

**BASEMENT FLOOR AREA CALCULATION**

WALL SEGMENT	LENGTH	COVERAGE	RESULT
A	53'-0"	100%	53.0%
B	15'-0"	100%	15.0%
C	14'-0"	100%	14.0%
D	8'-0"	100%	8.0%
E	36'-0"	100%	36.0%
F	2'-0"	100%	2.0%
G	31'-0"	100%	31.0%
H	22'-0"	100%	22.0%
TOTALS	184'	NA	184%

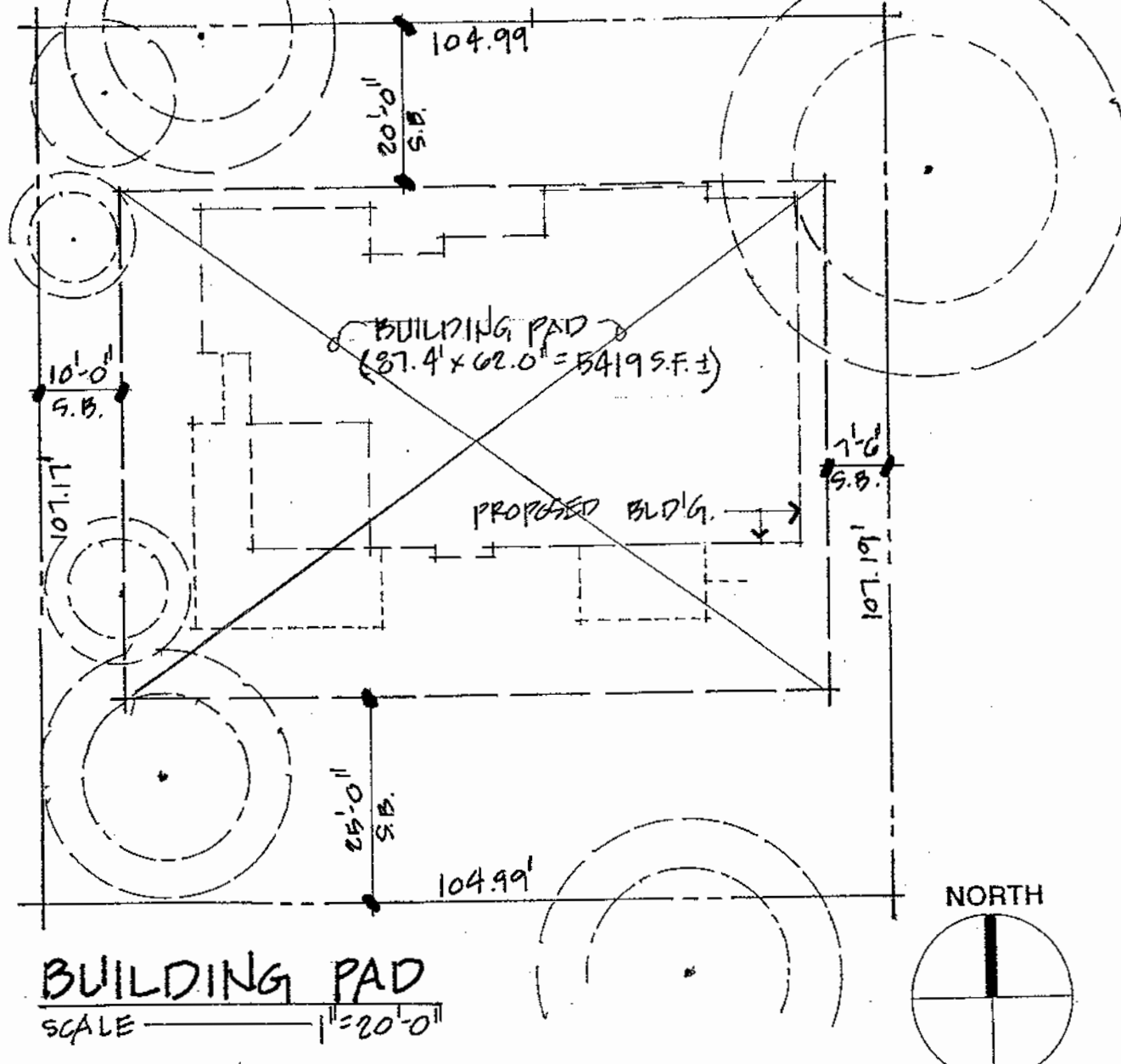
ENTIRE BASEMENT IS BELOW GRADE (1340 S.F.)

**INDEX TO DRAWINGS:**

- SF SINGLE FAMILY COVER SHEET
- S01 SITE SURVEY
- A1 SITE PLAN
- C1 CSWPP/CMP
- C2 CSWPP NOTES & DETAILS
- C3 DRAINAGE PLAN
- C4 UTILITY NOTES & DETAILS
- A2 NOTES
- A3 FOUNDATION PLAN
- A4 LOWER FLOOR PLAN
- A5 MAIN FLOOR PLAN
- A6 UPPER FLOOR PLAN
- A7 MAIN FLOOR FRAMING PLAN
- A8 UPPER FLOOR FRAMING PLAN
- A9 ROOF FRAMING PLAN
- A10 EXTERIOR ELEVATIONS
- A11 EXTERIOR ELEVATIONS
- A12 SECTIONS
- A13 DETAILS
- A14 DETAILS

- S1.0 STRUCTURAL NOTES/SCHEDULE
- S2.0 STRUCTURAL DETAILS
- S2.1 STRUCTURAL DETAILS
- S3.0 STRUCTURAL DETAILS
- S4.0 STRUCTURAL DETAILS

- M1 LOWER FLOOR SCHEMATIC DUCT LAYOUT
- M2 UPPER FLOOR SCHEMATIC DUCT LAYOUT



**GROSS FLOOR AREA CALCULATIONS**

A. Lot Area	11253	Square Feet
B. Allowed Gross Floor Area (refer to "Allowed GFA")	4501	Square Feet
C. Proposed Gross Floor Area	4485	Square Feet

**AVERAGE BUILDING ELEVATION CALCULATION**

MIDPOINT ELEV.	WALL SEGMENT LENGTH	
A = 366.0	a = 11.5'	Axa = 4209
B = 366.0	b = 42.0'	Bxb = 15372
C = 366.0	c = 38.25'	Cxc = 13999.5
D = 366.0	d = 1.25'	Dxd = 457.5
E = 366.0	e = 8.0'	Exe = 2928
F = 366.0	f = 1.25'	Fxf = 457.5
G = 366.0	g = 7.25'	Gxg = 2653.5
H = 366.0	h = 15.5'	Hxh = 5673
I = 366.0	i = 14.5'	Ixi = 5307
J = 366.0	j = 8.0'	Jxj = 2928
K = 366.0	k = 6.0'	Kxk = 2196
L = 366.0	l = 18.5'	Lxl = 6711
M = 366.0	m = 21.0'	Mxm = 7686
N = 366.0	n = 6.0'	Nxn = 2196
O = 366.0	o = 21.5'	Oxo = 7869
P = 366.0	p = 8.0'	Pxp = 2928
Q = 366.0	q = 20.0'	Qxq = 7320
R = 366.0	r = 2.0'	Rxr = 732

TOTAL: 91083 ÷ 250.5 = 366 ABE = 366' (AVERAGE BLDG. ELEVATION)

**LOT SLOPE CALCULATIONS**

Highest Elevation Point of Lot:	368	Feet
Lowest Elevation Point of Lot:	366	Feet
Elevation Difference:	2.0	Feet
Horizontal Distance Between High and Low Points:	133	Feet
Lot Slope*	1.5	%

**LOT COVERAGE CALCULATIONS**

A. Allowed Lot Coverage	40	% of Lot
B. Allowed Lot Coverage Area	4501	Square Feet
C. Gross Lot Area	11253	Square Feet
D. Net Lot Area	11253	Square Feet
E. Main Structure Roof Area	3860	Square Feet
F. Accessory Building Roof Area	0	Square Feet
G. Vehicular Use (driveway, access easements, parking)	491	Square Feet
H. Total Existing Lot Coverage Area	4761	Square Feet
I. (Total Lot Coverage Area Removed)	4761	Square Feet
J. Total New Lot Coverage Area	4371	Square Feet
K. Total Project Lot Coverage Area = (H-I) + J	4371	Square Feet
L. Proposed adjustment for single story	0	Square Feet
M. Proposed adjustment for flag lot	0	Square Feet
N. Proposed Lot Coverage = (K/D)x100	38.84	% of Lot

**HARDSCAPE**

What is the total square footage of all hardscape on property? 95 Square Feet  
What is the total square footage of all decks on property? 0 Square Feet

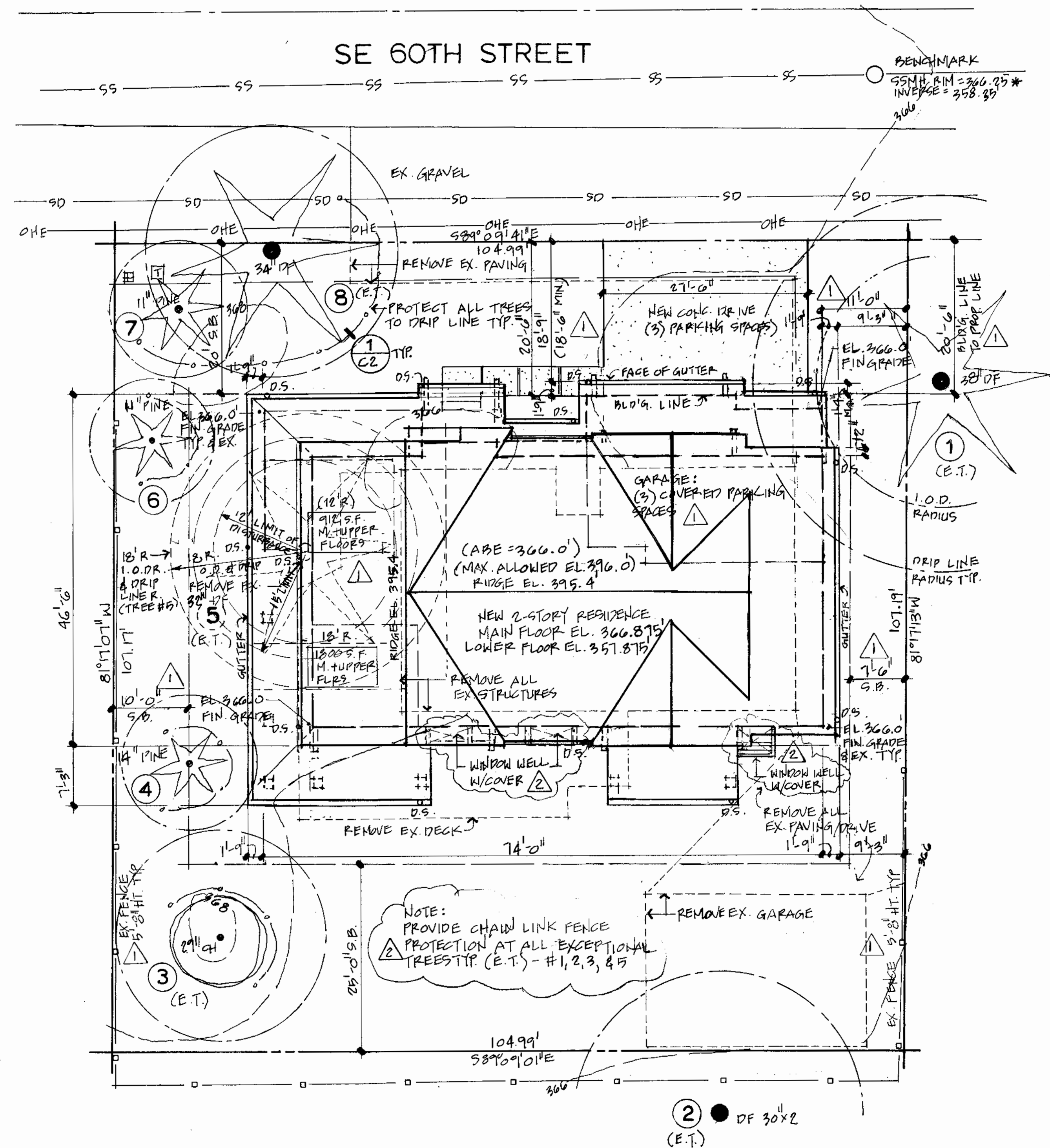
**BUILDING AREA CALCULATIONS**

Building Area	Existing Area	Removed Area	New/Addition Area	Total
Upper Floor	0	0	1686	1686
Main Floor	0	0	2000	2000
Gross Basement Area	0	1340	1340	1340
Garage/Carport	0	664	664	664
Total Floor Area	0	1340	5690	5690
Accessory Buildings	0	0	0	0
Basement Area Excluded	0	1340	1340	1340
150% GFA Modifier*	0	0	0	0
200% GFA Modifier*	0	135	135	135
Staircase GFA Modifier*	0	0	0	0
TOTAL Building Area	0	4485	4485	4485

\*Enter the actual room area

**NOTE:**

Per MICC 19.02.020(F)(3)(d), this project shall remove Japanese knotweed (*Polygonum cuspidatum*) and Regulated Class A, Regulated Class B, and Regulated Class C weeds identified on the King County Noxious Weed list, as amended, from required landscaping areas established pursuant to subsection (F)(3)(a) of this section. New landscaping shall not incorporate any weeds identified on the King County Noxious Weed list, as amended. Provided, that removal shall not be required if the removal will result in increased slope instability or risk of landslide or erosion.



**SITE PLAN**

SCALE 1" = 10'-0" 0 5 10 20 40

BUILDING FOOTPRINT (BL. O.H. & GUTTERS): 3880 S.F.  
CONCRETE DRIVE: 491 S.F.  
TOTAL: 4371 S.F.  
WALKS: (AREA NOT UNDER O.H.) 67 S.F.  
TOTAL W/WALK: 4438 S.F.

**LEGAL DESCRIPTION**

LOT 2, BLOCK 2, TIMBERLAND NO. 4, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 60 OF PLATS, PAGE 41, RECORDS OF KING COUNTY, WASHINGTON.  
SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

**TAX ACCOUNT #:**

865090-0030  
PROJECT CONTACT:  
JOSH THURMAN  
(206) 321-3129  
TD@CONSTRUCTION@LIVE.COM

**TREE INVENTORY/RETENTION**

TREE #	SPECIES	DIA.	DRIP LINE RADIUS	RETAIN YES/NO
1 (E.T.)	FIR	38"	25'	YES (OPPOSITE)
2 (E.T.)	FIR	30"	19'	YES (OPPOSITE)
3 (E.T.)	CH.	29"	14'	YES
4	PINE	14"	9'	YES
5 (E.T.)	FIR	32"	18'	NO
6	PINE	11"	8'	YES
7	PINE	14"	9'	YES
8 (E.T.)	FIR	34"	17'	YES

△ CUT/FILL (BEYOND BUILDING PAD)  
CUT: 19 CUBIC YARDS  
FILL: 19 CUBIC YARDS

Drawing Title:  
SITE PLAN

Drawn By: T.D.  
Checked By:  
Approved By:

Issue Date: 1/17/20

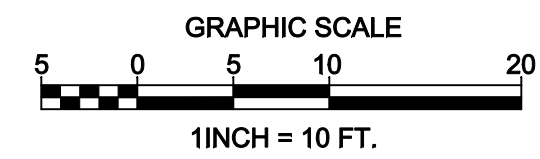
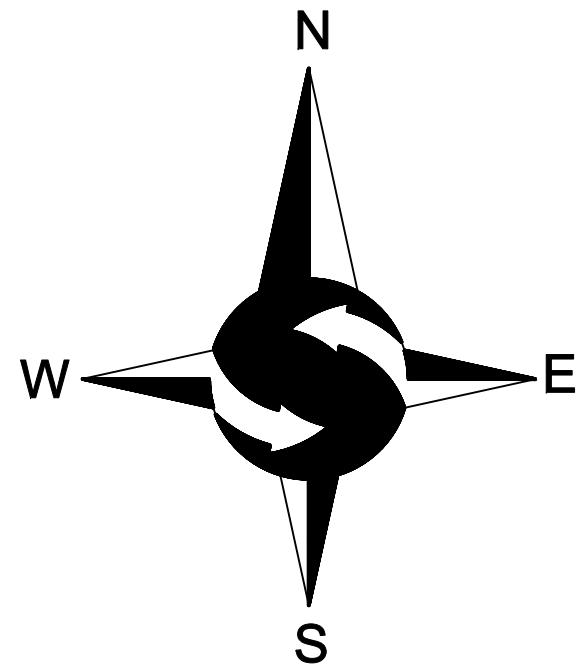
Revisions:

No.	Description	Date
1	PRESUBMITAL 2/28/20	
2	PERMIT 2/22/21	

Scale: AS NOTED

Sheet No.





**LEGEND**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li> FOUND MONUMENT AS DESCRIBED</li> <li> FOUND REBAR AS DESCRIBED</li> <li> TACK IN LEAD FOUND</li> <li> SET 5/8" X 24" IRON ROD W/ Y- YELLOW PLASTIC CAP</li> <li> POWER METER</li> <li> UTILITY POLE</li> <li> GAS METER</li> <li> SANITARY SEWER CLEANOUT</li> <li> SANITARY SEWER MANHOLE</li> <li> WATER VALVE</li> <li> FIRE HYDRANT</li> <li> WATER METER</li> <li> SIGN</li> <li> APPROXIMATE LOCATION SANITARY SEWER LINE</li> <li> APPROXIMATE LOCATION STORM DRAIN LINE</li> </ul> | <ul style="list-style-type: none"> <li> OHP- OVERHEAD POWER</li> <li> OHU- OVERHEAD UTILITIES</li> <li> CHAINLINK FENCE</li> <li> WOOD FENCE</li> <li> CONCRETE WALL</li> <li> ROCKERY</li> <li> ASPHALT SURFACE</li> <li> CONCRETE SURFACE</li> <li> GRAVEL SURFACE</li> <li> CE CEDAR</li> <li> DS DECIDUOUS</li> <li> SP SPRUCE</li> <li> BI BIRCH</li> <li> PI PINE</li> <li>* INDICATES MULTI-TRUNK</li> </ul> |
|--|---|

**LEGAL DESCRIPTION**

LOT 2, BLOCK 2, TIMBERLAND NO. 4, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 60 OF PLATS, PAGE 41, RECORDS OF KING COUNTY, WASHINGTON.  
SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

**BASIS OF BEARINGS**

THE PLAT OF TIMBERLAND NO. 4, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 60 OF PLATS, PAGE 41, RECORDS OF KING COUNTY, WASHINGTON.

**PROJECT INFORMATION**

**SURVEYOR:** SITE SURVEYING, INC.  
21923 NE 11TH ST  
SAMMAMISH, WA 98074  
PHONE: 425.298.4412

**PROPERTY OWNER:** ROBERT WHEELER  
9027 SE 60TH STREET  
MERCER ISLAND, WA 98040

**TAX PARCEL NUMBER:** 865090-0030

**PROJECT ADDRESS:** 9027 SE 60TH STREET  
MERCER ISLAND, WA 98040

**ZONING:** R-9.6

**JURISDICTION:** CITY OF MERCER ISLAND

**PARCEL ACREAGE:** 11,253 S.F. (± 0.258 ACRES)  
AS SURVEYED

**GENERAL NOTES**

- 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.
- INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND SPECTRAPRECISION FOCUS 36 TOTAL STATION. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.
- THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN DECEMBER 2019 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- 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.
- ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

**VERTICAL DATUM & CONTOUR INTERVAL**

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

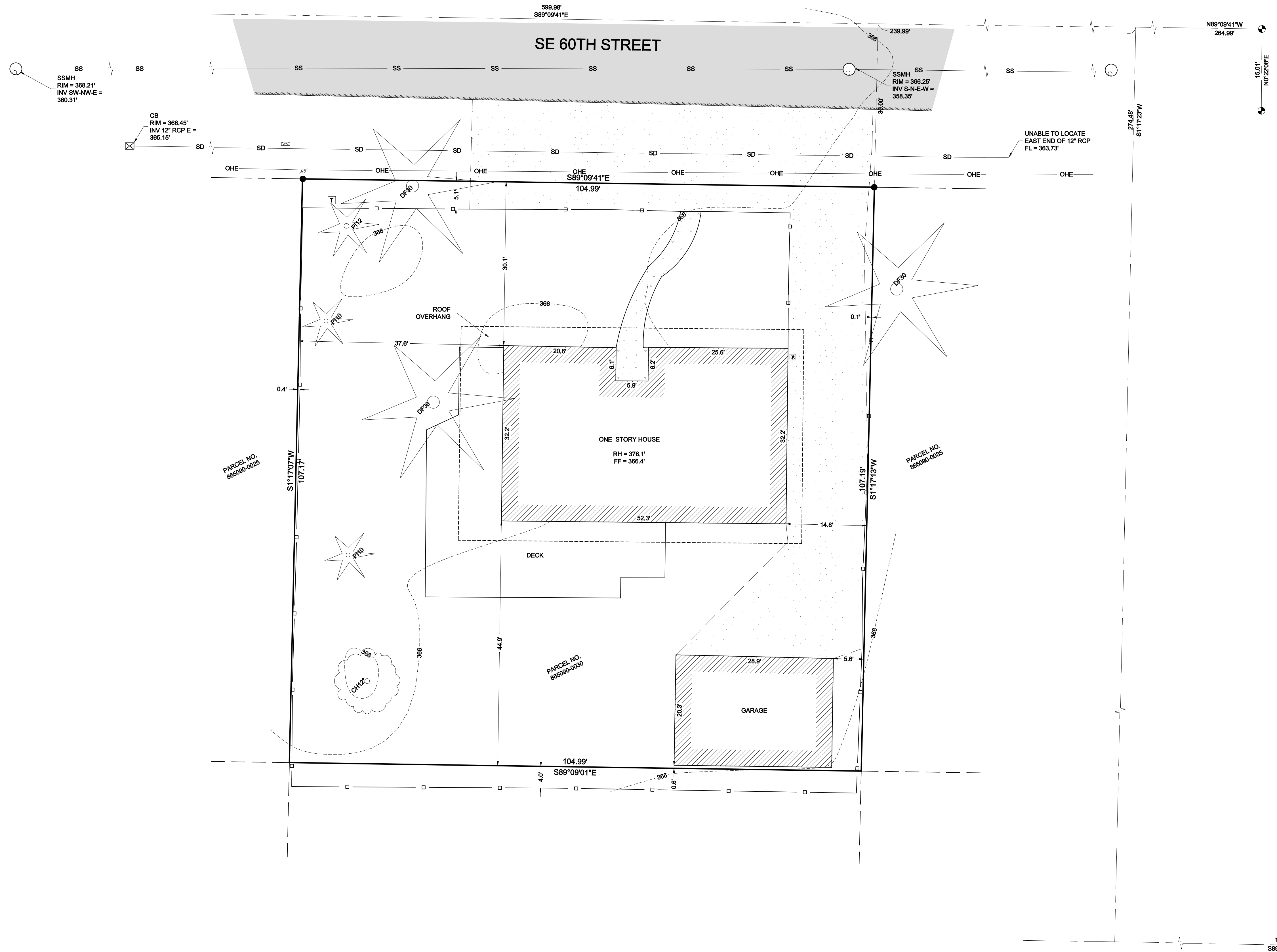
THE MARK IS A MONUMENT IN CASE AT THE EAST END OF SE 60TH STREET, ± 150 FEET EAST OF THE INTERSECTION OF 92ND AVENUE SE.

POINT ID NO. MI-1063;  
ELEVATION: 334.534 FEET - NAVD 88

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



VICINITY MAP  
NTS



SE 1/4, SW 1/4, SEC 19, TWP 24N, RNG 5E, W.M.



DATE	REVISION	DRN

**TOPOGRAPHIC SURVEY**  
ROBERT WHEELER  
9027 SE 60TH STREET  
MERCER ISLAND, WA 98040

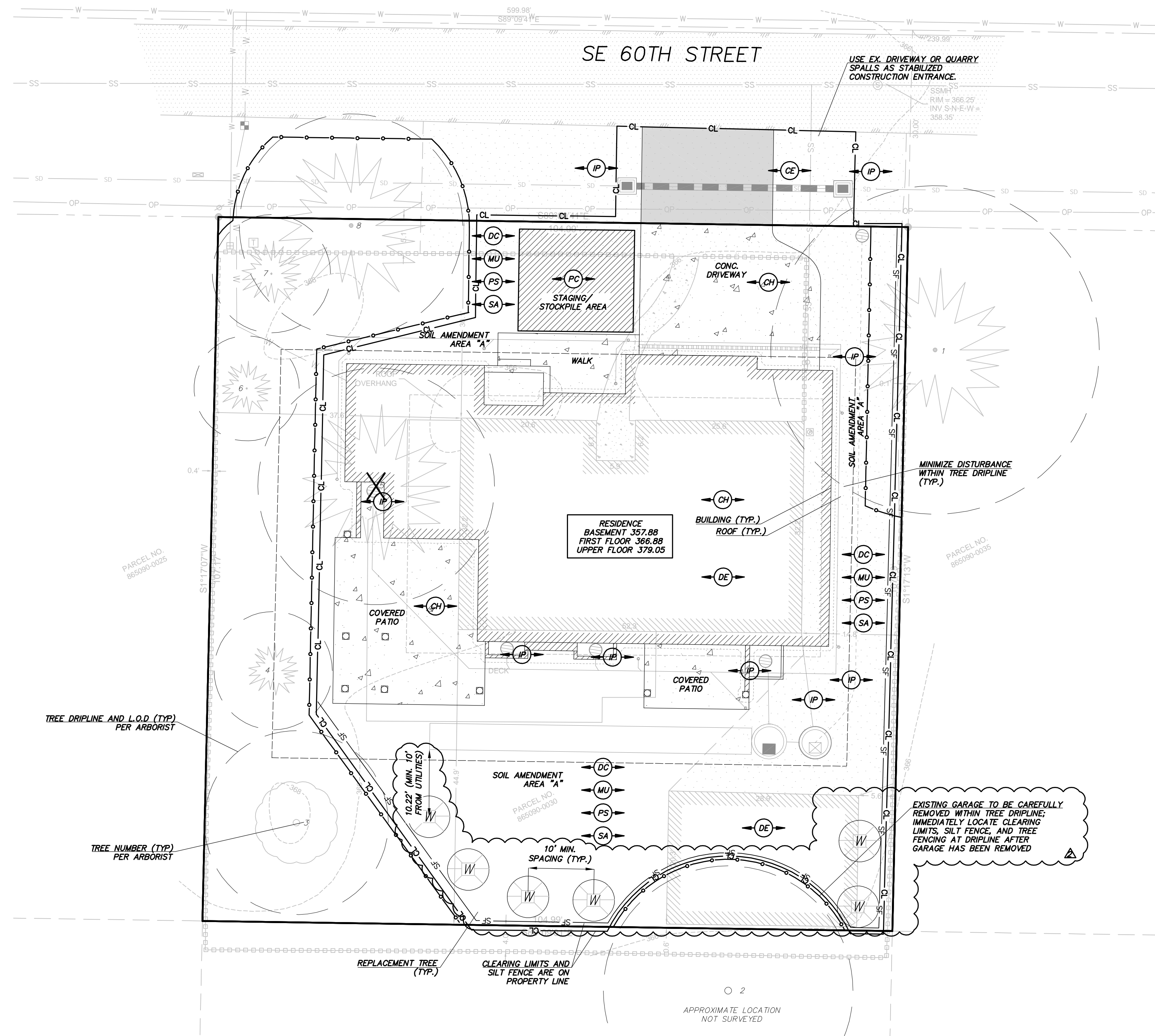
PROJECT NO. 19-497

DRAWN BY: EFJ  
CHECKED BY: TNW  
DATE: 12/5/19

SHEET 1 OF 1



SE 1/4, SW 1/4, SECTION 19, TOWNSHIP 24 N, RANGE 5 E, W.M.  
**TIMBERLAND RESIDENCE**



- TESC LEGEND:**  
 FOR ADDITIONAL TESC DETAILS REFER TO DOE 2012 SWMMWW
- CL CONSTRUCTION LIMITS, TO BE FLAGGED OR FENCED WHEN NO SILT FENCE IS PROPOSED (BMP C103)
  - SF SILT FENCE IS PROPOSED (BMP C233)
  - DE DEMO EXISTING IMPROVEMENTS
  - CE STABILIZED CONSTRUCTION ENTRANCE (BMP C105)
  - IP INLET PROTECTION (BMP C220)
  - DC DUST CONTROL (BMP C140)
  - MU MULCHING, MATTING, & COMPOST BLANKETS (BMP C121, BMP C125)
  - PS PERMANENT SEEDING AND PLANTING (BMP C120)
  - SA POST-CONSTRUCTION SOIL AMENDMENT QUALITY & DEPTH (BMP C120)
  - CH CONCRETE HANDLING (BMP C151)
  - PC PLASTIC COVERING (BMP C123)
  - Tree symbols: TREE TO BE REMOVED (circle with X), TREE TO BE SAVED, PROVIDE TREE PROTECTION FENCING (circle with dot)



**VICINITY MAP**  
 1"=±500'

**PROJECT DESCRIPTION:**  
 SITE ADDRESS: 9027 SE 60TH STREET  
 MERCER ISLAND, WA 98040  
 SITE AREA: 11,253 S.F. (0.258 AC)  
 JURISDICTION: CITY OF MERCER ISLAND  
 PROPERTY TAX NO: 865090-0030  
 PROPOSED USE: SINGLE FAMILY RESIDENCE

**PROJECT CONTACTS:**  
 OWNER: ROBERT WHEELER  
 9027 SE 60TH STREET  
 MERCER ISLAND, WA 98040

APPLICANT: THURMAN DEVELOPMENT GROUP, INC.  
 2212 QUEEN ANNE AVE N. #273  
 SEATTLE, WA 98109  
 206.321.3129  
 CONTACT: JOSHUA H. THURMAN

ARCHITECT: ANTONIO D'AMBROSIO  
 3712 EAST MERCER WAY  
 MERCER ISLAND, WA 98040  
 206.232.6923

CIVIL ENGINEER: D.R. STRONG CONSULTING ENGINEERS, INC.  
 620 7TH AVE NE  
 KIRKLAND, WASHINGTON 98033  
 425.827.3063  
 CONTACT: YOSHIO L. PIEDISCALZI, P.E.  
 YOSHIO.PIEDISCALZI@DRSTRONG.COM

SURVEYOR: SITE SURVEYING, INC.  
 21923 NE 11TH STREET  
 SAMMAMISH, WASHINGTON 98074  
 425.298.4412  
 CONTACT: THOMAS N. WOLDENDORP

GEOTECH ENGINEER: GEOTECH CONSULTANTS, INC.  
 2401 10TH AVE EAST  
 SEATTLE, WA 98102  
 425.747.5618  
 CONTACT: MARK R. MCGINNIS, P.E.

ARBORIST: EASTSIDE TREE WORKS  
 206.396.9998  
 CONTACT: RON PAQUETTE, CERTIFIED ARBORIST

**DRAWING INDEX:**  
 C1 1 OF 4 COVER SHEET, CSWPPP / CMP AND TREE PLAN  
 C2 2 OF 4 CSWPPP NOTES & DETAILS  
 C3 3 OF 4 DRAINAGE PLAN  
 C4 4 OF 4 UTILITY NOTES & DETAILS

**LEGAL DESCRIPTION:** (BY SURVEYOR)  
 LOT 2, BLOCK 2, TIMBERLAND NO. 4, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 60 OF PLATS, PAGE 41, RECORDS OF KING COUNTY, WASHINGTON;  
 SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

**BASIS OF BEARINGS:** (BY SURVEYOR)  
 THE PLAT OF TIMBERLAND NO. 4, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 60 OF PLATS, PAGE 41, RECORDS OF KING COUNTY, WASHINGTON.

- SURVEYOR'S NOTES:** (BY SURVEYOR)
- 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.
  - INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND SPECTRAPRECISION FOCUS 35 TOTAL STATION. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.
  - THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN DECEMBER 2019 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
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  - ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

**VERTICAL DATUM AND CONTOUR:** (BY SURVEYOR)  
 ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY WGS SURVEY CONTROL DATABASE.

THE MARK IS A MONUMENT IN CASE AT THE EAST END OF SE 60TH STREET, ± 150 FEET EAST OF THE INTERSECTION OF 92ND AVENUE SE.

POINT ID NO. MI-1063;  
 ELEVATION: 334.534 FEET - NAVD 88

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

**TREE INVENTORY/RETENTION REPORT:** (BY ARBORIST)

Tree #	Species	Name	DBH (Over 24")	Height	Drip Line Radius	Condition	Exceptional Tree	L.O.D.	Retain Yes / No
1	Douglas Fir	Pseudotsuga menziesii	38"	100'	25'	Good	Yes	25'	Yes
2	Douglas Fir	Pseudotsuga menziesii	30" x 2	100'	19'	Good	Yes	19'	Yes
3	Cherry	Prunus avium	29"	30'	14'	Fair	Yes	14'	Yes
4	Pine	Pinus contorta	14"	45'	9'	Fair	No	9'	Yes
5	Douglas Fir	Pseudotsuga menziesii	32"	100'	18'	Good	Yes	18'	No
6	Pine	Pinus contorta	11"	45'	8'	Fair	No	8'	Yes
7	Pine	Pinus contorta	14"	45'	9'	Fair	No	9'	Yes
8	Douglas Fir	Pseudotsuga menziesii	34"	100'	17'	Good	Yes	17'	Yes

DBH in RED denotes trees over 24"

**SITE VOLUME CALCULATIONS**

CUT VOLUME (CU. YDS.)	FILL VOLUME (CU. YDS.)	NET VOLUME (CU. YDS.)
565	6	559 CUT

ALL VOLUMES ARE APPROXIMATE AND ARE PROVIDED FOR PERMITTING PURPOSES AND REPRESENT FINISH GRADE TO EXISTING GRADE AS SHOWN. CONTRACTOR SHALL RELY ON HIS/HER OWN ESTIMATES FOR DETERMINING ACTUAL EARTHWORK QUANTITIES. THE VOLUMES DO NOT INCLUDE STRIPPING, STRUCTURAL EXCAVATION, EXPANSION/COMPACTION FACTOR OR ANY SOIL TYPE RESTRICTIONS.

**SOIL AMENDMENT NOTE:**  
 AREA "A": STOCKPILE SITE DUFF AND TOPSOIL FOR ALL DISTURBED PERVIOUS AREAS AND REAPPLY WITH SOIL AMENDMENT AFTER GRADING AND CONSTRUCTION. MINIMUM SCARIFICATION DEPTH 8-INCHES. PROVIDE A TOTAL OF 24 C.Y. OF AMENDMENT OVER AN AREA OF 4,298 S.F.

**ON-SITE SOILS:**  
 THE ENTIRE SITE CONTAINS ARENTS, ALDERWOOD MATERIAL (AmB) SOILS PER THE NRCS SOIL MAP

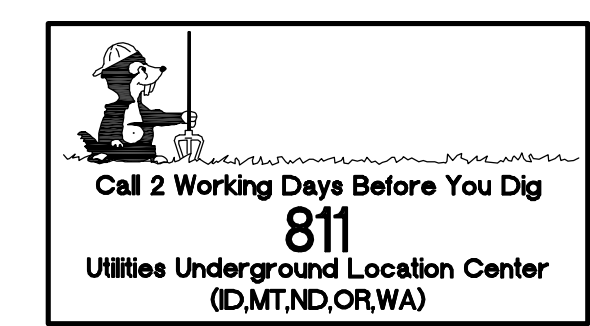
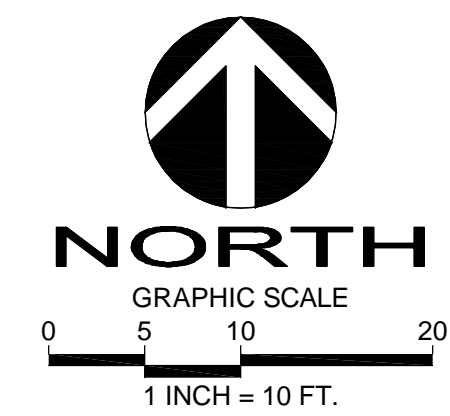
- CONSTRUCTION SEQUENCE**
- ARRANGE AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY INSPECTOR.
  - FLAG OR FENCE CLEARING LIMITS.
  - CALL ONE-CALL UTILITY LOCATE SERVICE PRIOR TO ANY EXCAVATION WORK.
  - GRADE ACCESS ROAD & CONSTRUCT/INSTALL ROCK CONSTRUCTION ENTRANCE IF NECESSARY.
  - INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
  - INSTALL SHORING WALL.
  - CONSTRUCT RESIDENCE AND OTHER SITE IMPROVEMENTS.
  - MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OR COUNTY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
  - MAINTAIN ACCESS TO OFF-SITE ROADS AND DRIVEWAYS AT ALL TIMES DURING THE DURATION OF THE PROJECT.
  - RELOCATE EROSION CONTROL MEASURES OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE CITY TESC MINIMUM REQUIREMENTS.
  - COVER ALL AREAS THAT WILL BE UNWORKED FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON OR TWO DAYS DURING THE WET SEASON WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING OR EQUIVALENT.
  - STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN SEVEN DAYS.
  - SEED OR SOD ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.
  - UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BMP'S REMOVED IF APPROPRIATE AFTER ACCEPTANCE BY INSPECTOR.

**GRADING NOTE:**  
 TOTAL AREA TO BE DISTURBED ON-SITE.....8,572 S.F.  
 TOTAL AREA TO BE DISTURBED OFF-SITE..... 450 S.F.  
 TOTAL AREA TO BE DISTURBED FOR PROJECT.....9,020 S.F.  
 FILL SHALL CONSIST OF SUITABLE MATERIAL ORIGINATING FROM THE SITE OR FROM AN APPROVED SUPPLIER.

**P.E. CERTIFICATION FOR SECTION B:**  
 I HEREBY STATE THAT THIS CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN FOR 9027 SE 60TH STREET HAS BEEN PREPARED BY ME OR UNDER MY SUPERVISION AND MEETS THE STANDARD OF CARE AND EXPERTISE WHICH IS USUAL AND CUSTOMARY IN THIS COMMUNITY FOR PROFESSIONAL ENGINEERS. I UNDERSTAND THAT THE CITY OF MERCER ISLAND DOES NOT AND WILL NOT ASSUME LIABILITY FOR THE SUFFICIENCY, SUITABILITY, OR PERFORMANCE OF CONSTRUCTION SWPPP BMP'S PREPARED BY ME.

**GENERAL EROSION CONTROL NOTES:**  
 ALL DISTURBED AREAS SHALL BE STABILIZED USING TYPICAL TESC BMP'S. THE LIMITS OF DISTURBANCE WILL BE DELINEATED WITH HIGH VISIBILITY CONSTRUCTION FENCING. DURING CONSTRUCTION SILT FENCES WILL BE PLACED DOWN SLOPE OF DISTURBED AREAS ALONG WITH STRAW MATTING, NETS, OR PLASTIC COVERING OVER EXPOSED SOIL OR STOCKPILES. TREES TO BE RETAINED WILL BE PROTECTED WITH HIGH VISIBILITY CONSTRUCTION FENCING.  
 AT THE COMPLETION OF THE PROJECT ALL DISTURBED AREAS WILL BE STABILIZED WITH COMPOST AMENDED SOILS AND HYDROSEEDING OR SOD.

**TREE REPLACEMENT NOTE:**  
 PER CITY OF MERCER ISLAND TREE REPLACEMENT STANDARDS, ANY EXCEPTIONAL TREE THAT IS TO BE REMOVED SHALL REQUIRE 6 REPLACEMENT TREES. TREE 5 IS THE ONLY TREE BEING REMOVED AS A PART OF THIS PROJECT, AND IS CONSIDERED AN EXCEPTIONAL TREE PER THE UPDATED ARBORIST REPORT. THIS REMOVED TREE WILL BE REPLACED WITH 6 TREES THAT WILL MEET THE MERCER ISLAND STANDARDS FOR TREE REPLACEMENT. THE LOCATION OF THESE REPLACEMENT TREES ARE SHOWN ON THIS SHEET. THE TREES SHALL BE WESTERN RED CEDAR TREES.



**TIMBERLAND RESIDENCE**  
 COVER SHEET, C.S.W.P.P. PLAN & TREE PLAN  
 9027 SE 60TH STREET  
 MERCER ISLAND, WA 98040  
 PARCEL NO. 865090-0030

**THURMAN DEVELOPMENT GROUP, INC.**  
 2212 QUEEN ANNE AVENUE N. # 273  
 SEATTLE, WA 98109  
 206.321.3129



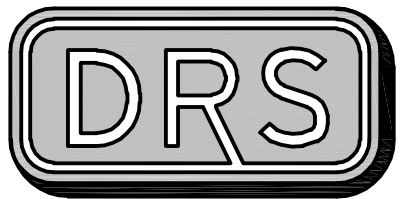
DATE	REVISION	BY	FOR
APR 02, 2020	1	YLP	YLP
APR 02, 2020	2	YLP	YLP

DRAFTED BY: PFC  
 DESIGNED BY: DLR  
 PROJECT ENGINEER: YLP  
 DATE: 1/21/20  
 PROJECT NO.: 19106

DRAWING: C1  
 SHEET: 1 OF 4



# TIMBERLAND RESIDENCE



**D.R. STRONG**  
CONSULTING ENGINEERS  
ENGINEERS PLANNERS SURVEYORS

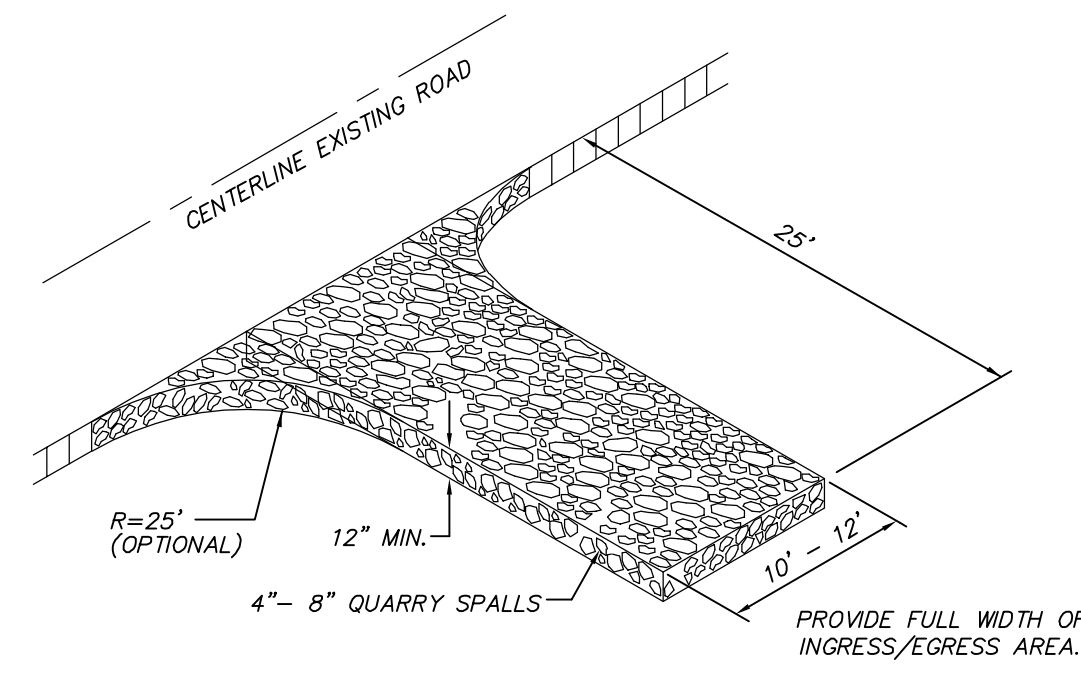
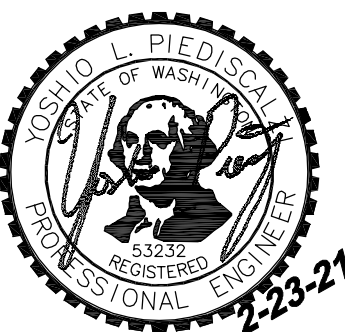
620 - 7th AVENUE KIRKLAND, WA 98033  
O 425.827.3063 F 425.827.3423

TIMBERLAND RESIDENCE

C.S.W.P.P. NOTES & DETAILS  
9027 SE 60TH STREET  
MERCER ISLAND, WA 98040  
PARCEL NO. 865090-0030

THURMAN DEVELOPMENT  
GROUP, INC.

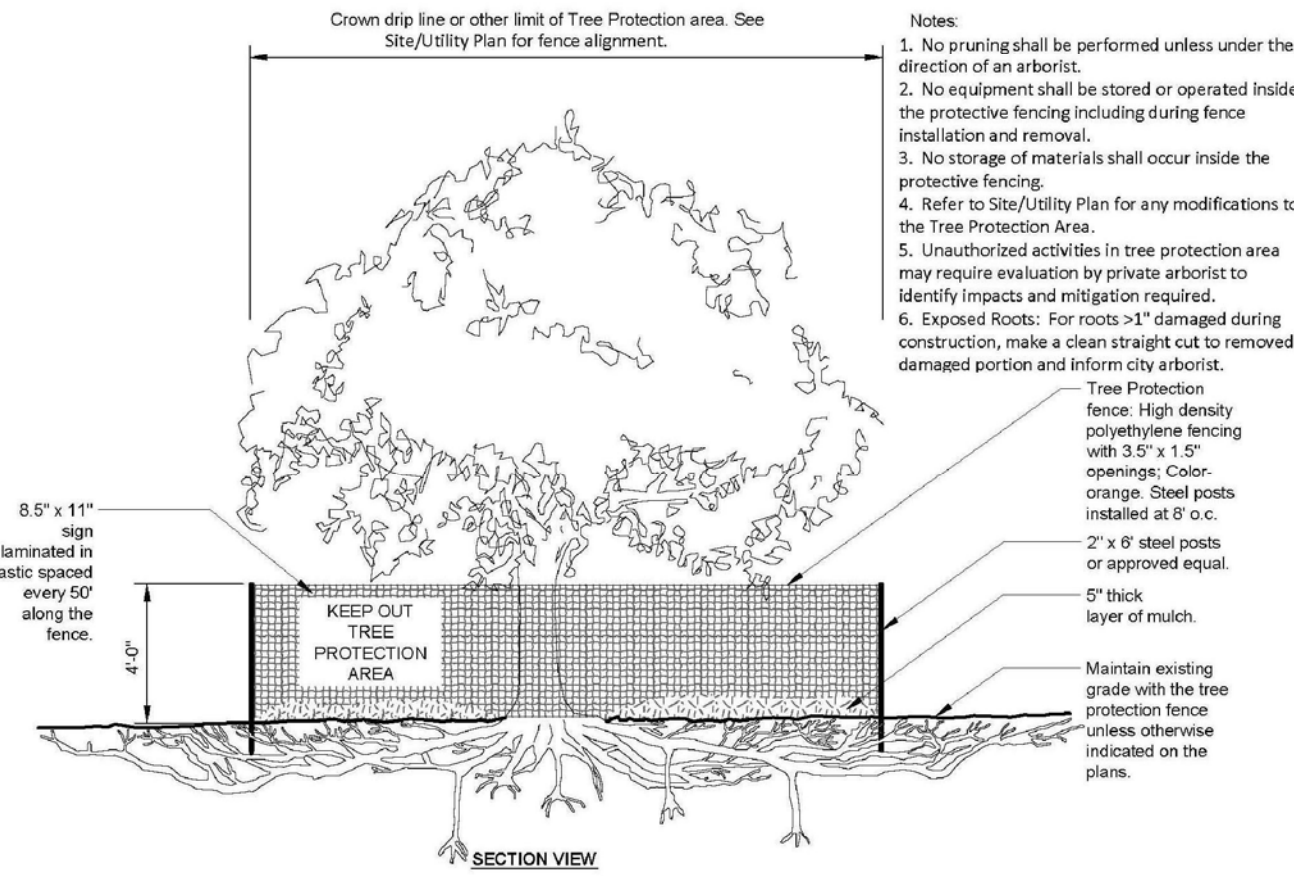
2212 QUEEN ANNE AVENUE N, # 273  
SEATTLE, WA 98109  
206.321.3129



DRIVEWAYS SHALL BE PAVED TO THE EDGE OF R-O-W PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY. IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD.

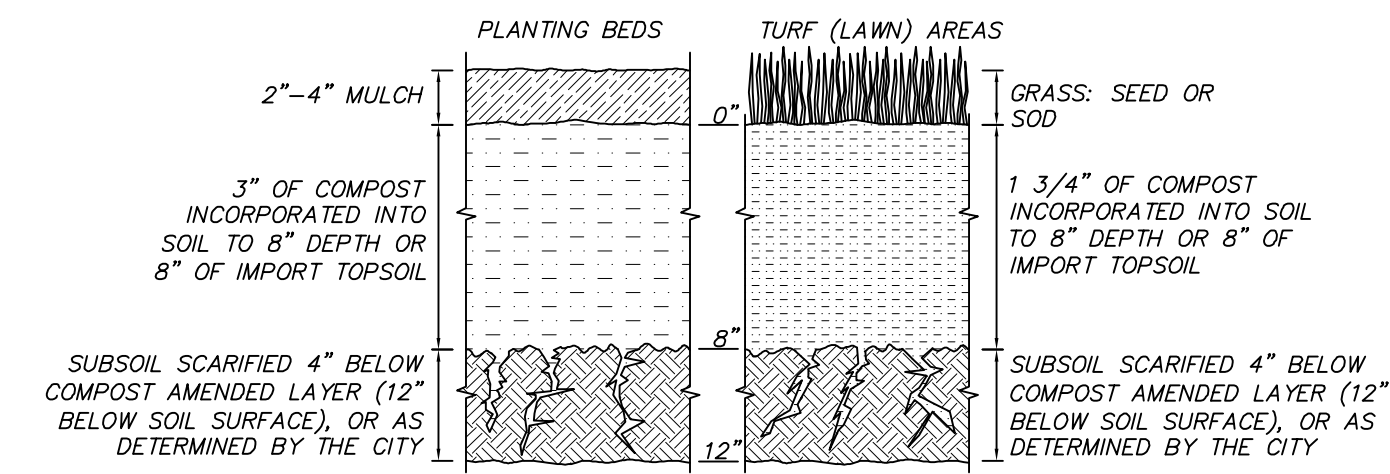
GRAVEL CONSTRUCTION ENTRANCE

NTS



TREE PROTECTION FENCING

NTS



SOIL AMENDMENT  
PER BMP 15.13

NTS

### SOIL AMENDMENT NOTES

\*SOIL RETENTION: RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE, IN ANY AREAS REQUIRING GRADING REMOVE AND STOCKPILE THE DUFF LAYER AND TOPSOIL ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SITE WHERE FEASIBLE.

\*SOIL QUALITY: ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:

1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHALL BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
2. MULCH PLANTING BEDS WITH 2-4 INCHES OF ORGANIC MATERIAL.
3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
  - A. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BIOTENTION (BMP 17.30), WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1. THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
  - B. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A.) ABOVE, OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173-330-220. THE RESULTING SOIL SHOULD BE CONGRUOUS TO THE TYPE OF VEGETATION TO BE ESTABLISHED.

\*IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:

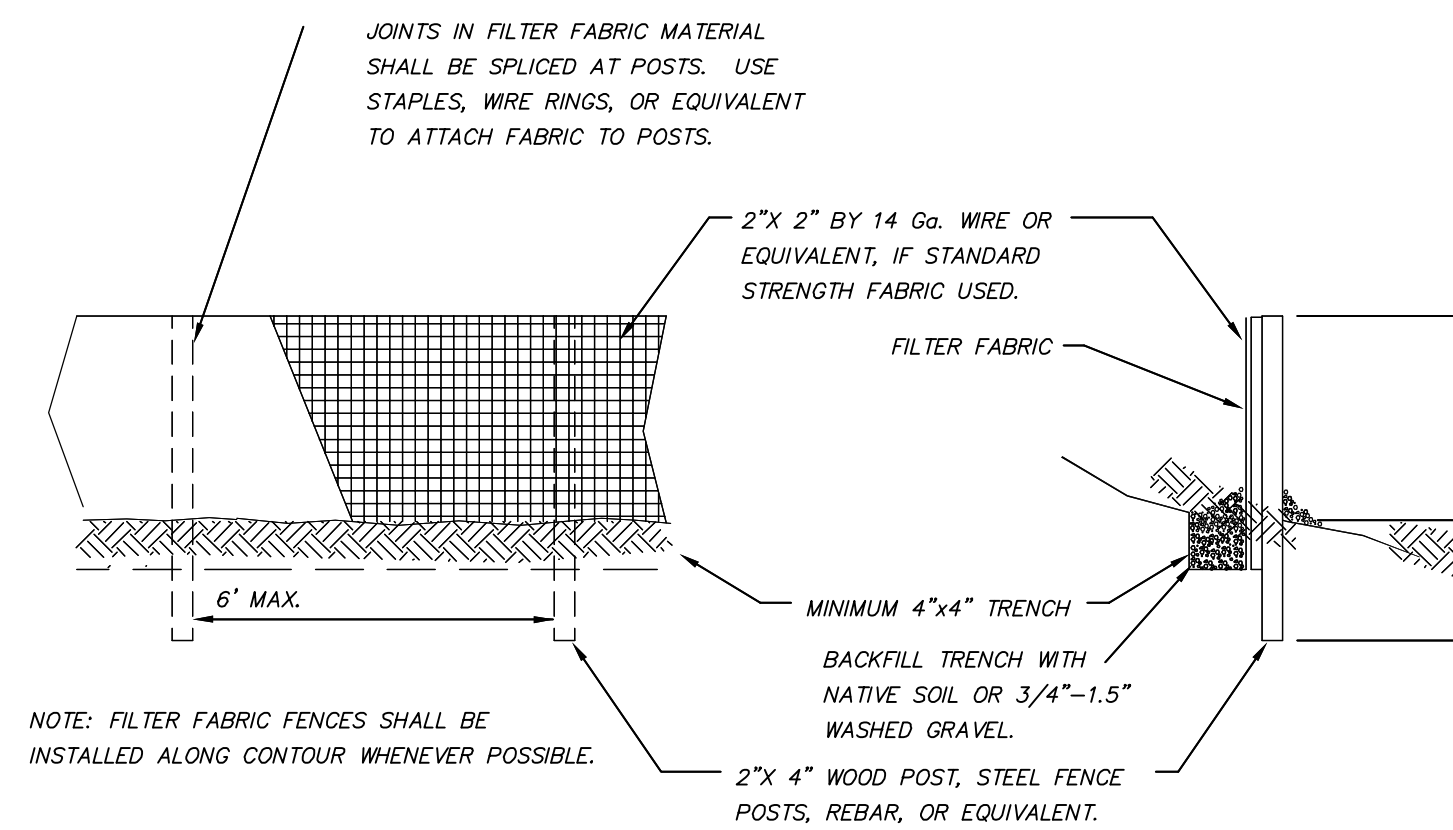
1. LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
2. AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PRE-APPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT.
3. STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED RATE.
4. IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS.

MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.

MAINTENANCE:  
\*ESTABLISH SOIL QUALITY AND DEPTH TOWARD THE END OF CONSTRUCTION AND ONCE ESTABLISHED, PROTECT FROM COMPACTION, SUCH AS FROM LARGE MACHINERY USE, AND FROM EROSION.  
\*PLANT VEGETATION AND MULCH THE AMENDED SOIL AREA AFTER INSTALLATION.  
\*LEAVE PLANT DEBRIS OR ITS EQUIVALENT ON THE SOIL SURFACE TO REPLENISH ORGANIC MATTER.  
\*REDUCE AND ADJUST, WHERE POSSIBLE, THE USE OF IRRIGATION, FERTILIZERS, HERBICIDES AND PESTICIDES, RATHER THAN CONTINUING TO IMPLEMENT FORMERLY ESTABLISHED PRACTICES.

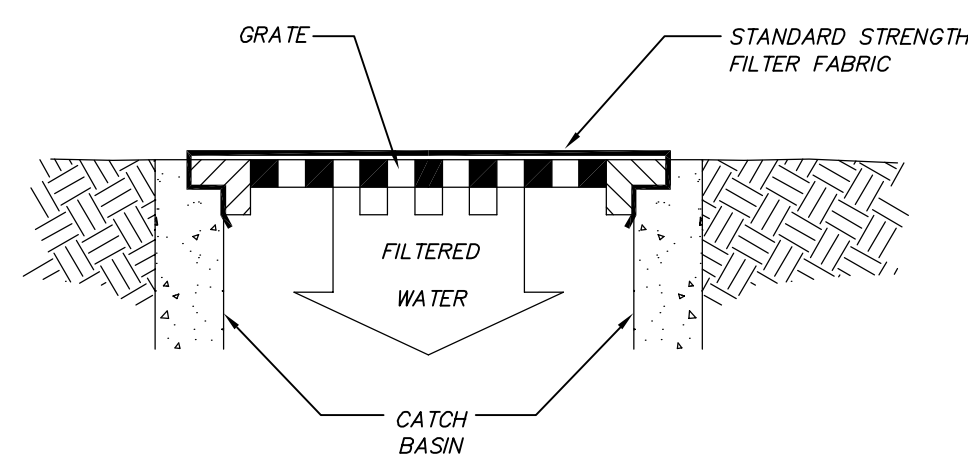
### EROSION AND SEDIMENT CONTROL NOTES:

1. APPROVAL OF THIS EROSION AND SEDIMENT CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY A CONTINUOUS LENGTH OF SURVEY TAPE (OR FENCING, IF REQUIRED) PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
5. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.).
6. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE TESC FACILITIES DURING THE WET SEASON (OCT. 1 TO APRIL 30) AND OF MONTHLY REVIEWS DURING THE DRY SEASON (MAY 1 TO SEPT. 30).
7. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G. SEEDING, MULCHING, PLASTIC COVERING, ETC.).
8. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
9. ALL DISTURBED AREAS SHALL BE STABILIZED USING TYPICAL TESC BMP'S. THE LIMITS OF DISTURBANCE WILL BE DELINEATED WITH HIGH VISIBILITY CONSTRUCTION FENCING. DURING CONSTRUCTION SILT FENCES WILL BE PLACED DOWN SLOPE OF DISTURBED AREAS ALONG WITH STRAW MATTING, NETS, OR PLASTIC COVERING OVER EXPOSED SOIL OR STOCKPILES. TREES TO BE RETAINED WILL BE PROTECTED WITH HIGH VISIBILITY CONSTRUCTION FENCING.
10. ALL SOIL STOCKPILES TO BE COVERED WITH PLASTIC SHEETING UNTIL SUCH TIME THAT THE SOIL IS EITHER USED OR REMOVED. PILES SHOULD BE SITUATED AND LOCATED SUCH THAT SEDIMENT DOES NOT RUN INTO THE STREET OR ONTO ADJOINING PROPERTIES.
11. ALL EXPOSED SOIL AREAS SHALL BE COVERED OR PROTECTED USING AN APPROPRIATE BMP. STABILIZED DENuded AREAS OF THE SITE BY MULCHING, SEEDING, PLANTING, OR SODDING.
12. ALL ADJACENT PROPERTIES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION BY APPROPRIATE USE OF VEGETATION BUFFER STRIPS, SEDIMENT BARRIERS, OR FILTERS, DIKES, MULCHING, OR BY A COMBINATION OF THESE MEASURES AND OTHER APPROPRIATE BMP'S.
13. PROVIDE FOR PERIODIC STREET CLEANING TO REMOVE ANY SEDIMENT THAT MAY HAVE BEEN TRACKED OFF-SITE. SEDIMENT SHOULD BE REMOVED BY SHOVELING OR SWEEPING AND CAREFULLY REMOVED TO A SUITABLE DISPOSAL AREA WHERE IT WILL NOT BE RE-ERODED.
14. ALL INSTALLED EROSION AND SEDIMENT CONTROL BMP'S SHALL BE INSPECTED REGULARLY BY THE GENERAL CONTRACTOR ESPECIALLY AFTER ANY LARGE STORM. MAINTENANCE, INCLUDING REMOVAL AND PROPER DISPOSAL OF SEDIMENT SHOULD BE A NECESSARY TO INSURE THAT SEDIMENT AND EROSION IS CONTROLLED ON SITE.



SILT FENCE DETAIL

NTS



NOTE: ONLY TO BE USED WHERE PONDING OF WATER ABOVE THE CATCH BASIN WILL NOT CAUSE TRAFFIC PROBLEMS AND WHERE OVERFLOW WILL NOT RESULT IN EROSION OF SLOPES.

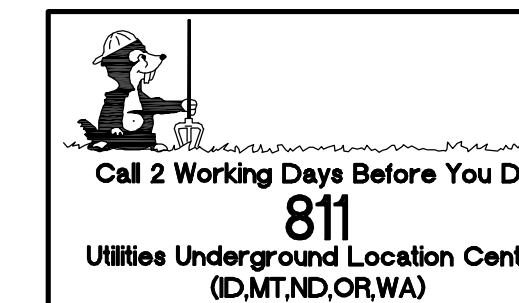
CATCH BASIN INLET FILTER

NTS

### CATCH BASIN INSERT MAINTENANCE STANDARDS

1. ANY ACCUMULATED SEDIMENT ON OR AROUND THE FILTER FABRIC PROTECTION SHALL BE REMOVED IMMEDIATELY. SEDIMENT SHALL NOT BE REMOVED WITH WATER, AND ALL SEDIMENT MUST BE DISPOSED OF AS FILL ON SITE OR HAULED OFF-SITE.
2. ANY SEDIMENT IN THE CATCH BASIN INSERT SHALL BE REMOVED WHEN THE SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE. THE FILTER MEDIA FOR THE INSERT SHALL BE CLEANED OR REPLACED AT LEAST MONTHLY.
3. REGULAR MAINTENANCE IS CRITICAL FOR BOTH FORMS OF CATCH BASINS PROTECTION. UNLIKE MANY FORMS OF PROTECTION THAT FAIL GRADUALLY, CATCH BASIN PROTECTION WILL FAIL SUDDENLY AND COMPLETELY IF NOT MAINTAINED PROPERLY.

NO REVISIONS THIS SHEET



DATE	REVISION	BY
APR 02, 2020	YLP	YLP
02/26/20	CITY COMMENTS	01/28/20
02/23/21	CITY COMMENTS	

DRAFTED BY: PFC  
DESIGNED BY: DLR  
PROJECT ENGINEER: YLP  
DATE: 1/21/20  
PROJECT NO.: 19106

DRAWING: C2  
SHEET: 2 OF 4



# TIMBERLAND RESIDENCE



**TIMBERLAND RESIDENCE**  
DRAINAGE PLAN  
9027 SE 60TH STREET  
MERCER ISLAND, WA 98040  
PARCEL NO. 865090-0030

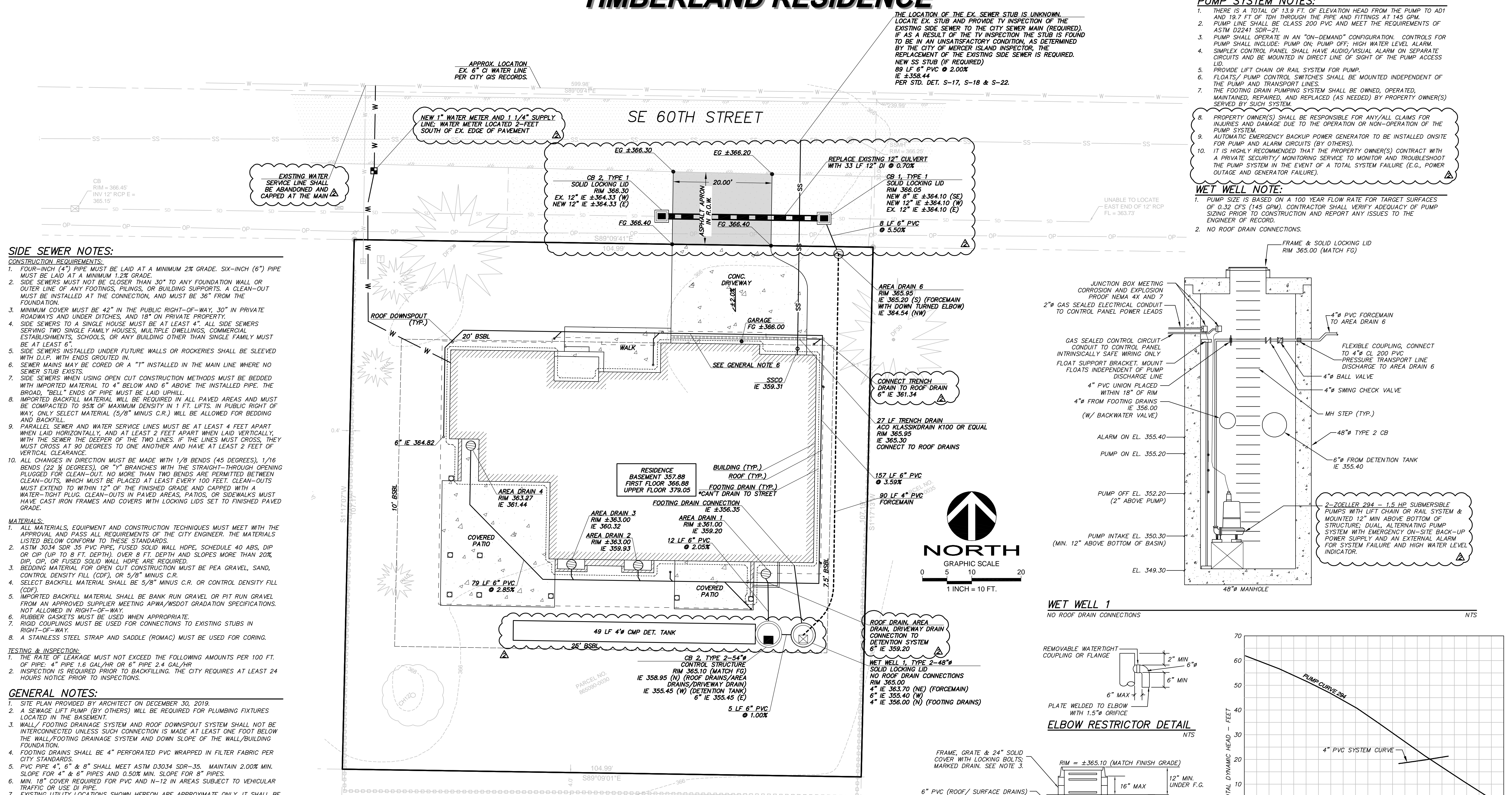
**THURMAN DEVELOPMENT GROUP, INC.**  
2212 QUEEN ANNE AVENUE N. # 273  
SEATTLE, WA 98109  
206.321.3129



DATE	REVISION	CITY COMMENTS
APR 11 2020	YLP	
APR 11 2020	YLP	
APR 11 2020	YLP	

DRAFTED BY: PFC  
DESIGNED BY: DLR  
PROJECT ENGINEER: YLP  
DATE: 1/21/20  
PROJECT NO.: 19106

DRAWING: C3  
SHEET: 3 OF 4



**SIDE SEWER NOTES:**

**CONSTRUCTION REQUIREMENTS:**

- FOUR-INCH (4") PIPE MUST BE LAID AT A MINIMUM 2% GRADE. SIX-INCH (6") PIPE MUST BE LAID AT A MINIMUM 1.2% GRADE.
- SIDE SEWERS MUST NOT BE CLOSER THAN 30" TO ANY FOUNDATION WALL OR OUTER LINE OF ANY FOOTINGS, PILINGS, OR BUILDING SUPPORTS. A CLEAN-OUT MUST BE INSTALLED AT THE CONNECTION, AND MUST BE 36" FROM THE FOUNDATION.
- MINIMUM COVER MUST BE 42" IN THE PUBLIC RIGHT-OF-WAY, 30" IN PRIVATE ROADWAYS AND UNDER DITCHES, AND 18" ON PRIVATE PROPERTY.
- SIDE SEWERS TO A SINGLE HOUSE MUST BE AT LEAST 4". ALL SIDE SEWERS SERVING TWO SINGLE FAMILY HOUSES, MULTIPLE DWELLINGS, COMMERCIAL ESTABLISHMENTS, SCHOOLS, OR ANY BUILDING OTHER THAN SINGLE FAMILY MUST BE AT LEAST 6".
- SIDE SEWERS INSTALLED UNDER FUTURE WALLS OR ROCKERIES SHALL BE SLEEVED WITH D.I.P. WITH ENDS SLOTTED IN.
- SEWER MAINS MAY BE CORED OR A "T" INSTALLED IN THE MAIN LINE WHERE NO SEWER STUB EXISTS.
- SIDE SEWERS WHEN USING OPEN CUT CONSTRUCTION METHODS MUST BE BEDDED WITH IMPORTED MATERIAL TO 4" BELOW AND 6" ABOVE THE INSTALLED PIPE. THE BROAD, "BELL" ENDS OF PIPE MUST BE LAID UP HILL.
- IMPORTED BACKFILL MATERIAL WILL BE REQUIRED IN ALL PAVED AREAS AND MUST BE COMPACTED TO 95% OF MAXIMUM DENSITY IN 1 FT. LIFTS. IN PUBLIC RIGHT OF WAY, ONLY SELECT MATERIAL (5/8" MINUS C.R.) WILL BE ALLOWED FOR BEDDING AND BACKFILL.
- PARALLEL SEWER AND WATER SERVICE LINES MUST BE AT LEAST 4 FEET APART WHEN LAID HORIZONTALLY, AND AT LEAST 2 FEET APART WHEN LAID VERTICALLY. WITH THE SEWER THE DEEPER OF THE TWO LINES, IF THE LINES MUST CROSS, THEY MUST CROSS AT 90 DEGREES TO ONE ANOTHER AND HAVE AT LEAST 2 FEET OF VERTICAL CLEARANCE.
- ALL CHANGES IN DIRECTION MUST BE MADE WITH 1/8 BENDS (45 DEGREES), 1/16 BENDS (22 1/2 DEGREES), OR "Y" BRANCHES WITH THE STRAIGHT-THROUGH OPENING PLUGGED FOR CLEAN-OUT. NO MORE THAN TWO BENDS ARE PERMITTED BETWEEN CLEAN-OUTS, WHICH MUST BE PLACED AT LEAST EVERY 100 FEET. CLEAN-OUTS MUST EXTEND TO WITHIN 12" OF THE FINISHED GRADE AND CAPPED WITH A WATER-TIGHT PLUG. CLEAN-OUTS IN PAVED AREAS, PATIOS, OR SIDEWALKS MUST HAVE CAST IRON FRAMES AND COVERS WITH LOCKING LIDS SET TO FINISHED GRADE.

**MATERIALS:**

- ALL MATERIALS, EQUIPMENT AND CONSTRUCTION TECHNIQUES MUST MEET WITH THE APPROVAL AND PUMP (BY OTHERS) OF THE CITY ENGINEER. THE MATERIALS LISTED BELOW CONFORM TO THESE STANDARDS.
- ASTM 3034 SDR 35 PVC PIPE, FUSED SOLID WALL HDPE, SCHEDULE 40 ABS, DIP OR OIP (UP TO 8 FT. DEPTH), OVER 8 FT. DEPTH AND SLOPES MORE THAN 20%, DIP, OIP, OR FUSED SOLID WALL HDPE ARE REQUIRED.
- BEDDING MATERIAL FOR OPEN CUT CONSTRUCTION MUST BE PEA GRAVEL, SAND, CONTROL DENSITY FILL (CDF), OR 5/8" MINUS C.R.
- SELECT BACKFILL MATERIAL SHALL BE 5/8" MINUS C.R. OR CONTROL DENSITY FILL (CDF).
- IMPORTED BACKFILL MATERIAL SHALL BE BANK RUN GRAVEL OR PIT RUN GRAVEL FROM AN APPROVED SUPPLIER MEETING APWA/WSDOT GRADATION SPECIFICATIONS. NOT ALLOWED IN RIGHT-OF-WAY.
- RUBBER GASKETS MUST BE USED WHEN APPROPRIATE.
- RIGID COUPLINGS MUST BE USED FOR CONNECTIONS TO EXISTING STUBS IN RIGHT-OF-WAY.
- A STAINLESS STEEL STRAP AND SADDLE (ROMAC) MUST BE USED FOR CORING.

**TESTING & INSPECTION:**

- THE RATE OF LEAKAGE MUST NOT EXCEED THE FOLLOWING AMOUNTS PER 100 FT. OF PIPE: 4" PIPE GAL/AIR OR 6" PIPE GAL/AIR
- INSPECTION IS REQUIRED PRIOR TO BACKFILLING. THE CITY REQUIRES AT LEAST 24 HOURS NOTICE PRIOR TO INSPECTIONS.

**GENERAL NOTES:**

- SITE PLAN PROVIDED BY ARCHITECT ON DECEMBER 30, 2019.
- A SEWAGE LIFT PUMP (BY OTHERS) WILL BE REQUIRED FOR PLUMBING FIXTURES LOCATED IN THE BASEMENT.
- WALL/ FOOTING DRAINAGE SYSTEM AND ROOF DOWNSPOUT SYSTEM SHALL NOT BE INTERCONNECTED UNLESS SUCH CONNECTION IS MADE AT LEAST ONE FOOT BELOW THE WALL/FOOTING DRAINAGE SYSTEM AND DOWN SLOPE OF THE WALL/BUILDING FOUNDATION.
- FOOTING DRAINS SHALL BE 4" PERFORATED PVC WRAPPED IN FILTER FABRIC PER CITY STANDARDS.
- PVC PIPE 4", 6" & 8" SHALL MEET ASTM D3034 SDR-35. MAINTAIN 2.00% MIN. SLOPE FOR 4" & 6" PIPES AND 0.50% MIN. SLOPE FOR 8" PIPES.
- MIN. 18" COVER REQUIRED FOR PVC AND N-12 IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR USE DI PIPE.
- EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES SHOWN, OR NOT SHOWN IN THEIR PROPER LOCATION.
- CONTRACTOR SHALL POT-HOLE LOCATION OF EXISTING UTILITIES TO BE RECONNECTED PRIOR TO BEGINNING CONSTRUCTION. NOTIFY ENGINEER OF ANY CONFLICTS.
- CONTRACTOR TO VERIFY CONDITION AND GOOD WORKING ORDER OF ALL EXISTING UTILITIES TO BE RECONNECTED OR RE-USED PRIOR TO START OF CONSTRUCTION. ALWAYS CALL 811 TWO WORKING DAYS BEFORE YOU DIG.

**RESTRICTOR CATCH BASIN NOTES:**

- USE A MINIMUM OF A 72 IN. DIAM. TYPE 2 CATCH BASIN WHEN CONNECTING PIPE MATERIAL IS CONCRETE OR LCP. A 54 IN. DIAM. TYPE 2 CATCH BASIN MAY BE USED FOR OTHER CIRCULAR SINGLE WALL PIPE (SUCH AS CORRUGATED ALUMINUM PIPE).
- OUTLET PIPE: MIN. 6 INCH.
- METAL PARTS: CORROSION RESISTANT NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
- FRAME AND LADDER OR STEPS OFFSET 50.
- CLEANOUT GATE IS VISIBLE FROM TOP.
- CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE.
- FRAME IS CLEAR OF CURB.
- IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
- PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3"-0" VERTICAL SPACING).
- THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275. DESIGNATION 2032A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48 CLASS 30B. THE LIFT HANDLE SHALL BE MADE OF SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION). IT MAY BE SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOP AS REQUIRED. A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED. THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT. ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
- THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 30 FEET.

**PUMP SYSTEM OPERATION AND MAINTENANCE:**

**SYSTEM OPERATION:**

IN A PUMP-TO-GRAVITY STORMWATER SYSTEM, A PUMP IS USED TO CONVEY STORMWATER COLLECTED IN A PUMP CHAMBER (WET WELL) TO THE APPROVED DISCHARGE LOCATION. THE WET WELL CONTAINS A PUMP OPERATING IN AN "ON-DEMAND" CONFIGURATION. THIS SYSTEM CONTAINS MINIMAL EMERGENCY STORAGE IN THE EVENT OF A SYSTEM FAILURE. A 1.5-INCH DIAMETER FORCE MAIN FROM THE WET WELL DISCHARGES TO A YARD DRAIN LOCATED NEAR THE SOUTHEASTERN CORNER OF THE BUILDING. THE DISCHARGE PIPE IN THE YARD DRAIN INCLUDES A DOWN ELBOW TO PROVIDE ENERGY DISSIPATION.

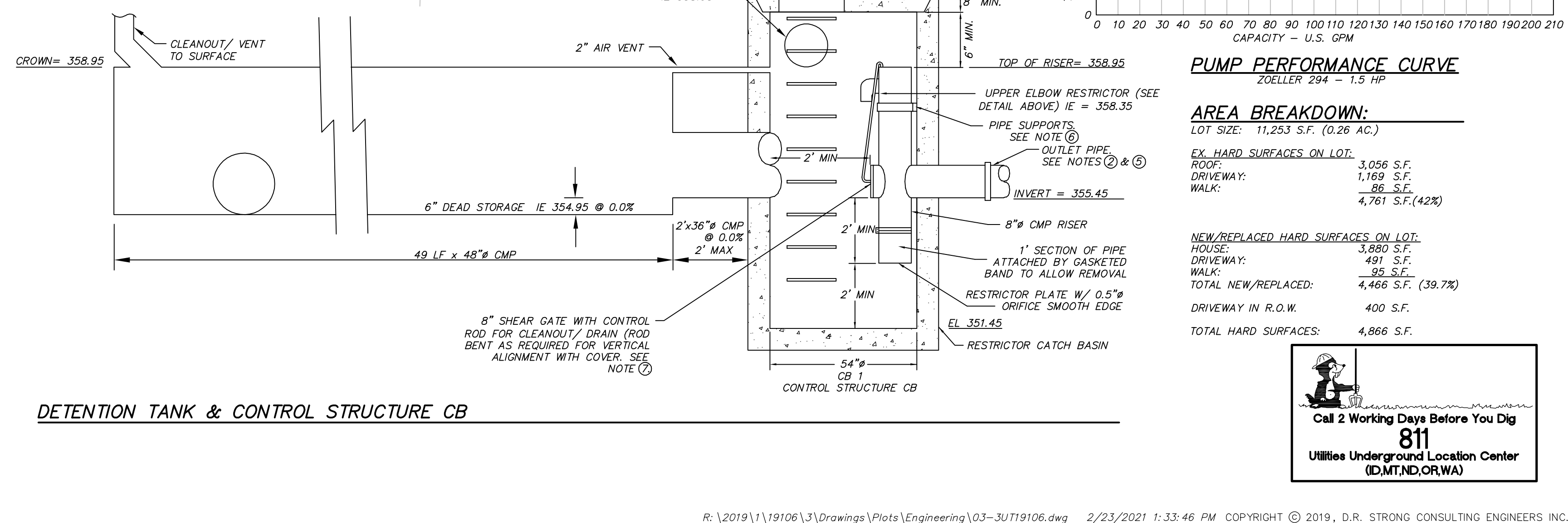
**CONTROLS FOR THE PUMP INCLUDE:** PUMP ON; PUMP OFF; AND HIGH WATER LEVEL ALARM. WHEN STORMWATER IN THE WET WELL RISES TO THE LEVEL OF THE "ON" FLOAT SETTING, THE PUMP IS ACTIVATED AND PUMPS THE LEVEL OF THE STORMWATER DOWN UNTIL IT REACHES THE "OFF" FLOAT SETTING. IF THE WATER LEVEL EXCEEDS THE "ALARM" LEVEL, A RED LIGHT AND AN AUDIBLE BUZZER WILL TURN ON AT THE CONTROL PANEL. PRESSING THE "SILENCE" BUTTON ON THE CONTROL PANEL WILL ONLY SILENCE THE AUDIBLE ALARM AND IS NOT A SOLUTION TO THE ALARM CONDITION. THE ALARM LIGHT WILL REMAIN LIT UNTIL THE ALARM CONDITION HAS BEEN RESOLVED. WE RECOMMEND THAT THE CONTROL PANEL BE EQUIPPED FOR REMOTE MONITORING BY A PRIVATE O&M FIRM TO ENSURE RESOLUTION OF ALARM CONDITIONS IN A TIMELY MANNER. CODE REQUIRES THAT THE PUMP AND ALARM BE ON DIFFERENT CIRCUITS SO THAT IF THE PUMP BREAKER TRIPS, THE ALARM CAN STILL OPERATE.

**RECOMMENDED MAINTENANCE:**

THE PUMP SHOULD BE SUBMERGED DURING NORMAL OPERATION BECAUSE HEAT GENERATED BY THE PUMP IS DISSIPATED IN THE SURROUNDING WATER. OTHERWISE, THE PUMP COULD BURN OUT IF ALLOWED TO OPERATE IN A NON-SUBMERGED CONDITION. CHECK TO SEE THAT THE FLOAT SWITCHES ARE CLEAN AND FREE IN THEIR MOVEMENTS, AND TEST THE HIGH ALARM FLOAT BY LIFTING IT, OR BY PUSHING DOWN ON THE LOW ALARM FLOAT (IF PRESENT). IF THE ALARM DOES NOT SOUND AND THE CIRCUIT BREAKER IS NOT TRIPPED, CONTACT A QUALIFIED ELECTRICIAN FOR SERVICING. PERFORM FLOAT TESTING QUARTERLY DURING THE FIRST YEAR OF OPERATION, THEN AT SEMI-ANNUALLY THEREAFTER.

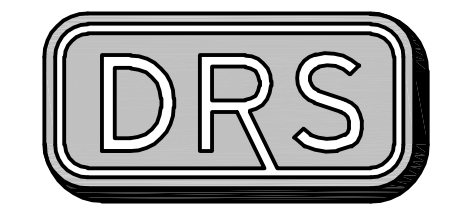
**FIRE SPRINKLER NOTE:**

NFPA 13D SPRINKLER SYSTEM MUST BE INSTALLED FOR THIS RESIDENCE PER THE CITY OF MERCER ISLAND STANDARDS.



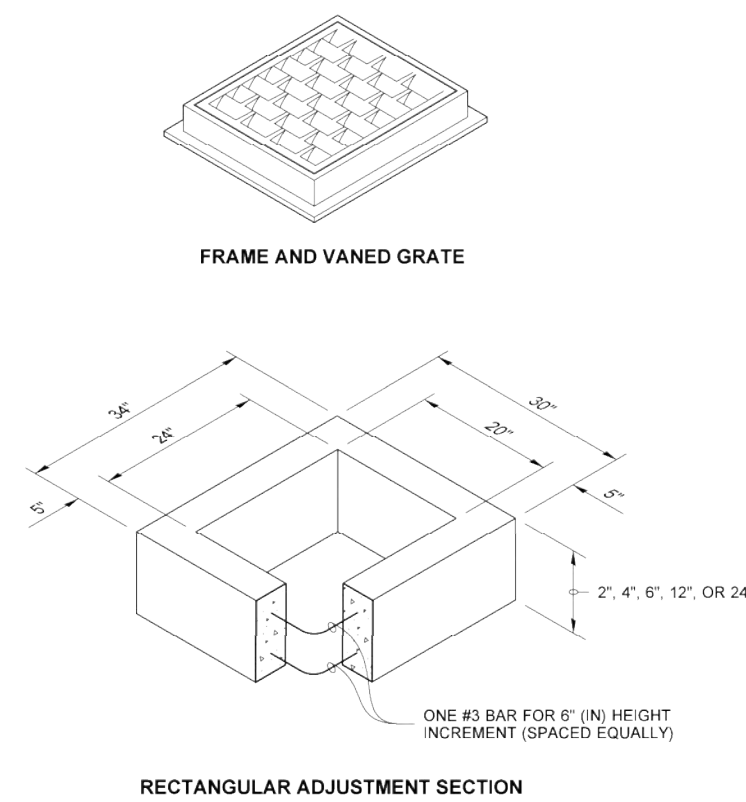


SE 1/4, SW 1/4, SECTION 19, TOWNSHIP 24 N, RANGE 5 E, W.M.  
**TIMBERLAND RESIDENCE**



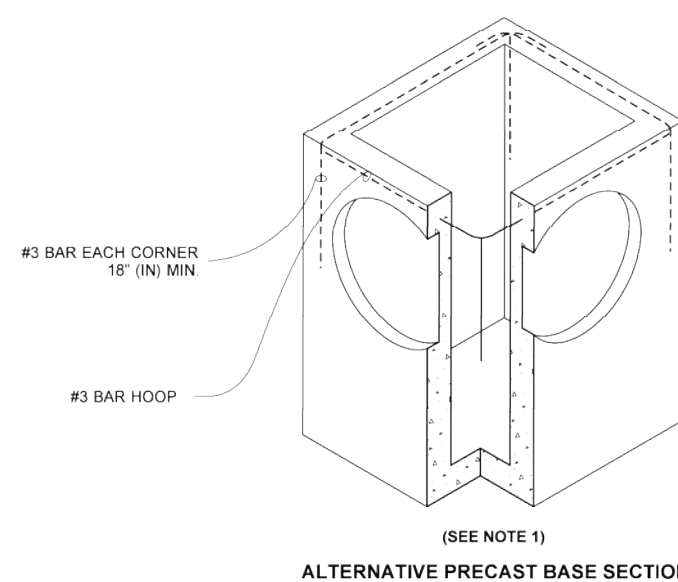
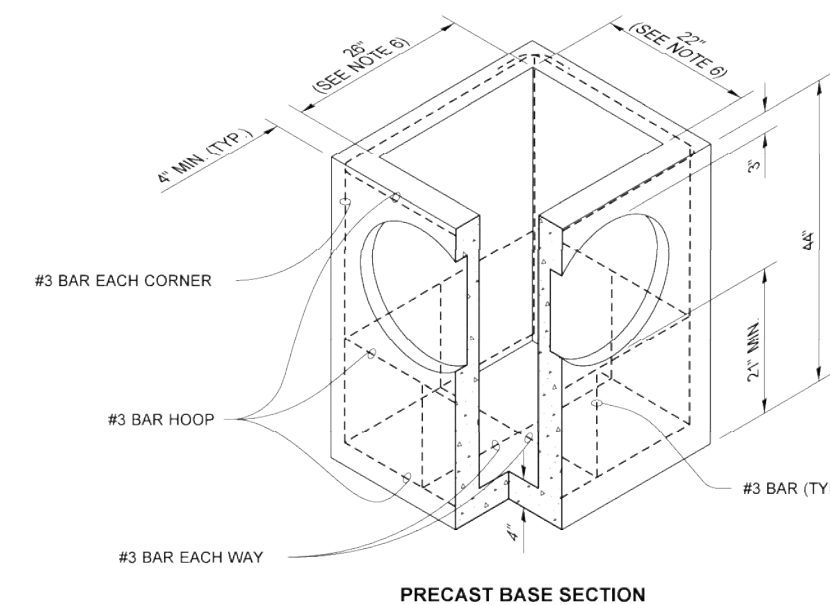
**D.R. STRONG**  
 CONSULTING ENGINEERS  
 ENGINEERS PLANNERS SURVEYORS  
 620 - 7th AVENUE KIRKLAND, WA 98033  
 O 425.827.3065 F 425.827.3423

DRAWN BY: LISA CYRARD



PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
GRSSP # (STD. SPEC. SECT. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	15"

\* CORRUGATED POLYETHYLENE STORM SEWER PIPE



**NOTES**

- As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, fibers (placed according to the Standard Specifications) or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouts.
- The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1/2" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification Section 9-04.3.
- The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
- The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
- The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1" : 24" or steeper.
- The opening shall be measured at the top of the Precast Base Section.
- All pickup holes shall be grouted full after the basin has been placed.

DRAWN BY: FERIE LEDELL

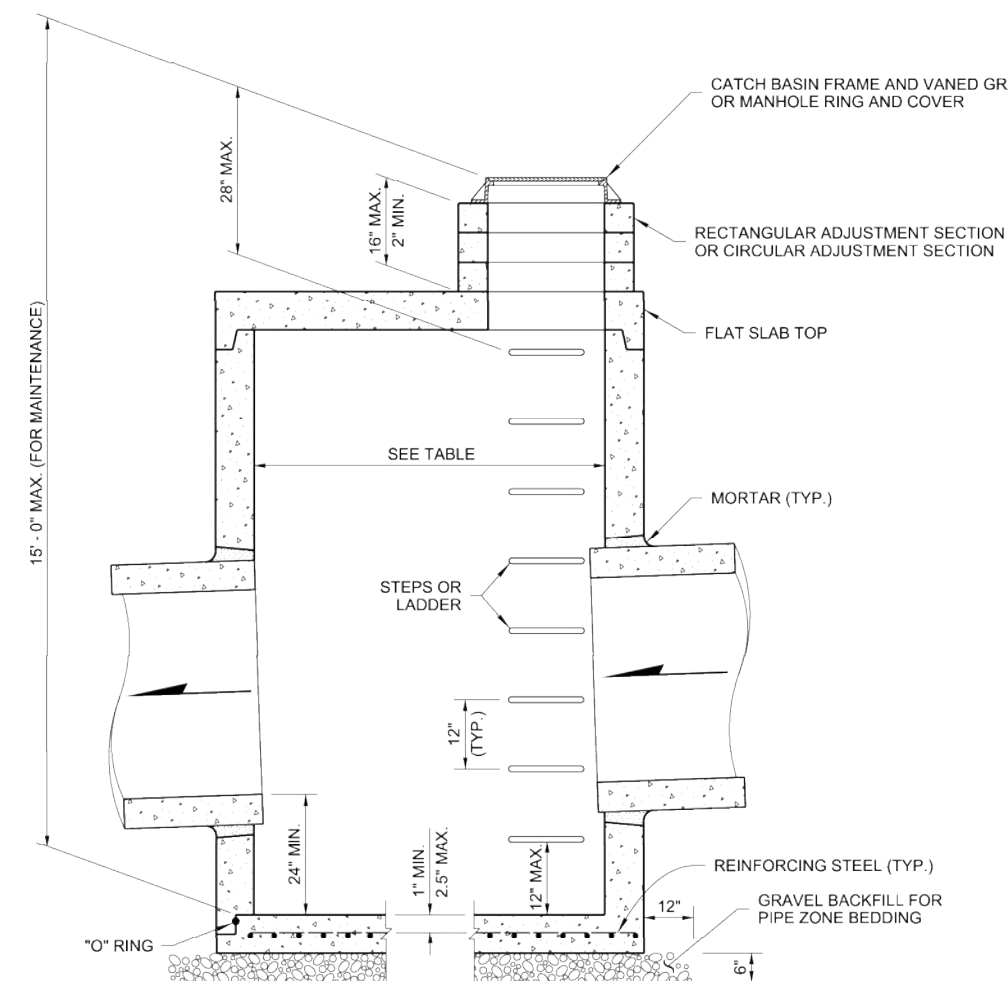


**CATCH BASIN TYPE 1**  
 STANDARD PLAN B-5.20-02

APPROVED FOR PUBLICATION  
 J. Helman, Julie  
 Jan 23 2017 2:53 PM  
 STATE DESIGN ENGINEER  
 Washington State Department of Transportation

**NOTES**

- No steps are required when height is 4' or less.
- The bottom of the precast catch basin may be sloped to facilitate cleaning.
- The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
- Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1/2" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification Section 9-04.3.



CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

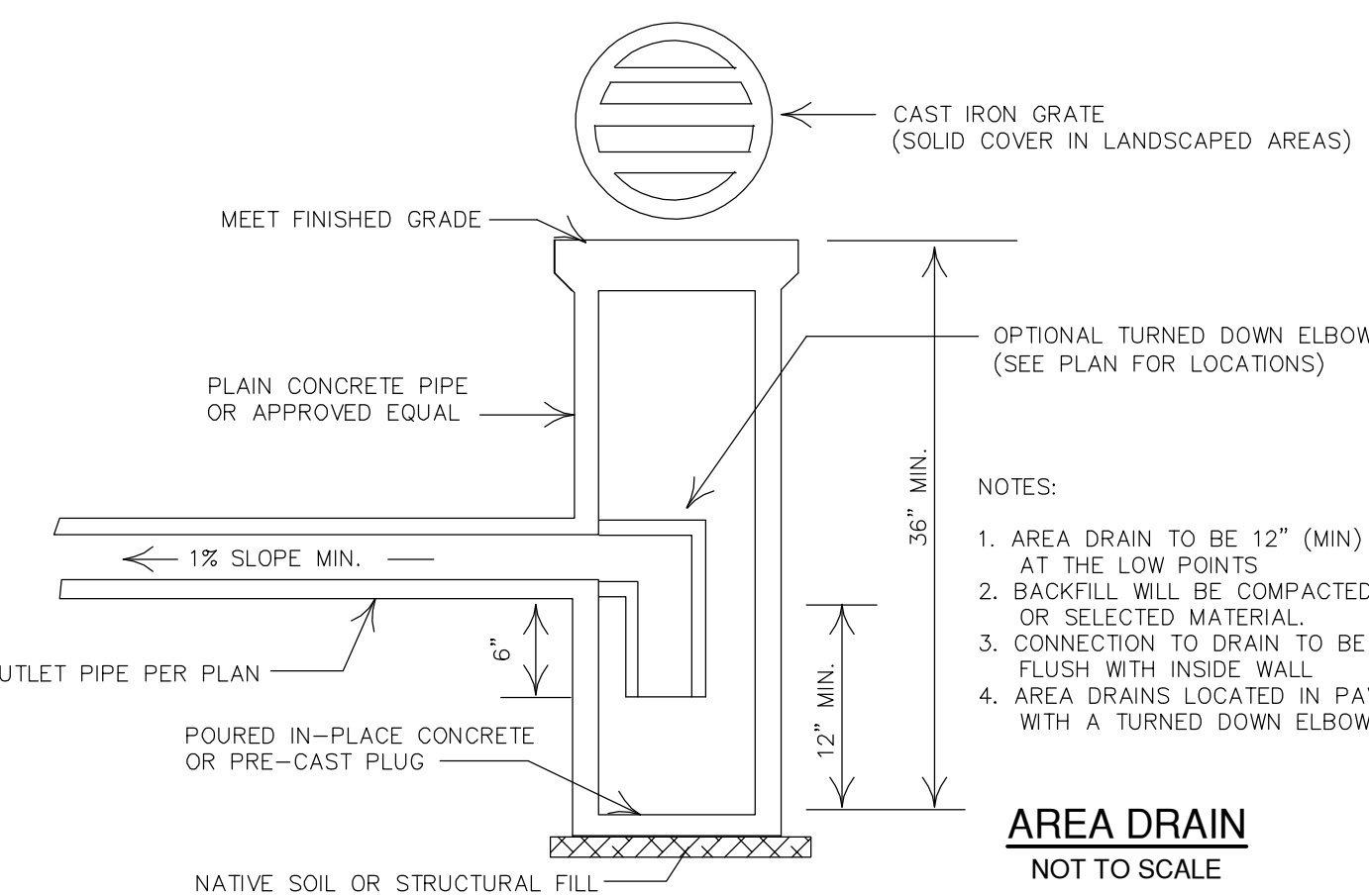
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER			
	CONCRETE	ALL METAL	CPSSP (1)	SOLID WALL PVC (2)
48"	24"	30"	24"	30"
54"	30"	36"	30"	36"
60"	36"	42"	36"	42"
72"	42"	54"	42"	48"
84"	54"	60"	54"	48"
96"	60"	72"	60"	48"
120"	66"	84"	60"	48"
144"	78"	96"	60"	48"

- Corrugated Polyethylene Storm Sewer Pipe (See Standard Specification Section 9-05.20)
- (See Standard Specification Section 9-05.12(1))
- (See Standard Specification Section 9-05.12(2))
- Polypropylene Pipe (See Standard Specification Section 9-05.24)



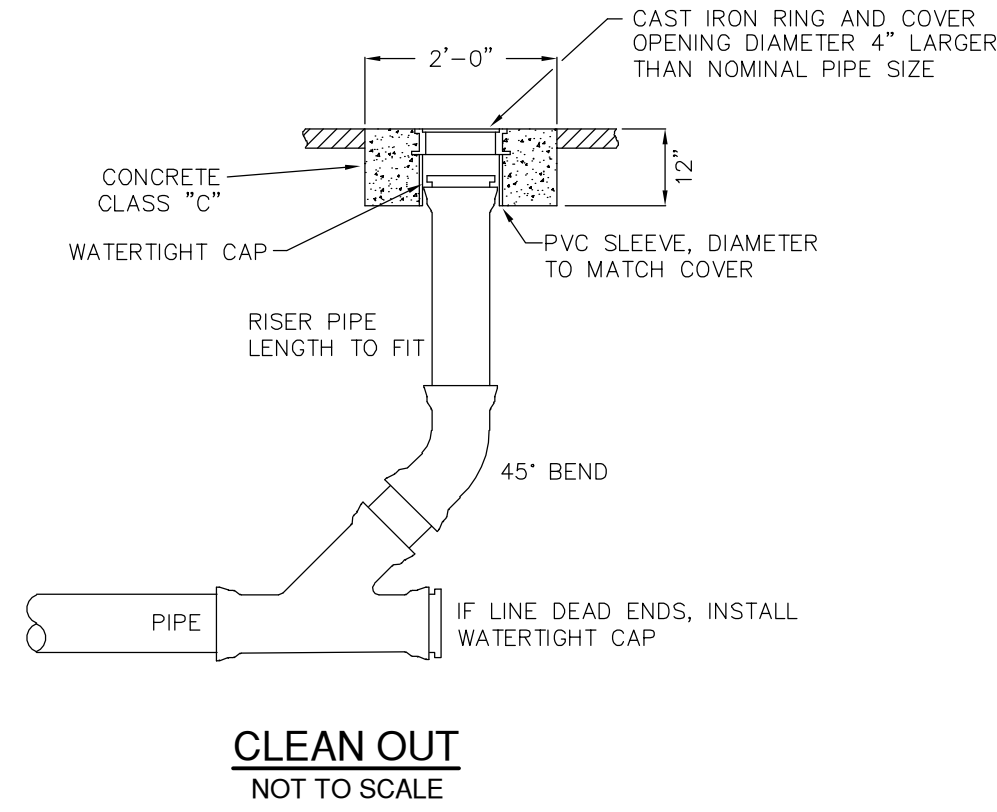
**CATCH BASIN TYPE 2**  
 STANDARD PLAN B-10.20-02

APPROVED FOR PUBLICATION  
 J. Helman, Julie  
 Feb 20 2018 12:49 PM  
 STATE DESIGN ENGINEER  
 Washington State Department of Transportation



**NOTES:**

- AREA DRAIN TO BE 12" (MIN) DIAM. AND LOCATED AT THE LOW POINTS
- BACKFILL WILL BE COMPACTED USING NATIVE OR SELECTED MATERIAL
- CONNECTION TO DRAIN TO BE MOTARED AND MADE FLUSH WITH INSIDE WALL
- AREA DRAINS LOCATED IN PAVED/PARKING AREAS TO BE FITTED WITH A TURNED DOWN ELBOW FOR OIL/WATER SEPARATION.



**100-year Peak Runoff Analysis**

Basin: Lot Area	100
Design Storm	3.9
P	from Isopluals
Land Cover 1	Lawns
Area 1	0.000 acres
C 1	0.25
Land Cover 2	Pavment & Roofs
Area 2	0.112 acres
C 2	0.9
Land Cover 3	Light Forest
Area 3	0 acres
C 3	0.15
Area Total	0.112 acres
aR	2.61
bR	0.63
Cc	0.90
Tc	6.3 minutes
iR	0.82
IR	3.19
Q100	0.32 cfs

**Table 3.2.1.B Coefficients for the Rational Method "IR" Equation**

	100 year	50 year	25 year	10 year	5 year	2 year
aR	2.61	2.75	2.66	2.44	2.33	1.58
bR	0.63	0.65	0.65	0.64	0.63	0.58

**Table 3.2.1.A Runoff Coefficients**

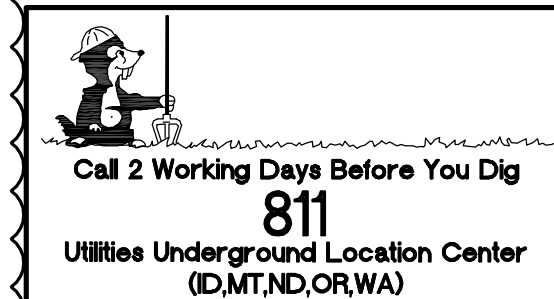
Land Cover	C
Dense Forest	0.10
Light Forest	0.15
Pasture	0.20
Lawns	0.25
Playgrounds	0.30
Gravel Areas	0.80
Pavement & Roofs	0.90
Composite Lots	0.48

**Table 1**

**ON-SITE DETENTION DESIGN FOR PROJECTS BETWEEN 500 SF AND 9,500 SF NEW PLUS REPLACED IMPERVIOUS SURFACE AREA**

New and Replaced Impervious Surface Area (sf)	Detention Pipe Diameter (in)	Detention Pipe Length (ft)		Lowest Orifice Diameter (in) <sup>(1)</sup>		Distance from Outlet Invert to Second Orifice (ft)		Second Orifice Diameter (in)	
		B soils	C soils	B soils	C soils	B soils	C soils	B soils	C soils
		500 to 1,000 sf	36"	30	22	0.5	0.5	2.2	2.0
1,001 to 2,000 sf	48"	18	11	0.5	0.5	3.3	3.2	0.9	0.8
	60"	11	7	0.5	0.5	4.2	3.4	0.5	0.6
	36"	66	43	0.5	0.5	2.2	2.3	0.9	1.4
2,001 to 3,000 sf	48"	34	23	0.5	0.5	3.2	3.3	0.9	1.2
	60"	22	14	0.5	0.5	4.3	3.6	0.9	0.9
	36"	90	66	0.5	0.5	2.2	2.4	0.9	1.9
3,001 to 4,000 sf	48"	48	36	0.5	0.5	3.1	2.8	0.9	1.5
	60"	30	20	0.5	0.5	4.2	3.7	0.9	1.1
	36"	120	78	0.5	0.5	2.4	2.2	1.4	1.6
4,001 to 5,000 sf	48"	62	42	0.5	0.5	2.8	2.9	0.8	1.3
	60"	42	26	0.5	0.5	3.8	3.9	0.9	1.3
	36"	134	91	0.5	0.5	2.8	2.2	1.7	1.5
5,001 to 6,000 sf	48"	73	49	0.5	0.5	3.6	2.9	1.6	1.5
	60"	46	31	0.5	0.5	4.6	3.5	1.6	1.3
	36"	162	109	0.5	0.5	2.7	2.2	1.8	1.6
6,001 to 7,000 sf	48"	90	59	0.5	0.5	3.5	2.9	1.7	1.5
	60"	54	37	0.5	0.5	4.6	3.6	1.6	1.4
	36"	192	128	0.5	0.5	2.7	2.2	1.9	1.8
7,001 to 8,000 sf	48"	102	68	0.5	0.5	3.7	2.9	1.9	1.6
	60"	64	43	0.5	0.5	4.6	3.6	1.8	1.5
	36"	216	146	0.5	0.5	2.8	2.2	2.0	1.9
8,001 to 8,500 sf <sup>(1)</sup>	48"	119	79	0.5	0.5	3.8	2.9	2.2	1.7
	60"	73	49	0.5	0.5	4.5	3.6	2.0	1.6
	36"	228	155	0.5	0.5	2.8	2.2	2.1	1.9
8,501 to 9,000 sf	48"	124	84	0.5	0.5	3.7	2.9	1.9	1.8
	60"	77	53	0.5	0.5	4.6	3.6	2.0	1.6
	36"	NA <sup>(1)</sup>	164	0.5	0.5	NA <sup>(1)</sup>	2.2	NA <sup>(1)</sup>	1.9
9,001 to 9,500 sf <sup>(2)</sup>	48"	NA <sup>(1)</sup>	89	0.5	0.5	NA <sup>(1)</sup>	2.9	NA <sup>(1)</sup>	1.9
	60"	NA <sup>(1)</sup>	55	0.5	0.5	NA <sup>(1)</sup>	3.6	NA <sup>(1)</sup>	1.7
	36"	NA <sup>(1)</sup>	174	0.5	0.5	NA <sup>(1)</sup>	2.2	NA <sup>(1)</sup>	2.1
	48"	NA <sup>(1)</sup>	94	0.5	0.5	NA <sup>(1)</sup>	2.9	NA <sup>(1)</sup>	2.0
	60"	NA <sup>(1)</sup>	58	0.5	0.5	NA <sup>(1)</sup>	3.7	NA <sup>(1)</sup>	1.7

**DETENTION VOLUME CALCULATION:**

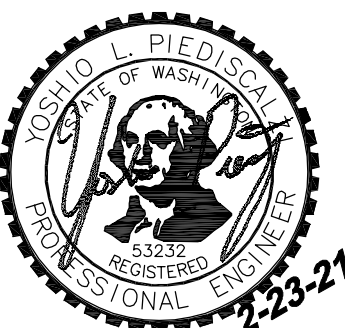


**TIMBERLAND RESIDENCE**

UTILITY NOTES AND DETAILS  
 9027 SE 60TH STREET  
 MERCER ISLAND, WA 98040  
 PARCEL NO. 865090-0030

**THURMAN DEVELOPMENT GROUP, INC.**

2212 QUEEN ANNE AVENUE N. # 273  
 SEATTLE, WA 98109  
 206.321.3129



APR YLP YLP

REVISION CITY COMMENTS 01.28.20 CITY COMMENTS

DATE 02.26.20 02.23.21

DATE 02.26.20 02.23.21

DATE 02.26.20 02.23.21

DRAFTED BY: PFC  
 DESIGNED BY: DLR  
 PROJECT ENGINEER: YLP  
 DATE: 1/21/20  
 PROJECT NO.: 19106

DRAWING: C4  
 SHEET: 4 OF 4



**GENERAL NOTES**

**CODE**

All materials, workmanship and construction shall conform to the 2015 Edition of the I.B.C. / I.R.C. Building Code requirements and all applicable codes and authorities having jurisdiction.

**BUILDING**

Type VB Site Class: D2  
Occupancy Group: R-3 Wind Exposure: B (110 MPH)

Contractor shall verify all dimensions and conditions in the field, provide temporary bracing as required until all permanent connections and stiffenings have been installed. It is the contractor's responsibility to identify all discrepancies or confusions to the designer at the time they are noted.

**FOUNDATION**

Unless a soils investigation by a qualified soils engineer is provided, foundation design is based on an assumed average soil bearing of 1500 PSF. Exterior footings shall bear 1'-6" (minimum) below finished grade. All footings to bear on firm undisturbed earth below organic surface soils. Backfill to be thoroughly compacted per Specifications. Provide 2 #4 (minimum) continuous bottom of all walls and footings.

**CONCRETE**

CLASS AND USE	PSI	MINIMUM SLUMP	SACKS/C.Y.
A - Footings and foundations	3000	3 - 4	5-1/2
B - Slabs on grade	2500	3 - 4	5-1/2

Note: 3000 PSI concrete is for weathering purposes only. No special inspection required.

1. Air-entraining agent (5% to 7%) to be used in all concrete flatwork exposed to weather.
2. Pozzolith 300 series (4 oz. per 100# of cement) to be used in all concrete.
3. Mix may be designed in accordance with the provisions the IBC/IRC.
4. Water - cement ratio per IBC/IRC.

**REINFORCING STEEL**

ASTM A615 grade 40, reinforcing steel details shall be prepared by an experienced detailer approved by the Designer and conform to standard practice outlined in ACI 318-14. Note: Grade 40 for #4 bars and smaller, grade 60 for #5 bars and larger.

**CONCRETE COVER OF REINFORCING**

- 3" Concrete poured against earth.
- 2" Formed concrete with earth backfill.
- 1-1/2" Beams and columns (stirrups, ties) walls exposed to weather, slabs on moisture barrier.
- 1" Walls, inside face.

Lap column verticals, Class "A" concrete and masonry column and wall verticals 40 diameters (2' min). Lap all other reinforcing 30 diameters (2' min). Splices at tension regions shall not be permitted.

**FRAMING**

All framing to comply with IBC Chapter 23. Nail sizes and spacing to conform to IBC Table 2304.10.1

All wood in contact with concrete to be pressure treated. All metal fasteners, hangers, straps, and miscellaneous hardware that comes in contact with pressure treated lumber shall be "Simpson Z Max" or equal (6105), hot dipped galvanized per ASTM A-153 or be stainless steel

Structural design is based on the following allowable stresses (units in PSI):

Timber connectors called out by letters and numbers shall be "Strong-Tie" by Simpson Company, as specified in their latest catalog.

If the contractor proposes the use of alternate nails or staples they shall submit specifications to the structural engineer (prior to construction) for review and approval.

**LUMBER STRENGTHS**

	Fv	Fb	E
<b>JOIST, RAFTERS:</b> Hem-Fir #2	150	950	1,300,000
<b>BEAMS, HEADERS, LINTELS, GIRDERS</b>			
4" Nominal Hem-Fir #2	150	950	1,300,000
4" Nominal Doug-Fir #2	180	400	1,600,000
6" Nominal Doug-Fir #1	180	1,000	1,700,000
<b>GLUE LAMINATED TIMBERS:</b>			
Doug-Fir Larch (24F-V3)	165	2400	1,800,000
(22F-V3)	165	2200	1,700,000
(20F-V3)	165	2000	1,600,000
*FARALAM® (2.0E)	210	2400	2,000,000

**LOADING:**

Roof:	15 PSF DEAD LOAD + 33 PSF LIVE LOAD	= 48 PSF
Floor:	10 PSF DEAD LOAD + 40 PSF LIVE LOAD	= 50 PSF
Ceiling:	5 PSF DEAD LOAD + 5 PSF LIVE LOAD	= 10 PSF
Deck:	10 PSF DEAD LOAD + 60 PSF LIVE LOAD	= 70 PSF
Interior Partition:		10 PSF
Exterior Partition:		10 PSF

Bolt heads and nuts bearing against wood to be provided with flat cut washers. Wood bearing on or installed within 1" of masonry or concrete to be treated with an approved preservative. Solid blocking of not less than 2" thickness shall be provided at ends and at all support of joists and rafters. Between supports provide blocking or approved bridging at 8'-0" o.c. for floor joists, 10'-0" for roof joists. Typical sill bolts to be 5/8" diameter at 4'-0" o.c., embed 10". All metal framing anchors and hangers shown on drawings shall be "Strong Tie Connectors" as manufactured by Simpson Company or approved equal.

Anchor bolts (J-bolts) to have 3"x3"x.224" plate washers, 7" min. embedment.

**WOOD TRUSSES**

Shall be factory fabricated trusses. Design and fabrication shall conform to the requirements of the International Building Code. Engineering design and shop drawings bearing the stamp of a professional engineer registered in the State of Washington and showing all details of construction including bracing.

Trusses shall be designed for uniform loading as follows:

Top Chord	33 PSF of tributary area
Bottom Chord	7 PSF of tributary area

Fabricator shall be approved by the Designer.

**STRUCTURAL GLUE-LAMINATED TIMBER**

Glue laminated members shall be fabricated in conformance with ASTM and AITC standards. Each member shall bear an A. I. T. C. identification mark and shall be accompanied by an A. I. T. C. certificate of conformance. All simple span beams shall be Douglas Fir combination 24F-V4, Fb=2400 PSI, Fv=165 PSI. All cantilevered beams shall be Douglas Fir combination 24F-V8, Fb=2400 PSI, Fv=165 PSI. Center all simple span glulam beams to 2,000' radius, unless shown otherwise on plans. Glulam columns shall be Douglas Fir combination No. 5, Fc=2400 PSI, E=2,000,000 PSI.

**PLYWOOD**

Each sheet shall bear the trademark of the American Plywood Association. All grading shall conform to PS I. Use thickness and nailing as shown on the drawings. All Plywood shall be C-D Interior grade with exterior glue. Except as otherwise shown or noted, provide Bd at 6" on center supported panel edges and Bd at 12" on center on other supporting members for walls, roof and floors.

Roof Diaphragm: 1/2" plywood (panel Index = 24/16), with Bd nails at 6" o.c. at supported panel and at 12" o.c. at field (typical unless noted otherwise).

Floor Diaphragm: 3/4" plywood (panel Index = 24/16) with 10d nails at 6" o.c. at supported panel edges and at 12" o.c. at field (typical unless noted otherwise on plan). Optional to use 0.148 diameter P-nails in lieu of 10d nails.

**STRUCTURAL STEEL**

Structural Grade ASTM A36, Fy = 36,000 psi. Pipe columns ASTM A53, grade B, Fy = 35,000 psi. Structural tubing columns ASTM A500, grade B, Fy = 46,000 psi. All steel except steel embedded in concrete shall be given one shop coat of approved paint. Welds to be 3/16" minimum continuous fillet by A.W.S. certified welders. Field connections not shown shall be bolted framed beam connections per AISC. All bolts to be A325. During erection, structural steel shall be secured from collapsing with temporary bracing. Where expansion anchors are specified, the contractor shall submit to the structural engineer a sample of the anchor to be used with laboratory data of pull-out and shear strength. Special inspections shall be required for all welding.

**2015 WASHINGTON ENERGY CODE**

(EDITED FROM) CHAPTER 5I-11 I.A.C. - EFFECTIVE JULY 1, 2016

**PRESCRIPTIVE REQUIREMENTS FOR GROUP R OCCUPANCY - CLIMATE ZONE 5 AND MARINE 4**

GLAZING AREA <sup>1</sup> % OF FLOOR	GLAZING U-FACTOR		DOOR U-FACTOR <sup>4</sup>	CEILING <sup>2</sup>	VAULTED CEILING <sup>3</sup>	WALL ABOVE GRADE <sup>5</sup>	WALL INT. BELOW GRADE <sup>4</sup>	WALL EXT. BELOW GRADE <sup>4</sup>	FLOOR <sup>7</sup>	SLAB ON GRADE <sup>6</sup>
	VERTICAL	OVERHEAD <sup>11</sup>								
UNLIMITED	0.28	0.50	0.20	R-49	R-38	R-21 INT.7	R-21 TB	R-10	R-30 U=0.029	R-10

\*REFERENCE CASE

1. NOMINAL R-VALUES ARE FOR WOOD FRAME ASSEMBLIES ONLY OR ASSEMBLIES BUILT IN ACCORDANCE WITH SECTION 601.1.
2. MINIMUM REQUIREMENTS FOR EACH OPTION LISTED. FOR EXAMPLE, IF A PROPOSED DESIGN HAS A GLAZING RATIO TO THE CONDITIONED FLOOR AREA OF 15%, IT SHALL COMPLY WITH ALL OF THE REQUIREMENTS OF THE 15% GLAZING OPTION (OR HIGHER). PROPOSED DESIGNS WHICH CANNOT MEET THE SPECIFIC REQUIREMENTS OF A LISTED OPTION ABOVE MAY CALCULATE COMPLIANCE BY CHAPTERS 4 OR 5 OF THIS CODE.
3. REQUIREMENT APPLIES TO ALL CEILING-5 EXCEPT SINGLE RAFTER OR JOIST VAULTED CEILING. 'ADV' DENOTES ADVANCED FRAMED CEILING.
4. REQUIREMENT APPLICABLE ONLY TO SINGLE RAFTER OR JOIST VAULTED CEILING.
5. BELOW GRADE WALLS SHALL BE INSULATED EITHER ON THE EXTERIOR TO A MINIMUM OF R-10 CONTINUOUS, OR ON THE INTERIOR AS A FRAMED WALL. EXTERIOR INSULATION INSTALLED ON BELOW GRADE WALLS SHALL BE A WATER RESISTANT MATERIAL, MANUFACTURED FOR ITS INTENDED USE AND INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. SEE SECTION 602.2.
6. FLOORS OVER CRAWL SPACES OR EXPOSED TO AMBIENT AIR CONDITIONS.
7. REQUIRED SLAB PERIMETER INSULATION SHALL BE A WATER RESISTANT MATERIAL, MANUFACTURED FOR ITS INTENDED USE, AND INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. SEE SECTION 602.4. FOR SLABS INSIDE A FOUNDATION WALL, THE INSULATION SHALL BE INSTALLED TO PROVIDE A THERMAL BREAK (TB) BETWEEN THE SLAB EDGE AND THE FOUNDATION. MONOLITHIC SLABS SHALL INCLUDE INSULATION INSTALLED OUTSIDE THE FOUNDATION WALL, AND SHALL EXTEND DOWNWARD FROM THE TOP OF THE SLAB FOR A MINIMUM OF 24 INCHES OR DOWNWARD AND THEN HORIZONTALLY FOR A MINIMUM COMBINED DISTANCE OF 24 INCHES. MONOLITHIC SLABS SHALL ALSO INCLUDE R-10 INSULATION UNDER THE NON-LOAD-BEARING PORTIONS OF THE SLAB.
8. INT. DENOTES STANDARD FRAMING 16 INCHES ON CENTER WITH HEADERS INSULATED WITH A MINIMUM OF R-10 INSULATION.
9. RESERVED
10. DOORS INCLUDING ALL FIRE DOORS, SHALL BE ASSIGNED DEFAULT U-FACTORS FROM TABLE 10-6C.
11. WHERE A MAXIMUM GLAZING AREA IS LISTED, THE TOTAL GLAZING AREA (COMBINED VERTICAL PLUS OVERHEAD) AS A PERCENT OF GROSS CONDITIONED FLOOR AREA SHALL BE LESS THAN OR EQUAL TO THAT VALUE. OVERHEAD GLAZING WITH U-FACTOR OF U=0.035 OR LESS IS NOT INCLUDED IN GLAZING AREA LIMITATIONS.
12. OVERHEAD GLAZING SHALL HAVE U-FACTORS DETERMINED IN ACCORDANCE WITH NFRC 100 OR AS SPECIFIED IN SECTION 602.1.5.
13. LOG AND SOLID TIMBER WALLS WITH A MINIMUM AVERAGE THICKNESS OF 5.5" ARE EXEMPT FROM THIS INSULATION REQUIREMENT.

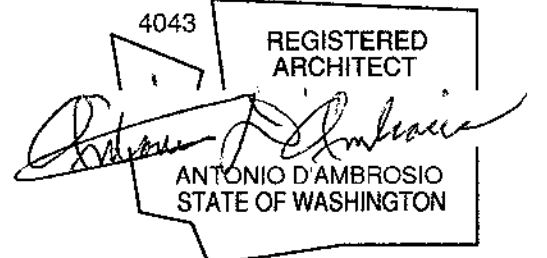
**CERTIFICATE (NSEC R401.3)**

A PERMANENT CERTIFICATE SHALL BE POSTED WITHIN 3 FEET OF THE ELECTRICAL DISTRIBUTION PANEL OR ON THE PANEL ITSELF. THE CERTIFICATE SHALL BE COMPLETED BY THE BUILDER OR REGISTERED DESIGN PROFESSIONAL, AND LIST THE FOLLOWING: INSULATION R-VALUES FOR ALL BUILDING FRAMING AND FOUNDATION/SLAB COMPONENTS, DUCT INSULATION OUTSIDE CONDITIONED AREAS, GLAZING U VALUES AND/OR SHGC VALUES, TYPE AND EFFICIENCY OF HEATING/COOLING SYSTEM AND HEATER HEATING EQUIPMENT, DUCT LEAKAGE RATES INCLUDING TEST CONDITIONS PER NSEC 509.10.2 AND AIR LEAKAGE RESULTS IF A BLOWER DOOR TEST WAS CONDUCTED.

**GENERAL NOTES**

1. COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES. ALL WORK SHALL CONFORM TO IRC / IBC ( 2015 EDITION).
2. THE ARCHITECT SHALL BE THE INTERPRETER OF THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS AND THE JUDGE OF THE PERFORMANCE THEREUNDER BY BOTH THE OWNER AND THE CONTRACTOR.
3. THESE DRAWINGS COVER THE FURNISHINGS AND INSTALLATION OF ALL MATERIALS AND WORK AS CALLED FOR ON THE DRAWINGS AND/OR IN THE SPECIFICATIONS WHICH ARE BOUND SEPARATELY AND ARE PART OF THIS CONTRACT. STRUCTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. EACH CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CHECKING WITH THE ARCHITECTURAL DRAWINGS BEFORE THE INSTALLATION OF THEIR WORK. ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL AND THE CONSULTING ENGINEER(S) DRAWINGS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION BY NOTIFICATION FOR CLARIFICATION. ANY WORK INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE AND AT NO ADDITIONAL EXPENSE TO THE OWNER OR ARCHITECT.
4. DRAWINGS SHALL NOT BE USED FOR SCALING DIMENSIONS. CONTRACTORS SHALL USE DIMENSIONS SHOWN ON THE DRAWINGS AND ACTUAL FIELD MEASUREMENT. NOTIFY THE ARCHITECT IF ANY DISCREPANCIES ARE FOUND.
5. VERIFY ALL ROUGH IN DIMENSIONS FOR EQUIPMENT PROVIDED IN THIS CONTRACT OR BY OTHERS, PRIOR TO INSTALLATION. NOTIFY ARCHITECT IF CONFLICT IS DISCOVERED.
6. VERIFY SIZE AND LOCATION OF AND PROVIDE ALL OPENINGS THROUGH FLOORS AND WALLS, FURRING, ANCHORS, INSERTS, ROUGH BUCKS AND BACKING FOR SURFACE MOUNTING ITEMS.
7. PROVIDE FURRING AS REQUIRED TO CONCEAL MECHANICAL AND ELECTRICAL IN ALL FINISHED AREAS.
8. REFER TO STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL NOTES, SCHEDULES AND SYMBOLS.
9. THROUGHOUT THE PLANS ARE ABBREVIATIONS WHICH ARE COMMON USE. THE LIST OF ABBREVIATIONS PROVIDED IS NOT INTENDED TO BE COMPLETE OR REPRESENTATIVE OF CONDITIONS OR MATERIALS ACTUALLY USED ON THE PROJECT. THE ARCHITECT WILL DEFINE THE INTENT OF ANY IN QUESTION.
10. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION AND COORDINATION WITH OTHER CONTRACTORS TO SECURE COMPLIANCE OF DRAWING AND SPECIFICATIONS AND THE ACCURATE LOCATION OF STRUCTURAL MEMBERS AND OPENINGS FOR MECHANICAL, ELECTRICAL, AND MISCELLANEOUS EQUIPMENT.
11. IN CASE OF CONFLICT WHEREIN THE METHODS OR STANDARDS OF INSTALLATION OF THE MATERIALS SPECIFIED DO NOT EQUAL OR EXCEED THE REQUIREMENTS OF THE LAWS OR ORDINANCES, THE LAWS OR ORDINANCES SHALL GOVERN. NOTIFY THE ARCHITECT OF ALL CONFLICTS.
12. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, GRADES AND EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. DO NOT PROCEED WITH WORK RELATION TO DISCREPANCIES UNTIL DISCREPANCIES ARE RESOLVED THEN APPROVED BY THE ARCHITECT.
13. CONSULT WITH ARCHITECT REGARDING ANY SUSPECTED ERROR, OMISSIONS OR CHANGES ON PLANS BEFORE PROCEEDING WITH WORK.
14. REPETITIVE FEATURES ARE OFTEN DRAWN ONLY ONCE AND SHALL BE COMPLETELY PROVIDED AS IF DRAWN IN FULL.
15. ALL PLAN DIMENSIONS ARE TO FACE OF STUDS OR FACE OF CONCRETE WALLS, ETC., UNO.
16. PLANS ARE DRAWN ASSUMING THE FOLLOWING ROUGH OPENINGS:  
SWINGING DOORS: NOMINAL SIZE +2"  
BIFOLD DOORS: NOMINAL SIZE +1 1/2"  
BI-PASS DOORS: NOMINAL SIZE +0"  
WINDOWS: NOMINAL SIZE +0"
17. VERIFY ALL ROUGH-IN DIMENSIONS.
18. FLOOR LINE REFERS TO TOP OF PLYWOOD SUBFLOOR.
19. ALL FOUNDATION FOOTINGS ARE TO REST ON FIRM UNDISTURBED SOIL.
20. PROVIDE ADEQUATE BRACINGS AND/OR BLOCKING IN HALLS TO SUPPORT COUNTER, CABINETS, SHELVES, AND EQUIPMENT, ETC., AS REQUIRED.
21. PROVIDE GALVANIC INSULATION BETWEEN DISSIMILAR MATERIALS.
22. THE JUNCTION OF THE ROOF AND VERTICAL SURFACES SHALL BE FLASHED AND COUNTER FLASHED IN A MANNER TO MAKE THEM WEATHERPROOF.
23. ALL EXTERIOR WALL OPENINGS, FLASHING, EXPANSION JOINTS SHALL BE CONSTRUCTED IN SUCH MANNER AS TO MAKE THEM WEATHERPROOF.
24. WHERE FLOOR DRAINS OR FLOOR SINKS OCCUR, ALL FINISH FLOORS SHALL SLOPE TO DRAIN. THE BASE OF WALLS AT ALL SLOPING FLOORS SHALL BE LEVEL.
25. THERE SHALL BE NO EXPOSED PIPE, CONDUITS, DUCTS, VENTS, ETC. ALL SUCH LINES SHALL BE CONCEALED OR FURRED AND FINISHED, UNLESS APPROVED OR NOTED OTHERWISE AS EXPOSED CONSTRUCTION ON DRAWINGS.
26. ALL EGRESS WINDOWS (E) TO HAVE NET 24" CLEAR OPENING HT., 20" MIN. NET CLEAR OPENING WIDTH, MIN. NET CLEAR OPENING AREA OF 5.7 SQ. FT. AND 44" MAX. SILL HT. TYP.
27. CONTRACTORS SHALL VERIFY SIZES AND LOCATIONS OF ALL OPENINGS FOR MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR AS WELL AS SHOP DRAWINGS AS APPROVED BY ARCHITECT BEFORE PROCEEDING WITH THE WORK.
28. CONTRACTORS SHALL VERIFY SIZES AND LOCATIONS OF ALL MECHANICAL EQUIPMENT PADS AND BASES AS WELL AS POWER AND WATER OR DRAIN INSTALLATION WITH EQUIPMENT MANUFACTURERS BEFORE PROCEEDING WITH THE WORK.
29. PROVIDE CAULKING BETWEEN SOLE PLATES AND SUBFLOOR AND BETWEEN RIM JOISTS AT BOTH TOP PLATE AND SUBFLOOR.
30. SAFETY GLAZING: WINDOW MANUFACTURER SHALL PROVIDE TEMPERED SAFETY GLAZING WHERE REQUIRED BY I.B.S.D.C. SECTION 2406.
31. THE ARCHITECT HAS NOT BEEN RETAINED OR COMPENSATED TO PROVIDE CONSTRUCTION REVIEW SERVICES RELATED TO THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES FOR THE CONTRACTOR TO PERFORM HIS WORK. THE UNDERTAKING OF PERIODIC SITE VISITS BY THE ARCHITECT SHALL NOT BE CONSTRUED AS SUPERVISION OF ACTUAL CONSTRUCTION NOR MAKE HIM RESPONSIBLE FOR PROVIDING A SAFE PLACE FOR THE PERFORMANCE OF WORK BY THE CONTRACTOR, SUBCONTRACTORS, SUPPLIERS OR THEIR EMPLOYEES, OR FOR ACCESS, VISITS, TRAVEL, OR OCCUPANCY BY ANY PERSON.
32. THE ARCHITECT HAS USED THAT DEGREE OF CARE SKILL ORDINARILY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY MEMBERS OF THE PROFESSION IN THIS LOCALITY, AND NO OTHER WARRANTY, EITHER EXPRESSED OR IMPLIED IS MADE IN CONNECTION WITH RENDERING OF PROFESSIONAL SERVICES.
33. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACINGS OF ALL STRUCTURAL MEMBERS DURING CONSTRUCTION.

3426 GARDEN AVENUE NORTH  
RENTON, WASHINGTON, 98056  
CELL 206-310-4500  
email dambrosioarchitect@yahoo.com



A New Residence For:  
**TIMBERLAND**  
9027 SE 60<sup>TH</sup> ST. MERCER ISLAND, WA 98040

Drawing Title:  
NOTES

Drawn By: M.D., T.D.  
Checked By:  
Approved By:

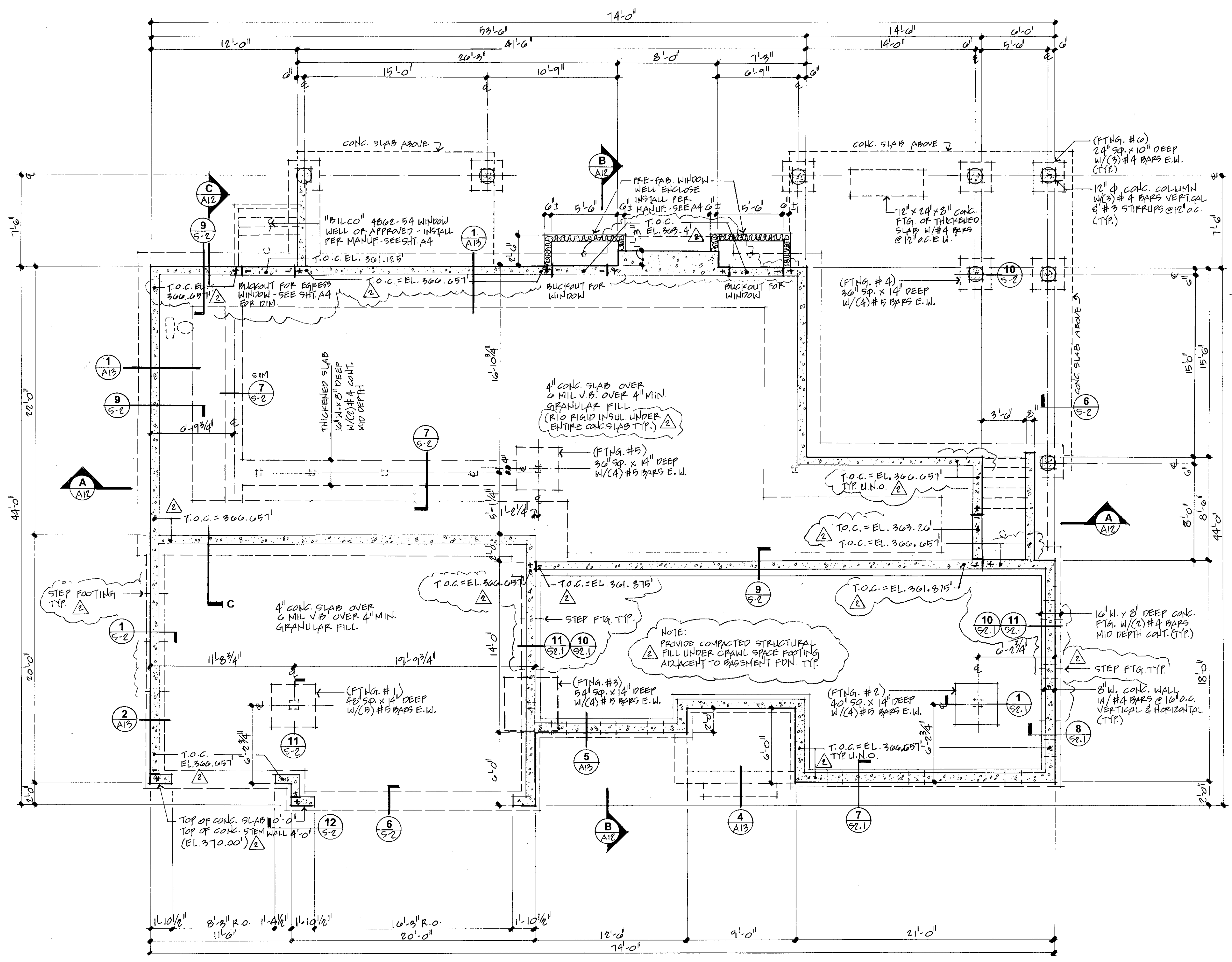
Issue Date: 1/17/20

Revisions:  
No. Description Date  
1 PERMIT 2/22/21

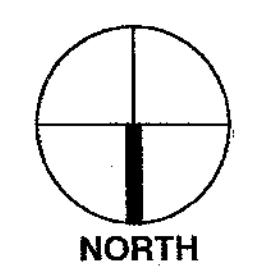
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Sheet No.

**A2**





**FOUNDATION PLAN**  
SCALE 1/4" = 1'-0"



A New Residence For:

**TIMBERLAND**

9027 SE 60<sup>TH</sup> ST. MERCER ISLAND, WA 98040

Drawing Title:  
FOUNDATION PLAN

Drawn By: T.D.  
Checked By:  
Approved By:

Issue Date: 1/17/20

Revisions:

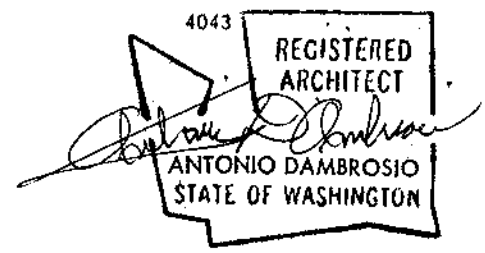
No.	Description	Date
1	PERMIT	2/22/21

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

Sheet No.

**A3**





A New Residence For:  
**TIMBERLAND**  
MERCER ISLAND, WA 98040  
9027 SE 60<sup>TH</sup> ST.

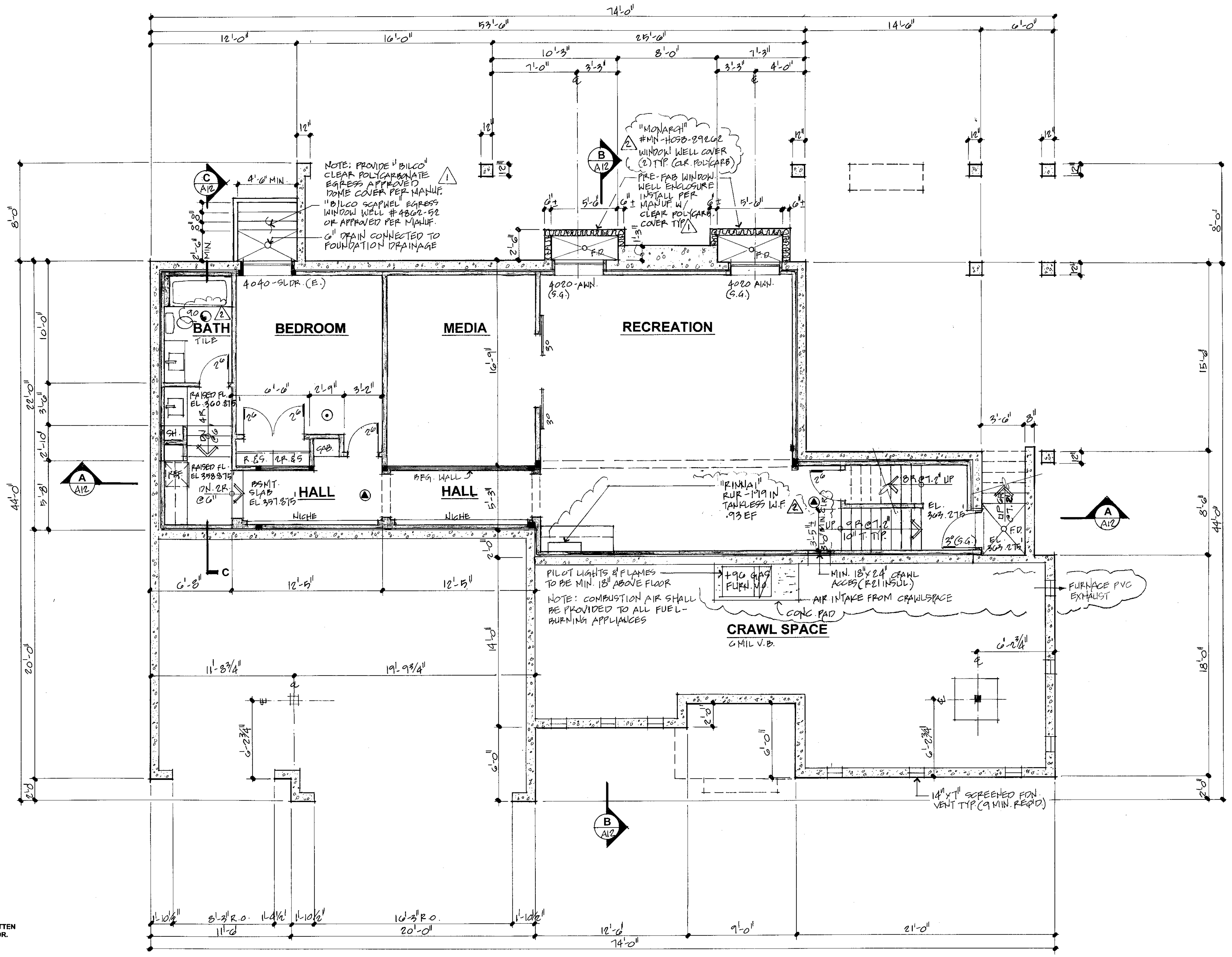
- ENERGY CREDITS:**
- 1a: EFFICIENT BUILDING ENVELOPE 1a: VERTICAL FENESTRATION U = 0.28 FLOOR R-38 SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB. BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB. 0.5 CREDIT
  - 3a: HIGH EFFICIENCY HVAC 3a: GAS FURNACE W/MIN. AFUE OF 84%. 1.0 CREDIT
  - 4: HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM: ALL HEATING AND COOLING SYSTEM COMPONENTS INSTALLED INSIDE THE CONDITIONED SPACE. THIS INCLUDES ALL EQUIPMENT AND DISTRIBUTION SYSTEM COMPONENTS SUCH AS FORCED AIR DUCTS HYDRONIC PIPING, HYDRONIC FLOOR HEATING LOOP, CONVEYORS AND RADIATORS. ALL COMBUSTION EQUIPMENT SHALL BE DIRECT VENT OR SEALED COMBUSTION. FOR FORCED AIR DUCTS: A MAX. OF 10 LINEAR FT. OF SUPPLY DUCTS MAY BE LOCATED OUTSIDE OF THE CONDITIONED SPACE. ALL METALLIC DUCTS LOCATED OUTSIDE THE CONDITIONED SPACE MUST HAVE BOTH TRANSVERSE AND LONGITUDINAL JOINTS SEALED WITH MASTIC. IF FLEX DUCTS ARE USED, THEY CANNOT CONTAIN SPLICES. FLEX DUCT CONNECTIONS MUST BE MADE WITH NYLON STRAPS AND INSTALLED USING A PLASTIC STRAPPING TENSIONING TOOL. DUCTS LOCATED OUTSIDE THE CONDITIONED SPACE MUST BE INSULATED TO A MIN. OF R-8. LOCATING COMPONENTS IN CONDITIONED CRAWL SPACES IS NOT PERMITTED UNDER THIS OPTION. ELECTRIC RESISTANCE HEAT AND DUCTLESS HEAT PUMPS HEAT PUMPS ARE NOT PERMITTED UNDER THIS OPTION. DIRECT COMBUSTION HEATING EQUIPMENT WITH AFUE LESS THAN 80% IS NOT PERMITTED UNDER THIS OPTION. 1.0 CREDIT
  - 5a: EFFICIENT WATER HEATING 5a: ALL SHOWER HEAD AND KITCHEN FAUCETS INSTALLED IN THE HOUSE SHALL BE RATED AT 1.75 GPM OR LESS. ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS. 0.5 CREDIT
  - 5c: EFFICIENT WATER HEATING 5c: GAS WATER W/MIN. EF OF 0.91. 1.5 CREDITS
- TOTAL CREDITS:** 4.5 CREDITS

- LIGHTING EFFICIENCY:**
- 1. A MIN. OF 75% OF PERMANENTLY INSTALLED LIGHTING MUST BE HIGH-EFFICIENCY LAMPS (WA ENERGY CODE R401.1)
  - 2. PERMANENTLY MOUNTED LIGHT FIXTURES PROVIDING OUTDOOR LIGHTING WILL BE HIGH EFFICIENCY UNLESS EQUIPPED WITH BUILT IN PHOTO CONTROL SENSOR. (WSEC 505.2)

- MECHANICAL & ENERGY NOTES:**
1. ALL GLAZING SHALL BE DOUBLE GLAZED, U = .28 MAX.
  2. ALL METAL DUCT JOINTS TO BE TAPED WITH DUCT TAPE.
  3. ALL OPENINGS IN THE EXTERIOR WALLS SHALL BE SEALED OR WEATHERSTRIPPED AS APPROPRIATE TO LIMIT AIR LEAKAGE.
  4. BATT INSULATION SHALL BE CAREFULLY INSTALLED TO AVOID TEARING OR RIPPING THE VAPOR BARRIER. ALL JOINTS (BETWEEN BATT SPLICES) AND TEARS SHALL BE SEALED WITH DUCT TAPE (OR OTHER APPROVED MATERIAL).
  5. SHOWERS SHALL BE EQUIPPED WITH FLOW-CONTROL DEVICES THAT LIMIT TOTAL FLOW TO A MAXIMUM OF 1.75 GPM OR LESS PER SHOWERHEAD.
  6. FACTORY-BUILT WINDOWS SHALL BE RATED AND TESTED BY THE ASTM STANDARD E-283-73 LISTING AIR LEAKAGE RATES.
  7. VERIFY R-4 (DUCTS WITHIN CONDITIONED SPACE) AND R-8 (DUCTS OUTSIDE CONDITIONED SPACE) INSULATION REQUIREMENTS ON ALL DUCTING PER APPLICABLE WSEC REGULATIONS.
  8. ALL FAN DUCTING TO BE SMOOTH WALL 26-GAUGE OR HEAVIER.
  9. FUEL FOR WATER AND SPACE HEATING SHALL BE GAS.
  10. SERVICE WATER HEATER SHALL HAVE A LABEL WHICH STATES THAT IT COMPLIES WITH THE LATEST EDITION OF THE NATIONAL APPLIANCE ENERGY CONSERVATION ACT.
  11. ALL WATER SERVICE PIPING SHALL BE THERMALLY INSULATED IN ACCORDANCE WITH LOCAL CODE. HOT WATER PIPES SHALL BE INSULATED TO R-3 PER WSEC R403.5.3.
  12. CONTINUOUS APPROVED VAPOR BARRIERS SHALL BE INSTALLED ON THE HEATING SIDE OF ALL BATT INSULATION INSTALLED.
  13. HEATING DUCTS SHALL BE CONTAINED INSIDE ONE-HOUR WRAPPED JOIST SPACE IF DUCT RUNS UP INTO JOISTS AREA.
  14. ONLY ONE DUCT IS ALLOWED PER JOIST BAY FOR BATH, KITCHEN, OR LAUNDRY ROOM VENT FANS.
  15. ALL AIR DUCTS, DRYER EXHAUST VENTS AND DUCTS, OUTSIDE COMBUSTION AIR FLUES, PLUMBING WASTE, ELECTRIC LIGHT, RECESSED CANS AND BOXES MUST MAINTAIN THE INTEGRITY OF THE FIRE-RESISTIVE ASSEMBLIES WHERE APPLICABLE.
  16. DISHWASHER MUST BE PROVIDED WITH AN ATMOSPHERIC AIR GAP MOUNTED ABOVE FLOOD LEVEL RIM OF SINK.
  17. HOT WATER TANKS MUST BE PROVIDED WITH ALL OF THE FOLLOWING:
    - a.) BE SECURED TO PREVENT SEISMIC DISPLACEMENT.
    - b.) BE PROVIDED WITH A PRESSURE RELIEF VALVE DISCHARGING TO THE EXTERIOR OF THE BUILDING TERMINATING 6" TO 24" ABOVE THE GROUND.
    - c.) BE PROVIDED WITH A THERMAL EXPANSION TANK SIZED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.
  18. DUCTS SHALL BE LEAKED TESTED IN ACCORDANCE WITH WSEC R403.3.3 A WRITTEN REPORT OF THE RESULTS SHALL BE PROVIDED TO THE MECHANICAL INSPECTOR.
  19. COMBUSTION AIR SHALL BE PROVIDED TO ALL FUEL-BURNING APPLIANCES PER IRC M1701.1
  20. FACTORY-BUILT FIREPLACES SHALL BE LISTED AND LABELED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE CONDITIONS OF THE LISTING. DECORATIVE SHROUDS SHALL BE LISTED AND LABELED FOR USE WITH THE SPECIFIC FACTORY-BUILT CHIMNEY SYSTEM AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS. IRC R1004
- INSTALL WHOLE HOUSE VENTILATION SYSTEM IN ACCORDANCE WITH VIAQ 303.4.1. INSTALL ONE EXHAUST FAN IN A UTILITY ROOM OR AS SHOWN ON THE DRAWINGS. FAN SHALL BE CAPABLE OF PRODUCING 130 CFM AND BE PROVIDED WITH CONTROL FOR MANUAL, TIMED OR AUTOMATIC OPERATION.

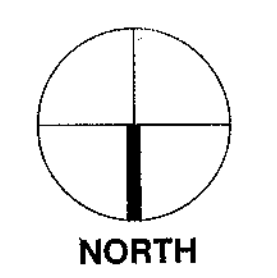
WHOLE HOUSE VENTILATION FANS MUST BE RATED FOR SOUND AT A MAXIMUM OF 1.0 SOME PER ASHRAE 62-2-2010 SECTION 7.2.1.

HVAC SUBCONTRACTOR TO DESIGN AND INSTALL A WHOLE HOUSE MECHANICAL VENTILATION (INTERMITTENT) SYSTEM THAT COMPLIES WITH ASHRAE STANDARD 62-2-2010, SECTIONS 4 AND 7 OR LOCAL EQUIVALENT. USE ASHRAE STANDARD 62-2-2010, EQUATION 4.2 TO DEMONSTRATE ADEQUATE VENTILATION AIR FLOW.



**LOWER FLOOR PLAN**

SCALE 1/4" = 1'-0"  
LOWER FLOOR (BASEMENT): 1,340 S.F.



Drawing Title:  
LOWER FLOOR PLAN

Drawn By: T.D.  
Checked By:  
Approved By:

Issue Date: 1/17/20

Revisions:

No.	Description	Date
1	PRESUBMITAL	2/20/20
2	PERMIT	2/20/20

Scale: 1/4" = 1'-0"  
Sheet No.

**A4**

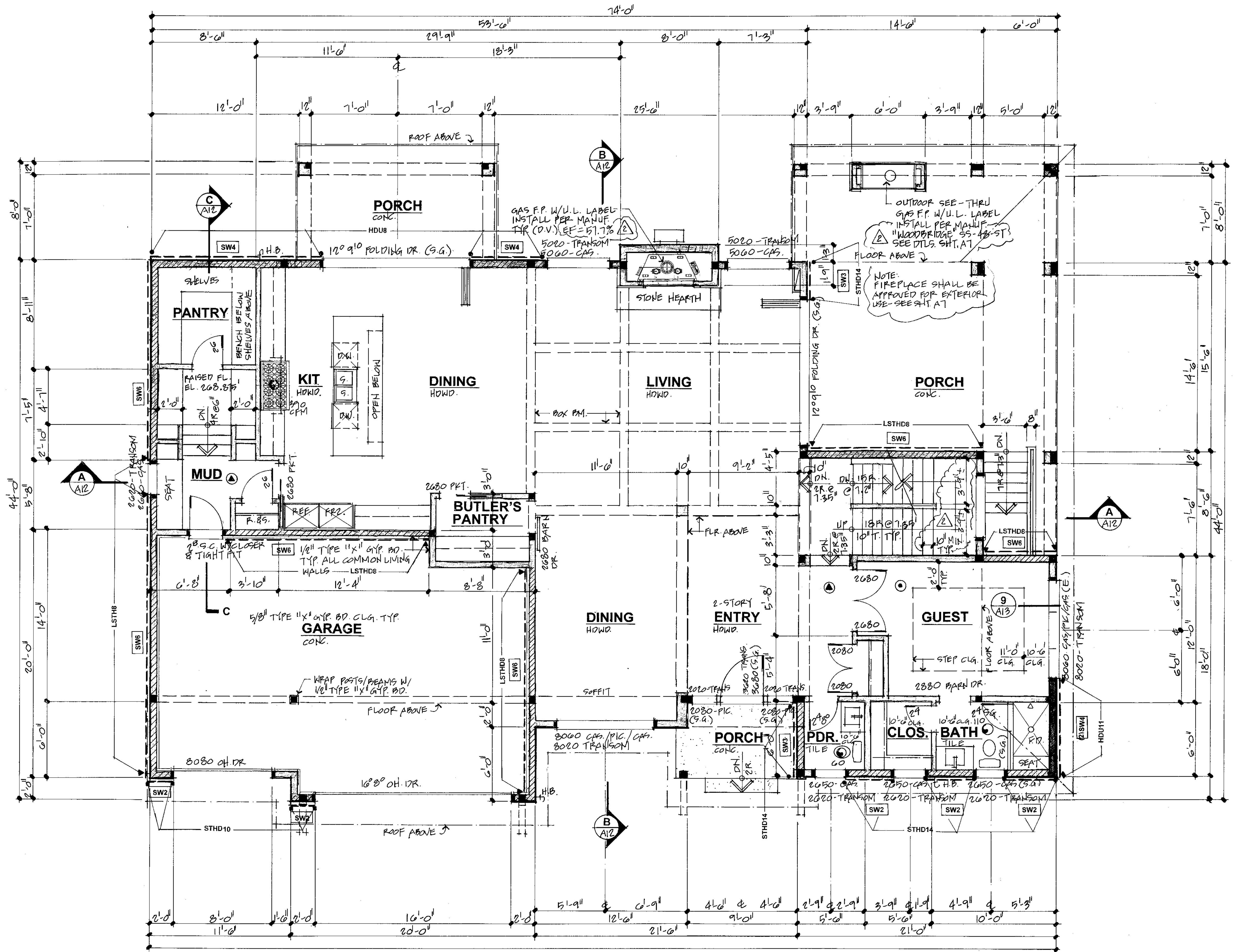


**FLOOR PLAN NOTES:**

- ALL HEADERS TO BE 4X8 MIN. U.N.O. SEE FRAMING PLAN.
- CONTRACTOR SHALL VERIFY TO INSPECTOR THAT ALL GUARDS AND RAILINGS SHALL BE CAPABLE OF RESISTING A 200lb. LOAD ON TOP OF RAIL ACTING IN ANY DIRECTION AS REQUIRED BY IRC.
- ALL EGRESS WINDOWS (E.) TO HAVE NET 24" CLEAR OPENING HEIGHT, 20" NET CLEAR OPENING WIDTH, MIN. NET CLEAR OPENING AREA OF 5.7 S.F. AND 44" MAX. SILL HEIGHT TYP.
- FIREBLOCKING @ ALL PLUMBING PENETRATIONS.
- ALL EGRESS WINDOWS (E.) TO HAVE NET 24" CLEAR OPENING HEIGHT, 28" NET CLEAR OPENING WIDTH, MIN. NET CLEAR OPENING AREA OF 5.7 S.F. AND 44" MAX. SILL HEIGHT TYPICAL.
- UNIFORM RISERS @ ALL STAIRS.
- ALL WINDOWS ARE NOMINAL R.O. WIDTH AND HEIGHT, VERIFY WINDOW SIZES WITH MANUFACTURER.
- ALL WOOD IN CONTACT W/ CONCRETE TO BE P.T.
- ALL HEADERS IN EXTERIOR WALLS TO BE INSULATED WITH MIN. R10 INSULATION (EXCEPT @ FULL WALL CAVITY WIDTH HDRS.)
- CAULK AND WEATHERSTRIP ALL JOINTS AND OPENINGS PER WSEC.
- ALL DIMENSIONS TO FACE OF STUD.
- ■ DENOTES SOLID BEARING UNDER CONCENTRATED LOAD. SEE FRAMING PLAN.
- PROVIDE 26 GA. GALVANIZED SHEET METAL FLASHING ABOVE WINDOW AND DOORS TYP. LAP BUILDING PAPER OVER.
- SEE SHEET A2 FOR LUMBER GRADES AND STRUCTURAL/FRAMING NOTES.
- KITCHEN RANGE, DRYER, BATHROOM AND LAUNDRY ROOM VENTILATION DUCTS ARE TO HAVE SMOOTH NON-COMBUSTIBLE, NON-ABSORBENT SURFACE AND SHALL BE EQUIPPED W/BACKDRAFT DAMPERS.
- CLOTHES DRYER EXHAUST DUCTS SHALL NOT BE ASSEMBLED WITH METAL SCREWS OR OTHER FASTENING MEANS WHICH EXTEND INTO THE DUCT.
- ALL SHOWERS SHALL HAVE FLOW RESTRICTORS TO LIMIT WATER TO 1.75 GPM, PER WSEC.
- PROVIDE 'DENSIELD' TILE BACKER BOARD, OR APPROVED, AT ALL AREAS SUBJECT TO WATER SPLASH.
- FILL ALL EXISTING FRAMING CAVITIES WHICH ARE EXPOSED DURING CONSTRUCTION TO THE FULL DEPTH WITH BATT INSULATION OR INSULATION AN EQUIVALENT R-VALUE.
- ALL TOILETS TO BE MAX. 1.6 GALLONS/FLUSH.
- SMOKE DETECTORS TO BE HARD WIRED W/ BATTERY BACKUP, INTERCONNECTED.
- THE POINT OF DISCHARGE OF EXHAUST FAN AIR SHALL BE AT LEAST 3' FROM ANY OPENING IN BLDG.

**FIREBLOCKING IRC R302.11**

IN COMBUSTIBLE CONSTRUCTION FIREBLOCKING SHALL BE PROVIDED TO CUT OFF BOTH VERTICAL AND HORIZONTAL CONCEALED DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES AND BETWEEN A TOP STORY AND THE ROOF SPACES. FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAMED CONSTRUCTION IN CONCEALED SPACES INTERCONNECTIONS BETWEEN VERTICAL AND HORIZONTAL SPACES, AROUND PENETRATIONS FOR MEP INSTALLATION AND OTHER LOCATIONS AS INDICATED IN IRC R302.11



**MAIN FLOOR PLAN**

SCALE 1/4" = 1'-0"

MAIN FLOOR:	2000 S.F.
GARAGE:	664 S.F.
TOTAL BUILDING:	2664 S.F.
REAR PORCH A:	128 S.F.
REAR PORCH B:	482 S.F.
FRONT PORCH:	69 S.F.
TOTAL PORCHES:	674 S.F.
TOTAL STRUCTURE:	3338 S.F.

**LEGEND:**

- NEW CONSTRUCTION
- SHEAR WALL (SEE SCHED. SHT. S1)
- EXHAUST FAN
- 110 V. SMOKE DETECTOR W/ BATTERY BACKUP INTERCONNECTED
- COMBINATION SMOKE/CARBON MONOXIDE DETECTOR
- SAFETY GLASS
- EGRESS
- HOSE BIB



Drawing Title:  
MAIN FLOOR PLAN

Drawn By: T.D.  
Checked By:  
Approved By:

Issue Date: 1/17/20

Revisions:

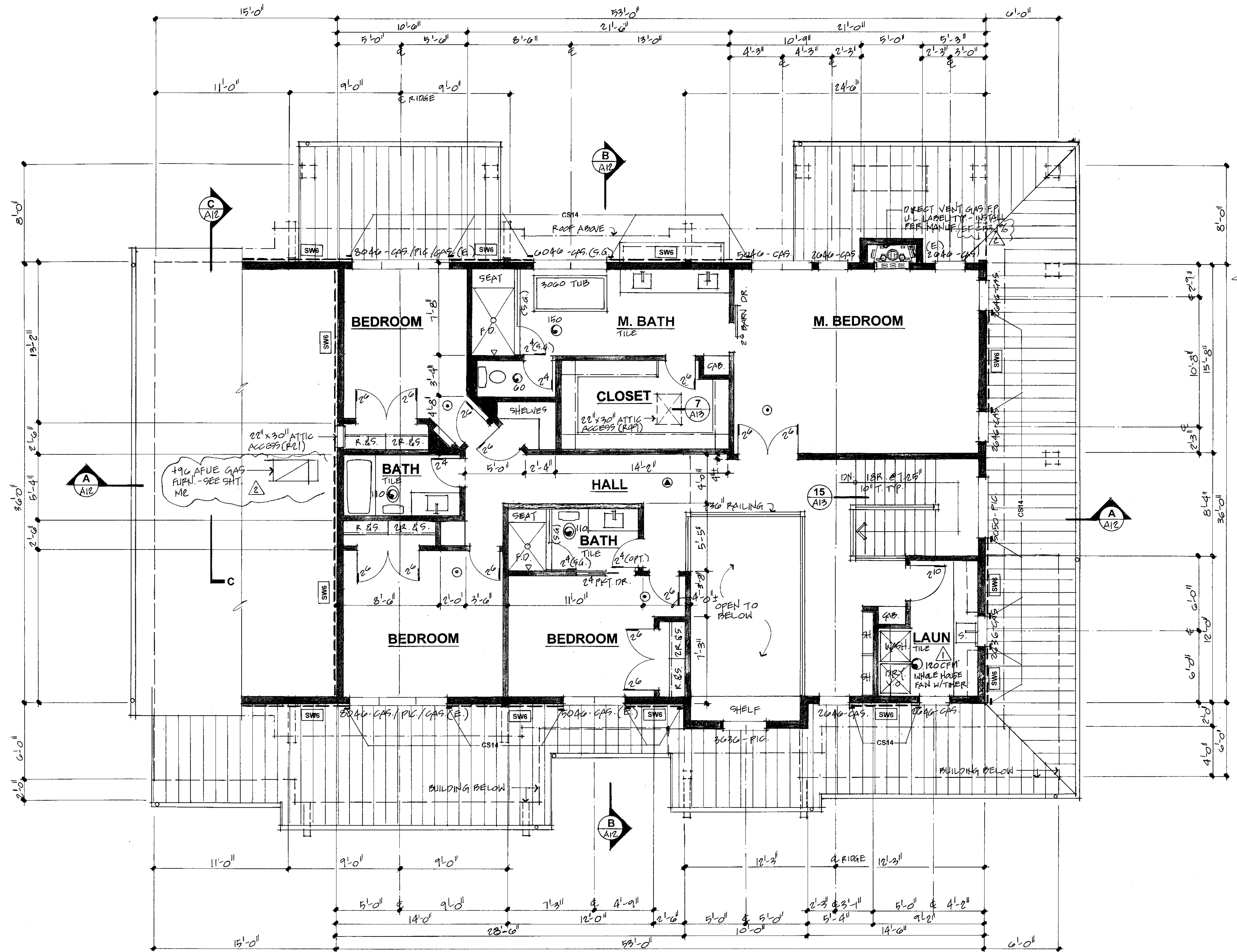
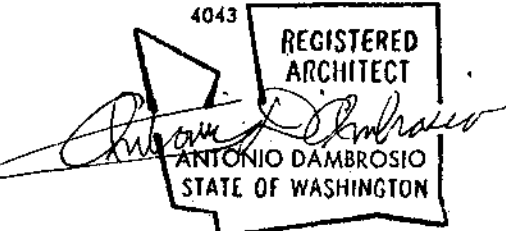
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Scale: 1/4" = 1'-0"

Sheet No.

**A5**





**UPPER FLOOR PLAN**

SCALE 1/4" = 1'-0"

UPPER FLOOR: (INCL VAULTED ENTRY) 1821 S.F.  
UPPER FLOOR W.O. VAULT: 1686 S.F.

A New Residence For:  
**TIMBERLAND**  
9027 SE 60<sup>TH</sup> ST.  
MERCER ISLAND, WA 98040

Drawing Title:  
UPPER FLOOR PLAN

Drawn By: T.D.  
Checked By:  
Approved By:

Issue Date: 1/17/20

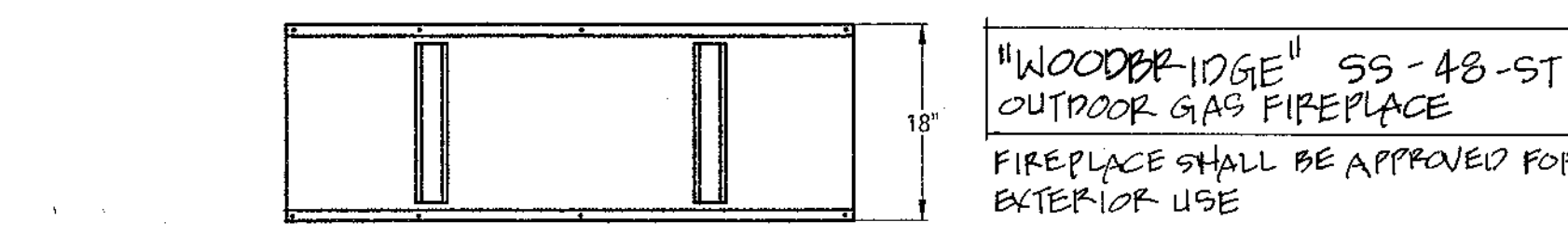
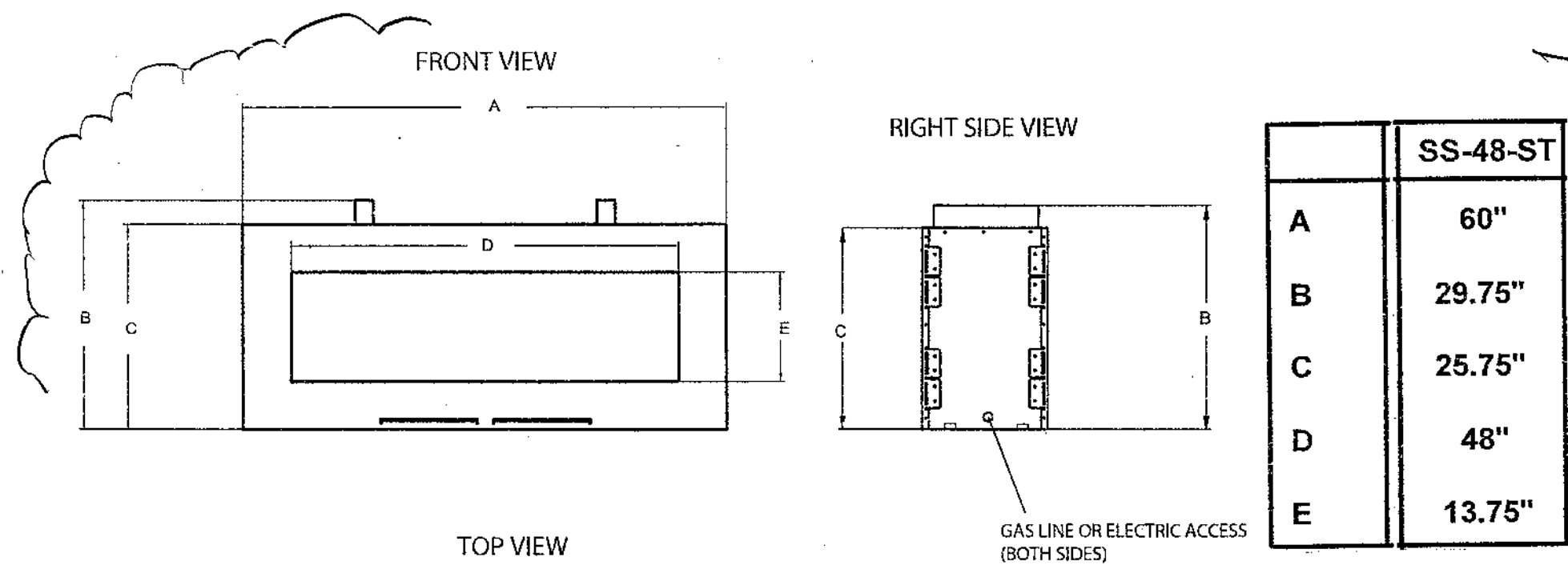
Revisions:

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2	PERMIT	2/02/21

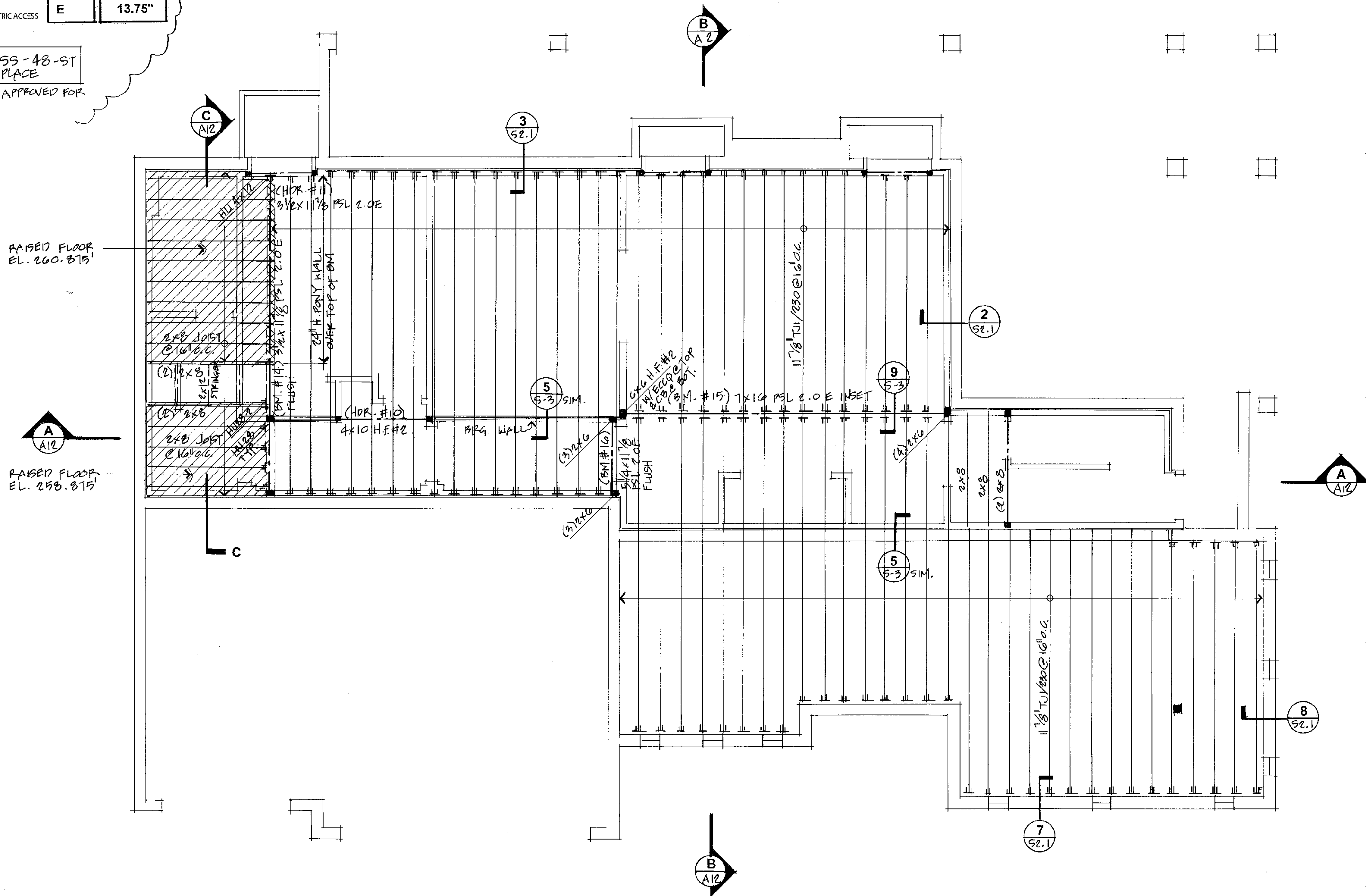
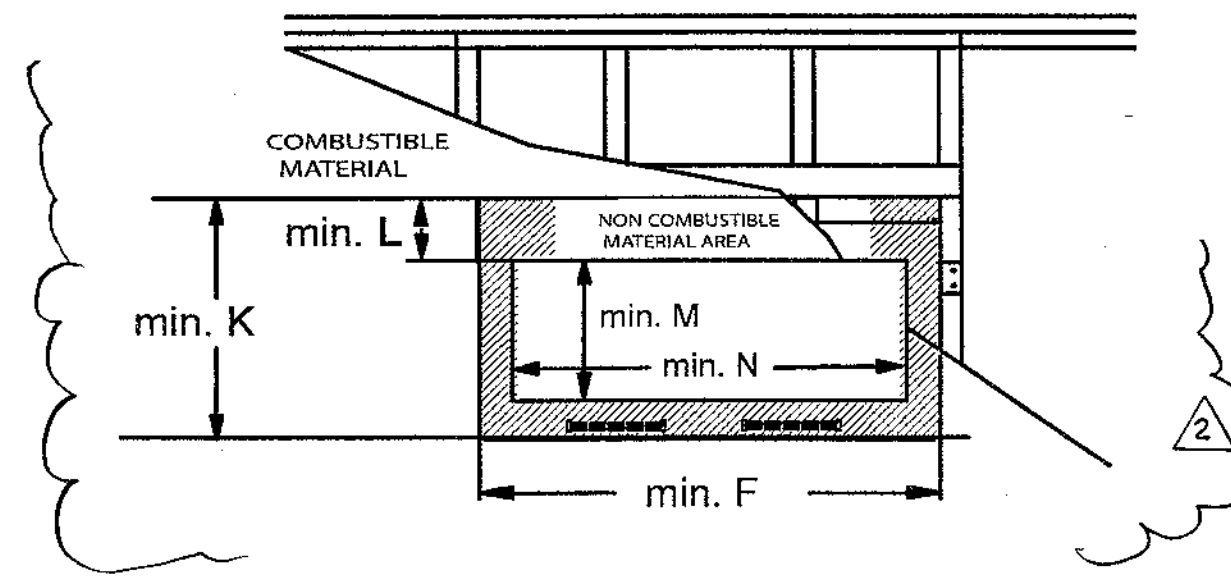
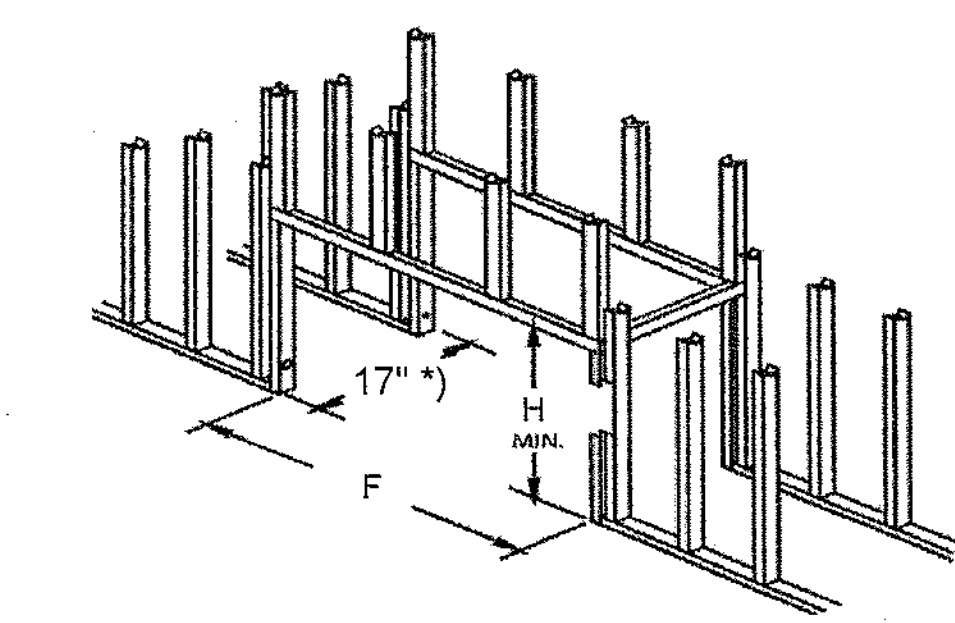
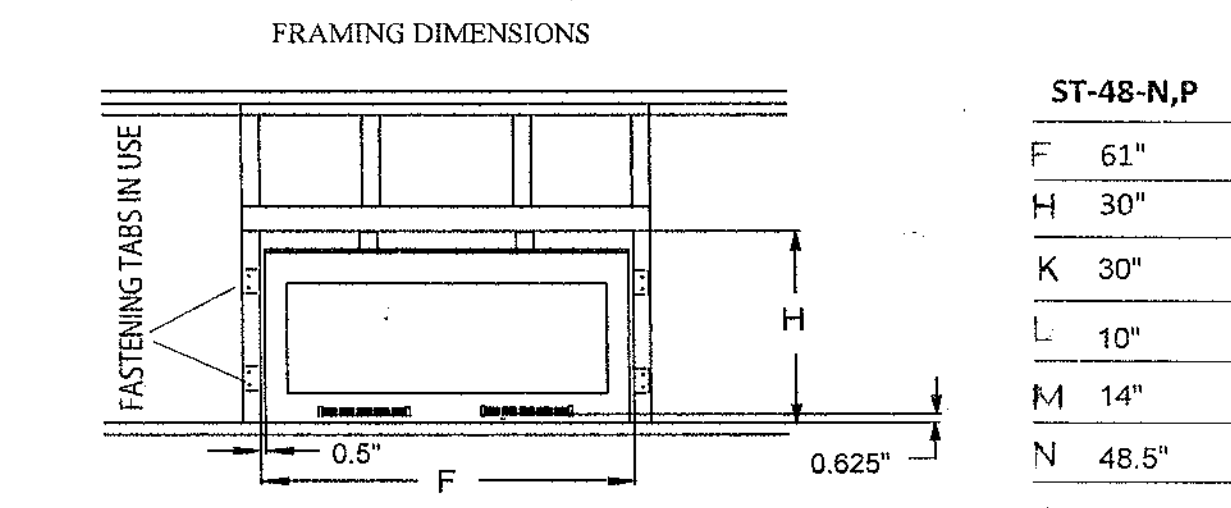
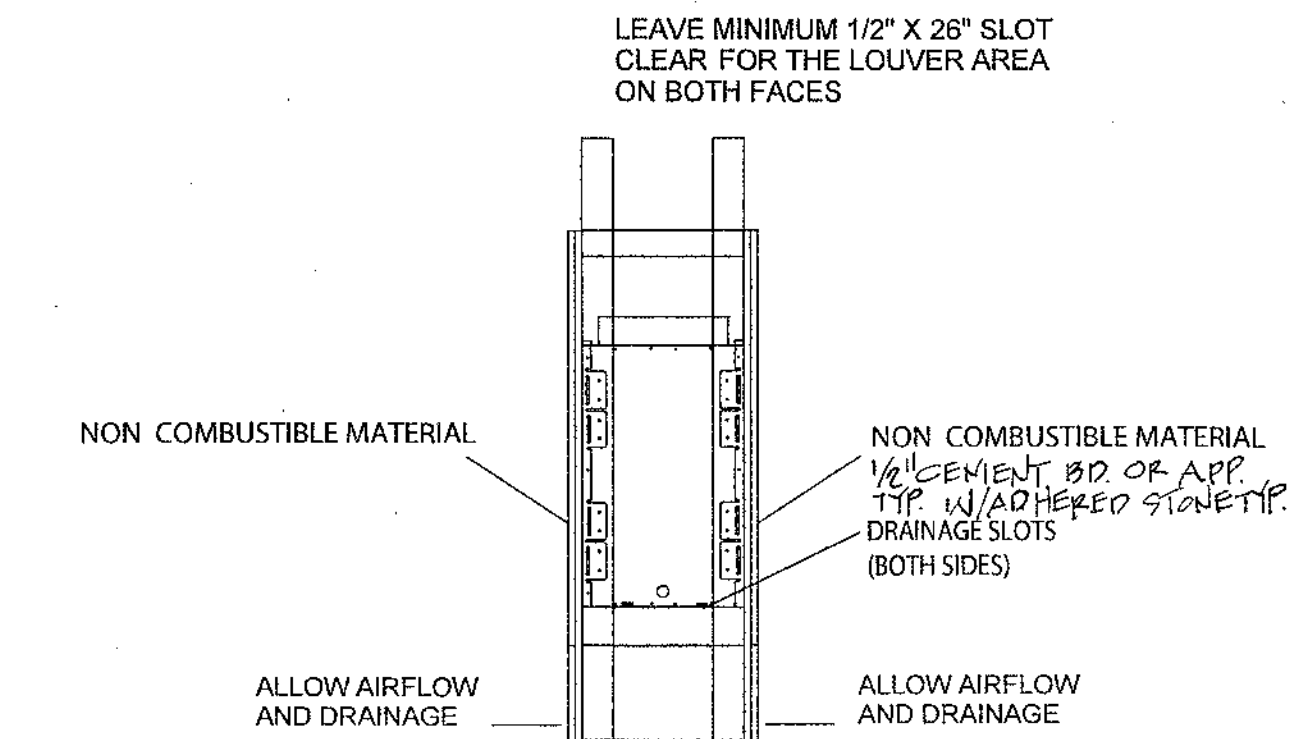
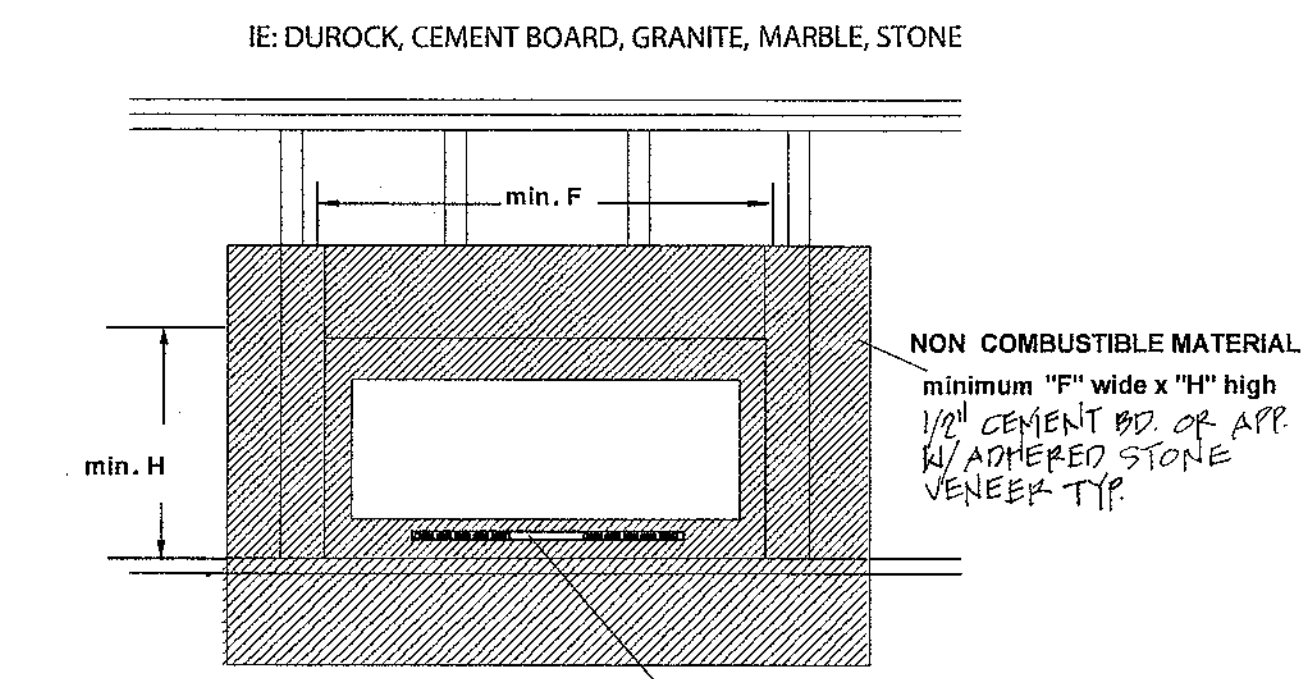
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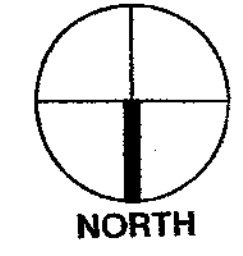




**OPTION 1**  
FACING WITH ONE LAYER OF NON-COMBUSTIBLE MATERIAL



**MAIN FLOOR FRAMING PLAN**  
SCALE 1/4" = 1'-0"



A New Residence For:  
**TIMBERLAND**  
9027 SE 60<sup>TH</sup> ST.  
MERCER ISLAND, WA 98040

Drawing Title:  
MAIN FLOOR FRAMING PLAN

Drawn By: T.D.  
Checked By:  
Approved By:

Issue Date: 1/11/20

Revisions:

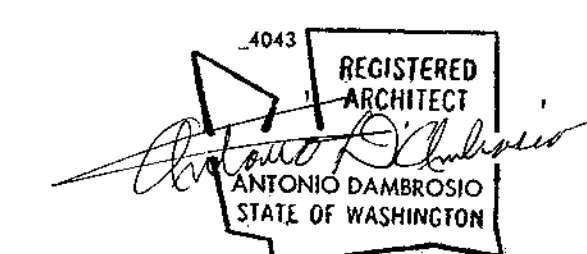
No.	Description	Date
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Scale: 1/4" = 1'-0"

Sheet No.

**A7**





A New Residence For:  
**TIMBERLAND**  
9027 SE 60<sup>TH</sup> ST. MERCER ISLAND, WA 98040

Drawing Title:  
UPPER FLOOR FRAMING PLAN

Drawn By: T.D.  
Checked By:  
Approved By:

Issue Date: 1/17/20

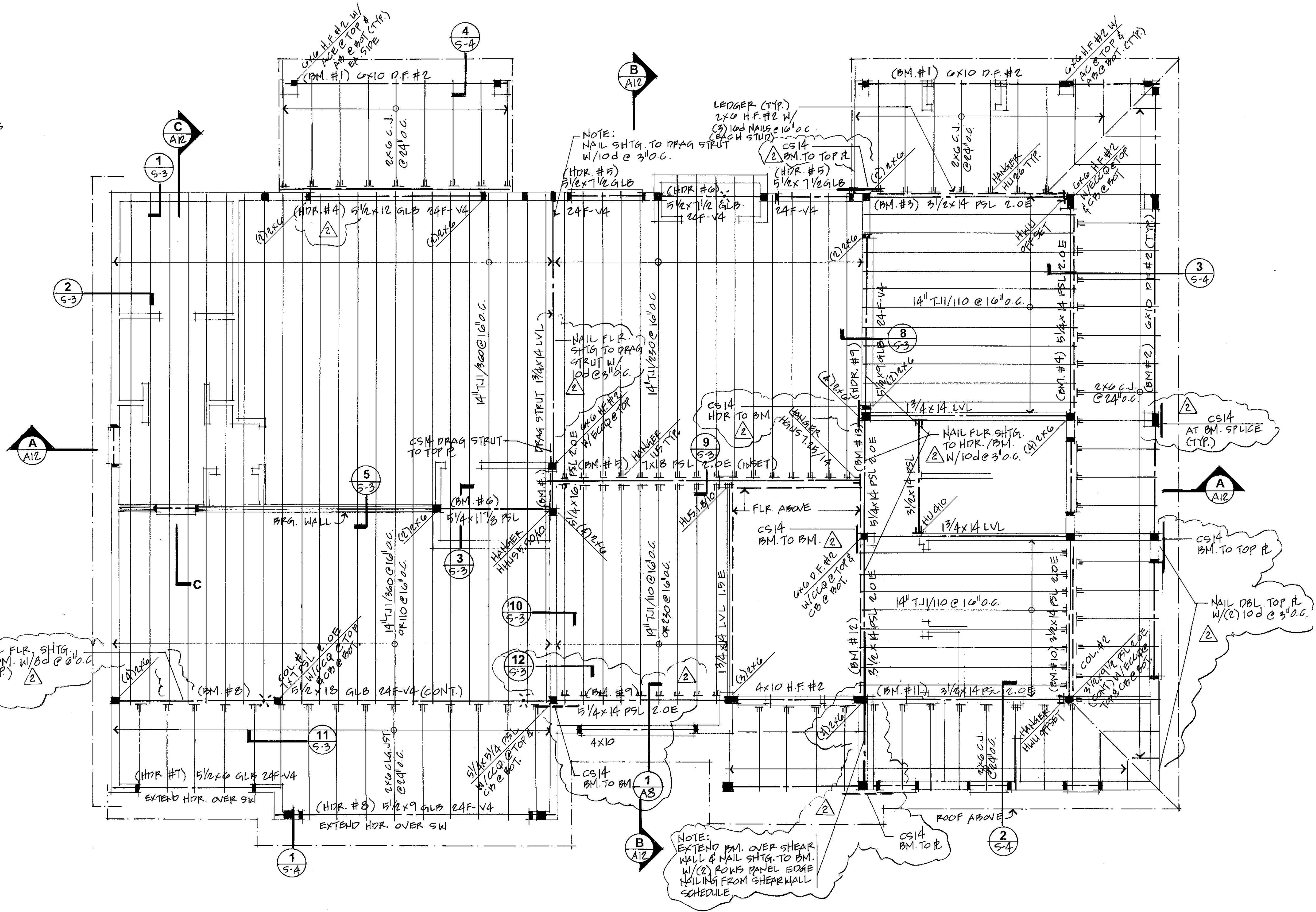
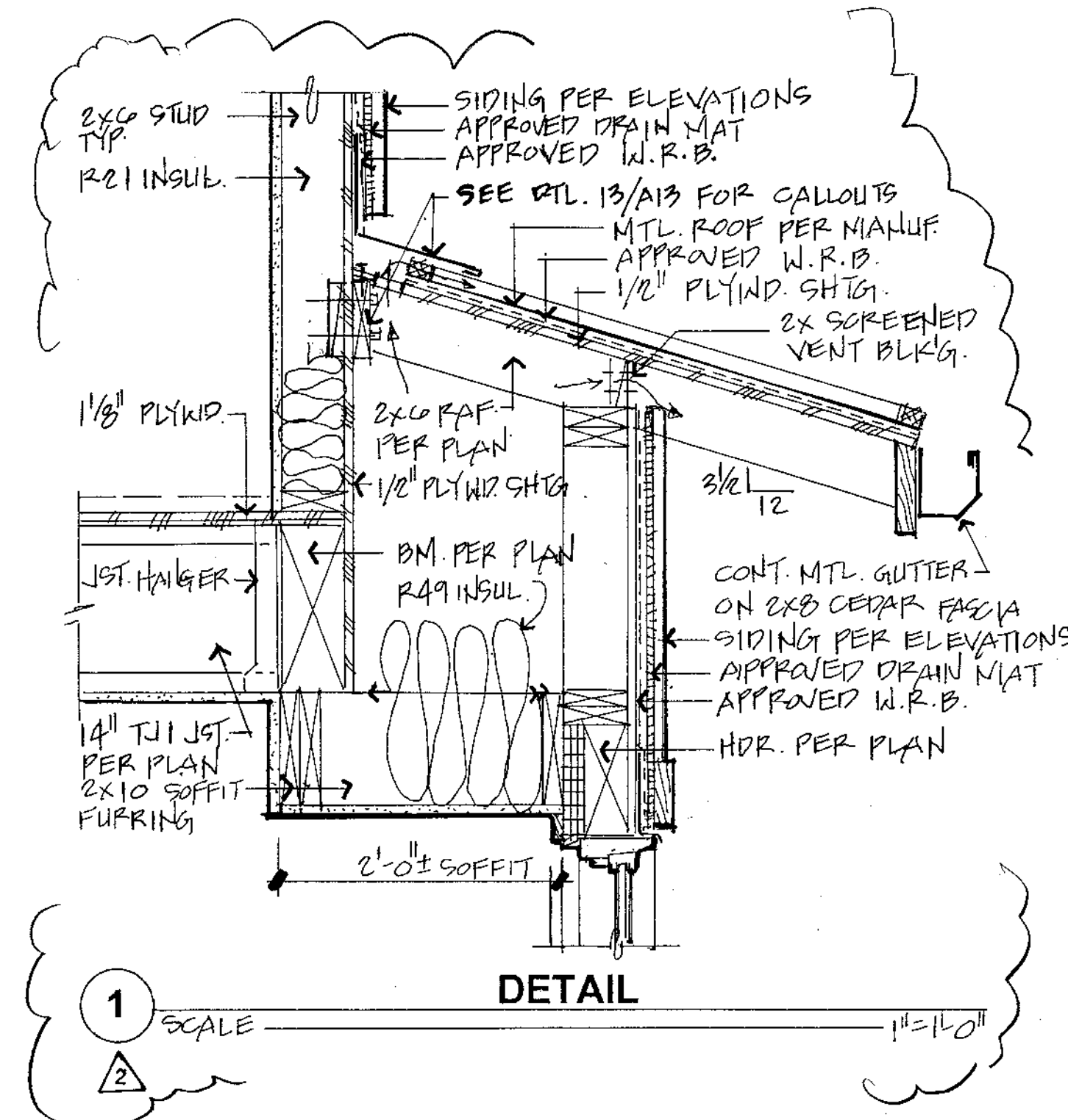
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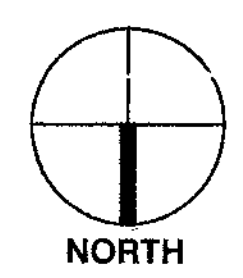
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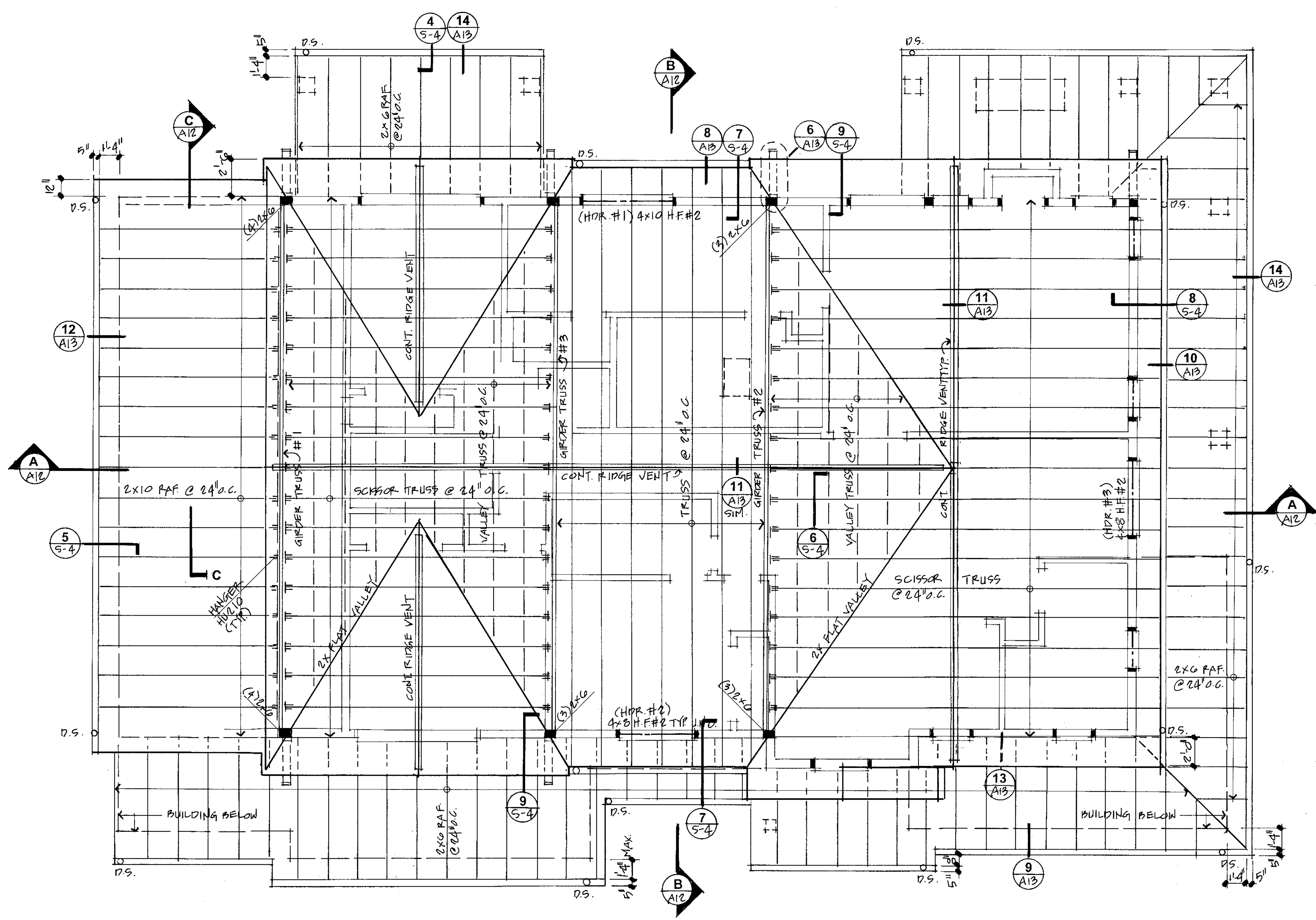
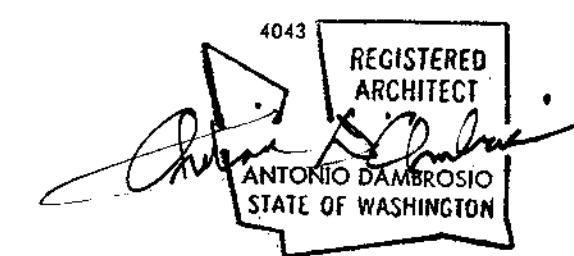


**UPPER FLOOR FRAMING PLAN**  
SCALE 1/4" = 1'-0"

NOTE:  
HDR. 4x8 H.F. #2 U.N.O.  
POST (2) 2x6 (EXT. WALLS) U.N.O.







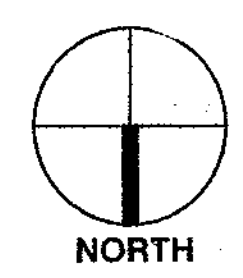
**ROOF FRAMING PLAN**  
SCALE 1/4" = 1'-0"

**ROOF VENTILATION:**

**UPPER ROOF:** 2408 S.F. ÷ 150 = 16.49 x .15 = 3.225 S.F.  
3.225 x 144 = 1185 SQ. IN.  
PROVIDED: 108 LIN. FT. OF CONT. RIDGE VENT @ 13.5 SQ. IN. N.F.A./FT.  
108 x 13.5 = 1458 SQ. IN. ✓  
BALANCE W/ (2) 2" Ø VENT HOLES ALL LEAVES

**REAR PORCH:** 128 S.F. ÷ 150 = .85 S.F.  
.85 x 144 = 123 SQ. IN.  
PROVIDED: 16 LIN. FT. OF CONT. SOFFIT VENT @ 10 SQ. IN. N.F.A./FT.  
10 x 16 = 160 SQ. IN. ✓

**FRONT/SIDE ROOF:** 826 S.F. ÷ 150 = 5.50 S.F.  
5.50 x 144 = 793 SQ. IN.  
PROVIDED: 126 LIN. FT. OF CONT. SOFFIT VENT @ 10 SQ. IN. N.F.A./FT.  
10 x 126 = 1,260 SQ. IN. ✓



A New Residence For:  
**TIMBERLAND**  
9027 SE 60<sup>TH</sup> ST. MERCER ISLAND, WA 98040

Drawing Title:  
ROOF FRAMING PLAN

Drawn By: T.D.  
Checked By:  
Approved By:

Issue Date: 1/11/20

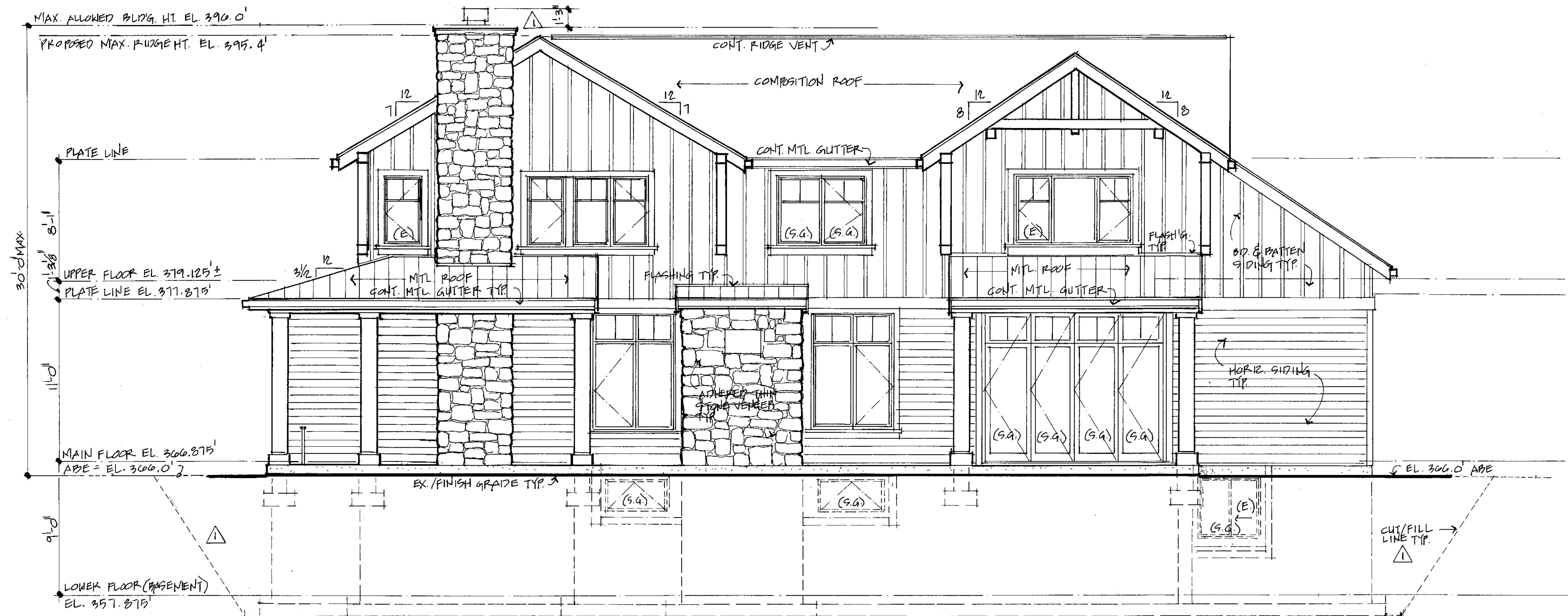
Revisions:  
No. Description Date

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

Sheet No.

**A9**





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



**NORTH ELEVATION**  
 SCALE 1/4" = 1'-0"

A New Residence For:  
**TIMBERLAND**  
 9027 SE 60<sup>TH</sup> ST. MERCER ISLAND, WA 98040

Drawing Title:  
 EXTERIOR ELEVATIONS

Drawn By: T.D.  
 Checked By:  
 Approved By:

Issue Date: 1/17/20

Revisions:

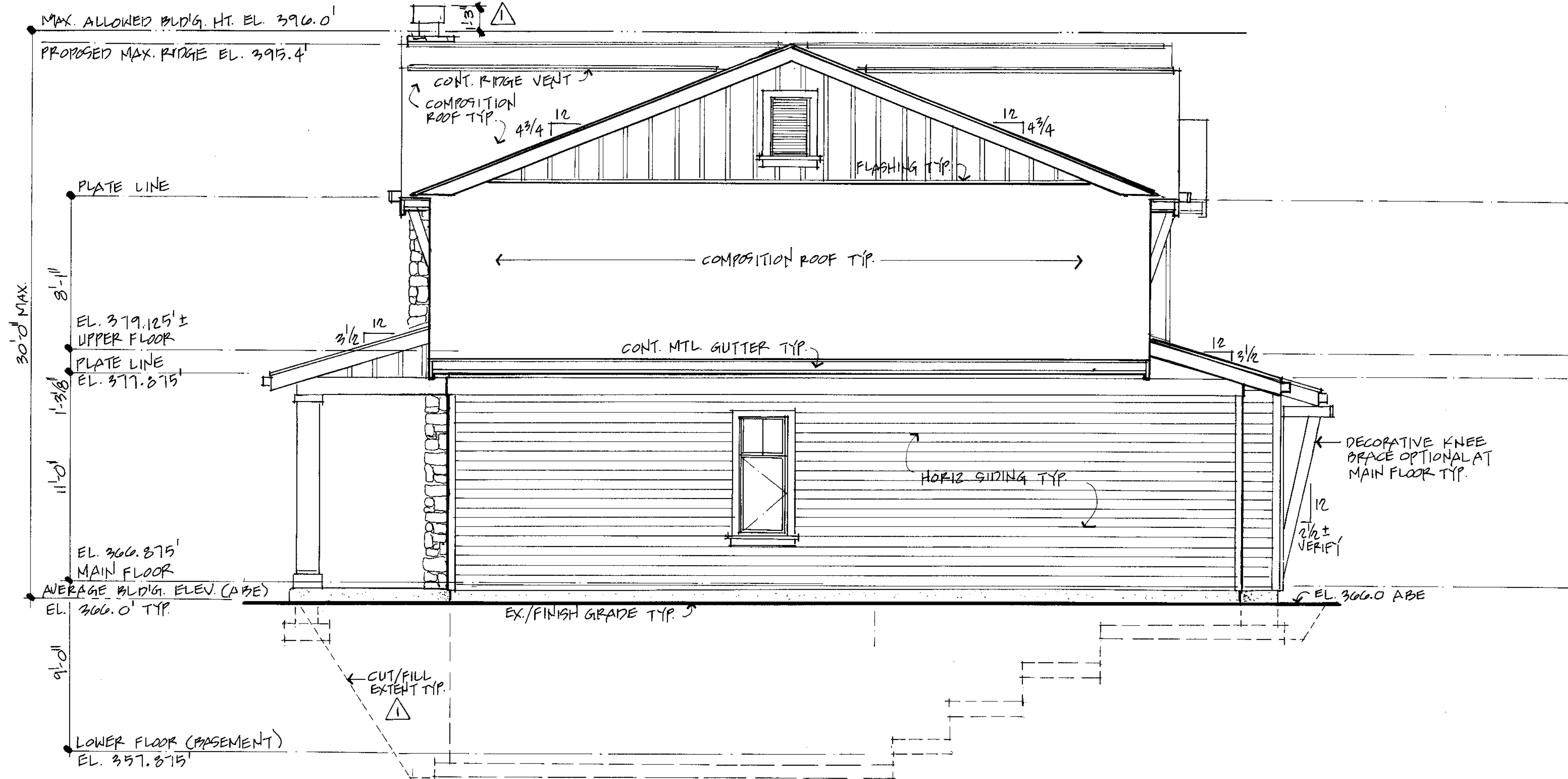
No.	Description	Date
1	PRESUBMITTAL 2/20/20	

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

Sheet No.

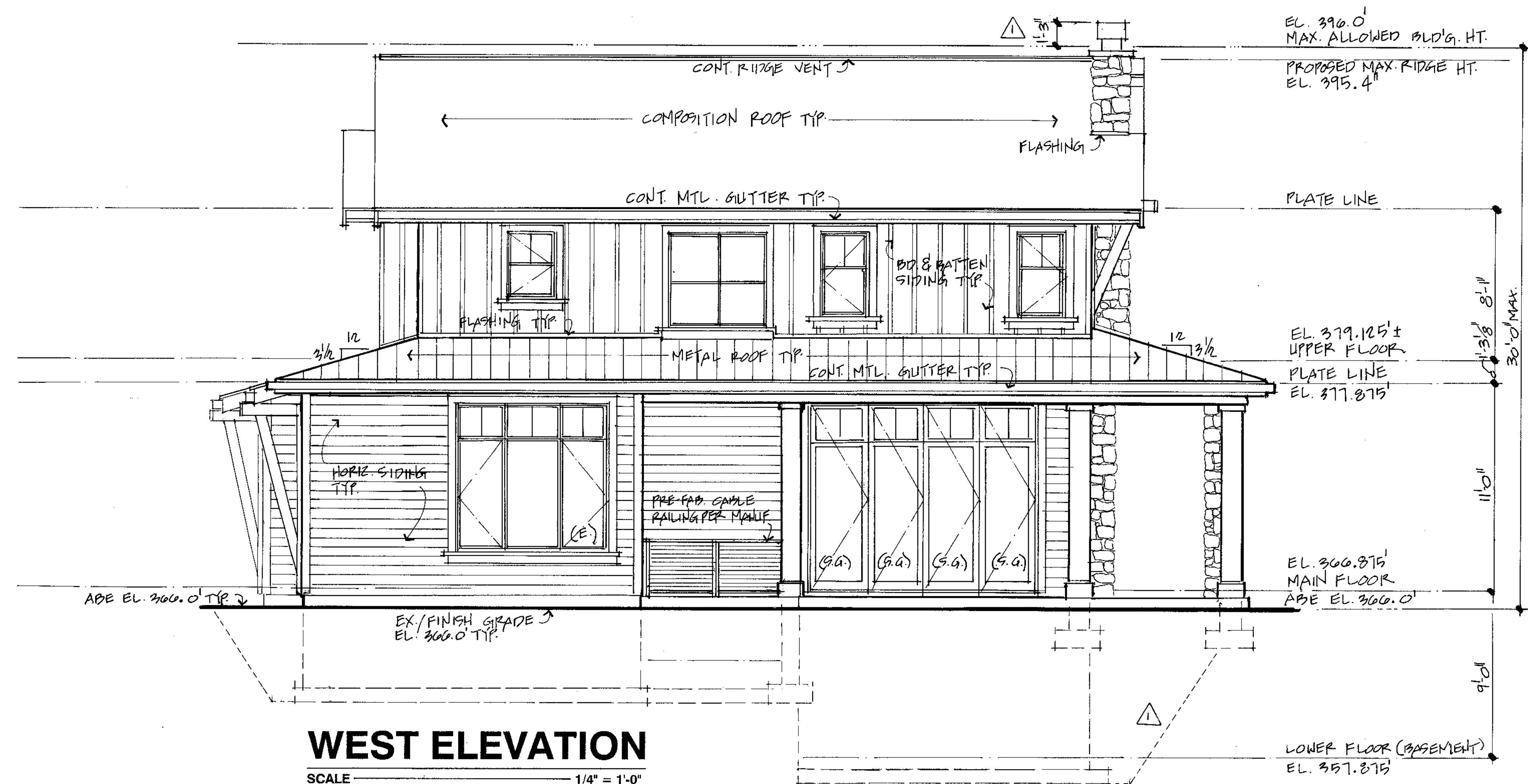
**A10**





**EAST ELEVATION**

SCALE 1/4" = 1'-0"



**WEST ELEVATION**

SCALE 1/4" = 1'-0"

**TIMBERLAND**

A New Residence For:

9027 SE 60<sup>TH</sup> ST. MERCER ISLAND, WA 98040

Drawing Title:  
EXTERIOR ELEVATIONS

Drawn By: T.D.  
Checked By:  
Approved By:

Issue Date: 1/17/20

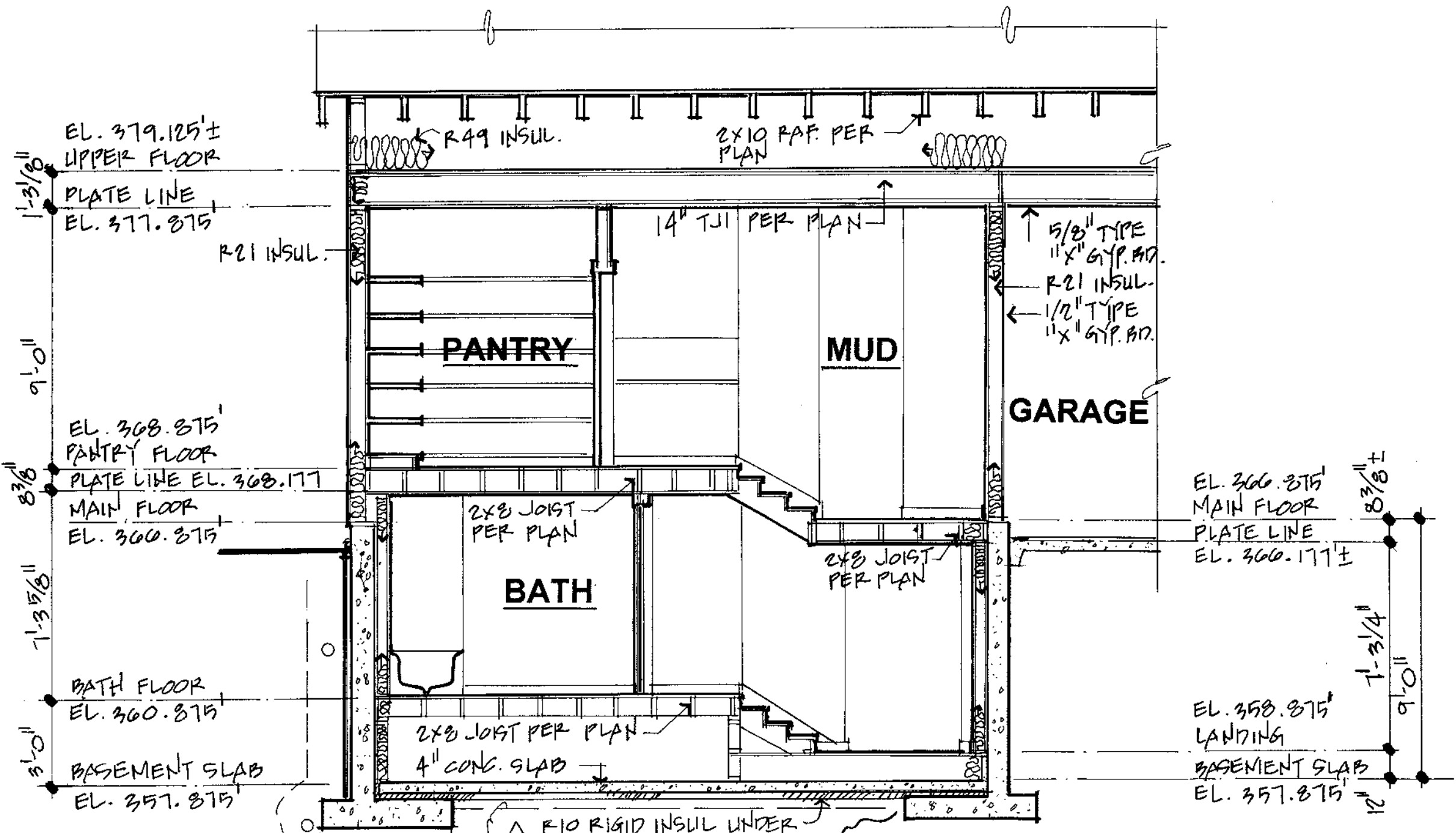
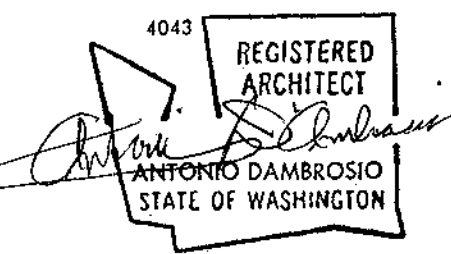
Revisions:  
No. Description Date  
1 PRELIMINARY 2/10/20

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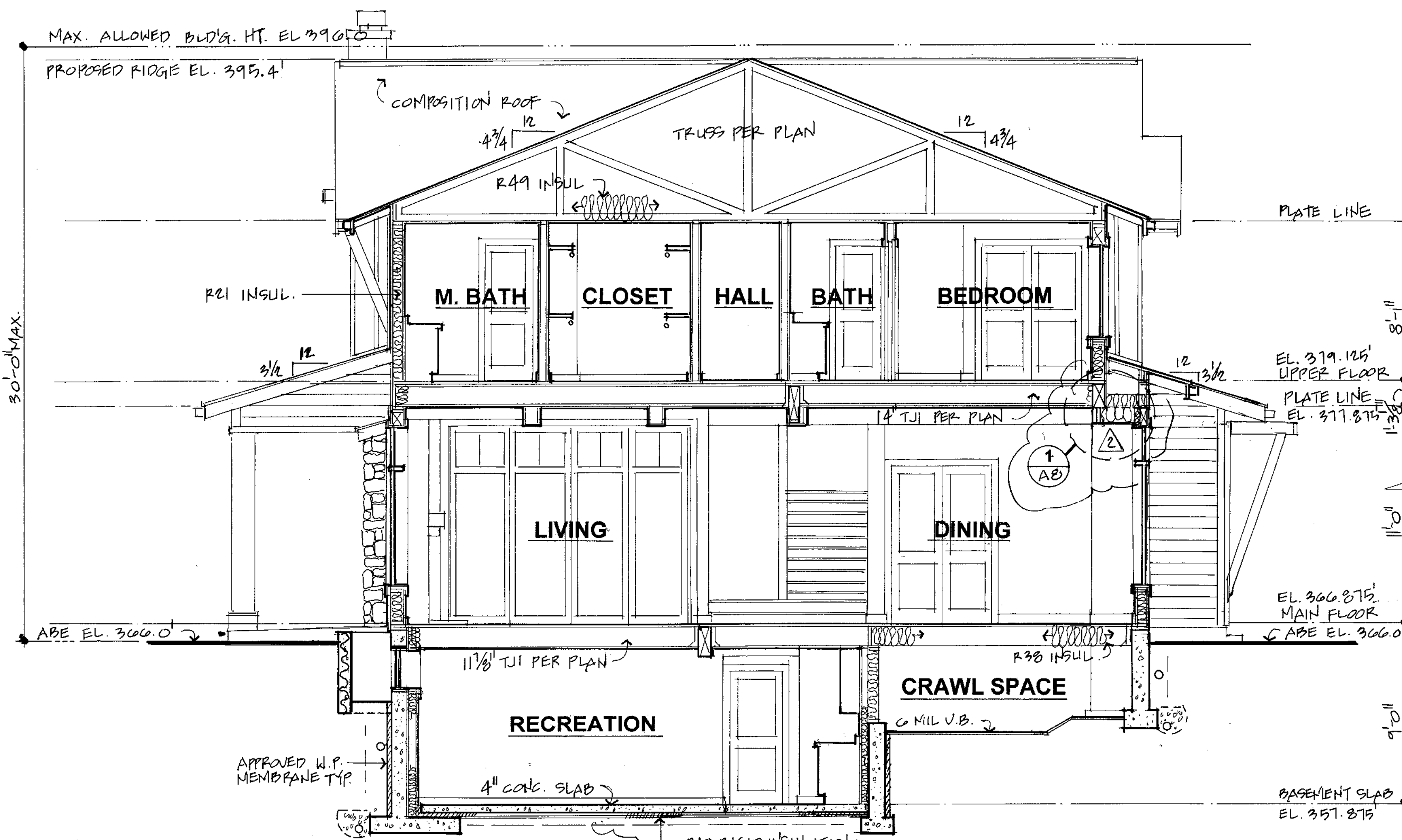
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**A11**

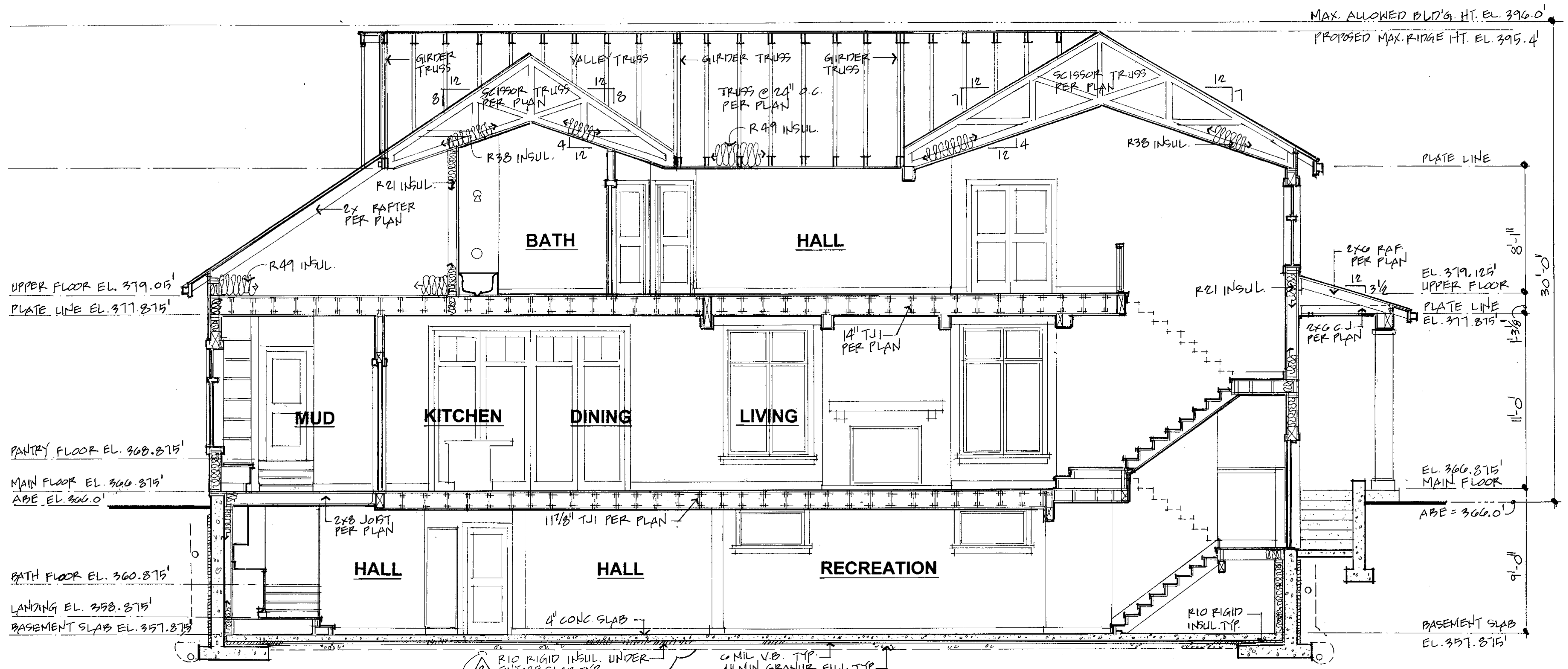




**SECTION CC**  
SCALE 1/4" = 1'-0"



**SECTION BB**  
SCALE 1/4" = 1'-0"



**SECTION AA**  
SCALE 1/4" = 1'-0"

**TIMBERLAND**  
 A New Residence For:  
 9027 SE 60<sup>TH</sup> ST. MERCER ISLAND, WA 98040

Drawing Title:  
SECTION AA, BB, CC

Drawn By: T.D.  
Checked By:  
Approved By:

Issue Date: 1/17/20

Revisions:

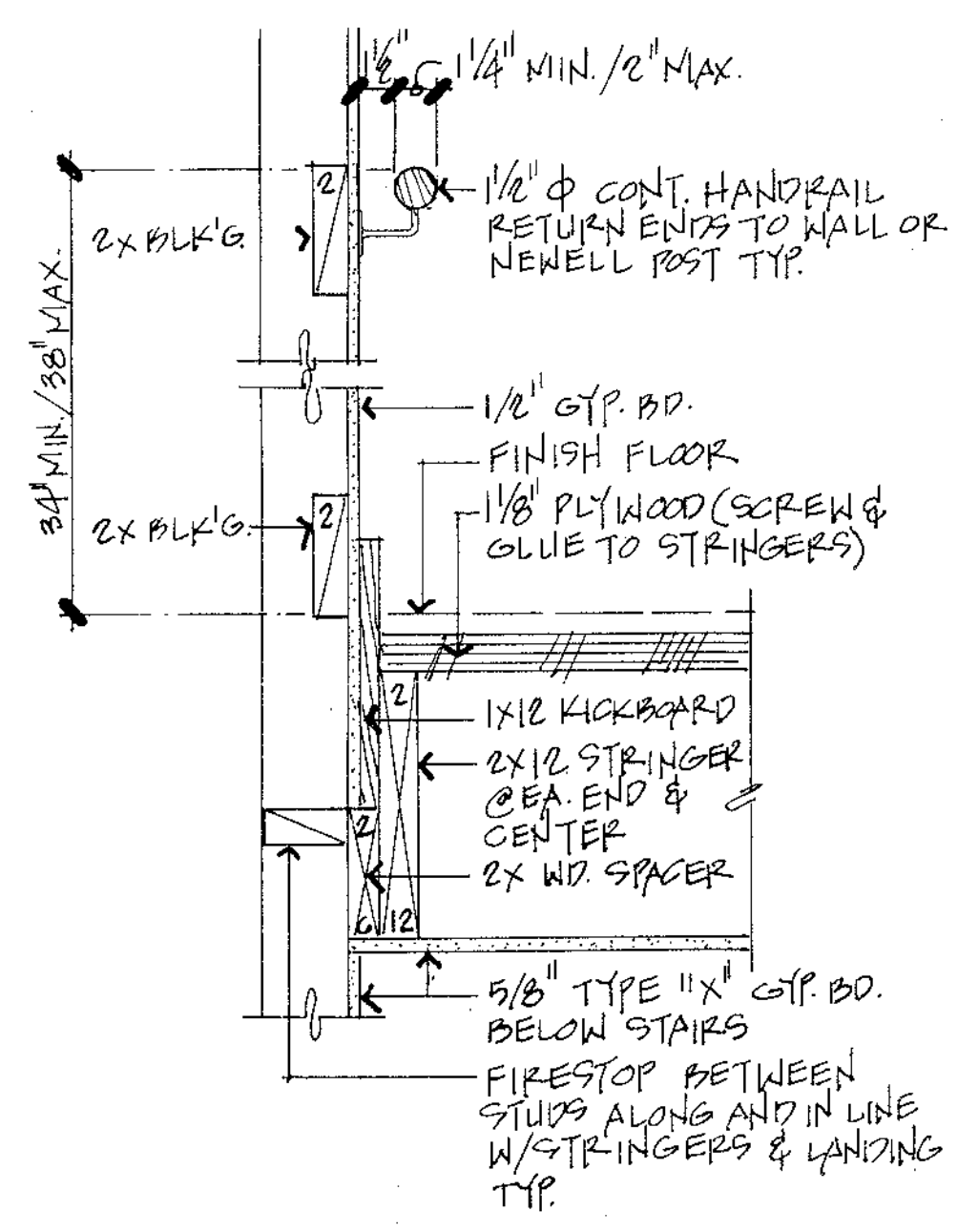
No.	Description	Date
1	PERMIT 2/22/21	

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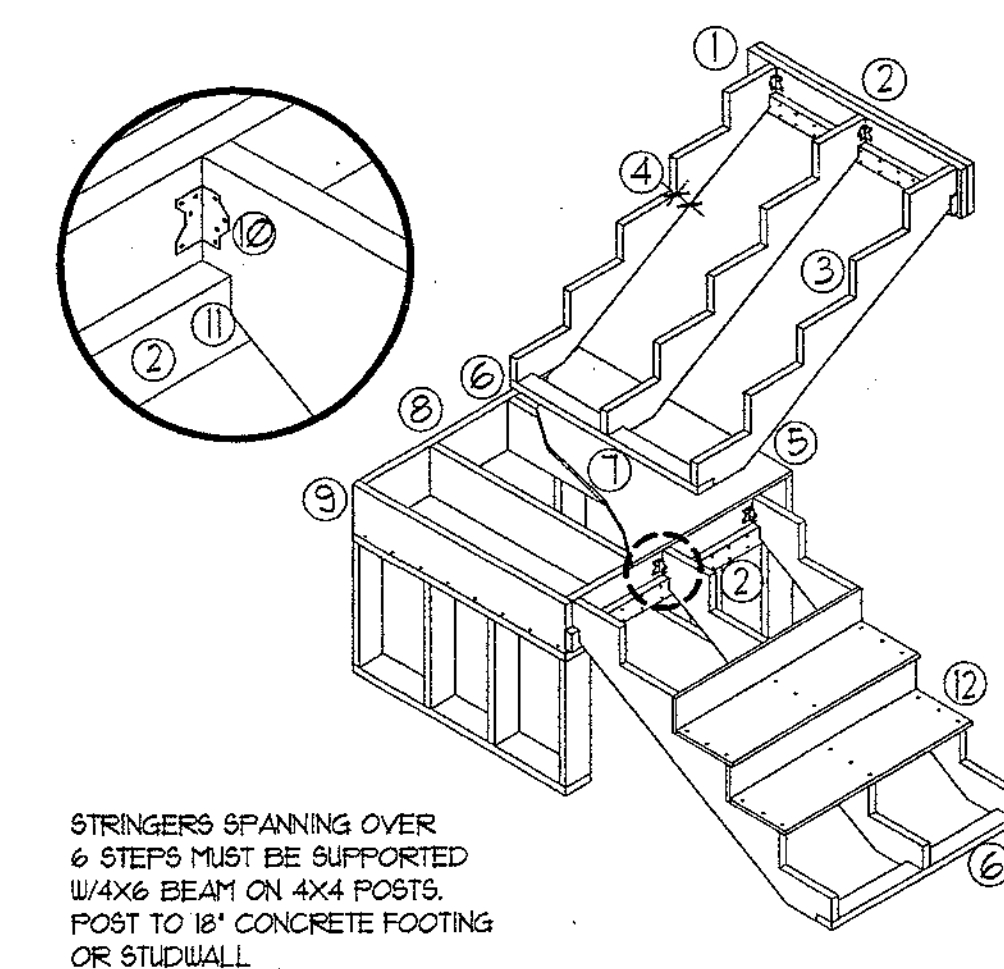
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**A12**





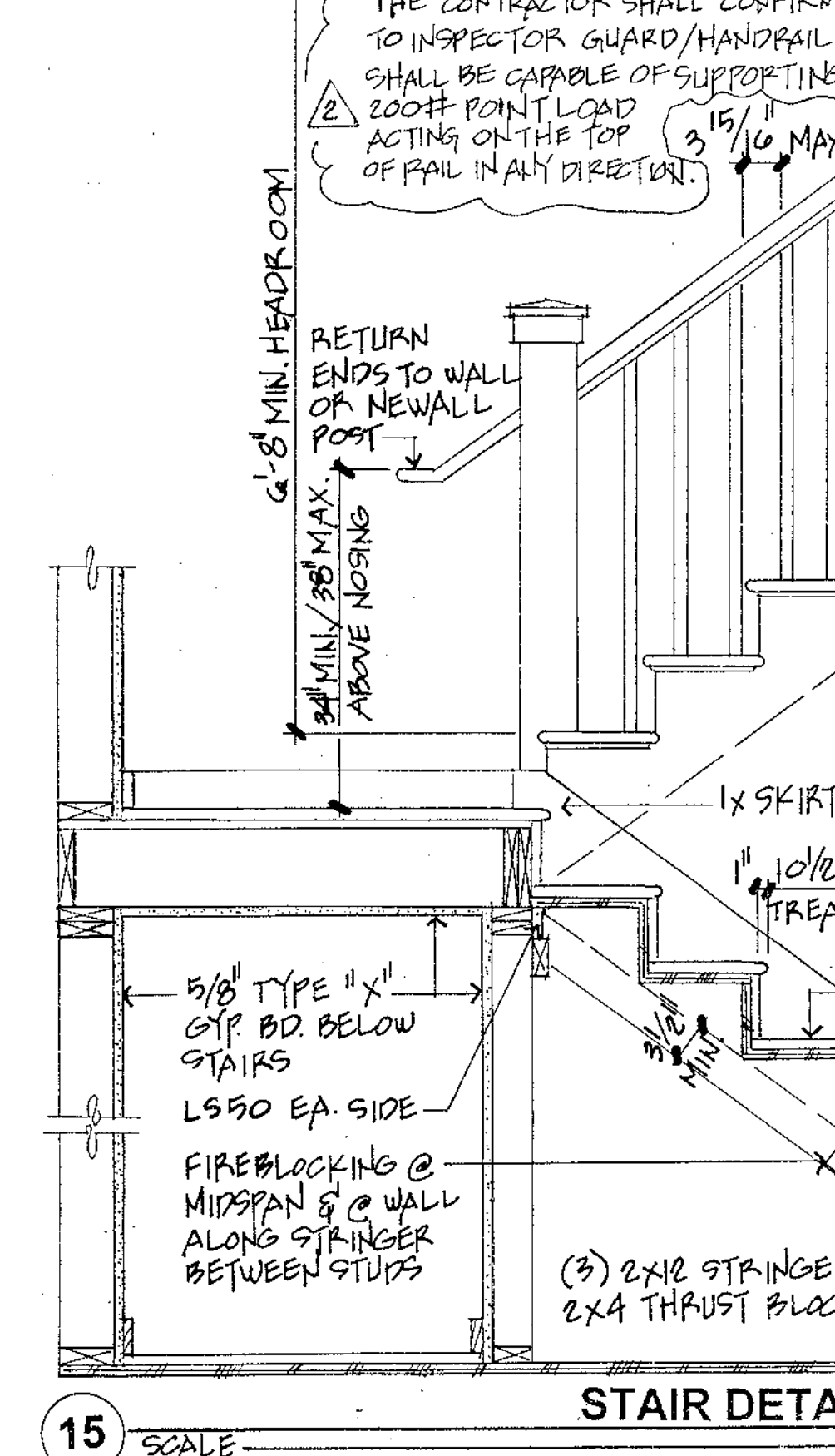
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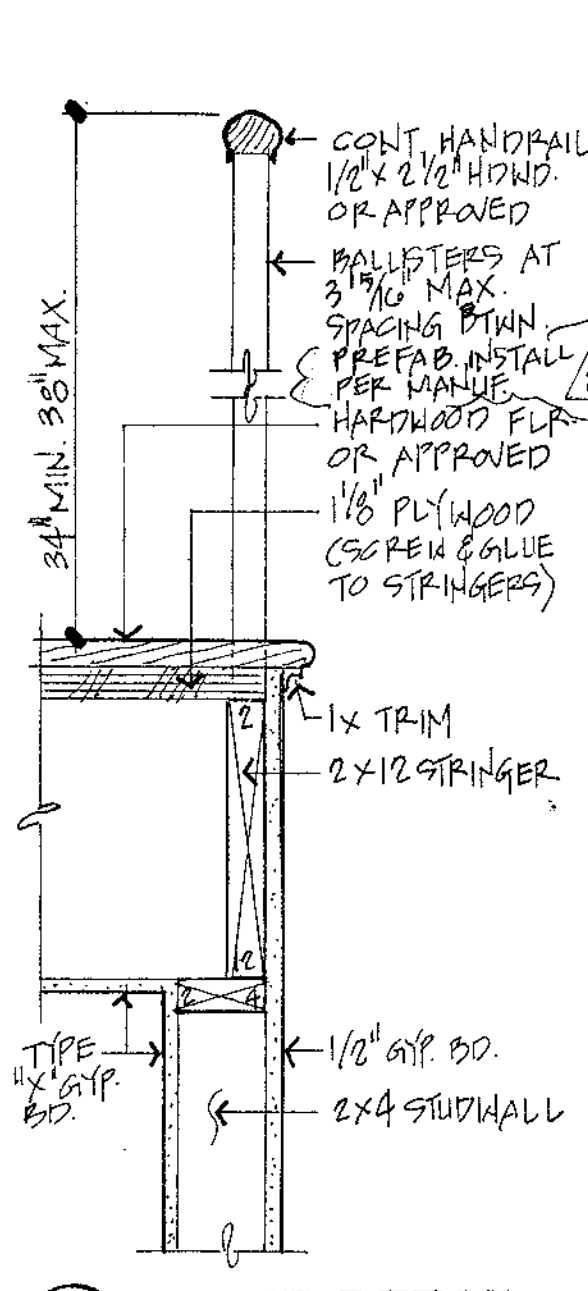
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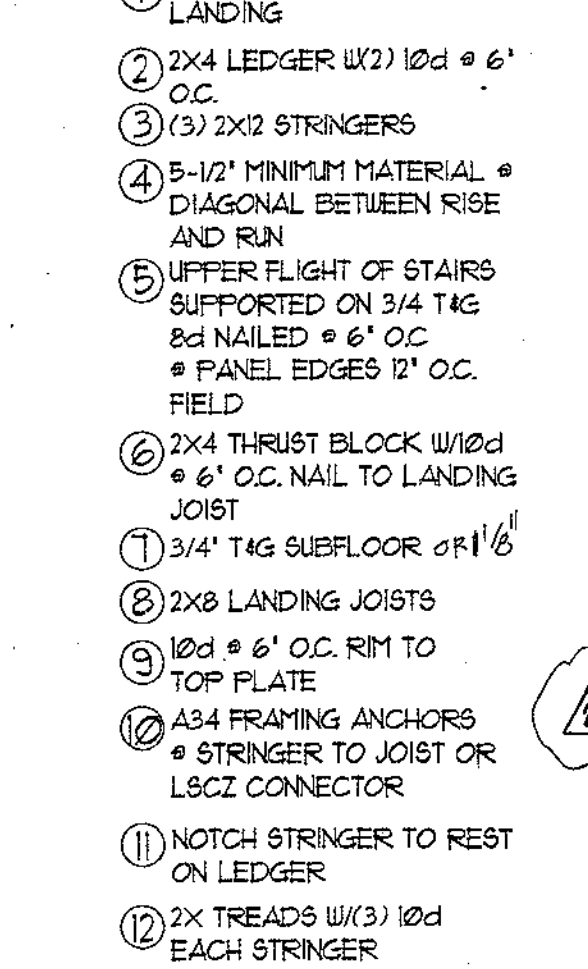
STAIR LANDING CONNECTION



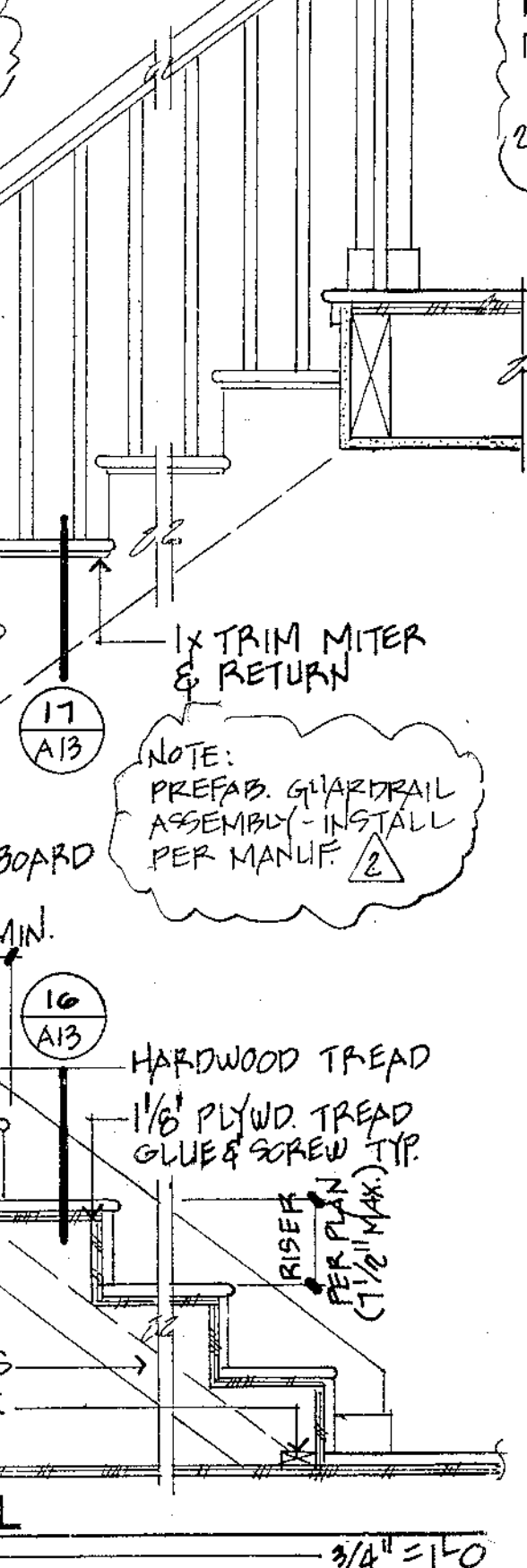
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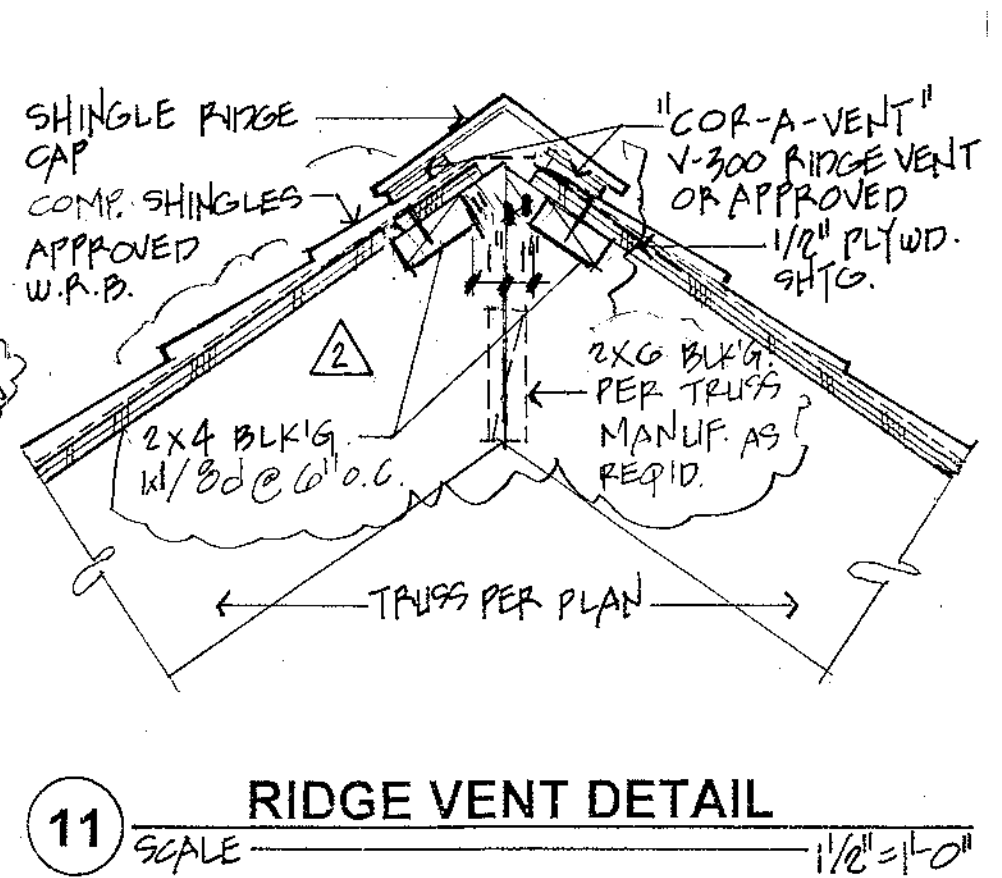
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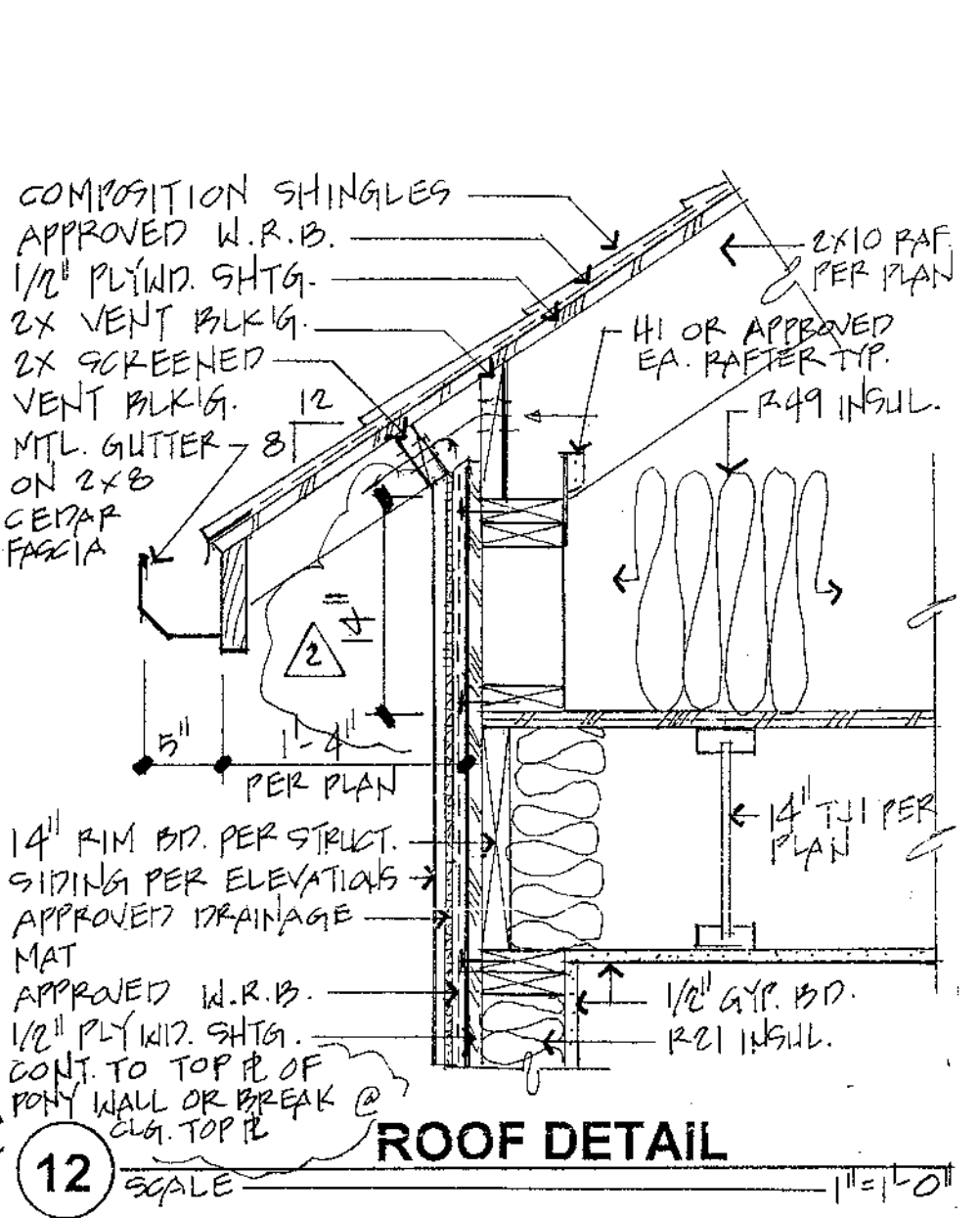
STAIR LANDING CONNECTION



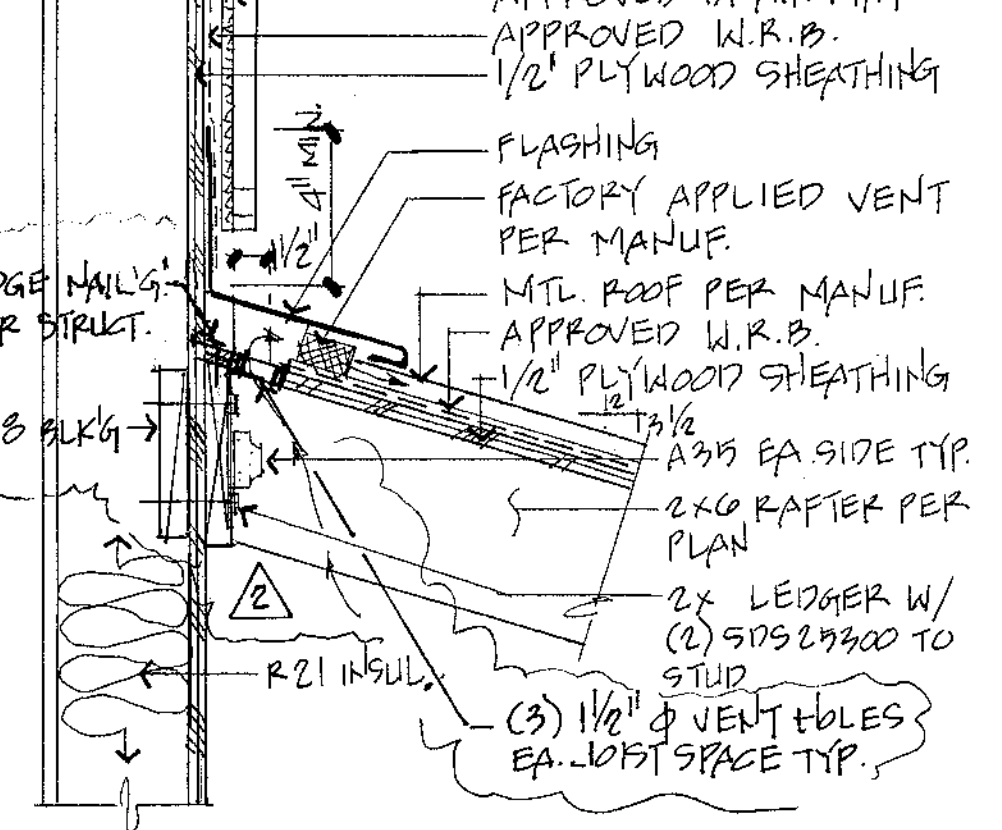
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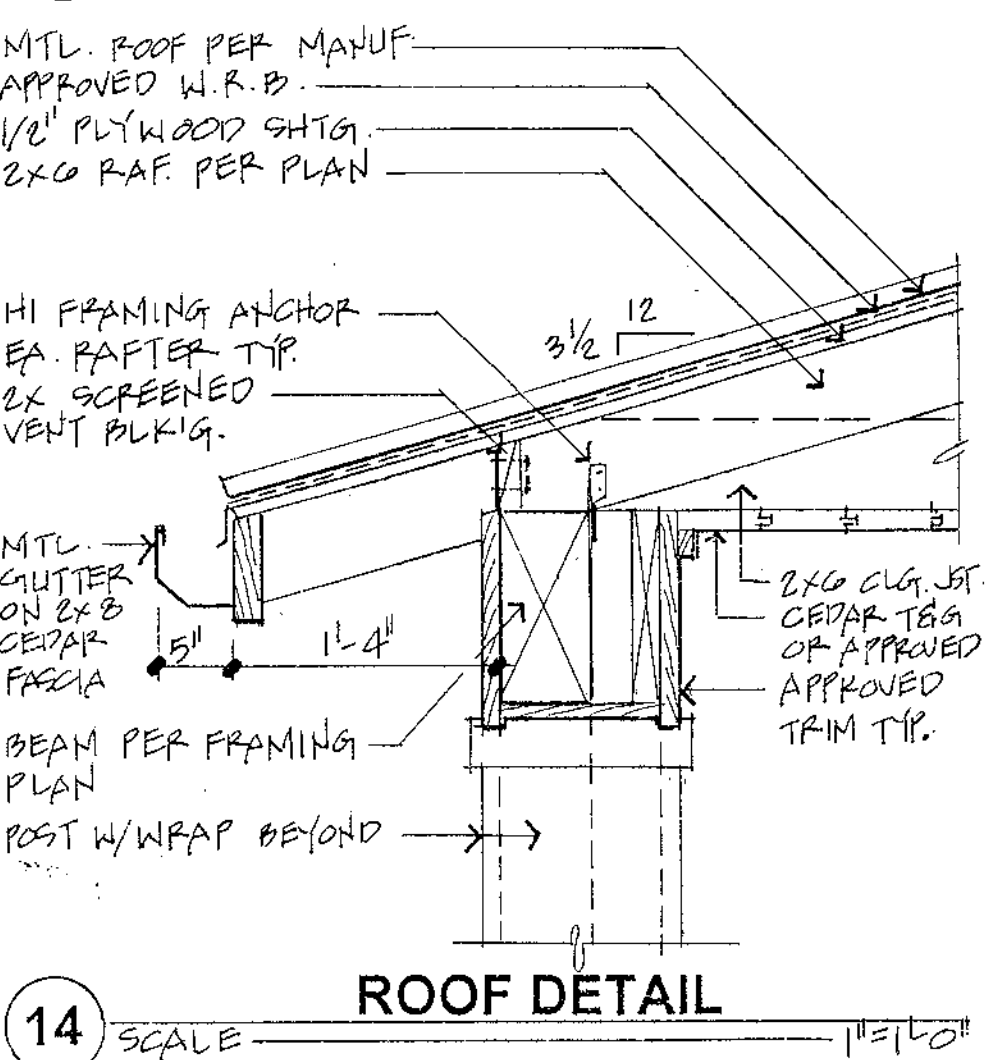
**11** SCALE 1/2" = 1'-0"



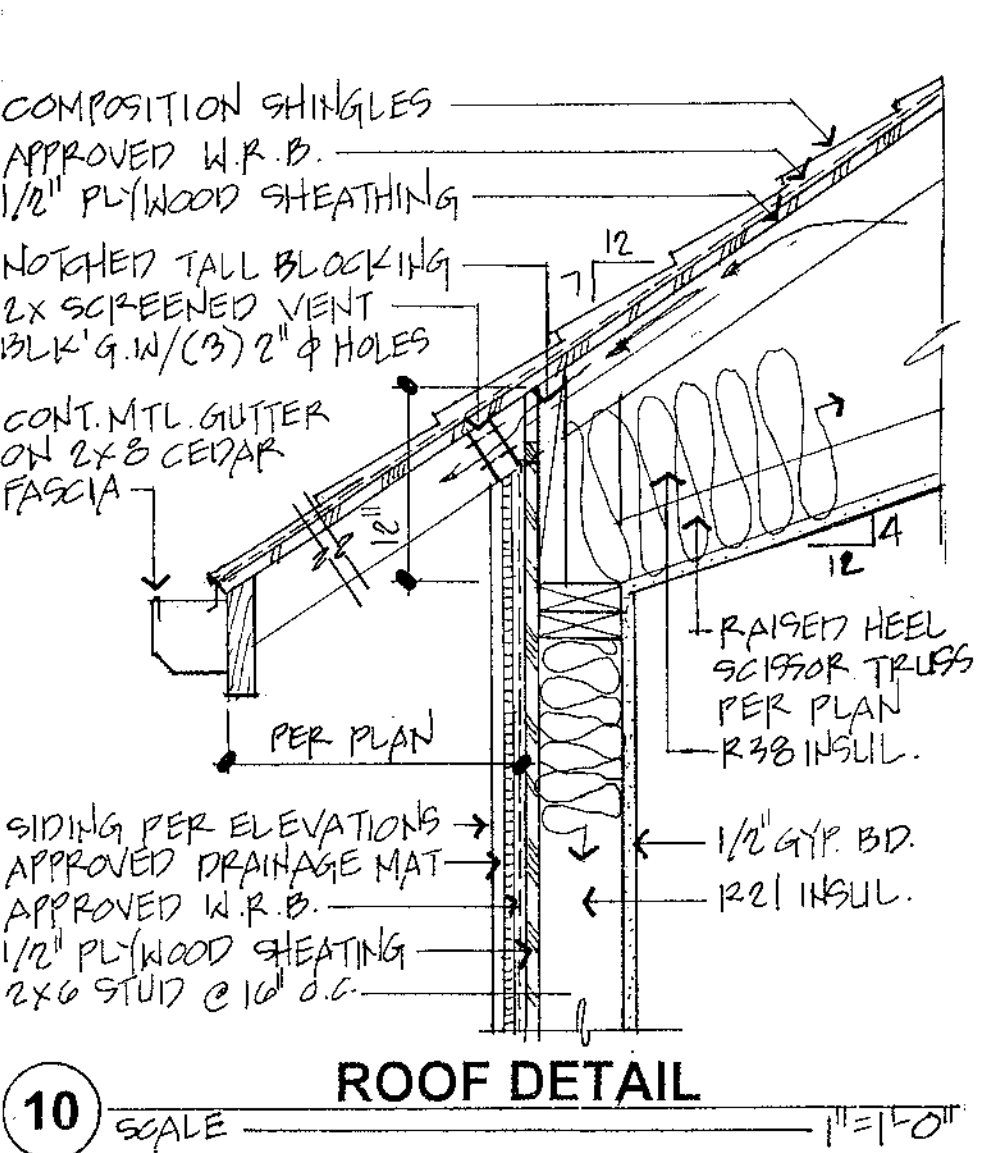
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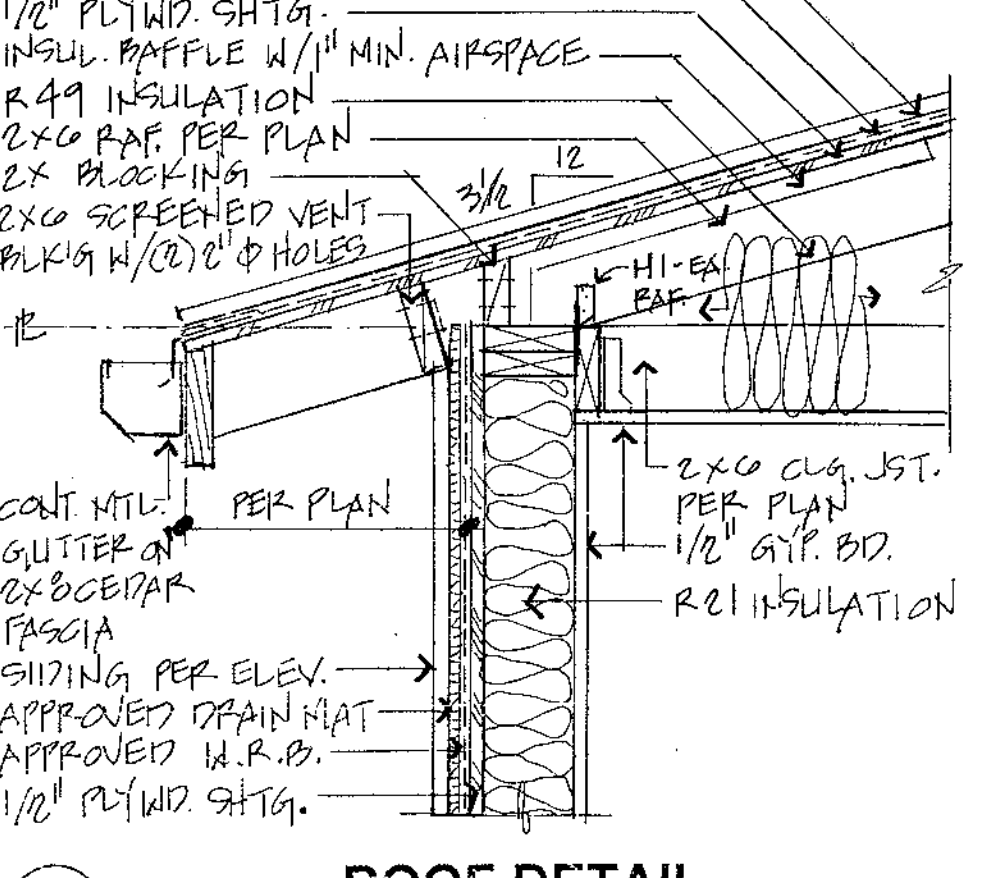
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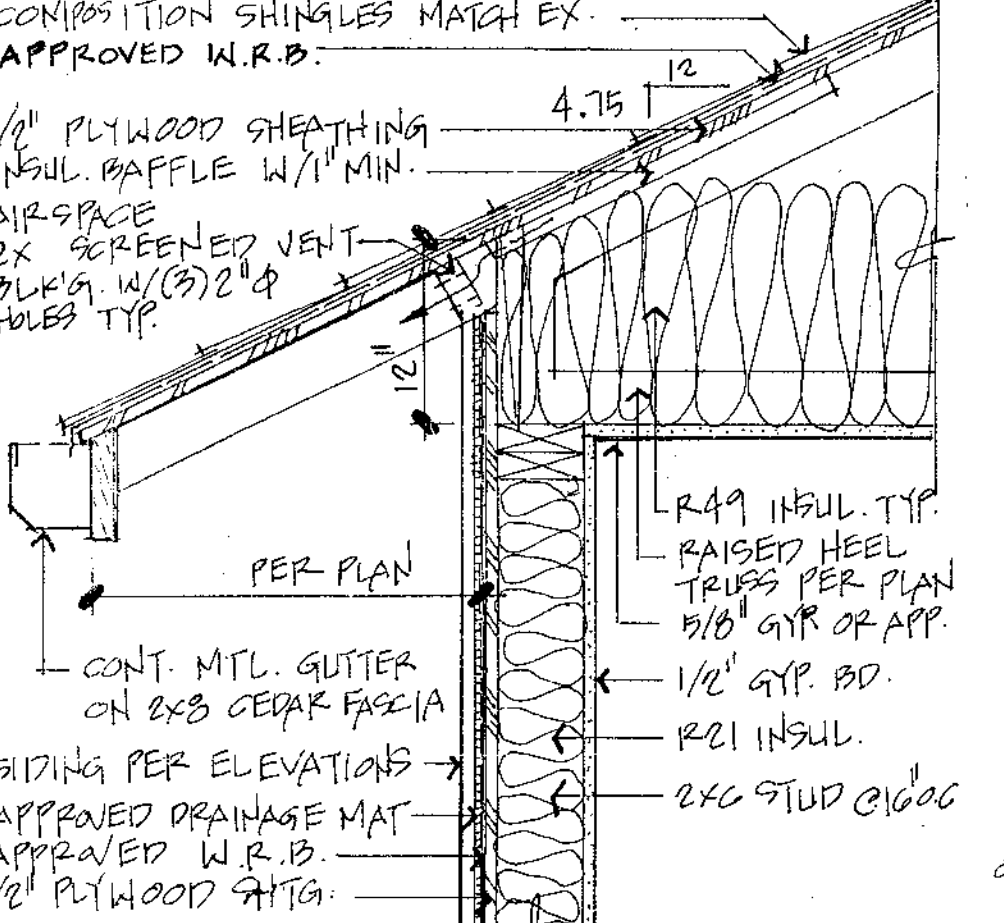
**14** SCALE 1/2" = 1'-0"



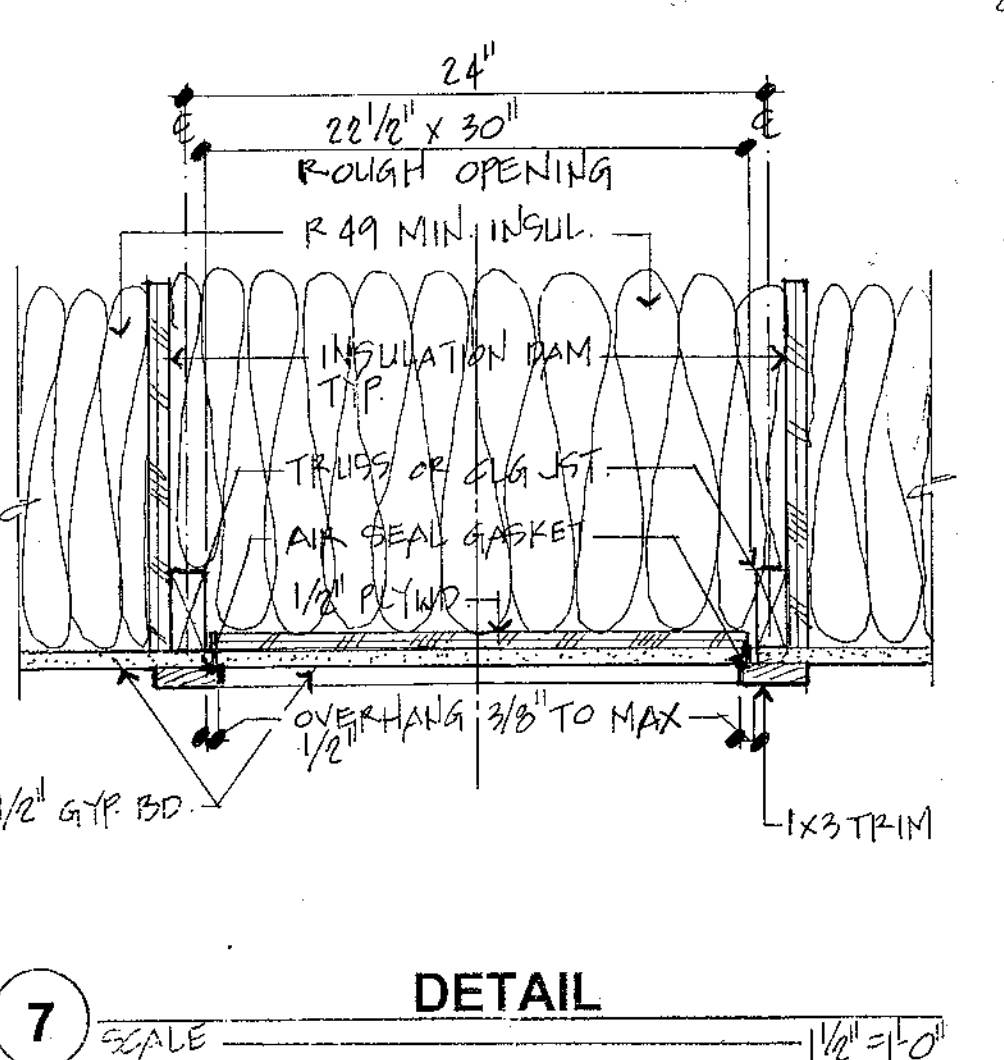
**10** SCALE 1/2" = 1'-0"



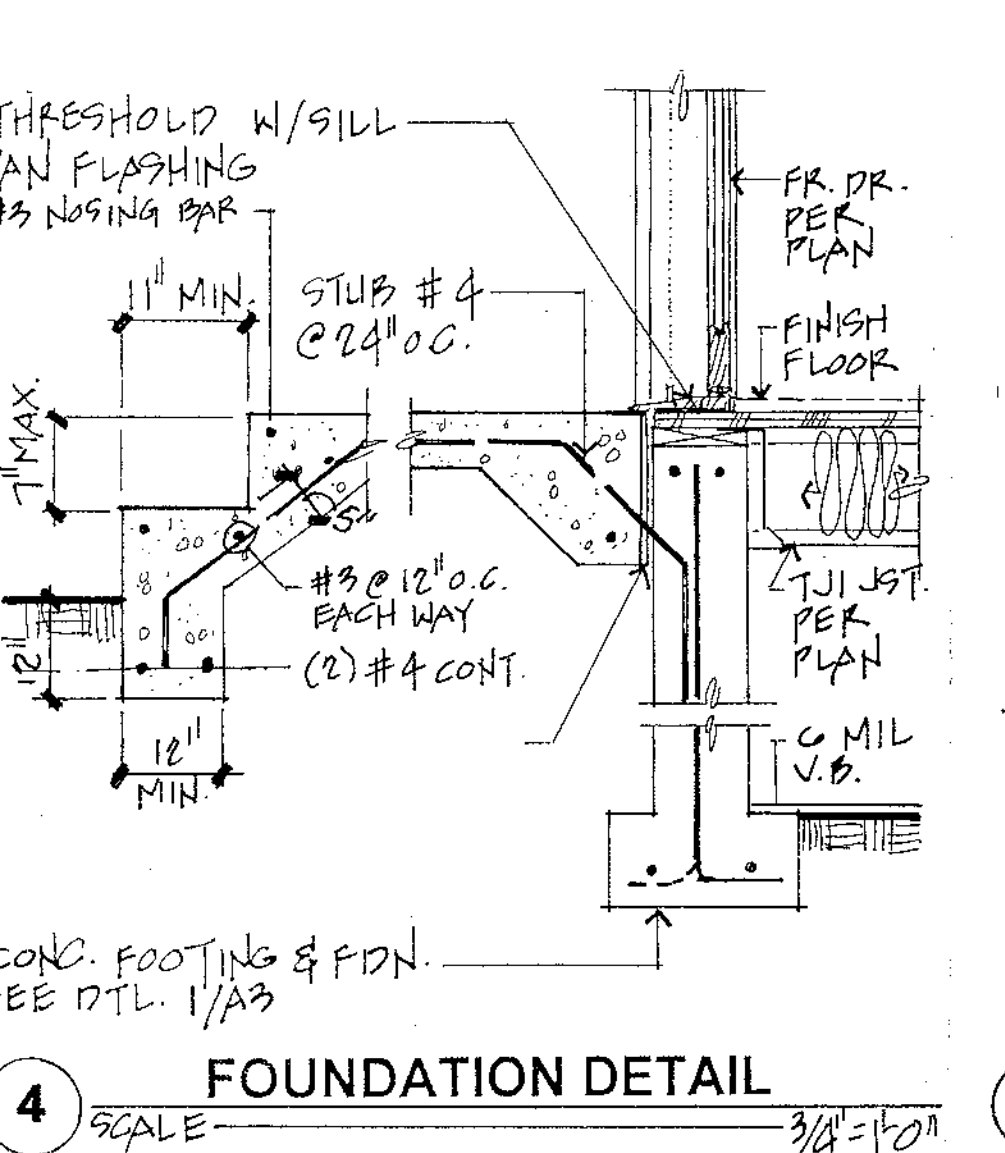
**9** SCALE 1/2" = 1'-0"



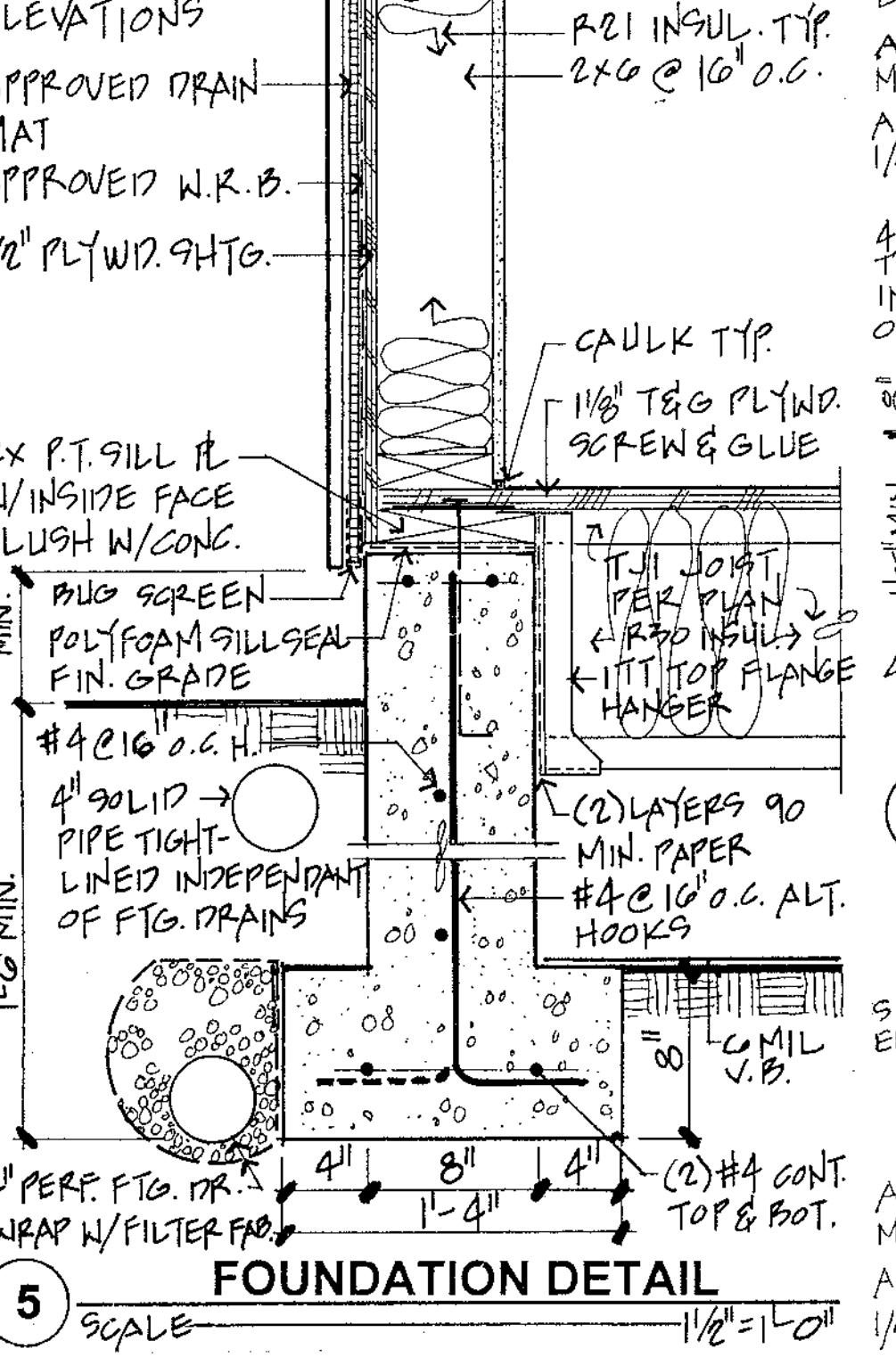
**8** SCALE 1/2" = 1'-0"



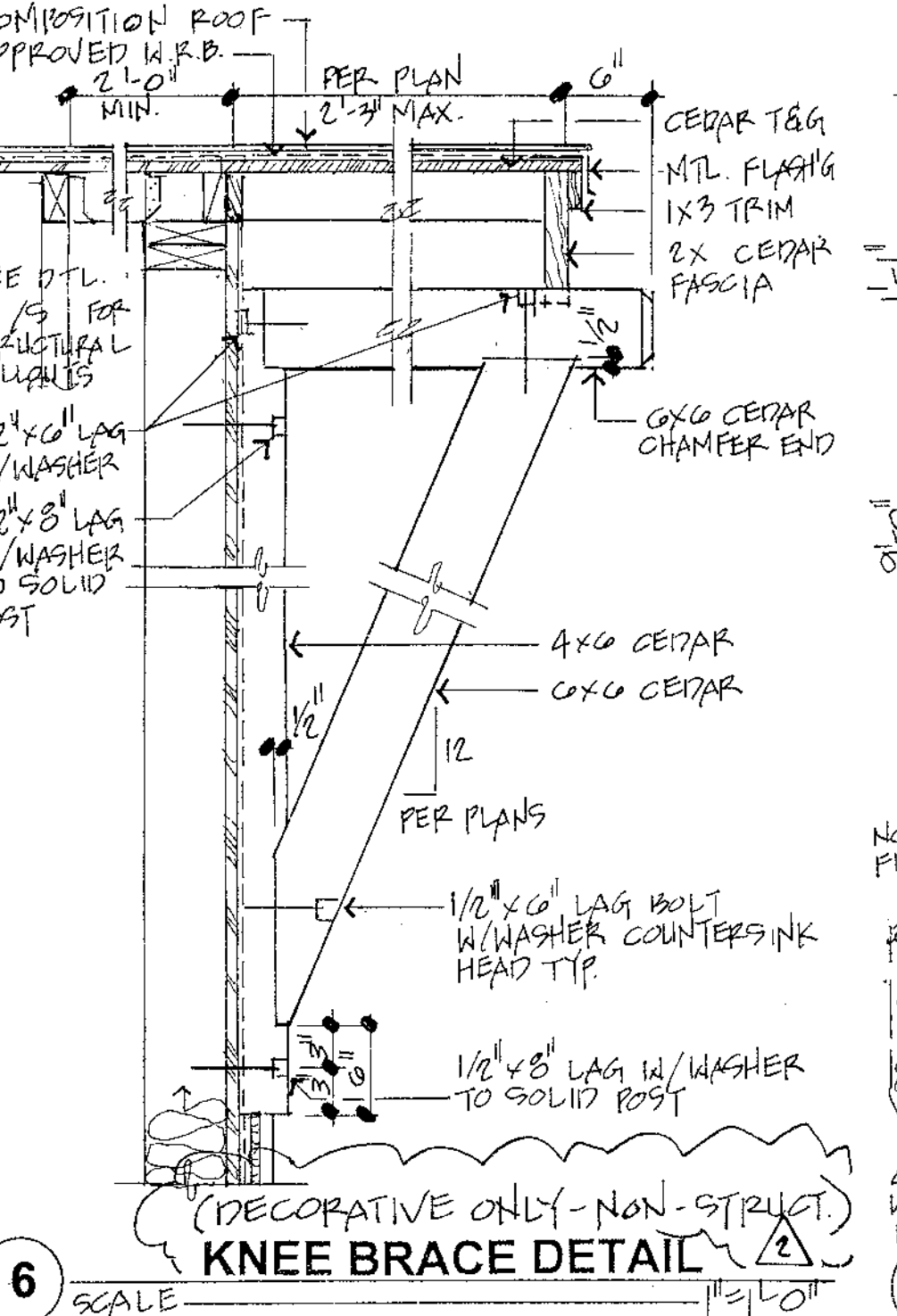
**7** SCALE 1/2" = 1'-0"



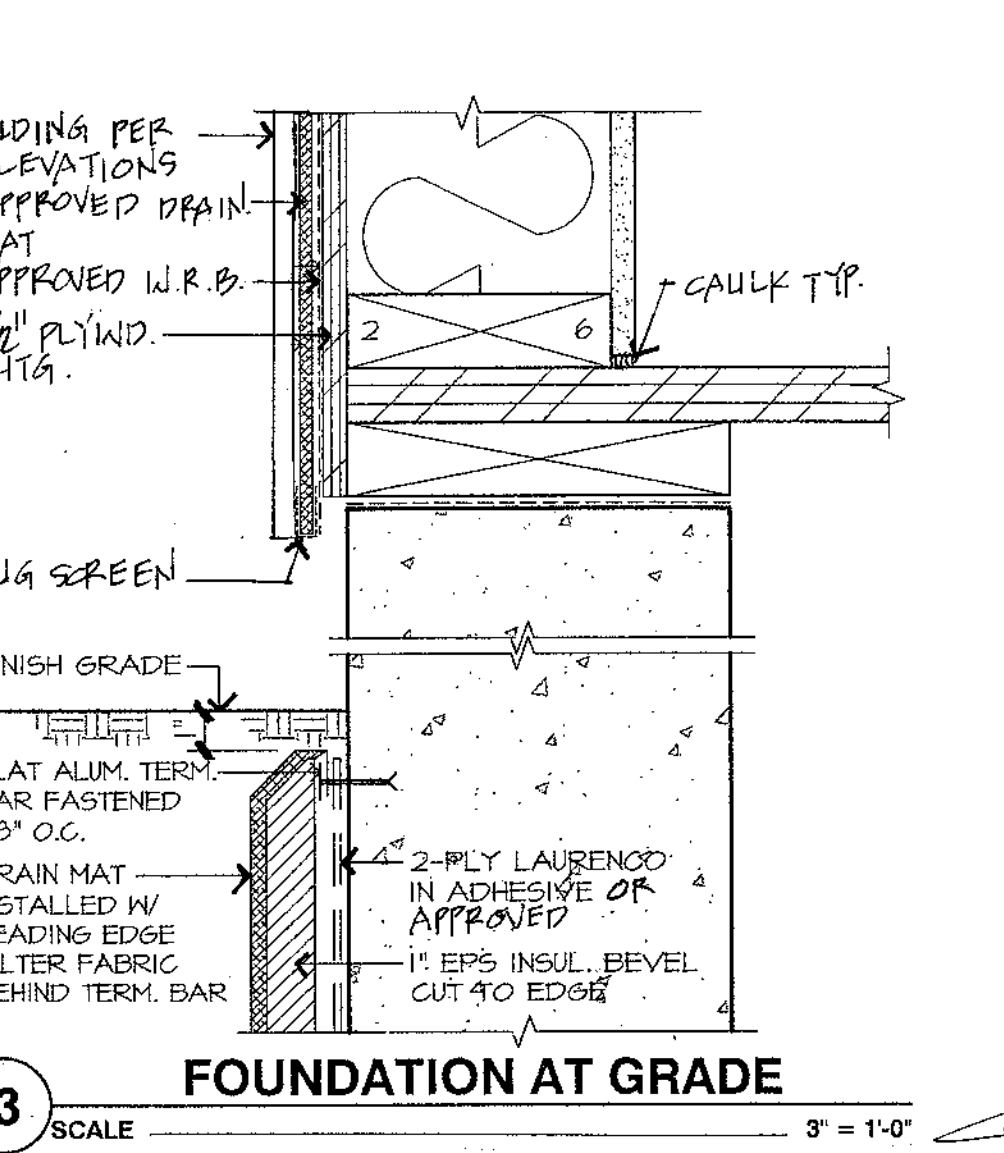
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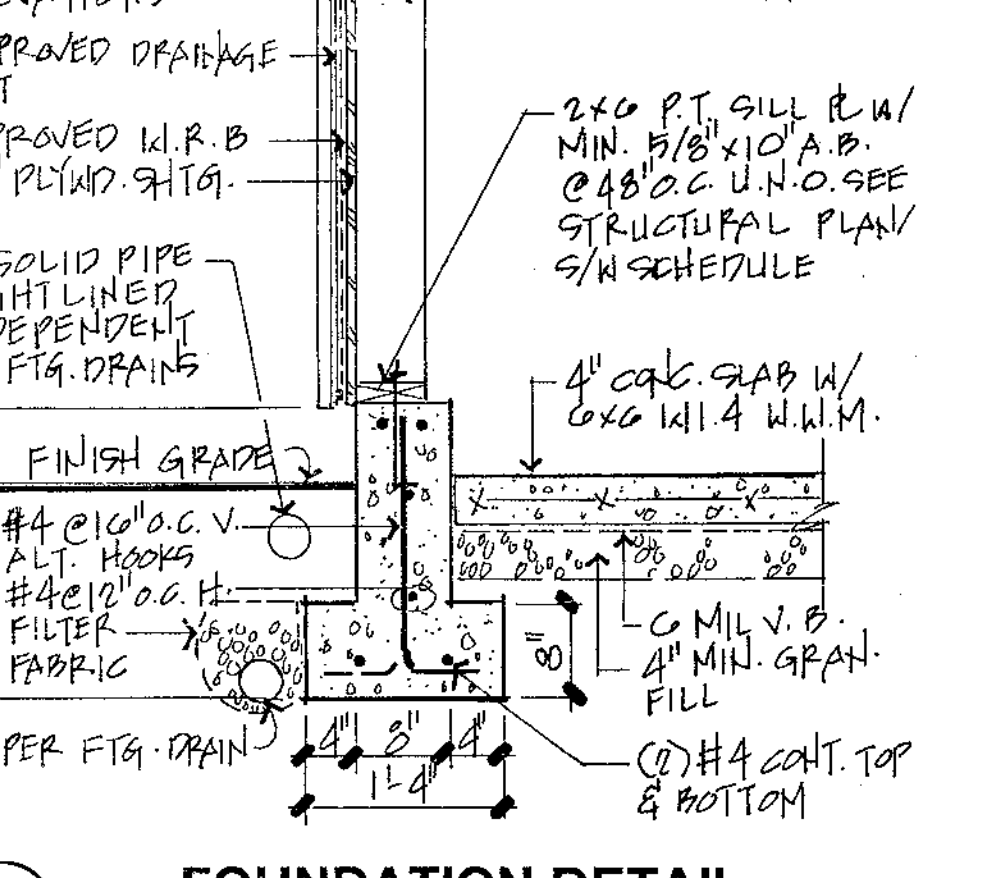
**5** SCALE 1/2" = 1'-0"



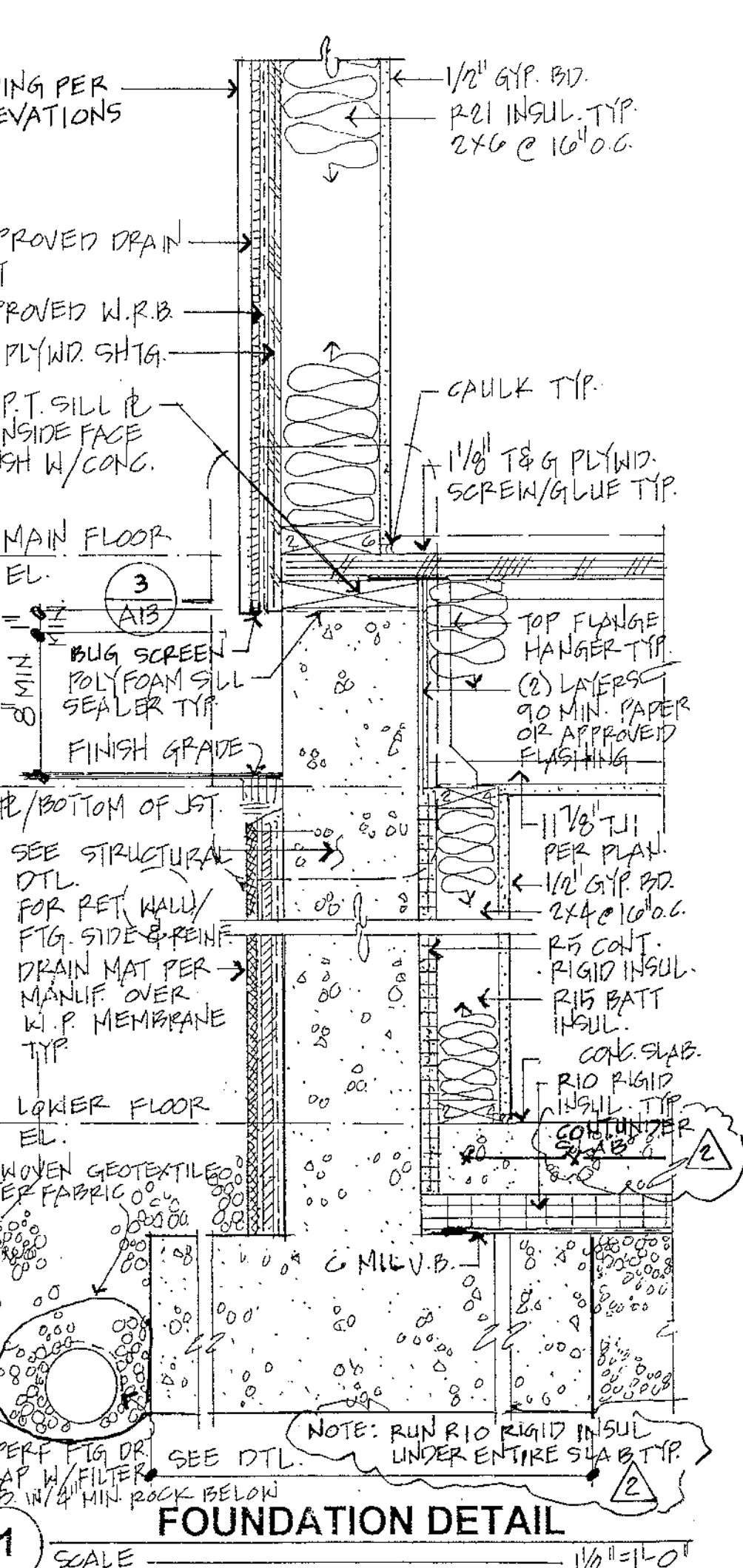
**6** SCALE 1/2" = 1'-0"



**3** SCALE 3/4" = 1'-0"



**2** SCALE 3/4" = 1'-0"



**1** SCALE 1/2" = 1'-0"



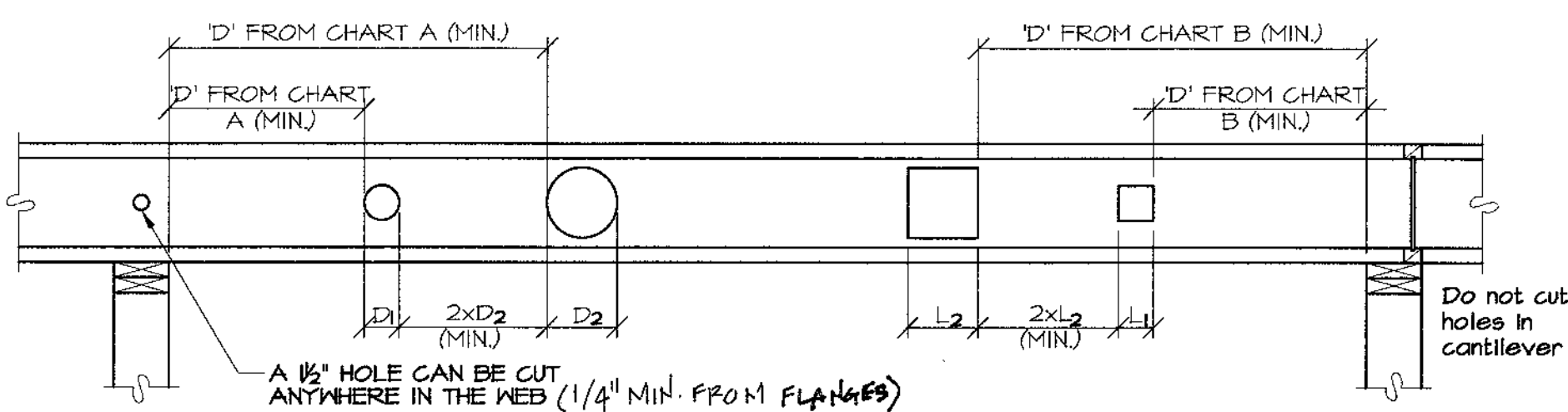


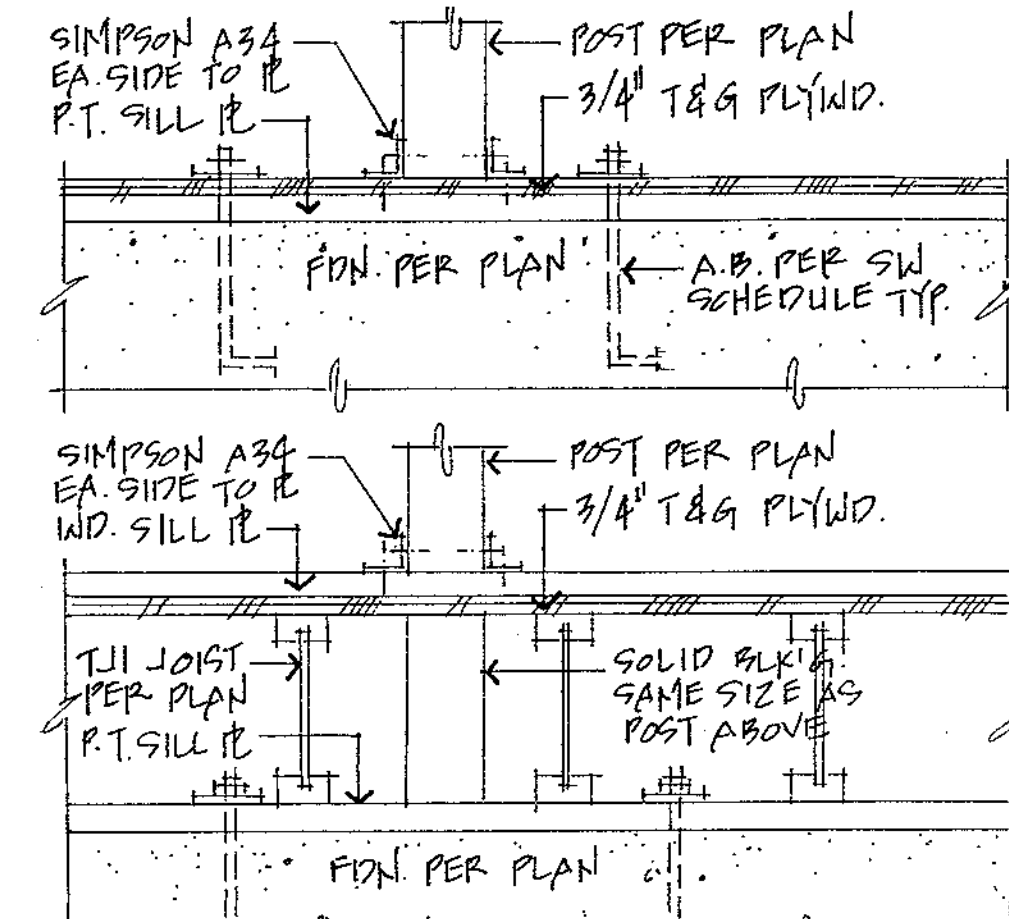
CHART A - ROUND HOLES MINIMUM DISTANCE (D) FROM THE INSIDE FACE OF SUPPORT TO NEAREST EDGE OF HOLE

Table with columns for Joist Depth, TJI/PRO Series, and Round Hole Size (2, 3, 4, 6, 8, 11 inches).

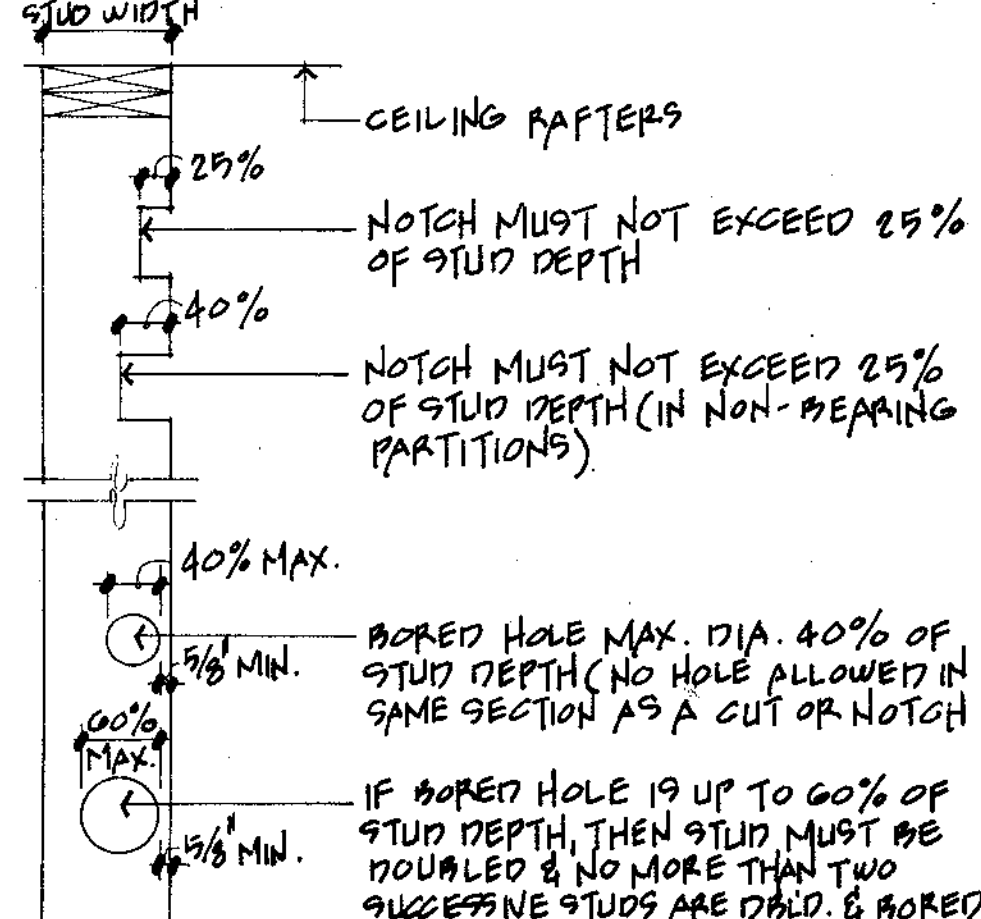
CHART B - SQUARE OR RECTANGULAR HOLES MINIMUM DISTANCE (D) FROM THE INSIDE FACE OF SUPPORT TO NEAREST EDGE OF HOLE

Table with columns for Joist Depth, TJI/PRO Series, and Square or Rectangle Hole Size (2, 3, 4, 6, 8, 11 inches).

ALLOWABLE PENETRATION IN TJI JOISTS



5 TYPICAL COLUMN CONNECTION



4 TYP. STUD NOTCHING & BORING

Vertical Fenestration (Windows and doors)

Table listing fenestration components, U-factor, area, and UA values.

Sum of Vertical Fenestration Area and UA  
Vertical Fenestration Area Weighted U = UA/Area

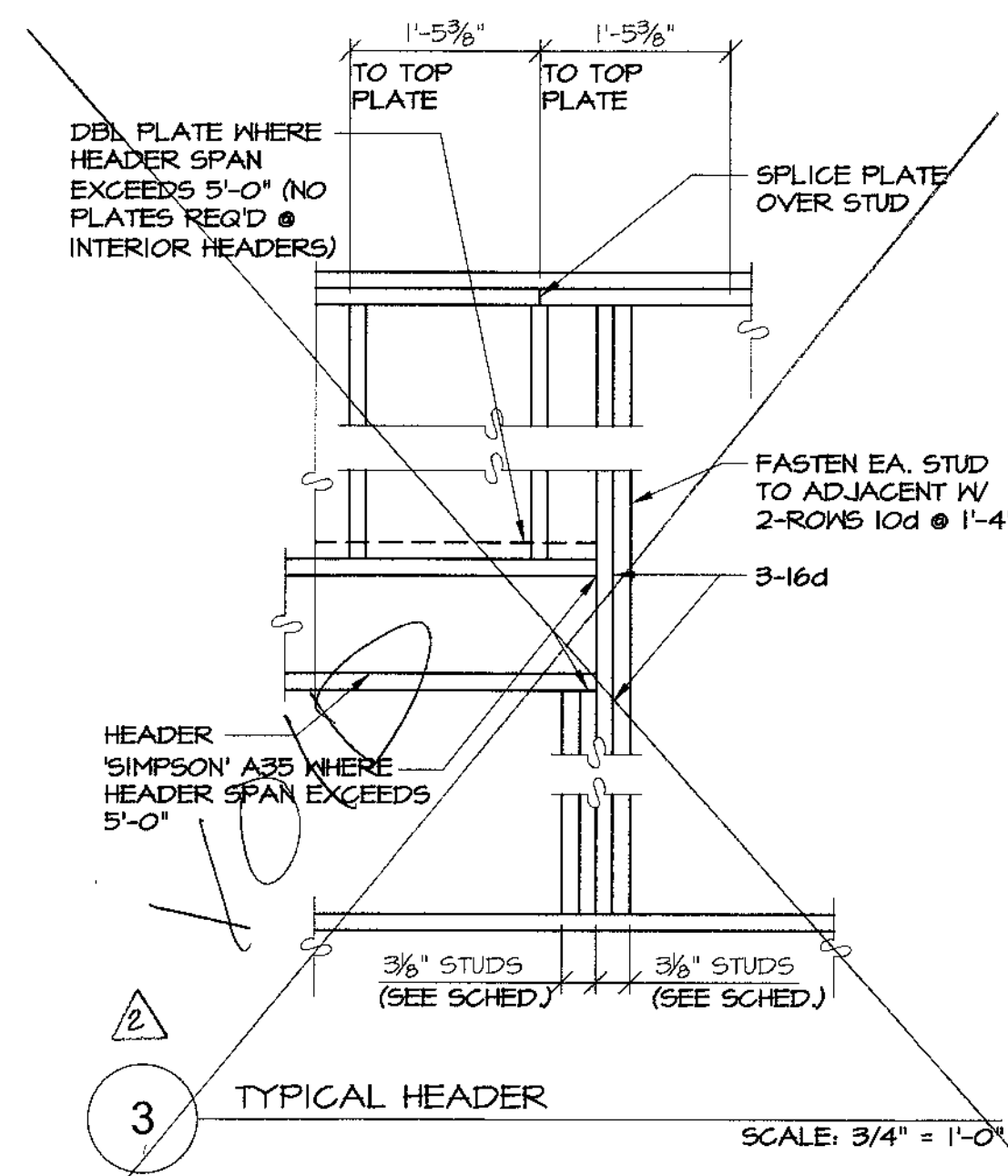
Overhead Glazing (Skylights)

Table listing overhead glazing components and UA values.

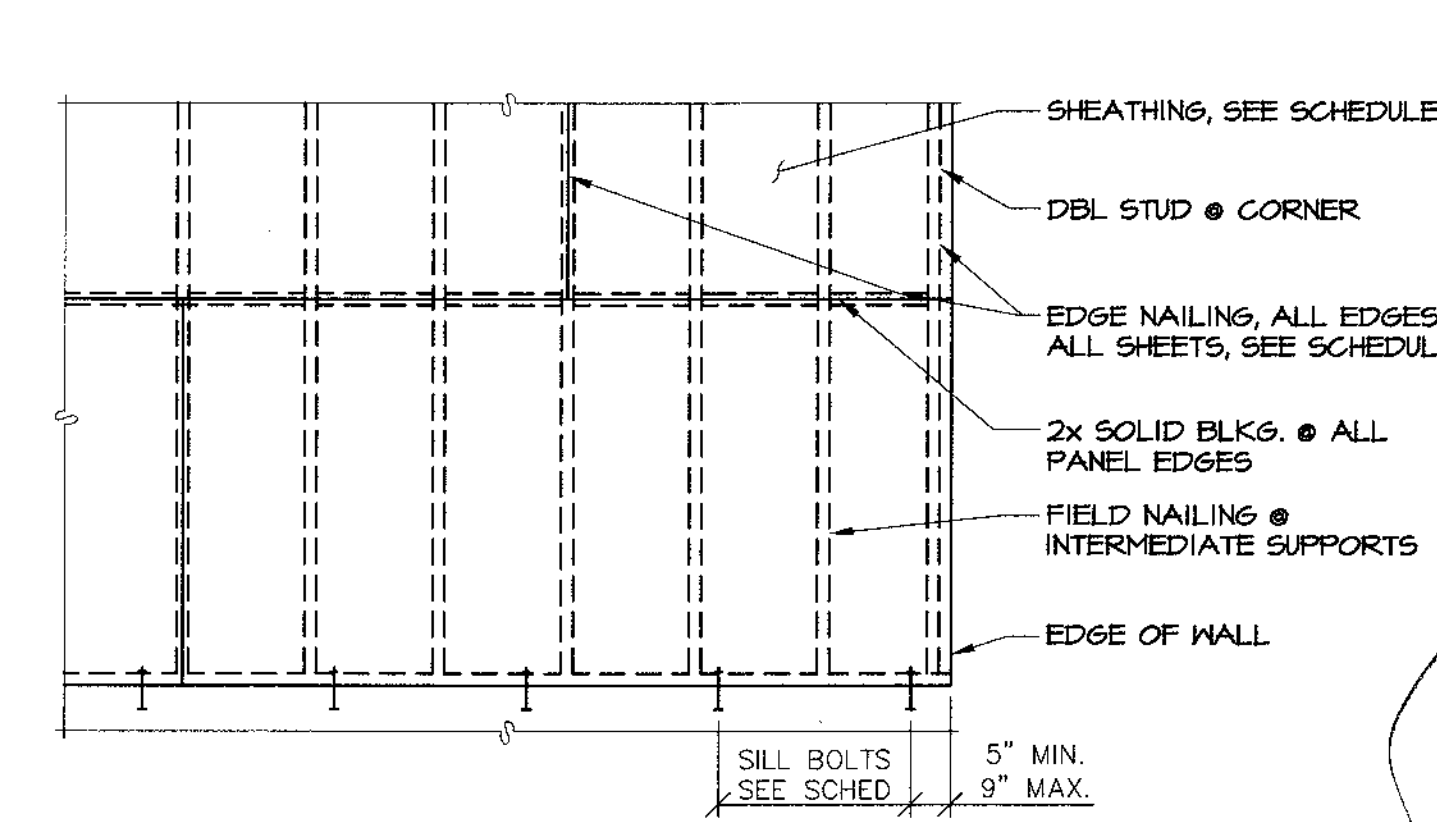
Sum of Overhead Glazing Area and UA  
Overhead Glazing Area Weighted U = UA/Area

Total Sum of Fenestration Area and UA (for heating system sizing calculations)

Summary table for total fenestration area and UA.



3 TYPICAL HEADER



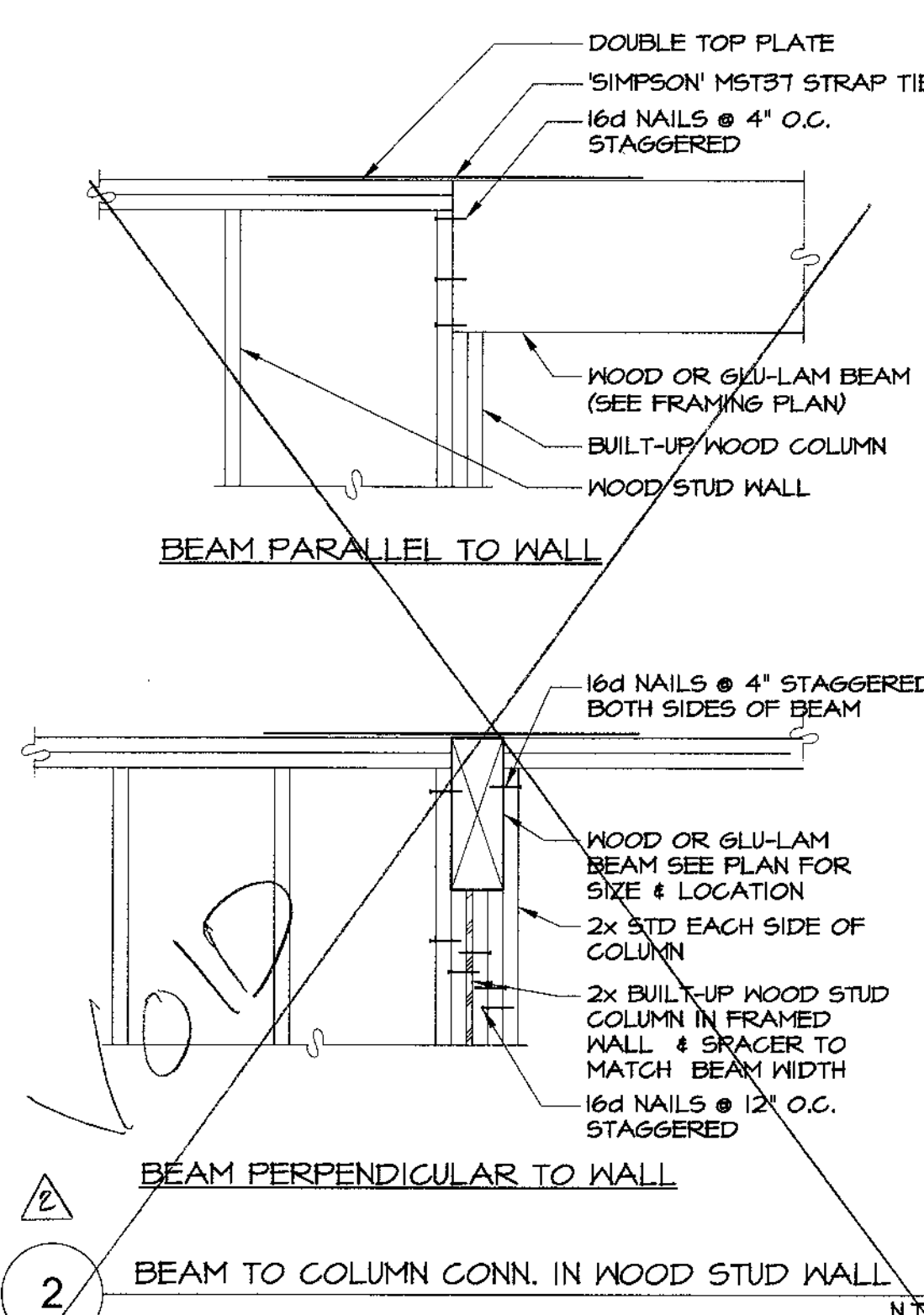
4 TYPICAL WALL SHEATHING

- NOTES: 1. MIN. EDGE DISTANCE FOR NAILS SHALL BE 3/8". 2. MIN. SHEATHING SHEET SIZE SHALL BE 2'-0" x 4'-0". 3. NAILS SHALL NOT BE OVERDRIVEN. 4. NAILS SHALL BE COMMON WIRE TYPE OR APPROVED EQUAL.

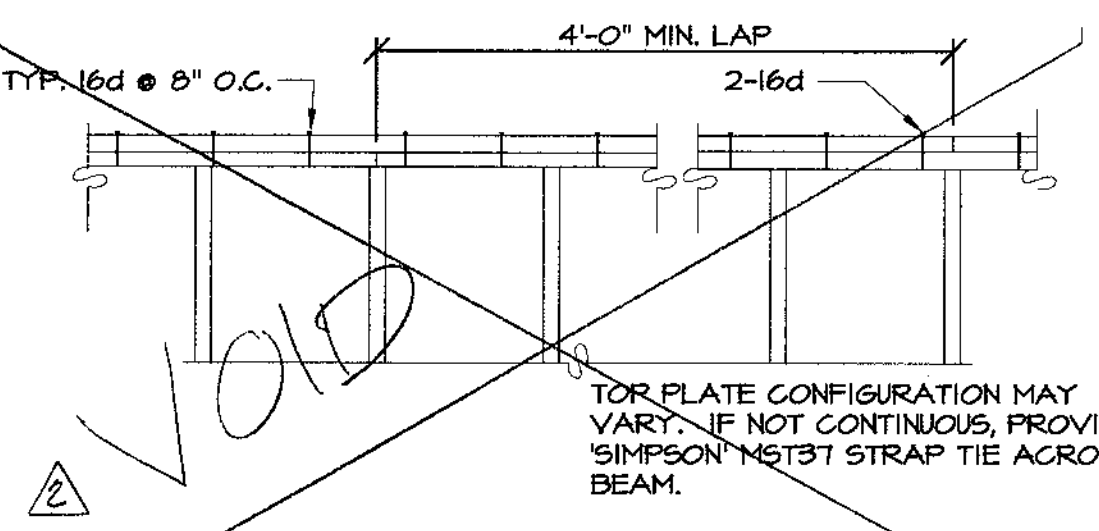
TABLES OF EQUIVALENT FASTENERS: COMMON NAIL, STAPLES, NAILS & T-NAILS.

NOTE: PENETRATION IS THE DEPTH OF EMBEDMENT OF THE STAPLE OR NAIL INTO THE MAIN MEMBER REQUIRED TO ATTAIN ITS FULL CAPACITY (SHEAR VALUE) FOR LATERAL LOADINGS.

TABLE 2304.9.1 - FASTENING SCHEDULE: CONNECTION, FASTENING, LOCATION.



2 BEAM TO COLUMN CONN. IN WOOD STUD WALL



1 TYPICAL MIN. DBL. PLATE & MIN. NAILING

TIMBERLAND  
MERCER ISLAND, WA 98040  
9027 SE 60th ST.

A New Residence For:

Drawing Title: DETAILS

Drawn By: M.D.T.D.  
Checked By:  
Approved By:

Issue Date: 1/17/20

Revisions:

Table with columns for No., Description, Date.

Scale: AS NOTED

Sheet No.

A14



STRUCTURAL NOTES

GENERAL REQUIREMENTS & DESIGN CRITERIA

BUILDING CODE & REFERENCE STANDARDS: THE "INTERNATIONAL BUILDING CODE", 2015 EDITION, GOVERNS THE DESIGN AND CONSTRUCTION OF THIS PROJECT.

ARCHITECTURAL DRAWINGS: REFER TO THE ARCHITECTURAL DRAWINGS FOR INFORMATION INCLUDING, BUT NOT LIMITED TO: DIMENSIONS, ELEVATIONS, SLOPES, DOOR AND WINDOW OPENINGS, NON-BEARING WALLS, STAIRS, CURBS, DRAINS, DEPRESSIONS, RAILINGS, WATERPROOFING, FINISHES AND OTHER NONSTRUCTURAL ITEMS.

STRUCTURAL RESPONSIBILITIES: THE PE IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE PRIMARY STRUCTURE IN ITS COMPLETED STATE.

CONTRACTOR RESPONSIBILITIES: THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND ALL JOB RELATED SAFETY STANDARDS SUCH AS OSHA AND WSHA.

DISCREPANCIES: IN CASE OF DISCREPANCIES BETWEEN THESE GENERAL NOTES, THE CONTRACT DRAWINGS AND SPECIFICATIONS, AND/OR REFERENCE STANDARDS, THE ENGINEER SHALL DETERMINE WHICH SHALL GOVERN.

SITE VERIFICATION: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE PRIOR TO FABRICATION AND/OR CONSTRUCTION.

WIND DESIGN: BASIC WIND SPEED (3-SECOND GUST), V = 85 MPH; WIND IMPORTANCE FACTOR, IW = 1.0; OCCUPANCY CATEGORY = II; EXPOSURE CATEGORY = B;

SEISMIC DESIGN: SEISMIC IMPORTANCE FACTOR IE = 1.0; OCCUPANCY CATEGORY = II; SS = 1.451G; S1 = 0.556G; SITE CLASS = D; SDS = 0.967G; SD1 = 0.556G; SEISMIC DESIGN CATEGORY = D;

SNOW LOAD: GROUND SNOW LOAD, PG = 20 PSF; FLAT ROOF SNOW LOAD, PF = 25 PSF (DRIFT LOADS CONSIDERED PER ASCE 7 WHERE APPLICABLE);

LIVE LOADS: ROOF (LIVE) 20 PSF; ROOF (SNOW) 25 PSF; RESIDENTIAL FLOOR 40 PSF; RESIDENTIAL DECK 60 PSF

DESIGN-BY-OTHERS (DEFERRED SUBMITTALS) LOADS: ALL PRE-ENGINEERED/FABRICATED/MANUFACTURED OR OTHER PRODUCTS DESIGNED BY OTHERS SHALL BE DESIGNED FOR THE TRIBUTARY DEAD AND LIVE LOADS PLUS WIND, EARTHQUAKE, AND COMPONENT AND CLADDING LOADS WHEN APPLICABLE.

DEFERRED SUBMITTALS: ITEMS DESIGNED BY OTHERS SHALL INCLUDE CALCULATIONS, SHOP DRAWINGS AND PRODUCT DATA. DESIGN SHALL BE PREPARED BY THE SSE AND SUBMITTED TO THE ARCHITECT AND SER FOR REVIEW PRIOR TO SUBMISSION TO THE JURISDICTION FOR APPROVAL.

INSPECTIONS: ALL CONSTRUCTION IS SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL IN ACCORDANCE WITH IBC SEC 109. THE CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS WITH THE BUILDING OFFICIAL.

PREFABRICATED CONSTRUCTION: ALL PREFABRICATED CONSTRUCTION SHALL CONFORM TO IBC SEC 1703.6.

GEOTECHNICAL INSPECTION: THE GEOTECHNICAL ENGINEER OR BUILDING OFFICIAL SHALL INSPECT ALL PREPARED SOIL BEARING SURFACES PRIOR TO PLACEMENT OF CONCRETE AND REINFORCING STEEL AND PROVIDE A LETTER TO THE OWNER STATING THAT SOILS ARE ADEQUATE TO SUPPORT THE "ALLOWABLE FOUNDATION PRESSURE".

DESIGN SOIL VALUES: ALLOWABLE BEARING PRESSURE (ASSUMED) 1500 PSF; PASSIVE LATERAL PRESSURE 150 PSF/FT; ACTIVE LATERAL PRESSURE (UNRESTRAINED) 35 PSF/FT;

SLABS-ON-GRADE & FOUNDATIONS: ALL FOUNDATIONS SHALL BEAR ON STRUCTURAL COMPACTED FILL OR COMPETENT NATIVE SOIL PER THE GEOTECHNICAL REPORT.

COMPACTION: UNLESS OTHERWISE SPECIFIED BY A GEOTECHNICAL ENGINEER, FOOTINGS SHALL BE PLACED ON COMPACTED MATERIAL AND SHALL BE WELL-GRADED GRANULAR MATERIAL WITH NO MORE THAN 5% PASSING A #2 SIEVE.

CAST-IN-PLACE CONCRETE & REINFORCEMENT

REFERENCE STANDARDS: CONFORM TO: (1) ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY".

FIELD REFERENCE: THE CONTRACTOR SHALL KEEP A COPY OF ACI FIELD REFERENCE MANUAL, SP-15, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301) WITH SELECTED ACI AND ASTM REFERENCES."

CONCRETE MIXTURES: CONFORM TO ACI 318 CHAPTER 5 "CONCRETE QUALITY, MIXING, AND PLACING."

MATERIALS: CONFORM TO ACI 318 CHAPTER 3 "MATERIALS" FOR REQUIREMENTS FOR CEMENTITIOUS MATERIALS, AGGREGATES, MIXING WATER AND ADMIXTURES.

MIX DESIGNS: PROVIDE A 5-SACK MINIMUM, 28-DAY COMPRESSIVE STRENGTH f'c = 2,500 PSI CONCRETE MIX WITH MAXIMUM 3/4" AGGREGATE AND 0.50 W/C RATIO FOR ALL ISOLATED POST AND CONTINUOUS WALL FOOTINGS.

MIX DESIGN NOTES: (1) W/C RATIO: WATER-CEMENTITIOUS MATERIAL RATIOS SHALL BE BASED ON THE TOTAL WEIGHT OF CEMENTITIOUS MATERIALS.

(3) AIR CONTENT: CONFORM TO ACI 301 SEC 4.2.2.4. HORIZONTAL EXTERIOR SURFACES IN CONTACT WITH THE SOIL REQUIRE ENTRAINED AIR. USE "MODERATE EXPOSURE".

FORMWORK: CONFORM TO ACI 301 SEC 2 "FORMWORK AND FORM ACCESSORIES." REMOVAL OF FORMS SHALL CONFORM TO SEC 2.3.2 EXCEPT STRENGTH INDICATED IN SEC 2.3.2.5 SHALL BE 0.75 F'C.

MEASURING, MIXING, AND DELIVERY: CONFORM TO ACI 301 SEC 4.3.

HANDLING, PLACING, CONSTRUCTING AND CURING: CONFORM TO ACI 301 SEC 5.

REBAR FABRICATION & PLACING: CONFORM TO ACI 301, SEC 3.2.2 "FABRICATION", AND ACI SP-66 "ACI DETAILING MANUAL" CONFORM TO ACI 301, SEC 3.3.2 "PLACEMENT."

SPICES: CONFORM TO ACI 301, SEC 3.3.2.7. REFER TO PLANS FOR TYPICAL SPICES.

FIELD BENDING: CONFORM TO ACI 301 SEC 3.3.2.8. "FIELD BENDING OR STRAIGHTENING." BAR SIZES #3 THROUGH #5 MAY BE FIELD BENT COLD THE FIRST TIME.

CORNER BARS: PROVIDE MATCHING-SIZED "L" CORNER BARS FOR ALL HORIZONTAL WALL AND FOOTING BARS WITH THE APPROPRIATE SPLICE LENGTH, UNO.

CONCRETE COVER: CONFORM TO THE FOLLOWING COVER REQUIREMENTS FROM ACI 301, TABLE 3.3.2.3: CONCRETE CAST AGAINST EARTH 3"; CONCRETE EXPOSED TO EARTH OR WEATHER (#5 & SMALLER) 1-1/2"; BARS IN SLABS AND WALLS 3/4"

CONSTRUCTION JOINTS: CONFORM TO ACI 301 SEC 2.2.2.5, 5.1.2.3A, 5.2.1.1, AND 5.3.2.6. CONSTRUCTION JOINTS SHALL BE LOCATED AND DETAILED AS ON THE CONSTRUCTION DRAWINGS.

WOOD FRAMING

REFERENCE STANDARDS: CONFORM TO: (1) IBC CHAPTER 23 "WOOD", (2) NDS AND NDS SUPPLEMENT - "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", (3) ANSI/TPI 1 "NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION",

DEFERRED SUBMITTALS: SUBMIT PRODUCT DATA AND PROOF OF ICC APPROVAL FOR FRAMING MEMBERS AND FASTENERS THAT HAVE BEEN DESIGNED BY OTHERS.

IDENTIFICATION: ALL SAWN LUMBER AND PRE-MANUFACTURED WOOD PRODUCTS SHALL BE IDENTIFIED BY THE GRADE MARK OR A CERTIFICATE OF INSPECTION ISSUED BY THE CERTIFYING AGENCY.

MATERIALS: - SAWN LUMBER: CONFORM TO GRADING RULES OF WMPA, WCLIB OR NLGA. FINGER JOINTED STUDS ACCEPTABLE AT INTERIOR WALLS ONLY.

Table with 4 columns: MEMBER USE, SIZE, SPECIES, GRADE. Rows include STUDS & POSTS, RAFTERS, BEAMS, POSTS & TIMBERS.

- GLUED LAMINATED TIMBER: CONFORM TO AITC 117 "STANDARD SPECIFICATIONS FOR STRUCTURAL GLUE-LAMINATED TIMBER OF SOFTWOOD SPECIES, MANUFACTURING AND DESIGN" AND ANSI/AITC A190.1 "STRUCTURAL GLUED LAMINATED TIMBER."

Table with 4 columns: MEMBER USE, SIZES, SPECIES, STRESS CLASS, USES. Rows include BEAMS, METAL PLATE CONNECTED WOOD ROOF TRUSSES.

- WOOD STRUCTURAL SHEATHING (PLYWOOD): WOOD APA-RATED STRUCTURAL SHEATHING INCLUDES: ALL VENEER PLYWOOD, ORIENTED STRAND BOARD, WATERBOARD, PARTICLEBOARD, 11-11 SIDING, AND COMPOSITES OF VENEER AND WOOD BASED MATERIAL.

Table with 5 columns: LOCATION, THICKNESS, SPAN RATING, PLYWOOD GRADE, EXPOSURE. Rows include ROOF, FLOOR, WALLS, WALLS(ALT).

- JOIST HANGERS AND CONNECTORS: SHALL BE "STRONG TIE" BY SIMPSON COMPANY OR USP EQUIVALENT AS SPECIFIED IN THEIR LATEST CATALOGS.

- NAILS AND STAPLES: CONFORM TO IBC SEC 2303.6 "NAILS AND STAPLES." UNLESS NOTED ON PLANS, NAIL PER IBC TABLE 2304.9.1. UNLESS NOTED OTHERWISE ALL NAILS SHALL BE COMMON. NAIL SIZES SPECIFIED ON THE DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS.

Table with 3 columns: SIZE, LENGTH, DIAMETER. Rows include 8d, 10d, (8d & 10d ALTERNATIVE) PASLODE TETRAGRIP NAILS, 12d (16d SINKER), 16d.

- LAG BOLTS/BOLTS: CONFORM TO ASTM A307.

NAILING REQUIREMENTS: PROVIDE MINIMUM NAILING IN ACCORDANCE WITH IBC TABLE 2304.9.1 "FASTENING SCHEDULE" EXCEPT AS NOTED ON THE DRAWINGS.

STANDARD LIGHT-FRAME CONSTRUCTION: UNLESS NOTED ON THE PLANS, CONSTRUCTION SHALL CONFORM TO IBC SEC 2308 "CONVENTIONAL LIGHT-FRAME CONSTRUCTION" AND IBC SEC 2304 "GENERAL CONSTRUCTION REQUIREMENTS."

(1) WALL FRAMING: UNLESS OTHERWISE NOTED, ALL INTERIOR WALLS SHALL BE 2x4 @ 16"OC AND ALL EXTERIOR WALLS SHALL BE 2x6 @ 16"OC. PROVIDE (2) BUNDLED STUDS MIN AT WALL ENDS AND EACH SIDE OF ALL OPENINGS.

(2) ROOF/FLOOR FRAMING: UNLESS OTHERWISE NOTED, PROVIDE DOUBLE JOISTS/RAFTERS UNDER ALL PARALLEL BEARING PARTITIONS AND SOLID BLOCKING AT ALL BEARING POINTS.

MOISTURE CONTENT: WOOD MATERIAL USED FOR THIS PROJECT SHALL HAVE MAXIMUM MOISTURE CONTENT OF 19% EXCEPT FOR THE PRESSURE-TREATED WOOD SILL PLATE.

PRESERVATIVE TREATMENT: WOOD MATERIALS ARE REQUIRED TO BE "TREATED WOOD" UNDER CERTAIN CONDITIONS IN ACCORDANCE WITH IBC SEC 2304.11 "PROTECTION AGAINST DECAY AND TERMITES".

METAL CONNECTORS/PT WOOD: CK ENGINEERING LLC RECOMMENDS THAT ALL METAL HARDWARE AND FASTENERS IN CONTACT WITH PRESSURE TREATED LUMBER BE STAINLESS STEEL TYPE 316L.

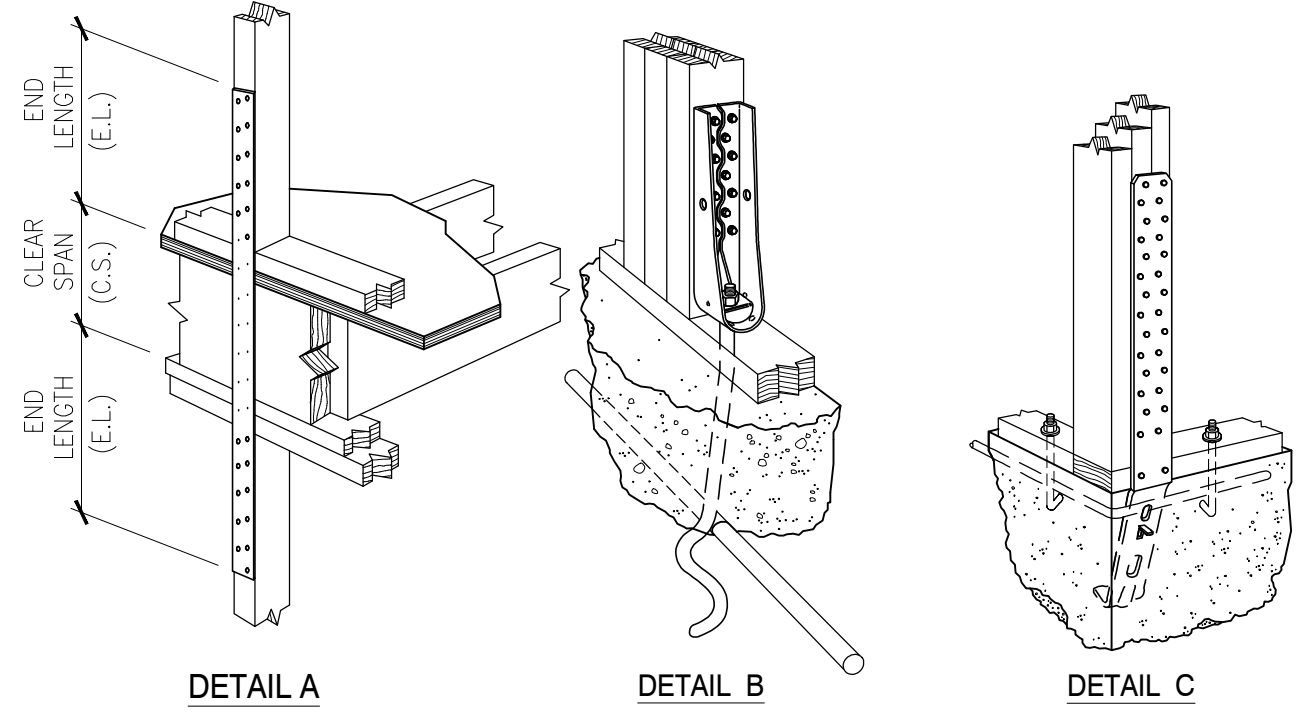


Table with 6 columns: MODEL #, ANCHORAGE TYPE, FASTENERS, END STUD REQUIRED, CAPACITY (LBS) DOUG-FIR, CAPACITY (LBS) HEM-FIR. Rows include CS14, LSTHD8/RJ, STHD10/RJ, STHD14/RJ, HDU8, HDU11.

- NOTES: 1. HOLD-DOWNS SPECIFIED ARE AS MANUFACTURED BY SIMPSON ANCHOR TIE DOWN CO., INC; 2. LOCATE ALL HOLD-DOWNS AT ENDS OF ALL SHEAR WALLS & FASTEN TO BUNDLED END STUDS.

HOLDOWN SCHEDULE

SCALE: N.T.S.

8

WOOD-FRAMED SHEAR WALL SCHEDULE FOR HEM-FIR/DOUG-FIR STUD FRAMING

Large table with columns for SW TYPE, SW SHEATHING, NAIL SIZE & SPACING, RIM JOIST OR BLOCKING ATTACHMENT, BOTTOM PLATE & EDGE MEMBER REQUIREMENTS, SILL PLATE REQUIREMENTS, and SHEAR LOAD CAPACITY (PLF). Rows include SW-6, SW-4, SW-3, SW-2, 2SW-4, 2SW-3, 2SW-2.

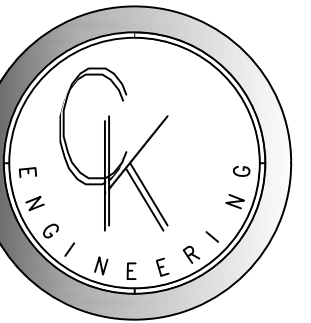
- NOTES: 1. INSTALL PANELS EITHER HORIZONTALLY OR VERTICALLY. 2. WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2x FRAMING SHALL BE STAGGERED SO THAT JOINTS ON OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUDS.

- 10. ANCHOR BOLTS SHALL BE PROVIDED WITH HOT-DIPPED GALVANIZED STEEL PLATE WASHERS 5"x3"x0.229"(MIN). 11. PRESSURE TREATED MATERIAL CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS.

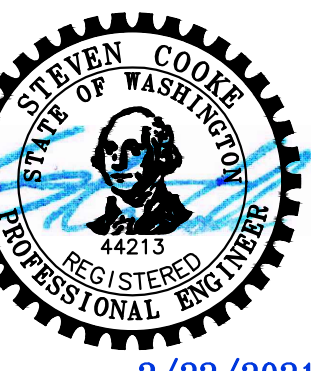
WOOD-FRAMED SHEAR WALL SCHEDULE

SCALE: N.T.S.

12



CK ENGINEERING LLC PROFESSIONAL STRUCTURAL ENGINEERING SERVICES 19105 36th Ave. W. Suite 205 Lynnwood, WA 98036 Phone: (206) 417-0670



2/22/2021

TIMBERLAND 9027 SE 60TH ST MERCER ISLAND, WA 98040

Table with 3 columns: REVISION #, DATE, DESCRIPTION. Row 1: 1, 02-22-2021, EOC REVIEW.

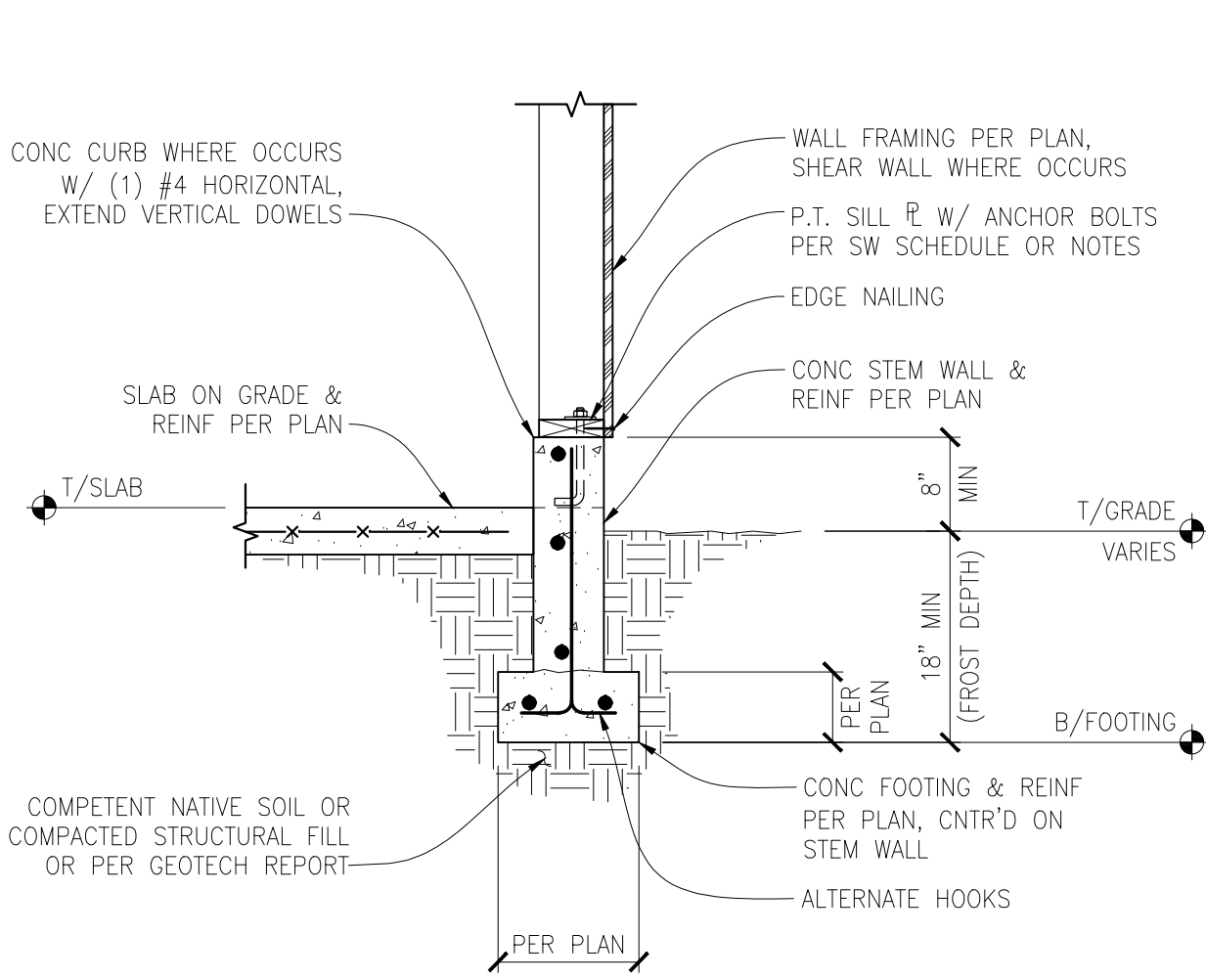
Drawn By: PK Checked By: SC Date: 2-22-2021

CK JOB NO. 19-061

STRUCTURAL NOTES/SCHED.

S-1.0

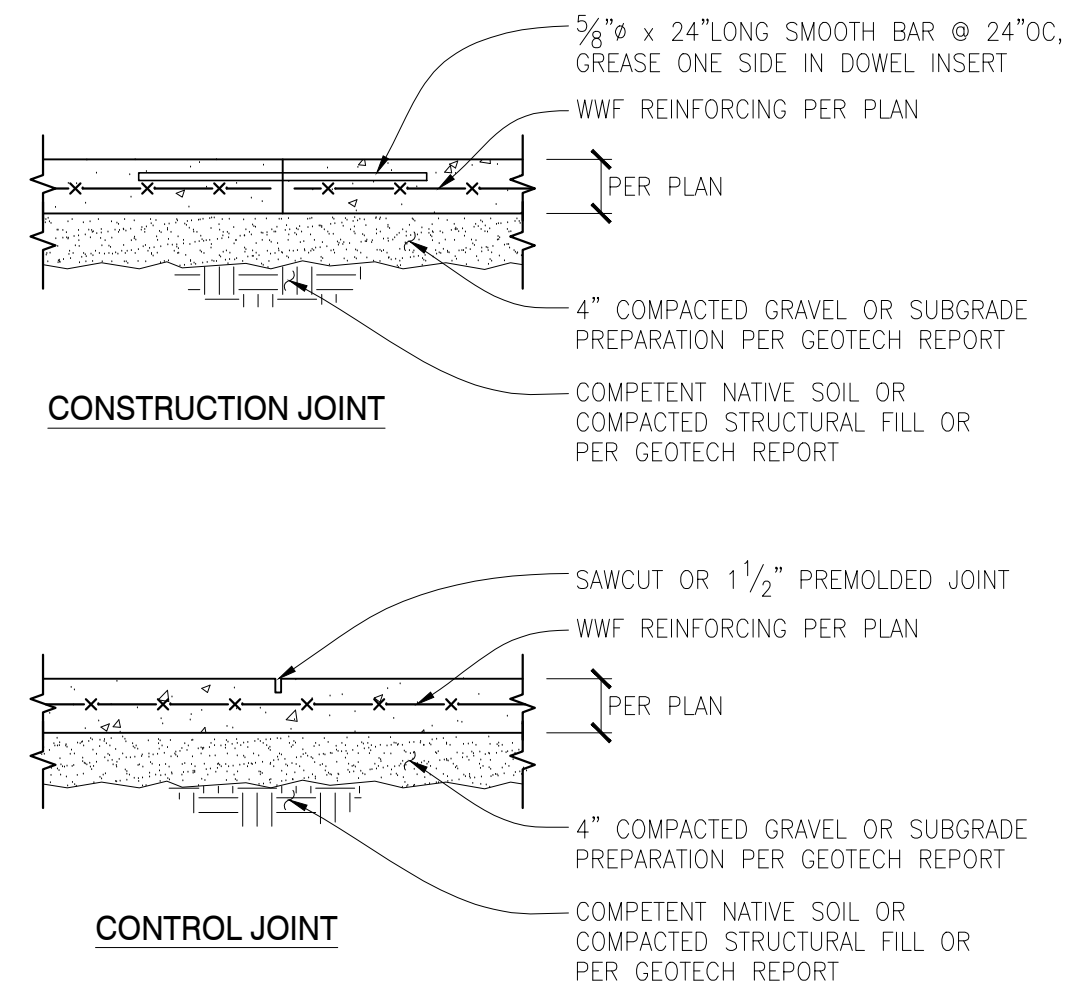




**TYPICAL FOUNDATION FOOTING AND STEM WALL WITH SLAB ON GRADE**

SCALE: 3/4" = 1'-0"

1



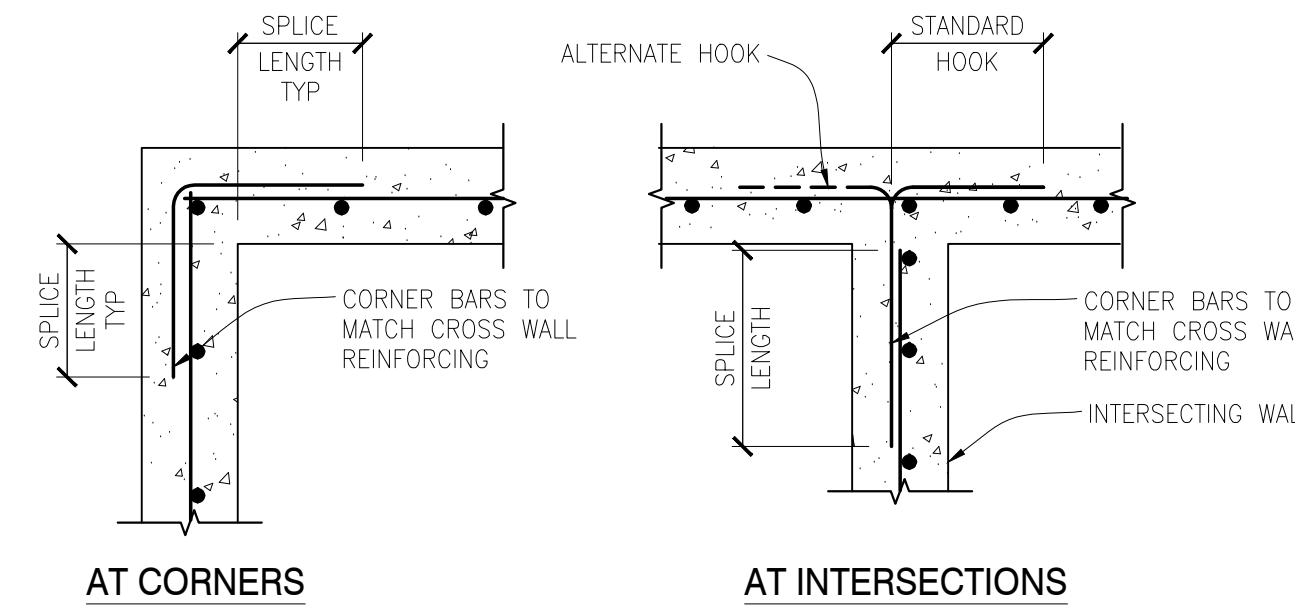
NOTES:

- FOR CONSTRUCTION OR CONTROL JOINT LOCATIONS REFERENCE FOUNDATION/SLAB PLAN
- USE "SOFTCUT SAW" AS SOON AS POSSIBLE WITHOUT CAUSING RAVELING OF CONCRETE EDGES. SAWCUT ALONG SHORT DIRECTION OF POUR FIRST
- PROVIDE CONSTRUCTION/CONTROL JOINT TO ENCLOSE APPROXIMATE SQUARE AREAS OF 225 SF MAX

**TYPICAL SLAB ON GRADE JOINT DETAILS**

SCALE: N.T.S.

2



NOTES:

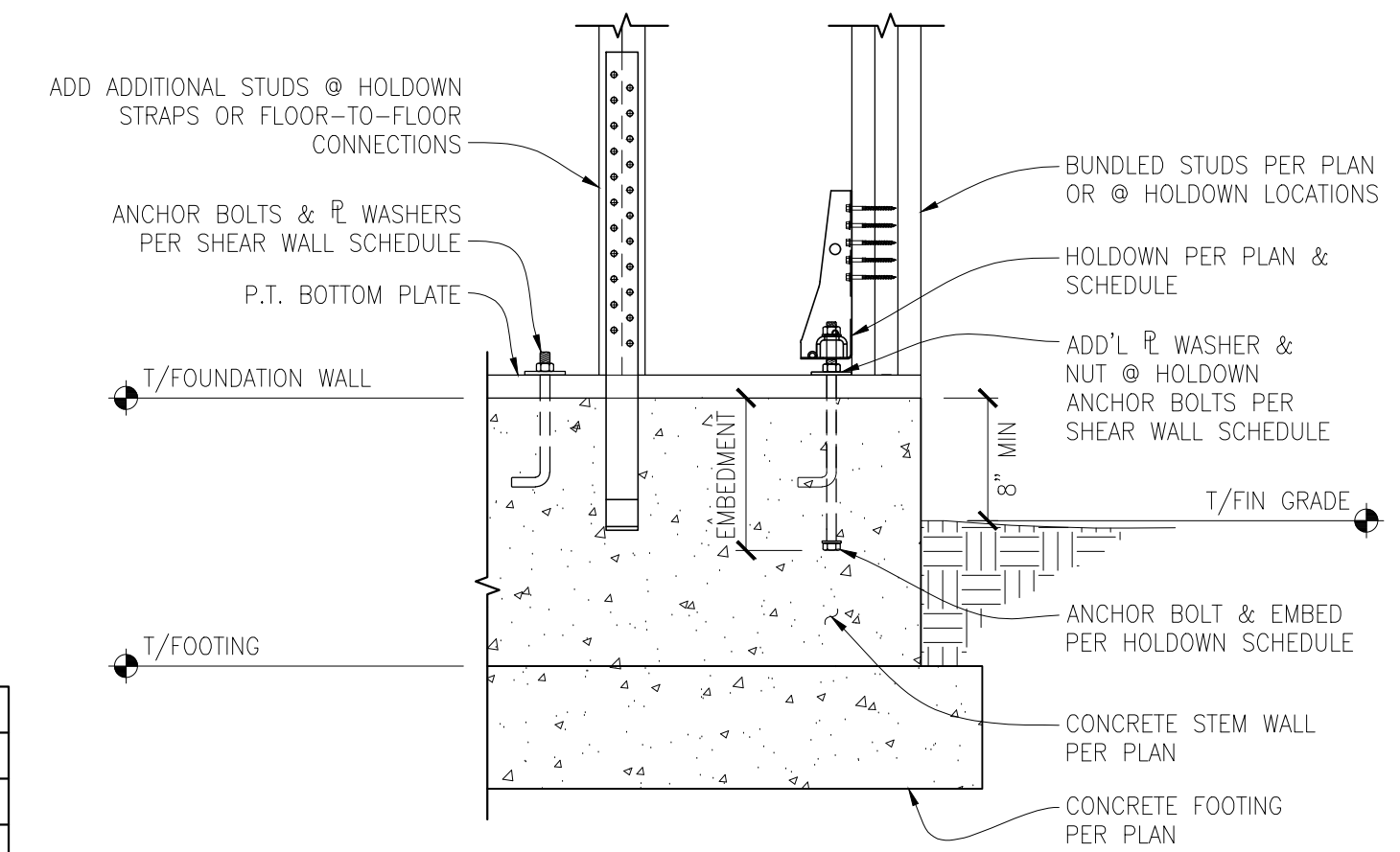
- WALL SIZE & REINFORCING PER PLAN.
- CORNER BARS SIZE & SPACING TO MATCH HORIZONTAL REINFORCING.

**TYPICAL CORNER BARS AT CONCRETE WALLS - SINGLE MAT**

SCALE: N.T.S.

3

SPLICE LENGTH	
BAR	LENGTH
#4	28"
#5	36"

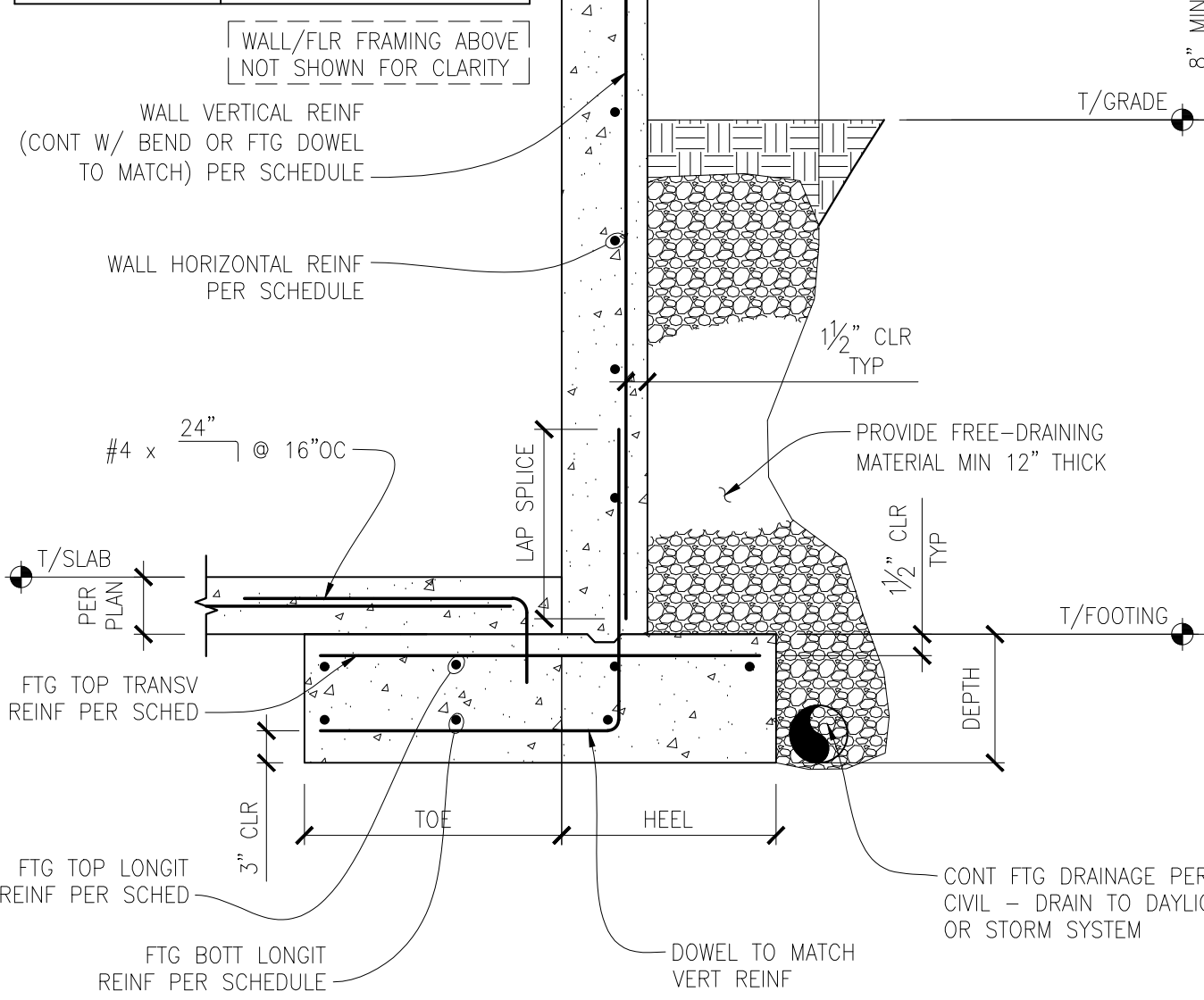


**TYPICAL SHEAR WALL HOLDDOWN CONNECTIONS AT FOUNDATION CONCRETE WALL**

SCALE: N.T.S.

4

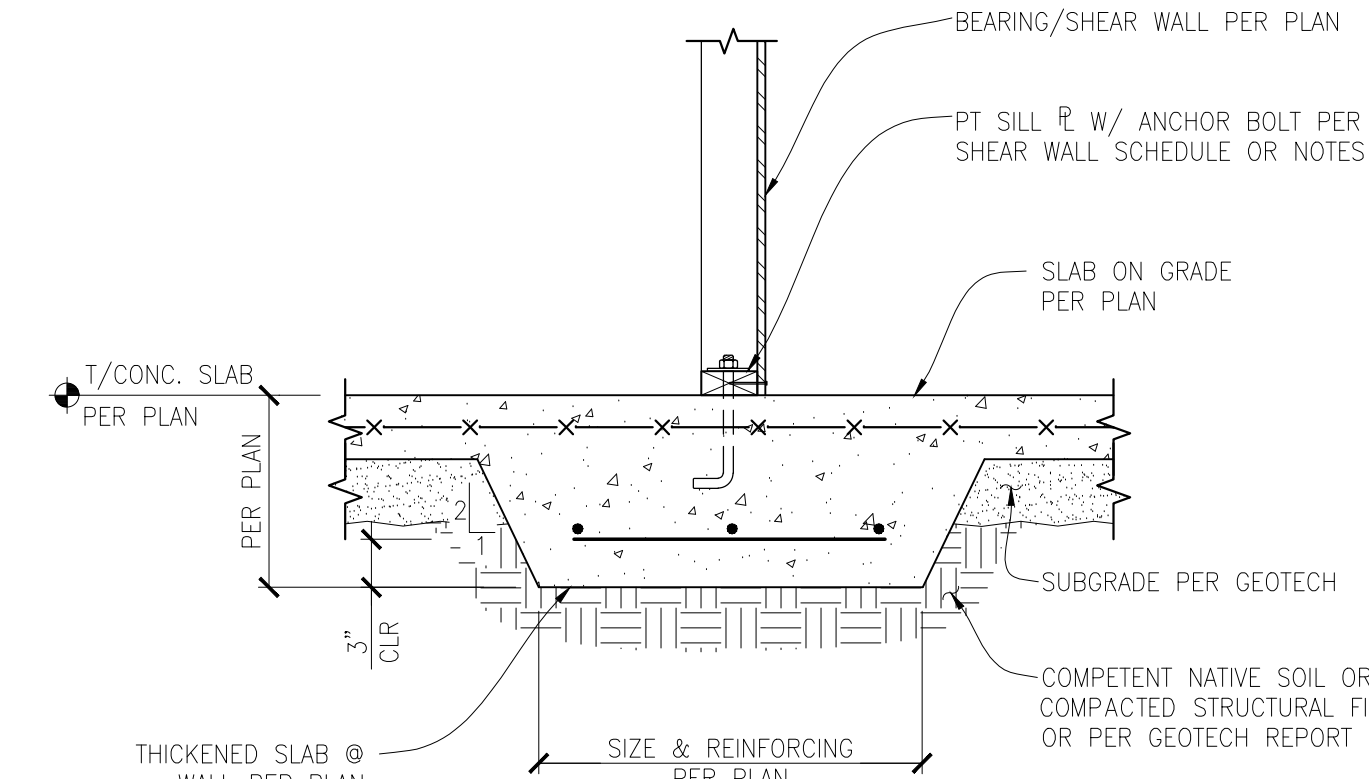
SPLICE LENGTH	
BAR	LENGTH
#4	28"
#5	36"



**TYPICAL THICKENED SLAB EDGE FOOTING**

SCALE: 3/4" = 1'-0"

6



**TYPICAL INTERIOR THICKENED SLAB FOOTING AT BEARING / SHEAR WALL**

SCALE: 1" = 1'-0"

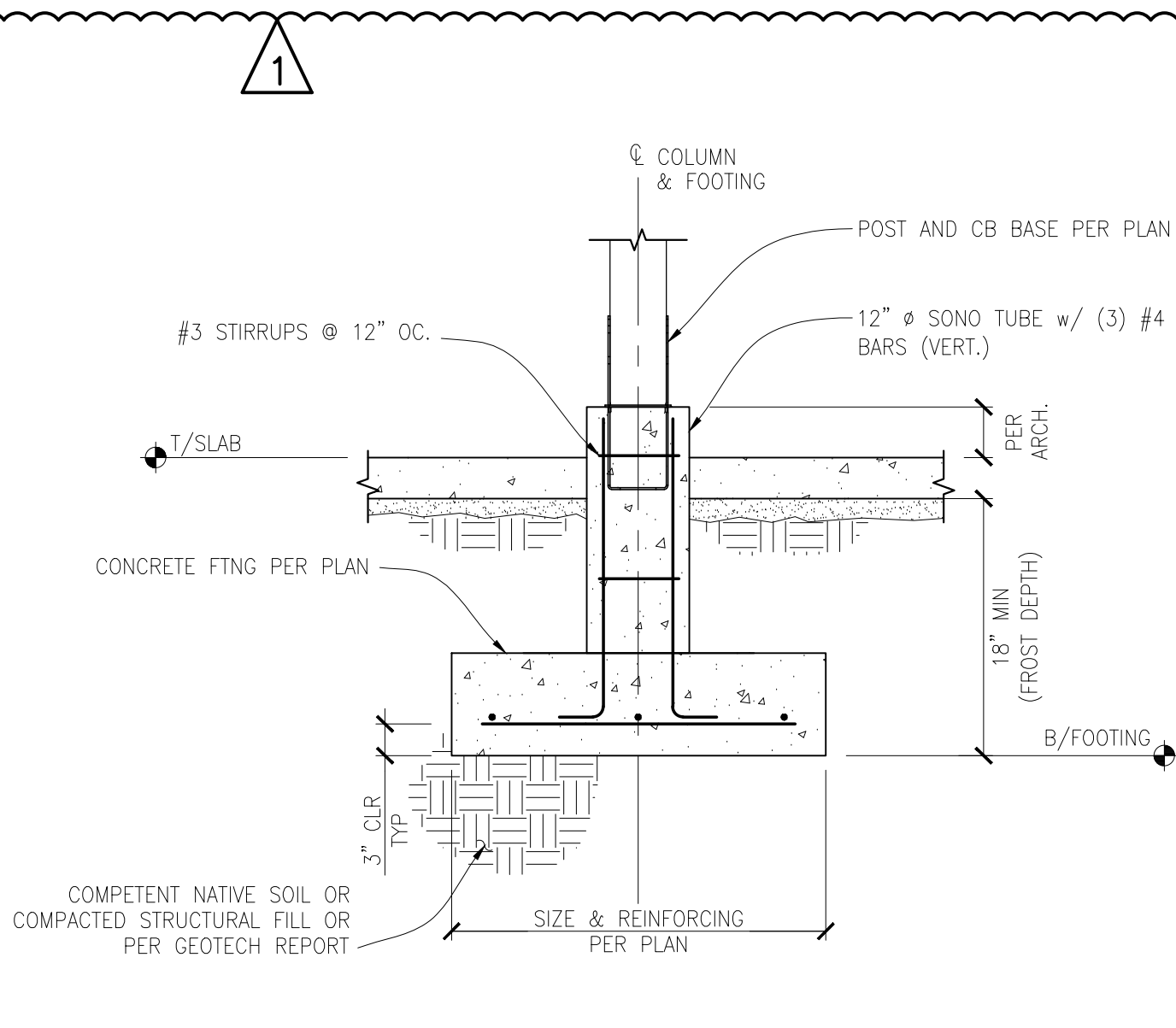
7

RETAINING WALL/FOOTING SCHEDULE									
WALL					FOOTING				
HT (MAX)	THK	VERTICAL	HORIZONTAL	TOE	HEEL	DEPTH	TOP/TRANSV	TOP/LONGIT	BOTTOM/LONGIT
4'-0"	8"	#4 @ 16"OC	#4 @ 12"OC	1'-0"	1'-0"	10"	#4 @ 16"OC	(3) #4	(2) #4
6'-0"	8"	#4 @ 12"OC	#4 @ 12"OC	2'-0"	1'-0"	10"	#4 @ 10"OC	(3) #4	(2) #4
8'-0"	8"	#5 @ 8"OC	#4 @ 12"OC	2'-9"	1'-9"	14"	#5 @ 8"OC	(4) #5	(4) #5
10'-0"	10"	#6 @ 8"OC	#5 @ 12"OC	4'-6"	1'-9"	16"	#6 @ 8"OC	(5) #6	(5) #6

**RETAINING WALL AND SCHEDULE**

SCALE: N.T.S.

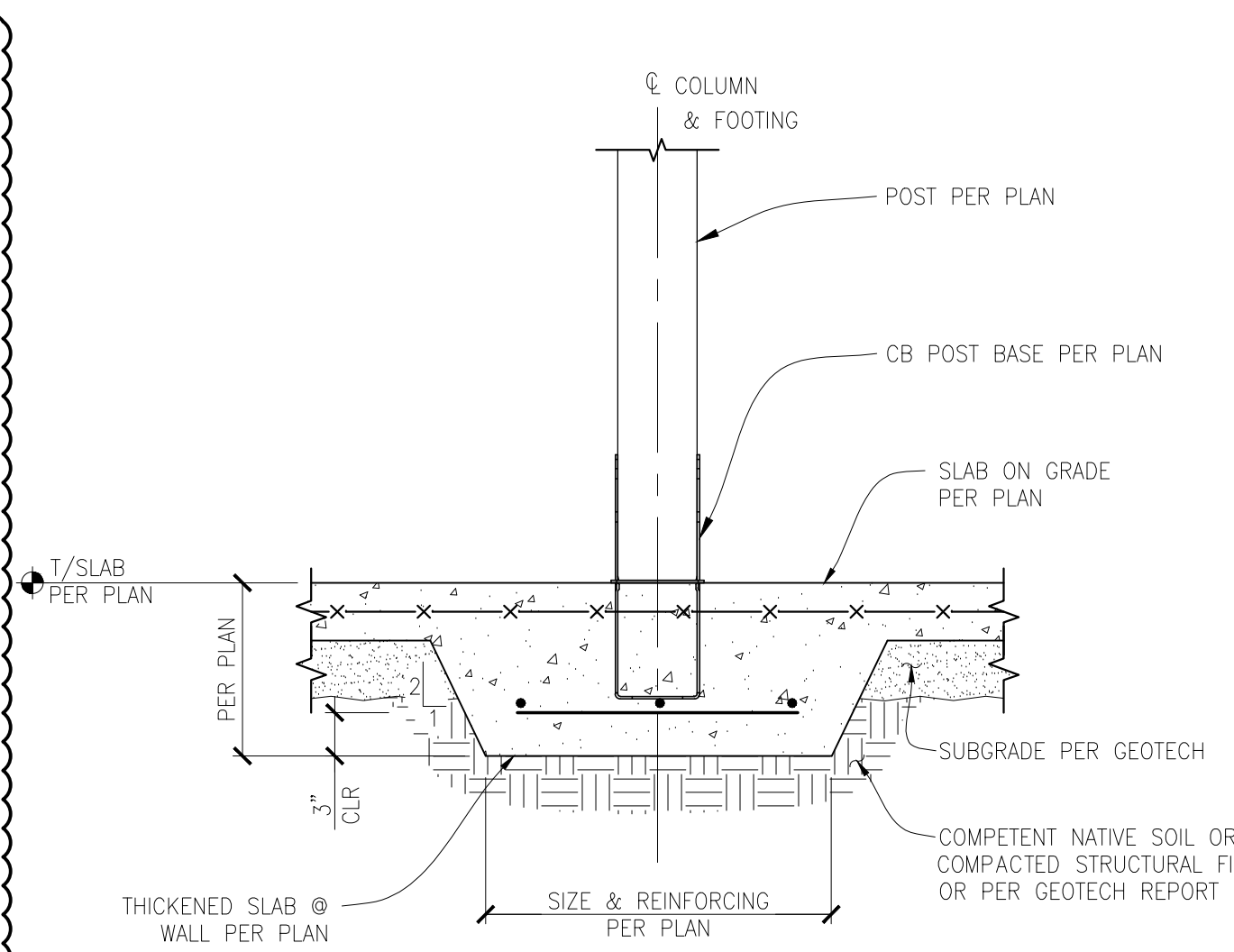
9



**NEW FOOTING/POST CONNECTION**

SCALE: 3/4" = 1'-0"

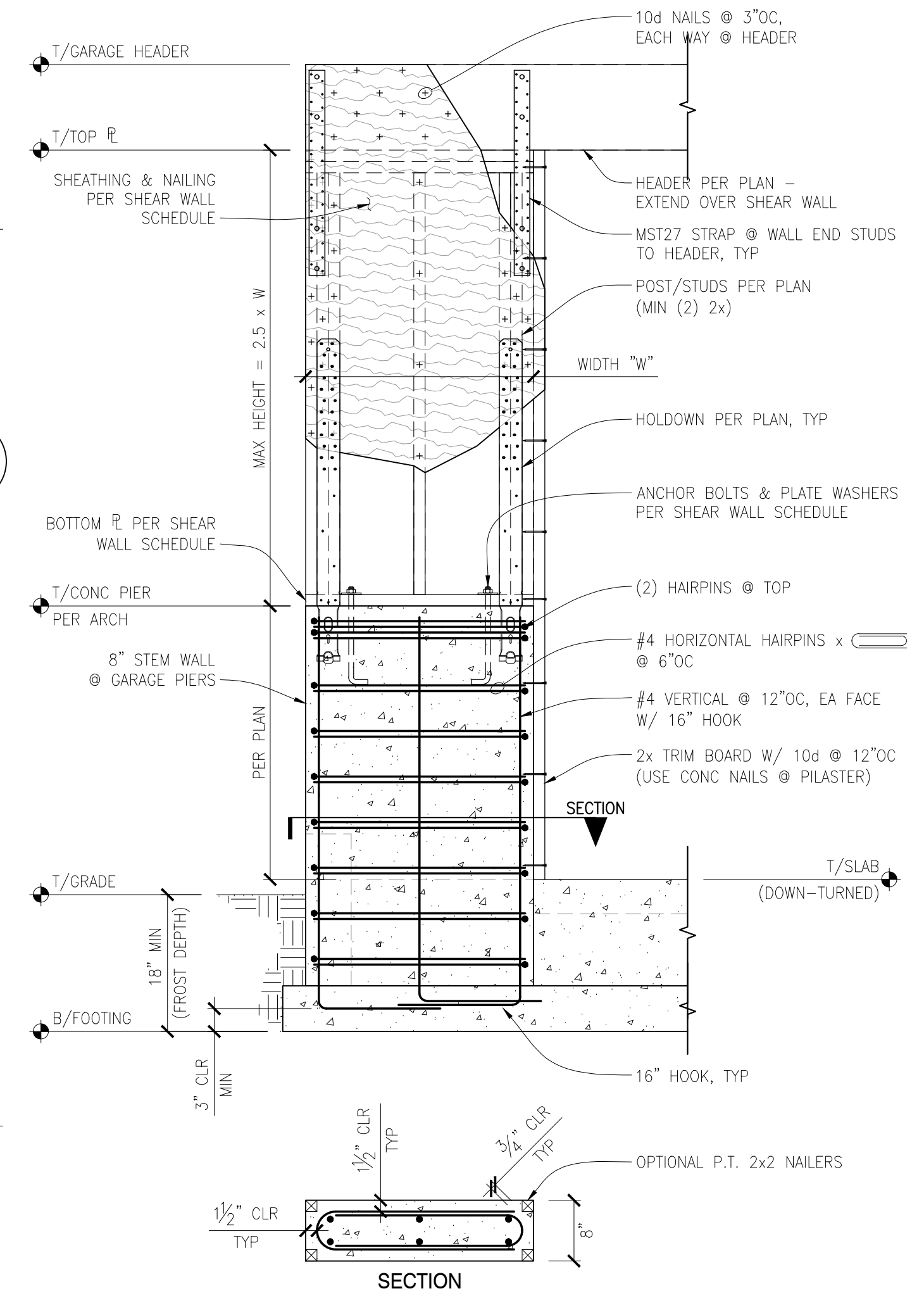
10



**TYPICAL INTERIOR THICKENED SLAB FOOTING AND WOOD POST CONNECTION**

SCALE: 1" = 1'-0"

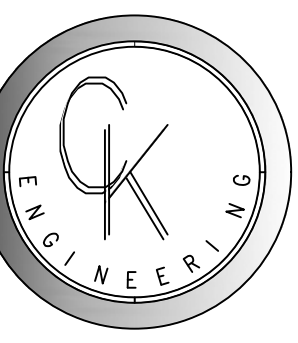
11



**GARAGE PORTAL SHEAR WALL**

SCALE: 3/4" = 1'-0"

12



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**TIMBERLAND**  
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REVISION #	DATE	DESCRIPTION
1	02-22-2021	BDC REVIEW

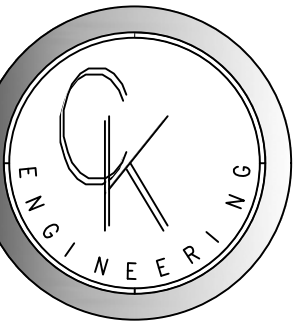
Drawn By: PK  
Checked By: SC  
Date: 2-22-2021

CK JOB NO.  
19-061

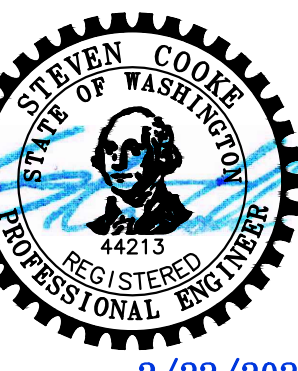
STRUCTURAL  
DETAILS

S-2.0





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**TIMBERLAND**  
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1	02-22-2021	BDC REVIEW

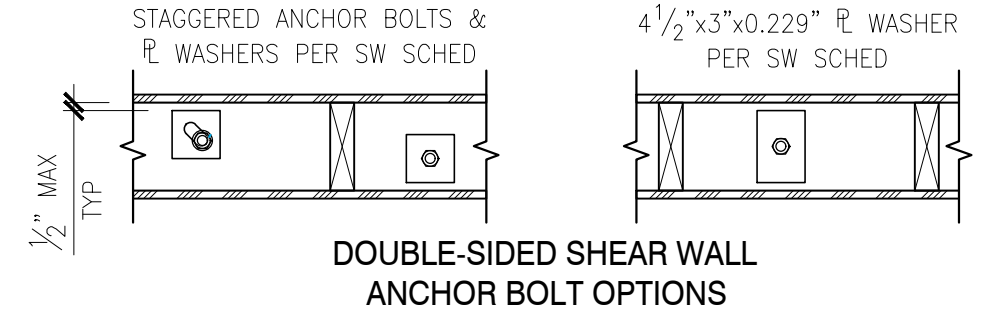
Drawn By: PK  
 Checked By: SC  
 Date: 2-22-2021

CK JOB NO.  
 19-061

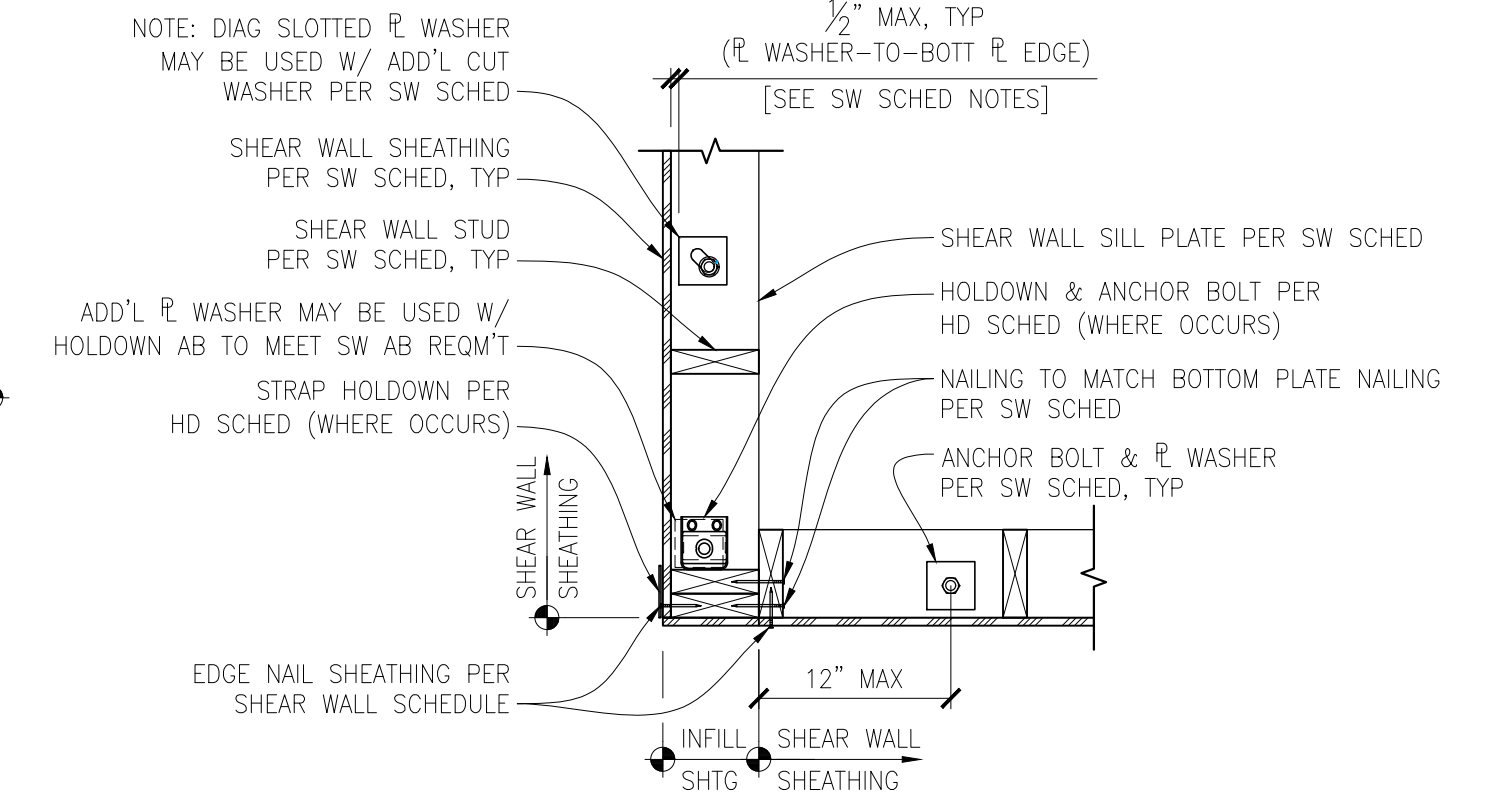
STRUCTURAL  
 DETAILS

S-2.1

SIMPSON STRONG-TIE  
 SLOTTED PLATE WASHERS  
 W/ 3/8" ANCHOR BOLTS  
 3x3x0.229 BPS#-3  
 4.5x3x0.229 BPS#-6

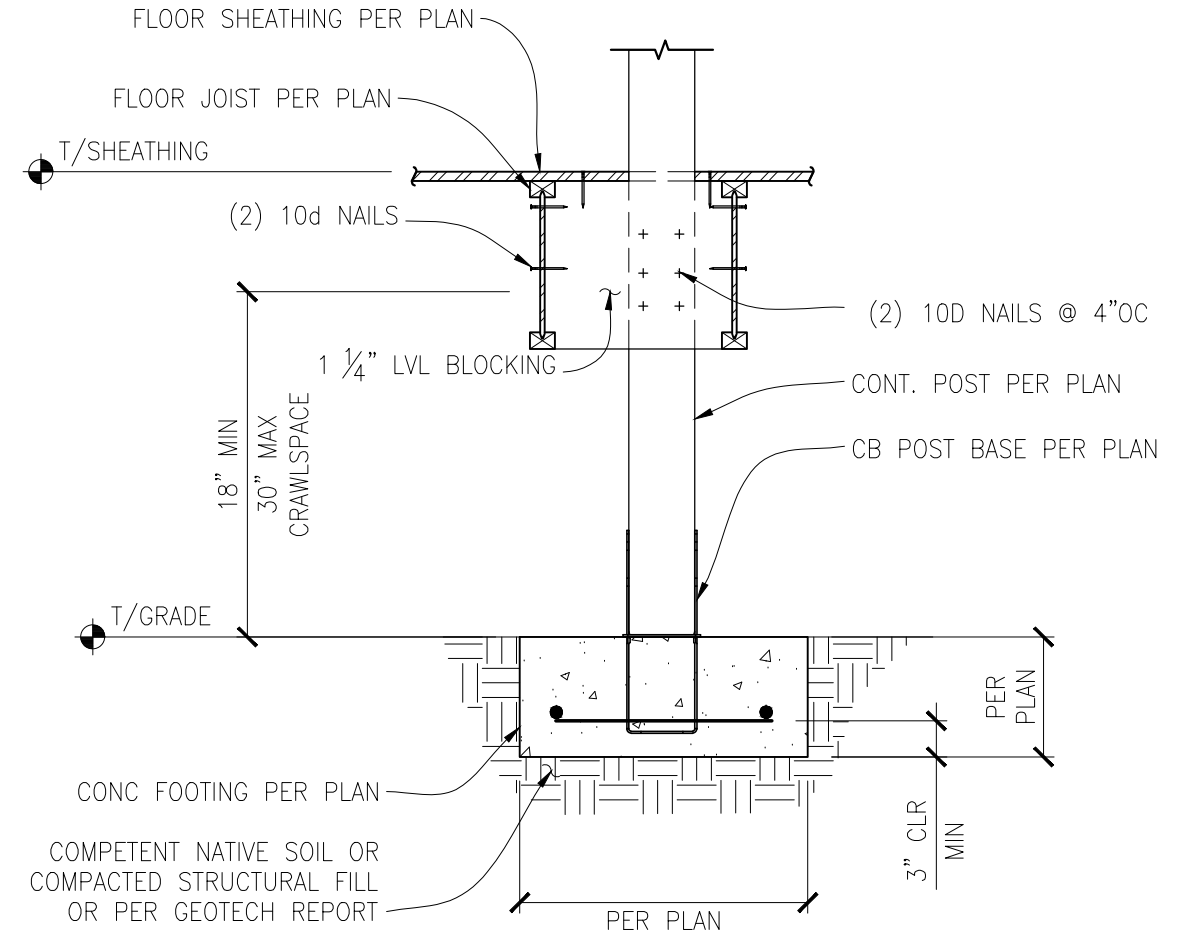


**DOUBLE-SIDED SHEAR WALL ANCHOR BOLT OPTIONS**



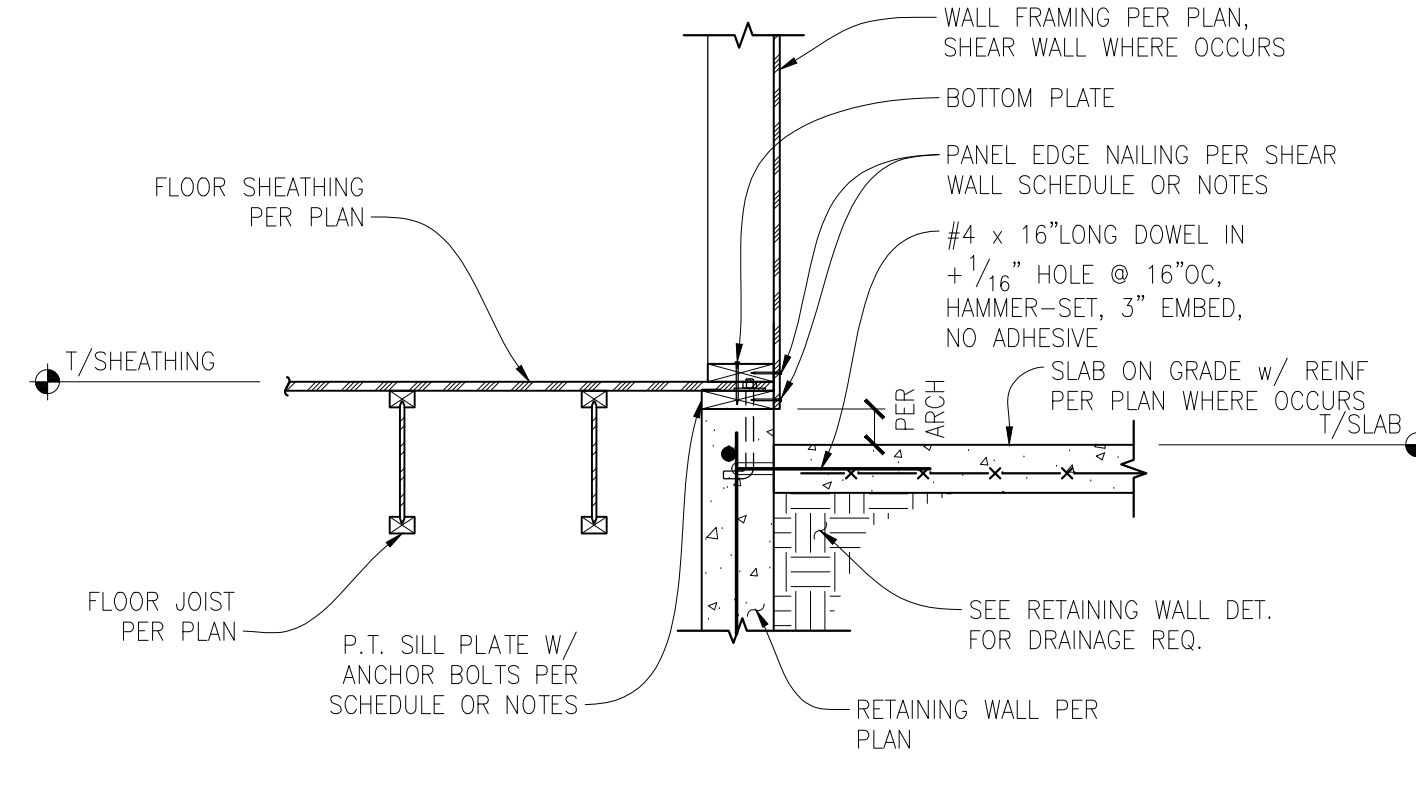
**TYPICAL PLAN VIEW - SHEAR WALL HOLDOWNS & ANCHOR BOLTS**

SCALE: 1" = 1'-0"



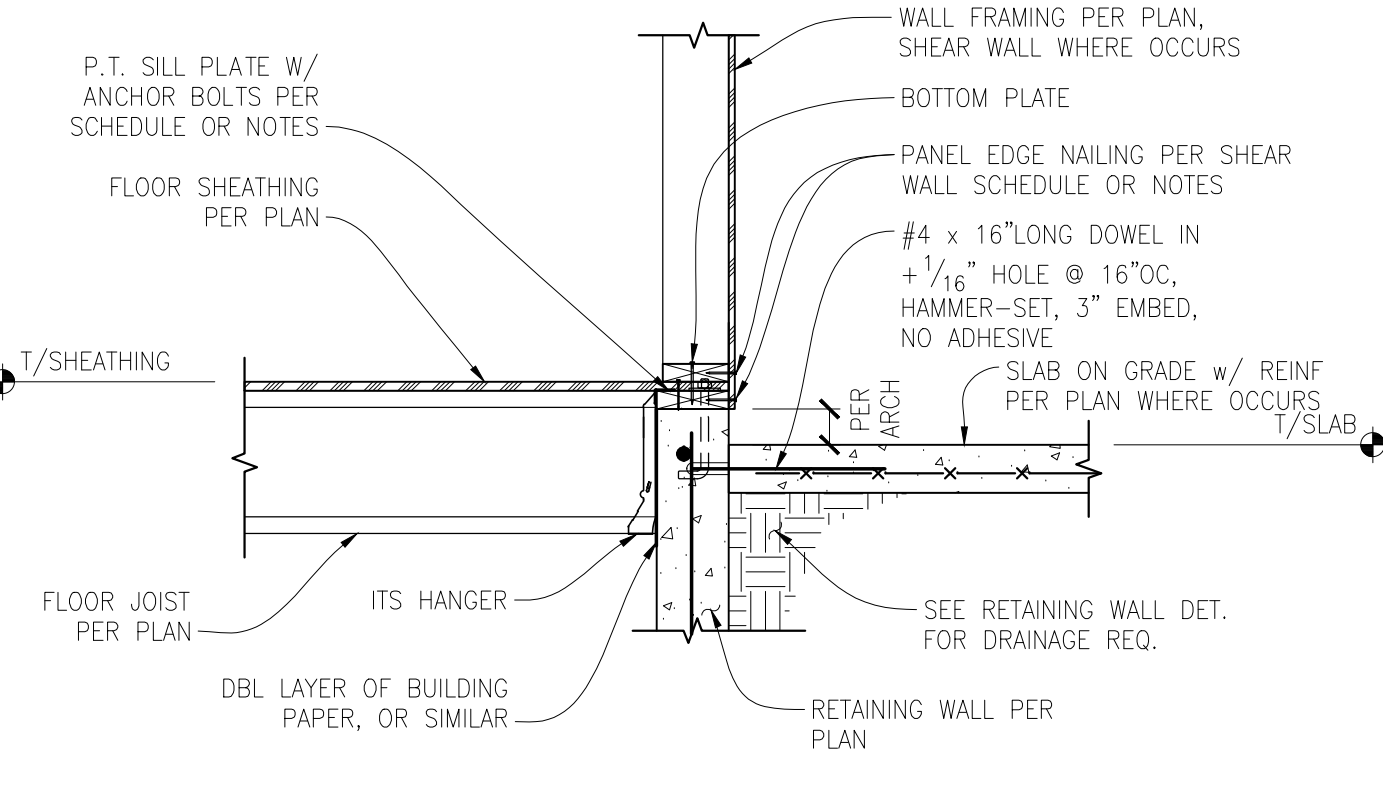
**CB POST TO FOOTING CONNECTION**

SCALE: 3/4" = 1'-0"



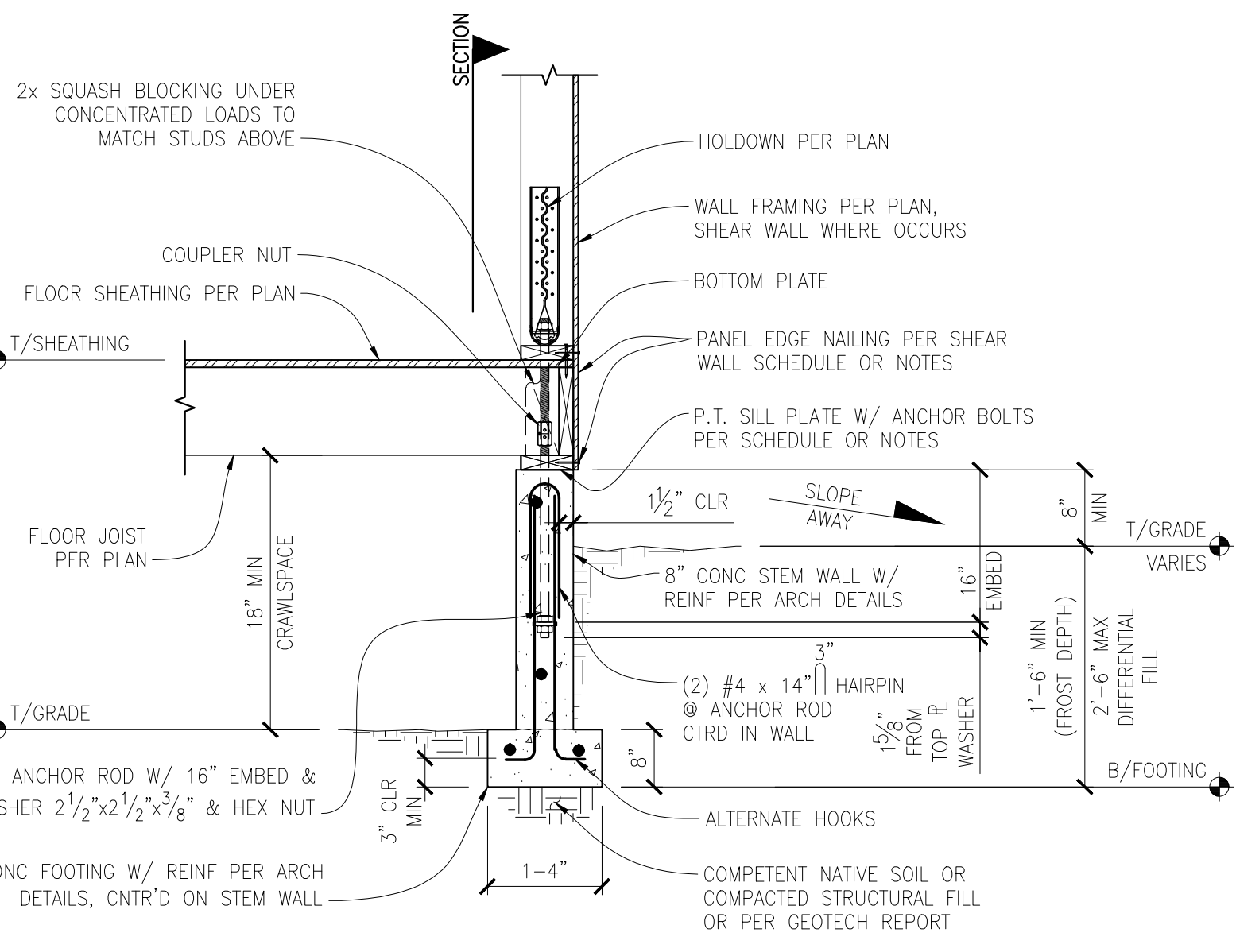
**EXTERIOR SHEAR WALL WITH JOISTS PARALLEL TO RETAINING WALL**

SCALE: 3/4" = 1'-0"



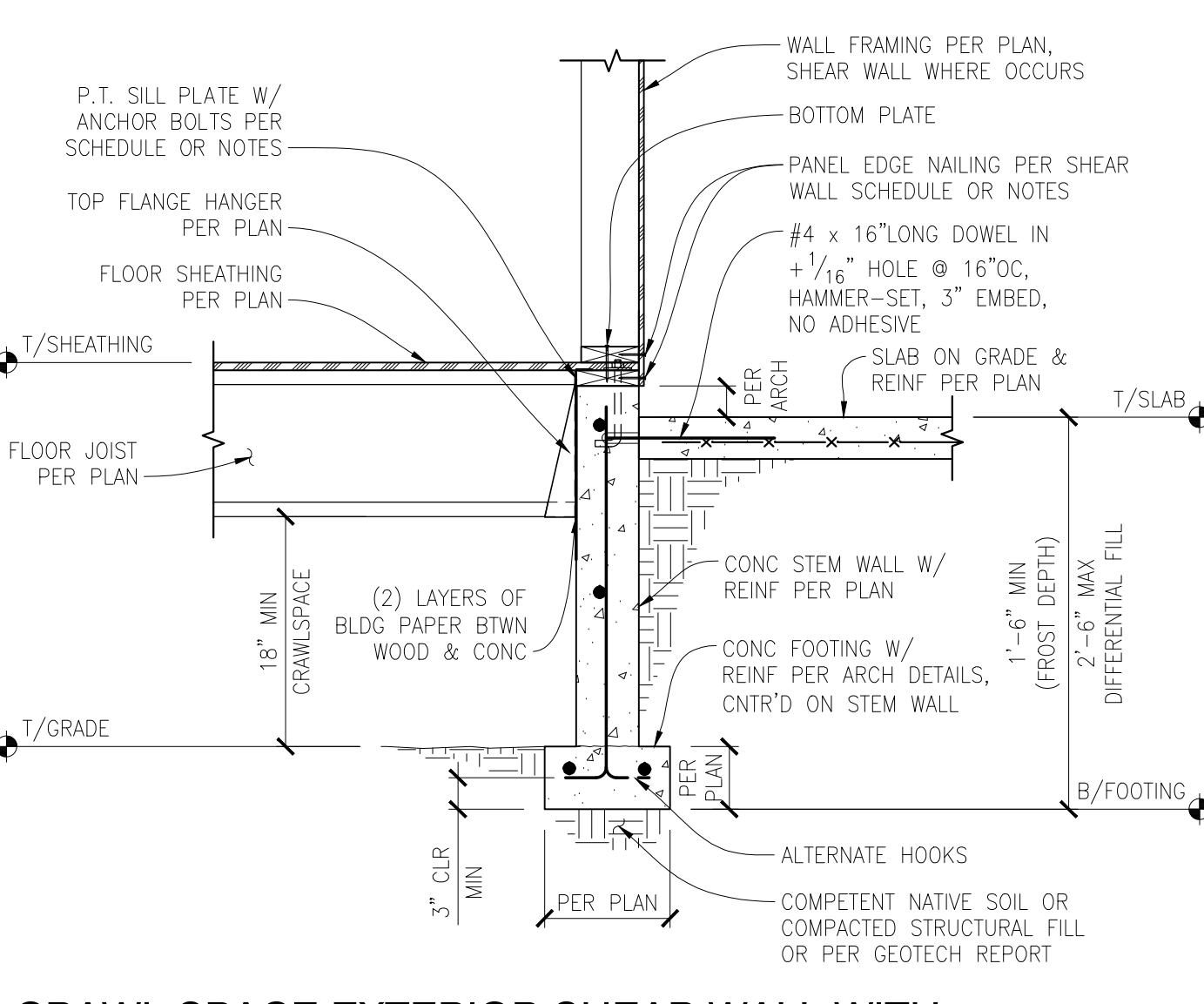
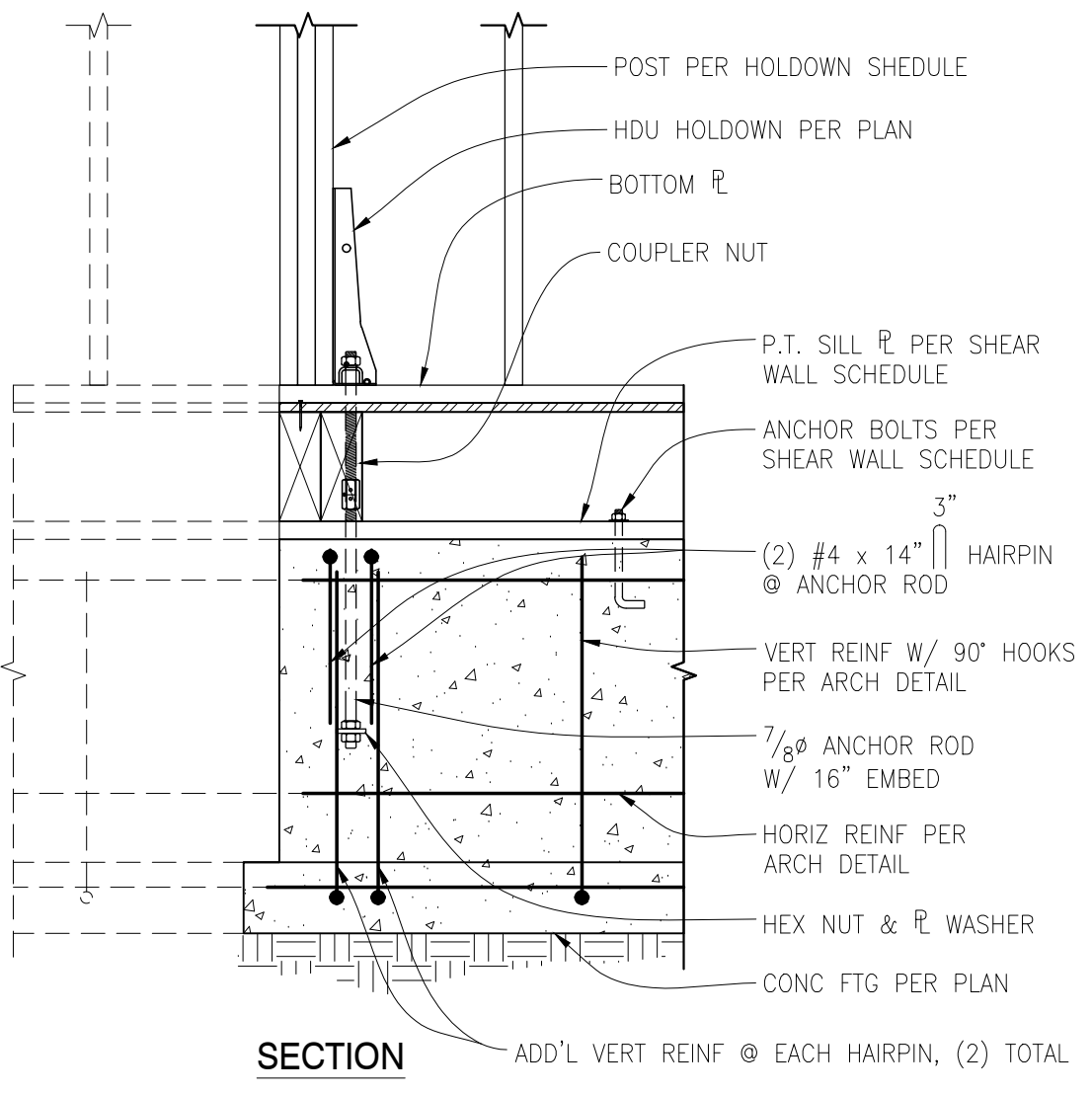
**EXTERIOR SHEAR WALL WITH JOISTS PERPENDICULAR TO RETAINING WALL**

SCALE: 3/4" = 1'-0"



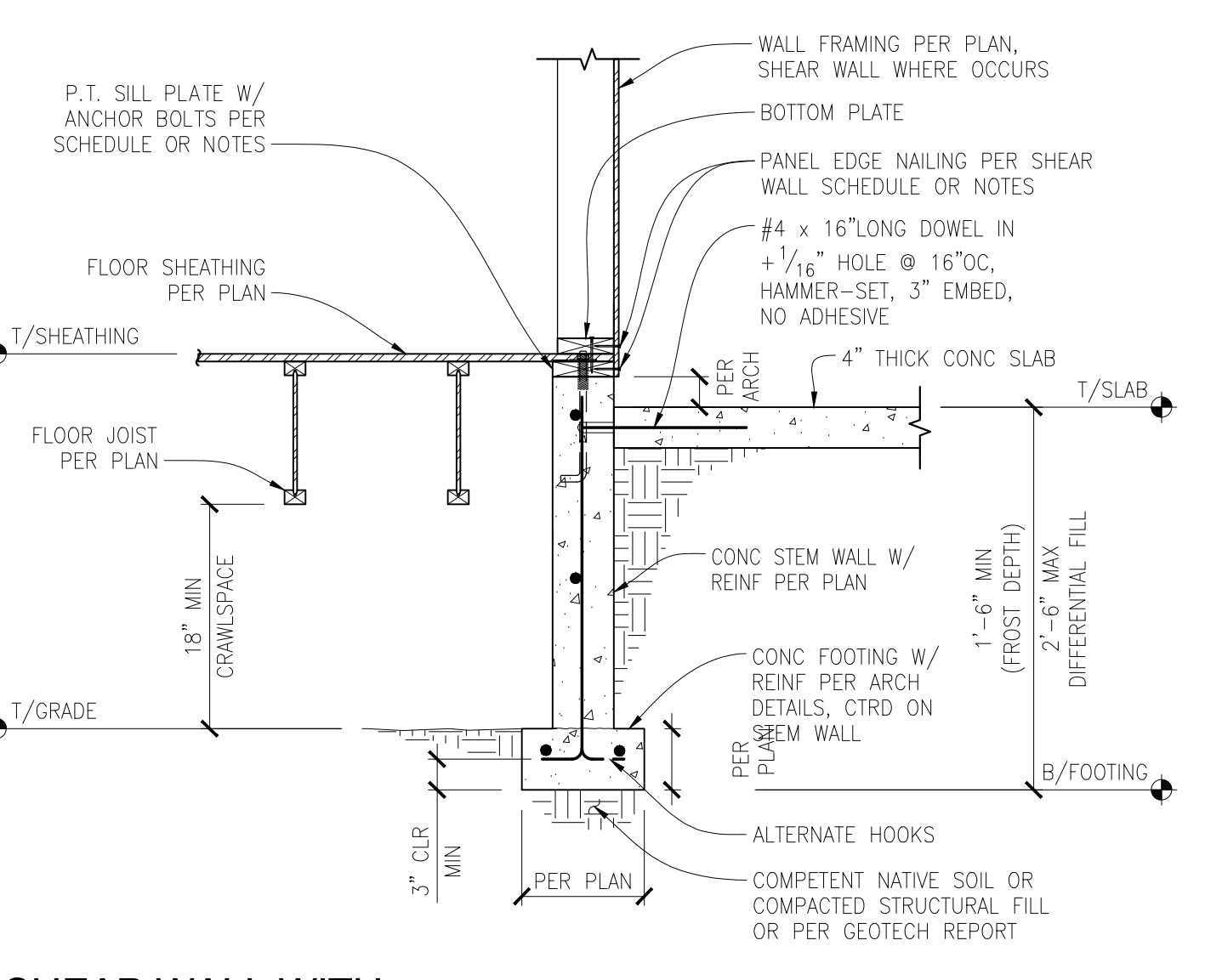
**HOLDOWN AT SHEAR WALL WITH JOISTS PERPENDICULAR**

SCALE: 3/4" = 1'-0"



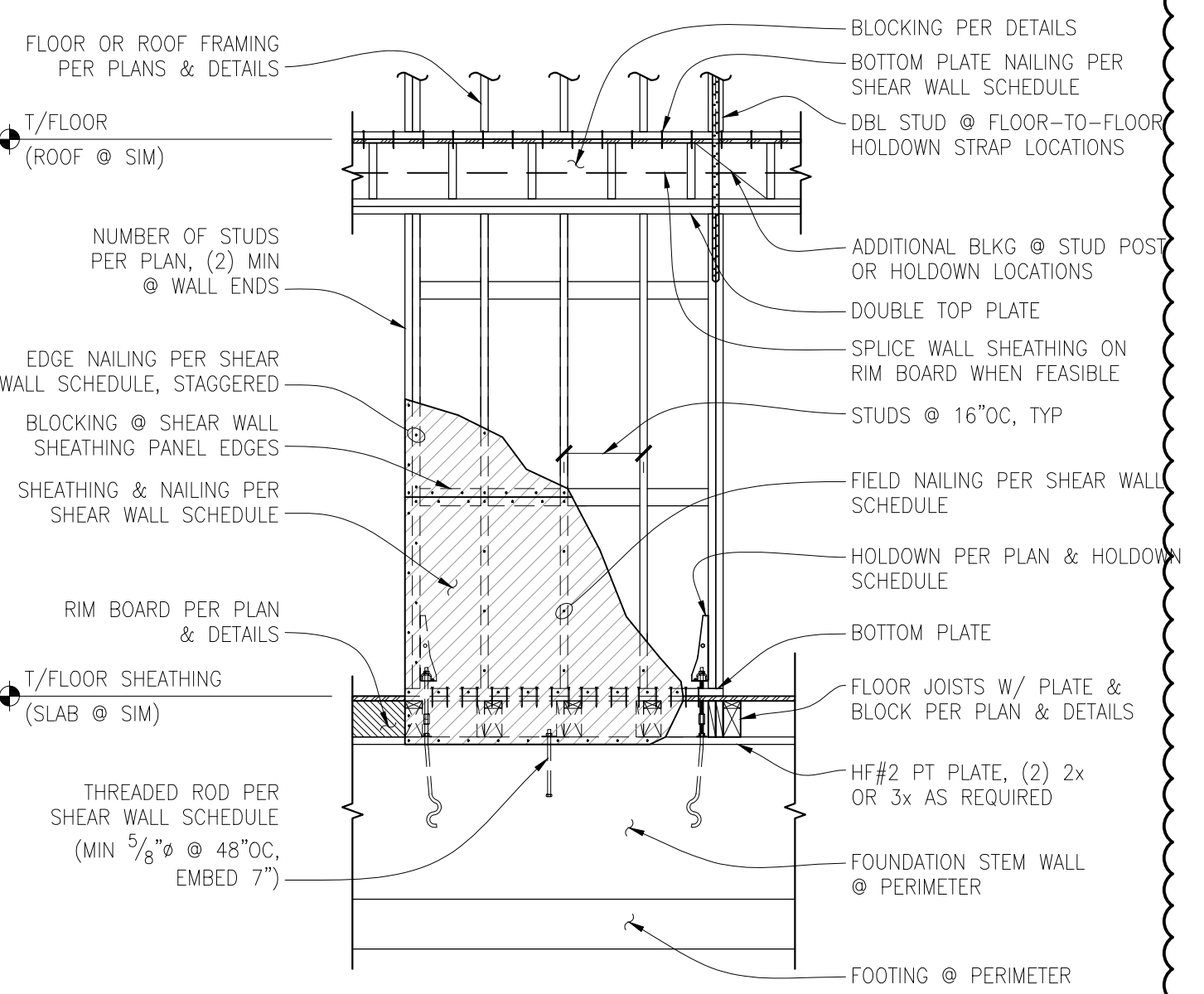
**CRAWL SPACE EXTERIOR SHEAR WALL WITH JOISTS PERPENDICULAR TO RAISED STEM WALL**

SCALE: 3/4" = 1'-0"



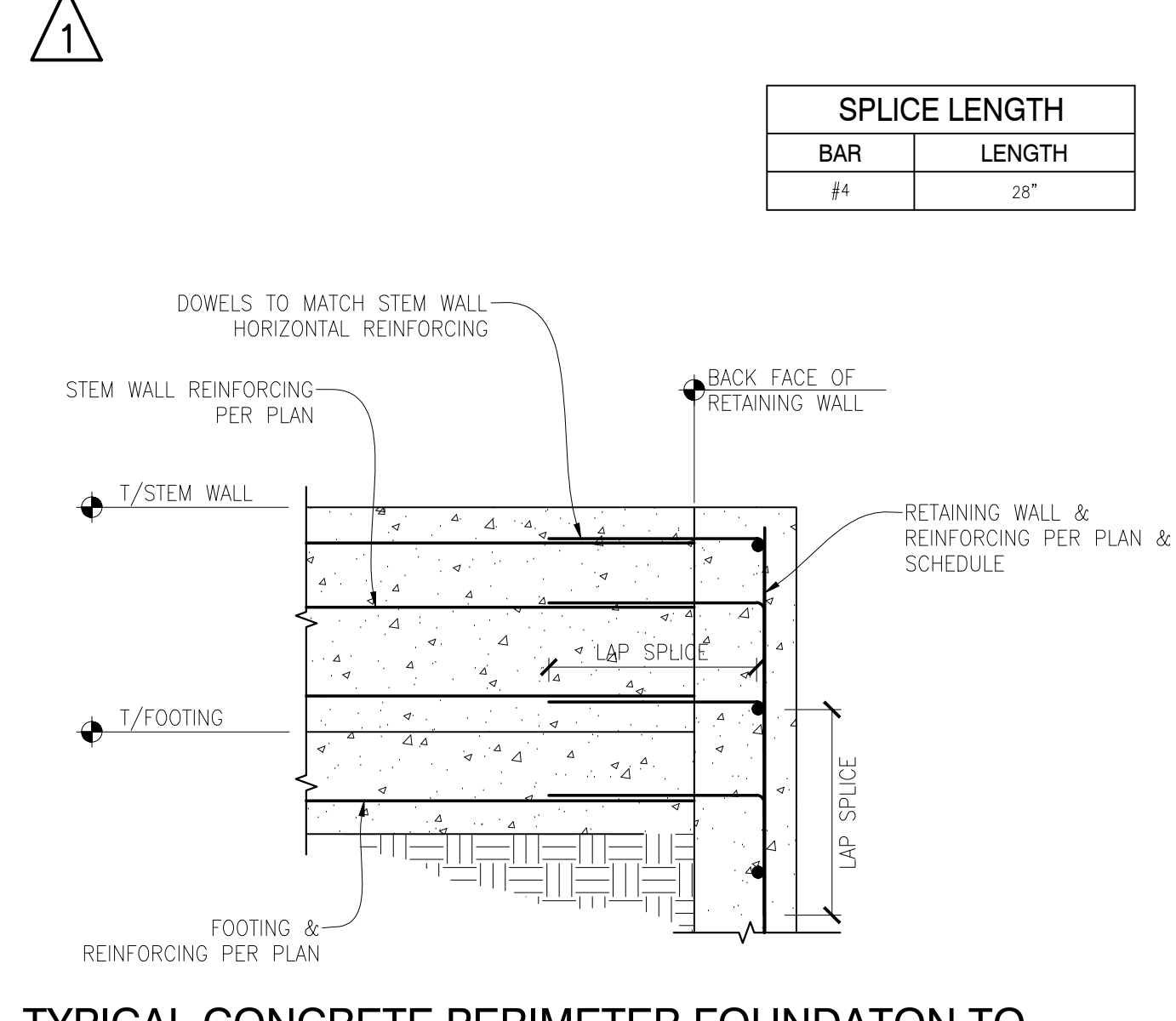
**SHEAR WALL WITH JOISTS PARALLEL TO RAISED STEM WALL**

SCALE: 3/4" = 1'-0"



**TYPICAL SHEAR WALL ELEVATION**

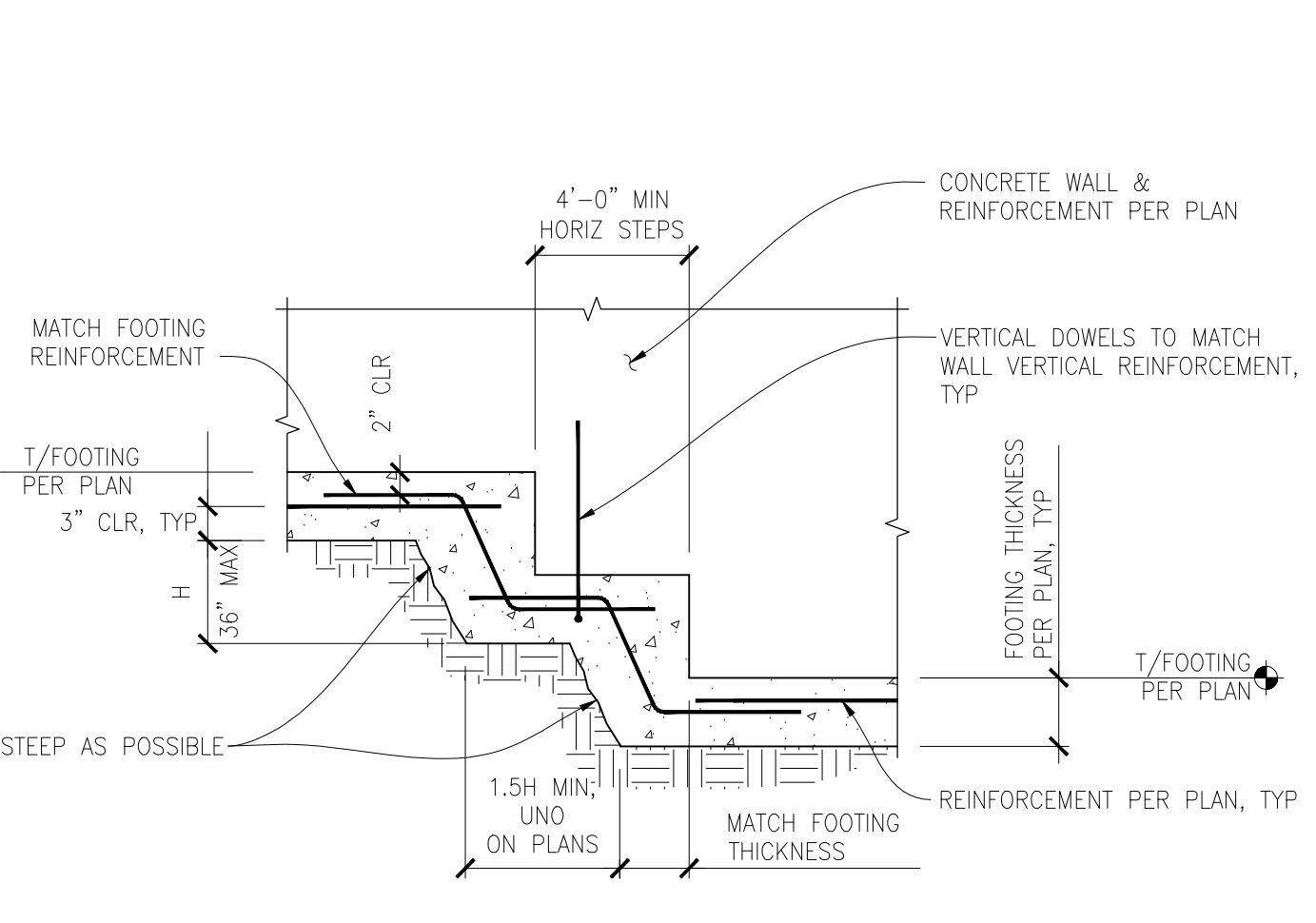
SCALE: N.T.S.



**TYPICAL CONCRETE PERIMETER FOUNDATION TO RETAINING WALL CONNECTION**

SCALE: 3/4" = 1'-0"

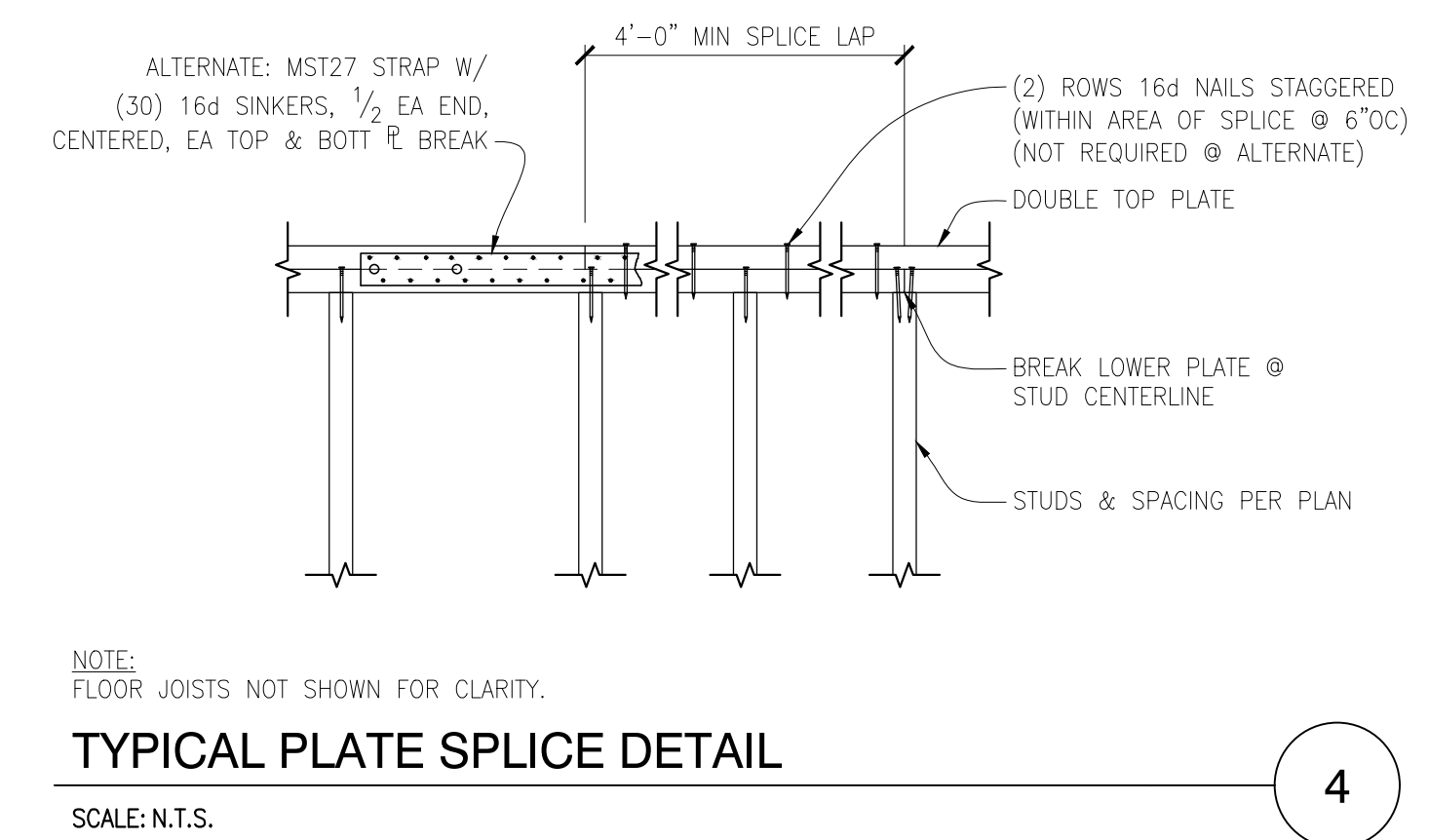
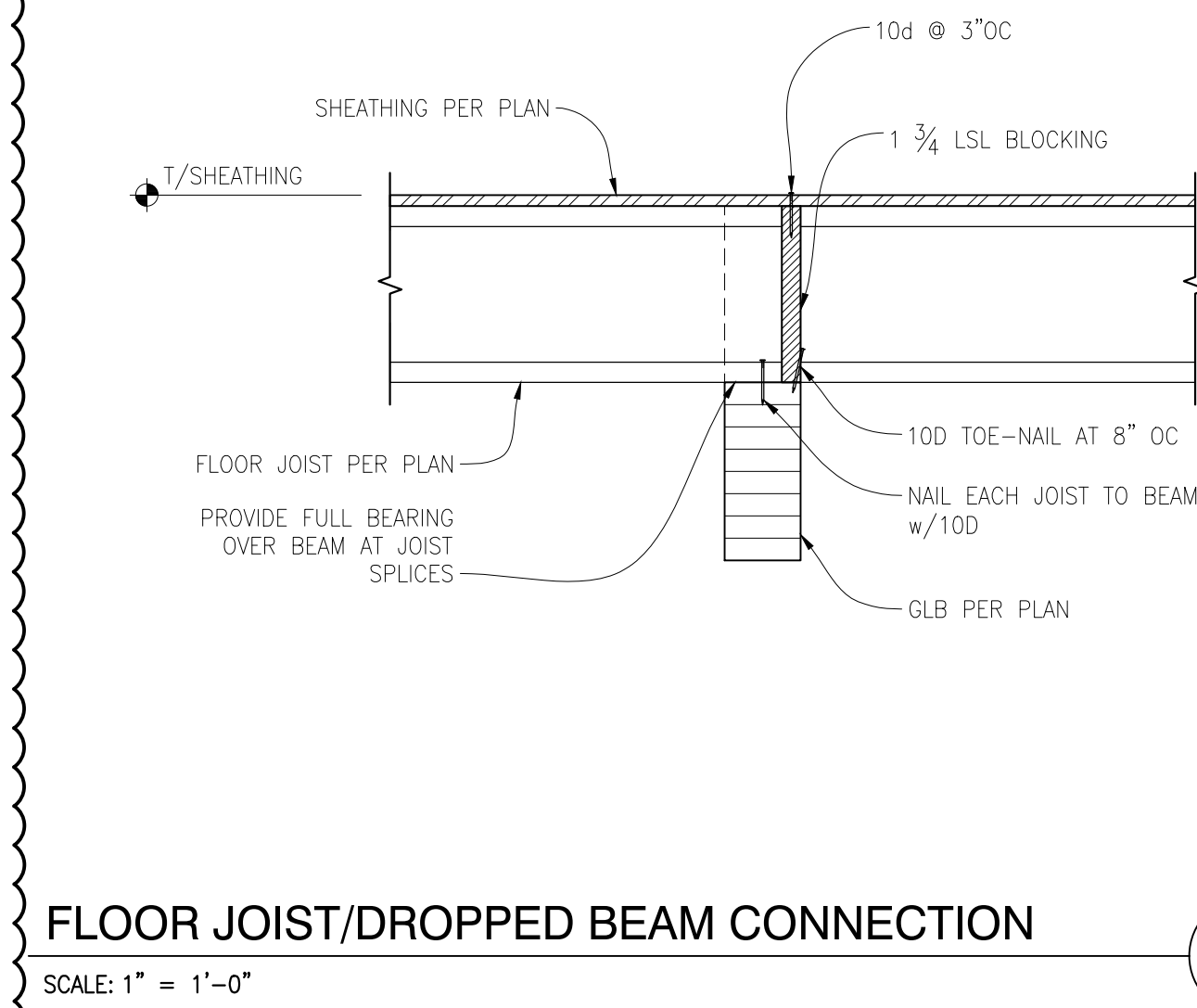
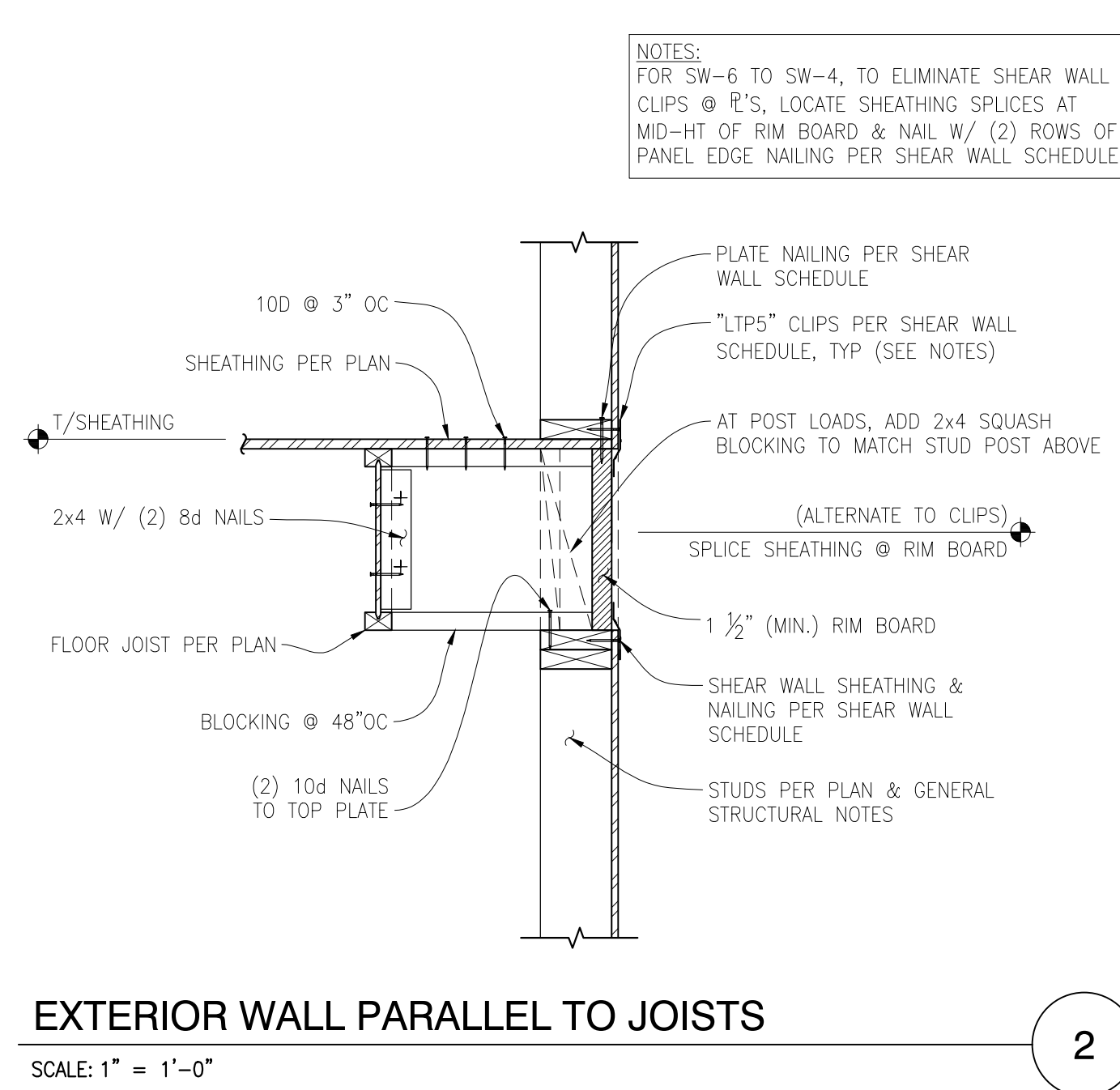
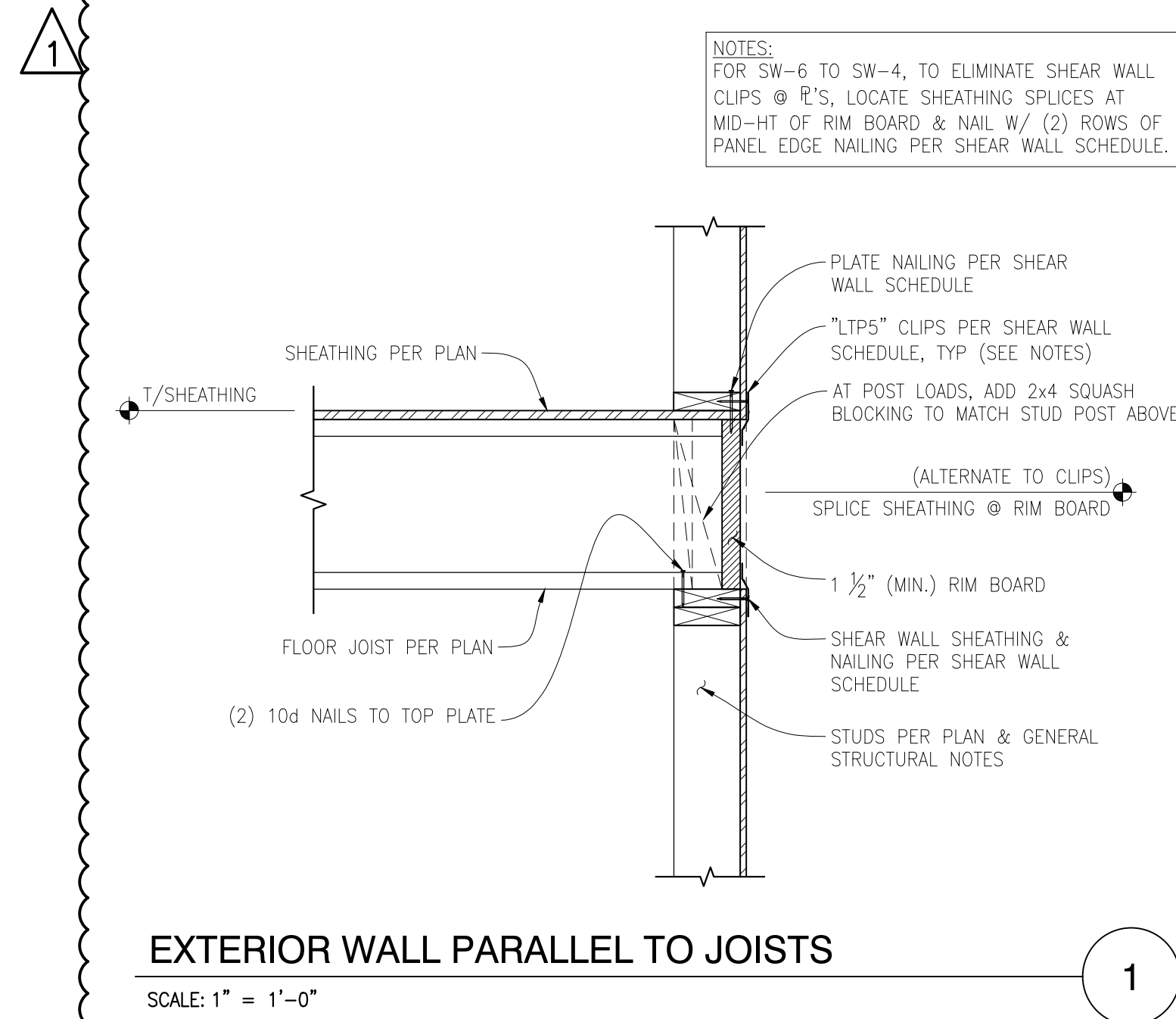
SPLICE LENGTH	
BAR #	LENGTH
#4	28"



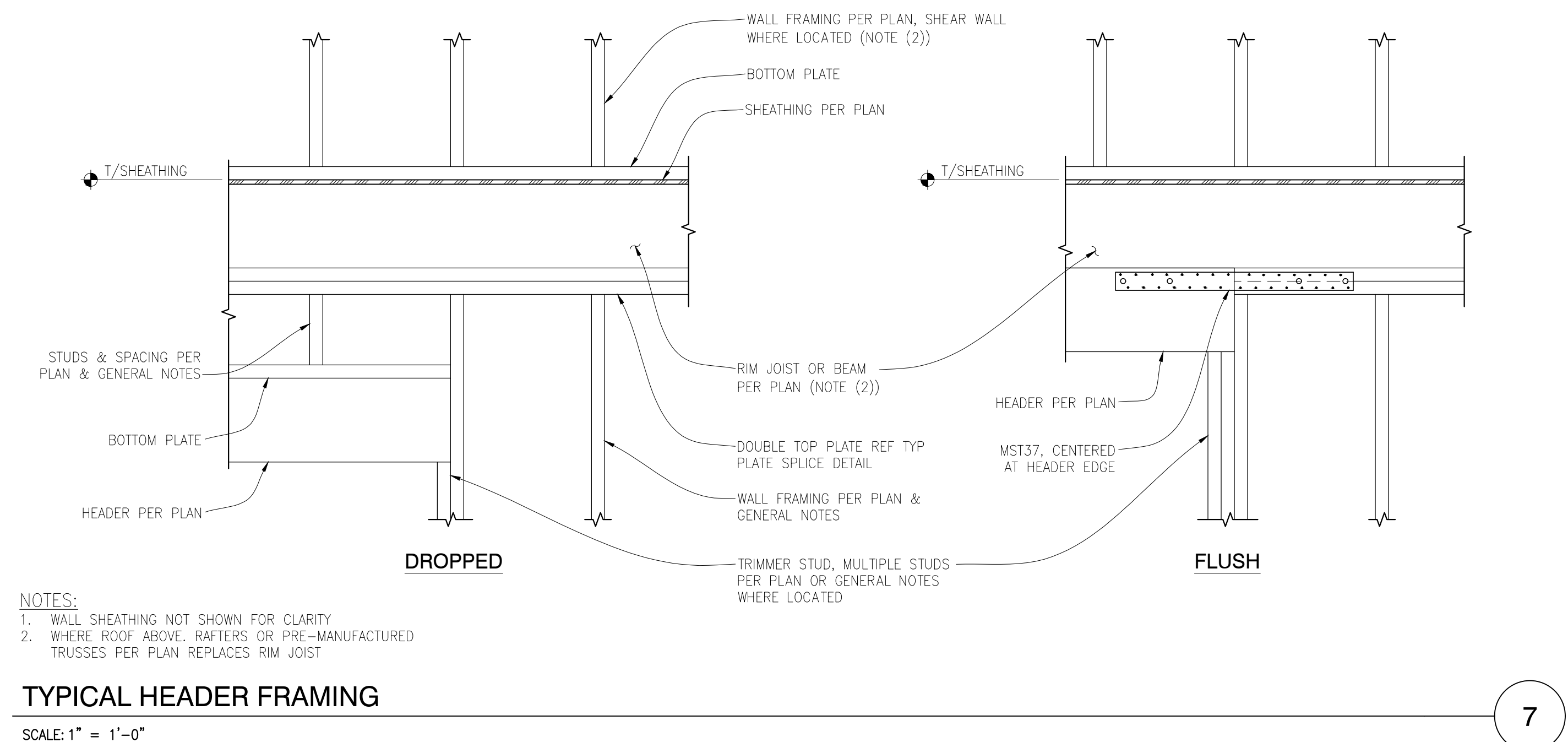
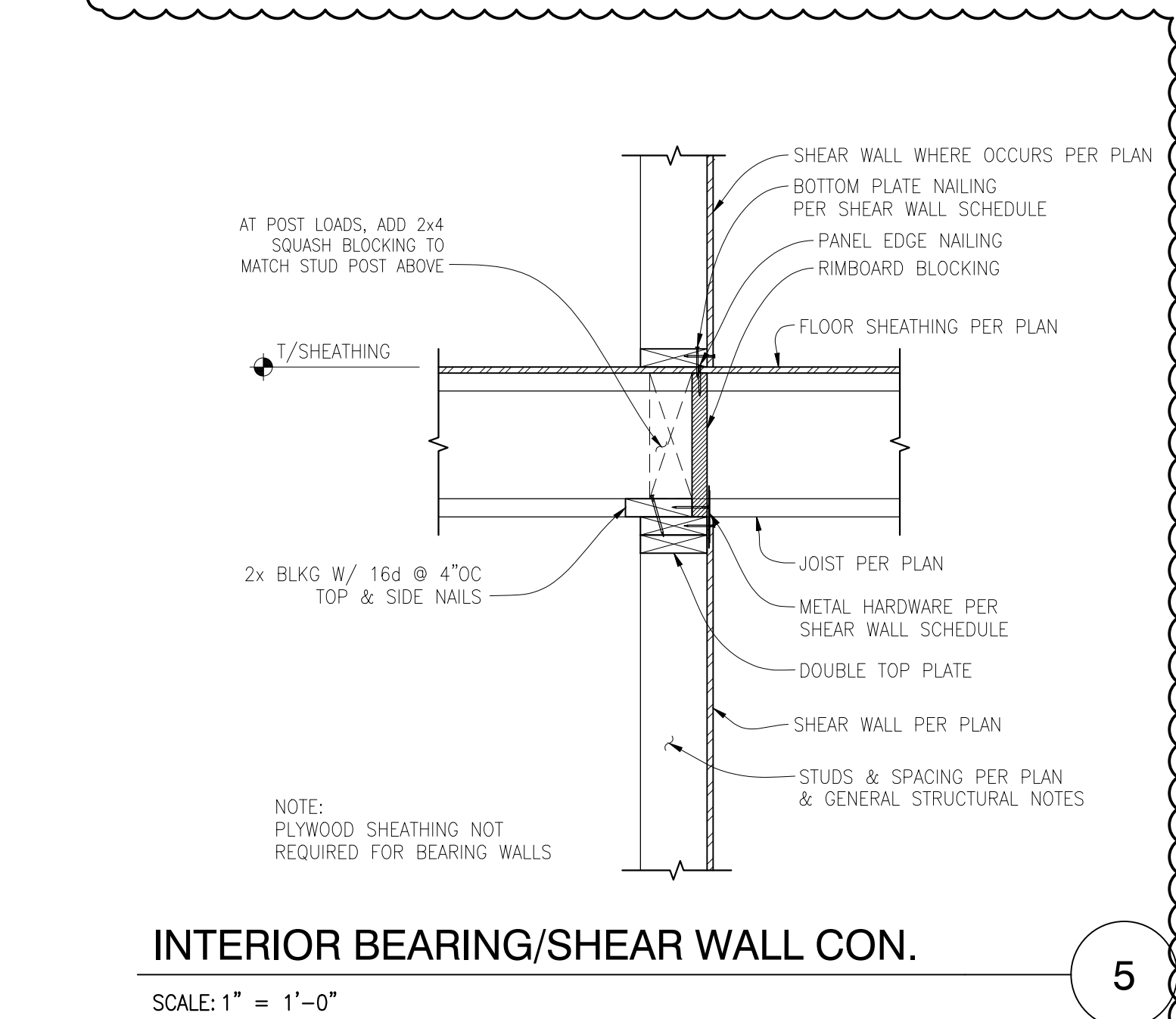
**TYPICAL STEPPED FOOTING DETAIL**

SCALE: 3/4" = 1'-0"

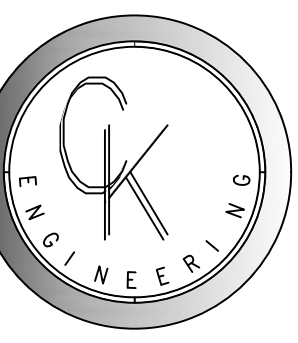
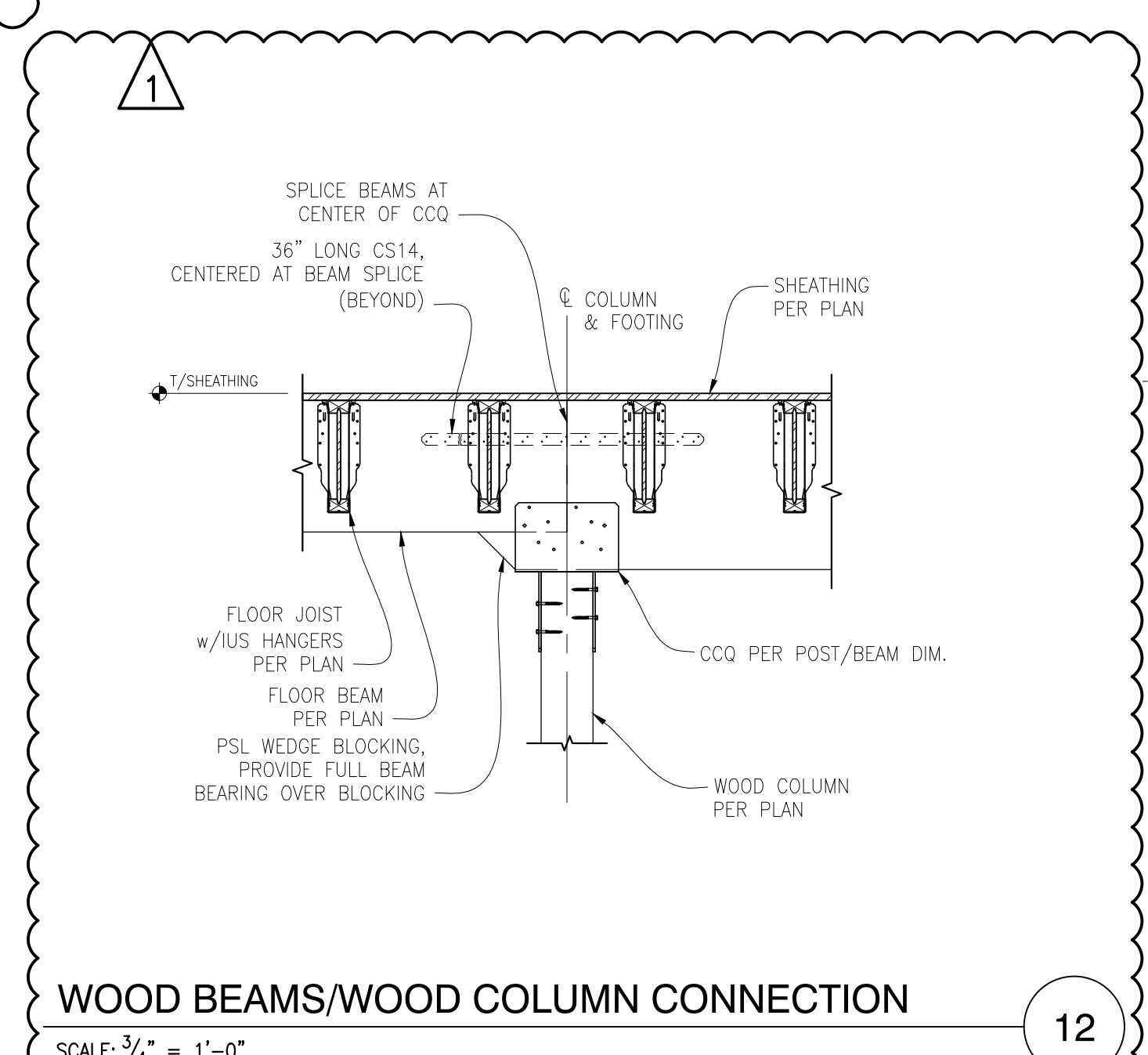
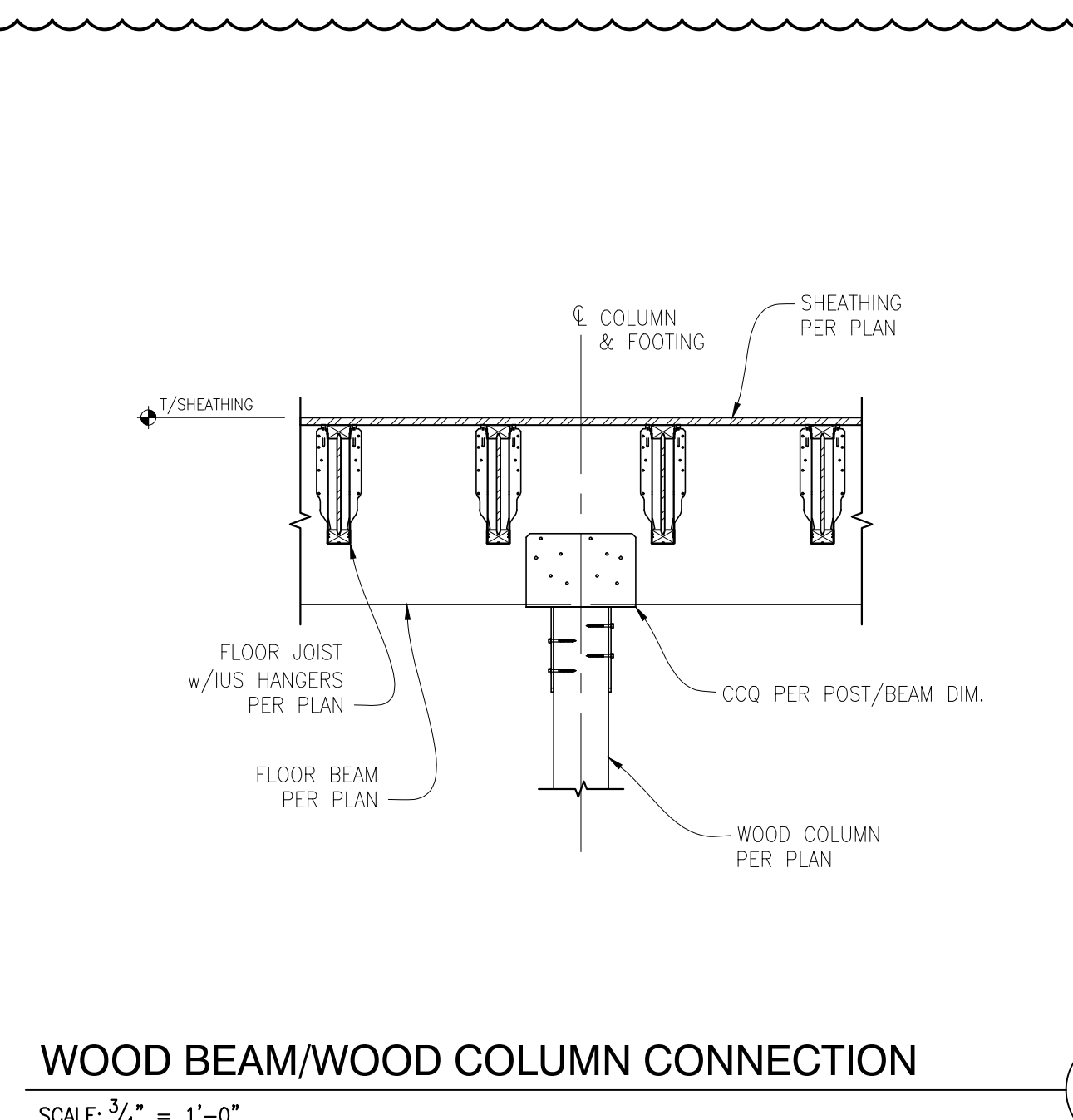
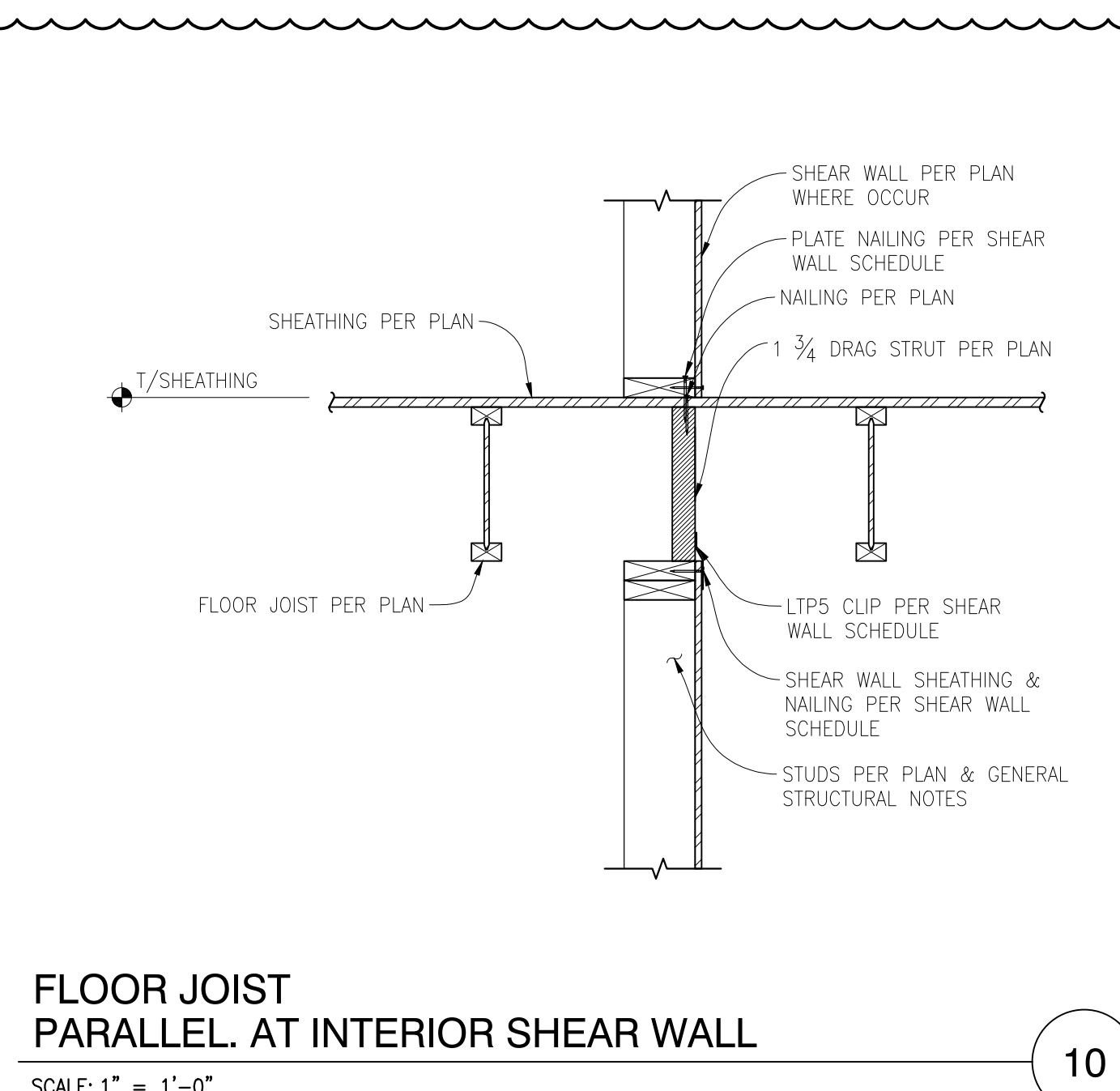
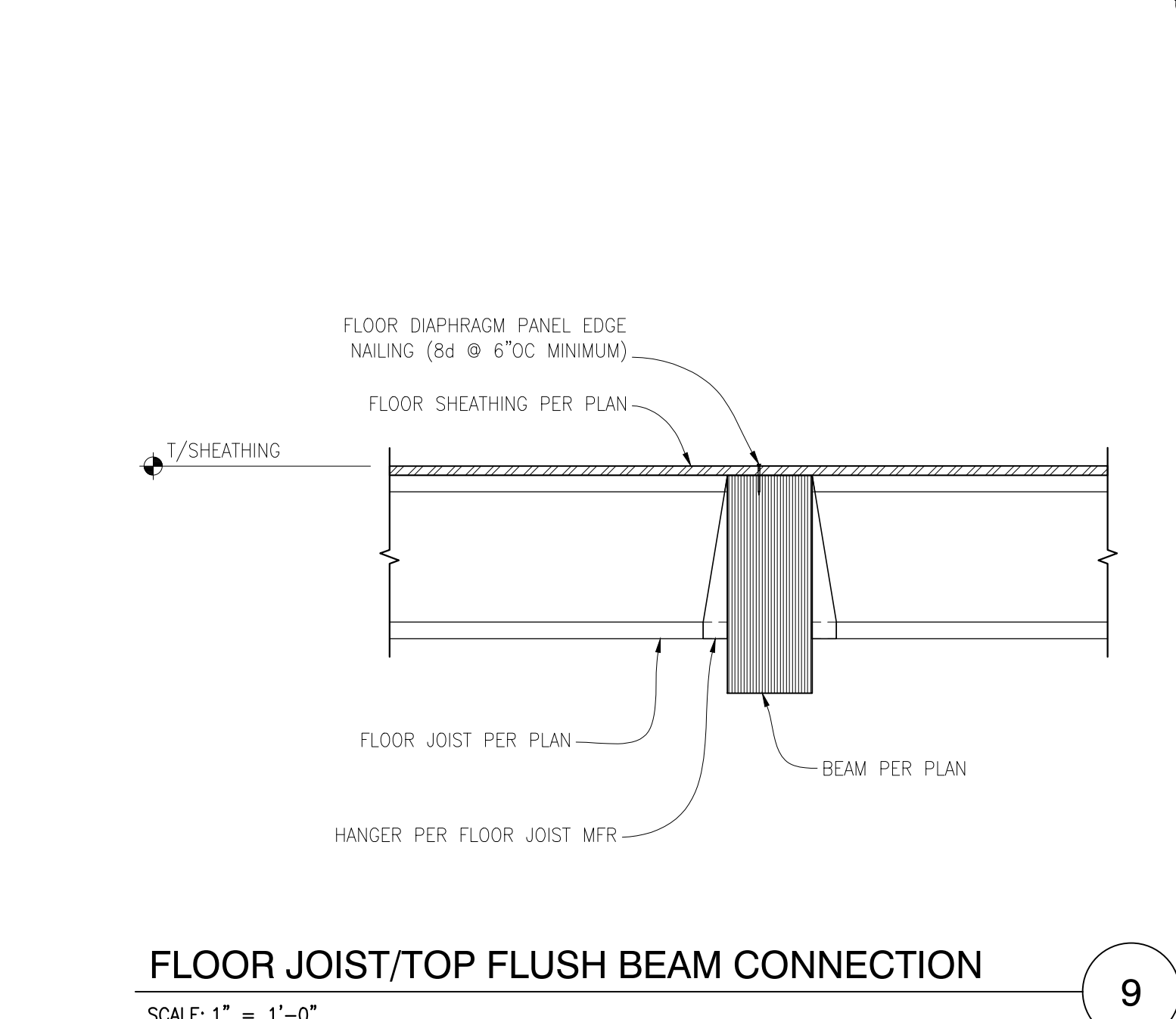
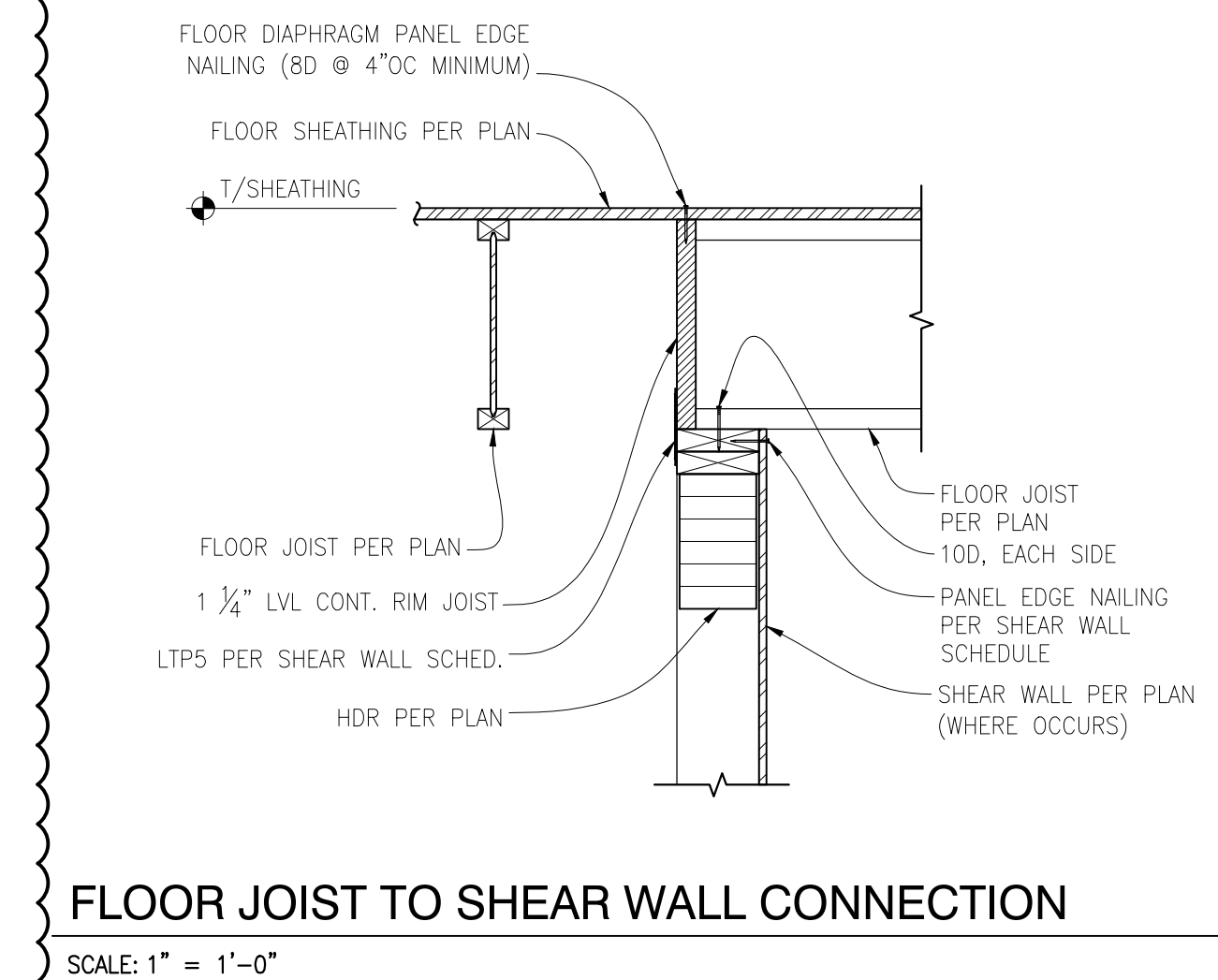




**NOTE:**  
FLOOR JOISTS NOT SHOWN FOR CLARITY.



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



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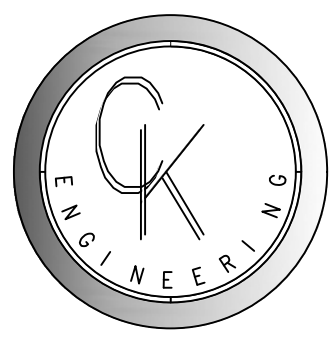
REVISION #	DATE	DESCRIPTION
1	02-22-2021	BDC REVIEW

Drawn By: PK  
Checked By: SC  
Date: 2-22-2021

CK JOB NO.  
19-061

STRUCTURAL  
DETAILS

S-3.0

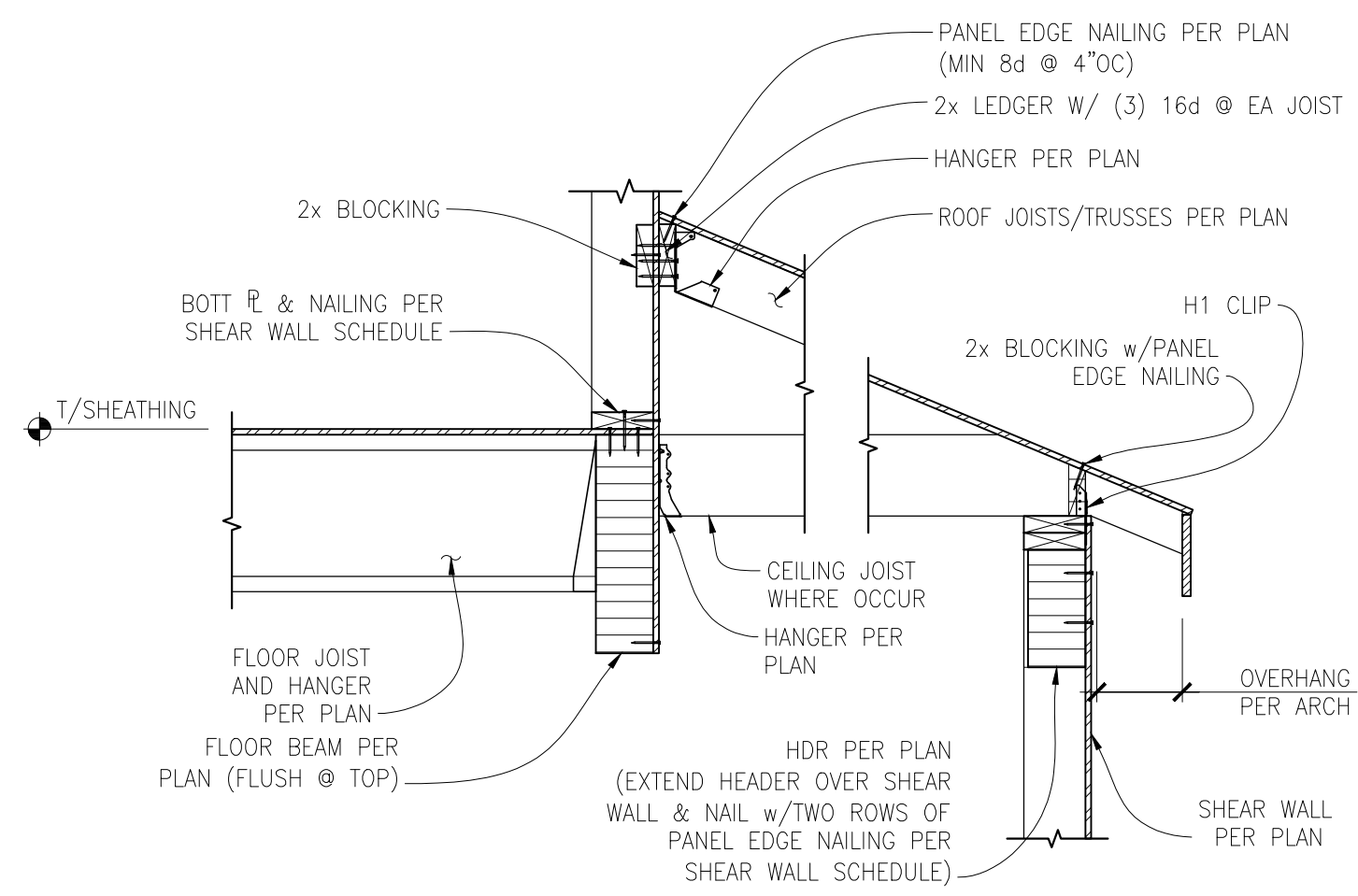


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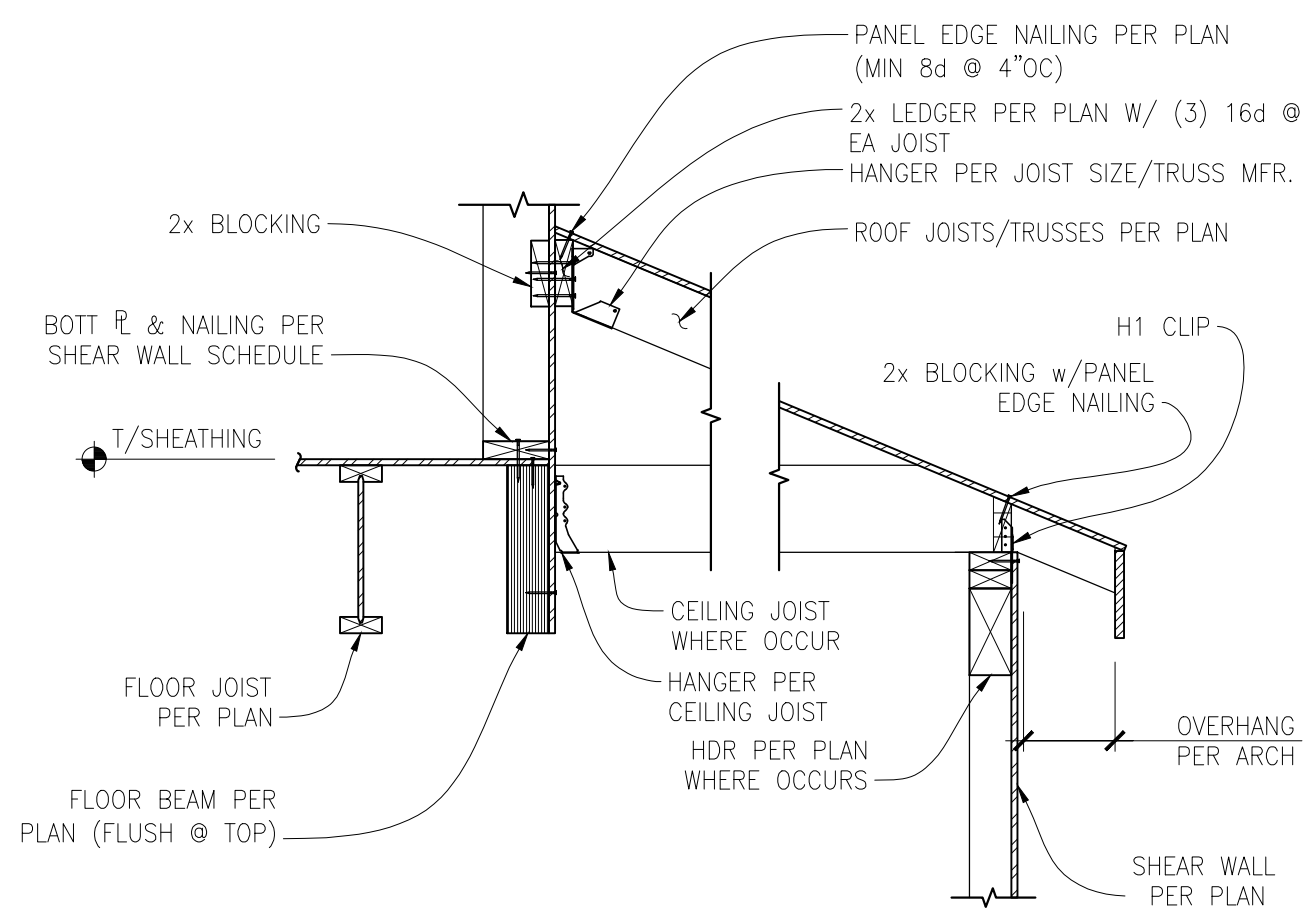
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 MERCER ISLAND, WA 98040



**UPPER FLOOR SHEAR WALL TO MAIN FLOOR SHEAR WALL CONNECTION**

SCALE: 3/4" = 1'-0"

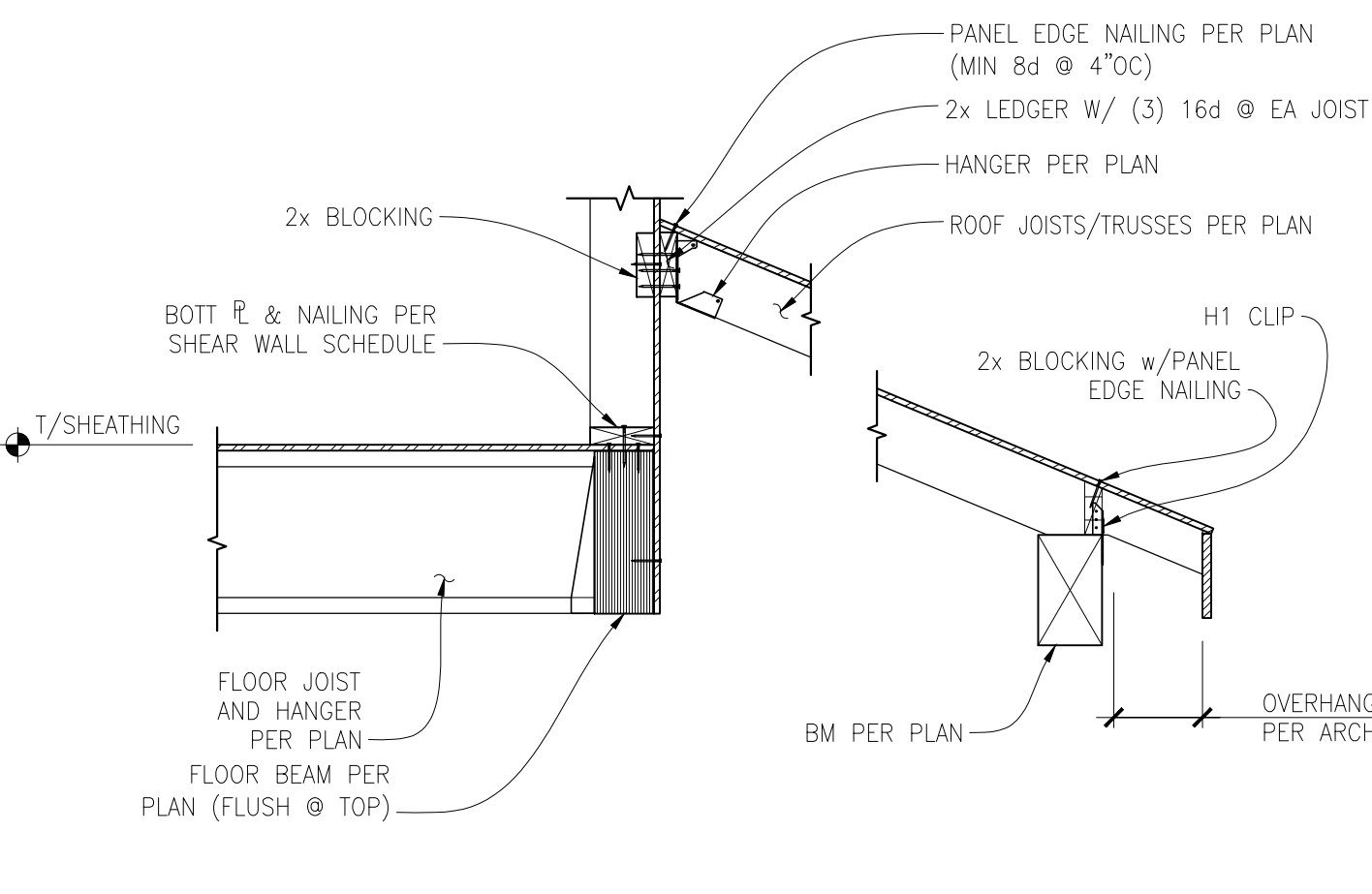
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**UPPER FLOOR SHEAR WALL TO MAIN FLOOR SHEAR WALL CONNECTION**

SCALE: 3/4" = 1'-0"

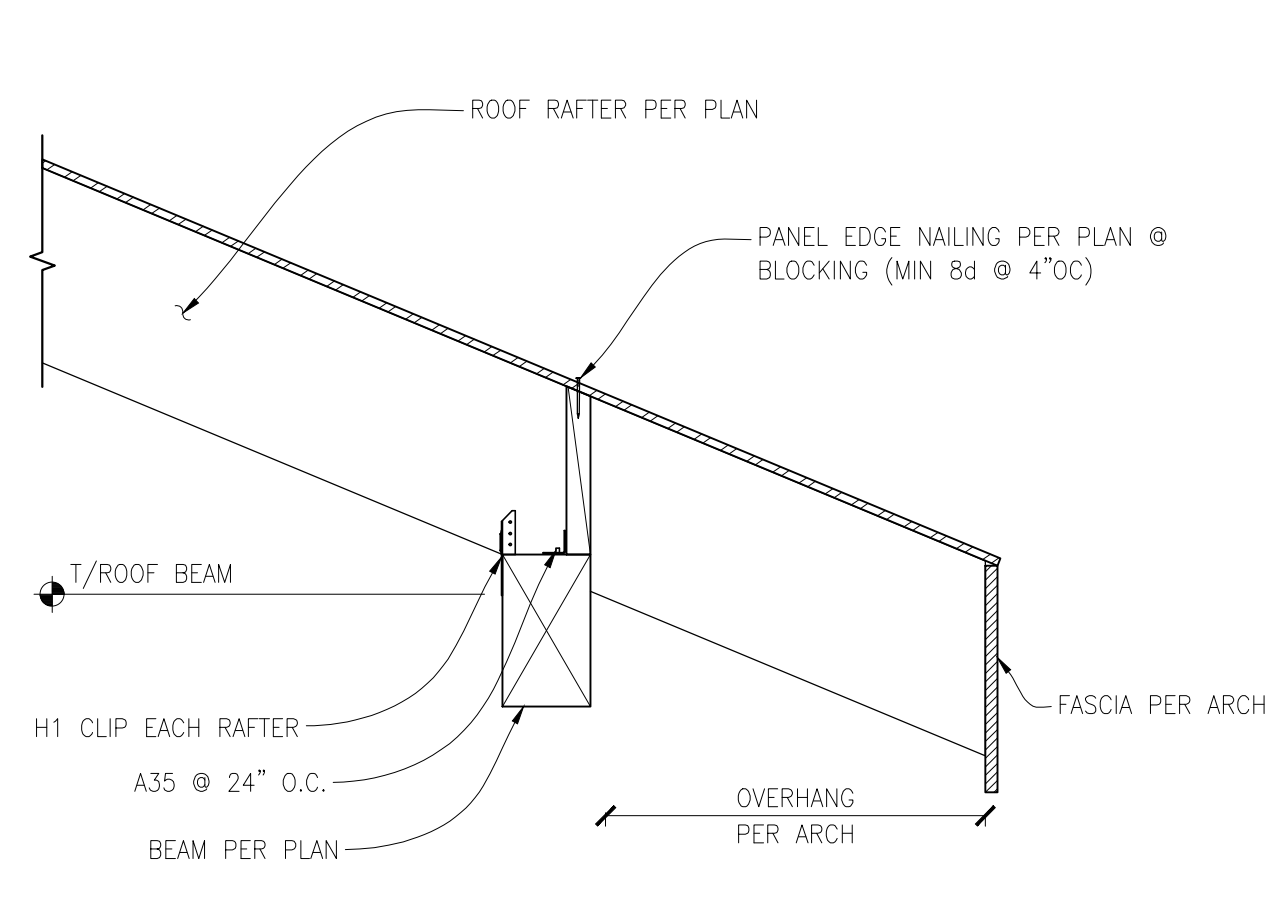
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**UPPER FLOOR SHEAR WALL TO MAIN FLOOR/ LOWER ROOF CONNECTION**

SCALE: 3/4" = 1'-0"

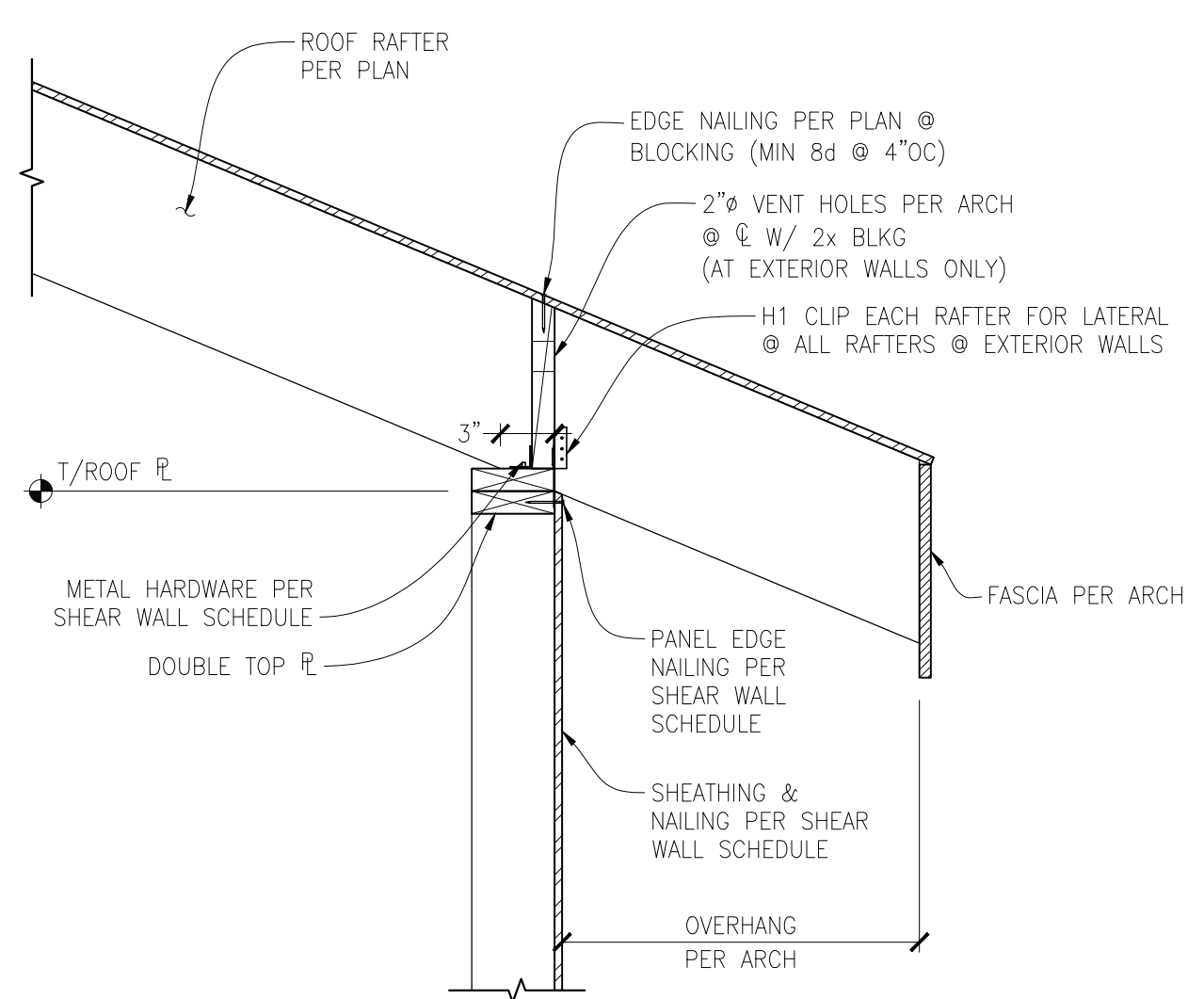
3



**EXTERIOR ROOF RAFTERS TO ROOF BEAM CONNECTION**

SCALE: 1" = 1'-0"

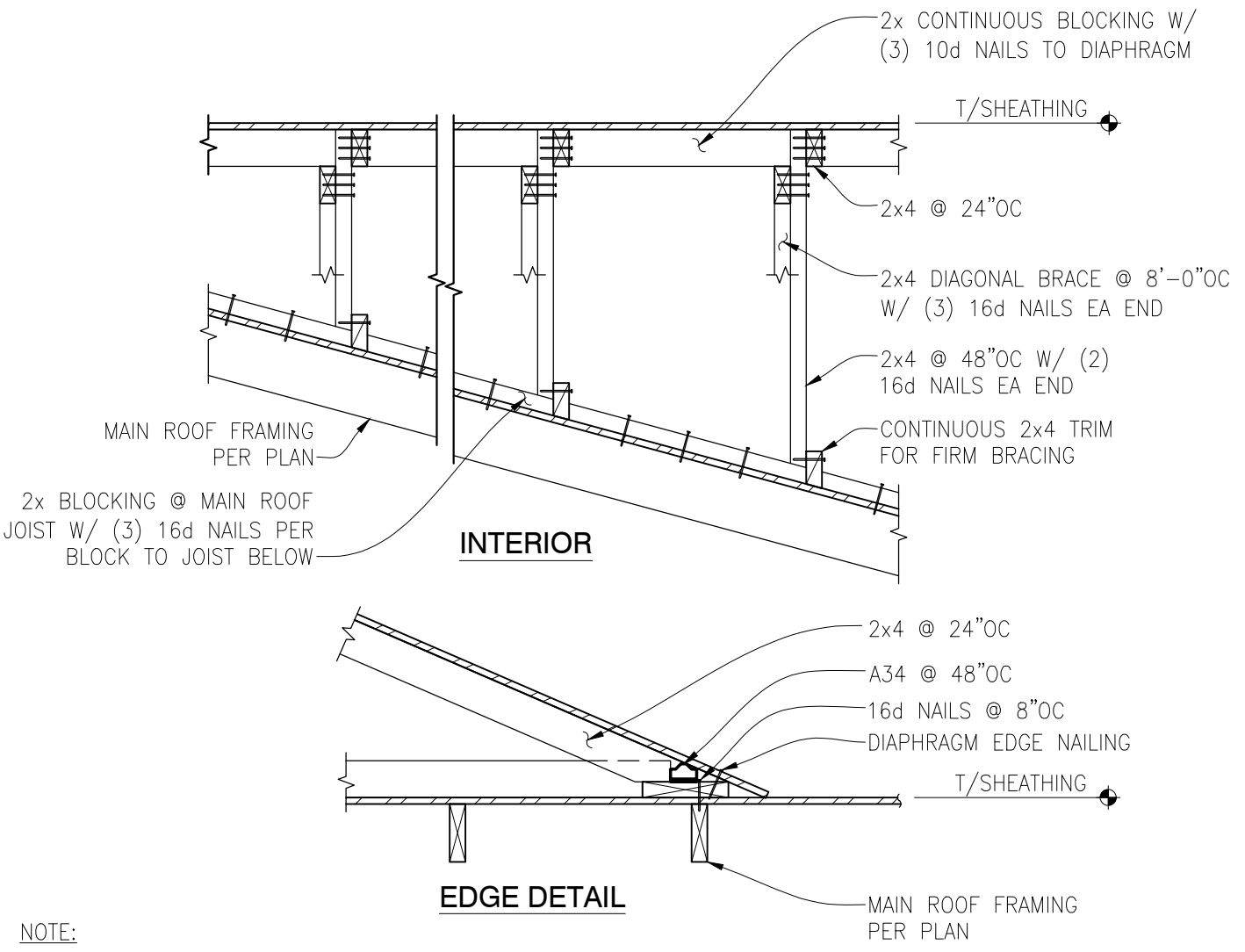
4



**SHEAR WALL PERPENDICULAR TO ROOF RAFTER**

SCALE: 1" = 1'-0"

5

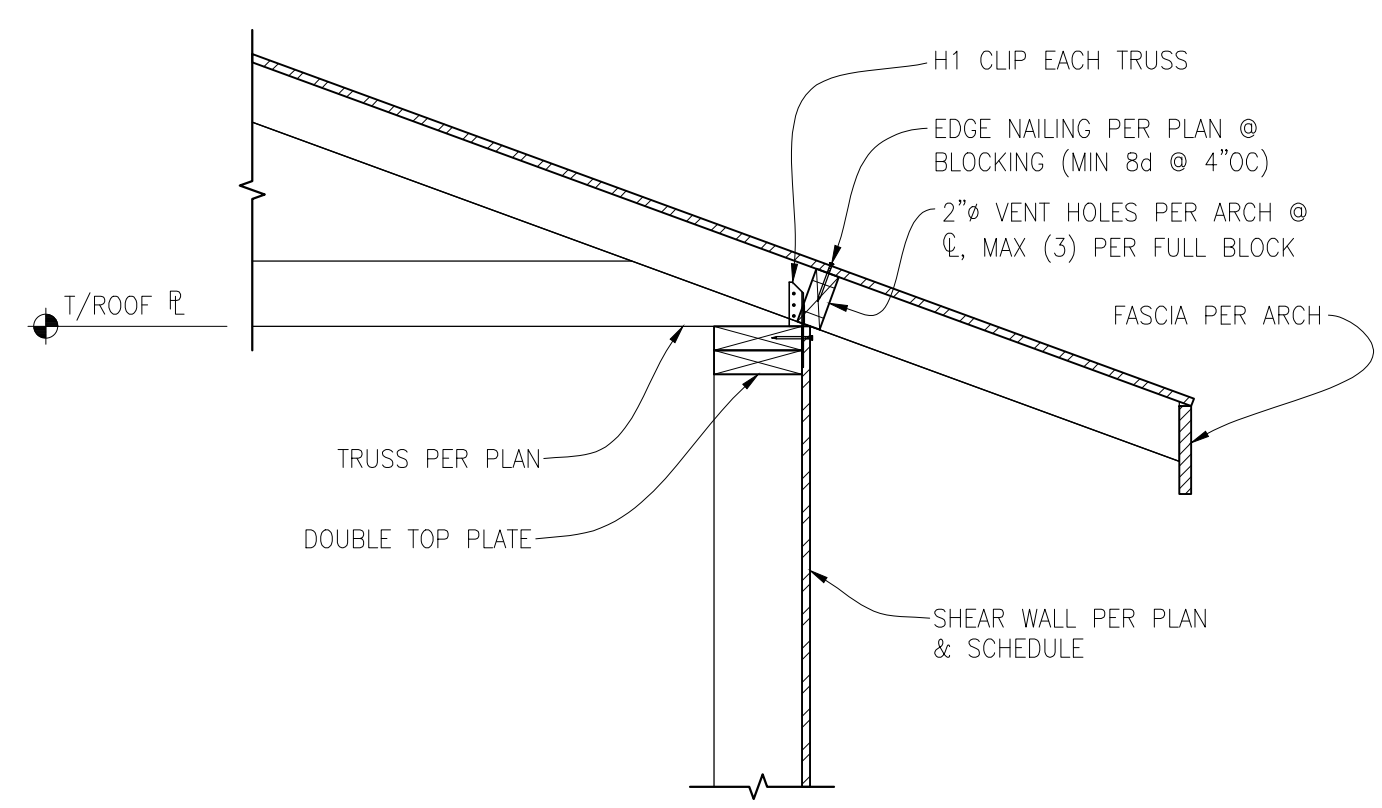


NOTE:  
 VENTILATION MAY BE REQUIRED AT BLOCKING. VERIFY METHOD WITH ENGINEER PRIOR TO CONSTRUCTION.

**TYPICAL ROOF OVERFRAMING DETAIL**

SCALE: N.T.S.

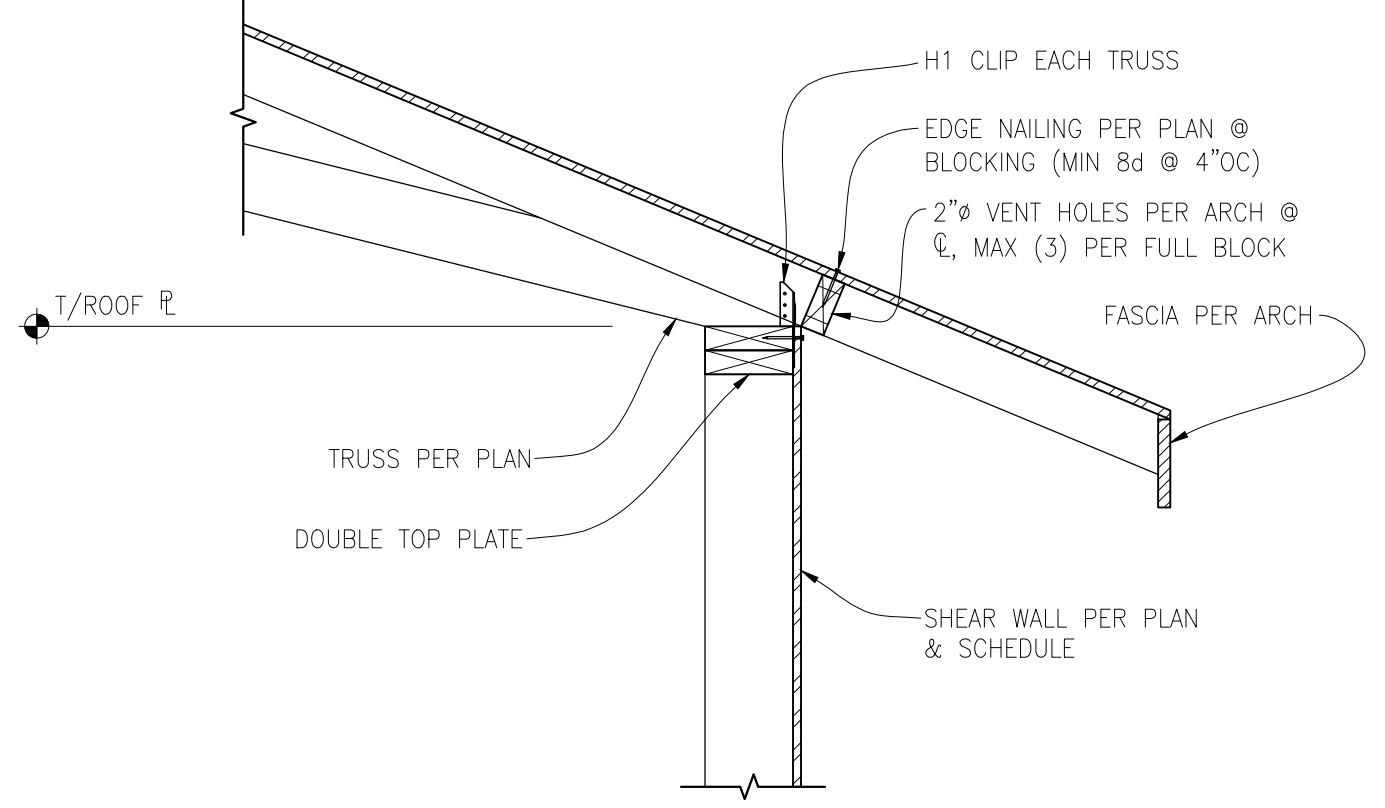
6



**EXTERIOR SHEAR WALL PERPENDICULAR TO ROOF TRUSS CONNECTION**

SCALE: 1" = 1'-0"

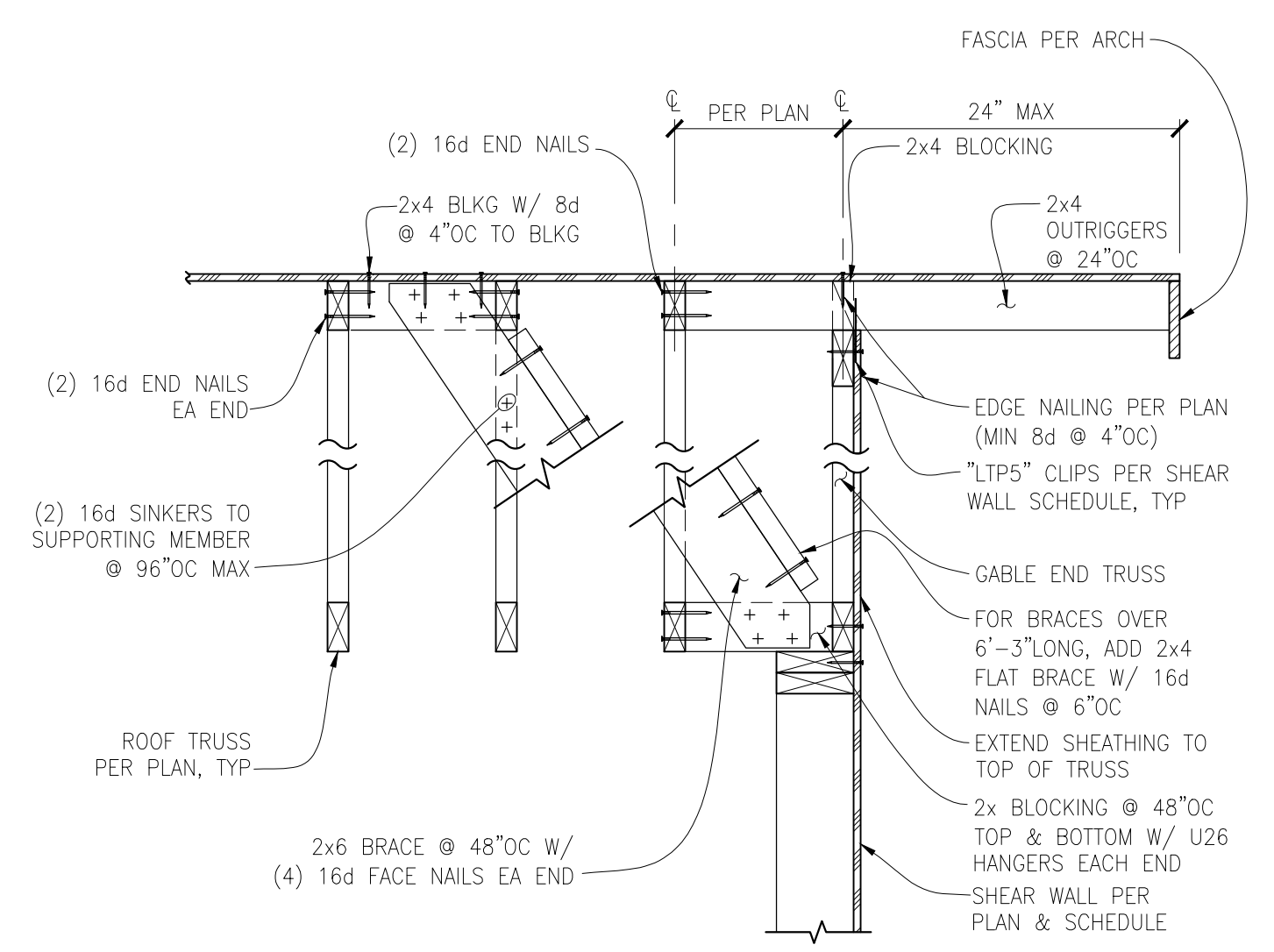
7



**EXTERIOR SHEAR WALL PERPENDICULAR TO ROOF TRUSS**

SCALE: 1" = 1'-0"

8



**EXTERIOR SHEAR WALL PARALLEL TO ROOF TRUSS**

SCALE: N.T.S.

9

REVISION #	DATE	DESCRIPTION

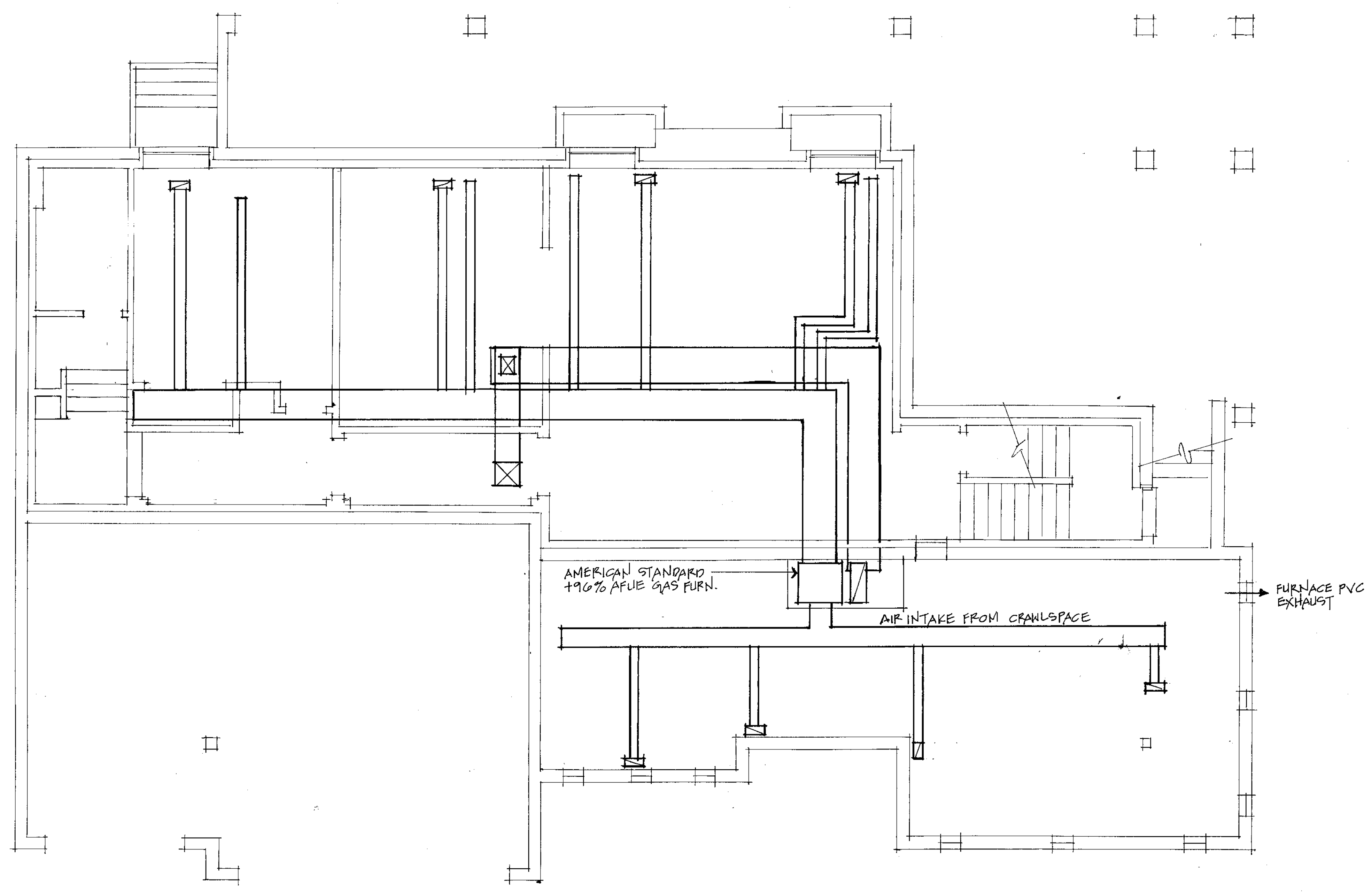
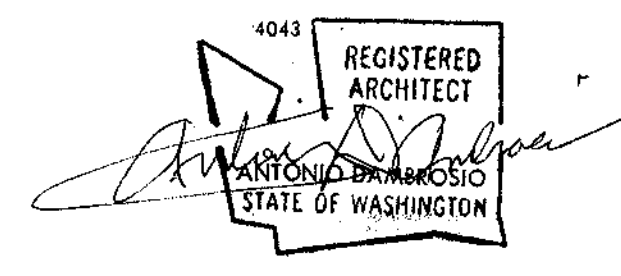
Drawn By: PK  
 Checked By: SC  
 Date: 1-13-2020

CK JOB NO.  
 19-061

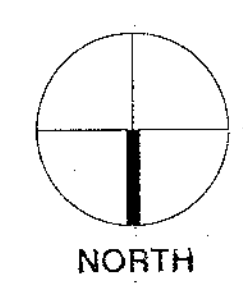
STRUCTURAL  
 DETAILS

S-4.0





SCHMATIC DUCT LAYOUT  
**LOWER FLOOR PLAN**  
 SCALE 1/4" = 1'-0"



A New Residence For:  
**TIMBERLAND**  
 9027 SE 60<sup>TH</sup> ST.  
 MERCER ISLAND, WA 98040

Drawing Title:  
 LOWER FLOOR SCHEMATIC DUCT LAYOUT

Drawn By:  
 Checked By:  
 Approved By:

Issue Date:

Revisions:

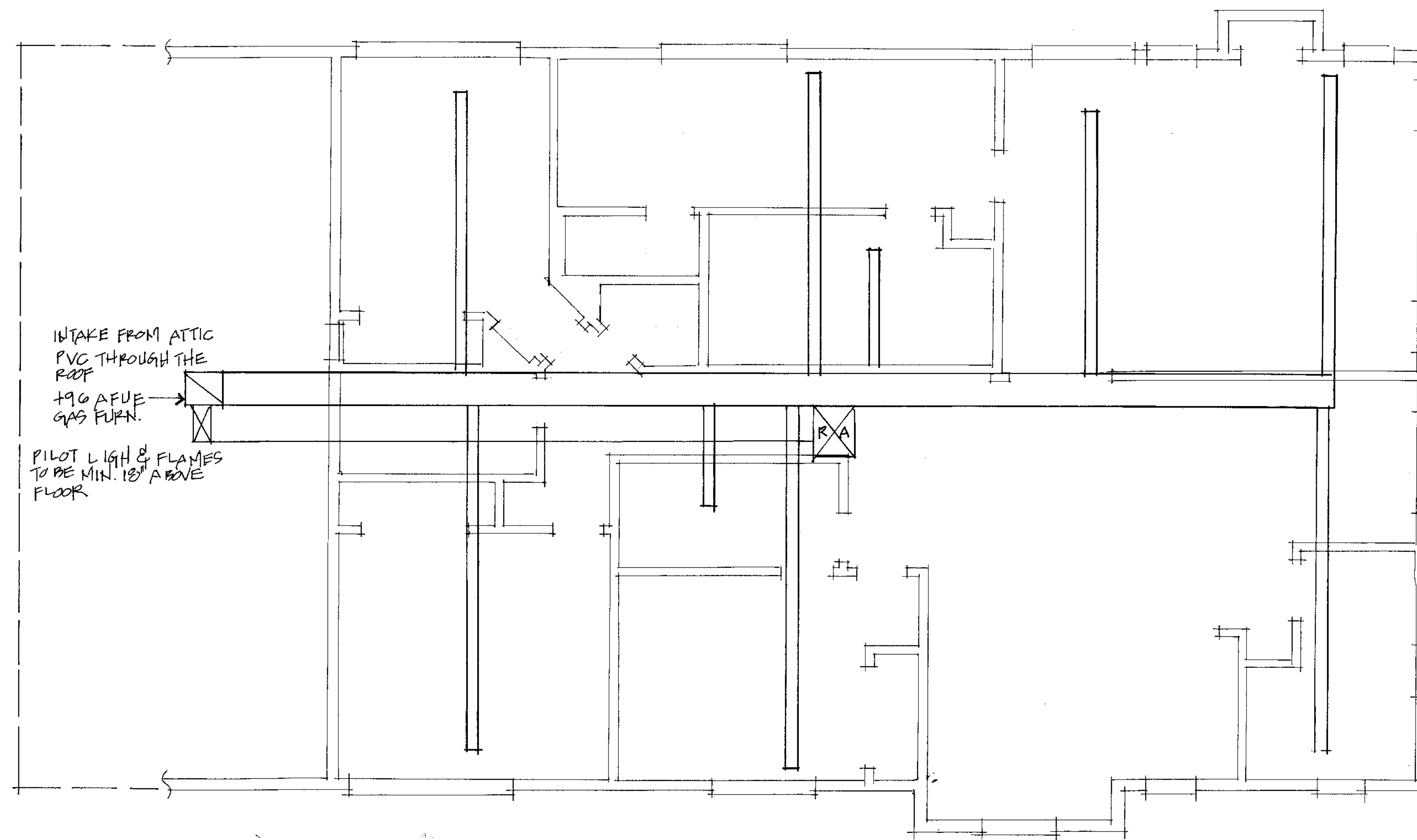
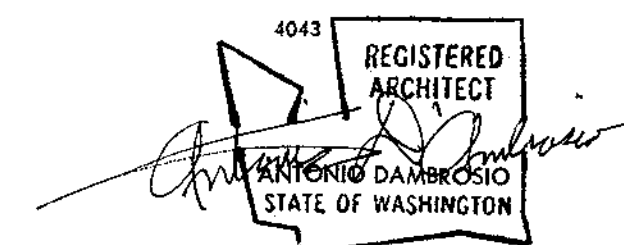
No.	Description	Date
1	PERMIT	2/22/21

Scale: AS NOTED

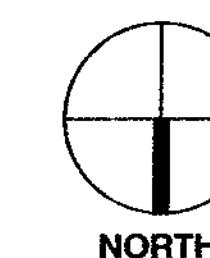
Sheet No.

**M1**





SCHMATIC DUCT LAYOUT  
**UPPER FLOOR PLAN**  
SCALE 1/4" = 1'-0"



A New Residence For:  
**TIMBERLAND**  
9027 SE 60<sup>TH</sup> ST. MERCER ISLAND, WA 98040

Drawing Title:

UPPER FLOOR SCHEMATIC  
DUCT LAYOUT

Drawn By:

Checked By:

Approved By:

Issue Date:

Revisions:

No.	Description	Date
1	PERMIT	4/22/11

Scale:

Sheet No.