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FRONT ELEVATION:



PREPARED FOR:

8456 SE 40TH RESIDENCE

PROJECT DATA:

PARCEL NO.:	502190-0190	DESIGN TEAM:	URBAN DESIGN GROUP 15445 53rd AVE. S. STE. 110 TUKWILA, WA 98188 (206) 838-8250 urbandesigncenter@yahoo.com CONTACT: PAVEL MELNIK
PROPERTY TYPE:	R, RESIDENTIAL	STRUCTURAL ENGINEER:	NN ENGINEERING P.O. BOX 39681 LAKEWOOD, WA 98449 (253) 250-6651 NNENGINEERING@COMCAST.NET CONTACT: NORM P. NAVARRO
LAND AREA:	11,930 S.F.	OWNER:	PHILIP SUDO Q LLC mackuntu@gmail.com laurieyang92@gmail.com CONTACT: KUN QIAN & LAURIE QIAN
ACRES:	0.27		
Q,S,T,R:	SN-1 -24-5		
ADDRESS:	8456 SE 40TH MERCER ISLAND, WA 98040		
ZONE:	R-8.4		
SETBACKS:	FRONT: 20 FEET REAR: 25 FEET SIDE: 5 FT. MIN. 30 FEET		
MAX HEIGHT:			
WATER:	WATER DISTRICT		
SEWER/SEPTIC:	PUBLIC		
ROAD ACCESS:	PUBLIC		
STREET SURFACE:	PAVED		

SHEET #	COVER
AO	COVER
1 OF 1	BOUNDARY/TOPOGRAPHIC SURVEY
SITE	ARCHITECTURAL SITE PLAN
T1	TREE PROTECTION PLAN
	CIVIL ENGINEERING
C1.0	TESS/DEMO/CSMPPP
C1.1	DRAINAGE SITE PLAN
C1.2	DETENTION DETAIL
	ARCHITECTURAL PLAN
A1.1	GENERAL NOTES AND PLAN PREVIEW
A1.2	ENERGY CREDITS OPTIONS
A2.1	GROSS FLOOR AREA (GFA)
A2.2	PARKING
A3	MAIN FLOOR PLAN
A4	UPPER FLOOR PLAN
A5	FRONT AND REAR ELEVATIONS
A6	LEFT AND RIGHT ELEVATIONS
A7	PERSPECTIVE VIEWS
A8	BUILDING CROSS-SECTION AND DETAILS
A9	ROOF LAYOUT
A10	SCHEDULES AND NOTES
A11	DETAILS
A12	PROJECT DETAILS
A13	HARDIE PANEL SIDING DETAILS
A14	ARTISAN LAP SIDING DETAILS
	STRUCTURAL PLAN
S1.1	GENERAL NOTES
S1.2	GENERAL NOTES
S2	FOUNDATION DETAILS
S3	FRAMING DETAILS
S4	FOUNDATION/ FLOOR FRAMING
S5	UPPER FLOOR FRAMING
S6	ROOF FRAMING

3D RENDERING NOTES:

3D ELEVATIONS ARE FOR REFERENCE ONLY. THESE SHOULD NOT BE USED TO DETERMINE ANY PORTION OF THE CONSTRUCTION OTHER THAN GENERAL MATERIAL AND APPEARANCE. REFER TO ELEVATION SHEETS FOR DETAILS.

PROJECT DESCRIPTION:

SINGLE FAMILY RESIDENCE (4 016 S.F.) AND ATTACHED 2-CAR GARAGE (500 S.F.).

BUILDING DEPARTMENT NOTES:

THE INSTALLATION OF A NFPA 13D FIRE SPRINKLER SYSTEM. THIS WILL REQUIRE A SEPARATE PERMIT, BUT MAY BE DEFERRED BY CITY AFTER FULL REVIEW.



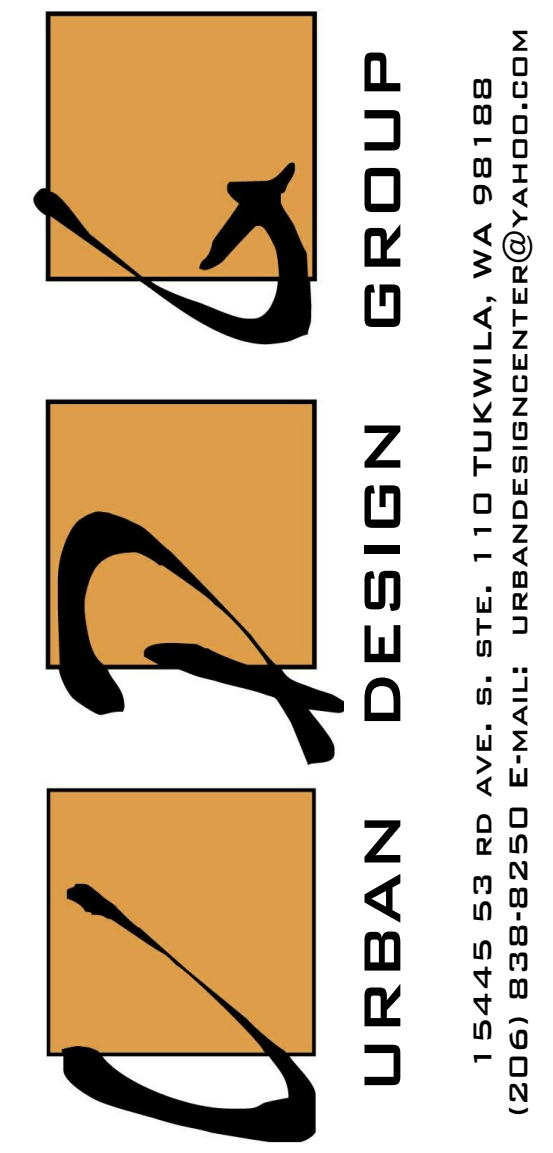
FRONT/RIGHT ELEVATION:



REAR/LEFT ELEVATION:



REAR ELEVATION:



PROJECT NAME:
**SINGLE-FAMILY RESIDENCE
 8456 SE 40TH
 MERCER ISLAND, WA 98040
 PARCEL #: 502190-0190**

PREPARED FOR:
**PHILIP SUDO Q LLC
 KUN QIAN &
 LAURIE QIAN**

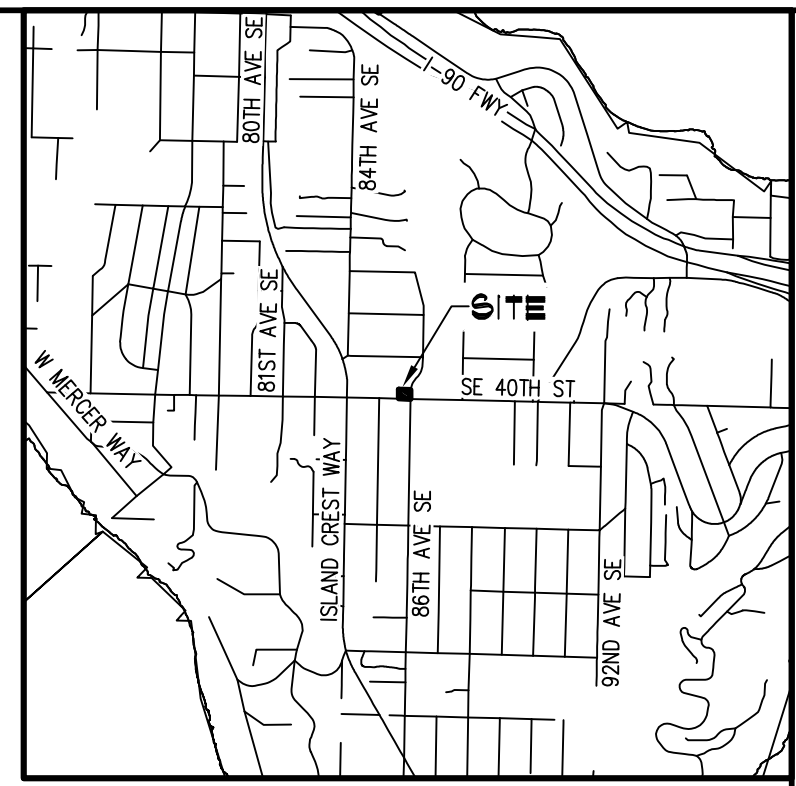
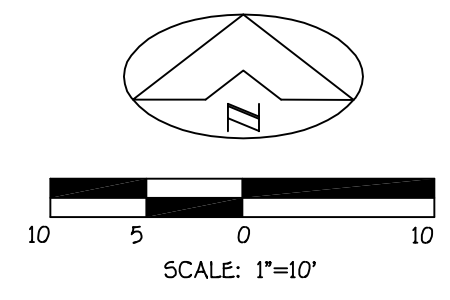
SUBMITTAL/REVISION: DATE:
 SUBMITTED -/-/2022
 REVISED -/-/2022
 DESIGN BY: PAVEL MELNIK
 DRAFTED BY: ANNA KONYAKINA

SHEET TITLE:
COVER SHEET

PROJECT NUMBER:
21257

SHEET NUMBER:
AO

A PORTION OF THE SW 1/4, SW 1/4 OF SECTION 7, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M.



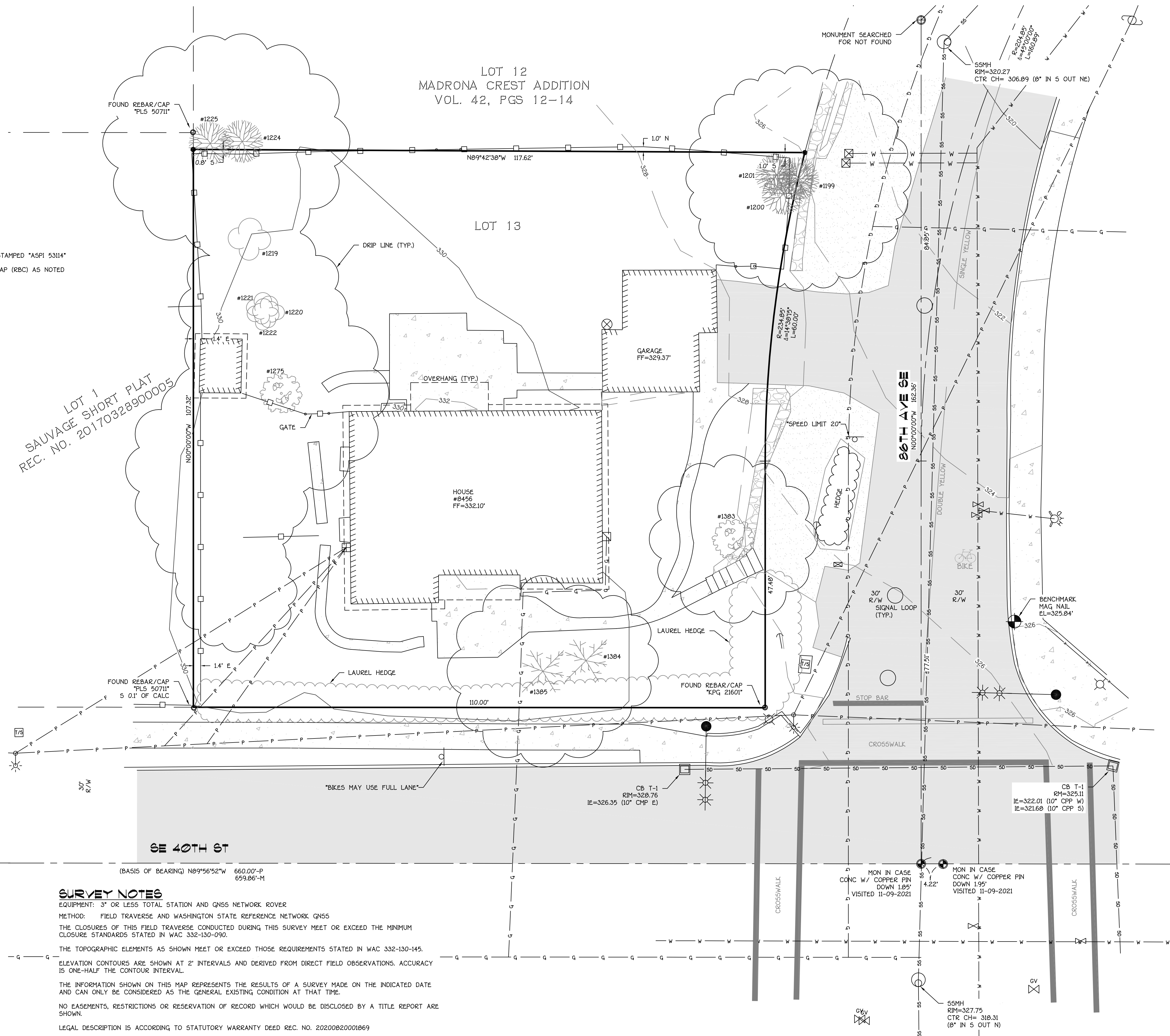
TREE TABLE

POINT	DESCRIPTION
1199	28" REDWOOD
1200	12" REDWOOD
1201	50" REDWOOD
1219	8" DECIDUOUS
1220	8" DECIDUOUS
1221	10" DECIDUOUS
1222	8" DECIDUOUS
1224	28" FIR
1225	22" FIR
1275	10" MAPLE
1383	18" MAPLE
1384	10" BIRCH
1385	16" BIRCH

LEGEND

- SET 24" X 1/2" REBAR WITH CAP STAMPED "ASPI 53114"
- FOUND IRON PIPE OR REBAR AND CAP (RBC) AS NOTED
- ⊗ WATER METER
- ⊕ WATER VALVE
- ⊙ FIRE HYDRANT
- ⊖ HOSE BIB
- ⊞ POWER METER
- ⊠ TRAFFIC SIGNAL BOX
- ⊡ PEDESTRIAN POLE PUSH BUTTON
- ⊛ TRAFFIC SIGNAL
- ⊙ UTILITY POLE
- ⊙ UTILITY POLE WITH LIGHT
- ⊙ GUY ANCHOR
- ⊙ MAILBOX
- ⊙ SIGN
- ⊙ GATE POST
- ⊙ TYPE 1 CATCH BASIN
- ⊙ SANITARY SEWER MANHOLE
- ⊙ GAS METER
- ⊙ GAS VALVE
- ⊙ WOOD FENCE
- ⊙ GAS
- ⊙ STORM DRAIN
- ⊙ OVERHEAD UTILITIES
- ⊙ SANITARY SEWER
- DECIDUOUS
- MAPLE
- COTTONWOOD
- FIR
- ASPHALT
- CONCRETE
- GRAVEL
- ROCKERY

LOT 1
SAUVAGE SHORT PLAT
REC. NO. 20170328900005



LEGAL DESCRIPTION

LOT 13, BLOCK 7, MADRONA CREST ADDITION, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 42 OF PLATS, PAGE 12 THROUGH 14, IN KING COUNTY, WASHINGTON.
SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARING

589°56'52"E BETWEEN FOUND MONUMENTS ALONG CENTERLINE OF SE 40TH ST ACCORDING TO THE PLAT OF MADRONA CREST REFERENCED HEREON.

DATUM NAVD 88
BENCHMARK

MAG NAIL LOCATED ON EAST SIDE OF 86TH AVE SE, 0.5' EAST OF BACK OF CURB AND 5.5' WEST OF ANGLE POINT IN BACK OF SIDEWALK.
ELEV. = 325.84'
ELEVATION ESTABLISHED BY GPS OBSERVATIONS UTILIZING THE WASHINGTON STATE REFERENCE NETWORK.

SURVEY REFERENCES

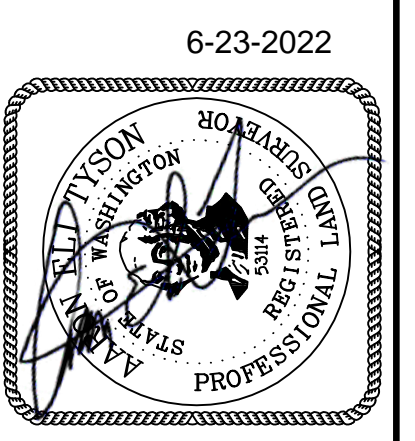
P- MADRONA CREST ADDITION, RECORDED IN VOLUME 42, PG. 12 OF PLATS SHORT PLAT AF# 20170328900005
R- RECORD OF SURVEY AF# 20140213900001

UTILITY NOTES

BASIS FOR UTILITY LINES SHOWN:
FIELD OBSERVATIONS & AS-BUILT MAPS
IN PROVIDING THIS SURVEY, NO ATTEMPT HAS BEEN MADE TO OBTAIN OR SHOW DATA CONCERNING CONDITION OR CAPACITY OF ANY UTILITY EXISTING ON THIS SITE, WHETHER PRIVATE, MUNICIPAL OR PUBLIC OWNED.
UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THE SITE. UNDERGROUND UTILITY LOCATIONS SHOWN HEREON ARE TAKEN FROM A COMPILATION OF PUBLIC RECORDS AND VISIBLE FIELD EVIDENCE. WE ASSUME NO LIABILITY FOR THE ACCURACY OF THE PUBLIC RECORDS. UNDERGROUND UTILITY LOCATIONS ARE ONLY APPROXIMATE. UNDERGROUND CONNECTIONS ARE SHOWN AS STRAIGHT LINES BETWEEN VISIBLE SURFACE LOCATIONS BUT MAY CONTAIN BENDS OR CURVES NOT SHOWN. FIELD VERIFICATION IS NECESSARY PRIOR TO OR DURING ANY CONSTRUCTION.
SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT SURVEYED OR EXAMINED OR CONSIDERED AS PART OF THIS SURVEY. NO EVIDENCE OR STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONDITIONS, CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS PROPERTY.

SURVEY NOTES

EQUIPMENT: 3" OR LESS TOTAL STATION AND GNSS NETWORK ROVER
METHOD: FIELD TRAVERSE AND WASHINGTON STATE REFERENCE NETWORK GNSS
THE CLOSURES OF THIS FIELD TRAVERSE CONDUCTED DURING THIS SURVEY MEET OR EXCEED THE MINIMUM CLOSURE STANDARDS STATED IN WAC 332-130-090.
THE TOPOGRAPHIC ELEMENTS AS SHOWN MEET OR EXCEED THOSE REQUIREMENTS STATED IN WAC 332-130-145.
ELEVATION CONTOURS ARE SHOWN AT 2' INTERVALS AND DERIVED FROM DIRECT FIELD OBSERVATIONS. ACCURACY IS ONE-HALF THE CONTOUR INTERVAL.
THE INFORMATION SHOWN ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON THE INDICATED DATE AND CAN ONLY BE CONSIDERED AS THE GENERAL EXISTING CONDITION AT THAT TIME.
NO EASEMENTS, RESTRICTIONS OR RESERVATION OF RECORD WHICH WOULD BE DISCLOSED BY A TITLE REPORT ARE SHOWN.
LEGAL DESCRIPTION IS ACCORDING TO STATUTORY WARRANTY DEED REC. NO. 20200820001869



ASPI, LLC
LAND SURVEYING
AND
PLANNING
5205 6 2ND AVE, SUITE 4
EVERETT, WA 98203
(425) 252-1884

BOUNDARY/TOPOGRAPHIC
SURVEY
FOR
LAURIE YANG
PORTION OF SW 1/4, SW 1/4 OF SECTION 7, TOWNSHIP 24 NORTH,
RANGE 05 EAST, W.M.
CITY OF MERCER ISLAND
KING COUNTY, WASHINGTON

DRAWN BY: NJT
DATE: 10/09/2021
PROJECT NO.: 21-514
SHEET NO.: 1 OF 1

SITE DATA

SITE ADDRESS: 8456 SE 40TH ST, MERCER ISLAND, WA 98040
TAX PARCEL NUMBER: 502190-0790
GROSS SITE AREA: 11,930 SF (0.27 ACRES)



ZONING INFORMATION:

PARCEL NO.: 502190-0190
 PROPERTY TYPE: R, RESIDENTIAL
 LAND AREA: 11,930 sq. ft.
 ACRES: 0.27
 Q.S.T.R.: SW-1 -24-5
 ADDRESS: 8456 SE 40TH ST
 MERCER ISLAND, WA 98040
 ZONING: R-24
 SETBACKS: FRONT: 20 FEET
 REAR: 25 FEET
 SIDE: 17% OF THE LOT WIDTH OR 18.24' (10'132 X 11% = 18.24)
 MAX. HEIGHT: 30 FEET
 MAX. LOT COVERAGE: 40% (PERCENT)
 WATER: WATER DISTRICT
 SEWER/SEPTIC: PUBLIC
 ROAD ACCESS: PUBLIC
 STREET SURFACE: PAVED

LOT COVERAGE CALCULATION

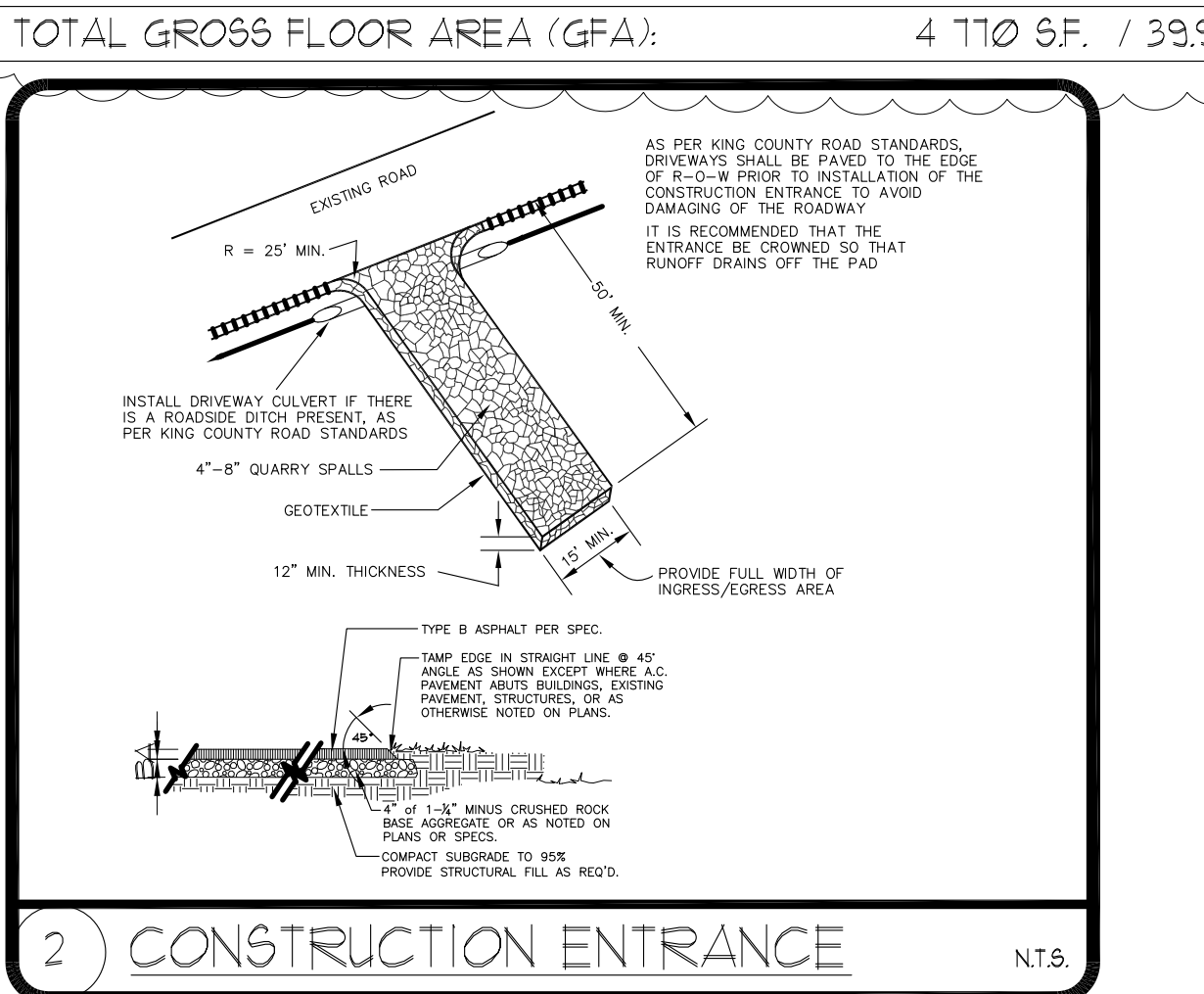
11,930 SF. TOTAL LOT AREA
 3,019 SF. BUILDING STRUCTURE W/ COVERED PORCH, CANTILEVERS AND ROOF OVERHANGS
 224 SF. COVERED PATIO
 813 SF. CONCRETE DRIVEWAY
 4,056 SF/33.99% TOTAL LOT COVERAGE (MAX 40%)

HARDSCAPE CALCULATION

11,930 SF. TOTAL LOT AREA
 9 SF/0.075% CONCRETE STOOP (MAX 9%)

GROSS FLOOR AREA:

LOT AREA: 11,930 s.f.
 ALLOWED GFA: 4,772 s.f.
 GFA W/ALLOWANCE (40%): 4,772 s.f.
 MAIN FLOOR: 2,015 SF.
 GARAGE: 500 SF.
 UPPER FLOOR: 2,255 SF.
 STAIRCASE: EXCLUDED
 TOTAL GROSS FLOOR AREA (GFA): 4,770 SF. / 39.98%



HEIGHT CALCULATION:

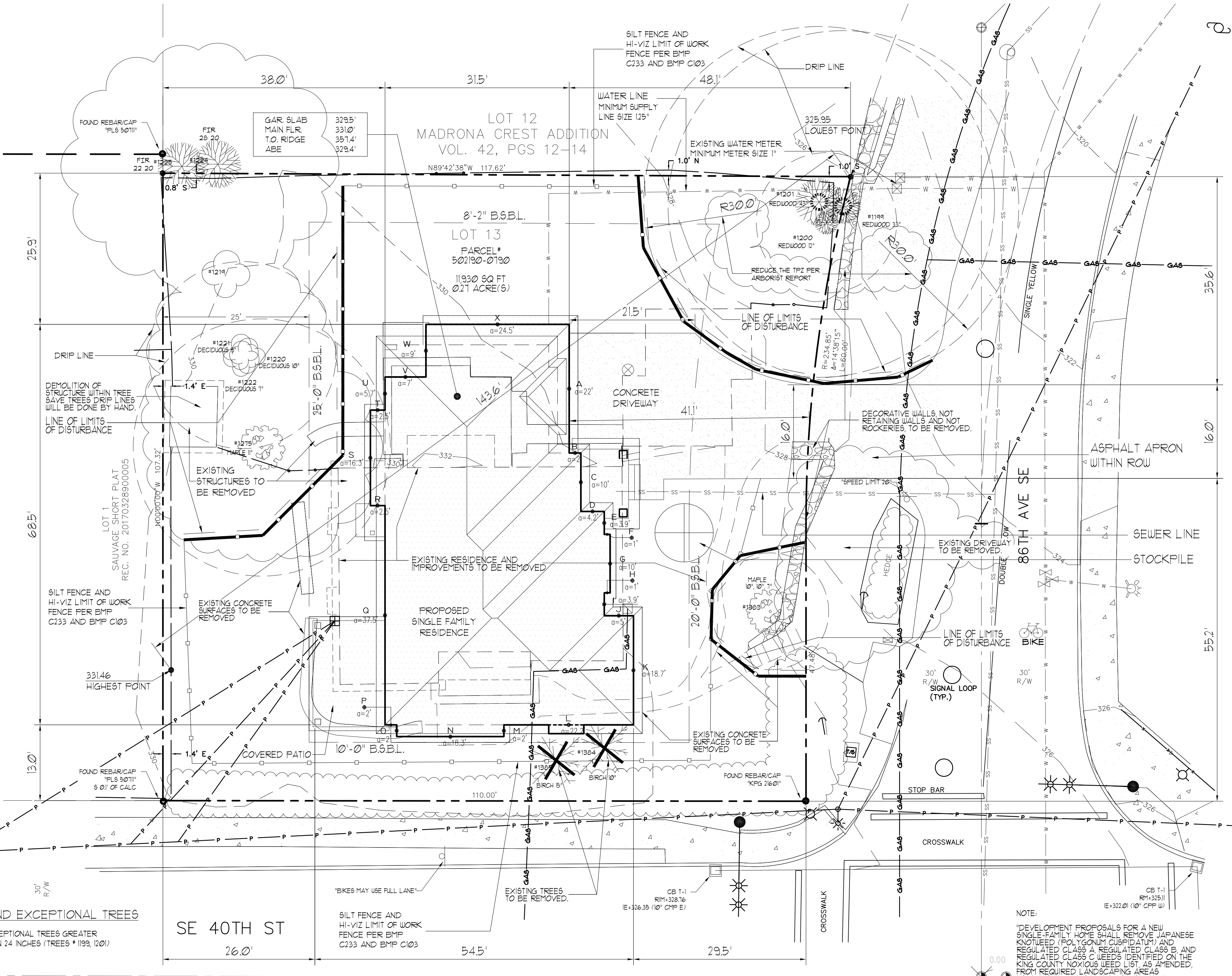
PT.	MID. PT. HT	Wall SEGMENT LENGTH	RESULT
A	329.3	22	7244.6
B	329.3	2	658.6
C	329.3	10	3293
D	329.3	4.2	1383.06
E	329.3	3.9	1284.27
F	329	1	329
G	329	10	3290
H	329	1	329
I	329	3.9	1283.1
J	329	5	1645
K	329	18.7	6152.3
L	329.5	22.2	7314.9
M	329.5	2	659
N	329.5	18.3	6029.85
O	329.5	2	659
P	329.5	2	659
Q	329.5	37.5	12356.3
R	329.5	2.5	823.75
S	329.5	16.3	5370.85
T	329.5	2.5	823.75
U	329.5	5.7	1878.15
V	329.5	7	2306.5
W	329.5	9	2965.5
X	329.5	24.5	8072.75
TOTAL		233.2	76811.2
ABE			329.379

TREE TABLE (ON SITE TREES)

POINT	DESCRIPTION	REMAIN?
1200	REDWOOD 12" 14'	YES
1201	REDWOOD 50" 16'	YES
1219	DECIDUOUS 8" 10'	YES
1220	DECIDUOUS 8" 10'	YES
1221	DECIDUOUS 10" 16'	YES
1222	DECIDUOUS 8" 12'	YES
1275	MAPLE 10" 20'	YES
1383	MAPLE 18" 16'	YES
1384	BIRCH 10" 14'	NO
1385	BIRCH 16" 18'	NO

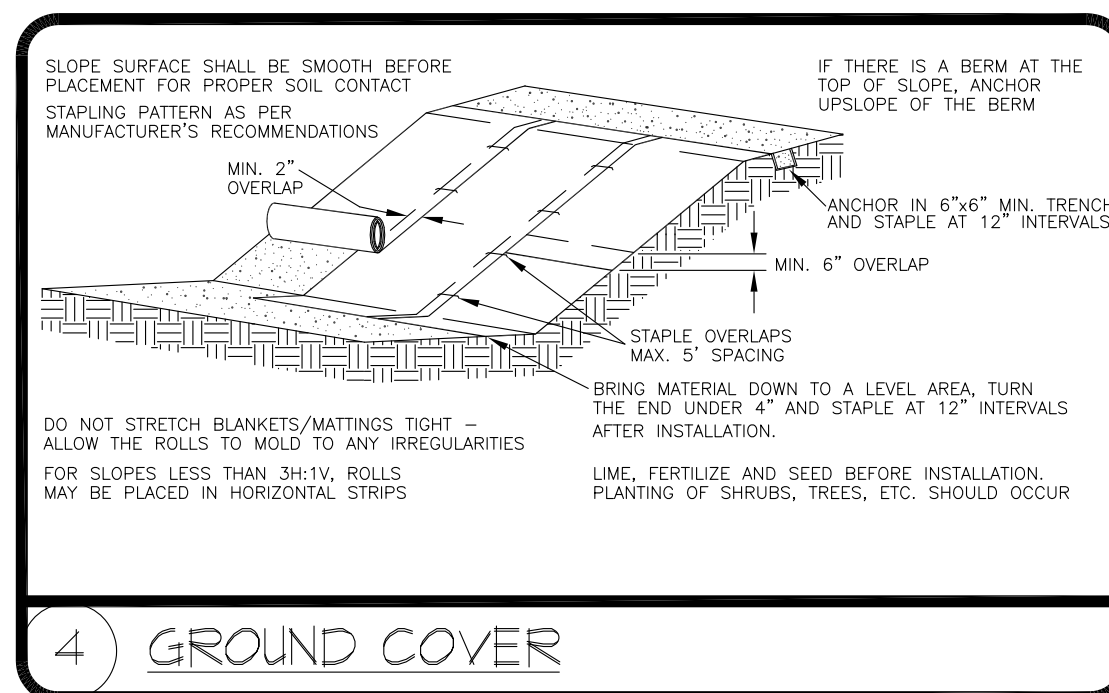
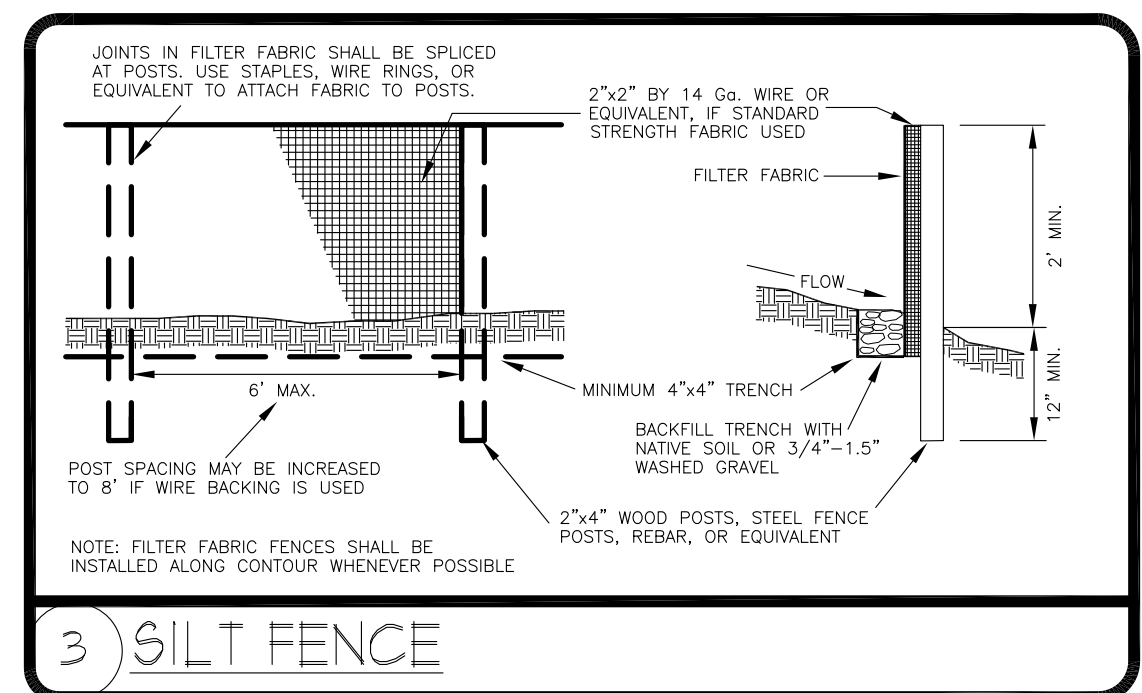
TREE TABLE (NEIGHBORING TREES)

POINT	DESCRIPTION	REMAIN?
1199	REDWOOD 28" 22'	YES
1224	FIR 28" 20'	YES
1225	FIR 22" 20'	YES



REDUCE THE TPZ PER ARBORIST'S TREE PROTECTION PLAN

THE SIGNIFICANT ON-SITE TREES WERE TAGGED WITH NUMBERS CORRESPONDING TO THE NUMBERS LISTED IN THIS REPORT. REFER TO ATTACHMENT I, SITE IMAGES, FOR AN ORIENTATION TO THE SITE AND THE APPROXIMATE LOCATION OF THE TREES. THERE WERE A TOTAL OF 8 REGULATED TREES AND 5 UNREGULATED TREES ON THE PROPERTY. ACCORDING TO THE DPO DIRECTOR'S RULE 6-10008 THERE WERE TWO EXCEPTIONAL TREES ON THE PROPERTY. TREES LABELED 1199 AND 1201 EXCEPTIONAL TREES WILL BE MARKED WITH AN 'X' FOLLOWING THEIR CORRESPONDING NUMBER. TWO TREES LABELED 1384 AND 1385 WOULD CONFLICT WITH THE PROPOSED WORK AND ARE PROPOSED FOR REMOVAL. THE TWO TREES TO BE REMOVED ARE BOTH IN POOR HEALTH DUE TO BRONZE BIRCH BORER DAMAGE AND SEVERE PRUNING. NO ADJACENT TREES WILL BE AFFECTED BY THE REMOVAL OF THESE TREES.
 * TREE 1201 HAS A TPZ THAT WILL LIKELY INTERFERE WITH CONSTRUCTION ACTIVITIES TO THE SOUTH OF THE TREE. THE TPZ WILL BE REDUCED BY 30%. THIS WOULD REDUCE THE TPZ FROM 43' TO 30'. ANY EXCAVATION DONE WITHIN THE TPZ ZONES SHALL BE DONE WITH HAND TOOLS AND A CONSULTING ARBORIST ON SITE.
 * TREE 1199 HAS A TPZ THAT WILL LIKELY INTERFERE WITH THE CONSTRUCTION OF THE DRIVEWAY. TO THE SOUTH OF THE TREE THE TPZ WILL BE REDUCED BY 10% TO MATCH TREE 1201'S TPZ. THIS WOULD REDUCE THE TPZ ON THE SOUTH SIDE OF THE TREE FROM 33' TO 30'. ANY EXCAVATION DONE WITHIN THE TPZ ZONES SHALL BE DONE WITH HAND TOOLS AND A CONSULTING ARBORIST ON SITE.



DRAINAGE DESIGN PROVIDED BY INTERLAKEN ENGINEERING AND DESIGN, PLLC SEATTLE, WA TEL: (206) 470-9572 CONTACT: MATTHEW HARRINGA www.interlakenengineering.com

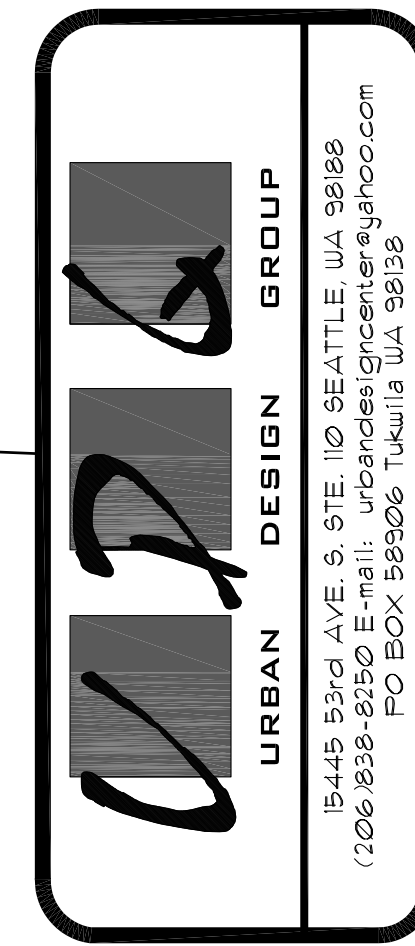
LEGAL DESCRIPTION:
 MADRONA CREST ADD
 Plat Block: 1
 Plat Lot: 13

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



Project
SINGLE-FAMILY RESIDENCE
PARCEL#: 502190-0190
8456 SE 40TH
MERCER ISLAND, WA 98040

Prepared for
KUN QIAN & LAURIE QIAN



ENGINEER	DESIGN BY	COMMENTS
IYAN SHVETS	IYAN SHVETS	
REV. DATE		

Project # :
21257
 Sheet
SITE

Tree #	Species	Latin Name	DBH	Appr Ht	Health	Drip Line Radius	TPZ Radius [ft]	CRZ Radius [ft]	Exceptional	Regulated	Retain
1199*	Redwood	<i>(Sequoia sempervirens)</i>	35"	95'	Very Good	20'	33'	16.5'	Yes	Yes	Yes
The tree is perched on top of a small stone retaining wall at the northeast corner of the property. There is a small fence that is growing against the trunk at the root flare. This tree is part of a cluster of 3 Redwood trees.											
1200	Redwood	<i>(Sequoia sempervirens)</i>	12"	35'	Good	17'	12'	6'	No	Yes	Yes
This tree is located at the northeast corner of the property. This tree is growing subdominantly under 2 larger Redwood trees.											
1201*	Redwood	<i>(Sequoia sempervirens)</i>	43"	100'	Very Good	19'	43'	26.5'	Yes	Yes	Yes
This tree is located at the northeast corner of the property amongst a cluster of 3 Redwood trees.											
1220, 1221 and 1222	Mountain ash	<i>(Sorbus americana)</i>	10", 9", and 7"	40'	Fair	16'	10'	5'	No	Yes	Yes
The tree is located approximately 30' south of the northwestern corner of the property and approximately 12' from the west wall											
1275	Japanese maple	<i>(Acer palmatum)</i>	11"	30'	Good	22'	11'	5.5'	No	Yes	Yes
This tree is located approximately 15' west of the northwest corner of the house.											
1383	Japanese maple	<i>(Acer palmatum)</i>	10", 10", and 7"	20'	Very Good	19'	10'	5'	No	Yes	Yes
This tree is located approximately 25' east of the southeast corner of the house.											
1384	Paper birch	<i>(Betula papyrifera)</i>	10"	20'	Poor	8'	10'	5'	No	Yes	No
This tree is located approximately 15' south of the southeast corner of the house.											
1385	Paper birch	<i>(Betula papyrifera)</i>	15"	20'	Poor	15'	15'	7.5'	No	Yes	No

TREE INVENTORY SUMMARY
(PER ARBORIST REPORT)

LEGEND EXCEPTIONAL TREES

EXCEPTIONAL TREES GREATER THAN 24 INCHES (TREES # 1199, 1201)

TREE PROTECTION AREA (TPZ)

KEEP OUT!

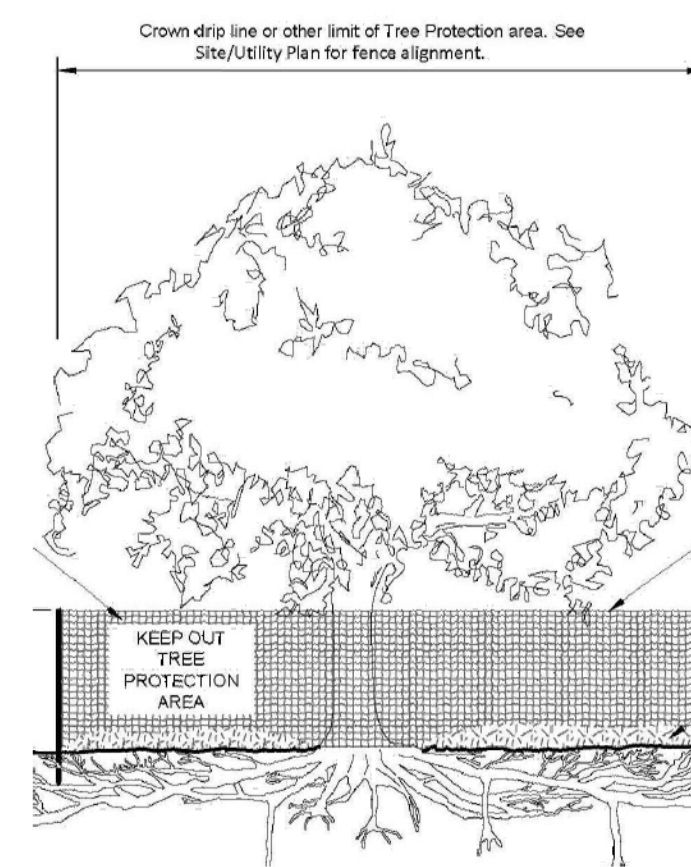
DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

1. Correction Notices or Stop Work Orders until compliance is achieved
2. RE Inspection Fees
3. Arborist reports recommending mitigation

Notes

1. No pruning shall be performed unless under the direction of an arborist
2. No equipment shall be stored or operated inside the protective fencing including during fence installation and removal
3. No storage of materials shall occur inside the protective fencing
4. Refer to Site/Utility Plan for allowable modifications to the tree protection area.
5. Unauthorized activities in tree protection area may require evaluation by private arborist to identify impacts and mitigation required
6. Exposed roots: For roots > 1" damaged during construction, make a clean straight cut to remove damaged portion and inform City Arborist



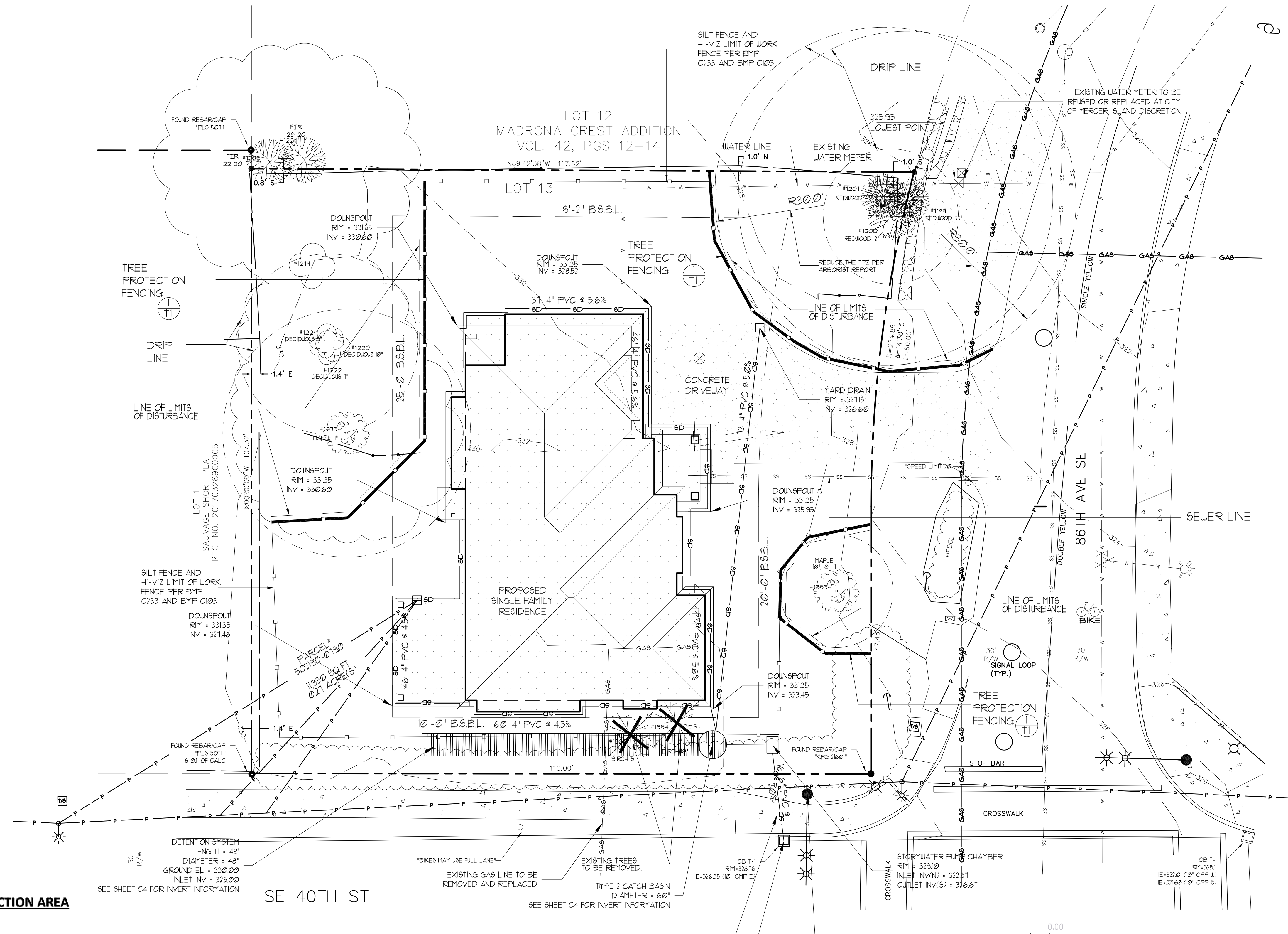
Tree protection fence: 4-6" chain link fence, solidly anchored into the ground, or if authorized High-density polyethylene fencing with 3.5" x 1.5" openings; color orange. Steel posts installed at 8' o.c.

2" x 6" steel posts or approved equal

Maintain existing grade with the tree protection fence unless otherwise indication on the plans

Any Work in the protected area must be with the permission of the City Arborist john.kenney@mercergov.org

1 TREE PROTECTION ZONE (TPZ)



REDUCE THE TPZ PER ARBORIST'S TREE PROTECTION PLAN

THE SIGNIFICANT ON-SITE TREES WERE TAGGED WITH NUMBERS CORRESPONDING TO THE NUMBERS LISTED IN THIS REPORT. REFER TO ATTACHMENT I SITE IMAGES FOR AN ORIENTATION TO THE SITE AND THE APPROXIMATE LOCATION OF THE TREES. THERE WERE A TOTAL OF 8 REGULATED TREES AND 5 UNREGULATED TREES ON THE PROPERTY. ACCORDING TO THE DPD DIRECTOR'S RULE 16-2009 THERE WERE TWO EXCEPTIONAL TREES ON THE PROPERTY. TREES LABELED 1199 AND 1201 EXCEPTIONAL TREES WILL BE MARKED WITH AN 'X' FOLLOWING THEIR CORRESPONDING NUMBER. TWO TREES LABELED 1384 AND 1385 WOULD CONFLICT WITH THE PROPOSED WORK AND ARE PROPOSED FOR REMOVAL. THE TWO TREES TO BE REMOVED ARE BOTH IN POOR HEALTH DUE TO BRONZE BIRCH BORER DAMAGE AND SEVERE PRUNING. NO ADJACENT TREES WILL BE AFFECTED BY THE REMOVAL OF THESE TREES.

- * TREE 1200 HAS A TPZ THAT WILL LIKELY INTERFERE WITH CONSTRUCTION ACTIVITIES. TO THE SOUTH OF THE TREE, THE TPZ WILL BE REDUCED BY 30%. THIS WOULD REDUCE THE TPZ FROM 43' TO 30'. ANY EXCAVATION DONE WITHIN THE TPZ ZONES SHALL BE DONE WITH HAND TOOLS AND A CONSULTING ARBORIST ON SITE.
- * TREE 1199 HAS A TPZ THAT WILL LIKELY INTERFERE WITH THE CONSTRUCTION OF THE DRIVEWAY. TO THE SOUTH OF THE TREE, THE TPZ WILL BE REDUCED BY 10% TO MATCH TREE 1200'S TPZ. THIS WOULD REDUCE THE TPZ ON THE SOUTH SIDE OF THE DRIVEWAY TO THE TREE FROM 33' TO 30'. ANY EXCAVATION DONE WITHIN THE TPZ ZONES SHALL BE DONE WITH HAND TOOLS AND A CONSULTING ARBORIST ON SITE.

TO AVOID ANY CONFLICTS OF INTEREST, EASTSIDE TREE WORKS WILL NOT BE PERFORMING ANY TREE REMOVALS ASSOCIATED WITH THIS CONSTRUCTION PROJECT.

Project
SINGLE-FAMILY RESIDENCE
PARCEL#: 502190-0790
8456 SE 40TH
MERCER ISLAND, WA 98040

Prepared for
KUN QIAN & LAURIE QIAN

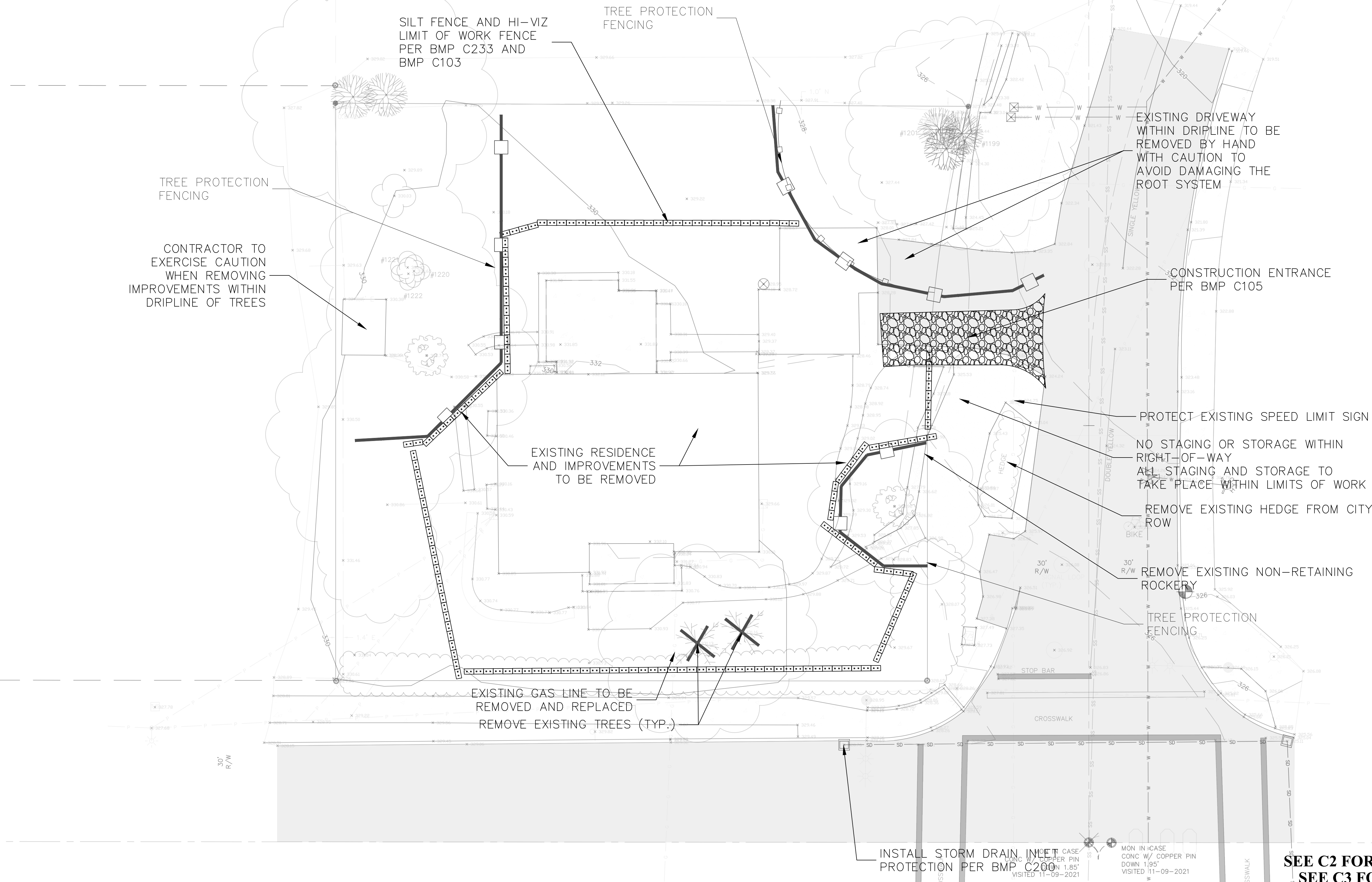
URBAN DESIGN GROUP
18445 53rd AVE S, STE 110 SEATTLE, WA 98148
(206) 838-8250 E-mail: urban@designergroup.com
PO BOX 88906 Tukwila WA 98198

PLAN 156/E	ENGINEER	DESIGN BY	COMMENTS
02/20/2023	Ivan Shvets	Ivan Shvets	
REV. DATE			

Project # :
21257
Sheet
T1

TREE PROTECTION PLAN
SCALE: 1" = 10'-0"

Plot Date: 02-20-2023



**SEE C2 FOR TESC/ CSWPPP DETAILS
SEE C3 FOR DRAINAGE SITE PLAN**

Qian Yang Residence
 Site Address: 8456 SE 40th St
 Jurisdiction: Mercer Island
 Parcel No.: 502190-0790
 Applicant: Qian Yang
 Permit No.: 2206-271
 Interlaken Project No.: SEA-22-041

Interlaken Engineering and Design, PLLC
 Seattle, WA | (206) 470-9572
 www.interlakenengineering.com

Revisions:
2023-06-29: Detention updated, driveway drainage added
2023-03-28: Updated for new house location and driveway layout
2023-02-15: Updated for City of Mercer Island comments

C1
 TESC/ Demo/ CSWPPP
 Scale: 1" = 10'

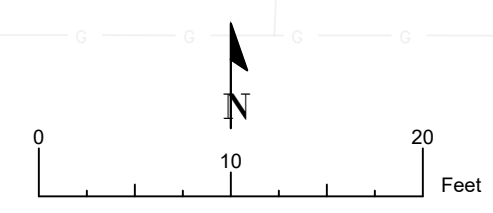
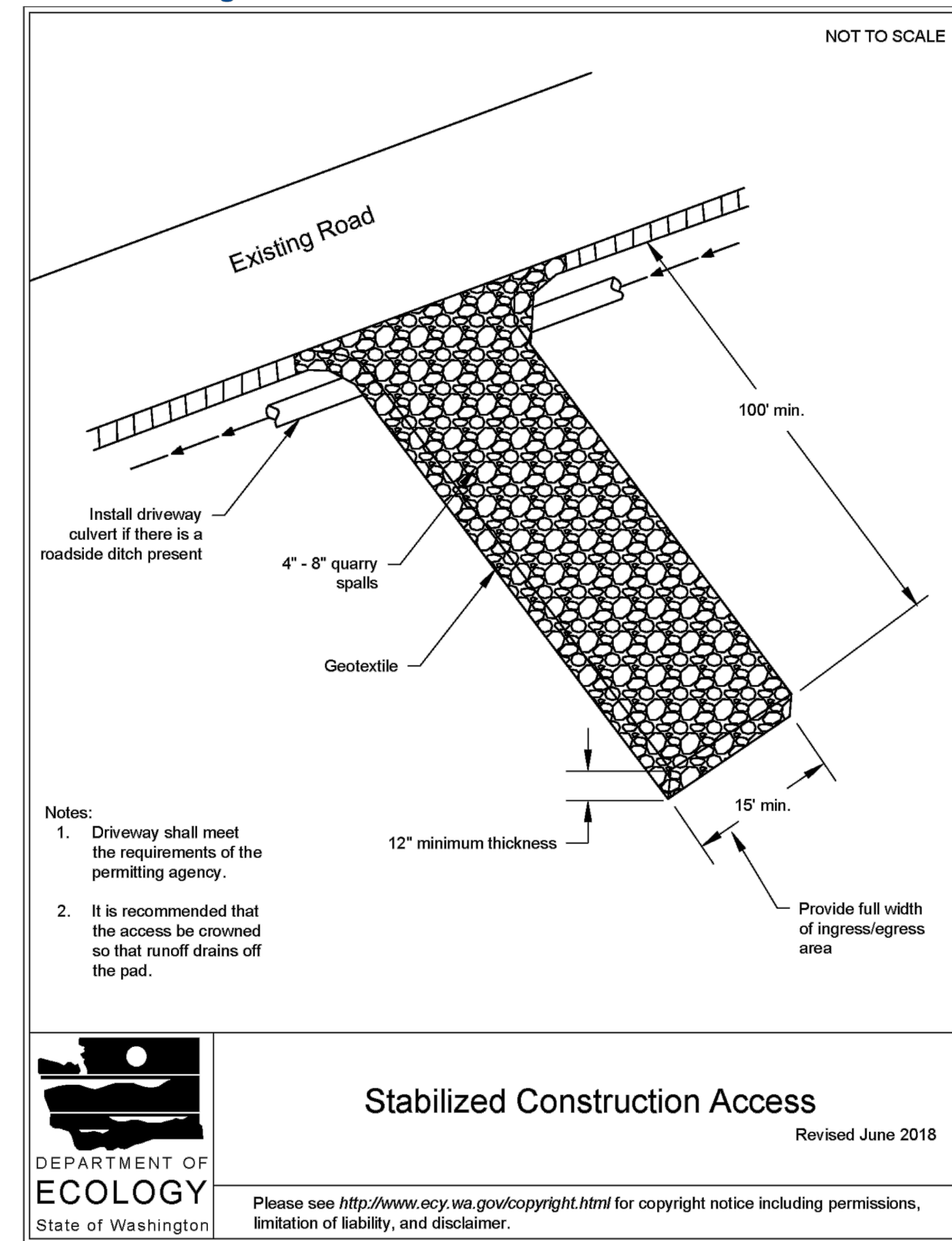
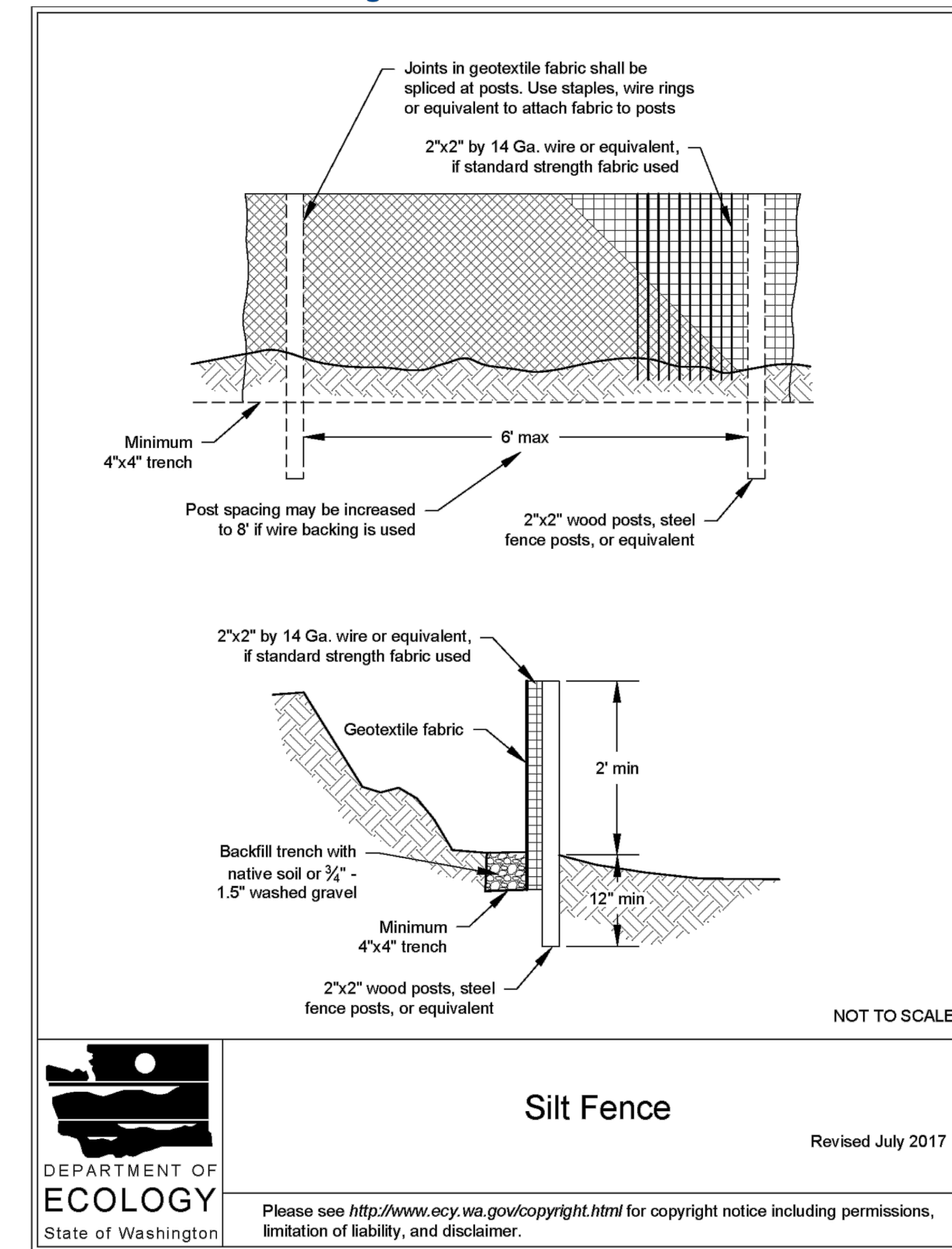


Figure II-3.1: Stabilized Construction Access

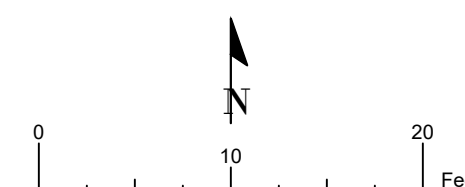


2019 Stormwater Management Manual for Western Washington
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Figure II-3.22: Silt Fence



2019 Stormwater Management Manual for Western Washington
Volume II - Chapter 3 - Page 371



SEE C1 FOR TESC/ DEMO/ CSWPPP

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C2
TESC/ CSWPPP Details
Scale: As Noted

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

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

1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL.
3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
 - A. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BIORETENTION (BMP T7.30), WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1. THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
 - B. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A) ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173-350-220.
4. IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS. MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.

PRE-APPROVED AMENDMENT METHOD:
TURF: 7860 SF x 5.4 CY / 1,000 SF = 42.44 CY
TOTAL QUANTITY = 42.44 CY

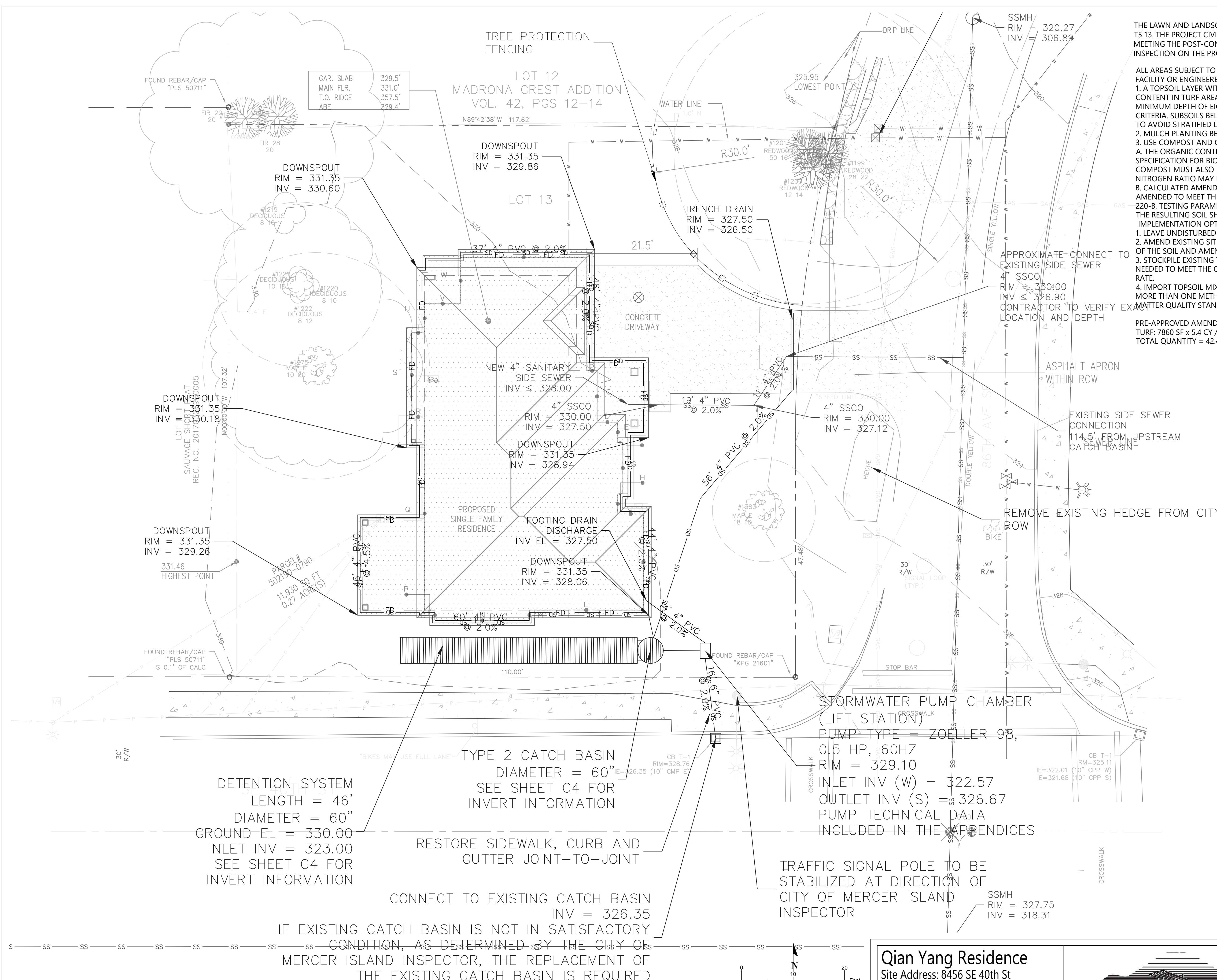
CITY OF MERCER ISLAND PUMP NOTES

- 1) AN EMERGENCY ON-SITE, BACK-UP POWER SUPPLY AND AN EXTERNAL ALARM SYSTEM FOR SYSTEM FAILURE AND HIGH WATER LEVEL INDICATOR ARE REQUIRED FOR THE PUMP SYSTEM.
- 2) PRIVATE PROPERTY OWNERS SHALL BE RESPONSIBLE FOR ANY AND ALL CLAIMS FOR INJURIES AND DAMAGE DUE TO THE OPERATION OR NON-OPERATION OF THE PUMP SYSTEM.

SEWER NOTES
THE TV INSPECTION OF THE EXISTING SIDE SEWER TO THE CITY SEWER MAIN ON 86TH AVE SE IS REQUIRED PRIOR TO ANY WORK RELATED TO THE SIDE SEWER. IF THE RESULT OF THE TV INSPECTION IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, THE REPLACEMENT OF THE EXISTING SIDE SEWER IS REQUIRED.

Hard Surface Data	
Lot Size	11,930 sf
New Roof	3,255 sf
New Driveway + Walkway	815 sf
Total Proposed Hard Surface	4,070 sf
Proposed Vegetation	7,860 sf

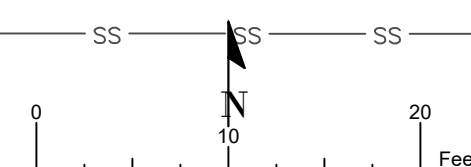
SEE C1 FOR TESC/ DEMO CSWPPP
SEE C4 FOR DETENTION DETAILS



LEGAL DESCRIPTION
LOT 13, BLOCK 7, MADRONA CREST ADDITION, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 42 OF PLATS, PAGE 12 THROUGH 14, IN KING COUNTY, WASHINGTON.
SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

CONNECT TO EXISTING CATCH BASIN
INV = 326.35
IF EXISTING CATCH BASIN IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, THE REPLACEMENT OF THE EXISTING CATCH BASIN IS REQUIRED

TRAFFIC SIGNAL POLE TO BE STABILIZED AT DIRECTION OF CITY OF MERCER ISLAND INSPECTOR



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Revisions:

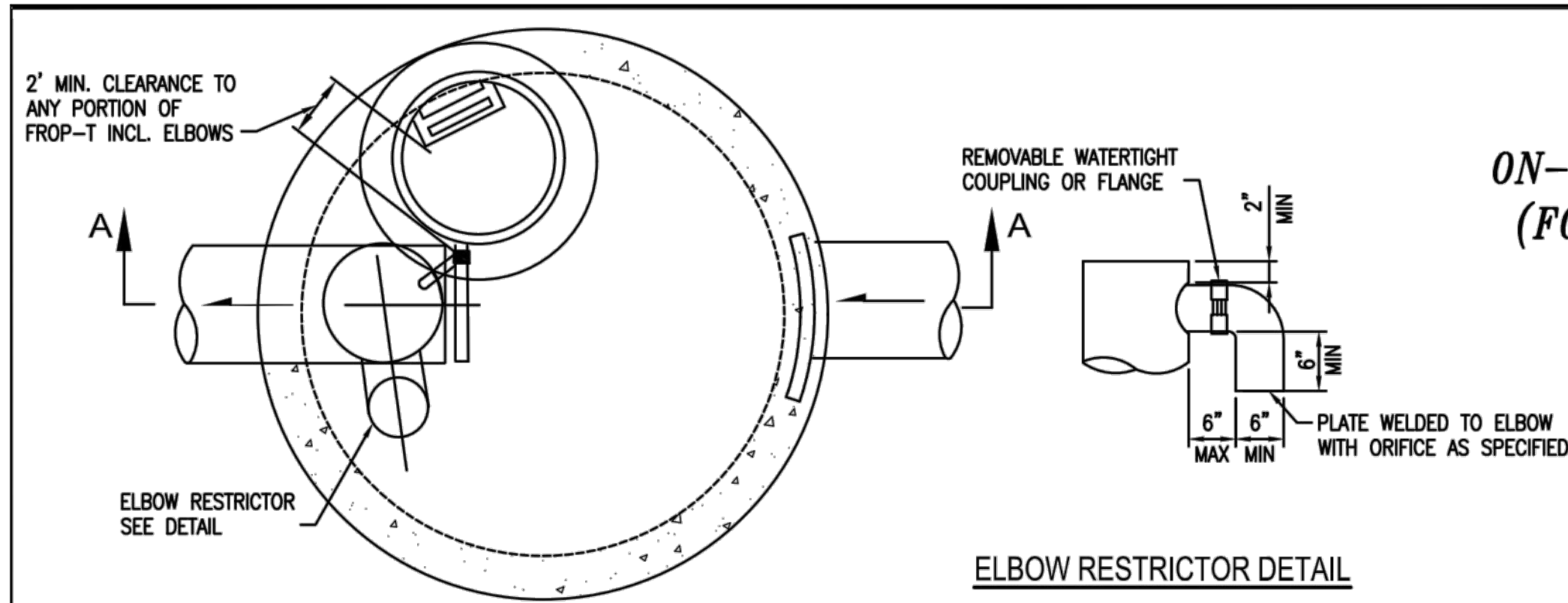
2023-06-29: Detention updated, driveway drainage added
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C3

Drainage Site Plan

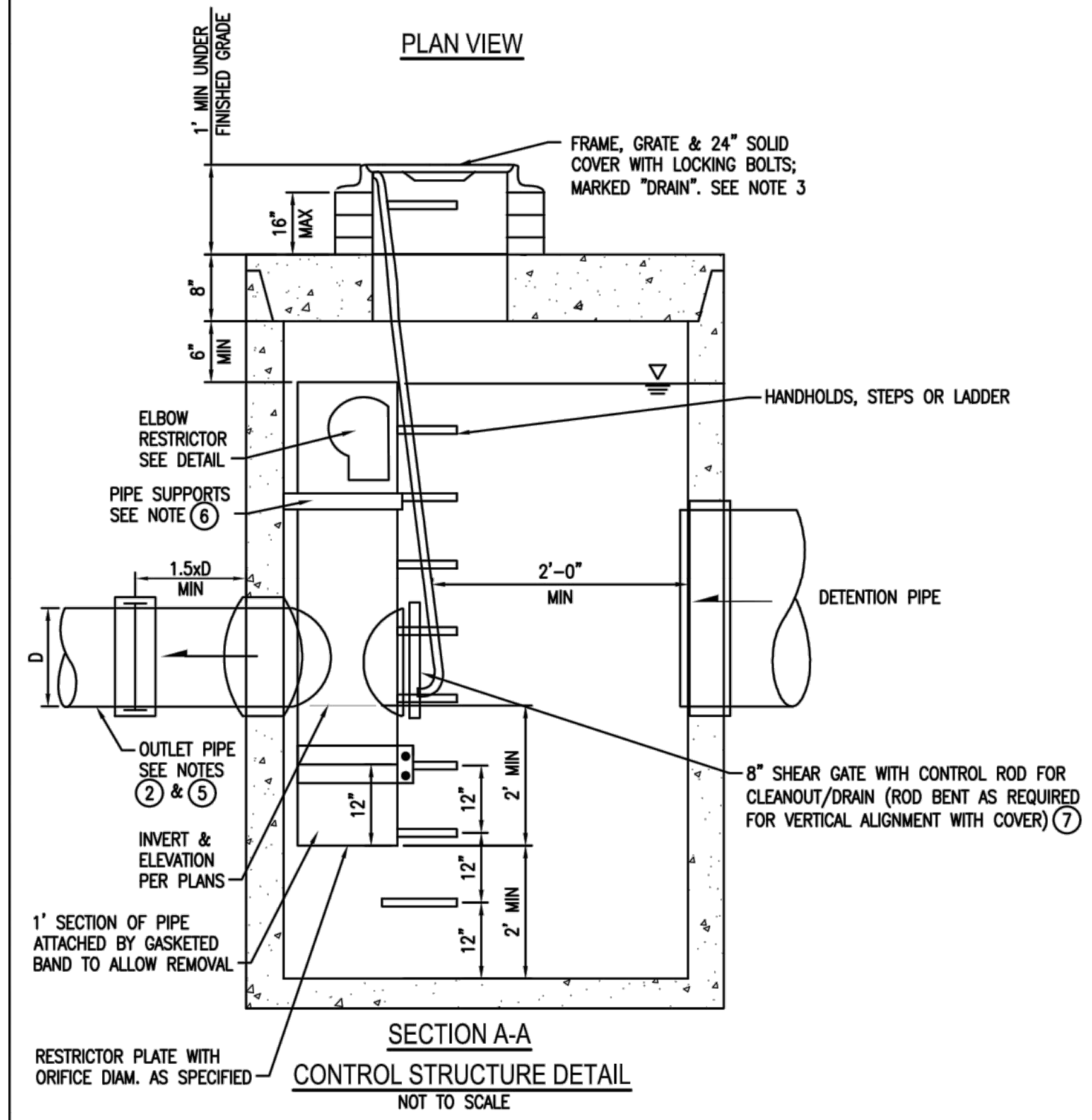
Scale: 1" = 10'

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



PLAN VIEW

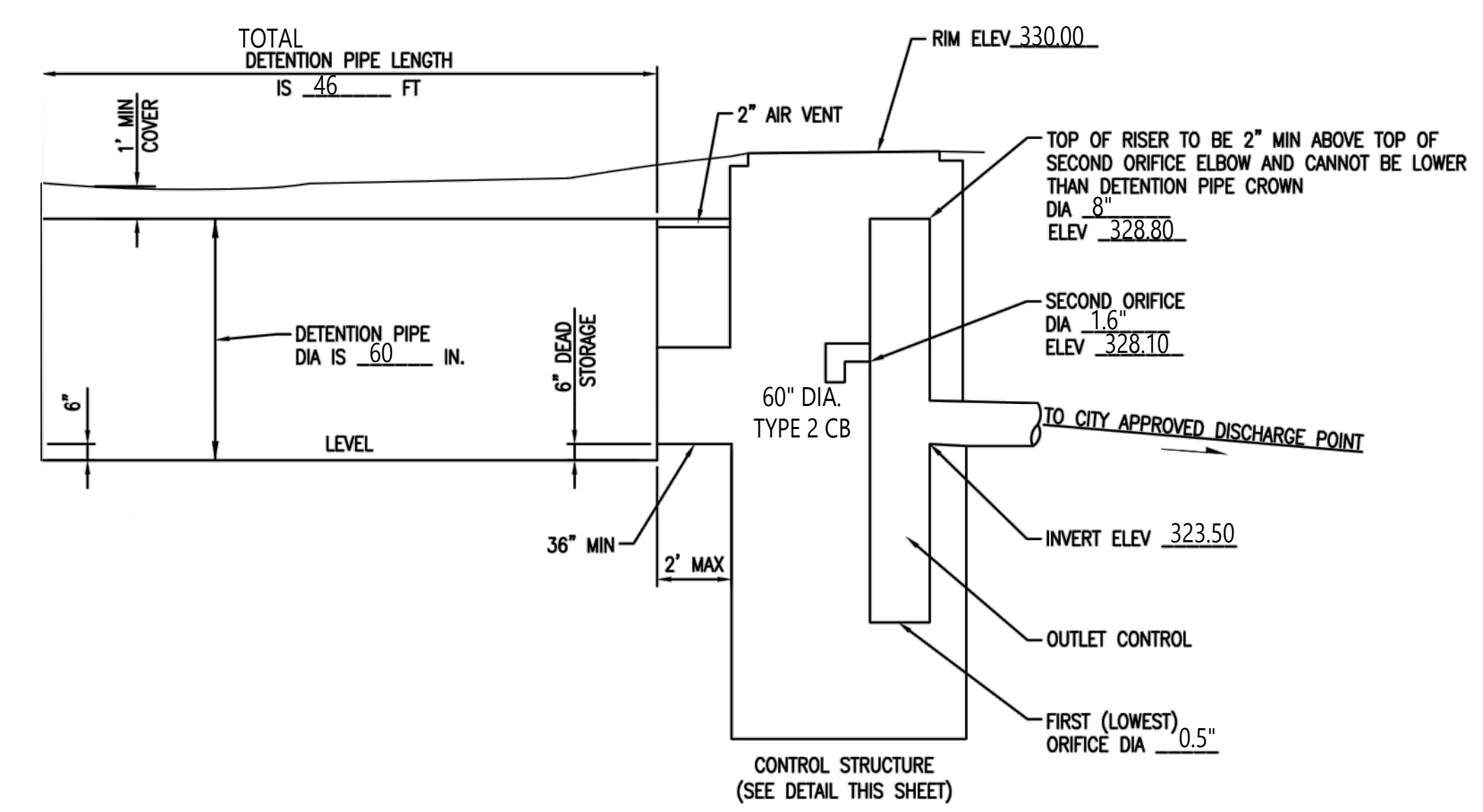
ELBOW RESTRICTOR DETAIL



SECTION A-A
CONTROL STRUCTURE DETAIL
 NOT TO SCALE

NO UPPER CATCH BASIN REQUIRED -
 DETENTION PIPE LENGTH IS LESS THAN 50 FT.

OWNER: _____	ADDRESS: <u>80XX SE 20th St</u>	PREPARED BY: <u>Interlaken Engineering and Design, PLLC</u>
PERMIT #: <u>2206-271</u>	PHONE: <u>(206) 470-9572</u>	DATE: <u>December 14, 2022</u>
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): <u>4,070 sf (roof+driveway)</u>	DETENTION PIPE DIA (INCH): <u>60</u>	DETENTION PIPE LENGTH (FT): <u>46</u>
SOIL TYPE: <u>B to be detained</u>	PIPE MATERIAL: <u>ADS</u>	ORIFICE #1 DIA <u>0.5</u> INCH, ELEV <u>321.50</u>
		ORIFICE #2 DIA <u>1.6</u> INCH, ELEV <u>328.10</u>



ON-SITE DETENTION SYSTEM
 NOT TO SCALE (ENGINEER TO FILL IN BLANKS)

CONTROL STRUCTURE NOTES:

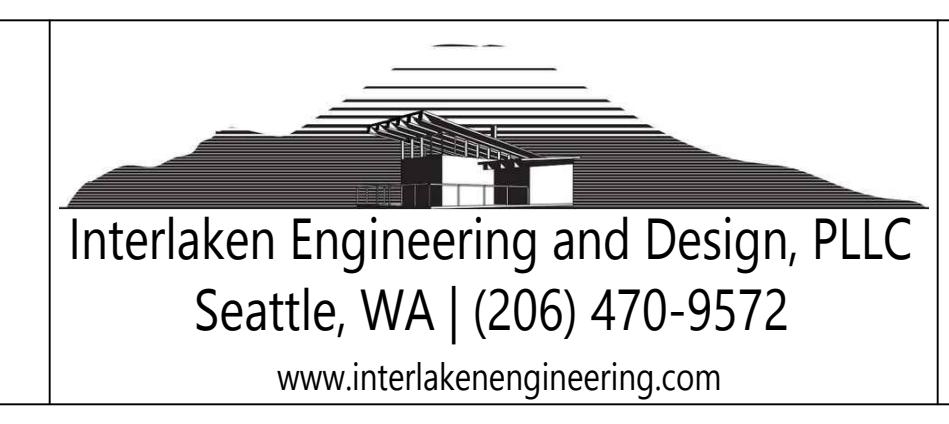
- | | |
|--|---|
| <p>① USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.</p> <p>② OUTLET PIPE: MIN. 6 INCH.</p> <p>③ METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT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

ON-SITE DETENTION SYSTEM NOTES:

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

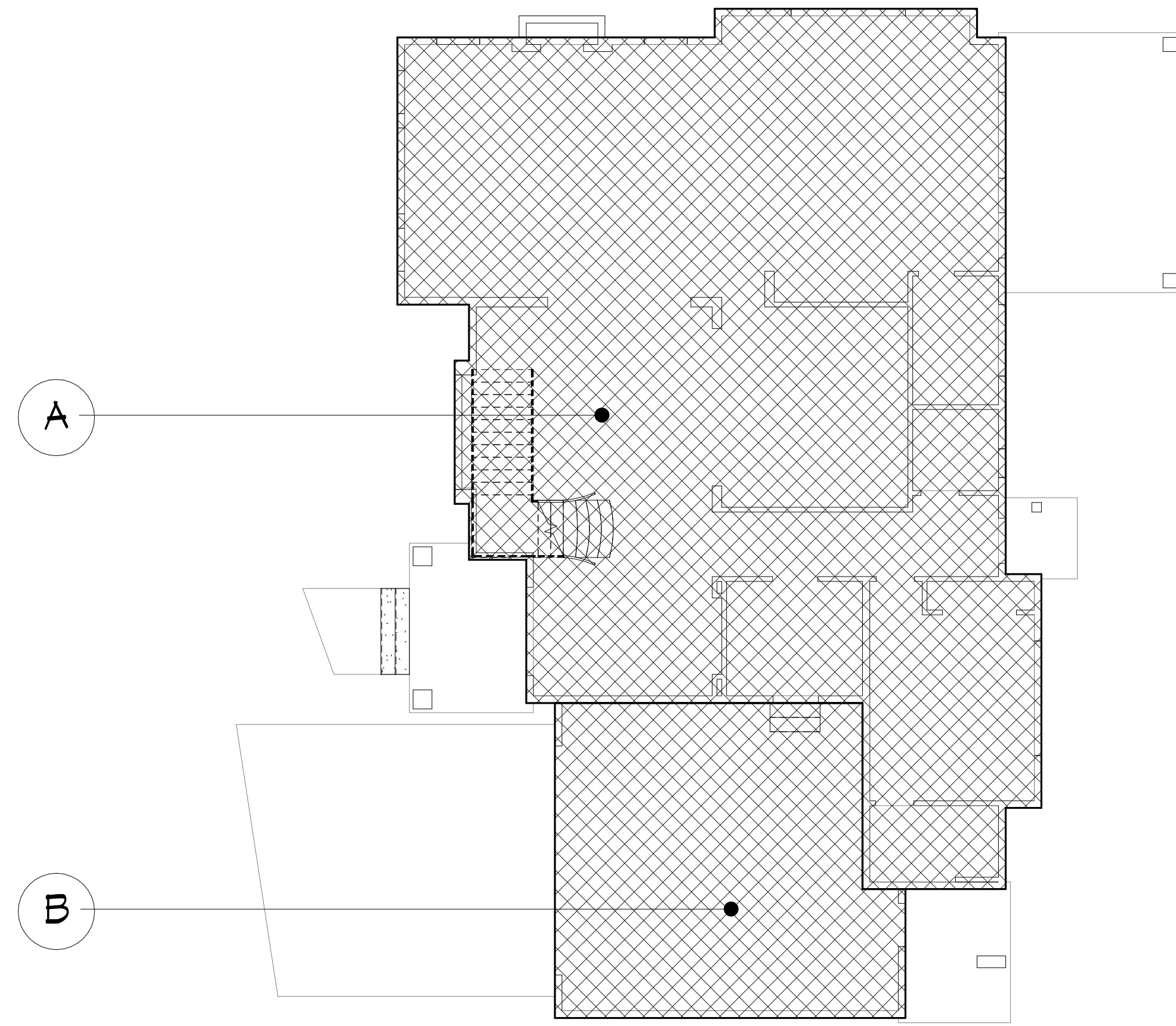
SEE C3 FOR DRAINAGE SITE PLAN

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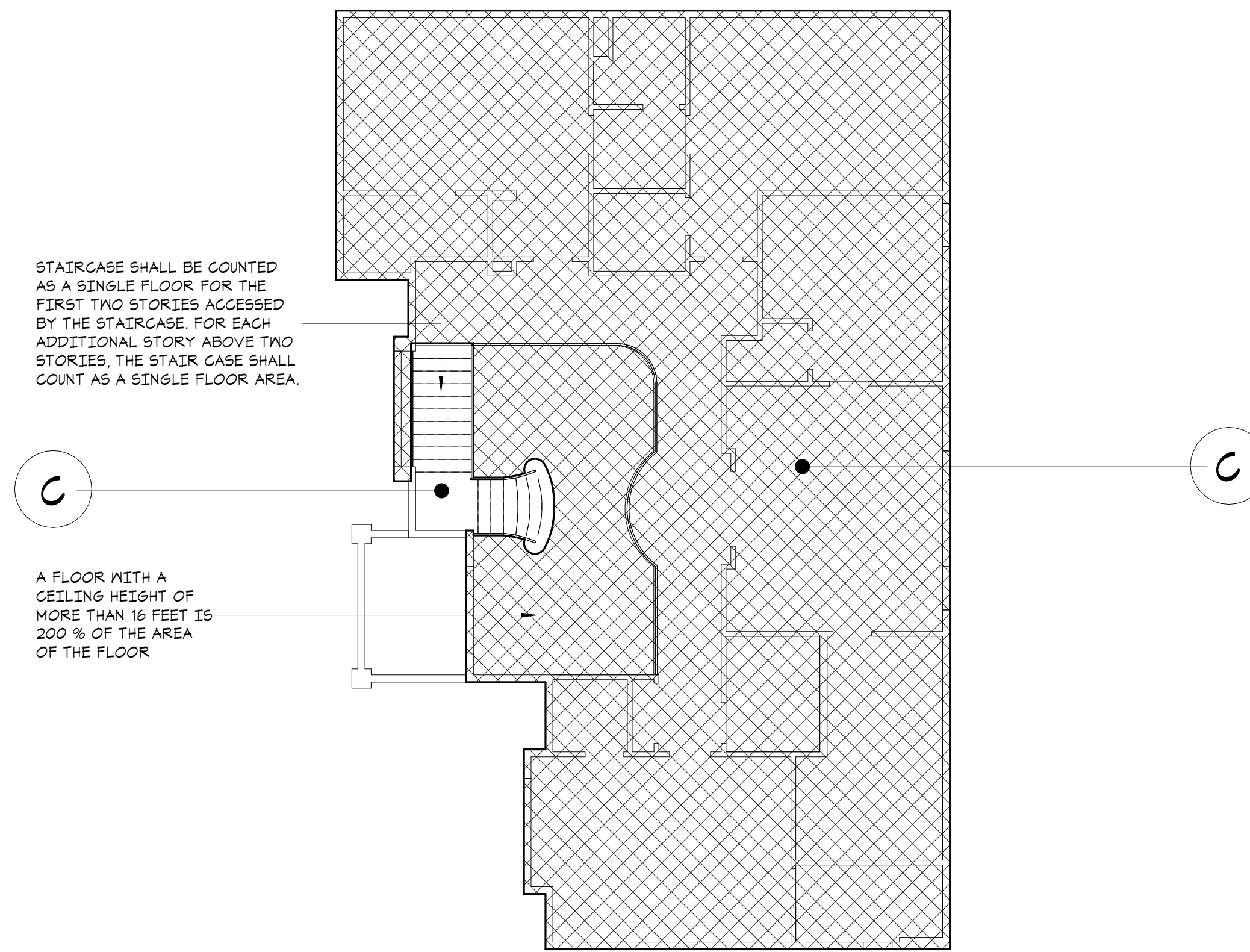


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C4
 Detention Detail
 Scale: As Noted



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



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

STAIRCASE SHALL BE COUNTED AS A SINGLE FLOOR FOR THE FIRST TWO STORIES, ACCESSED BY THE STAIRCASE. FOR EACH ADDITIONAL STORY ABOVE TWO STORIES, THE STAIR CASE SHALL COUNT AS A SINGLE FLOOR AREA.

A FLOOR WITH A CEILING HEIGHT OF MORE THAN 16 FEET IS 200% OF THE AREA OF THE FLOOR.

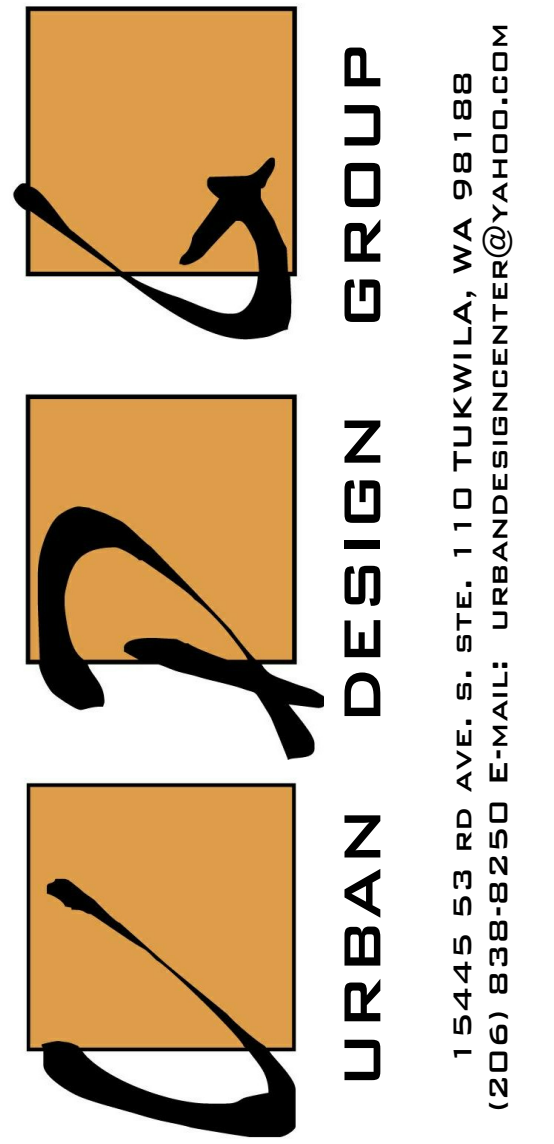
GROSS FLOOR AREA:			
(A)	MAIN FLOOR:	2 015	S.F.
(B)	GARAGE:	500	S.F.
(C)	UPPER FLOOR:	2 255	S.F.
(D)	STAIRCASE:	EXCLUDED	
TOTAL GROSS FLOOR AREA (GFA):		4 710	S.F.

GROSS FLOOR AREA:	
LOT AREA:	11 930 s.f.
ALLOWED GFA *:	40%
GFA W/ALLOWANCE (40%):	4 712 s.f.
TOTAL PROPOSED GFA:	4,710 S.F. / 39.98%

* ZONING R-2.4: 5,000 SQUARE FEET OR 40% OF THE LOT AREA, WHICHEVER IS LESS.

** IF AN ACCESSORY DWELLING UNIT IS PROPOSED, THE 40% ALLOWED GFA MAY BE INCREASED BY THE LESSER OF 5 PERCENTILE POINTS, OR THE FLOOR AREA OF THE ACCESSORY DWELLING UNIT. PROVIDED, THIS ALLOWANCE SHALL NOT RESULT IN A GFA OF MORE THAN 4,500 SQUARE FEET OR 45% OF THE LOT AREA, WHICHEVER IS LESS.

NOTE:
THE GFA INCLUDES THE FLOOR AREA OF THE MAIN BUILDING, ACCESSORY BUILDINGS, GARAGES, ATTACHED ROOFED DECKS ON THE SECOND OR THIRD STORY OF A SINGLE FAMILY HOME, STAIR CASES, ETC. THE GFA DOES NOT INCLUDE SECOND- OR THIRD UNCOVERED DECKS OR UNCOVERED ROOFTOP DECKS.



URBAN DESIGN GROUP
15445 53 RD AVE. S. STE. 110 TUKWILA, WA 98188
(206) 836-8250 E-MAIL: URBANDESIGNCENTER@YAHOO.COM

PROJECT NAME:
SINGLE-FAMILY RESIDENCE
8456 SE 40TH
MERCER ISLAND, WA 98040
PARCEL #: 502190-0790

PREPARED FOR:
PHILIP SUDO & LLC
KUN QIAN &
Laurie Qian

SUBMITTAL/REVISION: DATE:
SUBMITTED -/-/2022
REVISED -/-/2022
DESIGN BY: PAVEL MELNIK
DRAFTED BY: ANNA KONYAKINA
SHEET TITLE:

GROSS FLOOR AREA (GFA)

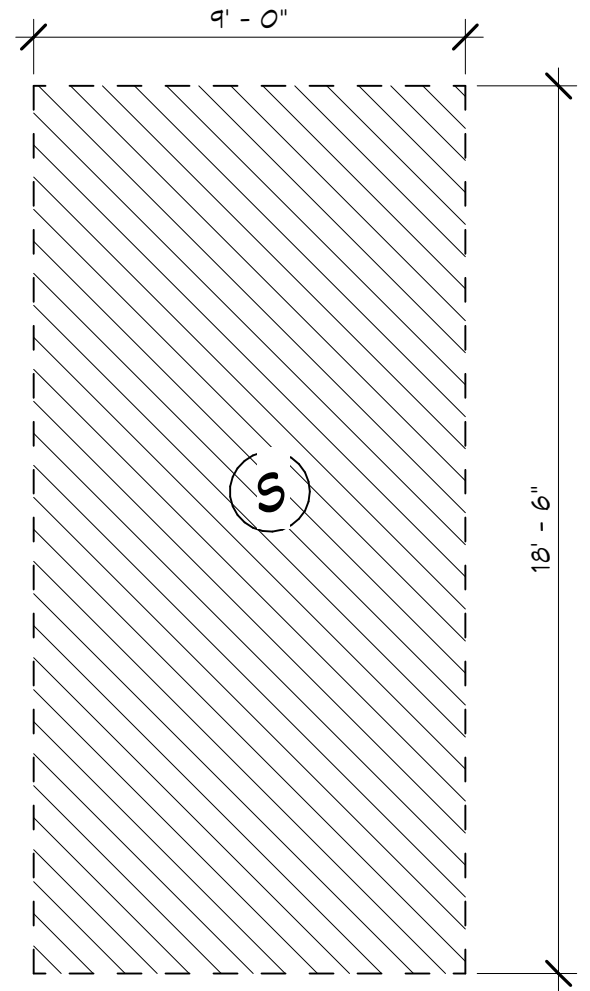
PROJECT NUMBER:
21257

SHEET NUMBER:

A2.1

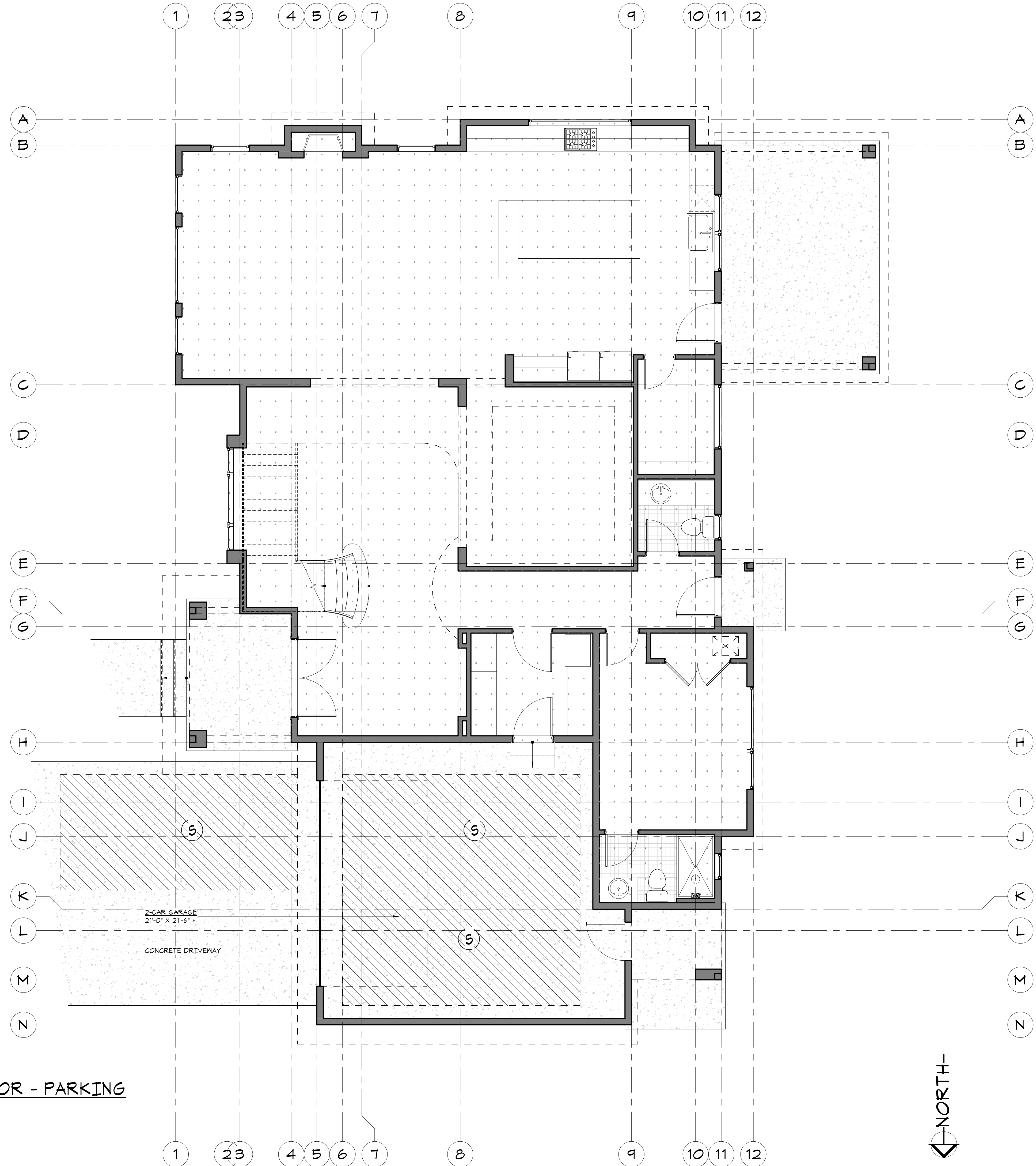
PARKING REQUIRED (MCC 19.02.020(6)(2)(A)):
 A. EACH SINGLE-FAMILY DWELLING WITH A GROSS FLOOR AREA OF 3,000 SQUARE FEET OR MORE SHALL HAVE AT LEAST THREE PARKING SPACES SUFFICIENT IN SIZE TO PARK A PASSENGER AUTOMOBILE; PROVIDED, AT LEAST TWO OF THE STALLS SHALL BE COVERED STALLS.

STANDARD PARKING STALL (9' X 10.5'):



PROVIDED PARKING:
 TWO (2) STANDARD SIZE COVERED PARKING SPACES IN THE GARAGE. DRIVEWAY CONTAINS A MINIMUM OF ONE (1) STANDARD PARKING STALL.

PARKING STALLS



MAIN FLOOR - PARKING
 SCALE: 1/4" = 1'-0"

- TYPICAL FLOOR NOTES:**
- INSTALL SMOKE DETECTORS IN ALL SLEEPING ROOMS AND AT AREAS ADJACENT TO SLEEPING ROOMS, AND AT CEILING HEIGHT CHANGES GREATER THAN 24". SMOKE DETECTORS TO BE HARD-WIRED AND INTERCONNECTED, WITH BATTERY BACK-UP PER CODE.
 - INSTALL CARBON MONOXIDE SENSORS ADJACENT TO SLEEPING AREAS.
 - ALL INTERIOR WALLS TO BE 2x4 @ 16" O.C. (U.N.O.)
 - ALL EXTERIOR WALLS TO BE 2x6 @ 16" O.C. (U.N.O.)
 - MAIN FLOOR HEADERS PER STRUCTURAL @ 9'-0" A.F.F. (U.N.O.)
 - WINDOW SIZES ARE NOMINAL ROUGH OPENING, WIDTH AND HEIGHT.
 - DOOR SIZES NOTED ARE SLABS NOT ROUGH OPENINGS
 - PROVIDE FIREBLOCKING AT ALL PLUMBING OPENINGS.
 - PROVIDE SOLID BLOCKING OVER SUPPORTS.
 - WHEN THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR-CEILING ASSEMBLY, DRAFTSTOPPING SHALL BE INSTALLED SO THAT THE AREA OF CONCEALED SPACE DOES NOT EXCEED 1000 SF. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS AND SHALL BE OF 1/2" GYP BOARD OR OTHER APPROVED MATERIALS INSTALLED PARALLEL TO THE FLOOR FRAMING MEMBERS PER CODE.
 - PROVIDE FIREBLOCKING TO CUT OFF ALL CONCEALED HORIZONTAL AND VERTICAL DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STAIRS, AND BETWEEN A TOP STORY AND THE ROOF SPACE. FIREBLOCKING SHALL CONSIST OF NOT LESS THAN 2" NOMINAL LUMBER OR OTHER APPROVED MATERIAL.
 - ASPHALT-SATURATED FELT FREE FROM HOLES OR BREAKS, WEIGHING NOT LESS THAN 14 POUNDS PER 100 SQUARE FEET AND COMPLYING WITH ASTM D 226 OR OTHER APPROVED WEATHER RESISTANT MATERIAL SHALL BE APPLIED OVER SHEATHING OF ALL EXTERIOR WALLS. APPROVED ALTERNATIVE WEATHERPROOF MEMBRANES SHALL BE USED FOR OPEN JOINT RAIN SCREEN SIDING. WEATHER RESISTANT MATERIALS SHALL BE APPLIED HORIZONTALLY PER MANUFACTURERS RECOMMENDATIONS, WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2 INCHES AND NOT LESS THAN 6 INCHES WHERE JOINTS OCCUR PER CODE.
 - APPROVED CORROSION-RESISTIVE FLASHING SHALL BE PROVIDED IN THE EXTERIOR WALL ENVELOPE IN SUCH A MANNER AS TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OR PENETRATION OF WATER TO THE BUILDINGS STRUCTURAL FRAMING COMPONENTS. THE FLASHING SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL SURFACE AND SHALL BE INSTALLED TO PREVENT WATER FROM REENTERING THE EXTERIOR WALL ENVELOPE. FLASHING SHALL BE INSTALLED AT, BUT NOT LIMITED TO THE FOLLOWING LOCATIONS:
-TOP OF ALL EXTERIOR WINDOW OPENINGS
-INTERSECTIONS OF FRAME WALLS AND MASONRY OR STUCCO
-UNDER MASONRY, WOOD OR METAL COPINGS AND SILLS
-CONTINUOUSLY ABOVE ALL PROJECTING MOOD TRIM
-WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH TO A WALL
-AT WALL AND ROOF OR SOFFIT INTERSECTIONS
 - EXTERIOR LOCATIONS FOR ENVIRONMENTAL AIR DUCT EXHAUST & INTAKE OPENINGS TO BE A MINIMUM OF 3'-0" FROM PROPERTY LINE & MINIMUM 3'-0" FROM BUILDING OPENINGS. EQUIP ALL DUCTS W/ BACK-DRAFT DAMPERS.
 - AIR EXHAUST & INTAKE OPENINGS THAT TERMINATE OUTDOORS SHALL BE PROTECTED W/ CORROSION RESISTANT SCREENS, LOUVERS, OR GRILLS W/ 1/4" MINIMUM 1/2" MAX OPENINGS IN ANY DIMENSION. OPENINGS SHALL BE PROTECTED AGAINST LOCAL WEATHER CONDITIONS PER 2015 IRC.
 - DUCTS FOR KITCHEN RANGES SHALL BE OF METAL AND BE EQUIPPED W/ BACK-DRAFT DAMPERS PER CODE.
 - ALL INTERIOR FINISHES TO MEET MINIMUM FLAME SPREAD INDEX AND SMOKE DEVELOPMENT INDEX AS REQUIRED BY 2015 IRC.
 - UNDER FLOOR CLEANOUT NOT MORE THAN 20" FROM ACCESS DOOR WITH AN UNOBSTRUCTED 30" WIDE X 18" HIGH PATH PATHWAY. CLEANOUTS ARE ACCESSIBLE. 12" CLEARANCE REQUIRED AT LINES LESS THAN OR EQUAL TO 2". 18" CLEARANCE AT LINES GREATER THAN 2". (UPC 101.9)
 - GLAZING IN ALL FIXED AND OPERABLE PANELS OF SKININGS, SLIDING AND BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION, SAFETY GLAZING.

- GARAGE NOTES:**
- GARAGES SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 5/8" TYPE X GMB APPLIED TO THE GARAGE SIDE. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 5/8" TYPE X GYPSUM BOARD OR EQUIVALENT.
 - OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 1 3/8" IN THICKNESS, SOLID OR HONEYCOMB CORE STEEL DOORS NOT LESS THAN 1 3/8" THICK, OR 20-MINUTE FIRE-RATED DOORS.
 - DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM NO. 26 GAGE SHEET STEEL OR OTHER APPROVED MATERIALS AND SHALL HAVE NO OPENINGS INTO THE GARAGE. IRC R304.1.1
 - IN SEISMIC ZONES 3 & 4, WATER HEATERS SHALL BE ANCHORED TO RESIST HORIZ. DISPLACEMENT DUE TO EARTHQUAKE MOTION. STRAPINGS SHALL BE @ POINTS WITHIN THE UPPER ONE THIRD AND LOWER ONE THIRD PER UPC SEC. 510.5
 - PROVIDE OUTDOOR COMBUSTION AIR FOR WATER HEATER
 - GARAGE FLOOR SURFACES SHALL BE OF APPROVED NONCOMBUSTIBLE MATERIAL AND THE AREA USED FOR THE PARKING OF AUTOMOBILES OR OTHER VEHICLES SHALL BE SLOPED TO FACILITATE THE MOVEMENT OF LIQUIDS TO A DRAIN OR TOWARD THE MAIN VEHICLE ENTRY DOORWAY.

AREA SUMMARY:

MAIN FLOOR:	2,025 SF
UPPER FLOOR:	1,991 SF
LIVING/HEATED SPACE:	4,016 SF
GARAGE:	500 SF
FRONT PORCH:	92 SF
CONCRETE LANDING:	63 SF
COVERED PATIO:	210 SF

NOTE: REFER TO STRUCTURAL SHEETS FOR SHEAR WALL SCHEDULE AND ENGINEERING PLAN WHICH CONTAIN REFERENCES AND/OR INSTRUCTIONS PERTAINING TO EACH SHEAR WALL INDICATED IN THIS PLAN

NOTE: EACH DOOR TO BE UNDERCUT A MINIMUM OF 1/2-INCH TO ASSURE FREE FLOW OF FRESH AIR THROUGHOUT HABITABLE ROOMS

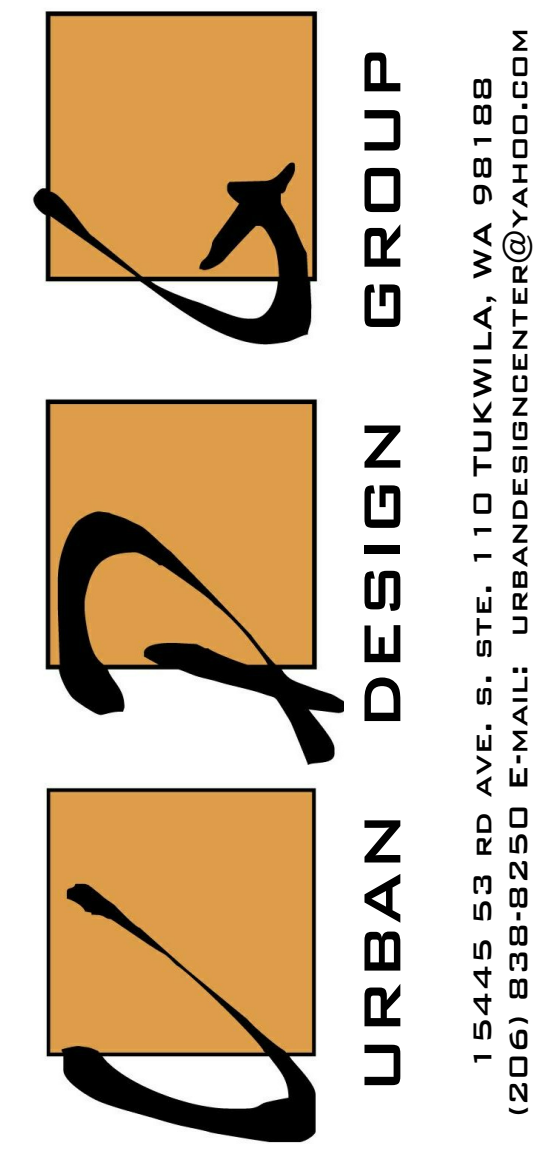
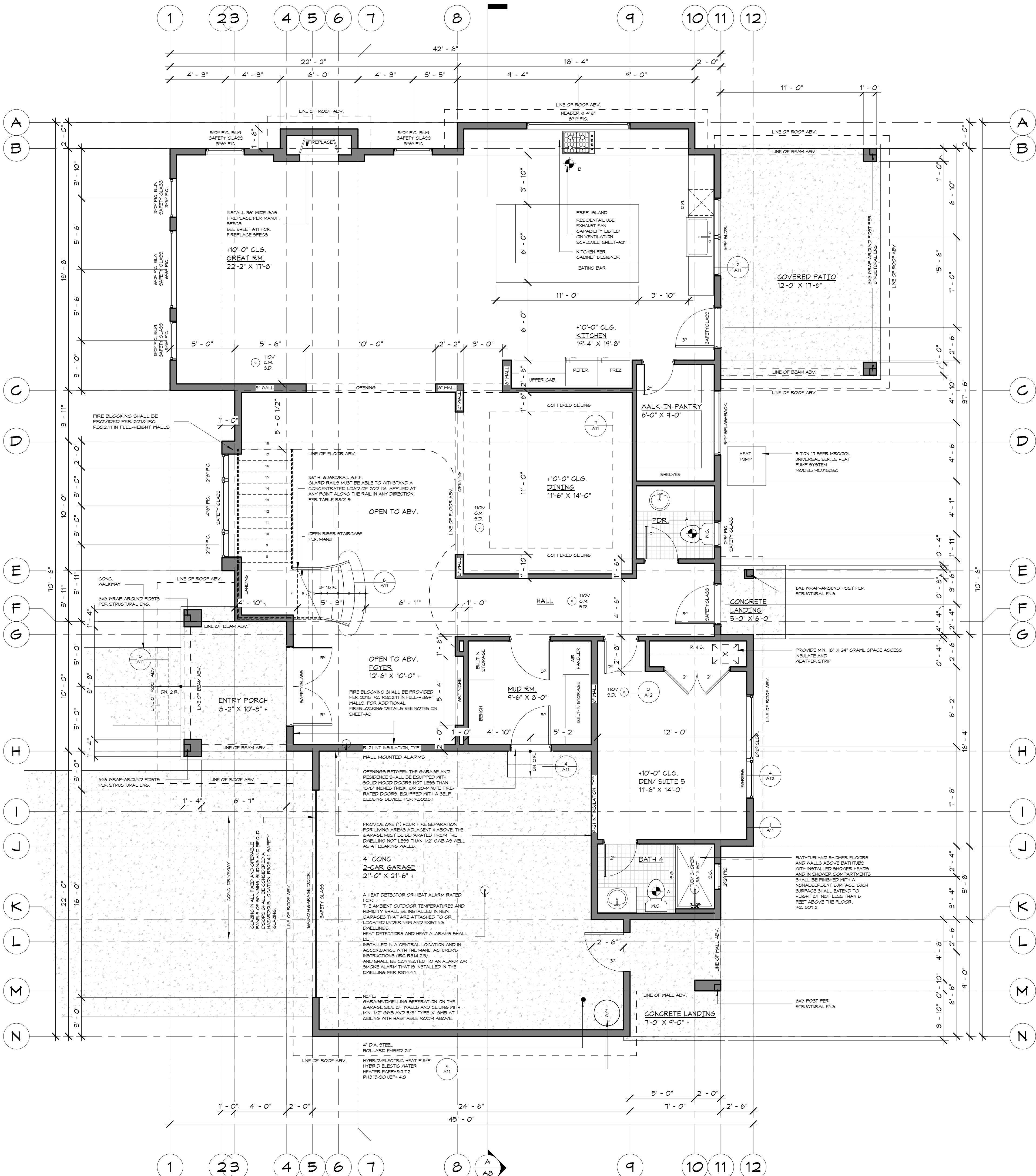
NOTE: CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS OF PROJECT AND REPORT ANY OMISSIONS / DISCREPANCIES TO DESIGNER PRIOR TO COMMENCING WORK. DESIGNER SHALL NOT BE RESPONSIBLE FOR DISCREPANT CONDITIONS RESULTING FROM UNAUTHORIZED WORK PERFORMED BY THE CONTRACTOR.

NOTE: THE DOOR IN THE DWELLING/GARAGE SEPARATION MUST BE EQUIPPED WITH A SELF-CLOSING OR AUTOMATED CLOSING DEVICE. PER IRC 302.5.1

FOR SMOKE & CARBON MONOXIDE ALARMS NOTES SEE SHEET A5.

MAIN FLOOR PLAN

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



PROJECT NAME:
SINGLE-FAMILY RESIDENCE
8456 SE 40TH
MERCER ISLAND, WA 98040
PARCEL #: 502190-0790

PREPARED FOR:
PHILIP SUDO & LLC
KUN QIAN &
Laurie Qian

SUBMITTAL/REVISION: DATE:
 SUBMITTED -/-/2022
 REVISED -/-/2022

DESIGN BY: PAVEL MELNIK
 DRAFTED BY: ANNA KONYAKINA

MAIN FLOOR PLAN

PROJECT NUMBER:
21257

SHEET NUMBER:
A3

URBAN DESIGN GROUP
 15445 53 RD AVE. S. STE. 110 TUKWILA, WA 98188
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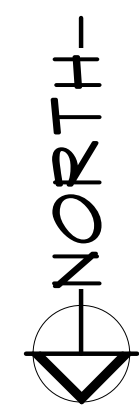
TYPICAL FLOOR NOTES:

- INSTALL SMOKE DETECTORS IN ALL SLEEPING ROOMS AND AT AREAS ADJACENT TO SLEEPING ROOMS, AND AT CEILING HEIGHT CHANGES GREATER THAN 24". SMOKE DETECTORS TO BE HARD-WIRED AND INTERCONNECTED WITH BATTERY BACK-UP PER CODE.
- INSTALL CARBON MONOXIDE SENSORS ADJACENT TO SLEEPING AREAS.
- ALL INTERIOR WALLS TO BE 2x4 @ 16" O.C. (U.N.O.)
- ALL EXTERIOR WALLS TO BE 2x6 @ 16" O.C. (U.N.O.)
- UPPER FLOOR HEADERS PER STRUCTURAL @ 8'-0" A.F.F. (U.N.O.)
- WINDOW SIZES ARE NOMINAL ROUGH OPENING WIDTH AND HEIGHT.
- DOOR SIZES NOTED ARE SLABS NOT ROUGH OPENINGS.
- PROVIDE FIREBLOCKING AT ALL PLUMBING OPENINGS.
- PROVIDE SOLID BLOCKING OVER SUPPORTS.
- WHEN THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR-CEILING ASSEMBLY, DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF CONCEALED SPACE DOES NOT EXCEED 1000 SF. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS AND SHALL BE OF 1/2" GYP BOARD OR OTHER APPROVED MATERIALS INSTALLED PARALLEL TO THE FLOOR FRAMING MEMBERS PER CODE.
- PROVIDE FIREBLOCKING TO CUT OFF ALL CONCEALED HORIZONTAL AND VERTICAL DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOFSPACE. FIREBLOCKING SHALL CONSIST OF NOT LESS THAN 2" NOMINAL LUMBER OR OTHER APPROVED MATERIAL.
- ASPHALT-SATURATED FELT FREE FROM HOLES OR BREAKS, WEIGHING NOT LESS THAN 14 POUNDS PER 100 SQUARE FEET AND COMPLYING WITH ASTM D 226 OR OTHER APPROVED WEATHER RESISTANT MATERIAL SHALL BE APPLIED OVER SHEATHING OF ALL EXTERIOR WALLS. APPROVED ALTERNATIVE WEATHERPROOF MEMBRANES SHALL BE USED FOR OPEN JOINT RAIN SCREEN SIDING. WEATHER RESISTANT MATERIALS SHALL BE APPLIED HORIZONTALLY PER MANUFACTURERS RECOMMENDATIONS WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2 INCHES AND NOT LESS THAN 6 INCHES WHERE JOINTS OCCUR PER CODE.
- APPROVED CORROSION-RESISTIVE FLASHING SHALL BE PROVIDED IN THE EXTERIOR WALL ENVELOPE IN SUCH A MANNER AS TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OR PENETRATION OF WATER TO THE BUILDING'S STRUCTURAL FRAMING COMPONENTS. THE FLASHING SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL SURFACE AND SHALL BE INSTALLED TO PREVENT WATER FROM REENTERING THE EXTERIOR WALL ENVELOPE. FLASHING SHALL BE INSTALLED AT, BUT NOT LIMITED TO THE FOLLOWING LOCATIONS:
 - THE TOP OF ALL EXTERIOR WINDOW & DOOR OPENINGS
 - INTERSECTIONS OF FRAME WALLS AND MASONRY OR STUCCO
 - UNDER MASONRY, WOOD OR METAL COPINGS AND SILLS
 - CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM
 - WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH TO A WALL
 - AT WALL AND ROOF OR SOFFIT INTERSECTIONS
 - AT BUILT-IN GUTTERS
- EXTERIOR LOCATIONS FOR ENVIRONMENTAL AIR DUCT EXHAUST & INTAKE OPENINGS TO BE A MINIMUM OF 3'-0" FROM PROPERTY LINE & MINIMUM 3'-0" FROM BUILDING OPENINGS. EQUIP ALL DUCTS W/ BACK-DRAFT DAMPERS.
- AIR EXHAUST & INTAKE OPENINGS THAT TERMINATE OUTDOORS SHALL BE PROTECTED W/ CORROSION RESISTANT SCREENS, LOUVERS, OR GRILLS W/ 1/4" MINIMUM & 1/2" MAX OPENINGS IN ANY DIMENSION. OPENINGS SHALL BE PROTECTED AGAINST LOCAL WEATHER CONDITIONS PER 2015 IRC.
- DUCTS FOR KITCHEN RANGES SHALL BE OF METAL AND BE EQUIPPED W/ BACK-DRAFT DAMPERS PER CODE.
- ALL INTERIOR FINISHES TO MEET MINIMUM FLAME SPREAD INDEX AND SMOKE DEVELOPMENT INDEX AS REQUIRED BY 2015 IRC.
- UNDER FLOOR CLEANOUT NOT MORE THAN 20' FROM ACCESS DOOR WITH AN UNOBSTRUCTED 30" WIDE X 18" HIGH PATHWAY. CLEANOUTS ARE ACCESSIBLE. 12" CLEARANCE REQUIRED AT LINES LESS THAN OR EQUAL TO 2". 18" CLEARANCE AT LINES GREATER THAN 2". (UPC 701.9)
- GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGS, SLIDING AND BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION. SAFETY GLAZING.

AREA SUMMARY:

MAIN FLOOR:	2 025	SF
UPPER FLOOR:	1 491	SF
LIVING/HEATED SPACE:	4 016	SF
GARAGE:	500	SF
FRONT PORCH:	42	SF
CONCRETE LANDING:	63	SF
COVERED PATIO:	210	SF

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



NOTE: REFER TO STRUCTURAL SHEETS FOR SHEAR WALL SCHEDULE AND ENGINEERING PLAN WHICH CONTAIN REFERENCES AND/OR INSTRUCTIONS PERTAINING TO EACH SHEAR WALL INDICATED IN THIS PLAN

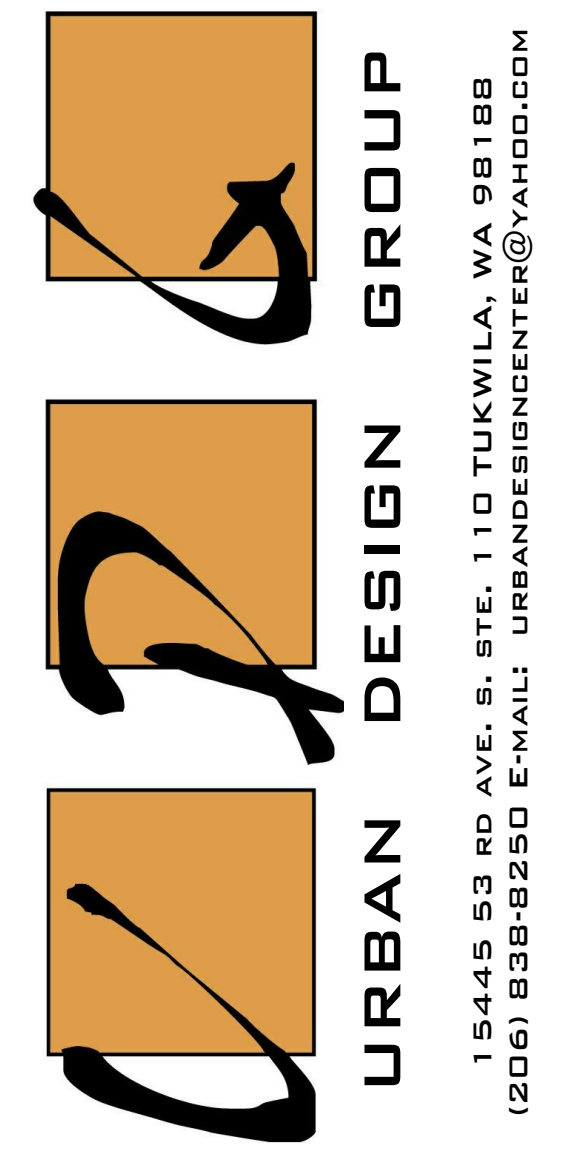
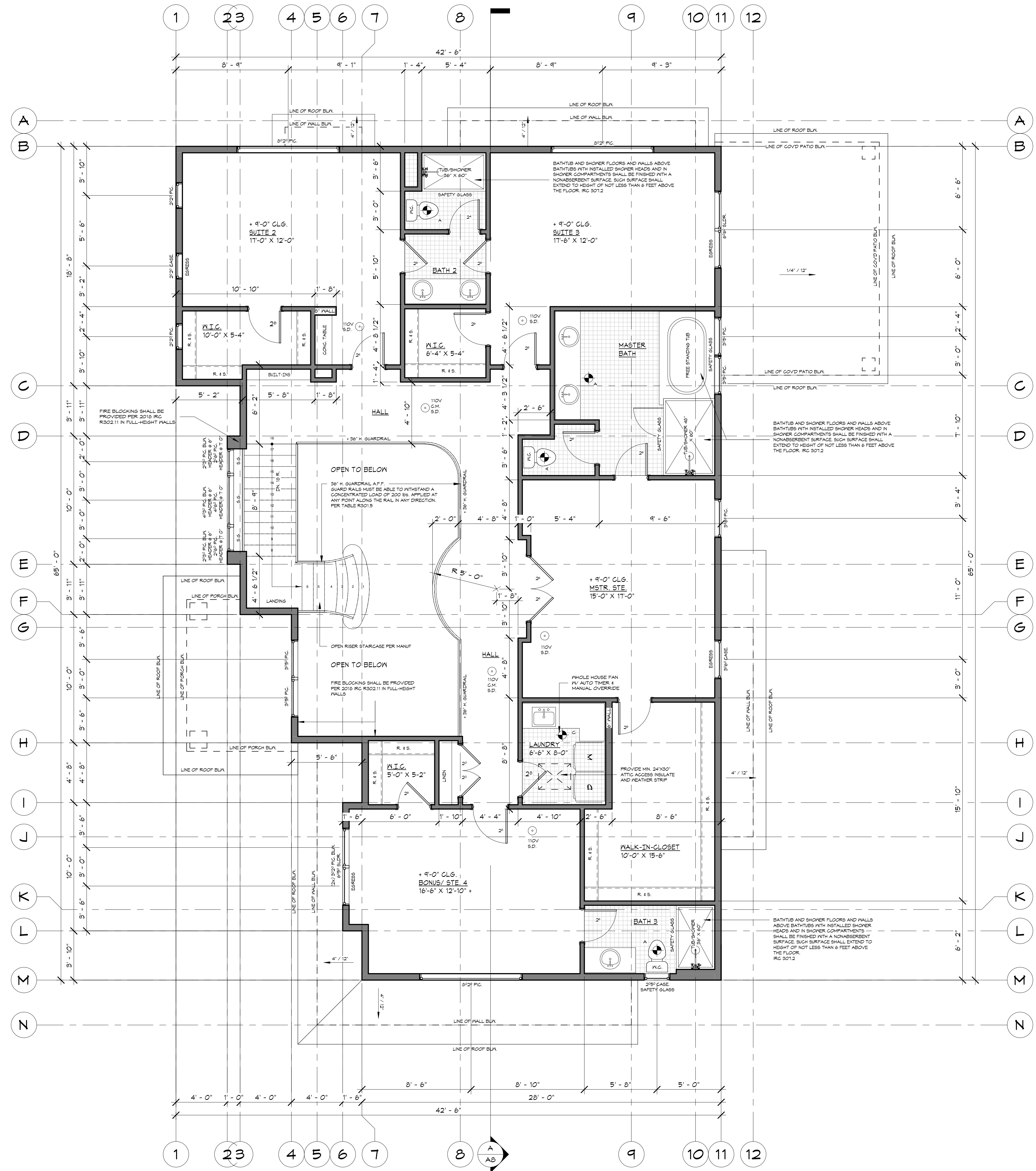
NOTE: EACH DOOR TO BE UNDERCUT A MINIMUM OF 1/2-INCH TO ASSURE FREE FLOW OF FRESH AIR THROUGHOUT HABITABLE ROOMS

NOTE: CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS OF PROJECT AND REPORT ANY OMISSIONS / DISCREPANCIES TO DESIGNER PRIOR TO COMMENCING WORK. DESIGNER SHALL NOT BE RESPONSIBLE FOR DISCREPANT CONDITIONS RESULTING FROM UNAUTHORIZED WORK PERFORMED BY THE CONTRACTOR.

NOTE: THE DOOR IN THE DWELLING/GARAGE SEPARATION MUST BE EQUIPPED WITH A SELF-CLOSING OR AUTOMATED CLOSING DEVICE. PER IRC 302.5.1

FOR SMOKE & CARBON MONOXIDE ALARMS NOTES SEE SHEET A5.

NOTE: DUCT TO EXTERIOR. FOR INTERMITTENT DISTRIBUTED



PROJECT NAME:
SINGLE-FAMILY RESIDENCE
8456 SE 40TH
MERCER ISLAND, WA 98040
PARCEL #: 502190-0790

PREPARED FOR:
PHILIP SUDO & LLC
KUN QIAN &
LAURIE QIAN

SUBMITTAL/REVISION: DATE:
SUBMITTED: -/-/2022
REVISED: -/-/2022
DESIGN BY: PAVEL MELNIK
DRAFTED BY: ANNA KONYAKINA
SHEET TITLE:

UPPER FLOOR PLAN

PROJECT NUMBER:
21257

SHEET NUMBER:

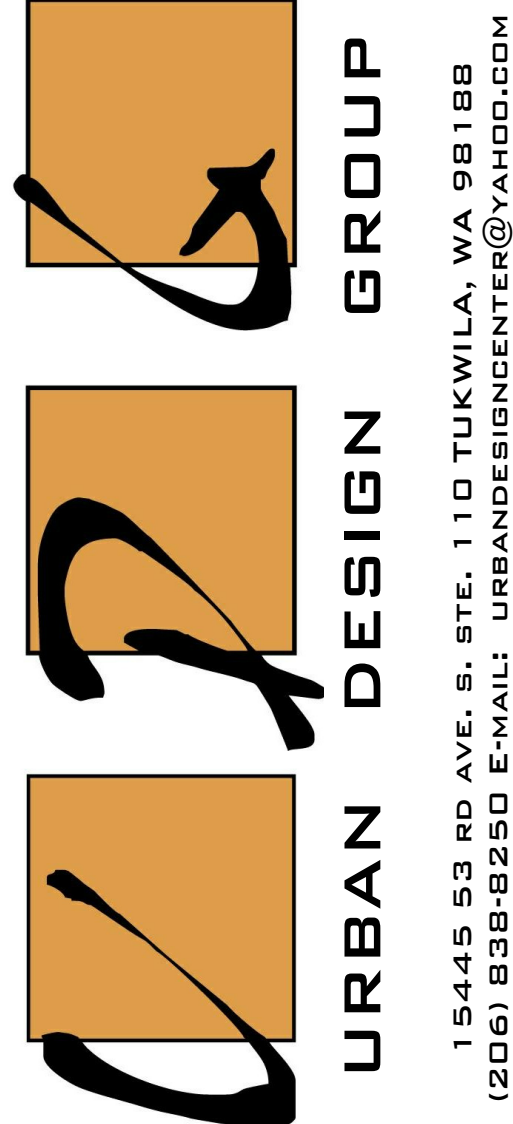
- ELEVATION NOTES:**
1. VERIFY SHEAR WALL NAILING & HOLD-DOWNS PER PLAN PRIOR TO INSTALLING SIDING.
 2. CAULK ALL EXTERIOR JOINTS & PENETRATIONS.
 3. PROVIDE APPROVED CORROSION RESISTANT FLASHING AT EXTERIOR WALL ENVELOPE PER I.R.C. R103.6
 4. PROVIDE FLASHING AT ROOF PENETRATIONS PER I.R.C. R905.2.6
 5. PROVIDE WEATHER STRIPPING AT ALL EXTERIOR & GARAGE-INTERIOR DOORS.
 6. PROVIDE CONTINUOUS GUTTERS & DOWNSPOUTS @ ALL EAVES, TYP.
 7. ADDRESS OR HOUSE NUMBER TO BE POSTED AND PLAINLY VISIBLE FROM THE STREET FRONTAGE, MIN. 4" HEIGHT, 1/2" STROKE WIDTH AND CONTRASTING BACKGROUND.
 8. PROVIDE STAIRWAY ILLUMINATION PER I.R.C. R303.6
 9. SEE SHEET A1 FOR ADDITIONAL NOTES.
 10. PROVIDE SURFACE DRAINAGE 6" : 10' MIN. AWAY FROM HOUSE FOOTPRINT I.R.C. R401.3

NOTE:
NO OPERABLE WINDOW SHALL BE INSTALLED LESS THAN 24 INCHES ABOVE FINISHED FLOOR THAT IS GREATER THAN 12 INCHES ABOVE THE FINISH GRADE OR OTHER SURFACE BELOW ON THE EXTERIOR OF THE BUILDING.

NOTE:
CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS OF PROJECT AND REPORT ANY OMISSIONS / DISCREPANCIES TO DESIGNER PRIOR TO COMMENCING WORK. DESIGNER SHALL NOT BE RESPONSIBLE FOR DISCREPANT CONDITIONS RESULTING FROM UNAUTHORIZED WORK PERFORMED BY THE CONTRACTOR.

NOTE:
FOR HARDIE PANEL DETAILS SEE SHEET A13
FOR ARTISAN LAP SIDING DETAILS SEE SHEET A14

SMOKE & CARBON MONOXIDE ALARMS:
SMOKE AND CARBON MONOXIDE ALARMS MUST BE PROVIDED IN ALL REQUIRED LOCATIONS AND MUST BE:
* AUDIBLE IN ALL PARTS OF THE HOUSE
* INSTALLED PER MANUFACTURER'S INSTRUCTIONS
NEW HOUSES (I.R.C. R314 & R315)
SMOKE ALARMS AND CARBON MONOXIDE ALARMS ARE REQUIRED AND MUST BE CONNECTED TO THE MAIN ELECTRICAL SYSTEM WITH BATTERY BACKUP.
CARBON MONOXIDE ALARMS ARE REQUIRED IN ALL NEW AND EXISTING HOMES, APARTMENTS, CONDOMINIUMS, AND OTHER MULTI-FAMILY UNITS.
REQUIRED LOCATIONS
* SMOKE ALARMS SHALL BE LOCATED IN EACH SLEEPING ROOM AND IN NAPPING AREAS IN A FAMILY HOME CHILD CARE.
* SMOKE ALARMS AND CARBON MONOXIDE ALARMS SHALL BE LOCATED OUTSIDE EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
* SMOKE ALARMS AND CARBON MONOXIDE ALARMS SHALL BE LOCATED ON EVERY FLOOR LEVEL, INCLUDING BASEMENTS (DOES NOT INCLUDE CRAWLSPACE AND UNINHABITABLE ATTICS).
* IN SPLIT LEVEL FLOOR PLANS, AT THE UPPER LEVEL, PROVIDED THERE IS NO INTERVENING DOOR BETWEEN ADJACENT LEVELS AND THE LOWER LEVEL IS LESS THAN A FULL STORY BELOW THE UPPER LEVEL
* A CARBON MONOXIDE ALARM IS REQUIRED IN A BEDROOM WHEN A FUEL-BURNING APPLIANCE IS INSTALLED IN THE BEDROOM OR ITS ATTACHED BATHROOM.
* A COMBINATION ALARM (COMBINED SMOKE AND CARBON MONOXIDE ALARMS) IS ACCEPTABLE IN ANY REQUIRED LOCATION.
* WALL MOUNTED ALARMS MUST BE NOT MORE THAN 12 INCHES FROM THE ADJOINING CEILING SURFACE.
* AVOID PLACING ALARMS LESS THAN 3 FEET FROM SUPPLY REGISTERS OF A FORCED AIR HEATING OR COOLING SYSTEM AND DO NOT PLACE ALARMS IN THE DIRECT AIRFLOW OF THE REGISTERS.
* AVOID PLACING ALARMS WITHIN 3 FEET HORIZONTALLY FROM DOORS TO BATHROOMS CONTAINING A BATHUB OR SHOWER.
* DO NOT PLACE ALARMS IN SPACES WHERE TEMPERATURES MAY BE ABOVE OR BELOW THE ALARM'S OPERATING TEMPERATURE RANGE.
* DO NOT PLACE ALARMS WITHIN 3 FEET OF THE BLADES OF A CEILING FAN.
* ALARMS IN PEAKED OR SLOPED CEILINGS MUST BE WITHIN 3 FEET OF THE PEAK, MEASURED HORIZONTALLY, BUT NOT IN THE HIGHEST 4 INCHES OF THE CEILING, MEASURED VERTICALLY.
A. PHOTOELECTRIC SMOKE ALARMS MUST NOT BE LESS THAN 6 FEET FROM A PERMANENT COOKING APPLIANCE.
B. IONIZATION SMOKE ALARMS WITH AN ALARM-SILENCING SWITCH MUST NOT BE LESS THAN 10 FEET FROM A PERMANENT COOKING APPLIANCE.
C. IONIZATION SMOKE ALARMS WITHOUT AN ALARM-SILENCING SWITCH MUST NOT BE LESS THAN 20 FEET FROM A PERMANENT COOKING APPLIANCE
CARBON MONOXIDE ALARM LOCATION LIMITATIONS
* DO NOT PLACE ALARMS DIRECTLY ABOVE OR BESIDE FUEL-BURNING APPLIANCES.
* DO NOT PLACE ALARMS IN DIRECT SUNLIGHT.
* DO NOT PLACE ALARMS IN LOW AREAS WHERE CHILDREN CAN REACH, DO NOT PLACE ALARMS BEHIND CURTAINS OR ANY STRUCTURE THAT MIGHT PREVENT CARBON MONOXIDE FROM REACHING THE SENSOR.



PROJECT NAME:
SINGLE-FAMILY RESIDENCE
8456 SE 40TH
MERCER ISLAND, WA 98040
PARCEL #: 502190-0790

PREPARED FOR:
PHILIP SUDO & LLC
KUN QIAN &
Laurie Qian

SUBMITTAL/REVISION: DATE:
SUBMITTED -/-/2022
REVISED -/-/2022
DESIGN BY: PAVEL MELNIK
DRAFTED BY: ANNA KONYAKINA
SHEET TITLE:

FRONT AND REAR ELEVATIONS

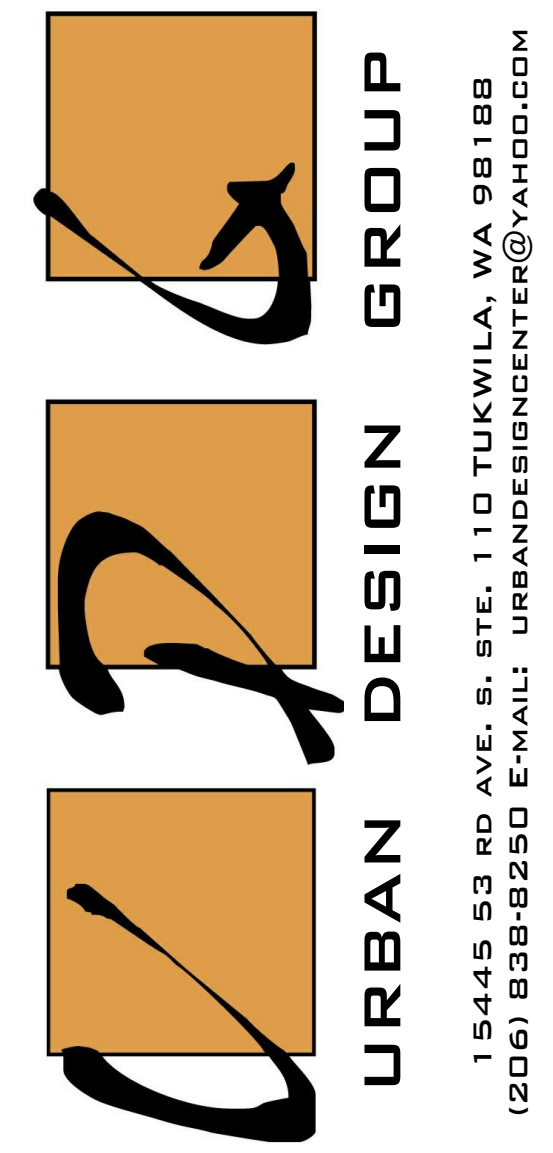
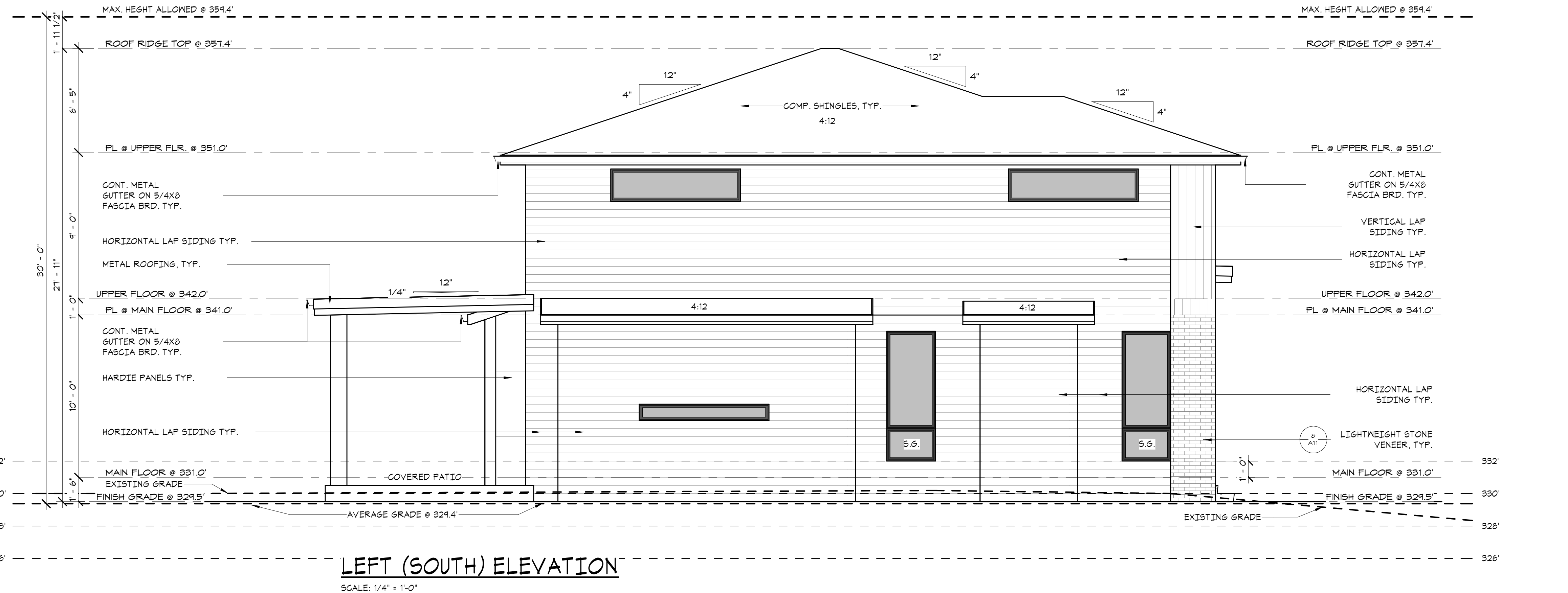
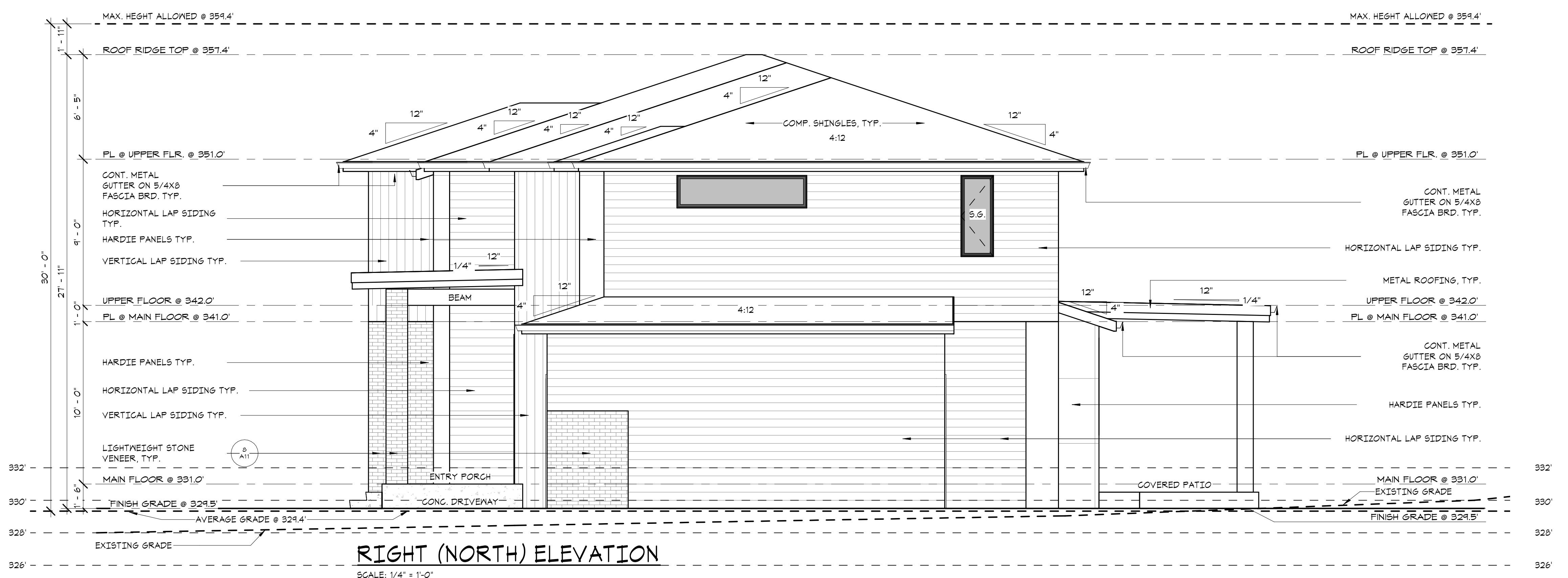
PROJECT NUMBER:
21257
SHEET NUMBER:

- ELEVATION NOTES:
1. VERIFY SHEAR WALL NAILING & HOLDDOWNS PER PLAN PRIOR TO INSTALLING SIDING.
 2. CAULK ALL EXTERIOR JOINTS & PENETRATIONS.
 3. PROVIDE APPROVED CORROSION RESISTANT FLASHING AT EXTERIOR WALL ENVELOPE PER I.R.C. R109.8
 4. PROVIDE FLASHING AT ROOF PENETRATIONS PER I.R.C. R405.2.8
 5. PROVIDE WEATHER STRIPPING AT ALL EXTERIOR & GARAGE-INTERIOR DOORS.
 6. PROVIDE CONTINUOUS GUTTERS & DOWNSPOUTS @ ALL EAVES, TYP.
 7. ADDRESS OR HOUSE NUMBER TO BE POSTED AND PLAINLY VISIBLE FROM THE STREET FRONTAGE, MIN. 4" HEIGHT, 1/2" STROKE WIDTH AND CONTRASTING BACKGROUND.
 8. PROVIDE STAIRWAY ILLUMINATION PER I.R.C. R309.6
 9. SEE SHEET A1 FOR ADDITIONAL NOTES.
 10. PROVIDE SURFACE DRAINAGE 6" x 10" MIN. AWAY FROM HOUSE FOOTPRINT IRC R401.3

NOTE:
NO OPERABLE WINDOW SHALL BE INSTALLED LESS THAN 24 INCHES ABOVE FINISHED FLOOR THAT IS GREATER THAN 12 INCHES ABOVE THE FINISH GRADE OR OTHER SURFACE BELOW ON THE EXTERIOR OF THE BUILDING.

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NOTE:
FOR HARDIE PANEL DETAILS SEE SHEET A13
FOR ARTISAN LAP SIDING DETAILS SEE SHEET A14



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**SINGLE-FAMILY RESIDENCE
8456 SE 40TH
MERCER ISLAND, WA 98040
PARCEL #: 502190-0790**

PREPARED FOR:
**PHILIP SUDO & LLC
KUN QIAN &
LAURIE QIAN**

SUBMITTAL/REVISION: DATE:
SUBMITTED -/-/2022
REVISED -/-/2022
DESIGN BY: PAVEL MELNIK
DRAFTED BY: ANNA KONYAKINA
SHEET TITLE:

**LEFT AND
RIGHT
ELEVATIONS**

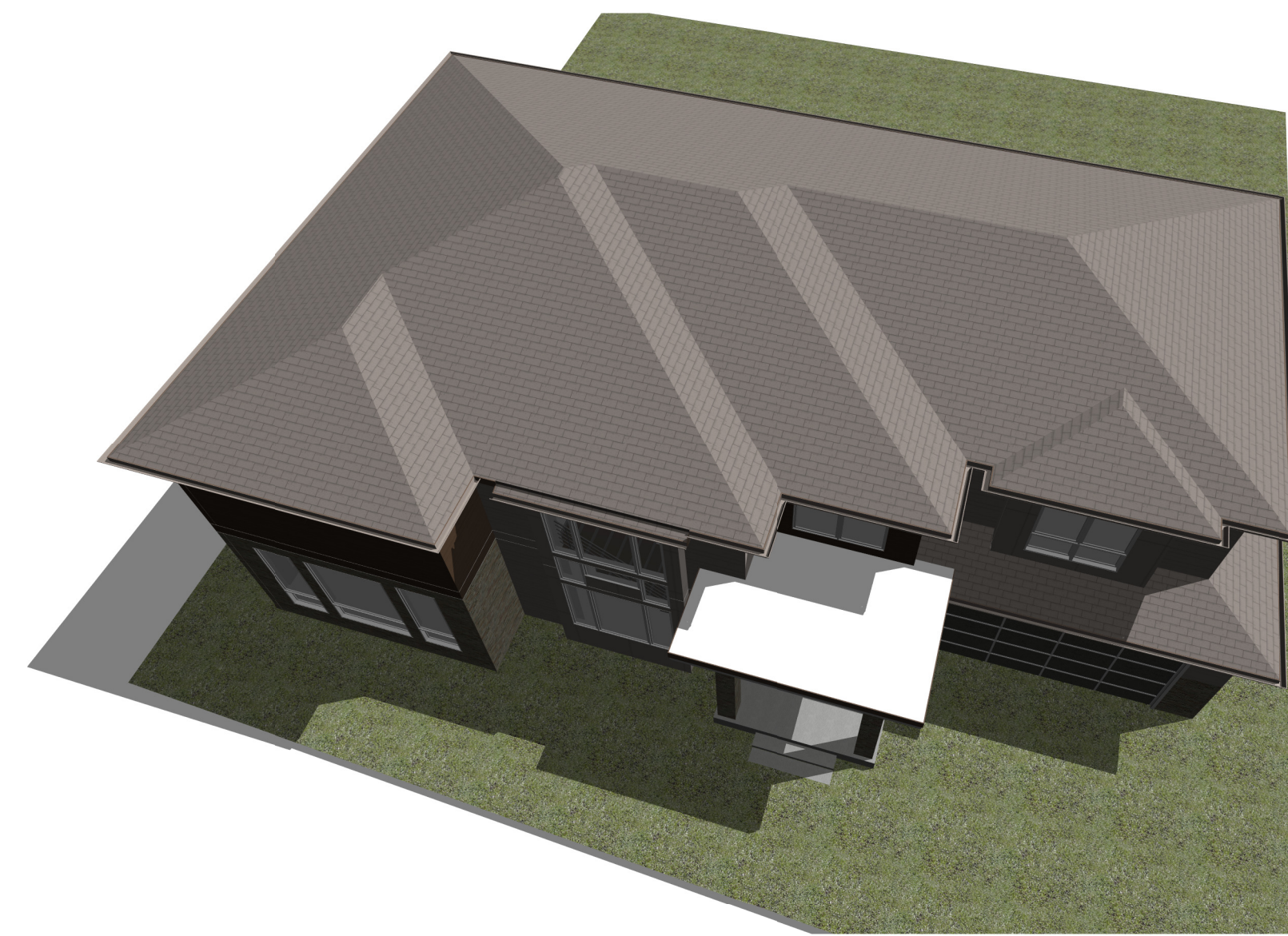
PROJECT NUMBER:
21257
SHEET NUMBER:

A6

15445 53 RD AVE. S. STE. 110 TUKWILA, WA 98188
(206) 838-8250 E-MAIL: URBANDESIGNCENTER@YAHOO.COM



PERSPECTIVE VIEW: FRONT VIEW



PERSPECTIVE VIEW: BIRD EYE VIEW



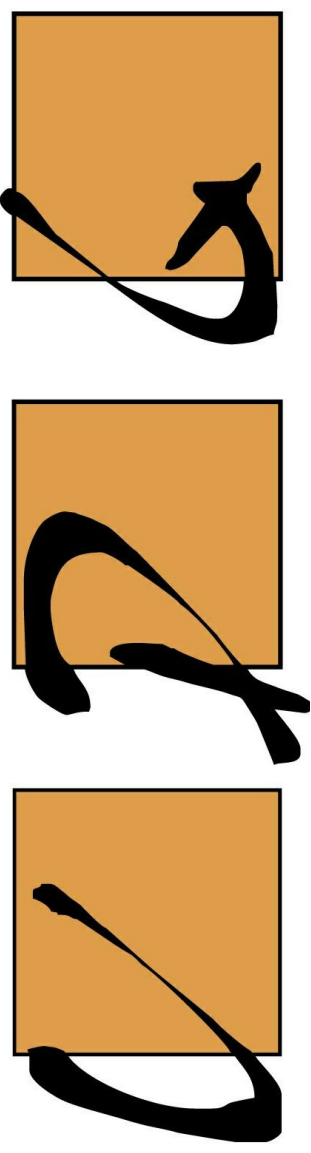
PERSPECTIVE VIEW: REAR ELEVATION



PERSPECTIVE VIEW: REAR/ LEFT ELEVATION

PERSPECTIVE VIEW:

PERSPECTIVE VIEWS ARE FOR REFERENCE ONLY. THEY SHOULD NOT BE USED TO DETERMINE ANY PORTION OF THE CONSTRUCTION OTHER THAN GENERAL MATERIAL APPEARANCE. REFER TO ELEVATION SHEETS FOR DETAILS.



URBAN DESIGN GROUP

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8456 SE 40TH
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PREPARED FOR:
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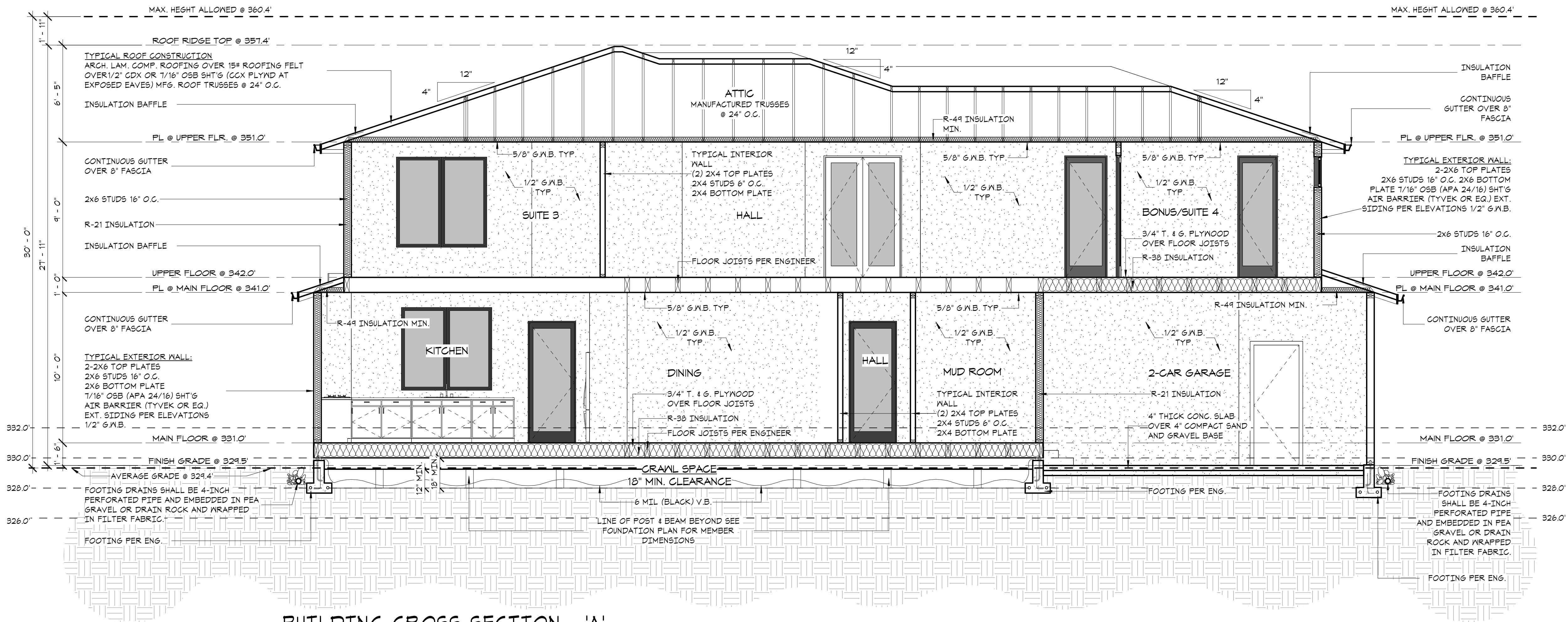
SUBMITTAL/REVISION: DATE:
SUBMITTED -/-/2022
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DESIGN BY: PAVEL MELNIK
DRAFTED BY: ANNA KONYAKINA
SHEET TITLE:

PERSPECTIVE VIEWS

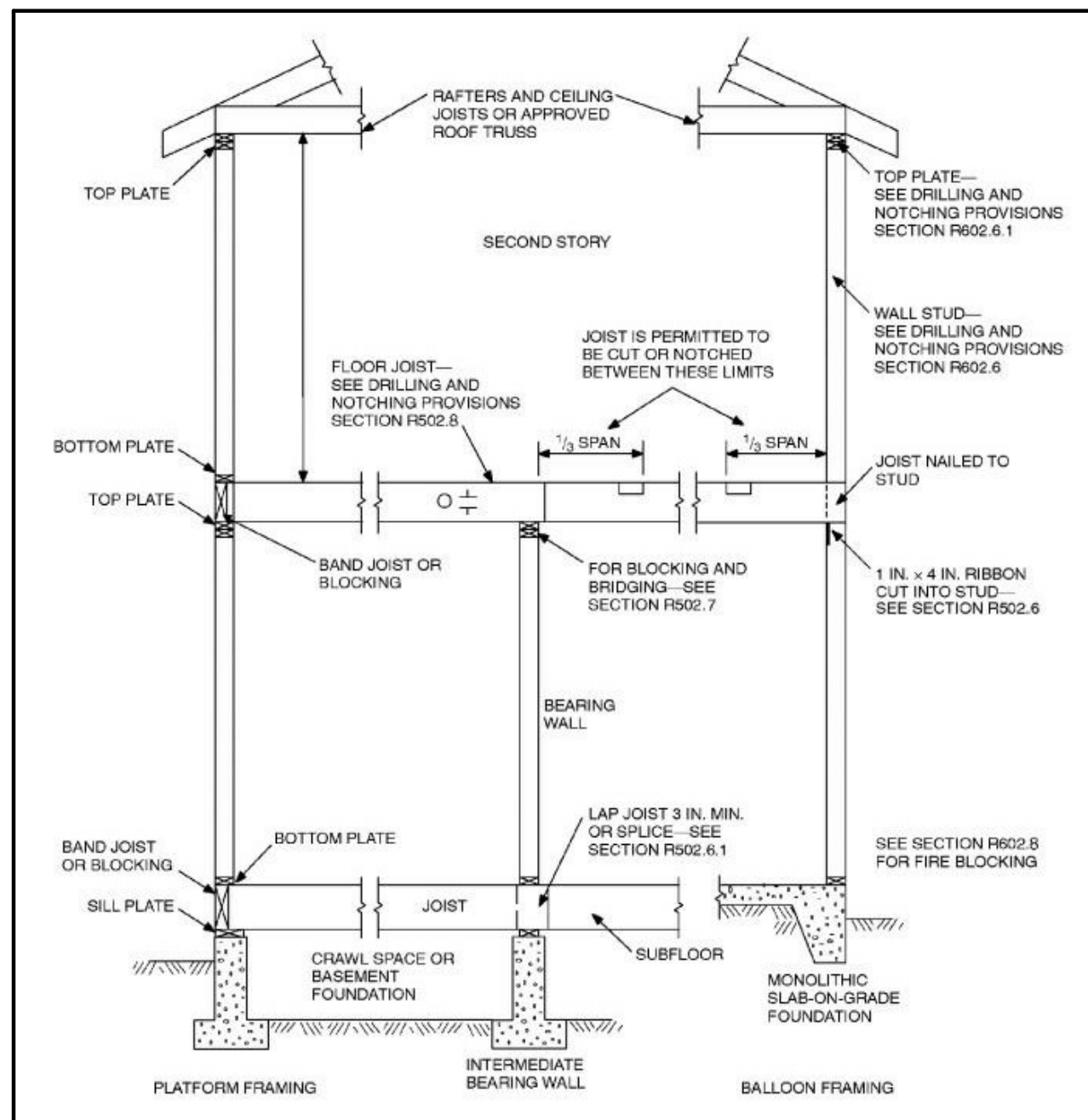
PROJECT NUMBER:
21257

SHEET NUMBER:

A7



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



2019 IRC SECTION R302.11 FIREBLOCKING.
IN COMBUSTIBLE CONSTRUCTION, FIREBLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE. FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:

- 1) IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS AS FOLLOWS:
 - A) VERTICALLY AT THE CEILING AND FLOOR LEVELS.
 - B) HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.
- 2) AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILING AND COVE CEILING.
- 3) IN CONCEALED SPACES AT STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R302.7.
- 4) AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION. THE MATERIAL FILLING THIS ANNULAR SPACE SHALL NOT BE REQUIRED TO MEET THE ASTM E 136 REQUIREMENTS.
- 5) FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES, SEE SECTION R1003.14.
- 6) FIREBLOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPARATION. FIRE BLOCKING MATERIALS SHALL CONSIST OF MATERIAL LISTED IN SECTION R302.11.1. LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED. THE INTEGRITY OF ALL FIREBLOCKS SHALL BE MAINTAINED. DRAFTSTOPPING: WHEN THERE IS USABLE SPACE BOTH ABOVE AND BELOW A CONCEALED SPACE OF A FLOOR/CEILING ASSEMBLY, DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1000 SQUARE FEET. DRAFTSTOPS SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS. DRAFTSTOPPING MATERIALS SHALL CONSIST OF MATERIALS LISTED IN SECTION R302.12.1. DRAFTSTOPPING MATERIALS SHALL NOT BE LESS THAN 5 INCH GYPSUM, 3/8 INCH WOOD STRUCTURAL PANELS OR OTHER APPROVED MATERIALS ADEQUATELY SUPPORTED. THE INTEGRITY OF THE DRAFTSTOPS SHALL BE MAINTAINED.

SECTION 312.12: RODENT PROOFING.
312.12.1: STRAINER PLATES ON DRAIN INLETS SHALL BE DESIGNED AND INSTALLED SO THAT NO OPENING EXCEEDS 1/2 OF AN INCH IN THE LEAST DIMENSION.
312.12.2: METER BOXES SHALL BE CONSTRUCTED IN SUCH A MANNER THAT RATS CANNOT ENTER A BUILDING BY FOLLOWING THE SERVICE PIPES FROM THE BOX INTO THE BUILDING.
312.12.2: METAL COLLARS.
IN OR ON BUILDINGS WHERE OPENINGS HAVE BEEN MADE IN WALLS, FLOORS, OR CEILING FOR THE PASSAGE OF PIPES, SUCH OPENINGS SHALL BE CLOSED AND PROTECTED BY THE INSTALLATION OF APPROVED METAL COLLARS SECURELY FASTENED TO THE ADJOINING STRUCTURE.
312.12.3: TUB WASTE OPENINGS.
TUB WASTE OPENINGS IN FRAMED CONSTRUCTION TO CRAWL SPACES AT OR BELOW THE FIRST FLOOR SHALL BE PROTECTED BY THE INSTALLATION OF APPROVED METAL COLLARS OR METAL SCREEN SECURELY FASTENED TO THE ADJOINING STRUCTURE WITH NO OPENING GREATER THAN 1/2 OF AN INCH IN THE LEAST DIMENSION.
* 2018 UNIFORM PLUMBING CODE WITH WASHINGTON STATE AMENDMENTS (UPC)

CERTIFICATE (MSEC R401.3):
A PERMANENT CERTIFICATE SHALL BE COMPLETED AND POSTED ON OR WITHIN THREE FEET OF ELECTRICAL DISTRIBUTION PANEL. THE CERTIFICATE MUST LIST THE ENERGY FEATURES OF THE STRUCTURE.

DUCTS (MSEC R403.2.2):
DUCTS MUST BE LEAK TESTED IN ACCORDANCE WITH ASHRAE 90.1-2010 USING THE MAXIMUM DUCT LEAKAGE RATES SPECIFIED. DUCT TIGHTNESS MUST BE VERIFIED BY EITHER THE POST-CONSTRUCTION TEST OR ROUGH-IN TEST PER MSEC R403.2.2. TOTAL LEAKAGE MUST BE LESS THAN OR EQUAL TO 4 CFM PER 100 S.F. OF CONDITIONED FLOOR AREA WHEN TESTED AT A PRESSURE DIFFERENTIAL OF 0.1" W.G. (25 PA) ACROSS THE ENTIRE SYSTEM. PROVIDE GENERAL NOTES TO ADDRESS THIS REQUIREMENT.

PER MSEC R402.4, THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE(3). THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL. (R402.4.1.2).

PER MSEC R403.1.1, AT LEAST ONE THERMOSTAT PER DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE.

PER MSEC R404.1, A MINIMUM OF 90 PERCENT OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.

DUCTS (503.1.1)

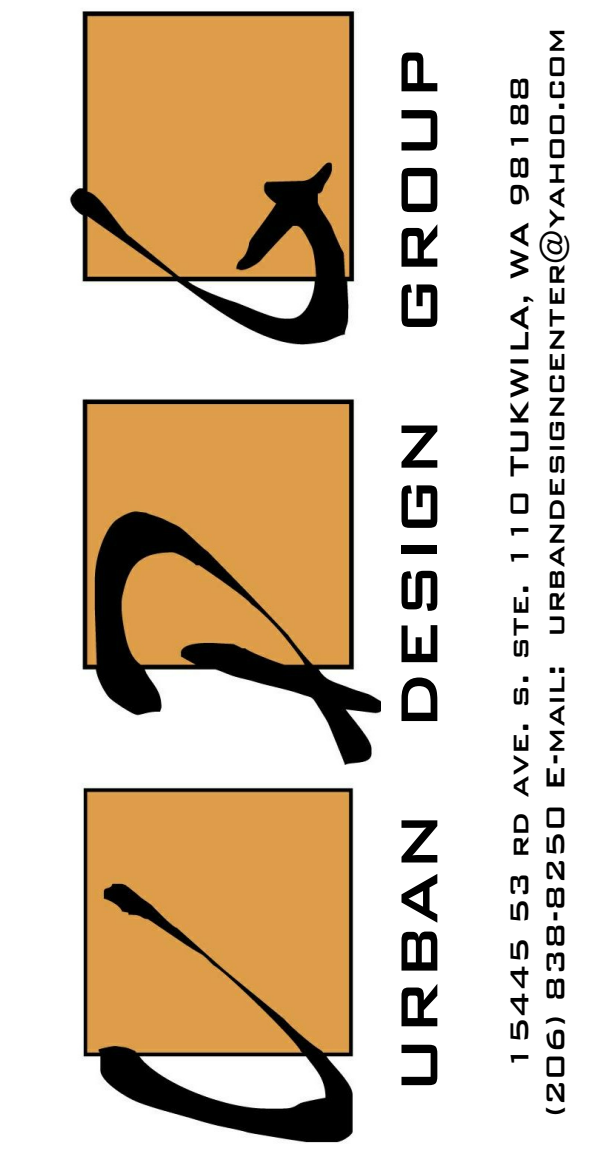
- * INSTALLATION OF DUCTS IN EXTERIOR WALLS, FLOOR OR CEILING CANNOT DISPLACE REQUIRED INSULATION.
- * BUILDING CAVITIES CANNOT BE USED AS DUCTS DUCT TESTING (503.1.2)
- * DUCTS LOCATED OUTSIDE THE CONDITIONED SPACE MUST BE TESTED.

NOTE:
REFER TO STRUCTURAL ENGINEERING SHEETS FOR FOUNDATION/CRAWL SPACE VENTILATION.

NOTE:
CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS OF PROJECT AND REPORT ANY OMISSIONS / DISCREPANCIES TO DESIGNER PRIOR TO COMMENCING WORK. DESIGNER SHALL NOT BE RESPONSIBLE FOR DISCREPANT CONDITIONS RESULTING FROM UNAUTHORIZED WORK PERFORMED BY THE CONTRACTOR.

NOTE:
FOR MORE DETAILS SEE STRUCTURAL ENGINEERING PLAN.

NOTE:
REFER TO STRUCTURAL SHEETS FOR SHEAR WALL SCHEDULE AND ENGINEERING PLAN WHICH CONTAIN REFERENCES AND/OR INSTRUCTIONS PERTAINING TO EACH SHEAR WALL INDICATED IN THIS PLAN



PROJECT NAME:
SINGLE-FAMILY RESIDENCE
8456 SE 40TH
MERCER ISLAND, WA 98040
PARCEL #: 502190-0790

PREPARED FOR:
PHILIP SUDO & LLC
KUN QIAN &
Laurie Qian

SUBMITTAL/REVISION: DATE:
SUBMITTED -/-/2022
REVISED -/-/2022

DESIGN BY: PAVEL MELNIK
DRAFTED BY: ANNA KONYAKINA

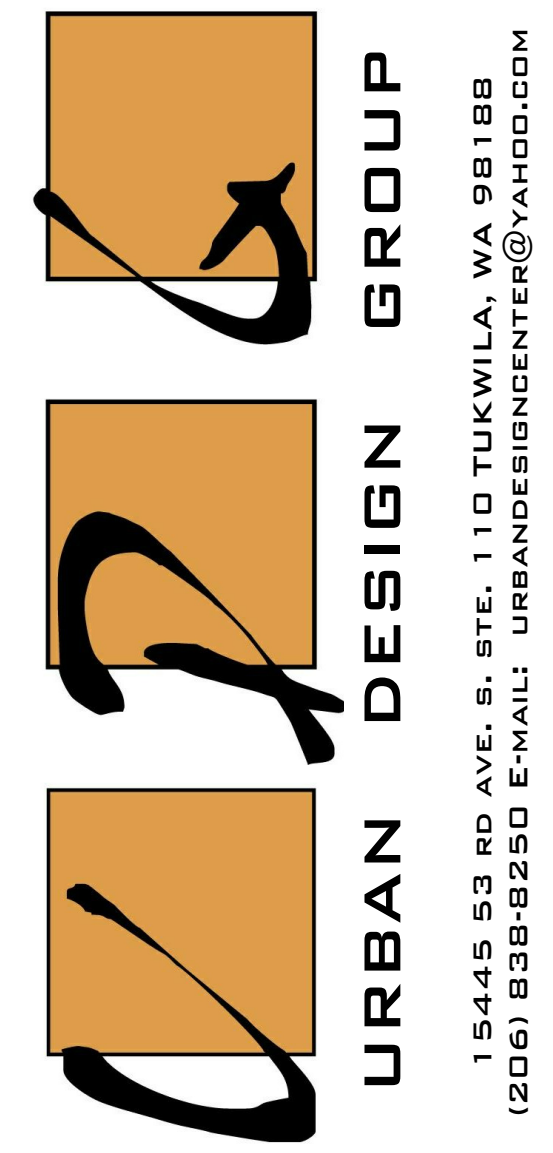
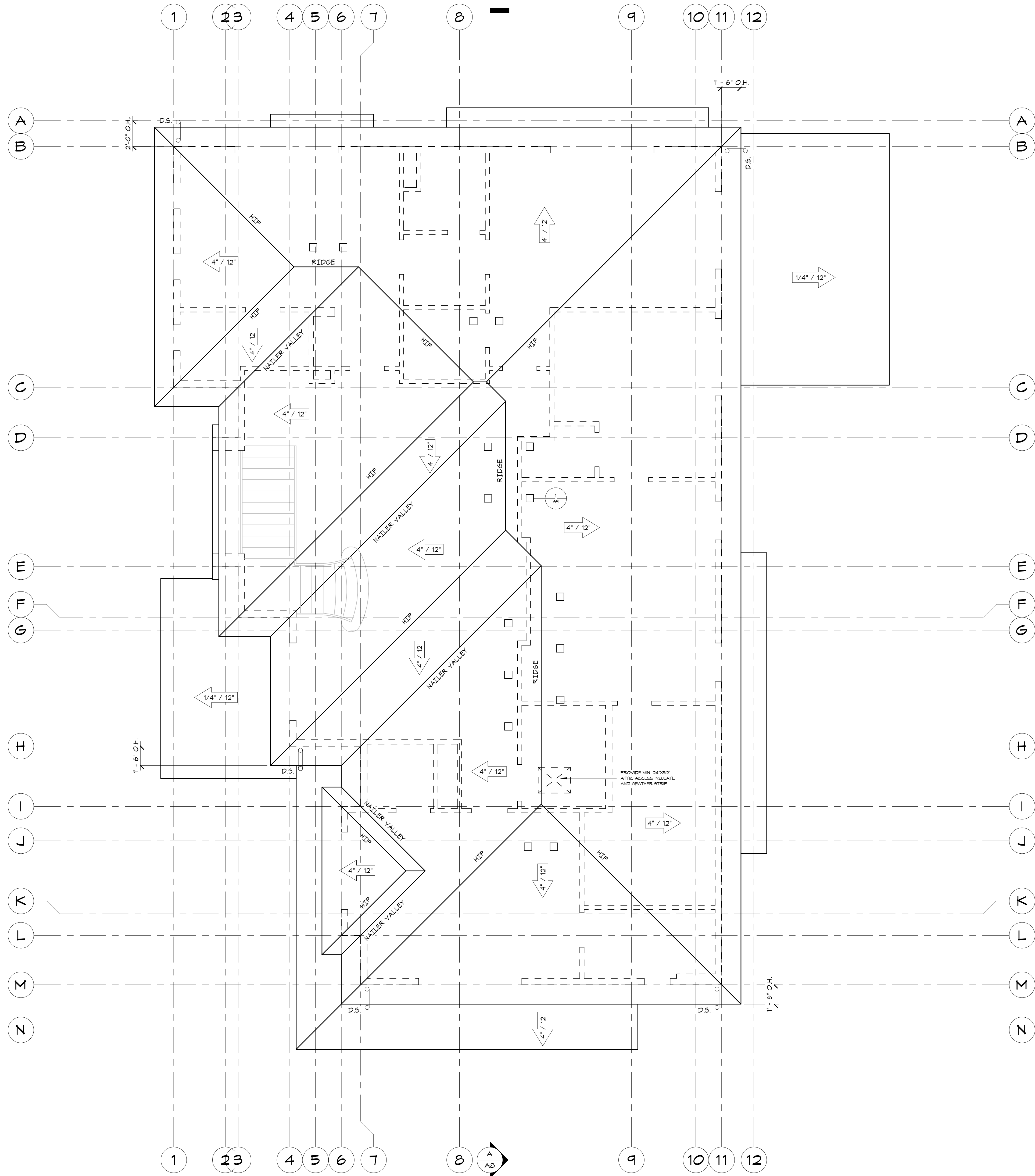
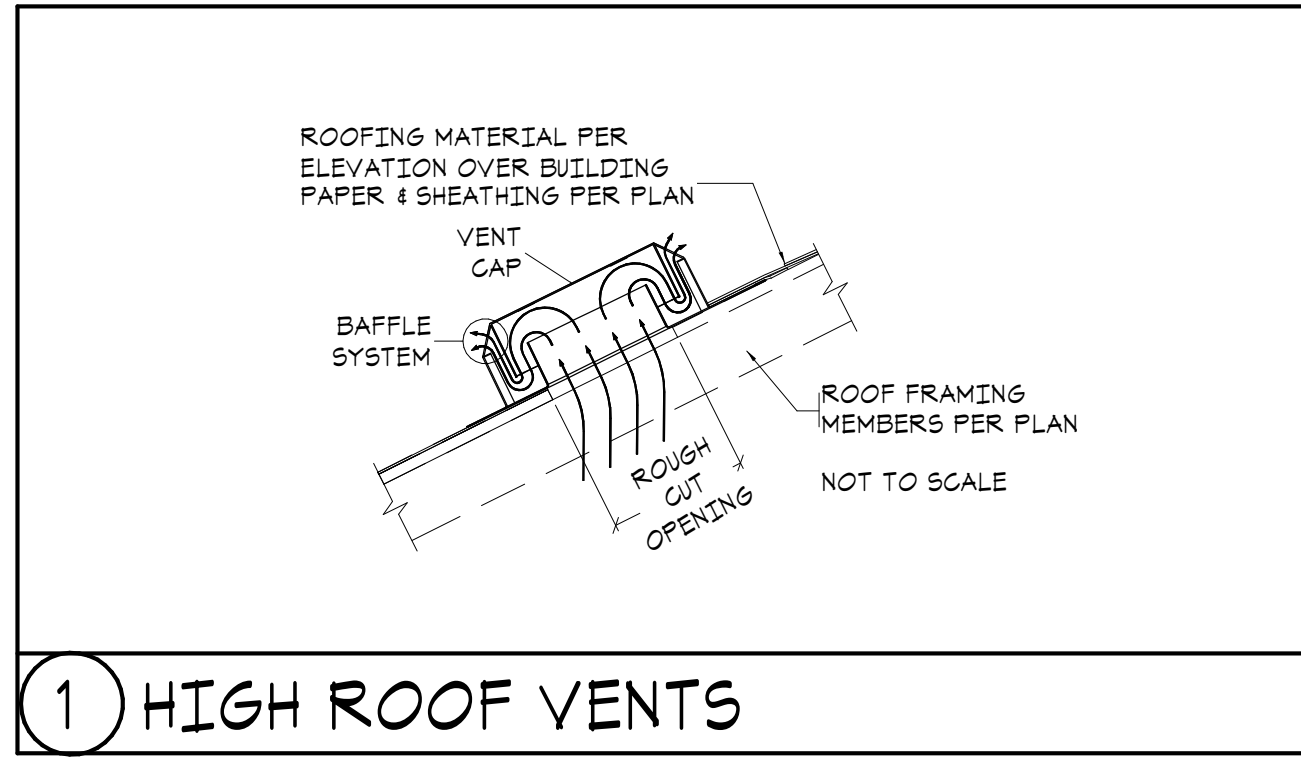
SHEET TITLE:

BUILDING
CROSS-SECTION
AND DETAILS

PROJECT NUMBER:
21257

SHEET NUMBER:

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



PROJECT NAME:
SINGLE-FAMILY RESIDENCE
8456 SE 40TH
MERCER ISLAND, WA 98040
PARCEL #: 502190-0790

PREPARED FOR:
PHILIP SUDO & LLC
KUN QIAN &
LAURIE QIAN

SUBMITTAL/REVISION: DATE:
SUBMITTED: --/--/2022
REVISED: --/--/2022
DESIGN BY: PAVEL MELNIK
DRAFTED BY: ANNA KONYAKINA
SHEET TITLE:

ROOF LAYOUT
PROJECT NUMBER:
21257
SHEET NUMBER:

GLAZING SCHEDULE

Table with columns: ROOM, # OF WINDS, WND. W, WND. H, MANUF., FRAME TYPE, WDW. TYPE, MODEL NO., AIR GAP, GAS, LO-E, U-VAL (1), AREA, N.A. Includes sections for MAIN FLOOR, UPPER FLOOR, and DOORS WITH MORE THAN 50% GLASS.

ROOF VENTILATION

Table with columns: Standard Truss / Scissor Truss Roof Framing Assembly, LOWER ROOF, MAIN ROOF. Includes sections for LOWER ROOF and MAIN ROOF with ventilation requirements.

TABLE R302.6

Table with columns: SEPARATION, MATERIAL. Dwelling-Garage Separation table.

For Sl: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

R314.2.3 A HEAT DETECTOR OR HEAT ALARM RATED FOR THE AMBIENT OUTDOOR TEMPERATURES AND HUMIDITY SHALL BE INSTALLED IN NEW GARAGES THAT ARE ATTACHED TO OR LOCATED UNDER NEW AND EXISTING DWELLINGS...

REQUIRED SAFETY GLAZING LOCATIONS:

- List of 11 safety glazing locations including swinging doors, fixed and sliding panels, storm doors, storm windows, doors, doors, walls, fences, swimming pools, hot tubs, spas, stairs, and ramps.

EXCEPTIONS:

- List of 11 exceptions for safety glazing locations, including where a rail is installed, glazing adjacent to stairs and ramps, and glazing where the bottom exposed edge is less than 36 inches above the plane of the adjacent walking surface.

EXCEPTION: THE GLAZING IS PROTECTED BY A GUARD COMPLYING WITH SECTION R312 AND THE PLANE OF THE GLASS IS MORE THAN 18 INCHES (457 MM) FROM THE GUARD.

R302.6 DWELLING-GARAGE FIRE SEPARATION THE GARAGE SHALL BE SEPARATED AS REQUIRED BY TABLE R302.6. OPENINGS IN GARAGE WALLS SHALL COMPLY WITH SECTION R302.5. ATTACHMENT OF GYPSUM BOARD SHALL COMPLY WITH TABLE R102.3.5. THE WALL SEPARATION PROVISIONS OF TABLE R302.6 SHALL NOT APPLY TO GARAGE WALLS THAT ARE PERPENDICULAR TO THE ADJACENT DWELLING UNIT WALL.

NOTE: CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS OF PROJECT AND REPORT ANY OMISSIONS / DISCREPANCIES TO DESIGNER PRIOR TO COMMENCING WORK. DESIGNER SHALL NOT BE RESPONSIBLE FOR DISCREPANT CONDITIONS RESULTING FROM UNAUTHORIZED WORK PERFORMED BY THE CONTRACTOR.

NOTE: REFER TO STRUCTURAL SHEETS FOR SHEAR WALL SCHEDULE AND ENGINEERING PLAN WHICH CONTAIN REFERENCES AND/OR INSTRUCTIONS PERTAINING TO EACH SHEAR WALL INDICATED IN THIS PLAN.

EnergyPlus simulation results showing Project Information, Contact Information, Heating System Type, Design Temperature, Area of Building, Glazing and Doors, Skylights, Insulation, Single Rafter or Joist Vaulted Ceilings, Above Grade Walls, Floors, Below Grade Walls, Slab Below Grade, Slab on Grade, Location of Ducts, and Sum of UA.

ENERGY NOTES: 1. A RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE COMPLYING WITH SEC R401.3 IS REQUIRED TO BE COMPLETED BY THE DESIGN PROFESSIONAL OR BUILDING AND PERMANENTLY POSTED WITHIN 3' OF THE ELECTRICAL PANEL PRIOR TO FINAL INSPECTION. 2. DUCT LEAKAGE TEST RESULTS SHALL BE PROVIDED TO THE BUILDING INSPECTOR AND HOMEOWNER PRIOR TO AN APPROVED FINAL INSPECTION PER SEC R403.2.2. 3. EACH DWELLING UNIT IS REQUIRED TO BE PROVIDED WITH AT LEAST ONE PROGRAMMABLE THERMOSTAT FOR THE REGULATION OF TEMPERATURE PER SEC R403.1. 4. BUILDING AIR LEAKAGE TESTING, DEMONSTRATING THAT LEAKAGE RATE NOT EXCEED 5 AIR CHANGES PER HOUR AND CONFORM TO SEC R402.4.1 THROUGH R402.4.4. 5. MINIMUM 90% OF ALL INTERIOR LUMINAIRES SHALL BE HIGH EFFICACY LUMINAIRES. ALL EXTERIOR LIGHTING SHALL BE HIGH EFFICACY LUMINAIRES PER SEC R404.1. 6. BUILDING ENVELOPE MEETS REQUIREMENTS OF TABLE R402.1.1, CLIMATE ZONE 4 OF 2018 SEC.

VENTILATION SCHEDULE

Table with columns: SYMBOL, LOCATION, MINIMUM FAN REQUIREMENTS. Includes sections for 2018 WASHINGTON STATE ENERGY CODE and fan requirements for Bath, Powder, Laundry, Kitchen, and Whole House Fan.

2018 Residential Ventilation Compliance Summary

Applicant: 40TH MERCER ISLAND parcel; Permit Number: DWEL21-0295

VENTILATION AND INDOOR AIR QUALITY REQUIREMENTS

Whole house Ventilation fan(s) shall be provided according to International Residential Code M1505.4. Ventilation rate CFM = (0.01 x total sq ft.) + [7.5 x (# of bedrooms + 1)] but not less than 30 cfm.

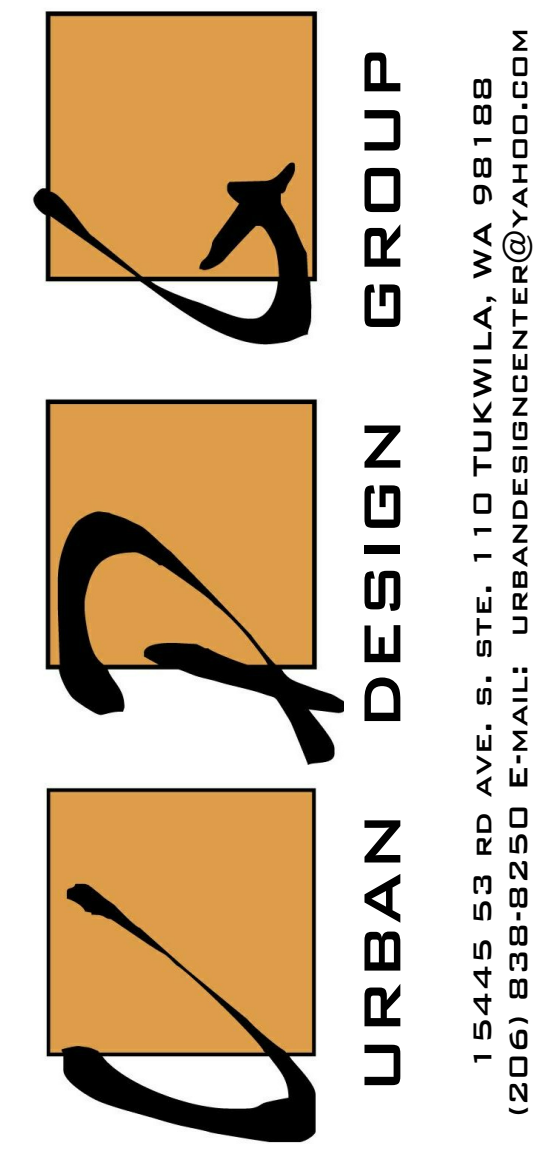
WHOLE HOUSE VENTILATION SYSTEM Exempt: Addition less than 500 sq ft. or Remodel only. Exhaust fan with 24-hr timer and fresh air inlets in each habitable room per IRC M1505.4.1.2. Integrated with forced air system per IRC M1505.4.1.5. Supply fan per IRC M1505.4.1.3. Balanced and NOT Distributed. Balanced Supply and Exhaust fans per IRC M1505.4.1.4. NOT balanced and Distributed. Engineered design complying with IMC section 403.8.10. X NOT balanced and NOT distributed.

Specify location of Whole House Fan: LAUNDRY Size: 128 cfm CONTIN. hrs/day

Table: 2018 Table M1505.4.3(1) WHOLE-HOUSE SYSTEM MINIMUM VENTILATION RATES, Qp. Columns: Floor Area (sq.ft.), Number of Bedrooms (0, 1, 2, 3, 4, >4). Rows: 0 to 500, 501 to 1000, 1001 to 1500, 1501 to 2000, 2001 to 2500, 2501 to 3000, 3001 to 3500, 3501 to 4000, 4001 to 4500, 4501 to 5000, Greater than 5000.

Table: 2018 Table M1505.4.3(2) WHOLE-HOUSE VENTILATION QUALITY ADJUSTMENT (Ca). Columns: SYSTEM TYPE, DISTRIBUTED, NOT DISTRIBUTED, Min. adjusted fan size (cfm). Rows: BALANCED, NOT BALANCED.

Table: 2018 Table M1505.4.3(3) INTERMITTENT WHOLE-HOUSE VENTILATION RATE FACTORS (Cb). Columns: Run-time % in each 4-hour segment, Rate Multiplier, Min. adjusted Fan Size (cfm), Specified Fan Size (cfm). Rows: 50% (2 hrs every 4 hrs; 12 hrs / day), 66% (2 hrs 40 min every 4 hrs; 16 hrs / day), 75% (3 hrs every 4 hrs; 18 hrs / day), 100% (continuously operating).



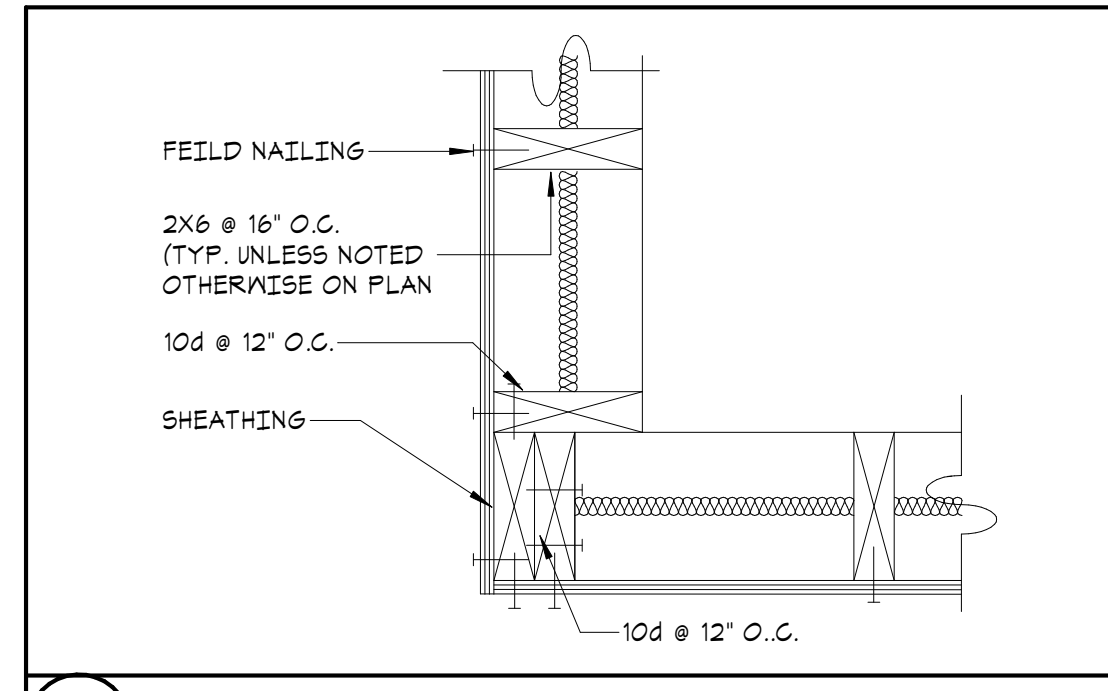
PROJECT NAME: SINGLE-FAMILY RESIDENCE 8456 SE 40TH MERCER ISLAND, WA 98040 PARCEL #: 502190-0790

PREPARED FOR: PHILIP SUDO & LLC KUN QIAN & LAURIE QIAN

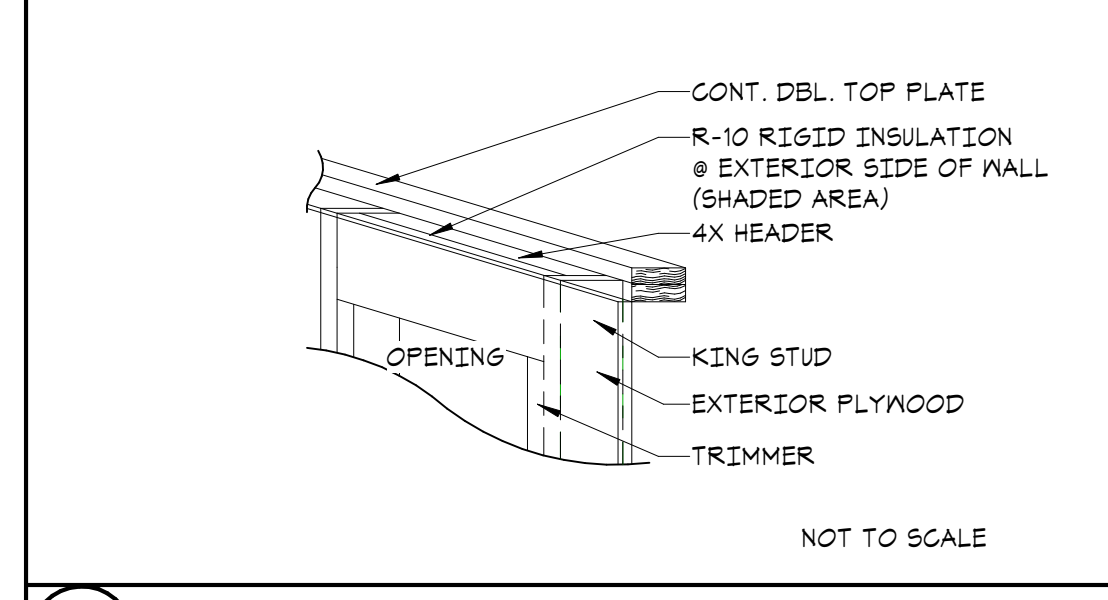
SUBMITTAL/REVISION: DATE: SUBMITTED: --/2022 REVISED: --/2022 DESIGN BY: PAVEL MELNIK DRAFTED BY: ANNA KONYAKINA SHEET TITLE:

SCHEDULES AND NOTES

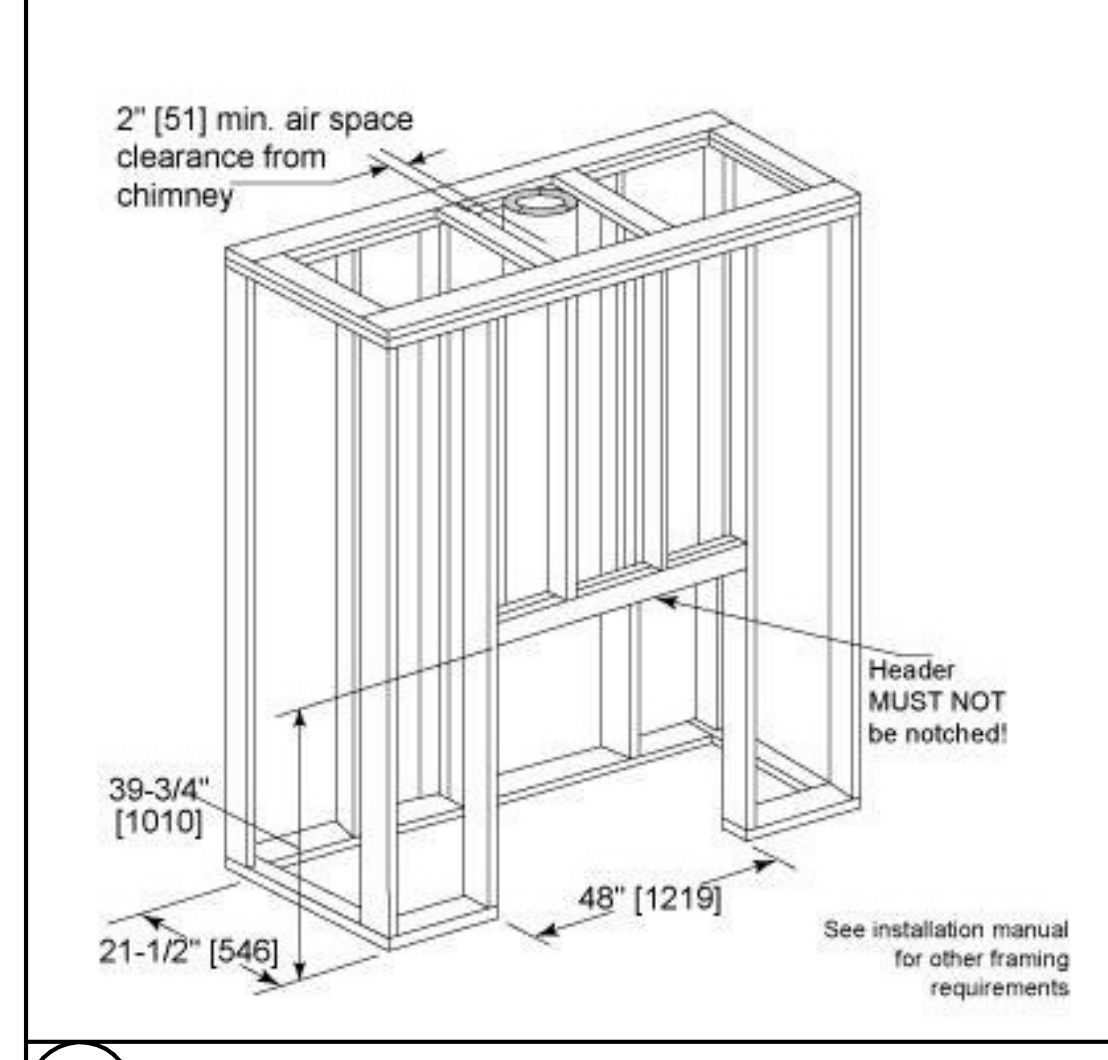
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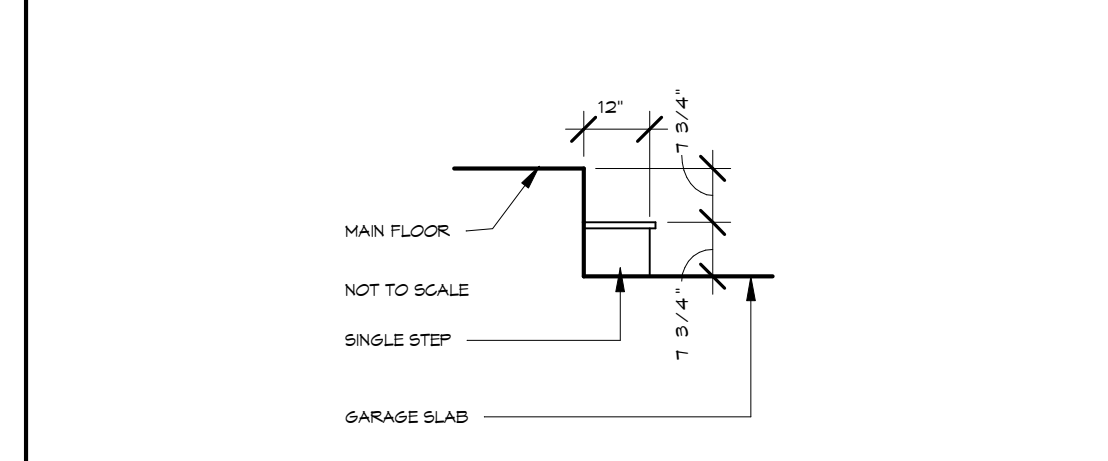
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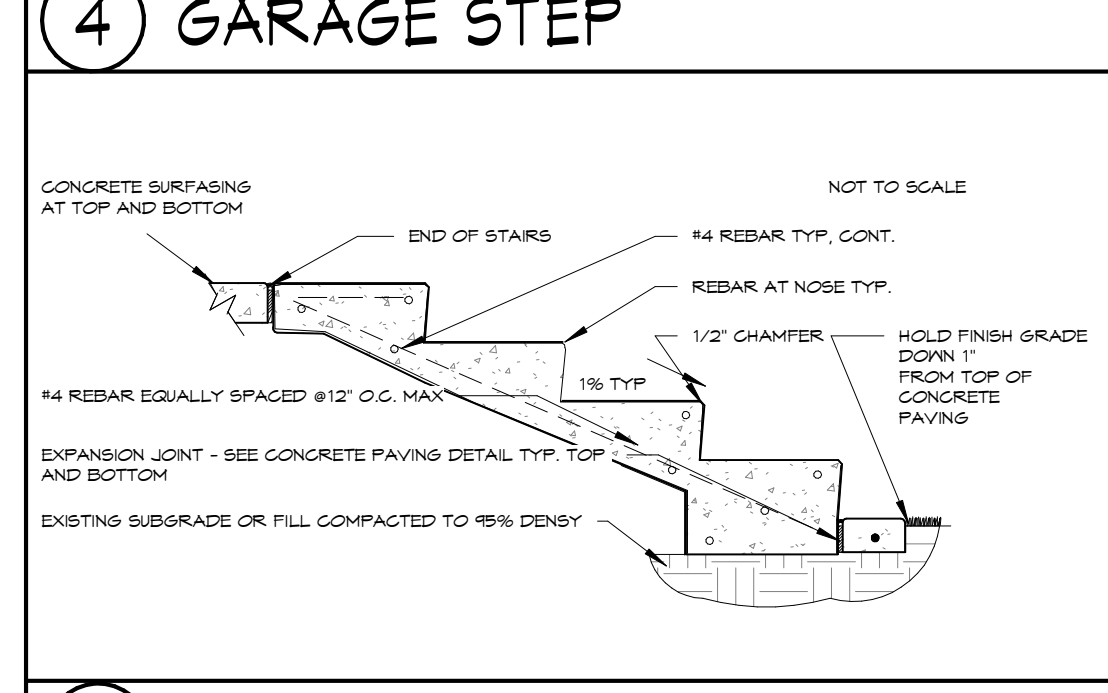
2 HEADER/ INSULATION



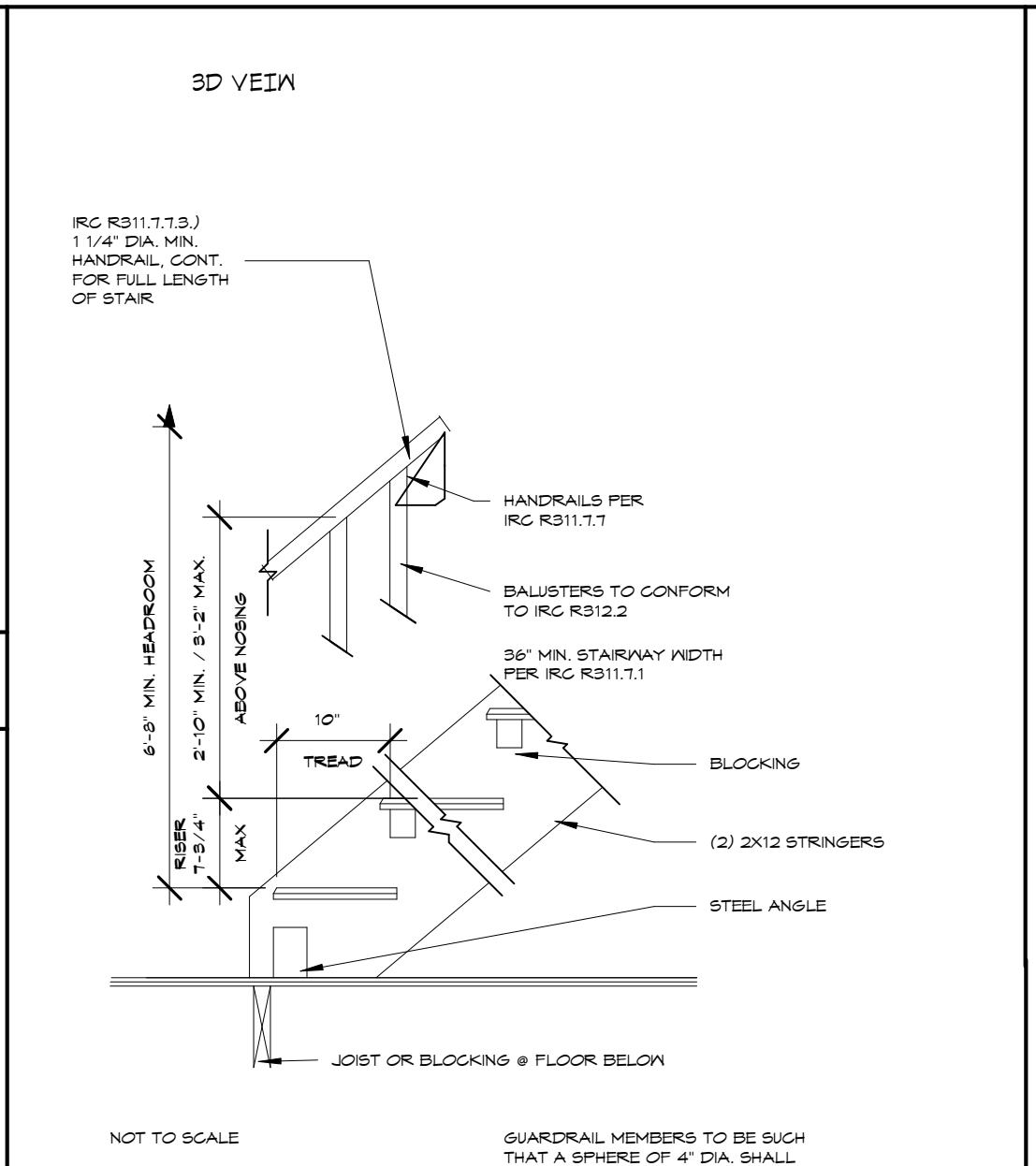
3 FIREPLACE FRAMING



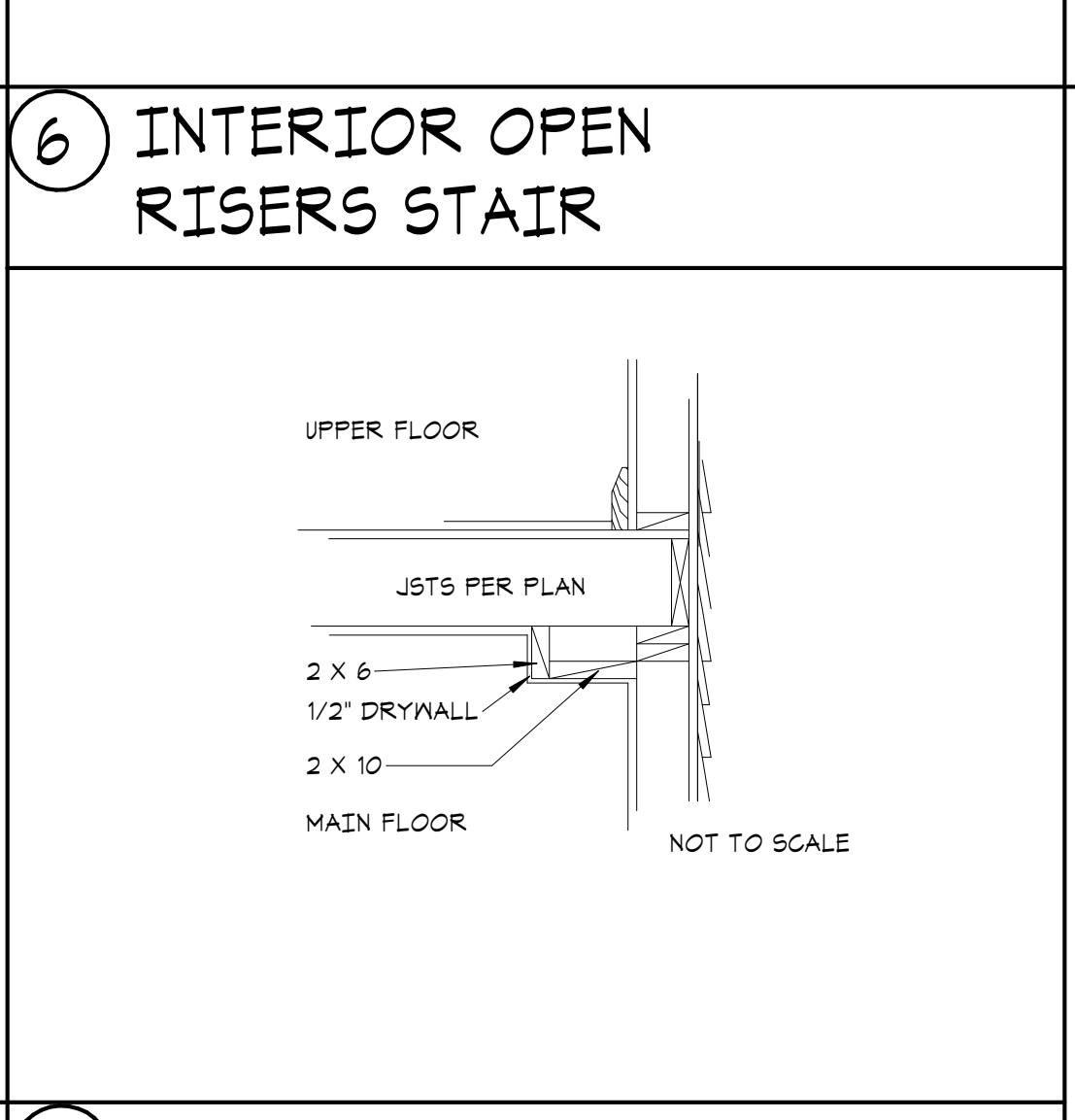
4 GARAGE STEP



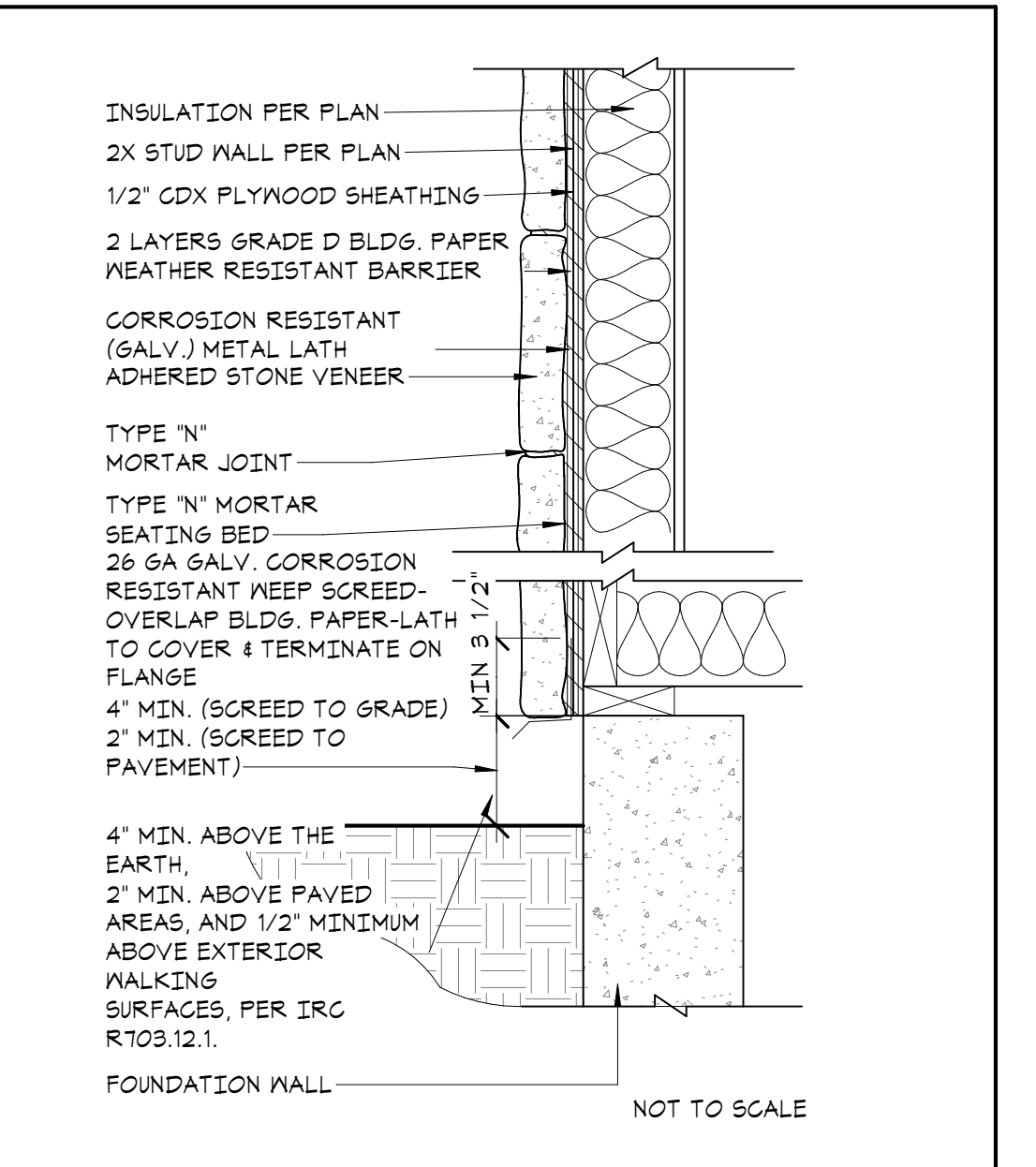
5 EXTERIOR STAIR



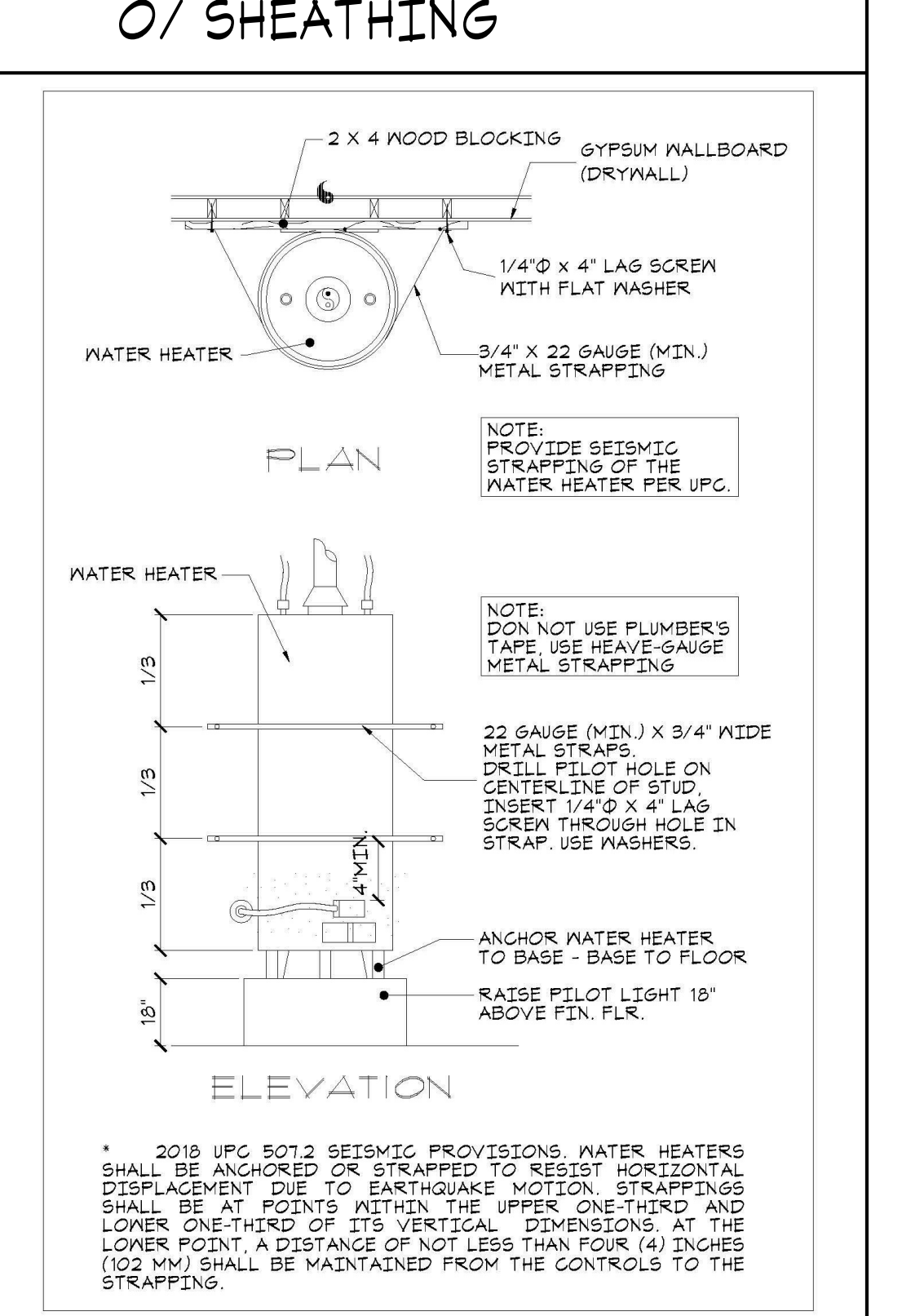
6 INTERIOR OPEN RISERS STAIR



7 COFFERED CEILING



8 ADHERED VENEER / SHEATHING



9 WATER HEATER ANCHORAGE

ALTAIR™-C & ALTAIRDLX™-C SERIES

DIRECT-VENT FIREPLACES

Appliance Specifications

Model	Height (inches)	Depth (inches)	Width (inches)	Weight (lbs)
ALC-12	42	18	18	110
ALC-18	48	18	18	120
ALC-24	54	18	18	130
ALC-30	60	18	18	140
ALC-36	66	18	18	150
ALC-42	72	18	18	160
ALC-48	78	18	18	170
ALC-54	84	18	18	180
ALC-60	90	18	18	190
ALC-66	96	18	18	200
ALC-72	102	18	18	210
ALC-78	108	18	18	220
ALC-84	114	18	18	230
ALC-90	120	18	18	240
ALC-96	126	18	18	250
ALC-102	132	18	18	260
ALC-108	138	18	18	270
ALC-114	144	18	18	280
ALC-120	150	18	18	290

ASTRIA FIREPLACES

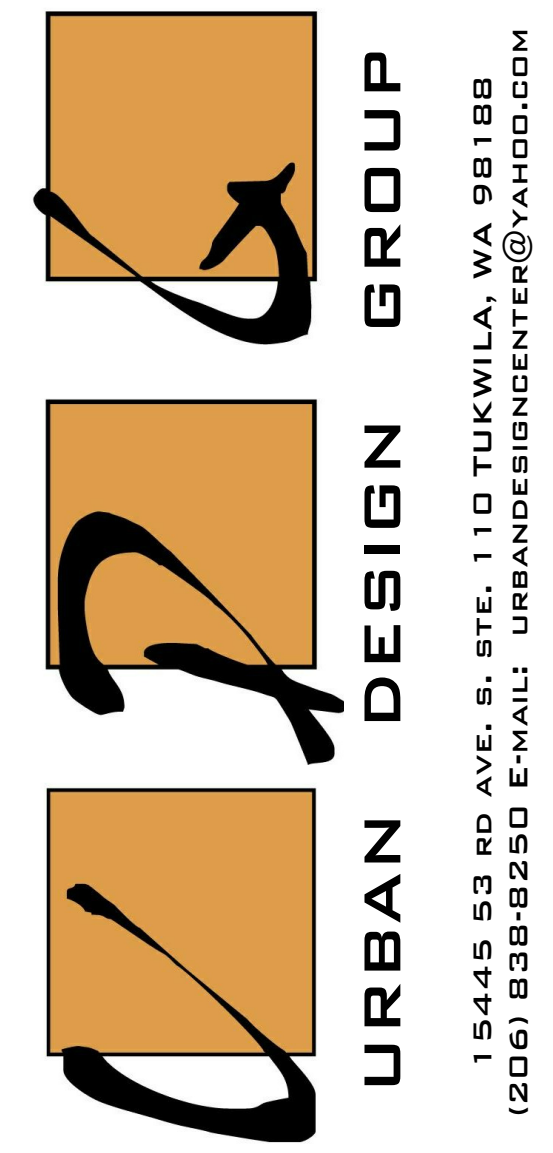
ALTAIR™-C & ALTAIRDLX™-C SERIES

Product Reference Information

Model	Height (inches)	Depth (inches)	Width (inches)	Weight (lbs)
ALC-12	42	18	18	110
ALC-18	48	18	18	120
ALC-24	54	18	18	130
ALC-30	60	18	18	140
ALC-36	66	18	18	150
ALC-42	72	18	18	160
ALC-48	78	18	18	170
ALC-54	84	18	18	180
ALC-60	90	18	18	190
ALC-66	96	18	18	200
ALC-72	102	18	18	210
ALC-78	108	18	18	220
ALC-84	114	18	18	230
ALC-90	120	18	18	240
ALC-96	126	18	18	250
ALC-102	132	18	18	260
ALC-108	138	18	18	270
ALC-114	144	18	18	280
ALC-120	150	18	18	290

ASTRIA FIREPLACES

FIREPLACE SPECS



PROJECT NAME:
SINGLE-FAMILY RESIDENCE
8456 SE 40TH
MERCER ISLAND, WA 98040
PARCEL #: 502190-0790

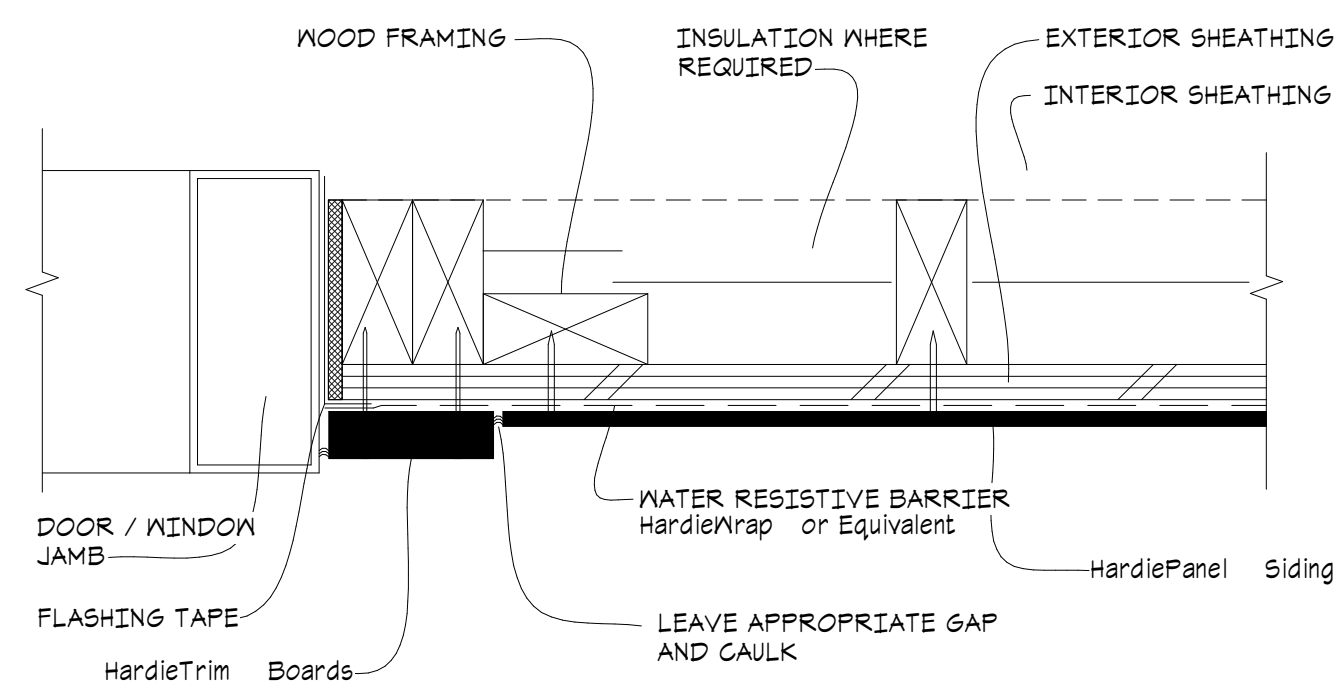
PREPARED FOR:
PHILIP SUDO & LLC
KUN QIAN &
LAURIE QIAN

SUBMITTAL/REVISION: DATE:
SUBMITTED -/-/2022
REVISED -/-/2022
DESIGN BY: PAVEL MELNIK
DRAFTED BY: ANNA KONYAKINA
SHEET TITLE:

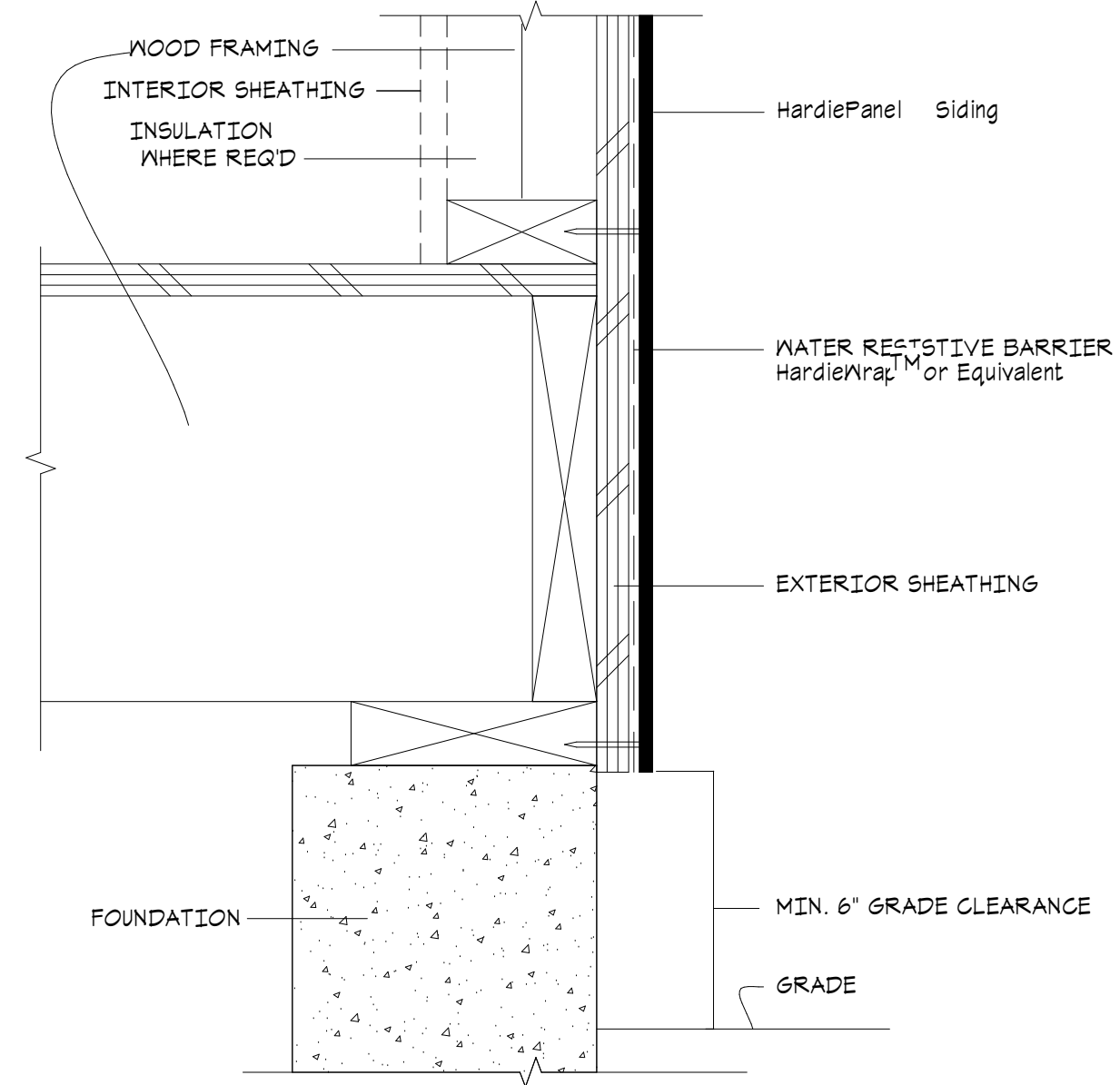
DETAILS

PROJECT NUMBER:
21257

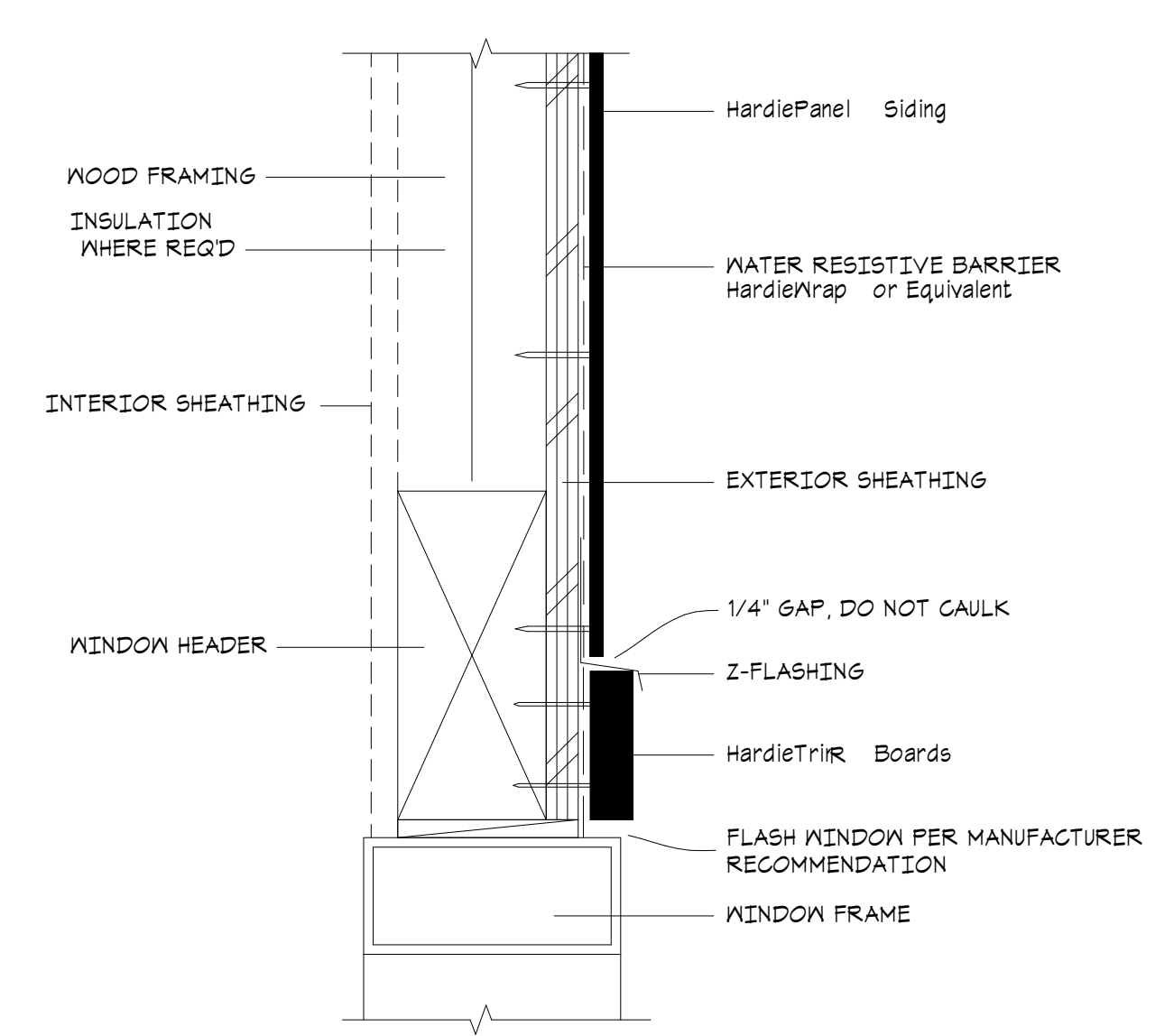
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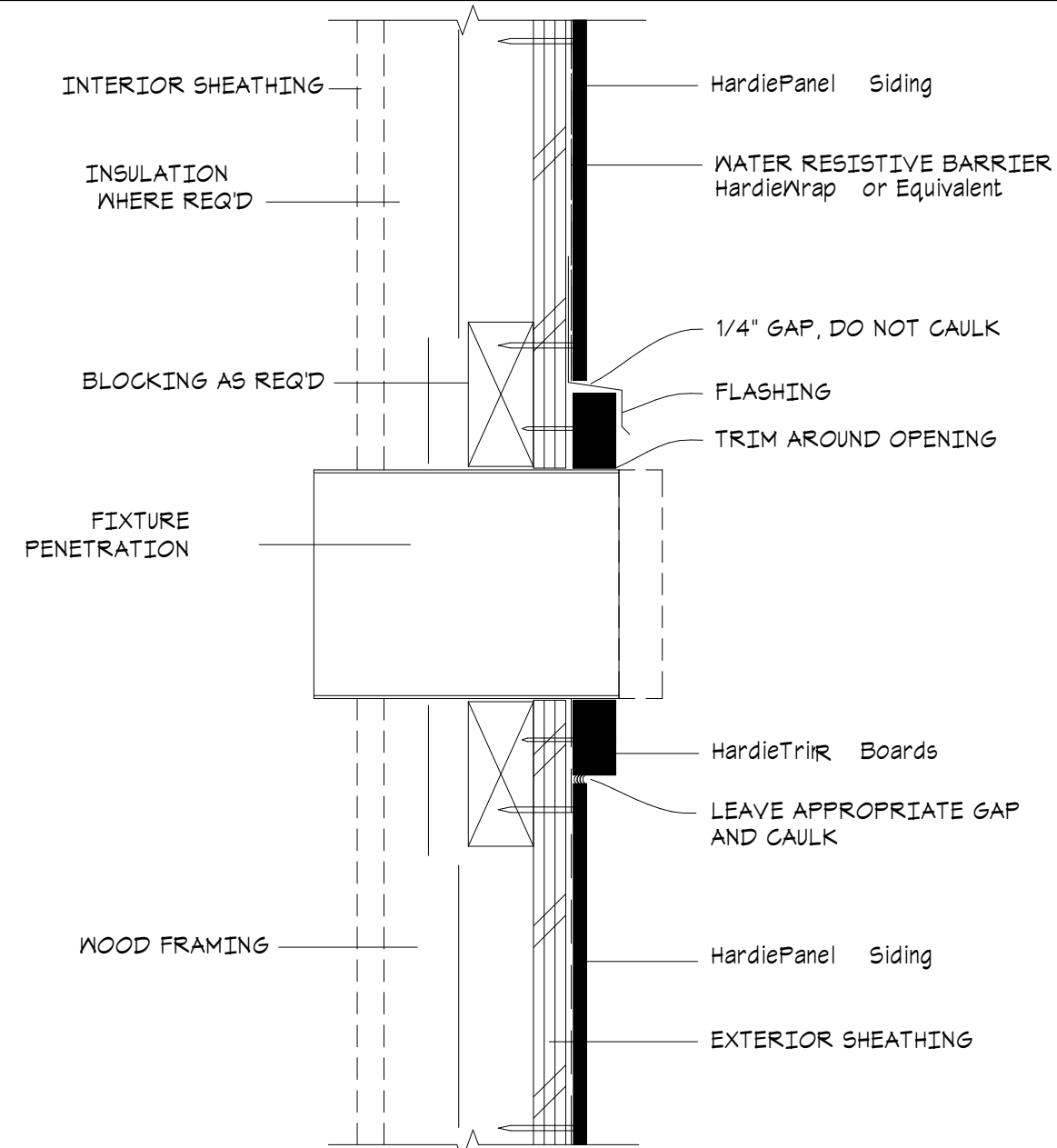
① DOOR / WINDOW JAMB



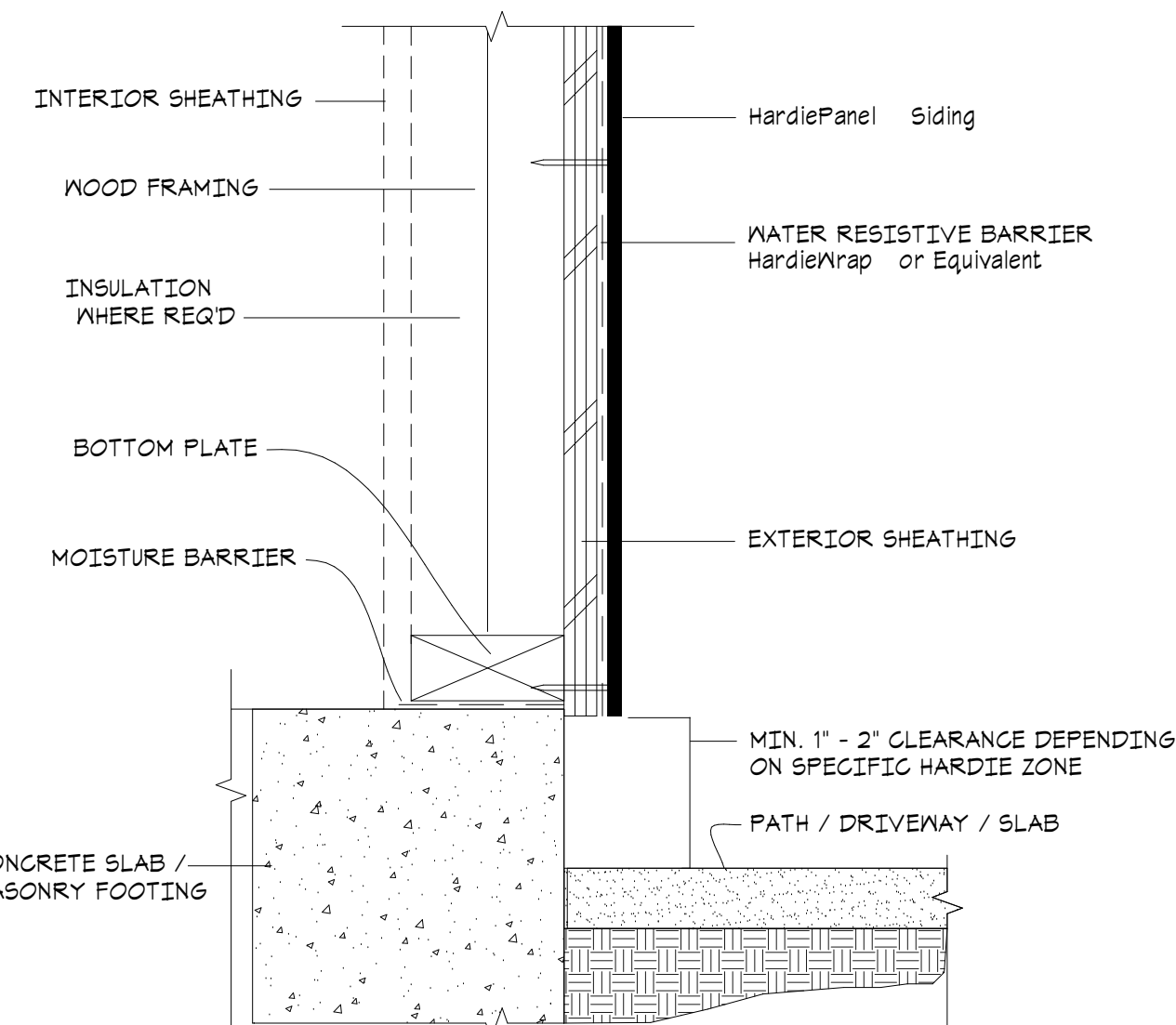
② GRADE CLEARANCE



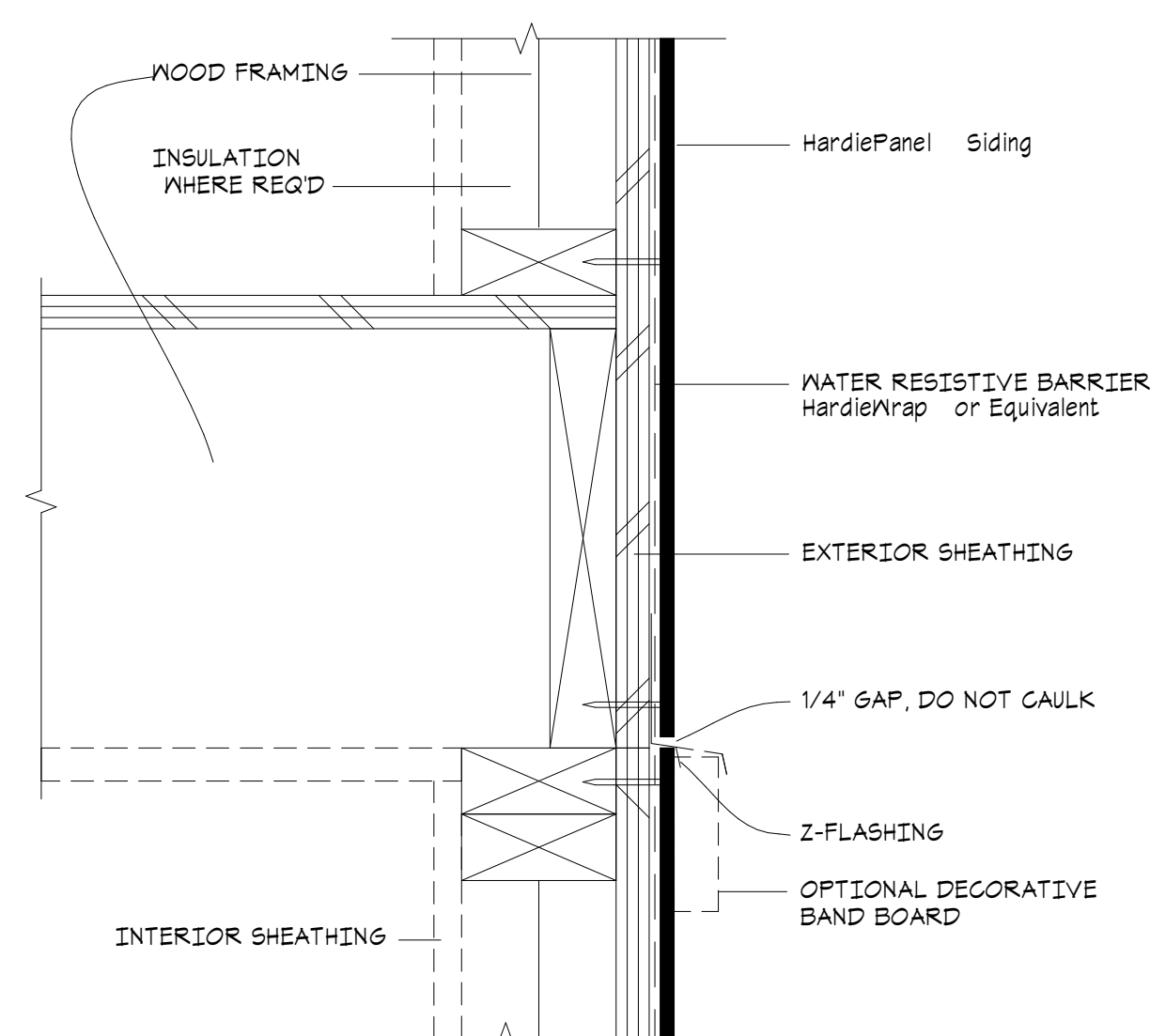
③ WINDOW/DOOR HEAD



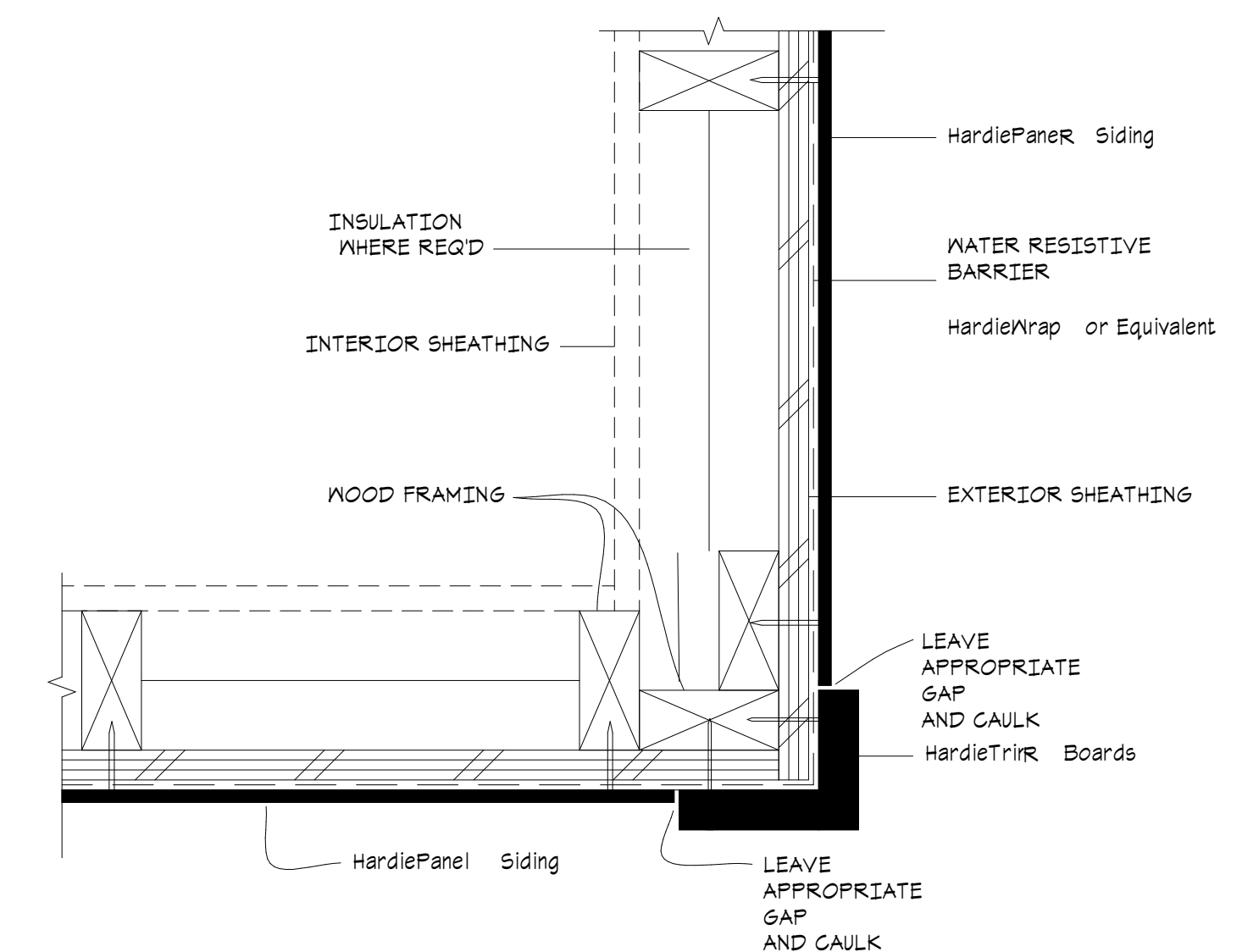
④ FIXTURE PENETRATION



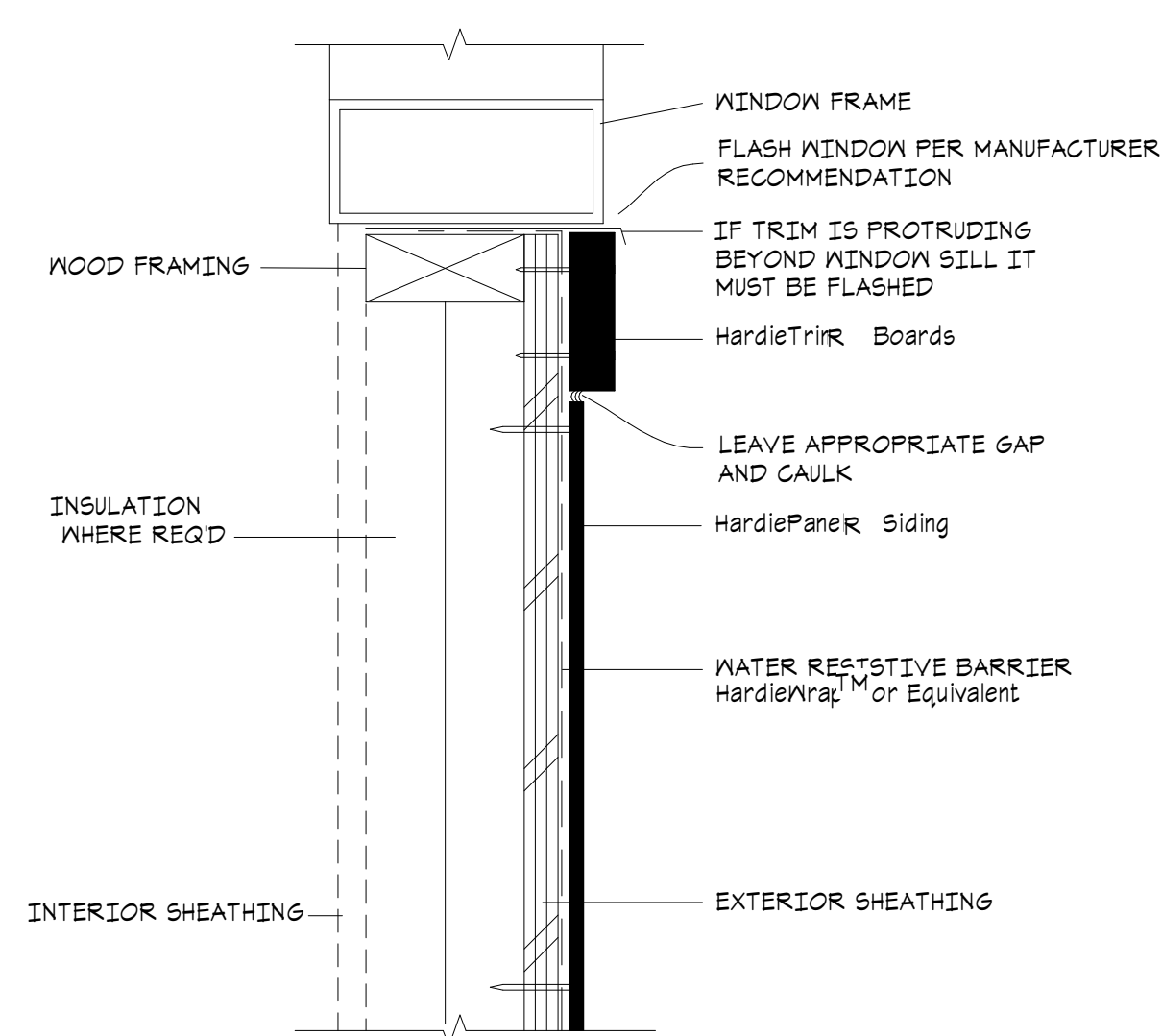
⑤ HARDSCAPE CLEARANCES, DECKS, PORCHES, PATIOS, WALKWAYS, ROOFS, ETC.



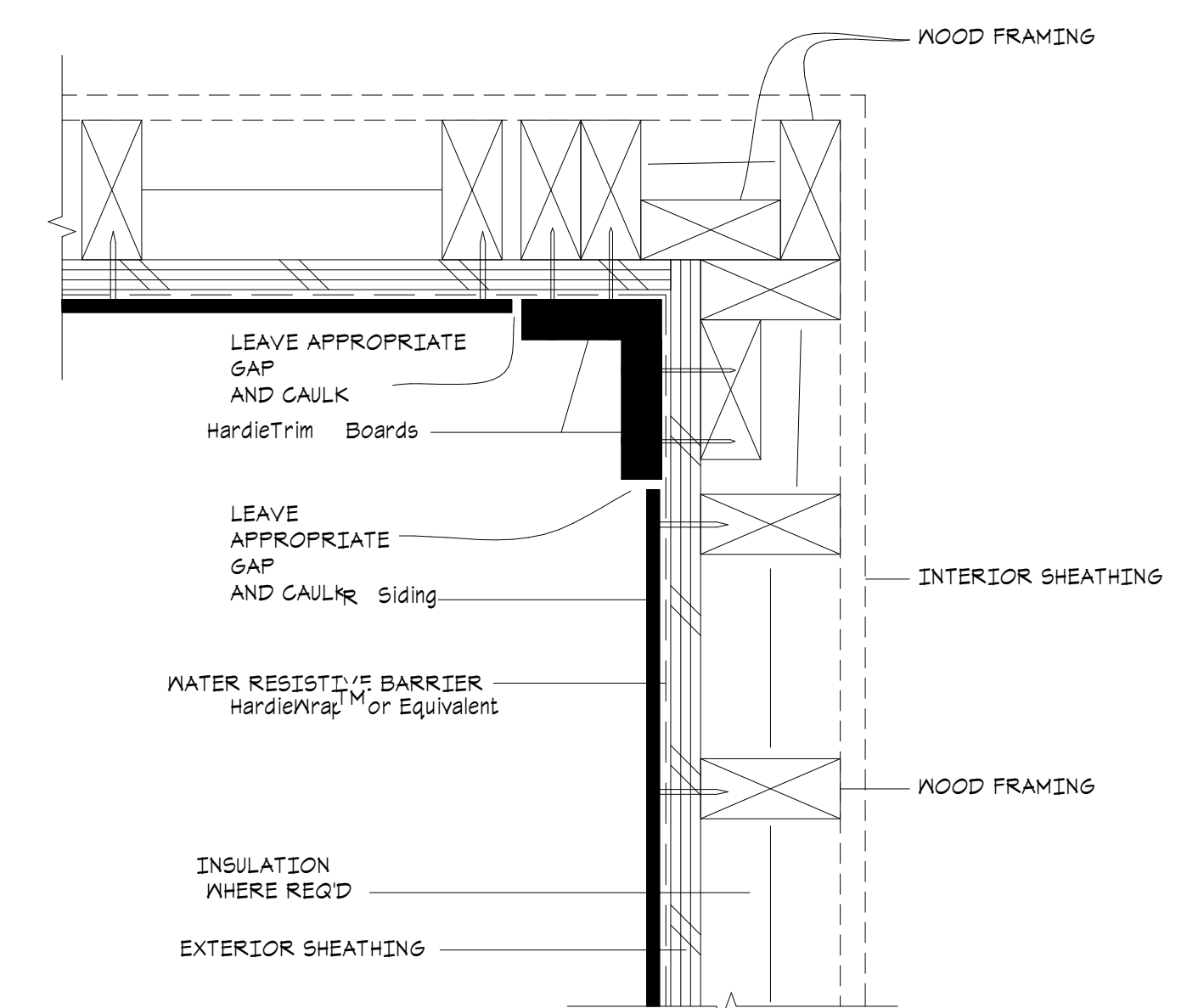
⑥ HORIZONTAL VIEW



⑦ OUTSIDE CORNER



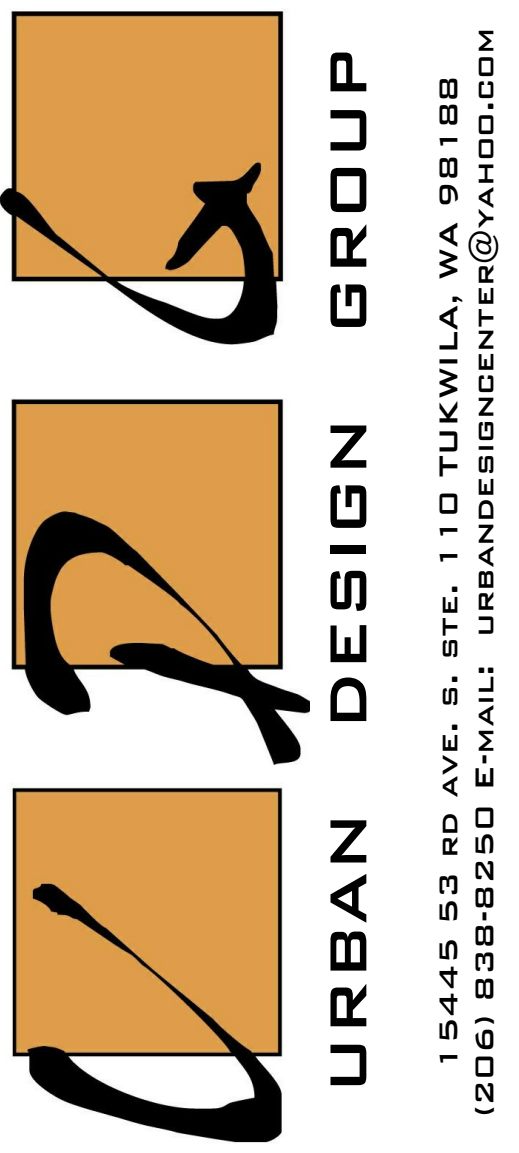
⑧ WINDOW SILL



⑨ INSIDE CORNER

HARDIE PANEL SIDING DETAILS

SCALE: NOT TO SCALE (N.T.S.)



PROJECT NAME:
SINGLE-FAMILY RESIDENCE
8456 SE 40TH
MERCER ISLAND, WA 98040
PARCEL #: 502190-0790

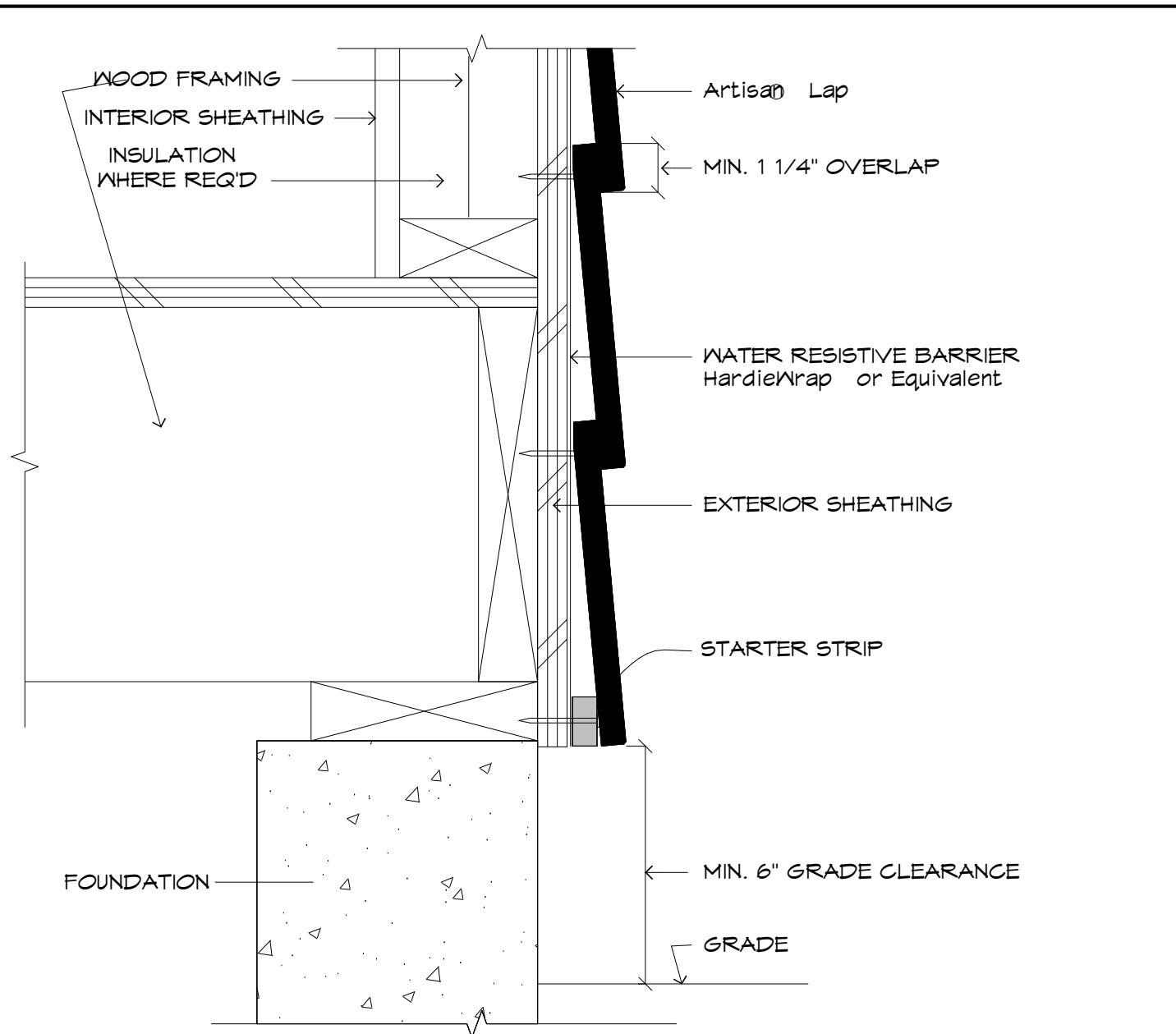
PREPARED FOR:
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KUN QIAN &
LAURIE QIAN

SUBMITTAL/REVISION: DATE:
 SUBMITTED -/-/2022
 REVISED -/-/2022
 DESIGN BY: PAVEL MELNIK
 DRAFTED BY: ANNA KONYAKINA

SHEET TITLE:
HARDIE
PANEL
SIDING
DETAILS

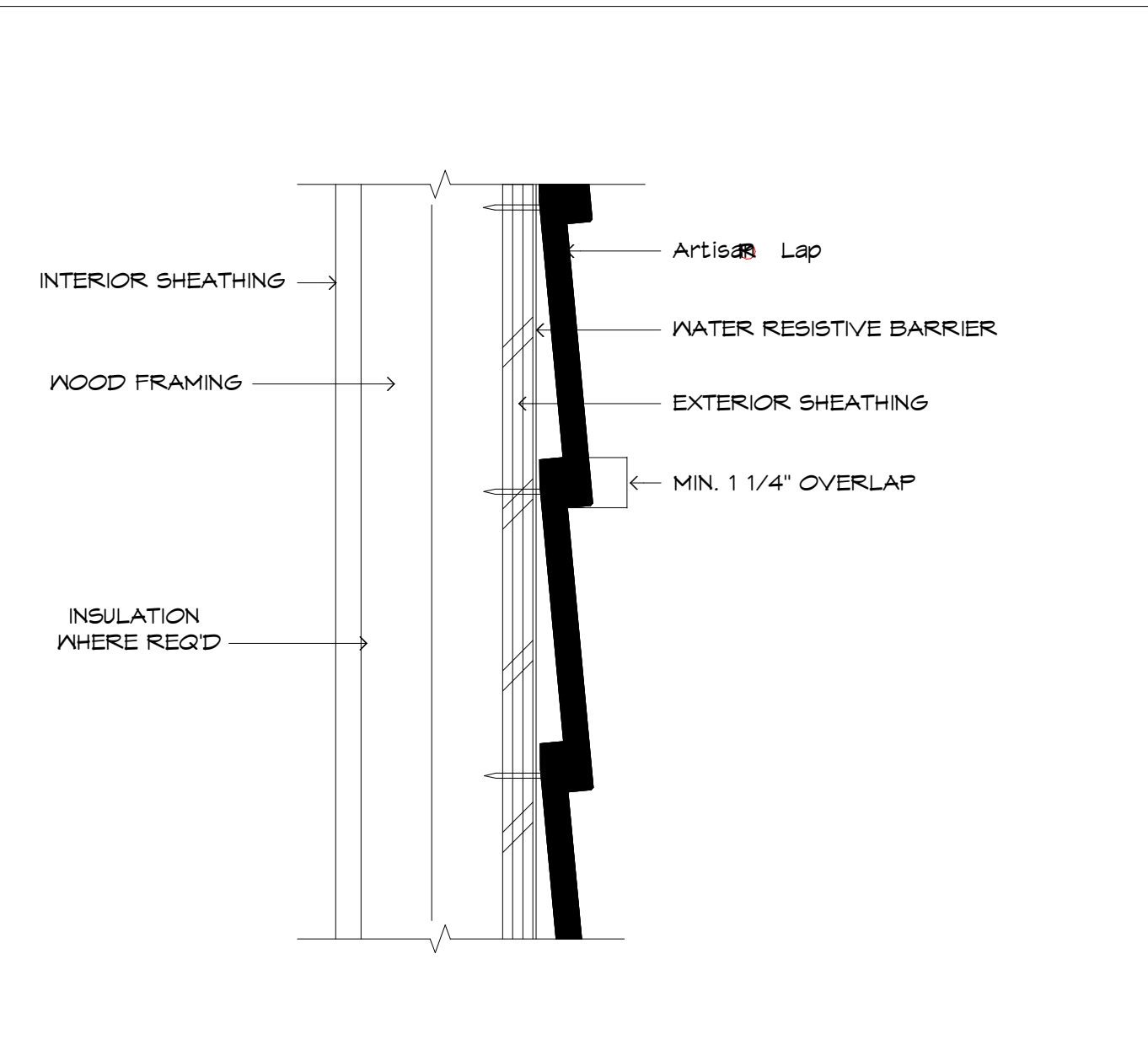
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21257

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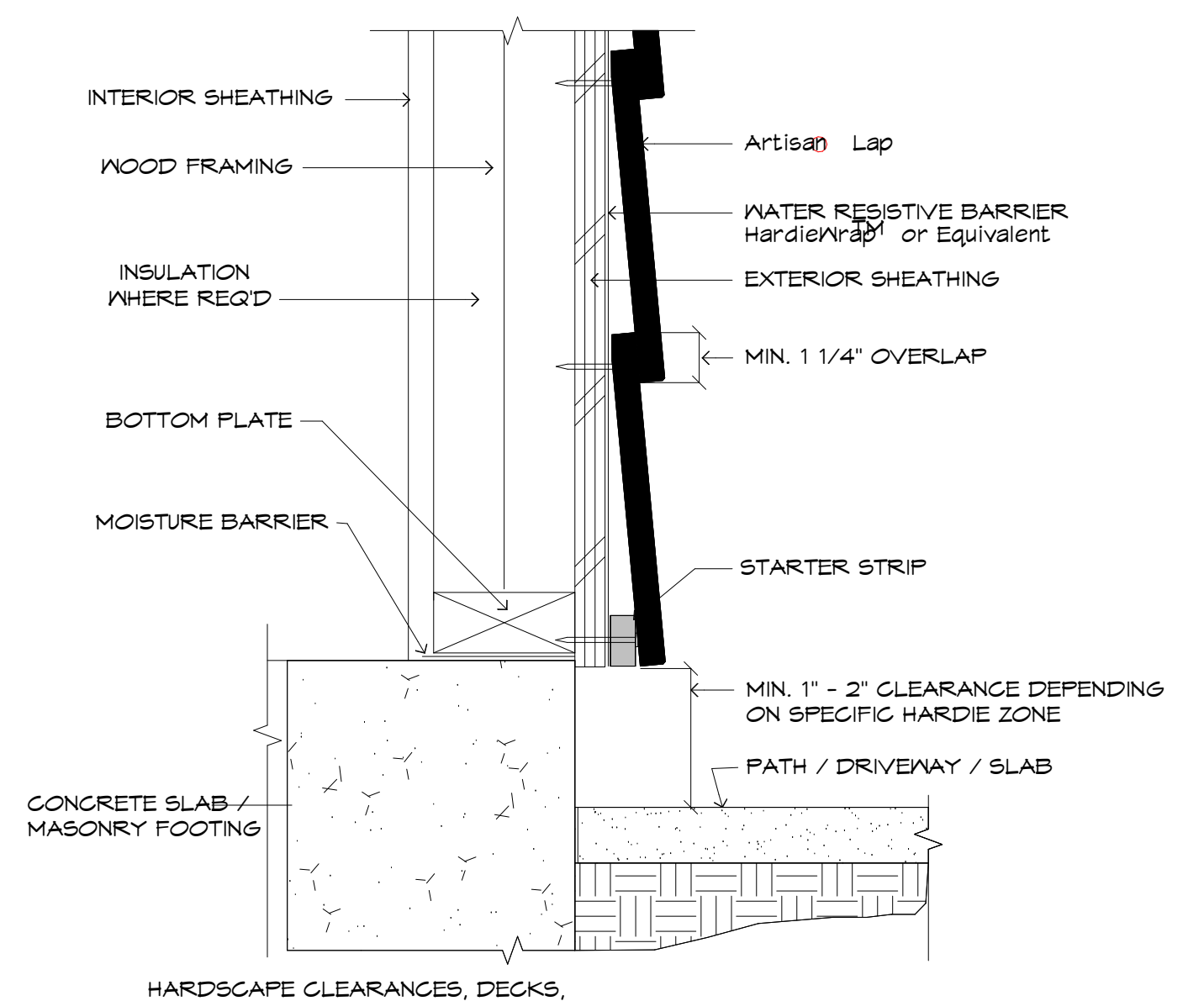
① GRADE CLEARANCE

SCALE: N.T.S.



② HORIZONTAL LAP VIEW

SCALE: N.T.S.

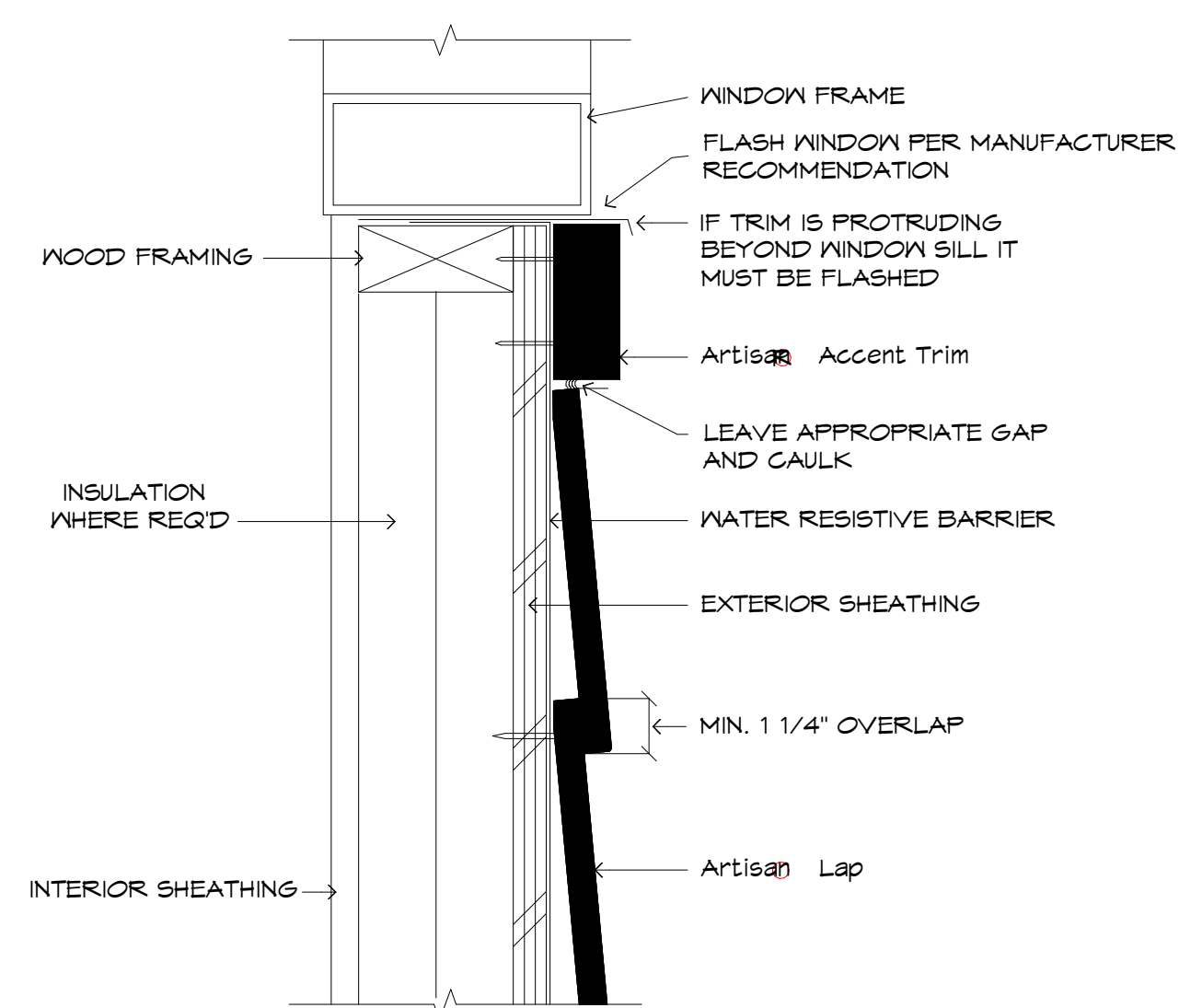


③ PORCHES, PATIOS, WALKWAYS, ROOFS, ETC.

SCALE: N.T.S.

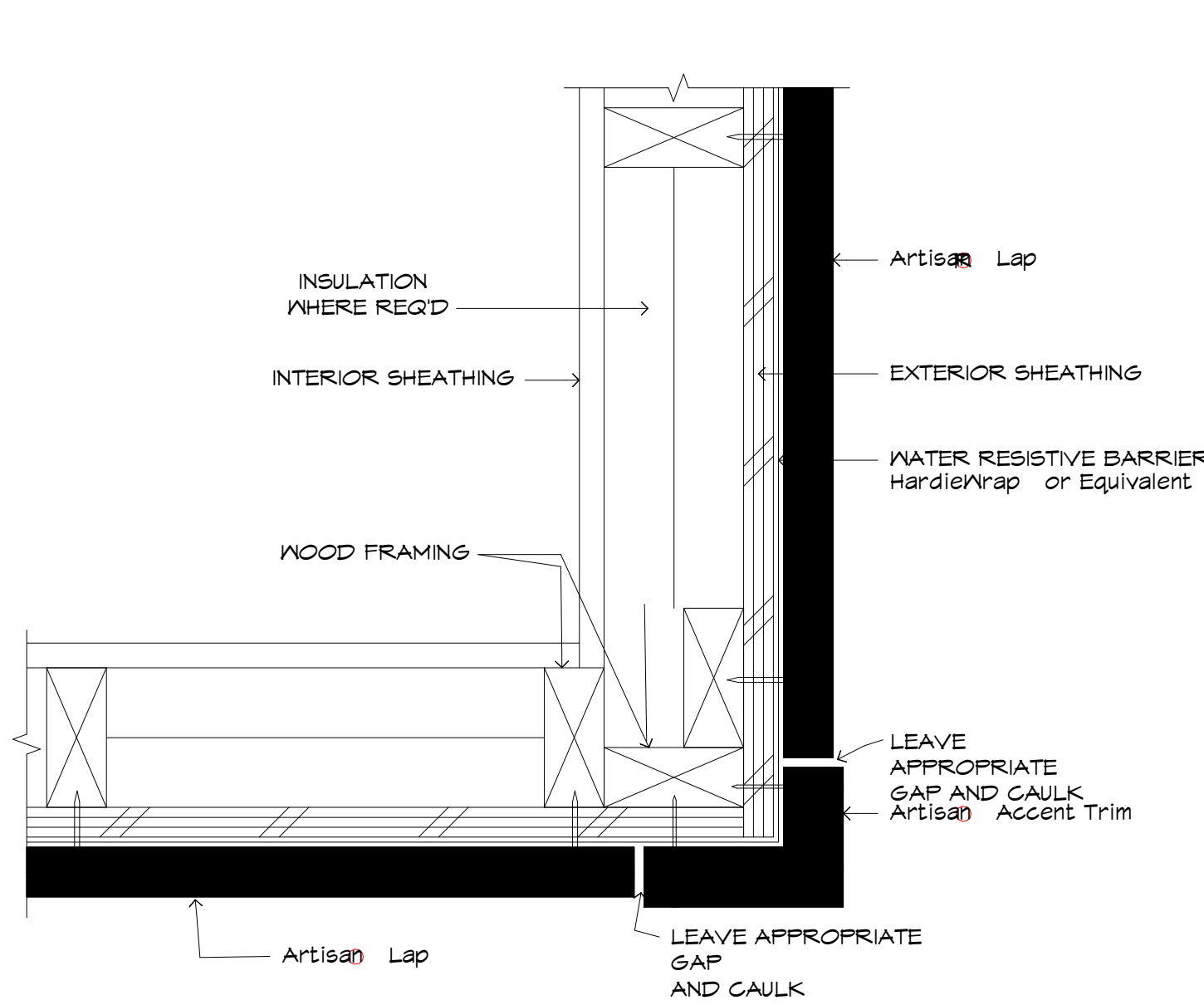
LAP SIDING DETAILS

SCALE: NOT TO SCALE (N.T.S.)



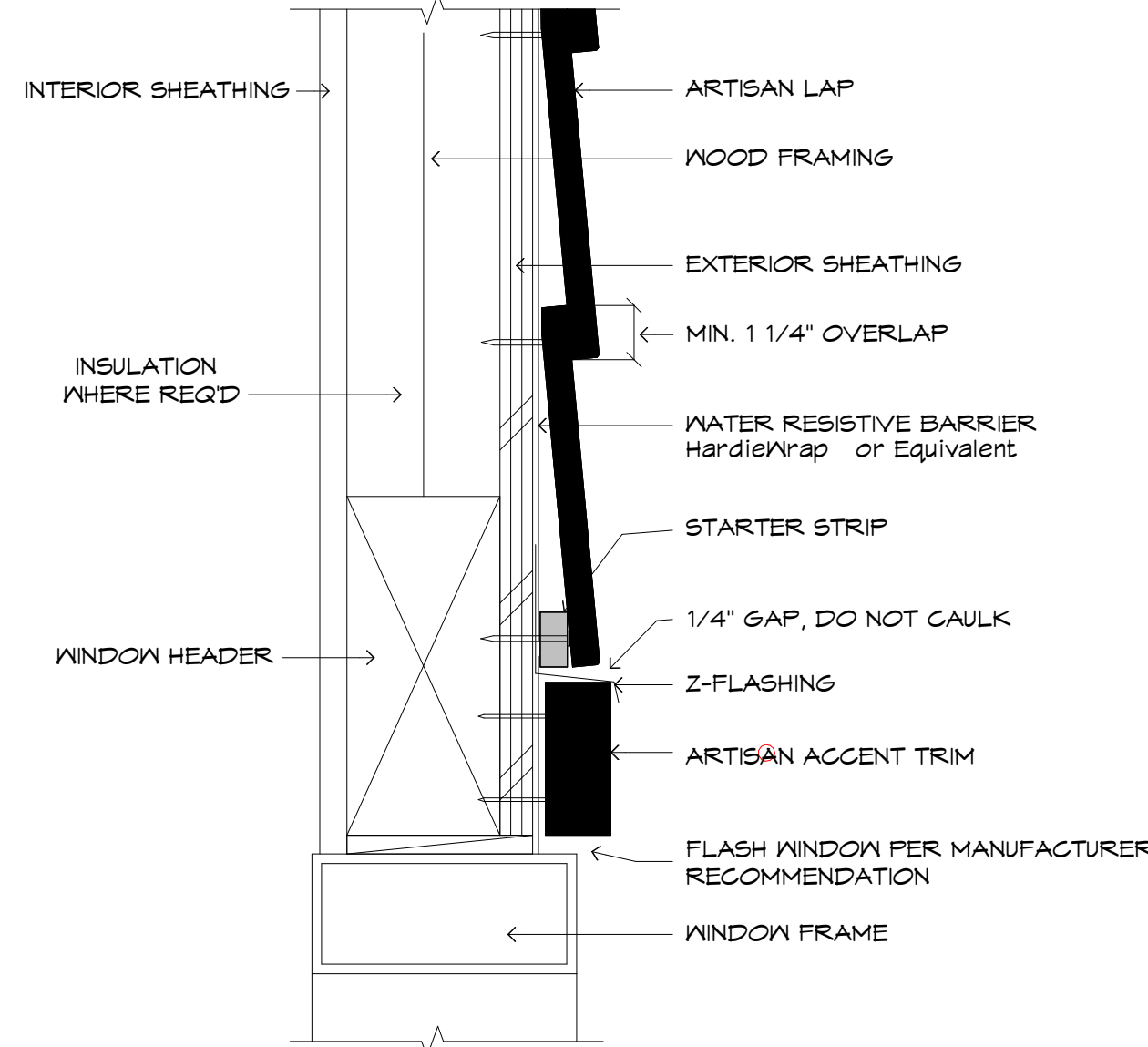
④ WINDOW SILL

SCALE: N.T.S.



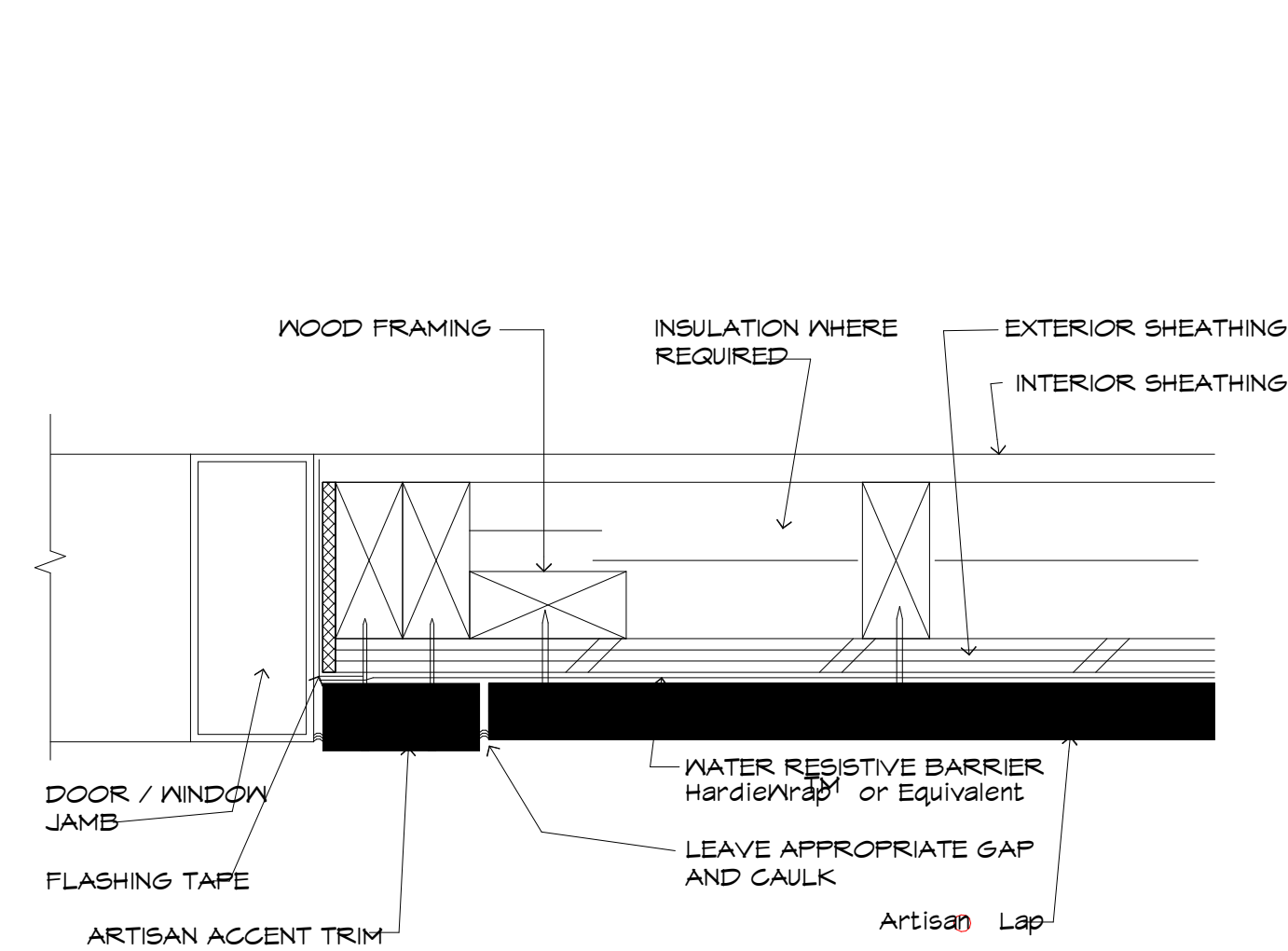
⑤ OUTSIDE CORNER

SCALE: N.T.S.



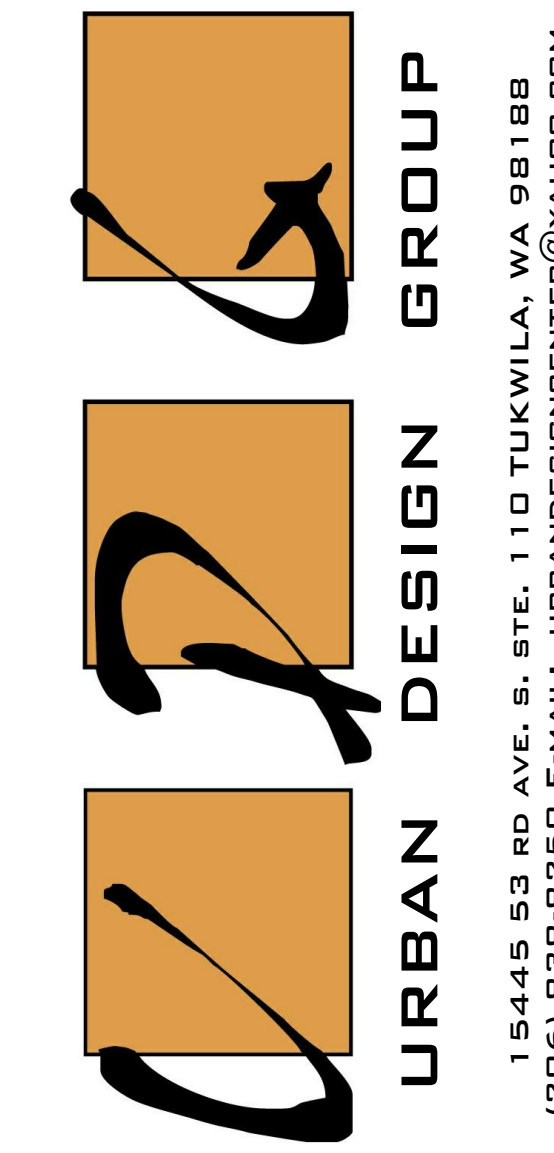
⑥ WINDOW/DOOR HEAD

SCALE: N.T.S.



⑦ DOOR / WINDOW JAMB

SCALE: N.T.S.



15445 53 RD AVE. S. STE. 110 TUKWILA, WA 98188
(206) 838-8250 E-MAIL: URBANDESIGNCENTER@YAHOO.COM

PROJECT NAME:
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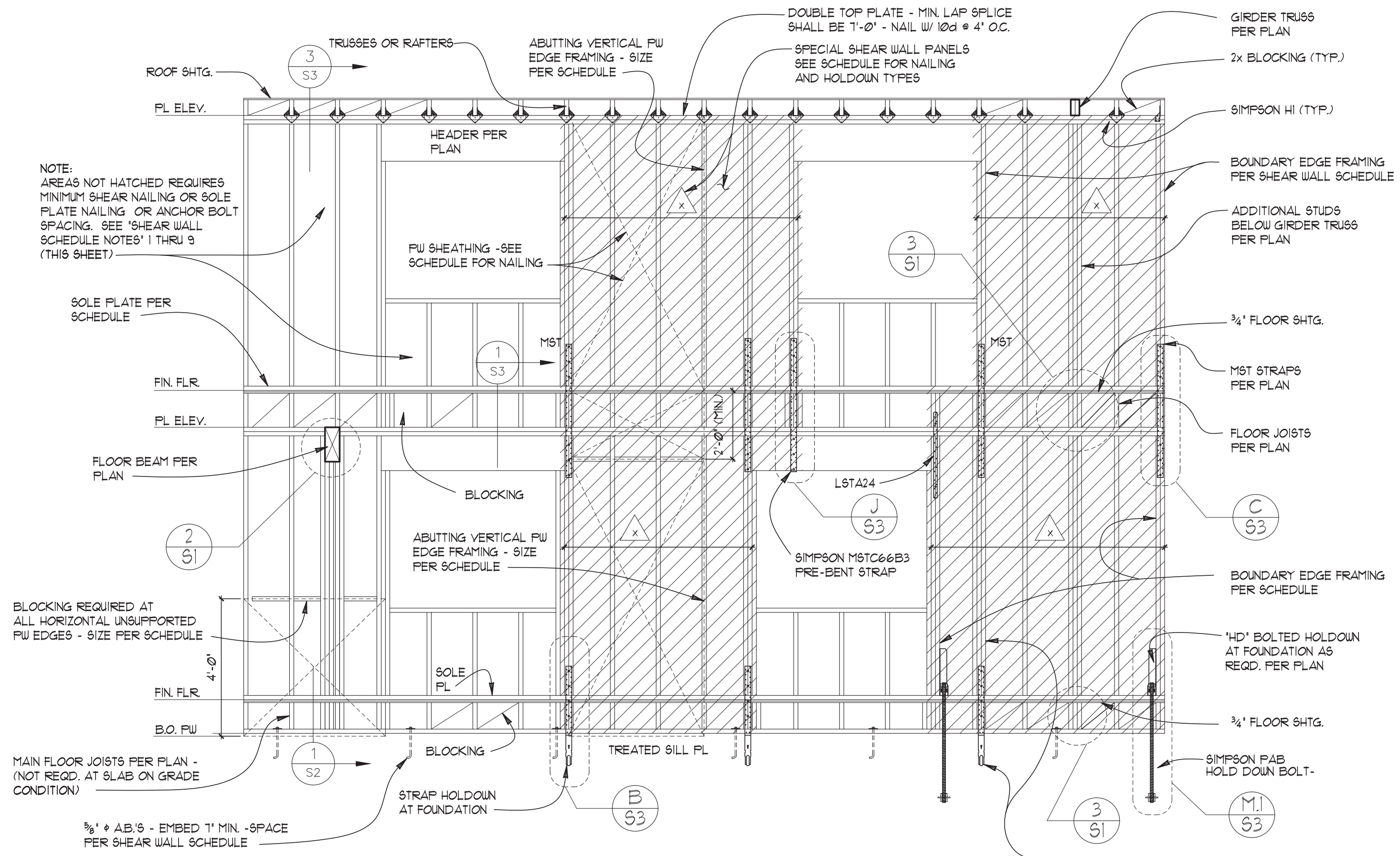
ARTISAN LAP SIDING DETAILS

PROJECT NUMBER:
21257

SHEET NUMBER:

SHEARWALL SCHEDULE														
(1) (2) (4)														
WALL TYPE	(5) SHTG.	(3) EDGE NAILING LENGTH X GAGE	(6) FIELD NAILING LENGTH X GAGE	3/8" DIA. AB. SPACING SOLE PLATE NAILING (GA)	ABUTTING VERT. FW EDGES	ABUTTING HORIZ. FW EDGES	(9) SOLE PL.	MUD SILL	BOUNDARY FRAMING (VERT.)	HOLDOWN TYPES	HOLDOWN BOLTS	REMARKS / DETAILS	SHEAR (PLF)	UPLIFT FORCE
DF	15/32" FW	8d @ 3' O.C. (2-1/2" X 0.131")	8d @ 12' O.C. (2-1/2" X 0.131")	3/8" AB. @ 36" O.C. 16d @ 8" O.C. (3-1/2" X 0.135")	2x6	2x6	2x6	2x6	4x6	HDQB	5B17/8X24	(N5) S11	287 plf	4.1 k
2	15/32" FW	8d @ 3' O.C. (2-1/2" X 0.131")	8d @ 12' O.C. (2-1/2" X 0.131")	3/8" AB. @ 24" O.C. 16d @ 8" O.C. (3-1/2" X 0.135")	2x6	2x6	2x6	2x6	2-2x6	STHD14RJ		(B) S11	219 plf	2.4 k
3	15/32" O8B	8d @ 4' O.C. (2-1/2" X 0.131")	8d @ 12' O.C. (2-1/2" X 0.131")	3/8" AB. @ 36" O.C. 16d @ 8" O.C. (3-1/2" X 0.135")	2x6	2x6	2x6	2x6	2-2x6	STHD14RJ		(B) S11	214 plf	3.5 k
4	15/32" O8B	8d @ 6' O.C. (2-1/2" X 0.131")	8d @ 12' O.C. (2-1/2" X 0.131")	3/8" AB. @ 24" O.C. 16d @ 4" O.C. (3-1/2" X 0.135")	3x6	3x6	3x6	3x6	4x6	HHQII	5B1X30	(N4) S11	487 plf	5.6 k
5	15/32" O8B	8d @ 6' O.C. (2-1/2" X 0.131")	8d @ 12' O.C. (2-1/2" X 0.131")	3/8" AB. @ 48" O.C. 16d @ 16" O.C. (3-1/2" X 0.135")	2x6	2x6	2x6	2x6	NONE				223 plf	0.0 k
6	15/32" FW	10d @ 3' O.C. (3" X 0.131")	10d @ 12' O.C. (3" X 0.131")	16d @ 4" O.C. (3-1/2" X 0.135")	2x6	2x6	2x6	2x6	2-2x6			(C) S3 (J) S3	401 plf	4.1 k
7	15/32" FW	8d @ 3' O.C. (2-1/2" X 0.131")	8d @ 12' O.C. (2-1/2" X 0.131")	3/8" AB. @ 36" O.C. 16d @ 8" O.C. (3-1/2" X 0.135")	2x6	2x6	2x6	2x6	2-2x6			(C) S3 (J) S3	343 plf	3.4 k
8	15/32" FW	8d @ 4' O.C. (2-1/2" X 0.131")	8d @ 12' O.C. (2-1/2" X 0.131")	3/8" AB. @ 36" O.C. 16d @ 8" O.C. (3-1/2" X 0.135")	2x6	2x6	2x6	2x6	2-2x6			(C) S3 (J) S3	243 plf	3.9 k
9	15/32" FW	8d @ 4' O.C. (2-1/2" X 0.131")	8d @ 12' O.C. (2-1/2" X 0.131")	3/8" AB. @ 36" O.C. 16d @ 8" O.C. (3-1/2" X 0.135")	2x6	2x6	2x6	2x6	2-2x6			(C) S3 (J) S3	150 plf	0.5 k
10	15/32" FW	8d @ 4' O.C. (2-1/2" X 0.131")	8d @ 12' O.C. (2-1/2" X 0.131")	16d @ 3" O.C. (3-1/2" X 0.135")	3x6	3x6	3x6	3x6	2-2x6	NONE			223 plf	0.0 k

NOTE: FOR ALL OTHER EXTERIOR WALLS NOT SPECIFIED IN SCHEDULE ABOVE, SEE NOTE 2. IN 'SHEAR WALL SCHEDULE NOTES'.



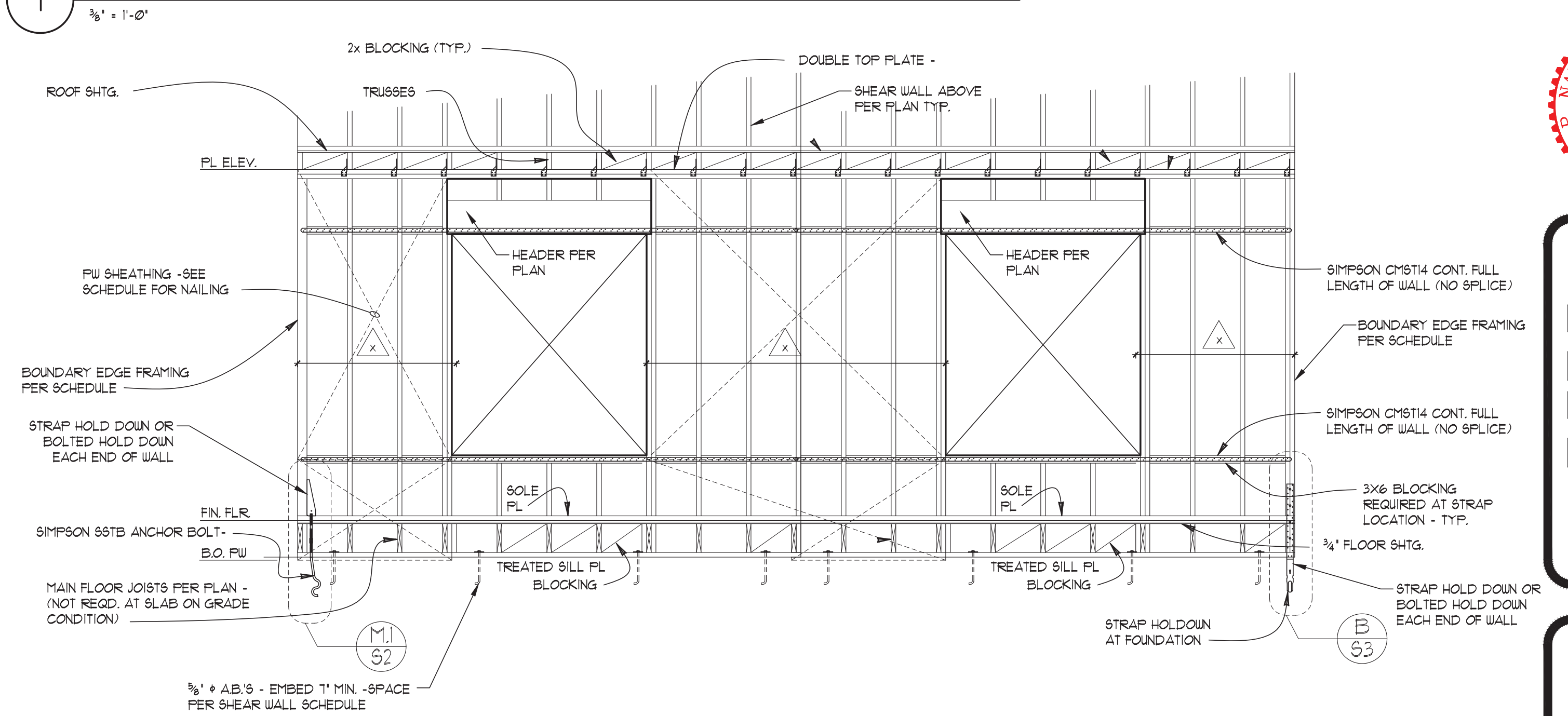
SHEAR WALL SCHEDULE NOTES (MAIN FLOOR):

- SHEAR WALLS NOTED IN SCHEDULE ARE WALLS WITH ADDITIONAL EDGE NAILING, ABUTTING HORIZONTAL AND VERTICAL EDGE FRAMING, AND ANCHOR BOLT SPACING. FIELD NAIL SIZE SHALL MATCH THE EDGE FRAMING SPECIFIED AND BE SPACED AT 12" O.C. SHEAR NAILING APPLIES TO ALL VERTICAL AND HORIZONTAL ABUTTING SHTG. EDGES, DOUBLE TOP PLATES, AND SOLE PLATES.
- ALL EXTERIOR WALLS NOT SPECIFIED IN SHEAR WALL SCHEDULE, SHALL BE DESIGNATED AS MINIMUM SHEAR PANELS WITH EDGE NAIL SIZE MATCHING SPECIFIED NAILS IN SCHEDULE AND SPACED AT 6" O.C. FIELD NAIL SPACING SHALL BE 12" O.C.
- SHEATHING SHALL BE 1/6" O8B UNLESS SPECIFIED 15/32" STRUCTURAL #1 IN SCHEDULE.
- EXTERIOR SHEAR WALL FRAMING SHALL BE 2X6 HEM FIR #2 UNLESS NOTED 'DF' (DOUG FIR) IN SCHEDULE. FRAMING SHALL BE SPACED AT 16" O.C.
- INTERIOR SHEAR WALL FRAMING SHALL BE 2X4 (OR 2X6 PER SCHEDULE) HEM FIR #2 SPACED AT 16" O.C.
- EDGE FRAMING OR END OF SHEAR WALLS SHALL BE FRAMED WITH: (2) MINIMUM 2X6 (2X6 WALLS), (2) 2X4 (2X4 WALLS), OR SOLID SAIN POSTS AS NOTED IN THE SCHEDULE.
- BLOCK ALL UNSUPPORTED HORIZONTAL SHEATHING EDGES WITH 2X6 OR 3X6 AS NOTED IN SCHEDULE. ALL VERTICAL ABUTTING SHEATHING EDGES SHALL BE 2X6 FOR EXTERIOR WALLS OR 2X4 FOR INTERIOR WALLS OR AS NOTED IN SCHEDULE.
- SOLE PLATE SHALL BE 2X6 FOR EXTERIOR WALLS. SOLE PLATE SHALL BE 2X4 OR 2X6 FOR INTERIOR WALLS. SOLE PLATE NAILING SHALL BE 16d SPACED 12" O.C. (MAX. OR LESS AS SPECIFIED IN SCHEDULE).
- MUD SILLS SHALL BE 2X6 HF #2 F.T. CONTINUOUS AROUND PERIMETER OF FOUNDATION WALL.
- FOUNDATION ANCHOR SHALL BE 3/8" DIA. X 10" AB. FOR 2X6 MUD SILL OR 3/8" DIA. X 12" AB. FOR 3X6 MUD SILLS. IF NOT SPECIFIED BY THE SHEAR WALL SCHEDULE, ANCHOR BOLTS SHALL BE SPACED NO MORE THAN 48" O.C. ALL ANCHOR BOLTS SHALL BE EMBEDDED IN CONCRETE 1" MIN. PROVIDE (2) MINIMUM AB.'S FOR EACH MUD SILL SECTION.
- PROVIDE 3"X3"X1/4" GALV. WASHERS FOR EACH ANCHOR BOLT. THE CONTRACTOR MAY USE 3"X3"X1/4" GALV. WASHERS WITH DIAGONAL SLOTTED HOLES IF STANDARD CUT WASHERS ARE USED AND PLACED ABOVE THE SLOTTED PLATE WASHERS.

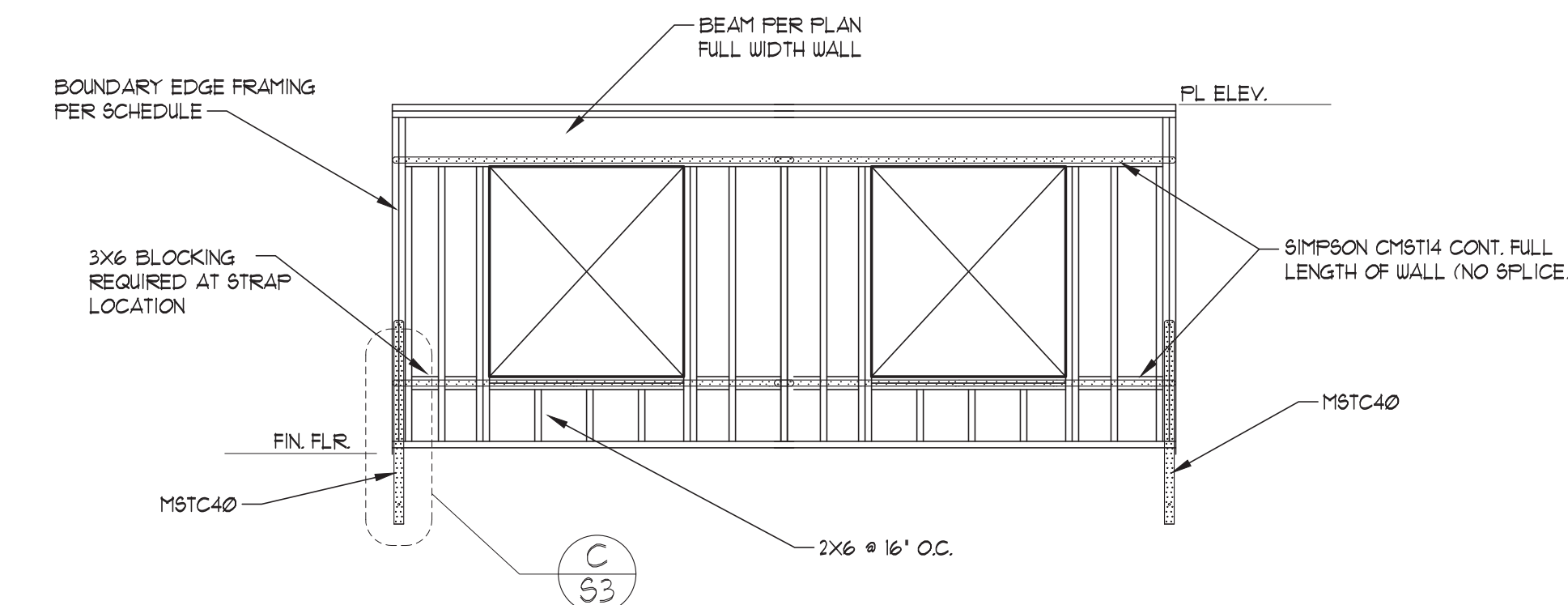
SHEAR WALL SCHEDULE NOTES (UPPER FLOOR):

- SHEAR WALLS NOTED IN SCHEDULE ARE WALLS WITH ADDITIONAL EDGE NAILING, ABUTTING HORIZONTAL AND VERTICAL EDGE FRAMING, AND ANCHOR BOLT SPACING. FIELD NAIL SIZE SHALL MATCH THE EDGE FRAMING SPECIFIED AND BE SPACED AT 12" O.C. SHEAR NAILING APPLIES TO ALL VERTICAL AND HORIZONTAL ABUTTING SHTG. EDGES, DOUBLE TOP PLATES, AND SOLE PLATES.
- ALL EXTERIOR WALLS NOT SPECIFIED IN SHEAR WALL SCHEDULE, SHALL BE DESIGNATED AS MINIMUM SHEAR PANELS WITH EDGE NAIL SIZE MATCHING SPECIFIED NAILS IN SCHEDULE AND SPACED AT 6" O.C. FIELD NAIL SPACING SHALL BE 12" O.C.
- SHEATHING SHALL BE 1/6" O8B UNLESS SPECIFIED 15/32" STRUCTURAL #1 IN SCHEDULE.
- EXTERIOR SHEAR WALL FRAMING SHALL BE 2X6 HEM FIR #2 UNLESS NOTED 'DF' (DOUG FIR) IN SCHEDULE. FRAMING SHALL BE SPACED AT 16" O.C.
- INTERIOR SHEAR WALL FRAMING SHALL BE 2X4 (OR 2X6 PER SCHEDULE) HEM FIR #2 SPACED AT 16" O.C.
- EDGE FRAMING OR END OF SHEAR WALLS SHALL BE FRAMED WITH: (2) MINIMUM 2X6 (2X6 WALLS), (2) 2X4 (2X4 WALLS), OR SOLID SAIN POSTS AS NOTED IN THE SCHEDULE.
- BLOCK ALL UNSUPPORTED HORIZONTAL SHEATHING EDGES WITH 2X6 OR 3X6 AS NOTED IN SCHEDULE. ALL VERTICAL ABUTTING SHEATHING EDGES SHALL BE 2X6 FOR EXTERIOR WALLS OR 2X4 FOR INTERIOR WALLS OR AS NOTED IN SCHEDULE.
- SOLE PLATE SHALL BE 2X6 FOR EXTERIOR WALLS. SOLE PLATE SHALL BE 2X4 OR 2X6 FOR INTERIOR WALLS. SOLE PLATE NAILING SHALL BE 16d SPACED 12" O.C. (MAX. OR LESS AS SPECIFIED IN SCHEDULE).

1 ELEVATION - TWO STORY FRAMING OR SHEAR WALL (HATCHED)



B ELEVATION - SHEAR TRANSFER SHEAR WALL - MULTIPLE WINDOWS



C ELEVATION - SHEAR TRANSFER SHEAR WALL

Project
MARTIN QIAN AND LAURIE YANG
 8456 SE 40TH ST
 PC: MERCER ISLAND, WA

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URBAN DESIGN GROUP
 Contents
GENERAL NOTES

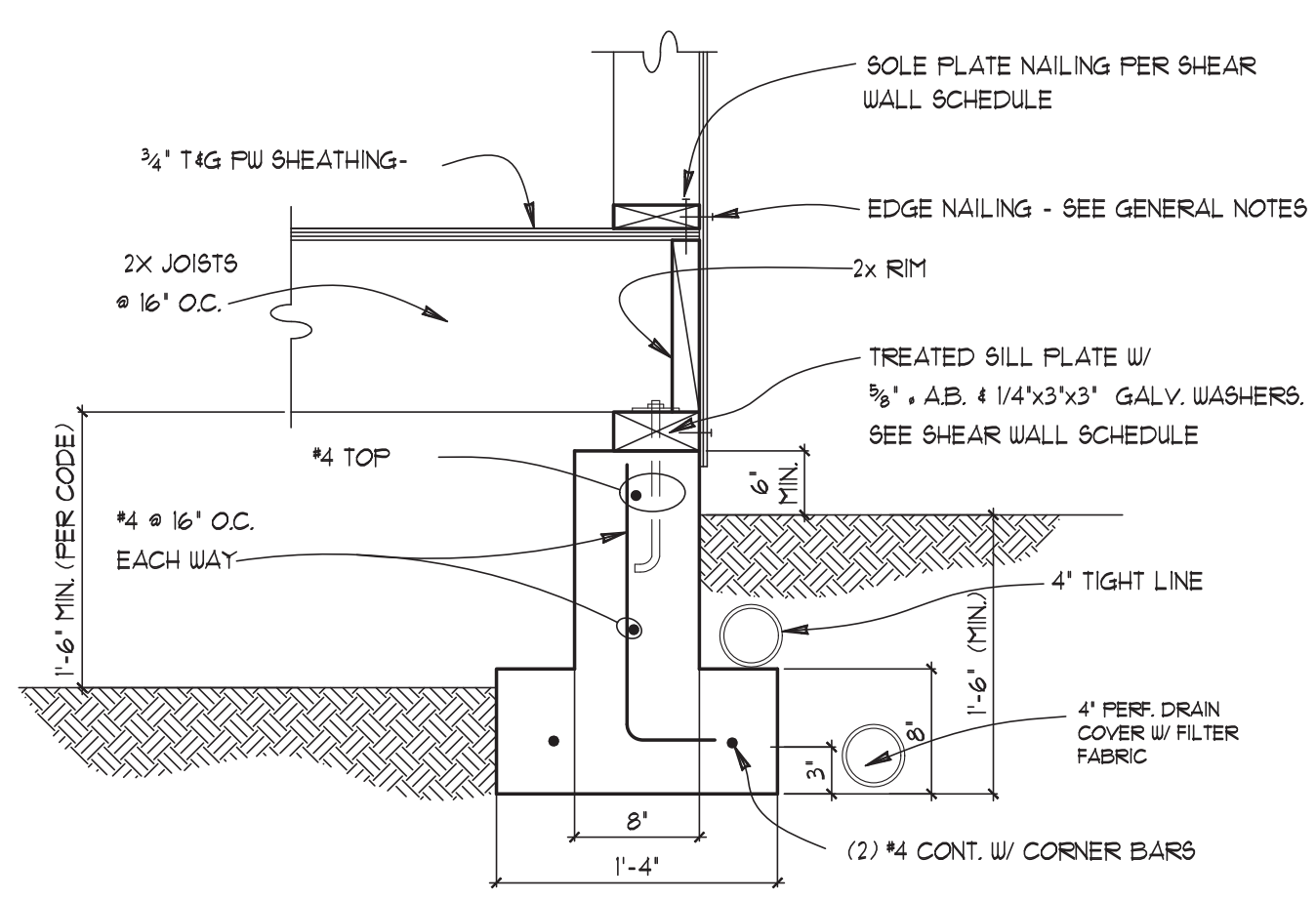
MAVARO
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF WASHINGTON
 No. 10000
 EXPIRES JANUARY 31, 2024

MM ENGINEERING
 10000
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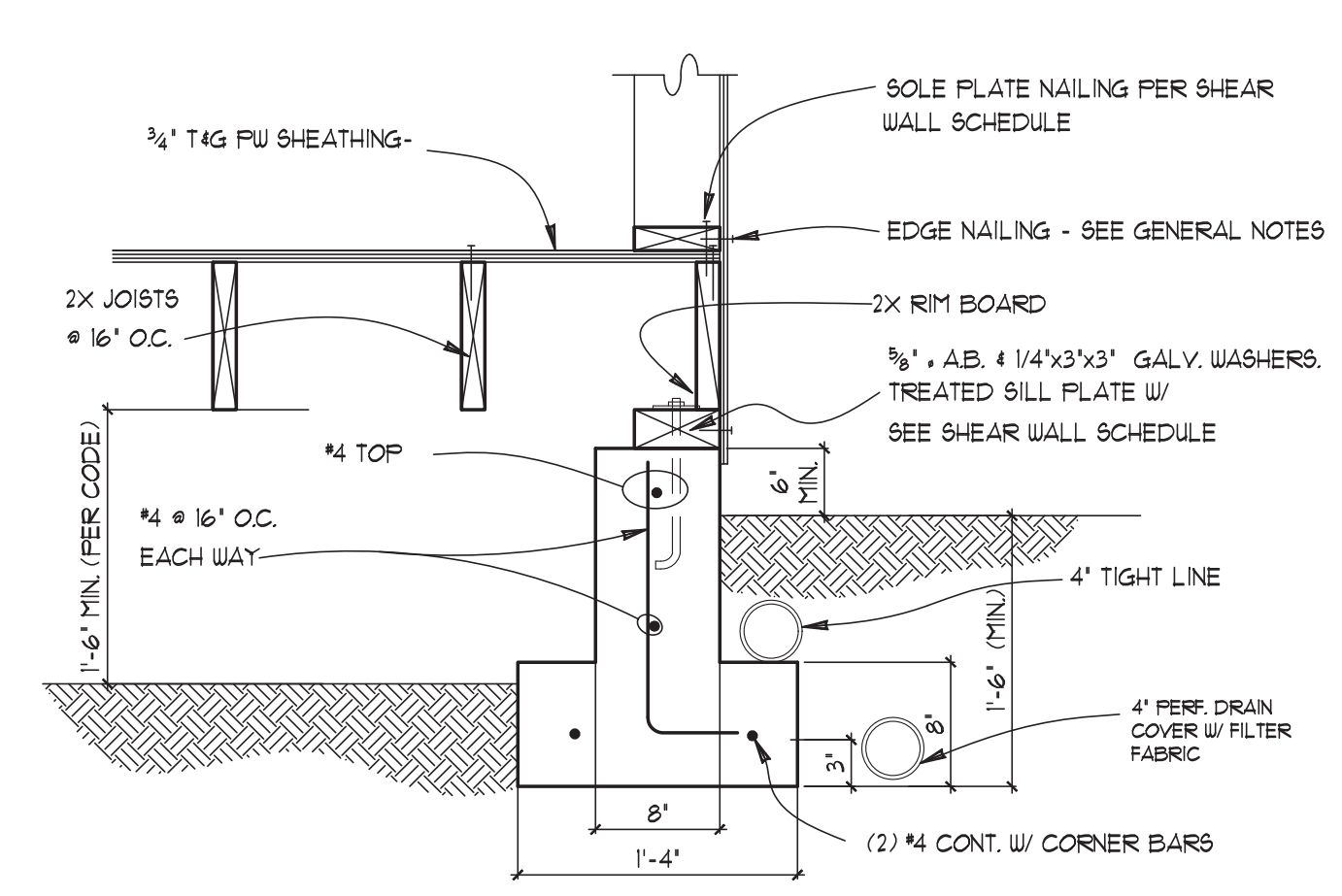
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COMMENTS: △	REV. DATE: △

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 Sheet
S1.2

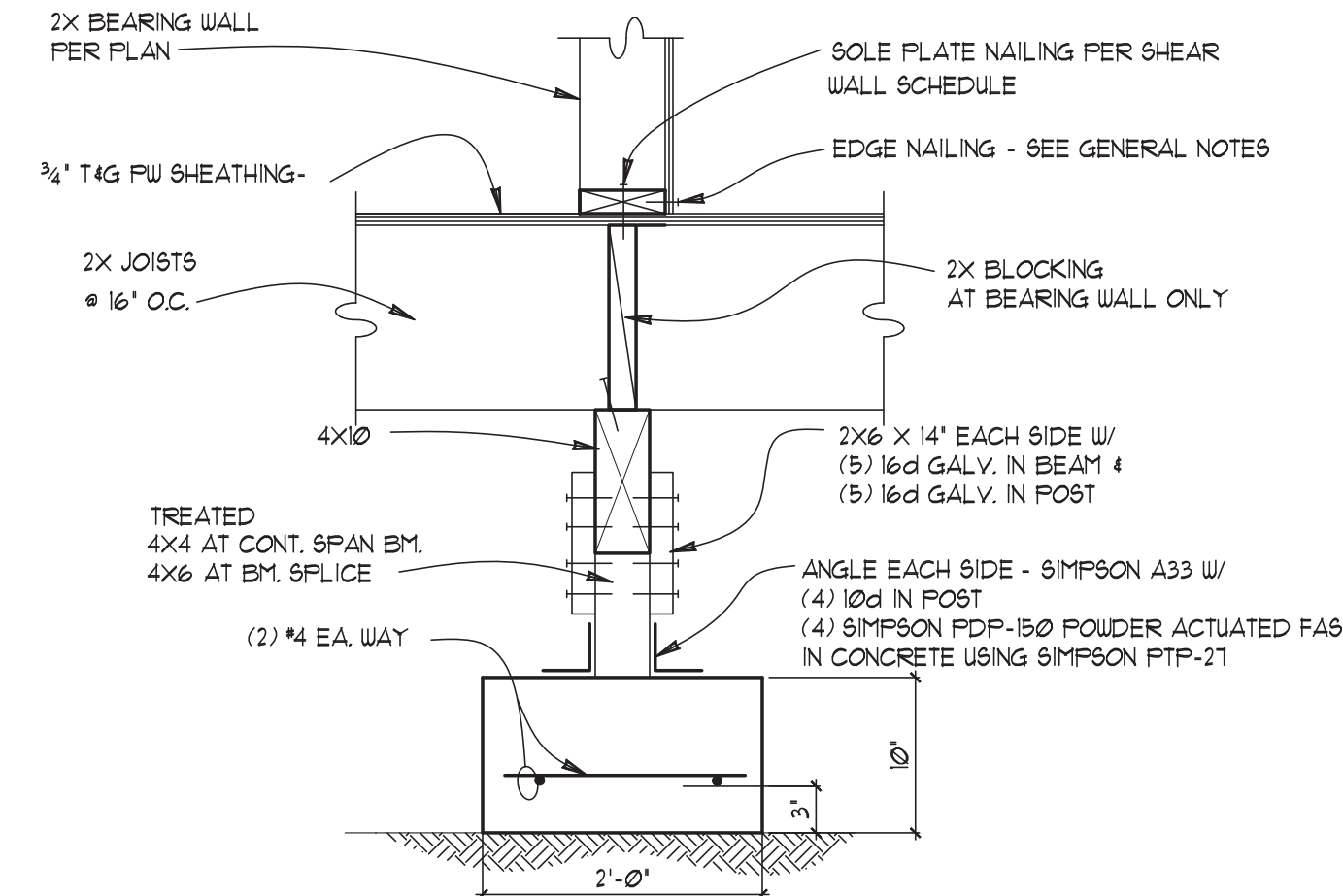
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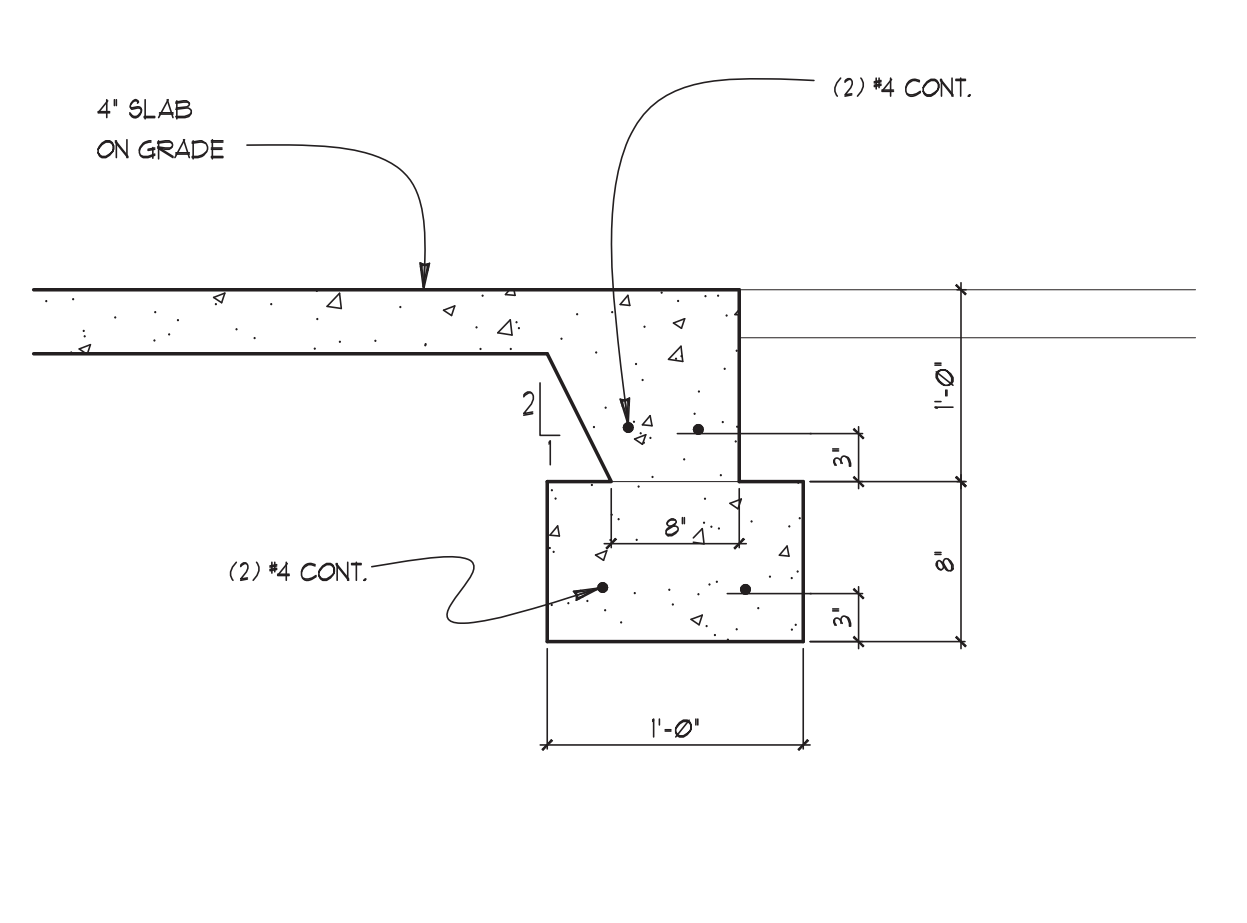
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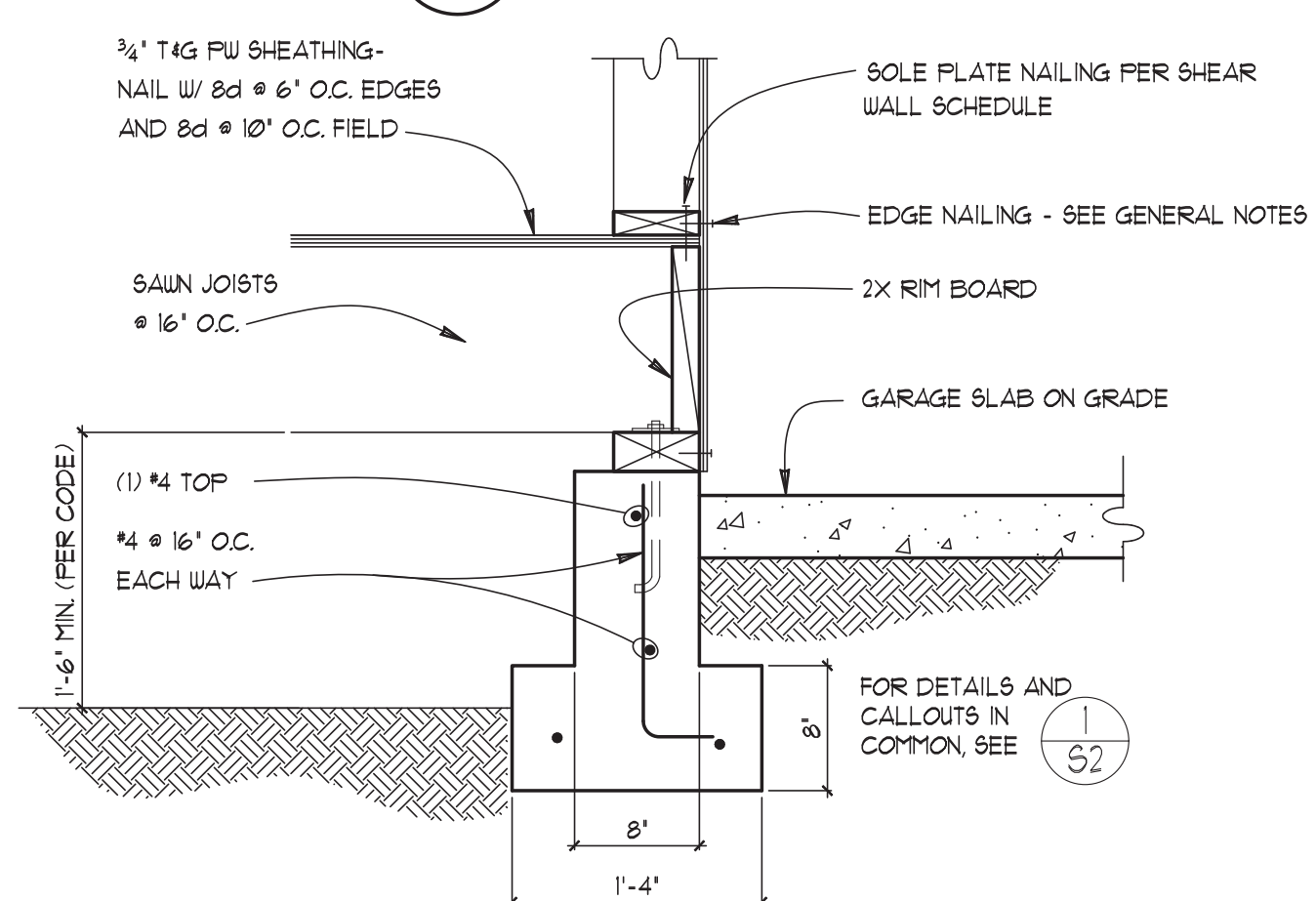
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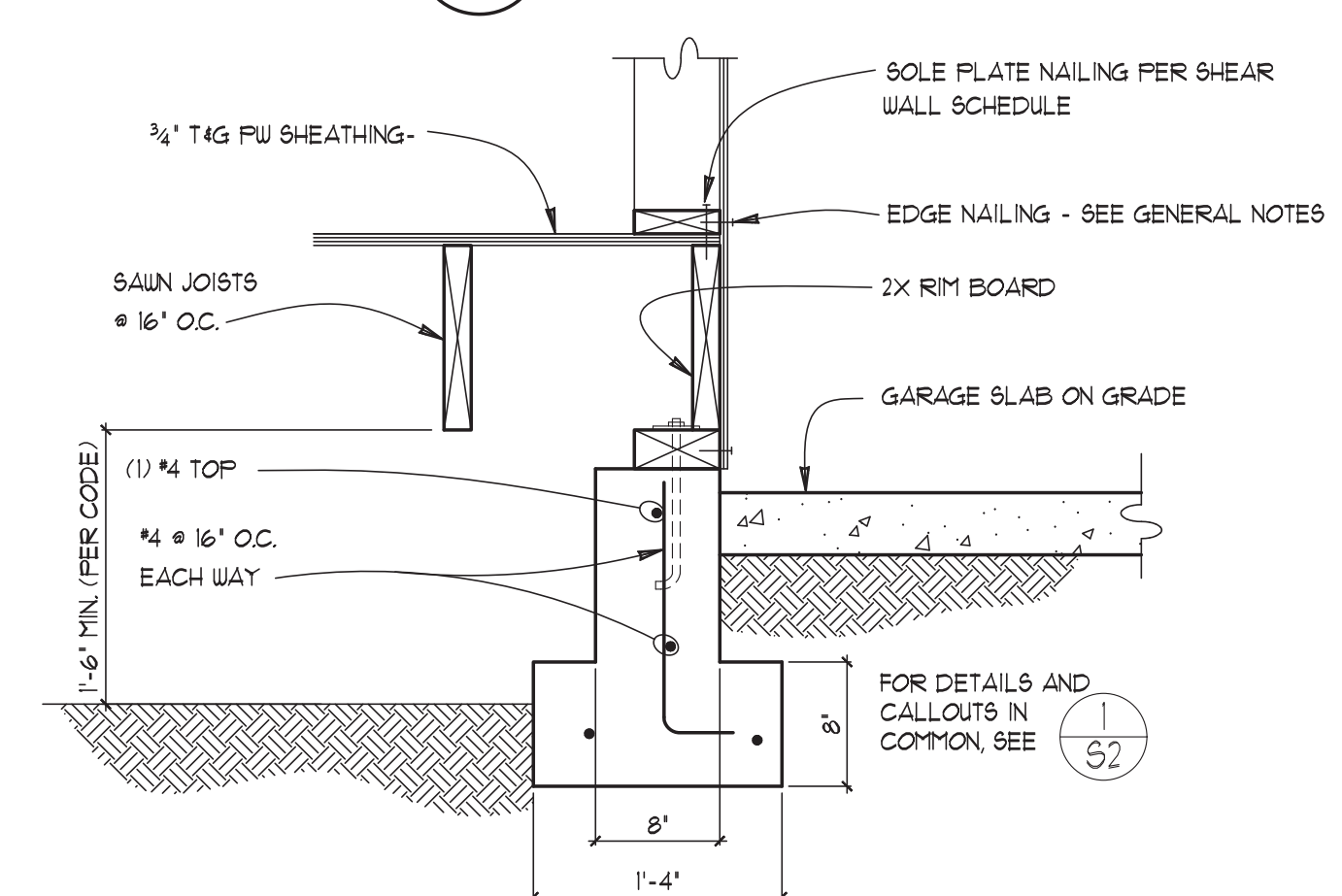
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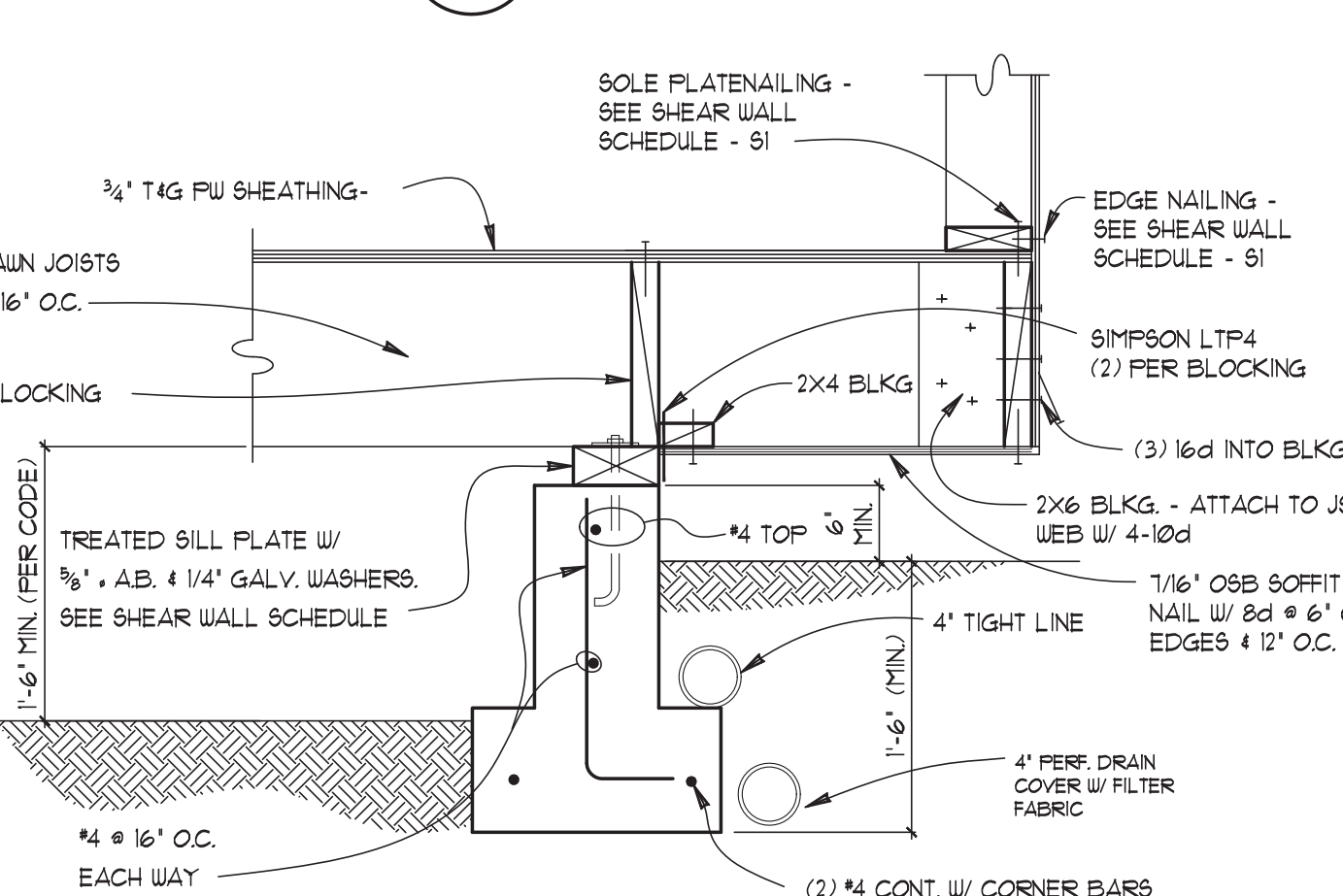
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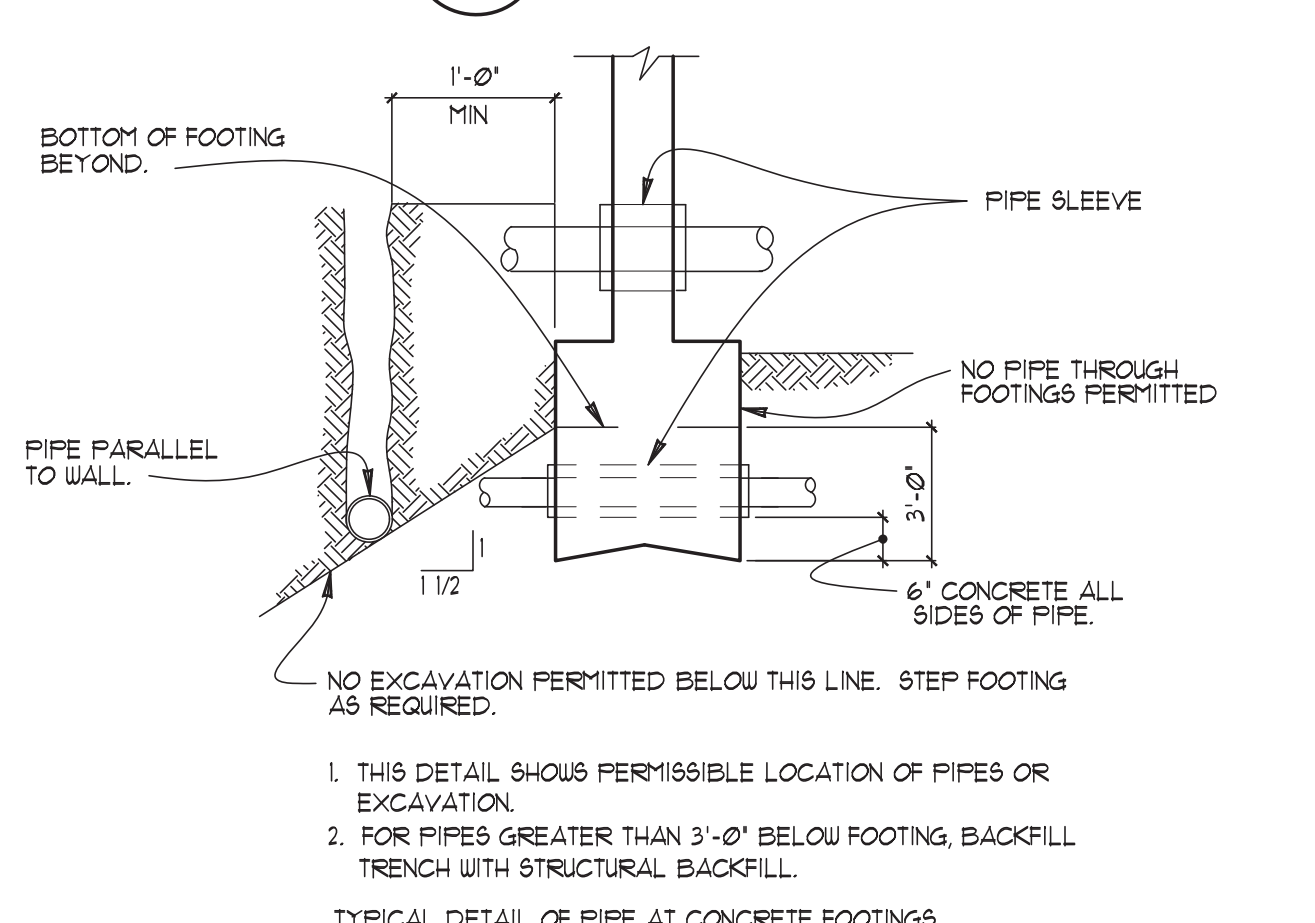
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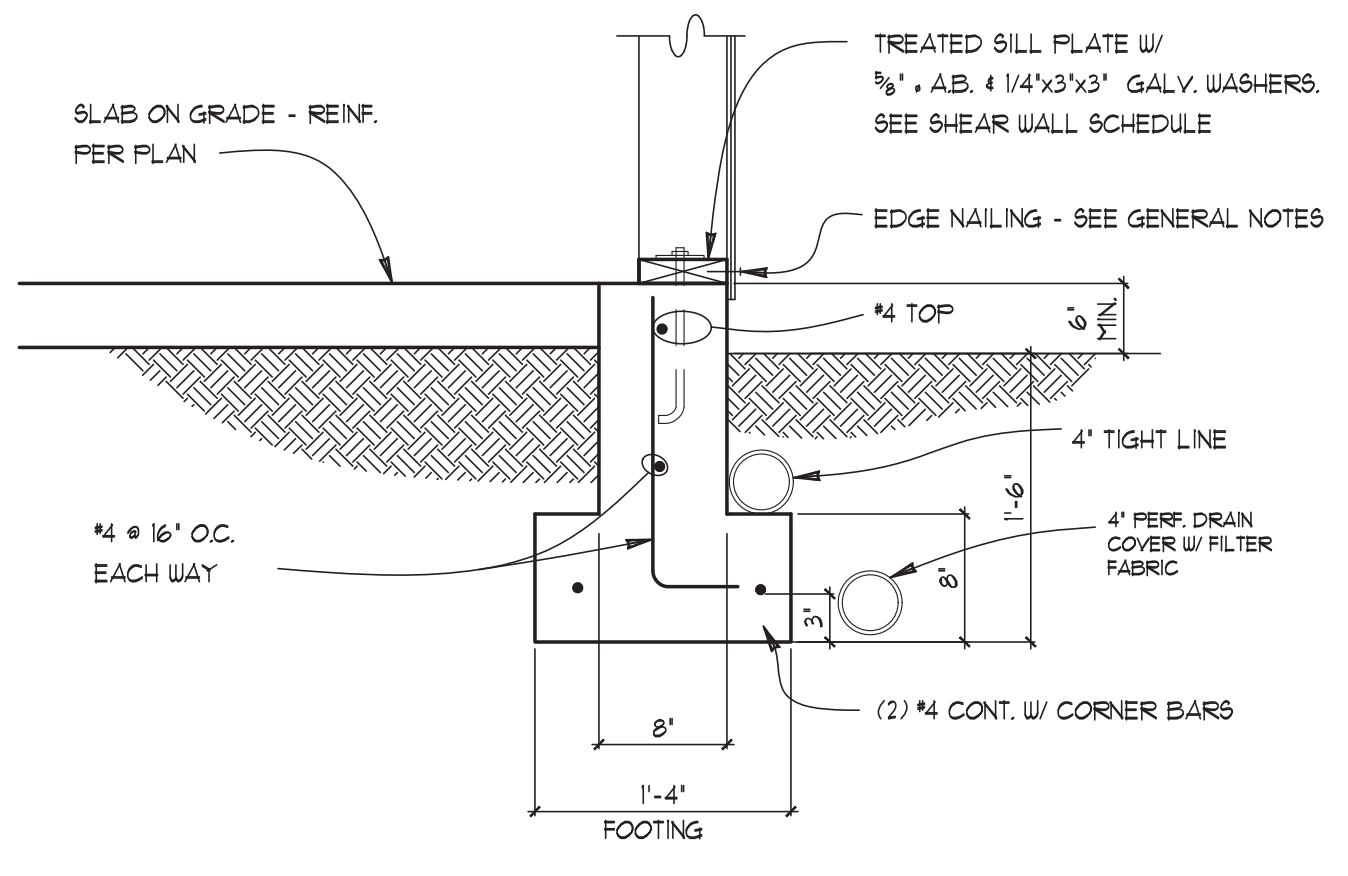
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1" = 1'-0"



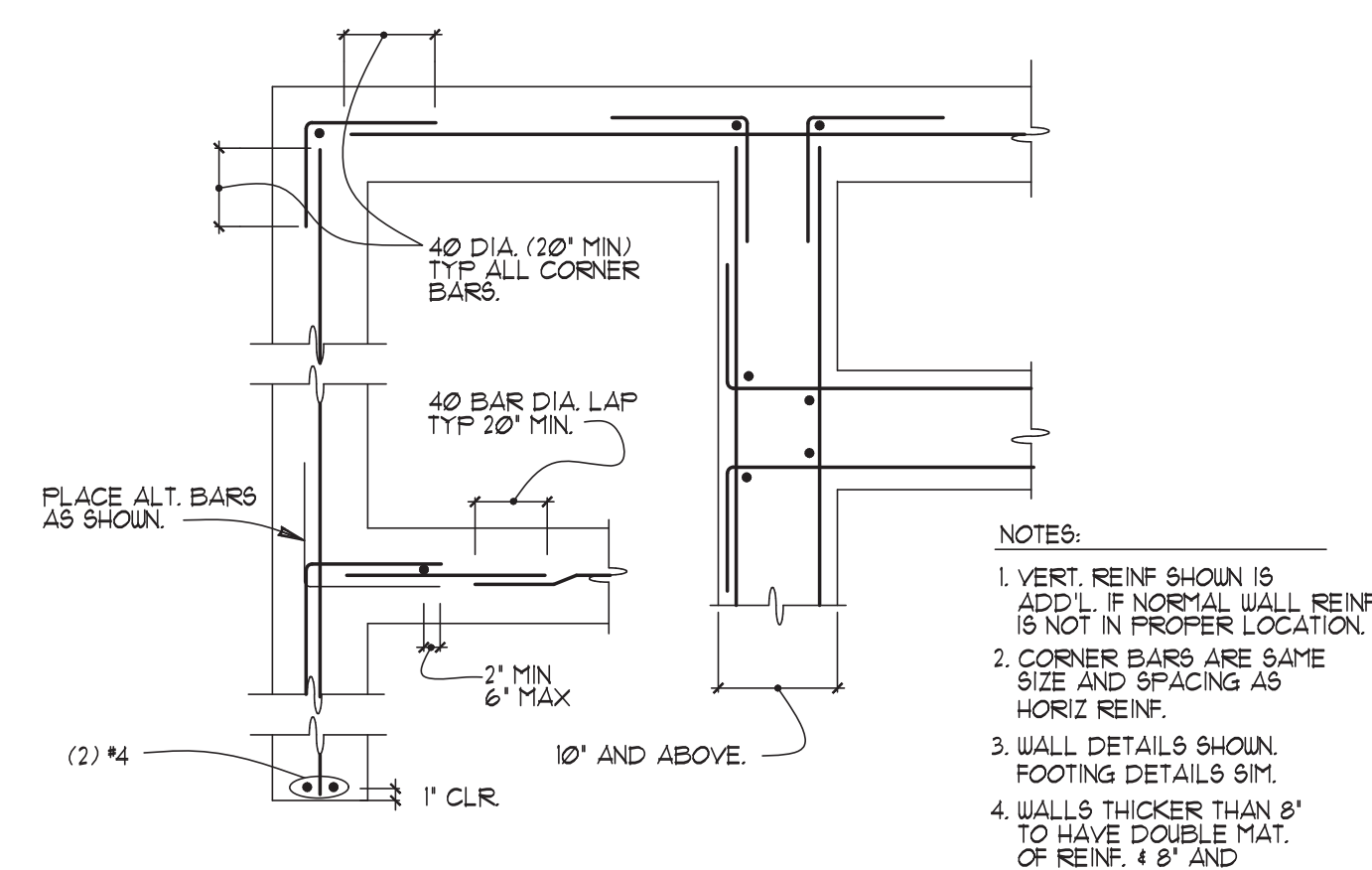
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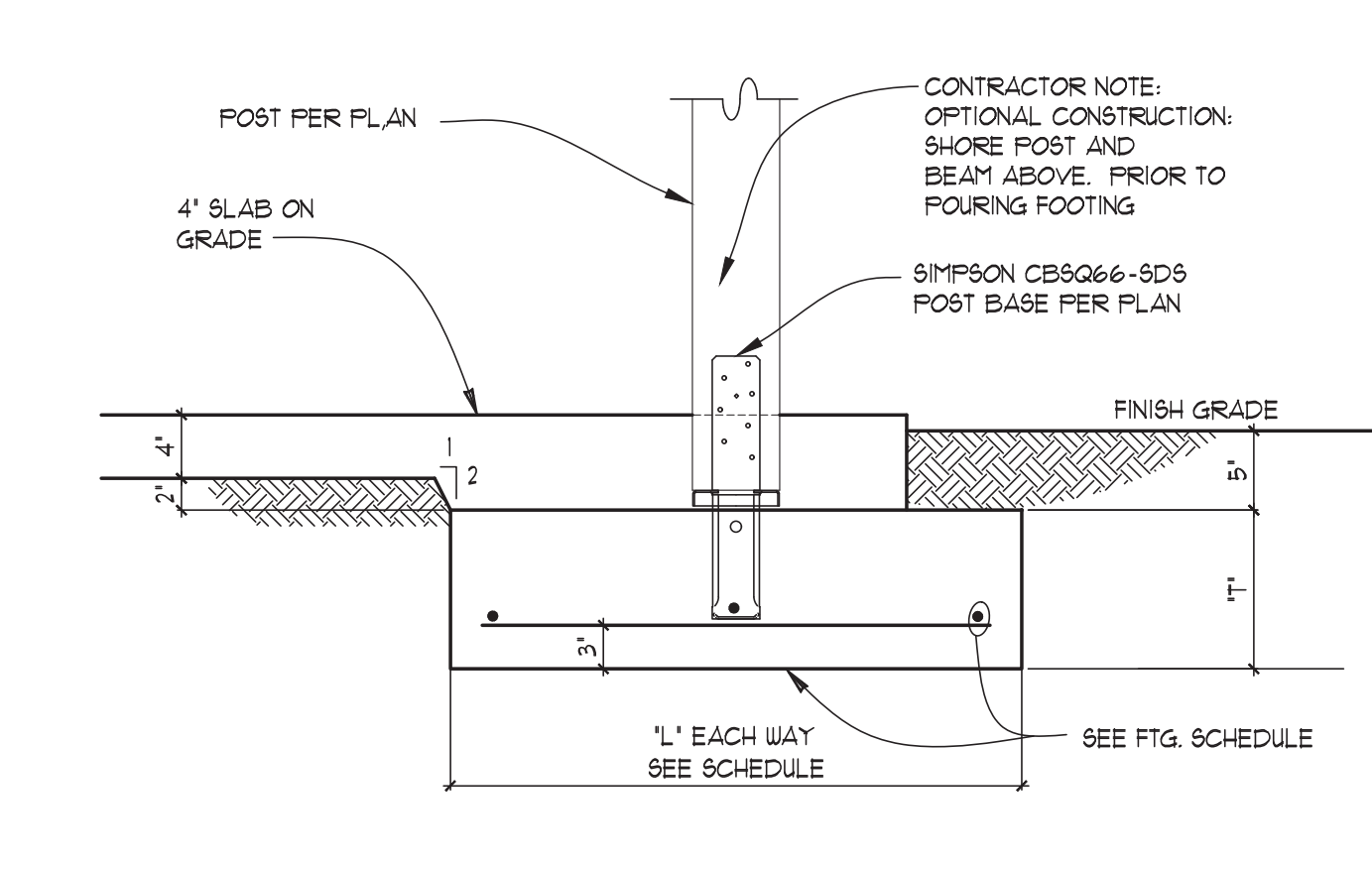
8 SECTION
1" = 1'-0"



9 SECTION
1" = 1'-0"



10 SECTION
1" = 1'-0"



11 SECTION
1" = 1'-0"

NOTES:
1. VERT. REINF SHOWN IS ADD'L. IF NORMAL WALL REINF IS NOT IN PROPER LOCATION.
2. CORNER BARS ARE SAME SIZE AND SPACING AS HORIZ. REINF.
3. WALL DETAILS SHOWN. FOOTING DETAILS SIM.
4. WALLS THICKER THAN 8" TO HAVE DOUBLE MAT. OF REINF. 4" AND SMALLER USE SINGLE MAT.

NO EXCAVATION PERMITTED BELOW THIS LINE. STEP FOOTING AS REQUIRED.
1. THIS DETAIL SHOWS PERMISSIBLE LOCATION OF PIPES OR EXCAVATION.
2. FOR PIPES GREATER THAN 3'-0" BELOW FOOTING, BACKFILL TRENCH WITH STRUCTURAL BACKFILL.
TYPICAL DETAIL OF PIPE AT CONCRETE FOOTINGS

Project
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8456 SE 40TH ST
PC: MERCER ISLAND, WA

Prepared for
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Contents
FOUNDATION DETAILS

Professional Engineer
D. M. FARRO
10/15/2023
RECEIVED
JANUARY 21, 2024

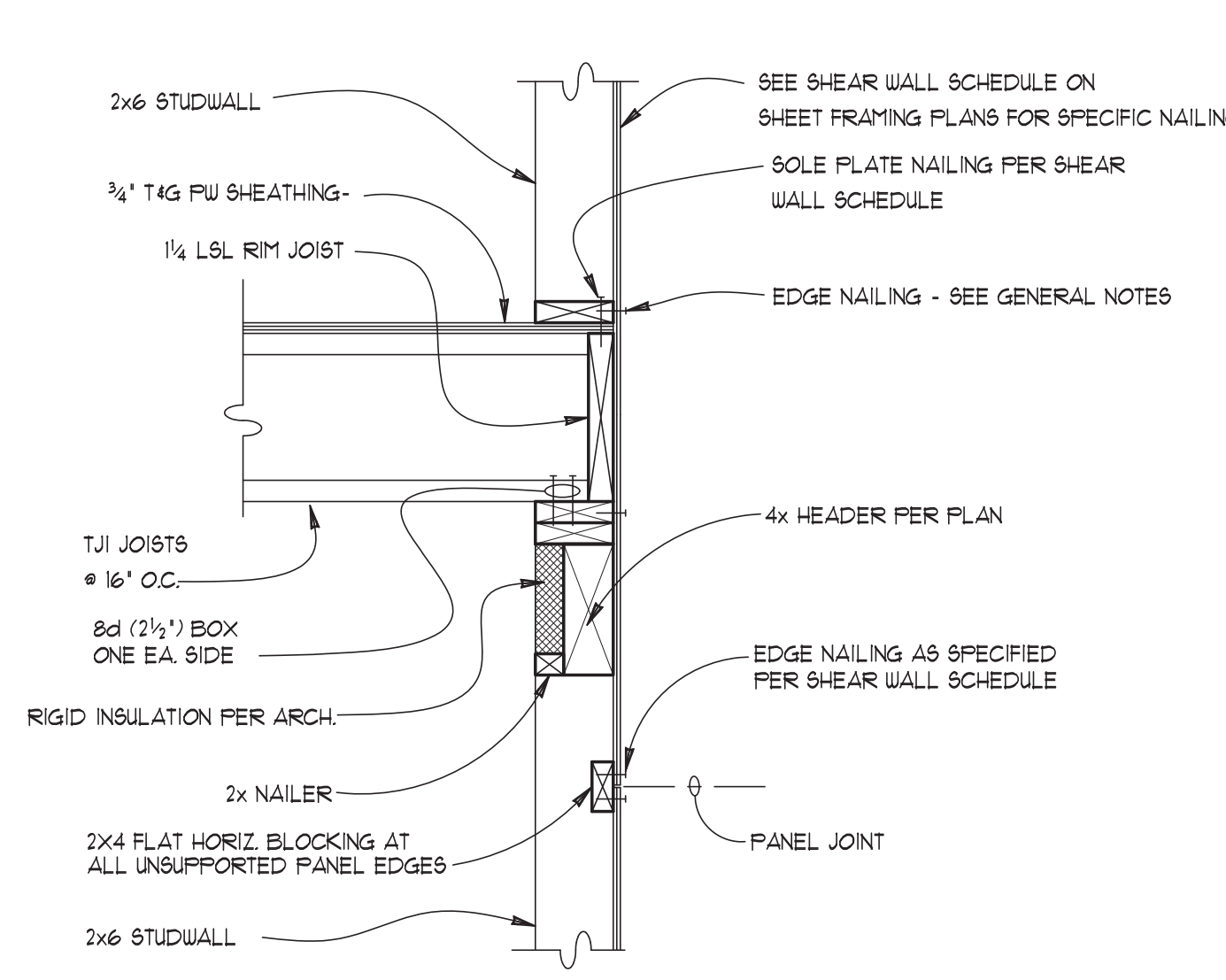
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PERMIT ISSUE:	DESIGN BY:
06/15/2023	NFN
REV. DATE:	COMMENTS:

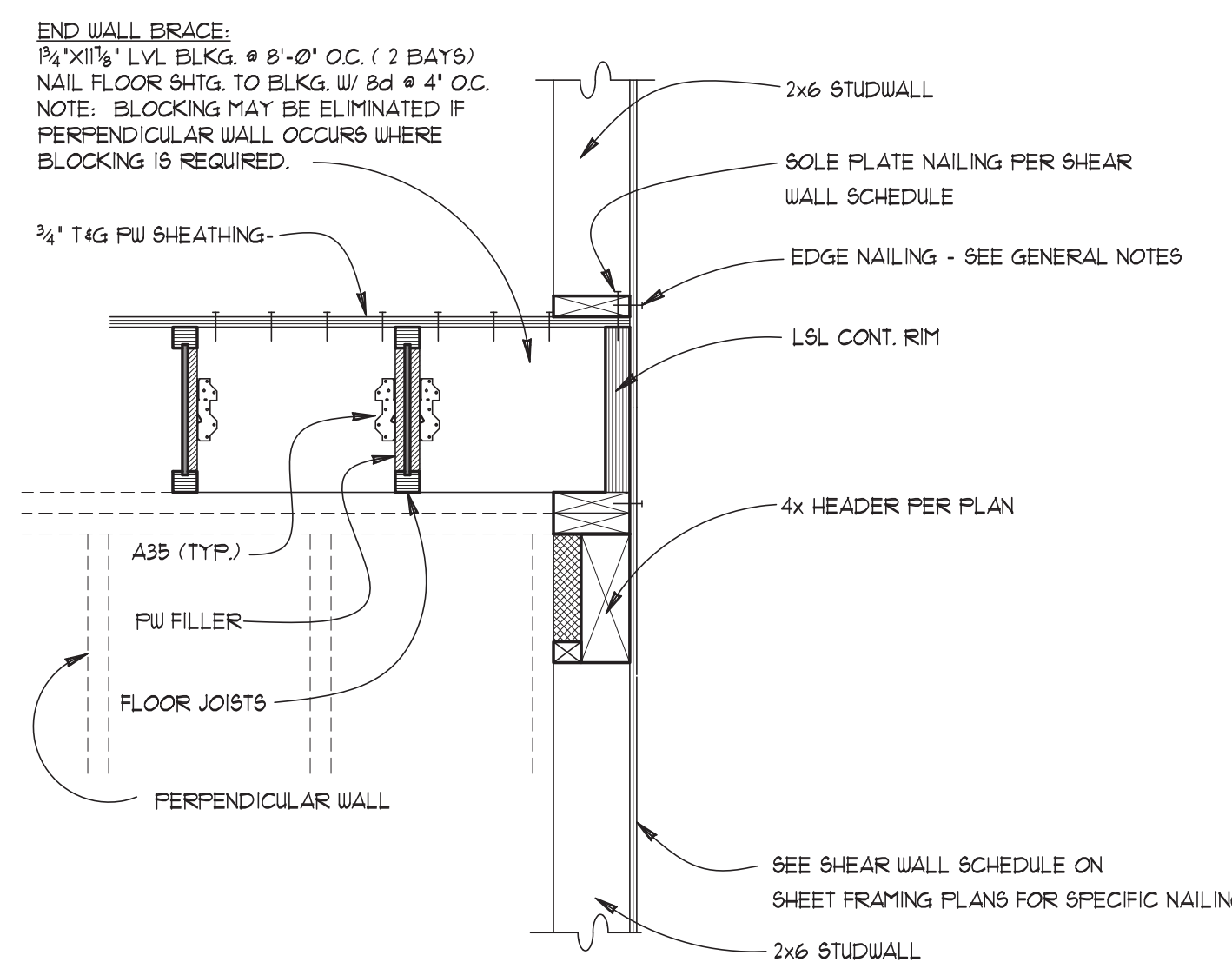
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S2

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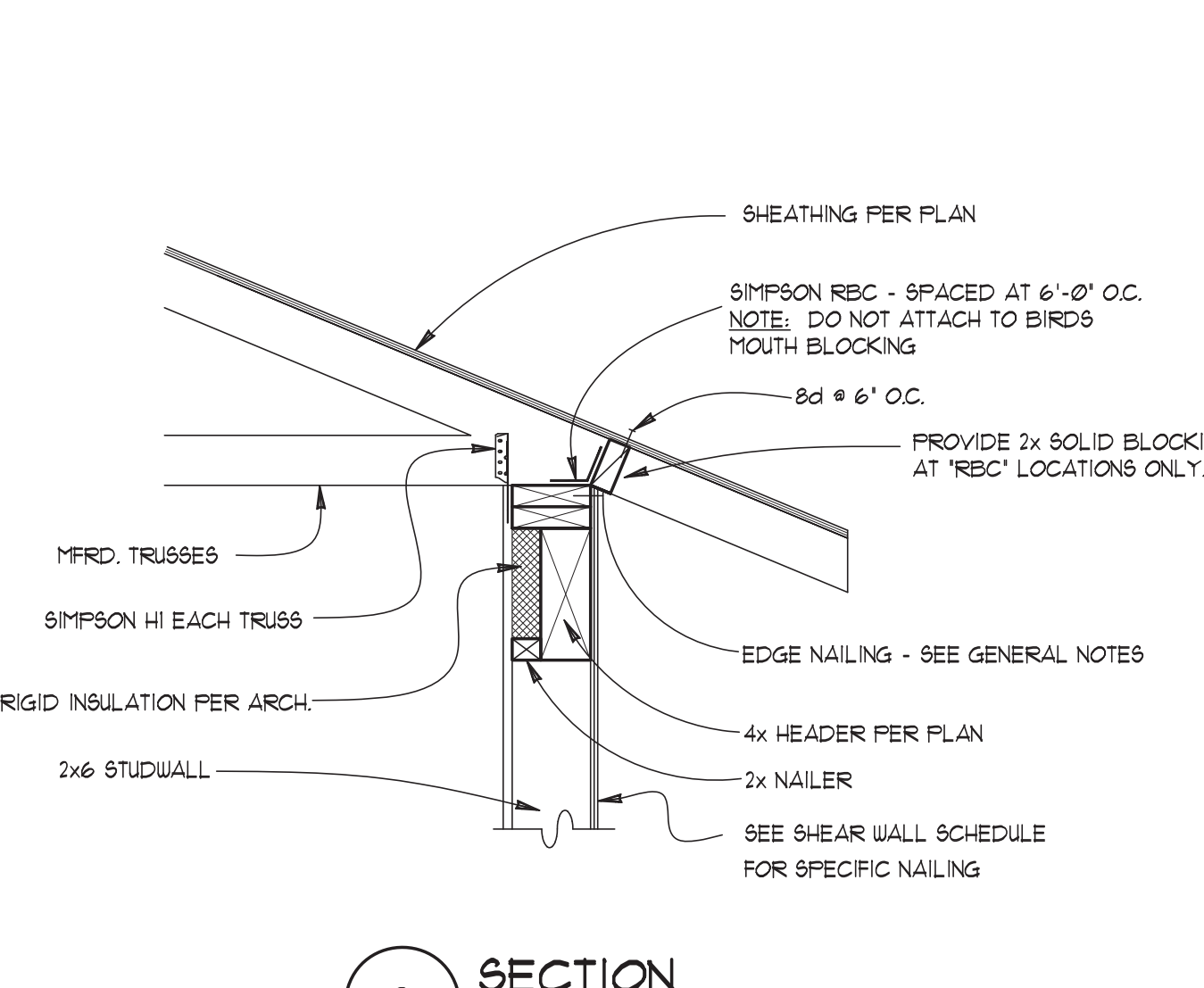
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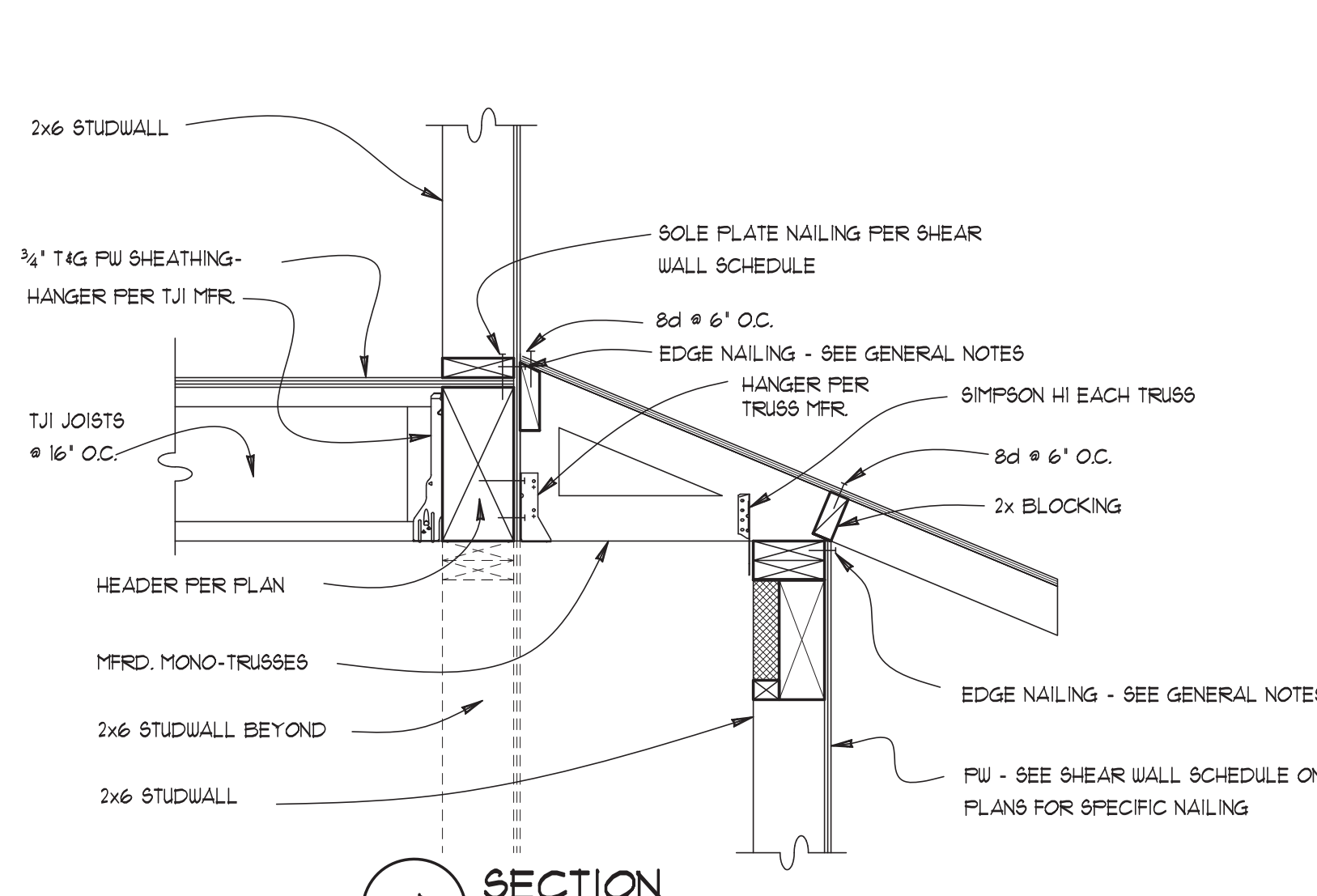
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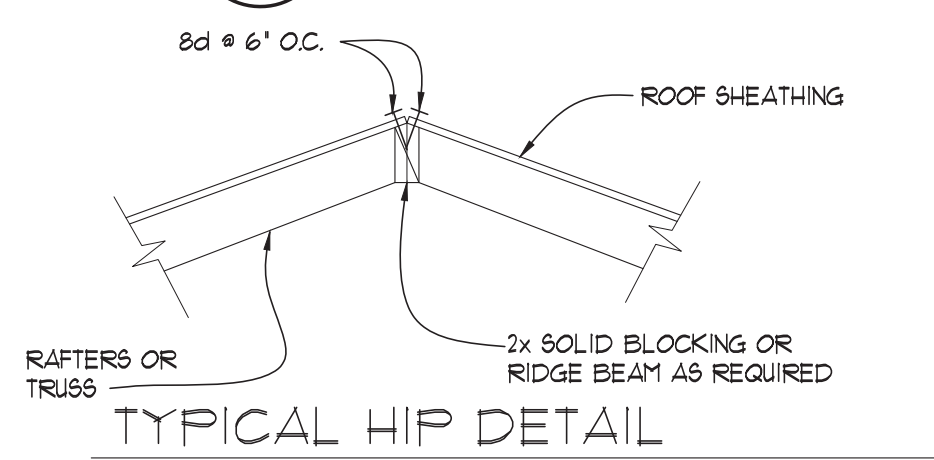
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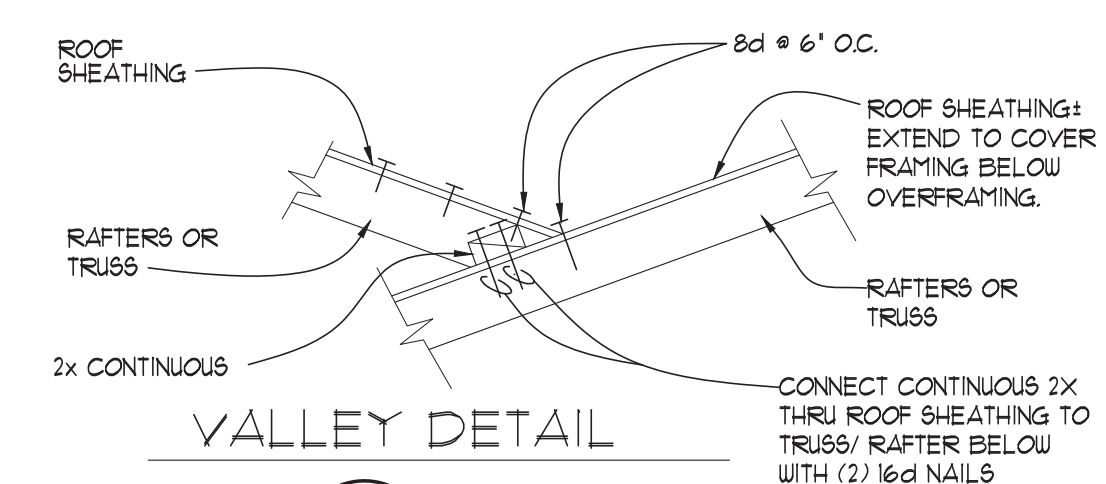
3 SECTION
1" = 1'-0"



4 SECTION
1" = 1'-0"

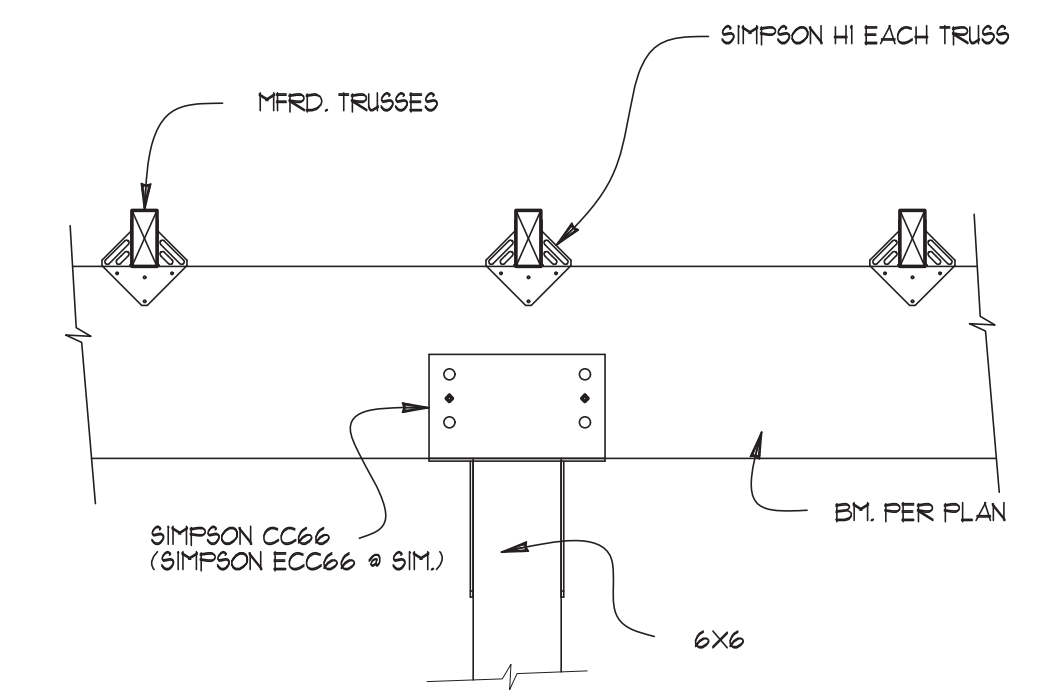


TYPICAL HIP DETAIL

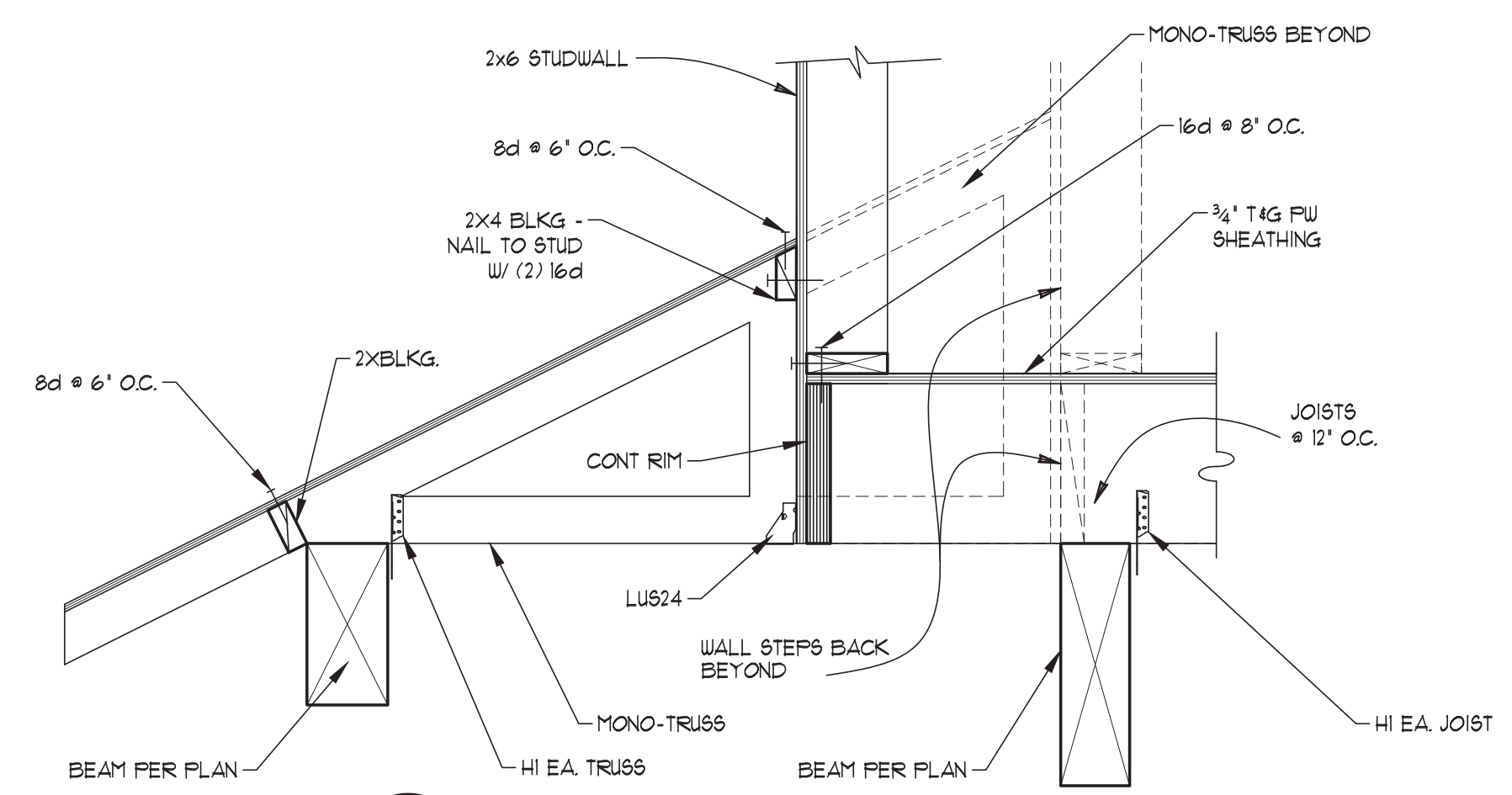


VALLEY DETAIL

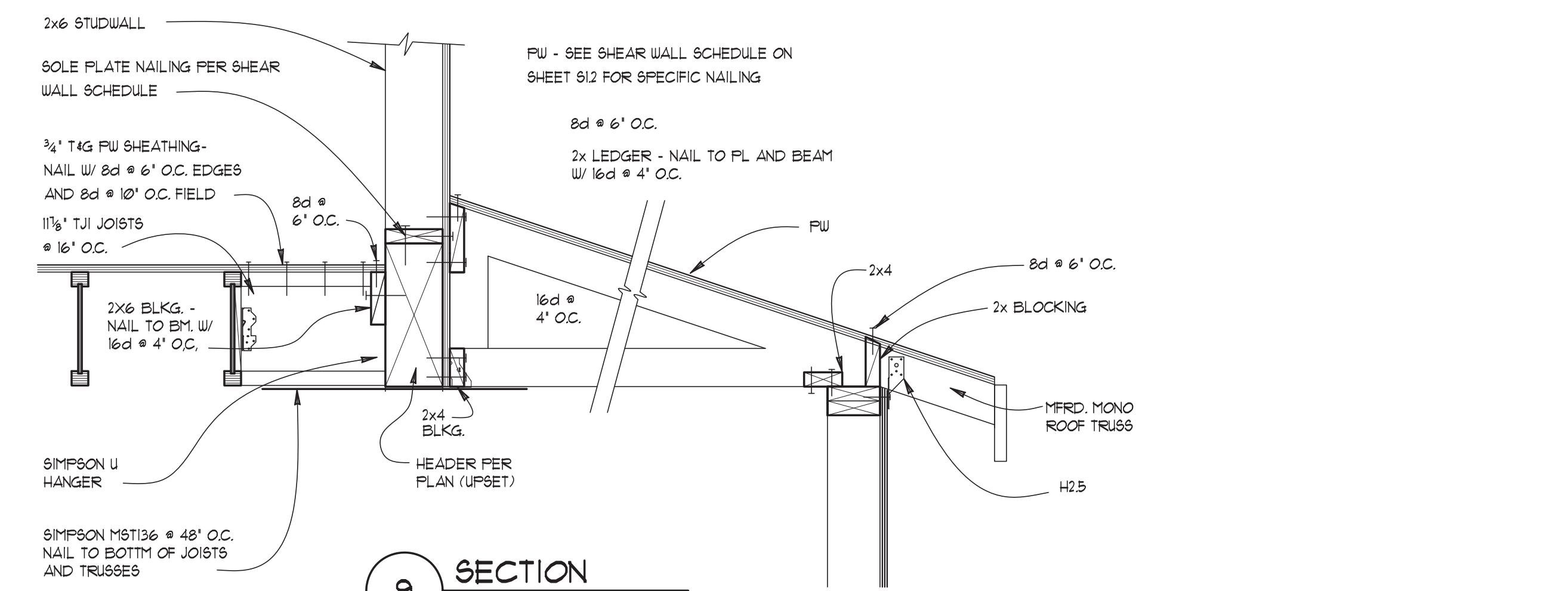
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1" = 1'-0"



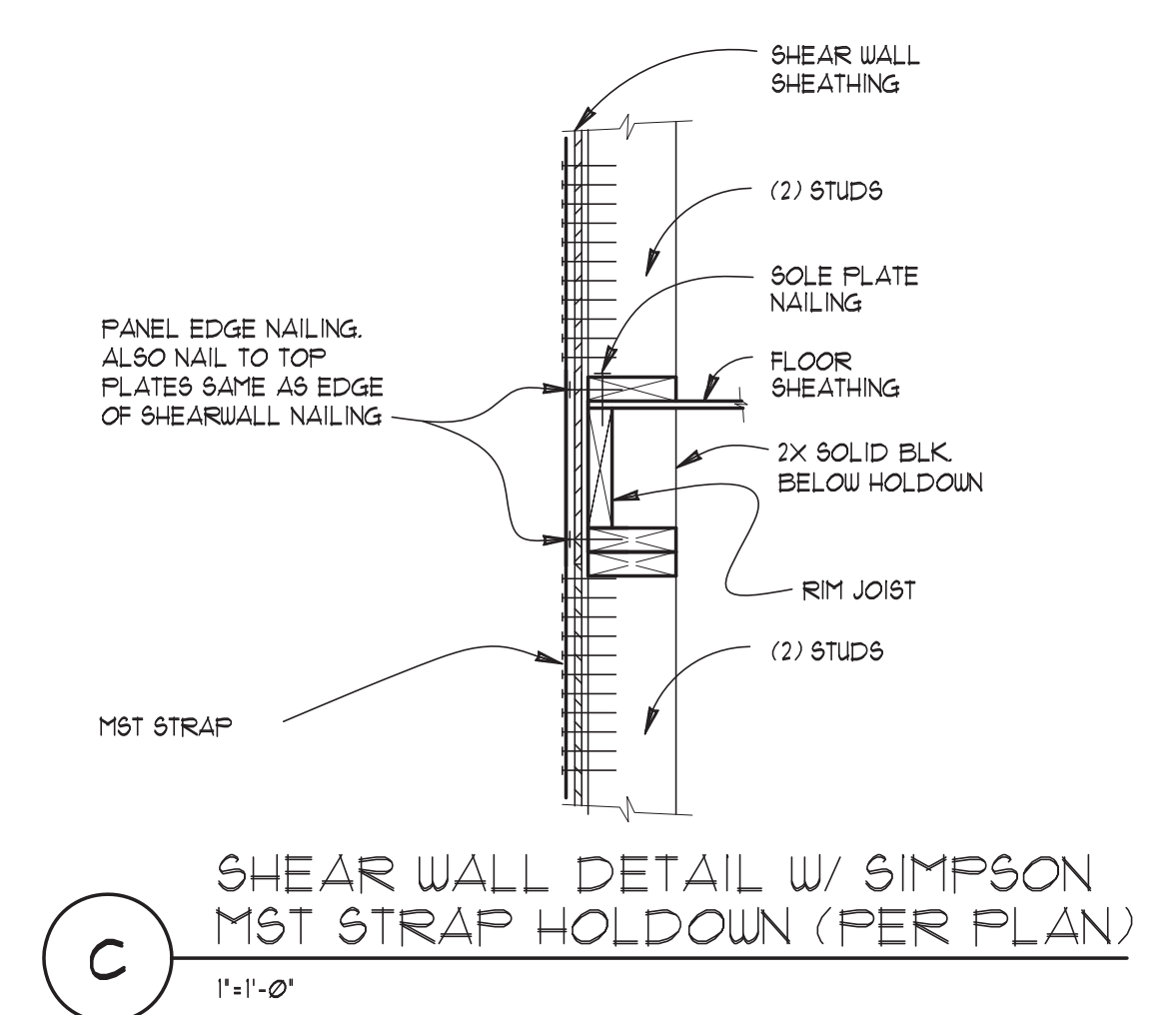
6 SECTION
1" = 1'-0"



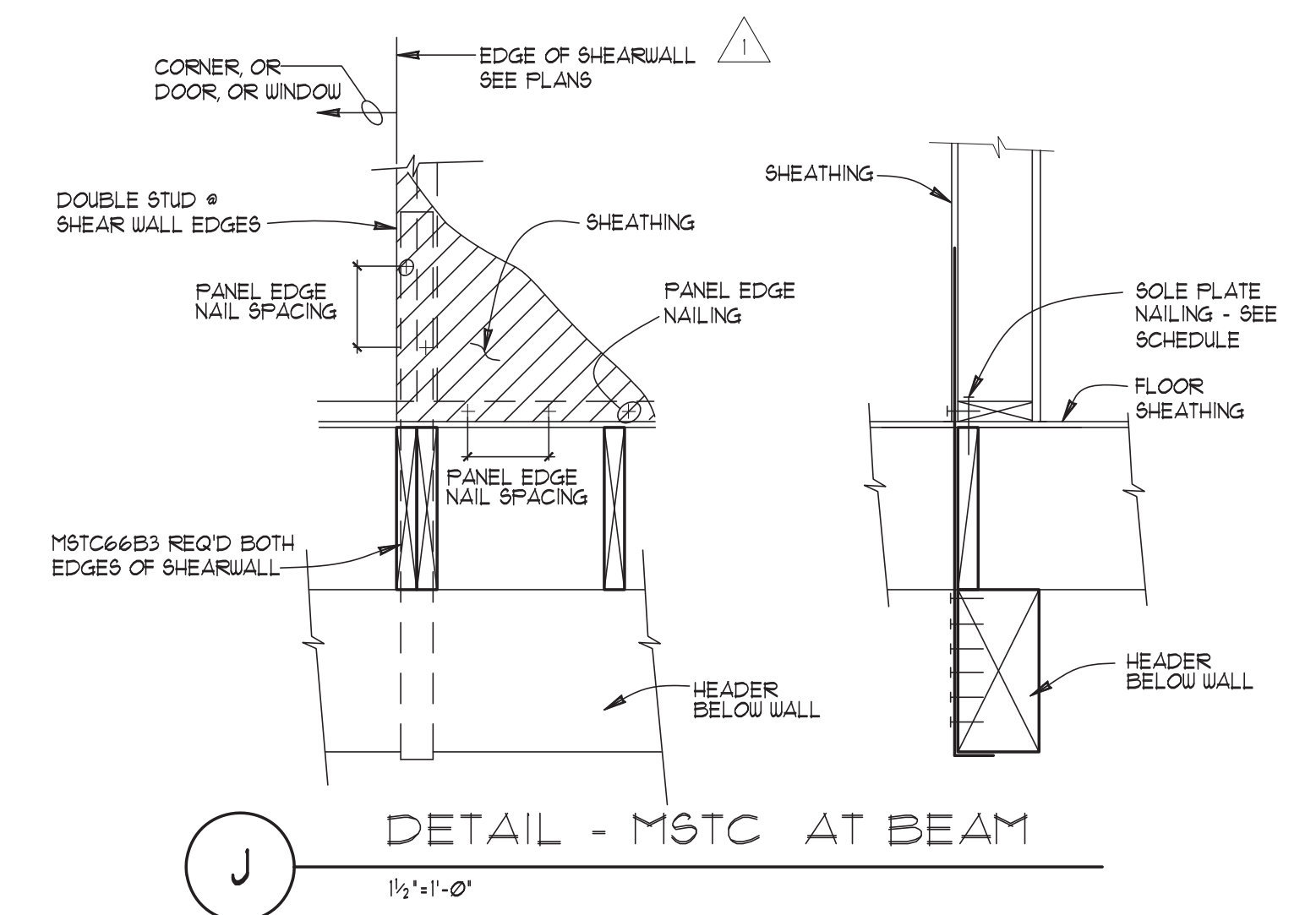
7 SECTION
1" = 1'-0"



9 SECTION
1" = 1'-0"



C SECTION
1" = 1'-0"



J SECTION
1 1/2" = 1'-0"

Project
MARTIN QIAN AND LAURIE YANG
8456 SE 40TH ST
PC: MERCER ISLAND, WA

Prepared for
URBAN DESIGN GROUP
Contents
FRAMING DETAILS

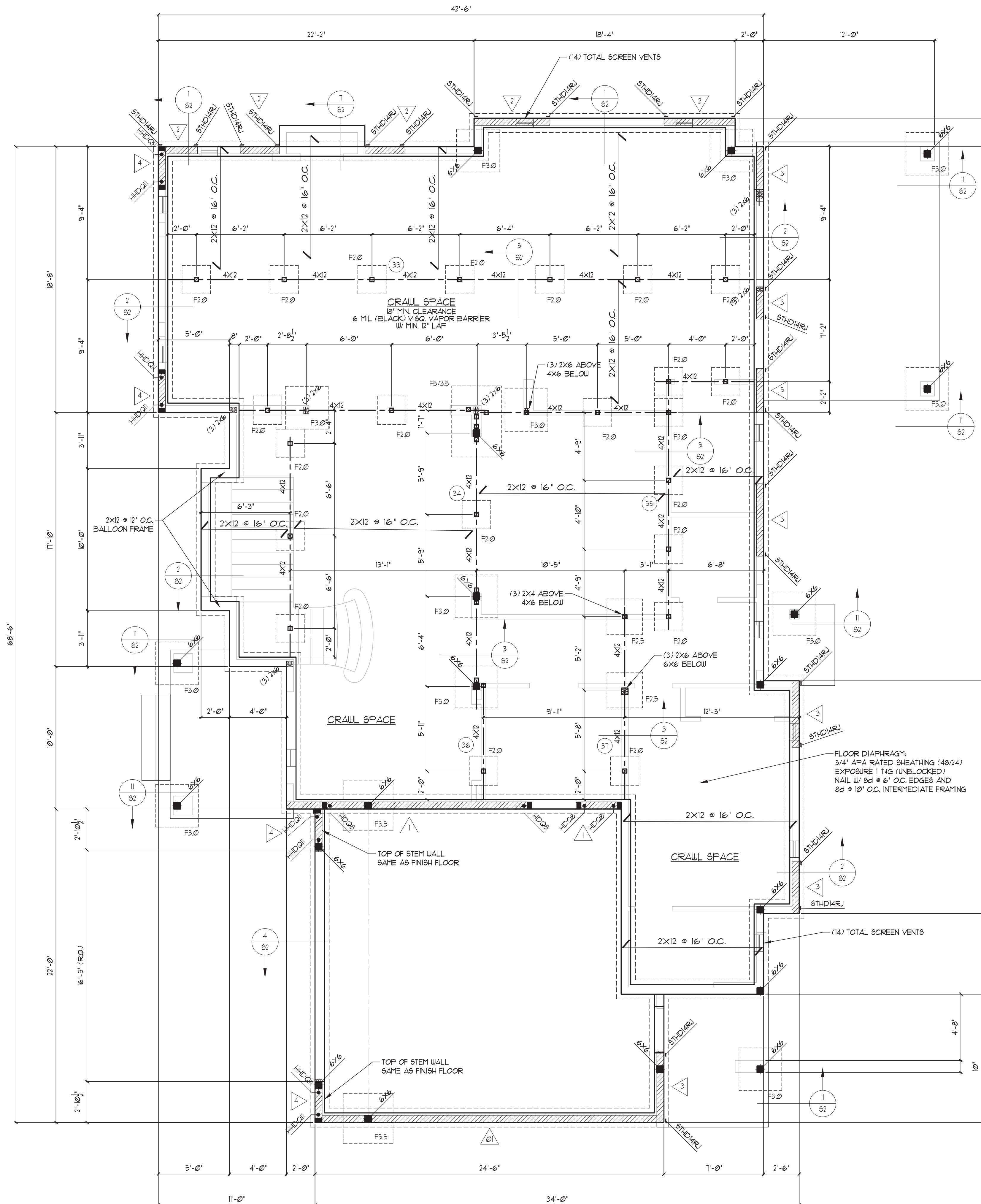
Professional Engineer
D. M. FARRO
Professional Engineer
No. 1000000000
State of Washington
Exp. 12/31/2024
R01P08 JANUARY 21, 2024

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REV. DATE:			

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S3

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FOUNDATION / MAIN FLOOR FRAMING PLAN

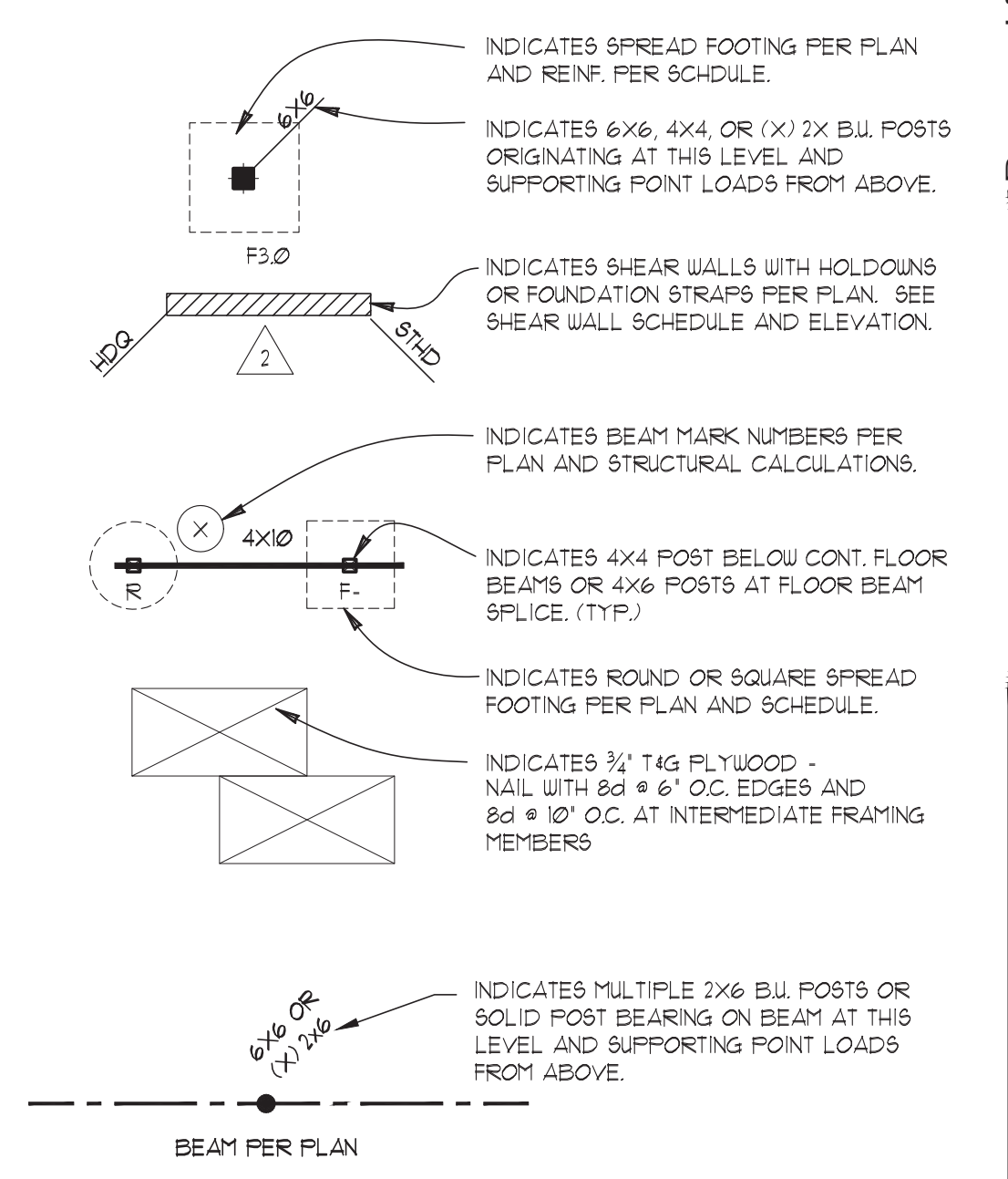
1/4" = 1'-0" DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.

FOUNDATION VENTILATION:
 PROVIDE CRAWL SPACE VENTILATION AS PER IBC SEC. 1203.3.1
 'CRAWLSPACE AREA' x 1/150 = TOTAL VENT AREA REQUIRED (SF.)
 QTY. OF 1'x4' VENTS REQUIRED: 13

FOUNDATION & MAIN FLOOR FRAMING NOTES:

- ALL FLOOR BEAMS SHALL BE 4X10 DF #2 UNLESS NOTED OTHERWISE ON PLAN. NOTE LOCATE BEAMS UNDER BEARING WALL WHERE NOTED ON PLAN.
- ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED GLACIAL TILL OR STRUCTURAL FILL. SEE GENERAL NOTES FOR ASSUMED ALLOWABLE SOIL LATERAL OR VERTICAL BEARING PRESSURES.
- THE BOTTOMS OF FOOTING EXCAVATIONS SHALL BE LEVEL, CLEAN, AND FREE OF LOOSE MATERIAL OR WATER WHEN CONCRETE IS PLACED. OVER EXCAVATION SHALL BE FILLED CONCRETE THE SAME STRENGTH AS FOOTINGS.
- FINISH GRADE AROUND THE PERIMETER OF THE STRUCTURE SHALL BE DRAINED AWAY FROM THE FOUNDATION FOR RAIN OR IRRIGATION WATER.
- THE CONTRACTOR SHALL FOLLOW THE AVAILABLE GEO-TECH. REPORT FOR THE RECOMMENDED SITE PREPARATIONS BEFORE CONSTRUCTING THE FOUNDATION.
- ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESURE TREATED WITH AN APPROVED PRESERVATIVE. ANY FIELD CUTS, NOTCHES, AND DRILLED HOLES SHALL BE RE-TREATED PER AWP#44.
- ALL FASTENERS & HARDWARE IN PRESURE TREATED OR FIRE TREATED WOOD SHALL BE SIMPSON '2" MAX.' (G105 HDG PER ASTM A653).
- PROVIDE DOUBLE JOISTS OR BEAM (PER PLAN) BELOW SHEAR WALL PARALLEL TO TO JOISTS. NAIL WALL SOLE PLATE TO JOISTS OR BEAM PER SHEAR WALL SCHEDULE OR NOTE B. OF SHEAR WALL SCHEDULE NOTES.
- PROVIDE 3/4" DIA. GALV. ANCHOR BOLTS EMBED 1" MIN. IN CONCRETE. PROVIDE 1/4"x3"x3" GALVANIZED WASHERS AT EACH ANCHOR BOLT.
- PROVIDE APPROPRIATE BLOCKOUT IN STEM WALLS OR FOOTINGS FOR PLUMBING & ELECTRICAL STUB-OUTS PER ARCH. PLANS. COORDINATE WITH GENERAL CONTRACTOR.
- PROVIDE CRAWL SPACE ACCESS PER IBC AND ARCHITECTURAL PLANS. COORDINATE LOCATION IN SITE WITH CONTRACTOR.
- PROVIDE CRAWL SPACE VENTILATION PER IBC AND FOUNDATION PLANS. DO NOT LOCATE VENTS WITHIN 8" OF HOLD-DOWN STRAPS OR HOLD-DOWN BOLTS. MAINTAIN 3'-0" CLEAR FROM EACH CORNER.
- FOR TYPICAL PLACEMENT OF HORIZONTAL REINF. IN CONCRETE, SEE 14/52.
- FOR TYPICAL DETAIL FOR INSTALLATION OF PIPES NEAR FOOTINGS, SEE 8/52.
- PROVIDE SQUASH BLOCKING BELOW ALL SOLID SAUN OR BUILT-UP 2X POSTS ALONG EXTERIOR OR INTERIOR STEM WALLS PER DETAIL 4/51.

LEGEND



TYPE	DIMENSION (INCHES)	REINF.	ALLOWABLE LOAD (KIPS)
	L' x W'	LONGIT. TRANSV.	
F2.0	24" x 24"	(3) #4 (3) #4	5.5 K
F3.0	24" DIA.	(2) #4 (2) #4	4.3 K
F3.5	36" x 36"	(3) #4 (3) #4	12.4 K
F4.0	42" x 42"	(3) #4 (3) #4	16.5 K
F5.0	48" x 48"	(3) #5 (3) #5	21.6 K
F5.0	60" x 60"	(6) #5 (6) #5	33.5 K

SPREAD FOOTING DETAIL

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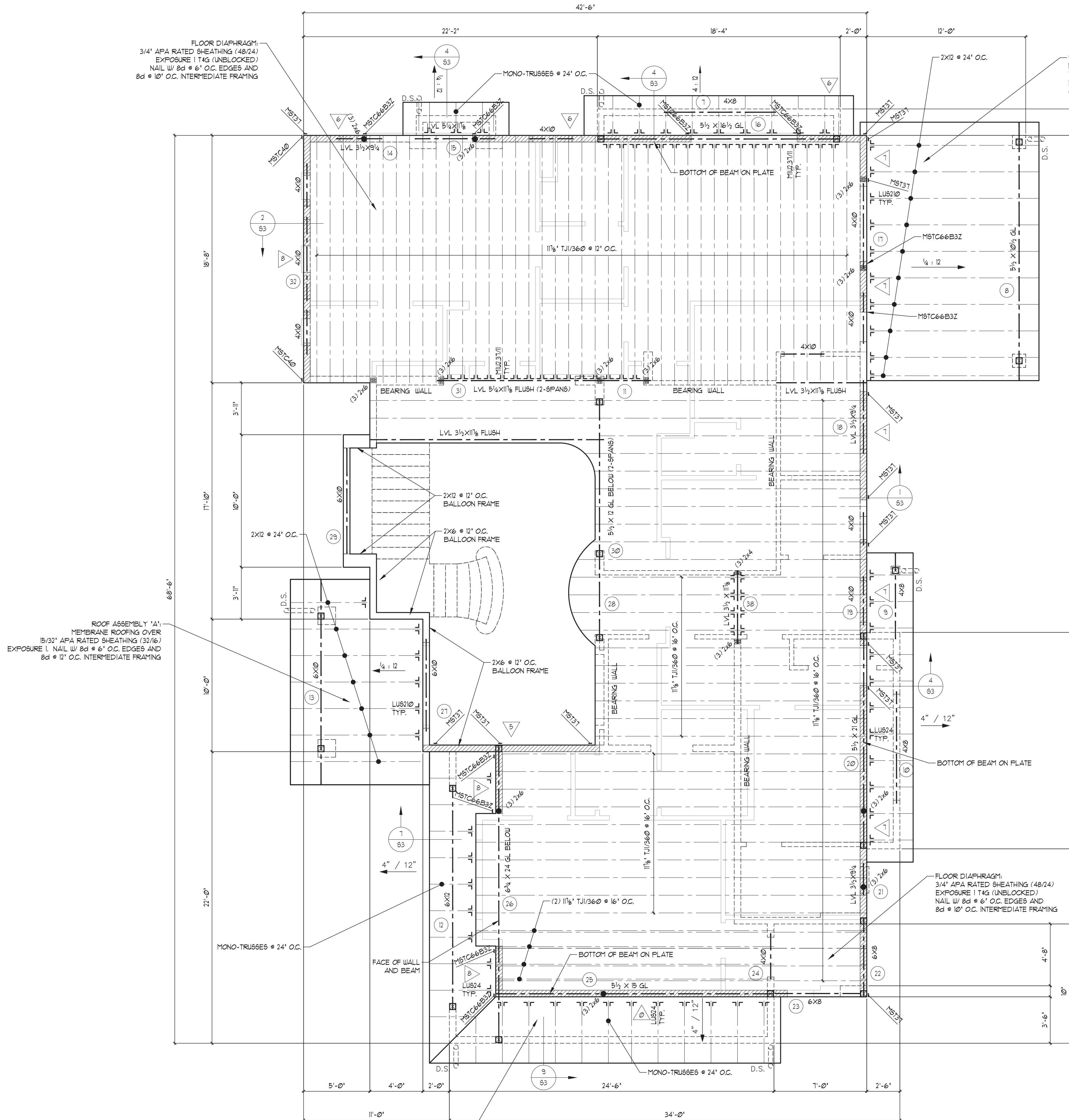
Prepared for
URBAN DESIGN GROUP
 Contents
FOUNDATION - FLOOR FRAMING



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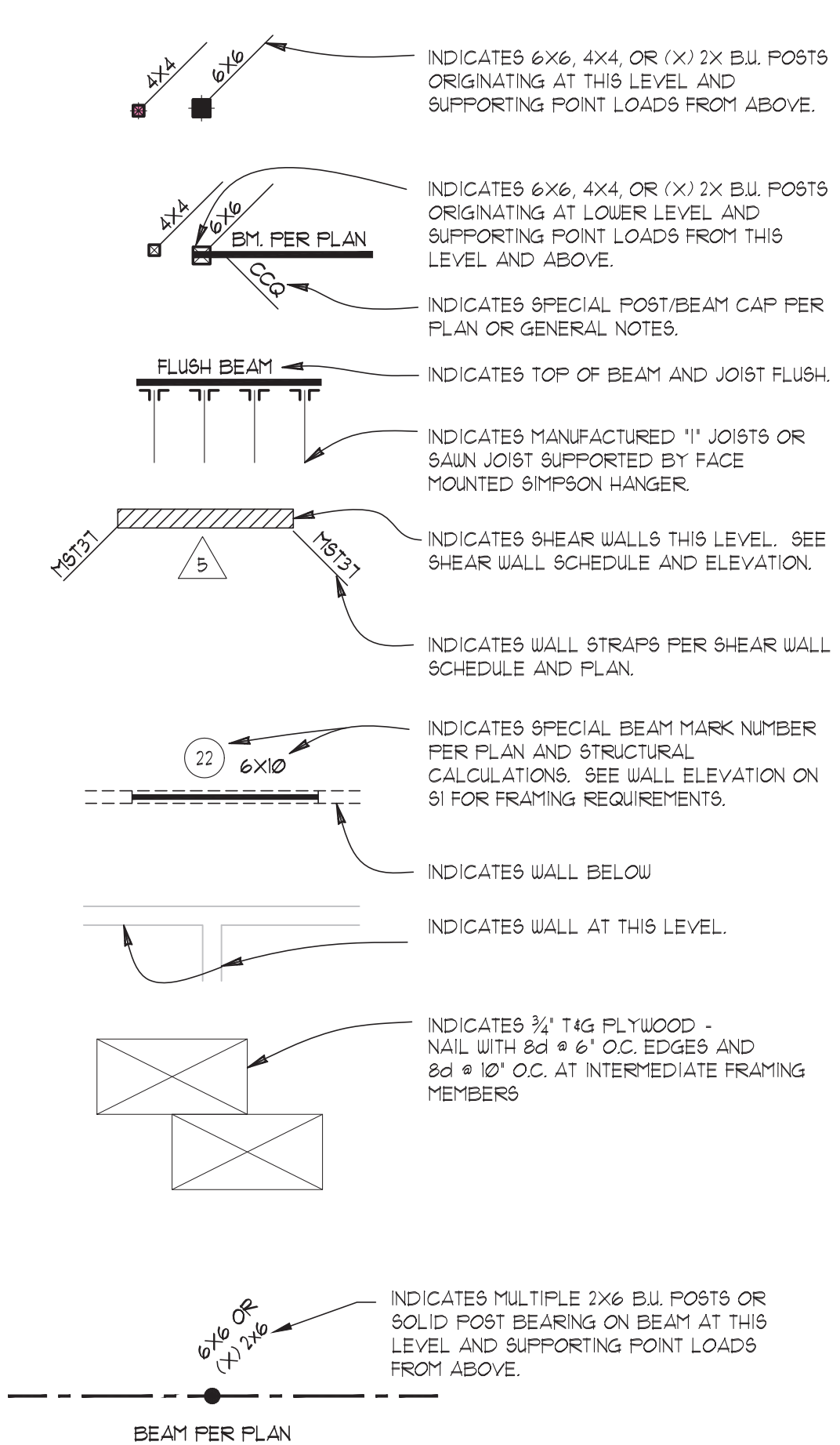
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REV. DATE:	COMMENTS:

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 PLOT DATE: 06/15/2022



- FLOOR FRAMING NOTES:**
- ALL EXTERIOR HEADERS SHALL BE 6X10 DFP, UNLESS NOTED OTHERWISE ON PLAN. ALL INTERIOR HEADERS SHALL BE 4X10 DFP, UNLESS NOTED OTHERWISE.
 - ALL EXTERIOR WALL STUDS SHALL BE 2X6 HEM-FIR #2 SPACED AT 16\"/>

LEGEND



UPPER FLOOR FRAMING PLAN

1/4" = 1'-0" DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.

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MARTIN QIAN AND LAURIE YANG
 8456 SE 40TH ST
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 Contents
UPPER FLOOR FRAMING

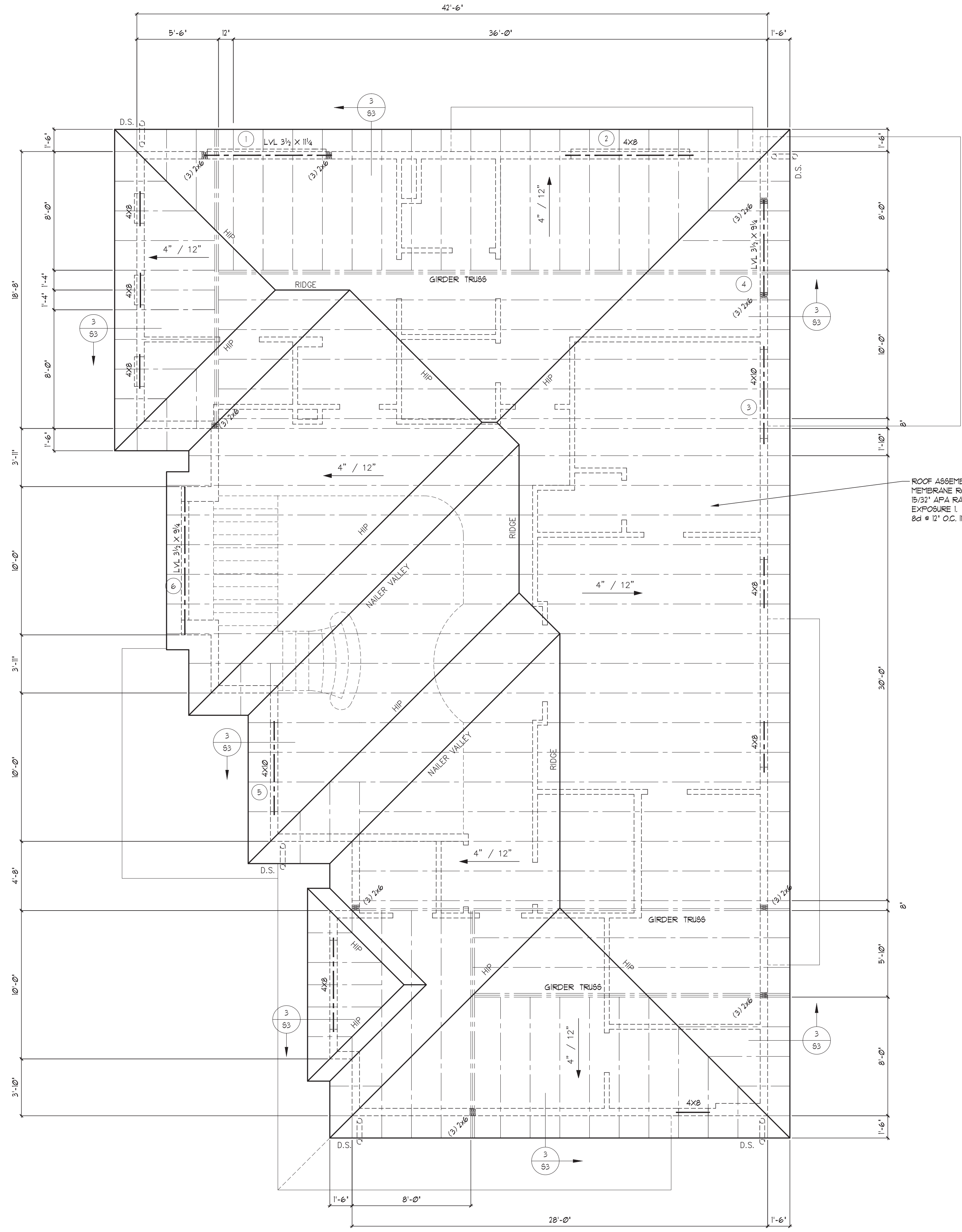
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REVISIONS:	COMMENTS:

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ROOF FRAMING PLAN

1/4" = 1'-0" DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.

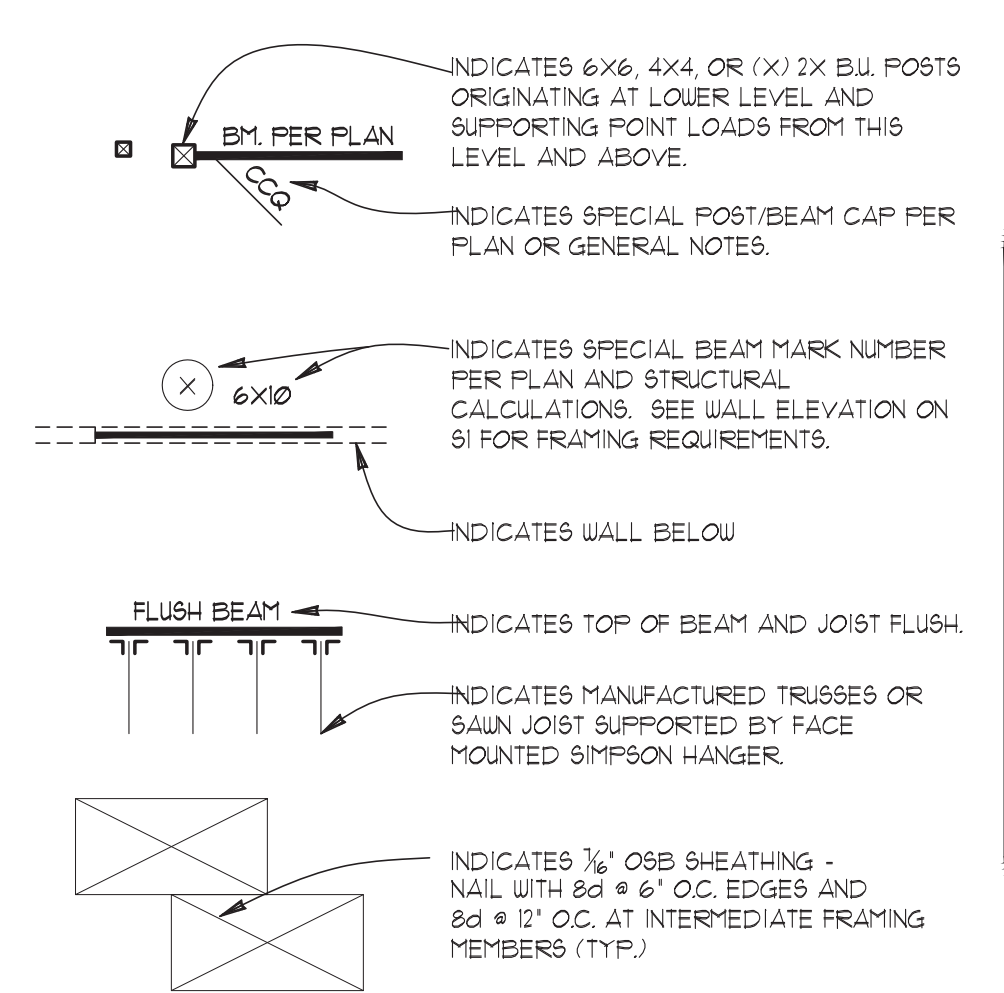
ROOF FRAMING NOTES:

- ALL EXTERIOR HEADERS SHALL BE 6x8 DP2 UNLESS NOTED OTHERWISE ON PLAN. ALL INTERIOR HEADERS SHALL BE 4x10 DP2 UNLESS NOTED OTHERWISE ON PLAN.
- SEE GENERAL NOTES AND TRUSS NOTES BELOW FOR TRUSS DESIGN SPECIFICATIONS.
- ALL SAUN ROOF JOISTS SHALL BE HP2 OR BETTER AND SPACED AT 24" O.C. UNLESS NOTED OTHERWISE.
- PRE-FRDR. TJ JOISTS SHALL BE OF THE SIZE AND SERIES SPECIFIED ON THE PLAN. VERIFY MFRD. PLACEMENT PLAN WITH STRUCTURAL. NOTIFY THIS OFFICE OF ANY CONFLICTS IN LAYOUT BEFORE INSTALLATION.
- PROVIDE ROOF VENTILATION PER CURRENT IRC OR IBC. SEE ARCHITECTURAL PLANS FOR SPECIFIC REQUIREMENTS.
- PROVIDE ATTIC ACCESS PANEL PER CURRENT IRC, IBC, AND ARCHITECTURAL PLANS FOR SPECIFIC REQUIREMENTS.

WOOD TRUSSES (IBC 2303.4) SHALL BE:

- DESIGNED PER IBC 2303.4.1 TO CARRY LOADS LISTED IN THE DESIGN CRITERION AND ANY ADDITIONAL POINT LOADS, UNIFORM LOADS, OR DRAG STRUT FORCES NOTED ON FRAMING PLANS.
- NON-ATTIC STORAGE TRUSSES SHALL BE DESIGNED WITH A LIVE LOAD OF 20 PBF LOCATED IN THE PLANE OF THE TRUSS. THE MAXIMUM STORAGE SPACE ABOVE THE BOTTOM CHORD SHALL BE LESS THAN 42" HIGH AND 24" WIDE.
- ATTIC TRUSSES SHALL BE DESIGNED FOR FLOOR LOADS LISTED IN THE DESIGN CRITERION AND LOCATED IN AREAS NOTED ON THE FRAMING PLANS.
- TRUSS DESIGN DRAWINGS AND DOCUMENT SUBMITTAL (2303.4.1) SHALL INCLUDE STRESS ANALYSIS AND PICTORIAL DEPICTION OF EACH TRUSS TYPE FOR THE PROJECT AND INCLUDING A TRUSS PLACEMENT DIAGRAM (2303.4.2). TRUSS INSTALLATION DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A LICENSED ENGINEER IN THE STATE OF WASHINGTON. APPROVED TRUSS DOCUMENTS SHALL REMAIN ON THE JOB SITE FOR INSPECTION.
- ALTERATIONS (2303.4.5) TRUSS MEMBERS SHALL NOT BE NOTCHED, DRILLED, SPLICED OR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN APPROVAL OF THE TRUSS DESIGNER. ALTERATIONS RESULTING IN THE ADDITION OF LOADS TO ANY MEMBER (E.G. HVAC EQUIPMENT, PIPING, ETC.) SHALL NOT BE PERMITTED WITHOUT APPROVAL OF TRUSS DESIGNER.
- TELL SPECIFICATIONS: THE DESIGN, MANUFACTURE, FABRICATION, AND QUALITY ASSURANCE OF METAL-PLATE-CONNECTED WOOD TRUSSES SHALL BE IN ACCORDANCE WITH TPI 1.
- TRUSSES SHALL BE BRACED TO MANUFACTURE'S SPECIFICATIONS.
- UNLESS NOTED OTHERWISE ON PLANS, ALL TRUSSES SHALL HAVE SIMPSON H-1 CLIPS AT EXTERIOR BEARING WALLS. AT GABLE END TRUSSES, PROVIDE SIMPSON A35 AT 24" O.C.
- PROVIDE 5TC CLIPS AT ALL TRUSSES OVER NON-BEARING WALLS.

LEGEND



COORDINATION OF CONSTRUCTION, INCLUDING VERIFICATION OF DIMENSIONS & FIELD CONDITIONS, IS THE RESPONSIBILITY OF THE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM PRIOR TO CONSTRUCTION.

CONTRACTOR NOTE:
REFER TO TRUSS MANUFACTURER DWG. FOR TRUSS LAYOUT AND TYPES. USE THIS DRAWING FOR LOCATION OF SPECIAL BEAM SIZES, GIRDER TRUSS AND BUILT-UP POST LOCATIONS.

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Prepared for
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 Contents
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Project # :
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