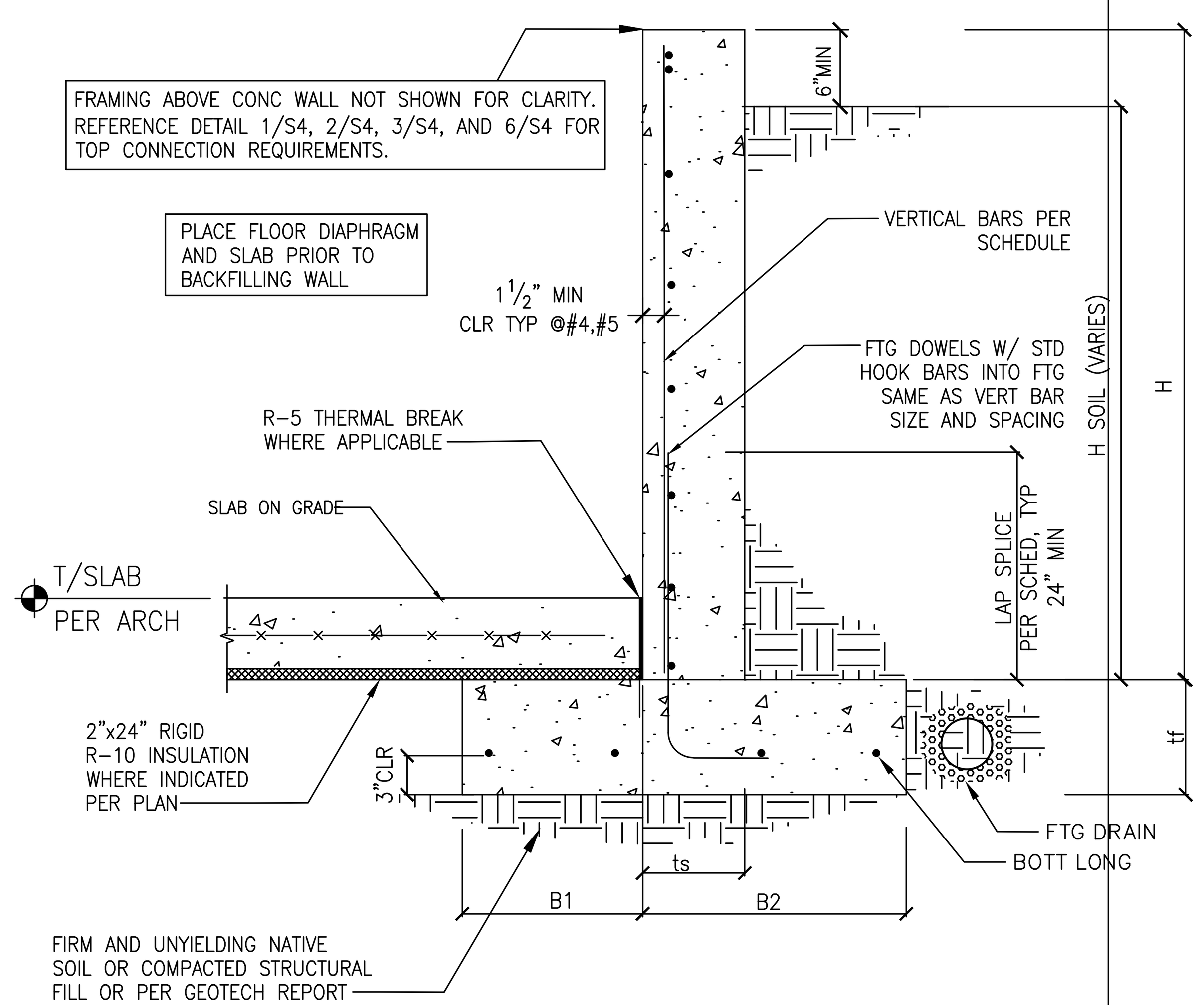
ANW 220185
LATERAL DETAILS

SHEET NUMBER:
S 3



NOTES:
1. BOLTS 5/8"DIA @ MAX 12"OC AT 2x SILL PLATE
2. BOLTS 5/8"DIA @ MAX 12"OC AT 3x SILL PLATE
3. LS90 @ MAX 12"OC & PER SHEAR WALL SCHEDULE
4. FURRING WALL PER ARCHITECTURAL
5. TOP OF WALL ELEVATIONS PER ARCHITECTURAL

1 TYPICAL BASEMENT WALL WITH JOISTS PERPENDICULAR



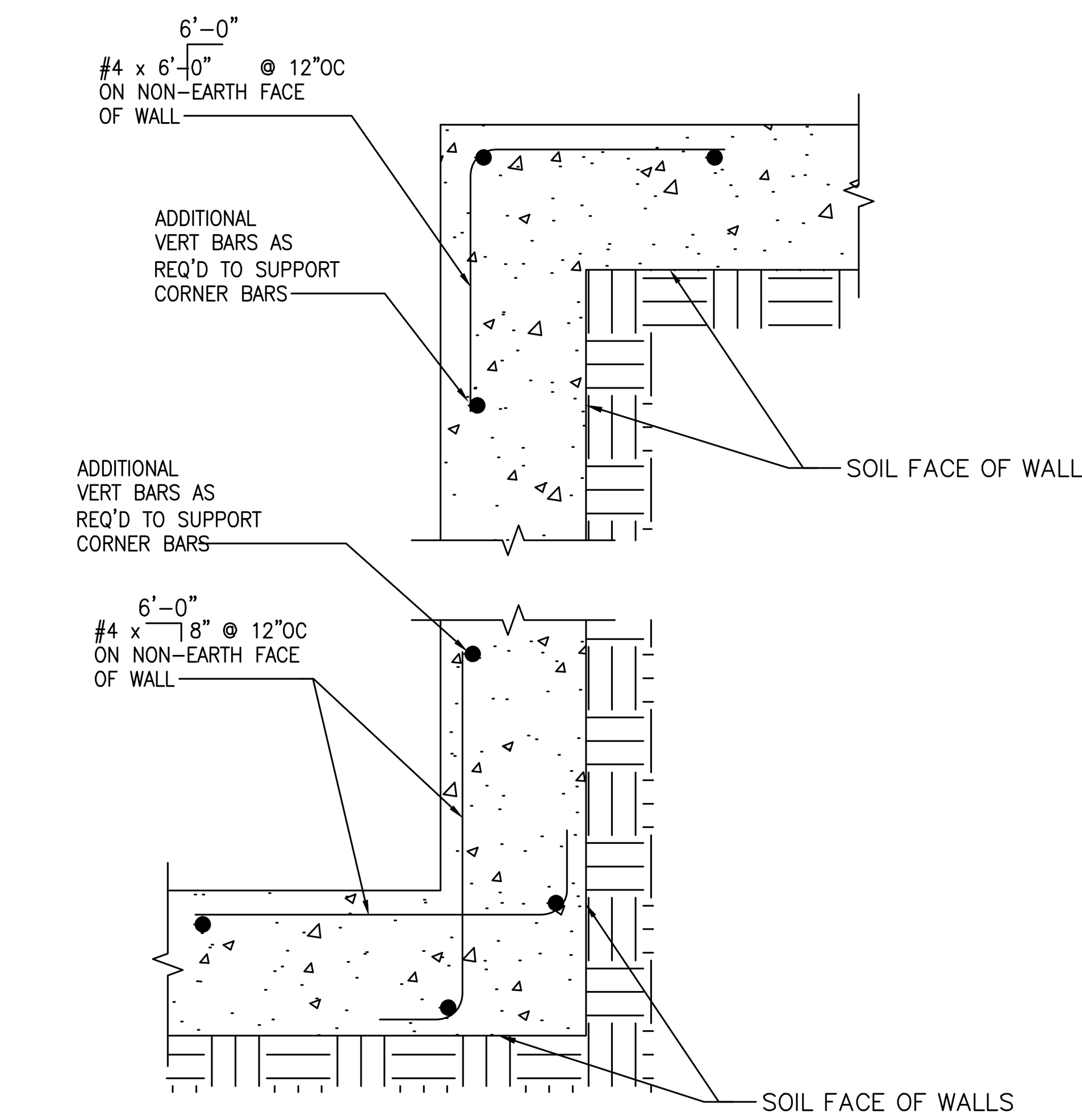
4 FULL HEIGHT BASEMENT WALL - TOP RESTRAINED

RETAINING WALL/FOOTING SCHEDULE - TYPICAL							
WALL / FOOTING SIZE					WALL REINFORCING		FOOTING REINFORCEMENT
H	B1	ts	B2	tf	VERTICAL	HORIZONTAL	BOTT LONG
11'–0"	1'–7"	10"	2'–2"	12"	#5 @ 12"OC	#4 @ 9"OC	(5)#4

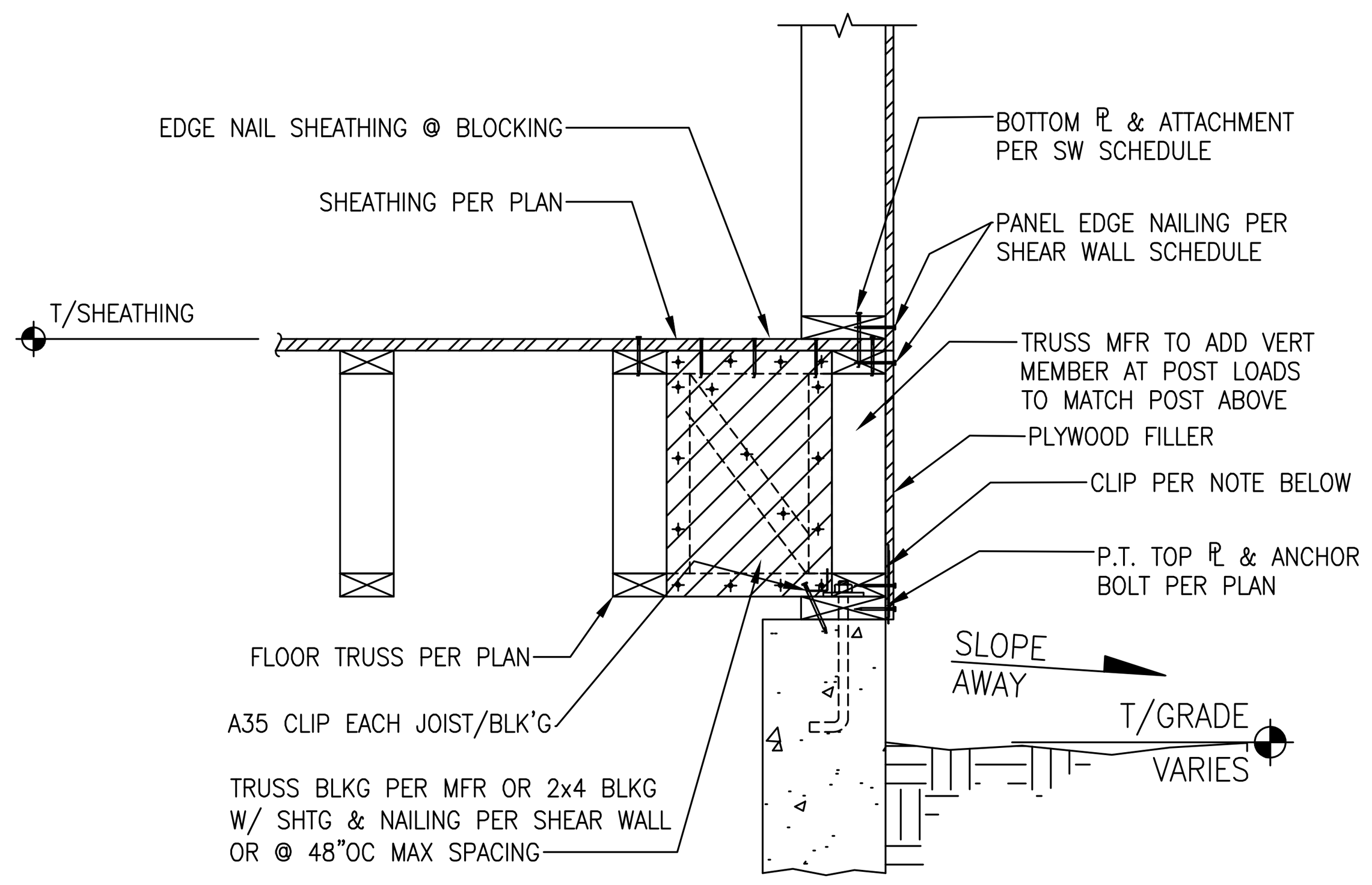
NOTES:
–SOIL BEARING PRESSURE 1500 PSF ASSUMED AND MUST BE FIELD VERIFIED BY A GEOTECH ENGINEER OR BY THE BUILDING OFFICIAL.
–TOP OF WALL ELEVATION PER ARCHITECTURAL.

DESIGN PARAMETERS (ASSUMED)
1. 50 PCF/FT EQUIVALENT FLUID PRESSURE
2. 130 PCF SOIL WEIGHT
3. 1500 PSF SOIL BEARING PRESSURE
4. PASSIVE PRESSURE 300 PCF
5. SEISMIC SURCHARGE 10H
6. 70 PSF/FT SURCHARGE
7. FRICTION COEFFICIENT 0.35
8. CONCRETE 3000 PSI W/6 SACK CEMENT PER CUBIC YARD AND 6 GALLONS WATER PER SACK
9. GRADE 40 STEEL FOR #4 & SMALLER GRADE 60 STEEL FOR #5 & GREATER
10. BACKFILL W/ POROUS MATERIAL; PROVIDE TEMPORARY BRACINGS AS REQ'D

SPECIAL INSPECTION REQUIRED FOR WALLS HIGHER THAN 8 FT.



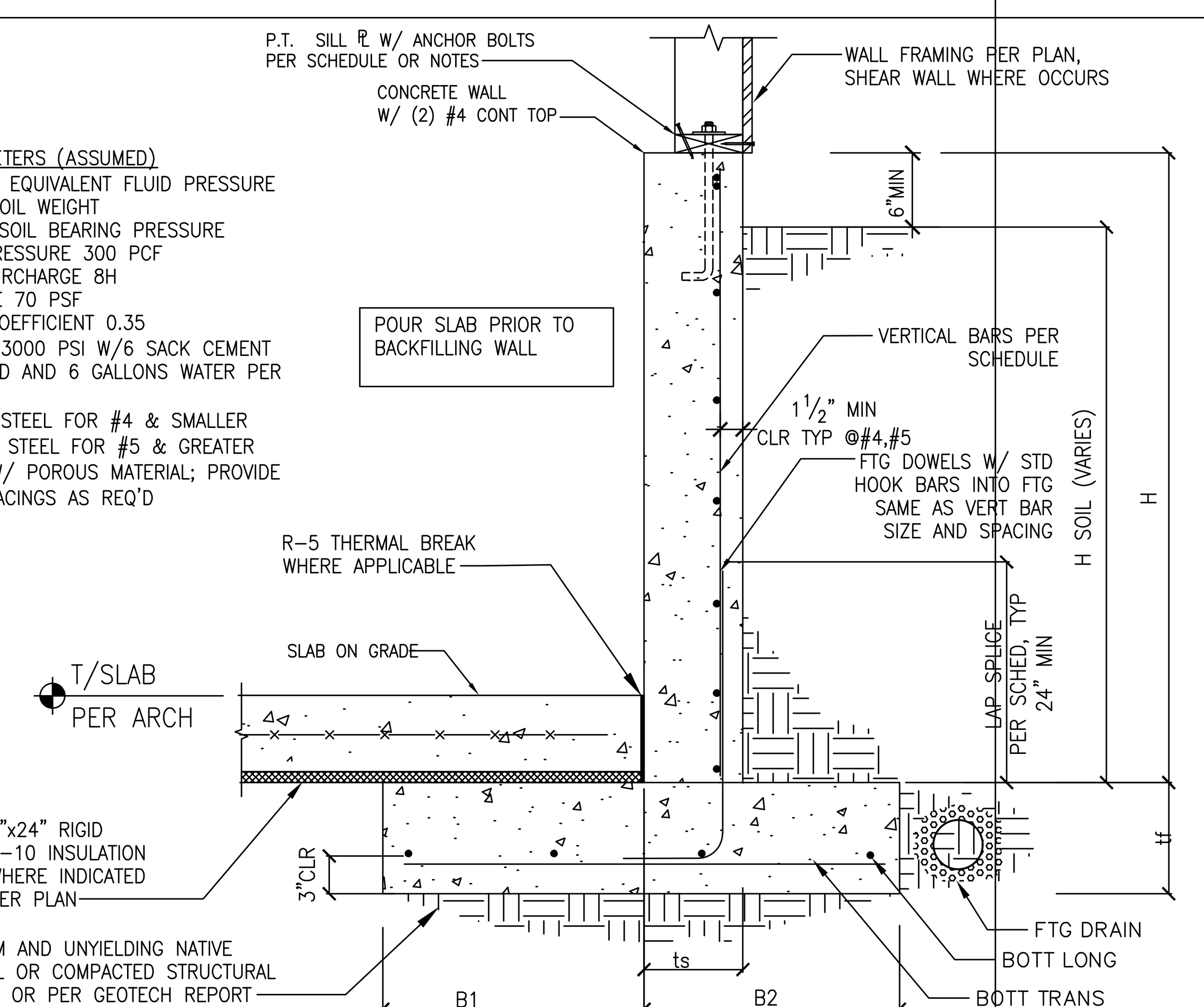
7 ADD'L REINFORCEMENT AT CONCRETE WALLS-TOP VIEW



NOTES:
1. BOLTS 5/8"DIA @ MAX 12"OC AT 2x SILL PLATE
2. BOLTS 5/8"DIA @ MAX 12"OC AT 3x SILL PLATE
3. LS90 @ MAX 12"OC & PER SHEAR WALL SCHEDULE
4. FURRING WALL PER ARCHITECTURAL
5. TOP OF WALL ELEVATIONS PER ARCHITECTURAL

2 TYPICAL BASEMENT WALL WITH JOISTS PARALLEL

DESIGN PARAMETERS (ASSUMED)
1. 35 PCF/FT EQUIVALENT FLUID PRESSURE
2. 130 PCF SOIL WEIGHT
3. 1500 PSF SOIL BEARING PRESSURE
4. PASSIVE PRESSURE 300 PCF
5. SEISMIC SURCHARGE 8H
6. SURCHARGE 70 PSF
7. FRICTION COEFFICIENT 0.35
8. CONCRETE 3000 PSI W/6 SACK CEMENT PER CUBIC YARD AND 6 GALLONS WATER PER SACK
9. GRADE 40 STEEL FOR #4 & SMALLER GRADE 60 STEEL FOR #5 & GREATER
10. BACKFILL W/ POROUS MATERIAL; PROVIDE TEMPORARY BRACINGS AS REQ'D

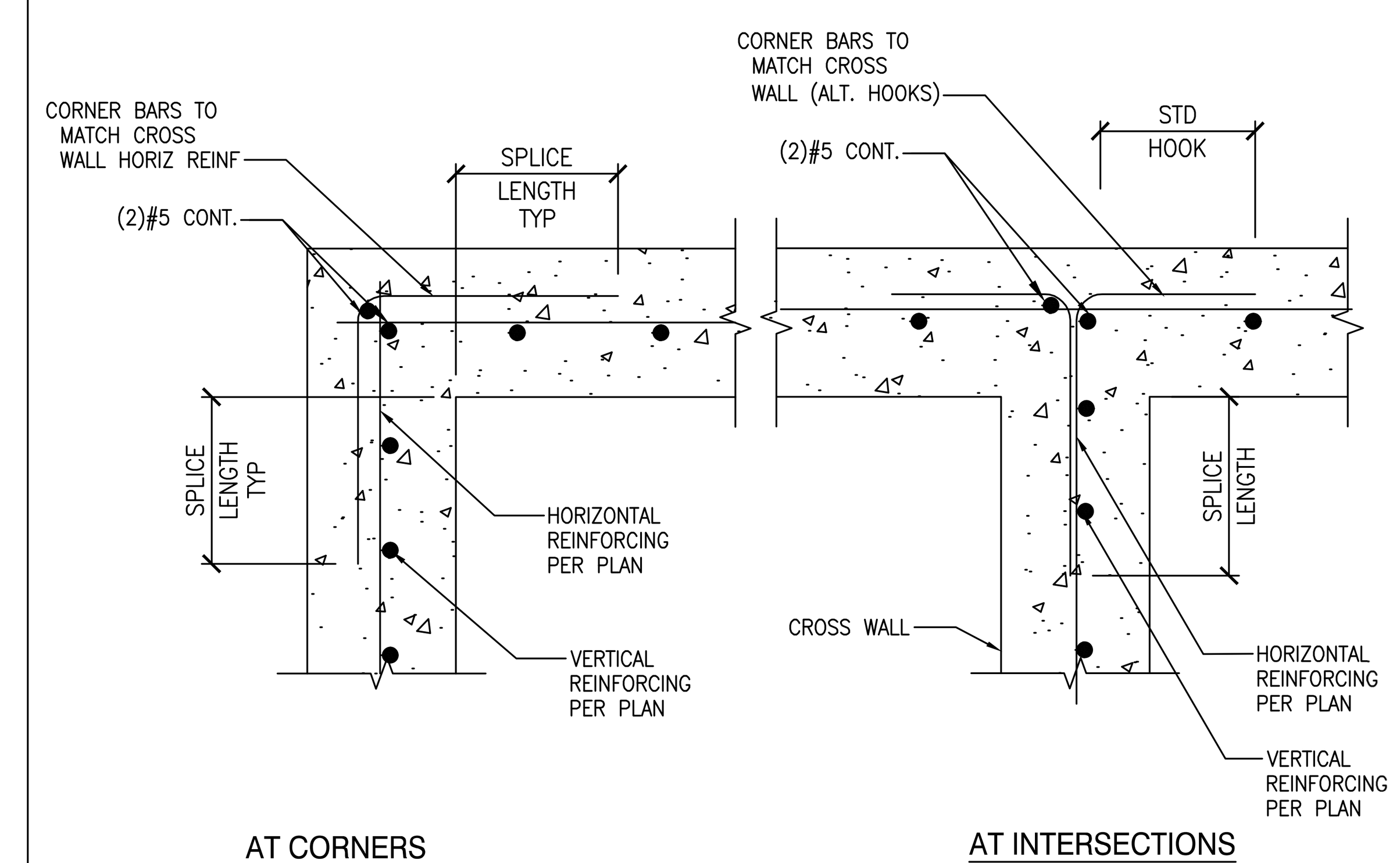


5 RETAINING WALL DETAIL - HEIGHT VARIES

RETAINING WALL/FOOTING SCHEDULE - TYPICAL								
WALL / FOOTING SIZE					WALL REINFORCING		FOOTING REINFORCEMENT	
H	B1	ts	B2	tf	VERTICAL	HORIZONTAL	BOTT LONG	BOTT TRANS
4'–0" AT EGRESS WNDW	1'–0"	8"	1'–9"	10"	#5 @ 16"OC	#4 @ 11"OC	(4)#4	#4 @ 12"OC
11'–0" AT STAIR CASE	4'–5"	8"	2'–9"	12"	#6 @ 6"OC	#4 @ 9"OC	(9)#4	–

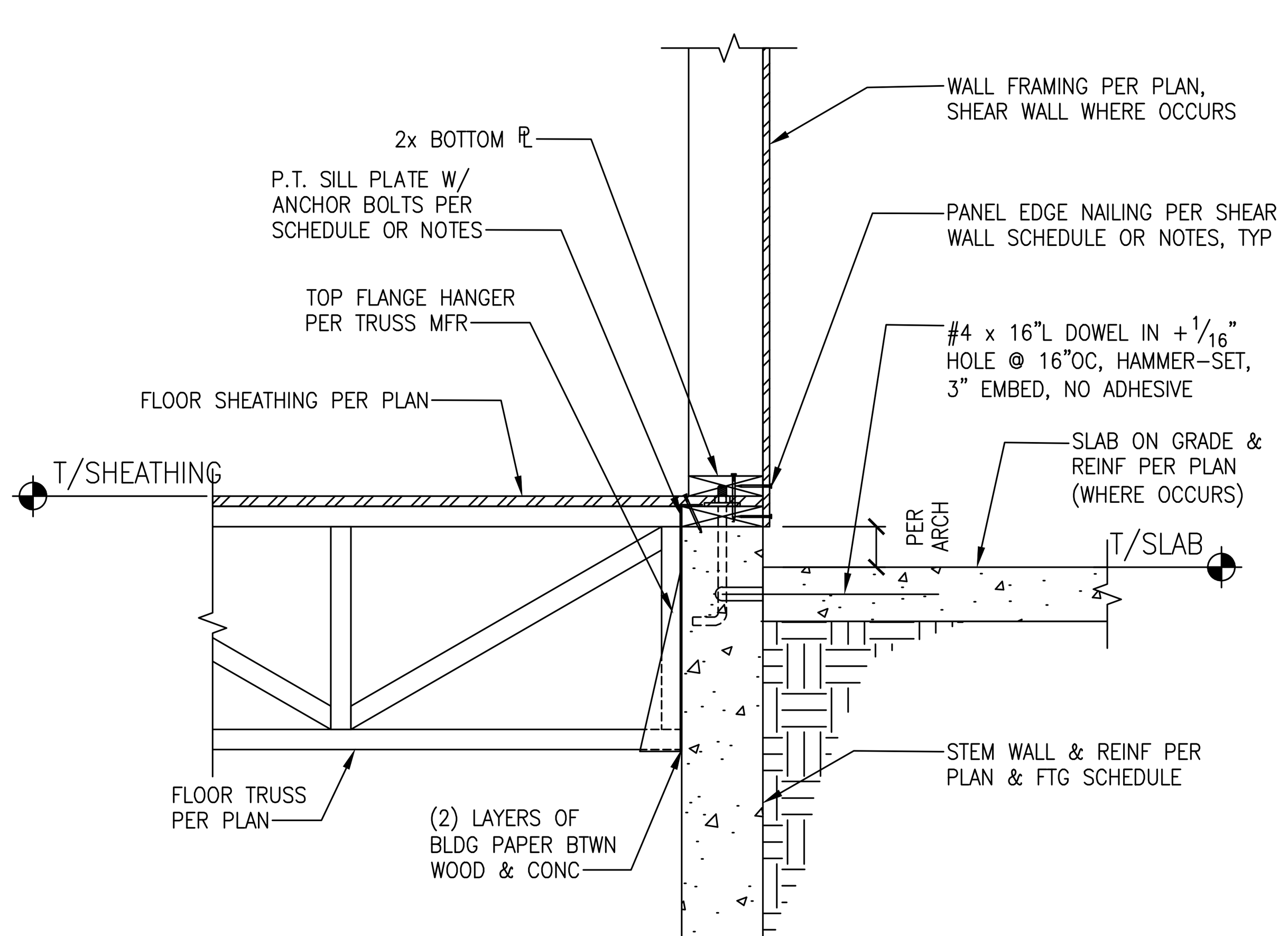
NOTES:
–SOIL BEARING PRESSURE 1500 PSF ASSUMED AND MUST BE FIELD VERIFIED BY A GEOTECH ENGINEER OR BY THE BUILDING OFFICIAL.
–TOP OF WALL ELEVATION PER ARCHITECTURAL.

SPECIAL INSPECTION REQUIRED FOR WALLS HIGHER THAN 8 FT.



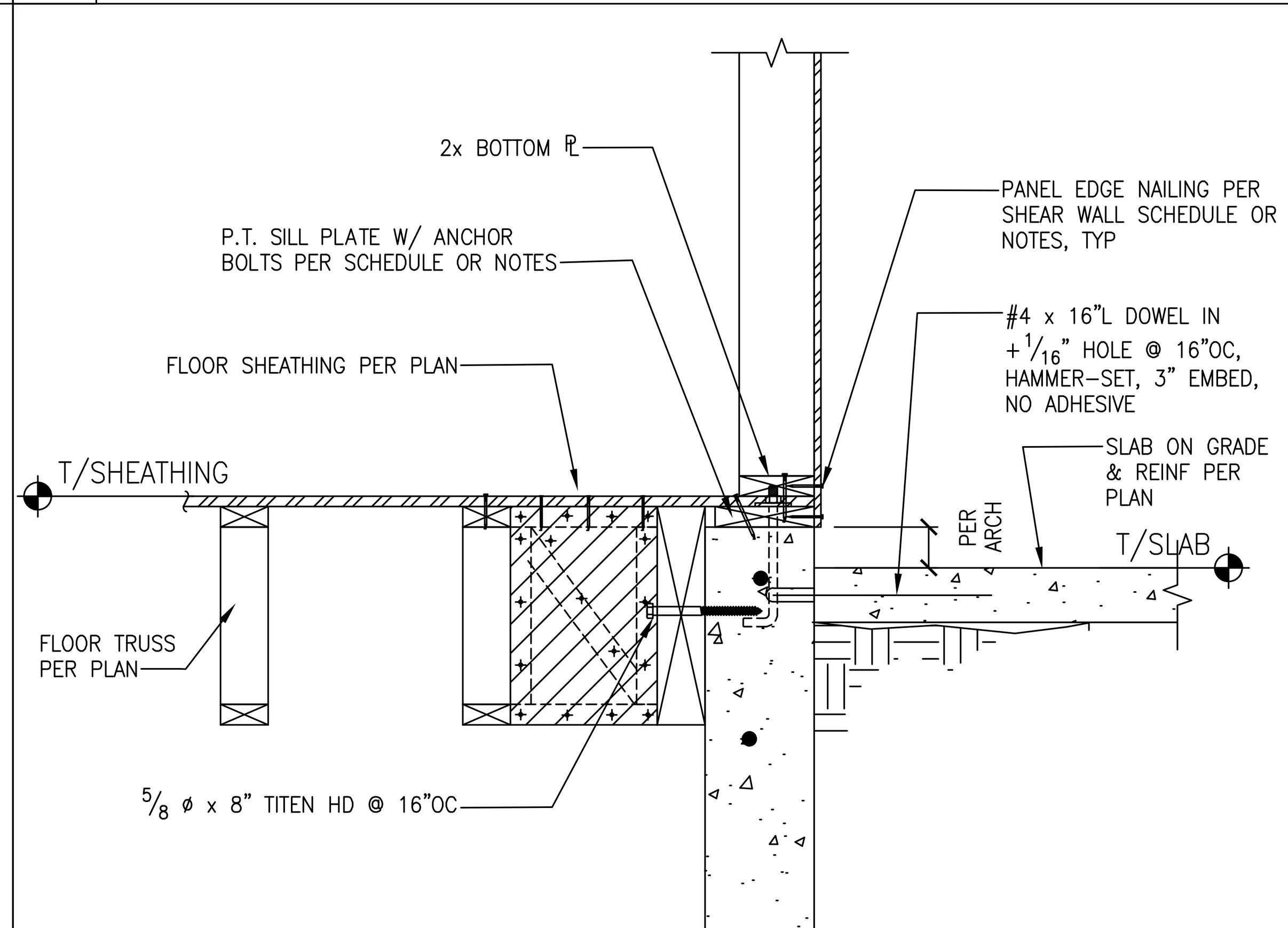
NOTES:
1. FOR SPLICE LENGTHS REFERENCE BAR LAP/SPLICE SCHEDULE.
2. FOR WALL SIZE & REINFORCING REFERENCE ELEVATIONS, SECTIONS & DETAILS.
3. AT FOOTING & STEM WALLS, CORNER BARS TO MATCH FOOTING & STEM WALL HORIZONTAL BARS.

8 TYPICAL CORNERS BARS AT CONCRETE BSM WALLS & FTGs



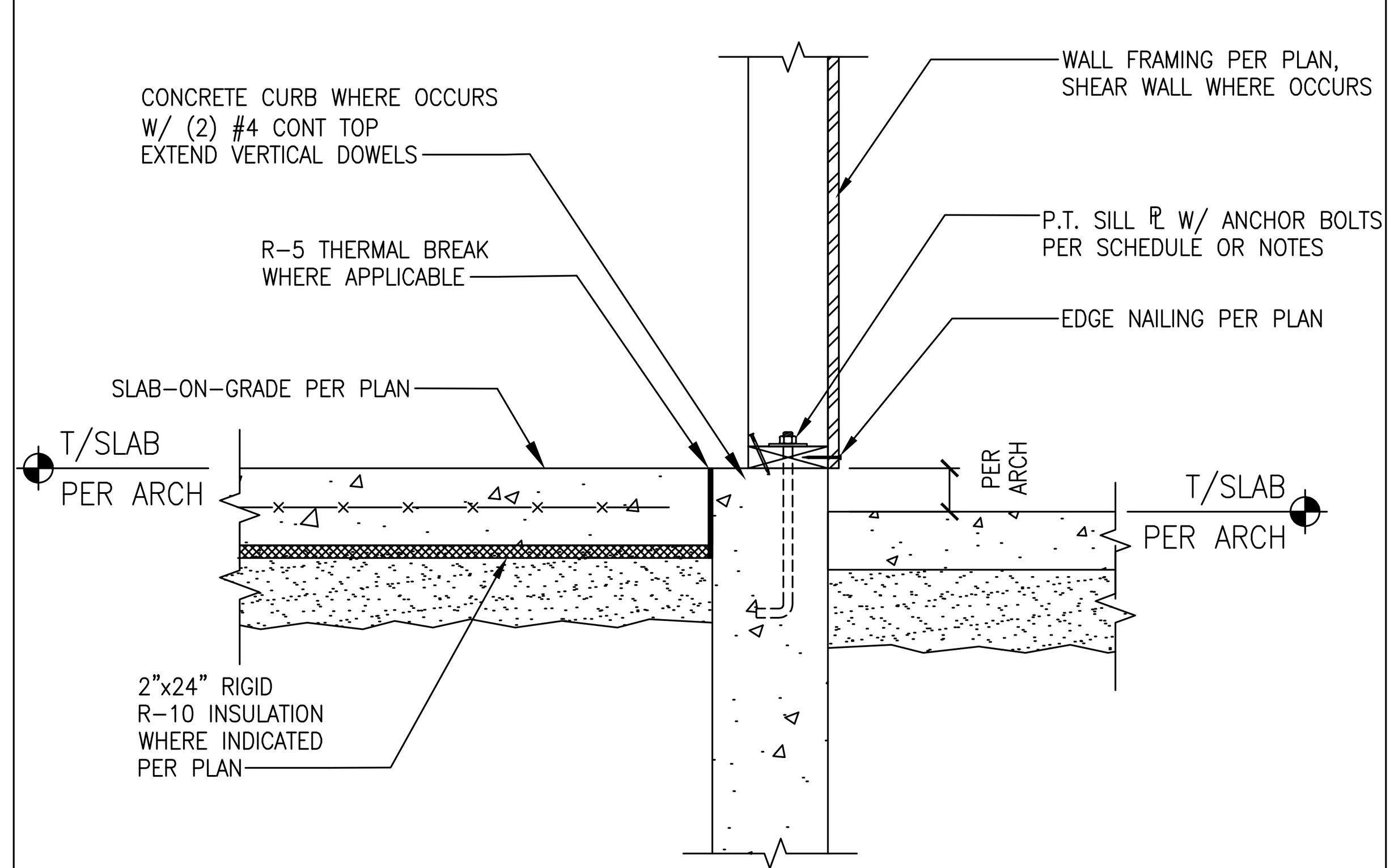
NOTES:
1. BOLTS 5/8"DIA @ MAX 12"OC AT 2x SILL PLATE
2. BOLTS 5/8"DIA @ MAX 12"OC AT 3x SILL PLATE
3. LS90 @ MAX 12"OC & PER SHEAR WALL SCHEDULE
4. FURRING WALL PER ARCHITECTURAL
5. TOP OF WALL ELEVATIONS PER ARCHITECTURAL

3 TYPICAL BASEMENT WALL WITH JOISTS PERPENDICULAR



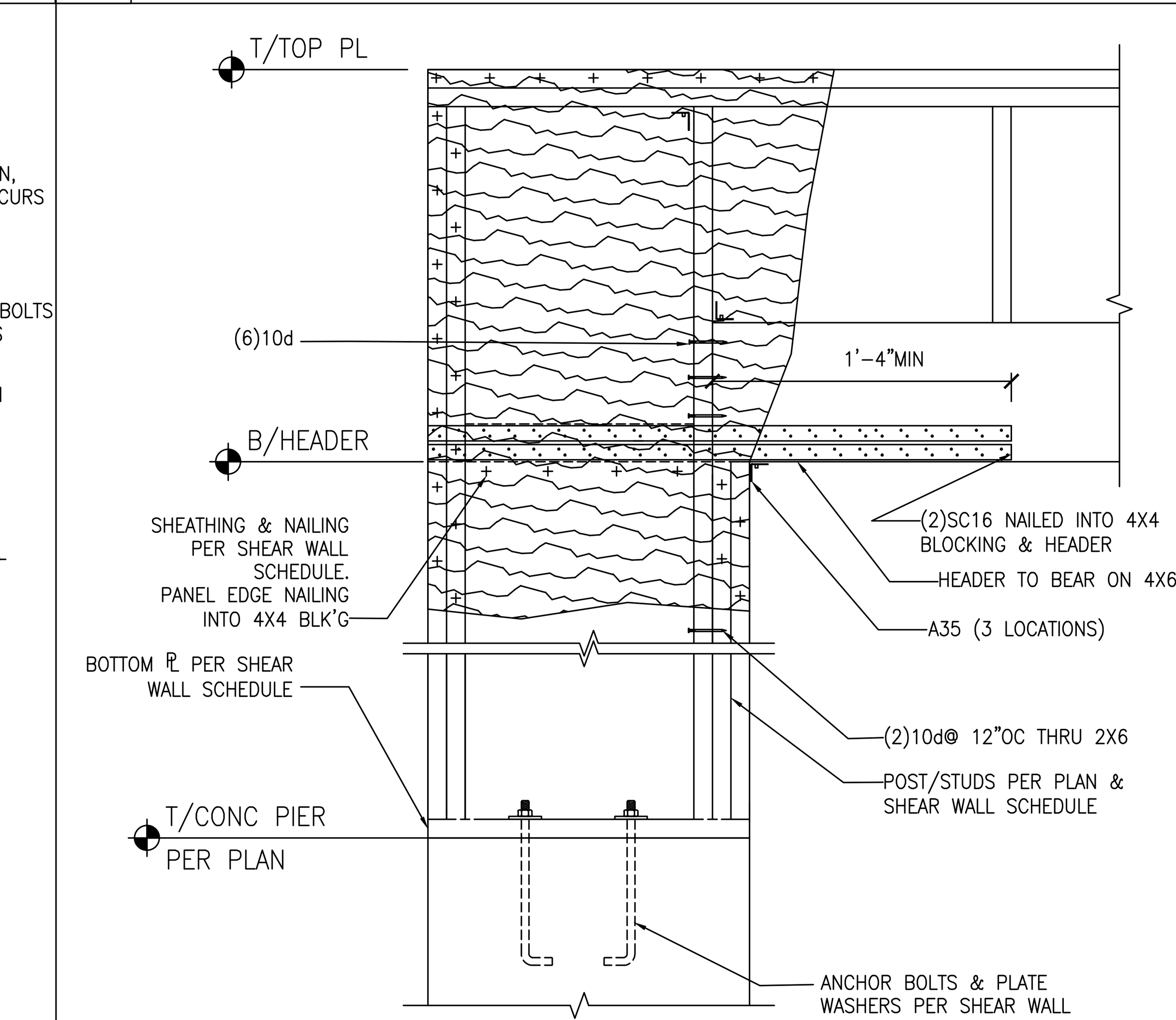
NOTES:
1. BOLTS 5/8"DIA @ MAX 12"OC at 2x SILL PLATE
2. BOLTS 5/8"DIA @ MAX 12"OC at 3x SILL PLATE
3. LS90 @ MAX 12"OC & PER SHEAR WALL SCHEDULE
4. FURRING WALL PER ARCHITECTURAL
5. TOP OF WALL ELEVATIONS PER ARCHITECTURAL

6 TYPICAL BASEMENT WALL WITH JOISTS PARALLEL



NOTE:
1.FOOTING SIZE AND REINFORCING PER FOUNDATION PLAN, A-SHEETS.
2.TOP OF WALL ELEVATION PER ARCHITECTURAL.
3.FOOTING SHALL BE MINIMUM 18" FROST DEPTH, BELOW GRADE LEVEL AND STEM WALL HEIGHT PER HOLDOWN REQUIREMENTS.

9 TYPICAL INTERIOR SHEAR WALL WITH SLAB ON GRADE



10 TYPICAL STRAPPING WALL/HEADER AT GARAGE

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DETAILS

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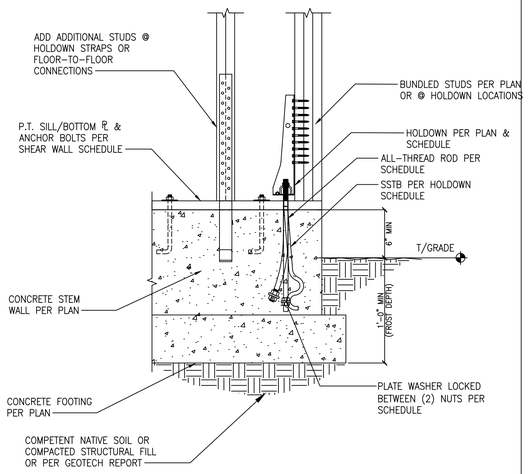
S 4



1 TYPICAL SHEAR WALL HOLDOWN CONNECTION

IBC 2018 SPECIAL INSPECTIONS - TABLE 1

REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION		
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY
SOILS			
VERIFY FOOTING BEARING CAPACITY AND SUBGRADE PREPARATION FOR FILLS	TABLE 1705.6		PERIODIC (A)
FILL MATERIAL VERIFICATION			CONTINUOUS
FILL PLACEMENT & COMPACTION			CONTINUOUS
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	TABLE 1705.6		PERIODIC (A)
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL			PERIODIC
PERFORM CLASSIFICATION OF COMPACTED FILL MATERIALS			PERIODIC
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1705.6		CONTINUOUS
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	TABLE 1705.6		PERIODIC

IBC 2018 SPECIAL INSPECTIONS - TABLE 2

WOOD

	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY
FABRICATION OF PREFABRICATED STRUCTURAL ELEMENTS	1704.2, 1705.5	–	PERIODIC
A. VERIFY STRUCTURAL PANEL GRADE AND THICKNESS	1705.5.1, 1704.10.1, TABLE 2306.2(2)	–	PERIODIC
B. VERIFY NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES	1705.5.1, TABLE 2306.2(2)	–	PERIODIC
C. VERIFY NAIL OR STAPLE DIAMETER AND LENGTH, NUMBER OF FASTENER LINES AND SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARGINS	1704.1, 1705.5.1, TABLE 2306.2(2)	–	PERIODIC
PREFABRICATED WOOD SHEAR PANELS	1705.11.3	ICC EVALUATION REPORT	PERIODIC

IBC 2018 SPECIAL INSPECTIONS - TABLE 2

REQUIRED STRUCTURAL SPECIAL INSPECTIONS

FABRICATORS

	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY
FABRICATORS			PERIODIC
CONCRETE			
REINFORCING STEEL	TABLE 1705.3		PERIODIC
WELDING REINFORCING STEEL (WABO-CERTIFIED SPECIAL AGENCY IS REQUIRED)			CONTINUOUS
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706	TABLE 1705.3		PERIODIC
2) REINFORCING STEEL IN WALLS OF CONCRETE	–		CONTINUOUS (B)
4) OTHER REINFORCING STEEL.	TABLE 1705.3		PERIODIC
PLACEMENT OF BOLTS & HOLDOWNS INSTALLED IN CONCRETE			CONTINUOUS
VERIFYING USE OF REQUIRED MIX DESIGN(S)			PERIODIC
CONCRETE PLACEMENT	TABLE 1705.3		CONTINUOUS
VERIFICATION OF IN-SITU CONCRETE PRIOR TO REMOVAL OF FORMS AND SHORES FROM ELEVATED BEAMS AND STRUCTURAL SLABS	TABLE 1705.3	ACI 318: 6.2	PERIODIC (A)
VERIFICATION OF FORMWORK	TABLE 1705.3	ACI 318: 6.1.1	PERIODIC (A)
VERIFYING WELDER QUALIFICATIONS	1705.2.1	ASW D1.3	PERIODIC

2 SPECIAL INSPECTION SCHEDULE

DESIGN PARAMETERS (ASSUMED)

1. 35 PCF/FT EQUIVALENT FLUID PRESSURE
2. 110 PCF SOIL WEIGHT
3. 1500 PSF SOIL BEARING PRESSURE
4. PASSIVE PRESSURE 350 PCF
5. SEISMIC SURCHARGE 8H
6. CONCRETE 3000 PSI W/6 SACK CEMENT PER CUBIC YARD AND 6 GALLONS WATER PER SACK
7. GRADE 40 STEEL FOR #4 & SMALLER GRADE 60 STEEL FOR #5 & GREATER
8. BACKFILL W/ POUROUS MATERIAL; PROVIDE TEMPORARY BRACINGS AS REQ'D

FOOTING SCHEDULE

WALL TYPE	SIZE KEY		SIZE			REINFORCING	
	KEY(kT)	KEY(kD)	TOE	HEEL	THK (fD)	TRANSVERSAL TOP	LONGITUDINAL BOTT
RW-3	0'-10"	1'-6"	1'-3"	1'-9"	0'-10"	#5 @ 12"OC	(6) #4
RW-5	0'-10"	1'-6"	1'-6"	2'-0"	0'-10"	#5 @ 12"OC	(6) #4
RW-7	0'-10"	1'-6"	2'-6"	2'-9"	1'-0"	#5 @ 12"OC	(4) #4

NOTE:
CONTRACTOR TO COORDINATE FOOTING SIZES WITH RETAINED SOIL HEIGHT AT WALL.

WALL SCHEDULE

WALL TYPE	SIZE H	SIZE WIDTH (wT)	REINFORCING SOIL FACE VERTICAL	REINFORCING SOIL FACE HORZONTAL
RW-3	3'-0"	0'-8"	#5 @ 12"OC	#4 @ 11"OC
RW-5	5'-0"	0'-8"	#5 @ 12"OC	#4 @ 9"OC
RW-7	7'-0"	0'-8"	#5 @ 12"OC	#4 @ 9"OC

5 TYPICAL SITE RETAINING WALL

PROJECT #:
23-111
DRAWN BY: GS
REVIEWED BY: GS
DATE: 3/2/23

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GABRIELA MIA ZVELT — STATE OF WASHINGTON — 53184 — REGISTERED PROFESSIONAL ENGINEER
3/10/2023

PROJECT NAME:
Phan-Nguyen Residence
4102 Island Crest Way
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IBC 2018

DETAILS

ANW 220185
LATERAL DETAILS

SHEET NUMBER:
S 5