ABBREVIATION KEY

B.E.W. = BOTTOM EACH WAY
DBL. = DOUBLE
DISP = GARBAGE DISPOSAL
DW = DISH WASHER
FT = FEET
O.C. = ON CENTER
PL. = POINT LOAD
R&S = ROD AND SHELF
SG = SAFETY GLASS
SIM. = SIMILAR
TB = TOWEL BAR
TP = TOILET PAPER HANGER
TR = TOWEL RING
TYP. = TYPICAL
U.N.O. = UNLESS NOTED OTHERWISE
VB = VAPOR BARRIER
VTOS = VENT TO OUT SIDE
WH = WATER HEATER

NFPA 13d FIRE SPRINKLER SYSTEM REQUIRED
NFPA 72 "HOUSEHOLD" MONITORED FIRE ALARM TO BE INSTALLED

American Classic Homes

9675 S.E. 36th ST. MERCER ISLAND, WA 98040

89TH AVE SE RESIDENCE

42xx 89TH AVE SE MERCER ISLAND, WA 98040

PLAN DESCRIPTION

FLOOR AREA:	
MAIN LEVEL:	1801 S.F.
UPPER LEVEL:	1841 S.F.
TOTAL RESIDENCE:	3642 S.F.
ADU:	448 S.F.
TOTAL LIVING:	4090 S.F.
GARAGE:	407 S.F.
FRONT PORCH:	200 S.F.
REAR PATIO:	266 S.F.

FLOOR AREA RATIO:	
LOT AREA:	10,126 S.F.
40% MAX.	
MAXIMUM ALLOWED:	4050 S.F.
+5% FOR ADU	506 S.F.
SUB TOTAL	4556 S.F.
MAXIMUM ALLOWED:	4500 S.F.
HEATED RESIDENCE:	3642 S.F.
GARAGE:	407 S.F.
TOTAL RESIDENCE:	4049 S.F.
	39.99%
+	
ADU:	448 S.F.
PROPOSED F.A.R. (TOTAL)	4497 S.F. 44.42%

SINGLE FAMILY RESIDENCE
WOOD FRAME STRUCTURE
STEM WALL / CRAWL SPACE FOUNDATION
DETACHED RESIDENCE
WITH ATTACHED 2 CAR GARAGE
WITH ATTACHED A.DU.

DESIGNER

BROBST DESIGN WORKS
CONTACT:
DAN BROBST
206.409.6690
dan@brobstdesignworks.com

STRUCTURAL ENGINEER

MYERS ENGINEERING
CONTACT:
MARK MYERS
253.585.3248
myengineer@centurytel.net

ENERGY CREDIT INFORMATION

SEE PAGE N1 & N1.1 FOR ENERGY COMPLIANCE

BUILDING CODE / ENERGY COMPLIANCE

2018 INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 WASHINGTON STATE ENERGY
2018 UNIFORM PLUMBING CODE
+ WA. STATE AMMENDMENTS

BUILDING ZONE R-9.6

REVISIONS

SHEET INDEX

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89TH AVE SE RESIDENCE
42xx 89TH AVE SE
MERCER ISLAND, WA 98040

American Classic Homes
9675 S.E. 36th ST. MERCER ISLAND, WA 98040

REVISED

SCALE

DATE 3.5.2021

COMPUTER FILE NAME

COVER

SHEET NUMBER

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

(PER SPECIAL WARRANTY DEED RECORDING# 20180906000652)

LOT 10, BLOCK 3 OF LUCAS HEIGHTS, AS PER PLAT RECORDED IN VOLUME 17 OF PLATS, ON PAGE 5, RECORDS OF KING COUNTY;

TOGETHER WITH THE WEST 1/2 OF VACATED ALLEY ADJOINING, SITUATE IN COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

N 26°03'25" E BETWEEN FOUND CENTERLINE MONUMENTATION PER R1

REFERENCES

R1. RECORD OF SURVEY, VOL. 153, PG. 244, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD88 PER GPS OBSERVATIONS

SURVEYOR'S NOTES

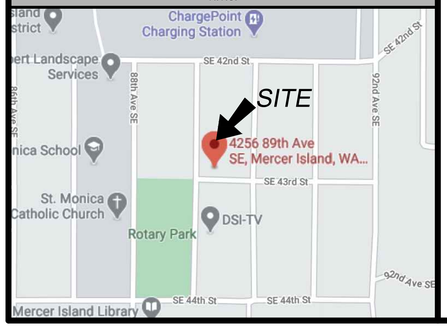
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN DECEMBER OF 2020 AND JANUARY OF 2021. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 4457300210.
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 10,126± S.F. (0.23 ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

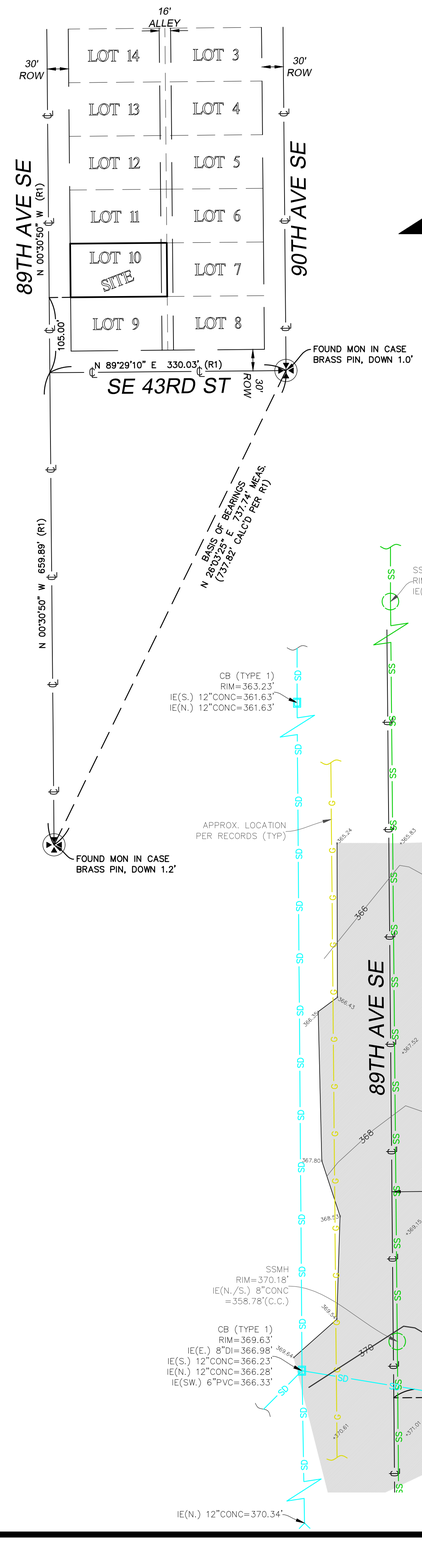
LEGEND

- ASPHALT SURFACE
- BUILDING
- CENTERLINE ROW
- CULVERT PIPE
- CONC WALL
- FENCE LINE (WIRE)
- FENCE LINE (WOOD)
- GAS LINE
- GRAVEL SURFACE
- IP IRON PIPE (FOUND)
- MB MAILBOX (RESIDENTIAL)
- MONUMENT IN CASE (FOUND)
- P POWER (OVERHEAD)
- PP POWER POLE
- SS SEWER LINE
- SEWER MANHOLE
- SIGN (AS NOTED)
- SD STORM DRAIN LINE
- T TELEPHONE (OVERHEAD)
- TAG SIZE TYPE TREE (AS NOTED)
- W WATER LINE
- GUY ANCHOR
- INLET (TYPE 1)
- BENCHMARK

VICINITY MAP

N.T.S.





CONTROL MAP

N.T.S.

STEEP SLOPE/BUFFER DISCLAIMER:

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

INDEXING INFORMATION

SE 1/4 NW 1/4
SECTION: 18
TOWNSHIP: 24N
RANGE: 05E
COUNTY: KING

TREE INVENTORY

PER ARBOR REPORT BY: WASHINGTON FORESTRY CONSULTANTS, INC. DATED: 01/07/2021

NUMBER	DIAMETER	TYPE/NAME
1	11.1" (CALC'D)	WA HAWTHORNE
314	11.2" (CALC'D)	ENGLISH LAUREL
322	12.4"	PACIFIC DOGWOOD
330	24.2" (CALC'D)	BIGLEAF MAPLE
331	22.0" (CALC'D)	BIGLEAF MAPLE
339	23.2" (CALC'D)	BIGLEAF MAPLE

10 0 5 10
(IN FEET)
1 INCH = 10 FT.

measure success

TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 4457300210

ACH HOMES LLC
4000 BLOCK OF 89TH AVE SE
MERCER ISLAND, WA 98040

Terrane
10801 Main Street, Suite 102, Bellevue, WA 98004
phone 425.458.4488 support@terrane.net
www.terrane.net

JOB NUMBER:	202424
DATE:	12/30/20
DRAFTED BY:	RSN
CHECKED BY:	JGM/CSP
SCALE:	1" = 10'

REVISION HISTORY

01/12/21	ADD ARBORIST DATA

SHEET NUMBER

1 OF 1

AVERAGE BUILDING ELEVATION (ABE)

WALL	WALL SEGMENT	EXIST. MIDPT. ELEV.	WALL SEGMENT x ELEV.
A	48.0'	369.0	17712
B	19.0'	370.25	7034.75
C	11.0'	370.5	4075.5
D	36.0'	371.5	13374
E	22.5'	372.0	8370
F	15.17'	371.25	5631.86
G	7.0'	371.25	2598.75
H	13.17'	371.25	4889.36
I	20.5'	371.5	7615.75
J	20'	370.75	7415
K	9'	370.25	3332.25
L	14.0'	369.75	5176.5
M	5.0'	369.5	1847.5
N	7.0'	369.25	2584.75
O	5.0'	369.0	1845
P	12.0'	368.5	4422
TOTAL	264.34	5925.5	97,924.97

AVERAGE BUILDING ELEVATION = 97,924.97 / 264.34' = 370.45'
MAXIMUM BUILDING HEIGHT = 370.45' + 30' = 400.45'
PROPOSED BUILDING HEIGHT (399.5')

Table 1. Summary of tree conditions.

Tag #	Species	DBH (in.)	Calculated DBH (in)	Condition	Save based on Tree Condition Alone? Yes or No	Save Tree based on Site Plans? Save or Remove
322	Pacific dogwood	12.4	--	Nearly dead; Topped for powerline clearance – 50% dead;	No–not a long-term tree	Remove – under powerline and dying
314	English laurel	6,8,5	11.2	Very poor; Invasive species;	No	Remove
331	Bigleaf maple	10,6,10, 11,4,5,6, 5,5	22.0	Very Poor – 9 sprouts;	No	Remove – in footprint of home;
339	Bigleaf maple	8,10,8,8, 9,9,8,7	23.2	Very poor; 8 sprouts;	No	Remove – in footprint of home;
330	Bigleaf maple	12,8,6,6, 8,10,8,6, 6	24.2	Very poor; 9 sprouts;	No	Remove – future hazard tree;
1	WA Hawthorne	6,7,4,3, 3,2	11.1	Very Poor; structurally defective;	No	Remove – Noxious Species – Highly Defective

Table 3 – Replacement tree calculations.

Tag #	Species	Actual DBH (in.)	Calculated DBH (in)	# Replacement Trees Required
322	Pacific dogwood	12.4	--	2
314	English laurel	6,8,5	11.2	2
331	Bigleaf maple	10,6,10,11,4,5,6,5,5	22.0	2
339	Bigleaf maple	8,10,8,8,9,9,8,7	23.2	2
330	Bigleaf maple	12,8,6,6,8,10,8,6,6	24.2	3
1	WA Hawthorne	6,7,4,3,3,2	11.1	2
	Sum			13

DEVELOPMENT PROPOSALS FOR A NEW SINGLE-FAMILY HOME SHALL REMOVE JAPANESE KNOTWEED (POLYGONUM CUSPIDATUM) AND REGULATED CLASS A, REGULATED CLASS B, AND REGULATED CLASS C WEEDS IDENTIFIED ON THE KING COUNTY NOXIOUS WEED LIST, AS AMENDED, FROM REQUIRED LANDSCAPING AREAS ESTABLISHED PURSUANT TO SUBSECTION 19.02.020(F)(3)(A). NEW LANDSCAPING ASSOCIATED WITH NEW SINGLE FAMILY HOME SHALL NOT INCORPORATE ANY WEED LIST, AS AMENDED. PROVIDED, THAT REMOVAL SHALL NOT BE REQUIRED IF THE REMOVAL WILL RESULT IN INCREASED SLOPE INSTABILITY OR RISK OF LANDSLIDE OR EROSION.

LOT COVERAGE:

LOT AREA:	10,126 S.F.
PROPOSED ROOF:	3530 S.F.
DRIVEWAY:	482 S.F.
TOTAL AREA:	4012 S.F.
TOTAL %.:	39.6% S.F.
MAX. ALLOWED %.:	40.0% S.F. 4050.4 S.F.
FRONT WALK BEYOND COVER:	128 S.F.
NORTH BLOCK WALL:	77 S.F.
SOUTH / EAST BLOCK WALL:	213 S.F.
TOTAL HARDSCAPE:	418 S.F.
TOTAL %.:	4.12% S.F.
MAX. ALLOWED %.:	6% S.F.

FLOOR AREA RATIO:

40% MAX.	
MAXIMUM ALLOWED:	4050 S.F.
+5% FOR ADU	506 S.F.
SUB TOTAL	4556 S.F.
MAXIMUM ALLOWED:	4500 S.F.
HEATED RESIDENCE:	3642 S.F.
GARAGE:	407 S.F.
TOTAL RESIDENCE:	4049 S.F. 39.99%
+	
ADU:	448 S.F.
PROPOSED F.A.R. (TOTAL)	4497 S.F. 44.42%

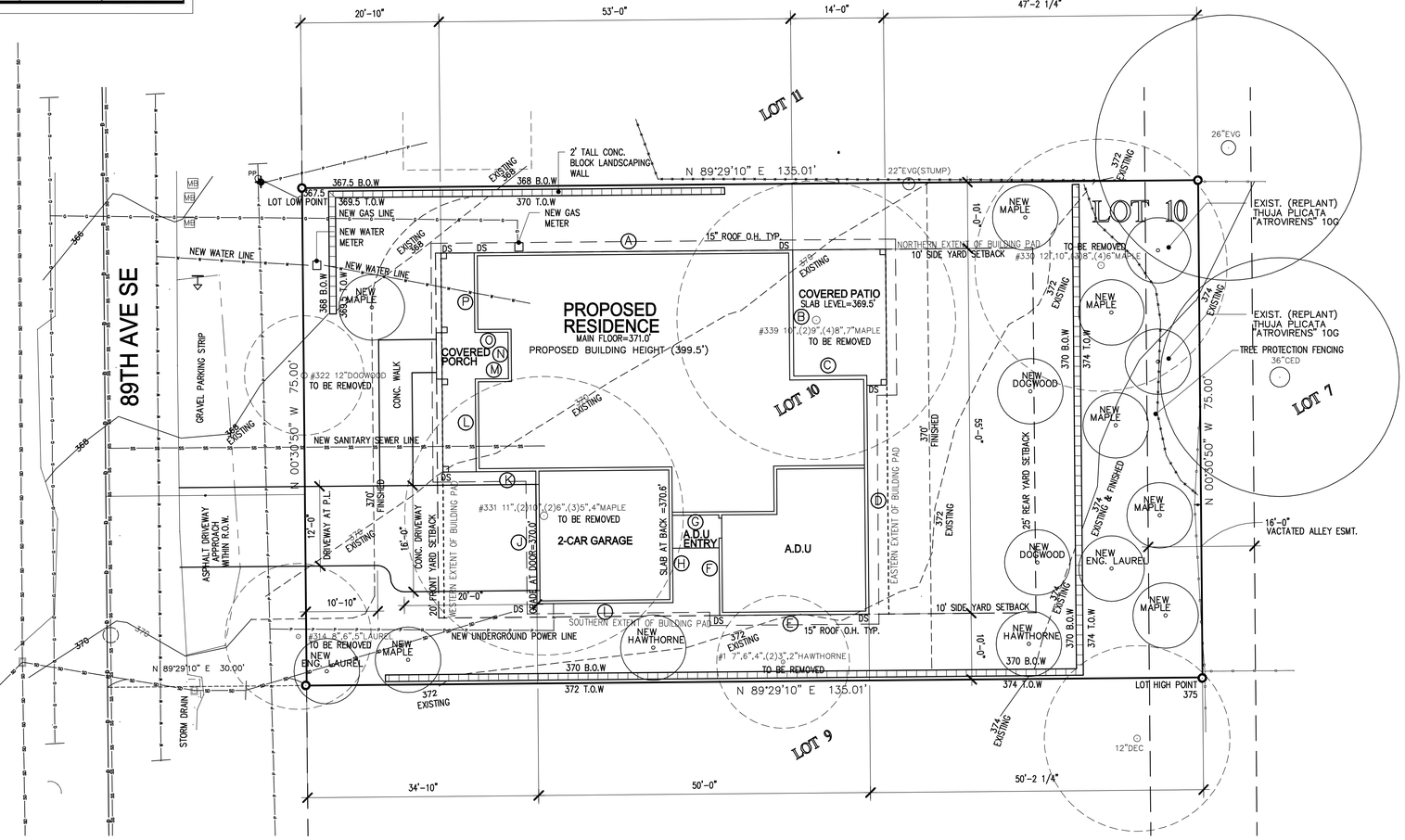
BUILDING PAD AREA: 3685 S.F.

LOT SLOPE
375.0' - 367.5 = 7.5'
HORIZONTAL DISTANCE = 154.0'
7.5 / 154.0' = .0487
.0316 x 100 = 4.87%

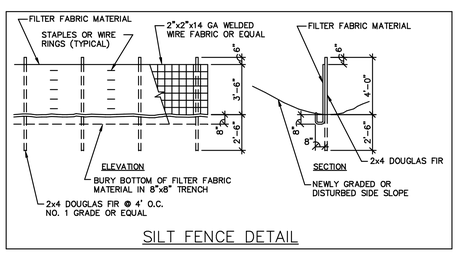
NOTE:
SILT FENCES TO BE PROVIDED AT ALL DOWNSTREAM AREAS - NO EXCEPTIONS

NOTE:
(DS) DENOTES DOWNSPOUT LOCATIONS CONNECT TO APPROVED DRAINAGE SYSTEM AS REQUIRED

TREE NOTE:
NO TREES TO BE REMOVED WITHOUT PRIOR APPROVAL



SITE PLAN
SCALE: 1" = 10'



SILT FENCE DETAIL

BROBST DESIGN WORKS
dan@brobstdesignworks.com
206.409.6690

SITE PLAN
49XX 89TH AVE SE
MERCER ISLAND WA 98040
TAX PARCEL: 4457300210

American Classic Homes

9675 S.E. 36th ST. MERCER ISLAND, WA 98040

REVISED

1"=10'-0"
SCALE

3.5.2021
DATE

COMPUTER FILE NAME
SITE

SHEET NUMBER

ENERGY & BUILDING LEAKAGE NOTES:

SEE PAGE N1 FOR COMPLETE INFORMATION

PLUMBING NOTE:

CLOTHES WASHER, REFRIGERATOR AND DISH WASHER MUST BE INSTALLED WITH WATER-HAMMER PREVENTION DEVICES.

FIRE BLOCKING NOTE

PROVIDE FIRE BLOCKING AT THE FOLLOWING LOCATIONS:
- AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES.
- IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS INCLUDING FURRED SPACES AT THE CEILING AND FLOOR LEVELS AND AT 10 FT. INTERVALS BOTH VERTICAL AND HORIZONTAL.
- IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN AND BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF STAIRS IF THE WALLS UNDER THE STAIRS ARE UNFINISHED
- IN OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS, FIREPLACES AND SIMILAR OPENINGS THAT AFFORD PASSAGE FOR FIRE AT CEILING AND FLOOR LEVELS, WITH NONCOMBUSTIBLE MATERIALS.
- AT OPENINGS BETWEEN ATTIC SPACES AND CHIMNEY CHASES FOR FACTORY BUILT CHIMNEYS.

FRAMING & ROUGH OPENING NOTES:

(VERIFY W/ CONTRACTOR)

-EXTERIOR HINGED DOORS
FURR BOTTOM WITH 3-1/2" x WIDTH x 7/16" OSB
SINGLE DOOR : WIDTH + 2" x 83"
DOUBLE DOOR SET : WIDTH + 3" x 83"

-INTERIOR HINGED DOORS: UPPER LEVEL
SINGLE DOOR : WIDTH + 2" x 82-1/2"
DBL. DOOR SET: WIDTH + 2" x 82-1/2"
-BYPASS DOORS: WIDTH – 1" x 83"

-INTERIOR HINGED DOORS : MAIN LEVEL
SINGLE DOOR : WIDTH + 2" x 99"
-BYPASS DOORS: WIDTH +3" x 100"

-SLIDING GLASS DOOR: WIDTH + 0" x 82-1/2"
PLACE NERVASTROL PLASTIC UNDER DOOR WITH CAULKING UNDER AND OVER NERVASTROL.

PROVIDE 2x BLOCKING AT THE FOLLOWING LOCATIONS:
KITCHEN CABINET BACKING @ 6'-10" CENTER LINE
HANDRAIL BACKING @ 32" CENTERLINE
TOWEL BAR BACKING @ 52" CENTERLINE
TOILET PAPER BACKING @ 26"x26"

PLUMBING NOTES:

-ALL PLUMBING SHALL BE RAT-PROOFED PER SECTION 313.12 UPC
- STRAINER PLATES ON DRAIN INLETS SHALL BE DESIGNED AND INSTALLED SO THAT NO OPENING IS GREATER THAN 1/2" IN THE LEAST DIMENSION. SECTION 313.12.1
- METER BOXES SHALL BE CONSTRUCTED IN SUCH A MANNER THAT RATS CAN NOT ENTER A BUILDING BY FOLLOWING THE SERVICE PIPES FROM THE BOX INTO THE BUILDING. SECTION 313.12.2
- IN OR ON BUILDINGS WHERE OPENINGS HAVE BEEN MADE IN WALLS, FLOORS, CEILINGS FOR THE PASSAGE OF PIPES – SUCH OPENINGS SHALL BE CLOSED & PROTECTED BY THE INSTALLATION OF APPROVED METAL COLLARS SECURELY FASTENED TO THE ADJOINING STRUCTURE. SECTION 313.12.3
- TUB WASTE OPENINGS IN FRAMED CONSTRUCTION TO CRAWL SPACES AT OR BELOW THE FIRST FLOOR SHALL BE PROTECTED BY THE INSTALLATION OF APPROVED METAL COLLARS OR METAL SCREEN SECURELY FASTENED TO THE ADJOINING STRUCTURE WITH NO OPENING GREATER THAN 1/2" IN THE LEAST DIMENSION. SECTION 313.12.3

SAFTEY GLASS NOTE:

(SG) DENOTES SAFETY TEMPERED GLASS

BUNDLED STUD NOTE:

SEE FLOOR FRAMING FOR BUNDLED STUD / POST LOCATIONS

ENGINEERING NOTE

REFERENCE "S" PAGES FOR POST & GANG STUD LOCATIONS, SHEARWALL LOCATIONS AND OTHER STRUCTURAL INFORMATION / REQUIREMENTS, TYP.

DOOR TRIMMER NOTE:

PROVIDE (3) TRIMMERS EACH SIDE OF ALL DOORS, TYP.

DENOTES MIN. 50 CFM EXHAUST FAN., UNO
ALL FANS MUST VENT TO THE OUTSIDE

110v DENOTES SMOKE DETECTOR LOCATION
ALL SMOKE DETECTORS TO BE 110V, INTERCONNECTED WITH BATTERY BACK-UP

CO CARBON MONOXIDE DETECTOR TO BE 110v WITH BATTERY BACK-UP, REQUIRED ON EACH LEVEL AND ADJACENT TO ALL SLEEPING AREAS

GAS APPLIANCE NOTE:

GAS BURNING APPLIANCES SHALL BE ANCHORED TO RESIST SEISMIC HORIZONTAL DISPLACEMENT PER IRC M1307.2 , THE ELEVATION OF THE IGNITION SOURCE TO BE 18" MIN. ABOVE THE FLOOR LEVEL PER IRC M1307.3

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40% MAX.	
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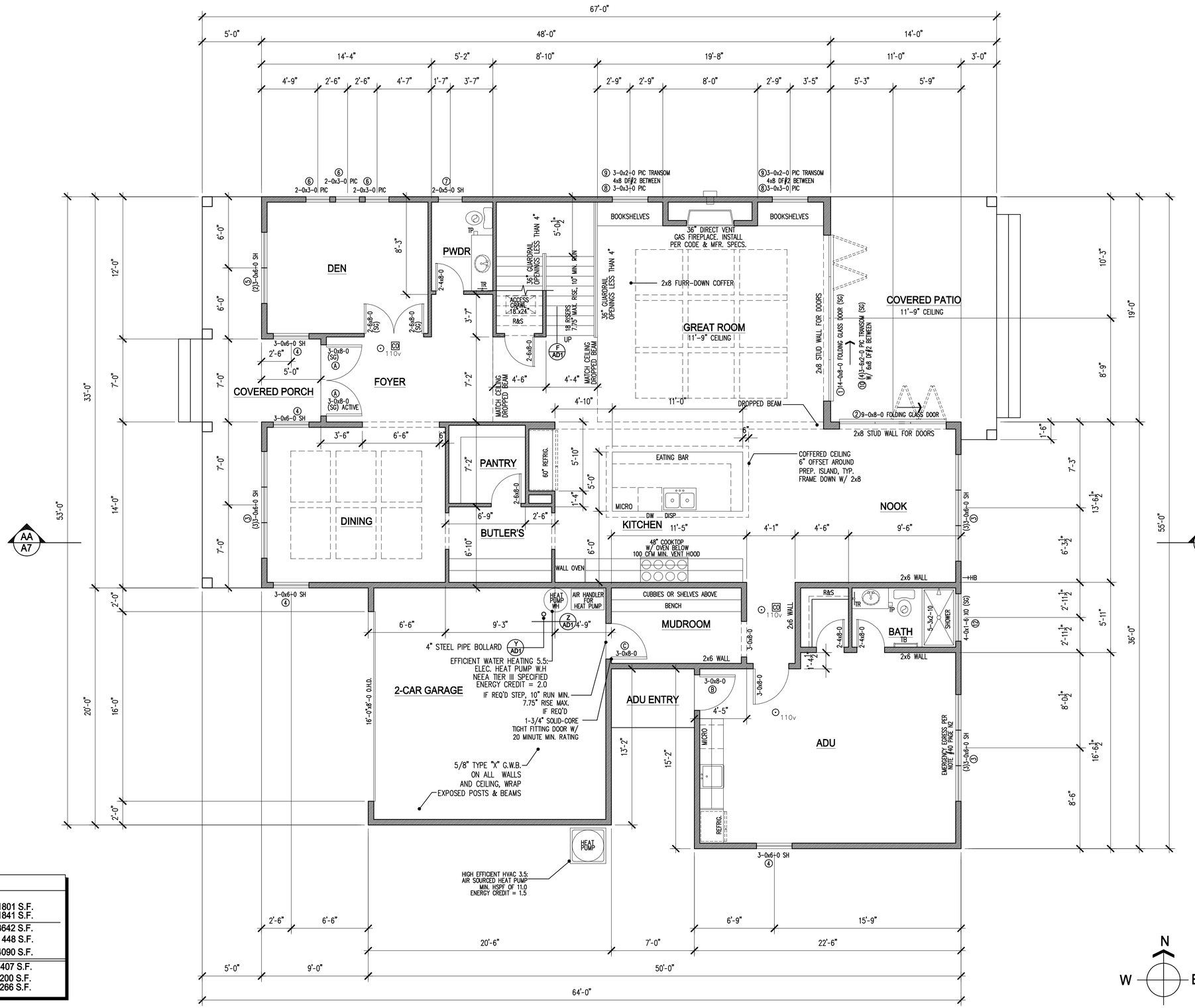

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MERCER ISLAND 89TH AVE SE RESIDENCE

MAIN LEVEL FLOOR PLAN

American ClassicHomes
9675 S.E. 36th ST. MERCER ISLAND, WA 98040

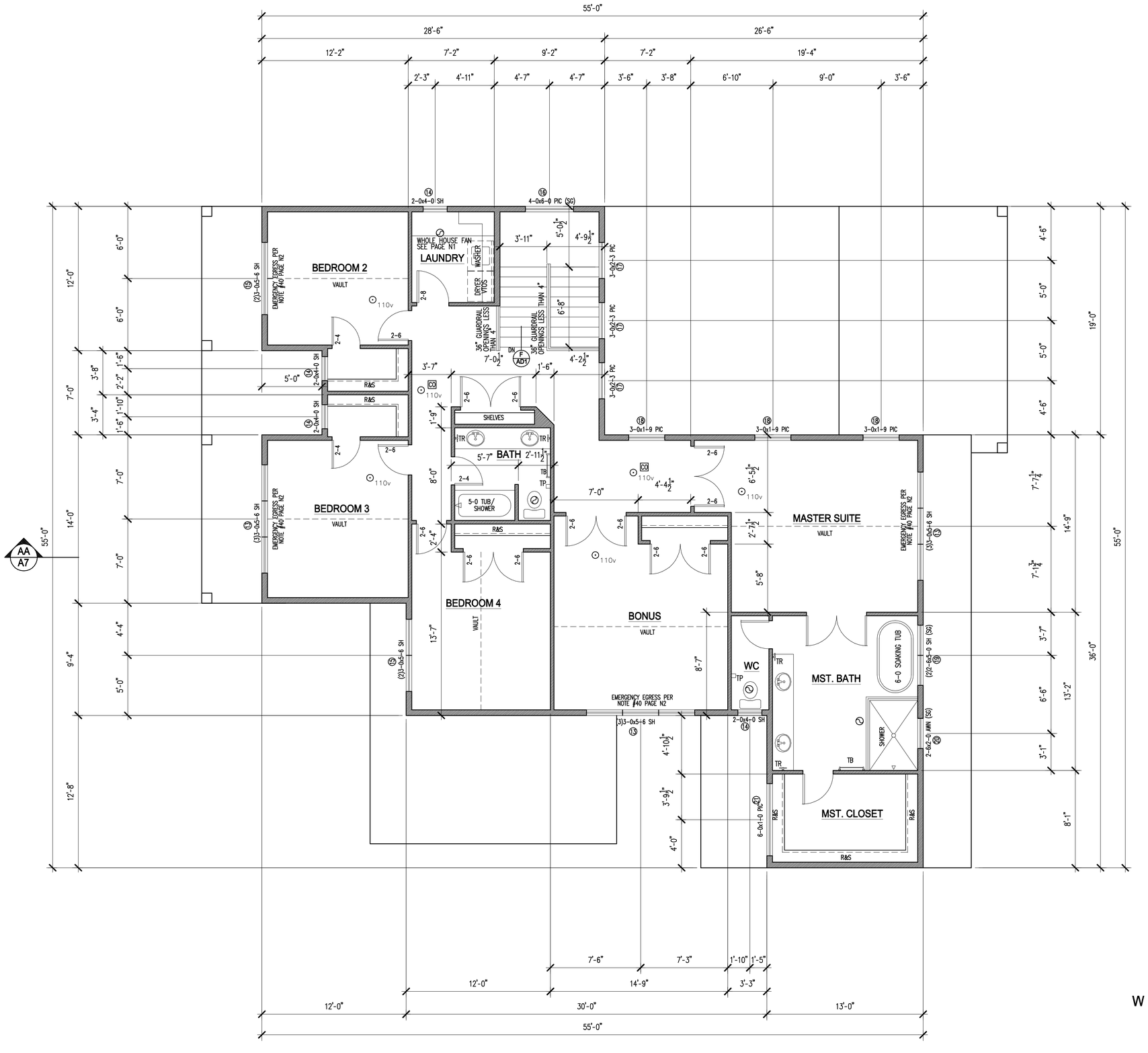
REVISED

1/4"=1'-0"
SCALE

3.5.2021
DATE

89th
COMPUTER FILE NAME

A1
SHEET NUMBER



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MERCER ISLAND
89TH AVE SE RESIDENCE
UPPER LEVEL FLOOR PLAN

American ClassicHomes

9675 S.E. 36th ST. MERCER ISLAND, WA 98040

REVISED

1/4"=1'-0"
SCALE

3.5.2021
DATE

89th
COMPUTER FILE NAME

A2
SHEET NUMBER

ATTIC VENTILATION:

MINIMUM ATTIC VENTILATION SHALL BE 1/300 OF THE ATTIC PLAN AREA.

UPPER VENTING SHALL BE PROVIDED BY:
AF-50 ROOF JACKS LOCATED WITHIN 3' OF THE RIDGE OF THE ROOF
EACH JACK VENT PROVIDES .34 SF OF VENTING PER JACK

LOWER VENTING SHALL BE PROVIDED BY
LOWER VENTING SHALL BE EAVE VENT BLOCKS W/ (3) 2" DIA SCREENED HOLES PROVIDING A NET VENT AREA OF 7.068 SQIN. =0.0492 SQ FT
AND IF REQUIRED
AF-50 ROOF JACKS LOCATED BELOW THE MIDPOINT OF THE ROOF
EACH JACK VENT PROVIDES .34 SF OF VENTING PER JACK

SEE DETAIL S/AD1 FOR VENTING AT EAVE DIAGRAM

REAR PATIO & GREAT ROOM ROOF:

646.0 SQ. FT ATTIC AREA / 300 = 2.16 SQFT. VENT'G REQ'D

1.08 SQFT. OF VENT'G TO BE PROVIDED ABOVE THE HALF-WAY POINT AND
1.08 SQFT. OF VENT'G TO BE PROVIDED BELOW THE HALF-WAY POINT.

UPPER VENTING:
1.08 SQ. FT. / .34 PER VENT = 3.17 : PROVIDE (4) ROOF JACKS

LOWER VENTING:
1.08 SQ. FT. / .049 PER VENT = 22.1 : PROVIDE A MIN. OF (23) EAVE BLOCKS

REAR LOW ROOF:

149.0 SQ. FT ATTIC AREA / 300 = .50 SQFT. VENT'G REQ'D

.25 SQFT. OF VENT'G TO BE PROVIDED ABOVE THE HALF-WAY POINT AND
.25 SQFT. OF VENT'G TO BE PROVIDED BELOW THE HALF-WAY POINT.

UPPER VENTING:
.25 SQ. FT. / .34 PER VENT = .73 : PROVIDE (1) ROOF JACKS

LOWER VENTING:
.25 SQ. FT. / .049 PER VENT = 5.1 : PROVIDE A MIN. OF (6) EAVE BLOCKS

GARAGE LOW ROOF:

394.0 SQ. FT ATTIC AREA / 300 = 1.32 SQFT. VENT'G REQ'D

.66 SQFT. OF VENT'G TO BE PROVIDED ABOVE THE HALF-WAY POINT AND
.66 SQFT. OF VENT'G TO BE PROVIDED BELOW THE HALF-WAY POINT.

UPPER VENTING:
.66 SQ. FT. / .34 PER VENT = 1.94 : PROVIDE (2) ROOF JACKS

LOWER VENTING:
.66 SQ. FT. / .049 PER VENT = 13.47 : PROVIDE A MIN. OF (14) EAVE BLOCKS

FRONT PORCH ROOF:

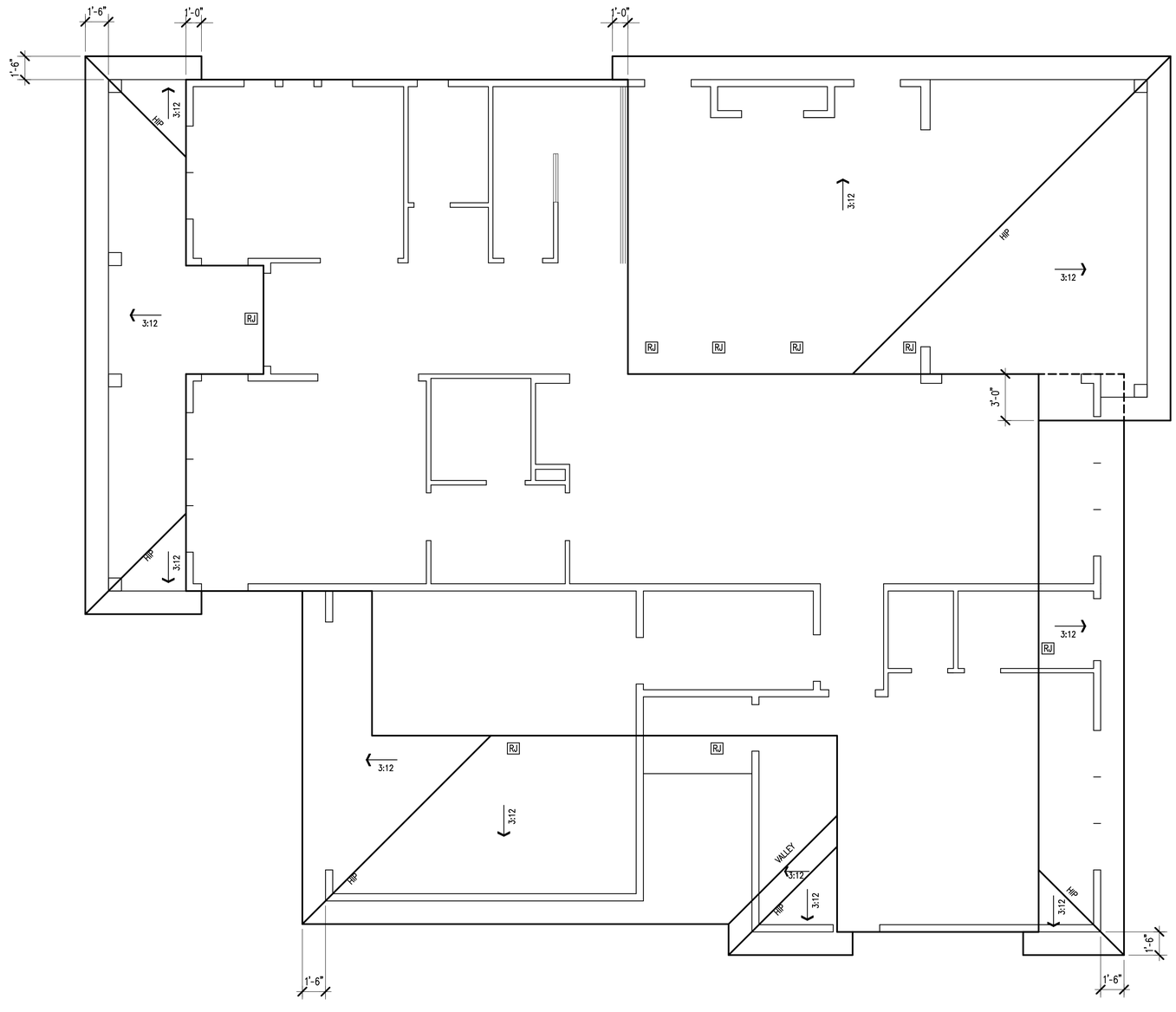
200.0 SQ. FT ATTIC AREA / 300 = .68 SQFT. VENT'G REQ'D

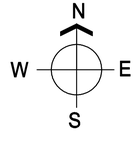
.34 SQFT. OF VENT'G TO BE PROVIDED ABOVE THE HALF-WAY POINT AND
.34 SQFT. OF VENT'G TO BE PROVIDED BELOW THE HALF-WAY POINT.

UPPER VENTING:
.34 SQ. FT. / .34 PER VENT = 1 : PROVIDE (1) ROOF JACKS

LOWER VENTING:
.34 SQ. FT. / .049 PER VENT = 6.9 : PROVIDE A MIN. OF (7) EAVE BLOCKS

RJ ROOF JACK LOCATIONS





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MERCER ISLAND
89TH AVE SE RESIDENCE
LOWER ROOF PLAN

American Classic Homes
9675 S.E. 36th ST. MERCER ISLAND, WA 98040

REVISED

1/4"=1'-0"
SCALE

3.5.2021
DATE

89th
COMPUTER FILE NAME

A3
SHEET NUMBER

ATTIC VENTILATION:

MINIMUM ATTIC VENTILATION SHALL BE 1/300 OF THE ATTIC PLAN AREA.

UPPER VENTING SHALL BE PROVIDED BY
AF-50 ROOF JACKS LOCATED WITHIN 3' OF THE RIDGE OF THE ROOF
EACH JACK VENT PROVIDES .34 SF OF VENTING PER JACK

LOWER VENTING SHALL BE PROVIDED BY
LOWER VENTING SHALL BE EAVE VENT BLOCKS W/ (3) 2" DIA SCREENED HOLES PROVIDING A NET VENT AREA OF 7.068 SQIN. =0.0492 SQ FT
AND IF REQUIRED
AF-50 ROOF JACKS LOCATED BELOW THE MIDPOINT OF THE ROOF
EACH JACK VENT PROVIDES .34 SF OF VENTING PER JACK

SEE DETAIL S/AD1 FOR VENTING AT EAVE DIAGRAM

UPPER ROOF:

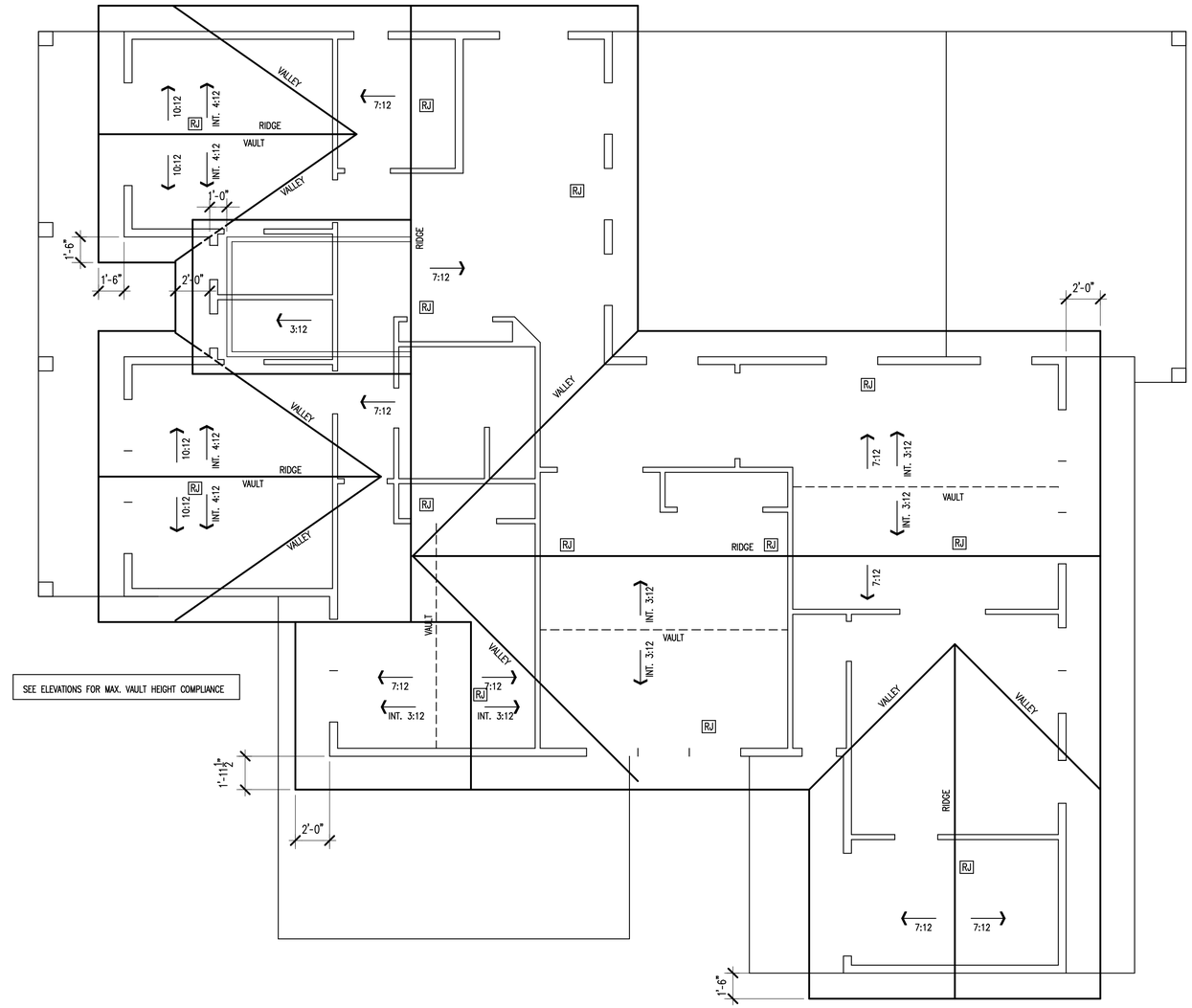
1844.0 SQ. FT ATTIC AREA / 300 = 6.16 SQFT. VENT'G REQ'D

3.08 SQFT. OF VENT'G TO BE PROVIDED ABOVE THE HALF-WAY POINT AND
3.08 SQFT. OF VENT'G TO BE PROVIDED BELOW THE HALF-WAY POINT.

UPPER VENTING:
3.08 SQ. FT. / .34 PER VENT = 9.05 : PROVIDE (10) ROOF JACKS

LOWER VENTING:
(40) MAX. EAVE VENTS x .049 PER VENT = 1.96 S.F. VIA EAVE VENTS
3.08 FT. REQUIRED – 1.96 PROVIDED = 1.12 REMAINING
1.12 SQ. FT. / .34 PER VENT = 3.30 : PROVIDE (4) LOW ROOF JACKS

RJ ROOF JACK LOCATIONS



AA
A7

AA
A7

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MERCER ISLAND
89TH AVE SE RESIDENCE
UPPER ROOF PLAN

American ClassicHomes

9675 S.E. 36th ST. MERCER ISLAND, WA 98040

REVISED

1/4"=1'-0"
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A4
SHEET NUMBER

FRONT ENTRY (WEST) ELEVATION

LEFT SIDE (NORTH) ELEVATION

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MERCER ISLAND 89TH AVE SE RESIDENCE

ELEVATIONS

American ClassicHomes
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REVISED

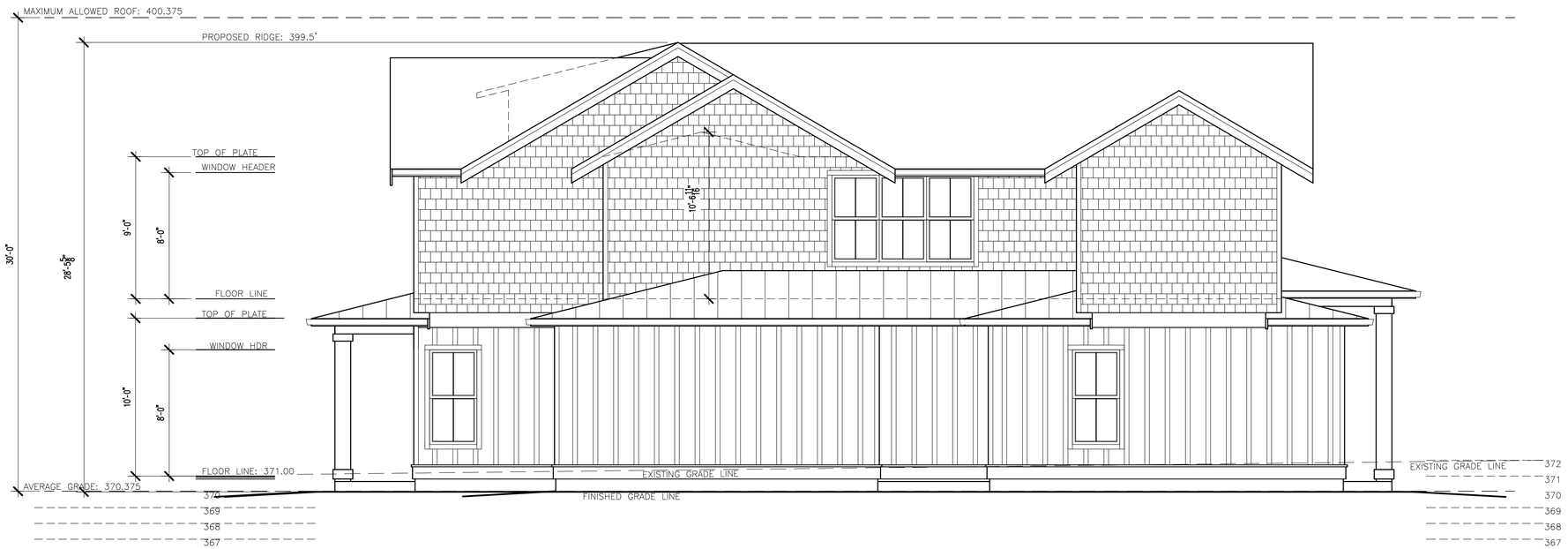
1/4"=1'-0"
SCALE

3.5.2021
DATE

89th
COMPUTER FILE NAME

A5
SHEET NUMBER

REAR (EAST) ELEVATION



RIGHT SIDE (SOUTH) ELEVATION

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MERCER ISLAND 89TH AVE SE RESIDENCE

ELEVATIONS

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REVISED

1/4"=1'-0"
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A6
SHEET NUMBER

ROOF CONSTRUCTION

COMPOSITION ROOF ON 30# FELT o/
DOUBLE LAYER AT LOW PITCHED ROOF AREAS
VERIFY ALL UNDERLAYMENT PER ROOFING MFR.
7/16" OSB"
2X RAFTERS OR PRE-MANUFACTURED TRUSSES o/
R=49 INSULATION (R-38 IN RAFTER AREAS) o/
1/2" G.W.B.

FLOOR CONSTRUCTION

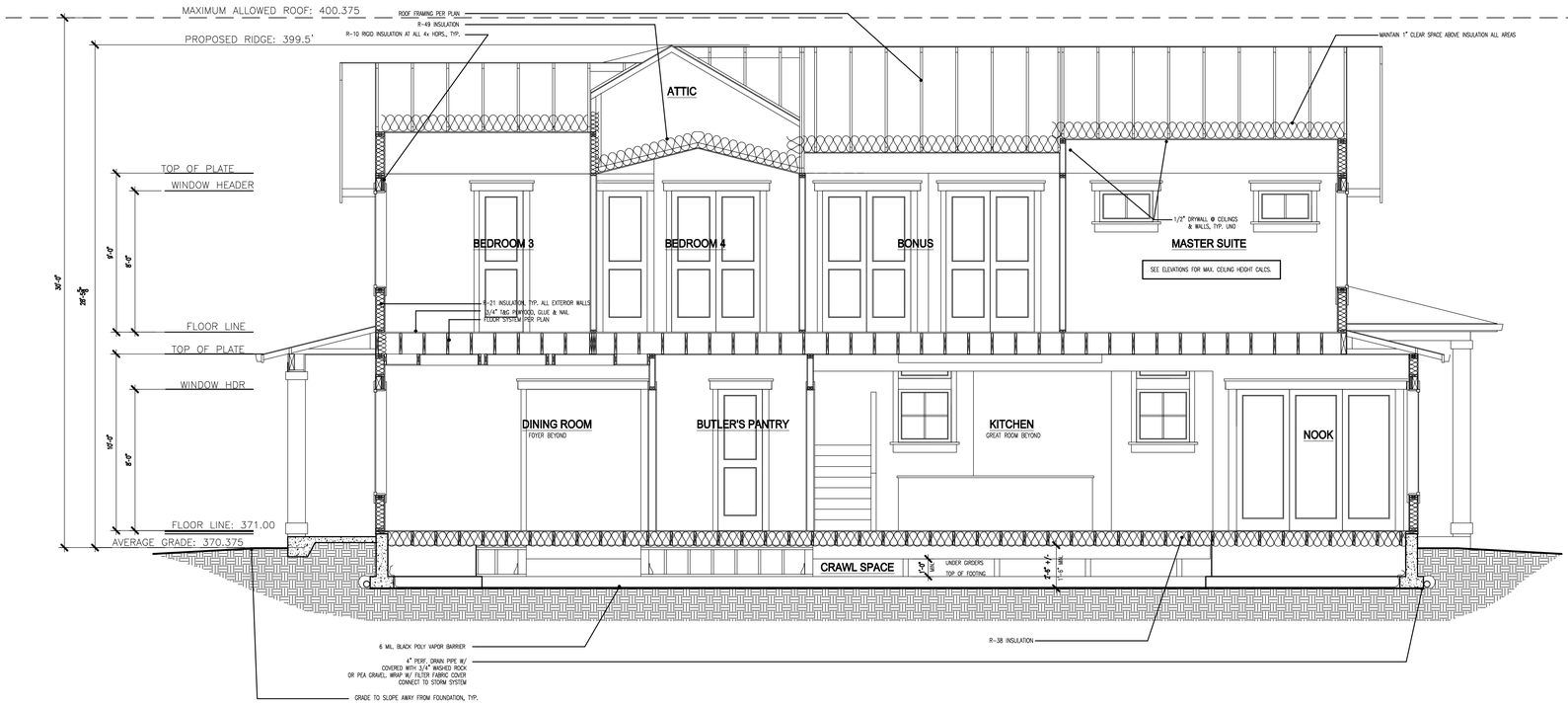
FINISH FLOOR o/
3/4" T & G PLYWOOD o/
JOISTS PER PLAN o/
R-38 INSULATION ABOVE NON-HEATED AREAS

STAIR CONSTRUCTION

2x12 STRINGERS
1-1/8" PLYWOOD TREADS
5/8" TYPE X GWB @ USEABLE
SPACE UNDER STAIRS
FIREBLOCK BETWEEN STUDS
ALONG RUN AND @ MID POINT
BETWEEN STRINGERS

EXTERIOR WALL CONSTRUCTION

SIDING o/
7 1/2# FELT o/
1/2" RATED OSB o/
2x6 STUDS PER PLAN
R=21.0 INSULATION w/ V.B. o/
1/2" G.W.B.



BUILDING SECTION AA

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MERCER ISLAND
89TH AVE SE RESIDENCE
SECTION

American Classic Homes
9675 S.E. 36th ST. MERCER ISLAND, WA 98040

REVISED

3/8"=1'-0"
SCALE

3.5.2021
DATE

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COMPUTER FILE NAME

A7
SHEET NUMBER

ELECTRICAL LEGEND

$	STANDARD SWITCH		HALF-HOT DUPLEX OUTLET
$3	TWO-WAY SWITCH	WP	WEATHER-PROOF DUPLEX OUTLET
$D	DIMMER SWITCH	CO	CARBON MONOXIDE DETECTOR
	CEILING MOUNT FIXTURE		SPECIAL PURPOSE CONNECTION
	PENDANT LIGHT FIXTURE		EXHAUST FAN (MIN 50 CFM.)
	RECESSED CAN		
F	FLUORESCENT WALL MOUNTED FIXTURE	MF	MULTI-FUNCTION (TV, PHONE, DATA)
	WALL MOUNTED FIXTURE	N	NETWORK JACK
	(2) LIGHT BAR LIGHT		REMOTE BUTTON
	(3) LIGHT BAR LIGHT	T	THERMOSTAT
	(4) LIGHT BAR LIGHT		DOOR BELL RINGER
	UNDER CABINET LIGHTS		PHOTO-EYE AT GARAGE DOOR
	110v DUPLEX OUTLET	110v S.D.	SMOKE DETECTOR W/ BATTERY BACK-UP
	220V OUTLET	COMBO	FAN / LIGHT COMBINATION
GFI	110v GFI DUPLEX OUTLET		

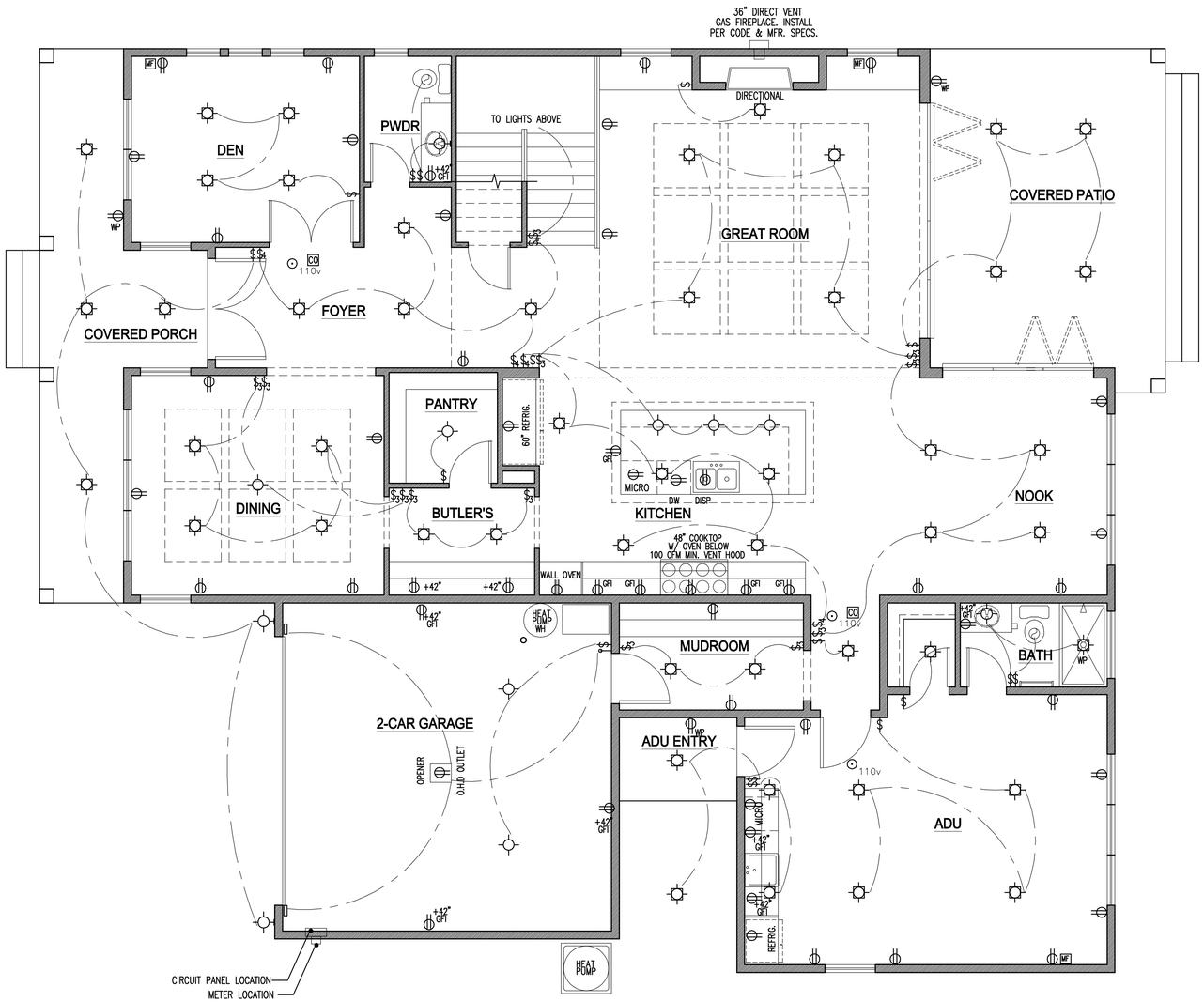
EXHAUST FAN — DENOTES MIN. 50 CFM EXHAUST FAN., UNO
ALL FANS MUST VENT TO THE OUTSIDE

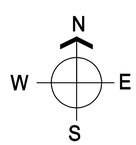
110v — DENOTES SMOKE DETECTOR LOCATION
ALL SMOKE DETECTORS TO BE 110V, INTERCONNECTED WITH BATTERY BACK-UP

CO — CARBON MONOXIDE DETECTOR TO BE 110v WITH BATTERY BACK-UP. REQUIRED ON EACH LEVEL AND ADJACENT TO ALL SLEEPING AREAS

NOTE:
ANY RECESSED LIGHT FIXTURE IS TO HAVE PROPER PROTECTION SO THAT THE FIXTURE WILL NOT BECOME OVERHEATED

ENERGY NOTES:
(SEE PAGE N1 AND N2 FOR ADD'L INFORMATION)
- HVAC CONTROLS WITH PROGRAMMABLE SCHEDULE PER WSEC 403.1.1
- 90% OF ALL LIGHTING FIXTURES SHALL BE HIGH-EFFICACY EQUIPPED PER WSEC 404.1





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MERCER ISLAND
89TH AVE SE RESIDENCE
MAIN LEVEL ELEC PLAN

American Classic Homes
9675 S.E. 36th ST. MERCER ISLAND, WA 98040

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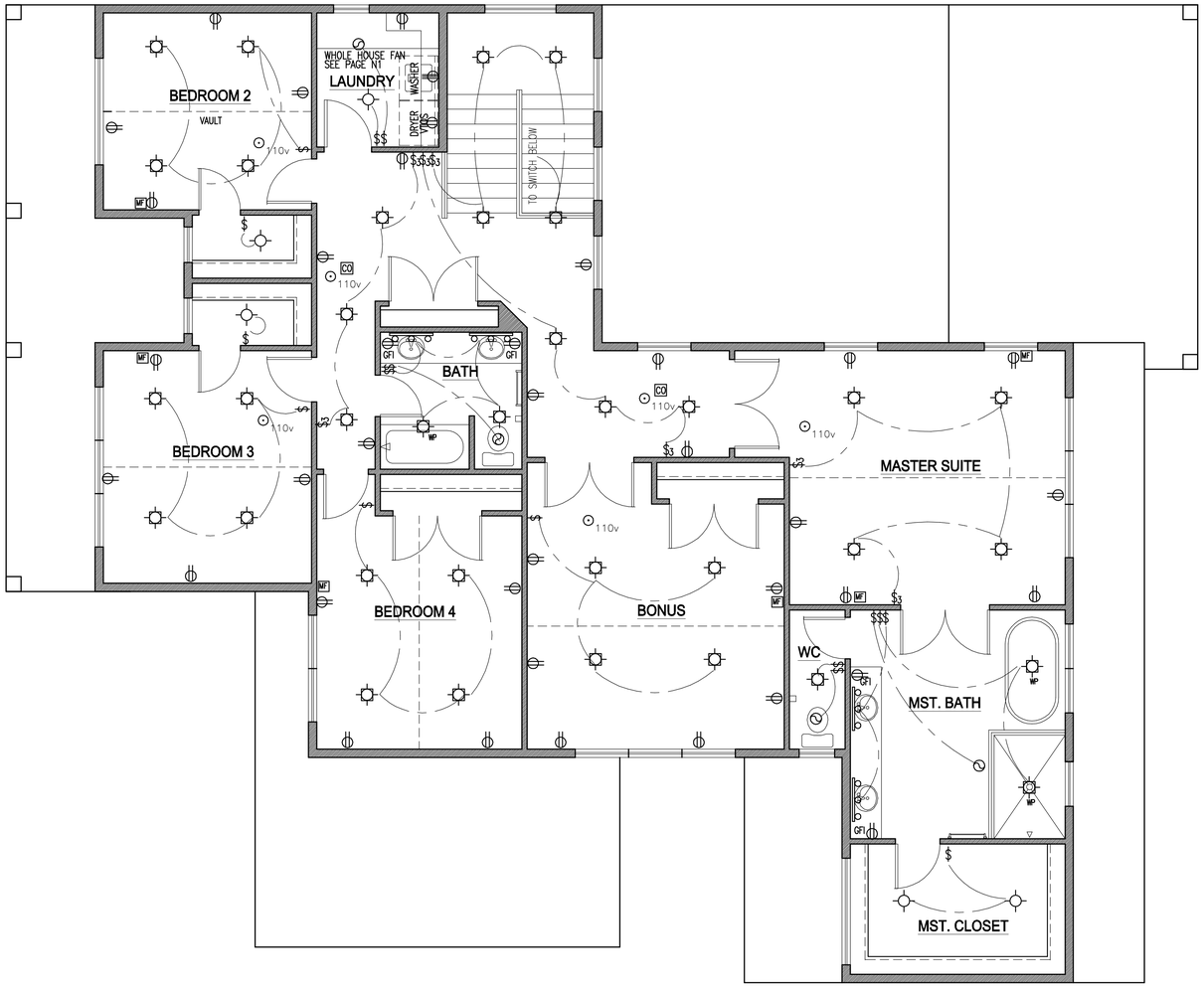
1/4"=1'-0"
SCALE

3.5.2021
DATE

89th
COMPUTER FILE NAME

E1
SHEET NUMBER



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MERCER ISLAND
89TH AVE SE RESIDENCE
UPPER LEVEL ELEC. PLAN

American Classic Homes
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1/4"=1'-0"
SCALE

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DATE

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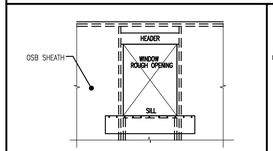
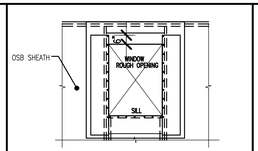
COMPUTER FILE NAME

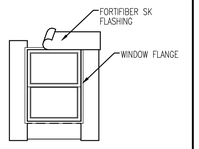
E2
SHEET NUMBER



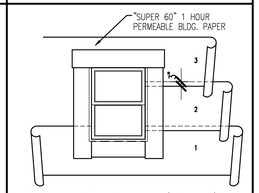
ATTACH A SILL STRIP OF FLASING MATERIAL AT LEAST 12" WIDE WITH THE TOP EDGE EVEN WITH THE TOP EDGE OF THE ROUGH SILL. EXTEND THIS SILL STRIP AT LEAST 12" BEYOND THE EDGE OF THE ROUGH OPENING FOR WINDOW. ATTACH FLASHING WITH GALVANIZED ROOFING NAILS OR RUST-RESISTANT STAPLES.



AFTER SILL STRIP IS IN PLACE, ATTACH JAMB STRIPS INSIDE OF OPENING AT LEAST 12" WIDE WITH INSIDE EDGE OF FLASHING EVEN WITH EDGE OF WINDOW OPENING. START JAMB STRIPS 1" BELOW THE SILL STRIP AND EXTEND JAMB STRIPS 6" ABOVE THE LOWER EDGE OF THE HEADER TOP OF WINDOW OPENINGS.

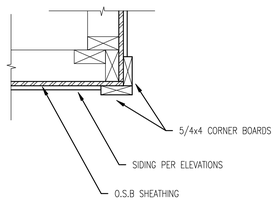


APPLY A BEAD OF CAULKING TO THE BACK SURFACES OF THE WINDOW, THEN PLACE THE WINDOW INTO THE ROUGH OPENING WITH FLANGES OVER THE INSTALLED FLASHING STRIPS. AFTER WINDOW IS PLACED, INSTALL THE HEAD FLASING OVER THE WINDOW FLANGE. THIS IS ANOTHER STRIP OF FLASING AT LEAST 12" WIDE.

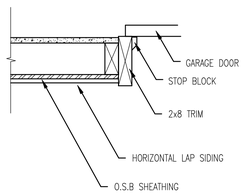


STARTING AT THE BOTTOM OF THE WALL (SOLE PLATE), LAY WATER RESISTANT PAPER UNDER THE SILL STRIP. CUT ANY EXCESS WATER RESISTANT PAPER THAT MAY EXTEND ABOVE THE SILL FLANGE ON EACH SIDE OF THE OPENING, (SHOWN IN DIAGRAM AS SHORT DASHED LINES), INSTALL SUCCEEDING COURSES OF WATER RESISTANT PAPER OVER JAMB AND HEAD FLANGES IN SHINGLE-BOARD FASHION.

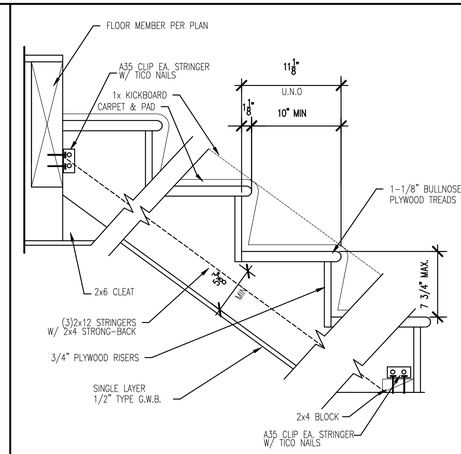
A WINDOW FLASHING DETAIL — NONE



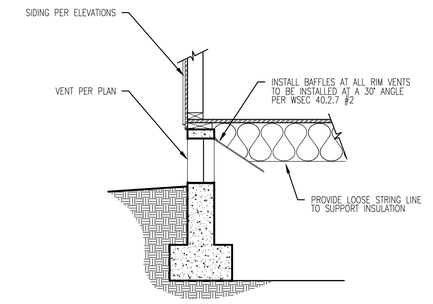
B CORNER TRIM DETAIL — 1-1/2" = 1'



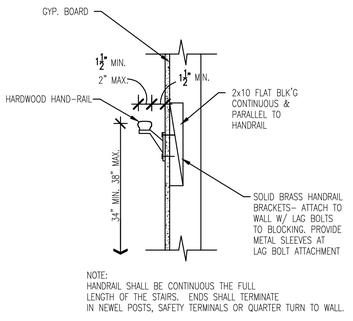
C EDGE DETAIL @ GARAGE DOOR — 1-1/2" = 1'



F TYPICAL STAIR DETAIL — 3/4" = 1'

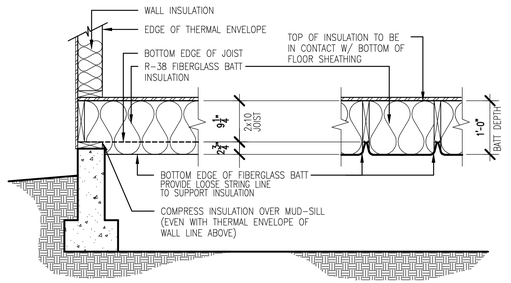


G INSULATION BAFFELS @ RIM VENTS — 3/4" = 1'



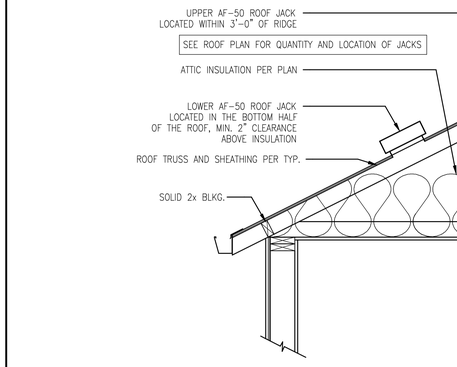
NOTE:
HANDRAIL SHALL BE CONTINUOUS THE FULL LENGTH OF THE STAIRS. ENDS SHALL TERMINATE IN NEWEL POSTS, SAFETY TERMINALS OR QUARTER TURN TO WALL.

H HANDRAIL AT WALL — NONE

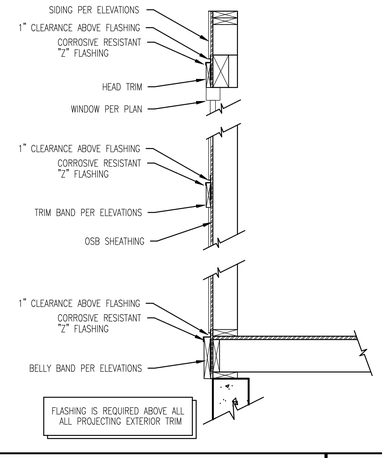


PARALLEL W/ JOISTS — PERPENDICULAR W/ JOISTS

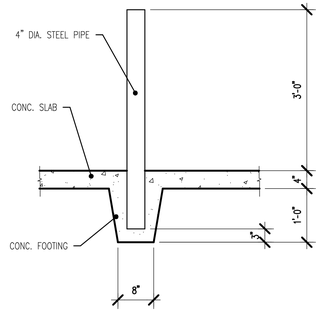
Q R-38 UNDERFLOOR INSULATION SUPPORT — 3/4" = 1'



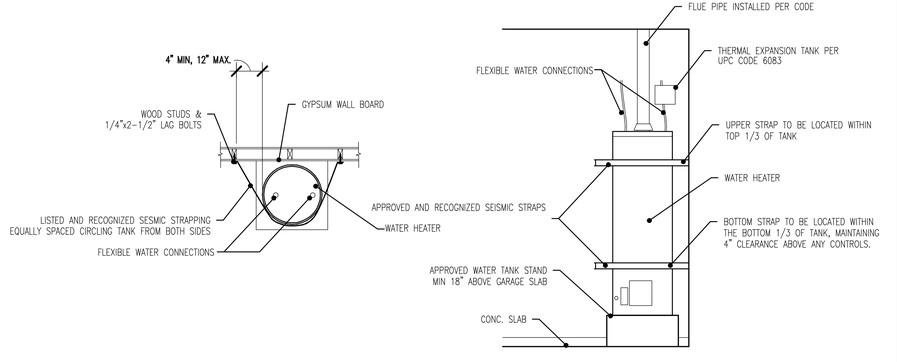
S ROOF VENT DIAGRAM — 3/4" = 1'



W "Z" FLASHING DETAILS — 3/4" = 1'



Y STEEL PIPE BOLLARD - BUMPER GUARD



Z WATER HEATER SEISMIC STRAPPING- PLAN WATER HEATER SEISMIC STRAPPING- ELEVATION

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ARCHETECTURAL DETAILS

American Classic Homes
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SCALE
3.5.2021

DATE
2018 IRC

COMPUTER FILE NAME
AD1

SHEET NUMBER

BUILDING CODE: 2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), AND BY REFERENCE, THE 2018 INTERNATION RESIDENTIAL CODE (IRC) AS AMENDED BY LOCAL JURISDICTION.
ROOF LIVE LOAD = 25 PSF SNOW (GROUND SNOW = 30 PSF)
ROOF DEAD LOAD = 15 PSF
FLOOR LIVE LOAD = 40 PSF (30 PSF AT SLEEPING AREAS)
FLOOR DEAD LOAD = 15 PSF
BALCONIES & DECKS = 60 PSF (LIVE LOAD) + 10 PSF (DEAD LOAD)
WIND SPEED (ULTIMATE / 3 SEC GUST) = 110 MPH (NOMINAL WIND SPEED = 85 MPH) FOR RISK CATEGORY II, EXPOSURE "B", Kzt=1.40
SOIL SITE CLASS "D" , SEISMIC CATEGORY D1/D2, Ss=1.419, Sds=1.135
OCCUPANCY GROUP: R-3 CONSTRUCTION TYPE: V-B

CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS OF PROJECT AND REPORT ANY OMISSIONS / DISCREPANCIES TO ARCHITECT AND/OR ENGINEER OF RECORD FOR RESOLUTION PRIOR TO COMMENCING WORK. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS ARCHITECT AND/OR ENGINEER OF RECORD ARE NOT RESPONSIBLE FOR DISCREPANT CONDITIONS RESULTING FROM UNAUTHORIZED WORK PERFORMED BY THE CONTRACTOR

DEFERRED SUBMITTAL ITEMS
THE FOLLOWING IS A LIST OF ITEMS THAT ARE NOT INCLUDED IN THIS PLAN AND SHOULD BE PROVIDED BY THE BUILDER AT TIME OF APPLICATION FOR PERMIT OR AS A DEFERRED SUBMITTAL ITEM:
- ALTERNATIVE I-JOIST/BEAM MANUFACTURER PLANS.
- MANUFACTURED TRUSS DESIGNS AND LAYOUTS.

GENERAL

FOUNDATION DESIGN IS BASED ON AN ALLOWABLE SOIL BEARING OF 1500 PSF. EXTERIOR FOOTINGS SHALL BEAR 18" (MINIMUM) BELOW FINISHED GRADE. ALL FOOTINGS TO BEAR ON FIRM UNDISTURBED EARTH BELOW ORGANIC SURFACE SOILS. BACKFILL TO BE THOROUGHLY COMPACTED.
BOLT HEADS AND NUTS BEARING AGAINST WOOD TO BE PROVIDED WITH Ø2.29"x3"x3" PLATE WASHERS. WOOD BEARING ON OR INSTALLED WITHIN 1" OF MASONRY OR CONCRETE TO BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE.
FOUNDATION SILL BOLTS (MIN. 7" EMBED.) TO BE 5/8" DIAMETER AT 6'-0" O.C. (4'-0" AT BUILDINGS OVER 2 STORIES) U.N.O.
METAL FRAMING CONNECTORS TO BE MANUFACTURED BY SIMPSON STRONG-TIE OR USP STEEL CONNECTORS

CONCRETE

MINIMUM COMPRESSIVE STRENGTH OF CONCRETE:

TYPE OR LOCATIONS OF CONCRETE CONSTRUCTION	MINIMUM COMPRESSIVE STRENGTH (f'c) AT 28 DAYS
	MODERATE WEATHERING POTENTIAL
BASEMENT WALLS, FOUNDATION FOOTINGS, BASEMENT SLABS, & INTERIOR SLABS ON GRADE (EXCEPT GARAGE) NOT EXPOSED TO THE WEATHER	2,500 psi
BASEMENT WALLS, FOUNDATION WALLS, EXTERIOR WALLS, PORCHES, STEPS, GARAGE & CARPORT SLABS, & OTHER CONCRETE WORK EXPOSED TO THE WEATHER	3,000 psi (6% air entrained +/- 1%)

CONCRETE MIXTURE SHALL CONTAIN AT LEAST OF 5½ SACKS OF CEMENT PER CUBIC YARD
CONCRETE "BATCH TICKET" SHALL BE AVAILABLE ON SITE FOR REVIEW BY BUILDING OFFICIAL
VERTICAL REINFORCING STEEL TO COMPLY WITH A615 GRADE 40 (GRADE 60 AT WALLS RETAINING MORE THAN 4FT OF SOIL)

CARPENTRY

GENERAL
ALL NAILING TO COMPLY WITH REQUIREMENTS OF IRC TABLE R602.3(1) AND/OR IBC TABLE 2304.10.1
ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED. FIELD CUT ENDS, NOTCHES, AND DRILLED HOLES OF PRESSURE TREATED LUMBER SHALL BE RETREATED IN THE FIELD IN ACCORDANCE WITH AWPA M4.
PER IRC 319.3, FASTENERS FOR PRESSURE PRESERVATIVE AND FIRE RETARDANT TREATED WOOD SHALL BE OF HOT-DIPPED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER.
6" MIN. CLEARANCE BETWEEN WOOD AND EARTH.
12" MIN. CLEARANCE BETWEEN FLOOR BEAMS AND EARTH.
18" MIN. CLEARANCE BETWEEN FLOOR JOIST AND EARTH.

FASTENER DIMENSIONS
ALL NAILS SPECIFIED ON THIS PLAN SHALL BE OF THE DIAMETER AND LENGTH LISTED BELOW OR AS PER APPENDIX L OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS)
8d COMMON (Ø.131" DIA., 2-1/2" LENGTH), 8d BOX (Ø.113" DIA, 2-1/2" LONG), 10d COMMON (Ø.148" DIA., 3" LONG)
10d BOX (Ø.128" DIA., 3" LENGTH), 16d COMMON (Ø.162" DIA, 3-1/2" LONG), 16d SINKER (Ø.148 DIA, 3-1/4" LONG)
5d COOLER (Ø.086" DIA, 1-5/8" LONG), 6d COOLER (Ø.092" DIA, 1-7/8" LONG)

LUMBER GRADES
FRAMING LUMBER SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN PRODUCTS ASSOCIATION OR THE WEST COST LUMBER INSPECTION BUREAU. ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED LUMBER GRADING AGENCY AND SHALL HAVE THE FOLLOWING UNADJUSTED MINIMUM DESIGN PROPERTIES, UNLESS NOTED OTHERWISE.

JOISTS:	WOOD TYPE:
2X4 to 2X8	HF #2 - Fb=850 psi, Fv=150 psi, Fc=1300 psi, E=1300000psi
2X10 OR LARGER	HF #2 - Fb=850 psi, Fv=150 psi, Fc=1300 psi, E=1300000psi
BEAM	
4X	DF-L #2 - Fb=900 psi, Fv=180 psi, Fc=1350 psi, E=1600000psi
6X OR LARGER	DF-L #2 - Fb=875 psi, Fv=170 psi, Fc=600 psi, E=1300000psi
STUDS	
2X4 & 2X6	HF STUD - Fb=675 psi, Fv=150 psi, Fc=800 psi, E=1200000psi
2X8 OR LARGER	HF #2 - Fb=975 psi, Fv=150 psi, Fc=1300 psi, E=1300000psi
POSTS	
4X4	DF-L #2 - Fb=900 psi, Fv=180 psi, Fc=1350 psi, E=1600000psi
4X6	DF-L #2 - Fb=900 psi, Fv=180 psi, Fc=1350 psi, E=1600000psi
6X6 OR LARGER	DF-L #1 - Fb=1200 psi, Fv=170 psi, Fc=1000 psi, E=1600000psi

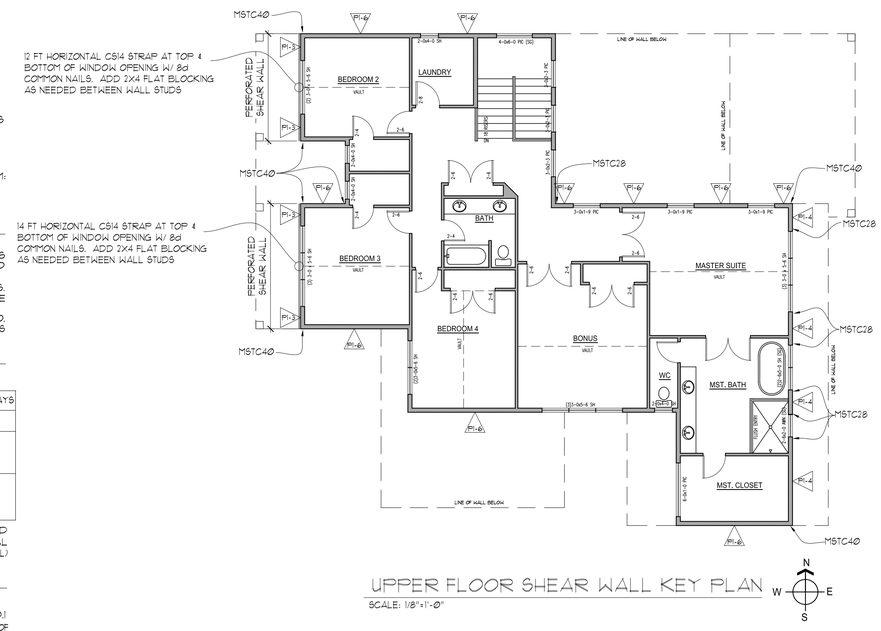
GLUED-LAMINATED BEAM (GLB)
SHALL BE 24F-V4 FOR SINGLE SPANS & 24F-V8 FOR CONTINUOUS OR CANTILEVER SPANS WITH THE FOLLOWING MINIMUM PROPERTIES:
Fb = 2,400 PSI, Fv = 165 PSI, Fc = 650 PSI (PERPENDICULAR), E = 1,800,000 PSI.

ENGINEERED WOOD BEAMS AND I-JOIST
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SPECIFICATIONS FOR APPROVAL BY BUILDING OFFICIAL. DESIGN, FABRICATION AND ERECTION IN ACCORDANCE WITH THE LATEST ICC EVALUATION REPORT.
BEAMS DESIGNATED AS "LSL" SHALL HAVE THE MINIMUM PROPERTIES:
Fb = 2,325 PSI, Fv = 310 PSI, Fc = 800 PSI (PERPENDICULAR), E = 1,550,000 PSI.
BEAMS DESIGNATED AS "LVL" SHALL HAVE THE MINIMUM PROPERTIES:
Fb = 2,600 PSI, Fv = 285 PSI, Fc = 750 PSI (PERPENDICULAR), E = 1,900,000 PSI.
BEAMS DESIGNATED AS "PSL" SHALL HAVE THE MINIMUM PROPERTIES:
Fb = 2,900 PSI, Fv = 290 PSI, Fc = 750 PSI (PERPENDICULAR), E = 2,000,000 PSI.
CALCULATIONS SHALL INCLUDE DEFLECTION AND CAMBER REQUIREMENTS.
DEFLECTION SHALL BE LIMITED AS FOLLOWS:
FLOOR LIVE LOAD MAXIMUM = L/480, FLOOR TOTAL LOAD MAXIMUM = L/240.

PREFABRICATED WOOD TRUSSES:
PRE-FABRICATED WOOD TRUSSES SHALL BE DESIGNED TO SUPPORT SELF WEIGHT PLUS LIVE LOADS & IMPOSED DEAD LOADS AS STATED IN THE GENERAL NOTES. TRUSSES SHALL BE DESIGNED & STAMPED BY A REGISTERED DESIGN PROFESSIONAL AND FABRICATED ONLY FROM THOSE DESIGNS. NON-BEARING WALLS SHALL BE HELD AWAY FROM THE TRUSS BOTTOM CHORD W/ AN APPROVED FASTENER (SUCH AS SIMPSON STC) TO ENSURE THAT THE TRUSS BOTTOM CHORD DOES NOT BEAR ON THE WALL. ALL PERMANENT TRUSS MEMBER BRACING SHALL BE INSTALLED PER THE TRUSS DESIGN DRAWINGS.

ROOF/WALL/FLOOR SHEATHING
ROOF SHEATHING SHALL BE MINIMUM 7/16 SHEATHING W/ 24/16 SPAN INDEX U.N.O. WALL SHEATHING, INCLUDING GABLES, SHALL BE 7/16 SHEATHING W/ 24/16 SPAN INDEX MINIMUM U.N.O. FLOOR SHEATHING SHALL BE MINIMUM 23/32 T&G SHEATHING W/ 48/32 SPAN INDEX MINIMUM U.N.O. MINIMUM NAILING SHALL BE 8d COMMON NAILS @ 6" O.C. @ PANEL EDGES & 12" O.C. IN PANEL FIELD U.N.O. ON SHEAR WALL SCHEDULE. ROOF AND FLOOR SHEATHING SHALL BE LAID OUT W/ LONG DIMENSION PERPENDICULAR TO FRAMING MEMBERS W/ END LAPS STAGGERED. WALL SHEATHING, INCLUDING GABLES, SHALL BE FULLY BLOCKED & EDGE NAILED AT ALL UNSUPPORTED SHEATHING PANEL EDGES.

STAIR FRAMING
UNLESS NOTED OTHERWISE SPECIFIED, TYPICAL STAIR FRAMING SHALL CONSIST OF 2X12 STAIR STRINGERS SPACED AT NO MORE THAN 18" O.C. AND REINFORCED W/ 2X6 SCABS ATTACHED W/ 10d COMMON NAILS STAGGERED AT 8" O.C. STRINGERS SHALL BE SUPPORTED AT UPPER END BY BEARING ON TOP PLATE OF WALL OR APPROVED CONNECTOR TO FLOOR BEAM SUCH AS SIMPSON LRU OR LSC. LANDINGS SHALL CONSIST OF CONVENTIONAL PLATFORM FRAMING W/ MINIMUM 2X6 JOISTS @ 16" O.C.



UPPER FLOOR SHEAR WALL KEY PLAN
SCALE: 1/8"=1'-0"

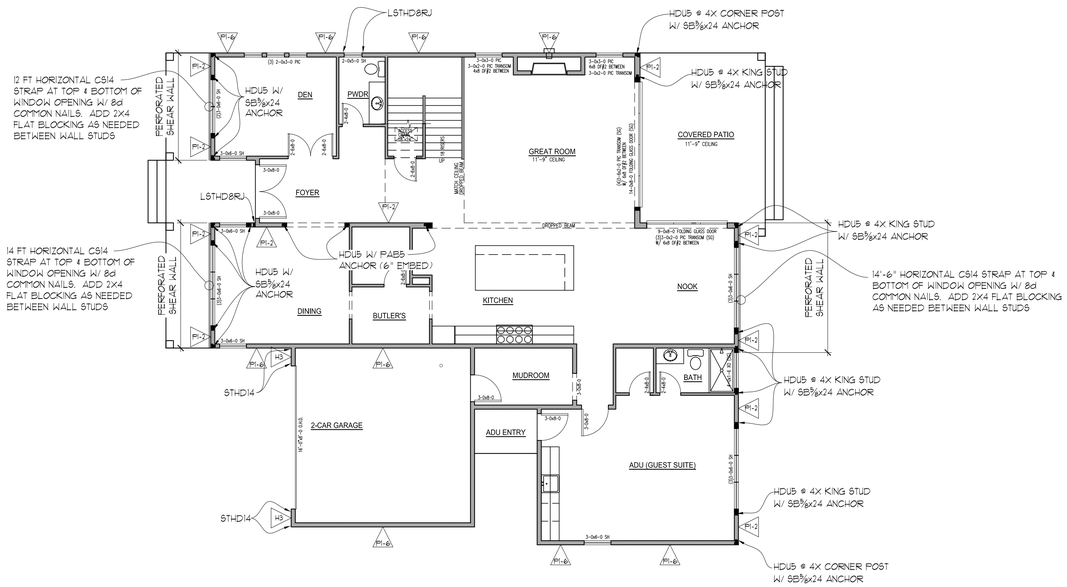
PERFORATED SHEAR WALLS: CONTINUE SHEAR WALL SHEATHING ABOVE AND BELOW ALL OPENINGS BETWEEN FULL HEIGHT WALL SEGMENTS WITH NAILING AS SHOWN IN SHEAR WALL SCHEDULE. ANY INCREASE TO HEIGHT OR WIDTH OF WINDOW OPENING MUST BE APPROVED BY ENGINEER OF RECORD.

SEE SHEET S5 FOR TYPICAL INSTALLATION DETAILS FOR STRAPS & FOUNDATION ANCHORS

SHEAR WALL SCHEDULE

WALL MARK	SHEATHING THICKNESS	SIDES	SHEAR PANEL EDGE NAILING	FIELD NAILING	FRAMING @ ABUTTING PANEL EDGES	SOLE/BASE PLATE NAILING TO JOIST OR BLKG/RIM BELOW	ANCHOR BOLT DIA. & SPACING	SILL PLATE SIZE	POST AT ENDS OF SHEAR WALL/ HOLDOWN U.N.O.
P1-6	7/16"	ONE	8d @ 6" O.C.	12" O.C.	2X	16d SINKER NAILS (Ø.148"x3¼") @ 8" O.C.	5/8" DIA. @ 72" O.C.	2X	(2) 2X POST (FACE NAIL W/ 10d (Ø.131"x3") NAILS @ 12" O.C (STAGGER)
P1-4	7/16"	ONE	8d @ 4" O.C.	12" O.C.	2X	16d SINKER NAILS (Ø.148"x3¼") @ 6" O.C.	5/8" DIA. @ 48" O.C.	2X	(2) 2X POST (FACE NAIL W/ 10d (Ø.131"x3") NAILS @ 12" O.C (STAGGER)
P1-3	7/16"	ONE	8d @ 3" O.C.	12" O.C.	3X / 2-2X	16d SINKER NAILS (Ø.148"x3¼") @ 4" O.C.	5/8" DIA. @ 36" O.C.	2X	(2) 2X POST (FACE NAIL W/ 10d (Ø.131"x3") NAILS @ 12" O.C (STAGGER)
P1-2	7/16"	ONE	8d @ 2" O.C.	12" O.C.	3X	16d SINKER NAILS (Ø.148"x3¼") @ 3" O.C.	5/8" DIA. @ 24" O.C.	3X	4X6 DOUG-FIR
H3	7/16"	ONE	SEE DETAIL H3 ON SHEET S5 FOR NAILING SPACING, STRAP & HOLDOWN TYPES						

1. FRAMING SHALL BE 2X HEM-FIR @ 16" O.C. MAX UNLESS NOTED OTHERWISE IN SCHEDULE.
2. SHEATHING PANELS MAY BE LAYED VERTICAL OR HORIZONTAL. BLOCK ALL HORIZONTAL EDGES W/ 2x OR 3x BLOCKING PER SCHEDULE (U.N.O.)
3. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEARWALLS SHALL RECEIVE APA RATED SHEATHING OR ALL VENEER PLYWOOD SIDING OF EQUIVALENT THICKNESS AT POINT OF FASTENING ON PANEL EDGES, FULLY BLOCKED WITH MINIMUM NAILING OF 8d @ 6" O.C. EDGE, 12" O.C. FIELD.
4. NAILING APPLIES TO ALL STUDS, TOP AND BOTTOM PLATES, AND BLOCKING. PLYWOOD JOINT AND SILL PLATE NAILING SHALL BE STAGGERED
5. ANCHOR BOLT SPACING IS 6'-0" O.C. (4'-0" AT BUILDINGS OVER 2 STORIES) UNLESS NOTED OTHERWISE IN SCHEDULE. MINIMUM OF 2 ANCHOR BOLTS PER PIECE OF FOUNDATION PLATE. ANCHOR BOLTS SPACED NO GREATER THAN 12" AND NO LESS THAN 7 TIMES THE ANCHOR BOLT DIAMETER AT ENDS AND SPLICES. PROVIDE Ø2.29"x3"x3" WASHERS AT ANCHOR BOLTS. PLATE WASHERS SHALL EXTEND TO WITHIN ½" OF THE SHEATHED EDGE OF THE SILL PLATE ON WALLS W/ EDGE NAILING AT 4" O.C. OR TIGHTER. DO NOT RECESS BOLTS.
6. ALL NAILS FOR SHEAR WALLS SHALL BE COMMON OR GALVANIZED BOX NAILS (U.N.O.) ALL SPECIFIED NAILS SHALL HAVE THE FOLLOWING DIMENSIONS: 8d COMMON (Ø.131" DIA, 2½" LONG) 8d BOX (Ø.113" DIA, 2½" LONG), 10d COMMON (Ø.148" DIA, 3" LONG), 10d BOX (Ø.128" DIA, 3" LONG), 16d COMMON (Ø.162" DIA, 3½" LONG), 16d SINKER (Ø.148" DIA, 3¼" LONG), 5d COOLER (Ø.086" DIA, 1⅝" LONG), 6d COOLER (Ø.092" DIA, 1⅞" LONG)
7. 1¼" No. 6 DRYWALL SCREWS (TYPE W OR S) MAY BE SUBSTITUTED AS 5d COOLER OR 6d COOLER FOR GYPSUM WALL BOARD SHEARWALLS
8. IN LIEU OF 3x VERTICALS AND BLOCKING AT PANEL EDGES, 2-2x'S W/ 10d (Ø.131"x3") FACE NAILS STAGGERED AT THE SAME SPACING AS PANEL EDGE NAILING MAY BE SUBSTITUTED. PLYWOOD EDGES TO BE CENTERED BETWEEN THE 2-2x MEMBERS (THIS ALTERNATIVE DOES NOT APPLY TO FOUNDATION SILL PLATES OR TO WALLS WITH 8d EDGE NAILING AT 2" O.C. OR 10d EDGE NAILING AT 3" O.C. OR 2" O.C. OR WALLS SHEATHED ON BOTH SIDES)
9. HOLDDOWNS AND STRAPS OF EQUIVALENT UPLIFT CAPACITY WITH CURRENT ICC EVALUATION REPORT OR SIMILAR MAY BE SUBSTITUTED FOR THOSE LISTED IN THE SHEARWALL SCHEDULE WITH PRIOR APPROVAL OF BUILDING OFFICIAL OR ENGINEER OF RECORD.
10. SQUASH BLOCKS IN FLOOR JOIST CAVITY ARE REQUIRED AT ENDS OF SHEAR WALLS WHERE FULL BEARING IS NOT PROVIDED BY THE FRAMING BELOW.
11. SIMPSON MASAP MUDSILL ANCHORS, MAY BE SUBSTITUTED (1) FOR (1) AT 2X SILL PLATES FOR THE ⅝" DIA. SILL PLATE ANCHOR BOLTS SPECIFIED.



MAIN FLOOR SHEAR WALL KEY PLAN
SCALE: 1/8"=1'-0"

STRUCTURAL PLANS

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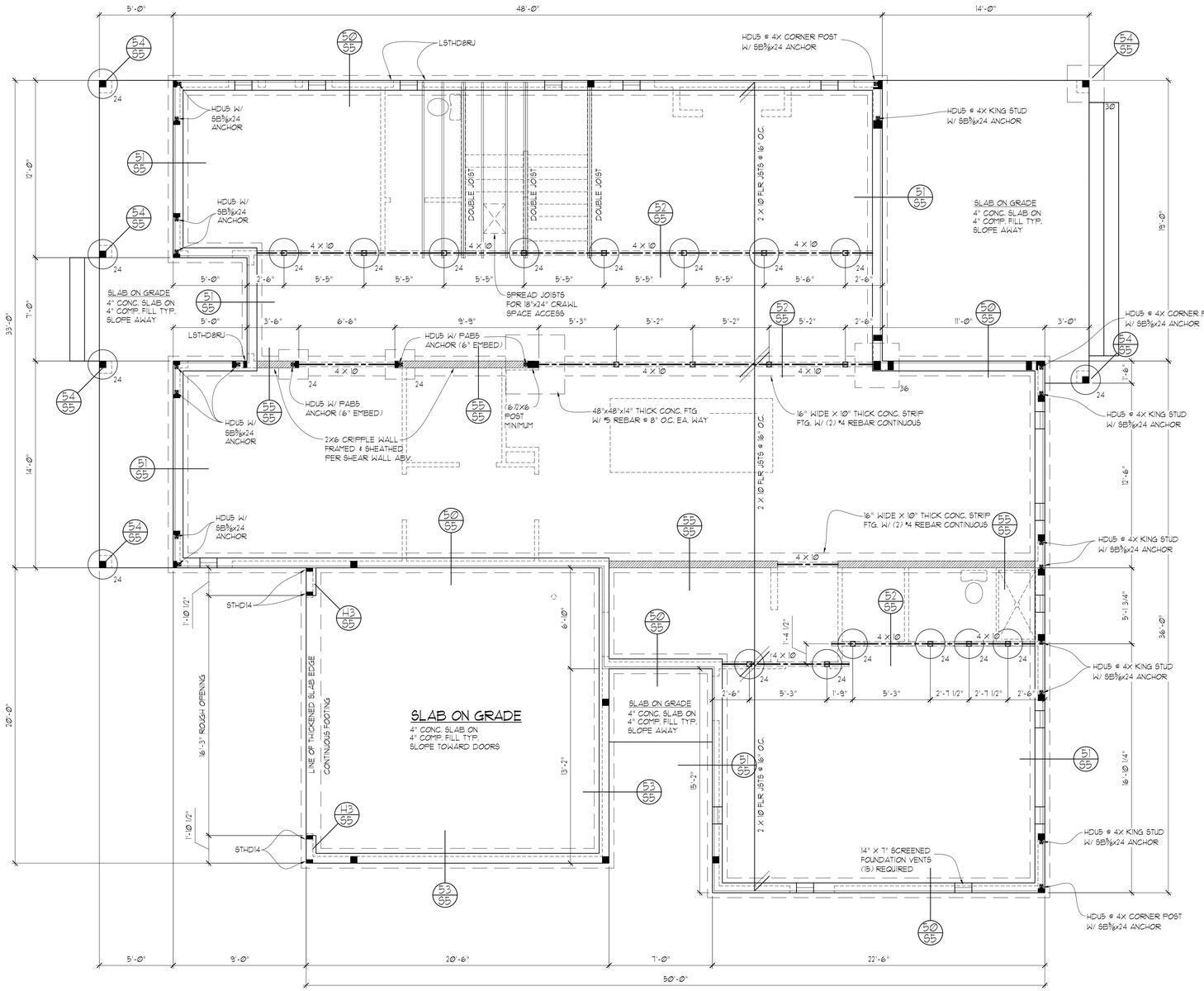
PROJECT #: 2343



SEE SHEET S5 FOR TYPICAL INSTALLATION DETAILS FOR STRAPS & FOUNDATION ANCHORS

FOOTING SCHEDULE

NOTE: USE MIN. 6" WIDE POST BELOW BEAM SPLICES
USE P.T. 4 X 4 POSTS BELOW 4 X BEAMS U.N.O.
USE P.T. 6 X 6 POST BELOW 6 X BEAMS U.N.O.

● 24	P.T. POST ON 24" DIA. X 10" THICK PLAIN CONC. FOOTING
■ 24	P.T. POST ON 24" X 24" X 10" THICK CONC. FOOTING W/ 2- # 4 BARS EACH WAY
■ 30	P.T. POST ON 30" X 30" X 12" THICK CONC. FOOTING W/ 3- # 5 BARS EACH WAY
■ 36	P.T. POST ON 36" X 36" X 12" THICK CONC. FOOTING W/ 3- # 5 BARS EACH WAY
■ 42	P.T. POST ON 42" X 42" X 12" THICK CONC. FOOTING W/ 4- # 5 BARS EACH WAY
	FOOTING SIZES BASED ON 1500 PSF SOIL BEARING CAPACITY

FOUNDATION/FLOOR FRAMING PLAN

SCALE : ¼"= 1'-Ø"

- ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED
- SOFFIT, VENT, AND INSULATE ALL CANTILEVERED AREAS
- PROVIDE SOLID BLOCKING OVER SUPPORTS
- ALL FOOTINGS TO REST ON UNDISTURBED SOIL
- PROVIDE SUPPLEMENTAL JOISTS/BLOCKING BELOW SHEAR WALLS AS INDICATED ON FRAMING PLAN
- ■ PROVIDE SOLID FRAMING EQUAL TO THE WIDTH OF THE MEMBER BEING SUPPORTED (U.N.O.)
- PROVIDE SUPPLEMENTAL BLOCKING IN FLOOR CAVITY BELOW SUPPORT POSTS FOR GIRDERS AND BEAMS
- PROVIDE COPY OF CONCRETE "BATCH TICKET" ON SITE FOR REVIEW BY BUILDING OFFICIAL
- IF AN ENGINEERED JOIST FLOOR FRAMING LAYOUT IS PROVIDED BY THE JOIST SUPPLIER, THAT JOIST LAYOUT SHALL SUPERCEDE THE JOIST LAYOUT INDICATED IN THE PLANS. PROVIDE I-JOIST LAYOUT AND SPECS ON SITE FOR INSPECTION.

STRUCTURAL PLANS

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BUILDING DEPT. APPROVAL STAMPS:

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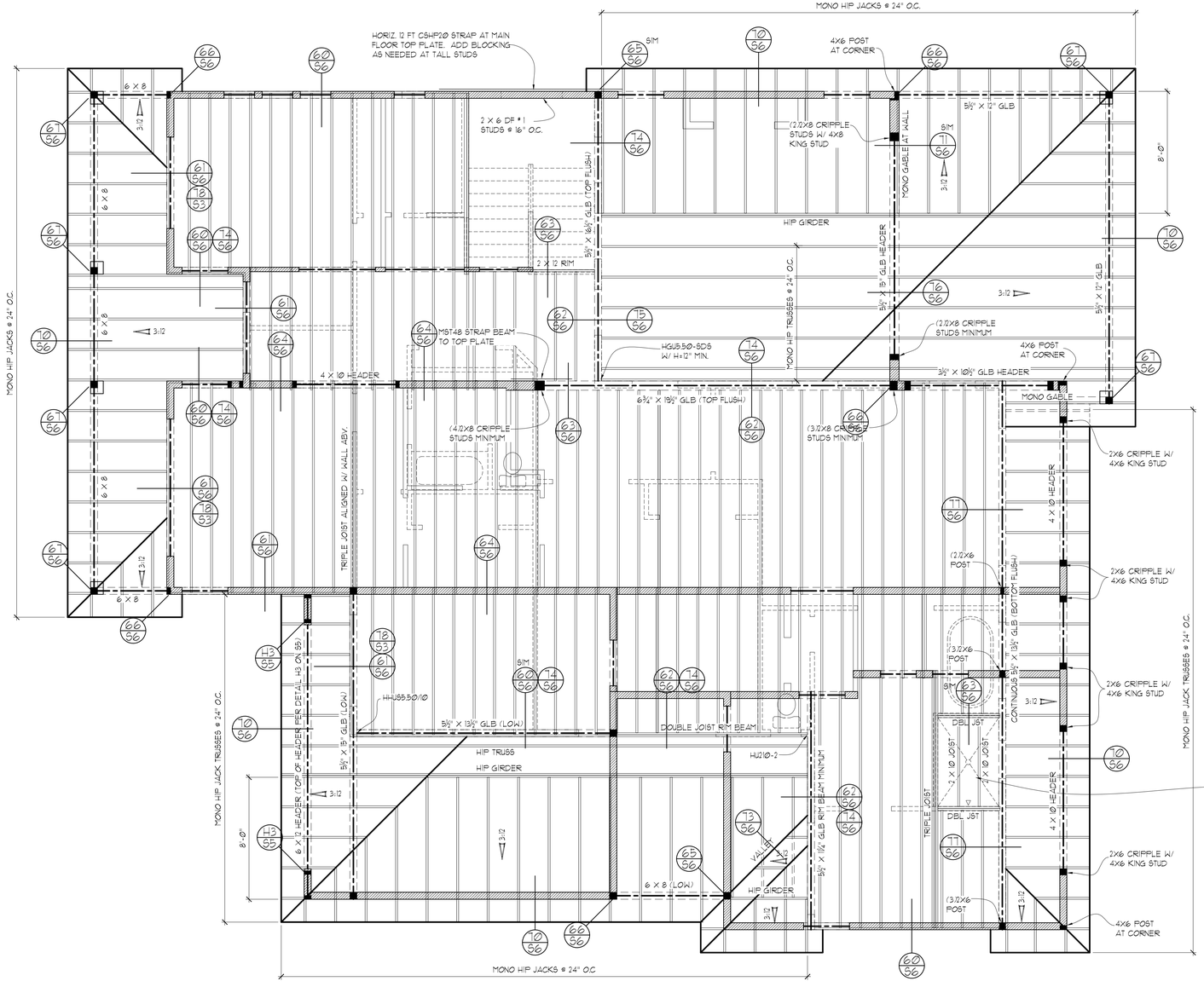
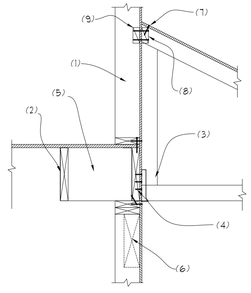
INIT: MM
PROJECT #: 2343



DROPPED FRAMING FOR FLUSH ENTRY SHOWERS: PROVIDE 2X6 LEDGERS & BLOCKING AROUND PERIMETER TO ACCEPT EDGE NAILING. SECURE 2X6 TO PERIMETER FRAMING W/ 10d COMMON NAILS (Ø.148"x3") STAGGERED AT 6" O.C.



1. 2x STUD WALL W/ SHEATHING & NAILING PER SHEAR WALL SCHEDULE
2. FLOOR JOISTS PER PLAN.
3. JACK/MONO TRUSS PER PLAN W/ LUS HANGER TO RIM
4. 2X RIM JOIST MINIMUM W/ 8d TOE NAILS @ 6" O.C. TO TOP PLATE
5. JOISTS PER PLAN OR JOIST BLOCKING @ 24" O.C. IN FIRST BAY, TOE NAILED TO TOP PLATE W/ (2) 8d TOE NAILS
6. STUD WALL OR BEAM PER PLAN
7. ROOF DIAPHRAGM EDGE NAILING PER PLAN
8. 2X BLOCKING BETWEEN TRUSSES ATTACHED TO WALL W/ 10d NAILS STAGGERED AT 6" O.C.
9. 2X BLOCKING BETWEEN STUDS W/ (2) 10d COM. TOE NAILS PER STUD

78 MONO/JACK TRUSS TO RIM
SCALE: 3/4"=1'

UPPER FLOOR JOISTS SHALL BE:
2 X 12 HF #2 JOISTS @ 16" O.C.
UNLESS NOTED OTHERWISE (U.N.O.)

UPPER FLOOR FRAMING PLAN

SCALE : ¼"= 1'-0"

- SOFFIT, VENT, AND INSULATE ALL CANTILEVERED AREAS
- EXTERIOR WALLS TO BE 2X6 AT 16" O.C., U.N.O.
- ALL DOOR/WINDOW HEADERS AT THIS LEVEL TO BE 4X10 DF #2 AT BEARING WALLS , U.N.O., 6'-0" MAX. SPAN
- INTERIOR PARTITIONS TO BE 2X4 AT 16" O.C. (2X6 @ PLUMBING WALLS) U.N.O.
- PROVIDE SUPPLEMENTAL JOISTS/BLOCKING BELOW SHEAR WALLS AS INDICATED ON FRAMING PLAN
- HEADERS 8FT OR LONGER SHALL BE PROVIDED W/ (2) TRIMMER (JACK) STUDS AT EACH END U.N.O.
- PROVIDE SOLID FRAMING EQUAL TO THE WIDTH OF THE MEMBER BEING SUPPORTED (U.N.O.)
- PROVIDE SUPPLEMENTAL BLOCKING IN FLOOR CAVITY BELOW SUPPORT POSTS FOR GIRDERS AND BEAMS AND PROVIDE MATCHING POSTS IN WALL BELOW
- IF AN ENGINEERED JOIST FLOOR FRAMING LAYOUT IS PROVIDED BY THE JOIST SUPPLIER, THAT JOIST LAYOUT SHALL SUPERCEDE THE JOIST LAYOUT INDICATED IN THE PLANS. PROVIDE I-JOIST LAYOUT AND SPECS ON SITE FOR INSPECTION.

STRUCTURAL PLANS

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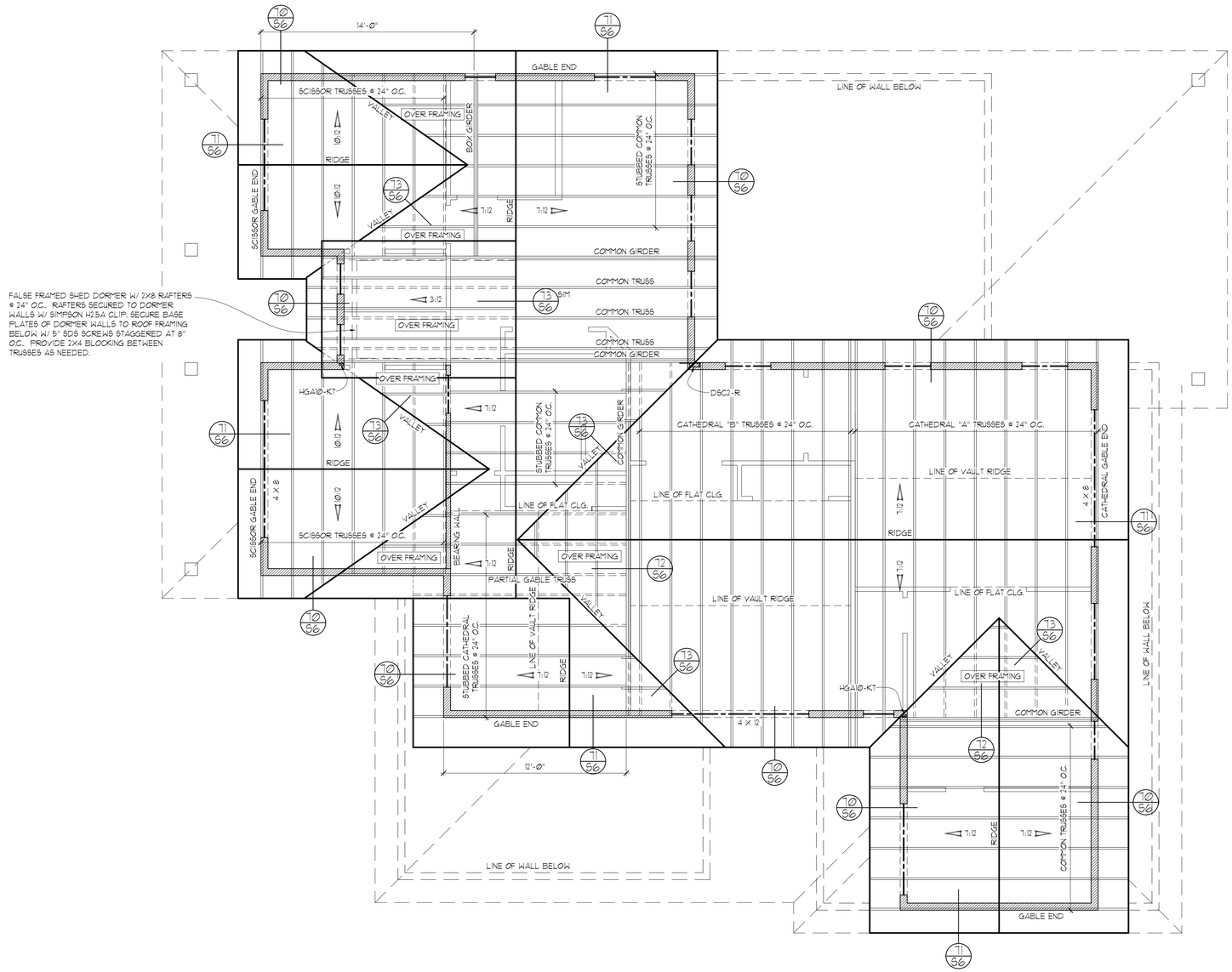

ROOF FRAMING PLAN

SCALE : ¼" = 1'-0"

- PROVIDE VENTED BLOCKING AT REQUIRED TRUSS/RAFTER BAYS
- ALL MANUFACTURED TRUSSES:
  - * SHALL HAVE DESIGN DETAILS AND DRAWINGS ON SITE FOR FRAMING INSPECTION
  - * SHALL NOT BE FIELD ALTERED WITHOUT ENGINEER'S APPROVAL
  - * SHALL BE INSTALLED AND BRACED TO MANUFACTURER'S SPECIFICATION
  - * SHALL CARRY MANUFACTURER'S STAMP ON EACH TRUSS
- ALL BEAMS AND HEADERS AT THIS LEVEL TO BE 4X8 DF #2 AT BEARING WALLS, U.N.O., 6'-0" MAX. SPAN
- HEADERS 8FT OR LONGER SHALL BE PROVIDED W/ (2) TRIMMER (JACK) STUDS AT EACH END U.N.O.
- ■ PROVIDE SOLID FRAMING EQUAL TO THE WIDTH OF THE MEMBER BEING SUPPORTED (U.N.O.)
- PROVIDE SUPPLEMENTAL BLOCKING IN FLOOR CAVITY BELOW SUPPORT POSTS FOR GIRDERS AND BEAMS AND PROVIDE MATCHING POSTS IN WALL BELOW

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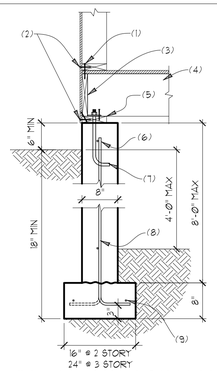
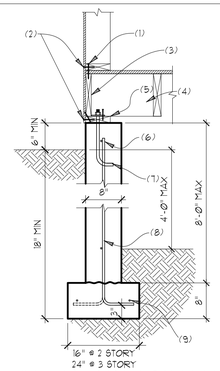


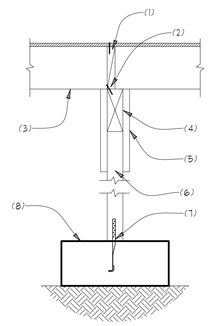
1. BASE PLATE NAILING PER SHEAR WALL SCHEDULE
2. SHEAR WALL EDGE NAILING PER SHEAR WALL SCHEDULE
3. SOLID CONTINUOUS RIM BOARD TOE NAILED TO SILL W/ 8d NAILS @ 6" OC. SECURE RIM BOARD TO EACH JOIST W/ (4) 10d NAILS (Ø.131"x3")
4. FLOOR JOIST PER PLAN SECURED TO SILL PLATE W/ (3) 8d NAILS
5. 2X PRESSURE TREATED SILL PLATE U.N.O. IN SHEAR WALL SCHEDULE
6. #4 REBAR HORIZ. @ 12" OC. W/ (1) #4 REBAR IN UPPER 3" TO 5" OF WALL
7. ⅝" DIA. ANCHOR BOLT @ 72" OC. U.N.O. IN SHEAR WALL SCHEDULE W/ 7" MIN. EMBEDMENT
8. #4 VERTICALS @ 48" OC. W/ STANDARD HOOK REQUIRED, ALTERNATE BENDS, NO WET SETTING PERMITTED
9. (2) #4 REBAR CONTINUOUS IN FOOTING

50 8" FOUNDATION STEM WALL
SCALE: ¾"=1'



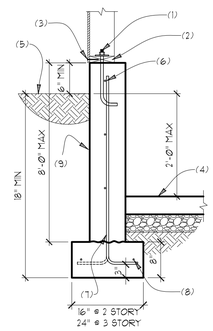
1. BASE PLATE NAILING PER SHEAR WALL SCHEDULE
2. SHEAR WALL EDGE NAILING PER SHEAR WALL SCHEDULE
3. SOLID CONTINUOUS RIM BOARD TOE NAILED TO SILL W/ 8D NAILS @ 6" OC. SECURE RIM BOARD TO EACH JOIST W/ (4) 10d NAILS (Ø.131"x3")
4. FLOOR JOIST BLOCKING AT FLOOR SHEATHING PANEL EDGES (48" O.C.) SECURED TO SILL PLATE W/ (3) 8d NAILS
5. 2X PRESSURE TREATED SILL PLATE U.N.O. IN SHEAR WALL SCHEDULE
6. #4 REBAR HORIZ. @ 12" OC. W/ (1) #4 REBAR IN UPPER 3" TO 5" OF WALL
7. ⅝" DIA. ANCHOR BOLT @ 72" OC. U.N.O. IN SHEAR WALL SCHEDULE W/ 7" MIN. EMBEDMENT
8. #4 VERTICALS @ 48" OC. W/ STANDARD HOOK REQUIRED, ALTERNATE BENDS, NO WET SETTING PERMITTED
9. (2) #4 REBAR CONTINUOUS IN FOOTING

51 8" FOUNDATION STEM WALL
SCALE: ¾"=1'



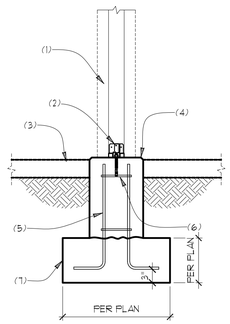
1. JOIST BLOCKING REQUIRED AT BEARING OR SHEAR WALLS ABOVE OR WHEN JOISTS ARE NOT CONTINUOUS AT BEAM
2. SECURE BLOCKING TO BEAM W/ 8d NAILS @ 6" O.C.
3. JOIST PER PLAN
4. BEAM PER PLAN
5. 2X OR SHEATHING CLEATS BOTH SIDES TO SECURE BEAM TO POST (3) 10d NAILS INTO EACH MEMBER AT EACH CLEAT
6. 4X OR 6X TREATED POST (4X6 MIN AT BEAM SPLICE)
7. SIMPSON MAB15 ANCHOR W/ 10dx1½" COMMON NAILS (Ø.148"x15") TO POST
8. ISOLATED OR CONTINUOUS SPREAD FOOTING PER PLAN

52 INTERIOR FOOTING @ BEAM LINE
SCALE: ¾"=1'



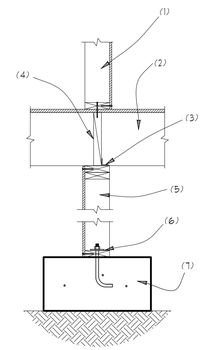
1. ⅝" DIA. ANCHOR BOLT @ 72" O.C. U.N.O. IN SHEAR WALL SCHEDULE W/ 7" MIN. EMBEDMENT
2. 2X PRESSURE TREATED SILL PLATE U.N.O. IN SHEAR WALL SCHEDULE
3. SHEAR WALL EDGE NAILING PER SHEAR WALL SCHEDULE
4. 4" CONCRETE SLAB OVER 4" COMPACT FILL
5. FINISH GRADE OR SLAB AS OCCURS
6. #4 HORIZ. REBAR @ 12" OC. W/ (1) #4 REBAR IN UPPER 3" TO 5" OF WALL
7. #4 VERTICALS @ 18" OC. W/ STANDARD HOOK REQUIRED, ALTERNATE BENDS, NO WET SETTING PERMITTED
8. (2) #4 REBAR CONTINUOUS IN FOOTING
9. INSTALL DAMPPROOFING OR WATERPROOFING PER IRC R406 WHERE INTERIOR SLAB IS BELOW EXTERIOR GRADE

53 8" STEM WALL AT SLAB ON GRADE
SCALE: ¾"=1'



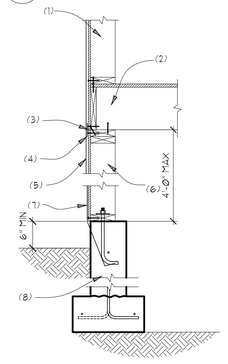
1. WOOD POST W/ ARCHITECTURAL COVER PER PLAN
2. SIMPSON ABUZ OR CPTZ POST BASE WITH CAST IN PLACE OR EPOXIED ANCHOR PER MANUF. SPECS.
3. FINISHED GRADE OR SLAB AS OCCURS
4. OPTIONAL 12" DIA OR SQUARE CONCRETE PEDESTAL
5. (4) #4 VERTICALS W/ STANDARD HOOK AT CONCRETE PEDESTAL
6. #3 TIES AT 8" O.C.
7. ISOLATED OR CONTINUOUS FOOTING PER PLAN

54 FOOTING AT WOOD COLUMN
SCALE: ¾"=1'



1. SHEAR WALL W/ NAILING PER SHEAR WALL SCHEDULE
2. JOIST PER PLAN
3. SIMPSON A35 @ 16" O.C.
4. 2X BLOCKING TO MATCH JOISTS
5. CRIPPLE WALL W/ STUDS @ 16" O.C. SHEATHED 4 NAILED PER SCHEDULE FOR SHEAR WALL ABOVE
6. PRESSURE TREATED SILL PLATE
7. FOOTING PER PLAN W/ ⅝" DIA. ANCHOR BOLTS PER SHEAR WALL SHEDULE.

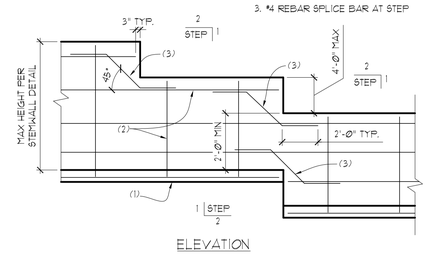
55 CRIPPLE WALL BEARING WALL
SCALE: ¾"=1'



1. STUD WALL FRAMING PER PLAN
2. FLOOR JOISTS & RIM JOIST PER PLAN
3. WALL SHEATHING PANEL EDGE W/ EDGE NAILING PER SHEAR WALL SCHEDULE
4. SIMPSON LTP4 @ 48" O.C.
5. EXTEND STHD STYLE ANCHOR STRAPS WITH OVERLAPPED CMSTC16 COILED STRAP TO GET FULL NAILING AT WALL FRAMING ABOVE (BOLT STYLE HOLDOWNS TO BE EXTENDED TO WALL ABOVE W/ COUPLER NUT AND ALL THREAD ROD)
6. 2x6 CRIPPLE WALL W/ STUDS @ 16" O.C. SHEATHED 4 NAILED PER WALL ABOVE W/ 4" O.C. 8d COMMON EDGE NAILING MINIMUM
7. HOLDOWN PER PLAN
8. STEM WALL & FOOTING PER PLAN

A1 CRIPPLE WALL FOR SLOPED LOTS
SCALE: ¾"=1'

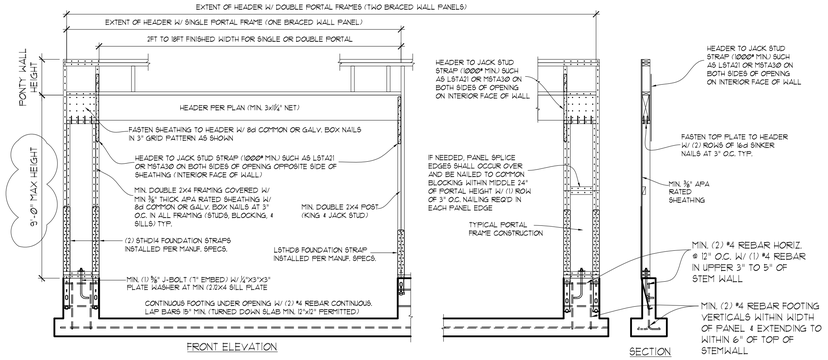
SEE DETAIL A1 FOR CRIPPLE WALL FRAMING SPECIFICATIONS



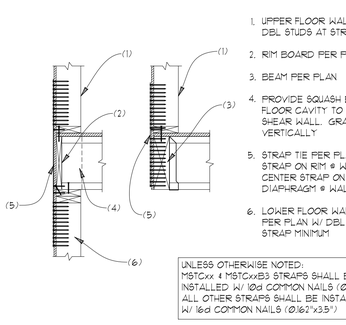
ELEVATION

1. FOOTING PER PLAN
2. HORIZONTAL & VERTICAL REBAR SPACED PER STEM WALL DETAIL
3. #4 REBAR SPLICE BAR AT STEP

A2 STEPPED FOOTING AT SLOPED LOT
SCALE: NTS



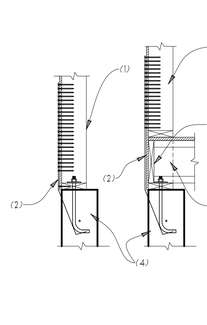
H3 PORTAL FRAME CONSTRUCTION (FIELD BUILT)
SCALE: NTS



1. UPPER FLOOR WALL PER PLAN W/ DBL STUDS AT STRAP MINIMUM
2. RIM BOARD PER PLAN
3. BEAM PER PLAN
4. PROVIDE SQUASH BLOCKS IN FLOOR CAVITY TO MATCH POST IN SHEAR WALL. GRAIN ORIENTED VERTICALLY
5. STRAP TIE PER PLAN CENTER STRAP ON RIM @ WALL TO WALL & CENTER STRAP ON FLOOR DIAPHRAGM @ WALL TO BEAM
6. LOWER FLOOR WALL OR BEAM PER PLAN W/ DBL STUDS AT STRAP MINIMUM

UNLESS OTHERWISE NOTED, MSTCxx & MSTCxxB3 STRAPS SHALL BE INSTALLED W/ 10d COMMON NAILS (Ø.148"x3") ALL OTHER STRAPS SHALL BE INSTALLED W/ 16d COMMON NAILS (Ø.162"x3.5")

H1 TYPICAL STRAP TIE @ UPPER FLOORS
SCALE: ¾"=1'



1. DBL 2X STUDS MINIMUM AT HOLDOWN UNLESS NOTED OTHERWISE
2. STRAP TIE HOLDOWN PER PLAN INSTALLED PER MANUF. SPECS. W/ 16d SINKER (Ø.148"x3¼") OR 10d COMMON (Ø.148"x3") NAILS
3. RIM BOARD PER PLAN
4. CONCRETE STEM WALL PER PLAN W/ #4 REBAR IN UPPER 3" TO 5" OF STEM WALL
5. PROVIDE SQUASH BLOCKS IN FLOOR CAVITY TO MATCH POST IN SHEAR WALL. GRAIN ORIENTED VERTICALLY

FOUNDATION STRAP	NAILS INTO END POST
LSTHD8/LSTHD8RJ	2Ø
STHD10/STHD10RJ	24
STHD14/STHD14RJ	3Ø

H2 TYPICAL STRAP TIE HOLDOWN
SCALE: ¾"=1'

1. DBL 2X STUDS MINIMUM AT HOLDOWN UNLES NOTED OTHERWISE
2. ANCHOR BOLT STYLE HOLDOWN PER PLAN INSTALLED PER MANUF. SPECS.
3. RIM BOARD PER PLAN
4. PROVIDE SQUASH BLOCKS IN FLOOR CAVITY TO MATCH POST IN SHEAR WALL. GRAIN ORIENTED VERTICALLY
5. ANCHOR BOLT INSTALLED PER MANUF. SPECS. (SEE BELOW FOR SIZE PER HOLDOWN) MAINTAIN 5" CLEARANCE FROM FNDTN VENTS.
6. CONCRETE STEM WALL PER PLAN
7. EXTEND ANCHOR BOLT W/ COUPLER NUT & ALL THREAD ROD

ANCHOR	EMBED.
SSTB16 (DIA. = ⅝")	12⅝"
SSTB20 (DIA. = ¾")	16⅜"
SSTB24 (DIA. = ⅞")	20⅝"
SSTB28 (DIA. = 1")	24⅛"
SSTB34, SSTB36 (DIA. = 1⅛")	28⅞"
SB3⅞x24, SB1⅛x24	18"
SB1x30	24"

H4 TYPICAL ANCHOR BOLT HOLDOWN
SCALE: ¾"=1'

1. STUD WALL PER PLAN W/ (2)2X POST AT HOLDOWN U.N.O. CRIPPLE WALLS FRAMED AND SHEATHED PER SHEAR WALL ABOVE INCLUDING POSTS (P1-4 MIN.).
2. PAB ANCHOR BOLT PER PLAN EMBEDDED INTO CONTINUOUS FOOTING (de=EMBEDMENT DEPTH)
3. ANCHOR EXTENDED AS NEEDED TO HOLDOWN IN WALL ABOVE W/ COUPLER NUT AND ALL THREAD ROD

ALL PAB ANCHORS CONSIST OF STANDARD A36, A36-A, OR A307 (Fu=58 ksi) ALL-THREAD ROD (UNLESS NOTED OTHERWISE) W/ NUT/WASHER/NUT COMBO OF HEAVY HEX NUTS AND PLATE WASHER AT EMBEDDED END. UNLESS PRE-INSTALLED W/ FIXED NUTS BY MANUFACTURER, THE PLATE WASHER SHALL BE AS SHOWN BELOW

PAB4 = ½" DIA. ALL-THREAD - ⅜"x1½"x1½" PLATE WASHER
PAB5 = ⅝" DIA. ALL-THREAD - ½"x1¾"x1¾" PLATE WASHER
PAB6 = ¾" DIA. ALL-THREAD - ½"x2¼"x2¼" PLATE WASHER
PAB7 = ⅞" DIA. ALL-THREAD - ½"x2½"x2½" PLATE WASHER
PAB8 = 1" DIA. ALL-THREAD - ⅝"x2¾"x2¾" PLATE WASHER
PAB9 = 1⅛" DIA. ALL-THREAD - ⅝"x3¼"x3¼" PLATE WASHER

H5 TYPICAL PAB ANCHOR BOLT
SCALE: ¾"=1'

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BUILDING DEPT. APPROVAL STAMPS:

REVISION:	INIT:	DATE:

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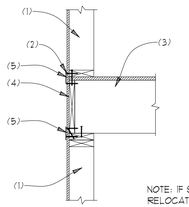
DATE: 2-17-2021
INIT: MM
PROJECT #: 2343

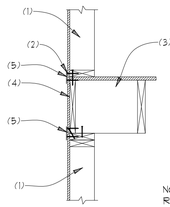


1. 2x STUD WALL W/ BASE PLATE NAILING PER SHEAR WALL SCHEDULE
2. EDGE NAILING PER SHEAR WALL SCHEDULE
3. JOIST PER PLAN SECURED TO TOP PLATE W/ (3) 8d NAILS
4. SOLID CONTINUOUS RIM BOARD W/ (4) 10d NAILS (Ø.131"x3") TO EACH JOIST & TOE NAILED TO TOP PLATE W/ 8d NAILS @ 6" O.C.
5. SHEATHING PANEL EDGE & EDGE NAILING PER SHEAR WALL SCHEDULE W/ SIMPSON LTP4 @ 48" O.C.

NOTE: IF SHEATHING JOINTS ARE RELOCATED TO OCCUR ON THE RIM, & SHEATHING IS EDGE NAILED AT RIM JOIST & WALL PLATES, THE SIMPSON LTP4 MAY BE ELIMINATED

60 FLOOR JOIST BEARING AT STUD WALL

SCALE: ¾"=1'

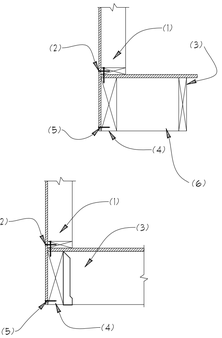


1. 2x STUD WALL W/ BASE PLATE NAILING PER SHEAR WALL SCHEDULE
2. EDGE NAILING PER SHEAR WALL SCHEDULE
3. JOIST BLOCKING @ FLOOR SHEATHING PANEL EDGES (48" O.C.) SECURED TO TOP PLATE W/ (3) 8d NAILS
4. SOLID CONTINUOUS RIM BOARD W/ (4) 10d NAILS (Ø.131"X3") TO EACH JOIST & TOE NAILED TO TOP PLATE W/ 8d NAILS @ 6" O.C.
5. SHEATHING PANEL EDGE & EDGE NAILING PER SHEAR WALL SCHEDULE W/ SIMPSON LTP4 @ 48" O.C.

NOTE: IF SHEATHING JOINTS ARE RELOCATED TO OCCUR ON THE RIM, & SHEATHING IS EDGE NAILED AT RIM JOIST & WALL PLATES, THE SIMPSON LTP4 MAY BE ELIMINATED

61 FLOOR JOIST PARALLEL TO STUD WALL

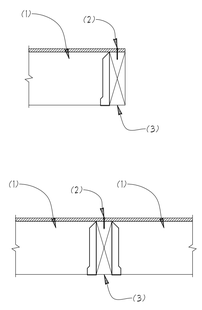
SCALE: ¾"=1'



1. 2x STUD WALL W/ BASE PLATE NAILING PER SHEAR WALL SCHEDULE
2. EDGE NAILING PER SHEAR WALL SCHEDULE
3. FLOOR JOIST PER PLAN W/ SIMPSON LUS210 OR USP JL210 HANGER
4. BEAM PER PLAN
5. WALL SHEATHING CONTINUOUS OVER BEAM W/ EDGE NAILING PER SHEAR WALL SCHEDULE
6. JOIST BLOCKING @ FLOOR SHEATHING PANEL EDGES (48" O.C.) SECURED TO TOP PLATE W/ (3) 8d NAILS

62 FLOOR JOIST AT BEAM

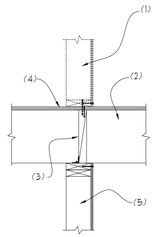
SCALE: ¾"=1'



1. FLOOR JOIST (ONE OR BOTH SIDES OF BEAM) PER PLAN W/ SIMPSON LUS210 OR USP JL210 HANGER
2. FLOOR DIAPHRAGM EDGE NAILING
3. BEAM PER PLAN

63 FLOOR JOIST AT BEAM

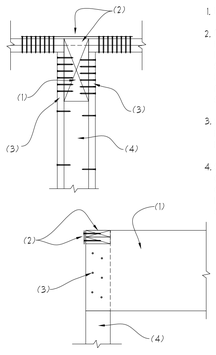
SCALE: ¾"=1'



1. WALL ABOVE PER PLAN (AS OCCURS).
2. FLOOR JOIST PER PLAN SECURE TO TOP PLATE W/ (3) 8d TOE NAILS
3. 2X FLOOR JOIST BLOCKING SECURED TO TOP PLATE W/ SIMPSON A35
4. FLOOR SHEATHING PER PLAN W/ EDGE NAILING TO JOIST BLOCKING
5. SHEAR WALL PER PLAN

64 FLOOR JOIST AT INT. SHEAR WALL

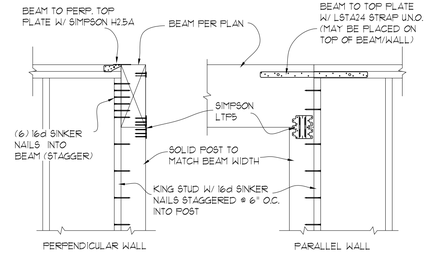
SCALE: ¾"=1'



1. BEAM PER PLAN
2. NOTCH BEAM FOR CONTINUOUS TOP 2X PLATE OF DOUBLE 2X PLATE OR INSTALL SIMPSON CMSTC16 OR MSTC28 STRAP ON TOP FACE OR EXTERIOR FACE OF DISCONTINUOUS PLATES W/ MINIMUM (8) 16d SINKER NAILS EACH SIDE OF BREAK IN TOP PLATE.
3. KING STUD W/ (6)-16d SINKER NAILS TO BEAM (STAGGERED) EACH SIDE AT BEAM @ 8" O.C. STAGGERED TO POST
4. SOLID POST TO MATCH WIDTH OF BEAM OR BUILT UP 2X STUDS W/ PLYWOOD OR OSB FILLER AS NEEDED. (NAIL PLIES OF BUILT UP 2X POST WITH 10d COMMON NAILS @ 12" O.C. (STAGGERED)

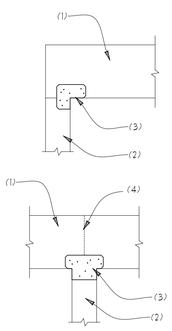
65 BEAM POCKET AT WALL

SCALE: ¾"=1'



66 BEAM POCKET AT CORNER

SCALE: ¾"=1'

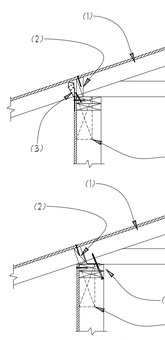


1. BEAM PER PLAN
2. WOOD POST OR COLUMN PER PLAN
3. SIMPSON AC OR LCE POST CAPS (PAIRED)
4. BEAM SPLICE AS OCCURS
5. MITER CUT BEAMS AT CORNER CONDITION

PLAN VIEW AT CORNER

67 WOOD BEAM AT WOOD POST

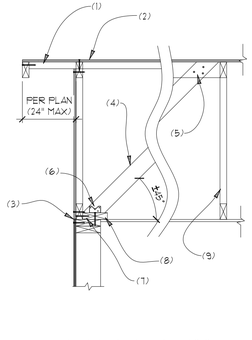
SCALE: ¾"=1'



1. TRUSS W/ ROOF SHEATHING PER PLAN
2. DIAPHRAGM EDGE NAILING AT 2x BLOCKING TOE NAILED TO PLATE W/ (3) 8d NAILS OR ATTACHED W/ (1) SIMPSON RBC PER BLOCK
3. SIMPSON H2.5A TRUSS TIE OR SDWC TRUSS SCREW @ EACH TRUSS INSTALLED PER MFG. SPECS.
4. 2x STUD WALL OR BEAM PER PLAN

70 ROOF TRUSS AT BEARING

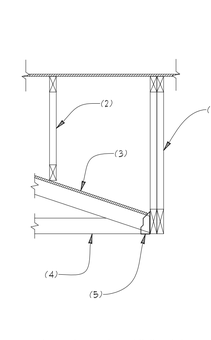
SCALE: ¾"=1'



1. 2x4 OUTRIGGER @ 48" O.C. W/ FASCIA BOARD (1X MIN.) SECURED TO ENDS W/ (2) 10d NAILS
2. ROOF SHEATHING W/ DIAPHRAGM EDGE NAILING TO GABLE TRUSS
3. SHEATHING SPLICE AT TOP PLATE OF WALL. FULLY SHEATH GABLE END TRUSS W/ EXTERIOR WALL SHEATHING PER PLAN W/ EDGE NAILING AT TOP & BOTTOM CHORD
4. 2x DIAGONAL BRACE @ 8FT O.C.
5. SECURE BRACE AT 2x BLOCKING W/ (3) 10d NAILS
6. SIMPSON A34 AT 2x BRACE
7. ATTACH GABLE TRUSS TO BACKER BOARD W/ 10d NAILS @ 6" O.C.
8. 2x6 CONTINUOUS BACKER BOARD SECURED TO TOP PLATE W/ 10d NAILS @ 6" O.C.
9. ROOF TRUSSES @ 24" O.C. PER PLAN

71 GABLE END TRUSS

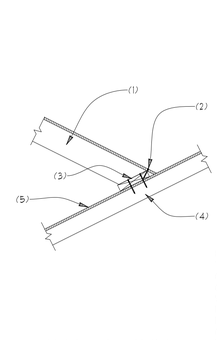
SCALE: ¾"=1'



1. GIRDER TRUSS PER PLAN
2. VALLEY TRUSSES OR CONVENTIONAL OVER FRAMING. WHERE VALLEY TRUSSES ARE USED SECURE VALLEY TRUSS TO SUPPORTING ROOF FRAMING W/ SIMPSON VTCR CLIPS @ 48" O.C.
3. ROOF SHEATHING CONTINUOUS BELOW OVERFRAMING. TRUSS TOP CHORDS W/O SHEATHING SHALL BE BRACED W/ 2x4 @ 24" O.C. ATTACHED W/ (2) 10d NAILS PER TRUSS
4. ROOF TRUSS PER PLAN
5. SIMPSON HUS26 OR USP THD26 FACE MOUNT HANGER U.N.O. PER TRUSS MANUF.

72 GIRDER TRUSS AT OVERFRAMING

SCALE: ¾"=1'



1. CONVENTIONAL 2x OVER FRAMING @ 24" O.C. W/ (4) 16d TOE NAILS TO VALLEY PLATE (SEE BELOW FOR RECOMMENDED SIZES BASED ON SPAN)
2. EDGE NAILING
3. 2x VALLEY BOARD TO MATCH RAFTER W/ (2) 16d NAILS PER TRUSS
4. ROOF TRUSS TOP CHORD OR RAFTER PER PLAN
5. CONTINUOUS SHEATHING BENEATH OVERFRAMING OR 2x4 BRACING @ 24" O.C. W/ 2-16d NAILS PER TRUSS.

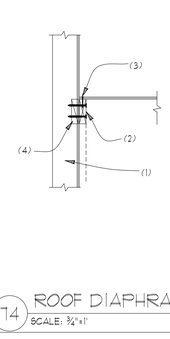
FOR RAFTER SPANS BELOW USE THE FOLLOWING SIZES:

0'-0" TO 6'-7"	2x4
6'-8" TO 9'-7"	2x6
9'-8" TO 12'-2"	2x8
12'-3" TO 14'-10"	2x10
14'-11" TO 17'-3"	2x12

(ASSUMES RAFTERS @ 24" O.C. LL=30PSF & DL=10PSF PER TABLE R802.5.1(3) FOR HF #2)

73 VALLEY FRAMING

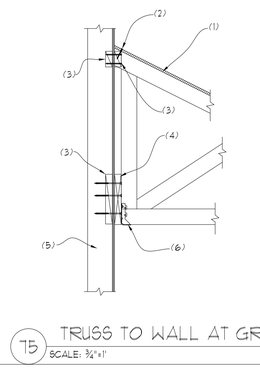
SCALE: ¾"=1'



1. EXTERIOR STUD WALL PER PLAN
2. RAFTER, TRUSS TOP CHORD, OR 2X6 LEDGER SECURED TO WALL W/ (2) 4" SIMPSON SDWS SCREWS PER WALL STUD (16" O.C.)
3. ROOF DIAPHRAGM EDGE NAILING PER PLAN
4. 2X6 BLOCKING BETWEEN STUDS

74 ROOF DIAPHRAGM TO WALL

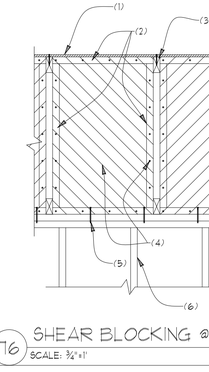
SCALE: ¾"=1'



1. TRUSS PER PLAN W/ TOP CHORD EXTENDED TO WALL
2. ROOF EDGE NAILING
3. 2x BLOCKING ATTACHED W/ (2) 10d NAILS PER STUD
4. CONTINUOUS 2x12 LEDGER W/ (3) 5" SDWS SCREWS PER STUD
5. 2x STUD WALL PER PLAN (STUDS @ 16" O.C.)
6. HANGER TO LEDGER PER TRUSS MANUFACTURER

75 TRUSS TO WALL AT GREAT ROOM

SCALE: ¾"=1'

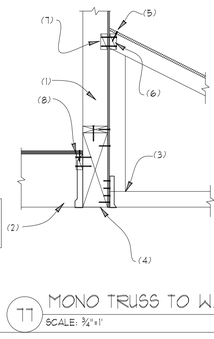


1. ROOF SHEATHING W/ DIAPHRAGM NAILING TO TRUSSES
2. 2x4 FLAT BLOCKING AT (4) SIDES OF BLOCKING PANEL
3. ROOF TRUSSES PER PLAN
4. SHEATHING AND EDGE NAILING PER SHEAR WALL SCHEDULE FOR WALL BELOW
5. BLOCKING NAILED TO TOP PLATE PER BASE PLATE NAILING OF WALL BELOW
6. INTERIOR SHEAR WALL PER PLAN

OPTION: FIRE-MANUF TRUSS BLOCKING PANEL MAY BE USED IN LIEU OF SITE BUILT ASSEMBLY SHOWN.

76 SHEAR BLOCKING @ INT. SHEAR WALL

SCALE: ¾"=1'



1. 2x STUD WALL W/ EXTERIO WALL SHEATHING PER PLAN
2. JOIST PER PLAN W/ LUS HANGER TO BEAM
3. JACK/MONO TRUSS PER PLAN W/ LUS HANGER TO RIM
4. BEAM PER PLAN
5. ROOF DIAPHRAGM EDGE NAILING PER PLAN
6. 2X BLOCKING BETWEEN TRUSSES ATTACHED TO WALL W/ 10d NAILS STAGGERED AT 6" O.C.
7. 2X BLOCKING BETWEEN STUDS
8. 2X BLOCKING BETWEEN JOISTS ATTACHED TO BEAM W/ 10D NAILS STAGGERED AT 6" O.C.

77 MONO TRUSS TO WALL AT BEAM

SCALE: ¾"=1'

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S6

DATE: 2-17-2021
INIT: MM
PROJECT #: 2343

SELECTED	CREDIT SELECTIONS	6.0 REQUIRED
HEATING OPTION	FUEL NORMALIZATION DESCRIPTIONS	
2	HEAT PUMP EQUIPMENT LISTED IN TABLE C40.3.3.2(1) OR C403.3.2(2)	1.0
ENERGY OPTION	DESCRIPTION	CREDIT(S)
1.3	EFFICIENT BUILDING ENVELOPE 1.3: PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.1 WITH THE FOLLOWING MODIFICATIONS: VERTICAL FENESTRATION U=0.28 FLOOR R-38 SLAB ON GRAD R-10 PERIMETER AND UNDER ENTIRE SLAB BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB	.5
2.1	AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2.1: COMPLIANCE IS BASED ON R402.4.1.2: REDUCE THE TESTED AIR LEAKAGE TO 3.0 AIR CHANGES PER HOUR MAXIMUM AT 50 PASCALS AND ALL WHOLE HOUSE VENTILATION REQUIREMENTS AS DETERMINED BY SECTION M1507.3 OF THE INTERNATIONAL RESIDENTIAL CODE OR SECTION 403.8 OF THE INTERNATIONAL MECHANICAL CODE SHALL BE MET WITH A HIGH EFFICIENCY FAN(S) (MAXIMUM 0.35 WATTS / CFM), NOT INTERLOCKED WITH THE FURNACE FAN (IF PRESENT). VENTILATION SYSTEMS USING A FURNACE INCLUDING AN ECM MOTOR ARE ALLOWED, PROVIDED THAT THEY ARE CONTROLLED TO OPERATE AT LOW SPEED IN VENTILATION ONLY MODE PANASONIC WHISPER CEILING DC VENTILATION FAN	.5
3.5	HIGH EFFICIENCY HVAC EQUIPMENT 3.5: AIR-SOURCED, CENTRALLY DUCTED HEAT PUMP WITH A MINIMUM HSPF OF 11.0 HEAT PUMP MODEL: TRANE XR-15 SINGLE STAGE HEAT PUMP (11.0 HSPF) AIR HANDLER MODEL: TRANE TEM6 VARIABLE SPEED HIGH EFFICIENCY ELEC. AIR HANDLER	1.5
5.1	EFFICIENT WATER HEATING OPTION 5.1 A DRAIN WATER HEAT RECOVERY UNIT(S) SHALL BE INSTALLED, WHICH CAPTURES WASTE WATER HEAT FROM ALL AND ONLY THE SHOWERS, AND HAS A MINIMUM EFFICIENCY OF 40% IF INSTALLED FOR EQUAL FLOW OR A MINIMUM EFFICIENCY OF 54% IF INSTALLED FOR UNEQUAL FLOW. SUCH UNITS SHALL BE RATED IN ACCORDANCE WITH CSA B55.1 OR IAPMO IGC 346-2017 AND BE SO LABELED.	.5
5.5	EFFICIENT WATER HEATING 5.5: WATER HEATER SYSTEM SHALL INCLUDE ONE OF THE FOLLOWING: ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER III OF NEAA'S ADVANCED WATER HEATING SPECIFICATIONS HEAT PUMP WATER HEATER MODEL: TBD	2.0
		6.0 SELECTED

ENERGY CREDIT SELECTIONS

2018 IRC WHOLE HOUSE VENTILATION INFORMATION

WHOLE HOUSE VENTILATION SYSTEM

☒ **OPTION 1 - IRC M1507.3.4 WHOLE HOUSE VENTING USING EXHAUST FANS**

WHOLE HOUSE VENTILATION RATE: 105 CFM. FROM TABLE M1507.3.3(1) FOR OPTION 1
CONTINUOUS OPERATION

KEY REQUIREMENTS OF EACH SYSTEM:

IRC M1507.3.4 WHOLE HOUSE VENTING USING EXHAUST FANS

- WHOLE HOUSE FANS LOCATED 4 FEET OR LESS FROM THE INTERIOR GRILL SHALL HAVE A SONE RATING OF 1.0 OR LESS.
- ALL EXHAUST DUCTS SHALL TERMINATE OUTSIDE THE BUILDING.
- OUTDOOR AIR SHALL BE DISTRIBUTED TO EACH HABITABLE ROOM.

ALL SYSTEMS IRC M1507.3.2:

THE WHOLE HOUSE VENTILATION FAN SHALL BE CONTROLLED BY A 24-HOUR CLOCK TIMER WITH THE CAPABILITY OF CONTINUOUS OPERATION, MANUAL AND AUTOMATIC CONTROL. SET TO OPERATE 8 HOURS A DAY & LABELED.

NOTE: THE ABOVE NOTES ARE EXCERPTS FROM THE CODE. FOR COMPLETE DETAILS, YOU MUST REFER TO THE CODE SECTIONS FOR TOTAL COMPLIANCE.

TABLE M1507.4
MINIMUM REQUIRED EXHAUST RATES FOR ONE AND TWO FAMILY DWELLINGS

AREA TO BE VENTILATED	VENTILATION RATES
KITCHENS	100 CFM INTERMEDIATE OR 25 CFM CONTINUOUS
BATHROOMS - TOILET ROOMS	MECHANICAL EXHUAST CAPACITY OF 50 CFM INTERMITTENT OR 20 CFM CONTINUOUS

TABLE M1507.3.3(1)
MINIMUM VENTILATION RATES
(CONTINUOUSLY OPERATING SYSTEMS)

(FT)	BEDROOMS (1) 0-1	2-3	4-5	6-7	>7
<1500	30	45	60	75	90
1501-3000	45	60	75	90	105
3001-4500	60	75	90	105	120
4501-6000	75	90	105	120	135
6001-7500	90	105	120	135	150
>7500	105	120	135	150	165

(1) VENTILATION RATES IN TABLE ARE MINIMUM OUTDOOR AIRFLOW RATES MEASURED IN CFM.

WHOLE HOUSE FAN SIZING

MECHANICAL SYSTEMS

Electrical

60. Electrical Connections. Equipment electrical connection shall be regulated in accordance with the adopted state electrical code.

Exceptions:
1. Means of disconnect. Independent means of disconnect for the electrical supply to each piece of equipment shall be provided in sight of the equipment served when the supply voltage exceeds 50 volts.
2. Service Receptacle. A 120-volt service receptacle shall be located within 25 feet of, and on the same level as, the equipment.
3. Illumination. Permanent switch controlled lighting shall be installed for maintenance of equipment. The lighting shall provide sufficient illumination to safely approach the equipment and perform maintenance. Control of the lighting shall be provided at the access entrance.
Equipment
61. Mechanical Equipment.. Equipment shall be approved by the building official for safe use or comply with applicable nationally recognized standards as evidenced by the listing and label of an approved agency. Listed appliances. The installer shall leave the manufacturer's installation and operating instructions attached to the appliance. Clearances of listed appliances from combustible materials shall be as specified in the listing or on the rating plate.

62. Water Heaters. Fuel burning water heaters shall not be installed in bathrooms or in a closet with access only through a bedroom or bathroom.
Exceptions:
1. Water heaters installed having direct vent systems.
2. Water heaters installed in a closet that has a weather-stripped solid door with an approved door closing device, and designed exclusively for the water heater and where all air for combustion and ventilation is supplied from the outdoors.
3. Water heaters of the automatic storage type installed as a replacement in a bathroom, when specifically approved, properly vented and supplied with adequate combustion air.
Heating system

Water heaters shall be installed in accordance with the manufacturer's installation instructions and the requirements of this code. Water heaters shall be anchored against movement and overturning in accordance with M1307.2. Gas-fired water heaters shall conform to the requirements in Chapter 24. with UL 174. Oiled-fired water heaters shall comply with UL 732

Prohibited locations: Fuel-fired water heaters shall not be installed in a room used as a storage closet. Water heaters located in a bedroom or bathroom shall be installed in a sealed enclosure so that combustion air will not be taken from the living space. Installation of direct-vent water heaters within an enclosure is not required. M2005.2.

64. Listing Required. All furnaces shall be listed and labeled by an approved agency and installed to listed specifications.

Location

65. Installation Per Listing. Equipment shall be located as required in Section M1307 & M1308, IRC, specific requirements elsewhere in the IRC and the conditions of the equipment's approval.

66. Prohibited Location. Fuel-burning equipment shall not be installed in a closet, bathroom or a room readily usable as a bedroom, or in a room, compartment or alcove opening directly into any of these, except direct vent equipment, electric heat furnaces and other conditions noted in

In areas subject to flooding, equipment which would be damaged or create hazardous conditions if subjected to inundation shall not be installed at or below grade unless suitably protected by elevation or other approved means.

67. Liquefied petroleum gas burning appliances shall not be installed in a pit, an underfloor space, below grade or similar location where vapors or fuel might unsafely collect unless an approved method for the safe collection, removal and containment or disposal of the vapors or fuel is provided.

68. Clearances. Furnaces within compartments or alcoves shall have a minimum working space clearance of 3 inches along the sides, back and top with a total width of the enclosing space being at least 12 inches wider than the furnace. Section M1305, IRC.

70. Support. Appliances designed to be in a fixed position shall be securely fastened in place. Supports for appliances shall be designed and constructed to sustain vertical and horizontal loads within the stress limitations in the building code. Section M1307.2, IRC.

71. Mechanical System in Garage.
A. Protection from damage. Equipment shall not be installed in a location where it is subject to mechanical damage unless protected by approved, substantial barriers. Section M1307.3.1.
B. Elevation of ignition source. Heating or cooling equipment located in a garage and which generates 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 inches above the floor level. Section M1307.3

Venting and Combustion Air

73. All fuel burning equipment shall be provided with combustion air. Appliances located within the building envelope shall obtain combustion air from outdoors. Heating equipment located within the Building Envelope shall be thermally isolated from the heated area. Chapter 17 IRC

74. Every appliance designed to be vented shall be connected to a venting system complying with Chapter 18, IRC.

75. 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, manufacturer's instructions, and the applicable provisions of Chapter 18, IRC.

76. 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 M1803.3.4 and Table M1306.2 IRC. and Figure M1306.1 IRC

77. Type B or BW. Type B or BW gas vent shall terminate per M1804 IRC

Duct work
78. Duct systems shall be of metal as set forth in Table M1601.1.1(2) IRC factory made air ducts complying with Chapter 16, IRC.
Joints and seams shall be substantially airtight by means of tapes, mastics, gaskets or other means.

2018 WASHINGTON STATE ENERGY CODE:

E1. Access Hatches and Doors. Access doors from conditioned spaces to unconditioned spaces (e.g., attics and crawl spaces) shall be weather-stripped and insulated to a level equivalent to the insulation on the surrounding surfaces. Access shall be provided to all equipment which prevents damaging or compressing the insulation. A wood framed or equivalent baffle or retainer must be provided when loose fill insulation is installed. Section R402.2.4. WSEC
INSULATION: All insulation materials, including facings such as vapor barriers or breather papers, installed within floor/ceiling assemblies, roof/ceiling assemblies, walls, crawl spaces, or attics shall have a flame-spread rating not to exceed 25 and a smoke density not to exceed 450

Exceptions:
1. Foam plastic insulation shall comply with Section R316, IRC.

2. When such materials are installed in concealed spaces, the flame spread and smoke-developed limitations do not apply to the facing, provided that the facing is installed in substantial contact with the unexposed surface of the ceiling, floor, or wall finish.

3. Cellulose insulation shall comply with Section R302.10.3 IRC

E2. Insulation Clearances. Where required, insulation shall be installed with clearances according to manufacturer's specifications. Insulation shall be installed so that required ventilation is unobstructed. For blown or poured loose fill, clearances shall be maintained through installation of a permanent retainer.

E3. Roofs/Ceilings. Open blown or poured loose fill insulation may be used where the slope of the ceiling is not more than 3:12 and there is more than 30 inches from the top of the ceiling framing to the underside of the roof sheathing at the roof ridge. When eave vents are installed, baffling of the vent openings shall be provided so as to deflect the incoming air above the surface of the insulation. Baffles shall be rigid material, resistant to wind driven moisture. Section R402.2.1.1 WSEC Refer to Section R806 IRC for additional information.

E4. Walls. Insulation installed in exterior walls shall comply with the provisions of this section. All wall insulation shall fill the entire framed cavity. Exterior wall cavities isolated during framing shall be fully insulated to the levels of surrounding walls. All faced insulation shall be face stapled to avoid compression. Table R402.4.1.1 WSEC
Vapor retarders shall be installed on the warm side (in winter) of the insulation Section IRC R702.7

E5. Floors. Floor insulation shall be installed in a permanent manner in substantial contact with the surface being insulated. Insulation supports shall be installed so spacing is no more than 24 inches on center. Foundation vents shall be placed so that the top of the vent is below the lower surface of the floor insulation. Section R402.2.7 WSEC

E6. Slab on grade floors. The minimum thermal resistance (R-Value) of the insulation around the perimeter of unheated or heated slab-on-grade floors shall be as specified in Table R402.1.1. The insulation shall be placed on the outside of the foundation or on the inside of the foundation wall. The insulation shall extend downward from the top of the slab for a minimum distance as shown in the table or to the top of the footing, whichever is less, or downward to at least the bottom of the slab and then horizontally to the interior or exterior for the total distance shown in the table. A two inch by two inch (maximum) pressure treated nailer may be placed at the finished floor elevation for attachment of interior finish materials.

Radiant Slabs. The entire area of a radiant slab shall be thermally isolated from the soil with a minimum of R-10 insulation. The insulation shall be an approved product for its intended use.

E7. Below Grade Walls. Below grade exterior wall insulation (cold side of the wall) shall extend from the top of the below grade wall to the top of the footing and shall be approved for below-grade use. Above grade insulation shall be protected. Insulation used on the interior (warm side of the wall) shall extend from the top of the below-grade wall to the below-grade floor level. Section R402.2.8 WSEC

E8. Roof/Ceiling assemblies where the ventilation space above the insulation is less than an average of 12 inches shall be provided with a vapor retarder. Faced batt insulation where used as a vapor retarder shall be face stapled. Single rafter joist vaulted ceiling cavities shall be of sufficient depth to allow a minimum one inch vented air space above the insulation. Vapor retarders are not required where the ventilation space above the insulation averages 12 inches or greater or where the insulation is installed between the roof membrane and the structural roof deck.

E9. Walls separating conditioned space shall have a vapor retarder installed. Faced batt insulation shall be face stapled.

E10. Floors separating conditioned space from unconditioned space shall have a vapor retarder installed with a one perm dry cup (4 ml.) rating or less.

E11. Ground cover of six mil (0.006" thick) black polyethylene or approved equal shall be laid over the ground within crawl spaces. The ground cover shall be overlapped 12" minimum at the joints and shall extend to the foundation wall.
Exception: The ground cover may be omitted in crawl spaces if the crawl space has a concrete slab floor with minimum thickness of 3-1/2 inches.

E12. Air Leakage Control. Seal all exterior openings Section R402.4
A. Exterior doors and windows shall be designed to limit air leakage into or from the building envelope, except for assemblies that are required to be of fire-resistive construction.
B. Exterior joints around windows and door frames, openings between walls and foundation, between roof and wall panels; openings at penetrations of util ity services through wall, floors and roofs; and all other openings in the building envelope shall be sealed, caulked, gasketed, or weather stripped. All other openings shall be sealed , caulked, gasketed or weather-stripped to limit air leakage.
C. Site constructed doors and windows are not required to be tested, but shall be made tight fitting. Fixed lights shall be stopped with salient all around. Operating sash shall have weather-stripping working against overlapping trim, and a latch which will hold the sash closed.
D. Recessed Light Fixtures. When installed in the building envelope, recessed lighting fixtures shall meet one of the following requirements :
1. Type IC rated, manufactured with no penetrations between the inside of the recessed fixture and the ceiling cavity, and sealed or gasketed to prevent air leakage into the unconditioned space.
2. Type IC, installed inside a sealed box constructed from a min. 1/2 inch thick gypsum wall board, or constructed from a preformed polymeric vapor barrier, or other air tight assembly manufactured for this purpose.
3. Type IC rated, certified under ASTM E283 to have no more than 2.0 cfm air movement from the conditioned space to the ceiling cavity. The lighting fixture shall be tested at 75 Pascals or 1.57 lbs/ft2 pressure difference and have a label attached, showing compliance. Section R402.4.5 WSEC

E14. Duct Construction. All duct work shall be constructed in accordance with standards RS-15, RS-16, RS-17, RS-18, RS-19, or RS-20, as applicable, and the International Mechanical Code. Section R403.3 WSEC

E15 R403.1 At least one thermostat shall be provided for each separate heating and cooling system. Programable per R403.1.1

ENERGY NOTES:

- DUCT TESTING REQUIRED PER WSEC R403.3.3
- BUILDING AIR LEAKAGE TESTING REQUIRED PER WSEC R402.4.1.2 (SEE NOTE THIS PAGE)
- HVAC CONTROLS WITH PROGRAMMABLE SCHEDULE PER WSEC R403.1.1
- A MINIMUM OF 90% OF PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY PER R404.1
- INSULATION MARKERS SHALL BE PLACED EVERY 300 S.F. IN THE ATTIC AND FACE TOWARD THE ATTIC ACCESS

PER WSEC R401.3:
A CERTIFICATE IS TO BE POSTED IN SPACE THE SPACE WHERE THE FURNACE IS LOCATED, UTILITY ROOM OR ON AN APPROVED LOCATION INSIDE THE BUILDING. WHEN LOCATED ON THE ELEC. PANEL, THE CERTIFICATE SHALL NOT COVER OR OBSTRUCT THE VISIBILITY OF THE CIRCUIT DIRECTORY LABEL, DISCONNECT LABEL OR OTHER REQD LABELS.

1. R-VALUES OF ALL INSULATION INSTALLED (ATTIC, FLOOR, WALLS, DUCT WORK OUTSIDE OF CONDITIONED SPACE, ETC.)
2. U-FACTORS AND SOLAR HEAT GAIN COEFFICIENT (SHGC) OF FENESTRATION
3. TYPE OF HEATING
4. TYPE OF COOLING (IF ANY)
5. TYPE OF WATER HEATING EQUIPMENT.
6. DUCT LEAKAGE RATES - INCLUDING TEST CONDITIONS & AIR LEAKAGE RESULTS IF A BLOWER DOOR TEST WAS CONDUCTED.

A COPY OF THE WSEC 2018 CERTIFICATE CAN BE FOUND AT:
http://www.energy.wsu.edu/BuildingEfficiency/EnergyCode.aspx

ALL HEADER MEMBERS ARE TO BE INSULATED WITH R-10 RIGID INSULATION UNLESS THE HEADER MEMBER IS 5-1/2" IN WIDTH

FRESH AIR IN HABITABLE ROOMS SHALL BE PROVIDED THROUGH WINDOWS, DOORS, SKYLIGHTS, LOUVERS OR OTHER APPROVED OPENINGS TO THE OUTDOOR AIR. SUCH OPENINGS SHALL BE PROVIDED WITH READY ACCESS OR SHALL OTHERWISE BE READILY CONTROALLABLE BY THE BUILDING OCCUPANTS. THE OPENABLE AREA TO THE OUTDOORS SHALL NOT BE LESS THAN 8% OF THE FLOOR AREA BEING VENTILATED. R303.1

ALL DOORS ARE TO BE UNDERCUT 1/2" WHERE SEPARATED FROM EXHAUST SOURCE (R1507.3.4.4)

WALL CORNER INSULATION:
CAVITIES WITHIN CORNERS AND HEADERS OF FRAME WALLS SHALL BE INSULATED BY COMPLETELY FILLING THE CAVITY WITH A MATERIAL HAVING A THERMAL RESISTANCE OF R-3 PER INCH, MINIMUM.
NO VOIDS

PIPE INSULATION NOTE

R403.5.3 WSEC

INSULATION FOR HOT WATER PIPES, BOTH WITHIN AND OUTSIDE THE CONDITIONED SPACE, SHALL HAVE A MINIMUM THERMAL RESISTANCE OF R-3

EXCEPTION:
PIPE INSULATION IS PERMITTED TO BE DISCONTINUOUS WHERE IT PASSES THROUGH STUDS, JOISTS OR OTHER STRUCTURAL MEMBERS AND WHERE THE INSULATED PIPES PASS OTHER PIPING, CONDUIT OR VENTS, PROVIDED THE INSULATION IS INSTALLED TIGHT TO EACH OBSTRUCTION.

BROBST DESIGN WORKS
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2018 IRC & WSEC CODES
ENERGY / VIAQ NOTES

American ClassicHomes
9675 S.E. 36th ST. MERCER ISLAND, WA 98040

REVISED

SCALE
3.5.2021

DATE
2018 ENERGY

COMPUTER FILE NAME
N1

SHEET NUMBER

2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family – New & Additions (effective February 1, 2021)

These requirements apply to all IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

Project Information	*Contact Information*
Amercian Classic Homes - Typical Energy Credits	Dan Brobst - designer Brobst Design Works
	dan@brobstdesignworks.com

Instructions: This single-family project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. Based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant.

Provide all information from the following tables as building permit drawings: Table R402.1 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and 406.3 - Energy Credits.

Authorized Representative		*Date*	

All Climate Zones (Table R402.1.1)		
	R-Value [a]	U-Factor [a]
Fenestration U-Factor [b]	n/a	0.30
Skylight U-Factor [b]	n/a	0.50
Glazed Fenestration SHGC [b,e]	n/a	n/a
Ceiling [e]	49 [i]	0.026
Wood Frame Wall [f,h]	21 int	0.056
Floor	30	0.029
Below Grade Wall [c,h]	10/15/21 int + TB	0.042
Slab [d,f] R-Value & Depth	10, 2 ft	n/a

a. *R*-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity that 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 Section 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 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% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family – New & Additions (effective February 1, 2021)

Each dwelling unit ***in a residential building*** shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

1. **Small Dwelling Unit:** 3 credits
   Dwelling units less than 1,500 sf in conditioned floor area with less than 300 sf of fenestration area. Additions to existing building that are greater than 500 sf of heated floor area but less than 1,500 sf.
2. **Medium Dwelling Unit:** 6 credits
   All dwelling units that are not included in #1 or #3
3. **Large Dwelling Unit:** 7 credits
   Dwelling units exceeding 5,000 sf of conditioned floor area
4. **Additions less than 500 square feet:** 1.5 credits
   All other additions shall meet 1-3 above

Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

Summary of Table R406.2				
Heating Options	Fuel Normalization Descriptions	Credits - select ONE heating option		User Notes
1	Combustion heating minimum NAECA[a]	0.0	○	
2	Heat pump[c]	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 - select ONE energy option from each category [d]**		
1.1	[illegible]	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[a]	High Efficiency HVAC	1.0	○	
3.2	High Efficiency HVAC	1.0	○	
3.3[a]	High Efficiency HVAC	1.5	○	
3.4	High Efficiency HVAC	1.5	○	
3.5	High Efficiency HVAC	1.5	◉	
3.6[a]	High Efficiency HVAC	2.0	○	
4.1	High Efficiency HVAC Distribution System	0.5	○	
4.2	High Efficiency HVAC Distribution System	1.0	○	

2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family – New & Additions (effective February 1, 2021)

Summary of Table R406.2 (cont.)				
Energy Options	Energy Credit Option Descriptions (cont.)	Credits - select ONE energy option from each category [d]		User Notes
5.1[e]	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[e]	Renewable Electric Energy (3 credits max)	1.0		
7.1	Appliance Package	0.5	☐	
	Total Credits		6.0	CLEAR FORM

a. An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
b. Equipment listed in Table C403.3.2(4) or C403.3.2(5)
c. Equipment listed in Table C403.3.2(1) or C403.3.2(2)
d. You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.
e. 1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max. See the complete Table R406.2 for all requirements and option descriptions.

Please print only pages 1 through 3 of this worksheet for submission to your building official.

Window, Skylight and Door Schedule

Project Information	*Contact Information*
Mercer Island 89th Residence	Dan Brobst
ACH	dan@brobstdesignworks.com

	Ref.	U-factor	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
Exempt Swinging Door (24 sq. ft. max.)								0.0	0.00
Exempt Glazed Fenestration (15 sq. ft. max.)								0.0	0.00

Vertical Fenestration (Windows and doors)

Component Description	Ref.	U-factor	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
Folding door at great room	1	0.28	1	14		8		112.0	31.36
Folding door at nook	2	0.28	1	9		8		72.0	20.16
Vinyl Window	3	0.28	3	9		6		162.0	45.36
Vinyl Window	4	0.28	4	3		6		72.0	20.16
Vinyl Window	5	0.28	1	6		6		36.0	10.08
Vinyl Window	6	0.28	3	2		3		18.0	5.04
Vinyl Window	7	0.28	1	2		5		10.0	2.80
Vinyl Window	8	0.28	2	3		3		18.0	5.04
Vinyl Window	9	0.28	2	3		2		12.0	3.36
Vinyl Window	10	0.28	1	14		2		28.0	7.84
Vinyl Window	11	0.28	0					0.0	0.00
Vinyl Window	12	0.28	1	4		1	6	6.0	1.68
Vinyl Window	13	0.28	3	9		5	6	148.5	41.58
Vinyl Window	14	0.28	4	2		4		32.0	8.96
Vinyl Window	15	0.28	2	6		5	6	66.0	18.48
Vinyl Window	16	0.28	1	4		6		24.0	6.72
Vinyl Window	17	0.28	3	3		2	3	20.3	5.67
Vinyl Window	18	0.28	3	3		1	9	15.8	4.41
Vinyl Window	19	0.28	1	5		5		25.0	7.00
Vinyl Window	20	0.28	1	2	6	2		5.0	1.40
Vinyl Window	21	0.28	1	6		1		6.0	1.68
								0.0	0.00
Entry Door	A	0.28	2	3		8		48.0	13.44
Garage Entry Door	B	0.28	1	3		8		24.0	6.72
ADU Entry Door	C	0.28	1	3		8		24.0	6.72
								0.0	0.00
								0.0	0.00
Sum of Vertical Fenestration Area and UA								984.5	275.66
Vertical Fenestration Area Weighted U = UA/Area									0.28

Overhead Glazing (Skylights)

Component Description	Ref.	U-factor	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
Sum of Overhead Glazing Area and UA								0.0	0.00
Overhead Glazing Area Weighted U = UA/Area									0.00
Total Sum of Fenestration Area and UA *(for heating system sizing calculations)*								984.5	275.66

Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 Washington State Energy Code (WSEC) and ACCA Manuals J and S. This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 956-2042 for assistance.

Project Information	*Contact Information*
Mercer Island 89th Residence	Dan Brobst
American Classic Homes	

Heating System Type: ○ All Other Systems ◉ Heat Pump

To see detailed instructions for each section, place your cursor on the word "Instructions"

Design Temperature
Instructions: Mercer Island — Design Temperature Difference (ΔT) = 45
ΔT = Indoor (70 degrees) - Outdoor Design Temp

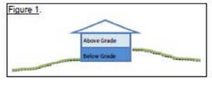
Area of Building
Conditioned Floor Area
Instructions: Conditioned Floor Area (sq ft) = 4,090
Average Ceiling Height
Instructions: Average Ceiling Height (ft) = 9.5 — Conditioned Volume = 38,855

		U-Factor	X	Area	=	UA
Glazing and Doors	Instructions: U-0.28	0.280		985		275.80
Skylights	Instructions	0.50		0		---
Insulation						
Attic	Instructions: R-49	0.026		2,427		63.10
Single Rafter or Joist Vaulted Ceilings	Instructions: Select R-Value	No selection		0		---
Above Grade Walls *(see Figure 1)*	Instructions: R-21 Intermediate	0.056		4,760		266.56
Floors	Instructions: R-38	0.025		2,427		60.68
Below Grade Walls *(see Figure 1)*	Instructions: Select R-value	No selection		0		---

		F-Factor	X	Length	=	UA
Slab Below Grade *(see Figure 1)*	Instructions: Select conditioning	No selection		0		---
Slab on Grade *(see Figure 1)*	Instructions: Select R-Value	No selection		0		---

Location of Ducts
Instructions: Unconditioned Space — **Duct Leakage Coefficient** 1.10

Figure 1:



Sum of UA	666.14	
Envelope Heat Load *Sum of UA x ΔT*	29,976	Btu / Hour
Air Leakage Heat Load *Volume x 0.5 x ΔT x 0.018*	18,884	Btu / Hour
Building Design Heat Load *Air leakage + envelope heat loss*	48,860	Btu / Hour
Building and Duct Heat Load *Ducts in unconditioned space: sum of building heat loss x 1.10* *Ducts in conditioned space: sum of building heat loss x 1*	53,746	Btu / Hour
Maximum Heat Equipment Output *Building and duct heat loss x 1.40 for forced air furnace* *Building and duct heat loss x 1.25 for heat pump*	67,182	Btu / Hour

(07/01/13)

BROBST DESIGN WORKS
dan@brobstdesignworks.com
206.409.6690

2018 IRC CODE
WASHINGTON STATE
ENERGY COMPLIANCE FORMS

American Classic Homes
9675 S.E. 36th ST. MERCER ISLAND, WA 98040

REVISED

SCALE
3.5.2021
DATE
2018 ENERGY
COMPUTER FILE NAME
N1.1
SHEET NUMBER

2018 IRC CODE

GROUP R-3 OCCUPANCY
Wind and Snow load factors may vary based on geographical location.

GENERAL

DEFINITION: Habitable Space (room) is space in a structure for living, sleeping, eating or cooking. Bathrooms, toilet compartments, closets, halls, storage or utility space and similar areas, are not considered habitable space. Section R202, IRC

1. Ceiling Heights. IRC R305.1
Habitable rooms, hallways, corridors, bathrooms, toilet rooms, laundry rooms and basements shall have a ceiling height of not less than 7 feet. The required height shall be measured from the finished floor to the lowest projection from the ceiling.
Exceptions:
1. Beams and girders spaced not less than 4 feet on center may project not more than 6 inches below the required ceiling height.
2. Ceilings in basements without habitable spaces may project to within 6'-8" of the finished floor, and beams, girders, ducts or other obstructions may project to within 6'-4" of the finished floor.
3. Not more than 50% of the required floor area of a room or space is permitted to have a sloped ceiling less than 7 feet in height, with no portion of the required floor area less than 5 feet in height.
4. Bathrooms shall have a min. ceiling height of 6'-8" over the fixture and at the front clearance area for fixtures. A shower or tub equiped with a showerhead shall have a min. ceiling height of 6'-8" above a min. area 30"x30" at the showerhead.

LIGHT, VENTILATION AND SANITATION

1. All habitable rooms shall be provided with aggregate glazing area of not less than 8% of the floor area of such rooms. Natural ventilation shall be through windows, doors, louvers or other approved openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the occupants. IRC Section R303.1
Exceptions provided per IRC Section R303.1

2. Ventilation. Group R Occupancies shall be provided with ventilation systems which comply with Section 303
The point of discharge for mechanical ventilating systems shall be at least 3 feet from any opening which allows air entry into occupied portions of the building. M1506.3

Refer to additional exhaust ventilation requirements in Section R303.3 for bathrooms and water closets. See Chapter 15 for kitchens & laundry room requirements.

3. Range & Dryer Vents. Ducts used for domestic kitchen range ventilation and clothes dryers exhaust shall be of metal and have smooth interior surfaces. Ducts shall be substantially airtight and shall comply with the provisions of Chapter 15, IRC. Exhaust ducts shall terminate outside the building and be equipped with back draft dampers. IRC Sections M1501, M1502 & M1503

4. Moisture Exhaust Ducts. Moisture exhaust ducts for domestic clothes dryers shall terminate on the outside of the building and shall be equipped with a back-draft damper. Screens shall not be installed at the duct termination. Ducts for exhausting clothes dryers shall not be connected or installed with sheet metal screws or other fasteners which will obstruct the flow. Clothes dryer moisture exhaust ducts shall not be connected to a gas vent connector, gas vent or chimney. Clothes-dryer moisture exhaust ducts shall not extend into or through ducts or plenums. Length Limitation. Unless otherwise permitted or required by the dryer manufacturer's installation instructions and approved by the building official, domestic dryer moisture exhaust ducts shall not exceed a total combined horizontal and vertical length of 35 feet, with reductions for elbows per IRC TABLE M1502.4.5.1

IF FITTINGS ARE USED, THE MAX. LENGTH SHALL BE REDUCED TO BE PER DRYER OR THE DRYER EXHAUST DUCT POWER VENTILATOR MANUFACTURER'S INSTALLATION

THE DUCT SHALL BE A MINIMUM OF 4" DIAMETER, O FMETAL OR APPROVED MATERIAL WITH SMOOTH SURFACE

5. Water Closet Space Requirements. The water closet stool in all occupancies shall be located in a clear space not less than 30 inches in width, with a clear space in front of the stool of not less than 24"

6. Tub & Shower Walls. When gypsum is used as a base for tile or wall panels for tub, shower or water closet compartment walls, water-resistant gypsum backing board shall be used. Regular gypsum wallboard is permitted under tile or wall panels in other wall and ceiling areas

Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower compartments shall be finished with a nonabsorbant surface. such wall surfaces shall extend to a height of not less than 6 feet above the floor

Water-resistant gypsum board shall not be used in the following locations:
a) Over a vapor retarder.
b) In areas subject to continuous high humidity, such as saunas, steam rooms or gang shower rooms.
c) On ceilings where frame spacing exceeds 12 inches on center.

FOUNDATIONS

7. Slope Limits. Cut slopes for permanent excavations shall be not steeper than 2 horizontal to 1 vertical and slopes for permanent fills shall be not steeper than 2 horizontal to 1 vertical unless substantiating data justifying steeper slopes are submitted. Deviation from the foregoing limitations for slopes shall be permitted only upon the presentation of a soil investigation report acceptable to the building official.

8. Setbacks from Slopes. Foundation setbacks from ascending and descending slopes shall comply with IRC Figure R403.1.7.1

9. Stepped Foundations. Foundations for all buildings where the surface of the ground slopes more than 1 foot vertical in 10 feet horizontal shall be level or shall be stepped so that both top and bottom of such foundation are level. IRC Section R403.1.5

10. Pier Footings. Individual concrete pier footings shall project minimum of 8 inches above exposed ground unless the columns or posts are of approved wood of natural resistance to decay or of treated wood.
Exterior concrete piers shall be 12" minimum below grad or to bearing soil whichever is greater

11. Column and Posts Supports. Columns and posts located on concrete or masonry floors or decks exposed to the weather or to water splash or in basements and which support permanent structures shall be supported by concrete piers or metal pedestals projecting above floors unless approved wood of natural resistance to decay or treated wood is used. The pedestals shall project at least 6 inches above exposed earth and at least 1 inch above such floors.

12. Under-floor Clearance & Access. When wood joists or the bottom of wood structural floors without joists are located closer than 18 inches or wood girders are located closer than 12 inches to exposed ground in crawl spaces or unexcavated areas located within the periphery of the building foundation, the floor assembly, including posts, girders, joists and subfloor, shall be approved wood of natural resistance to decay as listed in IRC Section R317.1 or treated wood.

When the above under-floor clearances are required, the under-floor area shall be accessible. Accessible under-floor areas shall be provided with a minimum 18 inch-by-24 inch opening unobstructed by pipes, ducts and similar construction. All under-floor access openings shall be effectively screened or covered. Pipes, ducts and other construction shall not interfere with the accessibility to or within under-floor areas.
IRC Section R408.4

13. Under-floor Ventilation. Under-floor ventilation, minimum net area of 1 square foot for each 150 square feet of under floor area, one opening shall be located within 3' of each corner of the building and shall provide cross ventilation. The openings shall be covered with one-quarter inch corrosion resistant wire mesh.
IRC Section R408.2

FRAMING

14. Quality & Identification. All lumber, wood structural panels, particleboard, structural glued-laminated timber, end-jointed lumber, fiberboard sheathing (when used structurally), hardboard siding (when used structurally), piles and poles regulated by this chapter shall conform to the applicable standards and grading rules specified in the UBC and shall be so identified by the grade mark or a certificate of inspection issued by an approved agency.
All preservative treated wood required to be treated under Section R317 shall be identified by the quality mark of an approved inspection.

15. Foundation Cripple Walls. Foundation cripple walls shall be framed of studs not less in size than the studding above with a minimum length of 14 inches, or shall be framed of solid blocking. When exceeding 4 feet in height, such walls shall be framed of studs having the size requirements for an additional story. Solid blocking or wood structural panels may be used to brace cripple walls having a stud height of 14 inches or less. Cripple walls having a stud height exceeding 14 inches shall be braced in accordance with Section R602.9, IRC.

16. BEARING: the ends of each floor joist shall have not less than 1-1/2 inches of bearing on wood or metal, nor less than 3 inches on masonry except where supported on a 1 x 4 ribbon strip nailed to adjoining stud. Section R502.6, IRC.

17. Supporting Bearing Partitions. Supporting bearing partitions perpendicular to floor joists shall not be offset from supporting girders, walls, or partitions more than floor joist depth. Floor joists under and parallel to bearing partitions shall be doubled.

18. Cutting, Notching and Boring.
A. Notches on ends of rafters and ceiling joists shall not exceed one-fourth of the depth. Holes bored in rafters or ceiling joists shall not be within 2 inches of the top or bottom, and their diameter shall not exceed one-third the depth of the member. Notches in the top or bottom of the rafter or ceiling joist shall not exceed one-sixth the depth and shall not be located in the middle third of the span. Sections R602.6, IRC.
B. In exterior walls and bearing partitions, any wood stud may be cut or notched to a depth not exceeding 25% of its width. Cutting or notching of studs to a depth of 40% of the stud width is permitted in non-bearing partitions. Section R602.6, IRC.
C. Notches in sawn lumber beams shall not exceed one-sixth the beam depth of the member and shall not be located in the middle third of the span. Notches at the ends shall not exceed one-fourth the beam depth. The tension side of sawn lumber beams of 3-1/2 inches or greater thickness shall not be notched except at the ends.
D. Manufactured glue laminated beams may not be notched, cut or bored without submission and approval of substantiating calculations from a licensed Structural Engineer.

Cutting, Drilling, Notching Structural members shall not be cut, bored or notched in excess of the limitations specified in IRC Sections: R502.8.1, R602.6, R802.7

19. Bridging and Blocking
Wall Framing. Bridging. Unless covered by interior or exterior wall covering or sheathing meeting the minimum requirements of this code, all stud partitions or walls with studs having a height-to-least thickness ratio exceeding 50 shall have bridging not less than 2 inches in thickness and of the same width of the studs fitted snugly and nailed thereto to provide adequate lateral support.
Floor Joists. Blocking. Floor joists shall be blocked when required by the provisions R502.7.1 IRC
Roof Framing. Blocking. Roof rafters and ceiling joists shall be supported laterally to prevent rotation and lateral displacement. R802.10.3 IRC

20. Post-Beam Connections. Where post and beam or girder construction is used, the design shall be in accordance with the provisions of this code. Positive connection shall be provided to ensure against uplift and lateral displacement.

21. Manufactured Roof Trusses --Sections R802.10.1, IRC.
A. Trusses. Stress analysis and drawings/details shall be stamped by an approved State of Washington Registered Engineer.
Drawings/details shall be on job site for framing inspection.
Pre-manufactured trusses shall be identified by manufacturer's stamp.
Girder and field identification of light metal plate connected trusses is required.
Information branded, marked, or otherwise permanently affixed to each truss shall contain the following:
1) identification of the truss manufacturing company;
2) the design load; and
3) the truss spacing.
Engineering data and details shall be approved by the building official before any field cuts or truss alterations.
All roof trusses shall be so framed and tied into the framework and supporting walls so as to form an integral part of the whole building. Roof trusses shall have joints well fitted and shall have all tension members well tightened before any load is placed upon the truss. Diagonal and sway bracing shall be used to brace all roof trusses.
B. Girder and Field Assembled Truss. Engineered stress analysis and details shall be submitted to building division for approval.
C. Use approved/applicable truss support hangers.

22. Wood Exposed to Weather. All wood exposed to weather, such as wood used for deck framing including decking, railings, joists, beams, and posts shall be naturally durable wood or wood that is preservative treated in accordance with AWPA U1. Section R317, IRC.

23. Guardrails. When decks, landings, stairs, ramps or porches are more than 30 inches above grade or floor below, the building shall be protected by a guardrail not less than 36 inches high with intermediate members spaced such that a sphere 4 inches in diameter cannot pass through.
Section R312, IRC

24. Decks. Decks 30 inches or more above grade require a permit. All decks must be designed and constructed in accordance with Section R507 IRC
Solid Sheathed Decks and Roofs. Solid sheathed decks and roofs shall be sloped a minimum 1/4 " per foot. When decks or roofs are not sloped to drain over deck or roof edges, roof drains in combination with overflow drain(s) and/or scupper(s) shall be installed. R903.4, R903.4.1 IRC

25. Roofs. Application of roof covering materials shall be in accordance with Section R903 IRC.

26. Roof Ventilation. The net free ventilating area of enclosed rafter or attic spaces shall be not less than 1/150 of the area of each space to be ventilated, except that the area may be 1/300, provided that 50% of the required ventilating area is located at least 3 feet above eave or cornice vents with the balance being provided by the eave or cornice vents, or if a vapor retarder not exceeding a 1 perm rating is installed on the warm side of the attic insulation. The openings shall be covered with corrosion-resistant metal mesh with mesh openings of 1/4 inch max. & 1/16 inch min. Section R806, IRC

27. Flashing & Counter-flashing. At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be provided per the roofing manufacturer's instructions and , when of metal, shall not be less than 0.019- inch (No. 26 ga. galvanized sheet) corrosion-resistant metal. Section R903.2, R903.2.1, R903.2.2 IRC.

28. Attic Space Access Opening. Attic spaces with 30 inches or more in vertical height and an area of 30 square feet or greater. shall be provided with an access opening 22 inches by 30 inches. The opening shall be located in a corridor, hallway or other readily accessible location and have at least 30 inches head room. Section R807.1 IRC

EXTERIOR WALLS

29. Exterior Wall Coverings. Exterior wood stud walls shall be covered on the outside with materials and in the manner specified in Section R703, IRC

30. All weather-exposed surfaces shall have a weather-resistive barrier to protect the interior wall covering. Section R703.1 IRC

31. Anchored veneer shall comply with the provisions of Section R703.8, and Table R703.8(1) & (2), Figure R703.8

32. Veneer support shall conform to all standards in Section R703.8.2 IRC

GARAGE / CARPORT (occupancy separation)

33. The garage shall be separated from the residence and its attic area by not less than 1/2" type "X" gypsum board applied to the garage side. Garages beneath habitable rooms shll be separated from all habitable rooms above by not less than 5/8" Type X gypsum board or equivalent. Where the separateion is a floor -ceiling assembly, the structure supporting the separateion shall also be protected by not less than 1/2" gypsum board or equivalent.

34. Doors between the garage and residence shall be equipped with solid wood doors not less than 1-3/8" in thickness, solid or honeycomb core steel doors not less than 1-3/8" thick, or 20-minute fire -rated door.
Door shall be equipped with self closing hinges

35. In areas where motor vehicles are stored or operated, floor surfaces shall be of noncombustible materials & slope to move liquid away.

36. An occupancy separation need not be provided between residence and a carport having no enclosed uses above, provided the carport is entirely open on two or more sides.

MEANS OF EGRESS

DEFINITIONS: A means of egress is an exit system that provides a continuous, unobstructed and undiminished path of exit travel from any occupied point in a building or structure to a public way. Such means of egress system consists of three separate and distinct elements: 1.) The exit access, 2.) The exit, and 3.) The exit discharge.
Public way is any street, alley, or similar parcel of land essentially unobstructed from the ground to the sky that is deeded, dedicated or otherwise permanently appropriated to the public for public use and having a clear width of not less than 10 feet.

37. Exterior Exit Door. Buildings or structures used for human occupancy shall have at least one exterior exit door with dimensions of 3 feet by 6 feet, 8 inches. Sections R311.2, IRC.

38. Hallways. Width. Hallways shall not be less than 36 inches wide.
Section R311.6, IRC.

39. Door Landing. A floor or landing is required on each side of an exterior door. The door may open at a landing that is not more than 7-3/4" inches lower than the floor level, provided the door does not swing over the landing. The landing shall be 36 inches in length minimum. Section R311.3 IRC.

40. WINDOW EGRESS
IRC R310.1: Emergency escape and rescue required:
Basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with IRC Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with IRC Section R310.2. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.

Exception: Basements used only to house mechanical equipment or storm shelters and not exceeding total floor area of 200 square feet
Where the dwelling is equipped with an automatic sprinkler system installed in accordance with section P2904, sleeping rooms in basements shall not be required to have emergency escape and rescue openings provided that the basment has one of the following:
- one means of egress complying with section R311 and one emergency escape and rescue opening
- two means of egress complying with section R311

R310.2.1: Minimum opening area. All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet.

Exception: grade floor openings shall have a minimum net clear opening of 5 s.f.

R310.2.1: Minimum opening height. The minimum net clear openings height shall be 24 inches.

R310.2.1: Minimum opening width. The minimum net clear opening width shall be 20 inches.

R310.1.1: Operational constraints. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge.

MISCELLANEOUS

41-A. Smoke Detection Location. A smoke detector shall be installed in each sleeping room and outside each separate sleeping area in the immediate vicinity of each bedrooms. When the dwelling unit has more than one story and in dwellings with basements, a detector shall be installed on each story and in the basement. Smoke alarms shall be installed not less than 3' horiz. from the door opening to a bathroom with a shower or tub unless this would prevent placement required by R314.3. See Section R314.3.1 for placement of smoke alarms near cooking appliances. Not less than 20' for ionization type, not less than 10' ionization with an alarm-silencing switch or not less than 6' for a photoelectric type.

41-B. Carbon Monoxide Alarms. A Carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms.
Where a fuel burning appliance is located within a bedroom or it's attached bathroom, a carbon monoxide alarm shall be installed within the bedroom. R315.3

Alarms shall be listed as complying with UL 2034 and installed per manufacturer's listing. R315.2 WAC, R315.1, R315.4 WA. State ammendment

FACTORY BUILT FIREPLACES

Factory built fireplaces shall be listed and labeled and shall be installed in accordance with the conditions of the listing. Factory-built fireplaces shall be tested in accordance with UL 127. R1004.1
Fireplaces shall comply with all provisions of section R1004

42. Installation of vented gas fireplaces (decorative appliances) shall be in accordance with the manufacturer's installation instructions.
And shall comply with all standards of Section G2434 (604) IRC

43. Gas Fire Log Lighters. Approved gas fire log lighters shall be installed in accordance with manufacturer's installation instructions. Section G2433.1

STAIRWAYS

44. Usable space under stairs shall have walls and soffits (on the enclosed side) protected as required for 1-hour fire resistive construction.

45. Fireblock Stairs. Between stair stringers at top and bottom and along and in line with the run of the stairs between studs.

46. Stairways. Section R311.7 IRC
Maximum rise 7-3/4" inches; minimum run 10 inches; headroom minimum 6 feet 8 inches; minimum width 36 inches.
Handrails to have ends returned and placed minimum 34 inches, maximum 38 inches above tread nosing. Unless designated for the disabled, the handgrip portion of handrails shall be not less than 1-1/4 inches nor more than 2 inches in cross-sectional dimension or the shape shall provide an equivalent gripping surface.
The handgrip portion of handrails shall have a smooth surface with no sharp corners. Handrails projecting from a wall shall have a space of not less than 1-1/2 inches between the wall and the handrail.

Exit Facilities. Stairs and exit balconies shall be positively anchored to the primary structure at 8 feet on center max. or be designed for lateral forces. Such attachment shall not be accomplished by use of toenails or nails subject to withdrawal.

GLAZING

47. Safety Glazing. Safety glass must comply with Section R308 IRC

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2018 IRC CODE
GENERAL NOTES

American ClassicHomes
9675 S.E. 36th ST. MERCER ISLAND, WA 98040

REVISED

3/8"=1'-0"
SCALE

3.5.2021
DATE

2018 ENERGY
COMPUTER FILE NAME

N2
SHEET NUMBER

INSTALL STORM DRAIN INLET PROTECTION PER BMP C200

NO STAGING OR STORAGE WITHIN RIGHT-OF-WAY
ALL STAGING AND STORAGE TO TAKE PLACE WITHIN LIMITS OF WORK

CONSTRUCTION ENTRANCE PER BMP C105

INSTALL STORM DRAIN INLET PROTECTION PER BMP C200

6' CHAINLINK FENCE ANCHORED IN GROUND PROTECTING OFFSITE TREES

REMOVE TREES (TYP.)

PROTECT TREES BEYOND LIMITS OF WORK (TYP.)

SILT FENCE AND HI-VIZ LIMIT OF WORK FENCE PER BMP C233 AND BMP C103

CB (TYPE 1)
RIM=363.23'
IE(S.) 12"CONC=361.63'
IE(N.) 12"CONC=361.63'

APPROX. LOCATION PER RECORDS (TYP)

APPROX. LOCATION PER RECORDS (TYP)

89TH AVE SE

30' ROW

NO PARKING

BENCHMARK
NAIL SET IN PP
ELEV: 368.52'

EAVE 2.6'N

EAVE 2.6'N

FOUND IRON PIPE W/ TACK AT PROP COR

N 89°29'10" E 135.01'

FENCE COR 0.9'N

N 0.90 FENCE

22"EVG(STUMP)

LOT 11

FOUND IRON PIPE W/ TACK AT PROP COR

FENCE END ± ALONG PROP LINE

26"EVG

FENCE END 0.2'S & 0.1'E OF PROP COR

PARCEL# 4457300210
10,126 SQ FT
0.23 ACRE(S)

#322 12"DOGWOOD

#339 10",(2)9",(1)8",7"MAPLE

#330 12",10",(3)8",6"MAPLE

LOT 10

LOT 7

36"CED

FENCE END 0.1'E

N 00°30'50" W 75.00

FENCE 1.0'W

16' ALLEY (VACATED)

#331 11",(2)10",(2)6",(3)5",4"MAPLE

CONC WALL

CONC WALL

#314 8",6",5"LAUREL

N 89°29'10" E 30.00'

#329

#1 7",6",4",(2)3",2"HAWTHORNE

N 89°29'10" E 135.01'

FENCE COR 0.9'N & 0.4'E OF PROP COR

FOUND IRON PIPE 0.07'S OF PROP COR

12"DEC

LOT 9

SMH
RIM=370.18'
IE(N./S.) 8"CONC
=358.78'(C.O.)

CB (TYPE 1)
RIM=369.63'
IE(E.) 8"DI=366.98'
IE(S.) 12"CONC=366.23'
IE(N.) 12"CONC=366.28'
IE(SW.) 6"PVC=366.33'

CB (TYPE 1)
RIM=370.23'
IE(E.) 4"PVC=368.98'
IE(W.) 8"DI=368.18'

FOUND IRON PIPE 0.12'W OF PROP COR

IE(N.) 12"CONC=370.34'

N 00°30'50" W 75.00

0 10 20 Feet

SEE C2 FOR DRAINAGE SITE PLAN

89th Ave SE SFR Site Address: 42XX 89th Ave SE Jurisdiction: Mercer Island Parcel No.: 445730-0210 Applicant: American Classic Homes Permit No.: Interlaken Project No.: SEA-21-010	Interlaken Engineering and Design, PLLC Seattle, WA | (206) 470-9572 www.interlakenengineering.com		Revisions:	C1 TESC/ Demo/ CSWPPP Scale: 1" = 10'

EXISTING TYPE 1 CB
RIM ≈ 364.00
INV. ≈ 362.17
CONTRACTOR TO CONFIRM LOCATIONS, DEPTHS, AND GRADES PRIOR TO DRAIN INSTALLATION

CONNECT NEW 12" RCP TO EXISTING 12" RCP MATCH INVERT

NEW TYPE 1 CB
RIM ≈ 365.50
INV. ≈ 363.62
CONNECT TO EXISTING 12" RCP

2' SHEET FLOW DISPERSION TRANSITION ZONE PER BMP T5.12

89TH AVE SE

DOWNSPOUT
RIM = 370.00
INV. = 368.55

DOWNSPOUT
RIM = 370.00
INV. = 368.43

DETENTION SYSTEM
LENGTH = 78'
DIAMETER = 36"
SEE SHEET C3 FOR INVERT INFORMATION

SDCO
RIM = 369.75
INV. = 367.07

DOWNSPOUT
RIM = 369.75
INV. = 367.51

PROPOSED RESIDENCE
MAIN FLOOR=371.0'
PROPOSED BUILDING HEIGHT (399.5')

COVERED PORCH

2-CAR GARAGE

A.D.U ENTRY

A.D.U

DOWNSPOUT
RIM = 369.75
INV. = 367.47

DOWNSPOUT
RIM = 370.00
INV. = 369.25

DOWNSPOUT
RIM = 369.83
INV. = 368.65

DOWNSPOUT
RIM = 369.75
INV. = 368.17

DOWNSPOUT
RIM = 370.00
INV. = 369.25

LOT 11
11

LOT 10
10

LOT 9
9

LOT 7
7

LOT 10

PARCEL# 4457300210
6,960 SQ FT (0.16 AC)

6' CHAINLINK FENCE ANCHORED IN GROUND PROTECTING OFFSITE TREES

TREE PROTECTION FENCING 36"CED

EXIST. (REPLANT) THUJA PLICATA "ATROVIRENS" 10G

VACTATED ALLEY ESMT.
16'
ALLEY
(VACATED)

FOUND IRON PIPE W/ TACK AT PROP COR

FOUND IRON PIPE 0.12'W OF PROP COR

FOUND IRON PIPE 0.07'S OF PROP COR

N 89°29'10" E 135.01'

N 00°30'50" W 75.00'

THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST-CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT CIVIL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS SPECIFIED ON THE APPROVED PLAN SET PRIOR TO FINAL INSPECTION ON THE PROJECT.

ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:
1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL
3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
A. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BIORETENTION (BMP T7.30), WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1. THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
B. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A.) ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173-350-220.
THE RESULTING SOIL SHOULD BE CONDUCIVE TO THE TYPE OF VEGETATION TO BE ESTABLISHED.
IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:
1. LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
2. AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PREAPPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT.
3. STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED RATE.
4. IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS.
MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.

PRE-APPROVED AMENDMENT METHOD:
TURF: 5300 SF x 5.4 CY / 1,000 SF = 28.62 CY
TOTAL QUANTITY = 28.62 CY

Hard Surface Data	
Existing Vegetation	10126 sf
New Roof	3594 sf
New Driveway/ Walkway	607 sf
Total Proposed Hard Surface	4201 sf
Proposed Vegetation	5925 sf

SEE C1 FOR TESC/ DEMO CSWPPP
SEE C3 FOR DETENTION DETAIL

0 10 20 Feet

LEGAL DESCRIPTION

(PER SPECIAL WARRANTY DEED RECORDING # 20180906000652)

LOT 10, BLOCK 3 OF LUCAS HEIGHTS, AS PER PLAT RECORDED IN VOLUME 17 OF PLATS, ON PAGE 5, RECORDS OF KING COUNTY;

TOGETHER WITH THE WEST HALF OF VACATED ALLEY ADJOINING, SITUATE IN COUNTY OF KING, STATE OF WASHINGTON.

89th Ave SE SFR
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Jurisdiction: Mercer Island
Parcel No.: 445730-0210
Applicant: American Classic Homes
Permit No.:
Interlaken Project No.: SEA-21-010

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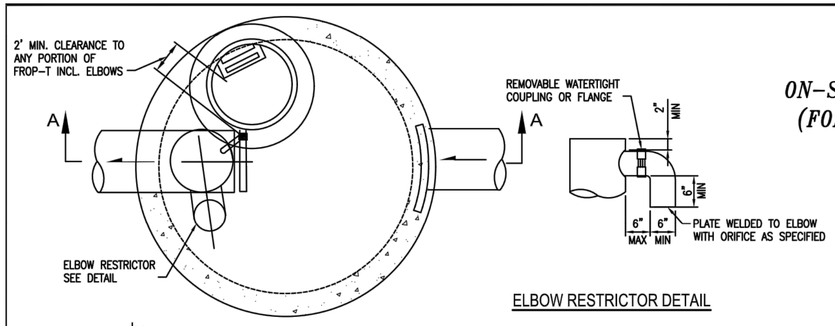
www.interlakenengineering.com

Revisions:

C2
Drainage Site Plan
Scale: 1" = 10'

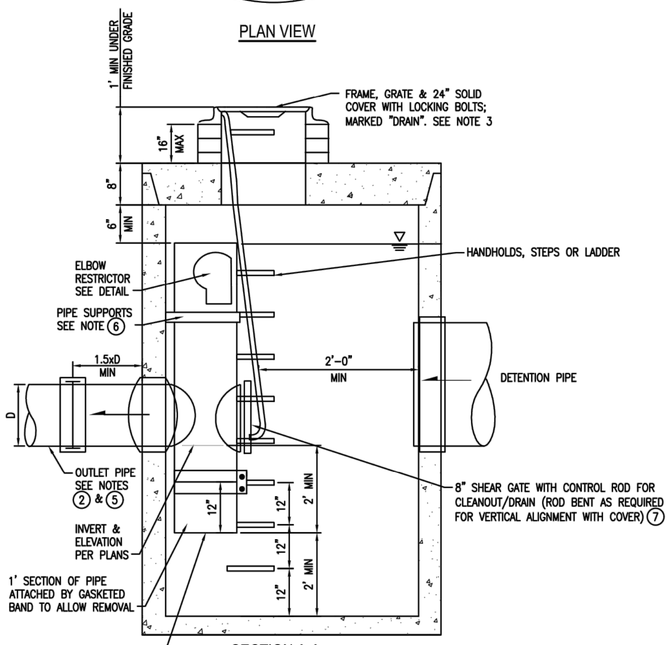
ATTACHMENT 1
CITY OF MERCER ISLAND
ON-SITE DETENTION SYSTEM WORKSHEET
(FOR NEW PLUS REPLACED IMPERVIOUS AREA OF 9,500 SF OR LESS)



PLAN VIEW

ELBOW RESTRICTOR DETAIL

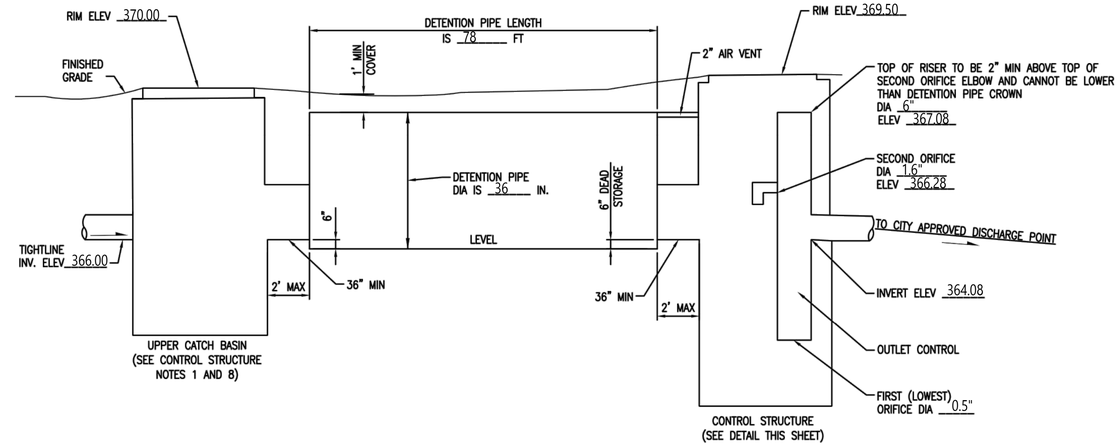
OWNER: _____	ADDRESS: 42XX 89th Ave SE	PREPARED BY: Interlaken Engineering and Design, PLLC	
PERMIT #: _____	_____	PHONE: (206) 470 - 9572	
		DATE: March 16, 2021	
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 3594 sf to be detained	DETENTION PIPE DIA (INCH): 36	DETENTION PIPE LENGTH (FT): 78	ORIFICE #1 DIA 0.5 INCH, ELEV 362.08
SOIL TYPE: C	PIPE MATERIAL: PVC		ORIFICE #2 DIA 1.6 INCH, ELEV 366.28



SECTION A-A

CONTROL STRUCTURE DETAIL

NOT TO SCALE



ON-SITE DETENTION SYSTEM

NOT TO SCALE (ENGINEER TO FILL IN BLANKS)

CONTROL STRUCTURE NOTES:

1. USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
2. OUTLET PIPE: MIN. 6 INCH.
3. METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
4. FRAME AND LADDER OR STEPS OFFSET SO:
   A. CLEANOUT GATE IS VISIBLE FROM TOP;
   B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
   C. FRAME IS CLEAR OF CURB.
5. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
6. PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
7. THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION ZG32A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B. THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION), IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED. A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED. THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT. ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
8. THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FT.

ON-SITE DETENTION SYSTEM NOTES:

1. CALL DEVELOPMENT SERVICES (206-275-7605) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
2. RESPONSIBILITY FOR OPERATION AND MAINTANANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
3. PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 9.05 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING, LINED CORRUGATED POLYETHYLENE PIPE (LCPE), ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCH (MEETS AASHTO DESIGNATIONS M274 AND M36), CORRUGATED OR SPIRAL RIB ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.
4. FOOTING DRAINS SHALL NOT BE CONNECTED TO THE DETENTION SYSTEM.

SEE C2 FOR DRAINAGE SITE PLAN

0 10 20 Feet

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Revisions:

C3

Detention Detail

Scale: As Noted