Outlook

Comments on the Gazebo project proposed by 8636 House owner Cui

From Melina Lin <melinalin48@gmail.com>
Date Wed 11/5/2025 10:14 AM
To Grace Manahan <grace.manahan@mercerisland.gov>

2 attachments (5 MB)
8636 n mercer wayplan set markup.pdf; 2025.05.28landscape-plancao24-036 Markup.pdf;

Hi, Grace,

I reviewed the updated plan for the Gazebo project under SUB3 and 5, It looks good and I see they made corrections on the location of the new Gazebo to meet setback requirements.

However, there are a couple of items need to be addressed further:

1. The retaining wall is still located within the utility easement, and I also noticed that several shrubs are positioned inside this area. As far as I understand, no structure—including a retaining wall—should be placed within a utility easement, as it would obstruct access for maintenance or emergency purposes.

2. The plan does not show the existing gazebo location (that is non-compliance), nor include a demolition plan for removing the existing structure (non-compliance). Without this information, it may give out a wrong message to the contractor. The plan should include this information so it is very clear for the purpose of this permit - the job requires a re-building of the structure.

I've attached my markups for your reference. Please review and let me know if you'd like to discuss further.

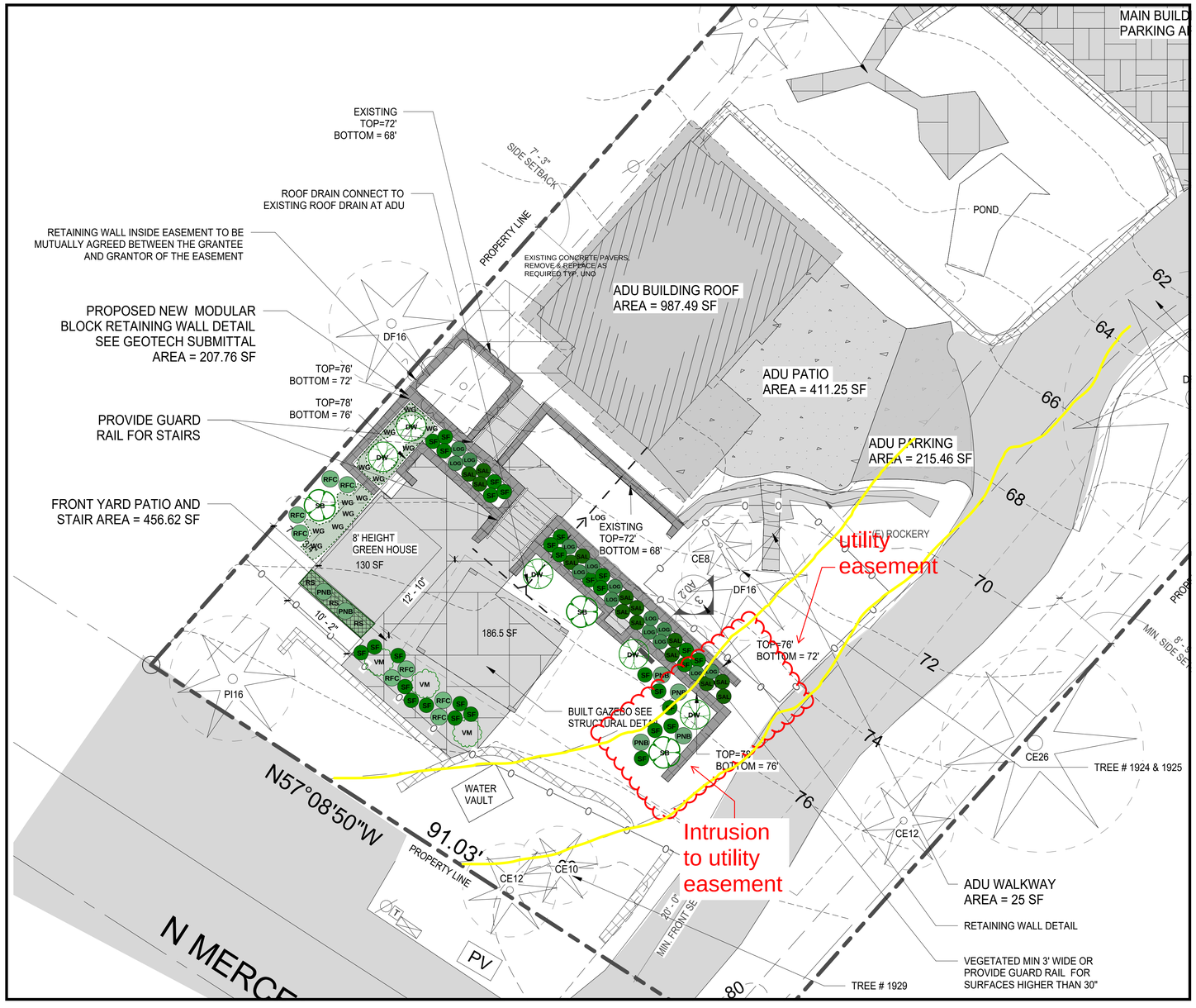
Here is a link to the permit documents for building permit 2401-034:

https://permitbulletin.mercerisland.gov/public/2401-034/

Warm Regards,

Melina Lin
Email: melinalin48@gmail.com
Cell: 206-355-9468

LANDSCAPE PLANTING PLAN



PLANT LEGEND

SYM	SPECIES	QTY	SIZE	SPACING
DW	PACIFIC DOGWOOD *CORNUS NUTTALLII*	5	5 GAL. / B&B	10-15' O.C.
VM	VINE MAPLE *ACER CIRCINATUM*	3	5 GAL.	10-12' O.C.
SB	SERVICEBERRY *AMELANCHIER ALNIFOLIA*	3	5 GAL.	8-10' O.C.
RFC	RED-FLOWERING CURRANT *RIBES SANGUINEUM*	8	2 GAL.	4-5' O.C.
PNB	PACIFIC NINEBARK *PHYSOCARPUS CAPITATUS*	6	2 GAL.	4-5' O.C.
LOG	LOW OREGON GRAPE *MAHONIA NERVOSA*	14	1 GAL.	3-4' O.C.
SAL	SALAL *GAULTHERIA SHALLON*	14	1 GAL.	3-4' O.C.
SF	SWORD FERN *POLYSTICHUM MUNITUM*	30	1 GAL.	2-3' O.C.
	WILD GINGER *ASARUM CAUDATUM*	60	4' POT	12" O.C.
	REDWOOD SORREL *OXALIS OREGANA*	60	4' POT	12" O.C.

PLANT COVER CALCULATIONS

GROUNDCOVERS: 120 SQUARE FEET

SHRUBS: 884 SQUARE FEET

TREES: 1,039 SQUARE FEET

TOTAL PLANT COVER PROVIDED: 2,043 SQUARE FEET

AREA OF DISTURBANCE: 2,000 SQUARE FEET

N

SCALE
1/8" = 1'0"

PROJECT DESCRIPTION

RESPONSE TO CE23-0004. PROPOSED TO RE-LANDSCAPE DISTURBED AREAS TO MEET REQUIREMENTS OF MICC 19.07.160(B)(2)(d).

AREA OF DISTURBANCE EQUAL TO 2,000 SQUARE FEET.

SUMMARY OF ECOLOGICAL FUNCTIONS

REPLANTING THE DISTURBED AND BARE SOIL WITH NATIVE VEGETATION AS PROPOSED HELPS STABILIZE SOIL, IMPROVE WATER INFILTRATION, AND REDUCE EROSION. IT ALSO RESTORES HABITAT FOR WILDLIFE, SUPPRESSES INVASIVE SPECIES, AND SUPPORTS BIODIVERSITY. ADDITIONALLY, THE VEGETATION ENHANCES AIR QUALITY, MODERATES TEMPERATURES, AND CONTRIBUTES TO THE OVERALL ECOLOGICAL HEALTH OF THE AREA.

MAINTENANCE NOTES

1) INSTALL PERMANENT DRIP IRRIGATION SYSTEM. WATER DURING DRY SEASON FOR 2-3 YEARS (MAY - SEPTEMBER).

2) MAINTAIN TWO TIMES PER YEAR FOR A PERIOD OF 3 YEARS AS FOLLOWS:

a) REMOVE COMPETING WEEDS AND RE-MULCH AS NEEDED

b) REPLACE DEAD PLANTS (80 % SURVIVAL GOAL)

PLANTING NOTES

1) PLANTING SELECTIONS SHALL BE PACIFIC NORTHWEST NATIVE SPECIES. NO CULTIVARS OR HYBRIDS ARE ALLOWED.

2) AREAS THAT HAVE BEEN CLEARED, GRADED, OR COMPACTED ARE TO BE AMENDED WITH ORGANIC MATTER PRIOR TO PLANTING. MULCH, SUCH AS WOOD CHIPS, SHOULD BE ADDED TO A 3" THICKNESS OVER THE ENTIRE PLANTING AREA WITHOUT COVERING THE STEMS OF PLANTS.

3) TIMING: INSTALL DURING DORMANT SEASON (LATE OCTOBER TO EARLY MARCH) IF POSSIBLE.

4) WATER IMMEDIATELY AFTER PLANTING.

8636 N MERCER WAY RESIDENCE
8636 N MERCER WAY, MERCER ISLAND, WA

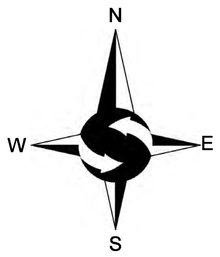
LANDSCAPE PLANTING PLAN

CASCARA TREE CONSULTING
KATIE HOGAN, PN-8078A
QUALIFIED TREE RISK ASSESSOR

CERTIFIED ARBORIST ISA®

PREPARED:
05/28/2025

SHEET NO.
L-01



GRAPHIC SCALE

10 0 10 20 40

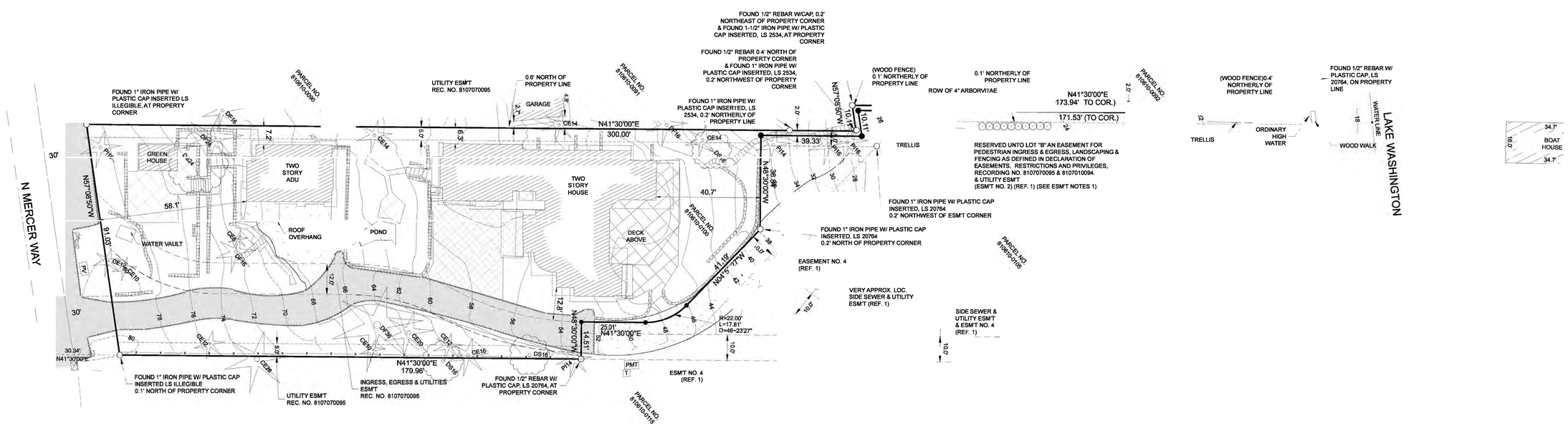
1 INCH = 20 FT.

LEGEND

FOUND MONUMENT AS DESCRIBED	CONCRETE WALL
FOUND REBAR AS DESCRIBED	ROCKERY
TACK IN LEAD FOUND	ASPHALT SURFACE
SET 5/8" X 24" IRON ROD W/1" YELLOW PLASTIC CAP	CONCRETE SURFACE
POWER METER	GRAVEL SURFACE
UTILITY POLE	
GAS METER	CE CEDAR
SANITARY SEWER CLEANOUT	DS DECIDUOUS
SANITARY SEWER MANHOLE	DF DOUGLAS FIR
WATER VALVE	MP MAPLE
FIRE HYDRANT	PI PINE
WATER METER	* INDICATES MULTI-TRUNK
SIGN	
SS APPROXIMATE LOCATION SANITARY SEWER LINE	
SD APPROXIMATE LOCATION STORM DRAIN LINE	
OHP OVERHEAD POWER	
OHU OVERHEAD UTILITIES	
X CHAINLINK FENCE	
WOOD FENCE	

VICINITY MAP

NTS



GENERAL NOTES

1. THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.
2. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND NIKON NIVO 5.C TOTAL STATION. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.
3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN MAY 2015 & MARCH 2023 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
4. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.
5. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

VERTICAL DATUM & CONTOUR INTERVAL

DATUM

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY CITY OF MERCER ISLAND SURVEY CONTROL DATABASE.

POINT ID NO. 9609 - FOUND 2.5" DIAMETER CONCRETE FILLED IRON PIPE WITH BRASS TACK DOWN 0.4'. AT THE CENTERLINE OF N MERCER WAY AT THE WEST END MERCER PARK LANE IN THE 8500 BLOCK.

ELEVATION: 75.681 FEET (23.068 METERS) NAVD88

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

REFERENCES

1. MERCER ISLAND BOUNDARY LINE REVISION FILE NO. MI-83-05-17, PREPARED BY JONES BASSI & ASSOCIATES, RECORDED SEPTEMBER 15, 1983, IN VOLUME 37 OF SURVEYS, PAGE 137, UNDER RECORDING NO. 8309159010, RECORDS OF KING COUNTY, WASHINGTON.

EASEMENT NOTES

1. DECLARATION RECORDED UNDER RECORDING NO. 8107070095 DESCRIBES THE EASEMENT FOR PEDESTRIAN INGRESS & EGRESS, LANDSCAPING AND FENCING AS DEFINED IN DECLARATION OF EASEMENT RESTRICTIONS AND PRIVILEGES, UNDER RECORDING NOS. 8107070095 & 8107010094, AS BEING THE NORTH 6.00 FEET OF LOT B PER REFERENCE NO. 1, HOWEVER, ALL RECORDED DOCUMENTS INDICATE THAT THE EASEMENT IS 6.00 FEET FROM THE NORTH LINE OF LOT A PER REFERENCE NO. 1.

LEGAL DESCRIPTION

REAL PROPERTY IN THE COUNTY OF KING, STATE OF WASHINGTON, DESCRIBED AS FOLLOWS:
LOT A OF MERCER ISLAND SHORT PLAT RECORDED UNDER KING COUNTY RECORDING NUMBER 7812180972, AND REVISED UNDER KING COUNTY RECORDING NUMBERS 7911309020 AND 8309159010, BEING A SUBDIVISION OF TRACT 10, SUNNYBANK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 29 OF PLATS, PAGE 31, IN KING COUNTY, WASHINGTON;
EXCEPT THE NORTHEASTERLY 10 FEET IN WIDTH OF THE SOUTHWESTERLY 300 FEET, AS MEASURED ALONG THE NORTHWESTERLY LINE THEREOF;
TOGETHER WITH THE SHORELANDS OF THE SECOND CLASS ADJOINING AND LYING BETWEEN THE NORTHEASTERLY PROJECTION OF THE SIDELINES OF SAID TRACT.
SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

ACCEPTED A BEARING OF N 41°30'00"E FOR THE SOUTHEASTERLY BOUNDARY OF LOT A OF MERCER ISLADN SHORT PLAT , AS RECORDED UNDER RECORDING NUMBER 7812180972, BASED ON FOUND MONUMENTS.

EASEMENTS/RESTRICTIONS PER TITLE REPORT

1. THIS SITE IS SUBJECT TO THE TERMS AND CONDITIONS OF A SEWER LINE EASEMENT, RECORDED UNDER A.F.N. 5028702, RECORDS OF KING COUNTY, WASHINGTON. (ACCROSS SHORELANDS - NOT SHOWN)
2. THIS SITE IS SUBJECT TO THE TERMS AND CONDITIONS OF AN ELECTRIC TRANSMISSION EASEMENT, RECORDED UNDER A.F.N. 7905230792, RECORDS OF KING COUNTY, WASHINGTON. (NOT SHOWN - OVER EXISTING UNDERGROUND UTILITIES)
3. THIS SITE IS SUBJECT TO THE TERMS AND CONDITIONS OF AN SEWER LINE EASEMENT, RECORDED UNDER A.F.N. 8007100624, RECORDS OF KING COUNTY, WASHINGTON. (SHOWN HEREON)
4. THIS SITE IS SUBJECT TO THE TERMS AND CONDITIONS OF AN AERIAL TELEVISION LINE EASEMENT, RECORDED UNDER A.F.N. 8810100612, RECORDS OF KING COUNTY, WASHINGTON. (NOT SHOWN - UNABLE TO OBTAIN DOCUMENT)
5. THIS SITE IS SUBJECT TO RESERVATIONS CONTAINED IN DEED FROM THE STATE OF WASHINGTON RECORDED UNDER RECORDING NO. 454094, RESERVING ALL OIL, GASES, COAL, ORES, MINERALS, FOSSILS, ETC., AND THE RIGHT OF ENTRY FOR OPENING, DEVELOPING AND WORKING THE SAME. (NO PLOTTABLE DATA)
6. THE SITE IS SUBJECT TO ANY AND ALL OFFERS OF DEDICATION, CONDITIONS, RESTRICTIONS, EASEMENTS, FENCE LINE/BOUNDARY DISCREPANCIES, NOTES AND/OR PROVISIONS SHOWN OR DISCLOSED BY SHORT PLAT NO. MI-83-05-17 RECORDED UNDER RECORDING NUMBER 8309159010. SAID SHORT PLAT IS A REVISION OF SHORT PLATS RECORDED UNDER RECORDING NOS. 7812180972 AND 7911309020. (SHOWN HEREON)

SE 1/4 NE 1/4 SEC 25 P 26N RN 4E W.M

Site Survey ng, Inc.

29 4412
1 th Street ammam h, WA 9
2192
www.sitesurveymapping.com

WOLDENDORP ROUSE, INC. WASHINGTON 22883 REGISTERED PROFESSIONAL LAND SURVEYOR STATE OF T. N. SYMMS

REVISION

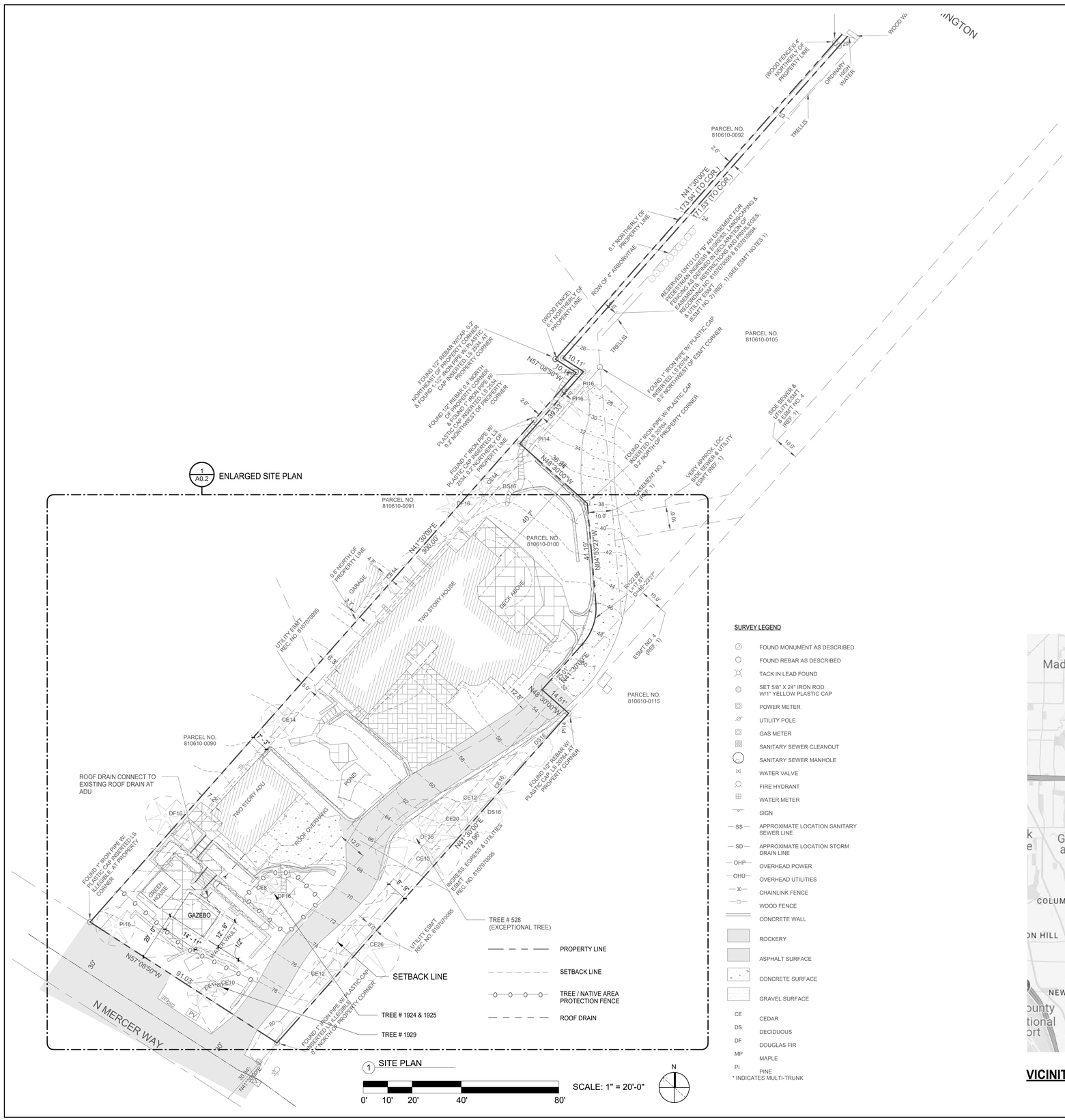
TOPOGRAPH C SURV
KAN CU & L U YAN
8636 N MERCER WAY
MERCER SLAND WA 980 0

TE S RVE N N TS ESERVE ©

PROJECT NO. 23-154

DRAWN BY: EFJ
CHECKED BY: TNW
DATE: 4/4/2023

SHEET 1 OF 1



1 SITE PLAN

SCALE: 1" = 20'-0"

0' 10' 20' 40' 80'

N

SURVEY LEGEND

- FOUND MONUMENT AS DESCRIBED
- FOUND REBAR AS DESCRIBED
- TACK IN LEAD FOUND
- SET 5/8" X 24" IRON ROD W/1" YELLOW PLASTIC CAP
- POWER METER
- UTILITY POLE
- GAS METER
- SANITARY SEWER CLEANOUT
- SANITARY SEWER MANHOLE
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- SIGN
- SS — APPROXIMATE LOCATION SANITARY SEWER LINE
- SD — APPROXIMATE LOCATION STORM DRAIN LINE
- OHP — OVERHEAD POWER
- OHU — OVERHEAD UTILITIES
- X — CHAINLINK FENCE
- WOOD FENCE
- CONCRETE WALL
- ROCKERY
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE

- CE — CEDAR
- DS — DECIDUOUS
- DF — DOUGLAS FIR
- MP — MAPLE
- PI — PINE

* INDICATES MULTI-TRUNK

8636 N MERCER WAY, MERCER ISLAND, WA 98040

PROJECT DESCRIPTION:

RESPONSE TO CE23-0004. PROPOSED TO REMOVE AND REPLACE EXISTING MODULAR RETAINING WALL AND STRUCTURAL CALCULATION FOR A BUILT ACCESSORY STRUCTURE IN THE FRONT YARD.

LEGAL DESCRIPTION:

SUNNY BANK ADD POR NLY & WLY OF LN BEG ON SELY LN THOF 179.96 FT NELY FR SE COR TH N 48-30 W 14.51 FT TH N 41-30 E 25.01 FT TH ON CRV LFT RAD 22 FT C/A 46-23-27 DIST 17.81FT TH N 04-53-27 W 41.19 FT TH N PLAT BLOCK: PLAT LOT: 2

PARCEL#: 810610-0100

ZONE: R-15

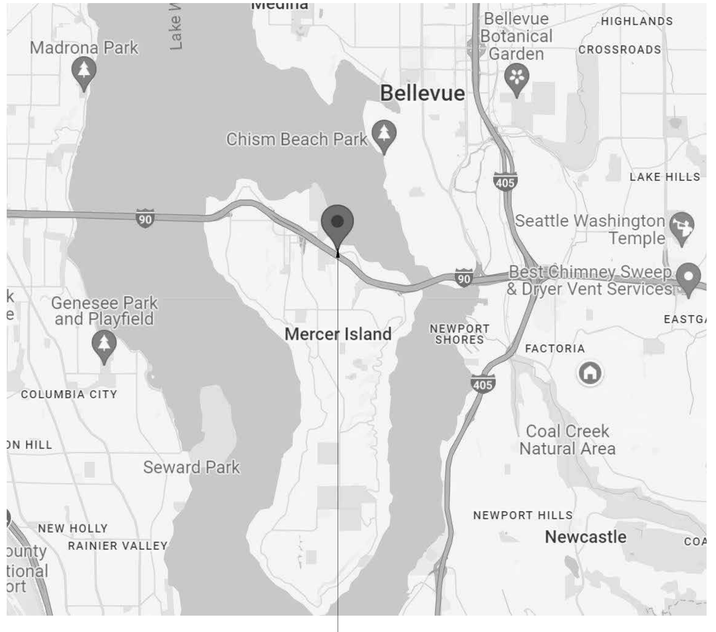
LOT SIZE: 23,988 SF (0.55 ACRES)

SETBACK: SEE SITE PLAN

YEAR BUILT: 2012

TREE TO BE REMOVED: NO

IMPERVIOUS SURFACE AREA CALCULATION: SEE A0.2



PROJECT LOCATION

VICINITY MAP

N

GM DESIGN
mokgary@gmail.com

Project:

8636 N MERCER WAY RESIDENCE SITE IMPROVEMENT

SHEET ADDRESS:

8636 N MERCER WAY, MERCER ISLAND, WA

No.	Description	Date
1	PER CITY COMMENTS	4/10/2023

Sheet Title:

SITE SURVEY PLAN / PROJECT INFORMATION

Date: 4/9/2023

Scale: As indicated

SHEET NUMBER:

A0.1

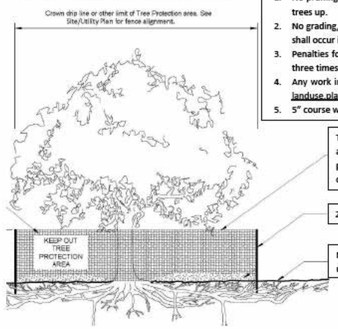
TREE PROTECTION AREA (TPZ)

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/financial penalties
3. Arborist reports recommending mitigation



Notes

1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
3. Penalties for damaging by root damage/compaction or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.160).
4. Any work in approved TPZ must be with the permission of the Land Use and Planning Division at landuse.planning@mercergov.org
5. 5" course woodchips within the tree protection zone, but not against the tree trunk.

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 Land Use and Planning Division at landuse.planning@mercergov.org

WALKWAY TO WATERFRONT
AREA = 88.64 SF

N41°30'00"E
300.00'

25' 4" MIN. BACK SETBACK

N04°53'27"W
41.19'

R=22.00'
L=17.81'
D=46°23'27"

BACK PATIO & DECK
AREA = 805.87 SF

MAIN BUILDING ROOF
AREA = 3548.45 SF

N41°30'00"E
25.01'

N48°30'00"W
14.51'

MAIN BUILDING FRONT
STONE WALKWAY AREA =
158.16 SF

MAIN BUILDING FRONT
PARKING AREA = 897.06 SF

EXISTING
TOP=72'
BOTTOM = 68'

7' 3" SIDE SETBACK

ROOF DRAIN CONNECT TO
EXISTING ROOF DRAIN AT ADU

PROPERTY LINE

POND

ADU BUILDING ROOF
AREA = 987.49 SF

PROPOSED NEW MODULAR
BLOCK RETAINING WALL DETAIL
SEE GEOTECH SUBMITTAL
AREA = 207.76 SF

DF16

TOP=76'
BOTTOM = 72'

TOP=78'
BOTTOM = 76'

PROVIDE GUARD
RAIL FOR STAIRS

FRONT YARD PATIO AND
STAIR AREA = 456.62 SF

PER MICC 19.02.020(C)(3)(A): EAVES
SHALL NOT PROTRUDE MORE THAN 18
INCHES INTO ANY REQUIRED YARD.

7' - 7 3/4"

8' HEIGHT
GREEN HOUSE
130 SF

12' - 10"

10' - 2"

186 SF

ADU PATIO
AREA = 411.25 SF

ADU PARKING
AREA = 215.46 SF

EXISTING
TOP=72'
BOTTOM = 68'

CE8

DF16

(E) ROCKERY

TOP=76'
BOTTOM = 72'

Retaining wall is still inside an utility easement. they need to be demolished or relocated

BUILT GAZEBO SEE
STRUCTURAL DETAIL

PER MICC 19.02.020(C)
(3)(A): EAVES SHALL
NOT PROTRUDE MORE
THAN 18 INCHES INTO
ANY REQUIRED YARD.

TOP=78'
BOTTOM = 76'

PI1

Need a demo plan or notes to demolish the existing buildings that are non compliance

WATER
VAULT

N57°08'50"W
91.03'

PROPERTY LINE

CE12

CE10

PV

20' 0" MIN. FRONT SETBACK

N MERCER WAY

N41°30'00"E
179.96'

DF36

CE10

ASPHALT DRIVEWAY
AREA =2400.38 SF

TREE # 528
(EXCEPTIONAL TREE)

PROPERTY LINE

6' 5" MIN. SIDE SETBACK

CE26

TREE # 1924 & 1925

CE12

ADU WALKWAY
AREA = 25 SF

RETAINING WALL DETAIL

VEGETATED MIN 3' WIDE OR
PROVIDE GUARD RAIL FOR
SURFACES HIGHER THAN 30"

TREE # 1929

PROPERTY LINE

SETBACK LINE

TREE / NATIVE AREA
PROTECTION FENCE

ROOF DRAIN

1 ENLARGED SITE PLAN
1" = 10'-0"

0' 5' 10' 20' 40'

N

GFA CALCULATION

MAIN BUILDING:

BASEMENT	= 1,550 SF
1ST FLOOR	= 2,250 SF
2ND FLOOR	= 2,310 SF
ATTACHED GARAGE	= 590 SF
SUBTOTAL	= 6,700 SF

DETACHED ADU:

BASEMENT	= 744 SF
1ST FLOOR	= 729 SF
ATTACHED GARAGE	= 651 SF
SUBTOTAL	= 2,124 SF

PROPOSED GREEN HOUSE = 130 SF
PROPOSED PERGOLA = 186 SF

TOTAL GFA = 9,140 SF

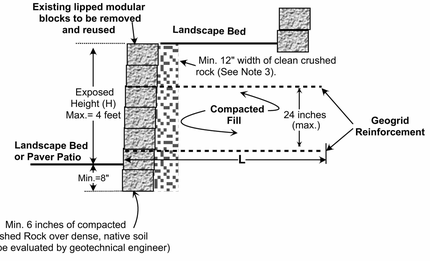
IMPERVIOUS SURFACE AREA CALCULATION

LOT TOTAL AREA = 23,988 SF
LOT SLOPE = 80' - 38' / 262' = 16%

BUILDING TOTAL ROOF = 3548.35 + 987.49	= 4,535.84 SF
BACK YARD PATIO AND OPENED DECK	= 805.87 SF
BACK YARD WATER FRONT WALKWAY	= 88.64 SF
MAIN BLDG FRONT PARKING	= 897.06 SF
MAIN BLDG FRONT WALKWAY	= 158.16 SF
ADU BLDG FRONT PARKING	= 215.46 SF
ADU FRONT WALKWAY & PATIO	= 436.25 SF
FRONT YARD ACCESSORY STRUCTURES	= 316.00 SF
FRONT YARD PATIO & STAIR	= 456.62 SF
ASPHALT DRIVEWAY	= 2,400.38 SF
RETAINING WALL	= 207.76 SF

TOTAL LOT COVERAGE AREA
4535.84+316.00+897.06+215.46+2400.38 = 8,364.74 SF
LOT COVERAGE = 8364.74 / 23988 = 34.87%
< 35% ALLOWED

TOTAL HARDSCAPE AREA
805.87 + 88.64 + 158.16 + 25 + 411.25 + 456.62 +207.76 = 2,153.3 SF
LOT COVERAGE = 2,153.3 / 23988 = 8.97%
< 9 % ALLOWED



3 **RETAINING WALL SECTION**

Notes:

1. This design for a typical retaining wall condition, and is not intended to support surcharges, such as those from vehicles or structures.
2. Geogrid reinforcement shall be Stratagrid 150, Miragrid 3XT, or equivalent, with a maximum separation of 24 inches between geogrid layers. Based on a 3- to 4-foot exposed height, geogrid reinforcement shall extend behind the block facing a minimum distance of L= 6 feet. This geogrid length accounts for the need to excavate approximately 3 feet below existing grade to reach dense, stable soil suitable for bearing.
3. A minimum of 12 inches of washed crushed rock shall be placed between the facing blocks and the Compacted Fill. If a 4-inch diameter perforated drain pipe is buried at the wall base, the perforated drain should connect to a suitable discharge point.
4. Compacted fill shall be free-draining, imported, coarse-grained granular soil, such as Seattle Type 17. A sample of which shall be submitted to the Geotechnical Engineer for approval prior to its use. The on-site soil is unacceptable for use ias Compacted Fill n the geogrid-reinforced zone. The fill shall be compacted in a maximum of 10-inch lifts using a jumping jack..
5. Exposed slopes should be vegetated or hydroseeded following completion to reduce the potential for erosion.

MARC R. McGINNIS STATE OF WASHINGTON 37849 REGISTERED PROFESSIONAL ENGINEER
6/5/2023

GEOTECH CONSULTANTS, INC.

GEOGRID-REINFORCED WALL
8636 North Mercer Way
Mercer Island, Washington

Job No:	Date:		Plate:
23150	June 2023		1

GM DESIGN
mokgary@gmail.com

Project:

8636 N MERCER WAY RESIDENCE SITE IMPROVEMENT

SHEET ADDRESS:

8636 N MERCER WAY,
MERCER ISLAND, WA

No.	Description	Date
1	PER CITY COMMENTS	4/10/2023

Sheet Title:

ENLARGED SITE PLAN

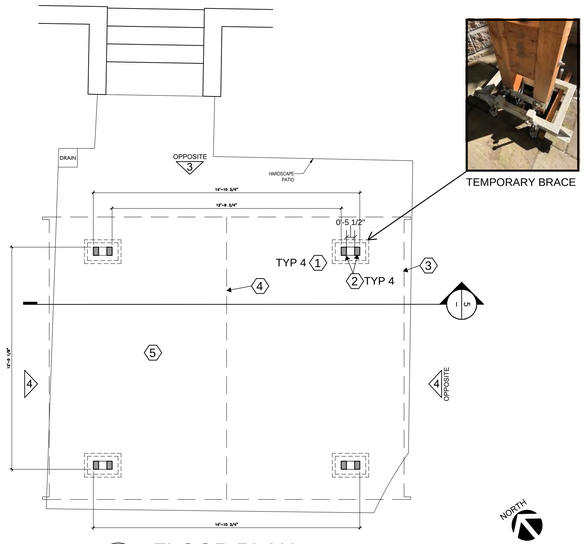
Date: 4/9/2023

Scale: 1" = 10'-0"

SHEET NUMBER:

A0.2

1 INCH



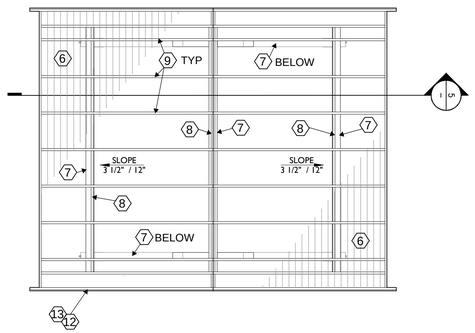
TEMPORARY BRACE

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

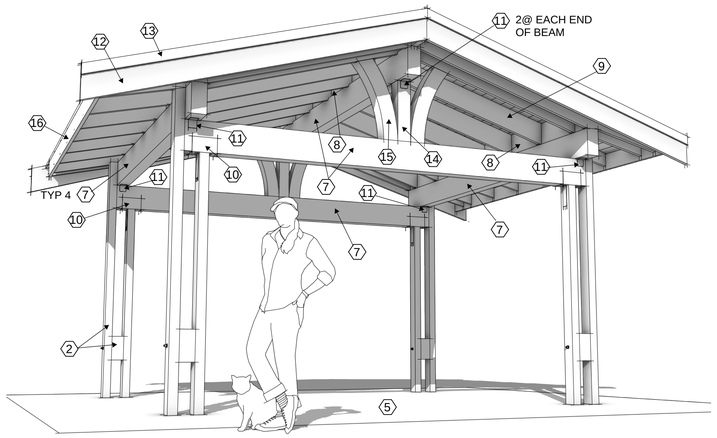
3

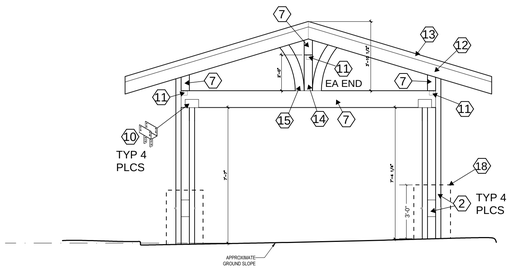
PROJECT DESCRIPTION

MOVE EXISTING, NON-PERMITTED TIMBER FRAME PERGOLA APPROXIMATELY 7'-8" NE TO COMPLY WITH MIN. 20'-0" FRONT YARD SETBACK, PER BUILDING INSPECTOR'S DIRECTION. EXISTING CONSTRUCTION HAS BEEN ACCURATELY MEASURED REVIEWED BY A STRUCTURAL ENGINEER (REF: STRUCTURAL SHEETS) TO FULLY COMPLY WITH CURRENT STRUCTURAL CODE. REFERENCE SITE PLAN FOR EXACT LOCATION ON PROPERTY. NOTE THAT THE RELOCATION WILL CONFLICT WITH THE EXISTING LANDSCAPE STAIRS WHICH WILL NEEDD TO BE REDESIGNED & RELOCATED ALSO.

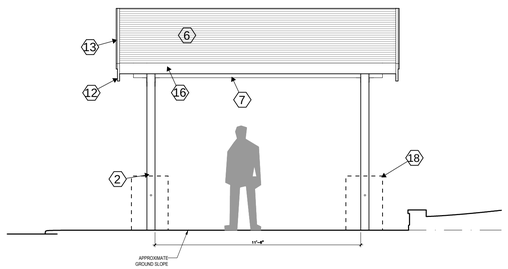


2 ROOF PLAN
SCALE: 1/4" = 1'-0"

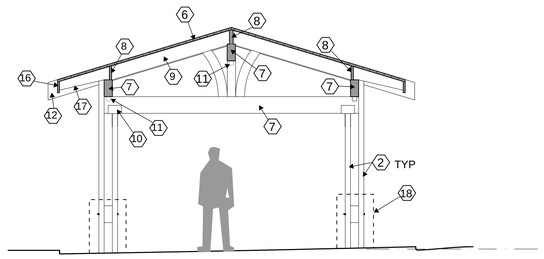




3 SOUTH ELEVATION
(NORTH ELEVATION OPPOSITE)
SCALE: 1/4" = 1'-0"



4 WEST ELEVATION
(EAST ELEVATION OPPOSITE)
SCALE: 1/4" = 1'-0"



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

KEYNOTES

1. TEMPORARY POST BRACKET. RELOCATE STRUCTURE PER SITE PLAN. REMOVE BRACKET AND MOUNT POSTS PER STRUCTURAL (4 PLACES).
2. DOUBLE 4X6 WOOD COLUMNS SPACED 5 1/2" APART (4 PLACES). NOTE ON N-S ELEVATIONS THAT THE COLUMNS ARE CONNECTED WITH A 6X6X11 1/4" WOOD BLOCK AT THE BOTTOM. (TEMPORARY CONNECTION - REF: STRUCTURAL)
3. EDGE OF ROOF – REF: ROOF PLAN.
4. ROOF RIDGE – REF: ROOF PLAN.
5. EXISTING STONE PATIO.
6. 1 1/2"X5" T&G DECKING.
7. 6X12 BEAM
8. 2X BLOCKING BETWEEN JOISTS
9. 2X10 JOISTS @ 24" OC
10. SIMPSON CC64 POST CAP (4 PLACES)
11. SIMPSON OHA33 ORNAMENTAL ANGLE (12 PLACES)
12. 2X10 GABLE END TRIM
13. 1X4 TRIM
14. 6X6 KING POST
15. CURVED DECORATIVE BRACE – 5 1/2" THICK
16. 2X8 TRIM AT RAFTER ENDS
17. ANGLE CUTS ON END OF RAFTERS
18. NOTE: COLUMN BASE TO BE COVERED W/STONE VENEER PLINTH.

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5652 REGISTERED ARCHITECT
MICHAEL L. JONES
STATE OF WASHINGTON

PERMIT SUBMTL

JURISDICTION STAMP

1 INCH

GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2011 EDITION).

2. DESIGN LOADING CRITERIA

ROOF LIVE LOAD (SNOW, IRREDUCIBLE, NOT INCLUDING DRIFT) 25 PSF

DESIGN LOADING CRITERIA - LATERAL LOADS

WIND
V_{ULT} = 100 MPH (3-SECOND GUST), V_{ASD} = 77 MPH (3-SECOND GUST)
ENCLOSED BUILDING, EXPOSURE 'C', K_{ZT}=1.0
DIRECTIONAL PROCEDURE PER ASCE 7-16 CH27

EARTHQUAKE
RISK CATEGORY 2, IE =1.0
SS =1.39 , S1 = 0.484,
SITE CLASS = D (ASSUMED),
FA= 1.2, FV =1.75
SDS = 1.1, SD1 = .59,
SDC = D,
BSRS = CANTILEVERED TIMBER COLUMNS R = 1.5
CS =0.14, RHO =1.3
DESIGN BASE SHEAR V=.416K
EQUIVALENT LATERAL FORCE PROCEDURE

DESIGN LOADING CRITERIA - DEAD LOADS

ROOF DEAD LOAD 14 PSF

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL AND ALL OTHER DISCIPLINES' DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

DISCREPANCIES: THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING, DURING THE BIDDING PERIOD, OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS OR OF ANY VARIATIONS NEEDED IN ORDER TO CONFORM TO CODES, RULES AND REGULATIONS. UPON RECEIPT OF SUCH INFORMATION, THE ENGINEER WILL SEND WRITTEN INSTRUCTIONS TO ALL CONCERNED. ANY SUCH DISCREPANCY, OMISSION, OR VARIATION NOT REPORTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND WORK SHALL BE PERFORMED IN A MANNER AS DIRECTED BY THE ENGINEER.

4. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE FIELD VERIFIED BY THE CONTRACTOR OR THE CONTRACTOR'S SUBCONTRACTOR.

5. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

ERECTION PLANS AND DETAILS OF SHORING SYSTEMS SHALL BE PROVIDED BY THE CONTRACTOR. DESIGN CALCULATIONS AND DRAWINGS ARE TO BE STAMPED BY A LICENSED STRUCTURAL ENGINEER IN THE STATE OF WASHINGTON. TWO SETS OF CALCULATIONS AND DRAWINGS ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. THIS CURSORY REVIEW WILL CHECK WHETHER THE CONTRACTOR'S ENGINEER HAS COMPLETED THE LOAD PATH TRANSFERRING ALL THE BUILDING'S DEAD LOADS AND CONSTRUCTION LIVE LOADS DOWN TO NATIVE SOILS. THE SHORING SHALL NOT BE SUPPORTING ON THE EXISTING STRUCTURE.

CHANGES IN FIELD CONDITIONS DURING CONSTRUCTION WILL REQUIRE RE-EVALUATION BY THE CONTRACTOR'S SHORING ENGINEER.

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

7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ONLY ON SHOP DRAWINGS WILL NOT SATISFY THIS REQUIREMENT.

8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.

9. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF FIELD ERECTED COMPONENTS SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

INSPECTIONS

10. STATEMENT OF SPECIAL INSPECTIONS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1705 OF THE 2018 IBC AS FOLLOWS:

A. THE FOLLOWING SYSTEMS WILL BE SUBJECT TO THE SEISMIC QUALITY ASSURANCE:
CONCRETE FOUNDATIONS

B. SPECIAL INSPECTION AND TESTING OF SPECIAL REINFORCED CONCRETE WALLS AND CONCRETE FOUNDATIONS SHALL CONFORM TO IBC SECTION 1708.

C. THE TYPE AND FREQUENCY OF TESTING REQUIRED SHALL BE PER IBC SECTION 1705 AND 1704.

D. THE TYPE AND FREQUENCY OF SPECIAL INSPECTIONS REQUIRED SHALL BE PER IBC SECTION 1706 AND 1704.

E. THE REQUIRED FREQUENCY AND DISTRIBUTION OF TESTING AND SPECIAL INSPECTION REPORTS SHALL BE THE RESPONSIBILITY OF THE INSPECTION/TESTING AGENCY. REPORTS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER OF RECORD WITHIN 14 DAYS OF INSPECTION.

F. STRUCTURAL OBSERVATION OF THE LATERAL AND GRAVITY STRUCTURAL SYSTEMS SHALL OCCUR AT APPROPRIATE INTERVALS DURING CONSTRUCTION. THE STRUCTURAL ENGINEER SHALL OBSERVE THAT THE WORK IS PROGRESSING IN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND ACCORDING TO THE DESIGN INTENT.

G. A STRUCTURAL OBSERVATION REPORT SHALL BE SUBMITTED TO THE ARCHITECT OF RECORD AFTER EACH OBSERVATION.

GEOTECHNICAL

11. FOUNDATION AND SLAB NOTES: SUB-GRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN BY THE INDIVIDUAL TESTING AGENCY OR LOCAL BUILDING OFFICIAL AT THE TIME OF EXCAVATION.

FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH (CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH) AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY. THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB OR BUILDING INSPECTOR. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE.

ALLOWABLE SOIL PRESSURE	1500 PSF (ASSUMED)
LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED)	60 PCF/35 PCF (ASSUMED)
PASSIVE EARTH PRESSURE	250 PCF (ASSUMED)
SEISMIC EARTH PRESSURE	8H (ASSUMED)
COEFFICIENT OF FRICTION	0.35 (ASSUMED)

RENOVATION

12. CONTRACTOR SHALL CHECK FOR DRY-ROT AT ALL EXTERIOR TIMBER COMPONENTS. CONTRACTOR SHALL NOTIFY ENGINEER & ARCHITECT OF ANY DRY ROT PARTICULARLY NEAR CONNECTION POINTS IN THE COLUMNS.

CONCRETE

13. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH IBC SECTION 1905 AND ACI 301. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF F'_C = 2,500 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS.

THE MINIMUM AMOUNTS OF CEMENT AND MAXIMUM AMOUNTS OF WATER MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE CONCRETE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 318 SECTION 5.3. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260-06, C494M-05A, C618-05, C989-06, AND C1017M-07. TOTAL AIR CONTENT SHALL BE IN ACCORDANCE WITH ACI 318 TABLE 4.4.1.

14. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, F_Y = 60,000 PSI. EXCEPTION: ANY BARS SPECIFICALLY NOTED ON THE DRAWINGS AS 'GRADE 40', F_Y = 40,000 PSI. GRADE 60 REINFORCING BARS INDICATED ON DRAWINGS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING COMPLYING WITH ASTM A615(S1) MAY BE WELDED ONLY IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN AWS D1.4 ARE SUBMITTED.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.

15. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI SP-66 (04) DETAILING MANUAL AND THE LATEST EDITION OF ACI 318. LAP ALL CONTINUOUS REINFORCEMENT 30 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS 30 BAR DIAMETERS OR 2'-0" MINIMUM. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

16. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES, EARTH FACE		3"
FORMED SURFACES EXPOSED TO EARTH (I.E. WALLS BELOW GROUND) OR WEATHER	(#6 BARS OR LARGER)	2"
	(#5 BARS OR SMALLER)	1 1/2"
COLUMN TIES OR SPIRALS AND BEAM STIRRUPS		1 1/2"
SLABS AND WALLS (INTERIOR FACE)		3/4"

17. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND PRECAST.

18. EMBEDDED ITEMS IN CAST-IN-PLACE CONCRETE: EMBEDDED ITEMS IN CAST-IN-PLACE CONCRETE SHALL NOT BE 'WET-SET' UNLESS SPECIFICALLY APPROVED BY ENGINEER OF RECORD. THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO, REINFORCING STEEL, ANCHOR BOLTS, DEFORMED BAR ANCHORS, EMBED PLATES, OR OTHER MISC. STEEL SHAPES TO BE CAST INTO CONCRETE.

19. NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3000 PSI MINIMUM).

20. EPOXY-GROUTED ITEMS SPECIFIED ON THE DRAWINGS SHALL BE GROUTED WITH HIT HY-200 ADHESIVE ANCHOR SYSTEMS AS MANUFACTURED BY HILTI, INC. OR SET-3G HIGH STRENGTH ADHESIVE ANCHOR SYSTEM AS MANUFACTURED BY SIMPSON STRONG-TIE OR AN ENGINEER APPROVED ALTERNATE THAT HAS ICC-ES TEST DATA FOR THEIR SPECIFIC PRODUCT AND APPLICATION. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORTS FOR SPECIFIC EPOXY UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS. HOLE SIZE SHALL BE 1/8" LARGER THAN BAR, ROD OR BOLT SIZE. NOTE: NO WELDING IS TO TAKE PLACE WITHIN 24" OF HARDENED EPOXY.

21. EXPANSION BOLTS INTO CONCRETE SHALL BE KWIK BOLT TZ WEDGE ANCHORS AND THREADED EXPANSION INSERTS INTO CONCRETE OR CONCRETE MASONRY UNIT SHALL BE KWIK BOLT 3 MASONRY ANCHORS AS MANUFACTURED BY HILTI, INC OR APPROVED EQUAL INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. INSERTS INTO CONCRETE MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION BOLT AND INSERT INSTALLATION. ANCHORS SHALL HAVE A CURRENT ICC REPORT.

STEEL

22. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON THE A.I.S.C. "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS," LATEST EDITION, PLUS ALL REFERENCED CODES.

23. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992, FY = 50 KSI, FOR WIDE FLANGE SHAPES AND TO ASTM A36 FY = 36 KSI, FOR PLATES, MISCELLANEOUS ROLLED SHAPES AND ALL-THREAD RODS. STEEL PIPE SHALL CONFORM TO ASTM A-53, TYPE E OR S, GRADE B, FY = 35 KSI. STRUCTURAL TUBING (HSS ROUND, SQUARE OR RECTANGULAR TUBES) SHALL CONFORM TO ASTM A500, GRADE B, WITH FY = 46 KSI FOR RECTANGULAR/SQUARE SECTIONS AND FY = 42 KSI FOR ROUND SECTIONS. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 36. TYPICAL AND GRADE 105 FOR HIGH-STRENGTH ANCHOR BOLTS WITH 3X3X3/8 PLATE WASHER AND DOUBLE NUT. HIGH-STRENGTH CONNECTION BOLTS SHALL CONFORM TO ASTM A325-X. COMMON BOLTS SHALL CONFORM TO ASTM A307, GRADE A. HIGH STRENGTH ALL-THREAD ROD SHALL CONFORM TO ASTM A193 GRADE B7.

24. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL CONFORM TO SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.

25. ALL WELDING SHALL BE IN CONFORMANCE WITH A.I.S.C. AND AWS. STANDARDS AND SHALL BE PERFORMED BY W.A.B.O. CERTIFIED WELDERS USING E70XX ELECTRODES. ONLY PRE-QUALIFIED WELDS (AS DEFINED BY AWS.) SHALL BE USED. WELDING OF GRADE 60 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING LOW HYDROGEN ELECTRODES. WELDING OF GRADE 40 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING E70XX ELECTRODES. SEE REINFORCING NOTE FOR MATERIAL REQUIREMENTS OF WELDED BARS. NOTE: NO WELDING IS TO TAKE PLACE WITHIN 24" OF HARDENED EPOXY NOR WITHIN 4" OF COLD BENDS IN REINFORCING STEEL. FABRICATION AND WELDING OF STRUCTURAL STEEL TAKING PLACE IN THE FABRICATORS SHOP SHALL BE SPECIAL INSPECTED PER GENERAL NOTE # 13. CONTRACTOR SHALL SUBMIT INSPECTION REPORTS AND CERTIFICATE OF COMPLIANCE TO THE CITY FOR REVIEW.

ALL WELDS SHALL BE VISUALLY TESTED BY A QUALIFIED INSPECTOR. IN ADDITION ALL COMPLETE PENETRATION WELDS SHALL BE TESTED USING THE ULTRASONIC METHOD AT THE PLANT OR SITE BY A QUALIFIED INSPECTOR. VERIFY LOCATIONS WITH THE STRUCTURAL ENGINEER WHERE ULTRASONIC TESTING IS REQUIRED FOR PARTIAL PENETRATION WELDS.

WOOD

26. FRAMING LUMBER SHALL BE KILN DRIED, AND GRADED AND MARKED IN CONFORMANCE WITH W.C.L.B. STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 16, LATEST EDITION. FURNISH TO THE FOLLOWING MINIMUM STANDARDS, UNLESS OTHERWISE NOTED ON THE PLANS:

JOISTS:	(2 X MEMBERS)	DOUG FIR #2 MINIMUM BASIC DESIGN STRESS, Fb = 900 PSI
	(3 X AND 4 X MEMBERS)	DOUG FIR #1 MINIMUM BASIC DESIGN STRESS, Fb = 1000 PSI
BEAMS AND STRINGERS:	(INCLUDING 6 X 10 AND LARGER MEMBERS)	DOUG FIR #1 MINIMUM BASIC DESIGN STRESS, Fb = 1200 PSI
POSTS AND TIMBERS:	(6 X 6 AND LARGER)	DOUG FIR #2 MINIMUM BASIC DESIGN STRESS, Fb = 900 PSI
STUDS, PLATES & MISCELLANEOUS LIGHT FRAMING:		DOUG FIR STANDARD GRADE MINIMUM BASIC DESIGN STRESS, Fb = 575 PSI
BOLTED FRAMING: STUDS, LEDGERS, AND PLATES		DOUG FIR #2 MINIMUM BASIC DESIGN STRESS, Fb = 900 PSI
PRESSURE TREATED FRAMING: LEDGERS, AND PLATES		HEM FIR #2 MINIMUM BASIC DESIGN STRESS, Fb = 800 PSI

27. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS1. SEE PLANS FOR THICKNESS, PANEL IDENTIFICATION INDEX AND NAILING REQUIREMENTS.

28. ALL WOOD MEMBERS EXPOSED TO WEATHER OR IN DIRECT CONTACT WITH SOIL SHALL BE PRESSURE-TREATED WITH ALKALINE COPPER QUATERNARY (ACQ). ALL WOOD MEMBERS (INCLUDING PLATES) IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH SODIUM BORATE (SBX).

ALL METAL CONNECTORS IN CONTACT WITH "ACQ" PRESSURE-TREATED LUMBER SHALL BE TYPE 304 OR 316 STAINLESS STEEL. THIS INCLUDES WASHERS, SCREWS, NAILS, HANGERS, AND ANY OTHER MISCELLANEOUS L.T. GAGE METAL CONNECTORS. WHERE ACQ LUMBER IS USED IN INTERIOR CONDITIONS, G185 ("HOT-DIP" GALVANIZED TO 1.85 OUNCES PER SQUARE FOOT) METAL CONNECTORS MAY BE USED IN LIEU OF STAINLESS STEEL. METAL CONNECTORS 1/2" THICK OR GREATER NEED NOT BE GALVANIZED FOR INTERIOR USE. METAL CONNECTORS 1/2" THICK PLUS ARE TO BE GALVANIZED FOR EXTERIOR USE, UNLESS SPECIFIED OTHERWISE BY THE ARCHITECT.

29. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NO.C-2021. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICBO APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE COMMON. ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

ALL JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "U" SERIES JOIST HANGERS. ALL DOUBLE OR TRIPPLE JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "HU" SERIES JOIST HANGERS.

30. HOLDOWNS CALLED OUT BY LETTERS "HDU", ARE MANUFACTURED BY THE SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NO.C-2021. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. EACH SIMPSON HOLD-DOWN SHALL BE BOLTED TO A MINIMUM OF (2) FULL HEIGHT STUDS. SEE SCHEDULE ON PLANS FOR FURTHER STUD REQUIREMENTS. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. ALL HOLDOWNS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.

31. WOOD FRAMING NOTES-- THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE. MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO TABLE 2304.10 OF THE INTERNATIONAL BUILDING CODE. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE COMMON. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.

B. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND MORE THAN ONE-HALF OF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE BRIDGING @ 8' O.C. AND SOLID BLOCKING AT ALL BEARING POINTS. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.

TOENAIL JOISTS TO SUPPORTS WITH TWO 16D NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH 16D @ 12" O.C. STAGGERED.

UNLESS OTHERWISE NOTED ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED WITH 8D NAILS @ 6" O.C. TO FRAMED PANEL EDGES AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" O.C. (10" O.C. AT FLOORS) TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES OR PROVIDE SOLID BLOCKING. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE-AND-GROOVE JOINTS AT UNBLOCKED EDGES OR SHALL BE SUPPORTED WITH SOLID BLOCKING. TOENAIL BLOCKING TO PLATE WITH 16D @ 12" O.C. OR (2) 16D EACH END AT SUPPORTS UNLESS OTHERWISE NOTED. AT BLOCKED FLOOR AND ROOF DIAPHRAGMS, INSTALL FLAT 2X BLOCKING AT ALL UNFRAMED PANEL EDGES AND NAIL WITH EDGE NAILING SPECIFIED.

C. NAILING: MINIMUM NAIL DIAMETER AND LENGTH SHALL BE AS FOLLOWS:

	NAIL SIZE ON DRAWINGS OR DETAILS	DIAMETER AND LENGTH
SHEATHING NAILS	8D	Ø.131" X 2 1/2"
	10D	Ø.148" X 2 1/2"
FRAMING NAILS	8D	Ø.131" X 2 1/2"
	10D	Ø.148" X 3"
	16D	Ø.161" X 3 1/2"

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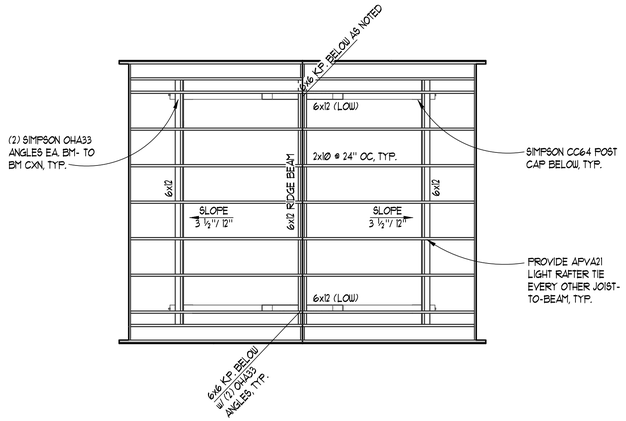
GENERAL STRUCTURAL NOTES

JURISDICTION STAMP

S1.0

1 INCH



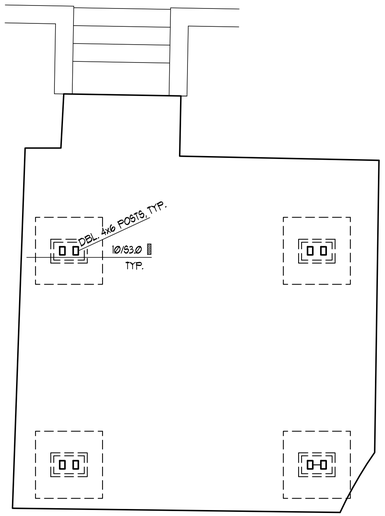
PLAN NOTES

1. NEW ROOF DIAPHRAGM SHALL BE 1/2" CDX PLYWOOD w/ MIN. PANEL INDEX OF 24/0, WITH 0.131" x 2.5" NAILS AT :
   - 6"oc AT ALL DIAPHRAGM BOUNDARIES AND SHEAR WALLS
   - 6"oc AT ALL SUPPORTED PANEL EDGES (UNBLOCKED)
   - 12"oc AT FIELD

2 ROOF FRAMING PLAN

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

0 4' 8'



PLAN NOTES

1. INDICATES NEW POST AND PAD FOOTING.
2. SEE SHEET S3.0 FOR TYPICAL CONCRETE DETAILS

1 FOUNDATION PLAN

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

0 4' 8'

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FIRST FLOOR / FOUNDATION PLAN

JURISDICTION STAMP

S2.0

1 INCH

REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE

(For Grade 60, Uncoated Bars, Normal Weight Concrete)

I MINIMUM STRAIGHT DEVELOPMENT LENGTH (ℓ_d) ✳

BAR SIZE	f 'c = 2500 PSI		f 'c = 4000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
# 3	24"	18"	24"	19"
# 4	32"	24"	33"	25"
# 5	39"	30"	41"	31"
# 6	47"	36"	49"	37"

✳ "TOP BARS" ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.
IF CLEAR CONCRETE COVER IS NOT GREATER THAN THE DIAMETER OF THE BAR OR THE CENTER TO CENTER SPACING IS NOT GREATER THAN 3 BAR DIAMETERS, THEN VALUES SHALL BE INCREASED BY 43%.

II MINIMUM LAP SPLICE LENGTHS (ℓ_s) ✳

BAR SIZE	f'c = 2500 PSI	
	TOP BARS	OTHER BARS
# 3	31"	24"
# 4	41"	32"
# 5	51"	39"
# 6	61"	47"

SPLICES IN HORIZONTAL REINFORCING SHALL NOT OCCUR IN BOTH CURTAINS OF REINFORCING AT THE SAME LOCATION.

III MINIMUM EMBEDMENT LENGTHS (ℓ_{dh}) FOR STANDARD END HOOKS

A. for general uses:

BAR SIZE	f'c = 2500 PSI
# 3	9"
# 4	12"
# 5	15"
# 6	18"

1. SIDE COVER MUST BE EQUAL TO OR GREATER THAN 2½".
2. END COVER FOR 90° HOOKS MUST BE EQUAL TO OR GREATER THAN 2".
3. 90° HOOKS ONLY

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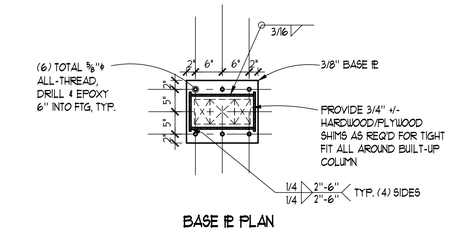

BASE PL PLAN

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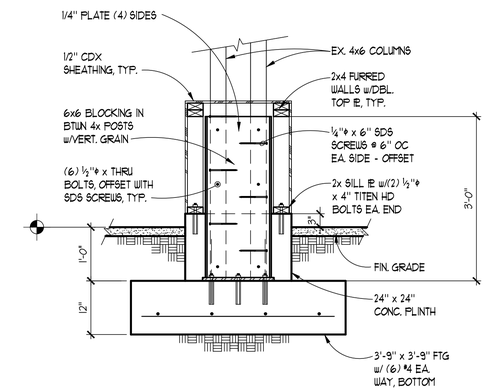

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FRAMING DETAILS

JURISDICTION STAMP

S3.0