PROJECT INFORMATION

OWNER'S AGENT

GENG TAN
5280 HIGHLAND DR.
BELLEVUE, WASHINGTON 98006
(206) 488-3688
GENGTAN@GMAIL.COM

PROPERTY OWNER

LIANG DU & ZHENG ZHANG
7545 EAST MERCER WAY
MERCER ISLAND, WASHINGTON 98040
(650)669-9598

LEGAL DESCRIPTION

LOT 11, BLOCK 4, FLOOD'S LAKESIDE TRACTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 20 OF PLATS, PAGE 83, IN KING COUNTY, WASHINGTON;
EXCEPT PORTION LYING WESTERLY OF THE FOLLOWING DESCRIBED LINE:
BEGINNING AT A POINT ON THE NORTHEASTERLY LINE OF SAID LOT 11 WHICH BEARS SOUTH 66°19'28" EAST 105 FEET FROM THE MOST NORTHERLY CORNER OF SAID LOT 11;
THENCE SOUTH 20°05'32" WEST 80 FEET;
THENCE SOUTHEAST TO A POINT ON THE SOUTHERLY LINE OF SAID LOT 11 WHICH BEARS NORTH 89°56'32" EAST 100 FEET FROM THE SOUTHWEST CORNER OF SAID LOT 11 AND THE TERMINUS OF SAID LINE;
AND EXCEPT THAT PORTION CONVEYED TO KING COUNTY FOR ROAD PURPOSES BY DEED RECORDED UNDER RECORDING NUMBER 932658.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

ZONING

R 9.6

TAX ACCOUNT NUMBER

257950-0175

CODE

PROJECT CONFORMING CODES

2018 INTERNATIONAL BUILDING CODE-WAC 51-50
2018 INTERNATIONAL RESIDENTIAL CODE-WAC 51-51
2018 INTERNATIONAL FIRE CODE-WAC 51-54A
2018 INTERNATIONAL MECHANICAL CODE-WAC 51-52
2018 INTERNATIONAL FUEL GAS CODE-WAC 51-52
2018 UNIFORM PLUMBING CODE-WAC 51-56 AND WAC 51-57
2018 WASHINGTON STATE ENERGY CODE

CURRENT MUNICIPAL CODE

FIRE REQUIREMENTS BY CITY:

Monitored Fire Alarm "Chapter3r 29" NFPA 72 required for the entire house due to deficiences related to access, grade, and waterflow.
"NFPA Chapter 29 Monitored Fire Alarm per CoMI specifications required"
A seoperate Fire permit is required and can be deferred

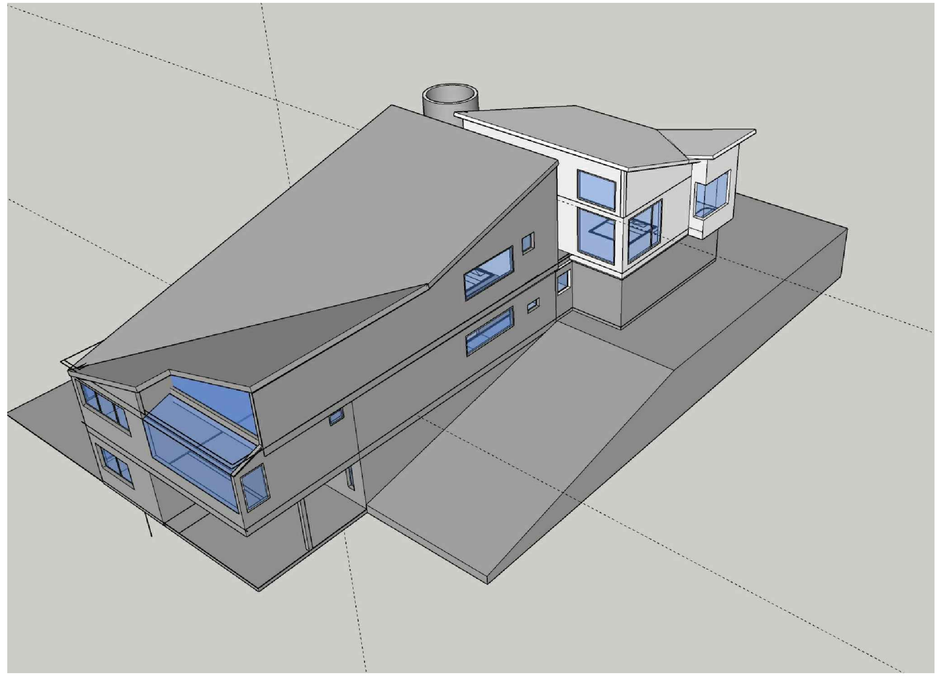
2

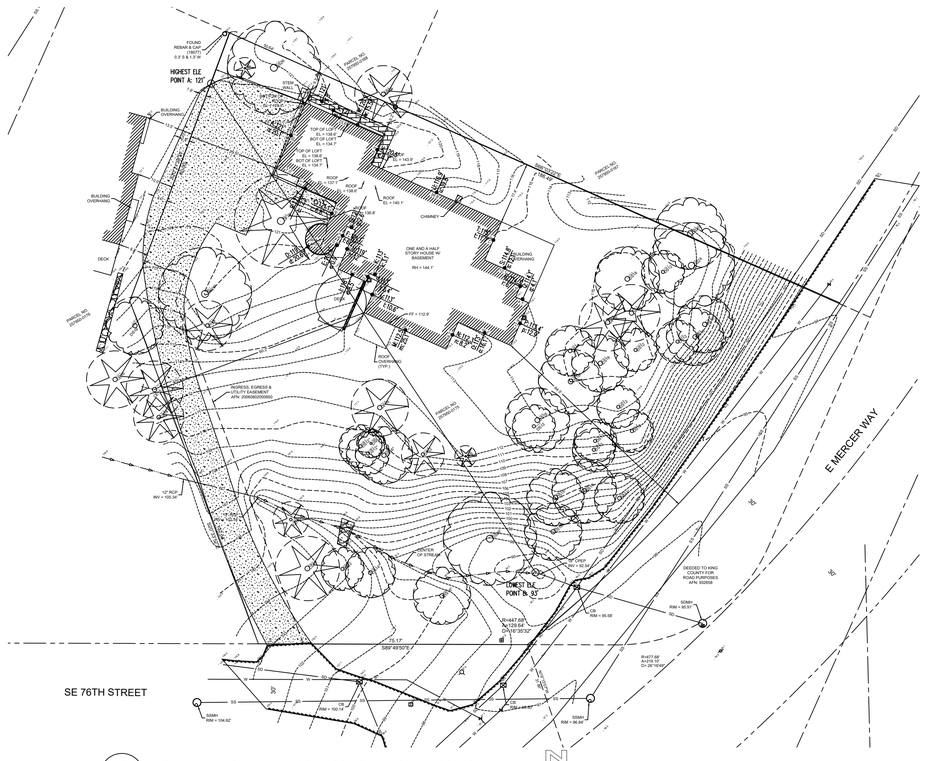
DEFERRED SUBMITTALS

FIRE SPRINKLER PERMIT
WATER METER PERMIT
MECHANICAL PERMIT
PLUMBING PERMIT
ELECTRICAL PERMIT
LOW VOLTAGE WIRING PERMIT

SHEET INDEX

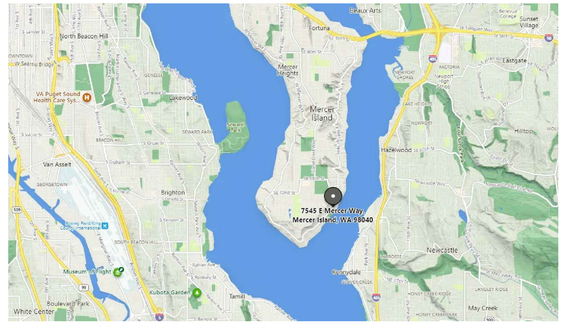
3D PERSPECTIVE





1 SITE PLAN SLOPE DIAGRAM
SCALE: 1" = 20'-0"

VICINITY MAP



LOT SLOPE CALC

HIGHEST ELEVATION POINT OF THE LOT A: 121'
LOWEST ELEVATION POINT OF THE LOT B: 93'
ELEVATION DIFFERENCE: 28'
HORIZONTAL DISTANCE: 164'
LOT SLOPE: 17%

AVERAGE EXISTING GRADE & HEIGHT CALCULATION

Mid Ele		Wall Length	
A	121	a	20.1
B	121.1	b	12.3
C	121.1	c	6.8
D	119	d	20.67
E	119.5	e	0.9
F	121.1	f	6.2
G	121	g	2.6
H	119	h	12
I	118	i	8.5
J	113	j	2.4
K	113	k	3.1
L	113	l	10.6
M	112.5	m	25.1
N	112	n	8.2
O	113	o	16.1
P	113.4	p	12.9
Q	114.1	q	4.1
R	114.3	r	6
S	114.8	s	12.1
T	115	t	11.7
U	116.9	u	39.8
V	120.5	v	8.3
W	120.9	w	15.58
X	121	x	2
Y	121	y	8

AVERAGE BUILDING ELEVATION:

$$=\frac{(A*a+B*b+C*c+D*d+E*e+F*f+G*g+H*h+I*i+J*j+K*k+L*l+M*m+N*n)}{a+b+c+d+e+f+g+h+i+j+k+l+m+n}$$

$$=\frac{32287}{276.05}$$

=117'

AVERAGE BUILDING ELEVATION: =117'

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Liang Mercer House Addition

7545 E Mercer Way
Mercer Island, WA 98040

project no: 22-95

8485 REGISTERED ARCHITECT GENG TAN STATE OF WASHINGTON

Issue/Revision:

1 8-8-2022 City Permit Comments Revision
2 11-4-2022 City Permit Comments Revision

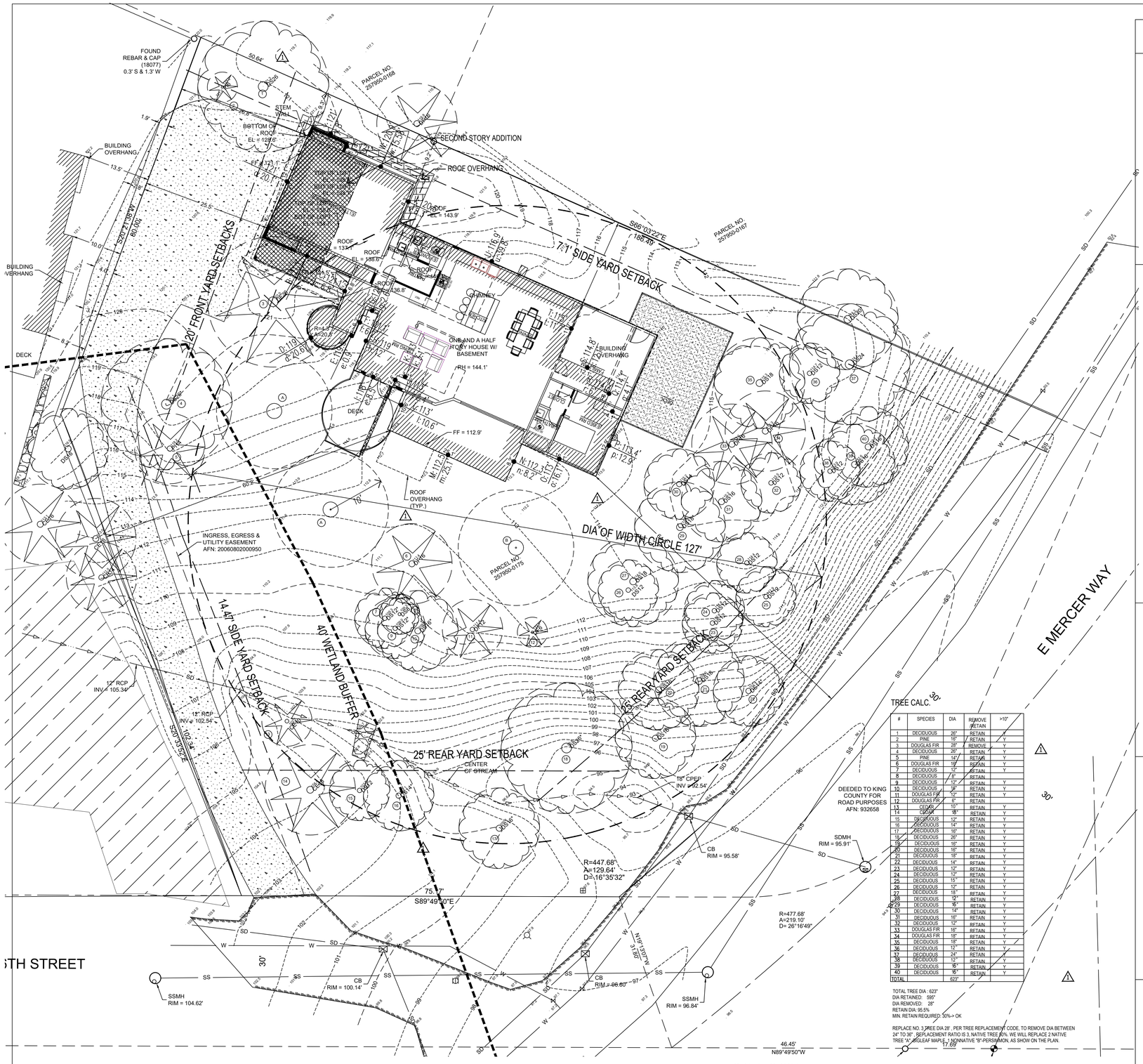
NO.	ISSUED FOR	DATE

Drawn By	Checked By	Date
TG/DM	TG	9/2020

Sheet Title
COVER SHEET /SITE DIAGRAM

Scale

Sheet Number
A 0.1



TREE CALC.

#	SPECIES	DIA	REMOVE / RETAIN	>10"
1	DECIDUOUS	26"	RETAIN	Y
2	PINE	15"	RETAIN	Y
3	DOUGLAS FIR	28"	REMOVE	Y
4	DECIDUOUS	26"	RETAIN	Y
5	PINE	14"	RETAIN	Y
6	DOUGLAS FIR	10"	RETAIN	Y
7	DECIDUOUS	12"	RETAIN	Y
8	DECIDUOUS	6"	RETAIN	
9	DECIDUOUS	12"	RETAIN	Y
10	DECIDUOUS	9"	RETAIN	Y
11	DOUGLAS FIR	12"	RETAIN	Y
12	DOUGLAS FIR	6"	RETAIN	
13	CEDAR	10"	RETAIN	Y
14	CEDAR	18"	RETAIN	Y
15	DECIDUOUS	12"	RETAIN	Y
16	DECIDUOUS	14"	RETAIN	Y
17	DECIDUOUS	16"	RETAIN	Y
18	DECIDUOUS	20"	RETAIN	Y
19	DECIDUOUS	16"	RETAIN	Y
20	DECIDUOUS	18"	RETAIN	Y
21	DECIDUOUS	18"	RETAIN	Y
22	DECIDUOUS	14"	RETAIN	Y
23	DECIDUOUS	12"	RETAIN	Y
24	DECIDUOUS	12"	RETAIN	Y
25	DECIDUOUS	15"	RETAIN	Y
26	DECIDUOUS	12"	RETAIN	Y
27	DECIDUOUS	18"	RETAIN	Y
28	DECIDUOUS	12"	RETAIN	Y
29	DECIDUOUS	16"	RETAIN	Y
30	DECIDUOUS	14"	RETAIN	Y
31	DECIDUOUS	16"	RETAIN	Y
32	DECIDUOUS	12"	RETAIN	Y
33	DOUGLAS FIR	16"	RETAIN	Y
34	DOUGLAS FIR	18"	RETAIN	Y
35	DECIDUOUS	18"	RETAIN	Y
36	DECIDUOUS	12"	RETAIN	Y
37	DECIDUOUS	24"	RETAIN	Y
38	DECIDUOUS	12"	RETAIN	Y
39	DECIDUOUS	16"	RETAIN	Y
40	DECIDUOUS	16"	RETAIN	Y
TOTAL		622"		

TOTAL TREE DIA : 622'
DIA RETAINED: 595'
DIA REMOVED: 28'
RETAIN DIA: 95.5%
MIN. RETAIN REQUIRED: 30%-> OK

REPLACE NO. 3 TREE DIA 28' . PER TREE REPLACEMENT CODE, TO REMOVE DIA BETWEEN 24" TO 36" , REPLACEMENT RATIO IS 3, NATIVE TREE 50%. WE WILL REPLACE 2 NATIVE TREE "A" , BIGLEAF MAPLE + 1 NONNATIVE "B"-PERSIMMON, AS SHOW ON THE PLAN.

GRAPHIC SCALE

10' 0 5 10' 20' 40'

(IN FEET)
1 inch= 10' ft

1 SITE PLAN
SCALE: 1" = 10'-0"

PROJECT DATA:

ADDRESS	7545 E Mercer Way, Mercer Island, WA 98040
PARCEL.	257950-0175
ZONE	R9.6
LEGAL DESCRIPTION	FLOODS LAKE SIDE TRS LESS POR LY WLY OF LN BEG ON NELY LN 105 FT SELY FR MOST NLY COR TH S 20-05-32 W 80 FT TH SELY TO TERMINUS OF SD LN AT PT ON S LN 100 FT E FR SW COR & LESS CO RD PLat Block: 4 Plat Lot: 11
PROJECT DESCRIPTION	INTERIIOR REMODEL OF EXISTING 1 ½ STORY HOUSE WITH A BASEMENT, AND ADD A MASTER SUITE ON TOP OF EXISITNG GARAGE.

MAX LOT COVERAGE

SLOPE 17% (REFER TO CALCULATION ON A0.1) 2
SLOPE BETWEEN 15%-30% ALLOWABLE IMPERVIOUS LOT COVERAGE: 35%
GROSS LOT SIZE: 20,929 SF
ALLOWABLE IMPERVIOUS AREA: 7,325.15 SF

(E) MAIN STRUCTURE ROOF AREA:	2,663 SF
(E) DRIVEWAY:	4,921 SF
(E) COVERED PATIO:	0 SF
(N) MAIN ROOF STRUCTURE:	20 SF
(N) DRIVEWAY:	0 SF
(N) COVERED PATIO:	0 SF

TOTAL LOT COVERAGE: 4941 SF
IMPERVIOUS %= 23.6% < 35% -> OK
GROSS LOT AREA: 20,939 SF
NET LOT AREA: 20,939 SF

HARDSCAPE CALCULATION

ALLOWED HARDSCAPE AREA: 9% (1,883.6 SF)

(E) UNCOVERED DECK:	322.4 SF
(E) WALKWAY:	77.1 SF
REMOVED HARD SCAPE:	7.28 SF
(N) UNCOVERED DECK:	379 SF

TOTAL HARD SCAPE AREA: 694.12 SF
TOTAL HARD SCAPE PERCENTAGE: 3.3% <9%-> OK

SETBACKS

MIN. FRONT SETBACK: 20'
MIN. BACK YARD SETBACK: 25'
MIN. SIDE SETBACKS: WHEN LOT IS LESS THAN 90 WIDTH,
TOTAL SIDE SETBACK IS 15', MIN 5'

LOT WIDTH: 127' (DIAMETER OF THE LARGEST CIRCLE IN LOT WITHOUT EASEMENT),
PER 19.02.020 LOT WIDTH >90'
TOTAL SIDE YARD SETBACK IS 17% OF LOT WIDTH.: 127x17%=21.59'
MIN SIDE YARD 33% OF TOTAL WIDTH: 21.59X33%=7.12'
OTHERSIDE YARD: MIN 14.47' 2
TOTAL SIDE: 21.59'

F.A.R. CALCULATION

LOT AREA: 20,929 SF
8,000 SF OR FAR 40% (WHICH IS LESS)
40% LOT SIZE: 8,371.6 SF
MAX FAR ALLOWED 8,000 SF

(E) WALK OUT BASEMENT:	1,580 SF
(N) WALKOUT BASMENT ADDITION:	0 SF
(E) GARAGE AREA:	530 SF
(N) GARAGE ADDED:	34.6 SF
(E) 1ST LEVEL:	1,890 SF
(N) 1ST FLOOR 150% GFA MODIFIER:	478.5 SF
(N) 1ST LEVEL ADDITION:	0 SF
(E) 2ND FLOOR:	1,030 SF
(N) 2ND FLOOR ADDITION:	361.7 SF

TOTAL GROSS BUILDING AREA: 5904.8 SF <8,000 SF -> OK
ACTUAL GROSS FLOOR AREA PERCENTAGE: 28.2% <40% -> OK

BUILDING HEIGHT CALCULATION

AVERAGE GRADE: 117' (SEE A0.1)
BASE BUILDING HEIGHT: 30'
ALLOWED MAX BUILDING HEIGHT: 147'
PROPOSED BUILDING HEIGHT: 141'

ALLOWED MAX HEIGHT OF EXISTING GRADE AT DOWNHILL SIDE: 30'

ACTUAL MAX HEIGHT OF EXISTING GRADE AT DOWNHILL SIDE: 25' -> OK
REFER TO SHEET A3.1

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Liang Mercer House Addition

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project no: 22-95

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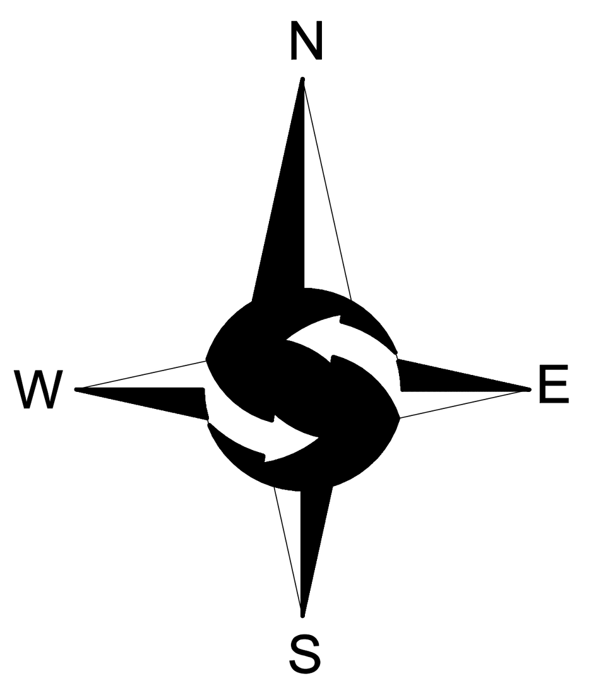
Sheet Title

SITE PLAN

Scale

Sheet Number

A 1.0 2



GRAPHIC SCALE
5 0 5 10 20
1 INCH = 10 FT.

LEGEND

Symbol	Description	Symbol	Description
	FOUND MONUMENT		CONCRETE WALL
	FOUND REBAR AS DESCRIBED		ROCKERY
	POWER METER		ASPHALT SURFACE
	GAS METER		CONCRETE SURFACE
	GAS VALVE		BRICK SURFACE
	UTILITY POLE	CE	CEDAR
	CATCH BASIN	DF	DOUGLAS FIR
	STORM DRAIN MANHOLE	DS	DECIDUOUS
	SANITARY SEWER MANHOLE	PI	PINE
	WATER VALVE		* INDICATES MULTI-TRUNK
	FIRE HYDRANT		
	WATER METER		
SS	APPROXIMATE LOCATION SANITARY SEWER LINE		
SD	APPROXIMATE LOCATION STORM DRAIN LINE		
W	APPROXIMATE LOCATION UNDERGROUND WATER LINE		

LEGAL DESCRIPTION

LOT 11, BLOCK 4, FLOOD'S LAKESIDE TRACTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 20 OF PLATS, PAGE 83, IN KING COUNTY, WASHINGTON;
EXCEPT PORTION LYING WESTERLY OF THE FOLLOWING DESCRIBED LINE:
BEGINNING AT A POINT ON THE NORTHEASTERLY LINE OF SAID LOT 11 WHICH BEARS SOUTH 66°19'28" EAST 105 FEET FROM THE MOST NORTHERLY CORNER OF SAID LOT 11;
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AND EXCEPT THAT PORTION CONVEYED TO KING COUNTY FOR ROAD PURPOSES BY DEED RECORDED UNDER RECORDING NUMBER 932658.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

RECORD OF SURVEY BY TERRANE FOR SELLA RAMAIYAH, DATED JUNE 8, 2018, IN VOLUME 386 OF SURVEYS, PAGE 48, UNDER RECORDING NO. 20180608900020, RECORDS OF KING COUNTY, WASHINGTON.

PROJECT INFORMATION

PROPERTY OWNER:	LIAN DU & ZHENG ZHANG 7545 EAST MERCER WAY MERCER ISLAND, WA 98040
TAX PARCEL NUMBER:	257950-0175
PROJECT ADDRESS:	7545 EAST MERCER WAY MERCER ISLAND, WA 98040
ZONING:	R-9.6
JURISDICTION:	CITY OF MERCER ISLAND
PARCEL ACREAGE:	20,929 S.F. (0.480 ACRES) AS SURVEYED

GENERAL NOTES

1. THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.

2. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND SPECTRAPRECISION FOCUS 35 TOTAL STATION AND AN EMLID REACH RS2 GPS RECEIVER. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.

3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN FEBRUARY 2022 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

4. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.

5. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

VERTICAL DATUM & CONTOUR INTERVAL

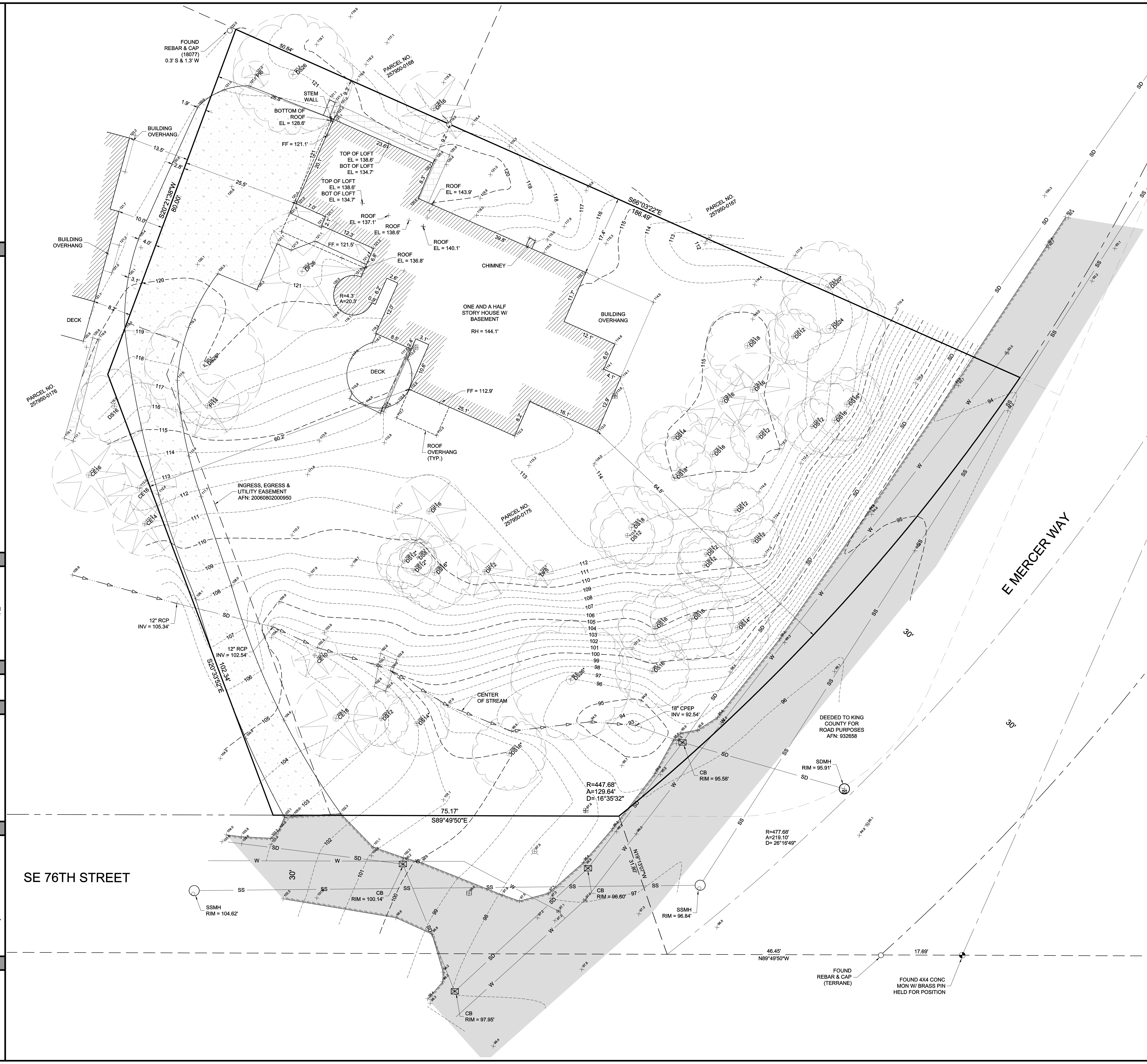
DATUM

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY WCCS SURVEY CONTROL DATABASE.

THE MARK IS A MONUMENT IN CASE AT THE INTERSECTION OF EAST MERCER WAY AND SE 76TH STREET.

POINT ID NO. 2415;
ELEVATION: 104.466 FEET- NAVD 88

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



NW 1/4, SE 1/4, SEC 30, TWP 24N, RNG 5E, W.M.

Site Surveying, Inc.
21923 NE 11th Street Sammamish, WA 98074
Phone: 425.298.4412
www.sitesurveymapping.com

THOMAS N. WOLDENDORP, STATE OF WASHINGTON, PROFESSIONAL LAND SURVEYOR

DRN	REVISION	DATE

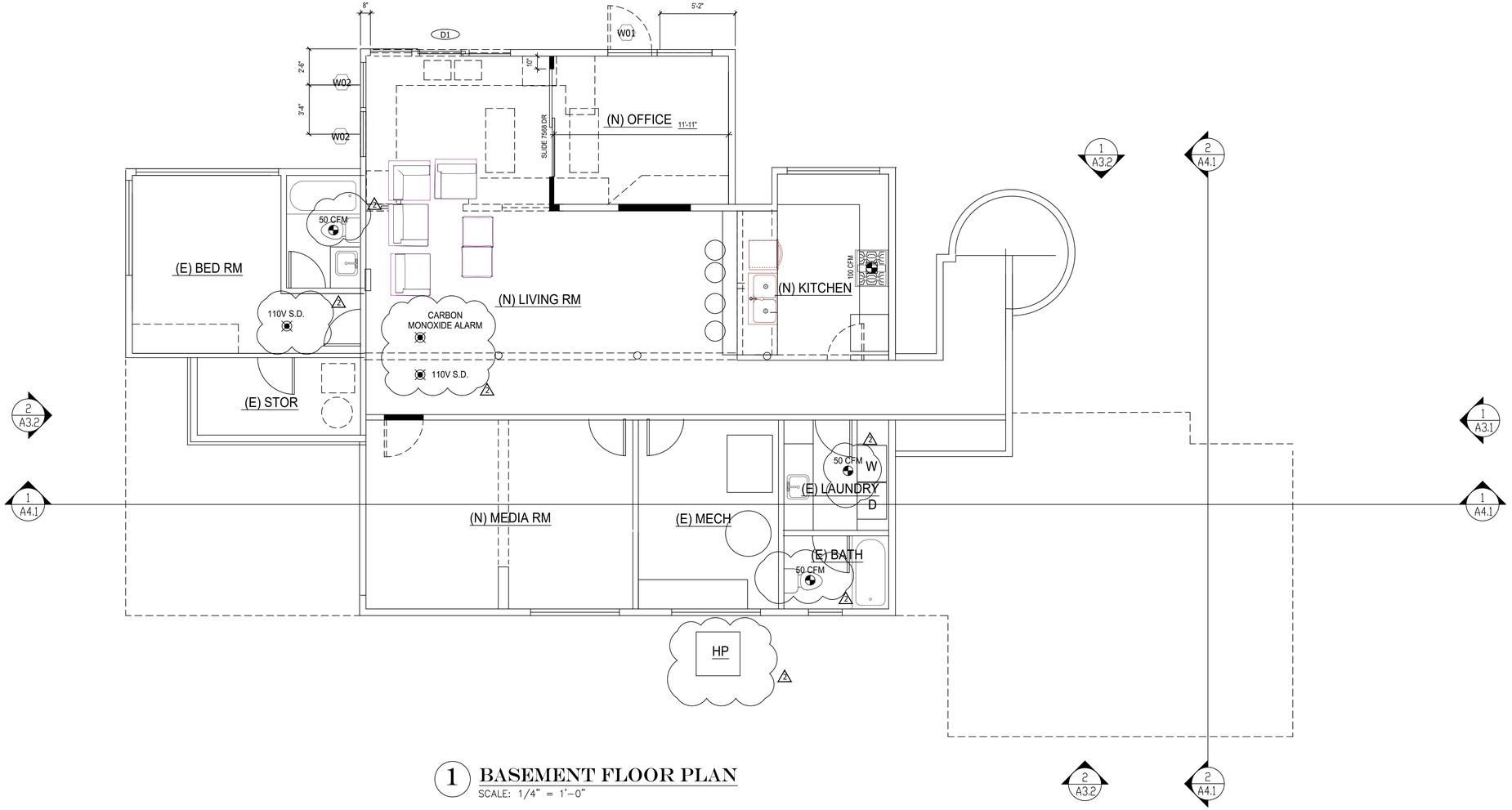
TOPOGRAPHIC SURVEY

LIANG DU & ZHENG ZHANG
7545 E MERCER WAY
MERCER ISLAND, WA 98040

PROJECT NO. 22-032

DRAWN BY: MTS
CHECKED BY: TNW
DATE: 2/28/2022

SHEET 1 OF 1



1 BASEMENT FLOOR PLAN
SCALE: 1/4" = 1'-0"

PLAN NOTES:

1. USE CONVENTIONAL FRAMING AND SHEATHING U.N.O.
2. ALL EXTERIOR WALLS TO BE 2x6 FRAMING U.N.O.
3. ALL INTERIOR WALLS TO BE 2x4 FRAMING U.N.O.
4. ALL DOOR JAMBS TO BE SET OFF WALLS 6" TYP. U.N.O.
5. ALL DIMENSIONS ARE TO FACE OF FRAMING U.N.O.
6. ALL EXHAUST FANS ARE TO VENTED TO OUTSIDE.
7. DOOR HT. AT THIS FLOOR IS 6'-8", TYP.
8. ALL SMOKE DETECTORS MUST BE PROVIDED w/ PRIMARY POWER FROM BUILDING WIRING, PROVIDED w/ BATTERY BACKUP, AND BE INTERCONNECTED.
9. ESCAPE (EGRESS) WINDOW MUST HAVE A CLEAR OPENABLE AREA OF 5.7 S.F. w/ A MINIMUM NET CLEAR HEIGHT OF 24" AND WIDTH DIMENSION OF 20". THE SILL HEIGHT MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
10. ALL EXTERIOR COLUMNS, BEAMS, AND JOISTS THAT ARE EXPOSED TO THE WEATHER MUST BE PRESSURE-TREATED.
11. SHOWER COMPARTMENTS AND WALLS AROUND BATHTUBS WITH SHOWERS SHALL BE FINISHED WITH A SMOOTH NON-ABSORBANT SURFACE TO NOT LESS THAN 72" ABOVE THE DRAIN INLET PER IBC SECTION 1209.2.3.

    WATER-RESISTANT BACKING IS REQUIRED WHERE SHOWER & WATER CLOSET WALLS WILL BE FINISHED WITH TILE OR WALL PANELS. WHERE WATER RESISTANT GYPSUM IS USED A VAPOR BARRIER SHALL NOT BE USED. IBC SECTION 2509 AND 1209.2
12. EMERGENCY ESCAPE AND RESCUE OPENINGS
    SHALL BE INSTALLED IN EVERY SLEEPING ROOM BELOW THE 4TH STORY AND IN BASEMENTS.
    * OPENABLE W/O KEYS OR SPECIAL TOOLS
    * MIN. 5.7 SF NET CLR OPENABLE AREA
    * MIN. 24" NET CLR OPENABLE HEIGHT
    * MIN. 20" NET CLR OPENABLE WIDTH
    * MAX. 44" FINISHED SILL HEIGHT
    IRC SECTION R310.2 & IBC SECTION 1030.
13. PER IRC R303.4 WHOLE HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH IRC SECTION M1505.4

    EACH DWELLING UNIT OR GUEST ROOM SHALL BE EQUIPPED W/ A VENTILATION SYSTEM COMPLYING W/ SECTION M1505.4.3, M1505.4.4, COMPLIANCE IS ALSO PERMITTED TO BE DEMONSTRATED THROUGH COMPLIANCE W/ THE INTERNATIONAL MECHANICAL CODE 403.3.2 (M1505.4)
14. STAIR LIGHTING ALL STAIRWAYS SHALL BE PROVIDED WITH LIGHT SOURCES. LIGHT ACTIVATION CONTROLS SHALL BE ACCESSIBLE AT THE TOP AND BOTTOM OF INTERIOR STAIRWAYS AND WITHIN DWELLING UNIT FOR EXTRIOR STAIRS
    IRC SECTIONS R303.7 & R303.8
15. WHERE REQUIRED, GUARDRAILS MUST BE DESIGNED AND INSTALLED TO RESIST A CONCENTRATED LOAD OF 200 POUNDS APPLIED IN ANY DIRECTIONS AT ANY POINT ON THE HANDRAIL OR TOP RAIL AND TRANSFER THAT LOAD THROUGH THE SUPPORT TO THE STRUCTURE IN ACCORDANCE WITH ASCE 7-16. THE CONNECTION OF THE GUARDRAIL /HANDRAIL SUPPORT POST SHALL BE CAPABLE OF RESISTING ALL RESULTING LOADS.
16. ATTIC VENTILATION:
    NO WORK ON ROOF- NOT APPLY
17. ACCESS OPENINGS:
    THROUGH THE CEILING SHALL BE A MINIMUM 22"X30" WITH A MINIMUM HEADROOM OF 30" IRC. R 807.1.
18. EXISTING VENTILATION OPENNINGS:
    VERIFY THAT ANY EXISTING ATTIC SPACE VENT OPENINGS THAT ARE CONCEALED BY THE NEW WORK ARE ADDED TO THE NEW REQUIRED VENT OPENING AREA.

CRAWL SPACE VENT CALCULATION:

VENT CALCULATION:
ADDITION W/ CRAWL SPACE TOTAL AREA: 1,782 SQ FT
VENT $\frac{1}{150}$ VENT AREA SQ FT
8X16 FOUNDATION VENT .89 SQFT
14 VENTS EVENLY SPREAD AROUND THE PERIMETER OF CRAWL SPACE AREA.

ENERGY NOTES:

1. ALL EXTERIOR NEW WALLS SHALL HAVE R21 BATT INSULTATION
2. NEW ROOF @TRUSS SHALL HAVE R49 INSULATION
3. ALL NEW WINDOW SHOULD HAVE U FACTOR 0.30 OR BETTER.
4. SKYLIGHT U-FACTOR 0.5 OR BETTER.
5. NEW SLAB ON GRADE FOR ADDITION SHALL HAVE R10 RIGID INSULATION.
6. NEW FLOOR R-VALUE: R30.

ENERGY CREDITS
TOTAL ADDITION IS LESS THAN 1500 SF, 3 CREDIT REQUIRED :

HEAT HP: EURL NORMALIZATION HEAR PUMP CREDIT 1.0
5.5 EFFICIENT WATER HEARING-HEAT PUMP WATER HEATER 2.0 2

LEGEND

- EXIST. WALL
- NEW WALL
- DEMO WALL
- ADDITION AREA

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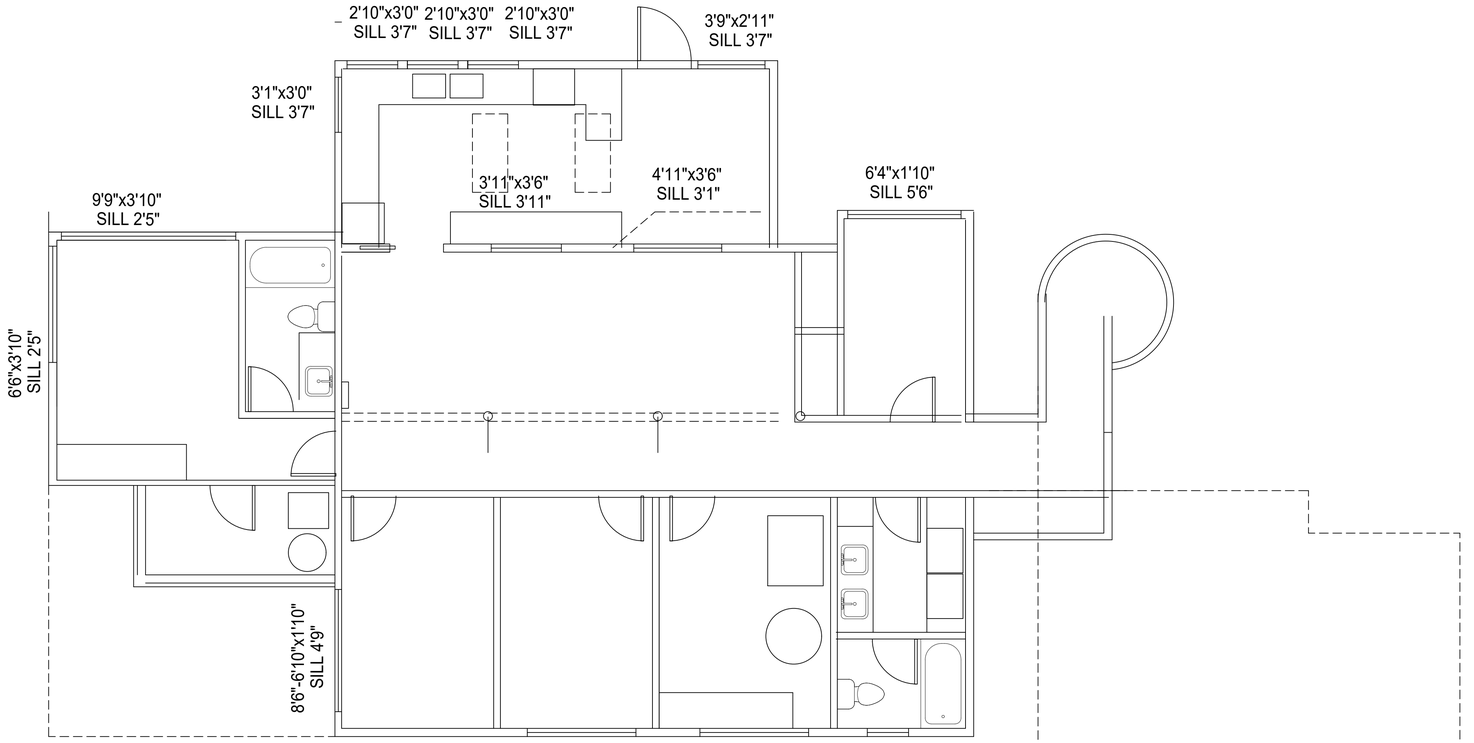
Sheet Title
BASEMENT FLOOR PLAN

1/4" = 1'-0"
Scale

Sheet Number
A2.0



FOR REFERENCE ONLY

LEGEND

EXIST. WALL

NEW WALL

DEMO WALL

1 EXISTING BASEMENT FLOOR PLAN
SCALE: 1/4" = 1'-0"

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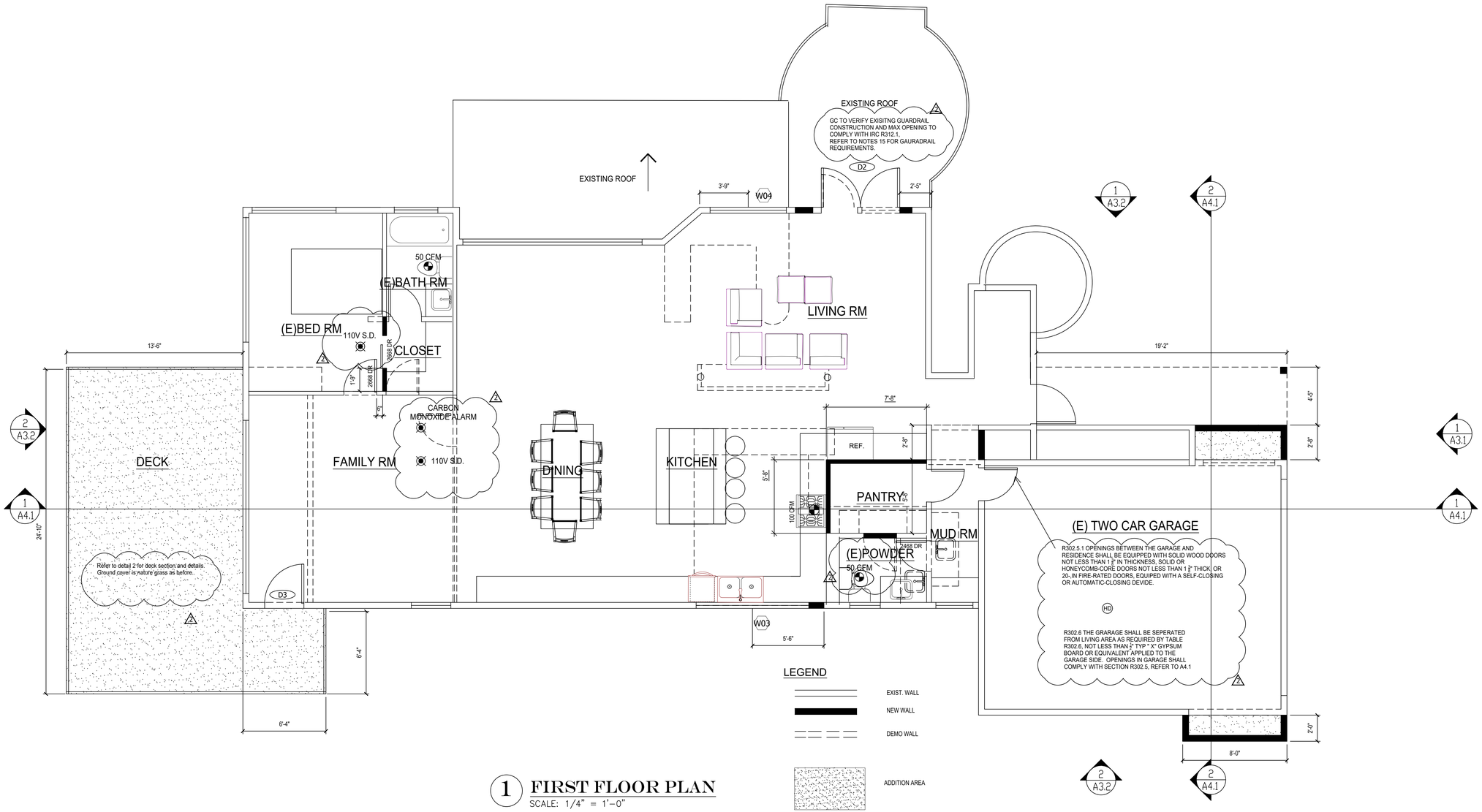
1/4" = 1'-0"

Sheet Number
A2.0A



LEGEND

EXIST. WALL

NEW WALL

DEMO WALL

ADDITION AREA

1 FIRST FLOOR PLAN

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

PLAN NOTES:

1. USE CONVENTIONAL FRAMING AND SHEATHING U.N.O.
2. ALL EXTERIOR WALLS TO BE 2x6 FRAMING U.N.O.
3. ALL INTERIOR WALLS TO BE 2x4 FRAMING U.N.O.
4. ALL DOOR JAMBS TO BE SET OFF WALLS 6" TYP. U.N.O.
5. ALL DIMENSIONS ARE TO FACE OF FRAMING U.N.O.
6. ALL EXHAUST FANS ARE TO VENTED TO OUTSIDE.
7. DOOR HT. AT THIS FLOOR IS 6'-8", TYP.
8. ALL SMOKE DETECTORS MUST BE PROVIDED w/ PRIMARY POWER FROM BUILDING WIRING, PROVIDED w/ BATTERY BACKUP, AND BE INTERCONNECTED.
9. ESCAPE (EGRESS) WINDOW MUST HAVE A CLEAR OPENABLE AREA OF 5.7 S.F. w/ A MINIMUM NET CLEAR HEIGHT OF 24" AND WIDTH DIMENSION OF 20". THE SILL HEIGHT MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
10. ALL EXTERIOR COLUMNS, BEAMS, AND JOISTS THAT ARE EXPOSED TO THE WEATHER MUST BE PRESSURE-TREATED.
11. SHOWER COMPARTMENTS AND WALLS AROUND BATHTUBS WITH SHOWERS SHALL BE FINISHED WITH A SMOOTH NON-ABSORBANT SURFACE TO NOT LESS THAN 72" ABOVE THE DRAIN INLET PER IBC SECTION 1209.2.3.

    WATER-RESISTANT BACKING IS REQUIRED WHERE SHOWER & WATER CLOSET WALLS WILL BE FINISHED WITH TILE OR WALL PANELS. WHERE WATER RESISTANT GYPSUM IS USED A VAPOR BARRIER SHALL NOT BE USED. IBC SECTION 2509 AND 1209.2
12. EMERGENCY ESCAPE AND RESCUE OPENINGS
    SHALL BE INSTALLED IN EVERY SLEEPING ROOM BELOW THE 4TH STORY AND IN BASEMENTS.
    * OPENABLE W/O KEYS OR SPECIAL TOOLS
    * MIN. 5.7 SF NET CLR OPENABLE AREA
    * MIN. 24" NET CLR OPENABLE HEIGHT
    * MIN. 20" NET CLR OPENABLE WIDTH
    * MAX. 44" FINISHED SILL HEIGHT
    IRC SECTION R310.2 & IBC SECTION 1030.
13. PER IRC R303.4 WHOLE HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH IRC SECTION M1505.4

    EACH DWELLING UNIT OR GUEST ROOM SHALL BE EQUIPPED W/ A VENTILATION SYSTEM COMPLYING W/ SECTION M1505.4.3, M1505.4.4, COMPLIANCE IS ALSO PERMITTED TO BE DEMONSTRATED THROUGH COMPLIANCE W/ THE INTERNATIONAL MECHANICAL CODE 403.3.2 (M1505.4)
14. STAIR LIGHTING ALL STAIRWAYS SHALL BE PROVIDED WITH LIGHT SOURCES. LIGHT ACTIVATION CONTROLS SHALL BE ACCESSIBLE AT THE TOP AND BOTTOM OF INTERIOR STAIRWAYS AND WITHIN DWELLING UNIT FOR EXTRIOR STAIRS
    IRC SECTIONS R303.7 & R303.8
15. WHERE REQUIRED, GUARDRAILS MUST BE DESIGNED AND INSTALLED TO RESIST A CONCENTRATED LOAD OF 200 POUNDS APPLIED IN ANY DIRECTIONS AT ANY POINT ON THE HANDRAIL OR TOP RAIL AND TRANSFER THAT LOAD THROUGH THE SUPPORT TO THE STRUCTURE IN ACCORDANCE WITH ASCE 7-16. THE CONNECTION OF THE GUARDRAIL /HANDRAIL SUPPORT POST SHALL BE CAPABLE OF RESISTING ALL RESULTING LOADS.
16. ATTIC VENTILATION:
    Refer to A4.1 for roof.
17. ACCESS OPENINGS:
    THROUGH THE CEILING SHALL BE A MINIMUM 22"X30" WITH A MINIMUM HEADROOM OF 30" IRC. R 807.1.
18. EXISTING VENTILATION OPENNINGS:
    VERIFY THAT ANY EXISTING ATTIC SPACE VENT OPENINGS THAT ARE CONCEALED BY THE NEW WORK ARE ADDED TO THE NEW REQUIRED VENT OPENING AREA.

CRAWL SPACE VENT CALCULATION:

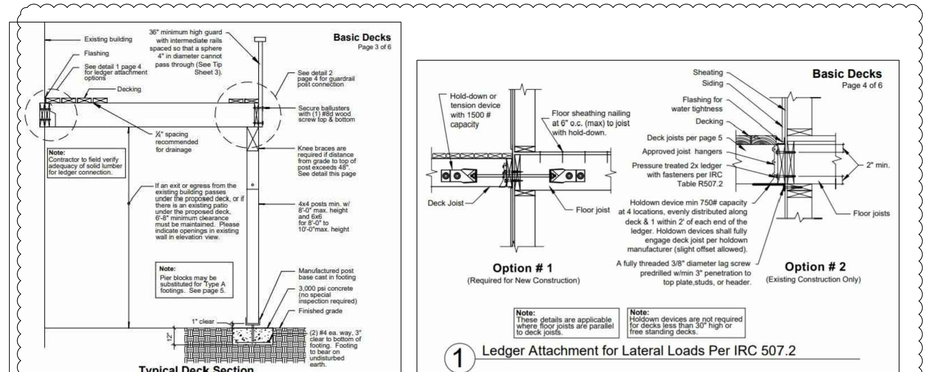
VENT CALCULATION:
ADDITION W/ CRAWL SPACE TOTAL AREA: 1,782 SQ FT
VENT $\frac{1}{150}$ VENT AREA SQ FT
8X16 FOUNDATION VENT. 89 SQFT
14 VENTS EVENLY SPREAD AROUND THE PERIMETER OF CRAWL SPACE AREA.

ENERGY NOTES:

1. ALL EXTERIOR NEW WALLS SHALL HAVE R21 BATT INSULTATION
2. NEW ROOF @TRUSS SHALL HAVE R49 INSULATION
3. ALL NEW WINDOW SHOULD HAVE U FACTOR 0.30 OR BETTER.
4. SKYLIGHT U-FACTOR 0.5 OR BETTER.
5. NEW SLAB ON GRADE FOR ADDITION SHALL HAVE R10 RIGID INSULATION.
6. NEW FLOOR R-VALUE: R30.

ENERGY CREDITS
TOTAL ADDITION IS LESS THAN 1500 SF, 3 CREDIT REQUIRED :

HEAT HP, FURL NORMALIZATION HEAR PUMP CREDIT:	1.0
5.5 EFFICIENT WATER HEARING-HEAT PUMP WATER HEATER	2.0



2 DECK DETAILS

SCALE: NTS

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Liang Mercer House Addition

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project no: 22-95

8485 REGISTERED ARCHITECT GENG TAN STATE OF WASHINGTON

Issue/Revision:

1 11-4-2022 City Permit Comments Revision

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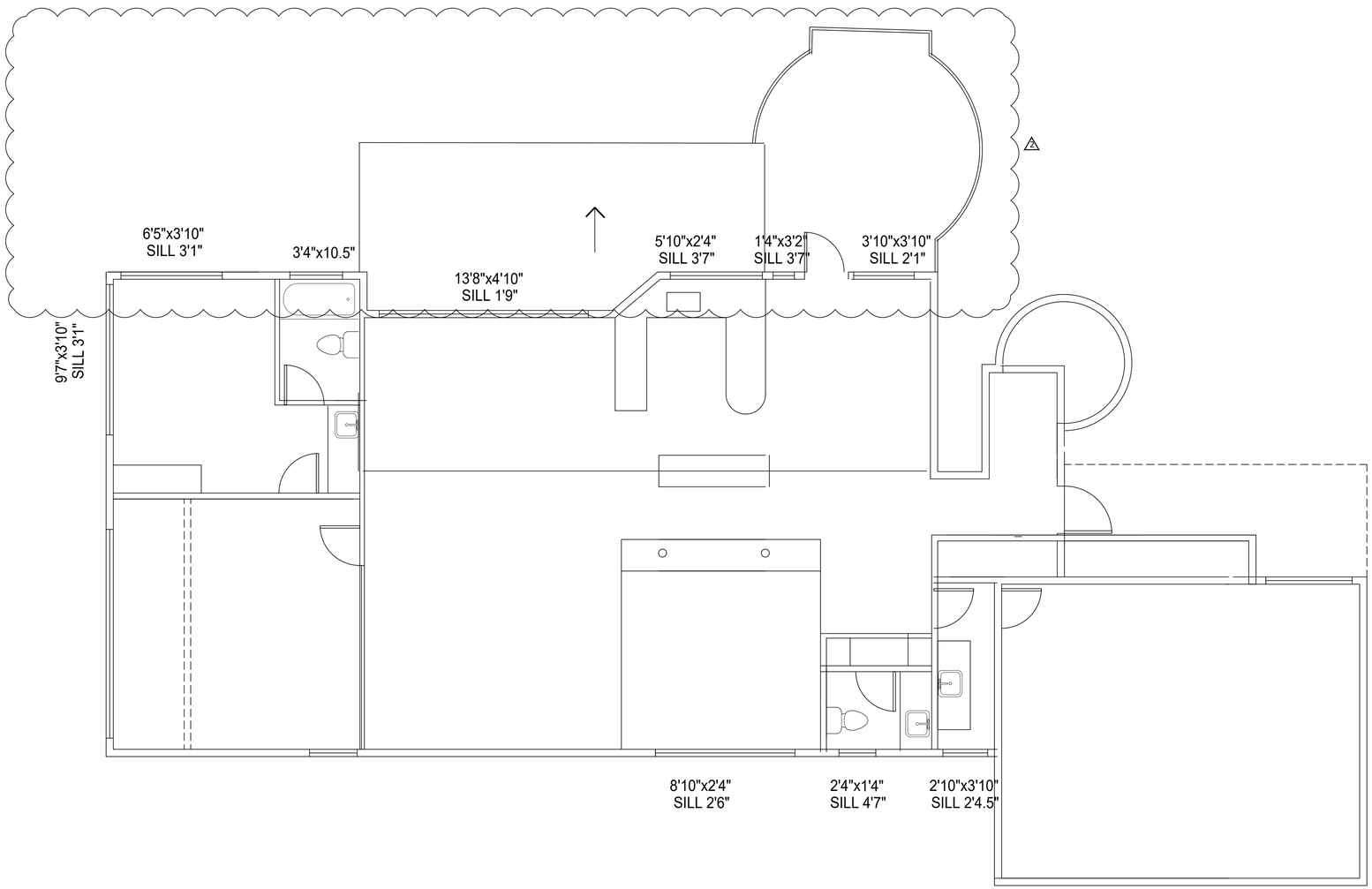
Sheet Title
FIRST FLOOR PLAN

1/4" = 1'-0"
Scale

Sheet Number
A2.1



FOR REFERENCE ONLY

LEGEND

EXIST. WALL

NEW WALL

DEMO WALL

1 EXISTING FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

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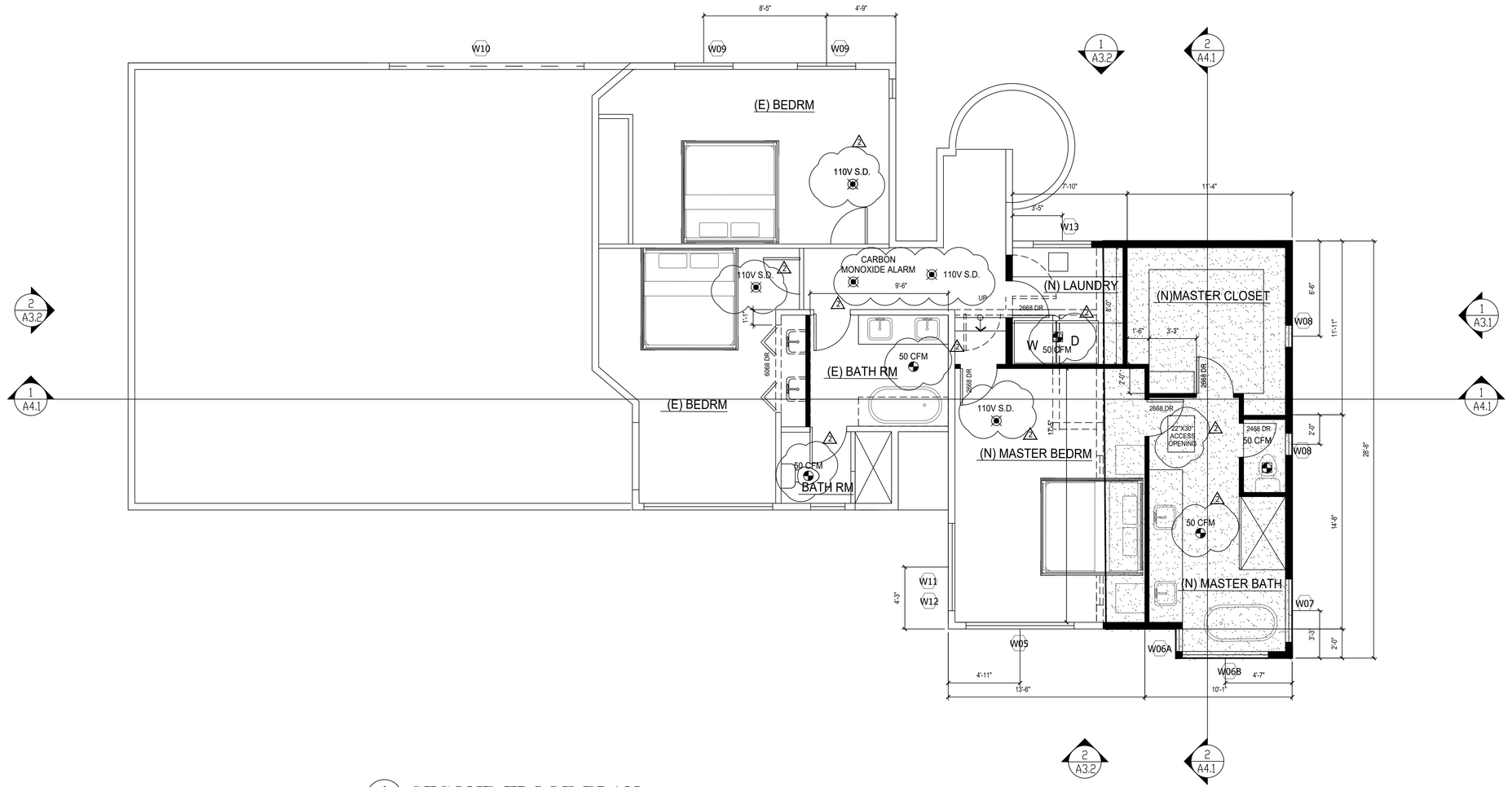
Sheet Number
A2.1A



1 SECOND FLOOR PLAN

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

PLAN NOTES:

1. USE CONVENTIONAL FRAMING AND SHEATHING U.N.O.
2. ALL EXTERIOR WALLS TO BE 2x6 FRAMING U.N.O.
3. ALL INTERIOR WALLS TO BE 2x4 FRAMING U.N.O.
4. ALL DOOR JAMBS TO BE SET OFF WALLS 6" TYP. U.N.O.
5. ALL DIMENSIONS ARE TO FACE OF FRAMING U.N.O.
6. ALL EXHAUST FANS ARE TO VENTED TO OUTSIDE.
7. DOOR HT. AT THIS FLOOR IS 6'-8", TYP.
8. ALL SMOKE DETECTORS MUST BE PROVIDED w/ PRIMARY POWER FROM BUILDING WIRING, PROVIDED w/ BATTERY BACKUP, AND BE INTERCONNECTED.
9. ESCAPE (EGRESS) WINDOW MUST HAVE A CLEAR OPENABLE AREA OF 5.7 S.F. w/ A MINIMUM NET CLEAR HEIGHT OF 24" AND WIDTH DIMENSION OF 20". THE SILL HEIGHT MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
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16. ATTIC VENTILATION:
    NO WORK ON ROOF- NOT APPLY

17. ACCESS OPENINGS:
    THROUGH THE CEILING SHALL BE A MINIMUM 22"X30" WITH A MINIMUM HEADROOM OF 30" IRC. R 807.1.

18. EXISTING VENTILATION OPENNINGS:
    VERIFY THAT ANY EXISTING ATTIC SPACE VENT OPENINGS THAT ARE CONCEALED BY THE NEW WORK ARE ADDED TO THE NEW REQUIRED VENT OPENING AREA.

CRAWL SPACE VENT CALCULATION:

VENT CALCULATION:
ADDITION W/ CRAWL SPACE TOTAL AREA: 1,782 SQ FT
VENT $\frac{1}{150}$ VENT AREA SQ FT
8X16 FOUNDATION VENT .89 SQFT
14 VENTS EVENLY SPREAD AROUND THE PERIMETER OF CRAWL SPACE AREA.

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6. NEW FLOOR R-VALUE: R30.

ENERGY CREDITS
TOTAL ADDITION IS LESS THAN 1500 SF, 3 CREDIT REQUIRED :

HEAT HP: EURL NORMALIZATION HEAR PUMP CREDIT: 1.0
5.5 EFFICIENT WATER HEARING-HEAT PUMP WATER HEATER 2.0 (2)

LEGEND

- EXIST. WALL
- NEW WALL
- DEMO WALL
- ADDITION AREA

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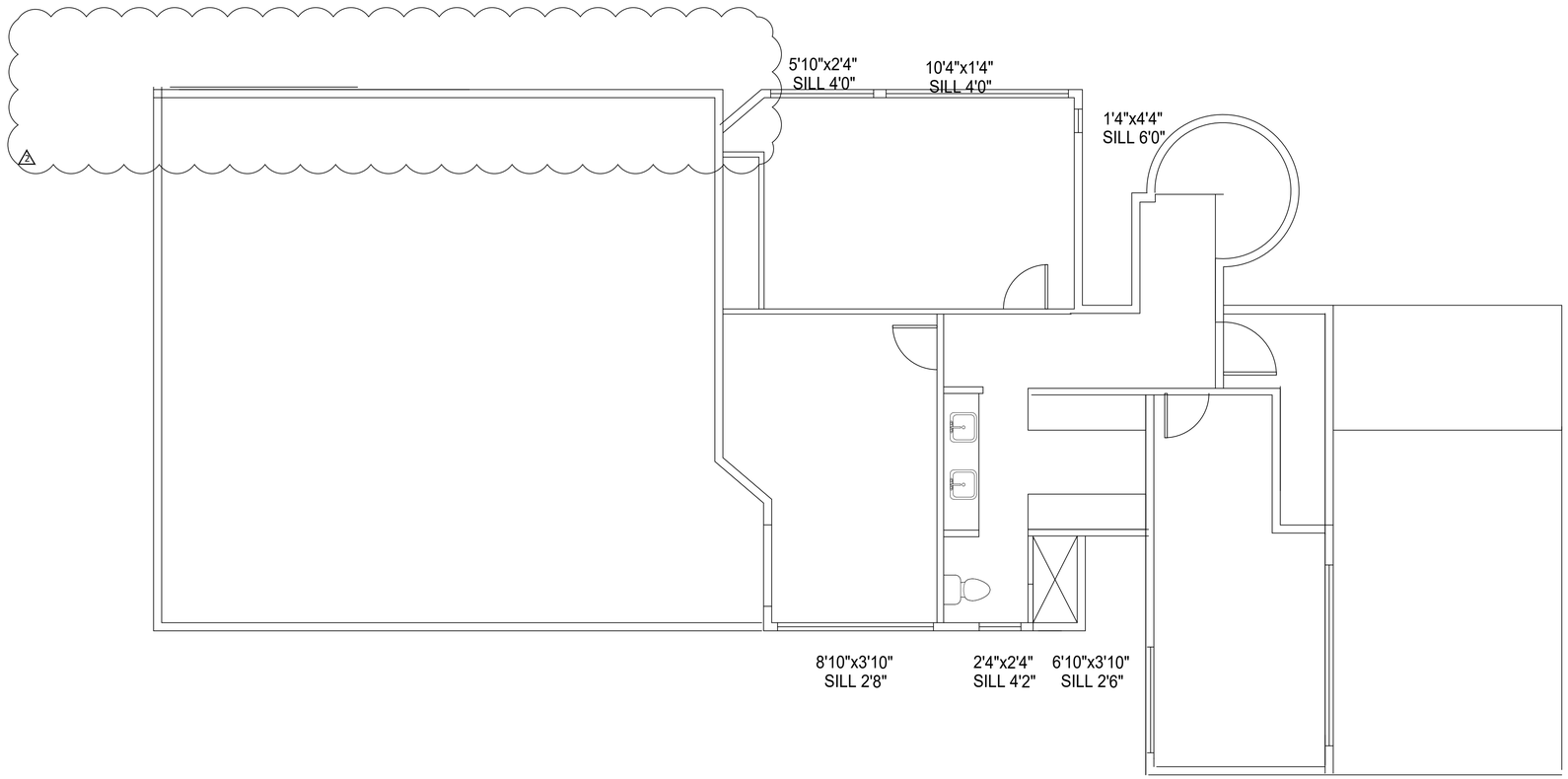
Sheet Title
SECOND FLOOR PLAN

1/4" = 1'-0"
Scale

Sheet Number
A2.2



FOR REFERENCE ONLY

LEGEND

EXIST. WALL

NEW WALL

DEMO WALL

1 EXISTING SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

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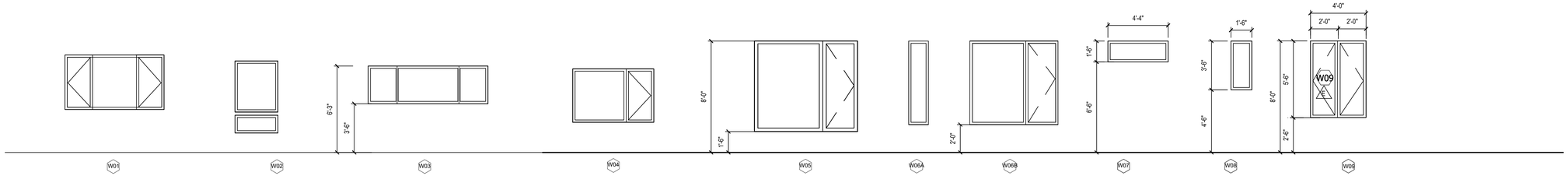
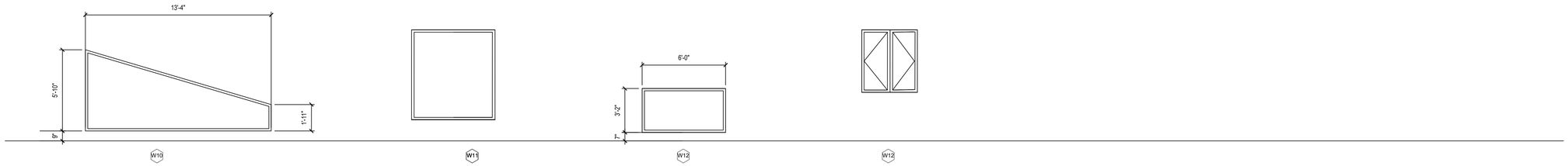
Sheet Title
EXISTING SECOND FLOOR PLAN

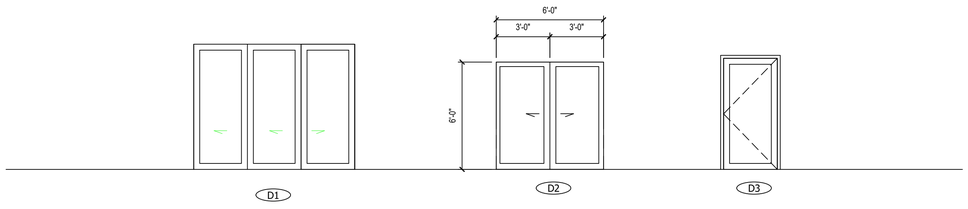
Scale
1/4" = 1'-0"

Sheet Number
A2.2A





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



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

WINDOWS

NUMBER	QTY	WIDTH	HEIGHT	EGRESS	TEMPERED	TYPE	NOTE
W 01	1	7'-2"	3'-11"			PICTURE/CASEMENT	
W02	2	3'-1"	5'-2"			PICTURE/ FIXED	
W03	1	8'-7"	2'-9"			PICTURE/ FIXED	
W04	1	5'-10"	3'-10"			PICTURE/CASEMENT	
W05	1	7'-5"	6'-6"	Y		**PICTURE**	
W06A	1	1'-5"	6'-0"			PICTURE/CASEMENT	
W06B	1	6'-4"	6'-0"		Y	PICTURE/CASEMENT	
W07	1	4'-4"	1'-6"			**PICTURE/ FIXED**	
W08	2	1'-6"	3'-6"			PICTURE/ FIXED	
W09	2	4'-0"	5'-5"	Y		PICTURE/CASEMENT	
W10	1	13'-4"	5'-10"			**PICTURE**	
W11	1	6'-0"	6'-6"			PICTURE/ FIXED	
W12	1	6'-0"	3'-2"			PICTURE/ FIXED	
W13	1	4'-0"	4'-6"			PICTURE/CASEMENT	

E – EGRESS WINDOW T – TEMPERED GLASS

DOOR

NUMBER	QTY	WIDTH	HEIGHT	EGRESS	TEMPERED	MATERIAL	OPERATION
D 01	1	9'-0"	7'-0"	N	YES	VINYL	SWING
D 02	1	6'-0"	6'-0"	N	YES	VINYL	SWING
D 03	1	3'-4"	6'-5"	N	YES	VINYL	SWING

***** Window will meet one of the below requirements:
1. Windows whose openings will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening when the opening is in its largest opened position.
2. Openings that are provided with window fall prevention devices that comply with ASTM F 2090.
3. Windows that are provided with window opening control devices that comply with Section R312.2.2.

WINDOW & DOOR NOTES

WINDOWS WHERE SILL IS MORE THAN 6' ABOVE GRADE SHALL HAVE A MINIMUM FINISHED SILL HEIGHT OF 24" ABOVE FINISHED FLOOR
ALL GLAZING IN DOORS OR GLAZING WITHIN 24" MEASURED HORIZONTALLY FROM EDGE OF AN OPENING DOOR TO BE TEMPERED GLASS.
FIXED PANELS IN SLIDING GLASS DOORS OR SIDELIGHTS SHALL BE TEMPERED GLASS, BUT ADJOINING GLAZING FURTHER THAN 24" FROM THE OPENING DOOR SHALL NOT BE REQUIRED TO BE SAFETY GLAZING.

ALL GLAZING WITHIN 18" OF FLOOR OR WALKING SURFACE SHALL BE TEMPERED.

WINDOWS AND DOORS ARE CALLED OUT AS TO THE NOMINAL SIZE OF EACH UNIT. THE CONTRACTOR SHALL VERIFY ROUGH-IN DIMENSIONS WITH THE WINDOW AND DOOR MANUFACTURER PRIOR TO FRAMING OPENINGS.

ALL WINDOWS AND EXTERIOR DOORS SHALL BE INSTALLED USING BEST PRACTICES AND AS SPECIFIED BY THE MANUFACTURER, INCLUDING WRAPPING ALL FRAMED OPENINGS WITH FLEXIBLE FLASHING, AND SETTING ALL WINDOW FLANGES ON A $\frac{1}{4}$" BEAD OF CAULKING. AT TOP OF WINDOWS & EXTERIOR DOORS, INSTALL MIN 24 GA GALVANIZED FLASHING BETWEEN SIDING AND ANY WINDOW CASING. CAULK ALL PRIMED CASINGS AND TRIM TO WINDOW OR DOOR AND TO PRIMED SIDING, PRIOR TO FINISH PAINTING.

AVOID JOINTS IN FLASHING. IF A JOINT IS REQUIRED, LAY A 4" LONG PIECE OF THE FLASHING UNDER THE JOINT, AND INSTALL FLASHING OVER THIS BACKING PIECE WITH A BUTT JOINT LAID IN CAULKING.

ALL EXTERIOR TRIM SHALL BE HARDIE-TRIM OR CEDAR- DO NOT USE "WHITE WOOD"

USE OIL BASE PRIMER OR OIL BASED STAIN ON ALL WOOD EXPOSED TO EXTERIOR OF BUILDING PRIOR TO INSTALLATION. PRIME OR STAIN (4) SIDES AND END CUTS.

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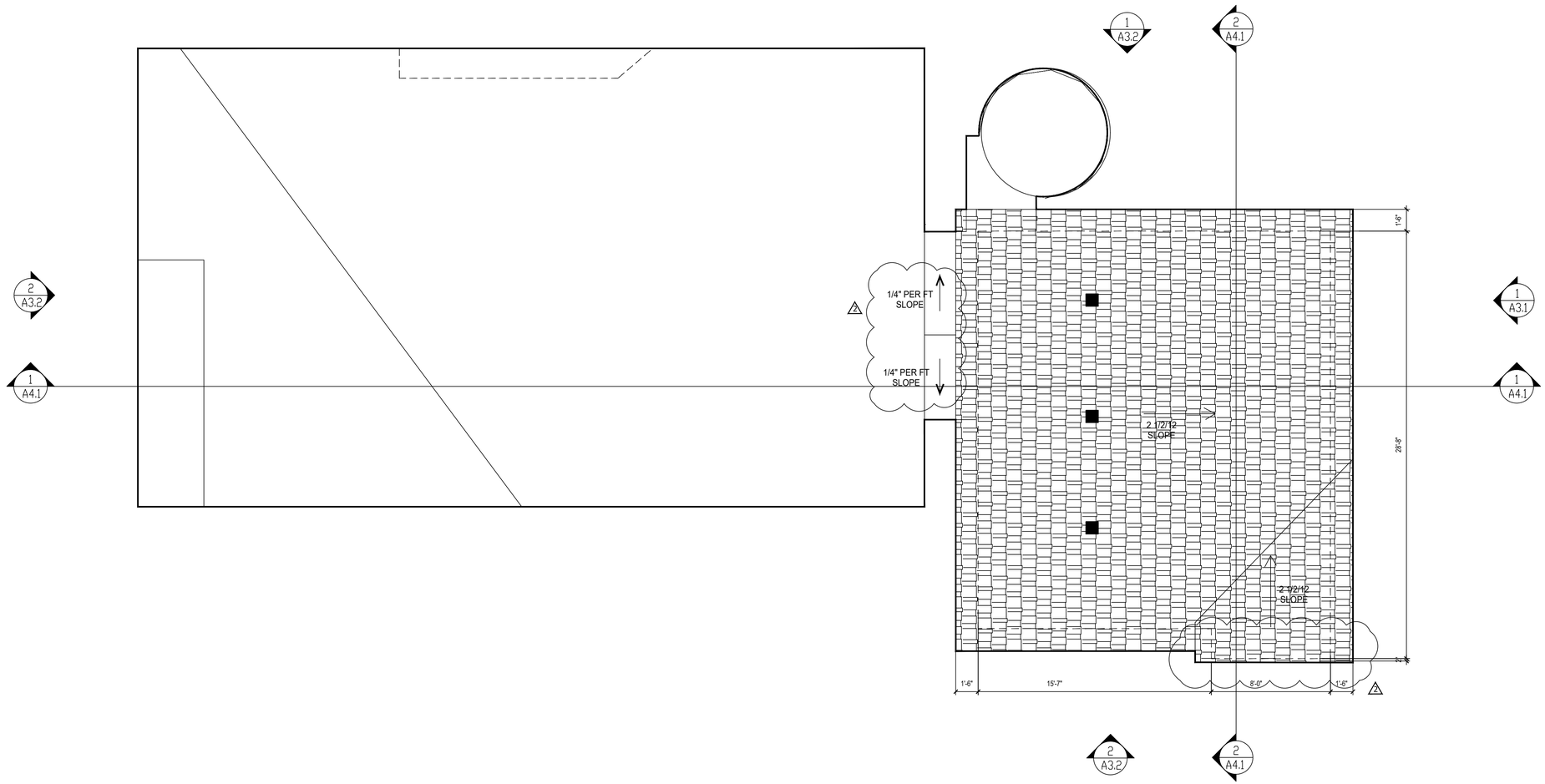
Sheet Title
WINDOW & ROOF PLAN

Scale
1/4" = 1'-0"

Sheet Number
A2.5

2



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

ROOF PLAN NOTES:

A 22X30 INCH ACCESS OPENING SHALL BE LOCATED IN A HALLWAY. CORRIDOR OR OTHER READILY ACCESSIBLE LOCATION. ATTICS WITH A MAXIMUM VERTICAL HEIGHT OF LESS THAN 30 INCHES OR AREA LESS THAN 30 SQFT IN AREA NEED NOT BE PROVIDED WITH ACCESS OPENING. A 30-INCH MINIMUM CLEAR HEADROOM IN THE OPENING. PROVIDE A RIM TO HOLD INSULATION OUT OF ACCESS DOORWAY, INSULATE ACCESS HATCH WITH R-49 RIGID FOAM BUILD UP, GASKET ATTIC ACCESS DOOR AT CEILING.

CONTINUOUS RIDGE VENT TYPICAL ON ALL RIDGES, DO NOT INSTALL ON HIP OR RIDGES SHORTER THAN 36".

GUTTERS: CONTINUOUS ALUMINUM GUTTERS, SLOPE TO DOWNSPOUTS PER BEST INDUSTRY PRACTICE. 5"K STYLE WITH 2X3 ALUMINUM DOWNSPOUTS. COLOR SELECTION BY OWNER.

RIDGE VENT: UNDER RIDGE SHINGLE OR METAL RIDGE TYPE: 1" TALL, MADE OF HEAT RESISTANT POLPROPYLENE OR EQUIVALENT; WITH 20 SQ INCH VENTILATION (NFVA) PER LINEAL FOOT.

EAVE VENT: (3) 2" DIAMETER HOLES IN SOLID BLOCKING, SCREEN WITH ¼" METAL SCREEN.

ROOF NOTES:

PROTECT ROOF SHEATHING AS SOON AS POSSIBLE BY INSTALLING ROOFING MANUFACTURE RECOMMENDED BASE SHEET WITHIN A MAXIMUM 1 WEEK PERIOD AFTER INSTALLATION OF THE SHEATHING. CALL FOR INTERMEDIATE NALNG INSPECTION IF REQUIRED TO ACCOMPLISH THIS REQUIREMENT.

USE DRIP FLASHING IN COMBINATION WITH 90# ROLL STARTER COURSE AT EAVE.

INSTALL ALL ROOFING, FLASHING, AND CAPS PER MANUFACTURERS SPECIFICATIONS AND BEST INDUSTRY PRACTICES.

ALL VALLEYS TO RECEIVE METAL VALLEY FLASHING, MIN 24 GA.

1) THE TOTAL NET FREE VENTILATION AREA SHALL NOT BE LESS THAN $\frac{1}{300}$ OF THE AREA OF THE SPACE VENTILATED, PROVIDED THAT AT LEAST 40% BUT NOT MORE THAN 50% OF THE REQUIRED AREA IS PROVIDED BY VENTILATOR LOCATED IN THE UPPER PORTION OF THE SPACE BEING VENTILATED. THE REMAINING BLANACE OF THE REQUIRED VENTING WILL BE PROVIDED BY EAVE VENTS AND/OR LOW ROOF VENTS.
2) ALTERNATIVE METHOD: VENTILATION SHALL NOT BE LESS THAN $\frac{1}{150}$ OF THE AREA OF THE SPACE VENTILATED.

VENTS:
1) 10"X10" ROOF VENTS ARE BASED ON 51 SQ IN NET FREE VENTILATION AREA PER VENT.
2) EAVE VENTS ARE BASED ON 9 SQ IN NET FREE VENTILATION AREA PER VENT.

ADDITION ROOF:

ATTIC AREA	644 SQFT
VENTILATION REQ	2.15 SQFT (309.6 SQ IN)
ROOF VENT (HIGH)	153 SQIN (3)
EAVE VENTS	162 SQIN (9)
TOTAL VENTILATION PROVIDED	2.18 SQFT

LEGEND

EXIST. ROOF

NEW ROOF

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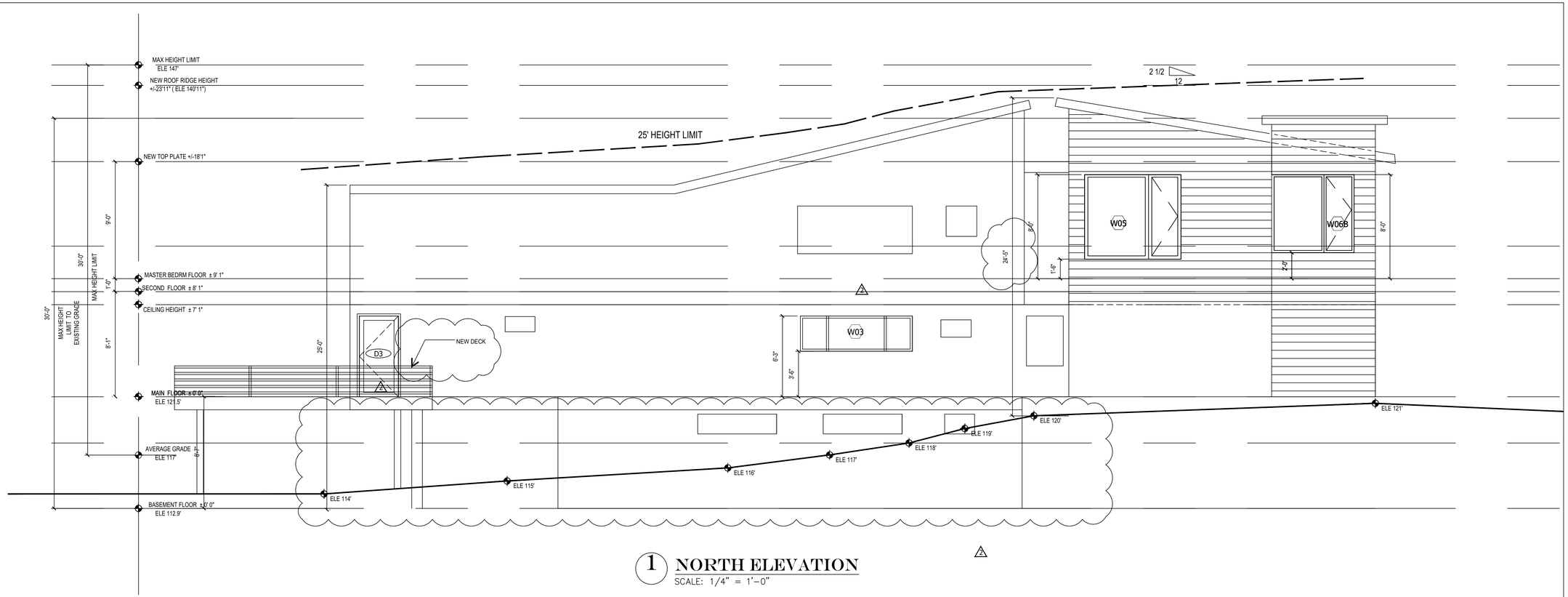
Sheet Title
ROOF PLAN

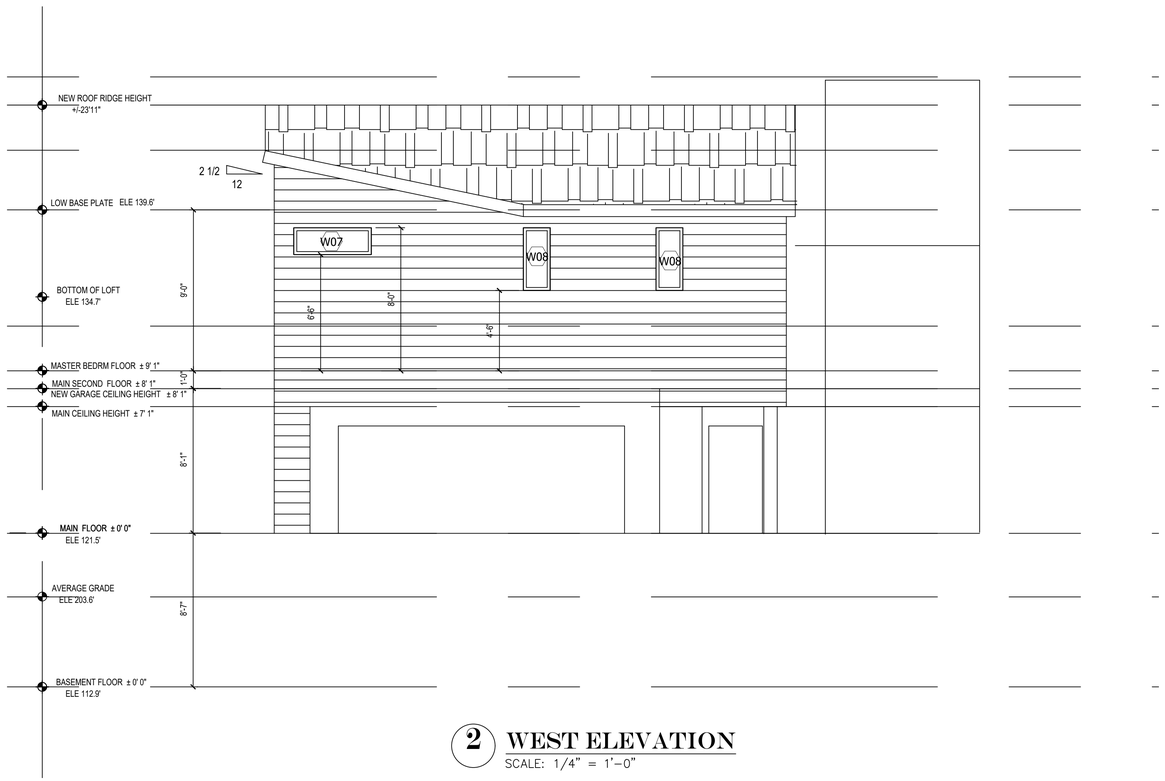
Scale 1/4" = 1'-0"

Sheet Number
A3.0



1 NORTH ELEVATION

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



2 WEST ELEVATION

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

EXTERIOR FINISH SCHEDULE:			
MAIN MATERIAL	MATERIAL	COLOR	NOTES
ROOFING	ASPHALT SHINGLE		
FLASHING			PRODUCT & COLOR MATCH EXISTING DETERMINED BY OWNER
MAIN SIDING MATERIAL	WOOD SIDING		
HIGHLIGHT SIDING MATERIAL	HARDI SIDING		
MASONRY			
CORNER BOARDS			
WINDOW & DOOR CASING	WOOD OR HARDI TRIM		
WINDOWS			

NOTES:

ADHERED MASONRY VENEER: (IRC R703.12) SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S INSTRUCTION. ON EXTERIOR STUD WALLS, ADHERED MASONRY VENEER SHALL BE INSTALLED:

* MIN. OF 4" ABOVE THE EARTH.
* MIN. OF 2" ABOVE PAVED AREA. OR
* MIN OF $\frac{1}{2}$" ABOVE EXTERIOR WALKING SURFACES WHICH ARE SUPPORTED BY THE SAME FOUNDATION THAT SUPPORTS THE EXTERIOR WALL.

FLASHING AT THE FOUNDATION IS REQUIRED TO HAVE A MIN. VERTICAL ATTACHMENT FLANGE OF 3 $\frac{1}{2}$" AND SHALL EXTEND A MIN. OF 1" BELOW THE PLATE LINE.

NOTES:

CONTRACTOR SHOULD VERIFY THE TRANSFER OF ALL POINT LOADS FROM THE ROOF DOWN THROUGH FRAMING MEMBERS AND INTO THE FOUNDATION.

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Liang Mercer House Addition

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Mercer Island, WA 98040

project no: 22-95

8485 REGISTERED ARCHITECT GENG TAN STATE OF WASHINGTON

Issue/Revision:

2 11-4-2022 City Permit Comments Revision

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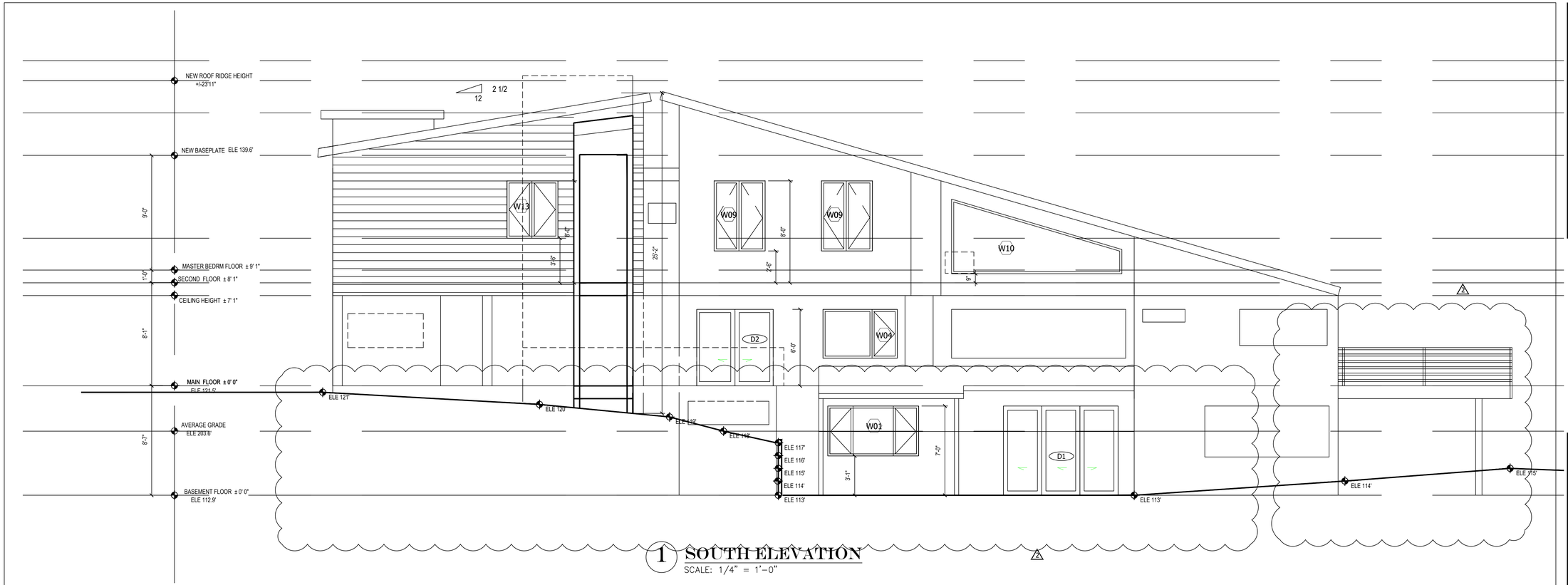
Sheet Title

EXTERIOR ELEVATIONS

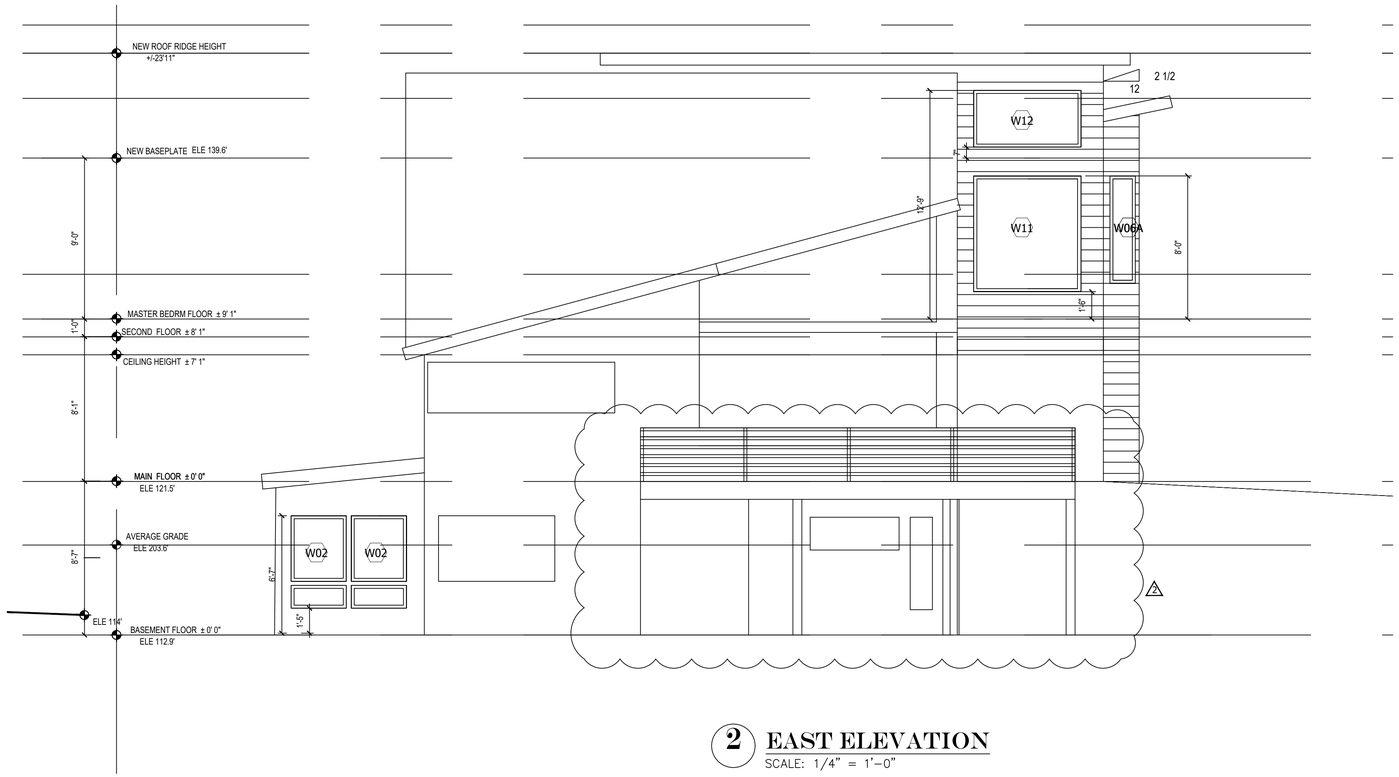
Scale 1/4" = 1'-0"

Sheet Number

A3.1



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



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

EXTERIOR FINISH SCHEDULE:			
MAIN MATERIAL	MATERIAL	COLOR	NOTES
ROOFING	ASPHALT SHINGLE		
FLASHING			PRODUCT & COLOR MATCH EXISTING DETERMINED BY OWNER
MAIN SIDING MATERIAL	WOOD SIDING		
HIGHLIGHT SIDING MATERIAL	HARDI SIDING		
MASONRY			
CORNER BOARDS			
WINDOW & DOOR CASING	WOOD OR HARDI TRIM		
WINDOWS			

NOTES:

ADHERED MASONRY VENEER: (IRC R703.12) SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S INSTRUCTION. ON EXTERIOR STUD WALLS, ADHERED MASONRY VENEER SHALL BE INSTALLED:

* MIN. OF 4" ABOVE THE EARTH.
* MIN. OF 2" ABOVE PAVED AREA. OR
* MIN OF $\frac{3}{4}$" ABOVE EXTERIOR WALKING SURFACES WHICH ARE SUPPORTED BY THE SAME FOUNDATION THAT SUPPORTS THE EXTERIOR WALL.

FLASHING AT THE FOUNDATION IS REQUIRED TO HAVE A MIN. VERTICAL ATTACHMENT FLANGE OF 3 $\frac{1}{2}$" AND SHALL EXTEND A MIN. OF 1" BELOW THE PLATE LINE.

NOTES:

CONTRACTOR SHOULD VERIFY THE TRANSFER OF ALL POINT LOADS FROM THE ROOF DOWN THROUGH FRAMING MEMBERS AND INTO THE FOUNDATION.

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Sheet Title
EXTERIOR ELEVATIONS

Scale 1/4" = 1'-0"

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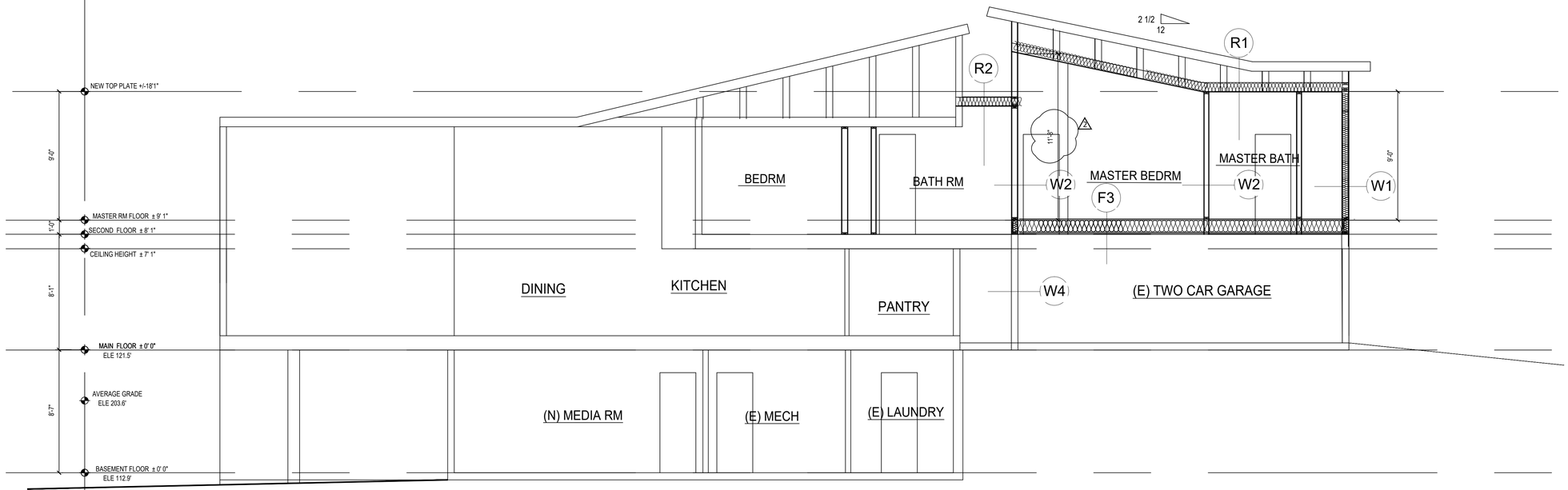
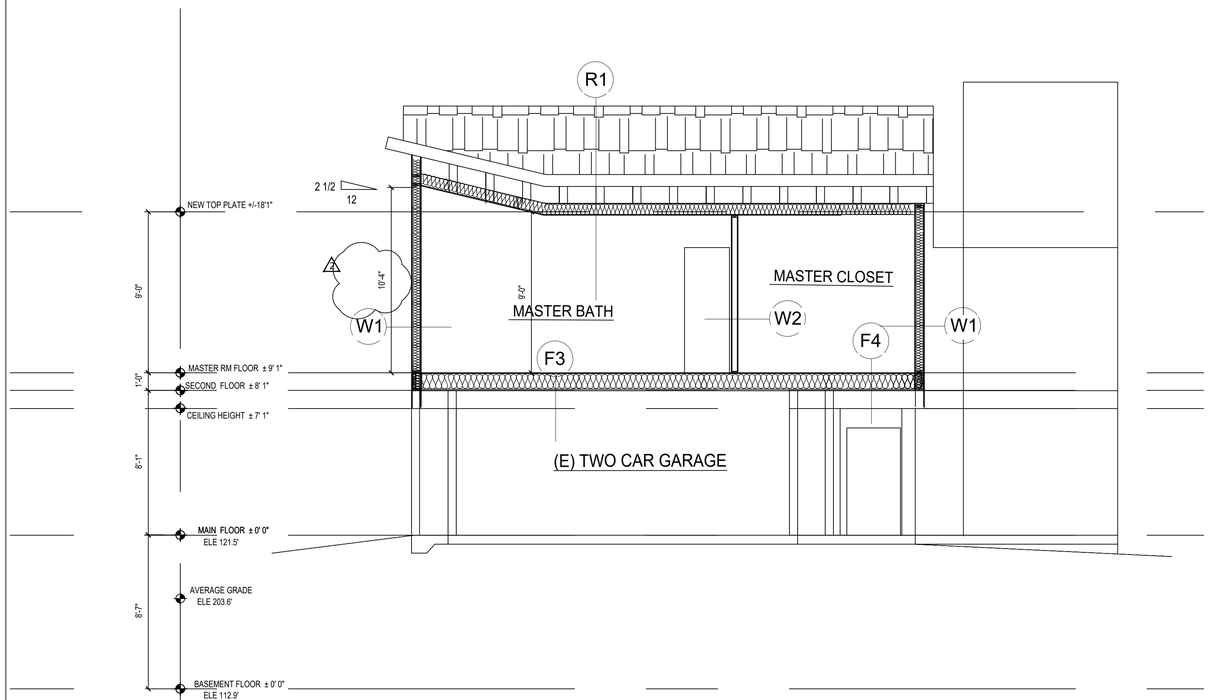
A3.2



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



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

ROOF ASSEMBLIES:

R1 SLOPED TRUSS ROOF

- 50-YEAR METAL/OR ASPHALT SHINGLE ROOFING
- O/30# FELT
- O/PLYWOOD SHEATHING AND NAILING PER STRUCTURE
- O/ROOF FRAMING PER STRUCTURE
- BATT INSULATION (R-49) W/VAPOR BARRIER
- 2XCEILING JOISTS OR TRUSSS BOTTOM CHORDS
- @24" O.C. (U.N.O)
- 5/8" GWB CEILING

R2 SLOW SLOPPED FRAMED ROOF

- TPO MEMBRANE
- TAPERED RIGID INSULATION (SLOPE PER PLANS)
- SHEATHING AND NAILING PER STRUCTURE
- TJI'S PER PLAN
- W/BATT INSULATION R-49 W/VAPOR BARRIER
- 2XCEILING JOISTS OR TRUSSS BOTTOM CHORDS @24" O.C. (U.N.O)
- 5/8" GWB CEILING

FLOOR ASSEMBLIES:

F1 FLOOR OVER CRAWL SPACE

- FINISH FLOOR
- O/3/4" APA RATED T & G PLYWOOD SUB-FLOOR
- O/JOIST PER PLAN 16" O.C.
- W/R-30 FIBERGLASS BATT INSULATION HOLD TIGHT OT SUB-FLOOR
- W/O MOISTURE BARRIER

F3 1-HR RATED FLOOR OVER GARAGE

- FINISH FLOOR PER PLANS
- SHEATHING & NAILING PER STRUCT.
- FLOOR JOISTS PER STRUCT
- R-38 BATT INSULATION
- (2) LAYERS 5/8" GWB

F4 FLOOR OVER EXTERIOR DECK/ENTRY

- FINISH FLOOR PER PLANS
- SHEATHING & NAILING PER STRUCT.
- FLOOR JOISTS PER STRUCT
- R-38 BATT INSULATION
- SOFFIT FINISH PER OWNER

WALL ASSEMBLIES:

W1 EXTERIOR WALL

- SIDING PER ELEVATION
- 3/4" PRESURE TREATED PLYWOOD RIPPED TO 3" STRIPS
- (1) LAYER MOISTURE BARRIER
- SHTG & NAILING PER STRUCT.
- 2X6 @ 16" O.C.
- R-21 BATT INSULATION
- 5/8" GWB

W2 TYPICAL INTERIOR PARTITION

- 5/8" GWB
- 2X4 @ 16" O.C.
- 5/8" GWB

W3 TYPICAL PLUMBING PARTITION

- 5/8" GWB
- 2X6 @ 16" O.C.
- R-21 BATT INSULATION
- 5/8" GWB

W4 1 HR GARAGE SEPERATION WALL

- 5/8" TYP. "X" GWB
- SHEATHING WHERE REQED PER STRUCTURE
- 2X6 @ 16" O.C.
- R-21 BATT INSULATION
- 5/8" GWB

NOTES:

CONTRACTOR SHOULD VERIFY THE TRANSFER OF ALL POINT LOADS FROM THE ROOF DOWN THROUGH FRAMING MEMBERS AND INTO THE FOUNDATION.

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BUILDING SECTION & DETAILS

Scale 1/4" = 1'-0"

Sheet Number

A4.1

GENERAL NOTES

ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE 2018 EDITION.

CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS AND EXISTING CONDITIONS IN FIELD BEFORE PROCEEDING WITH ANY CONSTRUCTION OR DEMOLITION. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR FIELD CHANGES.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS, EXISTING CONSTRUCTION AND SOIL EXCAVATIONS AS REQUIRED, IN A MANNER SUITABLE TO THE WORK SEQUENCE. TEMPORARY SHORING AND BRACING SHALL NOT BE REMOVED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS AND MATERIALS HAVE ACHIEVED DESIGN STRENGTH. FOUNDATIONS WALLS GREATER THAN 4 FEET SHALL NOT BE BACKFILLED UNTIL THE FLOOR FRAMING AND ALL CONNECTIONS TO THE FLOOR FRAMING PER THESE DETAILS ARE COMPLETE.

CHANGES: NO CHANGES TO THESE STRUCTURAL DRAWINGS ARE PERMITTED WITHOUT WRITTEN CONSENT OF THE ENGINEER. CHANGES WILL BE BILLED TO THE CLIENT, OWNER OR CONTRACTOR AT THE ENGINEER'S HOURLY RATE.

SUBMITTALS: SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO ANY FABRICATION OR CONSTRUCTION FOR ALL THE FOLLOWING: STRUCTURAL STEEL, STEEL CANOPIES, GLUED-LAMINATED MEMBERS AND PRE-MANUFACTURED WOOD MEMBERS.

DESIGN DRAWINGS AND CALCULATIONS, FOR PRE-MANUFACTURED WOOD TRUSSES AND JOISTS SHALL BEAR THE SEAL AND SIGNATURE OF THE WASHINGTON STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN, AND SHALL BE SUBMITTED TO THE ARCHITECT AND BUILDING OFFICIAL FOR REVIEW PRIOR TO FABRICATION.

DESIGN LOADS

LIVE LOADS: LIVE LOADS ARE DETERMINED IN ACCORDANCE WITH ASCE CH. 7
L = 40 PSF (RESIDENTIAL)

SNOW LOADS: SNOW LOADS ARE DETERMINED IN ACCORDANCE WITH ASCE CH. 7 WITH THE FOLLOWING FACTORS:
GROUND SNOW LOAD PG = 25 PSF CT = 1.0 CE = 1.0
ROOF SNOW LOAD PS = 25 PSF IS = 1.0

WIND LOADS: WIND LOADS ARE BASED ON ASCE 7-16 CH. 28 (ENVELOPE PROCEDURE) WITH THE FOLLOWING FACTORS:
EXPOSURE CATEGORY = C IW = 1.0
VELOCITY (3 SEC) = 110 MPH (ULT) KZT = 1.00
DESIGN WIND PRESSURED FOR DETERMINING FORCES ON COMPONENTS AND CLADDING ARE DETERMINED IN ACCORDANCE WITH ASCE 7-16 CHAPTER 30.

SEISMIC LOADS: SEISMIC LOADS ARE BASED ON THE EQUIVALENT LATERAL FORCE PROCEDURE IN ASCE 7-16 SECTION 12.8 WITH THE FOLLOWING FACTORS:
RISK CATEGORY = II SS = 1.454
SITE CLASS = D S1 = 0.502
DESIGN CATEGORY = D SDS = 1.163
R = 6.5 (WOOD SHEAR WALL) CS = 0.179 (ULT.)
IE = 1.0

FOUNDATIONS

CONCRETE FOUNDATIONS SHALL BEAR ON STIFF, COMPETENT, UNDISTURBED NATIVE SOIL. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN CONFIRMATION FROM THE BUILDING OFFICIAL THAT THE NATIVE SOIL AT THIS PROJECT IS ADEQUATE TO SUPPORT THE FOLLOWING BEARING PRESSURE: ALLOWABLE BEARING PRESSURE USED FOR STRUCTURAL DESIGN = 1500 PSF.

WHERE FOOTINGS MUST BEAR ON STRUCTURAL FILL DUE TO INADEQUATE SOIL CONDITIONS, THE FILL SHALL BE MIXED AND COMPACTED IN ACCORDANCE WITH SPECIFICATIONS PROVIDED BY A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF WASHINGTON.

BOTTOM OF FOOTING ELEVATION SHALL BE LOCATED AT MINIMUM FROST DEPTH 18" BELOW TOP OF FINISHED GRADE UNLESS REQUIRED OTHERWISE BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL CONFIRM THE MINIMUM FROST DEPTH WITH THE BUILDING OFFICIAL PRIOR TO EXCAVATION.

CONCRETE

CONCRETE WORK SHALL COMPLY, IN GENERAL, WITH ACI 301 (LATEST EDITION) "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.

CONCRETE MIXES: CONCRETE MIXES SHALL CONFORM ACI 318 CH. 5. MINIMUM CONCRETE STRENGTH f'C AT 28 DAYS SHALL BE AS FOLLOWS:
SLAB-ON-GRADE, CURBS AND PADS - 2500 PSI
FOOTINGS - 3000 PSI
WALLS, STEMS - 3000 PSI

WATER/CEMENT RATIO SHALL BE MEASURED BY WEIGHT AND SHALL BE BASED ON THE TOTAL CEMENTITIOUS MATERIAL. WATER/CEMENT RATIO SHALL BE DETERMINED BY THE SUPPLIER BASED ON STRENGTH REQUIREMENTS AND SHALL NOT EXCEED 0.55. WATER-REDUCING ADMIXTURES MAY BE INCORPORATED IN CONCRETE MIX DESIGNS, BUT SHALL CONFORM TO ASTM C 464 AND BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CACL AND OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.

REINFORCING STEEL: ALL REINFORCING SHALL BE DEFORMED BAR (REBAR) WITH BAR DIAMETERS SPECIFIED IN THESE DRAWINGS AND PROPERTIES BELOW:
ALL REINFORCING UNLESS NOTED OTHERWISE - ASTM A615, GRADE 60
#3 STIRRUPS AND TIES - ASTM A615, GRADE 40
WELDED REBAR - ASTM A706, GRADE 60
GALVANIZED WELDED WIRE FABRIC - ASTM A165

REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES."

REINFORCING STEEL SHALL BE LAPPED AS NOTED ON THE DRAWINGS. WHERE LAP LENGTH IS NOT SHOWN, REINFORCING BARS SHALL BE LAPPED AS FOLLOWS:
#5 AND SMALLER - 48 BAR DIAMETERS
#6 AND LARGER - 60 BAR DIAMETERS

MINIMUM CONCRETE COVER OVER REINFORCING SHALL BE AS FOLLOWS:
NONSTRUCTURAL SLAB-ON-GRADE - MID-DEPTH
WALL BARS: INTERIOR FACE - 3/4"
EXPOSED TO EARTH/WEATHER - 1-1/2" (#5 AND SMALLER), 2" (#6 AND LARGER)
FOOTINGS: BOTTOM BARS - 3" (CAST AGAINST EARTH)
TOP BARS - 1-1/2"
SIDE BARS - 2"

PROVIDE SUPPORTS AS REQUIRED FOR PROPER ALIGNMENT AND CONCRETE COVER AROUND THE REINFORCEMENT. CONSULT THE CRSI MANUAL OF STANDARD PRACTICE MSP-1 FOR SPECIFIC INFORMATION.

ANCHORS

USE OF DRILLED CONCRETE ANCHORS, INCLUDING EXPANSION BOLTS AND ADHESIVE ANCHORS, WHERE NOT SPECIFIED IN THESE DOCUMENTS SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER, ARCHITECT AND THE BUILDING INSPECTOR

EXPANSION BOLTS: EXPANSION BOLTS IN SOLID CONCRETE SHALL BE WEDGE-TYPE ANCHORS MADE OF CARBON STEEL. BOLT SIZE, SPACING AND EMBEDMENT LENGTH SHALL BE AS DESIGNATED IN THESE DRAWINGS. BOLTS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS WITH INSPECTION PER SCHEDULE. EXPANSION BOLTS SHALL BE SIMPSON STRONG BOLT 2 OR APPROVED EQUAL. A CURRENT ICBO OR ICC REPORT SHALL BE SUBMITTED FOR ALTERNATES.

ADHESIVE ANCHORS: ADHESIVE OR EPOXY TYPE ANCHORS IN SOLID CONCRETE SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS. ANCHOR SIZE, SPACING AND EMBEDMENT LENGTH SHALL BE AS DESIGNATED IN THESE DRAWINGS. ADHESIVE SHALL BE SIMPSON SET 3G. A CURRENT ICBO OR ICC REPORT SHALL BE SUBMITTED FOR ALTERNATES.

WOOD

SAWN LUMBER: STRUCTURAL SAWN LUMBER SHALL BE KILN DRIED AND BE OF THE SPECIES AND GRADE NOTED BELOW OR BETTER:

USE	GRADE	FB (PSI)
WALL STUDS	HEF FIR STUD	675
PLATES, PLANKS, JOISTS, RAFTERS	HEM FIR #2	850
4X BEAMS	HEM FIR #2	850
6X BEAMS	HEM FIR #2	675
4X BEAMS	DOUGLAS FIR #1	1350
6X BEAMS	DOUGLAS FIR #1	1350
4X POSTS	HEM FIR #2	850
6X POSTS	HEM FIR #2	675
6X POSTS	DOUGLAS FIR #1	1200

GLUED LAMINATED MEMBERS: GLUED LAMINATED MEMBERS SHALL EACH BEAR AN AITC IDENTIFICATION MARK AND BE ACCOMPANIED BY AN AITC CERTIFICATE OF CONFORMANCE. ONE COAT OF END SEALER SHALL BE APPLIED IMMEDIATELY AFTER TRIMMING EITHER SHOP OR FIELD. MEMBERS SHALL BE VISUAL GRADED WESTERN SPECIES INDUSTRIAL, ARCHITECTURAL OR PREMIUM GRADE WITH STRENGTH AS FOLLOWS:

SYMBOL SPECIES	FB (PSI)	E (PSI)
GLB 24F-V8 DF/DF	2400/2400 psi	1,800,000

ALL WOOD CONNECTORS SHALL BE MANUFACTURED BY SIMPSON STRONG TIE COMPANY (OR APPROVED EQUAL), AND OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS. ALL WOOD CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE TRIPLE ZINC G-185 GALVANIZED (1.85 OZ/SQ FT COATING).

ENGINEERED METAL-PLATE-CONNECTED WOOD TRUSSES SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER. THE CONTRACTOR SHALL SUBMIT ENGINEERED TRUSS SHOP DRAWINGS TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND APPROVAL. TRUSS SHOP DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A LICENSED DESIGN PROFESSIONAL CURRENTLY REGISTERED FOR PRACTICE IN THE STATE OF CT. SHOP DRAWINGS SHALL INDICATE ALL LOADING CASES CONSIDERED, MAXIMUM DEFLECTIONS AND MAXIMUM END REACTIONS FOR EACH TYPICAL TRUSS CONFIGURATION. TRUSS SHOP DRAWINGS SHALL INDICATE COMPRESSION MEMBERS REQUIRING ADDITIONAL FIELD-INSTALLED LATERAL BRACING. TRUSS DEFLECTIONS SHALL BE LIMITED TO 1360 OF SPAN.

MINIMUM WOOD NAILING REQUIREMENTS: UNLESS OTHERWISE NOTED ON THE DRAWINGS, TYPICAL WOOD FRAMING SHALL BE FASTENED PER IBC 2018 TABLE 2304.10.1.

RATED SHEATHING: STRUCTURAL PANELS SHALL BEAR THE APA TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION. SHEATHING SHALL BE AS FOLLOWS:
SHEAR WALL SHTG MIN. 7/16" 32/16 MIN. C-D INT APA WITH EXTERIOR GLUE (CDX)
ROOF SHTG MIN. 15/32" 32/16 MIN. C-D INT APA WITH EXTERIOR GLUE (CDX)
SUB FLOOR SHTG MIN. 3/4" 48/24 T&G MIN. C-D INT APA WITH EXTERIOR GLUE (CDX)

SHEATHING SHALL BE ORIENTATED OVER THE SUPPORTS AS SHOWN ON THE DRAWINGS. SHEAR WALL SHEATHING SHALL BE BLOCKED AT ALL PANEL EDGES AS SHOWN IN THE SHEAR WALL SCHEDULE.

PREMANUFACTURED OPEN WEB WOOD TRUSSES: TRUSSES SHALL BE DESIGN BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF WASHINGTON, WHO IS REGULARLY ENGAGED IN THE DESIGN OF PLATE-CONNECTED WOOD TRUSSES. TRUSS DESIGN SHALL BE ACCORDANCE WITH IBC SECTION 2303.4.

TRUSSES SHALL BE DESIGN FOR THE FOLLOWING DEAD LOADS:

	TOP CHORD	BOTTOM CHORD	TOTAL
ROOF TRUSSES	15 PSF	10 PSF	25 PSF

IN ADDITION TO DEAD LOADS, THE DESIGN SHALL INCLUDE THE LIVE, WIND, SNOW AND SNOW DRIFT LOADS AS IDENTIFIED IN THE "DESIGN LOADS" SECTION OF THESE DRAWINGS. IN ADDITION, THE TRUSS DESIGN SHALL INCLUDE CONCENTRATED AND AXIAL LOADS SHOWN ON FRAMING PLANS AND HANGER SCHEDULES IN THESE DRAWINGS. ROOF TRUSSES SHALL BE DESIGNED FOR WIND NET UPLIFT OF 10 PSF UNLESS OTHERWISE NOTED ON THE DRAWINGS. FLOOR TRUSSES SHALL BE DESIGN FOR MAXIMUM LIVE LOAD DEFLECTION = 1/2" AND MINIMUM LIVE LOAD DEFLECTION RATIO = L/480.

TRUSSES SHALL BE FABRICATED BY A MANUFACTURER WHO IS A MEMBER OF THE TRUSS PLATE INSTITUTE. TRUSSES SHALL BE SUPPLIED WITH THE PROPER HANGERS, END CONNECTIONS, BRIDGING, BRACING TO PROVIDE LATERAL STABILITY OF ALL TRUSS MEMBERS, AND TIE-DOWN CONNECTIONS TO BEAMS AND TOPS OF WALLS. TRUSSES SHALL BE SUPPLIED WITH TAPERED HARDWOOD SHIMMING SO THAT EVERY CHORD BEARS ON THE FULL WIDTH OF EVERY SUPPORT, WITHOUT NOTCHING THE TRUSS MEMBERS. THE TRUSS MANUFACTURER IS RESPONSIBLE FOR ENSURING THE BEARING SEAT DOES NOT EXCEED THE SILL PLATE CAPACITY OF THE SUPPORTING ELEMENT.

BUILDING OFFICIAL INSPECTIONS

THE FOLLOWING RECOMMENDED MINIMUM ITEMS SHALL BE INSPECTED BY A QUALIFIED INDIVIDUAL PROVIDED BY THE BUILDING OFFICIAL:
-FOOTINGS BEAR ON COMPETENT NATIVE SOIL PER THE "FOUNDATIONS" SECTION ABOVE
-FOOTING REINFORCEMENT
-SHEAR WALL SILL PLATE ANCHORS AND WASHERS PER SCHEDULE
-SHEAR WALL NAILING AND SHEAR CLIPS PER SCHEDULE
-SHEAR WALL HOLD-DOWNS
-VERIFY TYPE, SIZE AND GRADE OF STRUCTURAL STEEL MEMBERS AND BOLTS

TYPICAL DETAILS
IN ADDITION TO THE DETAILS AND SCHEDULES ON THE FRAMING PLANS, THOSE NOTED AS "TYPICAL" SHALL BE USED THROUGHOUT THE STRUCTURE AS APPLICABLE.

SHEET INDEX

ROOF

	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
1.	Blocking between ceiling joists, rafters or trusses to top plate or other framing below	3-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each end, toenail
	Blocking between rafters or truss not at the wall top plate, to rafter or truss	2-8d common (2 1/2" x 0.131") 2-3" x 0.131" nails 2-3"14 gage staples	**Each end, toenail**
		2-16 d common (3 1/2" x 0.162") 3-3" x 0.131" nails 3-3" 14 gage staples	End nail
	Flat blocking to truss and web filler	16d common (3 1/2" x 0.162") @ 6" o.c. 3" x 0.131" nails @ 6" o.c. 3" x 14 gage staples @ 6" .c	Face nail
2.	Ceiling joists to top plate	3-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each joist, toenail
3.	Ceiling joist not attached to parallel rafter, laps over partitions (no thrust) (see Section 2308.7.3.1, Table 2308.7.3.1)	3-16d common (3 1/2" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
4.	Ceiling joist attached to parallel rafter (heel joint) (see Section 2308.7.3.1, Table 2308.7.3.1)	Per Table 2308.7.3.1	Face nail
5.	Collar tie to rafter	3-10d commom (3" x 0.148"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
6.	Rafter or roof truss to top plate (See Section 2308.7.5, Table 2308.7.5)	3-10 common (3" x 0.148"); or 3-16d box (3 1/2" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131 nails; or 4-3" 14 gage staples, 7/16" crown	Toenail [c]
7.	Roof rafters to ridge valley or hip rafters; or roof rafter to 2-inch ridge beam	2-16d common (3 1/2" x 0.162"); or 3-10d box (3" x 0.128"; or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown; or	End nail
		3-10d commom (3 1/2" x 0.148"); or 3-16d box (3 1/2" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Toenail

WALL

8.	Stud to stud (not at braced wall panels)	16d common (3 1/2" x 0.162")	24" o.c. face nail
		10d box (3" x 0.128"); or 3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	16" o.c. face nail
9.	Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d common (3 1/2" x 0.162"); or	16" o.c. face nail
		16d box (3 1/2" x 0.135"); or	12" o.c. face nail
		3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	12" o.c. face nail
10.	Built-up header (2" to 2" header)	16d common (3 1/2" x 0.162"); or	16" o.c. each edge, face nail
		16d box (3 1/2" x 0.135")	16" o.c. each edge, face nail
11.	Continuous header to stud	4-8d common (2 1/2" x 0.131"); or 4-10d box (3" x 0.128")	Toenail
12.	Top plate to top plate	16d common (3 1/2" x 0.162"); or	16" o.c. face nail
		10d box (3" x 0.128"); or 3" x 0.131" nails; or 3" 14 gage staples, 7/16" crown	12" o.c. face nail
13.	Top plate to top plate, at end joints	8-16d common (3 1/2" x 0.162"); or 12-10d box (3" x 0.128"); or 12-3"x 0.131" nails; or 12-3" 14 gage staples, 7/16" crown	Each side of end joint, face nail (minimum 24" lap splice length each side of end joint)
14.	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d common (3 1/2" x 0.162"); or	16" o.c. face nail
		16d box (3 1/2" x 0.135"); or 3" x 0.131" nails; or 3" 14 gage staples, 7/16" crown	12" o.c. face nail
15.	Bottom plate to joist, rim joist, band joist or blocking at braced wall panels	2-16d common (3 1/2" x 0.162"); or 3-16d box (3 1/2" x 0.135"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	16" o.c. face nail
16.	Stud to top or bottom plate	4-8d common (2 1/2" x 0.131"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown; or	Toenail
		2-16d common (3 1/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	End nail
17.	Top plates, laps at corners and intersections	2-16d common (3 1/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Face nail
18.	1" brace to each stud and plate	2-8d common (2 1/2" x 0.131"); or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, 7/16" crown	Face nail
19.	1" x 6" sheathing to each bearing	2-8d common (2 1/2" x 0.131"); or 2-10d box (3" x 0.128")	Face nail
20.	1" x 8" and wider sheathing to each bearing	2-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128")	Face nail

WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING[a]

			Edges (inches)	Intermediate supports (inches)
30.	3/8" - 1/2"	6d common or deformed (2" x 0.113") (subfloor and wall)	6	12
		8d box or deformed (2 1/2" x 0.113") (roof)	6	12
		2 3/8" x 0.113" nail (subfloor and wall)	6	12
		1 3/4" 16 gage staple, 7/16" crown (subfloor and wall)	4	8
		2 3/8" x 0.113" nail (roof)	4	8
		1 3/4" 16 gage staple, 7/16" crown (roof)	3	6
31.	19/32" - 3/4"	8d common (2 1/2" x 0.131"); or 6d deformed (2" x 0.113")	6	12
		2 3/8" x 0.113" nail; or 2" 16 gage staple, 7/16" crown	4	8
32.	7/8" - 1 1/4"	10d common (3" x 0.148"); or 8d deformed (2 1/2" x 0.131")	6	12

OTHER EXTERIOR WALL SHEATHING

33.	1/2" fiberboard sheathing[b]	1 1/2" galvanized roofing nail (7/16" head diameter); or 1 1/2" 16 gage staple with 7/16" or 1" crown	3	6
34.	25/32" fiberboard sheathing[b]	1 1/2" galvanized roofing nail (7/16" diameter head); or 1 1/2" 16 gage staple with 7/16" or 1" crown	3	6

WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING

			Edges (inches)	Intermediate supports (inches)
35.	3/4" and less	8d common (2 1/2" x 0.131"); or 6d deformed (2" x 0.113")	6	12
36.	7/8" - 1"	8d common (2 1/2" x 0.131"); or 8d deformed (2 1/2" x 0.131")	6	12
37.	1 1/4" and less	8d common (2 1/2" x 0.131"); or 6d deformed (2" x 0.113")	6	12

PANEL SIDING TO FRAMING

38.	1/2" or less	6d corrosion-resistant siding (1 1/2" x 0.106"); or 6d corrosion-resistant casing (2" x 0.099")	6	12
39.	5/8"	8d corrosion-resistant siding (2 1/2" x 0.128"); or 8d corrosion-resistant casing (2 1/2" x 0.113")	6	12

INTERIOR PANELING

40.	1/4"	4d casing (1 1/2" x 0.080"); or 4d finish (1 1/2" x 0.072")	6	12
41.	3/8"	6d casing (2" x 0.099"); or 6d finish (Panel supports at 24 inches)	6	12

For SI: 1 inch = 25.4 mm.

a. Nails spaced at 6 inches at intermediate supports where spans are 48 inches or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing.
b. Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked).
c. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule and the ceiling joist is fastened to the top plate in accordance with this schedule, the number of toenails in the rafter shall be permitted to be reduced by one nail.

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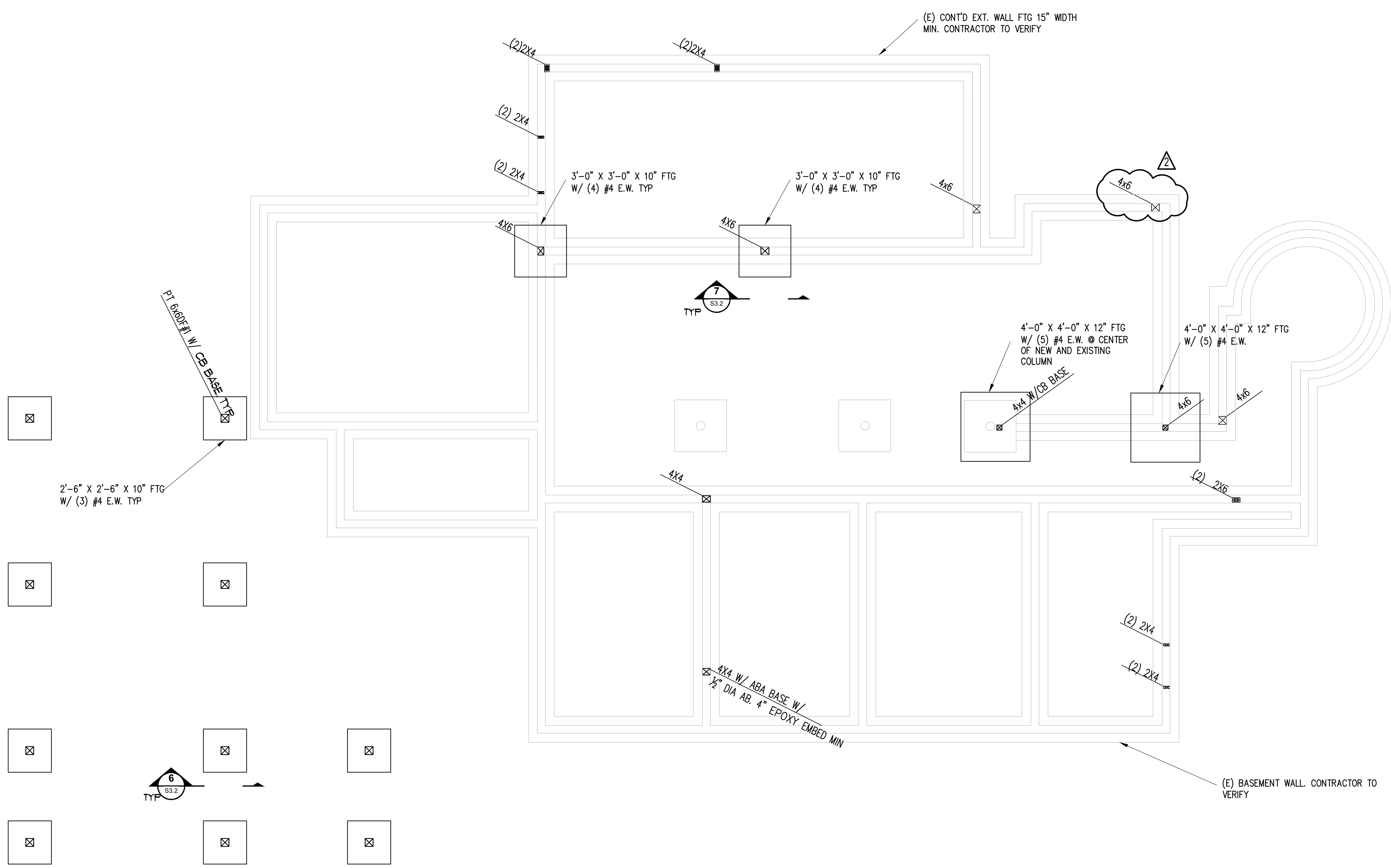
7545 E Mercer way
Remodel
7545 E Mercer way
Mercer Island, WA 98040

JOB # 2022004

REV	DESCRIPTION	DATE

Drawn By:
Drawing Title:
STRUCTURAL NOTES
Sheet
S1.0



MAIN FLOOR FRAMING PLAN

24x36: SCALE 1/4" = 1'-0"

FLOOR PLAN LEGEND

	NEW LOAD BEARING WALL
B-XX	NEW BEAM/HEADER, U.N.O
⊠	NEW POST
▲	NEW HOLD-DOWN LOCATION
	EXISTING BEAM/HEADER
X / #	INDICATES SHEAR WALL AND HOLD-DOWN TYPE. SEE SCHEDULE ON SHEET **S3.3**
	NEW HANGER
	NEW CONCRETE FOOTING
	EXISTING FOUNDATION

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. STRUCTURAL DRAWINGS ARE SCHEMATIC. DO NOT SCALE. CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR THE DEMOLITION.

2. DIMENSIONS AND LOCATION OF EXISTING FOUNDATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

3. ALL LOAD BEARING WALL WITH OUT SHEAR WALL TYPE SHOULD BE TYPE A.

4. ALL 4" LOAD BEARING WALL SHOULD BE 2X4 HF#2 @ 16" OC.

5. ALL 6" LOAD BEARING WALL SHOULD BE 2X6 HF#2 @ 16"O.C.

7. ALL POST SHALL BE HF#2 U.N.O.

8. ALL BEAM AND HEADER SHOULD BE HF#2 U .N. O.

10. All JOIST OR RAFTER PROVIDE FULL DEPTH BLK/BRACING @ 4'-0" MAX

11. ALL SHEAR WALL DOES NOT LINE UP ABOVE, HOLDOWN SHOULD BE CONTINUOUS AND CONNECTED TO BEAM OR CONCRETE WALL .

12. HOLDOWN AT EXISTING FOUNDATION SEE DETAIL 6/S3.3

11/6/2022

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JOB # 2022004

REV	DESCRIPTION	DATE
2	REVISION 2	11/6/22

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FOUNDATION PLAN
Sheet
S2.0

FLOOR PLAN LEGEND

Symbol	Description
	NEW LOAD BEARING WALL
B-XX	NEW BEAM/HEADER, U.N.O
	NEW POST
	NEW HOLD-DOWN LOCATION
	EXISTING BEAM/HEADER
X / #	INDICATES SHEAR WALL AND HOLD-DOWN TYPE. SEE SCHEDULE ON SHEET S3.3
	NEW HANGER
	NEW CONCRETE FOOTING
	EXISTING FOUNDATION

PLAN NOTES:

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2. DIMENSIONS AND LOCATION OF EXISTING FOUNDATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

3. ALL LOAD BEARING WALL WITH OUT SHEAR WALL TYPE SHOULD BE TYPE A.

4. ALL 4" LOAD BEARING WALL SHOULD BE 2X4 HF#2 @ 16" OC.

5. ALL 6" LOAD BEARING WALL SHOULD BE 2X6 HF#2 @ 16"O.C.

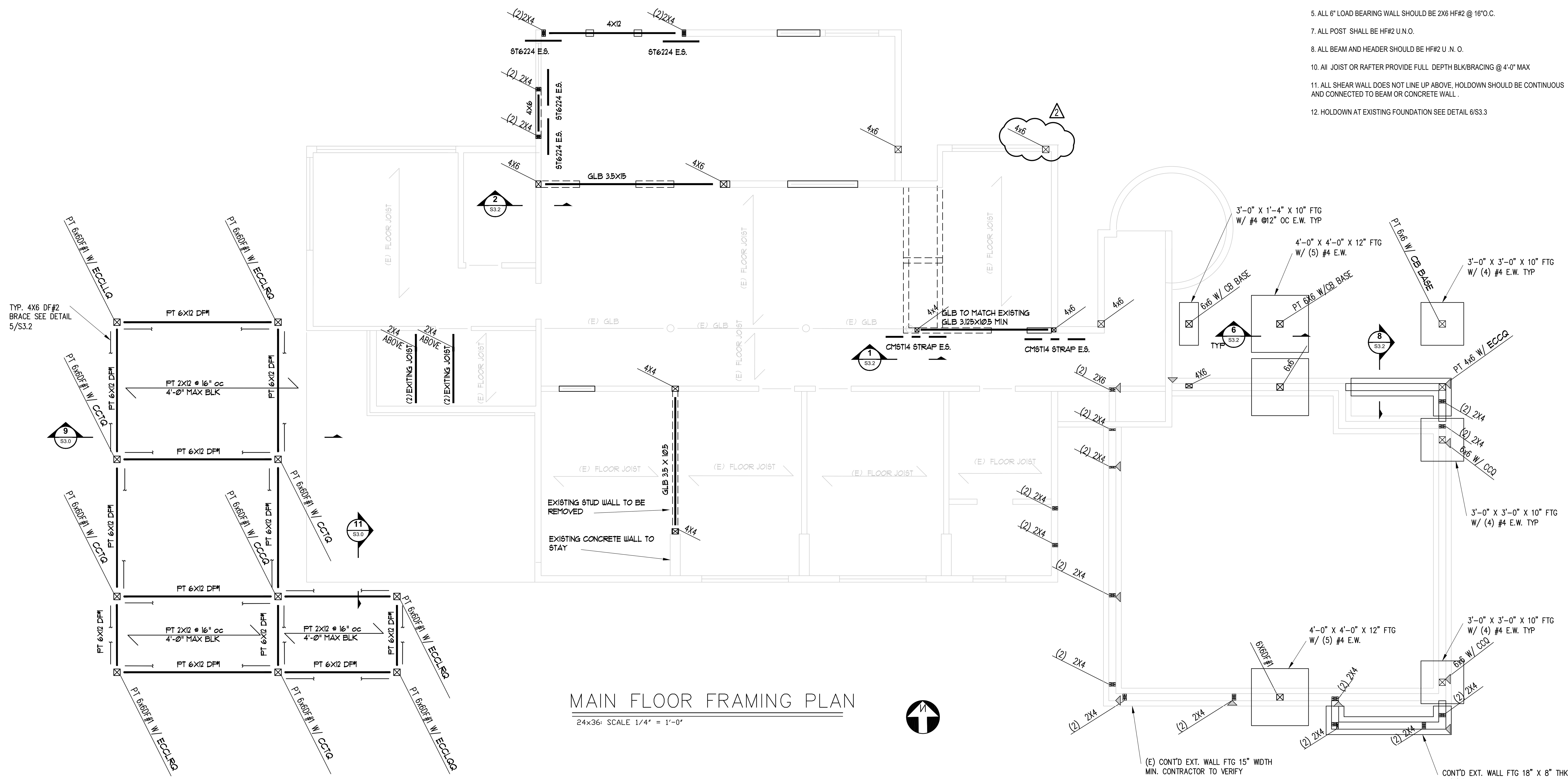
7. ALL POST SHALL BE HF#2 U.N.O.

8. ALL BEAM AND HEADER SHOULD BE HF#2 U .N. O.

10. All JOIST OR RAFTER PROVIDE FULL DEPTH BLK/BRACING @ 4'-0" MAX

11. ALL SHEAR WALL DOES NOT LINE UP ABOVE, HOLDOWN SHOULD BE CONTINUOUS AND CONNECTED TO BEAM OR CONCRETE WALL .

12. HOLDOWN AT EXISTING FOUNDATION SEE DETAIL 6/S3.3



MAIN FLOOR FRAMING PLAN

24x36: SCALE 1/4" = 1'-0"

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REV	DESCRIPTION	DATE
2	REVISION 2	11/6/22

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Drawing Title:

DECK FRAMING PLAN

Sheet

S2.1

FLOOR PLAN LEGEND

	NEW LOAD BEARING WALL
B-XX	NEW BEAM/HEADER, U.N.O
⊠	NEW POST
▲	NEW HOLD-DOWN LOCATION
	EXISTING BEAM/HEADER
A / 6	INDICATES SHEAR WALL AND HOLD-DOWN TYPE. SEE SCHEDULE ON SHEET S3.3
JL	NEW HANGER

PLAN NOTES:

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2. DIMENSIONS AND LOCATION OF EXISTING FOUNDATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

3. ALL LOAD BEARING WALL WITH OUT SHEAR WALL TYPE SHOULD BE TYPE A.

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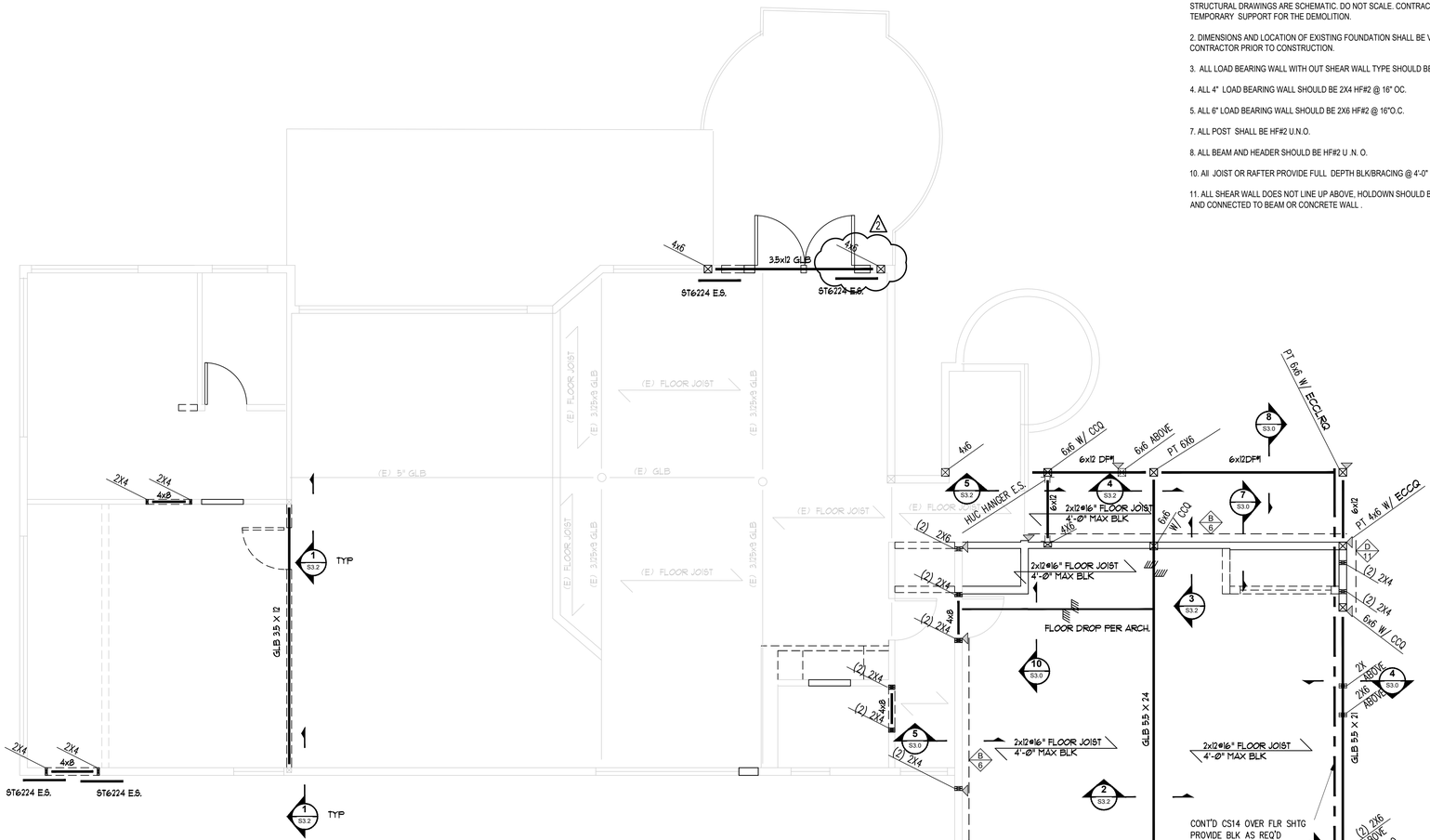
5. ALL 6" LOAD BEARING WALL SHOULD BE 2X6 HF#2 @ 16"O.C.

7. ALL POST SHALL BE HF#2 U.N.O.

8. ALL BEAM AND HEADER SHOULD BE HF#2 U .N. O.

10. All JOIST OR RAFTER PROVIDE FULL DEPTH BLK/BRACING @ 4'-0" MAX

11. ALL SHEAR WALL DOES NOT LINE UP ABOVE, HOLDOWN SHOULD BE CONTINUOUS AND CONNECTED TO BEAM OR CONCRETE WALL .



UPPER FLOOR FRAMING PLAN

24x36: SCALE 1/4" = 1'-0"

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Drawing Title:

ROOF FRAMING PLAN

Sheet

S2.2

FLOOR PLAN LEGEND

▭	NEW LOAD BEARING WALL
B-XX	NEW BEAM/HEADER, U.N.O
⊠	NEW POST
▲	NEW HOLD-DOWN LOCATION
	EXISTING BEAM/HEADER
X / #	INDICATES SHEAR WALL AND HOLD-DOWN TYPE. SEE SCHEDULE ON SHEET S3.3
	NEW HANGER

PLAN NOTES:

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2. DIMENSIONS AND LOCATION OF EXISTING FOUNDATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

3. ALL LOAD BEARING WALL WITH OUT SHEAR WALL TYPE SHOULD BE TYPE A.

4. ALL 4" LOAD BEARING WALL SHOULD BE 2X4 HF#2 @ 16" OC.

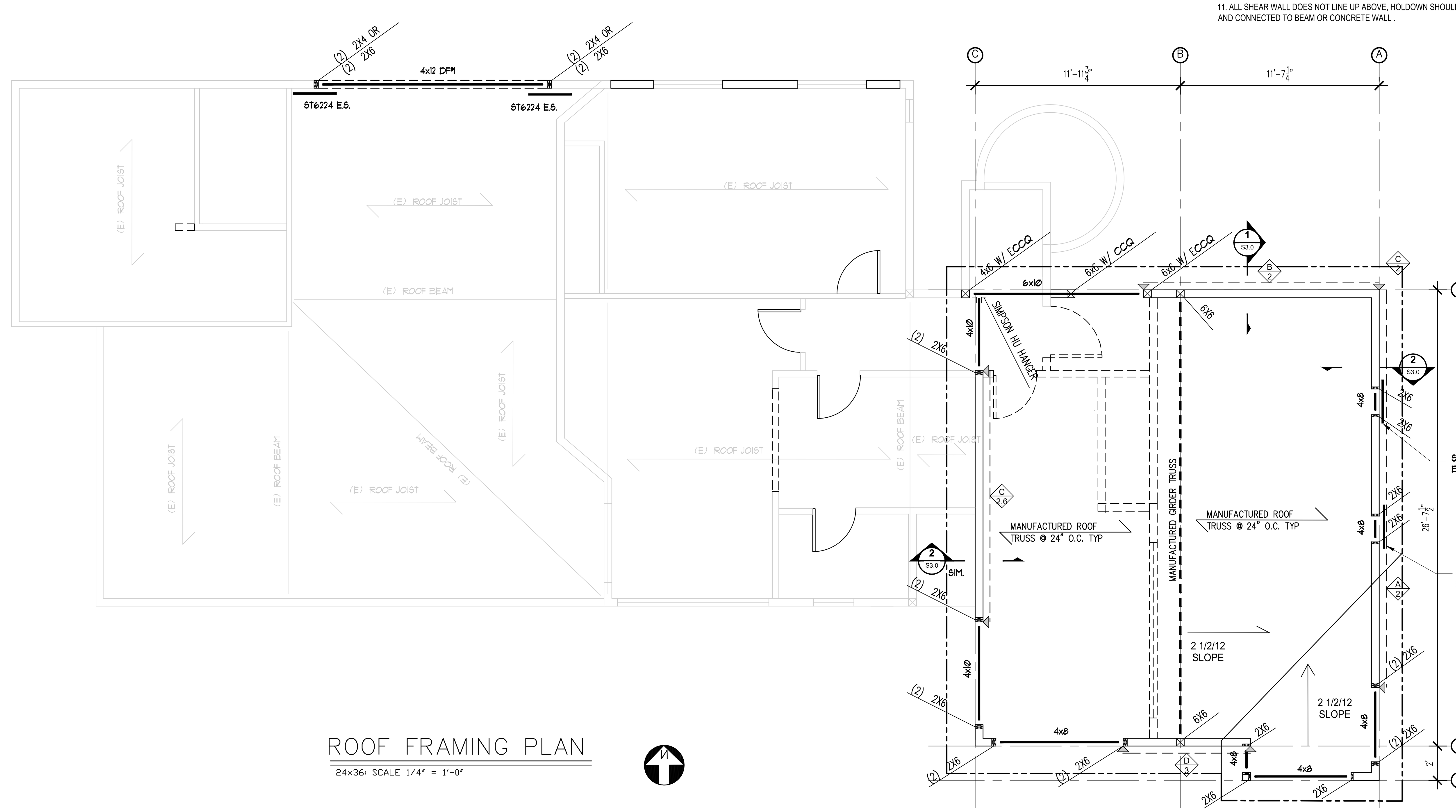
5. ALL 6" LOAD BEARING WALL SHOULD BE 2X6 HF#2 @ 16"O.C.

7. ALL POST SHALL BE HF#2 U.N.O.

8. ALL BEAM AND HEADER SHOULD BE HF#2 U .N. O.

10. All JOIST OR RAFTER PROVIDE FULL DEPTH BLK/BRACING @ 4'-0" MAX

11. ALL SHEAR WALL DOES NOT LINE UP ABOVE, HOLDOWN SHOULD BE CONTINUOUS AND CONNECTED TO BEAM OR CONCRETE WALL .



ROOF FRAMING PLAN

24x36: SCALE 1/4" = 1'-0"

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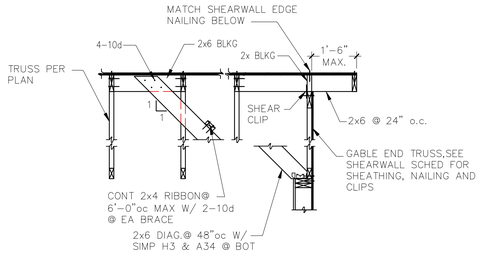
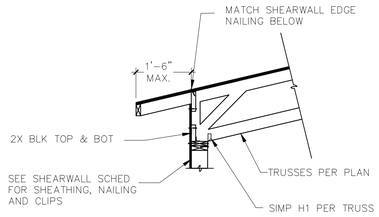
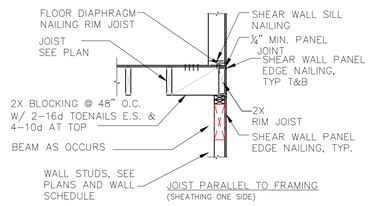
Sheet S2.3



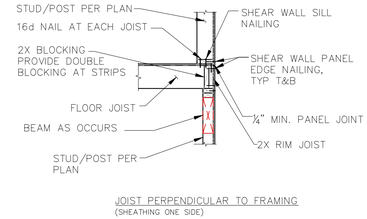
1 S2.3 TYP. GABLE END ROOF CONNECTION
SCALE: 1/2"=1'-0"



2 S2.3 TYP. ROOF TRUSS // TO WALL
SCALE: 1/2"=1'-0"



3 S2.2 TYP. JSTS. PARALLEL TO WALL
SCALE: 1/2"=1'-0"



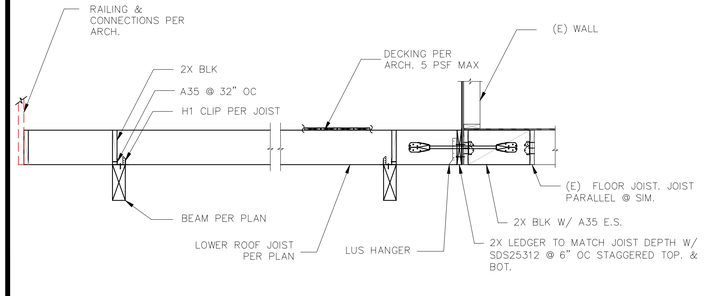
4 S2.2 TYP. JSTS. // TO WALL
SCALE: 1/2"=1'-0"

5 S2.2 TYP. JSTS. // TO (E) WALL
SCALE: 1/2"=1'-0"

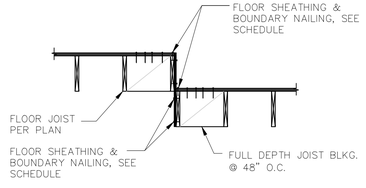
6 S2.2 TYP. POST @ FLOOR
SCALE: 1/2"=1'-0"

7 S2.2 WALL, JOISTS PARALLEL
SCALE: 3/4"=1'-0"

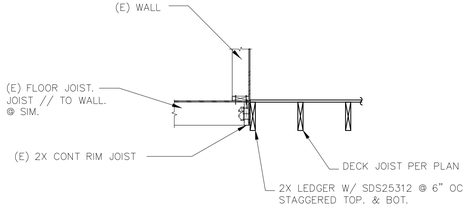
8 S2.2 TYP. JSTS. PARALLEL TO BEAM
SCALE: 1/2"=1'-0"



9 S2.1 TYP. DECK CONNECTION DETAIL
SCALE: 1/2"=1'-0"



10 S2.2 ELEV. CHANGE @ FLOOR
SCALE: 3/4"=1'-0"



11 S2.1 TYP. DECK CONNECTION DETAIL
SCALE: 1/2"=1'-0"

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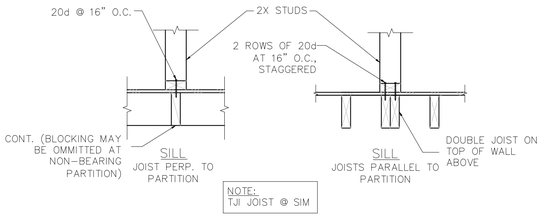
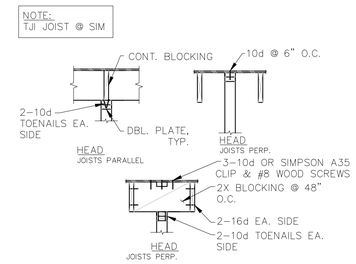
TYPICAL STRUCTURAL DETAILS

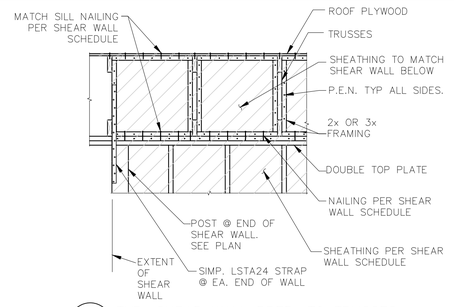
Sheet
S3.0



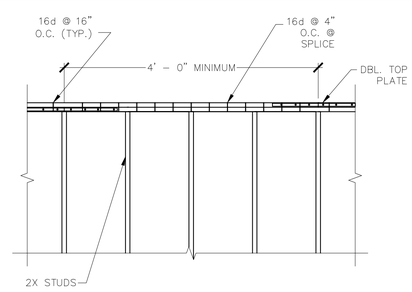
1 TYP. JOIST FRAMING AT NON-LOAD BEARING STUD WALLS
SCALE: 1/2"=1'-0"



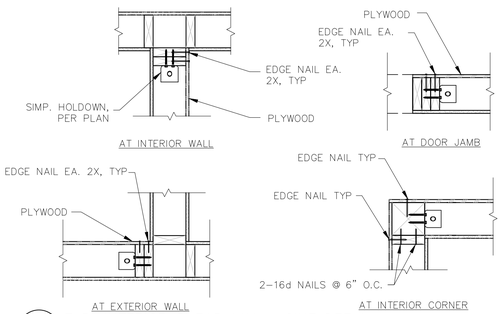
2 TYP. JOIST FRAMING AT STUD WALLS
SCALE: 1/2"=1'-0"



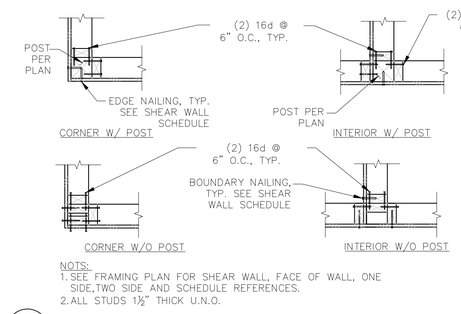
3 TYP. SHEAR WALL PREP. TO TRUSSES
SCALE: 1/2"=1'-0"



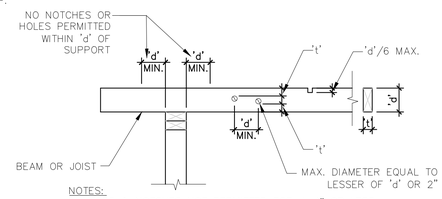
4 TYP. TOP PLATE SPLICE
SCALE: 1/2"=1'-0"



5 TYP. INTERIOR SHEAR WALL JOINT DETAIL
SCALE: 1/2"=1'-0"



6 TYP. INTERIOR SHEAR WALL JOINT DETAIL
SCALE: 1/2"=1'-0"



7 TYP. NOTCHES & HOLES IN JOISTS/BEAMS
SCALE: 1/2"=1'-0"

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TYPICAL STRUCTURAL DETAILS

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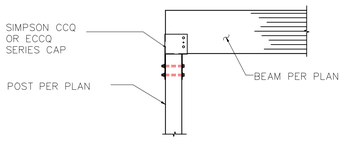
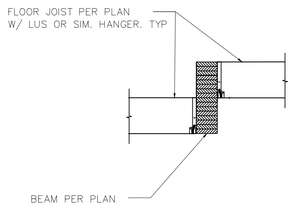
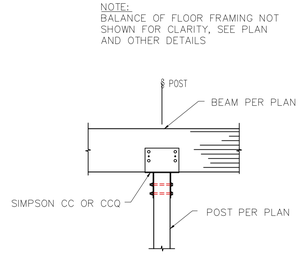


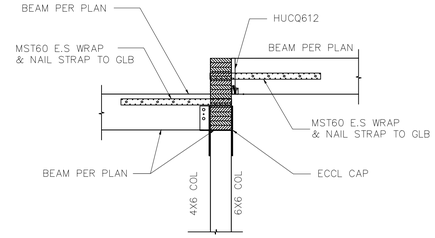
1 S2.1 TYP. COL TO GLB END CONN.
SCALE: 1/2"=1'-0"



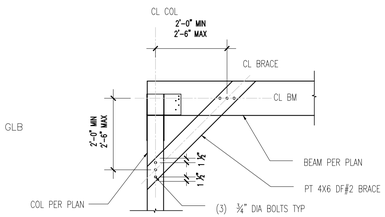
2 S2.1 TYP. FLOOR JOISTS TO BEAM
SCALE: 1/2"=1'-0"



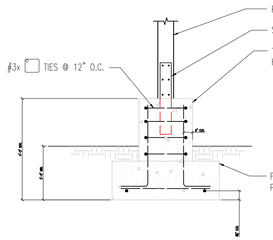
3 S2.1 TYP. COL TO CONT'D GLB CONN.
SCALE: 1/2"=1'-0"



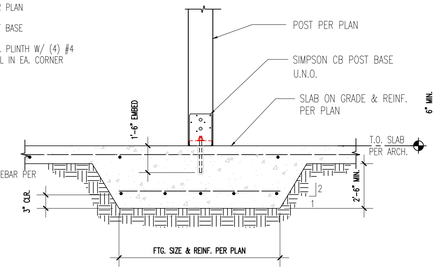
4 S2.2 ELEV. CHANGE @ BEAM
SCALE: 1/2"=1'-0"



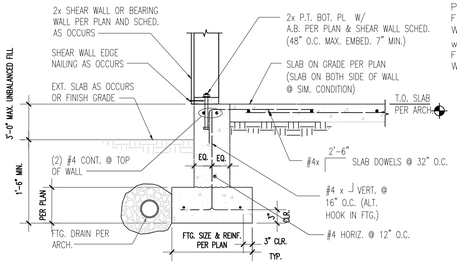
5 S2.2 ELEV. CHANGE @ BEAM
SCALE: 1/2"=1'-0"



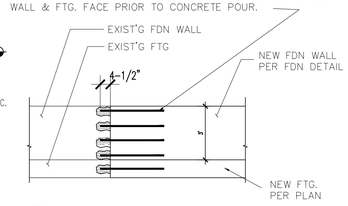
6 S2.0 TYP. EXTERIOR SQUARE FTG.
SCALE: 1/2"=1'-0"



7 S2.0 TYP. INTERIOR POST SPREAD FTG.
SCALE: 1/2"=1'-0"



8 S2.0 TYP. EXT. STUD WALL FTG.
SCALE: 1/2"=1'-0"



9 S2.0 (E) FTG CONNECTION DETAIL
SCALE: 1/2"=1'-0"

6/02/2022

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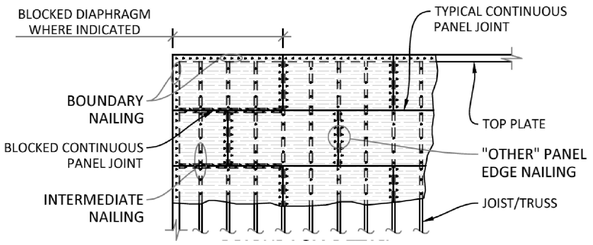
REV	DESCRIPTION	DATE

Drawn By:

Drawing Title:

TYPICAL STRUCTURAL DETAILS

Sheet
S3.2



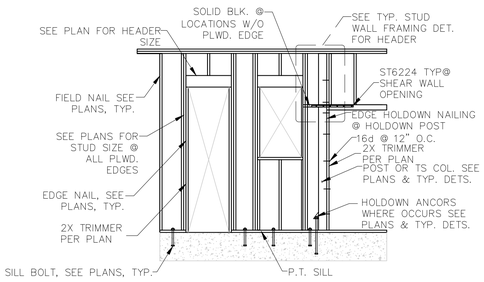
NOTE:
*PROVIDE ⅛" GAP @ TYP. PANEL JOINT

DIAPHRAGM NAILING SCHEDULE

LOCATION	SHEATHING	BLKG REQD	SIZE OF NAIL	NAIL SPACING AT BOUNDARIES AND "OTHER" PANEL EDGES	NAIL SPACING AT INTERMEDIATE FRAMING MEMBERS	NAIL SPACING AT BLOCKED PANEL JOINTS
ROOF	SEE STRUCT NOTES	NO	10d	6" OC	12" OC	6" OC
SUB-FLR		NO	10d & GLUE	4" OC	12" OC	4" OC

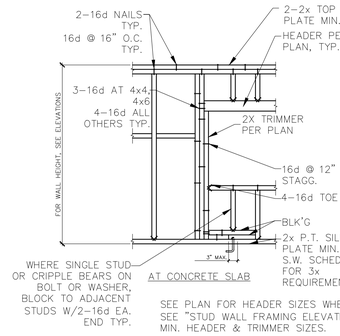
DIAPHRAGM NOTES
1. ALL DIAPHRAGM SHEATHING IS TO BE STAGGERED IN THE DIRECTION OF THE PLYWOOD SPAN PER DIAPHRAGM DETAIL
2. PROVIDE BOUNDARY NAILING CONTINUOUS AROUND THE ENTIRE PERIMETER OF THE DIAPHRAGM
3. NAILS SHALL BE COMMON OR GALVANIZED BOX
4. ALL FRAMING MEMBERS SHALL BE 2x MINIMUM NOMINAL WIDTH

1 TYP. PLY. DIAPHRAGM NAILING
SCALE 1/4" = 1'-0"

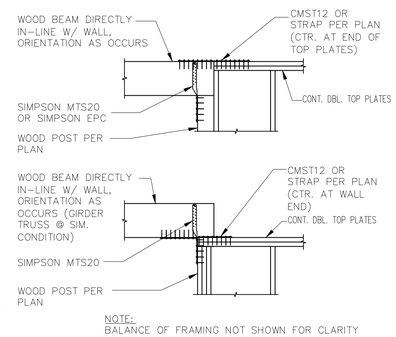


NOTES:
1. HEADERS KINGSTUDS AND OTHER REFERENCES ON PLAN GOVERN OVER TYPICAL DETAIL
2. SEE SHEAR WALL PLYWOOD NAILING DETAIL FOR ADDITIONAL INFORMATION
3. AT WOOD FRAMED WALLS USE SILL CONNECTION PER SHEAR WALL SCHEDULE

2 TYP. SHEAR WALL FRAMING
SCALE 1/4" = 1'-0"

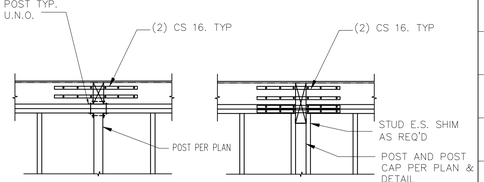


3 TYP. STUD WALL OPENING FRAMING
SCALE 1/2" = 1'-0"



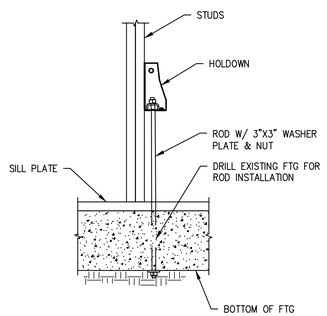
NOTE:
BALANCE OF FRAMING NOT SHOWN FOR CLARITY

4 TYP. TIE STRAP CONN. DETAILS
SCALE 1/2" = 1'-0"



NOTE:
BALANCE OF FRAMING NOT SHOWN FOR CLARITY

5 TYP. STRAP AT BEAM
SCALE 1/2" = 1'-0"



6 TYP. HOLDOWN AT EXISTING FTG
SCALE 1/2" = 1'-0"

SHEAR WALL SCHEDULE

MARK	SHEATHING	SIDE	PANEL NAILING SIZE	PANEL NAILING EDGE	PANEL NAILING FIELD	PANEL BLOCKING	SILL PLATE	ANCHOR BOLTS (MIN. 7" EMBED)	SHEAR CLIP	VALUE (PLF)
A	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	ONE	8d	6" O.C.	12" O.C.	2x	2x	5/8" x 10" @ 48" O.C. OR UFP10-SDS3 @ 48" O.C.	SIMPSON LTP4/A35 @ 18" O.C.	230
B	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	ONE	8d	4" O.C.	12" O.C.	3x	3x (2) 2x	5/8" x 12" @ 42" O.C. OR UFP10-SDS3 @ 42" O.C.	SIMPSON LTP4/A35 @ 18" O.C.	380
C	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	ONE	8d	3" O.C.	12" O.C.	3x	3x (2) 2x	5/8" x 12" @ 36" O.C. OR UFP10-SDS3 @ 36" O.C.	SIMPSON LTP4/A35 @ 16" O.C.	420
D	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	ONE	10d	3" O.C.	12" O.C.	3x	3x (2) 2x	5/8" X 12" @ 24" O.C. OR UFP10-SDS3 @ 24" O.C.	SIMPSON LTP4/A35 @ 12" O.C.	560
E	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	TWO	8d	6" O.C.	12" O.C.	3x	3x (2) 2x	5/8" X 12" @ 32" O.C.	SIMPSON LTP4 E.F. @ 24" O.C.	520
F	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	TWO	8d	4" O.C.	12" O.C.	3x	3x (2) 2x	5/8" x 12" @ 24" O.C.	SIMPSON LTP4 E.F. @ 18" O.C.	760
G	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	TWO	8d	3" O.C.	12" O.C.	3x	3x (2) 2x	5/8" x 12" @ 16" O.C.	SIMPSON LTP4 E.F. @ 16" O.C.	980
H	7/16" APA RATED SHEATHING WITH STUDS @ 16" O.C.	TWO	10d	3" O.C.	12" O.C.	3x	3x (2) 2x	5/8" x 12" @ 12" O.C.	SIMPSON LTP4 E.F. @ 12" O.C.	1,200

NOTES:
1. SOME SHEAR WALLS LISTED MAY NOT BE USED IN THIS PROJECT. REFER TO PLAN FOR TYPES USED.
2. 8d NAIL = 2 1/2" x 0.131" COMMON OR 2 1/2" x 0.113" GALVANIZED BOX.
   10d NAIL = 3" x 0.148" COMMON OR 3" x 0.128" GALVANIZED BOX.
3. IF ANCHOR BOLT SPACING IS GREATER THAN SHEAR WALL LENGTH INSTALL (1) ANCHOR BOLT WITHIN 12" OF EACH END.
4. NAIL SIZES SHOWN ARE FOR COMMON NAILS OR GALVANIZED BOX. POWER DRIVEN NAILS SHALL COMPLY WITH ESR 1539 FOR RECOMMENDED SPACING AND INSTALLATION TO COMPLY WITH THE ABOVE SHEAR WALL SCHEDULE.
5. SILL PLATE ANCHORS SHALL INCLUDE A STEEL PLATE WASHER NOT LESS THAN 0.229"x3"x3" IN SIZE PER AF&PA SDPWS SECTION 4.3.6.4.3. THE HOLE IN THE PLATE WASHER SHALL BE PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 5/16" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1-3/4", PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT. THE PLATE WASHER SHALL EXTEND TO WITHIN ½" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE(S) WITH SHEATHING.
6. IN SEISMIC DESIGN CATEGORY D, E, OR F, WHERE SHEAR DESIGN VALUES EXCEED 700 POUNDS PER LINEAR FOOT (350 PLF ASD), ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL NOT BE LESS THAN A SINGLE 3-INCH NOMINAL MEMBER, OR TWO 2-INCH NOMINAL MEMBERS FASTENED TOGETHER IN ACCORDANCE WITH SECTION 2306.1 TO TRANSFER THE DESIGN SHEAR VALUES BETWEEN FRAMING MEMBERS. WOOD STRUCTURAL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED IN ALL CASES.
7. WHERE PANELS ARE APPLIED TO BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. ALTERNATIVELY, THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS SHAL BE 3" NOMINAL OR GREATER AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED.
8. SHEAR WALL NAILING MUST BE INSTALLED SUCH THAT THE NAIL HEAD OR CROWN IS FLUSH WITH THE SURFACE OF SHEATHING. OVERDRIVEN OR OVER PENETRATED NAILS WILL NOT BE ALLOWED OR COUNTED AS APPROPRIATE NAILING.

SHEAR WALL SCHEDULE
SCALE NTS

HOLDOWN SCHEDULE

MARK	HOLDOWN	WOOD MEMBER	WOOD FASTENER	ANCHOR BOLT	ANCHOR BOLT EMBEDMENT (IN)	COMMENTS SEE NOTES BELOW	VALUE (LBS)
0	NONE REQUIRED						
1	SIMPSON MST37	(2) 2x	(22) 16d NAILS 1/2 TOP & BOT.	N/A	N/A	WRAP & NAIL STRAP TO BEAM/HEADER BELOW AS REQUIRED	2,135
2	SIMPSON MST48	(2) 2x	(32) 16d NAILS 1/2 TOP & BOT.	N/A	N/A	WRAP & NAIL STRAP TO BEAM/HEADER BELOW AS REQUIRED	3,425
3	SIMPSON MST60	(2) 2x	(48) 16d NAILS 1/2 TOP & BOT.	N/A	N/A	WRAP & NAIL STRAP TO BEAM/HEADER BELOW AS REQUIRED	4,830
4	SIMPSON CMST12	(1) 4x	(86) 16d NAILS 1/2 TOP & BOT.	N/A	N/A	WRAP & NAIL STRAP TO BEAM/HEADER BELOW AS REQUIRED 39" END LENGTH	9,215
5	SIMPSON LSTHD8 OR LSTHD8RJ	(2) 2x SEE NOTES	(24) 16d SINKERS	N/A	8"	SEE NOTES 1, 2, 3, AND 4 USE (3) 2x AT CORNERS	1,220
6	SIMPSON HDU2-SDS2.5	(2) 2x	(6) SIMPSON SDS SCREWS	5/8" DIA. SIMP. SSTB16	12-5/8"	SEE NOTES 1, 2, 3, AND 4	2215
7	SIMPSON HDU4-SDS2.5	(2) 2x	(14) SIMPSON SDS SCREWS	5/8" DIA. SIMP. SSTB20	16-5/8"	SEE NOTES 1, 2, 3, AND 4	3285
8	SIMPSON HDU5-SDS2.5	(2) 2x	(14) SIMPSON SDS SCREWS	5/8" DIA. SIMP. SSTB24	20-5/8"	SEE NOTES 1, 2, 3, AND 4	4340
9	SIMPSON HDU8-SDS2.5	(1) 4x	(20) SIMPSON SDS SCREWS	7/8" DIA. SIMP. SB7/8x24	18"	SEE NOTES 1, 2, 3, AND 4	5820
10	SIMPSON HHDQ11-SDS2.5	(1) 6x	(24) SIMPSON SDS SCREWS	1" DIA. A307 THREADED ROD	de = 16" W = 48"	SEE NOTES 1, 2, 3, 4 AND 5	8030
11	SIMPSON HHDQ14-SDS2.5	(1) 6x	(30) SIMPSON SDS SCREWS	1" DIA. A307 THREADED ROD	de = 16" W = 48"	SEE NOTES 1, 2, 3, 4 AND 5	12375
12	SIMPSON HDU14-SDS2.5	(1) 6x	(36) SIMPSON SDS SCREWS	1" DIA. A307 THREADED ROD	de = 16" W = 48"	SEE NOTES 1, 2, 3, 4 AND 5	12425

NOTES:
1. DOUBLE STUDS ARE REQUIRED AT HOLDOWNS UNLESS NOTED OTHERWISE. DOUBLE STUDS SHALL BE LAMINATED TOGETHER WITH 16d NAILS AT 6" O.C. FULL HEIGHT (TYPICAL).
2. PROVIDE HOLDOWN NOTED WITHIN 6" FROM EACH END OF EACH SHEAR WALL SHOWN ON PLANS.
3. ADD (2) EXTRA VERTICAL DOWEL WITH STANDARD HOOK IN FOOTING AT EACH ANCHOR BOLT LOCATION.
4. ADJUST FOOTING AND STEM WALL HEIGHT TO ACCOMMODATE ANCHOR BOLT EMBEDMENT REQUIREMENTS.
5. ADJUST FOOTING AND STEM WALL HEIGHT TO ACCOMMODATE ANCHOR BOLT EMBEDMENT REQUIREMENTS.
6. SEE THREADED ROD ANCHOR DETAIL.
7. FOR EXISTING STEM WALL, DRILL AND EPOXY ANCHOR. USE A307 THREADED ROD WITH SIMPSON SET-XP EPOXY. SEE PLANS AND DETAILS FOR REQUIRED EMBEDMENT.
8. ALL HOLDOWN ANCHORS AND BOLTS SHALL BE INSTALLED IN THE CORRECT LOCATION IN THE TOP OF THE CONCRETE WALL AND SECURED TO THE FORMS PRIOR TO CONCRETE INSTALLATION. THERE IS NO PRACTICAL SOLUTION TO POST-INSTALLED HOLDOWN ANCHORS IN THE TOP OF THE 8" CONCRETE STEM WALL. NO EPOXY OR MECHANICAL ANCHOR BOLT ALTERNATIVES WILL BE OFFERED FOR MISSING OR MISPLACED EMBEDDED ANCHORS. CONCRETE FOOTINGS AND STEM WALLS MAY HAVE TO BE REMOVED AT CONTRACTOR'S EXPENSE TO MITIGATE MISPLACED, MISALIGNED, OR MISSING HOLDOWN ANCHORS OR BOLTS.

HOLDOWN SCHEDULE
SCALE NTS

6/02/2022

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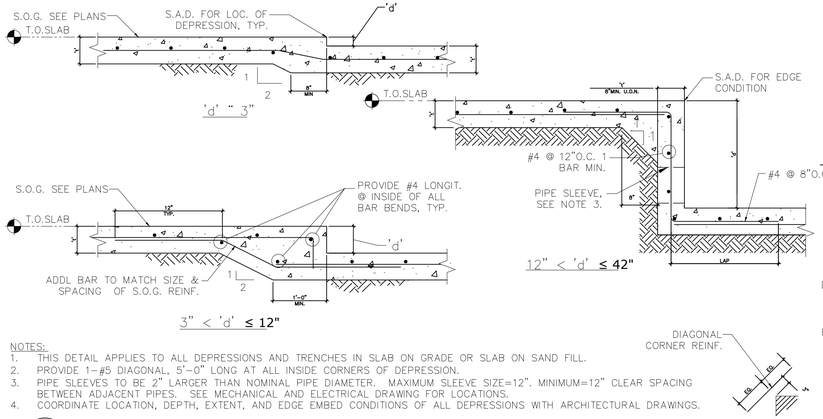
JOB # 2022004

REV	DESCRIPTION	DATE

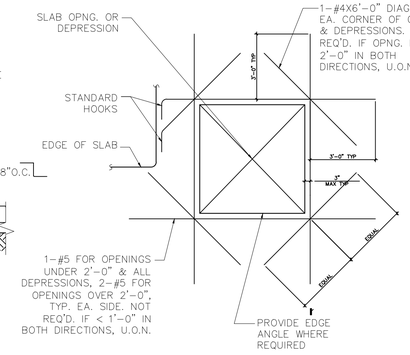
Drawn By:
Drawing Title:
SHEAR WALL DETAILS

Sheet
S3.3

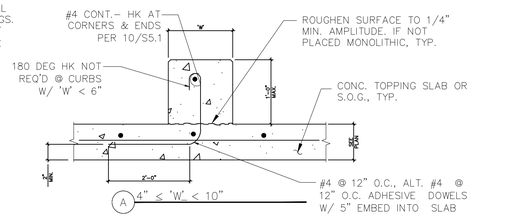


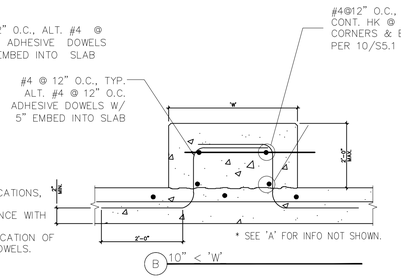
NOTES:
1. THIS DETAIL APPLIES TO ALL DEPRESSIONS AND TRENCHES IN SLAB ON GRADE OR SLAB ON SAND FILL.
2. PROVIDE 1–#5 DIAGONAL, 5'–0" LONG AT ALL INSIDE CORNERS OF DEPRESSION.
3. PIPE SLEEVES TO BE 2" LARGER THAN NOMINAL PIPE DIAMETER. MAXIMUM SLEEVE SIZE=12". MINIMUM=12" CLEAR SPACING BETWEEN ADJACENT PIPES. SEE MECHANICAL AND ELECTRICAL DRAWING FOR LOCATIONS.
4. COORDINATE LOCATION, DEPTH, EXTENT, AND EDGE EMBED CONDITIONS OF ALL DEPRESSIONS WITH ARCHITECTURAL DRAWINGS.

1 SLAB ON GRADE DEPRESSION
SCALE: 1/2"=1'–0"



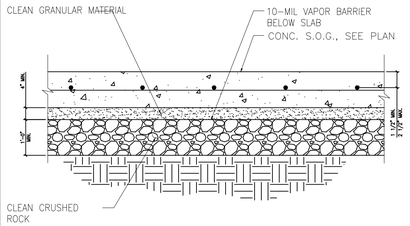
2 SLAB PENETRATION REINFORCING
SCALE: 1/2"=1'–0"





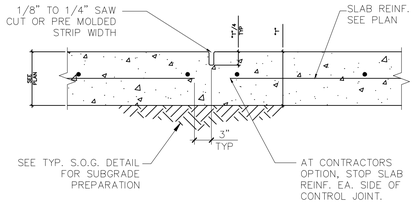
NOTES:
1. SEE ARCHITECTURAL & MECHANICAL DRAWINGS FOR CURB LOCATIONS, DIMENSIONS, CHAMFERS & INSERTS.
2. COORDINATE REINFORCEMENT LOCATIONS TO AVOID INTERFERENCE WITH INSTALLATION OF ADHESIVE DOWELS.
3. USE ALTERNATE IN DOWELS ARE NOT LOCATED IN PROPER LOCATION OF CURB IN CURB IS INSTALLED AT SLAB LOCATIONS WITHOUT DOWELS.

3 TYPICAL RAISED CURBS & PADS
SCALE: 1/2"=1'–0"



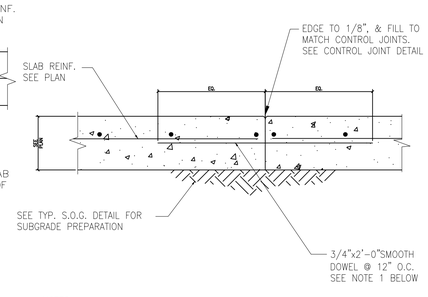
NOTES:
1. SEE GEOTECHNICAL REPORT.
2. SEE SPECIFICATIONS FOR GRANULAR MATERIAL & CRUSHED ROCK.
3. SEE PLANS FOR LOCATIONS OF COLUMN BLOCKOUTS, CONSTRUCTION JOINTS, CONTROL JOINTS AND SLAB DEPRESSIONS.

4 TYP. SUBGRADE PREP. & SLAB ON GRADE DETAIL
SCALE: 1/2"=1'–0"



NOTES:
1. WHEN USED, MAKE SAW CUT AS SOON AS SLAB CAN SUPPORT WEIGHT OF WORKERS & EQUIPMENT WITHOUT DAMAGE TO SLAB FINISH, & CUTS CAN BE MADE WITHOUT DAMAGE TO THE CONCRETE MAKE TRIAL CUTS AS REQUIRED.
2. JOINT TO BE THOROUGHLY CLEANED PRIOR TO FILLING.
3. PROVIDE FILLER MATERIAL IN ACCORDANCE WITH THE SPECIFICATIONS & APPLY STRICTLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. FILLER MATERIAL SHALL BE APPLIED WHEN SLAB IS UNDER PERMANENT TEMPERATURE CONTROL, SUCH AS AT THE COMPLETION OF THE BUILDING SHELL, WHENEVER POSSIBLE. IF PERMANENT TEMPERATURE CONTROL IS NOT ESTABLISHED, A MINIMUM OF 90 DAYS AFTER THE COMPLETION OF SLAB CONSTRUCTION SHALL ELAPSE PRIOR TO APPLYING THE JOINT FILLER.

5 CONTROL JOINTS AT SLAB ON GRADE
SCALE: 1/2"=1'–0"



NOTES:
1. BREAK BOND BETWEEN NEW AND PREVIOUSLY POURED SLAB ON GRADE BY SPRAYING OR PAINTING EXPOSED SIDE OF KEY WITH CURING COMPOUND OR FORM OIL.
2. LONG STRIP CONSTRUCTION METHOD SHALL BE USED FOR ALL SLAB ON GRADE, UNLESS OTHERWISE APPROVED BY RESIDENT ENGINEER.
3. SUBGRADE SHALL BE FREE OF STANDING WATER AT TIME OF CONCRETE PLACEMENT.

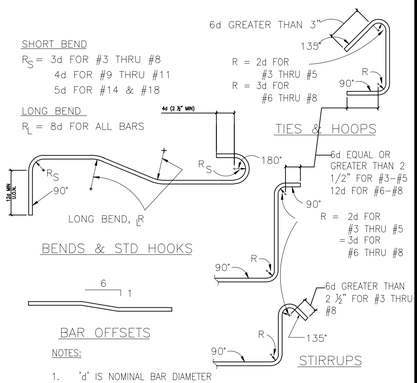
6 CONSTRUCTION JOINTS AT SLAB ON GRADE
SCALE: 1/2"=1'–0"

LAP SPLICE LENGTHS
(INCHES)(1,2)
GRADE 60 REINFORCING BARS, NORMAL WEIGHT CONCRETE

BAR SIZE		#3	#4	#5	#6	#7	#8	#9	#10	#11
fc'= 3000PSI	TOP BAR (3)	21	28	35	46	62	82	104	132	162
	OTHER BAR	16	21	27	35	48	63	80	101	124
fc'= 4000PSI	TOP BAR (3)	20	24	30	40	54	71	90	114	140
	OTHER BAR	16	19	23	30	41	55	69	88	108
fc'= 5000 PSI	TOP BAR (3)	20	22	27	35	48	63	80	102	125
	OTHER BAR	16	17	21	27	37	49	62	79	96

NOTES:
1. LAP SPLICE LENGTHS, WHERE PERMITTED, SHALL BE IN ACCORDANCE WITH THIS TABLE UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE.
2. EMBEDMENT LENGTHS OF DOWELS SHALL BE EQUAL TO LENGTHS FOR "OTHER" BARS.
3. TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

7 REINFORCING LAP SPLICE TABLE
SCALE: NTS

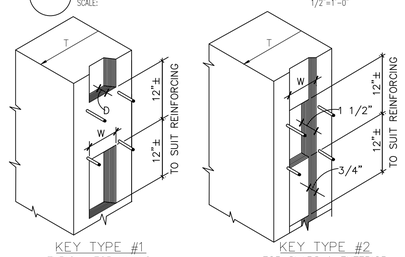


NOTES:
1. 'd' IS NOMINAL BAR DIAMETER
2. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.

8 HOOKS AND BENDS
SCALE: NTS

NOTES:
1. COLUMN DOWELS, TYPICAL HORIZONTAL WALL STEEL AND TYPICAL WALL STEEL DOWELS MAY BE WIRED TOGETHER INSTEAD OF SPACING AS SHOWN ABOVE.
2. CLEAR DISTANCE LIMITATION BETWEEN BARS SHALL APPLY ALSO TO THE CLEAR DISTANCE BETWEEN A CONTACT LAP SPLICE AND ADJACENT SPLICES OF BARS.
3. BARS SPLICED BY NONCONTACT LAP SPLICES SHALL NOT BE SPLICED TRANSVERSELY FURTHER APART THAN ONE–FIFTH THE REQUIRED LAP SPLICE LENGTH, NOR 6".

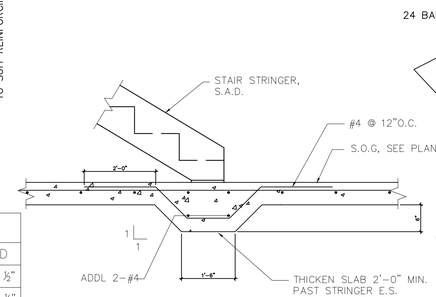
9 BAR SPACING & SLAB ON GRADE DETAIL
SCALE: NTS



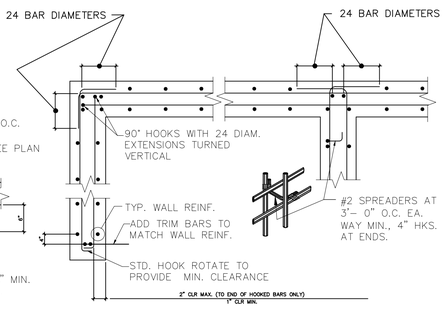
KEY SCHEDULE					
T	W	D	T	W	D
EQUAL LESS THAN 6" WALL OR SLAB	'T'	1 ½"	13"	7 ¼"	1 ½"
7"	7"	1 ½"	14" TO 16"	9 ¼"	2 ½"
8" TO 12"	5 ½"	1 ½"	18" & OVER	11 ¼"	2 ½"

NOTES:
1. BEFORE PLACING 2ND POUR, ALL SURFACES ARE TO BE ROUGHENED TO ¼" AMPLITUDE & THOROUGHLY CLEANED, SEE SPECIFICATIONS.
2. DETAILS APPLY TO BOTH HORIZONTAL & VERTICAL CONSTRUCTION JOINTS.

10 CONSTRUCTION JOINTS IN WALLS & SLABS
SCALE: 1/2"=1'–0"



11 STAIR STRINGER FOOTING
SCALE: 1/2"=1'–0"



NOTES:
1. WALLS WITH SINGLE CURTAIN OF STEEL SIMILAR TO ABOVE WITH HORIZONTAL HOOKS AT CORNERS ONLY.
2. SPLICES IN HORIZONTAL REINFORCEMENT SHALL BE STAGGERED.

12 WALL DETAIL REINF. @ CORNERS & INTER.
SCALE: NTS

6/02/2022

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PROFESSIONAL ENGINEER
6/4/2022

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7545 E Mercer way
Mercer Island, WA 98040

JOB # 2022004

REV	DESCRIPTION	DATE

Drawn By:
Drawing Title:
TYPICAL STRUCTURAL DETAILS
Sheet
S3.4