

CITY OF MERCER ISLAND

DEVELOPMENT SERVICES GROUP

9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org



INSPECTION REQUESTS:

online:



voicemail: (206) 275-7730

NOTE: ALL RECORDS AND DRAWINGS ARE SUBJECT TO PUBLIC DISCLOSURE AS REQUIRED BY RCW 42.56

CONTACT INFORMATION:

Applicant is to complete the following information.

Applicant Contact information prior to permit issuance: Name, Address, Phone, Email
Applicant Contact information post permit issuance: Name, Address, Phone, Email

REQUIRED SPECIAL INSPECTIONS / STRUCTURAL OBSERVATIONS:

It is the Engineer of Record's responsibility to specify all required Special Inspections or Structural Observation (check items below). The owner is responsible for hiring an approved private Special Inspector for the checked inspections noted below.

STRUCTURAL OBSERVATION BY ENGINEER OF RECORD (EOR): Engineer of Record, Company, Phone, General Conformance to Construction Documents, Other

SOILS / GEOTECHNICAL: Special Inspector, Company, Phone, Erosion control measures, Subsurface drainage placement, Shoring installation and monitoring, Verify fill material and compaction, etc.

REINFORCED CONCRETE: Special Inspector, Company, Phone, Concrete strength, Retaining wall construction, Reinforcing steel and concrete placement, etc.

STRUCTURAL STEEL: Special Inspector, Company, Phone, Fabrication and shop welds, Moment Frame construction, Structural steel erection, field welds and bolting, etc.

STRUCTURAL MASONRY: Special Inspector, Company, Phone, Mortar strength, Glass unit masonry installation, Masonry unit strength, Wall panel and veneer installation, etc.

WOOD: Special Inspector / Engineer of Record, Company, Phone, Lateral resisting system construction, High strength diaphragm construction, etc.

OTHER SPECIAL INSPECTIONS: Special Inspector, Company, Phone, Epoxy grout installations, Stucco installation, Expansion anchor installations, Infiltration System, etc.

DEFERRED SUBMITTALS:

The Applicant is required to select all deferred submittals / shop drawings for submittal to the City for review and approval prior to item fabrication / construction.

Connector plate wood trusses, Metal joist / metal trusses, Post tension layout, Exterior cladding, etc.

ENERGY CODE COMPLIANCE INFORMATION:

Indicate where the following information is located in the drawing set. Alternatively, incorporate or include the Residential Energy Code Prescriptive Compliance (RECPC) Form into the drawing set.

Building envelope, Air Leakage Testing, Whole house ventilation, Duct Leakage Testing, Energy Credit Information, Postconstruction Test, etc.

TO BE COMPLETED BY DSG

PROJECT ALERTS: Construction of the project shall be from approved plans only. No deviation from the approved project plans is allowed without prior approval from the City of Mercer Island.

TREE PROTECTION REQUIREMENTS: Tree protection as shown on approved drawings shall be installed at tree dripline prior to start of any site work and must remain in place throughout the project.

FIRE PROTECTION REQUIREMENTS: Separate Permits are required for ALL fire protection systems. Fire Sprinkler, Monitored Household Fire Alarm, etc.

WATER SUPPLY REQUIREMENTS: Fire sprinkler design calculations must be provided prior to determining water supply system requirements. City Installation, Applicant Installation, etc.

DRAINAGE REQUIREMENTS: On site detention system required, Direct discharge into the lake, On site infiltration system required, etc.

SIDE SEWER REQUIREMENTS: Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is lower than the elevation of the upstream manhole rim.

APPROVED CODE ALTERNATIVES: Code alternatives must be inspected. Refer to the Inspection Checklist. CA1, CA2

SURVEY REQUIREMENTS: Surveyor shall verify points chosen for height calculations and point verification shall be submitted at the time of City foundation inspection.

MAXIMUM 40 PERCENT ALTERATION INSPECTION: A Building Inspection prior to demolition is required for all legally nonconforming single family dwelling to ensure no more than 40 percent of the dwelling's exterior walls are structurally altered.

GEOTECHNICAL INFORMATION: Land clearing, grading, filling and foundation work within geologic hazard areas is NOT PERMITTED between October 1 and April 1 without an approved Seasonal Development Limitation Waiver.

SEASONAL DEVELOPMENT LIMITATION RESTRICTION: Applies (Geologic Hazard area). Grading not permitted between October 1 through April 1.

TO BE COMPLETED BY DSG

TO BE COMPLETED BY DSG

REQUIRED CONSTRUCTION INSPECTIONS: Inspector shall initial and date appropriate inspection only if approved. Tree protection, Erosion control, Sewer disconnect and cap, etc.

TO BE COMPLETED BY DSG

90 DAY TEMPORARY CERTIFICATE OF OCCUPANCY (TCO): Final Inspection: Tree Restoration, Fire protection, Access Road, Fire Extinguishing System, etc.

ADDITIONAL REQUIRED CITY INSPECTIONS: Call the appropriate contact to arrange the inspection. Required Inspection(s), Contact, Phone, Scheduling

IMPACT FEES: Impact fees apply and are due prior to Final Inspection or on date, whichever occurs first.

PLAN REVIEW APPROVALS: Not all review disciplines may be required to review the documents. Building, Planning, Engineering, Tree, Fire

TO BE COMPLETED BY DSG



CERTIFICATE OF OCCUPANCY issued after all required inspections have been performed and approved.

PROJECT NAME: PROJECT ADDRESS:

APPROVED DRAWINGS MUST BE KEPT ON THE BUILDING SITE AT ALL TIMES REVIEWED FOR CODE COMPLIANCE

PROPERTY INFORMATION

PROJECT ADDRESS: 4215 87th Ave SE, Mercer Island, WA 98040
 OWNER: BALDWIN TYLER+ELLISSA
 JURISDICTION: MERCER ISLAND
 PARCEL #: 362250-0115
 LEGAL DESCRIPTION: ISLAND CREST ADD Plat Block: 1 Plat Lot: 23
 WATER: WATER DISTRICT
 SEWER: PUBLIC
 YEAR BUILT: 1963

SCOPE OF WORK

REMODELLING KITCHEN & DINING IN FIRST FLOOR IN ADDITION TO ADDING NEW ENTRANCE IN THE FRONT. REMODELLING SECOND FLOOR.

ZONING

ZONING DESIGNATION: R-9.6
 FRONT YARD SETBACK: 20'
 SIDE YARD SETBACK: 17% OF LOT WIDTH = 17.85' TOTAL
 REAR YARD SETBACK: 25'
 MAX BUILDING HEIGHT: 30'
 MAX LOT COVERAGE: 40%
 MAX HARDSCAPE: 9%

LOT COVERAGE

MAX LOT COVERAGE: 40%

EXISTING COVERAGE

AREA COVERED BY BUILDING (INCLD. ROOF EAVES & GUTTERS): 3,611 sqft
 DRIVEWAYS: 1,618 sqft
 LOT AREA: 14,280 sqft
 TOTAL COVERAGE: 5,229 sqft = 36.6%

PROPOSED COVERAGE

AREA COVERED BY BUILDING (INCLD. ROOF EAVES & GUTTERS): 3,807 sqft
 DRIVEWAYS: 1,512 sqft
 LOT AREA: 14,280 sqft
 TOTAL COVERAGE: 5,319 sqft = 37%

HARDSCAPE CALCULATION

MAX HARDSCAPE: 9%
 EXISTING HARDSCAPE: 786 sqft = 5.5%
 PROPOSED HARDSCAPE: 793 sqft = 5.6%

GROSS FLOOR AREA (GFA)

MAX GFA: 40%

EXISTING AREA

BASEMENT: 840 sqft
 1ST FLOOR: 2,380 sqft
 2ND FLOOR: 1,415 sqft
 ATTACHED GARAGE: 380 sqft
 TOTAL FLOOR AREA: 5,015 sqft
 LOT AREA: 14,280 sqft
 EXISTING GFA: 35.1%

PROPOSED AREA

BASEMENT: 840 sqft
 1ST FLOOR: 2,576 sqft
 2ND FLOOR: 1,801 sqft
 ATTACHED GARAGE: 380 sqft
 TOTAL FLOOR AREA: 5,597 sqft
 LOT AREA: 14,280 sqft
 PROPOSED GFA: 39.2%

NOTES

NO TREES TO BE REMOVED & TREE PROTECTION FENCE WILL BE USED SO NO SOIL COMPACTION WILL OCCUR.

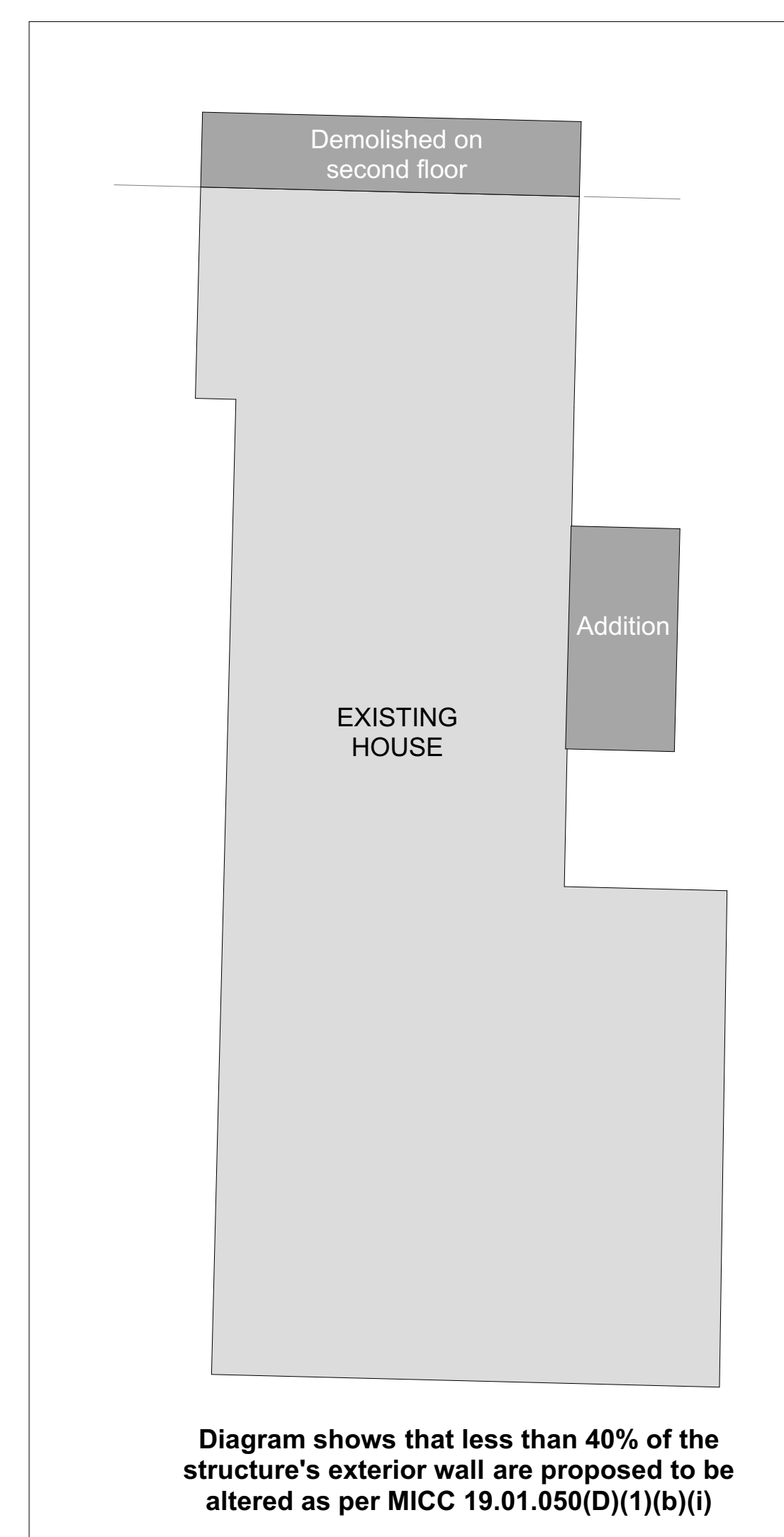
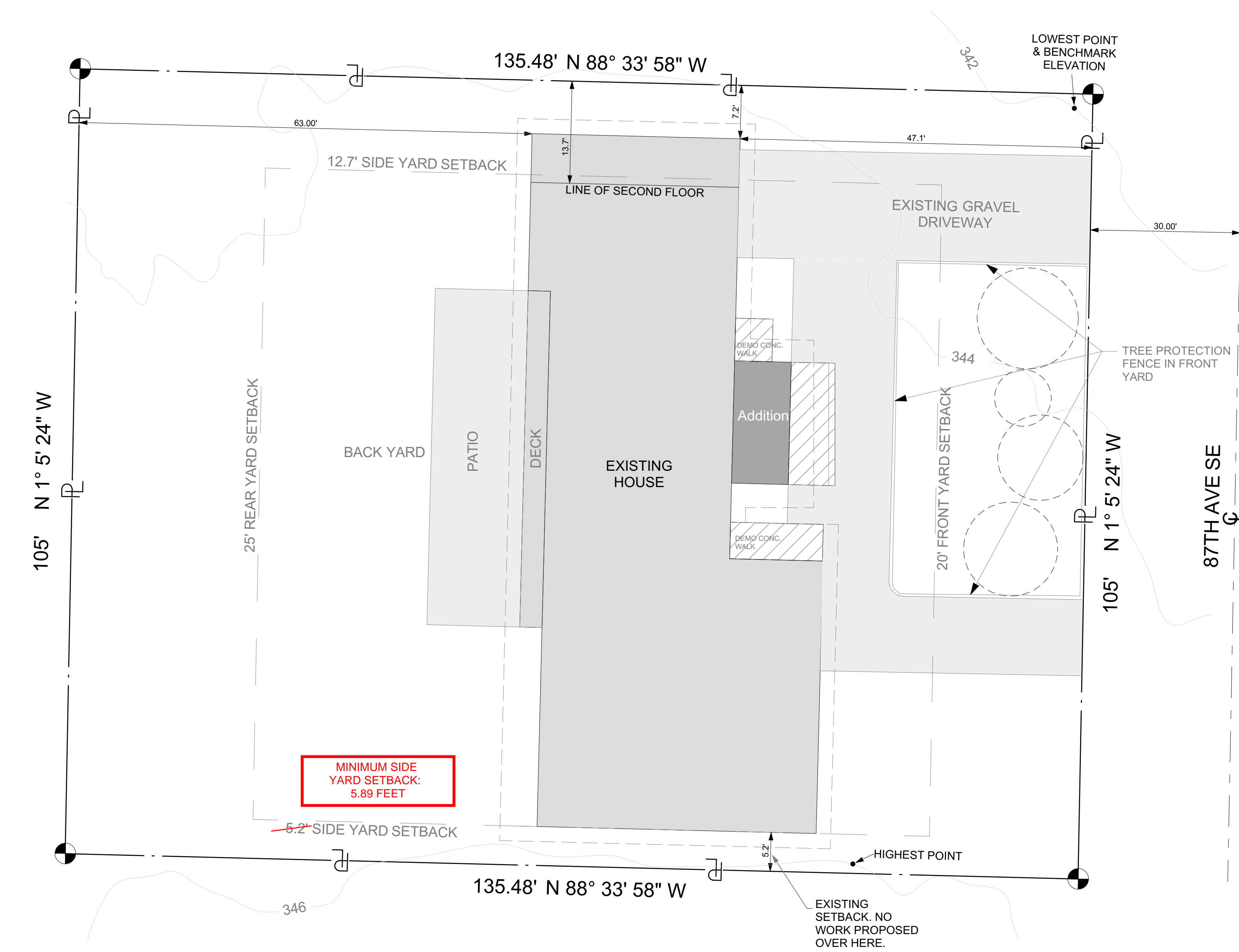
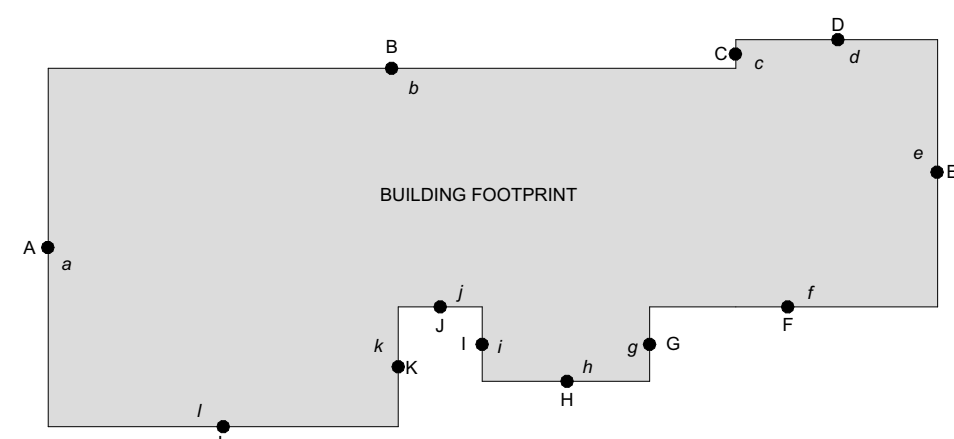
LOT SLOPE

LOWEST POINT: 342'
 HIGHEST POINT: 346'
 ELEVATION DIFFERENCE: 4'
 HORIZONTAL DIFFERENCE: 105.3'
 CALCULATION: 4/105.3 x 100 = 3.79

NOTE: ALL DRAWINGS COMPLY WITH THESE CODES:

- 2018 International Residential Code (IRC)
- 2018 International Fire Code (IFC)
- Washington State Energy Code (WCEC)

ABE CALCULATION



1
A0.01

SITE PLAN
SCALE: 1" = 10'

MIDPOINT ELEVATION	WALL SEGMENT LENGTH
A= 345.8'	a= 37.3'
B= 345'	b= 71.6'
C= 344'	c= 3'
D= 344'	d= 21'
E= 344'	e= 27.9'
F= 344'	f= 25.8'
G= 344'	g= 11.2'
H= 344.5'	h= 16.5'
I= 345'	i= 11.2'
J= 344.5'	j= 13.8'
K= 345'	k= 12.6'
L= 345.3'	l= 36.4'

ABE CALCULATION

$$(Axa)+(Bxb)+(Cxc)+(Dxd)+(Exe)+(Fxf)+(Gxg)+(Hxh)+(Ixi)+(Jxj)+(Kxk)+(Lxl)$$

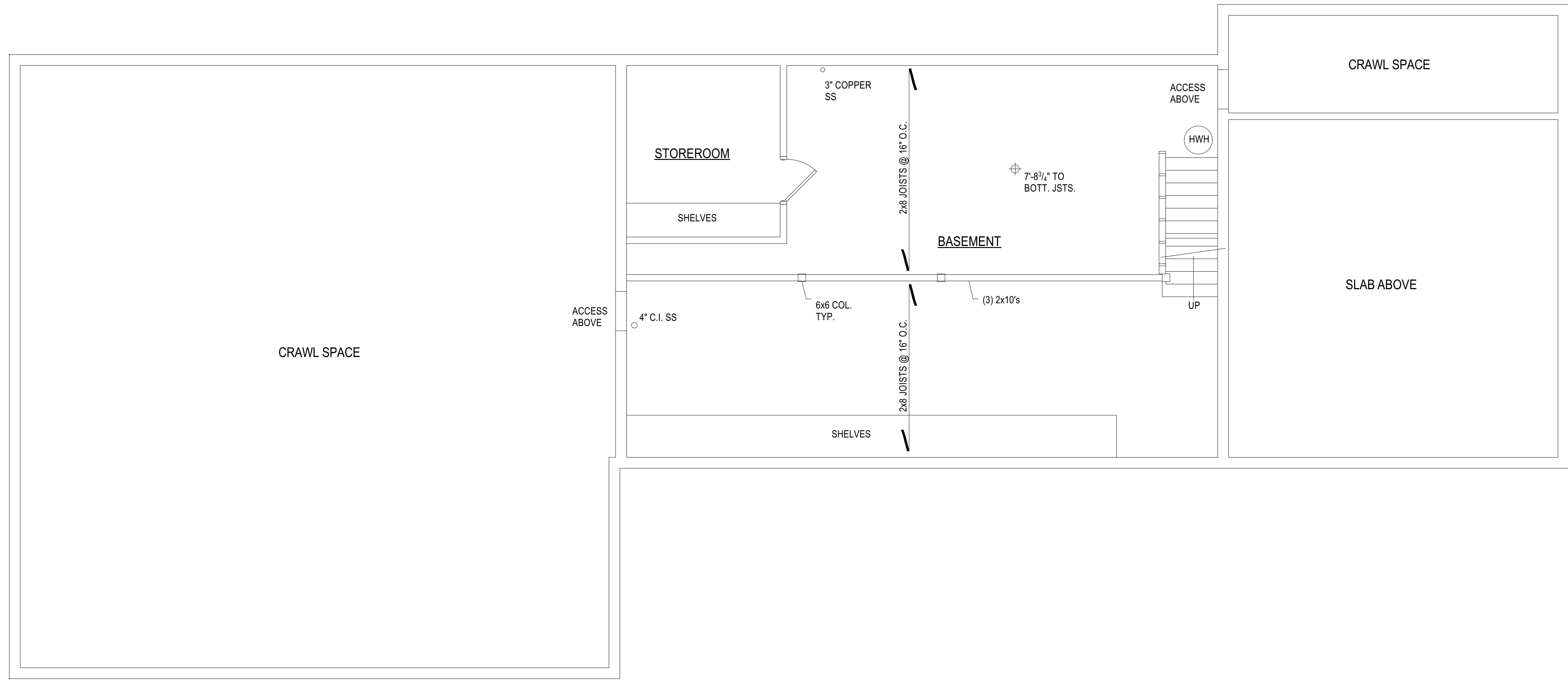
$$a + b + c + d + e + f + g + h + i + j + k + l$$

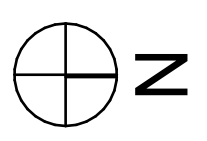
$$(345.8 \times 37.3) + (345 \times 71.6) + (344 \times 3) + (344 \times 21) + (344 \times 27.9) + (344 \times 25.8) + (344 \times 11.2) + (344.5 \times 16.5) + (345 \times 11.2) + (344.5 \times 13.8) + (345 \times 12.6) + (345.3 \times 36.4)$$

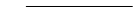

$$(12,898.34) + (24,702) + (1,032) + (7,224) + (9,597.6) + (8,875.2) + (3,852.8) + (5,684.25) + (3,864) + (4,754.1) + (4,347) + (12,568.92) = \frac{99,400.21}{288.3} = 344.8'$$

BUILDING HEIGHT



MAX BUILDING HEIGHT: 30'
 PROPOSED BUILDING HEIGHT: 26'-2"

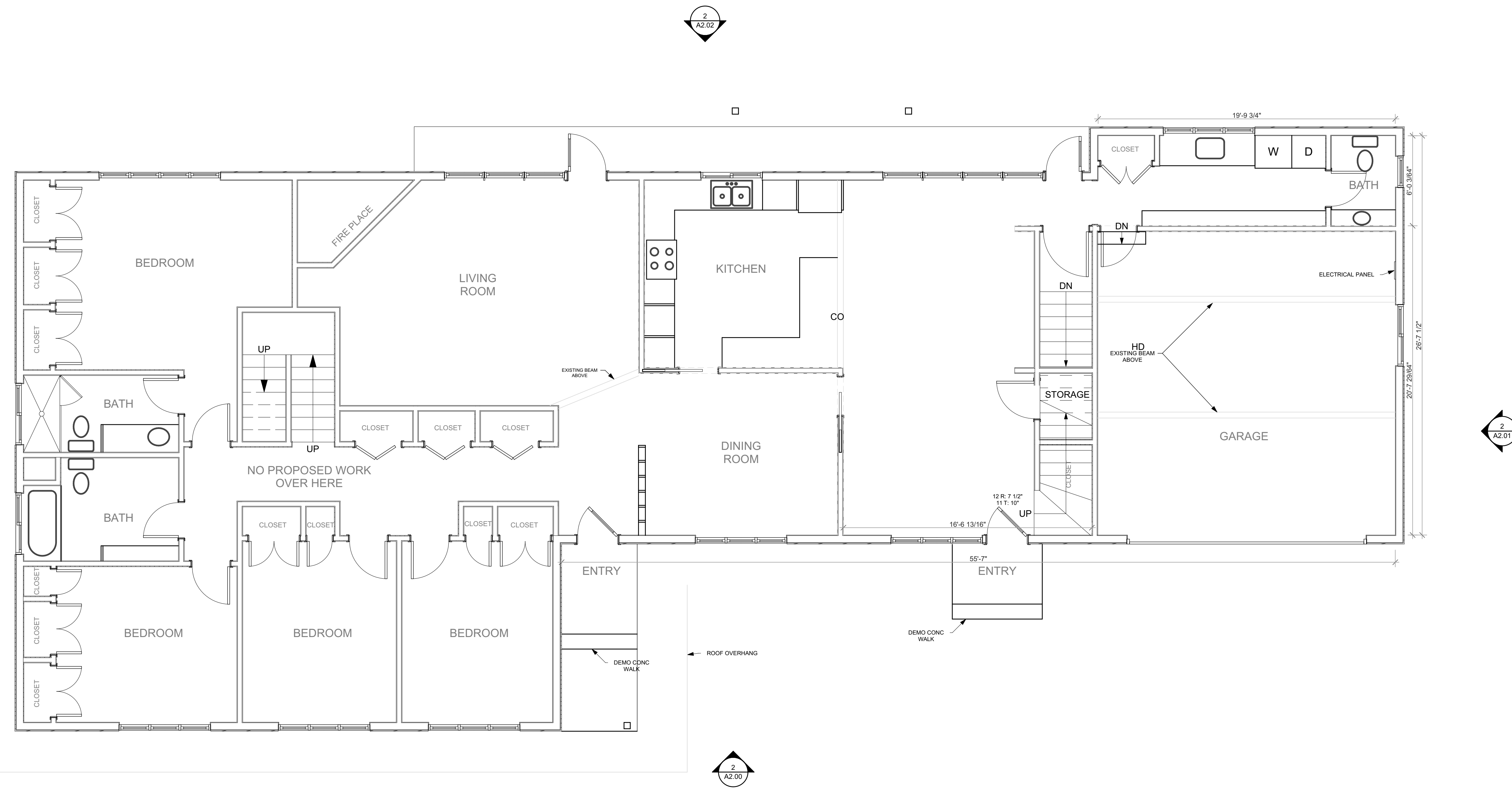


1
A1.00 EXISTING BASEMENT
SCALE: 1/4" = 1'-0" 

LEGEND	
EXISTING:	
DEMO:	



CLIENT APPROVAL	
DATE	DATE
REVISIONS	
	
	
NOTES	
REPRESENTATIVE: GH	
DRAWN BY: KHS	
DESIGNER: YA	
PROJECT #: 7070-D	
SHEET SIZE: 24 x 36	



1
A1.01 FIRST FLOOR EXISTING
SCALE: 1/4" = 1'-0"

LEGEND

EXISTING:	
DEMO:	



CLIENT APPROVAL

REVISIONS

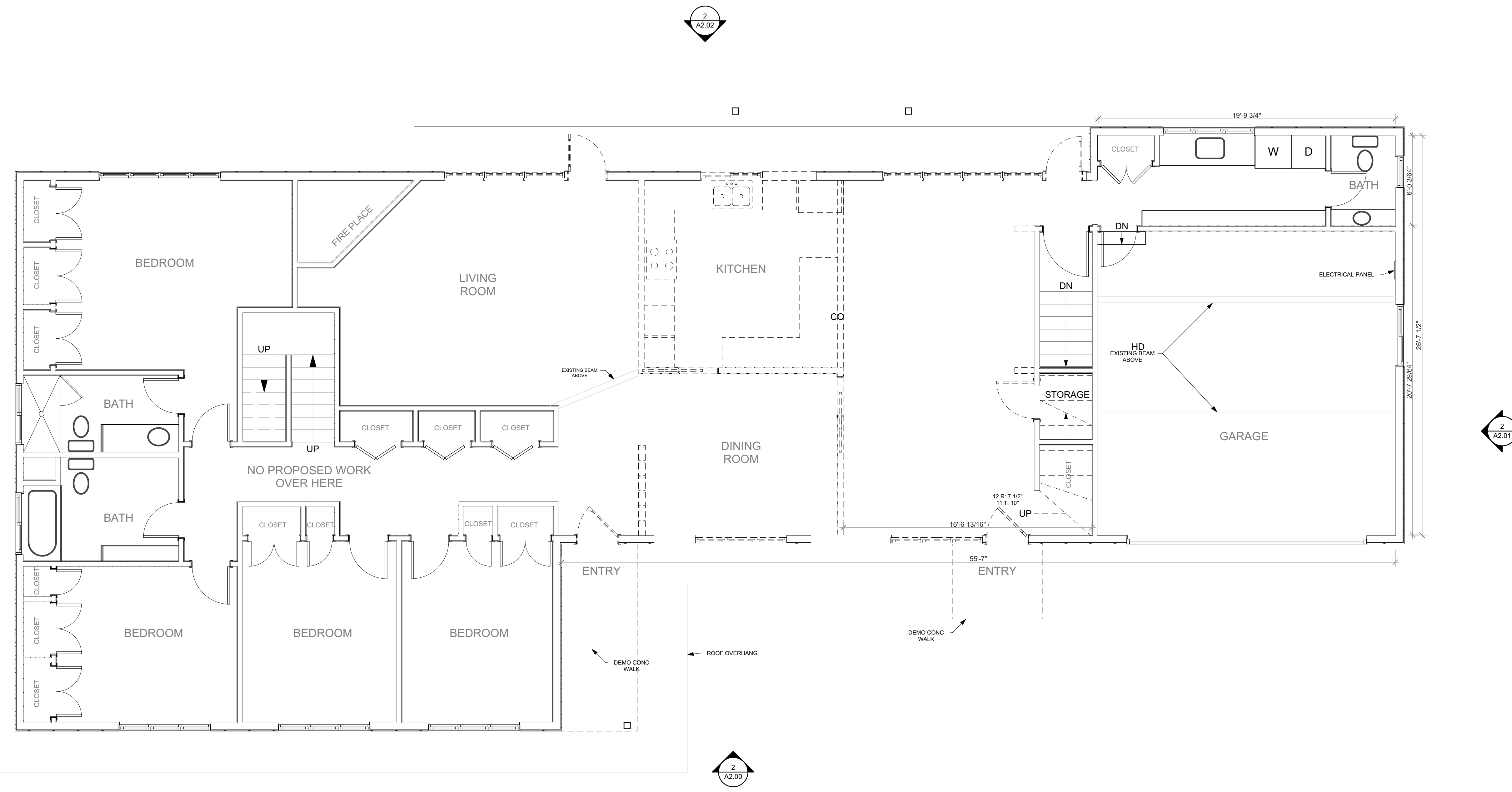
NOTES

REPRESENTATIVE: GH
DRAWN BY: KHS
DESIGNER: YA
PROJECT #: 7070-D
SHEET SIZE: 24 x 36

PROGRESS SET

FIRST FLOOR DEMO

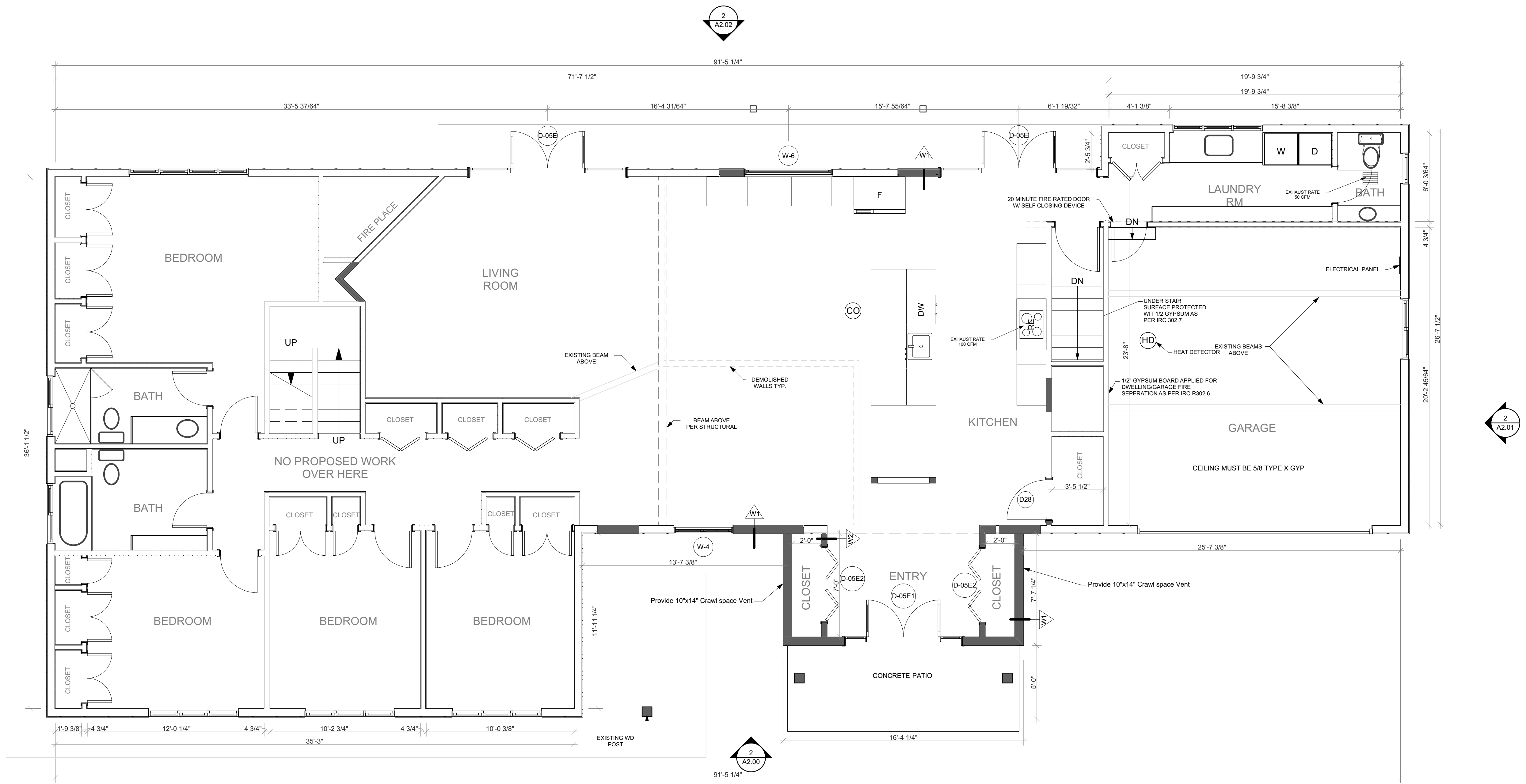
A1.02
PRINT DATE 1/31/2023



1
A1.02 FIRST FLOOR DEMO
SCALE: 1/4" = 1'-0"

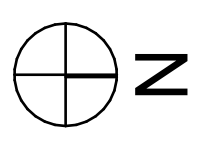
LEGEND

EXISTING:	
DEMO:	

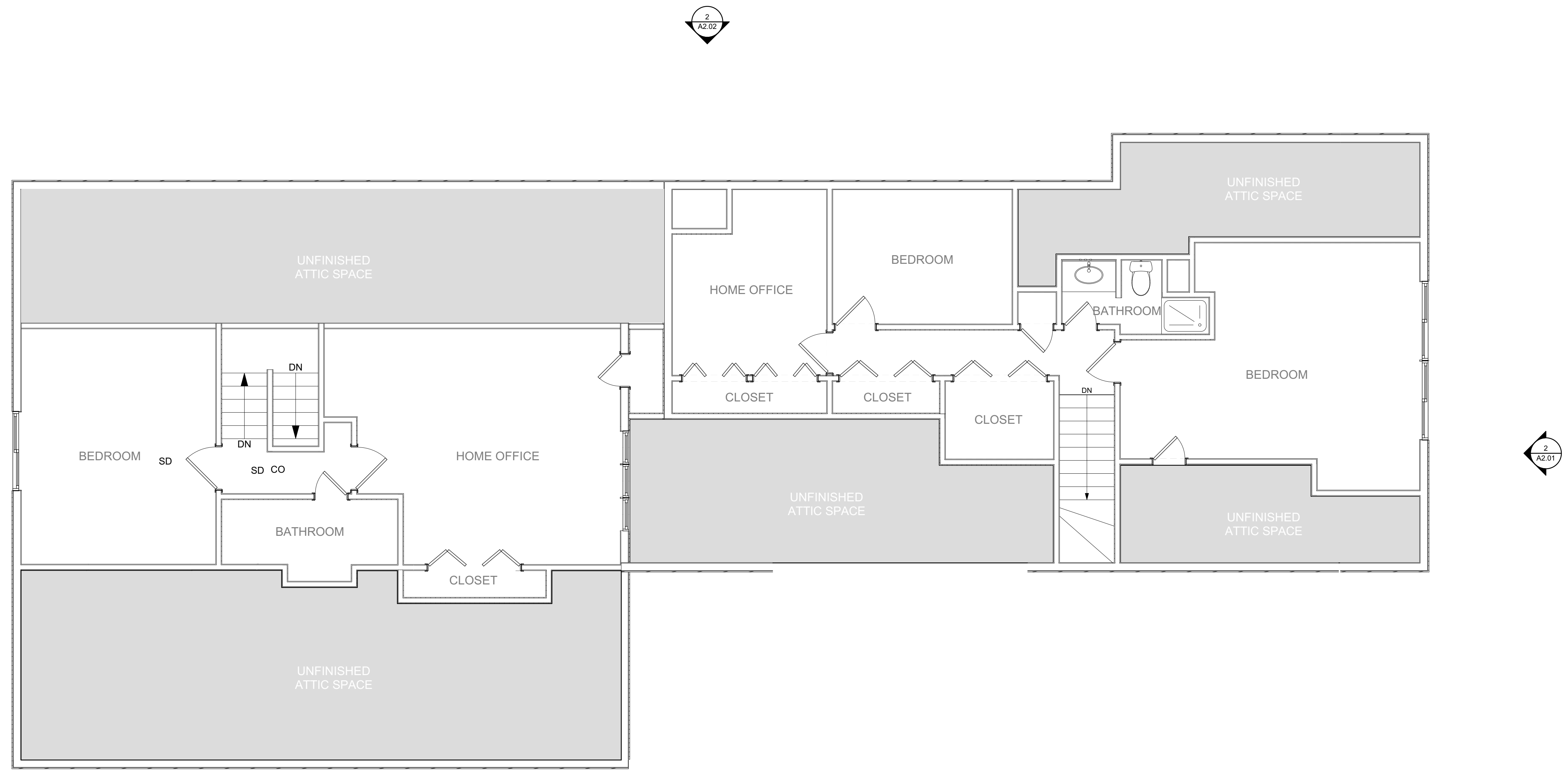


LEGEND

EXISTING:	—
NEW:	—

1
A1.03 FIRST FLOOR PROPOSED
SCALE: 1/4" = 1'-0" 

Note: Crawl Space Ventilation Calculation = 1sqft for 150 sqft.
Adding 196 Sqft, therefore providing 2 Vents.

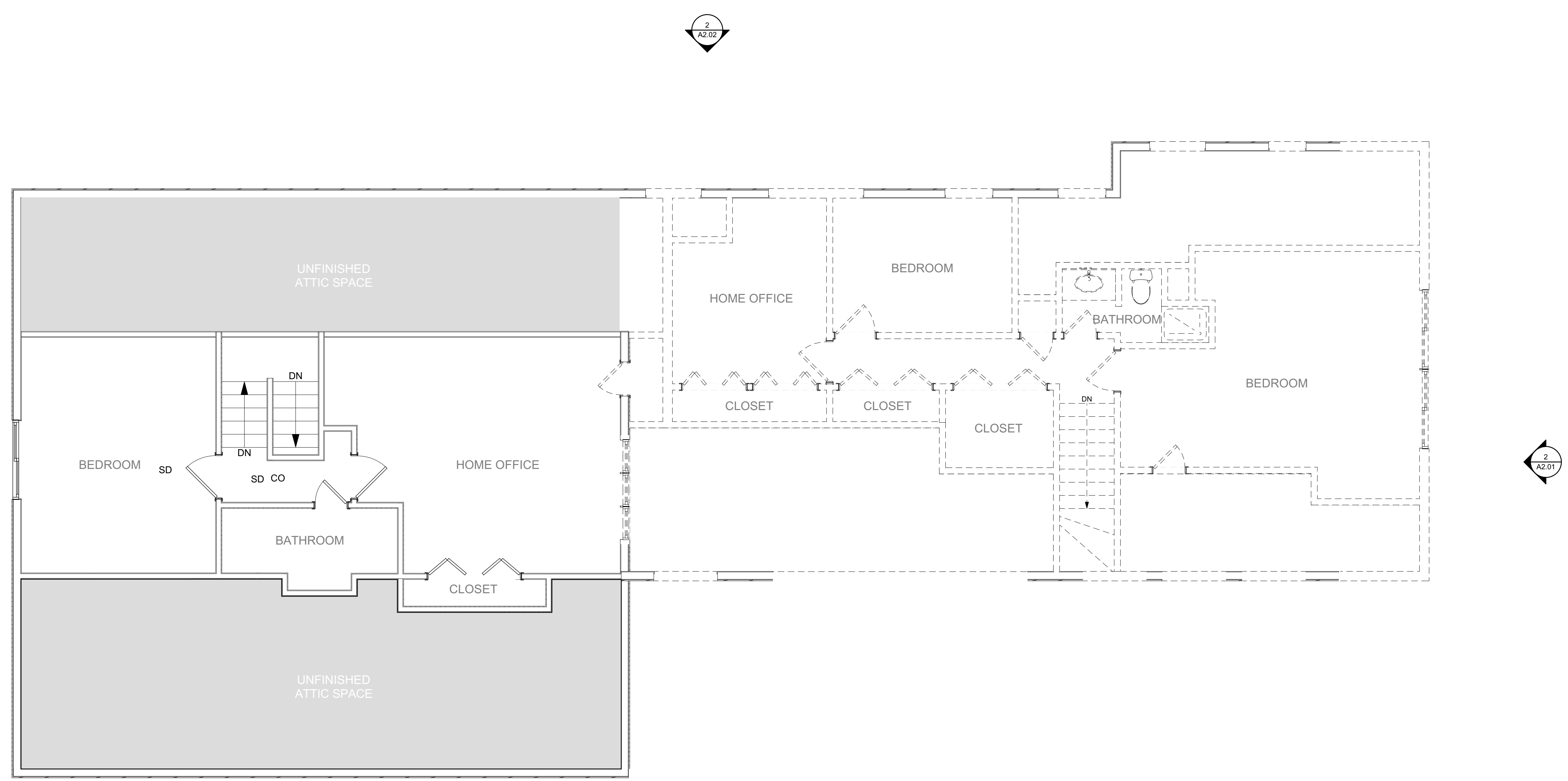


1
A1.04 SECOND FLOOR EXISTING
 SCALE: 1/4" = 1'-0"

LEGEND	
EXISTING:	
DEMO:	



CLIENT APPROVAL	
DATE	DATE
REVISIONS	
NOTES	
REPRESENTATIVE: GH	
DRAWN BY: KHS	
DESIGNER: YA	
PROJECT #: 7070-D	
SHEET SIZE: 24 x 36	



1
A1.05 SECOND FLOOR DEMO
 SCALE: 1/4" = 1'-0"

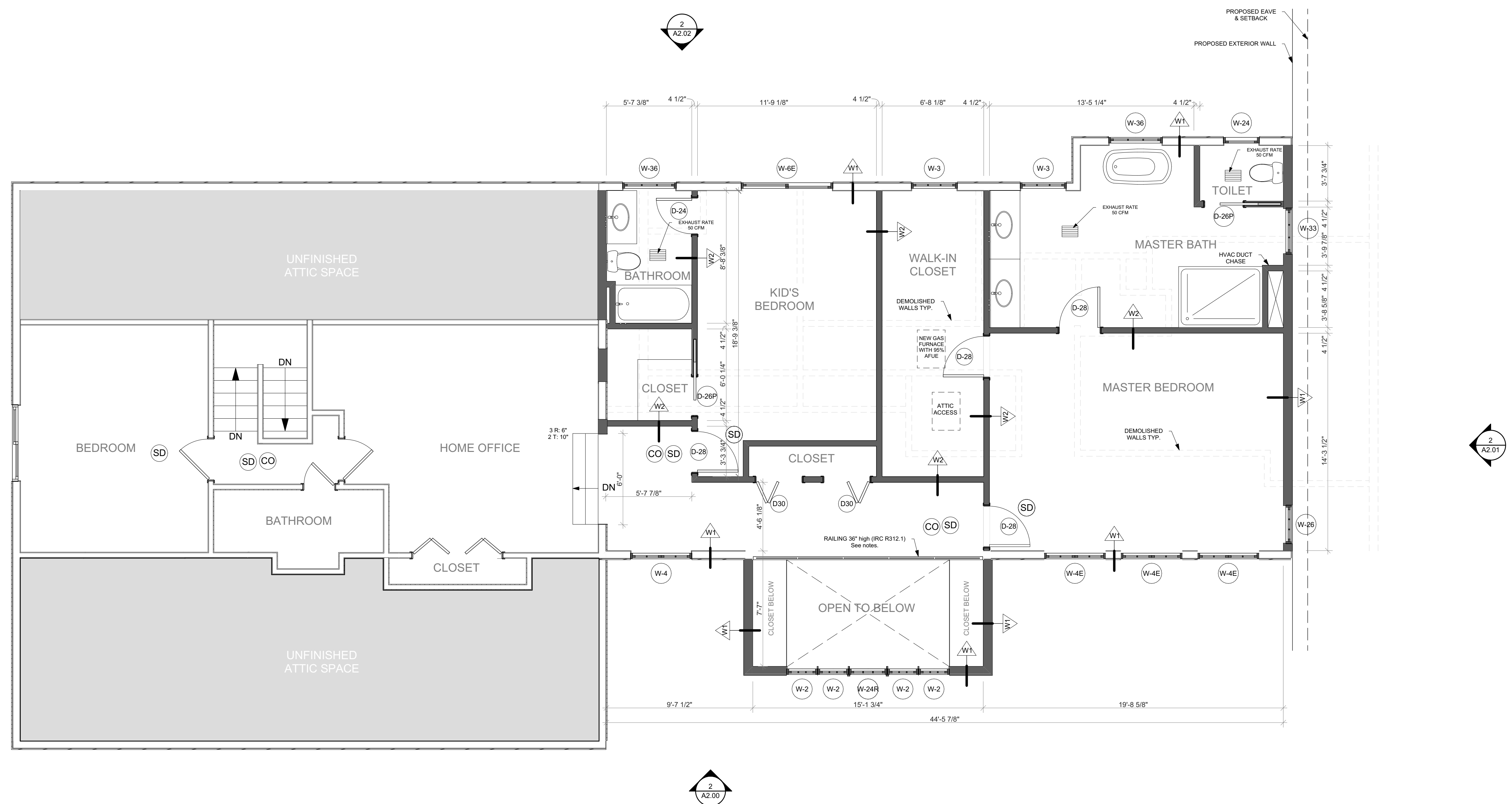
LEGEND	
EXISTING:	—
DEMO:	- - - - -

New gas furnace to comply with M1307.2
In attic furnace installations, where the unit is not rigidly attached to the structure, lateral bracing must be provided - typically straps running at a 45 angle from each corner of the unit to rigid framing members and tight enough to prevent horizontal movement.

New gas furnace to comply with M1305.1.3.
Attics containing appliances shall be provided with an opening and a clear and unobstructed passageway large enough to allow removal of the largest appliance.

NOTE: AS PER R302.11, FIRE BLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE.

NOTE: CONTRACTOR SHALL VERIFY TO INSPECTOR ALL GUARDS AND RAILINGS SHALL BE CAPABLE OF RESISTING 200LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION AS REQUIRED BY IRC TABLE R301.5



1
A1.06 SECOND FLOOR PROPOSED
SCALE: 1/4" = 1'-0"

LEGEND	
EXISTING:	
NEW:	

MERCER ISLAND
REVIEWED FOR CODE COMPLIANCE
February 27, 2023
SITE COPY

CLIENT APPROVAL

REVISIONS

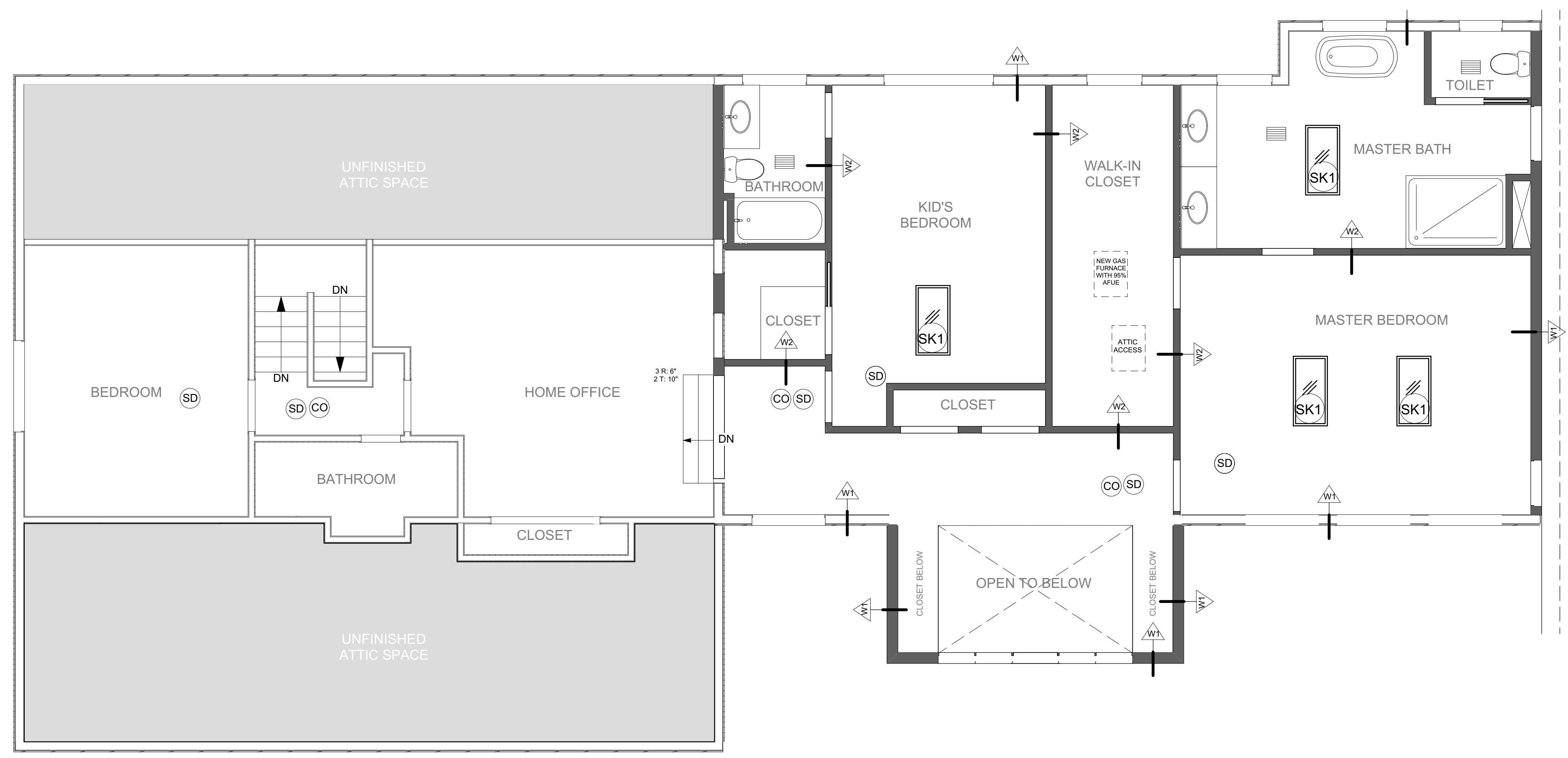
NOTES

REPRESENTATIVE: GH
DRAWN BY: KHS
DESIGNER: YA
PROJECT #: 7070-D
SHEET SIZE: 24 x 36

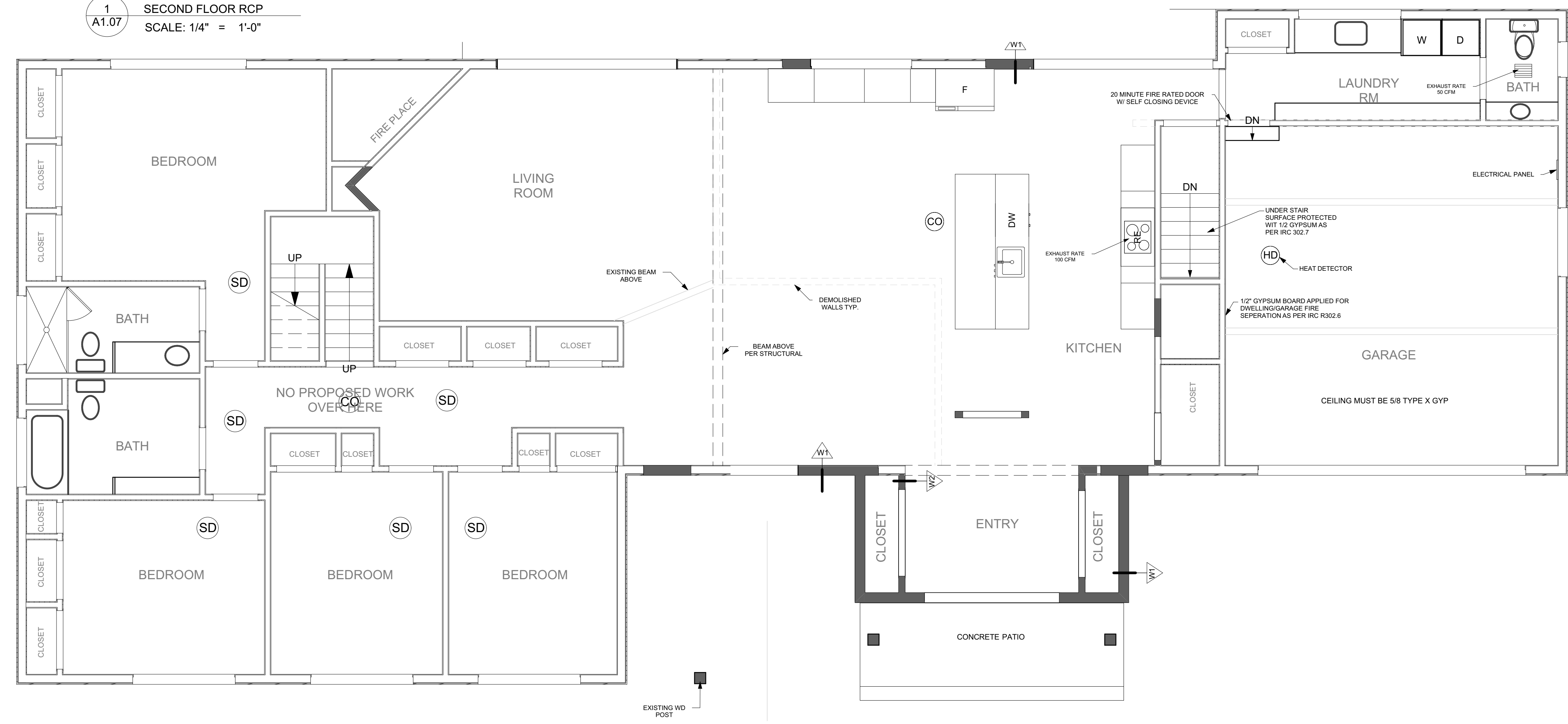
PROGRESS SET

SECOND FLOOR PROPOSED

A1.06
PRINT DATE 1/31/2023



1 SECOND FLOOR RCP
A1.07 SCALE: 1/4" = 1'-0"

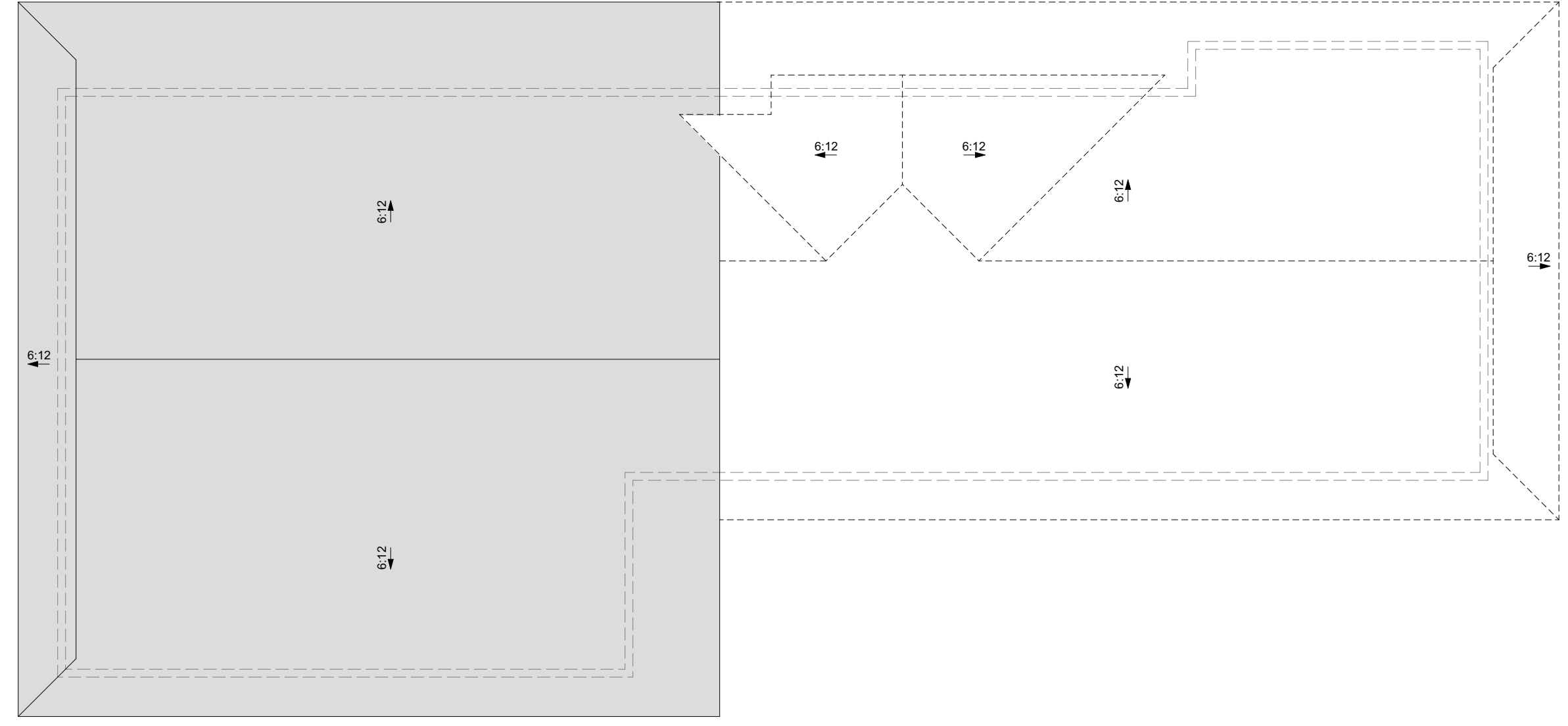


2 FIRST FLOOR RCP
A1.07 SCALE: 1/4" = 1'-0"



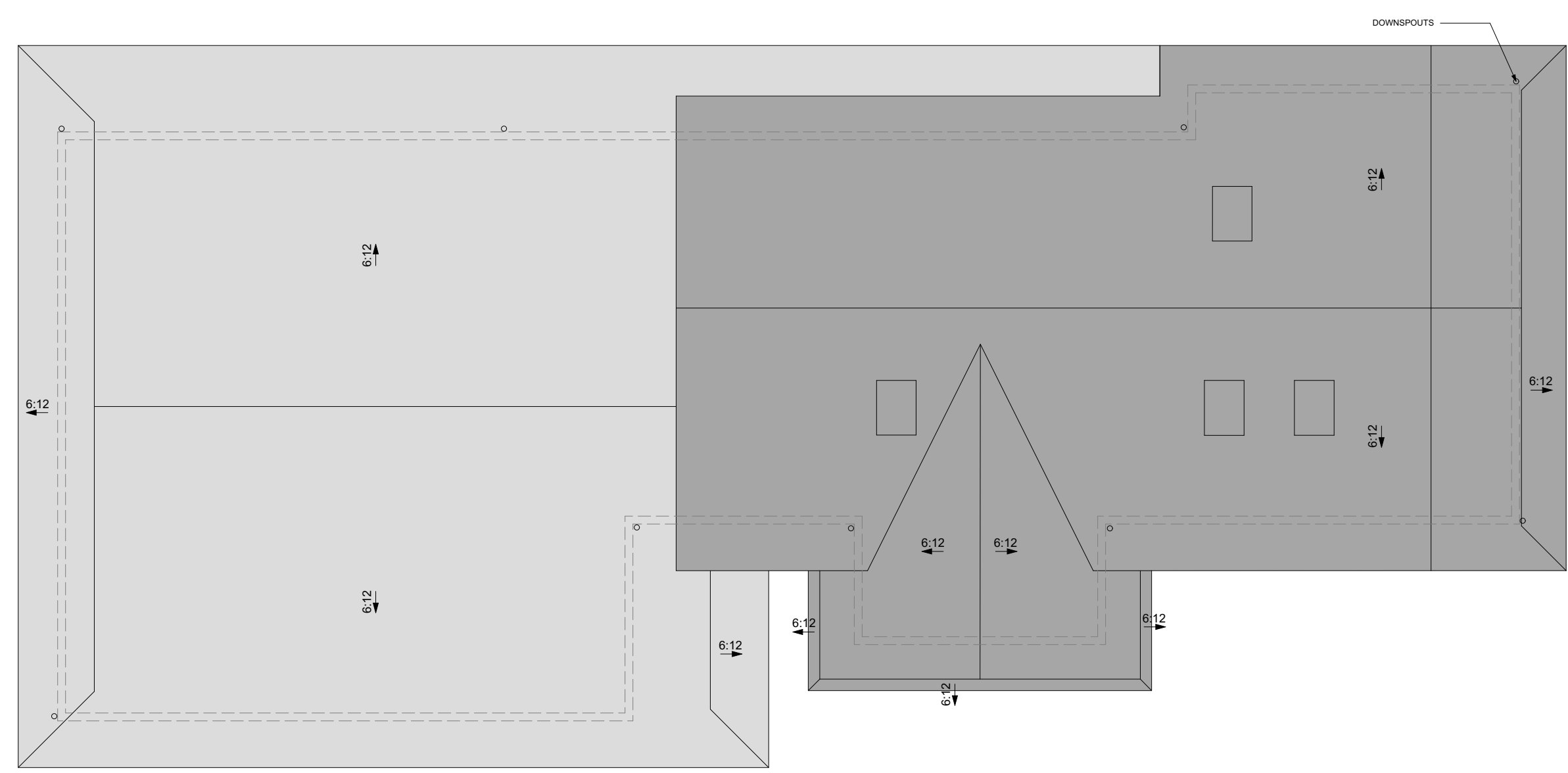
CLIENT APPROVAL	
DATE	DATE
REVISIONS	
NO.	DATE
NOTES	

EXISTING



1
A1.08 EXISTING ROOF PLAN
SCALE: 1/8" = 1'-0"

PROPOSED



1
A1.08 PROPOSED ROOF PLAN
SCALE: 1/8" = 1'-0"

NOTE: USING EXISTING TIGHT-LINE DOWNSPOUT DRAIN SYSTEM
NOTE: INSTALL RIDGE VENT OVER ALL RIDGES AS WELL AS INTAKE VENT TO ALL SOFFITS.
ATTIC VENTILATION CALCULATION: 1/150 sqft. OF ATTIC FLOOR SPACE, THEREFORE 1945/150 = 13 sqft. needed.

LEGEND

EXISTING: [Solid line]

DEMO: [Dashed line]

NEW: [Thick solid line]

WALL BELOW: [Dotted line]



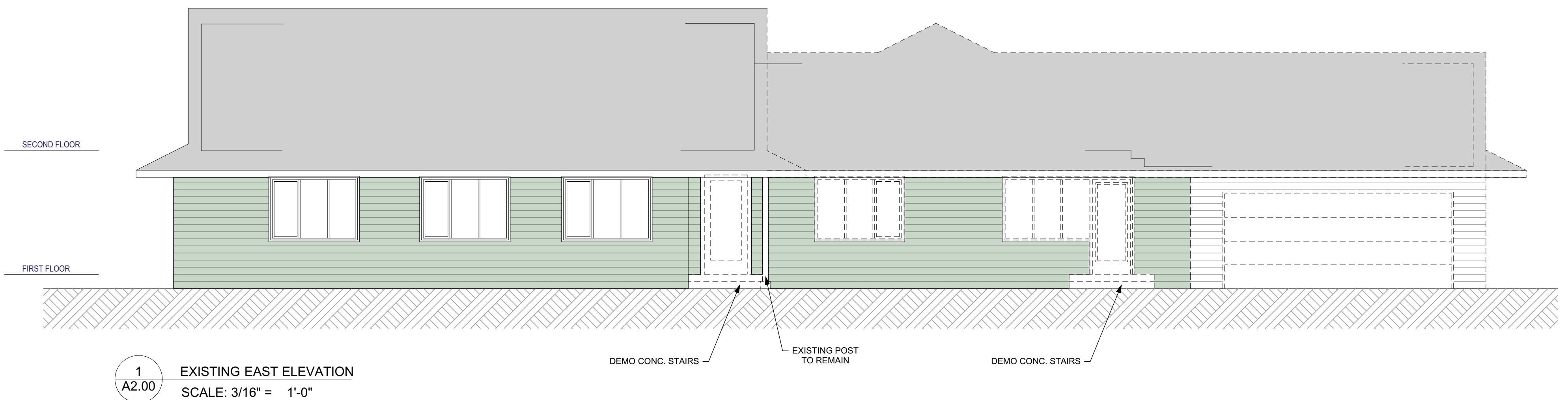
CLIENT APPROVAL

DATE	DATE

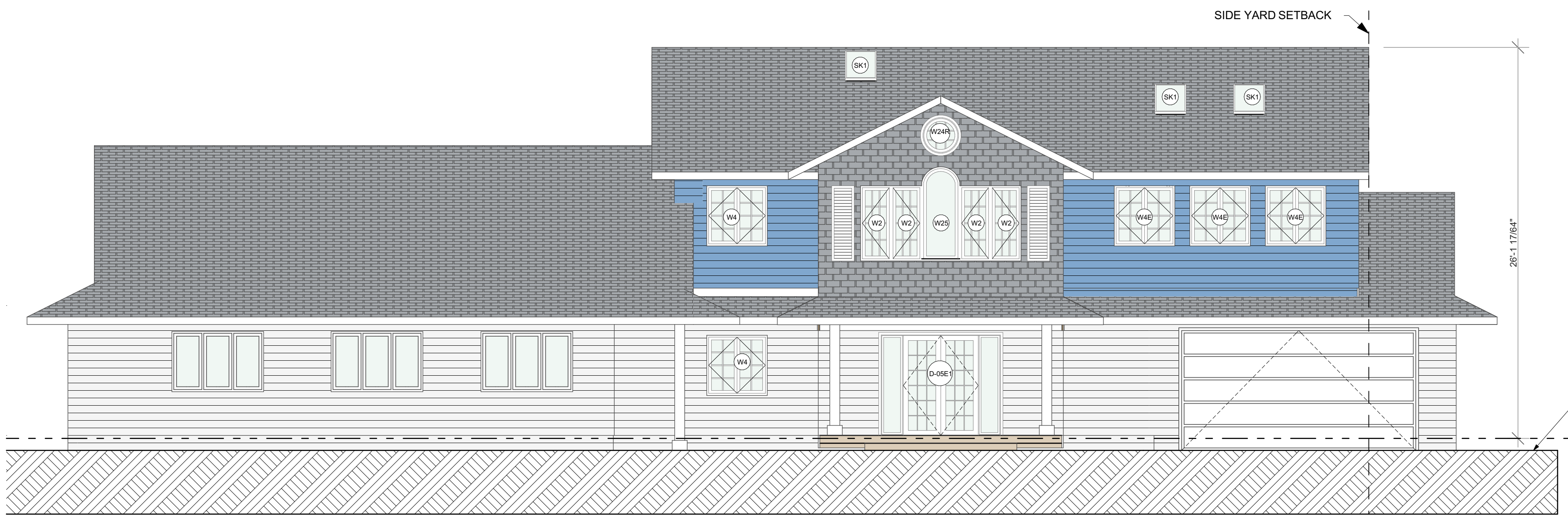
REVISIONS

NOTES

REPRESENTATIVE: GH
DRAWN BY: KHS
DESIGNER: YA
PROJECT #: 7070-D
SHEET SIZE: 24 x 36

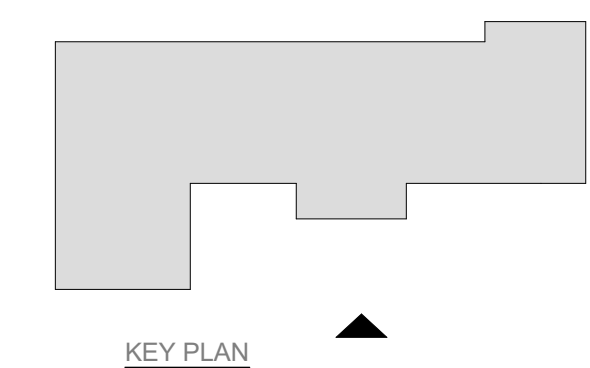


1
A2.00 EXISTING EAST ELEVATION
SCALE: 3/16" = 1'-0"



2
A2.00 PROPOSED EAST ELEVATION
SCALE: 3/16" = 1'-0"

MAXIMUM ALLOWED BUILDING HEIGHT IS 30'



CLIENT APPROVAL

REVISIONS

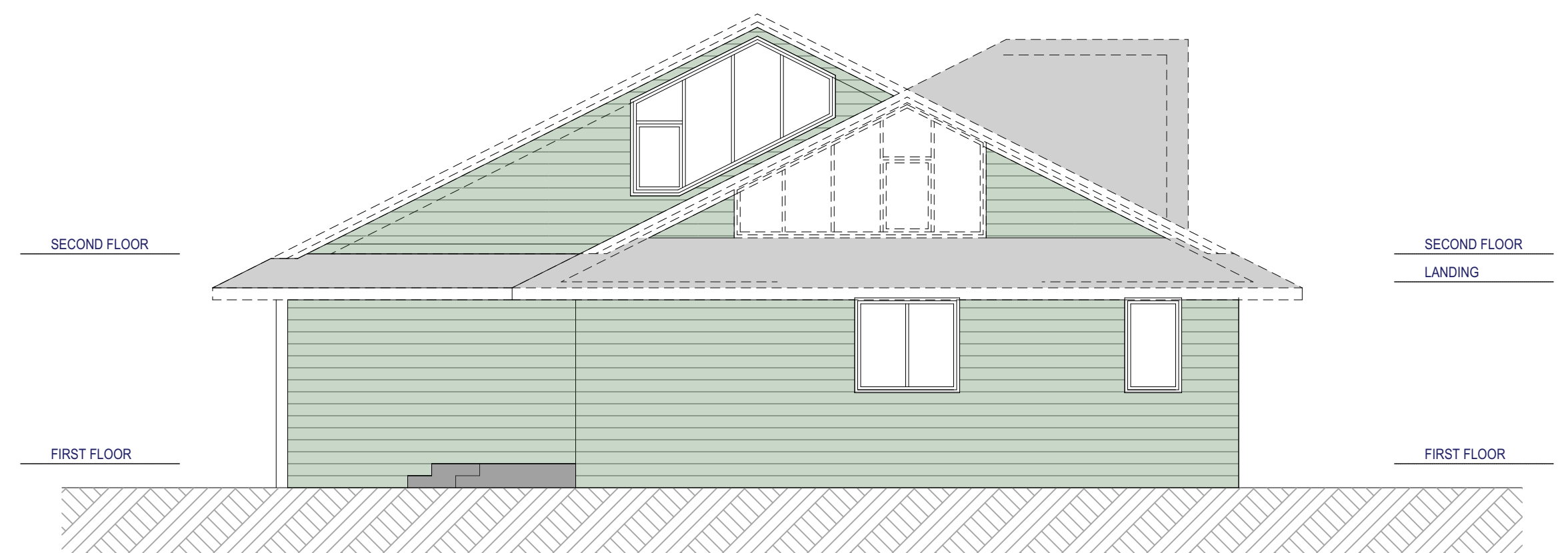
NOTES

REPRESENTATIVE: GH
DRAWN BY: KHS
DESIGNER: YA
PROJECT #: 2023-01
SHEET SIZE: 24 x 36

PROGRESS SET

EAST ELEVATIONS

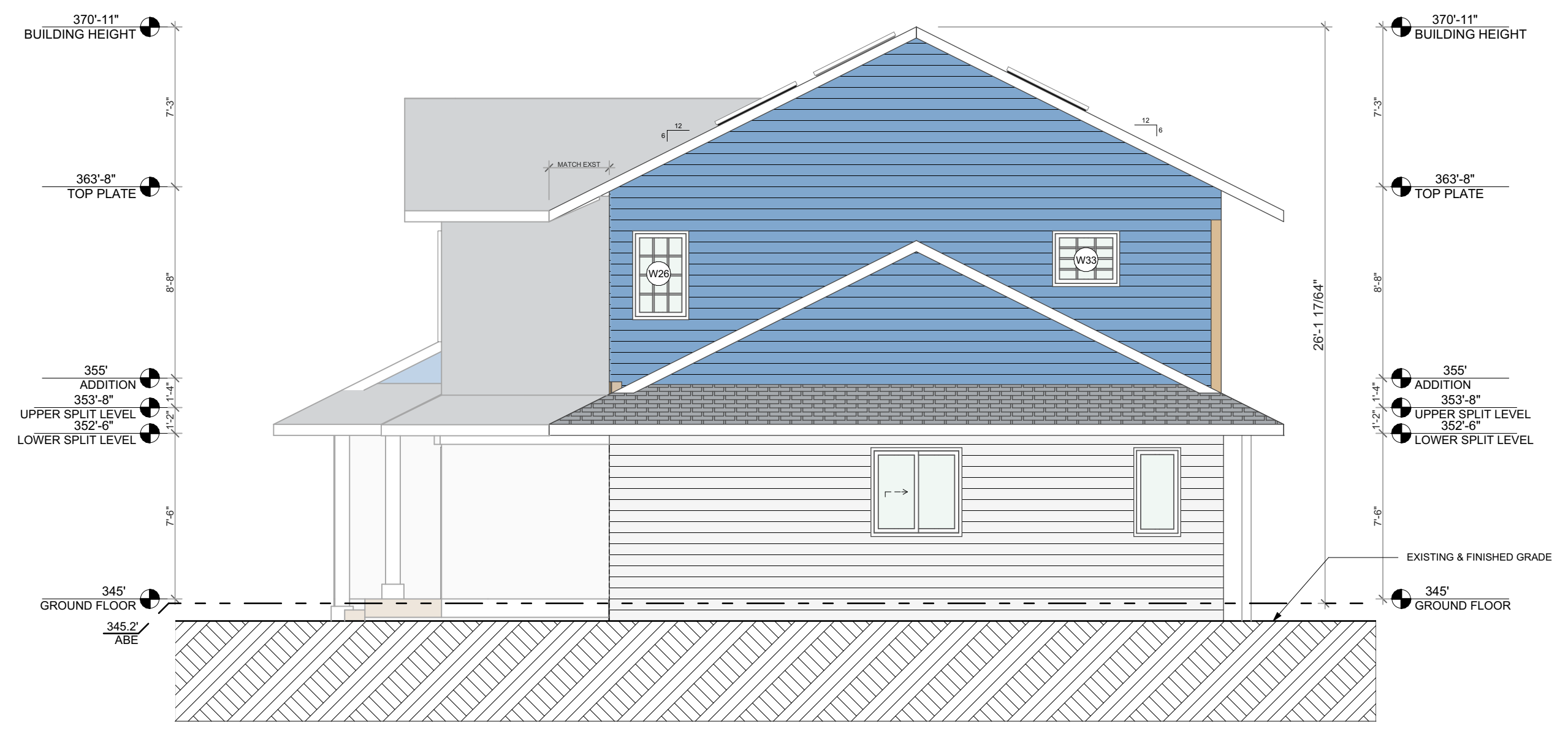
A2.00
PRINT DATE 1/31/2023



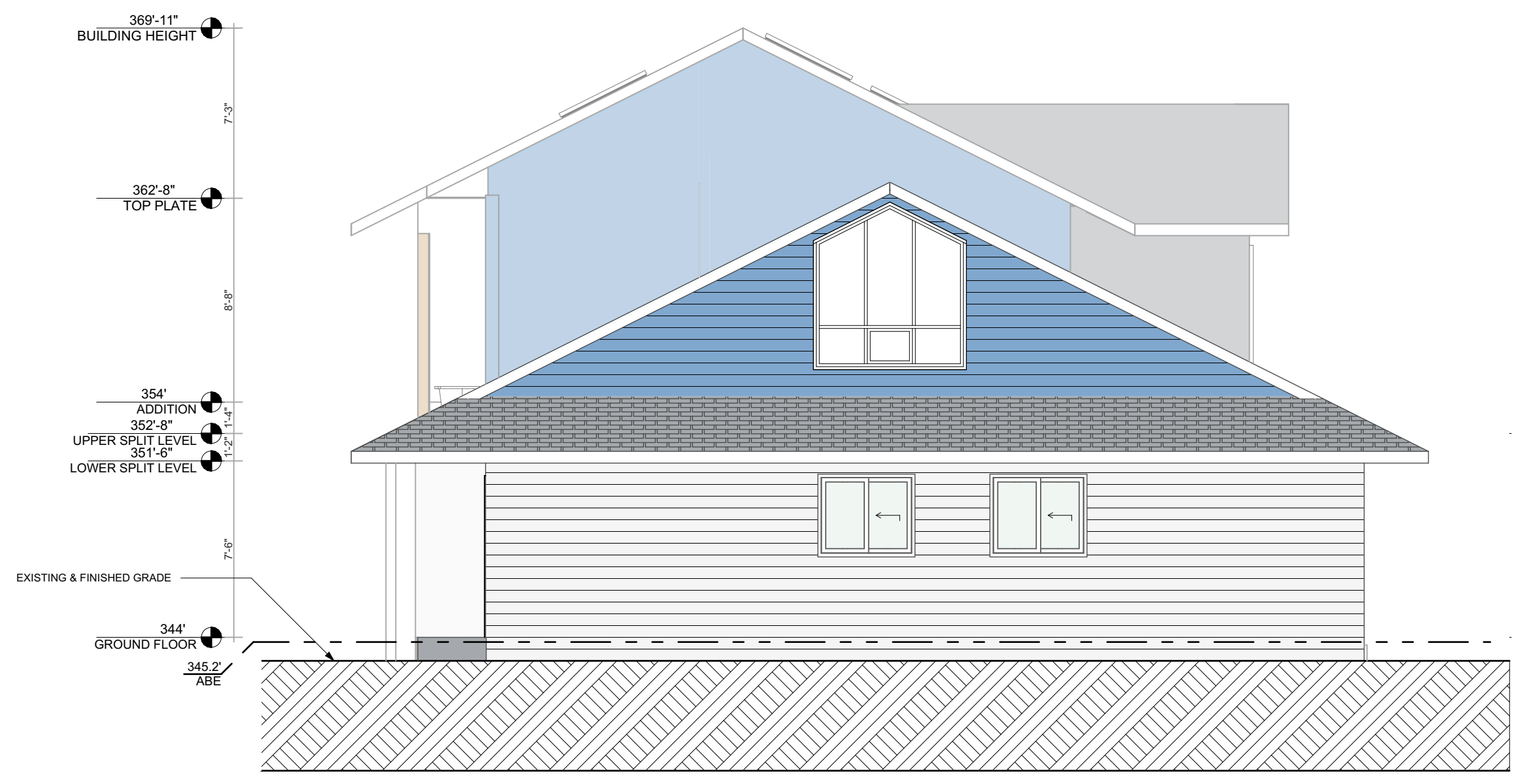
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A2.01 EXISTING NORTH ELEVATION
SCALE: 3/16" = 1'-0"



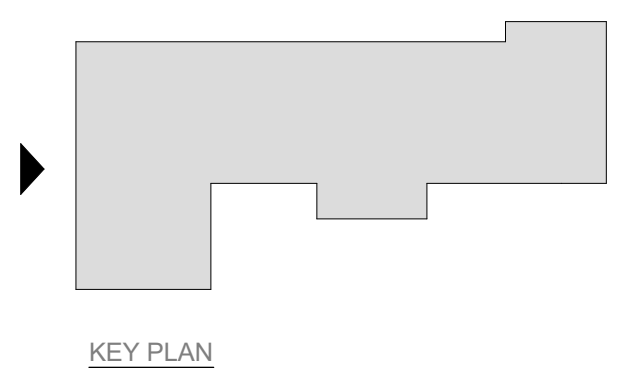
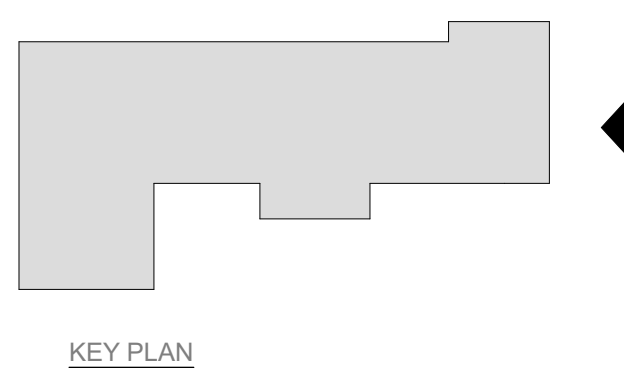
1
A2.01 EXISTING SOUTH ELEVATION
SCALE: 3/16" = 1'-0"



2
A2.01 PROPOSED NORTH ELEVATION
SCALE: 3/16" = 1'-0"



2
A2.01 PROPOSED SOUTH ELEVATION
SCALE: 3/16" = 1'-0"



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FOR CODE
COMPLIANCE
February 27, 2023
SITE COPY

CLIENT APPROVAL

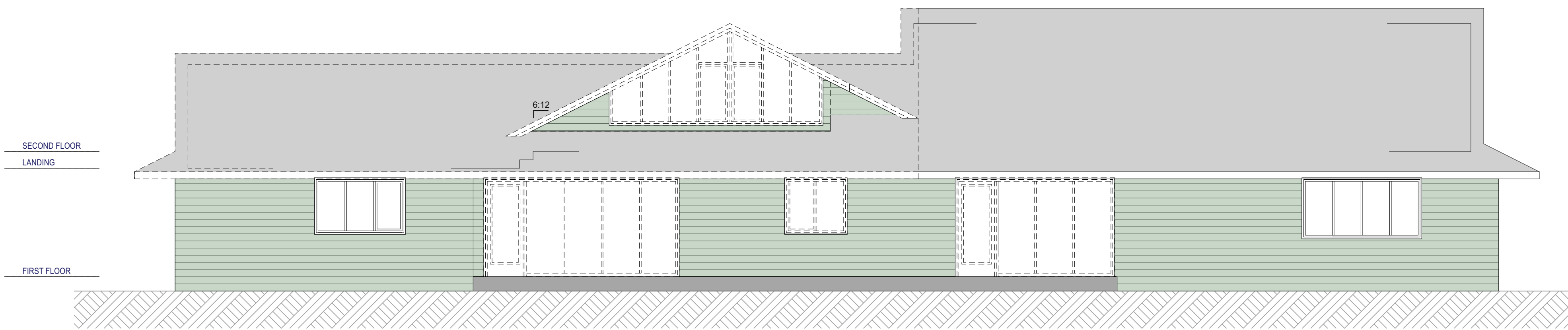
DATE	DATE

REVISIONS

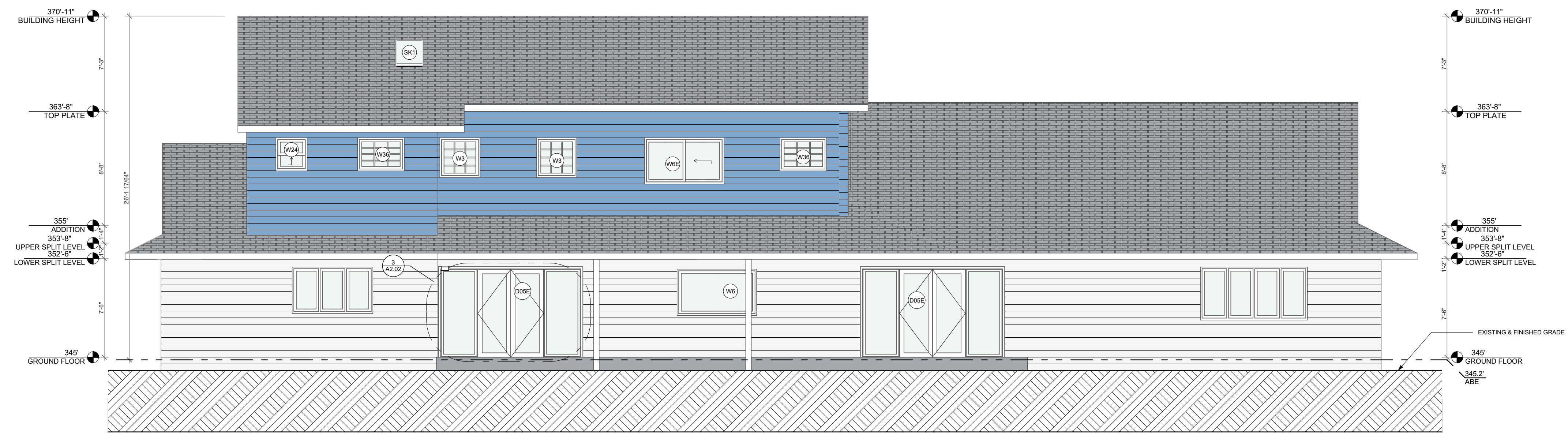
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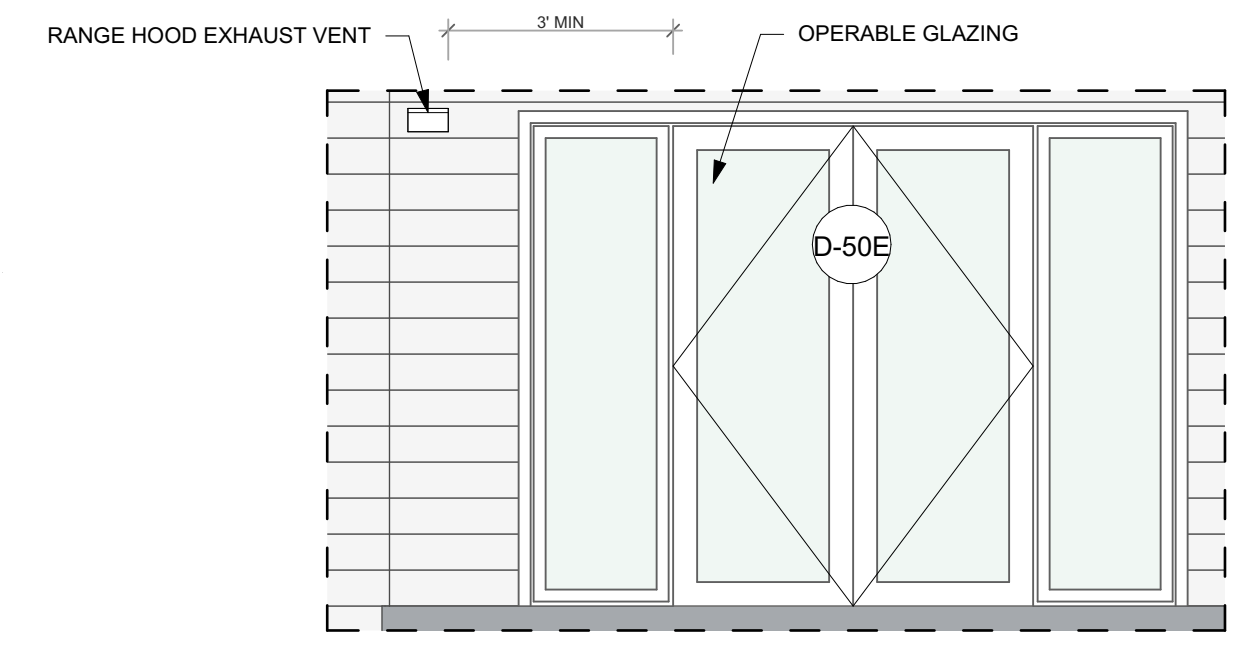
REPRESENTATIVE: GH
DRAWN BY: KHS
DESIGNER: YA
PROJECT #: 7070-D
SHEET SIZE: 24 x 36



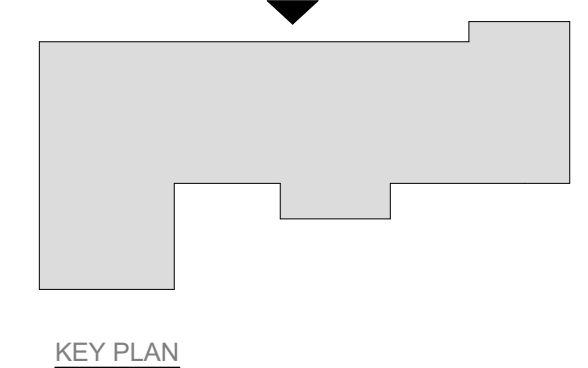
1
A2.02 EXISTING WEST ELEVATION
SCALE: 3/16" = 1'-0"



2
A2.02 PROPOSED WEST ELEVATION
SCALE: 3/16" = 1'-0"



3
A2.02 ENLARGED PATIO GLAZING ELEVATION
SCALE: 3/8" = 1'-0"



KEY PLAN

REVIEWED FOR CODE COMPLIANCE
February 27, 2023
SITE COPY

CLIENT APPROVAL

REVISIONS

NOTES

REPRESENTATIVE: GH
DRAWN BY: KHS
DESIGNER: YA
PROJECT #: 1070-D
SHEET SIZE: 24 x 36

PROGRESS SET

WEST ELEVATION

A2.02
PRINT DATE 1/18/2023

WINDOW SCHEDULE												
Element ID	W-2	W-3	W-4	W-4E	W-6	W-6E	W-24	W-24R	W-25	W-26	W-33	W-36
Quantity	4	2	2	3	1	1	1	1	1	1	1	2
PREVIEW												
WINDOW TYPE	CASEMENT		CASEMENT	CASEMENT	FIXED			FIXED	FIXED	CASEMENT	FIXED	
DIMENSIONS	2'-0"×5'-0"	3'-0"×3'-0"	4'-0"×4'-0"	4'-0"×4'-0"	6'-0"×3'-6"	6'-0"×3'-6"	2'-4"×2'-6"	2'-5 1/2"×2'-5 1/2"	2'-6"×6'-3 1/4"	2'-6"×4'-0"	3'-0"×2'-6"	3'-6"×2'-6"
EGRESS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U-VALUE	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
TEMPERED	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
LOCATION	ENTRY			M.BEDROOM	KITCHEN					M.BEDROOM	MASTER BATH	

DOOR SCHEDULE								
MARK	D28	D30	D-05E	D-05E1	D-05E2	D-24	D-26P	D-28
QUANTITY	1	2	2	1	2	1	2	4
PREVIEW								
DIMENSIONS	2'-8"×6'-8"	3'-0"×6'-8"	5'-0"×6'-8"	5'-0"×6'-8"	5'-0"×6'-8"	2'-4"×6'-8"	2'-6"×6'-8"	2'-8"×6'-8"
TYPE	Flush	Flush	No Grid	H-V Grid	Flush	Flush	Flush	Flush
FIRE RATING	20 minutes	20 minutes	Non-Rated	Non-Rated	Non-Rated	Non-Rated	Non-Rated	Non-Rated
EGRESS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MANUFACTUR...	<Undefined>	<Undefined>	KITCHEN/LIVING	ENTRY	CLOSET	<Undefined>	<Undefined>	<Undefined>
LOCATION	GARAGE	GARAGE						
NOTE			SAFETY GLAZING AS PER IRC R308.4					

SKYLIGHT SCHEDULE	
MARK	SK1
QUANTITY	4
PREVIEW	
DIMENSIONS	22 1/2"×46 1/2"
TYPE	FIXED
LOCATION	MULTIPLE



CLIENT APPROVAL	DATE
REVISIONS	DATE
NOTES	
REPRESENTATIVE: GH	
DRAWN BY: KHS	
DESIGNER: YA	
PROJECT #: 7070-D	
SHEET SIZE: 24 x 36	

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
BALDWIN RESIDENCE	ARMADA DESIGN & BUILD
4215 87th Ave SE Mercer Island, WA 98040	khushboo@armadabuild.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: Khushboo Srivastava Date: 09/06/2022

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,c}	n/a	n/a
Ceiling ^d	49	0.026
Wood Frame Wall ^{e,h}	21 int	0.056
Floor	30	0.029
Below Grade Wall ^{e,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.

- 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.
- Medium Dwelling Unit: 6 credits**
All dwelling units that are not included in #1 or #3
- Large Dwelling Unit: 7 credits**
Dwelling units exceeding 5,000 sf of conditioned floor area
- 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	<input type="checkbox"/>
2	Heat pump ^f	1.0	<input type="checkbox"/>
3	Electric resistance heat only - furnace or zonal	-1.0	<input type="checkbox"/>
4	DHP with zonal electric resistance per option 3.4	0.5	<input type="checkbox"/>
5	All other heating systems	-1.0	<input type="checkbox"/>
Energy Options	Energy Credit Option Descriptions	Credits - select ONE energy option from each category ^g	
1.1	Energy Star rated (U.S. North) Gas or propane furnace with minimum AFUE of 95% or Energy Star rated (U.S. North) Gas or propane boiler with minimum AFUE of 90%. ²	0.5	<input type="checkbox"/>
1.2	Efficient Building Envelope	1.0	<input type="checkbox"/>
1.3	Efficient Building Envelope	0.5	<input type="checkbox"/>
1.4	Efficient Building Envelope	1.0	<input type="checkbox"/>
1.5	Efficient Building Envelope	2.0	<input type="checkbox"/>
1.6	Efficient Building Envelope	3.0	<input type="checkbox"/>
1.7	Efficient Building Envelope	0.5	<input type="checkbox"/>
2.1	Air Leakage Control and Efficient Ventilation	0.5	<input type="checkbox"/>
2.2	Air Leakage Control and Efficient Ventilation	1.0	<input type="checkbox"/>
2.3	Air Leakage Control and Efficient Ventilation	1.5	<input type="checkbox"/>
2.4	Air Leakage Control and Efficient Ventilation	2.0	<input type="checkbox"/>
3.1 ⁴	High Efficiency HVAC	1.0	<input checked="" type="checkbox"/>
3.2	High Efficiency HVAC	1.0	<input type="checkbox"/>
3.3 ⁴	High Efficiency HVAC	1.5	<input type="checkbox"/>
3.4	High Efficiency HVAC	1.5	<input type="checkbox"/>
3.5	High Efficiency HVAC	1.5	<input type="checkbox"/>
3.6 ⁴	High Efficiency HVAC	2.0	<input type="checkbox"/>
4.1	High Efficiency HVAC Distribution System	0.5	<input type="checkbox"/>
4.2	High Efficiency HVAC Distribution System	1.0	<input type="checkbox"/>

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 ^g	User Notes
5.1 ⁴	Efficient Water Heating	0.5	<input type="checkbox"/>
5.2	Efficient Water Heating	0.5	<input type="checkbox"/>
5.3	Efficient Water Heating	1.0	<input type="checkbox"/>
5.4	Efficient Water Heating	1.5	<input type="checkbox"/>
5.5	Efficient Water Heating	2.0	<input checked="" type="checkbox"/>
5.6	Efficient Water Heating	2.5	<input type="checkbox"/>
6.1 ⁴	Renewable Electric Energy (3 credits max)	1.0	<input type="checkbox"/>
7.1	Appliance Package	0.5	<input type="checkbox"/>
Total Credits		3.0	<input type="button" value="Calculate Total"/> <input type="button" value="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.
 Use the single radiobutton in the upper right of the second column to deselect radiobuttons in that group.

Energy Credits: 1.1 1.2 1.3 1.4 1.5 1.6 1.7 2.1 2.2 2.3 2.4 3.1 3.2 3.3 3.4 3.5 3.6 4.1 4.2

DESCRIPTION OF CREDITS

3.1 ²	Energy Star rated (U.S. North) Gas or propane furnace with minimum AFUE of 95% or Energy Star rated (U.S. North) Gas or propane boiler with minimum AFUE of 90%. ²	1.0
5.5	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification or For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. ⁵	2.0



CLIENT APPROVAL

REVISIONS

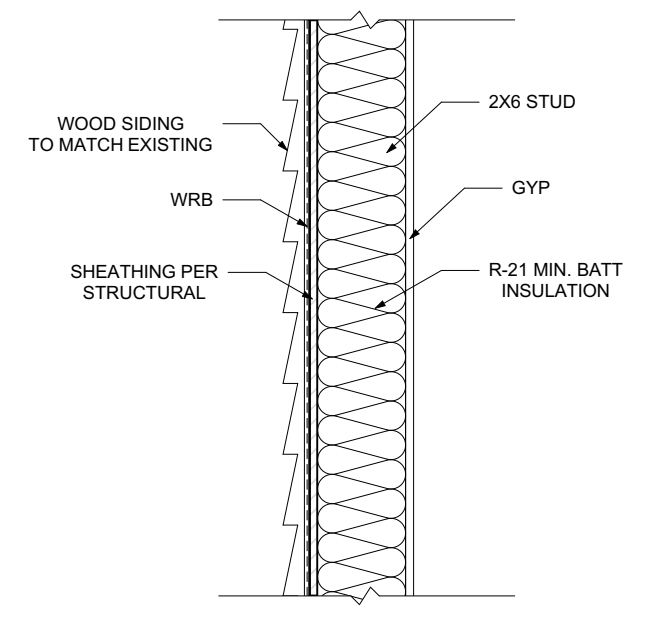
NOTES

REPRESENTATIVE: GH
DRAWN BY: KHS
DESIGNER: YA
PROJECT #: 7070-D
SHEET SIZE: 24 x 36

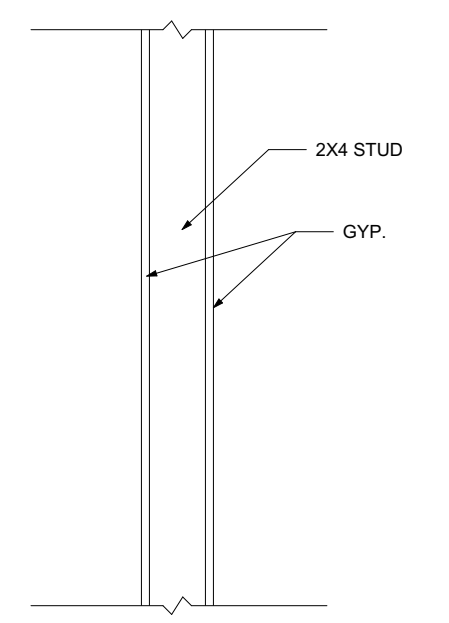
PROGRESS SET

ENERGY CODE

A3.01
PRINT DATE 1/31/2023



W1 2X6 EXTERIOR WALL 1" = 1'-0"



W2 2X4 INTERIOR WALL 1" = 1'-0"

CLIENT APPROVAL

DATE

REVISIONS

REVISIONS

NOTES

NOTES

REPRESENTATIVE: GH
 DRAWN BY: KHS
 DESIGNER: YA
 PROJECT #: 7070-D
 SHEET SIZE: 24 x 36

PROGRESS SET

DETAILS

A3.02
 PRINT DATE 1/31/2023

STRUCTURAL NOTES

(THESE NOTES ARE TYPICAL UNLESS NOTED OR DETAILED OTHERWISE ON DRAWINGS)

CODE

ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (IBC), 2018 EDITION. SPECIFICATIONS AND STANDARDS WHERE REFERENCED ON THE DRAWINGS ARE TO BE THE LATEST EDITION.

DESIGN LOADS

DEAD LOADS:
 ROOF 15 PSF
 FLOOR 15 PSF

LIVE LOADS:
 ROOF (SNOW LOAD) 25 PSF
 RESIDENTIAL 40 PSF

(LIVE LOADS ARE REDUCED WHERE PERMISSIBLE PER IBC SECTION 1607.11.)

EARTHQUAKE LOADS:

EQUIVALENT LATERAL FORCE PROCEDURE PER ASCE 7-16 SECTION 12.8.

SITE CLASS (ASSUMED)	D
SHORT PERIOD SPECTRAL RESPONSE ACCEL (S_s)	1.419
ONE SECOND SPECTRAL RESPONSE ACCEL (S_1)	0.493
SHORT PERIOD DESIGN SPECTRAL RESPONSE ACCEL (S_{ps})	1.135
ONE SECOND DESIGN SPECTRAL RESPONSE ACCEL (S_{p1})	0.595
RISK CATEGORY	II
SEISMIC IMPORTANCE FACTOR (I_e)	1.0
SEISMIC DESIGN CATEGORY	D
BASIC SEISMIC FORCE-RESISTING-SYSTEM	PLYWOOD SHEAR WALLS
RESPONSE MODIFICATION FACTOR, (R)	6.5
REDUNDANCY FACTOR (ρ)	1.3
SEISMIC RESPONSE COEFFICIENT (C_e)	0.175

W = TOTAL SEISMIC DEAD LOAD AS DEFINED PER ASCE 7-16 SECTION 12.7.2.

BASE SHEAR (V), $V = C_s W = \frac{S_{ps}}{R} W$

WIND LOADS:

BASIC WIND SPEED (3 SECOND GUST)	98 MPH
EXPOSURE	B
K_{zt}	1.0

SEE PLANS FOR ADDITIONAL DESIGN LOADS.

STATEMENT OF SPECIAL INSPECTIONS

SPECIAL INSPECTIONS ARE REQUIRED AS INDICATED IN THE FOLLOWING TABLE. THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER PRIOR TO COMMENCEMENT OF WORK IN ACCORDANCE WITH SECTION 1704.4 OF THE IBC.

STRUCTURAL OBSERVATION OF THE STRUCTURAL SYSTEM BY THE ENGINEER IS NOT REQUIRED.

FREQUENCY AND DISTRIBUTION OF REPORTS - INSPECTION REPORTS SHALL BE PROVIDED FOR EACH DAY ON SITE BY SPECIAL INSPECTOR. STRUCTURAL OBSERVATION REPORTS SHALL BE PROVIDED AFTER EACH OBSERVATION. REPORTS SHALL BE DISTRIBUTED TO THE CONTRACTOR, ARCHITECT, ENGINEER AND BUILDING OFFICIAL.

SPECIAL INSPECTION

OPERATION	CONT	PERIODIC	REMARKS
SOILS			
FOUNDATION BEARING CAPACITY VERIFICATION		X	
CONCRETE			
ADHESIVE ANCHORS	X		IF USED
NOTE: ALL ITEMS MARKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17. SPECIAL INSPECTION SHALL BE PERFORMED BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING OFFICIAL SHALL BE FURNISHED WITH COPIES OF ALL RESULTS. ANY INSPECTION FAILING TO MEET THE PROJECT SPECIFICATIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGN TEAM.			

FOUNDATIONS: SPREAD FOOTINGS

SOILS REPORT: NOT AVAILABLE AT TIME OF DESIGN

ALLOWABLE SOIL PRESSURE: 2000 PSF (ASSUMED; TO BE FIELD VERIFIED DURING CONSTRUCTION)

FOOTINGS SHALL BEAR ON FIRM UNDISTURBED EARTH OR 12" OF COMPACTED STRUCTURAL FILL AS REQUIRED AND AT LEAST 18" BELOW ADJACENT EXTERIOR GRADE. ANY FOOTING ELEVATIONS SHOWN IN THE DRAWINGS REPRESENT MINIMUM DEPTHS AND ARE FOR BIDDING ONLY. ACTUAL FOOTING ELEVATIONS ARE SUBJECT TO SITE CONDITIONS AND MUST THEREFORE BE ESTABLISHED BY THE CONTRACTOR. FOOTINGS SHALL BE CENTERED BELOW COLUMNS OR WALLS ABOVE, UNLESS NOTED OTHERWISE.

IMPORTED STRUCTURAL FILL AND BACKFILL MATERIAL SHOULD CONSIST OF CLEAN, WELL GRADED GRANULAR MATERIAL FREE OF DEBRIS OR ORGANICS WITH A MAXIMUM PARTICLE DIAMETER OF THREE INCHES AND NO MORE THAN 10% FINES (PASSING THE #200 SIEVE).

FILL AND BACKFILL MATERIAL SHOULD BE PLACED IN LEVEL LIFTS NOT EXCEEDING TWELVE (12") INCHES IN LOOSE THICKNESS AND COMPACTED TO A MINIMUM OF 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM TEST METHOD D1557.

EXCAVATIONS AND DRAINAGE INSTALLATION SHALL BE OBSERVED BY A SOILS ENGINEER RETAINED BY THE OWNER. IF EXCAVATION SHOWS SOIL CONDITIONS TO BE OTHER THAN THOSE ASSUMED ABOVE NOTIFY THE STRUCTURAL ENGINEER FOR POSSIBLE FOUNDATION REDESIGN.

CONCRETE

ALL CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED, AND PLACED IN ACCORDANCE WITH CHAPTER 26 OF ACI 318 AND THE AMERICAN CONCRETE INSTITUTE'S SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301).

ALL CONCRETE SHALL BE STONE-AGGREGATE CONCRETE HAVING A UNIT WEIGHT OF APPROXIMATELY 150 POUNDS PER CUBIC FOOT.

CONCRETE STRENGTHS AT 28 DAYS (f'_c) AND MIX CRITERIA SHALL BE AS FOLLOWS:

TYPE OF CONSTRUCTION	f'_c *	MAXIMUM WATER/CEMENT RATIO	MIN CEMENT CONTENT PER CUBIC YARD	MAXIMUM SHRINKAGE STRAIN
FOOTINGS	3000 PSI	0.55	5 1/2 SACK	N/A

THE MINIMUM AMOUNT OF CEMENT LISTED ABOVE MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER, AND ADMIXTURES AS WELL AS THE WATER-CEMENT RATIO, SLUMP, CONCRETE YIELD, AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH CHAPTER 26 OF ACI 318.

ALL CONCRETE EXPOSED TO WEATHER OR TO FREEZING TEMPERATURES SHALL BE AIR-ENTRAINED IN ACCORDANCE WITH ACI 318 TABLE 19.3.3.1 FOR MODERATE EXPOSURE CLASS F1.

*PROVIDE f'_c SPECIFIED IN TABLE FOR DURABILITY REQUIREMENTS. 2500 PSI CONCRETE MEETS STRENGTH REQUIREMENTS, THEREFORE SPECIAL INSPECTION IS NOT REQUIRED.

REINFORCING STEEL

REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615, AND SHALL BE GRADE 60 ($F_y = 60,000$ PSI) UNLESS NOTED OTHERWISE. GRADE 60 REINFORCING BARS INDICATED ON DRAWINGS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING COMPLYING WITH ASTM A615 MAY BE WELDED IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN AWS D1.4 ARE SUBMITTED.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. PROVIDE WELDED WIRE FABRIC IN SHEETS NOT ROLLS. LAP WELDED WIRE FABRIC 12" AT SIDES AND ENDS.

REINFORCING STEEL SHALL BE DETAILED INCLUDING HOOKS AND BENDS IN ACCORDANCE WITH ACI SP-66 AND ACI 318, LATEST EDITIONS. UNLESS OTHERWISE NOTED, REINFORCING SPLICE LENGTHS AND DEVELOPMENT LENGTHS SHALL BE PER SCHEDULE.

MECHANICAL SPLICING OF REINFORCING BARS, WHERE INDICATED ON THE DRAWINGS, SHALL BE BY AN ICB0 APPROVED SYSTEM. SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

REINFORCING SHALL BE PLACED AND ADEQUATELY SUPPORTED PRIOR TO PLACING CONCRETE. WET-SETTING EMBEDDED ITEMS IS NOT ALLOWED WITHOUT PRIOR ENGINEER APPROVAL. BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL NOT BE FIELD BENT UNLESS SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. REFER TO CHAPTER 25 OF ACI 318 FOR OTHER REINFORCING STEEL REQUIREMENTS.

MINIMUM LAPS AND EMBEDMENT

UNLESS OTHERWISE NOTED, REINFORCING SPLICE LENGTHS AND DEVELOPMENT LENGTHS SHALL BE AS TABULATED BELOW:

BAR SIZE	$f'_c = 3000$ PSI					
	DEVELOPMENT LENGTH			LAP SPLICE		
	TENSION	COMPRESSION	ALL BARS	TENSION	COMPRESSION	ALL BARS
#3	22	17	9	28	22	12
#4	29	22	11	37	29	15
#5	36	28	14	47	36	19

NOTE:
 1. ALL LENGTHS ARE IN INCHES.
 2. ALL LAP SPLICES ARE CLASS B.
 3. "TOP BARS" ARE HORIZONTAL REINFORCEMENT PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

CONCRETE COVER ON REINFORCING

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"

CONCRETE EXPOSED TO EARTH AND WEATHER:
 #6 BARS AND LARGER 2"
 #5 BARS AND SMALLER 1 1/2"

CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
 SLABS, WALLS AND JOISTS 3/4"
 COLUMN TIES OR SPIRALS AND BEAM STIRRUPS 1 1/2"

CONCRETE GENERAL NOTES

VERTICAL BARS SHALL START FROM TOP OF FOOTING. HORIZONTAL BARS SHALL START A DISTANCE OF 1/2 THE NORMAL BAR SPACING FROM TOP OF FOOTING AND TOP OF FRAMED SLABS. IN ADDITION, THERE SHALL BE A HORIZONTAL BAR AT A MAXIMUM OF 3" FROM TOP OF WALL AND BOTTOM OF FRAMED SLABS.

PROVIDE CORNER BARS TO MATCH THE HORIZONTAL REINFORCING WITH TENSION LAP SPLICE AT EACH SIDE PER TABLE, OR BEND ONE SIDE OVER TO PROVIDE TENSION LAP.

ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED AND PROPERLY PREPARED IMMEDIATELY PRIOR TO POURING OF CONCRETE. DOWEL STEEL SHALL BE THE SAME SIZE AND SPACING AS MAIN REINFORCING DETAILED BEYOND JOINT.

SEE ARCHITECTURAL DRAWINGS AND MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF OPENINGS IN CONCRETE WALLS, FLOORS AND ROOF. UNLESS INDICATED OTHERWISE, REINFORCE AROUND OPENINGS GREATER THAN 12" IN EITHER DIRECTION WITH (2) #5 EACH SIDE AND (1) #5 x 4'-0" DIAGONAL AT EACH CORNER. EXTEND BARS 2'-0" BEYOND EDGE OF OPENING. IF 2'-0" IS UNAVAILABLE, EXTEND AS FAR AS POSSIBLE AND HOOK. HOOK ALL REINFORCING INTERRUPTED BY OPENINGS.

BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL NOT BE FIELD BENT UNLESS SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES. PROVIDE 3/4" CHAMFER AT ALL CORNERS EXCEPT AS NOTED.

LUMBER

ALL GRADES SPECIFIED ARE MINIMUM GRADES REQUIRED. ALL LUMBER SHALL BE IN ACCORDANCE WITH WWPFA GRADING RULES, KILN-DRIED TO MC 19 AND 4 OF THE FOLLOWING MINIMUM STANDARDS:

SIZE CLASSIFICATION	SPECIES	GRADE	Fb (PSI)	Fc (PSI)
SLEEPERS	DOUG-FIR	STUD	700	-
LIGHT FRAMING (STUDS)	HEM-FIR	STUD	675	800
2x JOISTS AND PLANKS	HEM-FIR	#2	850	-
PLATES AND BLOCKING	HEM-FIR	#2	850	-
6x AND LARGER BEAMS AND STRINGERS	DOUG-FIR	#2	875	-
4x AND SMALLER BEAMS AND STRINGERS	HEM-FIR	#2	850	-
ALL POSTS AND TIMBERS	DOUG-FIR	#1	1200	1000

REFER TO PLAN NOTES, SCHEDULES, AND DETAILS FOR MORE SPECIFIC LUMBER SIZE AND GRADE REQUIREMENTS.

UNLESS NOTED OTHERWISE IN THE PLANS, ALL WOOD AND WOOD-BASED MEMBERS EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE, MASONRY, OR WITHIN 8" OF SOIL SHALL BE PRESERVATIVE-TREATED BY VACUUM-PRESSURE IMPREGNATION IN ACCORDANCE WITH AWPFA STANDARD U1.

NAILS, BOLTS, AND METAL CONNECTORS FOR WOOD

ALL NAILS SHALL CONFORM TO THE STANDARDS SET FORTH BY THE NATIONAL DESIGN STANDARDS (NDS) FOR WOOD CONSTRUCTION, LATEST EDITION. NAILING NOT SPECIFIED SHALL BE PER IBC TABLE 2304.10.1 NAILING SCHEDULE. ALL NAILS CALLED OUT ON PLANS SHALL BE COMMON NAILS UNLESS NOTED OTHERWISE AND SHALL MEET OR EXCEED THE FOLLOWING MINIMUM GUIDELINES:

NAIL	SHANK Ø	MIN LENGTH
8d COMMON	0.131Ø	2 1/2" SHANK
10d COMMON	0.148Ø	3" SHANK
12d COMMON	0.148Ø	3 1/4" SHANK
16d COMMON	0.162Ø	3 1/2" SHANK

10d BOX NAILS MAY BE SUBSTITUTED FOR 8d COMMON NAILS WITH NO CHANGE IN NAIL SPACING. FRAMING MEMBERS MAY BE NAILED WITH 16d SINKERS (0.148"Ø x 3 1/4"), BUT ONLY 16d COMMON NAILS SHALL BE USED WHERE 16d NAILS ARE INDICATED IN THIS DRAWING SET. ENGINEER MAY APPROVE OTHER NAILS IF NAIL LABELS ARE SUBMITTED TO ENGINEER PRIOR TO START OF CONSTRUCTION.

ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. LEAD HOLES FOR LAG BOLTS SHALL BE BORED FOR THE SHANK AND THREADED PORTIONS PER NDS 12.1.4.2.

CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, CATALOG TO BE THE LATEST EDITION, OR ENGINEER APPROVED EQUAL. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND WITH THE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY THE MANUFACTURER. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS, SCREWS, OR BOLTS IN EACH MEMBER.

INSTALL SOLID BLOCKING AT ALL BEARING POINTS. ALL SHIMS SHALL BE SEASONED, DRIED, AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

GALVANIZATION

UNLESS NOTED OTHERWISE, STEEL CONNECTORS IN CONTACT WITH TREATED WOOD SHALL BE GALVANIZED ACCORDING TO THE FOLLOWING TABLE:

GALVANIZATION	UNTREATED WOOD	CCA-C	SBX	ACC-C ACC-D	CBA-A CA-B	OTHER BORATE	ACZA	OTHER PT WOOD
G90	X	X	X					
G185	X	X	X	X	X	X		
HDG	X	X	X	X	X	X		
STT300	X	X	X	X	X	X	X	X

G90 = 0.90 OZ. OF ZINC PER SQUARE FOOT OF AREA

G185 = 1.85 OZ. OF ZINC PER SQUARE FOOT OF AREA

HDG = HOT DIP GALVANIZED

STT300 = TYPE 316L STAINLESS STEEL

RATED SHEATHING

RATED SHEATHING SHALL BE GRADE C-D INT-APA WITH EXTERIOR GLUE OR OSB SHEATHING WITH EXTERIOR GLUE IN CONFORMANCE WITH IBC STANDARD 2303.1.5.

TIMBERSTRAND, MICROLAM, AND PARALLAM MEMBERS

FABRICATED IN CONFORMANCE WITH THE INTERNATIONAL CODE COUNCIL EVALUATION SERVICE (ICC-ES) REPORT NO. ESR-1387 OR CCMC REPORT NO. 12627-R, 08675-R, AND 11161-R. EACH MEMBER SHALL BE IDENTIFIED BY A STAMP INDICATING THE PRODUCT TYPE AND GRADE, ICC-ES OR CCMC REPORT NUMBER, MANUFACTURER'S NAME, PLANT NUMBER AND INDEPENDENT INSPECTION AGENCY'S LOGO. FABRICATOR SHALL BE CERTIFIED. MEMBERS SHALL MEET THE FOLLOWING MINIMUM STANDARDS:

SIZE CLASSIFICATION	SPECIES	GRADE	Fb (PSI)	Fv (PSI)	Fc (PSI)
BEAMS & POSTS (d < 9 1/2")	LSL	1.3E	1,700	425	1,835
RIMS & BEAMS (d ≥ 9 1/2")	LSL	1.55E	2,325	310	-
BEAMS & POSTS	LVL	2.0E	2,600	285	2,510
POSTS (d < 9 1/2")	PSL	1.8E	2,400	190	2,500
BEAMS (d ≥ 9 1/2")	PSL	2.0E	2,900	290	-

TIMBERSTRAND, MICROLAM, AND UNTREATED PARALLAM MEMBERS ARE INTENDED FOR DRY-USE APPLICATIONS. UNLESS NOTED OTHERWISE, ENGINEERED WOOD BEAMS EXPOSED TO WEATHER SHALL BE TREATED PER MANUFACTURER'S RECOMMENDATIONS.

GLUE-LAMINATED TIMBER

GLUE-LAMINATED TIMBER SHALL BE DOUGLAS FIR, FABRICATED IN CONFORMANCE WITH ANSI/AITC STANDARD A190.1, LATEST EDITION. EACH MEMBER SHALL BEAR AN AITC IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC CERTIFICATE OF CONFORMANCE. FABRICATOR SHALL BE CERTIFIED. MEMBERS SHALL BE OF THE FOLLOWING MINIMUM STANDARDS:

SPAN	COMBINATION	Fb
SIMPLE SPAN BEAMS	24F-V4	2400 PSI
CANTILEVER OR MULTI-SPAN BEAMS	24F-V8	2400 PSI

WOOD I-JOISTS

WOOD I-JOISTS, MANUFACTURED BY WEYERHAEUSER CORPORATION SHALL BE SIZED AND DETAILED TO FIT THE DIMENSIONS AND LOADS INDICATED ON THE PLANS. ALL DESIGN SHALL BE IN ACCORDANCE WITH THE ALLOWABLE VALUES AND SECTION PROPERTIES ASSIGNED BY THE BUILDING CODE.

PROVIDE TEMPORARY BRACING UNTIL SHEATHING AND PERMANENT BRACING IS INSTALLED. MANUFACTURER SHALL PROVIDE ALL SPECIALTY ITEMS REQUIRED FOR A COMPLETE INSTALLATION OF JOISTS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

ALL I-JOISTS ARE TO BE CONNECTED TO FLUSH BEAMS OR WOOD LEDGERS WITH SIMPSON IUS, ITS, OR MIT HANGERS. PROVIDE WEB STIFFENERS AS REQUIRED.

PRE-MANUFACTURED WOOD TRUSSES

WOOD TRUSSES SHALL BE SIZED AND DETAILED TO FIT DIMENSIONS AND LOADS INDICATED ON THE PLANS. ALL DESIGN SHALL BE IN ACCORDANCE WITH THE ALLOWABLE VALUES AND SECTION PROPERTIES ASSIGNED BY THE BUILDING CODE. SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW PRIOR TO FABRICATION. CALCULATIONS AND SHOP DRAWINGS SHALL BE SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT. TRUSS DESIGN AND SHOP DRAWINGS SHALL BE IN CONFORMANCE WITH IBC 2303.4

PROVIDE TEMPORARY BRACING UNTIL SHEATHING AND PERMANENT BRACING IS INSTALLED. MANUFACTURER SHALL PROVIDE ALL SPECIALTY ITEMS REQUIRED FOR A COMPLETE INSTALLATION OF JOISTS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

FOR TOP CHORD DESIGN LIVE LOADS, REFER TO THE DESIGN LOAD SECTION. IN ADDITION TO ROOF LOADING LISTED IN THE DESIGN LOAD SECTION, ROOF TRUSSES SHALL BE DESIGNED FOR A BOTTOM CHORD LIVE LOAD OF 10 PSF. TOP AND BOTTOM CHORD LIVE LOAD DO NOT NEED TO BE DESIGNED FOR SIMULTANEOUSLY.

IN ADDITION TO THEIR SELF WEIGHT, ROOF TRUSSES SHALL BE DESIGNED FOR A TOP CHORD DEAD LOAD OF 5 PSF AND A BOTTOM CHORD DEAD LOAD OF 10 PSF ACTING SIMULTANEOUSLY. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOADS AND OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS. DEFLECTIONS SHALL NOT EXCEED L/360 FOR LIVE LOADS, OR L/240 FOR TOTAL LOADS.

TYPICAL FRAMING NOTES

1. BEARING WALL FRAMING

2x STUDS @ 16" OC FOR ALL SHEAR AND/OR BEARING WALLS UNO.

REFER TO FRAMING PLAN NOTES FOR TYPICAL DOOR & WINDOW HEADERS NOT CALLED OUT ON THE PLANS. HEADERS SHALL BE SUPPORTED BY A MINIMUM OF (1) CRIPPLE AND (1) FULL HEIGHT STUD UNO.

COLUMNS BELOW FLUSH MULTIPLE JOIST BEAMS SHALL BE EQUAL IN WIDTH TO THE BEAM. ALL COLUMNS NOT CALLED OUT OTHERWISE SHALL BE TWO STUDS.

2. WALL BASE PLATE ON CONCRETE

WALL PLATES BEARING ON CONCRETE SHALL BE PRESSURE-TREATED. FOR ALL EXTERIOR AND INTERIOR WALLS, BOLT PLATES OR SILLS TO CONCRETE STEM WALLS OR THICKENED SLAB FOOTINGS WITH 5/8 INCH DIAMETER ANCHOR BOLTS WITH 7 INCH MINIMUM EMBEDMENT. PLACE AT 5'-0" OC MAXIMUM FOR SHEAR WALLS, AND AT 6'-0" OC FOR BEARING WALLS AND OTHER PARTITIONS. USE MINIMUM OF TWO ANCHOR BOLTS PER SILL AND PLACE ONE WITHIN 12 INCHES OF END OF PLATES, TYPICAL UNLESS NOTED OR DETAILED OTHERWISE. REFER TO SHEAR WALL SCHEDULE. AT ALL SILL PLATE ANCHOR BOLTS, CONTRACTOR SHALL INSTALL 1/4" x 3" x 3" FLAT PLATE WASHERS. INTERIOR NON-STRUCTURAL WALLS MAY BE ANCHORED TO CONCRETE SLAB-ON-GRADE WITH 1/4" x 3" POWDER ACTUATED FASTENERS WITH 3/4" WASHERS AT 16" OC AND WITHIN 6" OF END OF PLATES.

3. ROOF AND FLOOR FRAMING

PROVIDE 1 1/2" FULL DEPTH BLOCKING FOR JOISTS AND RAFTERS AT ALL SUPPORTS AND AT 8'-0" OC MAXIMUM UNO. INTERMEDIATE 8'-0" OC BLOCKING NOT REQ'D IF GWB CEILING IS INSTALLED DIRECTLY TO UNDERSIDE OF FRAMING. INSTALL DOUBLE JOISTS UNDER PARTITIONS EXTENDING ONE HALF OR MORE OF THE JOIST SPAN. PROVIDE TRUSS BLOCKING PANELS FOR ROOF TRUSSES AT SUPPORTS AND SHEAR WALLS, AND WHERE INDICATED ON PLANS AND DETAILS.

4. DIAPHRAGM NAILING

ALL SHEAR WALLS, FLOOR AND ROOF DIAPHRAGM NAILINGS SHALL BE AS CALLED OUT ON SCHEDULES OR ON THE PLANS. EXTERIOR WALLS NOT INDICATED AS SHEAR WALLS SHALL BE SHEATHED AND NAILED TO SUPPORTING FRAMING WITH 8d NAILS AT 6" OC AT ALL PANEL EDGES AND 12" OC AT ALL INTERMEDIATE SUPPORTS.

THE USE OF NAIL GUNS WILL BE APPROVED IF NAILING INTO THE DIAPHRAGMS CAN BE INSTALLED FLUSH WITH FACE OF SHEATHING. NAIL PENETRATIONS GREATER THAN 1/16" ARE NOT ACCEPTABLE.

5. ALLOWABLE STUD AND PLATE PENETRATIONS

CUTTING AND/OR NOTCHING OF WOOD STUDS OR PLATES SHALL NOT EXCEED 25% OF THE STUD/PLATE WIDTH IN EXTERIOR AND BEARING WALLS AND SHALL NOT EXCEED 40% OF THE STUD/PLATE WIDTH IN ANY NON-BEARING PARTITIONS. BORED HOLE DIAMETER IS LIMITED TO 40% OF STUD/PLATE WIDTH IN ANY STUD AND MAY BE 60% IN NON-BEARING PARTITIONS OR IF STUD IS DOUBLED. MAINTAIN 5/8" MINIMUM EDGE DISTANCE FROM HOLE EDGE.

6. GYPSUM WALLBOARD NAILING

ALL GYPSUM WALLBOARD SHALL BE NAILED TO ALL STUDS AND TOP AND BOTTOM PLATES WITH 6d COOLER NAILS OR NO. 13 GAUGE x 1 5/8" @ 7" OC (5d COOLER NAILS FOR 1/2 INCH GYPSUM SHEATHING), TYPICAL UNLESS NOTED OTHERWISE. INSTALLATION OF GWB SHALL BE SUCH THAT JOINTS ARE STAGGERED ON EACH SIDE OF A SINGLE WALL.

EXISTING BUILDING

CONTRACTOR SHALL VERIFY ALL DIMENSIONS, MEMBER SIZES AND CONDITIONS OF THE EXISTING BUILDING DEPICTED IN THE DRAWINGS, AND NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES FOR POSSIBLE REDESIGN.

CONTRACTOR RESPONSIBLE FOR COMPLETELY SEALING ALL AREAS WHERE EXISTING ROOF MATERIAL IS PENETRATED OR REMOVED. PROVIDE WATER PROOFING AS REQUIRED BY THE ARCH.

GENERAL

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL, CIVIL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS FOR COMPATIBILITY BEFORE PROCEEDING. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING.

CONTRACTOR TO SEE ARCHITECTURAL, CIVIL, ELECTRICAL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF PIPE, VENT, DUCT AND OTHER OPENINGS AND DETAILS NOT SHOWN ON THESE DRAWINGS.

CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTION STABILITY AND TEMPORARY SHORING AS NECESSARY UNTIL PERMANENT SUPPORT AND STIFFENING ARE INSTALLED.

STRUCTURAL NOTES

(THESE NOTES ARE TYPICAL UNLESS NOTED OR DETAILED OTHERWISE ON DRAWINGS)

LEGEND			
DEFINITION	SYMBOL	DEFINITION	SYMBOL
DIRECTION OF FRAMING		NATIVE SOIL	
EXTENT OF FRAMING		GRANULAR FILL	
COLUMNS		STRUCTURAL STEEL	
COLUMN BEARING ON BEAM		RATED SHEATHING	
BEAM CONTINUOUS OVER SUPPORT		SHEAR WALL (SEE SCHEDULE)	SWX
CONCRETE WALL		COLUMN MARK (SEE SCHEDULE)	
BEARING STUD WALL		FOOTING MARK (SEE SCHEDULE)	
NON-BEARING STUD WALL		HOLDOWN MARK (SEE SCHEDULE)	
BEARING STUD SHEAR WALL		HANGER MARK (SEE SCHEDULE)	
NON-BEARING STUD SHEAR WALL		FLAG NOTE (SEE PLAN NOTES)	
CMU WALL		STEEL MOMENT FRAME CONN.	

ABBREVIATIONS			
(A)	ABOVE	GLB	GLUE-LAMINATED BEAM
AB	ANCHOR BOLT	HORIZ	HORIZONTAL
ALT	ALTERNATE	KP	KING POST
ARCH	ARCHITECT	KSI	KIPS PER SQUARE INCH
(B)	BELOW	L	ANGLE
BD	BAR DIAMETER	MECH	MECHANICAL
BLKG	BLOCKING	MF	MOMENT FRAME
BM	BEAM	MTL	METAL
BOT	BOTTOM	NS	NEAR SIDE
BRNG	BEARING	OC	ON CENTER
BTWN	BETWEEN	OPP	OPPOSITE
CJP	COMPLETE JOINT PENETRATION	PL	PLATE
CLR	CLEAR	PLCS	PLACES
CMU	CONCRETE MASONRY UNIT	PSI	POUNDS PER SQUARE INCH
COL	COLUMN	PSF	POUNDS PER SQUARE FOOT
CONC	CONCRETE	P/T	POST TENSIONED
CONN	CONNECTION	PT	PRESSURE TREATED
CONT	CONTINUOUS	REINF	REINFORCING
COORD	COORDINATE	REQ'D	REQUIRED
DBL	DOUBLE	SCHED	SCHEDULE
DET	DETAIL	SIM	SIMILAR
DIA	DIAMETER	SOG	SLAB ON GRADE
DIM	DIMENSION	STD	STANDARD
DIR	DIRECTION	STIFF	STIFFENER
EA	EACH	STL	STEEL
ELEV	ELEVATION	SYMM	SYMMETRICAL
ES	EACH SIDE	SW	SHEARWALL
EX	EXISTING	TOC	TOP OF CONCRETE
EXP	EXPANSION	TOS	TOP OF STEEL
FLR	FLOOR	TOW	TOP OF WALL
FDN	FOUNDATION	TYP	TYPICAL
FTG	FOOTING	UNO	UNLESS NOTED OTHERWISE
FS	FAR SIDE	VERT	VERTICAL
GC	GENERAL CONTRACTOR	WF	WIDE FLANGE



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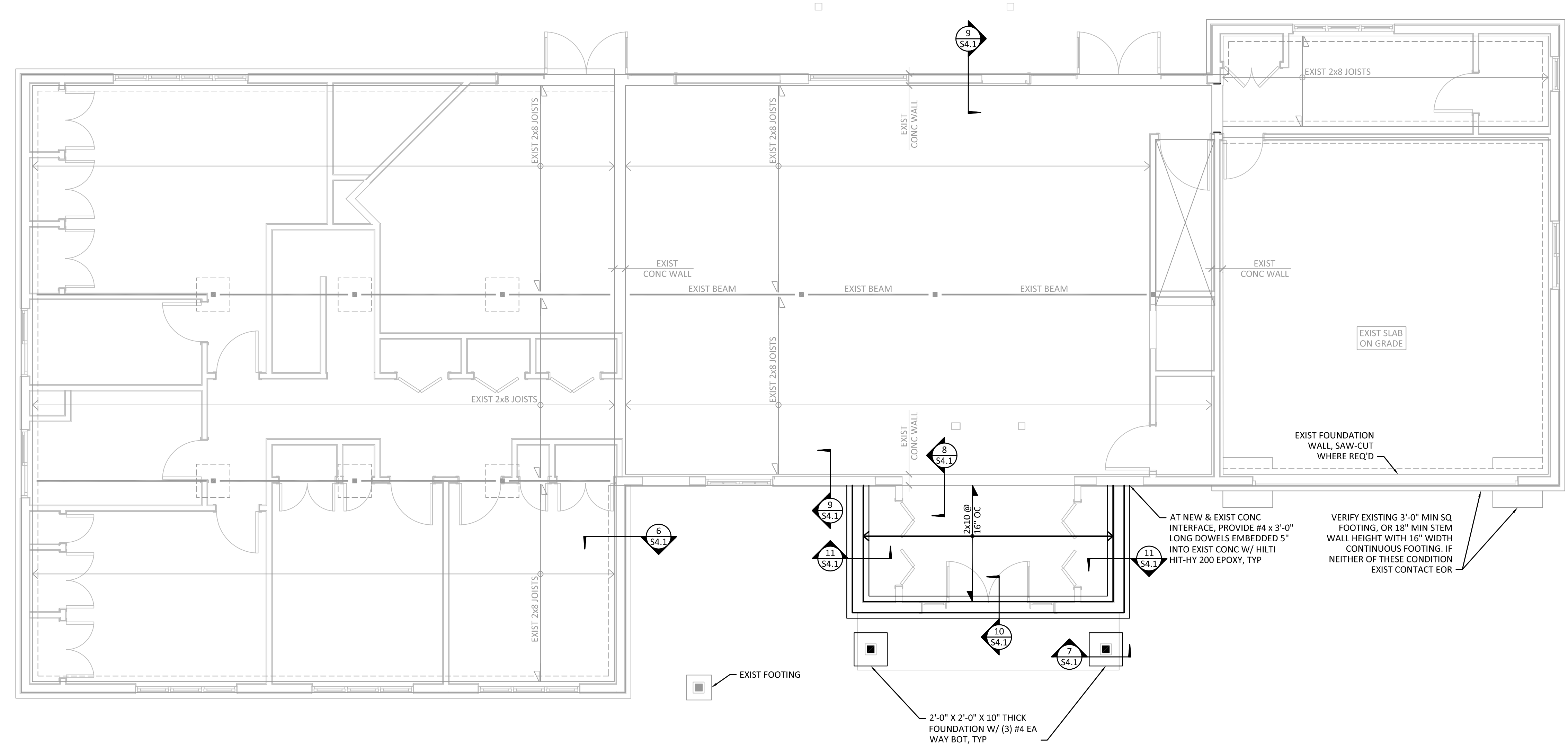
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STRUCTURAL NOTES

SHEET:

S1.2

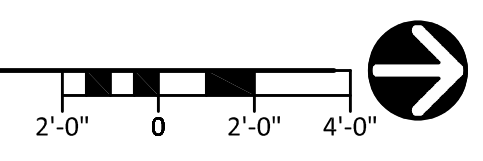


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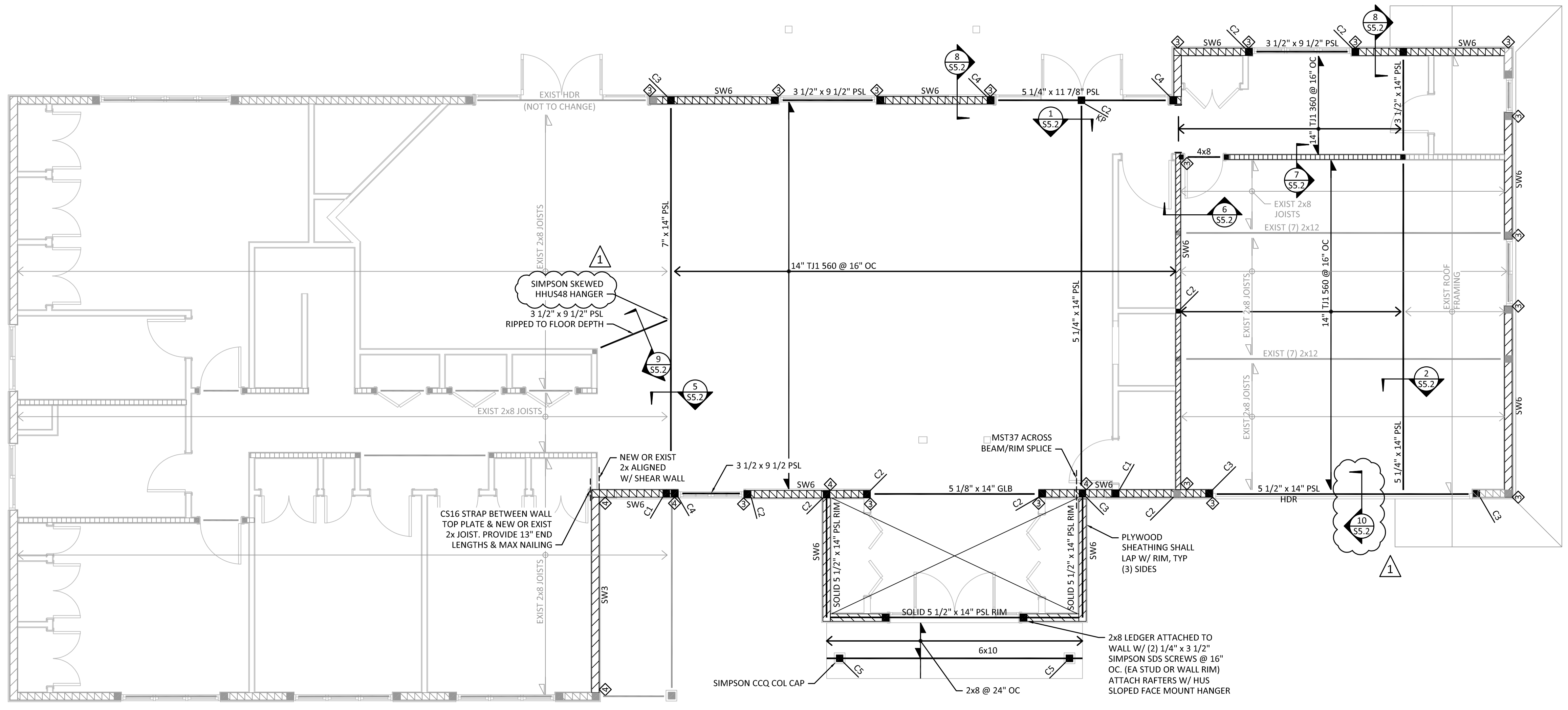
1 FOUNDATION & CRAWLSPACE FRAMING PLAN
 SCALE: 1/4" = 1'-0"

- FOUNDATION PLAN NOTES:**
- REFERENCE TO SLAB ELEVATION SHOWN ON PLAN AND VERIFY W/ ARCH DRAWINGS. EXTERIOR FOOTINGS SHALL BEAR A MIN OF 1'-6" BELOW ADJACENT GRADE.
 - FOOTINGS SHALL BEAR ON FIRM NATIVE SOIL OR COMPACTED STRUCTURAL FILL AS SPECIFIED IN THE SOILS REPORT.
 - REFER TO SHEET S4.1 FOR FOUNDATION DETAILS.
 - PLACE ALL REINFORCEMENT PER THE STRUCTURAL NOTES AND FOUNDATION DETAILS. REFER TO SHEET S1.1 FOR ADDITIONAL CONCRETE DETAILING REQUIREMENTS.
 - FOUNDATION LEVEL HOLDDOWNS ARE SHOWN ON THE FRAMING PLANS AT THE BASE OF WALL SHOWN. REFER TO HOLDDOWN SCHEDULE ON SHEET S3.1 FOR HOLDDOWN TYPES AND FRAMING PLANS FOR HOLDDOWN ANCHOR BOLT LOCATIONS.
 - REFER TO FRAMING PLANS AND SHEAR WALL SCHEDULE ON SHEET S3.1 FOR LOCATION OF SHEAR WALL ANCHOR BOLTS. ANCHORAGE AT NON-SHEAR WALLS SHALL BE PER STRUCTURAL NOTES.
 - CONTRACTOR SHALL VERIFY ALL DIMENSIONS & WALL LOCATIONS, AND NOTIFY ALL PARTIES OF ANY DISCREPANCIES.
 - REFER TO DETAIL 3/S4.1 FOR PIPE PENETRATIONS THROUGH CONCRETE WALL OR FOOTINGS.
 - WHERE SLAB ON GRADE IS INDICATED, SLAB SHALL BE 4" THICK WITH #4 REBAR AT 18" OC. SLAB SHALL BE POURED OVER A 10 MIL VAPOR BARRIER OVER 4" OF 5/8" CRUSHED ROCK.



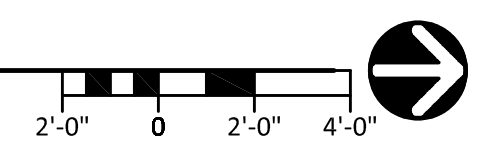
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 FOUNDATION & CRAWLSPACE FRAMING PLAN
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S2.1



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

- TYPICAL FLOOR FRAMING PLAN NOTES:**
- FLOOR SHEATHING SHALL BE 3/4" PI 48/24 WITH 10d COMMON NAILS SPACED AT 6" OC AT ALL DIAPHRAGM BOUNDARIES, PANEL EDGES AND SHEAR WALLS AND 10" OC AT INTERMEDIATE FRAMING. FOR SHEATHING LAYOUT AND NAILING REFER TO DETAIL 2/S5.1
 - COLUMNS AND BEARING WALLS SHOWN ON PLANS SHALL BE CONTINUED DOWN TO THE FOUNDATION UNLESS CARRIED BY A BEAM BELOW.
 - ALL DIAPHRAGMS UNBLOCKED.
 - REFER TO SHEET S5.1 THRU S5.2 FOR TYPICAL FLOOR FRAMING DETAILS.
 - CONTRACTOR SHALL HAVE THE OPTION TO DRILL A 1 1/2" Ø HOLE CENTERED IN THE DEPTH AND AT THE THIRD POINT OF THE SPAN FOR ALL WOOD FLUSH BEAMS SHOWN ON THE PLAN.
 - WALLS SHOWN ON THE FRAMING PLANS ARE WALLS BELOW THE FRAMING LEVELS INDICATED. HOLD-DOWNS SHALL BE PLACED AT THE BASE OF THE WALLS SHOWN.
 - TYPICAL HEADERS AT BEARING LOCATION SHALL BE 4x8 DF#2 UNO SUPPORTED BY A MINIMUM OF (1) CRIPPLE STUD AND (1) FULL HEIGHT STUD.
 - COLUMNS NOT OTHERWISE SHOWN OR CALLED OUT ON PLAN SHALL BE (2) 2x STUDS.
 - UNLESS NOTED OTHERWISE ALL STUDS SHALL BE HF STUD GRADE AND SPACED AT 16" OC.
 - UNLESS NOTED OTHERWISE, ALL BEAM-TO-BEAM CONNECTIONS SHALL BE SIMPSON HU SERIES FACE MOUNT HANGERS W/ MAX NAILING.
 - UNLESS NOTED OTHERWISE, ALL BEAM-TO-COLUMN CONNECTIONS SHALL BE SIMPSON ECCQ OR CCQ SERIES COLUMN CAPS.
 - UNLESS NOTED OTHERWISE, ALL JOIST-TO-BEAM CONNECTIONS SHALL BE SIMPSON LUS OR HUC FACE MOUNT HANGERS.



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UPPER FLOOR FRAMING PLAN
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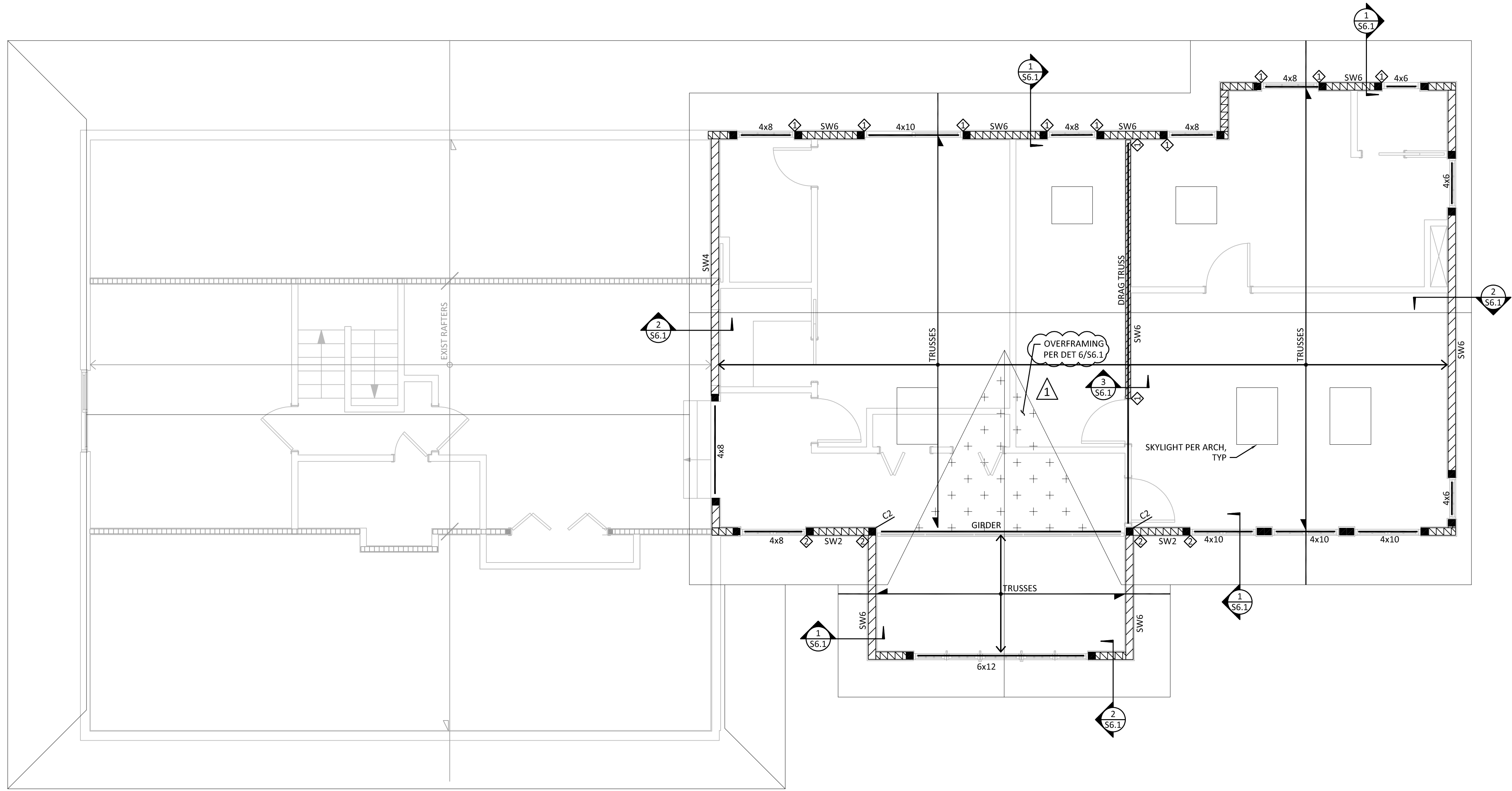
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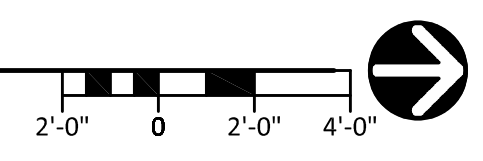


1 ROOF FRAMING PLAN

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

TYPICAL ROOF FRAMING PLAN NOTES:

1. WALLS SHOWN ON ROOF FRAMING PLAN ARE WALLS BELOW ROOF FRAMING.
2. BEAMS SHOWN ON ROOF FRAMING PLAN SHALL BE ABOVE DOUBLE TOP PLATE UNLESS USED AS A DOOR OR WINDOW HEADER.
3. ROOF SHEATHING SHALL BE 1/2" P140/20 WITH 8d COMMON NAILS SPACED AT 6" OC AT ALL DIAPHRAGM BOUNDARIES, PANEL EDGES, SHEAR WALLS, COLLECTOR TRUSSES, AND BLOCKING OR TRUSS BLOCKING PANELS INDICATED ON PLANS. NAILING AT INTERMEDIATE FRAMING SHALL BE 8d COMMON NAILS @ 12" OC. REFER TO DETAIL 2/S5.1 FOR SHEATHING LAYOUT AND NAILING.
4. UNLESS NOTED OTHERWISE, HEADERS AT ALL EXTERIOR WALLS SHALL BE 4x8 HF#2 WHERE MAXIMUM SPAN = 5'-5".
5. STUD WALL FRAMING SHALL BE 2x HF STUDS @ 16" OC FOR ALL STUD WALLS SHOWN ON THE PLAN.
6. REFER TO SHEET S6.1 FOR TYPICAL ROOF FRAMING DETAILS.
7. REFER TO DETAIL 3/S5.1 FOR CONSTRUCTION OF MULTIPLE STUD COLUMNS.
8. REFER TO THE STRUCTURAL NOTES SHEET FOR COLUMNS SUPPORTING TYPICAL BEARING WALL HEADER BEAMS.
9. ALL DIAPHRAGMS UNBLOCKED.
10. COLUMNS AND BEARING WALLS SHOWN ON PLAN SHALL BE CONTINUED DOWN TO THE FOUNDATION UNLESS CARRIED BY A BEAM BELOW.
11. HOLDDOWNS SHOWN ON ROOF FRAMING PLAN SHALL BE PLACED AT BASE OF WALLS SHOWN.
12. ATTACH ALL ROOF TRUSSES TO WALLS BELOW WITH SIMPSON H2.5A HURRICANE TIES.
13. TRUSSES MARKED "DRAG TRUSS" SHALL BE DESIGNED FOR THE SERVICE LEVEL IN-PLAN AXIAL LOAD OF 310 PLF



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ROOF FRAMING PLAN

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S2.3



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SHEAR WALL SCHEDULE

TYPE	APA-RATED SHEATHING	MIN FRAMING AT ADJOINING PANEL EDGES (SEE NOTE 5)	SHEAR WALL NAILING AT PANEL EDGES	RIM JOIST OR BLOCK CONN TO TOP PLATE	SILL PLATE NAILING TO RIM/BLKG BELOW	SILL PLATE ANCHOR BOLT TO SLAB OR FOUNDATION	FOUNDATION SILL PLATE SIZE	SHEAR CAPACITY (PLF)
SW6	15/32" ONE SIDE	2x STUD AND BLKG	0.131"Ø x 2 1/2" @ 6" OC	LTP4 OR A35 @ 24" OC	0.131"Ø x 3" @ 6" OC	5/8"Ø AB @ 5'-0" OC	2x	242
SW4	15/32" ONE SIDE	2x STUD AND BLKG	0.131"Ø x 2 1/2" @ 4" OC	LTP4 OR A35 @ 20" OC	0.131"Ø x 3" @ 4" OC	5/8"Ø AB @ 4'-0" OC	2x	350
SW3	15/32" ONE SIDE	(2) 2x STUD AND 2x FLAT BLKG	0.131"Ø x 2 1/2" @ 3" OC	LTP4 OR A35 @ 15" OC	0.131"Ø x 3" @ 3" OC	5/8"Ø AB @ 3'-0" OC	2x	455
SW2	15/32" ONE SIDE	3x STUD AND 2x FLAT BLKG	0.131"Ø x 2 1/2" @ 2" OC	LTP4 OR A35 @ 12" OC	0.131"Ø x 3" @ 2.5" OC	5/8"Ø AB @ 2'-6" OC	2x	595
2SW4	15/32" BOTH SIDES	(2) 2x STUD AND BLKG	0.131"Ø x 2 1/2" @ 4" OC	LTP4 OR A35 @ 10" OC	0.131"Ø x 3" @ 2" OC	5/8"Ø AB @ 2'-0" OC	2x	706
2SW3	15/32" BOTH SIDES	(2) 2x STUD AND BLKG	0.131"Ø x 2 1/2" @ 3" OC	LTP4 OR A35 @ 7.5" OC	0.131"Ø x 3" @ 1.5" OC	5/8"Ø AB @ 1'-6" OC	2x	910
2SW2	15/32" BOTH SIDES	3x STUD AND BLKG	0.131"Ø x 2 1/2" @ 2" OC	LTP4 OR A35 @ 6" OC	0.131"Ø x 3" @ 1.5" OC	5/8"Ø AB @ 1'-0" OC	2x	1190

- NOTES:
 1. REFER TO THE TYPICAL SHEAR WALL DETAIL.
 2. THE VALUES IN THIS TABLE ARE APPROPRIATE FOR HF GRADE STUDS AND HF GRADE PLATES & RIM/BLOCKING.
 3. NAILS AT ADJOINING PANEL EDGES SHALL BE STAGGERED EACH SIDE OF THE COMMON JOINT.
 4. WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS, OR FRAMING SHALL BE 3x AT ADJOINING PANEL EDGES AND NAILS SHALL BE STAGGERED.
 5. WHERE TABLE SPECIFIES (2) 2x FRAMING, CONNECT (2) 2x STUDS AND BLOCKING AS FOLLOWS: SW3 = (2) 0.131"Ø @ 3.5" OC, 2SW3 = (2) 0.131"Ø @ 1.5" OC.
 6. NOTE THAT 3x FRAMING MAY BE USED IN LIEU OF (2) 2x FRAMING SPECIFIED IN TABLE.
 7. INTERMEDIATE FRAMING TO BE WITH 2x MINIMUM MEMBERS. FIELD NAILING 12" OC MAXIMUM.
 8. AT ALL 5/8"Ø SILL PLATE ANCHOR BOLTS, INSTALL 1/4" x 3" x 3" PLATE WASHERS. EDGE OF PLATE WASHER SHALL BE WITHIN 1/2" OF SHEATHED EDGE.
 9. FOR DOUBLE SIDED SHEAR WALLS, USE WIDER PLATE WASHERS AS REQUIRED TO MEET THIS REQUIREMENT.
 10. PROVIDE A MINIMUM OF 7" EMBEDMENT FOR AB INTO FOUNDATION OR STEM WALL.
 11. 7/16" SHEATHING MAY BE USED IN PLACE OF 15/32" SHEATHING PROVIDED ALL STUDS ARE SPACED 16" OC OR PANELS ARE APPLIED WITH LONG DIMENSION ACROSS STUDS.
 12. AT EXIST FOUNDATION WALLS PROVIDE TITEN HD TO MATCH ANCHOR ABOVE WITH 7" EMBED.

HOLDOWN SCHEDULE

MARK	TYPE	MIN CHORD SIZE	STUD NAILS OR BOLTS	ANCHOR BOLT (SEE NOTE 4)	CAPACITY (LB)
1	MST48	(2) 2x	(17) 16d EA END	-	3,640
2	MST60	(2) 2x	(23) 16d EA END	-	5,405
3	HDU2	(2) 2x	(6) SDS 1/4" x 2 1/2" SCREWS	5/8"Ø	2,215
4	HDU5	(2) 2x	(14) SDS 1/4" x 2 1/2" SCREWS	5/8"Ø	4,340

- NOTES:
 1. REFER TO THE LATEST SIMPSON STRONG-TIE CATALOG FOR ADDITIONAL INSTALLATION REQUIREMENTS.
 2. REFER TO DETAIL 4/SS.2 FOR INSTALLATION OF MST FLOOR TO FLOOR STRAPS. REFER TO DETAILS 3/SS.2 FOR CONNECTION OF STRAP TO BEAM BELOW.
 3. INSTALL HD HOLDOWNS AT FOUNDATION WALLS PER DETAIL 4 & 5/54.1.
 4. AT ALL HOLDOWN CHORDS, PROVIDE PANEL EDGE NAILING PER SHEAR WALL SCHED.

COLUMN SCHEDULE

MARK	COLUMN SIZE 2x4 WALL	COLUMN SIZE 2x6 WALL	REMARKS
C1	(2) 2x4	(2) 2x6	SEE NOTE 2
C2	(3) 2x4	(3) 2x6	SEE NOTE 2
C3	(4) 2x4	(4) 2x6	SEE NOTE 2
C4	4x6 HF#1	4x6 HF#1	-
C5	4x8 HF#1	6x6 DF#1	-
C6	4x10 HF#1	6x8 DF#1	-
C7	6x10 DF#1	6x10 DF#1	-
C8	TS4x4x1/4	TS4x4x1/4	PL 3/4 x 5 x 0'-10"

- NOTES:
 1. REFER TO THE LATEST SIMPSON STRONG-TIE CATALOG FOR PRE-FABRICATED CONNECTION INSTALLATION REQUIREMENTS.
 2. MULTIPLE STUD COLUMNS SHALL USE GRADE OF STUD INDICATED ON WALL FRAMING SCHEDULE. REFER TO DETAIL 3/SS.1 FOR FABRICATION OF MULTIPLE STUD COLUMNS.
 3. CONTRACTOR TO PROVIDE BLOCKING EQUAL TO COLUMN DIMENSIONS AT JOIST SPACE FOR COLUMNS CONTINUING TO FOUNDATION.

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 DATE: 09/19/22

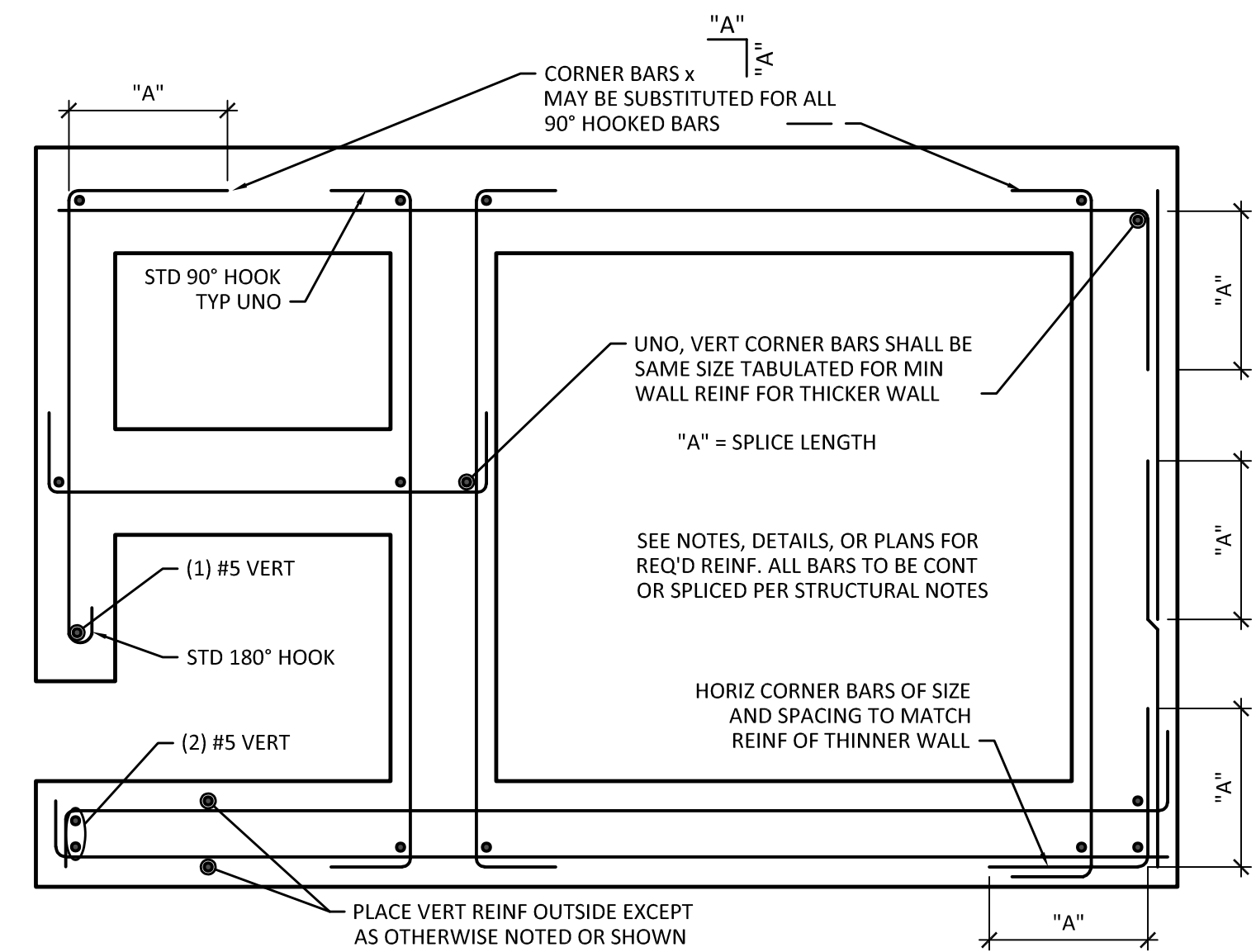
BALDWIN RESIDENCE ADDITION
 4215 87TH AVE SE
 MERCER ISLAND, WA 98040

February 27, 2023
 SCHEDULE
 FILE NAME:

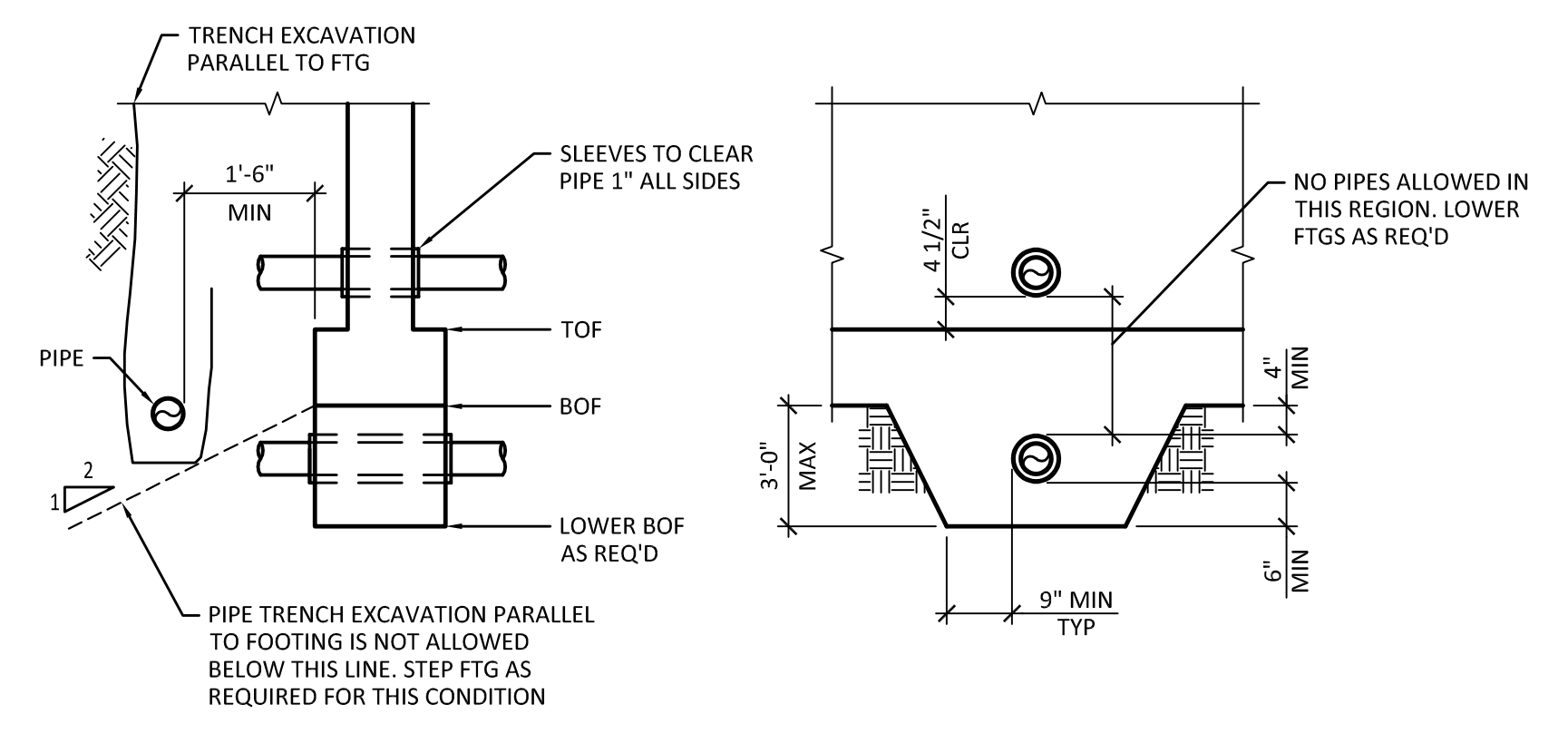
SHEET:
S3.1



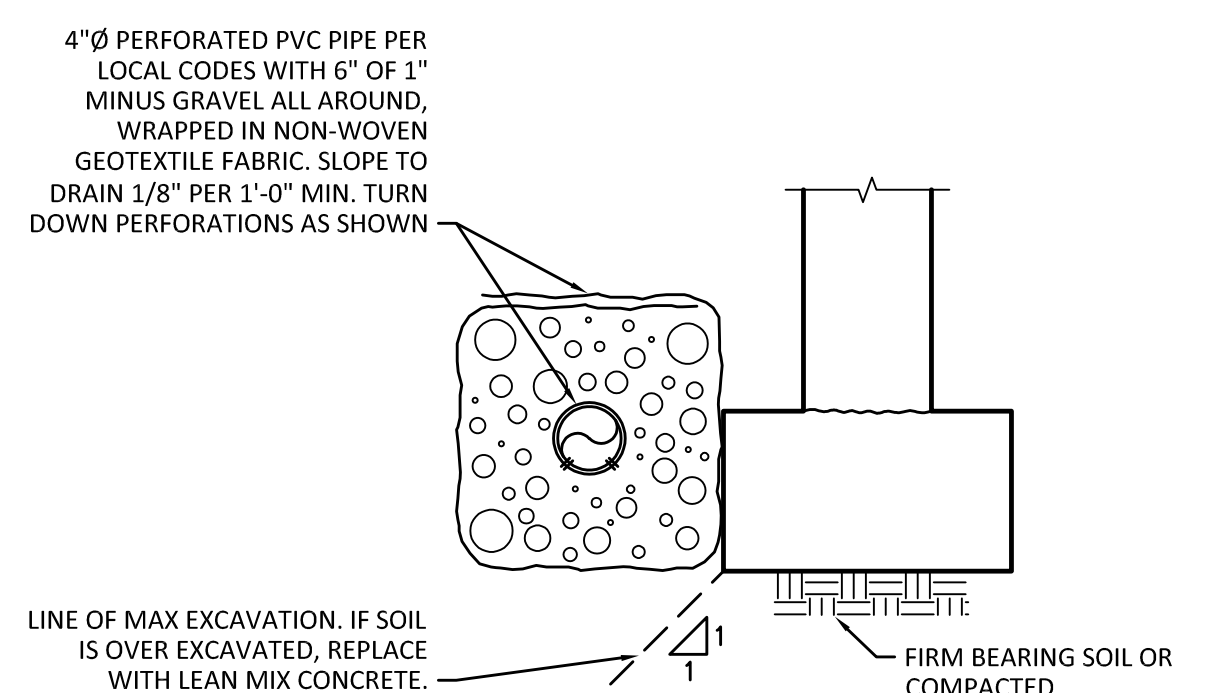
01/30/23



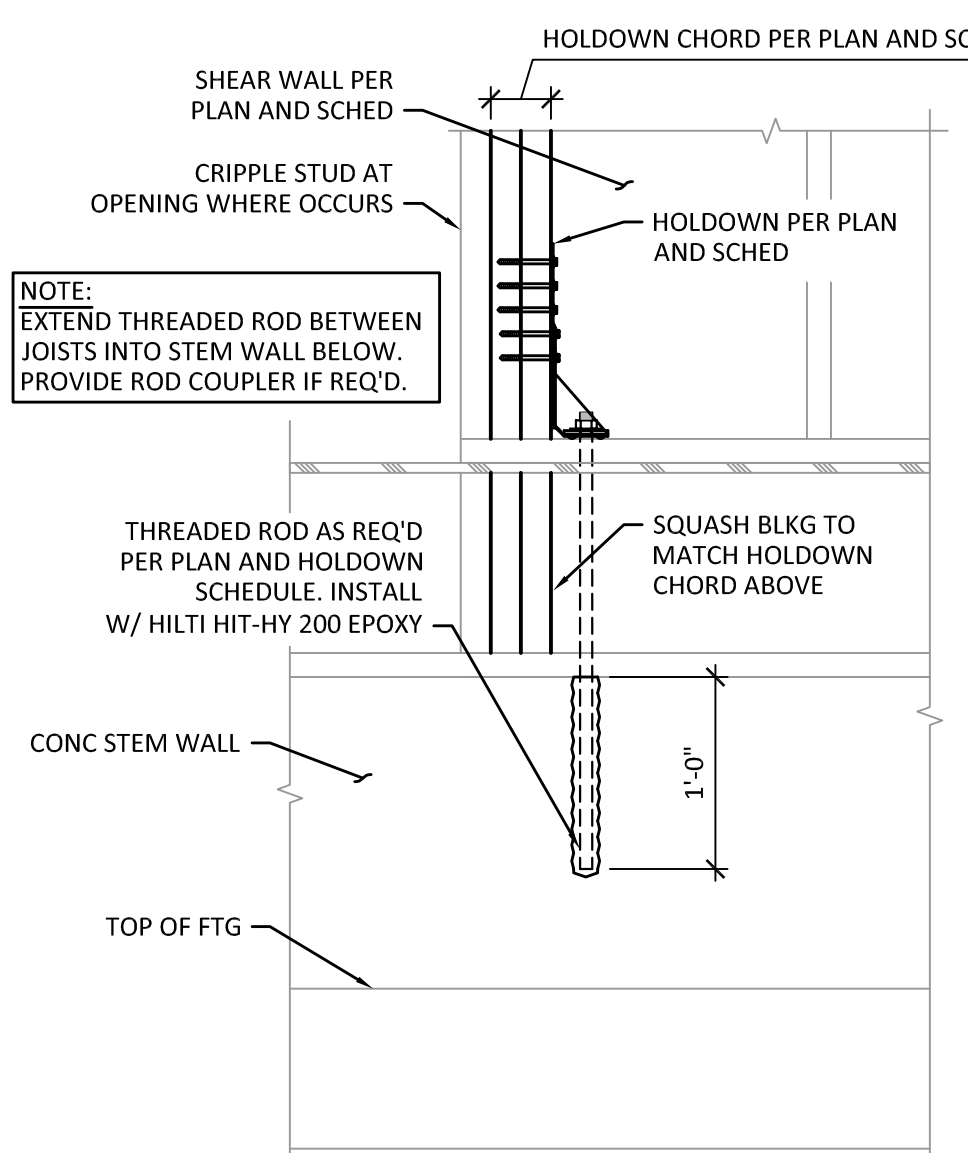
1 TYPICAL CONCRETE WALL REINFORCING DETAIL
 SCALE: NTS



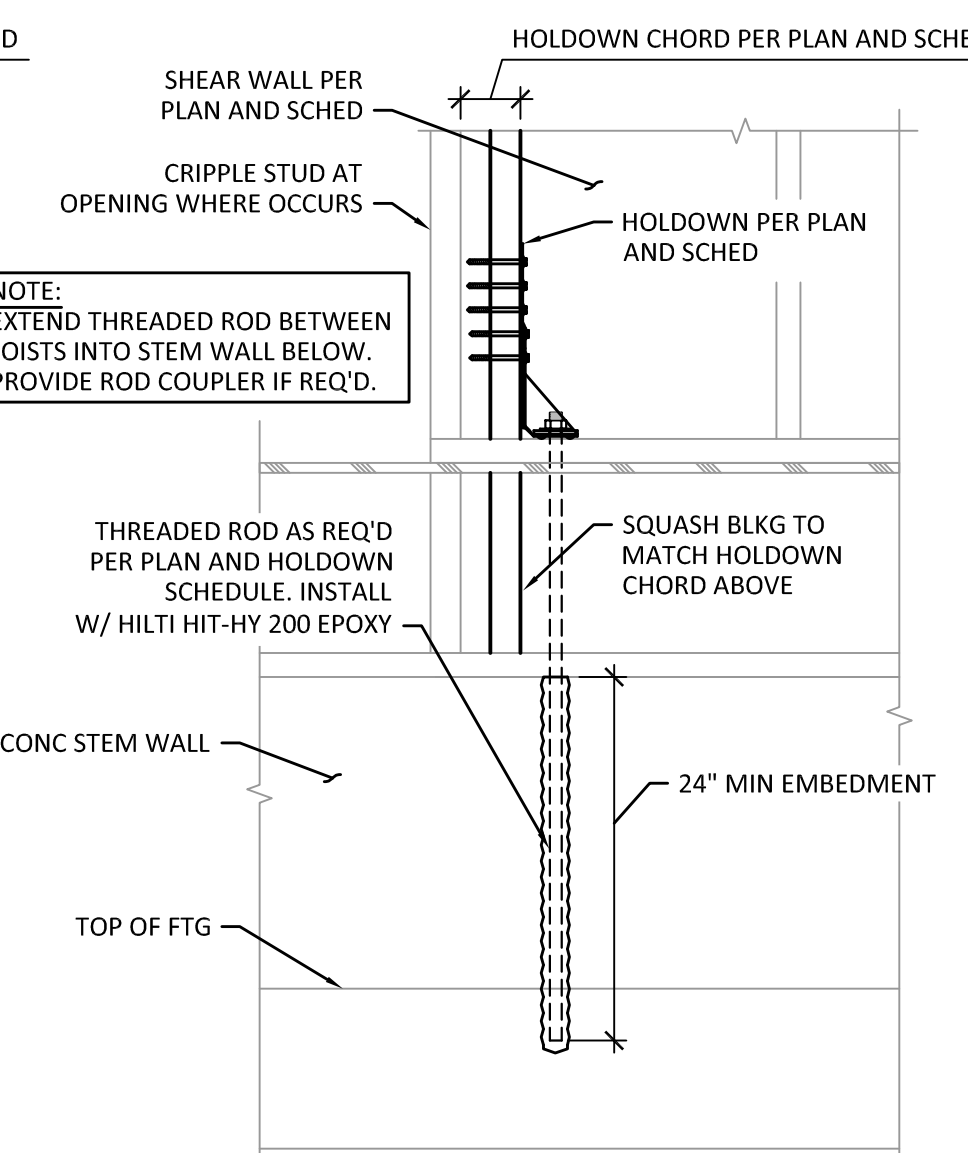
2 TYPICAL PIPE PENETRATION AT WALLS AND FOOTINGS
 SCALE: 1/2" = 1'-0"



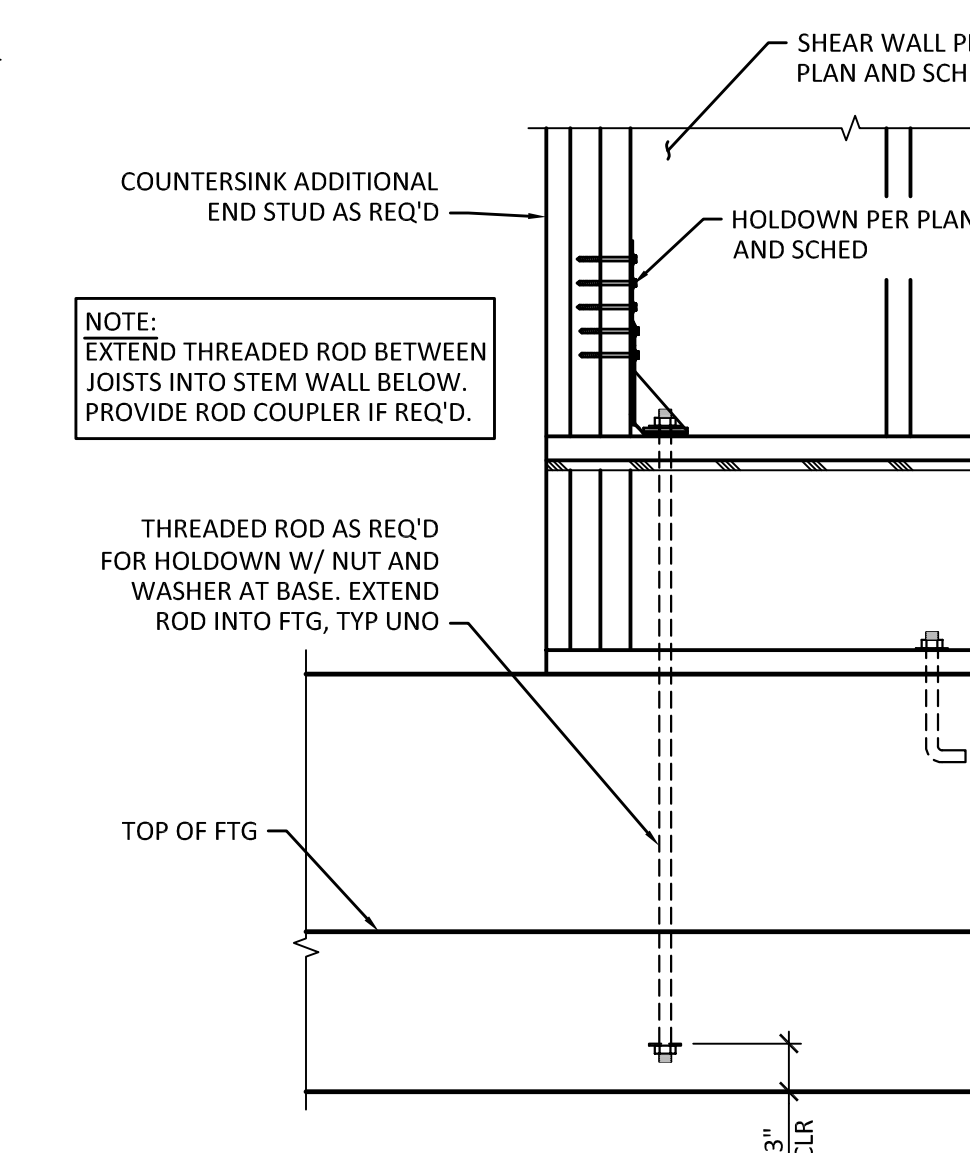
3 TYPICAL FOOTING DRAIN
 SCALE: 1" = 1'-0"



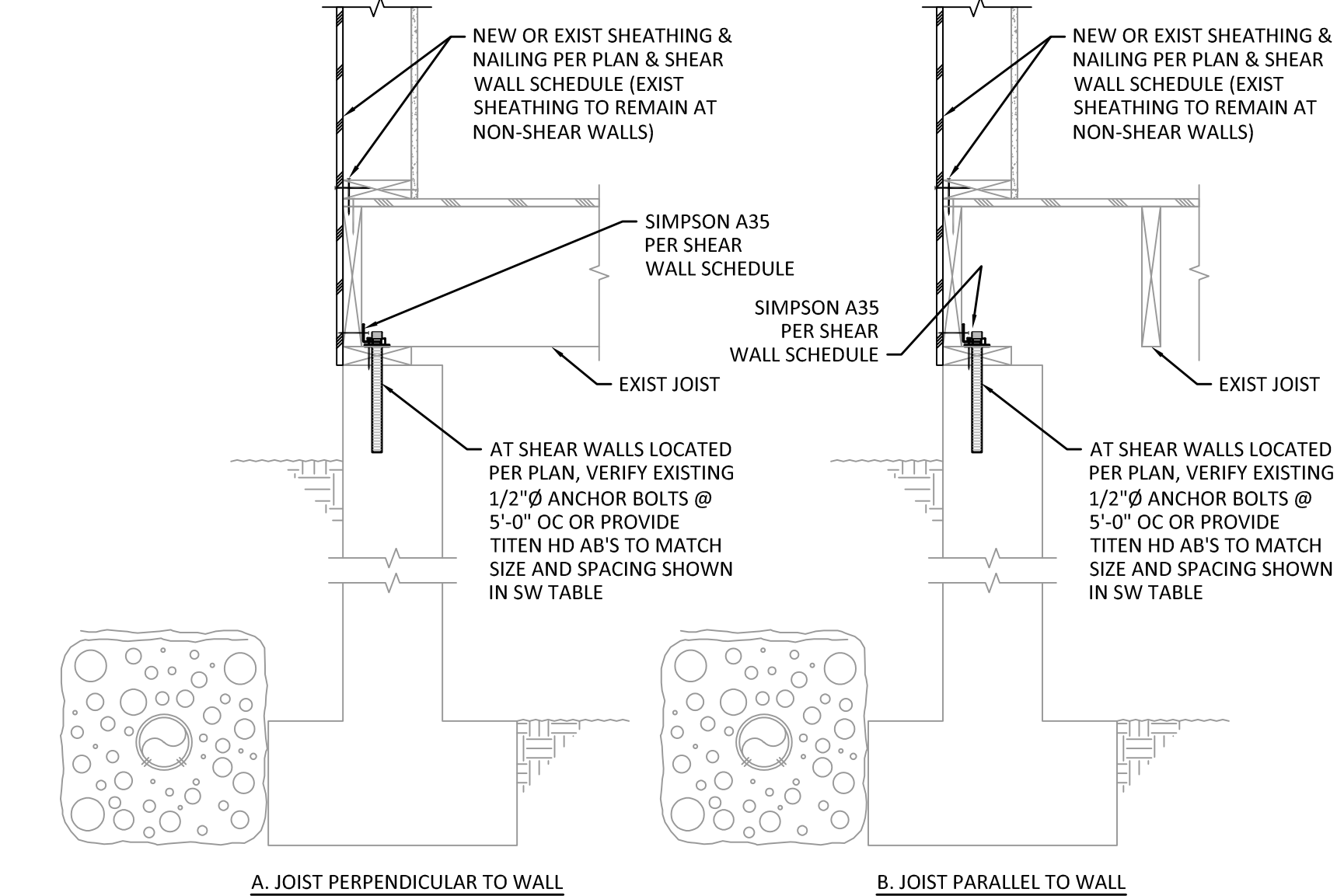
4 HOLDOWN DETAIL (EXIST FOOTING)
 SCALE: 1" = 1'-0"



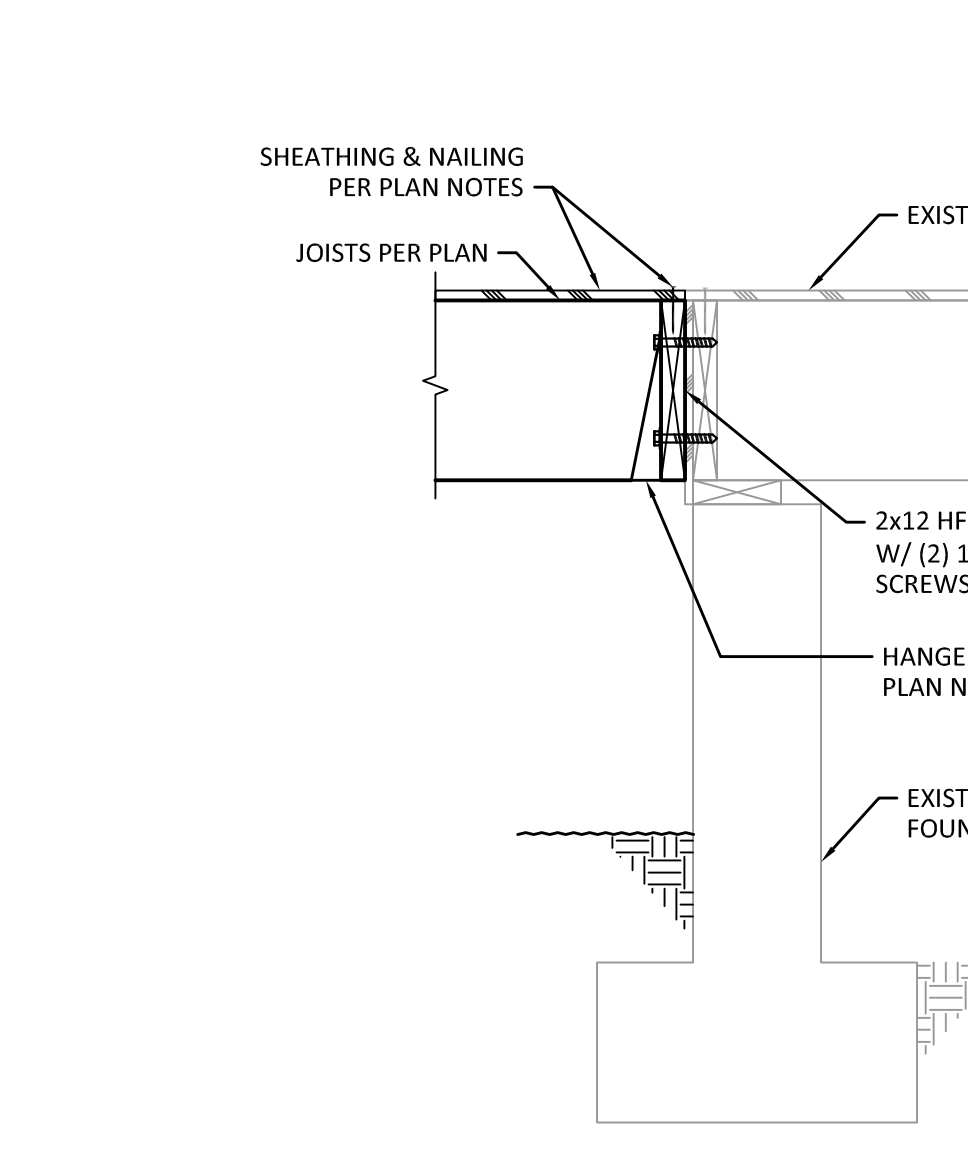
5 HOLDOWN DETAIL (NEW FOOTING)
 SCALE: 1" = 1'-0"



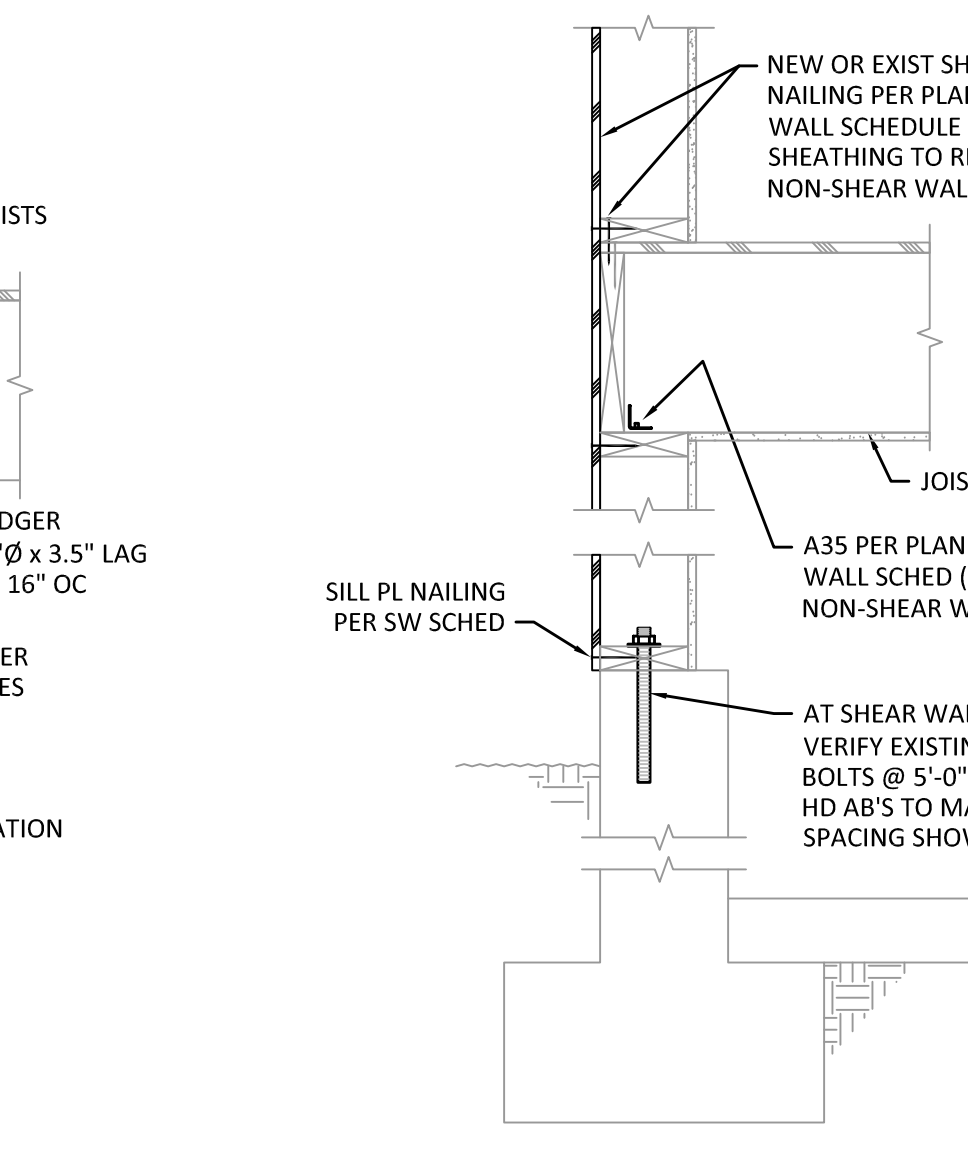
6 SECTION
 SCALE: 1" = 1'-0"



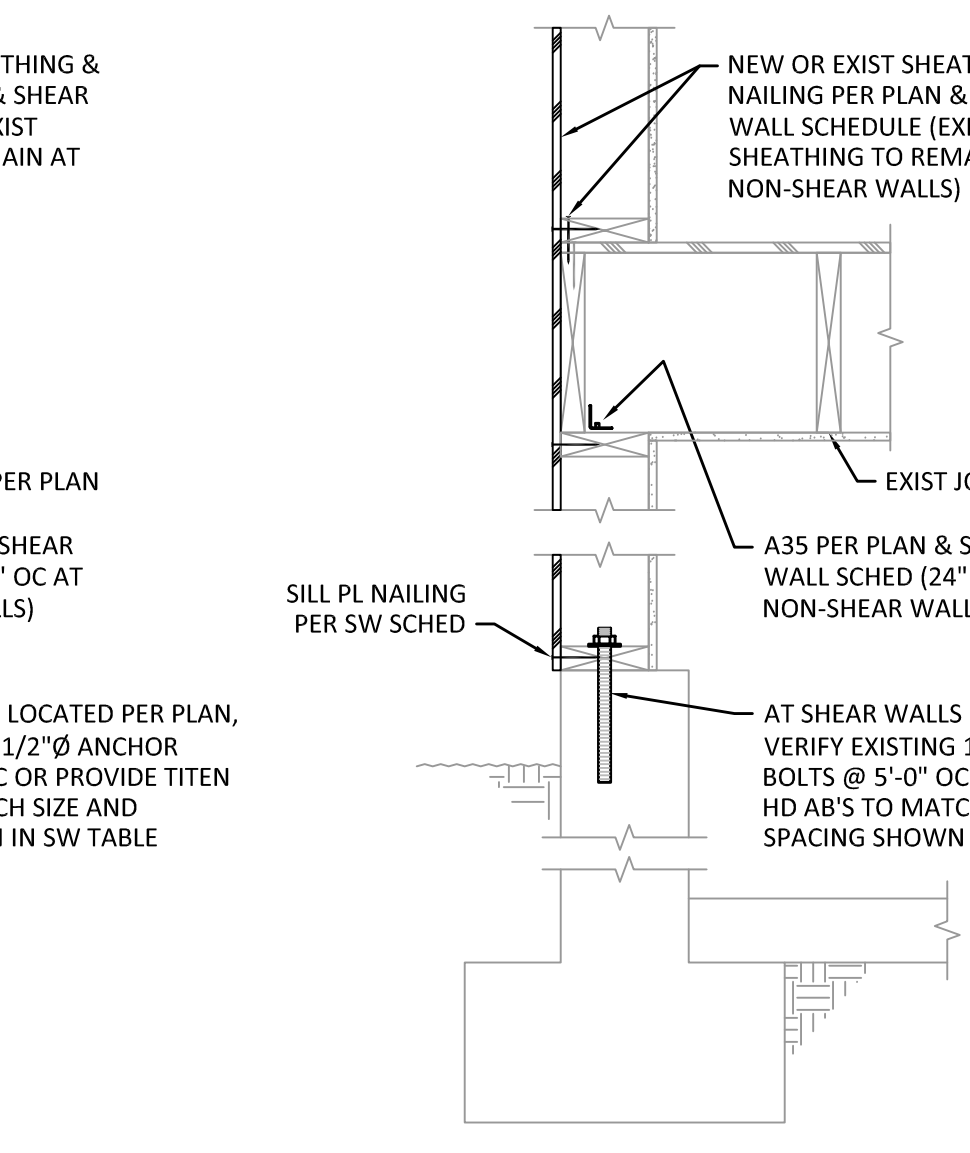
7 ISOLATED POST FOOTING
 SCALE: 1" = 1'-0"



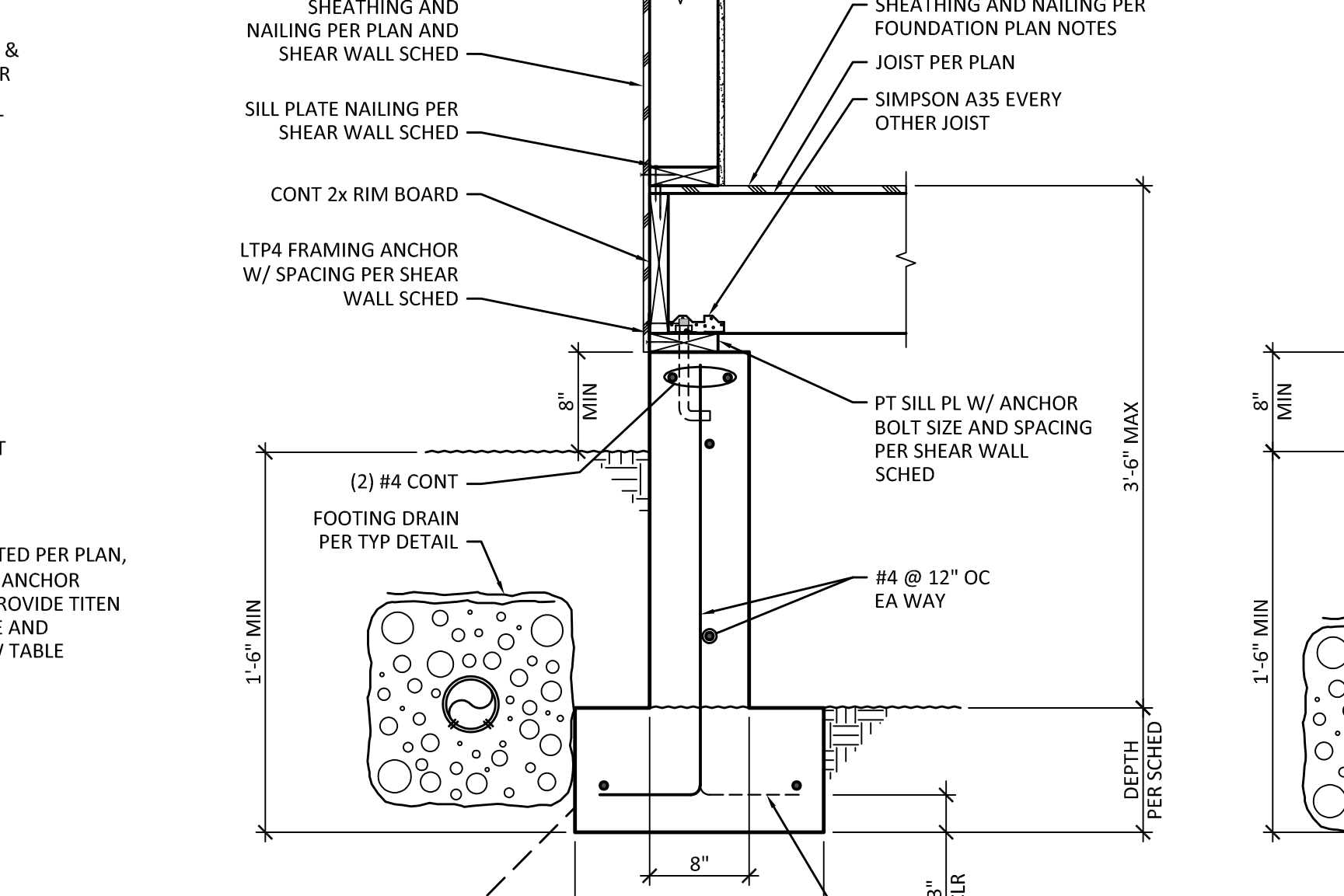
8 LEDGER TO EXIST WALL
 SCALE: 1" = 1'-0"



9 SECTION
 SCALE: 1" = 1'-0"



10 CRAWSPACE SECTION (BEARING)
 SCALE: 1" = 1'-0"



11 CRAWSPACE SECTION (NON-BEARING)
 SCALE: 1" = 1'-0"

MARK	DATE	DESCRIPTION	PERMIT SUBMITTAL	COMMENT RESPONSE
	09/19/22			
	01/30/23			

DESIGN:	BEL
DRAWN:	LVW
CHECK:	RMK
JOB NO:	21451.10
DATE:	09/19/22

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 4215 87TH AVE SE
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 February 27, 2023
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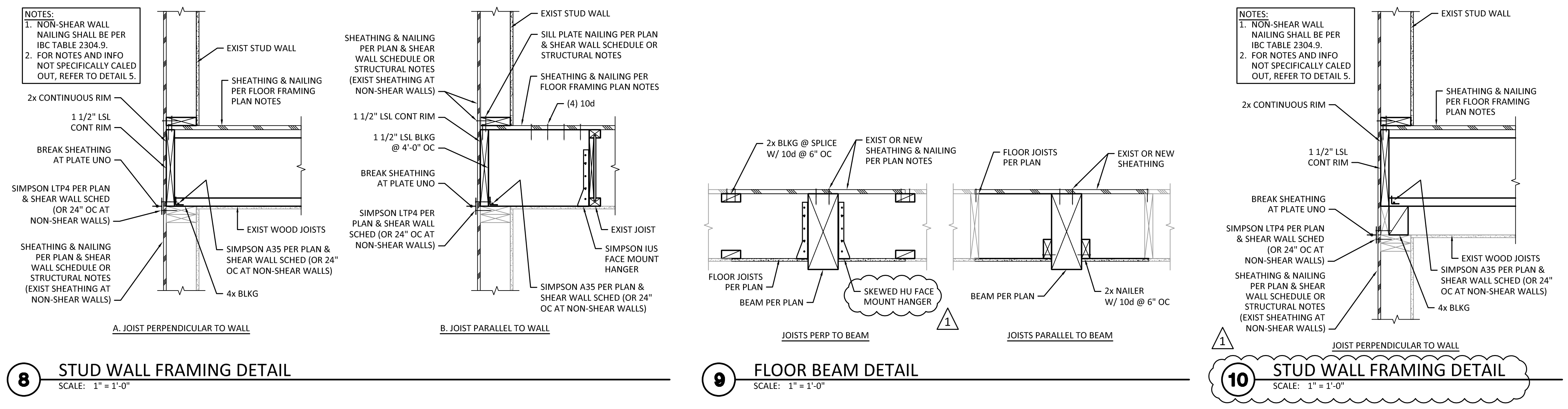
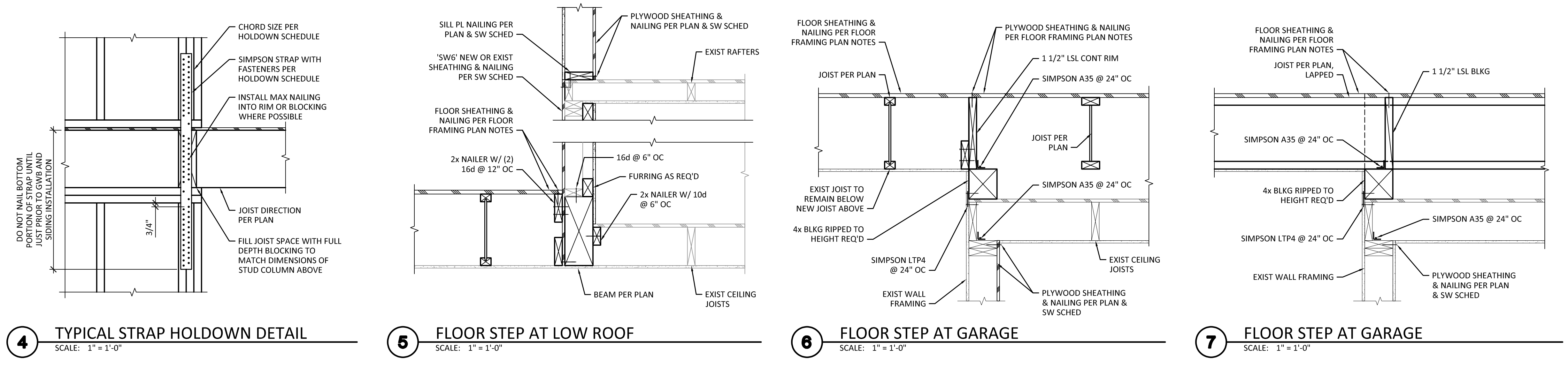
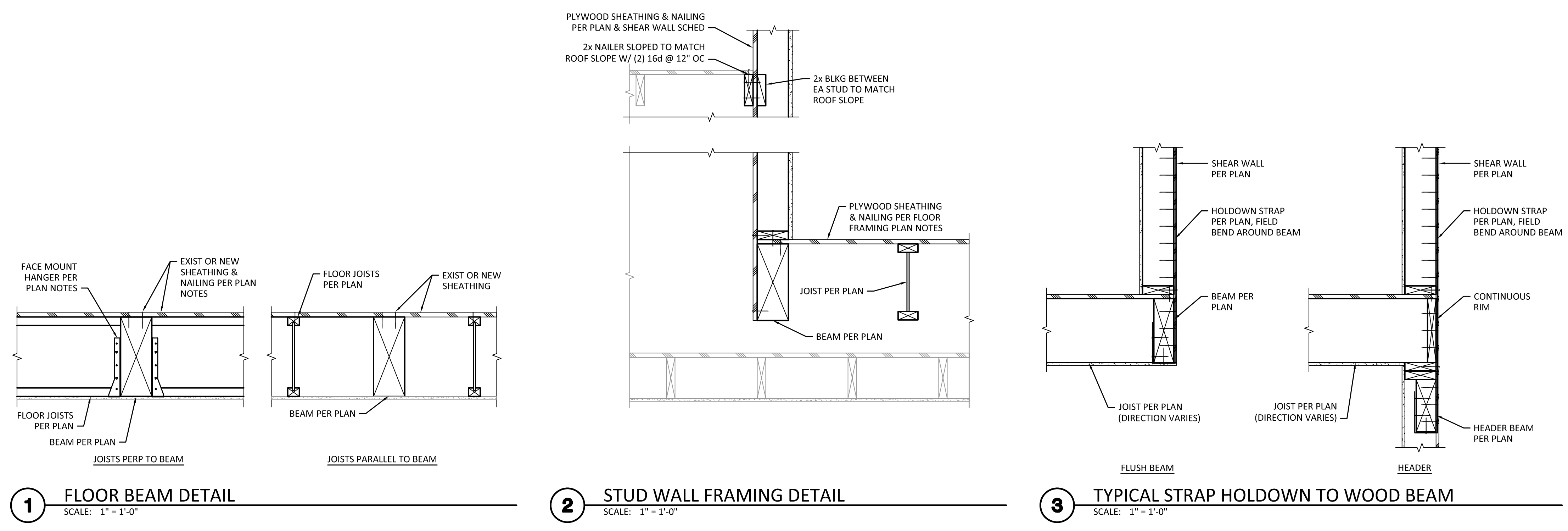
FOUNDATIONS DETAILS

SHEET:
S4.1



MARK	DATE	DESCRIPTION
	09/19/22	PERMIT SUBMITTAL
	01/30/23	COMMENT RESPONSE

DESIGN:	BEL
DRAWN:	LVW
CHECK:	RMK
JOB NO:	21451.10
DATE:	09/19/22



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WOOD FRAMING DETAILS

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