CITY OF MERCER ISLAND
DEVELOPMENT SERVICES GROUP

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

INSPECTION REQUESTS:
online: MyBuildingPermit.com
voicemail: (206) 275-7730

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

TO BE COMPLETED BY APPLICANT

CONTACT INFORMATION:
Applicant is to complete the following information.

Applicant Contact information *prior* to permit issuance:

Name: RIPPLE DESIGN STUDIO - JIM DEARTH
Address: 4303 STONE WAY N, SEATTE, WA, 98103
Phone: (206) 913-2333
Email: PROJECTS@RIPPLEDESIGNSTUDIO.COM

Applicant Contact information *post* permit issuance:

Name: NEW HORIZONS REAL ESTATE DEVELOPMEN
Address: 8744 126TH AVE NE, KIRKLAND, WA 98033
Phone: (206) 557-0722
Email: MLU0172MUA@GMAIL.COM

REQUIRED SPECIAL INSPECTIONS / STRUCTURAL OBSERVATIONS:
It is the Engineer of Record's responsibility to specify all required Special Inspections or Structural Observation (check items below). The owner is responsible for hiring an approved private Special Inspector for the checked inspections noted below. All Special Inspectors (except Geotechnical) must be WABO certified.
When Special Inspection or Structural Observation is required, the report shall be submitted to the City Building Inspector prior to the City Inspection. **Note: Inspection by the City Inspector is required in addition to the Special Inspection or Structural Observation indicated below. Do not cover or conceal any work prior to the City inspection.**

STRUCTURAL OBSERVATION BY ENGINEER OF RECORD (EOR):
Engineer of Record: DANIEL BUKER Company: BUKER ENGINEERING Phone: (206) 258-6333
- [x] General Conformance to Construction Documents
- [ ] Other:

SOILS / GEOTECHNICAL:
Special Inspector: MICHAEL XUE Company: PANGEO INC. Phone: (206) 262-0370
- [ ] Erosion control measures
- [ ] Shoring installation and monitoring
- [ ] Observe and monitor excavation
- [ ] Verification of soil bearing
- [ ] Other:
- [ ] Subsurface drainage placement
- [ ] Verify fill material and compaction
- [ ] Rockery installation
- [ ] Pile placement (auger cast/driven pile)
- [ ] Other:

REINFORCED CONCRETE:
Special Inspector: Company: Phone:
- [ ] Concrete strength
- [ ] Reinforcing steel and concrete placement
- [ ] Shotcrete placement
- [ ] Other:
- [ ] Retaining wall construction
- [ ] Prestressed / Precast construction
- [ ] Other:
- [ ] Other:

STRUCTURAL STEEL: *(AISC 360, Chapter N)*
Special Inspector: Company: Phone:
- [ ] Fabrication and shop welds
- [ ] Structural steel erection, field welds and bolting
- [ ] Other:
- [ ] Moment Frame construction
- [ ] Other:
- [ ] Other:

STRUCTURAL MASONRY:
Special Inspector: Company: Phone:
- [ ] Mortar strength
- [ ] Masonry unit strength
- [ ] Other:
- [ ] Glass unit masonry installation
- [ ] Wall panel and veneer installation
- [ ] Other:
- [ ] Other:

WOOD:
Special Inspector / Engineer of Record: Company: Phone:
- [x] Lateral resisting system construction
- [ ] Other:
- [ ] High strength diaphragm construction
- [ ] Other:

OTHER SPECIAL INSPECTIONS:
Special Inspector: TBD Company: TBD Phone:
- [ ] Epoxy grout installations
- [ ] Expansion anchor installations
- [ ] Other post installed anchors
- [ ] Alternative construction methods:
- [ ] Alternative construction materials:
- [x] Stucco installation
- [ ] Infiltration System
- [ ] Exterior Insulation Finish System (EIFS) installation
- [ ] Other:
- [ ] Other:

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

- [ ] Connector plate wood trusses
- [ ] Metal joist / metal trusses
- [ ] Premanufactured structures (stairs, etc.)
- [ ] Precast concrete elements
- [ ] Other:
- [ ] Post tension layout
- [ ] Exterior cladding
- [ ] Window wall / curtain wall construction
- [ ] Other:
- [ ] Other:

TO BE COMPLETED BY APPLICANT

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

Sheet:

- [ ] Building envelope: *WSEC Table 402.1.1* _____
  (include U-factors, insulation and moisture control)
- [ ] Whole house ventilation: *IRC Section M1507 WA Amended* _____
  (include ventilation option and duct sizing if applicable)
- [ ] Energy Credit Information: *WSEC Table 406.2* _____
  (include specific, written requirements)
- [x] RECPC Form Information: SUPPLEME
  (if incorporated within drawing set)
  http://www.mercergov.org/files/2012ResidentialEnergyCalcForm.pdf
- [x] Air Leakage Testing. *IRC Section R402.4.1.2 WA Amendments*
  - [x] Provide air leakage test report verifying air leakage rate does not to exceed 5 air changes per hour.
- [x] Duct Leakage Testing. *WSEC R403.2.2*
- [x] Postconstruction Test. *WSEC R403.2.2.1*
- [x] Rough-in Test. *WSEC R403.2.2.3*

FILE NAME: *DSG CVR 2016 24x36.PDF*

TO BE COMPLETED BY DSG

PROJECT ALERTS:
Construction of the project shall be from ***approved plans only***. No deviation from the approved project plans is allowed without prior approval from the City of Mercer Island. Approved plans must be kept on site and maintained in good condition.

- [x] Refer to "Conditions of Permit Approval" provided at permit issuance for required construction rules and regulations, including:
  - Site Considerations
  - Hours of Work
  - Construction Vehicle Parking Restrictions
  - Acess Road Requirements
  - ROW restrictions
  - Drainage Requirements
  - Sewer Requirements
  - Water Service Requirements
  - Additional Fire Code Requirements
  - Planning Requirements
  - Noise Abatement Certification
  - Tree Requirements
- [ ] Refer to "Preconstruction Meeting Checklist" provided at the preconstruction meeting for development related requirements.
- [x] Temporary site address with minimum 6" high numbers visible from the street must be installed.
- [x] Erosion control measures must be as shown on approved project drawings. All erosion control is to be in place and inspected prior to the start of any site work.
- [x] A City of Mercer Island Business License is required for all subcontractors. Call (206) 275-7783 for more information.

TREE PROTECTION REQUIREMENTS:
- [x] Tree protection as shown on approved drawings shall be installed at tree dripline prior to start of any site work and must remain in place throughout the project.
- [x] No trees shall be cut without a City of Mercer Island tree permit.
- [ ] Replacement trees must be a minimum of six feet tall at installation. They must be planted and approved prior to final inspection.
  - [ ] For this project, 2 trees are authorized to be removed and replaced with N/A trees.
- [ ] This project appears to be within a protected eagle nest area. Contact Federal Fish and Wildlife at (360) 534-9304 or visit their website at http://www.fws.gov/pacific/eagle

FIRE PROTECTION REQUIREMENTS:
Separate Permits are required for ALL fire protection systems. For more information, see http://www.mercergov.org/Page.asp?NavID=2614

- [x] Fire Sprinkler
  - [x] NFPA 13D
    - [ ] Plus
  - [ ] NFPA 13R
  - [ ] NFPA 13
- [ ] Approved Fire Code Alternatives:
  - [ ] FCA1
  - [ ] FCA2
  - [ ] FCA3
  - [ ] FCA4
- [ ] Monitored Household
  Fire Alarm per NFPA 72
- [ ] Monitored Sprinkler
  Water Flow Alarm
- [ ] Other:

WATER SUPPLY REQUIREMENTS:
- [ ] Fire sprinkler design calculations must be provided prior to determining water supply system requirements.
- [ ] Water Supply system upgrade required
  - [ ] City Installation.
  - [ ] Applicant Installation.
    Required Service Line Size: N/A (water main to meter)
    Required Supply Line Size: N/A (water main to house)
    Required Meter Size: N/A
- [ ] Abandonment of existing service and meter required at main.
- [x] Pressure reducing valve required if pressure exceeds 80 psi.
- [x] Reduced pressure backflow assembly (RPBA) required for all lots with waterfront or non-city water supply (private wells or lake irrigation).
- [ ] Additional water supply requirements:

DRAINAGE REQUIREMENTS:
- [x] On site detention system required.
- [ ] On site infiltration system required.
- [x] As-built Utility drawings required.
  - [x] Full Size drawings required.
- [ ] Direct discharge into the lake.
- [ ] No Storm Water permit required.
- [ ] Connection to public storm drainage conveyance system req'd.
- [x] Other: Civil Engineer certification letter for Post construction Soil

SIDE SEWER REQUIREMENTS:
- [x] Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is lower than the elevation of the upstream manhole rim or when side sewer is shared with one or more properties.
- [ ] Video tape of existing sewer required (see standard details)
- [x] New connection. [ ] Connect to existing. Disconnect permit required. [ ] Reconnect permit required.
- [ ] Other:

Note: When side sewer is to be connected to the lake line you will need to schedule three (3) days in advance with the City of Mercer Island Maintenance Department at (206) 275-7800.

APPROVED CODE ALTERNATIVES:
Code alternatives must be Inspected. Refer to the Inspection Checklist

- [ ] CA1:
- [ ] CA2:

SURVEY REQUIREMENTS (The following survey information must be submitted when checked):
Surveyor shall verify points chosen for height calculations and point verification shall be submitted at the time of City foundation Inspection. A property survey may be required to verify setbacks and in some cases buildings must be surveyed onto the lot. The City reserves the right to request an impervious area survey at any time prior to issuance of Certificate of Occupancy.

Surveyor: Phone:
- [ ] Building height survey
- [ ] Building setback survey
- [ ] Impervious surface survey
- [ ] Other:

- [ ] **MAXIMUM 40 PERCENT ALTERATION INSPECTION:** *MICC 19.01.050(D)(1)(b)(i)*
  A Building Inspection prior to demolition is required for all legally nonconforming single family dwelling to ensure no more than 40 percent of the dwelling's exterior walls are structurally altered. Contact the Building Inspector at (206) 275-7730.
  - [ ] Civil / Drainage
  - [ ] LUP / Setback requirements

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

- [x] Geotechnical Report provided. All construction must comply with the recommendations of the Geotechnical Report. A copy of report and other geotechnical information must be kept on site at all times.

Michael Xue *Geotechnical Engineer* (206) 262-0370 *Phone*

SEASONAL DEVELOPMENT LIMITATION RESTRICTION:
- [x] Applies (Geologic Hazard area). Grading not permitted between October 1 through April 1.
  - [ ] Waiver approved. Grading and excavation permitted subject to all conditions noted in Seasonal Development Limitation Waiver Permit.

Permit number *Approved by* *Date*

TO BE COMPLETED BY DSG

REQUIRED CONSTRUCTION INSPECTIONS:
It is the applicant's responsibility to contact DSG to schedule ALL inspections appropriate for the project. Request inspections online at www.MyBuildingPermit.com or by calling the Inspection Hotline at (206) 275-7730. Allow at least 24 hours (48 hours for Reinforcing steel) in advance of desired inspection. Be specific as to type of inspection.

Inspector shall initial and date appropriate inspection *only* if approved. Note: ***Items marked with an "•" require a separate permit.*** It is the applicants responsibility to apply for and obtain all City of Mercer Island permits.

INSPECTIONS: (Listed in order of typical sequencing)

Inspector	Date	Approved	
		☐	Pre-construction Meeting to Review Conditions of Permit Approval.
		•☐	Tree protection
		☐	Erosion control
		•☐	Sewer disconnect and cap. If applicable, separate side-sewer permit required
		•☐	Right-of-way use or work / easement, material delivery, etc. If applicable, separate ROW permit required
		☐	Land clearing, grading and demolition
		☐	Temporary power
		☐	Pilings / Shoring / Shotcrete. If applicable, provide survey letter (property line); Geotechnical Engineer / Special Inspector reports of inspections (pile and shoring installation, etc.)
		☐	Footings, setbacks, UFER ground. If applicable, provide survey letter (building height and setbacks); Special Inspector reports of inspections (soil bearing capacity, compaction, earthwork, pile installation, etc.)
		☐	Foundation walls / concrete columns
		☐	Roof and footing drains
		☐	Foundation damproofing
		•☐	Storm drainage, including (but not limited to): • Connections to storm main in ROW • Detention systems • Infiltration systems • Catch basins including oil-water separator tees • Area drains • Conveyance piping / cleanouts • Storm drain in ROW • Control structures / manholes • Pump systems • Retaining wall drainage
		•☐	Water Service
		☐	Water Supply
		☐	Water as-built drawings
		•☐	Side sewer installation, including (but not limited to): • Connections to side sewer main • Connections to existing side sewer • Back-flow valves • Grinder pump systems • Sewer manholes
		☐	Driveway / Access road
		☐	Underslab electrical / mechanical / plumbing
		☐	Underslab insulation / vapor barrier / reinforcing
		☐	Underfloor framing
		☐	Nailing-Roof sheathing. If applicable, provide Special Inspection letter for lateral wood inspection.
		☐	Nailing-Exterior wall and Shearwall. If applicable, provide Special Inspection letter for lateral wood inspection.
		☐	Rough hydronic installation
		☐	Rough electric installation
		•☐	Rough fire alarm (wiring inspection)
		☐	Rough plumbing installation (DWV, water)
		☐	Rough mechanical
		☐	Gas Piping
		•☐	Rough fire sprinkler / hydrostatic and flow (bucket) test
		☐	Framing and glazing. If applicable, provide Special Inspection letter for lateral wood inspection, welding epoxy anchors, etc.
		☐	Masonry construction (fireplace / walls / veneer / etc.)
		☐	Insulation installation
		☐	Stucco (paper and lath)
		☐	Shower pan (or tub)
		☐	Miscellaneous
		☐	Code Alternative CA1:
		☐	Code Alternative CA2:
		☐	Impact Fees Paid (If applicable)
		☐	**Final Inspection:** Tree Restoration ☐ TT
		☐	**Final Inspection:** Fire protection, including (but not limited to): • Sprinkler • Access Road • Fire Code Alternatives (see below) ☐ FCA1: ☐ FCA2: • Fuel Tank Installation • Fire Extinguishing System • Fire Alarm System ☐ FCA3: ☐ FCA4: ☐ TF
		☐	**Final Inspection:** Water supply protection, including (but not limited to) backflow devices for: • Waterfront property • Well water on property • Fire / lawn sprinkler • Boiler ☐ TW
		☐	**Final Inspection:** Site and utility: includes landscape, utilities and ROW. Site restoration complete and as-built drawings ready for submittal. ☐ TS
		☐	**Final Inspection:** Building, including electrical / mechanical / plumbing. If applicable, provide closeout (summary) letters from Engineer, Special Inspectors, Geotechnical Engineer, and exterior wall cladding inspectors (EIFS). ☐ TB

90 DAY TEMPORARY CERTIFICATE OF OCCUPANCY (TCO):
Applicant option. Additional fees will be required and must be approved prior to occupancy. TCO requires tree plantings be completed.

Approved *Start Date* *End Date*

ADDITIONAL REQUIRED CITY INSPECTIONS:
Call the appropriate contact to arrange the inspection.

Required Inspection(s):	Contact:	Phone:	Scheduling:

IMPACT FEES:
If applicable.

- [ ] Impact fees apply and are due ***prior*** to Final Inspection or on _____, whichever occurs first.
  Date

PLAN REVIEW APPROVALS:
Not all review disciplines may be required to review the documents.

☑ GR	☑ RP	☑ RD	☐ N/A	☐ N/A
Building	*Planning*	*Engineering*	*Tree*	*Fire*

APPROVED DRAWINGS MUST BE KEPT ON THE BUILDING SITE AT ALL TIMES

REVISED: *December 1st, 2015*

SF

PERMIT NUMBER 1709-164

CERTIFICATE OF OCCUPANCY
Issued after all required inspections have been performed and approved.
Date
Approved

PROJECT NAME: EAST MERCER PARCEL 1
PROJECT ADDRESS: 8375 E MERCER WAY, 98040

REVIEWED FOR CODE COMPLIANCE
11/8/18 *Date*
GR *Approved*

E MERCER PARCEL 1

8375 E. MERCER WAY MERCER ISLAND WA 98040

ABBREVIATIONS:

ABV	ABOVE
ADD	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
BLW	BELOW
BLK	BLOCK, BLOCKING
BOT	BOTTOM
BOW	BOTTOM OF WALL
CAB	CABINET
CL	CENTERLINE
CLG	CEILING
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CONTR	CONTRACT(OR)
CP	CENTERPOINT
CSMT	CASEMENT
DBL	DOUBLE
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DW	DISHWASHER
EA	EACH
EXH	EXHAUST
EX	EXISTING
EXT	EXTERIOR
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FN GRDE	FINISHED GRADE
FN	FINISHED
FNDN	FOUNDATION
FLR	FLOOR
FP	FIREPLACE
FRZR	FREEZER
GA	GAUGE
GL	GLASS
GR	GRADE
GWB	GYPSUM WALL BOARD
HB	HOSE BIBB
HGT	HEIGHT(H)
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
LT	LIGHT(ING)
LV	LOW VOLTAGE
MEMB	MEMBRANE
MATL	MATERIAL
MTL	METAL
MFR	MANUFACTURER
MT	MOUNT(ED)
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NFC	NOT FOR CONSTRUCTION
NO.	NUMBER
NOM	NOMINAL
OC	ON CENTER
OPH	OPPOSITE HAND
PNL	PANEL
PL	PLATE, PROPERTY LINE
PWD	PLYWOOD
R	RISER(S); RADIUS
RAD	RADIUS
RE:	REFER TO
RFG	ROOFING
REFR	REFRIGERATOR
SIM	SIMILAR
T	TREAD(S)
TBD	TO BE DETERMINED
TG	TEMPERED GLASS
T&G	TONGUE & GROOVE
THK	THICKNESS
TOP	TOPPING
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLT(AGE)
VIF	VERIFY IN FIELD
WD	WOOD
WDW	WINDOW

FLOOR PLAN LEGEND:

- EXISTING WALL TO REMAIN
- NEW FULL-HEIGHT WALL
- NEW FULL-HEIGHT CONCRETE WALL
- PARTIAL-HEIGHT WALL
- PROPERTY LINE
- BUILDING / STRUCTURE ABOVE
- BUILDING / STRUCTURE BELOW
- CENTERLINE
- AREA OF DRAWING REVISION
- ELEVATION MARKER (A / A3.2)
- SECTION MARKER (A / A3.2)

GENERAL PROJECT NOTES:

1. DO NOT SCALE DRAWINGS.
2. THIS PROJECT SHALL COMPLY WITH ALL GOVERNING REGULATIONS, ORDINANCES, BUILDING CODES, OR COVENANTS OF THE AREA IN WHICH IT IS BUILT.
3. APPROVAL BY AN INSPECTOR DOES NOT CONSTITUTE AUTHORITY TO DEVIATE FROM THE DRAWINGS OR SPECIFICATIONS.
4. THE CONTRACTOR SHALL SCHEDULE WALK-THROUGHS AT EACH OF BELOW NOTED INTERVALS:
   A. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
   B. PRIOR TO THE COMMENCEMENT OF ALL MECHANICAL + ELECTRICAL WORK.
5. PROVIDE ALL NECESSARY BARRICADES, WARNING SIGNS, + DEVICES TO PROTECT PUBLIC + CONSTRUCTION PERSONNEL DURING CONSTRUCTION.
6. MAINTAIN ALL REQUIRED ACCESS + EGRESS DURING CONSTRUCTION.

DUTY OF COOPERATION:

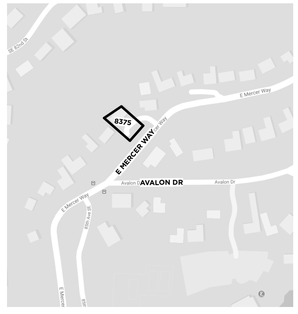
RELEASE + ACCEPTANCE OF THESE DOCUMENTS INDICATES COOPERATION AMONG THE OWNER, THE CONTRACTOR, + RIPPLE DESIGN STUDIO. ANY ERRORS, OMISSIONS, OR DISCREPANCIES DISCOVERED BY THE USE OF THESE DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO RIPPLE DESIGN STUDIO. FAILURE TO DO SO SHALL RELIEVE RIPPLE DESIGN STUDIO FROM ANY RESPONSIBILITY OF THE CONSEQUENCES.

ANY DEVIATIONS FROM THESE DOCUMENTS WITHOUT THE CONSENT OF RIPPLE DESIGN STUDIO ARE UNAUTHORIZED. FAILURE TO OBSERVE THESE PROCEDURES SHALL RELIEVE RIPPLE DESIGN STUDIO OF RESPONSIBILITY FOR ALL CONSEQUENCES ARISING OUT OF SUCH ACTIONS.

WSEC 2015 NOTES:

1. THIS PROJECT IS ELIGIBLE AND COMPLIANT W/ WSEC 2015 PRESCRIPTIVE METHOD.
2. INSULATION VALUES SHALL BE AS FOLLOWS:
   A. ALL VERTICAL GLAZING SHALL BE 0.30 U-FACTOR MAX.
   B. ALL OVERHEAD GLAZING SHALL BE 0.50 U-FACTOR MAX.
   C. ALL EXTERIOR DOORS (INCLUDING DOORS FROM CONDITIONED SPACE TO UNCONDITIONED SPACE) SHALL BE 0.20 U-FACTOR MIN.
   D. ALL CEILINGS OVER CONDITIONED SPACE SHALL RECEIVE R-49 BLOWN-IN INSULATION MIN.
   E. ALL VAULTED CEILINGS SHALL RECEIVE R-38 BATT INSULATION MIN.
   F. ALL ABOVE-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN.
   G. ALL BELOW-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN @ INTERIOR FRAMED WALL.
   H. ALL FLOORS OVER UNCONDITIONED SPACE SHALL RECEIVE R-30 BATT INSULATION MIN.
   I. ALL SLAB-ON-GRADE WITHIN CONDITIONED SPACE SHALL RECEIVE R-10 RIGID INSULATION WITHIN 24" OF SLAB PERIMETER.
   J. ALL HEADERS @ EXTERIOR WALLS SHALL RECEIVE R-10 RIGID INSULATION @ INTERIOR SIDE OF WALL.
3. RE: STRUCTURAL DRAWINGS FOR ALL FRAMING COMPLIANCE REQUIREMENTS.
4. PROVIDE 100 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ KITCHEN.
5. PROVIDE 50 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ ALL BATHS + LAUNDRY.
6. NATURAL GAS, PROPANE OR OIL WATER HEATER SHALL HAVE A MINIMUM EF OF 0.91 (WSEC 406.2 CREDIT 5C).
7. AT CRAWLSPACES THE MIN NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 FT² FOR EACH 300 FT² OF UNDER-FLOOR AREA. ONE VENTILATION OPENING SHALL BE WITHIN 3'-0" OF EACH CORNER OF THE BUILDING AT CRAWLSPACE, EXCEPT ONE SIDE OF THE BUILDING SHALL BE PERMITTED TO HAVE NO VENTILATION OPENINGS, OR CRAWLSPACE SHALL BE MECHANICALLY VENTED.
8. THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS R402.4.1 THROUGH R402.4.4. WHERE REQUIRED BY THE CODE OFFICIAL, TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY AND A WRITTEN REPORT OF THE TESTING RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE CODE OFFICIAL.
9. AT LEAST ONE THERMOSTAT PER DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE.

VICINITY MAP:



PROJECT INFO:

PROJECT ADDRESS:
8375 E. MERCER WAY
MERCER ISLAND, WA 98040

SCOPE OF WORK:
DEMOLITION OF EXISTING RESIDENCE AND CONSTRUCTION OF NEW SINGLE-FAMILY RESIDENCE WITH ATTACHED GARAGE.

ZONE:
R-8.4

LEGAL DESCRIPTION:
AVALON PARK ADD PCL A MERCER ISLAND LLR#SUB 16-004 REC#20170131900001 SD LLR DAF-LOTS 7THRU 9 SD BLK 3 TGW SELY 40 FT OF POR OF NW 1/4 STR 31-24-5 ADJ NWLY LNS OF SD LOTS & BET SWLY & NELY LN THOF EXTD WLY

ACCESSOR'S PARCEL NUMBER:
032110-0145

BUILDING CODE + OCCUPANCY:
2015 IRC (ARCHITECTURAL) + 2015 IBC (STRUCTURAL)
R-3 SINGLE-FAMILY RESIDENTIAL (RESIDENCE)
U STORAGE (GARAGE, STORAGE)

TYPE OF CONSTRUCTION:
TYPE-V-N NON-SPRINKLERED

OCCUPANT LOAD CALCULATIONS:

PROPOSED BASEMENT GROSS FLOOR AREA:	952 FT²
OCCUPANT LOAD FACTOR (ACCESSORY STORAGE):	1 PER 200 FT²
BASEMENT OCCUPANT LOAD:	5 OCCUPANTS
PROPOSED FIRST FLOOR GROSS FLOOR AREA:	1,907 FT²
OCCUPANT LOAD FACTOR (ACCESSORY STORAGE):	1 PER 200 FT²
FIRST FLOOR OCCUPANT LOAD:	10 OCCUPANTS
PROPOSED SECOND FLOOR GROSS FLOOR AREA:	1,918 FT²
OCCUPANT LOAD FACTOR (RESIDENTIAL):	1 PER 200 FT²
SECOND FLOOR OCCUPANT LOAD:	10 OCCUPANTS
TOTAL OCCUPANT LOAD:	25 OCCUPANTS

PROJECT TEAM:

CLIENT:
NEW HORIZON REAL ESTATE DEVELOPMENT
8744 126TH AVE NE
KIRKLAND, WA
206.557.0772

ARCHITECT / APPLICANT:
RIPPLE DESIGN STUDIO, INC. - JIM DEARTH
4303 STONE WAY N
SEATTLE, WA 98103
206.913.2333

SURVEYOR:
TERRANE
10801 MAIN STREET, SUITE 102
BELLEVUE, WA 98004
425.458.4488

GEOTECHNICAL ENGINEER:
PANGEO, INC. - MICHAEL XUE
3213 EASTLAKE AVE E SUITE B
SEATTLE, WA 98102
206.262.0307

CIVIL ENGINEER:
CIVIL ENGINEERING SOLUTIONS - JEFFREY ELLIS
2244 NW MARKET ST UNIT B
SEATTLE, WA 98107
206.930.0342

STRUCTURAL ENGINEER:
BUKER ENGINEERING - DANIEL BUKER
PO BOX 28531
SEATTLE, WA 98118
206.310.3559

CONTRACTOR:
TBD

SHEET INDEX:

RIPPLE
DESIGN STUDIO
206.913.2333
4303 STONE WAY N
SEATTLE, WA 98103

9790 REGISTERED ARCHITECT
JAMES M DEARTH
STATE OF WASHINGTON

E MERCER PARCEL 1
8375 E. MERCER WAY MERCER ISLAND, WA

REVIEWED FOR CODE COMPLIANCE
November 08, 2018
SITE COPY
CITY OF MERCER ISLAND

PROJECT INFORMATION

RELEASE

BUILDING PERMIT
10 OCT 2017

CORRECTIONS
20 SEPT 2018

A1.0

E MERCER PARCEL 1
AUTHORITY
9/20/18

RUN YONG USA

MERCER ISLAND LOT LINE REVISION NO. SUB 16-004

DECLARATION

WE THE UNDERSIGNED OWNER(S) IN FEE SIMPLE [AND CONTRACT PURCHASER(S)] OF THE LAND HEREIN DESCRIBED, DO HEREBY MAKE A LOT LINE REVISION THEREOF PURSUANT TO RCW 58.17.060 AND DECLARE THIS LOT LINE REVISION TO BE THE GRAPHIC REPRESENTATION OF THE SAME, AND THAT SAID SHORT SUBDIVISION IS MADE WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRE OF THE OWNER(S).

IN WITNESS WHEREOF WE HAVE SET OUR HANDS AND SEALS.

BY: _____
RUN YONG USA

ACKNOWLEDGEMENTS

STATE OF WASHINGTON }
} SS.
COUNTY OF KING }

I CERTIFY THAT I KNOW OR HAVE SATISFACTORY EVIDENCE THAT _____ IS THE PERSON WHO APPEARED BEFORE ME, AND SAID PERSON ACKNOWLEDGED THAT HE/SHE SIGNED THIS INSTRUMENT, ON OATH STATED THAT HE/SHE WAS AUTHORIZED TO EXECUTE THE INSTRUMENT AND ACKNOWLEDGED IT AS THE_____
OF RUN YONG USA, TO BE THE FREE AND VOLUNTARY ACT OF SUCH PARTY FOR THE USES AND PURPOSES MENTIONED IN THE INSTRUMENT.

GIVEN UNDER MY HAND AND OFFICIAL SEAL THIS _____ DAY OF _____, 2016.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON

PRINTED NAME _____
MY COMMISSION EXPIRES _____

CITY OF MERCER ISLAND APPROVALS

EXAMINED AND APPROVED THIS _____ DAY OF _____, 2016.

_____
CODE OFFICIAL

EXAMINED AND APPROVED THIS _____ DAY OF _____, 2016.

_____
CITY ENGINEER

KING COUNTY DEPARTMENT OF ASSESSMENTS

EXAMINED AND APPROVED THIS _____ DAY OF _____, 2016.

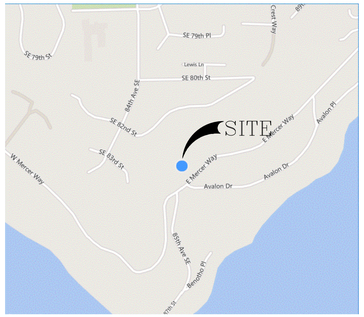
_____
ASSESSOR

BASIS OF BEARINGS

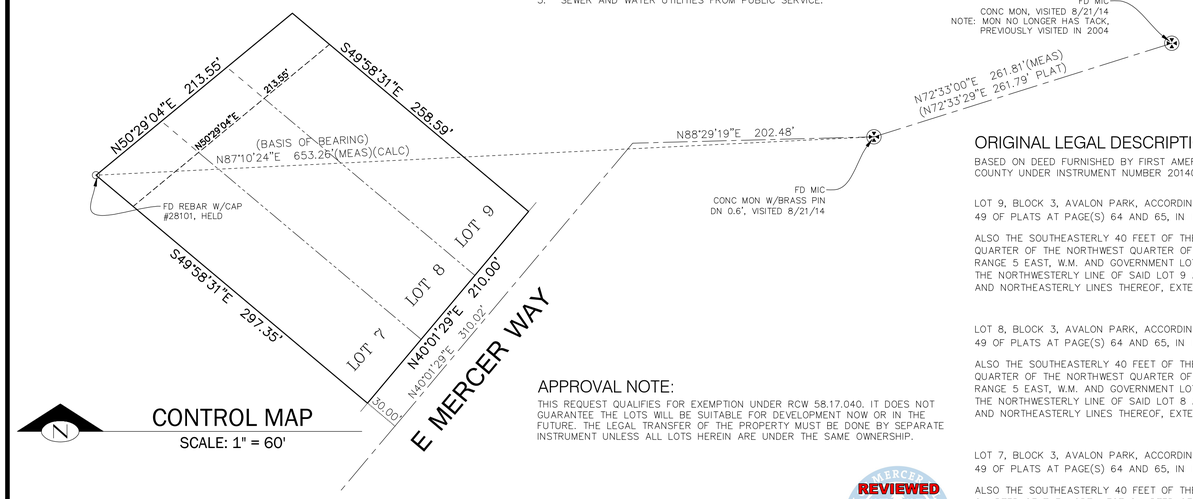
PER PLAT OF AVALON PARK, VOL. 49, PAGE(S) 64 & 65, RECORDS OF KING COUNTY, WASHINGTON.

SURVEY NOTES:

1. THE SURVEY SHOWN HEREON WAS PERFORMED IN AUGUST OF 2014. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST.
2. INSTRUMENTATION FOR THIS SURVEY WAS A LEICA TOTAL STATION UNIT. PROCEDURES USED IN THIS SURVEY WERE DIRECT AND REVERSE ANGLES, NO CORRECTION NECESSARY. MEETS WASHINGTON STATE STANDARDS SET BY WAC 332-130-090.
3. SEWER AND WATER UTILITIES FROM PUBLIC SERVICE.



VICINITY MAP
NOT TO SCALE



CONTROL MAP
SCALE: 1" = 60'

APPROVAL NOTE:

THIS REQUEST QUALIFIES FOR EXEMPTION UNDER RCW 58.17.040. IT DOES NOT GUARANTEE THE LOTS WILL BE SUITABLE FOR DEVELOPMENT NOW OR IN THE FUTURE. THE LEGAL TRANSFER OF THE PROPERTY MUST BE DONE BY SEPARATE INSTRUMENT UNLESS ALL LOTS HEREIN ARE UNDER THE SAME OWNERSHIP.

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ORIGINAL LEGAL DESCRIPTION:

BASED ON DEED FURNISHED BY FIRST AMERICAN TITLE, RECORDED IN KING COUNTY UNDER INSTRUMENT NUMBER 20140523001500, DATED MAY 23, 2014.

LOT 9, BLOCK 3, AVALON PARK, ACCORDING TO PLAT RECORDED IN VOLUME 49 OF PLATS AT PAGE(S) 64 AND 65, IN KING COUNTY, WASHINGTON.

ALSO THE SOUTHEASTERLY 40 FEET OF THE PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M. AND GOVERNMENT LOT 1 OF SAID SECTION ADJACENT TO THE NORTHWESTERLY LINE OF SAID LOT 9 AND BETWEEN THE SOUTHWESTERLY AND NORTHEASTERLY LINES THEREOF, EXTENDED NORTHWESTERLY.

LOT 8, BLOCK 3, AVALON PARK, ACCORDING TO PLAT RECORDED IN VOLUME 49 OF PLATS AT PAGE(S) 64 AND 65, IN KING COUNTY, WASHINGTON.

ALSO THE SOUTHEASTERLY 40 FEET OF THE PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M. AND GOVERNMENT LOT 1 OF SAID SECTION ADJACENT TO THE NORTHWESTERLY LINE OF SAID LOT 8 AND BETWEEN THE SOUTHWESTERLY AND NORTHEASTERLY LINES THEREOF, EXTENDED NORTHWESTERLY.

LOT 7, BLOCK 3, AVALON PARK, ACCORDING TO PLAT RECORDED IN VOLUME 49 OF PLATS AT PAGE(S) 64 AND 65, IN KING COUNTY, WASHINGTON.

ALSO THE SOUTHEASTERLY 40 FEET OF THE PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M. AND GOVERNMENT LOT 1 OF SAID SECTION ADJACENT TO THE NORTHWESTERLY LINE OF SAID LOT 7 AND BETWEEN THE SOUTHWESTERLY AND NORTHEASTERLY LINES THEREOF, EXTENDED NORTHWESTERLY.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

Terrane
10801 Main Street, Suite 102, Bellevue, WA 98004
phone 425.458.4488 support@terrane.net
www.terrane.net

EDWIN J. GREEN, JR. — 22331 — REGISTERED PROFESSIONAL LAND SURVEYOR — STATE OF WASHINGTON

CITY OF MERCER ISLAND SUB16-004
NW 1/4, NW 1/4, SEC 31, T 24N, R 5E, W.M.
RUN YONG USA
8375 & 8383 E MERCER WAY
MERCER ISLAND, WA

JOB NO.:	140845
DATE:	9/16/16
DRAFTED BY:	TLR
CHECKED BY:	EJG/SRM
SCALE:	1" = 60'

RUN YONG USA

MERCER ISLAND LOT LINE REVISION NO. SUB 16-004

SURVEY LEGEND

- BUILDING LINE
- EV — ELECTRICAL VAULT
- FOUND SURVEY MONUMENT
- FENCE LINE (CHAIN LINK)
- FENCE LINE (WOOD)
- FOUND IRON PIPE
- FOUND REBAR
- HH — HAND HOLE
- HYD — FIRE HYDRANT
- MH — MAINTENANCE HOLE
- PM — POWER METER
- TPED — TELEPHONE PEDISTAL
- WM — WATER METER
- WETLAND FLAG
- WATER VALVE

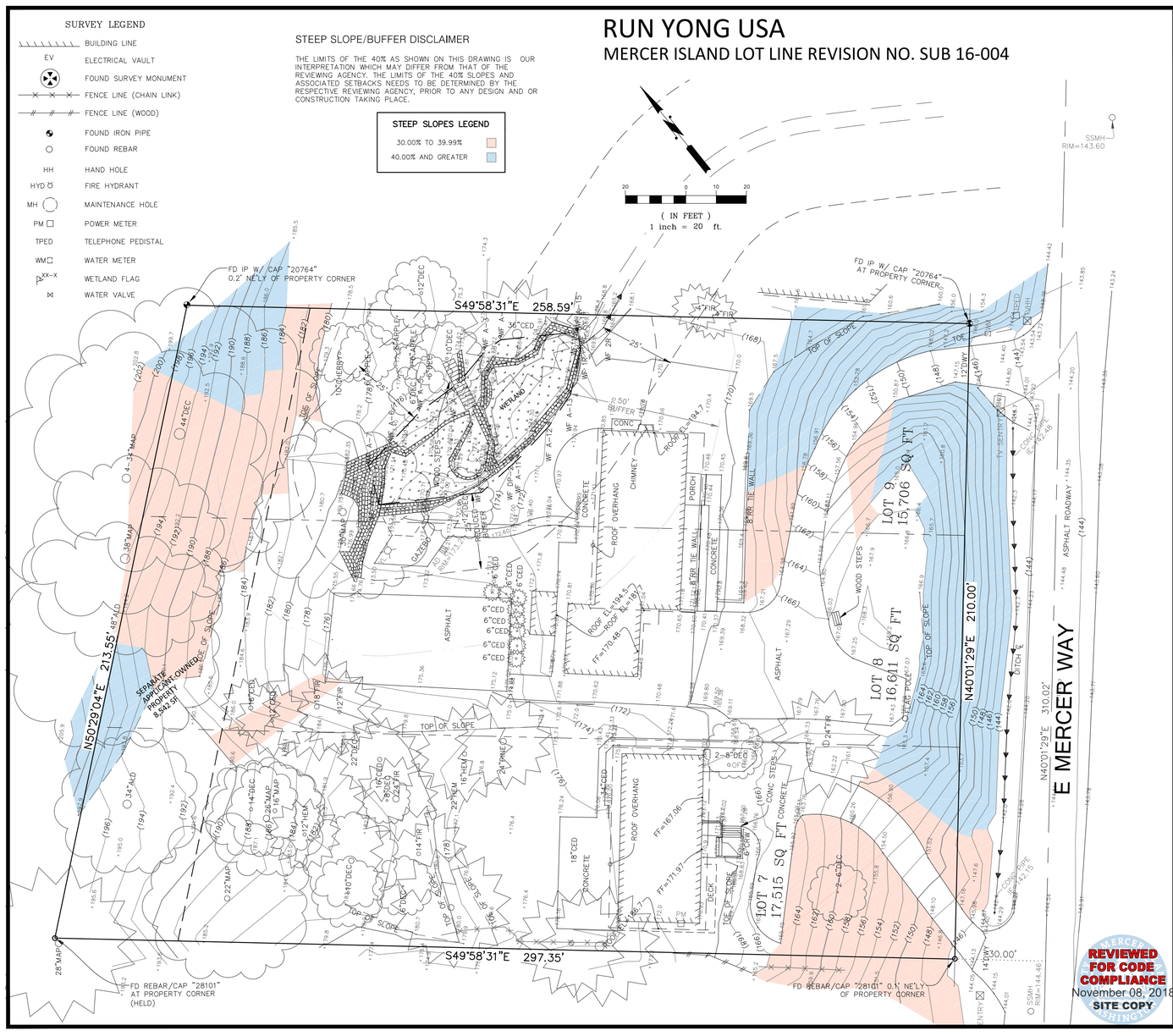
STEEP SLOPE/BUFFER DISCLAIMER

THE LIMITS OF THE 40% AS SHOWN ON THIS DRAWING IS OUR INTERPRETATION WHICH MAY DIFFER FROM THAT OF THE REVIEWING AGENCY. THE LIMITS OF THE 40% SLOPES AND ASSOCIATED SETBACKS NEEDS TO BE DETERMINED BY THE RESPECTIVE REVIEWING AGENCY, PRIOR TO ANY DESIGN AND OR CONSTRUCTION TAKING PLACE.

STEEP SLOPES LEGEND

- 30.00% TO 39.99%
- 40.00% AND GREATER

(IN FEET)
1 inch = 20 ft.



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www.terrane.net

EDWIN J. GREEN JR. — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON

TOPOGRAPHIC SURVEY
NW 1/4, NW 1/4, SEC 31, T 24N, R 5E, W.M.
RUN YONG USA
8375 & 8383 E MERCER WAY
MERCER ISLAND, WA

JOB NO.:	140845
DATE:	9/16/16
DRAFTED BY:	TLR
CHECKED BY:	EJG/SRM
SCALE:	1" = 20'

RUN YONG USA

MERCER ISLAND LOT LINE REVISION FILE NO. SUB 16-004

TOTAL SITE AREA IS 58,373 SF OR 1.34 ACRES.

PARCEL A
GROSS =15,683 SF
WETLAND BUFFER = 2,839 SF
ACCESS ESM'T = 524 SF
NET = 12,320 SF

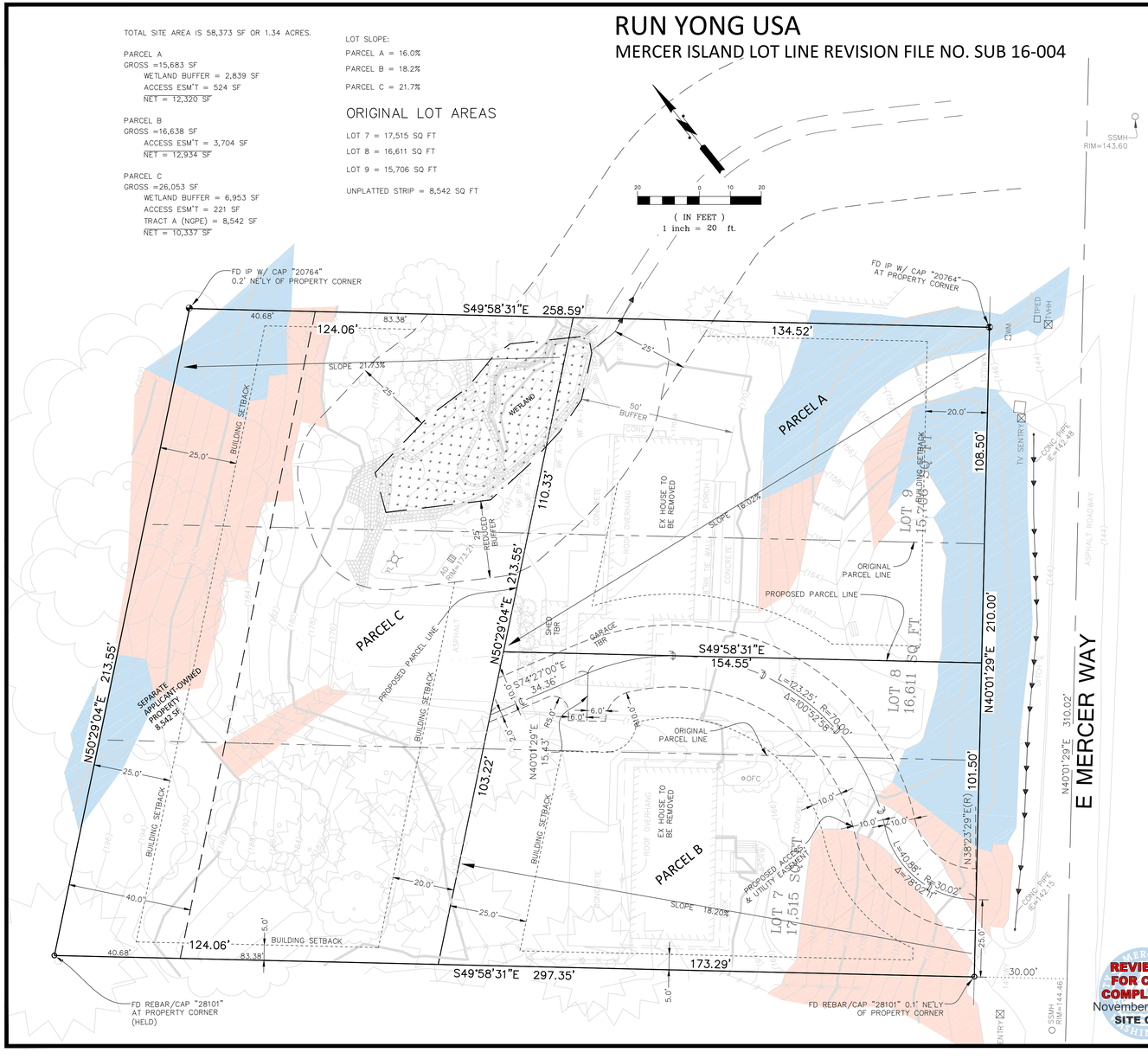
PARCEL B
GROSS =16,638 SF
ACCESS ESM'T = 3,704 SF
NET = 12,934 SF

PARCEL C
GROSS =26,053 SF
WETLAND BUFFER = 6,953 SF
ACCESS ESM'T = 221 SF
TRACT A (NGPE) = 8,542 SF
NET = 10,337 SF

LOT SLOPE:
PARCEL A = 16.0%
PARCEL B = 18.2%
PARCEL C = 21.7%

ORIGINAL LOT AREAS
LOT 7 = 17,515 SQ FT
LOT 8 = 16,611 SQ FT
LOT 9 = 15,706 SQ FT
UNPLATTED STRIP = 8,542 SQ FT

20 0 10 20
(IN FEET)
1 inch = 20 ft.



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November 08, 2018
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www.terrane.net

LOT LAYOUT
NW 1/4, NW 1/4, SEC 31, T 24N, R 5E, W.M.
RUN YONG USA
8375 & 8383 E MERCER WAY
MERCER ISLAND, WA

JOB NO.:	140845
DATE:	9/16/16
DRAFTED BY:	TLR
CHECKED BY:	EJG/SRM
SCALE:	1" = 20'

RUN YONG USA

MERCER ISLAND LOT LINE REVISION FILE NO. SUB 16-004

NEW LEGAL DESCRIPTIONS:

PARCEL A

LOT 9 AND THE NORTHEASTERLY 38.50 FEET OF LOT 8, BLOCK 3, AVALON PARK, ACCORDING TO THE PLAT RECORDED IN VOLUME 49 OF PLATS, AT PAGES 64 AND 65, IN KING COUNTY, WASHINGTON,

EXCEPT THE NORTHWESTERLY 82.00 FEET THEREOF.

PARCEL B

LOTS 7 AND 8, BLOCK 3, AVALON PARK, ACCORDING TO THE PLAT RECORDED IN VOLUME 49 OF PLATS, AT PAGES 64 AND 65, IN KING COUNTY, WASHINGTON,

EXCEPT THE NORTHEASTERLY 38.50 FEET OF SAID LOT 8;
AND EXCEPT THE NORTHWESTERLY 82.00 FEET THEREOF.

PARCEL C

THE NORTHWESTERLY 82.00 FEET OF LOTS 7, 8 AND 9, BLOCK 3, AVALON PARK, ACCORDING TO THE PLAT RECORDED IN VOLUME 49 OF PLATS, AT PAGES 64 AND 65, IN KING COUNTY, WASHINGTON;

TOGETHER WITH THE SOUTHEASTERLY 40 FEET OF THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M. AND GOVERNMENT LOT 1 OF SAID SECTION LYING BETWEEN THE SOUTHWESTERLY LINE OF LOT 7 IN BLOCK 3 OF SAID PLAT EXTENDED NORTHWESTERLY AND THE NORTHEASTERLY LINE OF LOT 9 IN BLOCK 3 OF SAID PLAT EXTENDED NORTHWESTERLY.

ACCESS AND UTILITY EASEMENT

THAT PORTION OF LOTS 7 AND 8, BLOCK 3, AVALON PARK, ACCORDING TO THE PLAT RECORDED IN VOLUME 49 OF PLATS, AT PAGES 64 AND 65, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

A STRIP OF LAND, 20.00 FEET IN WIDTH, HAVING 10.00 FEET ON BOTH SIDES OF THE FOLLOWING DESCRIBED CENTERLINE;

COMMENCING AT THE MOST SOUTHERLY CORNER OF SAID LOT 7;
THENCE NORTH 40°01'29" EAST, ALONG THE SOUTHEASTERLY LINE OF SAID LOT 7, A DISTANCE OF 25.00 FEET, TO THE BEGINNING OF A NON-TANGENT CURVE TO THE RIGHT FROM WHICH THE CENTER BEARS NORTH 38°23'29" EAST, 30.02 FEET DISTANT, AND THE POINT OF BEGINNING OF THIS CENTERLINE DESCRIPTION;
THENCE NORTHWESTERLY, NORTHERLY AND NORTHEASTERLY, ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 78°02'11" AND AN ARC DISTANCE OF 40.88 FEET, TO A POINT OF REVERSE CURVATURE HAVING A RADIUS OF 70.00 FEET;
THENCE NORTHEASTERLY, NORTHERLY AND NORTHWESTERLY, ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 100°52'58" AND AN ARC DISTANCE OF 123.25 FEET, TO A POINT HEREINAFTER REFERRED TO AS POINT "A" AND THE TERMINUS OF THIS CENTERLINE DESCRIPTION;

TOGETHER WITH A STRIP OF LAND, 12.00 FEET IN WIDTH, HAVING 6.00 FEET ON BOTH SIDES OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE HEREINBEFORE REFERENCED POINT "A";
THENCE SOUTH 40°01'29" WEST 15.43 FEET, TO THE TERMINUS OF THIS CENTERLINE DESCRIPTION;

TOGETHER WITH THAT PORTION OF SAID LOT 8, LYING NORTHERLY OF A FILLETED CURVE, CONCAVE TO THE SOUTH, HAVING A RADIUS OF 10.00 FEET BETWEEN THE SOUTHEASTERLY LINE OF SAID 12.00 FOOT STRIP AND THE SOUTHERLY LINE OF SAID 20.00 FOOT STRIP;

TOGETHER WITH A STRIP OF LAND, 12.00 FEET IN WIDTH, HAVING 10.00 FEET ON THE NORTH SIDE AND 2.00 FEET ON THE SOUTH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE;
BEGINNING AT THE HEREINBEFORE REFERENCED POINT "A";
THENCE NORTH 74°27'00" WEST 34.36 FEET, TO THE TERMINUS OF THIS CENTERLINE DESCRIPTION, AND A POINT ON THE SOUTHEASTERLY LINE OF THE NORTHWESTERLY 82.00 FEET OF SAID LOTS 7 AND 8;

TOGETHER WITH THAT PORTION OF SAID LOT 8, LYING NORTHERLY OF A FILLETED CURVE, CONCAVE TO THE SOUTH, HAVING A RADIUS OF 5.00 FEET BETWEEN THE SOUTHWESTERLY LINE OF SAID 12.00 FOOT STRIP AND THE NORTHWESTERLY LINE OF SAID 12.00 FOOT STRIP;

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November 08, 2018
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MERCER ISLAND PLANNING

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JAMES R. GREEN JR. — STATE OF WASHINGTON — 19991 — REGISTERED PROFESSIONAL ENGINEER

LOT LAYOUT
NW 1/4, NW 1/4, SEC 31, T 24N, R 5E, W.M.
RUN YONG USA
8375 & 8383 E MERCER WAY
MERCER ISLAND, WA

JOB NO.: 140845
DATE: 9/16/16
DRAFTED BY: TLR
CHECKED BY: EJG/SRM
SCALE: 1" = 20'

SITE NOTES:

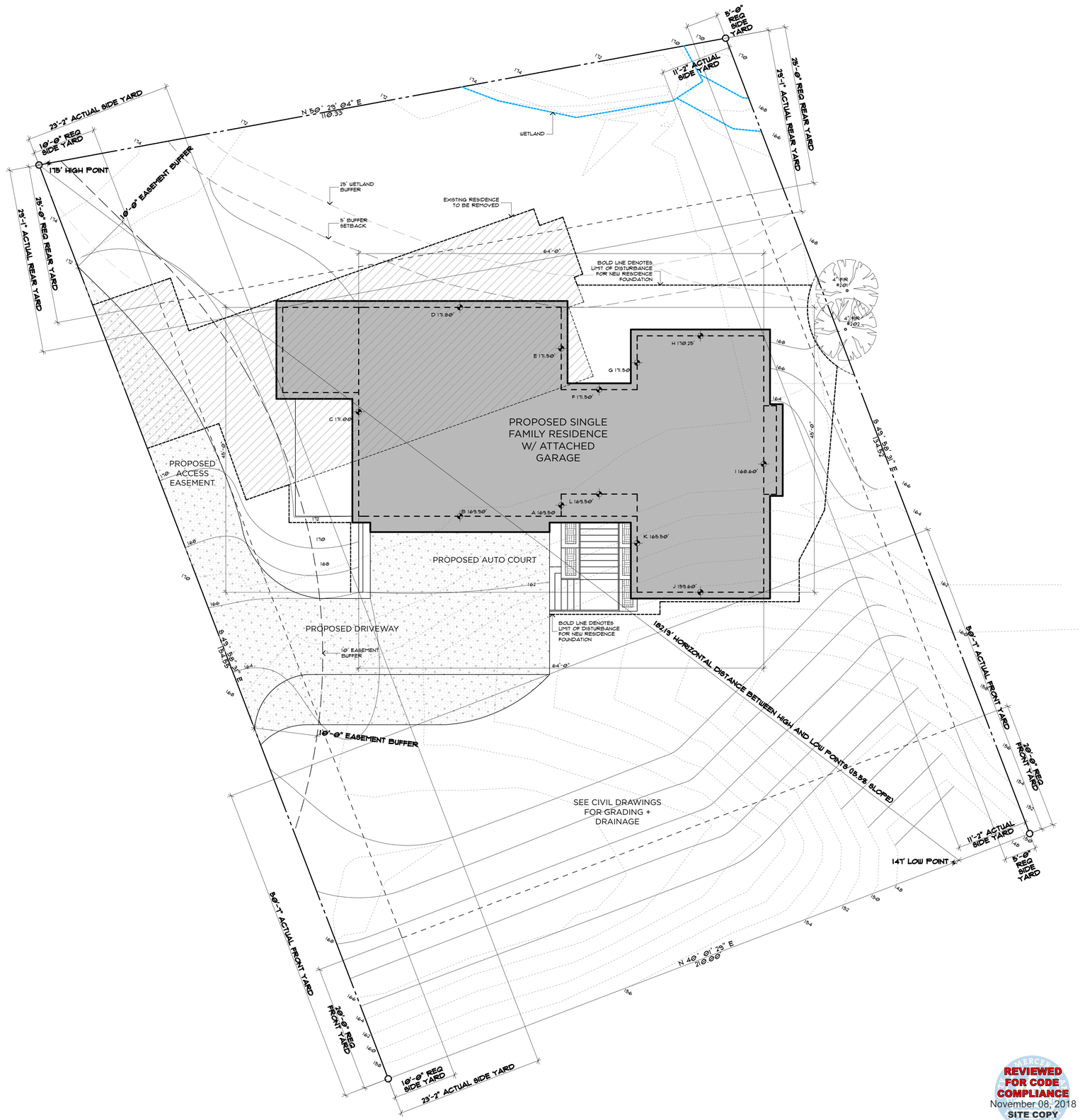
1. ALL IMMEDIATE AREAS AFFECTED BY NEW DEVELOPMENT SHALL BE GRADED AWAY FROM FOUNDATIONS + ADJACENT PROPERTIES @ 10% AS POSSIBLE, 2% MIN.

IMPERVIOUS SURFACE CALCULATIONS:

LOT AREA:	15,683 FT²
ALLOWABLE IMPERVIOUS SURFACE:	**5,489 FT² (35%)**
(LOT SLOPE IS BETWEEN 15% AND 30%)	
PROPOSED RESIDENCE ROOF AREA	2,602 FT²
PROPOSED DRIVE INCLUDING SHARED EASEMENT AREA:	1,796 FT²
WALKS + DECKS AREA:	362 FT²
WETLAND AREA:	286 FT²
TOTAL IMPERVIOUS SURFACE UPON COMPLETION:	**5,046 FT²** (32%)

AVERAGE BUILDING ELEVATION CALC.S:

ELEVATION @ POINT A:	169.50'
SEGMENT LENGTH @ POINT A:	3.5'
	(593.25' @ ELEV x LENGTH)
ELEVATION @ POINT B:	169.90'
SEGMENT LENGTH @ POINT B:	32'
	(5,436.80' @ ELEV x LENGTH)
ELEVATION @ POINT C:	171.00'
SEGMENT LENGTH @ POINT C:	33'
	(5,643.00' @ ELEV x LENGTH)
ELEVATION @ POINT D:	171.80'
SEGMENT LENGTH @ POINT D:	32'
	(5,497.60' @ ELEV x LENGTH)
ELEVATION @ POINT E:	171.50'
SEGMENT LENGTH @ POINT E:	13'
	(2,229.50' @ ELEV x LENGTH)
ELEVATION @ POINT F:	171.50'
SEGMENT LENGTH @ POINT F:	12'
	(2,058.00' @ ELEV x LENGTH)
ELEVATION @ POINT G:	171.50'
SEGMENT LENGTH @ POINT G:	8.5'
	(1,457.75' @ ELEV x LENGTH)
ELEVATION @ POINT H:	170.25'
SEGMENT LENGTH @ POINT H:	20'
	(3,405.00' @ ELEV x LENGTH)
ELEVATION @ POINT I:	168.60'
SEGMENT LENGTH @ POINT I:	40.5'
	(6,828.30 @ ELEV x LENGTH)
ELEVATION @ POINT J:	159.60'
SEGMENT LENGTH @ POINT J:	20'
	(3,192.00' @ ELEV x LENGTH)
ELEVATION @ POINT K:	165.50'
SEGMENT LENGTH @ POINT K:	15.5'
	(2,565.25' @ ELEV x LENGTH)
ELEVATION @ POINT L:	169.50'
SEGMENT LENGTH @ POINT L:	12'
	(2,034.00' @ ELEV x LENGTH)
TOTAL ELEVs x SEGMENT LENGTHs:	40,940.45'
TOTAL SEGMENT LENGTHs:	242'
AVERAGE NATURAL GRADE (ANG):	**169.18'**



SITE PLAN

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

0 1 4 8 12 16

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RIPPLE
DESIGN STUDIO
206.913.2333
4303 STONE WAY N
SEATTLE, WA 98103

9790 REGISTERED ARCHITECT
JAMES M DEARTH
STATE OF WASHINGTON

E MERCER PARCEL 1
8375 E. MERCER WAY MERCER ISLAND, WA

SITE PLAN

RELEASE

BUILDING PERMIT
10 OCT 2017

CORRECTIONS
20 SEPT 2018

A1.1

E MERCER PARCEL 1

TREE TABLE

BY AMERICAN FOREST MANAGEMENT

Tree Summary Table
For: 8383 E Mercer Way

American Forest Management, Inc.
Date: 8/29/14
Inspector: Wilkinson

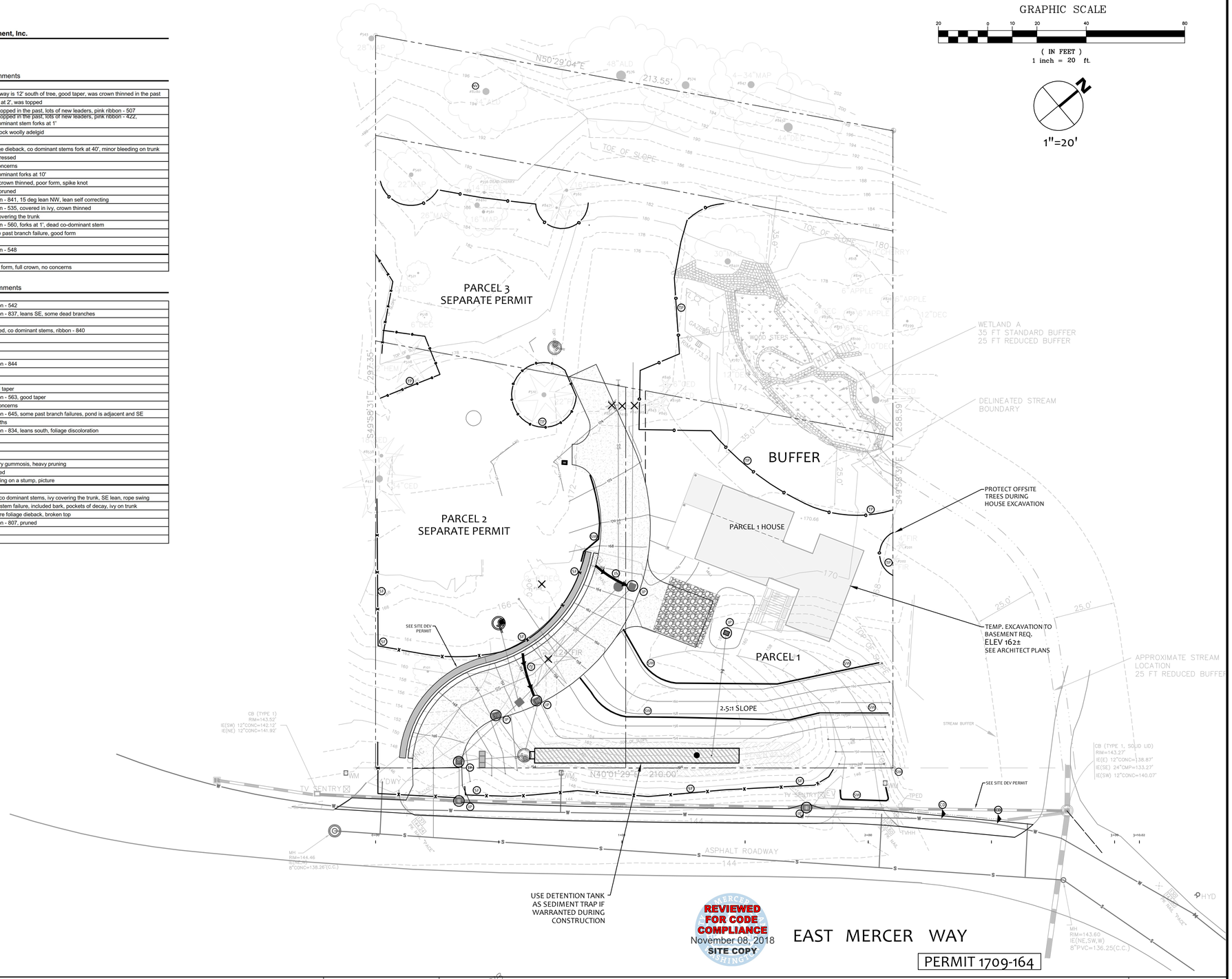
Tree/ Tag #	Species	DBH (inches)	Height (feet)	Drip-Line/Limits of Disturbance (feet) N	S	E	W	Condition	Viability	Comments
8185	Douglas fir	26	85		17 / 12		15 / 12	good	viable	driveway is 12' south of tree, good taper, was crown thinned in the past
101	deciduous ornamental	5, 7	20	15 / 8	10 / 8	10 / 8	12 / 8	good	viable	forks at 2', was topped
8538	western red cedar	19	55	13 / 12			18 / 12	fair-poor	borderline	was topped in the past, lots of new leaders, pink ribbon - 507
422	western red cedar	9, 22	55	14 / 12			16 / 12	fair-poor	borderline	was topped in the past, lots of new leaders, pink ribbon - 422, co-dominant stem forks at 1'
508	western hemlock	22	75	22 / 15		23 / 15	13 / 15	fair	viable	hemlock woolly adelgid
518	deciduous	5						good	viable	
8467	sitka spruce	17	75	6 / 10	16 / 10	20 / 10	4 / 10	fair	viable	foliage dieback, co dominant stems fork at 40', minor bleeding on trunk
521	Washington hawthorne	9	52	12 / 6		12 / 6		fair	viable	suppressed
519	Douglas fir	22	125		14 / 12	11 / 12	6 / 12	good	viable	no concerns
520	European mountain ash	7	25	15 / 6	10 / 6	13 / 6		good	viable	co-dominant forks at 10'
8509	western hemlock	20	90	15 / 12	12 / 12	14 / 12	8 / 12	fair	viable	was crown thinned, poor form, spike knot
510	western white pine	22	95	12 / 12	18 / 12	15 / 10	12 / 12	fair	viable	was pruned
8510	western red cedar	17	75	11 / 10	12 / 10	5 / 10	11 / 10	fair	viable	ribbon - 841, 15 deg lean NW, lean self correcting
8464	western hemlock	12	88		10 / 8		2 / 8	fair	viable	ribbon - 535, covered in ivy, crown thinned
561	big leaf maple	19	90			12 / 10		fair	viable	ivy covering the trunk
8462	big leaf maple	18	90	5 / 10			18 / 10	fair	viable	ribbon - 560, forks at 1', dead co-dominant stem
540	big leaf maple	22	90	25 / 15	25 / 15	17 / 15	10 / 15	good	viable	some past branch failure, good form
328	deciduous	6, 6	12	8	10	5	5	fair	viable	
8280	red alder	25	95					poor	non-viable	ribbon - 548
						Neighboring Trees				
543	big leaf maple	26			20 / 15		16 / 15	good	viable	good form, full crown, no concerns

Tree/ Tag #	Species	DBH (inches)	Height (feet)	Drip-Line/Limits of Disturbance (feet) N	S	E	W	Condition	Viability	Comments
8471	western red cedar	11	50	10 / 8	10 / 8	12 / 8	9 / 8	good	viable	ribbon - 542
8432	big leaf maple	38	100		38 / 20	35 / 20		fair	viable	ribbon - 837, leans SE, some dead branches
839	Pyramidalis arborvitae	5	25					fair	viable	
8497	Pyramidalis arborvitae	10	15					fair-poor	borderline	topped, co dominant stems, ribbon - 840
841	Pyramidalis arborvitae	6	28					fair	viable	
842	Pyramidalis arborvitae	6	30					fair	viable	
843	Pyramidalis arborvitae	6	30					fair	viable	
8498	Pyramidalis arborvitae	7	30					fair	viable	ribbon - 844
845	Pyramidalis arborvitae	6	35					fair	viable	
846	Pyramidalis arborvitae	7	35					fair	viable	
564	Douglas-fir	13	92		7 / 8	10 / 8	4 / 8	good	viable	good taper
8470	Douglas-fir	18	95	12 / 8		12 / 8	6 / 8	good	viable	ribbon - 563, good taper
562	western red cedar	18	65	11 / 10		15 / 12	5 / 10	good	viable	no concerns
8401	big leaf maple	36	95	20 / 18	25 / 10	29 / 10	26 / 18	fair	viable	ribbon - 645, some past branch failures, pond is adjacent and SE
787	cherry	13	18					poor	non viable	growths
8100	deciduous	8	22	4 / 4	15 / 4	4 / 4		fair-poor	borderline	ribbon - 834, leans south, foliage discoloration
835	fruit	5, 2	20	5 / 4	4 / 4	8 / 4		fair	viable	
833	apple	6	18	5 / 4	2 / 4	4 / 4	4 / 4	fair	viable	
819	fruit tree	5, 3	15	4 / 4	10 / 4	5 / 4	5 / 4	fair	viable	
818	cherry	9	22				10 / 8	fair	viable	cherry gummosis, heavy pruning
820	fruit tree	5, 2	12	2 / 4	8 / 4	4 / 4	6 / 4	fair	viable	pruned
798	western red cedar	26	70	10 / 12	15 / 12		18 / 12	fair	viable	growing on a stump, picture
						Neighboring Trees				
847	big leaf maple	38, 22, 30, 25			39 / 20	31 / 20		fair	viable	four co dominant stems, ivy covering the trunk, SE lean, rope swing
574	red alder	15, 32			38			fair-poor	borderline	past stem failure, included bark, pockets of decay, ivy on trunk
576	red alder	12, 9 , 34						poor	non-viable	severe foliage dieback, broken top
8399	cherry	3, 11, 4					8 / 5	fair	viable	ribbon - 807, pruned
201	Douglas-fir	4					4 / 4	good	viable	
202	Douglas-fir	4					8 / 4	good	viable	

Drip-lines range from 2-3', limiting distance for all sides is 3'

Drip-Line and Limits of Disturbance measurements from face of trunk
Trees on neighboring properties - Drip-line and Limits of Disturbance measurements from property lines

Drip-Line and Limits of Disturbance measurements from face of trunk
Trees on neighboring properties - Drip-line and Limits of Disturbance measurements from property lines



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November 08, 2018
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PERMIT 1709-164

NO.	DATE	BY	REVISIONS

APPLICANT
New Horizon Real Estate Development
8744 126th Ave NE
Kirkland, WA 98033

811 Know what's below. Call before you dig.

DATE: Sep 19, 2018
JOB# 1337
DRAFTED: CH DESIGN: DE
DIGITAL SIGNATURE

Sep 19, 2018
JEFFREY E. HARRIS
STATE OF WASHINGTON
39766
REGISTERED
PROFESSIONAL ENGINEER

CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

EROSION CONTROL PLAN

PARCEL 1

New Horizon Real Estate Development
8375 AND 8383 EAST MERCER WAY
MERCER ISLAND, WA 98040

DRAWING NO:
C1.0

APN 032110-0145
& 032110-0140

RECOMMENDED CONSTRUCTION SEQUENCE

A DETAILED CONSTRUCTION SEQUENCE IS NEEDED TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE APPLIED AT THE APPROPRIATE TIMES. A RECOMMENDED CONSTRUCTION SEQUENCE IS PROVIDED BELOW:

1. HOLD AN ONSITE PRE-CONSTRUCTION MEETING.

2. POST SIGN WITH NAME AND PHONE NUMBER OF ESC SUPERVISOR (MAY BE CONSOLIDATED WITH THE REQUIRED NOTICE OF CONSTRUCTION SIGN).

3. FLAG OR FENCE CLEARING LIMITS.

4. INSTALL CATCH BASIN PROTECTION, IF REQUIRED.

5. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).

6. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).

7. CONSTRUCT SEDIMENT PONDS AND TRAPS.

8. GRADE AND STABILIZE CONSTRUCTION ROADS.

9. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.

10. MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OF MERCER ISLAND STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

11. RELOCATE SURFACE SURFACE WATER CONTROLS OR TESC MEASURES, OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE TESC IS ALWAYS IN ACCORDANCE WITH CITY OF MERCER ISLAND TESC REQUIREMENTS.

12. COVER ALL AREAS THAT WILL BE UN-WORKED FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON (MAY 1 TO SEPT 30) OR TWO DAYS DURING THE WET SEASON (OCT 1 TO APRIL 30) WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, OR EQUIVALENT.

13. STABILIZE ALL AREAS WITHIN SEVEN DAYS OF REACHING FINAL GRADE.

14. SEED, SOD, STABILIZE, OR COVER ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.

15. UPON COMPLETION OF THE PROJECT, STABILIZE ALL DISTURBED AREAS AND REMOVE BMPS IF APPROPRIATE.

DENUDED AREAS REQUIREMENTS

APRIL 1 TO SEPT 30
ALL DENUDED AREAS MUST BE STABILIZED WITHIN 7 DAYS OF CONSTRUCTION. PLEASE READ ALL CITY TESC NOTES ON SHEET C1.2.

OCT 1 TO MARCH 31
ALL DENUDED AREAS MUST BE STABILIZED WITHIN 2 DAYS OF GRADING. IF AN EROSION PROBLEM ALREADY EXISTS ON THE SITE, OTHER COVER PROTECTION AND EROSION CONTROL WILL BE REQUIRED.

EROSION CONTROL NOTES

D.8.2 STANDARD ESC PLAN NOTES
THE STANDARD ESC PLAN NOTES MUST BE INCLUDED ON ALL ESC PLANS. AT THE APPLICANT'S DISCRETION, NOTES THAT IN NO WAY APPLY TO THE PROJECT MAY BE OMITTED; HOWEVER, THE REMAINING NOTES MUST NOT BE RENUMBERED. FOR EXAMPLE, IF ESC NOTE #3 WERE OMITTED, THE REMAINING NOTES SHOULD BE NUMBERED 1, 2, 4, 5, 6, ETC.

1. APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).

2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND
UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.

3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION (SWDM APPENDIX D). DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.

4. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.

5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.

6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.) AS DIRECTED BY CITY OF MERCER ISLAND.

7. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.

8. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO CONSECUTIVE DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).

9. ANY AREA NEEDING ESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.

10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH DURING THE DRY SEASON, BI-MONTHLY DURING THE WET SEASON, OR WITHIN TWENTY FOUR (24) HOURS FOLLOWING A STORM EVENT.

11. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.

12. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE ROUGH GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.

13. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL

14. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON.

CITY NOTES

1. ANY CHANGES TO THE APPROVED PLANS REQUIRES CITY APPROVAL THROUGH A REVISION.
2. APPLICANT IS RESPONSIBLE FOR ANY DAMAGES TO UNDERGROUND UTILITIES CAUSED FROM THIS CONSTRUCTION.
3. CATCH BASIN FILTERS SHOULD BE PROVIDED FOR ALL STORM DRAIN CATCH BASINS/INLETS DOWNSLOPE AND WITHIN 500 FEET OF THE CONSTRUCTION AREA. CATCH BASIN FILTERS SHOULD BE DESIGNED BY THE MANUFACTURER FOR USE AT CONSTRUCTION SITES AND APPROVED BY THE CITY INSPECTOR. CATCH BASIN FILTERS SHOULD BE INSPECTED FREQUENTLY, ESPECIALLY AFTER STORM EVENTS. IF THE FILTER BECOMES CLOGGED, IT SHOULD BE CLEANED OR REPLACED.
4. CONTRACTORS SHALL VERIFY LOCATIONS AND DEPTHS OF UTILITES.
5. AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, CALL "ONE CALL" AT 1.800.424-5555
6. DO NOT BACKFILL WITH NATIVE MATERIAL ON PUBLIC RIGHT-OF-WAY. ALL MATERIAL MUST BE IMPORTED
7. EROSION CONTROL: ALL "LAND DISTURBING ACTIVITY" IS SUBJECT TO PROVISIONS OF MERCER ISLAND ORDINANCE 95C-118 "STORM WATER MANAGEMENT." SPECIFIC ITEMS TO BE FOLLOWED AT YOUR SITE:
8. PROTECT ADJACENT PROPERTIES FROM ANY INCREASED RUNOFF OR SEDIMENTATION DUE TO THE CONSTRUCTION PROJECT THROUGH THE USE OF APPROPRIATE "BEST MANAGEMENT PRACTICES" (BMP) EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO, SEDIMENT TRAPS, SEDIMENT PONDS, FILTER FABRIC FENCES, VEGETATIVE BUFFER STRIPS OR BIOENGINEERED SWALES.
9. CONSTRUCTION ACCESS TO THE SITE SHOULD BE LIMITED TO ONE ROUTE. STABILIZE ENTRANCE WITH QUARRY SPALLS TO PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING THE STORM DRAINS.
10. PREVENT SEDIMENT, CONSTRUCTION DEBRIS, PAINTS, SOLVENTS, ETC., OR OTHER TYPES OF POLLUTION FROM ENTERING PUBLIC STORM DRAINS. KEEP ALL POLLUTION ON YOUR SITE.
11. ALL EXPOSED SOILS SHALL REMAIN DENUDED FOR NO LONGER THAN SEVEN (7) DAYS AND SHALL BE STABILIZED WITH MULCH, HAY, OR THE APPROPRIATE GROUND COVER. ALL EXPOSED SOILS SHALL BE COVERED IMMEDIATELY DURING ANY RAIN EVENT.
12. INSTALLATION OF CONCRETE DRIVEWAYS, TREES, SHRUBS, IRRIGATION, BOULDERS, BERMS, WALLS, GATES, AND OTHER IMPROVEMENTS ARE NOT ALLOWED IN THE PUBLIC RIGHT-OF-WAY WITHOUT PRIOR APPROVAL, AND AN ENCROACHMENT AGREEMENT AND RIGHT OF WAY PERMIT FROM THE SENIOR DEVELOPMENT ENGINEER.
13. OWNER SHALL CONTROL DISCHARGE OF SURFACE DRAINAGE RUNOFF FROM EXISTING AND NEW IMPERVIOUS AREAS IN A RESPONSIBLE MANNER. CONSTRUCTION OF NEW GUTTERS AND DOWNSPOUTS, DRY WELLS, LEVEL SPREADERS OR DOWNSTREAM CONVEYANCE PIPE MAY BE NECESSARY TO MINIMIZE DRAINAGE IMPACT TO YOUR NEIGHBORS. CONSTRUCTION OF MINIMUM DRAINAGE IMPROVEMENTS SHOWN OR CALLED OUT ON THIS PLAN DOES NOT IMPLY RELIEF FROM CIVIL LIABILITY FOR YOUR DOWNSTREAM DRAINAGE.
14. POT HOLING THE PUBLIC UTILITIES IS REQUIRED PRIOR TO ANY GRADING ACTIVITIES LESS THAN 6" OVER THE PUBLIC MAINS (WATER, SEWER AND STORM SYSTEMS). IF THERE IS A CONFLICT, THE APPLICANT IS REQUIRED TO SUBMIT A REVISION FOR APPROVAL PRIOR TO ANY GRADING ACTIVITIES OVER THE PUBLIC MAINS.
15. REMEMBER: EROSION CONTROL IS YOUR FIRST INSPECTION.
16. ROOF DRAINS MUST BE CONNECTED TO THE STORM DRAIN SYSTEM AND INSPECTED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO ANY BACKFILLING OF PIPE.
17. SILENT FENCE: CLEAN AND PROVIDE REGULAR MAINTENANCE OF THE SILT FENCE. THE FENCE IS TO REMAIN VERTICAL AND IS TO FUNCTION PROPERLY THROUGHOUT THE TERM OF THE PROJECT.
18. WORK IN PUBLIC RIGHT OF WAY REQUIRES A RIGHT-OF-WAY USE PERMIT.
19. REFER TO WATER SERVICE PERMIT FOR ACTUAL LOCATION OF NEW WATER METER AND SERVICE LINE DETERMINED BY MERCER ISLAND WATER DEPARTMENT.
16. THE TV INSPECTION OF THE EXISTING SIDE SEWER TO THE CITY SEWER MAIN IS REQUIRED. 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. ALTERNATELY, A PRESSURE TEST OF THE SIDE SEWER, FROM SEWER MAIN TO POINT OF CONNECTION, MAY BE SUBSTITUTED FOR THE VIDEO INSPECTION.
20. NEWLY INSTALLED SIDE SEWER REQUIRES A 4 P.S.I. AIR TEST OR PROVIDE 10' OF HYDROSTATIC HEAD TEST.
21. POT HOLING THE PUBLIC UTILITIES IS REQUIRED PRIOR TO ANY GRADING ACTIVITIES LESS THAN 6" OVER THE PUBLIC MAINS (WATER, SEWER AND STORM SYSTEMS). IF THERE IS A CONFLICT, THE APPLICANT IS REQUIRED TO SUBMIT A REVISION FOR APPROVAL PRIOR TO ANY GRADING ACTIVITIES OVER THE PUBLIC MAINS.
22. THE LIMITS AND EXTENDS OF THE PAVEMENT IN THE PUBLIC RIGHT OF WAY SHALL BE DETERMINED BY THE CITY ENGINEER PRIOR TO FINALIZE THE PROJECT.

CITY OF MERCER ISLAND
REVIEWED FOR CODE COMPLIANCE
November 08, 2018
SITE COPY

NO.	DATE	BY	REVISIONS

APPLICANT
New Horizon Real Estate Development
8744 126th Ave NE
Kirkland, WA 98033

811 Know what's below. Call before you dig.

DATE: Sep 15, 2018
JOB# 1337
DRAFTED: CH DESIGN: DE
DIGITAL SIGNATURE

Sep 15, 2018
JEFFREY E. DUFFY — STATE OF WASHINGTON — 39766 — REGISTERED PROFESSIONAL ENGINEER

CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

TESCP NOTES
PARCEL 1-3
New Horizon Real Estate Development
8375 AND 8383 EAST MERCER WAY
MERCER ISLAND, WA 98040

DRAWING NO:
C1.2

APN 032110-0145
& 032110-0140

SANITARY SEWER IMPROVEMENTS

(1) -

(2) 6" SDR 35 PVC SANITARY SEWER(SS) @ MIN 1.0%.

(3) -

(4) 6" SEWER CLEANOUT PER MERCER ISLAND DETAIL S-19.

(7) -

(8) -

WATER IMPROVEMENTS

(10) -NEW SF RESIDENTIAL WATER SERVICE & METER PIT. CONFIRM REQUIRED SIZE WITH BUILDING PERMIT REVIEW. INSTALL PER MERCER ISLAND DETAIL W-13, W-14, OR W-14A DEPENDING ON SIZE REQUIREMENT.

(11) MIN 1.5" 250 PSI PRIVATE HDPE WATER (ASTM D2239) FROM METER TO HOUSE. RECOMMENDED DEPTH=36". COORDINATE HOUSE ENTRY WITH BUILDER/OWNER.

(12) -

(14) -

STORM DRAIN

(20) 4" STORM DRAIN (3034 PVC) @ MIN 1% GRADE.

(21) 4" FOUNDATION DRAIN (3034 PVC) @ MIN 1% GRADE.

(22) 6" STORM DRAIN (3034 PVC) @ MIN 1% GRADE.

(23) -

(24) -

(25) -

(26) -

(28) -

(29) -

STORM DRAIN STRUCTURES

~~(30) -TYPE 1 CB WITH STANDARD GRATE. MAX 5' RIM TO FL DEPTH.~~

~~(31) -TYPE 1 CB WITH VANED LID. MAX 5' RIM TO FL DEPTH.~~

~~(32) -TYPE 1 CB WITH SOLID LID~~

(33) -

(34) -

(35) -

(36) -DURASLOPE CHANNEL / TRENCH DRAIN OR EQUAL: MIN 6" DEEP CHANNEL. SET LEVEL MIN 2" BELOW LOW GARAGE FF.

(39) -

(40) -TYPE 40 CATCH BASIN. IN DRIVEWAY ADD WATER QUALITY RISER TEE FOR EXITING PIPE (OR DOWNTURNED ELBOW)

(41) -

(43) -

(46) -

(47) -

A CLEARING LIMIT NOTE

ALL SELECTIVE CLEARING, TRENCHING AND OTHER WORK WITHIN THE DRIPLINES OF SIGNIFICANT TREES SHALL BE BY LOW IMPACT/HAND METHODS ONLY AND WORK SHALL BE ADJUSTED AS POSSIBLE TO MINIMIZE ANY DISTURBANCE TO THE SIGNIFICANT AND RETAINED TREES AND PROTECTED UNDERSTORY. CONSTRUCTION MATERIALS AND VEHICLES SHALL NOT BE STORED OUTSIDE THE CLEARING LIMITS.

B TREE DRIPLINE NOTE

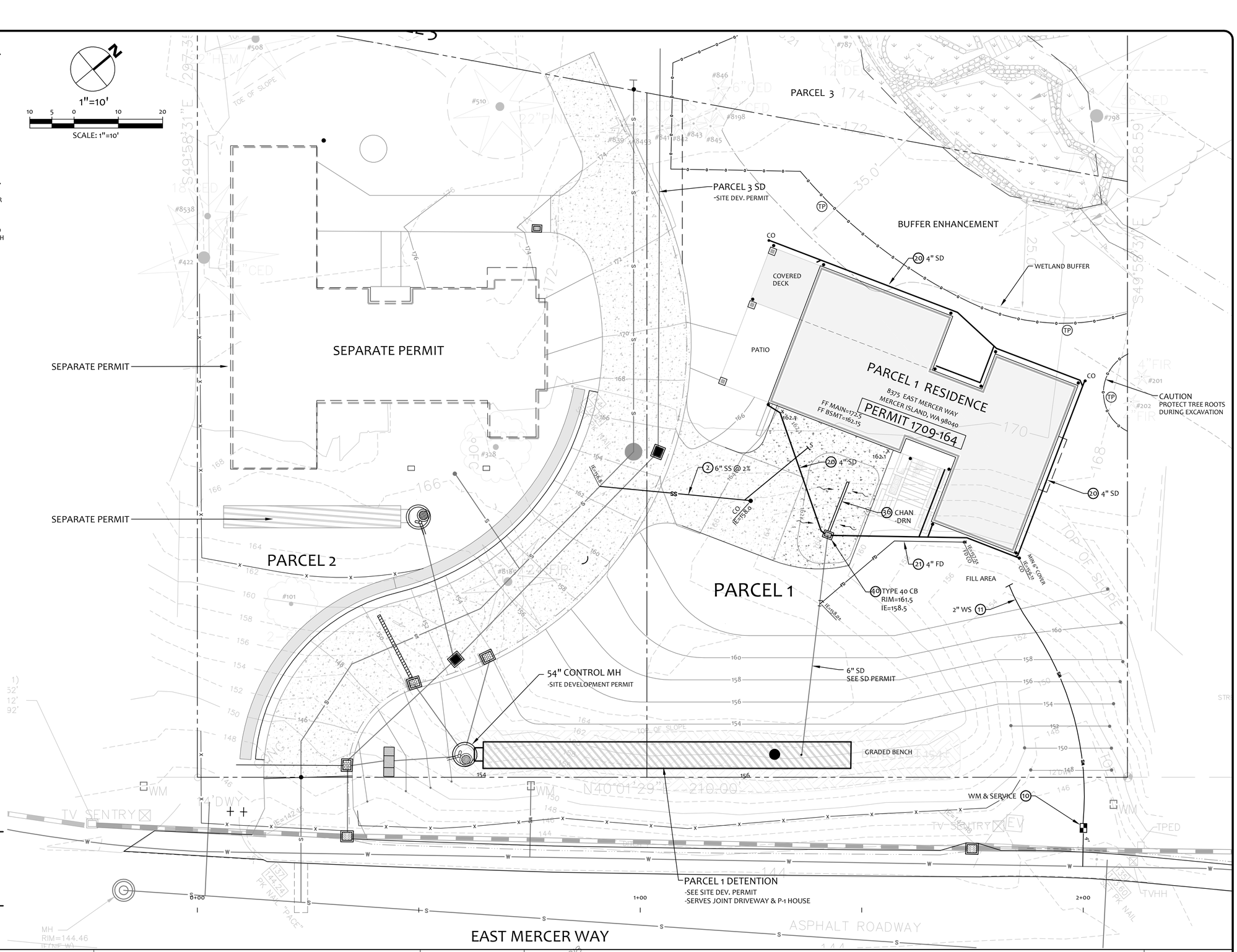
WORK WITHIN THE DRIPLINE OF TREES TO BE SAVED MUST BE UNDER THE DIRECTION OF A CERTIFIED ARBORIST (TYP.) SEE ALSO CLEARING LIMIT NOTE ON THIS SHEET.

N

1"=10'

10 5 0 10 20

SCALE: 1"=10'



NO.	DATE	BY	REVISIONS

APPLICANT
New Horizon Real Estate Development
8744 126th Ave NE
Kirkland, WA 98033

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DATE: Sep 19, 2018
JOB# 1337
DRAFTED: DE DESIGN: DE
DIGITAL SIGNATURE

Sep 19, 2018
JEFFREY E. DUFFY
STATE OF WASHINGTON
29766
REGISTERED
PROFESSIONAL ENGINEER

CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

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November 08, 2018
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PARCEL 1 CIVIL PLAN

PERMIT 1709-164

New Horizon Real Estate Development
8375 AND 8383 EAST MERCER WAY
MERCER ISLAND, WA 98040

DRAWING NO: C2.1

APN 032110-0145 & 032110-0140

FLOOR PLAN NOTES:

1. THIS PROJECT SHALL BE DESIGNED, ENGINEERED, + CONSTRUCTED IN FULL COMPLIANCE W/ ALL CODES + REGULATIONS.
2. ALL EXTERIOR WALLS SHALL BE 2x6 UNO.
3. ALL INTERIOR WALLS SHALL BE 2x6 UNO.
4. ALL HANDRAILS SHALL BE LOCATED @ 36" ABOVE STAIR NOSING WITH A GRASP DIMENSION BETWEEN 1¼" - 2".
5. ALL HANDRAILS SHALL BE CONTINUOUS OR TERMINATE AT NEWEL POST.
6. ALL GUARDRAILS SHALL BE 36" ABOVE FINISHED FLOOR AND DESIGNED SUCH THAT THE MAXIMUM OPENING WILL NOT ALLOW PASSAGE OF A 4" SPHERE.
7. ALL GUARDRAILS SHALL BE DESIGNED TO RESIST A 200LB CONCENTRATED LOAD AT THE TOP RAIL AND 50 PSF ON ALL GUARDRAIL INFILL COMPONENTS.
8. 5/8" GWB AT ALL GARAGE WALLS AND CEILING AS WELL AS ANY POSTS + BEAMS.
9. ACCESSIBLE AREA UNDER STAIR SHALL BE 1/2" GWB MINIMUM PER 302.7.
10. PROVIDE A PROGRAMMABLE THERMOSTAT FOR THE PRIMARY SPACE CONDITIONING SYSTEM WITHIN EACH DWELLING UNIT PER SEC R403.1.1.
11. A MINIMUM OF 75 PERCENT OF PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.
12. ALL SHOWERHEADS + KITCHEN SINK FAUCETS INSTALLED IN THE UNIT SHALL BE RATED AT 1.75 GPM OR LESS. ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS.
13. ALL EXHAUST AIR SHALL VENT DIRECTLY TO THE EXTERIOR OF THE BUILDING PER M1501.1 AND M1506.2.
14. CLOTHES DRYER SHALL BE EXHAUSTED TO THE OUTSIDE PER M1502.1
15. ALL STAIRS SHALL MEET FOLLOWING REQUIREMENTS;
    A. MINIMUM 36" WIDTH.
    B. MAXIMUM 7 3/4" RISER, MINIMUM 10" TREAD.
    C. MINIMUM 6'-8" HEAD ROOM
    D. MINIUM LANDING LENGTH 36".
16. A WRITTEN REPORT OF THE AIR LEAKAGE TEST RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE BUILDING INSPECTOR PRIOR TO CALL FOR FINAL INSPECTION. AIR LEAKAGE SHALL NOT EXCEED 2.0 AIR CHANGES/HOUR.
17. WHOLE HOUSE VENTILATION INTEGRATED WITH FORCED-AIR SYSTEM PER SRC M1507.3.5 AND SHALL RUN INTERMITTENTLY.
18. FIRE-BLOCKING SHALL BE PROVIDED IN THE FOLLOWING AREAS;
    A. CONCEALED SPACES OF STUD WALLS VERTICALLY BETWEEN CEILING AND FLOOR LEVELS + HORIZONTALLY AT INTERVALS NOT EXCEEDING 10FT

ENERGY CREDIT CALCULATIONS:

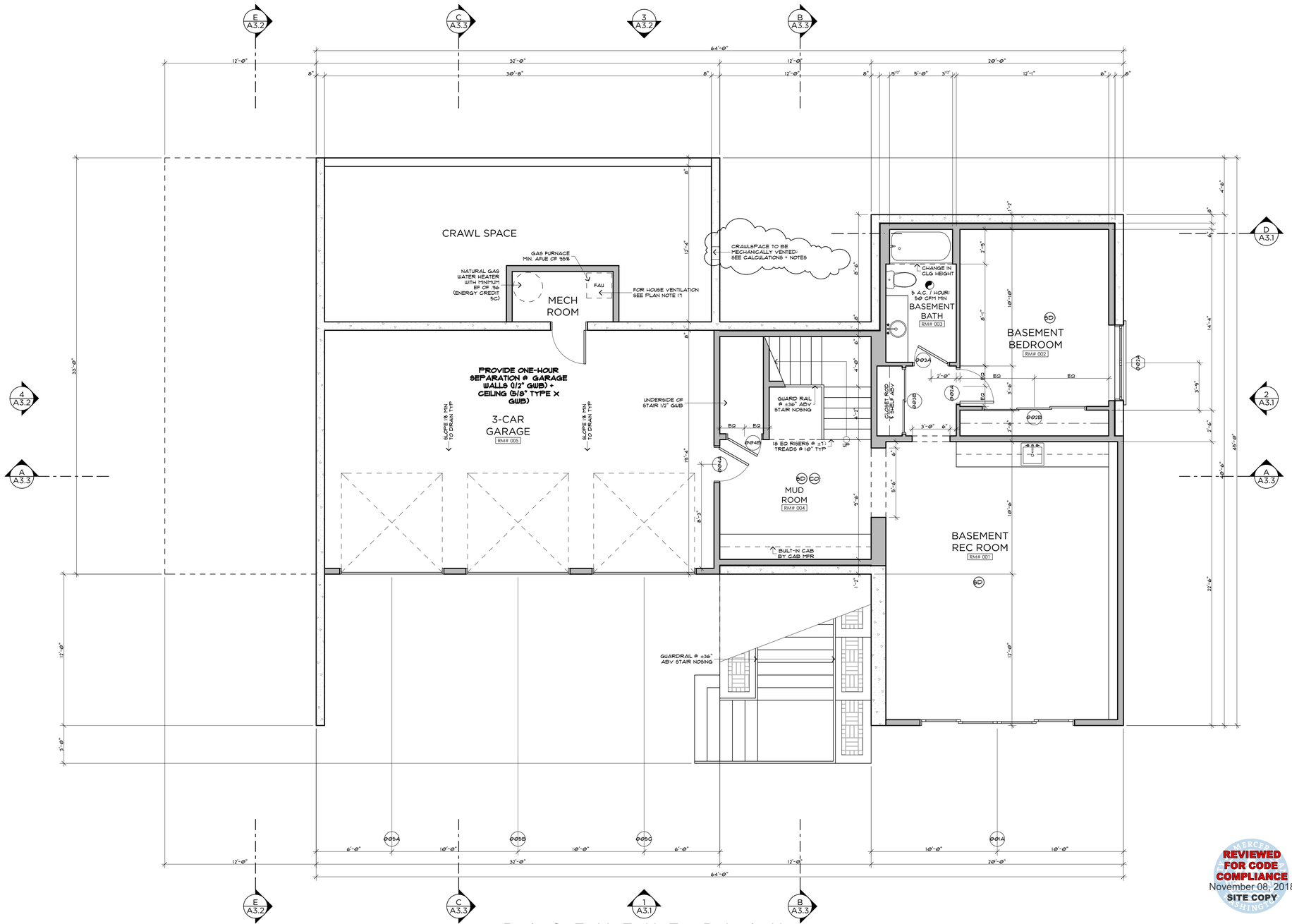
2b. A. TESTED AIR LEAKAGE SHALL BE 2.0 AIR CHANGES PER HOUR MAXIMUM.	1.0
B. HEAT RECOVERY VENTILATION SYSTEM SHALL BE INSTALLED WITH A MINIMUM SENSIBLE HEAT RECOVERY EFFICIENCY OF 0.70.	
3a. PROPANE FURNACE WITH MINIMUM AFUE OF 94%.	1.0
5c. PROPANE WATER HEATER WITH MINIMUM EF OF 0.91.	1.5
TOTAL CREDITS:	**3.5**

CRAWL SPACE VENT CALC.S:

CRAWL SPACE AREA	338.5 FT²
REQUIRED MECHANICAL VENTILATION (1CFM/50FT² OF CRAWL SPACE AREA)	6.77 CFM MINIMUM
PROPOSED MECHANICAL VENTING	**50 CFM CONTINUOUS MIN**

CRAWLSPACE NOTES:

1. EXPOSED EARTH IN CRAWLSPACE SHALL BE COVERED WITH A CONTINUOUS CLASS 1 VAPOR RETARDER. JOINTS OF THE VAPOR RETARDER SHALL OVERLAP BY 6 INCHES AND SHALL BE SEALED OR TAPED. THE EDGES OF THE VAPOR RETARDER SHALL EXTEND AT LEAST 6 INCHES UP THE STEM WALL; AND A RADON SYSTEM SHALL BE INSTALLED THAT MEETS THE REQUIREMENTS OF APPENDIX F OF THE WASHINGTON ADMINISTRATIVE CODE.
2. PROVIDE CONTINUOUSLY OPERATED MECHANICAL EXHAUST FOR CRAWLSPACE AREA; SEE CALCULATIONS FOR SIZING. EXHAUST VENTILATION SHALL TERMINATE TO THE EXTERIOR.
3. PROVIDE DUCTING FOR SUPPLY OR RETURN AIR SUCH THAT SPECIFIED AIRFLOW CROSSES THE LENGTH OF THE CRAWLSPACE



BASEMENT PLAN

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

0 1 4 8 12 16

REVIEWED FOR CODE COMPLIANCE
November 08, 2018
SITE COPY

RIPPLE
DESIGN STUDIO
206.913.2333
4303 STONE WAY N
SEATTLE, WA 98103

9790 REGISTERED ARCHITECT
JAMES M DEARTH
STATE OF WASHINGTON

E MERCER PARCEL 1
8375 E. MERCER WAY MERCER ISLAND, WA

BASEMENT PLAN

RELEASE

BUILDING PERMIT
10 OCT 2017

CORRECTIONS
20 SEPT 2018

A 2.0

E MERCER PARCEL 1
11/15/2018
9:29:19

FLOOR PLAN NOTES:

1. THIS PROJECT SHALL BE DESIGNED, ENGINEERED, + CONSTRUCTED IN FULL COMPLIANCE W/ ALL CODES + REGULATIONS.
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3. ALL INTERIOR WALLS SHALL BE 2x6 UNO.
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5. ALL HANDRAILS SHALL BE CONTINUOUS OR TERMINATE AT NEWEL POST.
6. ALL GUARDRAILS SHALL BE 36" ABOVE FINISHED FLOOR AND DESIGNED SUCH THAT THE MAXIMUM OPENING WILL NOT ALLOW PASSAGE OF A 4" SPHERE.
7. ALL GUARDRAILS SHALL BE DESIGNED TO RESIST A 200LB CONCENTRATED LOAD AT THE TOP RAIL AND 50 PSF ON ALL GUARDRAIL INFILL COMPONENTS.
8. 5/8" GWB AT ALL GARAGE WALLS AND CEILING AS WELL AS ANY POSTS + BEAMS.
9. ACCESSIBLE AREA UNDER STAIR SHALL BE 1/2" GWB MINIMUM PER 302.7.
10. PROVIDE A PROGRAMMABLE THERMOSTAT FOR THE PRIMARY SPACE CONDITIONING SYSTEM WITHIN EACH DWELLING UNIT PER SEC R403.1.1.
11. A MINIMUM OF 75 PERCENT OF PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.
12. ALL SHOWERHEADS + KITCHEN SINK FAUCETS INSTALLED IN THE UNIT SHALL BE RATED AT 1.75 GPM OR LESS. ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS.
13. ALL EXHAUST AIR SHALL VENT DIRECTLY TO THE EXTERIOR OF THE BUILDING PER M1501.1 AND M1506.2.
14. CLOTHES DRYER SHALL BE EXHAUSTED TO THE OUTSIDE PER M1502.1
15. ALL STAIRS SHALL MEET FOLLOWING REQUIREMENTS;
    A. MINIMUM 36" WIDTH.
    B. MAXIMUM 7 3/4" RISER, MINIMUM 10" TREAD.
    C. MINIMUM 6'-8" HEAD ROOM
    D. MINIUM LANDING LENGTH 36"
16. A WRITTEN REPORT OF THE AIR LEAKAGE TEST RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE BUILDING INSPECTOR PRIOR TO CALL FOR FINAL INSPECTION. AIR LEAKAGE SHALL NOT EXCEED 2.0 AIR CHANGES/HOUR.
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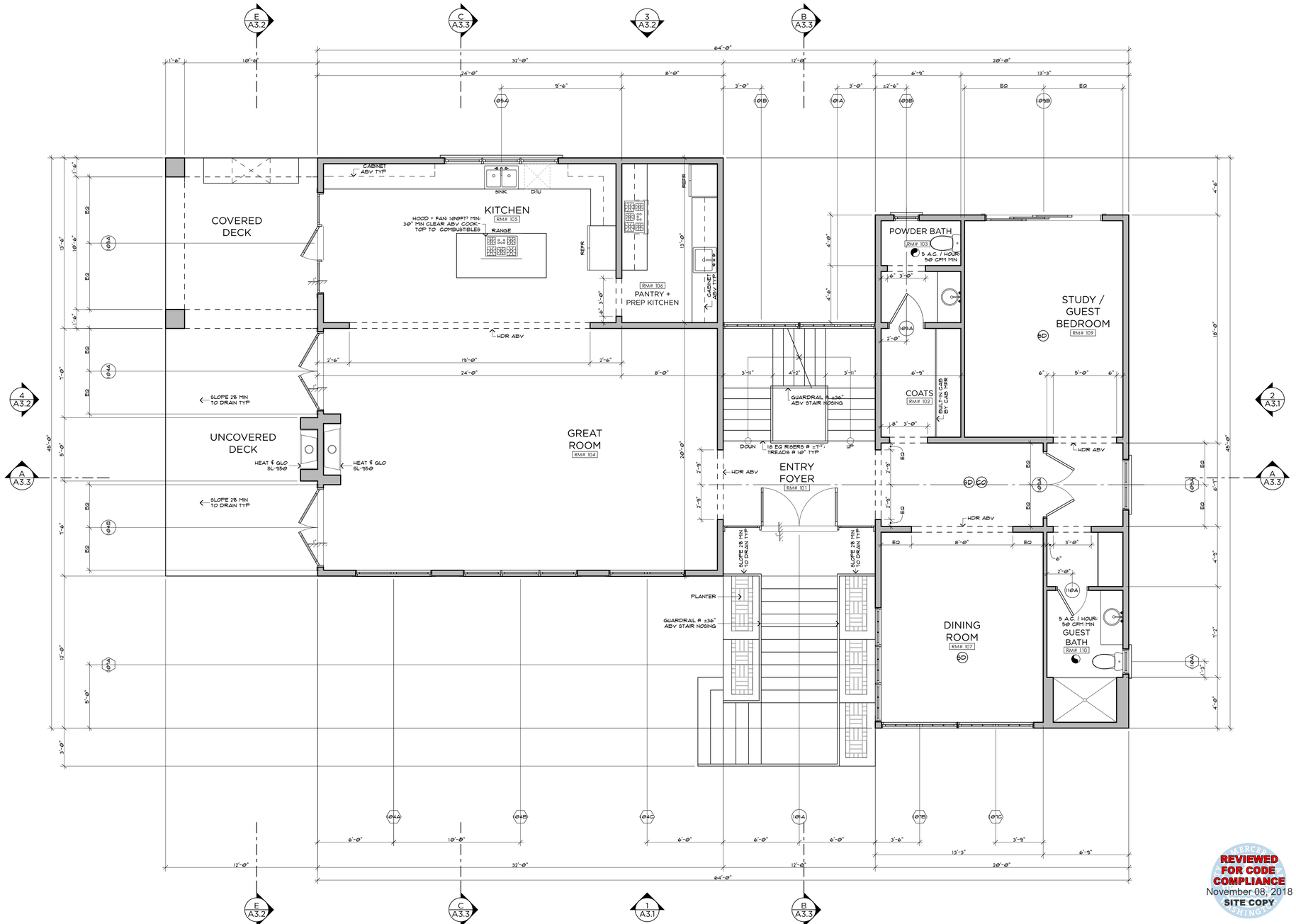
18. FIRE-BLOCKING SHALL BE PROVIDED IN THE FOLLOWING AREAS;
    A. CONCEALED SPACES OF STUD WALLS VERTICALLY BETWEEN CEILING AND FLOOR LEVELS + HORIZONTALLY AT INTERVALS NOT EXCEEDING 10FT

ENERGY CREDIT CALCULATIONS:

2b.	A. TESTED AIR LEAKAGE SHALL BE 2.0 AIR CHANGES PER HOUR MAXIMUM.	1.0
	B. HEAT RECOVERY VENTILATION SYSTEM SHALL BE INSTALLED WITH A MINIMUM SENSIBLE HEAT RECOVERY EFFICIENCY OF 0.70.	
3a.	PROPANE FURNACE WITH MINIMUM AFUE OF 94%.	1.0
5c.	PROPANE WATER HEATER WITH MINIMUM EF OF 0.91.	1.5
TOTAL CREDITS:		**3.5**



FIRST FLOOR PLAN

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

0 1 4 8 12 16

REVIEWED FOR CODE COMPLIANCE
November 08, 2018
SITE COPY

RIPPLE
DESIGN STUDIO
206.913.2333
4303 STONE WAY N
SEATTLE, WA 98103

9790 REGISTERED ARCHITECT
JAMES M DEARTH
STATE OF WASHINGTON

E MERCER PARCEL 1
8375 E. MERCER WAY MERCER ISLAND, WA

FIRST FLOOR PLAN

RELEASE

BUILDING PERMIT
10 OCT 2017

CORRECTIONS
20 SEPT 2018

A 2 . 1

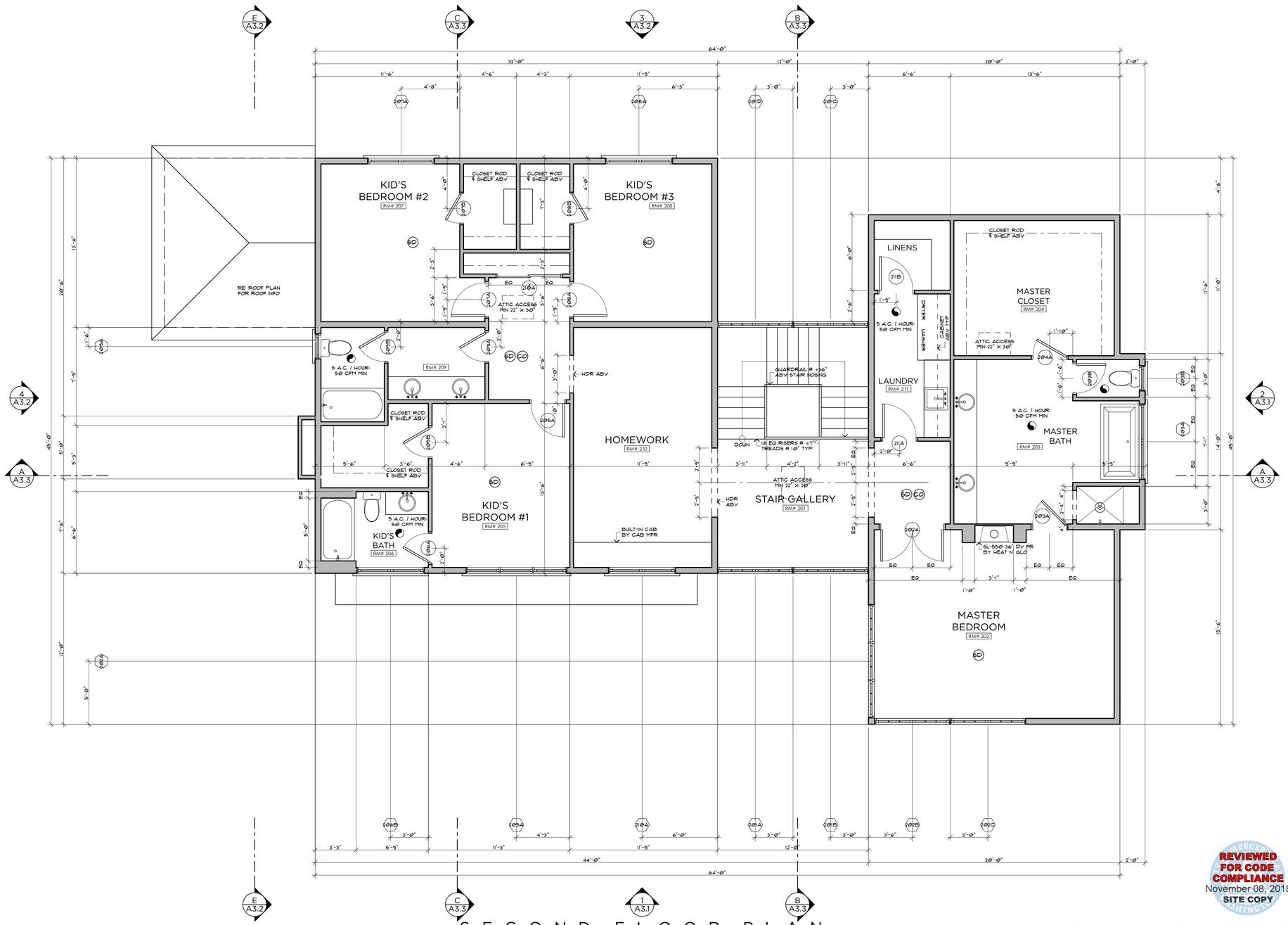
E MERCER PARCEL 1
9/20/18

FLOOR PLAN NOTES:

1. THIS PROJECT SHALL BE DESIGNED, ENGINEERED, + CONSTRUCTED IN FULL COMPLIANCE W/ ALL CODES + REGULATIONS.
2. ALL EXTERIOR WALLS SHALL BE 2x6 UNO.
3. ALL INTERIOR WALLS SHALL BE 2x6 UNO.
4. ALL HANDRAILS SHALL BE LOCATED @ 36" ABOVE STAIR NOSING WITH A GRASP DIMENSION BETWEEN 1¼" - 2".
5. ALL HANDRAILS SHALL BE CONTINUOUS OR TERMINATE AT NEWEL POST.
6. ALL GUARDRAILS SHALL BE 36" ABOVE FINISHED FLOOR AND DESIGNED SUCH THAT THE MAXIMUM OPENING WILL NOT ALLOW PASSAGE OF A 4" SPHERE.
7. ALL GUARDRAILS SHALL BE DESIGNED TO RESIST A 200LB CONCENTRATED LOAD AT THE TOP RAIL AND 50 PSF ON ALL GUARDRAIL INFILL COMPONENTS.
8. 5/8" GWB AT ALL GARAGE WALLS AND CEILING AS WELL AS ANY POSTS + BEAMS.
9. ACCESSIBLE AREA UNDER STAIR SHALL BE 1/2" GWB MINIMUM PER 302.7.
10. PROVIDE A PROGRAMMABLE THERMOSTAT FOR THE PRIMARY SPACE CONDITIONING SYSTEM WITHIN EACH DWELLING UNIT PER SEC R403.1.1.
11. A MINIMUM OF 75 PERCENT OF PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.
12. ALL SHOWERHEADS + KITCHEN SINK FAUCETS INSTALLED IN THE UNIT SHALL BE RATED AT 1.75 GPM OR LESS. ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS.
13. ALL EXHAUST AIR SHALL VENT DIRECTLY TO THE EXTERIOR OF THE BUILDING PER M1501.1 AND M1506.2.
14. CLOTHES DRYER SHALL BE EXHAUSTED TO THE OUTSIDE PER M1502.1
15. ALL STAIRS SHALL MEET FOLLOWING REQUIREMENTS;
    A. MINIMUM 36" WIDTH.
    B. MAXIMUM 7 3/4" RISER, MINIMUM 10" TREAD.
    C. MINIMUM 6'-8" HEAD ROOM
    D. MINIUM LANDING LENGTH 36"
16. A WRITTEN REPORT OF THE AIR LEAKAGE TEST RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE BUILDING INSPECTOR PRIOR TO CALL FOR FINAL INSPECTION. AIR LEAKAGE SHALL NOT EXCEED 2.0 AIR CHANGES/HOUR.
17. WHOLE HOUSE VENTILATION INTEGRATED WITH FORCED-AIR SYSTEM PER SRC M1507.3.5 AND SHALL RUN INTERMITTENTLY.
18. FIRE-BLOCKING SHALL BE PROVIDED IN THE FOLLOWING AREAS;
    A. CONCEALED SPACES OF STUD WALLS VERTICALLY BETWEEN CEILING AND FLOOR LEVELS + HORIZONTALLY AT INTERVALS NOT EXCEEDING 10FT

ENERGY CREDIT CALCULATIONS:

2b.	A. TESTED AIR LEAKAGE SHALL BE 2.0 AIR CHANGES PER HOUR MAXIMUM. B. HEAT RECOVERY VENTILATION SYSTEM SHALL BE INSTALLED WITH A MINIMUM SENSIBLE HEAT RECOVERY EFFICIENCY OF 0.70.	1.0
3a.	PROPANE FURNACE WITH MINIMUM AFUE OF 94%.	1.0
5c.	PROPANE WATER HEATER WITH MINIMUM EF OF 0.91.	1.5
TOTAL CREDITS:		**3.5**



SECOND FLOOR PLAN

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

0 1 4 8 12 16

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RIPPLE
DESIGN STUDIO
206.913.2333
4303 STONE WAY N
SEATTLE, WA 98103

9790 REGISTERED ARCHITECT
JAMES M DEARTH
STATE OF WASHINGTON

E MERCER PARCEL 1
8375 E. MERCER WAY MERCER ISLAND, WA

SECOND FLOOR PLAN

RELEASE

BUILDING PERMIT
10 OCT 2017

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20 SEPT 2018

A2.2

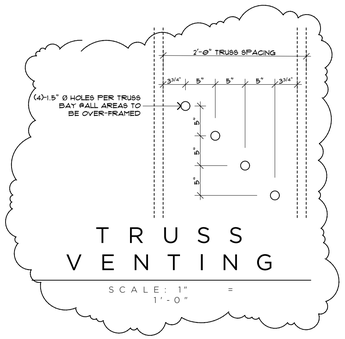
E MERCER PARCEL 1
AUTHORED 9/20/18

ROOF NOTES:

1. CHIMNEY SHALL EXTEND A MIN OF 2'-0" ABV ROOF OR PARAPET WITHIN 10'-0" RADIUS OF CHIMNEY. PROVIDE APPROVED SPARK ARRESTOR @ ALL CHIMNEY CAPS. ALL ARCHITECTURAL FEATURES MUST BE PERMITTED BY FLU + SPARK ARRESTOR MFR APPROVAL.
2. COORDINATE DOWNSPOUT LOCATION W/ RIPPLE DESIGN STUDIO, INC. PRIOR TO INSTALLATION.
3. ALL VENTS SHALL BE LOCATED AWAY FROM VISIBILITY @ PUBLIC RIGHT-OF-WAY.
4. TRUSS MANUFACTURERS TO PROVIDE TRUSS SHOP DRAWINGS TO RIPPLE DESIGN STUDIO FOR DESIGN APPROVAL PRIOR TO TRUSS MANUFACTURING.
5. ATTIC SHALL BE VENTED THROUGH EAVE, RIDGE, AND HIP VENTS AS WELL AS VENTILATION HOLES IN SHEATHING BETWEEN ATTIC SPACES.

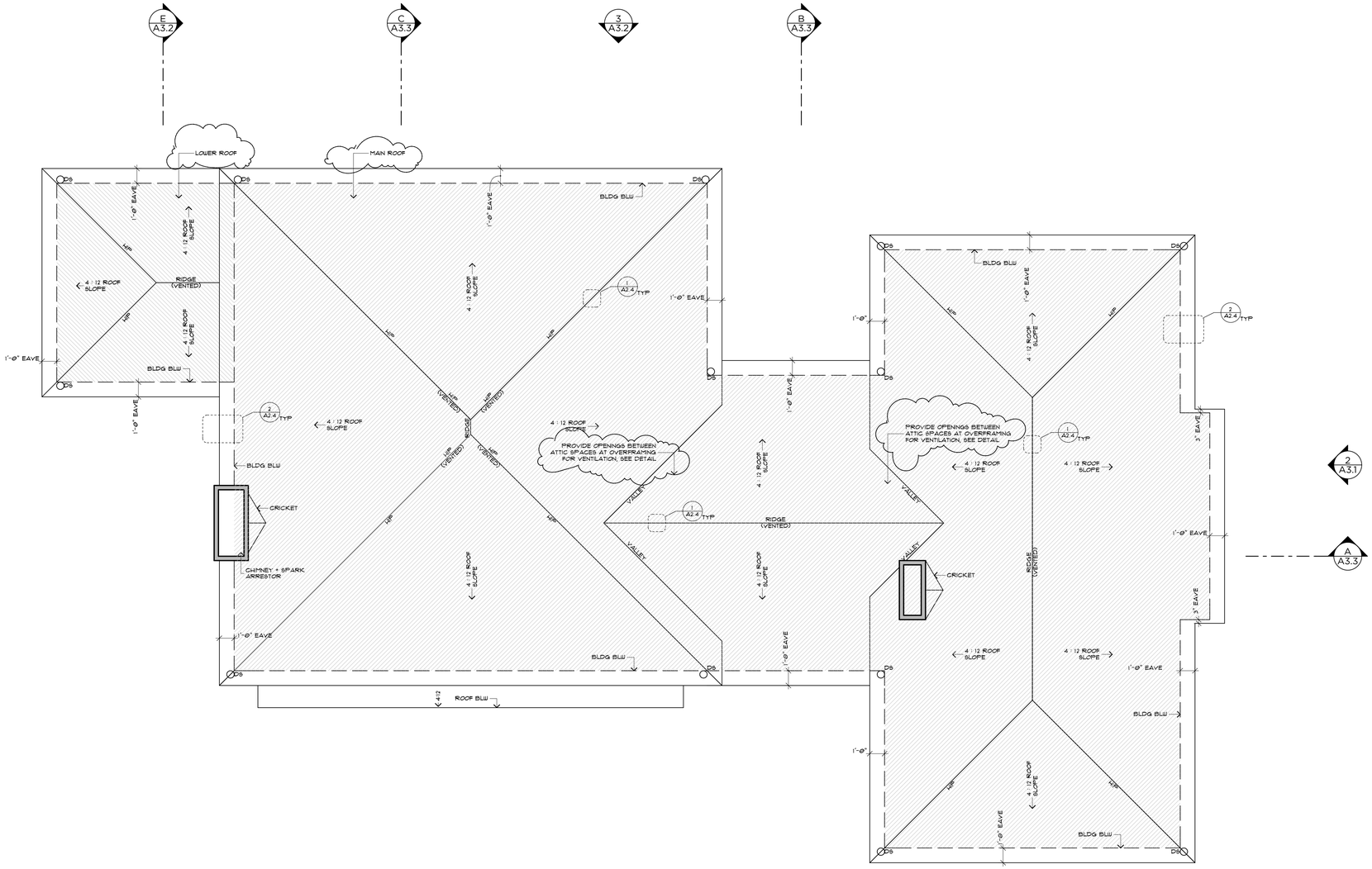
ATTIC VENTILATION CALCULATIONS:

ATTIC AREA - MAIN ROOF	2,129.00
REQUIRED VENTING (1/150)	**14.19**
LINEAR FEET OF RIDGE / HIP VENTING	59.50
PROPOSED RIDGE / HIP VENTING	**5.58**
@13.5 sq in NET/ FOOT (COR-A-VENT V-300))	
LINEAR FEET OF EAVE VENTING	235.00
PROPOSED EAVE VENTING	**10.25**
@3.14 sq in PER 2" HOLE @ BLOCKING, 2 HOLES / FT = 6.28 sq in / FT)	
TOTAL PROPOSED VENTILATION	**15.83**
ATTIC AREA - LOWER ROOF	161.50
REQUIRED VENTING (1/150)	**1.08**
LINEAR FEET OF RIDGE VENTING	5.00
PROPOSED RIDGE VENTING	**0.31**
@12 sq in NET/ FOOT)	
LINEAR FEET OF EAVE VENTING	37.50
PROPOSED EAVE VENTING	**1.64**
@3.14 sq in PER 2" HOLE @ BLOCKING, 2 HOLES / FT = 6.28 sq in / FT)	
TOTAL PROPOSED VENTILATION	**1.95**



TRUSS VENTING

SCALE: 1" = 1'-0"



ROOF PLAN

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

0 1 4 8 12 16

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ROOF NOTES:

1. CHIMNEY SHALL EXTEND A MIN OF 2'-0" ABV ROOF OR PARAPET WITHIN 10'-0" RADIUS OF CHIMNEY. PROVIDE APPROVED SPARK ARRESTOR @ ALL CHIMNEY CAPS. ALL ARCHITECTURAL FEATURES MUST BE PERMITTED BY FLU + SPARK ARRESTOR MFR APPROVAL.
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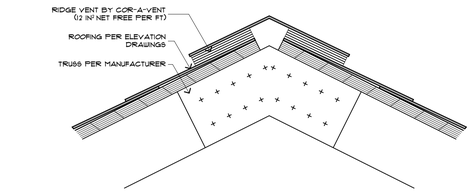
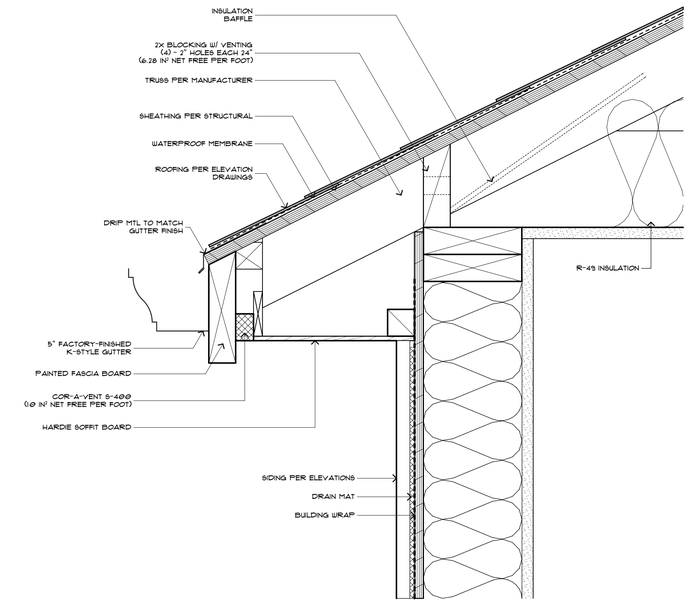


RIDGE VENT **1**

SCALE: 3" = 1'-0"



EAVE VENT **2**

SCALE: 3" = 1'-0"

0 4" 8" 12"

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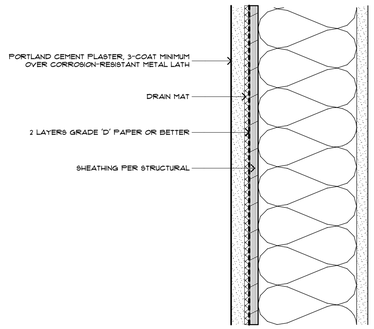
EAST ELEVATION **1**

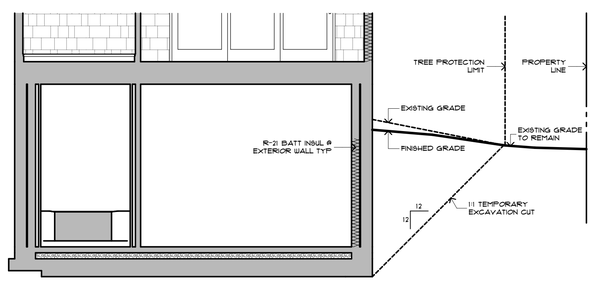
SCALE: 1/4" = 1'-0"

0 1 4 8 12 16



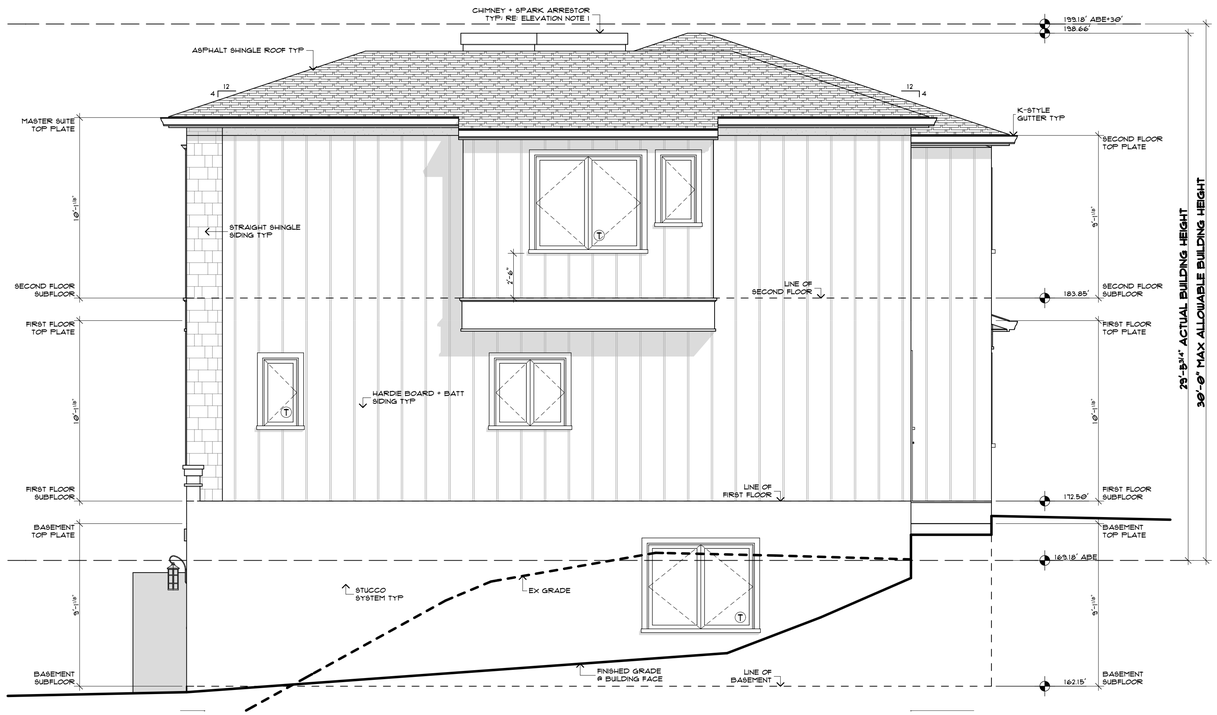
STUCCO DETAIL **4**

SCALE: 3" = 1'-0"



SECTION D-D **3**

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



NORTH ELEVATION **2**

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

0 1 4 8 12 16

ELEVATION + SECTION NOTES:

1. CHIMNEY SHALL EXTEND A MIN OF 2'-0" ABV ROOF OR PARAPET WITHIN 10'-0" RADIUS OF CHIMNEY. PROVIDE APPROVED SPARK ARRESTOR @ ALL CHIMNEY CAPS. ALL ARCHITECTURAL FEATURES MUST BE PERMITTED BY FLU + SPARK ARRESTOR MFR APPROVAL.
2. OPEN GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERN SUCH THAT A 4" SPHERE CANNOT PASS THROUGH.
3. STUCCO INSTALLATION SHALL BE IN COMPLIANCE WITH ASTM C 926, ASTM C 1063.

BASEMENT FLOOR AREA CALC.S:

WALL SEGMENT A LENGTH:	20'
WALL SEGMENT A COVERAGE:	100% *(20.00 FT % RESULT)*
WALL SEGMENT B LENGTH:	12'
WALL SEGMENT B COVERAGE:	100% *(12.00 FT % RESULT)*
WALL SEGMENT C LENGTH:	8.5'
WALL SEGMENT C COVERAGE:	100% *(8.50 FT % RESULT)*
WALL SEGMENT D LENGTH:	20'
WALL SEGMENT D COVERAGE:	75% *(15.00 FT % RESULT)*
WALL SEGMENT E LENGTH:	40.5'
WALL SEGMENT A COVERAGE:	50 FT % (20.25 FT % RESULT)
WALL SEGMENT F LENGTH:	20'
WALL SEGMENT B COVERAGE:	0% (0.00 FT % RESULT)
WALL SEGMENT G LENGTH:	12'
WALL SEGMENT C COVERAGE:	75% (9.00 FT % RESULT)
WALL SEGMENT H LENGTH:	12'
WALL SEGMENT D COVERAGE:	100% (12.00 FT % RESULT)
TOTAL SEGMENT LENGTHs:	145 FT²
TOTAL SEGMENT COVERAGE RESULTS:	*XX.XX FT %*
GROSS BASEMENT FLOOR AREA:	952 FT²
GROSS BASEMENT FLOOR % TO BE EXCLUDED:	**75%**
GROSS BASEMENT FLOOR AREA TO BE EXCLUDED:	**714.00 FT²**

AVERAGE BUILDING ELEVATION CALC.S:

ELEVATION @ POINT A:	169.50'
SEGMENT LENGTH @ POINT A:	3.5' (593.25' @ ELEV x LENGTH)
ELEVATION @ POINT B:	169.90'
SEGMENT LENGTH @ POINT B:	32' (5,436.80' @ ELEV x LENGTH)
ELEVATION @ POINT C:	171.00'
SEGMENT LENGTH @ POINT C:	33' (5,643.00' @ ELEV x LENGTH)
ELEVATION @ POINT D:	171.80'
SEGMENT LENGTH @ POINT D:	32' (5,497.60' @ ELEV x LENGTH)
ELEVATION @ POINT E:	171.50'
SEGMENT LENGTH @ POINT E:	13' (2,229.50' @ ELEV x LENGTH)
ELEVATION @ POINT F:	171.50'
SEGMENT LENGTH @ POINT F:	12' *(2,058.00' @ ELEV x LENGTH)*
ELEVATION @ POINT G:	171.50'
SEGMENT LENGTH @ POINT G:	8.5' *(1,457.75' @ ELEV x LENGTH)*
ELEVATION @ POINT H:	170.25'
SEGMENT LENGTH @ POINT H:	20' *(3,405.00' @ ELEV x LENGTH)*
ELEVATION @ POINT I:	168.60'
SEGMENT LENGTH @ POINT I:	40.5' *(6,828.30 @ ELEV x LENGTH)*
ELEVATION @ POINT J:	159.60'
SEGMENT LENGTH @ POINT J:	20' *(3,192.00' @ ELEV x LENGTH)*
ELEVATION @ POINT K:	165.50'
SEGMENT LENGTH @ POINT K:	15.5' (2,565.25' @ ELEV x LENGTH)
ELEVATION @ POINT L:	169.50'
SEGMENT LENGTH @ POINT L:	12' (2,034.00' @ ELEV x LENGTH)
TOTAL ELEVs x SEGMENT LENGTHs:	40,940.45'
TOTAL SEGMENT LENGTHs:	242'
AVERAGE NATURAL GRADE (ANG):	**169.18'**

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BUILDING ELEVATIONS

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BUILDING PERMIT
10 OCT 2017

CORRECTIONS
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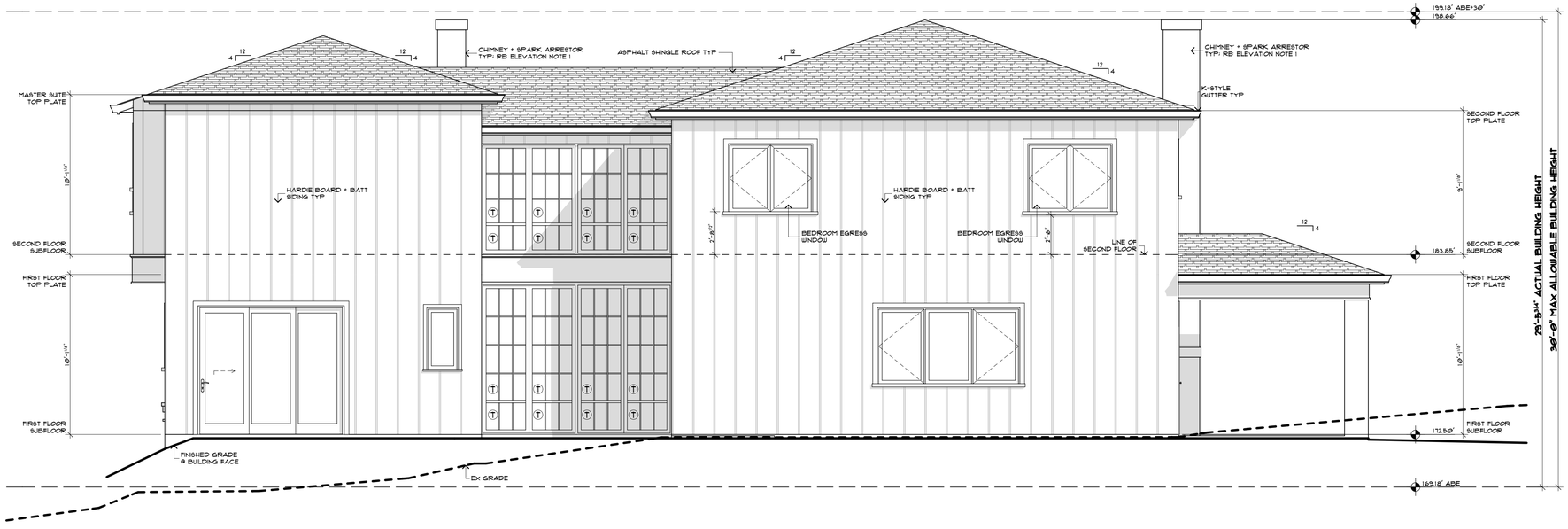
A 3 . 1

E MERCER PARCEL 1



WEST ELEVATION **3**

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

0 1 4 8 12 16

ELEVATION + SECTION NOTES:

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2. OPEN GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERN SUCH THAT A 4" SPHERE CANNOT PASS THROUGH.
3. STUCCO INSTALLATION SHALL BE IN COMPLIANCE WITH ASTM C 926, ASTM C 1063.

BASEMENT FLOOR AREA CALC.S:

WALL SEGMENT A LENGTH:	20'
WALL SEGMENT A COVERAGE:	100% *(20.00 FT % RESULT)*
WALL SEGMENT B LENGTH:	12'
WALL SEGMENT B COVERAGE:	100% *(12.00 FT % RESULT)*
WALL SEGMENT C LENGTH:	8.5'
WALL SEGMENT C COVERAGE:	100% *(8.50 FT % RESULT)*
WALL SEGMENT D LENGTH:	20'
WALL SEGMENT D COVERAGE:	75% *(15.00 FT % RESULT)*
WALL SEGMENT E LENGTH:	40.5'
WALL SEGMENT A COVERAGE:	50 FT % (20.25 FT % RESULT)
WALL SEGMENT F LENGTH:	20'
WALL SEGMENT B COVERAGE:	0% (0.00 FT % RESULT)
WALL SEGMENT G LENGTH:	12'
WALL SEGMENT C COVERAGE:	75% (9.00 FT % RESULT)
WALL SEGMENT H LENGTH:	12'
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TOTAL SEGMENT LENGTHs:	145 FT²
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GROSS BASEMENT FLOOR AREA:	952 FT²
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ELEVATION @ POINT A:	169.50'
SEGMENT LENGTH @ POINT A:	3.5' (593.25' @ ELEV x LENGTH)
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SEGMENT LENGTH @ POINT B:	32' (5,436.80' @ ELEV x LENGTH)
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SEGMENT LENGTH @ POINT C:	33' (5,643.00' @ ELEV x LENGTH)
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SEGMENT LENGTH @ POINT D:	32' (5,497.60' @ ELEV x LENGTH)
ELEVATION @ POINT E:	171.50'
SEGMENT LENGTH @ POINT E:	13' (2,229.50' @ ELEV x LENGTH)
ELEVATION @ POINT F:	171.50'
SEGMENT LENGTH @ POINT F:	12' *(2,058.00' @ ELEV x LENGTH)*
ELEVATION @ POINT G:	171.50'
SEGMENT LENGTH @ POINT G:	8.5' *(1,457.75' @ ELEV x LENGTH)*
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SEGMENT LENGTH @ POINT H:	20' *(3,405.00' @ ELEV x LENGTH)*
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SEGMENT LENGTH @ POINT I:	40.5' *(6,828.30 @ ELEV x LENGTH)*
ELEVATION @ POINT J:	159.60'
SEGMENT LENGTH @ POINT J:	20' *(3,192.00' @ ELEV x LENGTH)*
ELEVATION @ POINT K:	165.50'
SEGMENT LENGTH @ POINT K:	15.5' (2,565.25' @ ELEV x LENGTH)
ELEVATION @ POINT L:	169.50'
SEGMENT LENGTH @ POINT L:	12' (2,034.00' @ ELEV x LENGTH)
TOTAL ELEVs x SEGMENT LENGTHs:	40,940.45'
TOTAL SEGMENT LENGTHs:	242'
AVERAGE NATURAL GRADE (ANG):	**169.18'**

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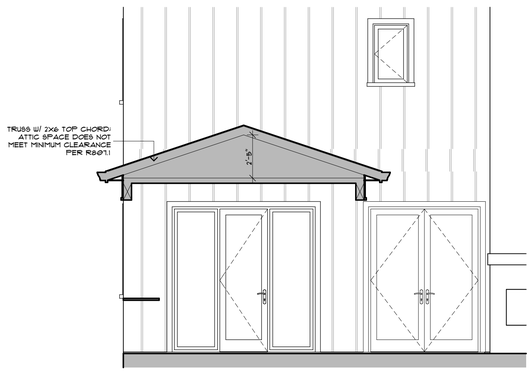
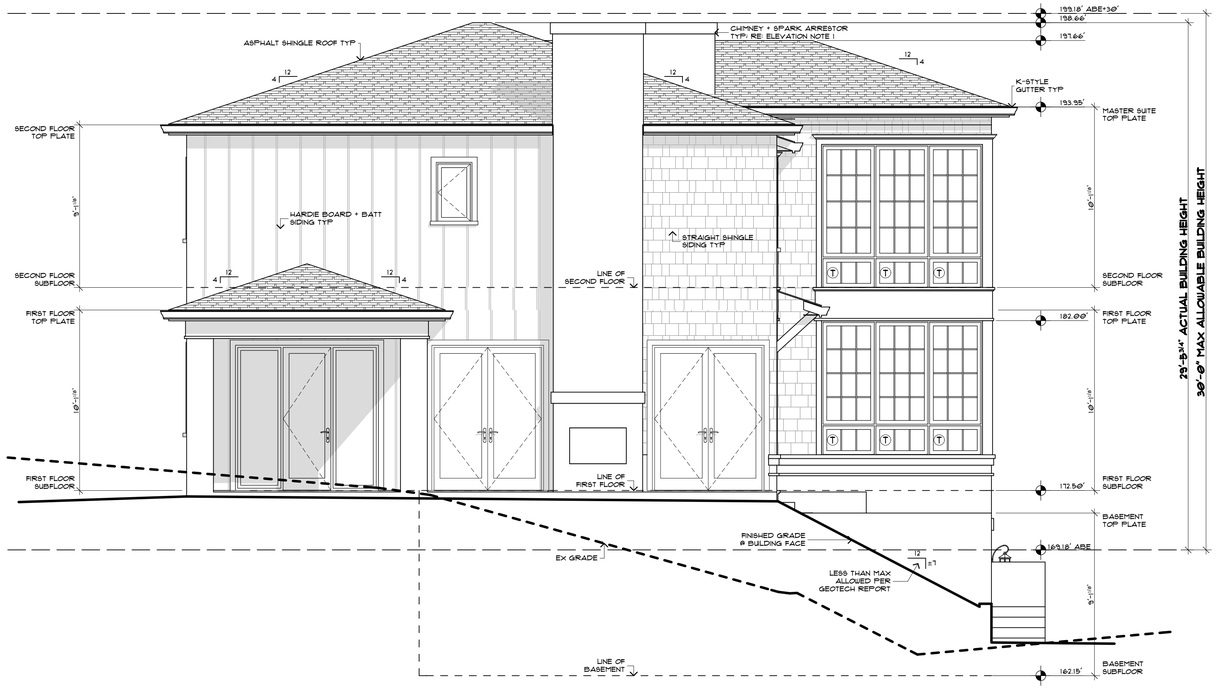


SECTION E-E

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



SOUTH ELEVATION **4**

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

0 1 4 8 12 16

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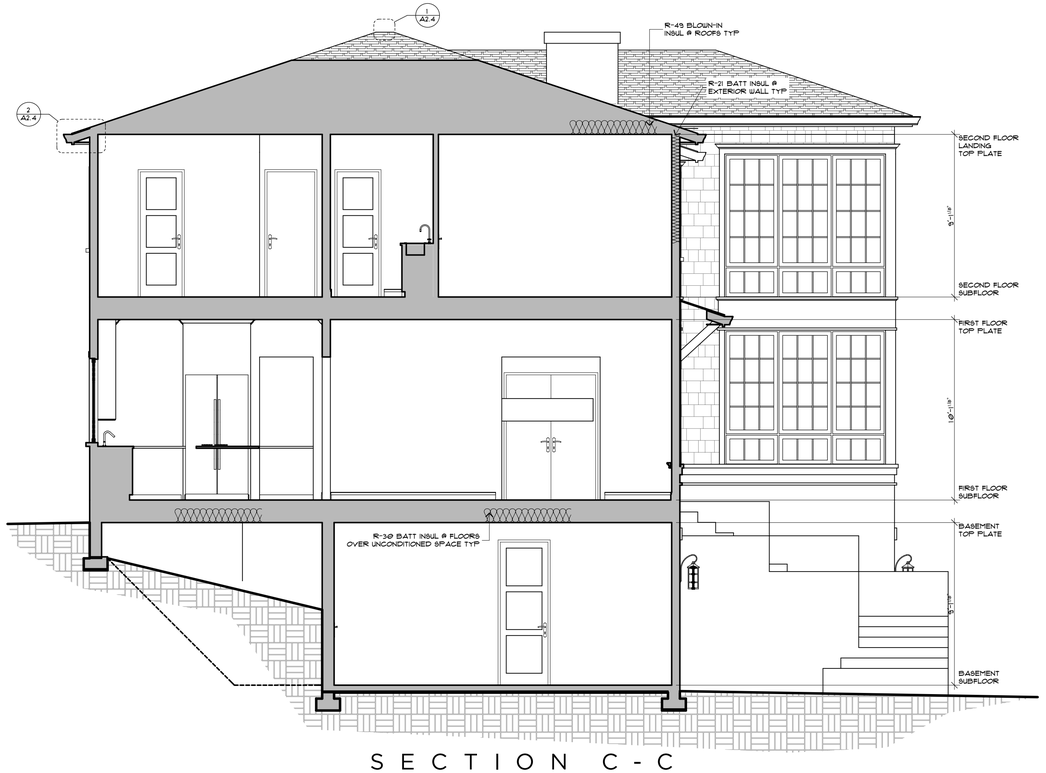
SECTION A-A

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

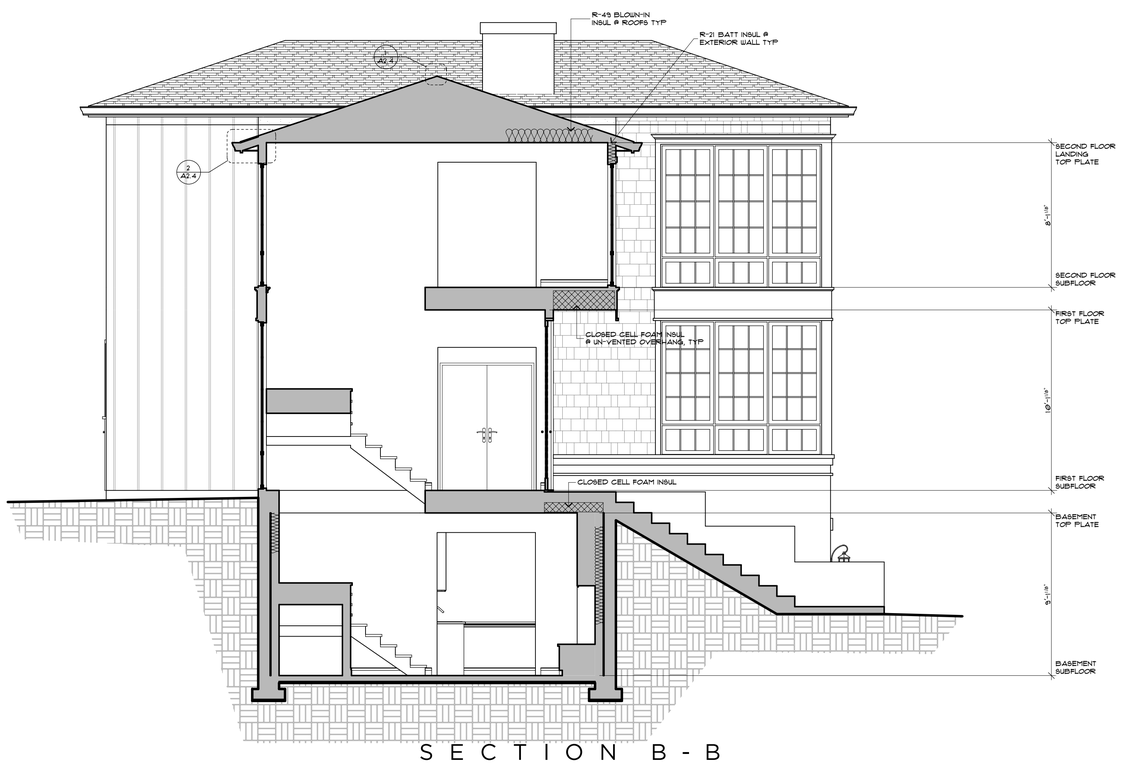
0 1 4 8 12 16



SECTION C-C

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

0 1 4 8 12 16



SECTION B-B

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

0 1 4 8 12 16

ELEVATION + SECTION NOTES:

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3. STUCCO INSTALLATION SHALL BE IN COMPLIANCE WITH ASTM C 926, ASTM C 1063.

WSEC 2015 NOTES:

1. THIS PROJECT IS ELIGIBLE AND COMPLIANT W/ WSEC 2015 PRESCRIPTIVE METHOD.
2. INSULATION VALUES SHALL BE AS FOLLOWS:
   A. ALL VERTICAL GLAZING SHALL BE 0.30 U-FACTOR MAX.
   B. ALL OVERHEAD GLAZING SHALL BE 0.50 U-FACTOR MAX.
   C. ALL EXTERIOR DOORS (INCLUDING DOORS FROM CONDITIONED SPACE TO UNCONDITIONED SPACE) SHALL BE 0.20 U-FACTOR MIN.
   D. ALL CEILINGS OVER CONDITIONED SPACE SHALL RECEIVE R-49 BLOWN-IN INSULATION MIN.
   E. ALL VAULTED CEILINGS SHALL RECEIVE R-38 BATT INSULATION MIN.
   F. ALL ABOVE-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN.
   G. ALL BELOW-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN @ INTERIOR FRAMED WALL.
   H. ALL FLOORS OVER UNCONDITIONED SPACE SHALL RECEIVE R-30 BATT INSULATION MIN.
   I. ALL SLAB-ON-GRADE WITHIN CONDITIONED SPACE SHALL RECEIVE R-10 RIGID INSULATION WITHIN 24" OF SLAB PERIMETER.
   J. ALL HEADERS @ EXTERIOR WALLS SHALL RECEIVE R-10 RIGID INSULATION @ INTERIOR SIDE OF WALL.
3. RE: STRUCTURAL DRAWINGS FOR ALL FRAMING COMPLIANCE REQUIREMENTS.
4. PROVIDE 100 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ KITCHEN.
5. PROVIDE 50 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ ALL BATHS + LAUNDRY.
6. NATURAL GAS, PROPANE OR OIL WATER HEATER SHALL HAVE A MINIMUM EF OF 0.91 (WSEC 406.2, CREDIT 5c).
7. AT CRAWLSPACES THE MIN NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 FT² FOR EACH 300 FT² OF UNDER-FLOOR AREA. ONE VENTILATION OPENING SHALL BE WITHIN 3'-0" OF EACH CORNER OF THE BUILDING AT CRAWLSPACE, EXCEPT ONE SIDE OF THE BUILDING SHALL BE PERMITTED TO HAVE NO VENTILATION OPENINGS, OR CRAWLSPACE SHALL BE MECHANICALLY VENTED.
8. THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS R402.4.1 THROUGH R402.4.4. WHERE REQUIRED BY THE CODE OFFICIAL, TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY AND A WRITTEN REPORT OF THE TESTING RESULTS SHALL BE SIGNED BY THE TESTING PARTY AND PROVIDED TO THE CODE OFFICIAL.
9. AT LEAST ONE THERMOSTAT PER DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE.

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E MERCER
PARCEL 1
8375 E. MERCER WAY MERCER ISLAND, WA

BUILDING
SECTIONS A-A
THROUGH C-C

RELEASE

BUILDING PERMIT
10 OCT 2017

CORRECTIONS
20 SEPT 2018

REVIEWED FOR CODE COMPLIANCE
November 08, 2018
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A3.3

E MERCER PARCEL 1
A3.3 SECTIONS
9/20/18

DOOR SCHEDULE:

DOOR NO.	WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	REMARKS
001A	12'-0"	8'-0"	FRENCH SLIDER	ALUMINUM / GLASS		4 PANEL, DIVIDED LIGHT
002A	2'-8"	7'-0"	PANEL	WOOD		
002B	8'-0"	7'-0"	SLIDER	WOOD		TRIPLE BY-PASS CLOSET
003A	2'-8"	8'-0"	PANEL	WOOD		PRIVACY LOCK
003B	5'-0"	7'-0"	SLIDER	WOOD		DOUBLE BY-PASS CLOSET
004A	2'-8"	8'-0"	PANEL	WOOD		AUTO-CLOSER, 20 MIN. RATED
004A	2'-8"	8'-0"	PANEL	WOOD		AUTO-CLOSER, 20 MIN. RATED
004B	2'-8"	8'-0"	PANEL	WOOD		
005A	8'-0"	8'-0"	OVERHEAD	WOOD		GARAGE DOOR
005B	8'-0"	8'-0"	OVERHEAD	WOOD		GARAGE DOOR
005C	8'-0"	8'-0"	OVERHEAD	WOOD		GARAGE DOOR
101A	6'-0"	9'-6"	FRENCH	ALUMINUM / GLASS		PAIR, DIVIDED LIGHT, W/3'-0" SIDELIGHTS
103A	2'-8"	8'-0"	PANEL	WOOD		PRIVACY LOCK
104A	6'-0"	8'-0"	FRENCH	ALUMINUM / GLASS		PAIR, DIVIDED LIGHT
104B	6'-0"	8'-0"	FRENCH	ALUMINUM / GLASS		PAIR, DIVIDED LIGHT
105A	2'-8"	8'-0"	FRENCH	ALUMINUM / GLASS		DIVIDED LIGHT, W/ 2'-8" SIDELIGHTS
109A	5'-0"	7'-0"	PANEL	WOOD		PAIR, PRIVACY LOCK
109B	9'-0"	8'-0"	FRENCH SLIDER	ALUMINUM / GLASS		3-PANEL, DIVIDED LIGHT
110A	2'-4"	8'-0"	PANEL	WOOD		
202A	5'-0"	8'-0"	PANEL	WOOD		PAIR, PRIVACY LOCK
203A	2'-8"	8'-0"	PANEL	WOOD		
203B	2'-4"	8'-0"		WOOD		
204A	2'-8"	8'-0"	PANEL	WOOD		
205A	2'-8"	7'-0"	PANEL	WOOD		PRIVACY LOCK
205B	2'-4"	7'-0"	PANEL	WOOD		
206A	2'-4"	7'-0"	PANEL	WOOD		
207A	2'-8"	7'-0"	PANEL	WOOD		PRIVACY LOCK
207B	2'-4"	7'-0"	PANEL	WOOD		
208A	2'-8"	7'-0"	PANEL	WOOD		PRIVACY LOCK
208B	2'-4"	7'-0"	PANEL	WOOD		
209A	2'-4"	7'-0"	PANEL	WOOD		
209B	2'-4"	7'-0"	PANEL	WOOD		PRIVACY LOCK
210A	5'-0"	7'-0"	SLIDER	WOOD		
211A	2'-8"	8'-0"	PANEL	WOOD		
211B	2'-8"	8'-0"	PANEL	WOOD		

WINDOW SCHEDULE:

WINDOW NO.	WIDTH	HEIGHT	HEADER	TYPE	MATERIAL	FINISH	REMARKS
002A	6'-0"	5'-0"	8'-0"	DOUBLE CASEMENT	ALUMINUM		DIVIDED LIGHT, SAFETY GLAZING, EGRESS
101A	6'-0"	9'-6"	9'-6"	FIXED	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING
101B	6'-0"	9'-6"	9'-6"	FIXED	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING
103B	2'-0"	4'-0"	8'-0"	CASEMENT	ALUMINUM		DIVIDED LIGHT
104A	6'-0"	7'-6"	9'-6"	FIXED	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING @ LOWER AWNING
104B	9'-0"	7'-6"	9'-6"	FIXED	ALUMINUM		TRIPLE, DIVIDED LIGHT, SAFETY GLAZING @ LOWER AWNING
104C	6'-0"	7'-6"	9'-6"	FIXED	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING @ LOWER AWNING
105A	9'-0"	5'-0"	8'-0"	CASEMENT	ALUMINUM		TRIPLE, DIVIDED LIGHT
107A	9'-0"	7'-6"	9'-6"	FIXED	ALUMINUM		TRIPLE, DIVIDED LIGHT, SAFETY GLAZING @ LOWER AWNING
107B	6'-0"	7'-6"	9'-6"	FIXED	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING @ LOWER AWNING
107C	6'-0"	7'-6"	9'-6"	FIXED	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING @ LOWER AWNING
109A	4'-0"	4'-0"	8'-0"	CASEMENT	ALUMINUM		DOUBLE, DIVIDED LIGHT
110A	2'-0"	4'-0"	8'-0"	CASEMENT	ALUMINUM		DIVIDED LIGHT, SAFETY GLAZING
201A	6'-0"	7'-0"	7'-0"	FIXED	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING
201B	6'-0"	7'-0"	7'-0"	FIXED	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING
201C	6'-0"	7'-0"	7'-0"	FIXED	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING
201D	6'-0"	7'-0"	7'-0"	FIXED	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING
202A	9'-0"	8'-0"	8'-0"	FIXED	ALUMINUM		TRIPLE, DIVIDED LIGHT, SAFETY GLAZING @ LOWER AWNING
202B	6'-0"	8'-0"	8'-0"	FIXED	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING @ LOWER AWNING
202C	6'-0"	8'-0"	8'-0"	CASEMENT	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING @ LOWER AWNING, FALL PROTECTION, EGRESS
203A	6'-0"	5'-6"	8'-0"	CASEMENT	ALUMINUM		DOUBLE, DIVIDED LIGHT, SAFETY GLAZING
203B	2'-0"	4'-0"	8'-0"	CASEMENT	ALUMINUM		DIVIDED LIGHT
205A	8'-0"	5'-0"	7'-0"	CASEMENT	ALUMINUM		TRIPLE, DIVIDED LIGHT, EGRESS
206B	5'-4"	5'-0"	7'-0"	CASEMENT	ALUMINUM		DOUBLE, DIVIDED LIGHT
207A	5'-4"	4'-6"	7'-0"	CASEMENT	ALUMINUM		DOUBLE, DIVIDED LIGHT, EGRESS
208A	5'-4"	4'-6"	7'-0"	CASEMENT	ALUMINUM		DOUBLE, DIVIDED LIGHT, EGRESS
209A	2'-0"	3'-6"	7'-0"	CASEMENT	ALUMINUM		DIVIDED LIGHT
210A	5'-4"	5'-0"	7'-0"	CASEMENT	ALUMINUM		DOUBLE, DIVIDED LIGHT

WSEC 2015 NOTES:

1. THIS PROJECT IS ELIGIBLE AND COMPLIANT W/ WSEC 2015 PRESCRIPTIVE METHOD.
2. INSULATION VALUES SHALL BE AS FOLLOWS:
   A. ALL VERTICAL GLAZING SHALL BE 0.30 U-FACTOR MAX.
   B. ALL OVERHEAD GLAZING SHALL BE 0.50 U-FACTOR MAX.
   C. ALL EXTERIOR DOORS (INCLUDING DOORS FROM CONDITIONED SPACE TO UNCONDITIONED SPACE) SHALL BE 0.20 U-FACTOR MIN.
   D. ALL CEILINGS OVER CONDITIONED SPACE SHALL RECEIVE R-49 BLOWN-IN INSULATION MIN.
   E. ALL VAULTED CEILINGS SHALL RECEIVE R-38 BATT INSULATION MIN.
   F. ALL ABOVE-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN.
   G. ALL BELOW-GRADE EXTERIOR WALLS SHALL RECEIVE R-21 BATT INSULATION MIN @ INTERIOR FRAMED WALL.
   H. ALL FLOORS OVER UNCONDITIONED SPACE SHALL RECEIVE R-30 BATT INSULATION MIN.
   I. ALL SLAB-ON-GRADE WITHIN CONDITIONED SPACE SHALL RECEIVE R-10 RIGID INSULATION WITHIN 24" OF SLAB PERIMETER.
   J. ALL HEADERS @ EXTERIOR WALLS SHALL RECEIVE R-10 RIGID INSULATION @ INTERIOR SIDE OF WALL.
3. RE: STRUCTURAL DRAWINGS FOR ALL FRAMING COMPLIANCE REQUIREMENTS.
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5. PROVIDE 50 CFM INTERMITTENTLY OPERATING POINT-OF-USE VENTILATION @ ALL BATHS + LAUNDRY.
6. NATURAL GAS, PROPANE OR OIL WATER HEATER SHALL HAVE A MINIMUM EF OF 0.91 (WSEC 406.2, CREDIT 5c).
7. AT CRAWLSPACES THE MIN NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 FT² FOR EACH 300 FT² OF UNDER-FLOOR AREA. ONE VENTILATION OPENING SHALL BE WITHIN 3'-0" OF EACH CORNER OF THE BUILDING AT CRAWLSPACE, EXCEPT ONE SIDE OF THE BUILDING SHALL BE PERMITTED TO HAVE NO VENTILATION OPENINGS, OR CRAWLSPACE SHALL BE MECHANICALLY VENTED.
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PARCEL 1
8375 E. MERCER WAY · MERCER ISLAND, WA

DOOR + WINDOW SCHEDULES

RELEASE

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CORRECTIONS
20 SEPT 2018

REVIEWED FOR CODE COMPLIANCE
November 08, 2018
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E
MERCER
PARCEL 1
8375 E. MERCER WAY
MERCER ISLAND, WA

General Structural Notes

The Following Apply Unless Noted Otherwise on the Drawings

Criteria

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE 2015 INTERNATIONAL BUILDING CODE.
2. DESIGN LOAD CRITERIA

FLOOR LIVE LOAD (RESIDENTIAL)	40 PSF
FLOOR LIVE LOAD (RESIDENTIAL DECKS)	60 PSF
SNOW	Pf=25 PSF
WIND	Iw=1.0, GCpi=0.18, 110 MPH (ULTIMATE), EXPOSURE "B", KZT=1.84
EARTHQUAKE	
ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE PROCEDURE
LATERAL SYSTEM:	LIGHT FRAMED SHEAR WALLS
BASE SHEAR (ALLOWABLE)	V=18.19 KIPS
SITE CRITERIA	SITE CLASS=D, Ss=1.461, Sds=0.97, S1=0.56, SD1=0.56, Cs=0.107 SDC D, Ie=1.0, R=6.5

SEE PLANS FOR ADDITIONAL LOADING CRITERIA

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
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 VERIFIED.
5. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY 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. SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

   CONNECTOR PLATE WOOD ROOF TRUSSES

   CONTRACTOR SHALL SUBMIT WALL ELEVATION DRAWINGS OF AT LEAST 1/8"=1'-0" SCALE INDICATING LOCATIONS OF CONNECTION EMBEDMENTS AND WALL OPENINGS FOR REVIEW PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH REINFORCEMENT SHOP DRAWINGS.

   APPROVED SETS OF ALL SHOP DRAWINGS SHALL ALSO BE SUBMITTED TO THE BUILDING DEPARTMENT.
10. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN TWO WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

    SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

Quality Assurance

1. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SECTIONS 110 AND 1704 OF THE INTERNATIONAL BUILDING CODE BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS. SPECIAL INSPECTION IS REQUIRED OF THE FOLLOWING TYPES OF CONSTRUCTION:

EXPANSION BOLTS AND THREADED EXPANSION INSERTS	PER MANUFACTURER
EPOXY GROUTED INSTALLATIONS	PER MANUFACTURER

2. UNLESS OTHERWISE NOTED, THE FOLLOWING ELEMENTS COMPRISE THE SEISMIC-FORCE-RESISTING SYSTEM AND ARE SUBJECT TO SPECIAL INSPECTION FOR SEISMIC RESISTANCE IN ACCORDANCE WITH SECTION 1705.12 OF THE INTERNATIONAL BUILDING CODE.
   A. STRUCTURAL WOOD SHEAR WALL SYSTEMS REQUIRE PERIODIC INSPECTION FOR NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC FORCE RESISTING SYSTEM INCLUDING DRAG STRUTS, BRACES AND HOLDOWNS.

Geotechnical

1. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE SOILS ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ONPLANS (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 AND SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.

ALLOWABLE SOIL PRESSURE	2000 PSF
LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED)	55 PCF/35 PCF
COEFICIENT OF FRICTION (FACTOR OF SAFETY OF 1.5 INCLUDED)	0.3
PILE CAPACITY (COMPRESSION/TENSION/LATERAL)	

   SOILS REPORT REFERENCE: PanGEO, Inc. Project #14-206, Dated 2/4/16
2. FOUNDATION DESIGN IS BASED ON THE INSTALLATION OF AGGREGATE PIERS IN ACCORDANCE WITH RECOMMENDATIONS OF GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER SHALL INSPECT AND APPROVE ALL SOIL CONDITIONS PRIOR TO FORMING FOUNDATIONS.

Concrete

1. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH IBC SECTION 1905, 1906 AND ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF f'c=3,000 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. (STRUCTURAL DESIGN OF FOUNDATION IS BASED ON A f'c=2,500 PSI, PER IBC 1705.3.2.3, SPECIAL INSPECTION IS NOT REQUIRED.)
2. THE MINIMUM AMOUNTS OF CEMENT 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 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 IBC 1905.6. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION, THE COST OF WHICH SHALL BE PAID BY THE GENERAL CONTRACTOR. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY TO THE CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.
3. ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER OR STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH TABLE ACI 318 TABLE 4.2.1 MODERATE EXPOSURE.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, fy=60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, fy=40,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. SPIRAL REINFORCEMENT SHALL BE PLAIN WIRE CONFORMING TO ASTM A615, GRADE 60, fy=60,000 PSI.
5. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-99 AND 318-14. LAP ALL REINFORCEMENTS IN ACCORDANCE WITH "THE REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE." PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. 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.
6. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSEDTO EARTH	3"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS OR SMALLER)	1-1/2"
SLABS AND WALLS (INT. FACE)	GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

7. CONCRETE WALL REINFORCING - PROVIDE THE FOLLOWING UNLESS DETAILED OTHERWISE:

6" WALLS	#4 @ 16 HORIZ.	#4 @ 18 VERTICAL	1 CURTAIN
8" WALLS	#4 @ 12 HORIZ.	#4 @ 18 VERTICAL	1 CURTAIN

8. 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.
9. 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).

Anchorage

1. EXPANSION BOLTS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "KWIK BOLT TZ" AS MANUFACTURED BY THE HILTI CORP., INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-1917, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION BOLT INSTALLATION.
2. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "HIT RE 500-V3" AS MANUFACTURED BY HILTI CORP. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2322. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED.

Steel

1. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON:
   A. EITHER AISC 360 AND SECTION 2205.2 OF THE INTERNATIONAL BUILDING CODE.
   B. MARCH 18, 2005 AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, AMENDED AS FOLLOWS.
      i) AS NOTED IN THE CONTRACT DOCUMENTS.
      ii) BY THE DELETION OF PARAGRAPH 4.4.1.
      iii) REVISE REFERENCE FROM "STRUCTURAL DESIGN DRAWINGS" TO "CONTRACT DOCUMENTS" IN PARAGRAPH 3.1.
2. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.

   STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER	ASTM SPECIFICATION	Fy
WIDE FLANGE SHAPES	A992	50 KSI
OTHER SHAPES, PLATES, AND RODS	A36	36 KSI
CONNECTION BOLTS (3/4" ROUND, UNLESS SHOWN OTHERWISE)	A325-N	

3. ALL A-325N CONNECTION BOLTS NEED ONLY BE TIGHTENED TO A SNUG TIGHT CONDITION, DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES IN A JOINT ARE IN FIRM CONTACT. THIS MAY BE ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH.
4. ALL WELDING SHALL BE IN CONFORMANCE WITH A.I.S.C. AND A.W.S. STANDARDS AND SHALL BE PERFORMED BY W.A.B.O. CERTIFIED WELDERS USING E70 XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY A.W.S.) SHALL BE USED. ALL COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT -20 DEGREES F AND 40 FT-LBS AT 70 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.

Wood

1. FRAMING LUMBER SHALL BE KILN DRIED OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH W.C.L.B. STANDARD GRADING RULES FOR WEST COAST LUMBER NO.17. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS AND BEAMS:	(2X & 3X MEMBERS)	DOUGLAS FIR-LARCH NO. 2 MINIMUM BASE VALUE, Fb=900 PSI
	(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 2 MINIMUM BASE VALUE, Fb=900 PSI
BEAMS:	(INCL. 6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb=1350 PSI
POSTS:	(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 2 MINIMUM BASE VALUE, Fc=1350 PSI
	(6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fc=1000 PSI
STUDS, PLATES & MISC. FRAMING:		DOUGLAS-FIR-LARCH NO. 2

2. MANUFACTURED LUMBER, PSL, LVL, AND LSL, SHALL BE MANUFACTURED UNDER A PROCESS APPROVED BY THE NATIONAL RESEARCH BOARD. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, THE NATIONAL RESEARCH BOARD NUMBER, AND THE QUALITY CONTROL AGENCY. ALL PSL, LVL, AND LSL LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH ICC-ES REPORT ESR-1387 USING DOUGLAS FIR VENEER GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. THE MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PSL (2.0E)	Fb=2900 PSI, E=2000 KSI, Fv=290 PSI
LVL (1.9E)	Fb=2600 PSI ,E=1900 KSI, Fv=285 PSI
LSL (1.55E)	Fb=2325 PSI ,E=1550 KSI, Fv=310 PSI

   DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER, ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.

   MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%. EXCESSIVE DEFLECTIONS MAY OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE.
3. PREFABRICATED PLYWOOD WEB JOISTS SHALL BE DESIGNED BY THE MANUFACTURER FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS AND SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S PUBLISHED SPECIFICATIONS. ALL NECESSARY BRIDGING, BLOCKING, BLOCKING PANELS, STIFFENERS, ETC., SHALL BE DETAILED AND FURNISHED BY THE MANUFACTURER. SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. DESIGN SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF WASHINGTON. PERMANENT AND TEMPORARY BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S SPECIFICATIONS.

   DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE PLYWOOD WEB JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH PLYWOOD WEB JOIST PROVIDED.
4. PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE "NATIONAL DESIGN STANDARD FOR METAL PLATE-CONNECTED WOOD TRUSS CONSTRUCTION, ANSI/TPI 1" BY THE TRUSS PLATE INSTITUTE FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. LOADING SHALL BE AS FOLLOWS:

TOP CHORD LIVE LOAD	25 PSF
TOP CHORD DEAD LOAD	10 PSF
BOTTOM CHORD DEAD LOAD	5 PSF
TOTAL LOAD	40 PSF
WIND UPLIFT (TOP CHORD)	5 PSF
BOTTOM CHORD LIVE LOAD	10 PSF

   (BOTTOM CHORD LIVE LOAD DOES NOT ACT CONCURENTLY WITH THE ROOF LIVE LOAD)

   WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANGNAIL OR EQUAL). SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTED DOCUMENTS SHALL BE SIGNED AND STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, HIPS, VALLEYS, ETC., SHOWN ON THE DRAWINGS. THE EXACT COMPOSITION OF SPECIAL HIP, VALLEY, AND INTERSECTION AREAS (USE OF GIRDER TRUSSES, JACK TRUSSES, STEP-DOWN TRUSSES, ETC.) SHALL BE DETERMINED BY THE MANUFACTURER UNLESS SPECIFICALLY INDICATED ON THE PLANS. PROVIDE ALL TRUSS TO TRUSS AND TRUSS TO GIRDER TRUSS CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. PROVIDE FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.

Wood (Con't)

5. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.
   A. ROOF SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 32/16.
   B. FLOOR SHEATHING SHALL BE 3/4" (NOMINAL) WITH SPAN RATING 48/24.
   C. WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0.
   D. REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.
6. ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2) LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.
7. PRESSURE TREATED WOOD SHALL BE TREATED PER AWPA STANDARD. PRESSURE TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO A RENTION OF 0.25 PCF. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO A RETENTION OF 0.40 PCF. WOOD FOR USE IN PERMANENT FOUNDATIONS SHALL BE TREATED TO A RETENTION OF 0.60 PCF. SODIUM BORATE (SBX) TREATED WOOD SHALL NOT BE USED WHERE EXPOSED TO WEATHER. FASTENERS AND TIMBER CONNECTORS IN DIRECT CONTACT WITH ACQ-A, CBA-A, CA-B, OR SBX TREATED WOOD SHALL BE G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653. FASTENERS AND TIMBER CONNECTORS IN DIRECT CONTACT WITH ACZA TREATED WOOD SHALL BE TYPE 304 OR 316 STAINLESS STEEL.
8. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2015. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC-ES 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.

   ALL 2X JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJI JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "ITT" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIT" SERIES JOIST HANGERS.

   WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.

   ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.
9. WOOD FASTENERS
   A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
8d	2-1/2"	0.131"
10d	3"	0.148"
16d BOX	3-1/2"	0.135"

   IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.

   NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.

   B. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG BOLTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (2005 EDITION) WITH A LEAD BORE HOLE OF 60 TO 70 PERCENT OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS.
10. 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 2304.10.1. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.
    B. WALL FRAMING: REFER ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16" O.C. UNO. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. TWO 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.

       ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d @ 12" O.C. AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE EIGHT 16d NAILS @ 4" O.C. EACH SIDE JOINT.

       ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH TWO ROWS OF 16d NAILS @ 12" ON-CENTER, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0" ON-CENTER EMBEDDED 7" MINIMUM, UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d @12" ON-CENTER. UNLESS OTHERWISE NOTED, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH NO. 6 X 1-1/4" TYPE S OR W SCREWS @ 8" ON-CENTER. UNLESS INDICATED OTHERWISE, 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS @ 6" ON-CENTER AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS @ 12" ON-CENTER ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS.
    C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. 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 TWO ROWS 16d @ 12" ON-CENTER.

       UNLESS OTHERWISE NOTED ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AT 6" ON-CENTER WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" ON-CENTER TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12" ON-CENTER UNLESS OTHERWISE NOTED.

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	7/13/17	Permit
1	3/12/18	Corrections
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Sheet Contents

General Structural Notes

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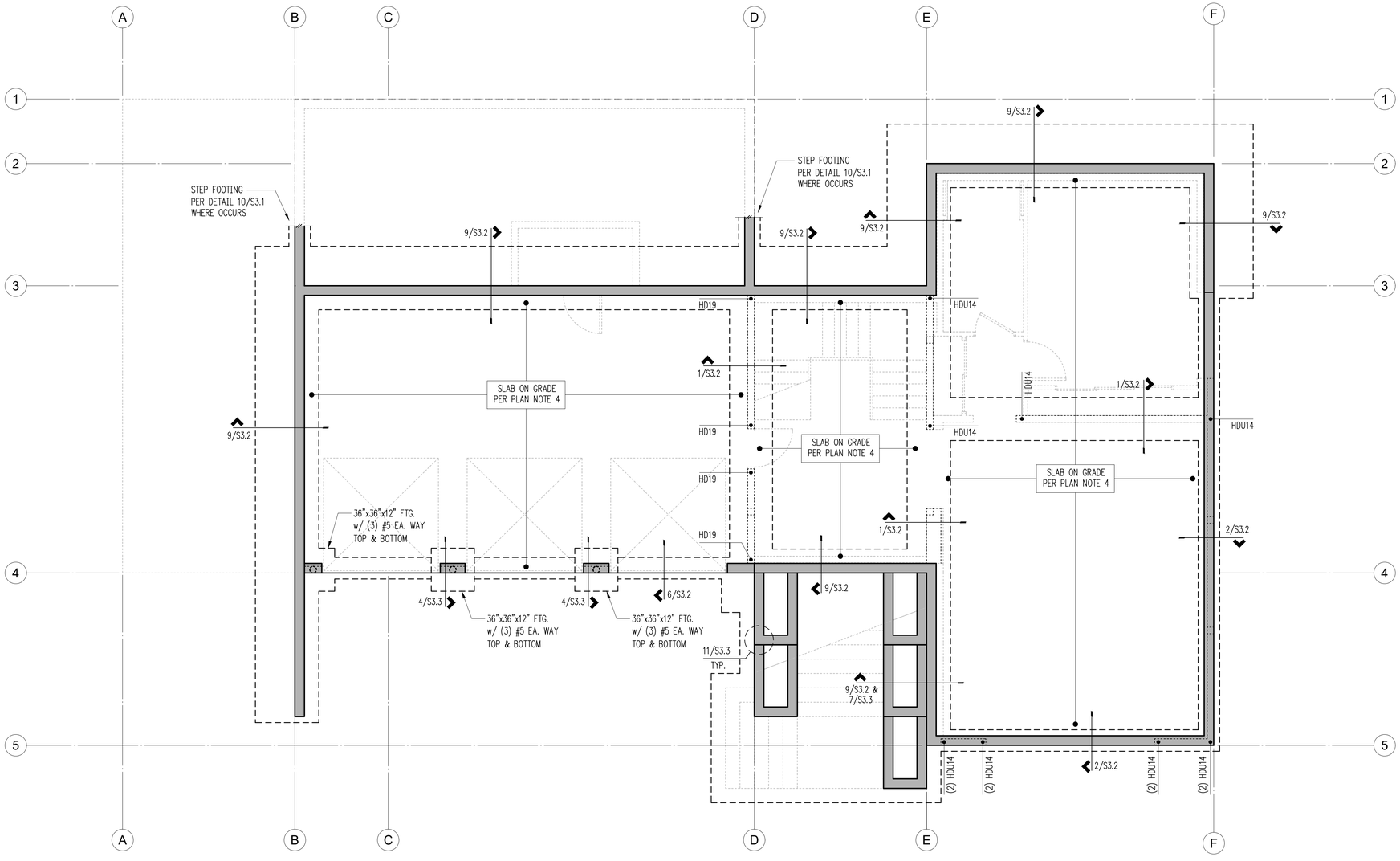
Sheet No.

S1.1



Foundation Plan

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

Plan Notes

1. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS (S1.1).
2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS UNLESS SPECIFICALLY NOTED ON STRUCTURAL PLANS.
3. ALL FOOTINGS SHALL BEAR ON FIRM, NATIVE SOIL.
4. 4" CONCRETE SLAB ON GRADE REINFORCED WITH #3 @ 12"oc EACH WAY, CENTERED IN SLAB. PROVIDE A BASE OF 4" COMPACTED, CLEAN 3/4" MINUS GRAVEL COVERED WITH 4 MIL. VAPOR BARRIER. PROVIDE JOINTS PER 2/S3.1.

Plan Notes (Con't)

6. PROVIDE DRAINAGE BEHIND ALL FOUNDATION WALLS.
7. REINFORCE FOOTING AND WALL CORNERS AND INTERSECTIONS PER 6/S3.1.
8. "HDU_" REFERS TO HOLDOWNS PER 8/S3.1
9. REFER 5/S3.2 WHERE PIPES PENETRATE FOUNDATION.
10. CONTRACTOR TO STEP FOUNDATION AS REQ'D PER DETAIL 10/S3.1.
11. CONTRACTOR TO VERIFY TOP OF FOOTING ELEVATION w/ ARCHITECTURAL PLANS.

NOTE: FOUNDATION DESIGN BASED ON INSTALLATION OF AGGREGATE PIERS IN ACCORDANCE WITH RECOMENDATIONS OF GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER SHALL INSPECT AND APPROVE ALL SOIL CONDITIONS PRIOR TO FORMING FOUNDATIONS

Legend

- (N) CONCRETE WALL ABOVE THIS LEVEL
- (N) CONCRETE FOOTING
- (N) SPAN DIRECTION
- EXTENT OF SPAN
- JOIST or BEAM HANGER PROVIDE HU HANGER u.n.o.
- HD — HOLDOWN TYPE

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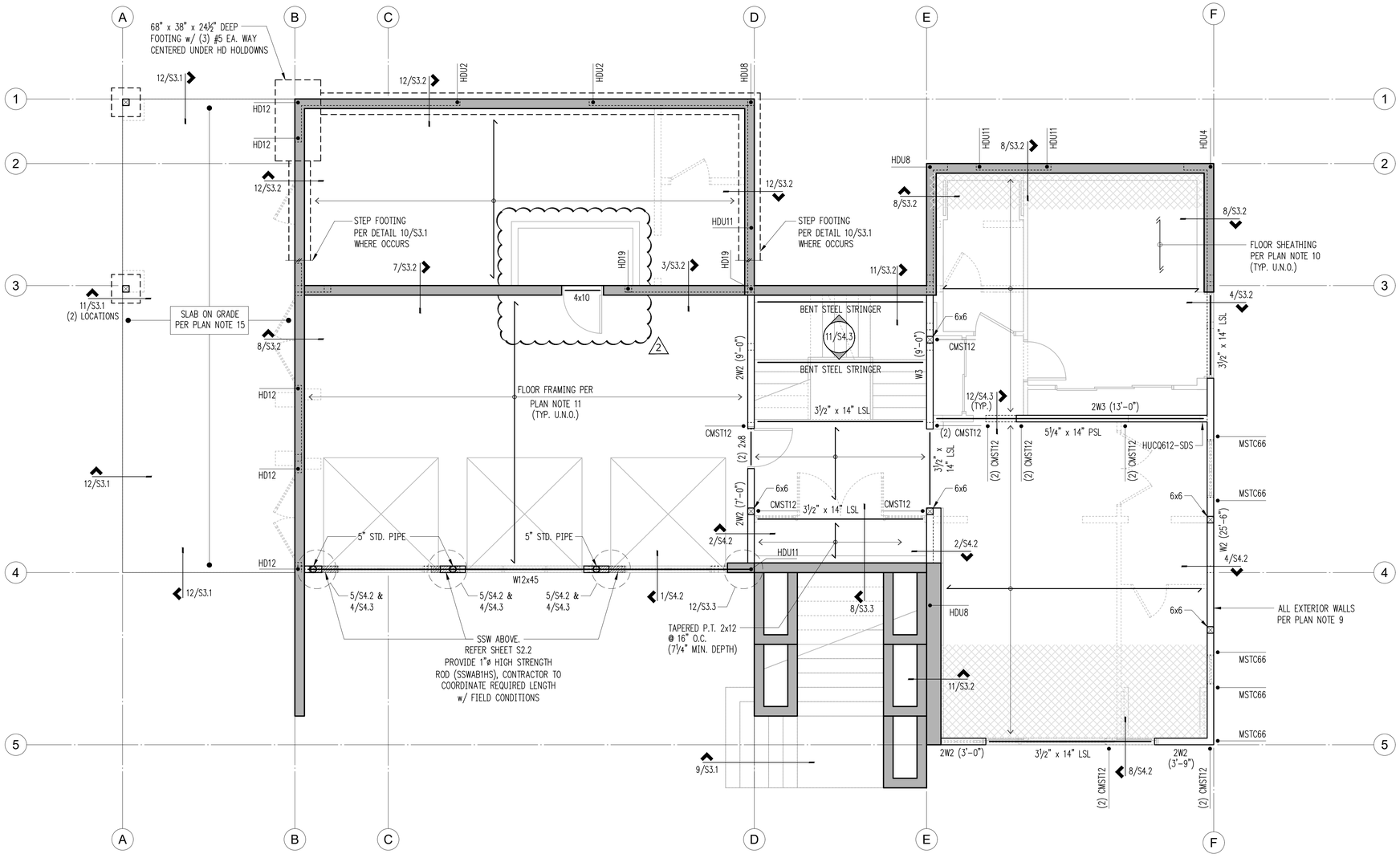
Sheet Contents

Foundation Plan

Sheet No.

S2.0



First Floor Framing Plan

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

Plan Notes

1. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS (S1.1).
2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS UNLESS SPECIFICALLY NOTED ON STRUCTURAL PLANS.
3. ALL FOOTINGS SHALL BEAR ON FIRM, NATIVE SOIL.
4. PROVIDE DRAINAGE BEHIND ALL FOUNDATION WALLS.
5. REINFORCE FOOTING AND WALL CORNERS AND INTERSECTIONS PER 6/S3.1.
6. "HDU_" REFERS TO HOLDOWNS PER 8/S3.1
7. REFER 5/S3.2 WHERE PIPES PENETRATE FOUNDATION.

Plan Notes (Con't)

8. CONTRACTOR TO VERIFY TOP OF FOOTING ELEVATION w/ ARCHITECTURAL PLANS.
9. "W#" REFERS TO SHEARWALL TYPE PER 3/S4.1 & 7/S4.1. ALL OTHER NON-DESIGNATED EXTERIOR WALLS SHALL BE SHEARWALL TYPE W6. WHERE INDICATED, "(X-X)" REFERS TO MINIMUM SHEARWALL LENGTH. COORDINATE ACTUAL LENGTH WITH ARCHITECTURAL.
10. FLOOR SHEATHING SHALL BE ¾" T&G PLYWOOD SHEATHING WITH 48/24 SPAN RATING. NAIL FRAMED PANEL EDGES W/ 8d COMMON (0.131"dia. x 2½") @ 6"oc, FIELD @ 12"oc. (REFER TO 9/S4.1)
11. FLOOR FRAMING TO BE 14" TJI/210 @ 16"oc (U.N.O.)
12. "MSTC66" & "CS16" REFER TO 60" LONG HOLDOWNS PER 11/S4.2 & 7/S4.2 RESPECTIVELY.

Plan Notes (Con't)

13. PROVIDE TOP PLATE SPLICES PER 1/S4.1
14. REFER TO 11/S4.1 AT SHEARWALL INTERSECTIONS.
15. 4" CONCRETE SLAB ON GRADE REINFORCED WITH #3 @ 12"oc EACH WAY, CENTERED IN SLAB. PROVIDE A BASE OF 4" COMPACTED, CLEAN ¾" MINUS GRAVEL COVERED WITH 4 MIL. VAPOR BARRIER. PROVIDE JOINTS PER 2/S3.1.
16. "SSW#" REFERS TO SIMPSON STRONGWALL. COORDINATE WALL HEIGHT WITH ARCHITECTURAL PLANS. REFER TO SSW1, SSW2 & 5/S4.2 FOR DETAILS. CONTRACTOR TO VERIFY REQ'D HEIGHT PRIOR TO PURCHASE.
17. "D.S." REFERS TO DRAG STRUT. NAIL FLOOR SHEATHING TO DRAG STRUT WITH (2) ROWS OF 8d COMMON (0.131"dia. x 2½") @ 4"oc. (REFER TO 5/S4.1)

Legend

- STRUCTURAL WOOD WALL or POST BELOW THIS LEVEL
- STRUCTURAL WOOD WALL or POST ABOVE THIS LEVEL
- CONCRETE WALL ABOVE THIS LEVEL
- CONCRETE FOOTING AT THIS LEVEL
- SPAN DIRECTION
- EXTENT OF SPAN
- JOIST or BEAM HANGER
- HD HOLDOWN TYPE
- BLOCK DIAPH. 2X'S LAID FLAT @ ALL PANEL EDGES. 8D @ 4"OC @ ALL PANEL EDGES & 12"OC IN FIELD. (REFER TO 9/S4.1)

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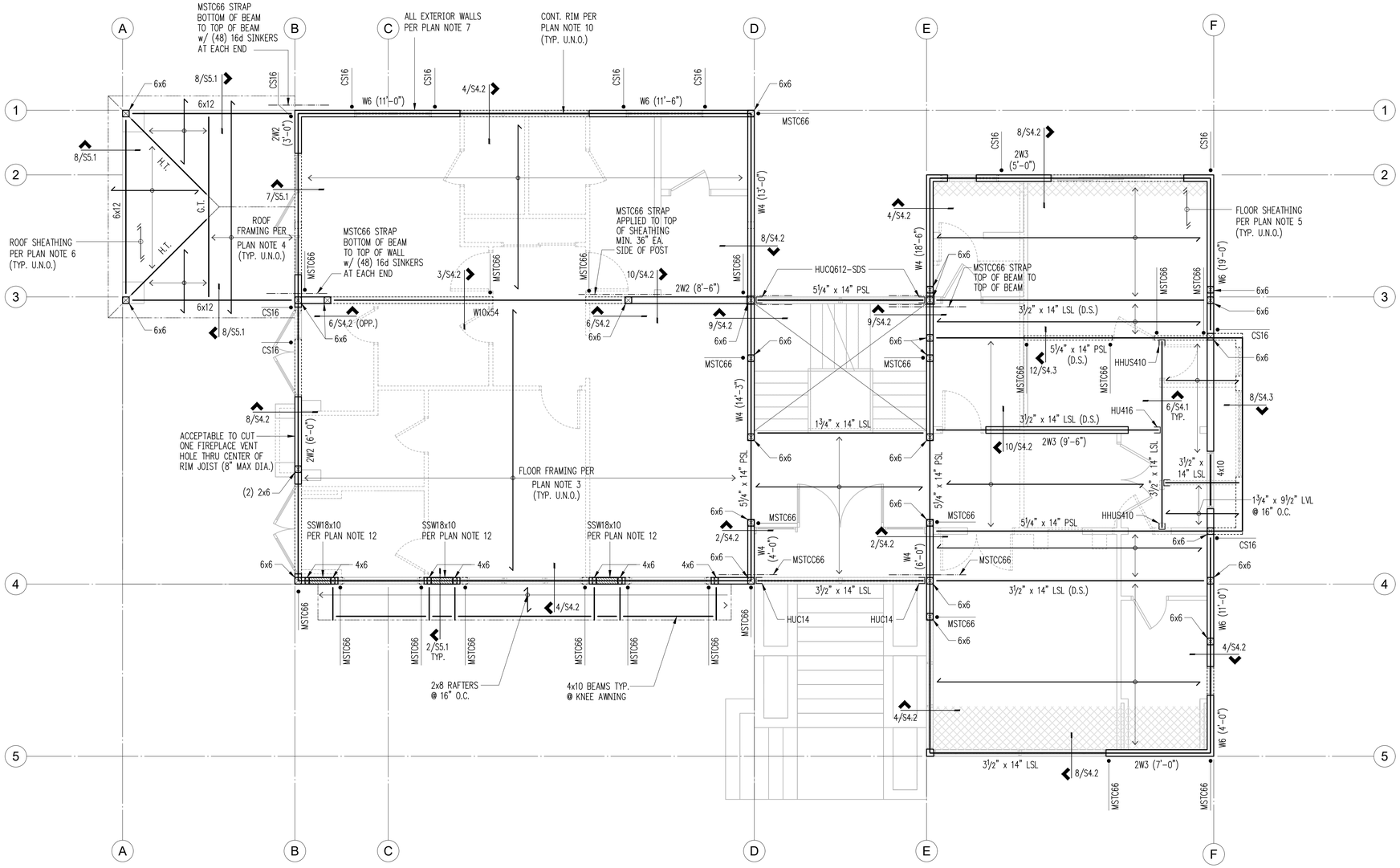
Sheet Contents: First Floor Framing Plan

Sheet No.: S2.1



Second Floor Framing Plan

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

Plan Notes

1. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS (S1.1).
2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS UNLESS SPECIFICALLY NOTED ON STRUCTURAL PLANS.
3. FLOOR FRAMING TO BE 14" TJI/210 @ 16"oc (U.N.O.)
4. ROOF FRAMING (where occurs) SHALL BE PRE-MANUFACTURED ROOF TRUSSES @ 24"oc. (Truss design by others).
5. FLOOR SHEATHING SHALL BE ¾" T&G PLYWOOD SHEATHING WITH 48/24 SPAN RATING. NAIL FRAMED PANEL EDGES W/ 8d COMMON (0.131"dia. x 2½") @ 6"oc, FIELD @ 12"oc. (REFER TO 9/S4.1)

Plan Notes (Con't)

6. ROOF SHEATHING SHALL BE 5/8" CDX PLYWOOD SHEATHING WITH 40/20 SPAN RATING. NAIL FRAMED PANEL EDGES W/ 8d COMMON (0.131"dia. x 2½") @ 6"oc, FIELD @ 12"oc. (REFER TO 9/S4.1)
7. "W#" REFERS TO SHEARWALL TYPE PER 3/S4.1 & 7/S4.1. ALL OTHER NON-DESIGNATED EXTERIOR WALLS SHALL BE SHEARWALL TYPE W6. WHERE INDICATED, "(X-X)" REFERS TO MINIMUM SHEARWALL LENGTH. COORDINATE ACTUAL LENGTH WITH ARCHITECTURAL.
8. "MSTC66" & "CS16" REFER TO HOLDOWNS PER 11/S4.2 & 7/S4.2 RESPECTIVELY.
9. PROVIDE TOP PLATE SPLICES PER 1/S4.1

Plan Notes (Con't)

10. AT EXTERIOR WALLS, PROVIDE CONTINUOUS FLUSH FRAMED 3½" X 14" LSL STRUCTURAL RIM JOIST, UNLESS NOTED OTHERWISE. RIM JOISTS OVER OPENINGS SHALL BE CONTINUOUS w/ NO SPLICES. REFER TO 4/S4.2 & 8/S4.2.
11. REFER TO 11/S4.1 AT SHEARWALL INTERSECTIONS.
12. "SSW#" REFERS TO SIMPSON STRONGWALL. COORDINATE WALL HEIGHT WITH ARCHITECTURAL PLANS. REFER TO SSW1, SSW2 & 5/S4.2 FOR DETAILS. CONTRACTOR TO VERIFY REQ'D HEIGHT PRIOR TO PURCHASE.
13. "D.S." REFERS TO DRAG STRUT. NAIL FLOOR SHEATHING TO DRAG STRUT WITH (2) ROWS OF 8d COMMON (0.131"dia. x 2½") @ 4"oc. (REFER TO 5/S4.1)

Legend

- STRUCTURAL WOOD WALL or POST BELOW THIS LEVEL
- STRUCTURAL WOOD WALL or POST ABOVE THIS LEVEL
- HD — HOLDOWN TYPE
- SPAN DIRECTION
- EXTENT OF SPAN
- JOIST or BEAM HANGER
- G.T. — GIRDER TRUSS
- H.T. — HIP TRUSS
- BLOCK DIAPH. 2X'S LAID FLAT @ ALL PANEL EDGES. 8D @ 4"OC @ ALL PANEL EDGES & 12"OC IN FIELD. (REFER TO 9/S4.1)

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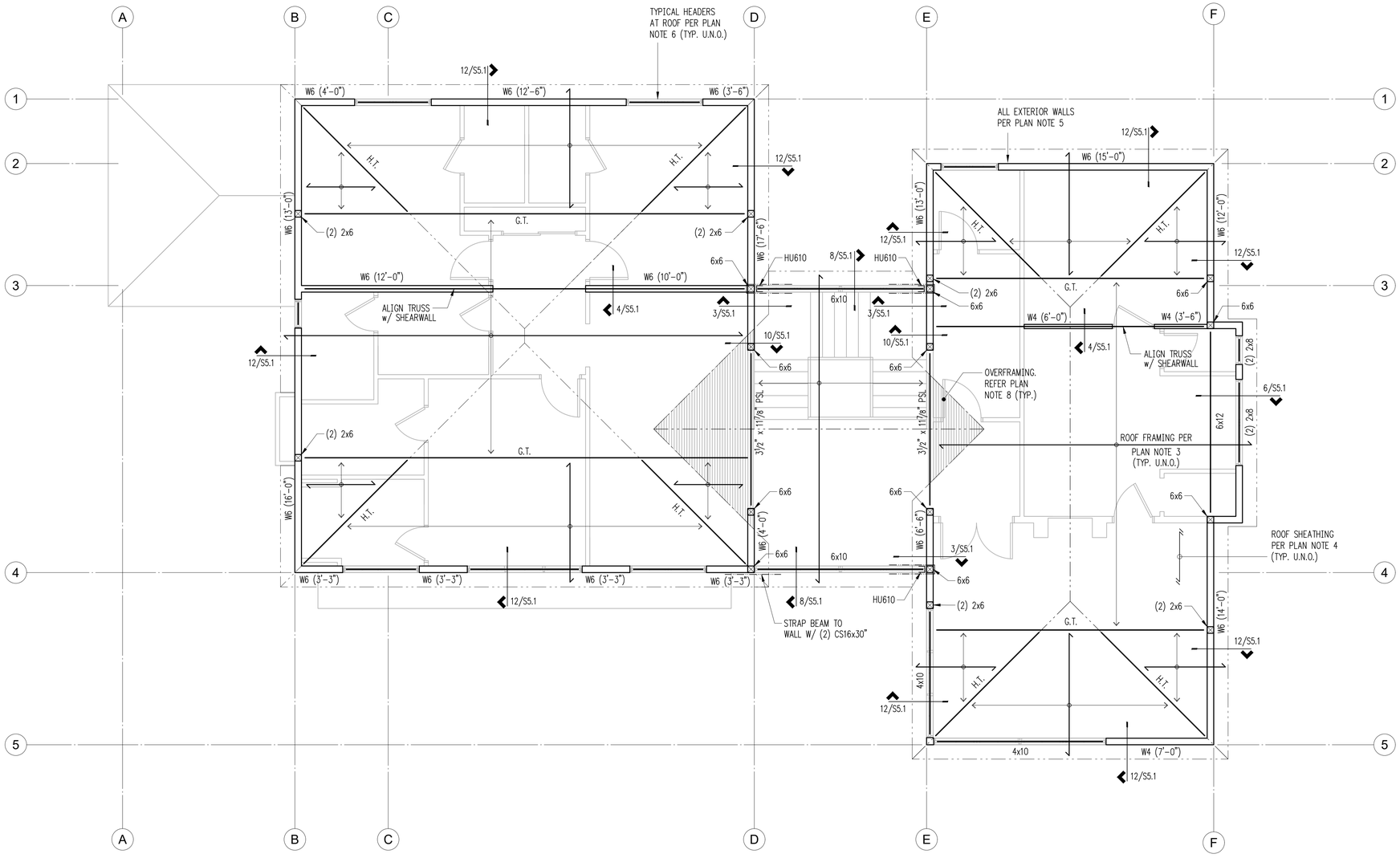
Sheet Contents: Second Floor Framing Plan

Sheet No.: S2.2



Roof Framing Plan

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

Plan Notes

1. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS (S1.1).
2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS UNLESS SPECIFICALLY NOTED ON STRUCTURAL PLANS.
3. ROOF FRAMING SHALL BE PRE-MANUFACTURED ROOF TRUSSES @ 24"oc. (TRUSS DESIGN BY OTHERS).
4. ROOF SHEATHING SHALL BE 5/8" CDX PLYWOOD SHEATHING WITH 40/20 SPAN RATING. NAIL FRAMED PANEL EDGES W/ 8d COMMON (0.131"dia. x 2½") @ 6"oc, FIELD @ 12"oc. (REFER TO 9/S4.1)

Plan Notes (Con't)

5. "W#" REFERS TO SHEARWALL TYPE PER 3/S4.1 & 7/S4.1. ALL OTHER NON-DESIGNATED EXTERIOR WALLS SHALL BE SHEARWALL TYPE W6. WHERE INDICATED, "(X-X)" REFERS TO MINIMUM SHEARWALL LENGTH. COORDINATE ACTUAL LENGTH WITH ARCHITECTURAL.
6. ALL HEADERS AT ROOF NOT NOTED OTHERWISE ON PLAN SHALL BE (2) 2X8. (REFER TO DETAIL 2/S4.1)
7. PROVIDE TOP PLATE SPLICES PER 1/S4.1
8. WHERE OVERFRAMING IS INDICATED, OVERFRAME WITH 2x6 @ 24" O.C. w/ 4'-0" MAX. SPAN. (REFER TO DETAIL 11/S5.1)

Legend

- STRUCTURAL WOOD WALL or POST BELOW THIS LEVEL
- SPAN DIRECTION
- EXTENT OF SPAN
- JOIST or BEAM HANGER
- G.T. GIRDER TRUSS
- H.T. HIP TRUSS

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PO Box 55124
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DANIEL R. BUKER — STATE OF WASHINGTON — 44090 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

East Mercer - Parcel 1

8375 E Mercer Way
Mercer Island, WA, 98040

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Sheet Contents: Roof Framing Plan

Sheet No.: S2.3

REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE

FOR F'c = 2500 psi, GRADE 60 REINFORCING

I

MINIMUM STRAIGHT DEVELOPMENT LENGTH (ℓd)

BAR SIZE	TOP BARS	OTHER BARS
#3	23"	18"
#4	31"	24"
#5	40"	30"
#6	47"	36"
#7	68"	53"
#8	78"	60"
#9	88"	68"
#10	99"	77"
#11	110"	85"

II

MINIMUM LAP SPLICE LENGTHS (ℓs)

BAR SIZE	TOP BARS	OTHER BARS
#3	31"	23"
#4	41"	31"
#5	51"	40"
#6	62"	47"
#7	89"	68"
#8	102"	78"
#9	114"	88"
#10	130"	99"
#11	143"	110"

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.

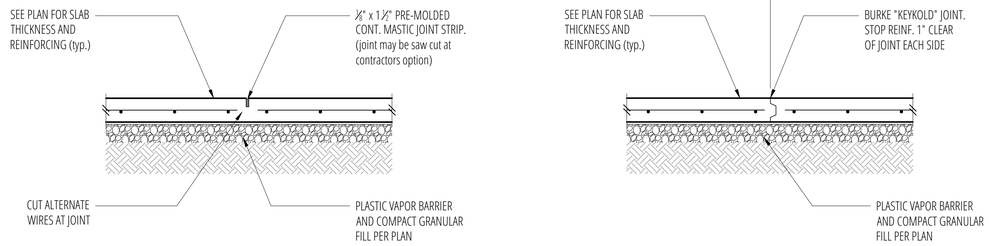
IF CLEAR CONCRETE COVER IS NOT GREATER THAN THE DIAMETER OF THE BAR, OR THE CENTER TO CENTER SPACING IS NOT GREATER THAN 3 BAR DIAMTERS, THEN LENGTHS SHALL BE INCREASED BY 50%

III

MINIMUM EMBEDMENT LENGTHS (ℓdh) FOR STANDARD END HOOKS

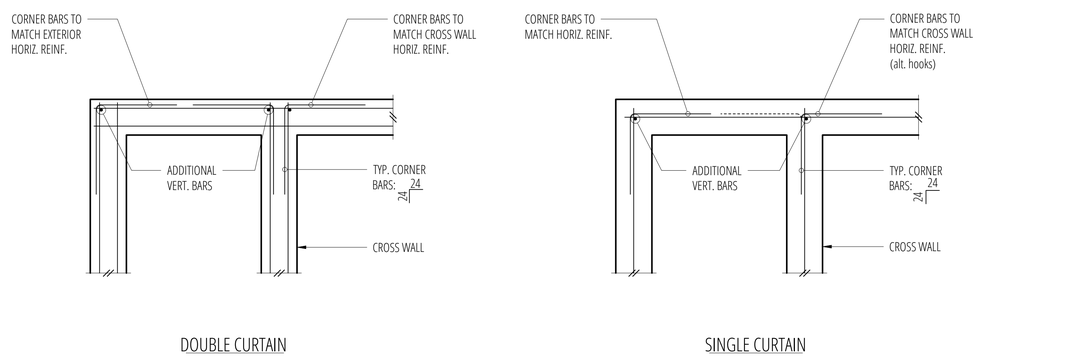
BAR SIZE	LENGTH
#3	7"
#4	9"
#5	11"
#6	13"
#7	14"
#8	17"
#9	19"
#10	21"
#11	24"

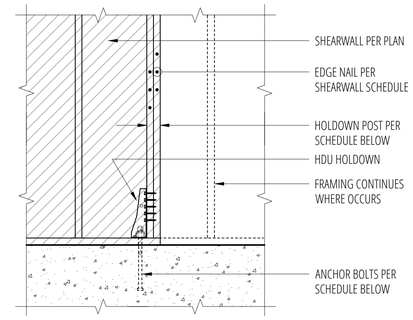
1. SIDE COVER MUST BE EQUAL TO OR GREATER THAN 2½"
2. END COVER FOR 90° HOOKS MUST BE EQUAL TO OR GREATER THAN 2"



2 Typical Slab Joints

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





Holdown Schedule

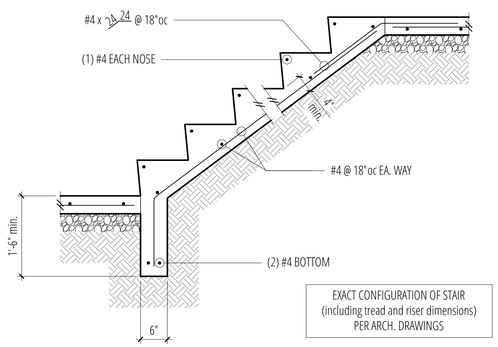
Plan Mark	Screws	Anchor Bolt ②	A.B. Embed	Holdown Post ①		Capacity #
				IF 2x4	IF 2x6	
HDU2-SDS2.5	(6) SDS¼" x 2½"	SSTB16	12⅝"	(2) 2x4	4x6	2215/3075
HDU4-SDS2.5	(10) SDS¼" x 2½"	SB⅝ x 24	18"	4x4	4x6	4565
HDU5-SDS2.5	(14) SDS¼" x 2½"	SB⅝ x 24	18"	4x4	4x6	5645
HDU8-SDS2.5	(20) SDS¼" x 2½"	SB⅞ x 24	18"	4x4	4x6	6970
HDU11-SDS2.5	(30) SDS¼" x 2½"	SB 1 x 30	24"	4x8	6x6	9535
HDU14-SDS2.5	(36) SDS¼" x 2½"	SB 1¼ x 30	30"	N/A	6x6	10770
HD12	(4) 1"ø THRU BOLTS	PAB9H	18½"	N/A	6x6	21620+
HD19	(5) 1"ø THRU BOLTS	PAB10H	21"	N/A	6x6	26690+

① MINIMUM SIZE OF POST AT END OF WALL UNLESS NOTED OTHERWISE ON FRAMING PLANS.

② "SSTB" & "SB" REFER TO ANCHOR BOLTS BY SIMPSON STRONG-TIE. INSTALL PER MANUFACTURER.

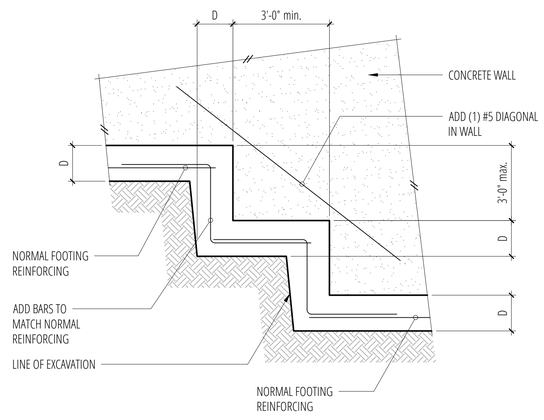
5 Typical Lap Splice & Development Length

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



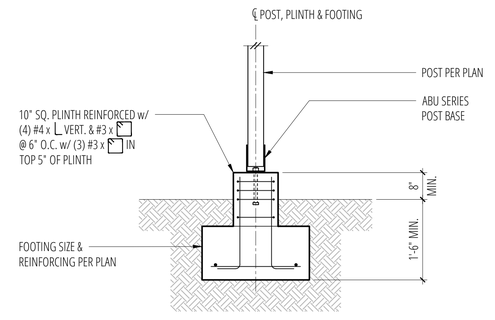
6 Typical Corner Bars at Concrete Walls and Footings

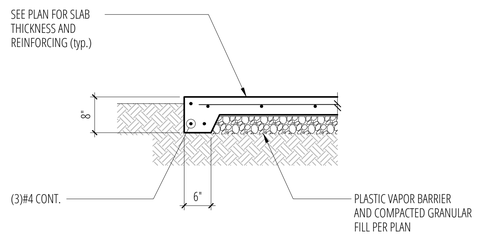
SCALE: 3/4"=1'-0"



8 Typical HDU Holdown

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





9 Typical Stair on Grade

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

10 Typical Stepped Footing

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

11 Post or Canopy Footing

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

12 Typical Slab Edge

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

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Sheet Contents: Concrete Details

Sheet No.: S3.1

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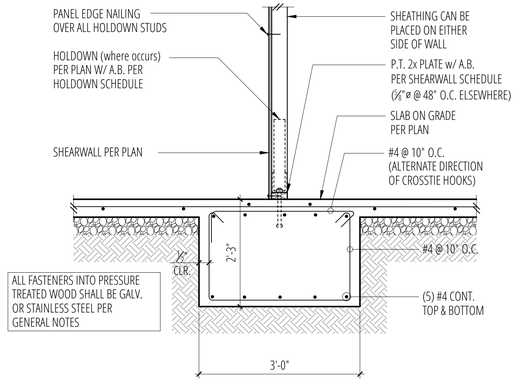
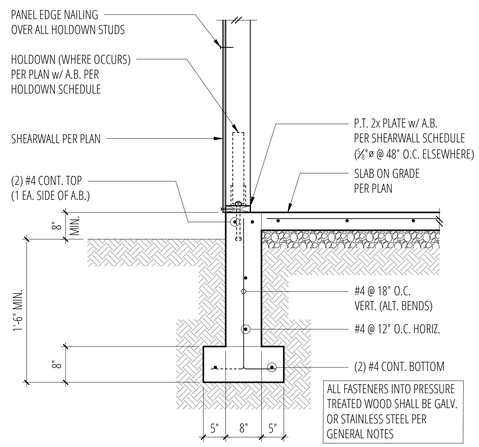


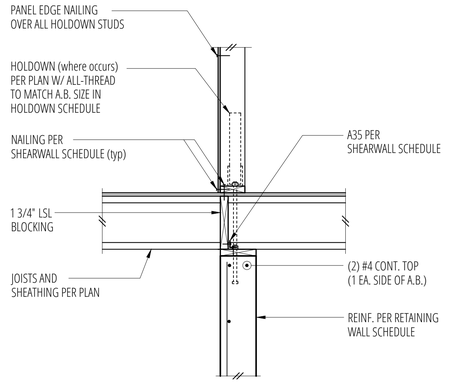
1 Interior Wall w/ Thickened Footing

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



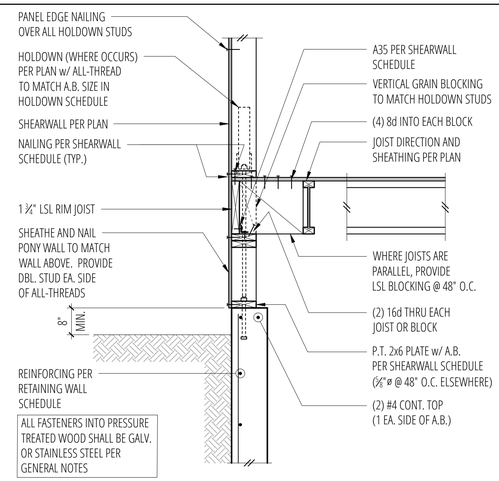
2 Exterior Wall w/ Slab on Grade

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



3 Shearwall Over Basement Wall

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



4 Exterior Framing at Basement (w/ Pony Wall)

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

5 Pipe and Trench Locations

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

6 Typical Turned-Down Slab Edge

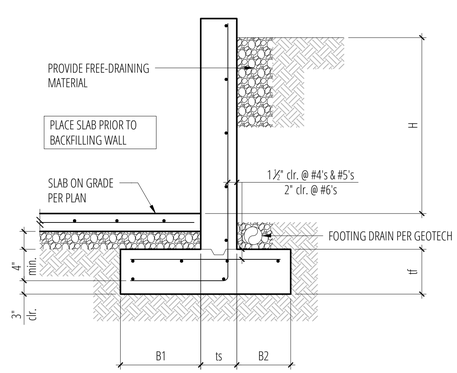
SCALE: 3/4"=1'-0"

7 Floor Framing over Basement Wall

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

8 Exterior Framing at Basement (Dropped Joist)

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

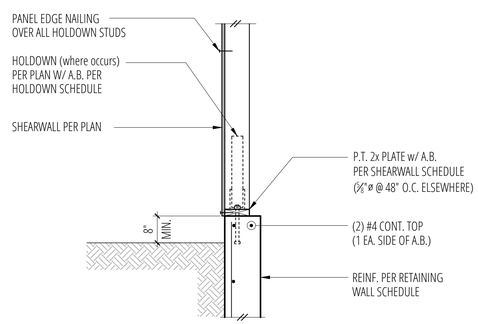


RETAINING WALL SCHEDULE w/ SLAB

H (ft.)	B1	ts	B2	tf	STEM REINFORCING		FOOTING REINFORCING	
					VERT.	HORIZ.	TOP	LONGIT.
3'-0"	5"	8"	5"	8"	#4 @ 18" O.C.	#4 @ 12" O.C.	-	(2) #4
4'-0"	1'-0"	8"	5"	8"	#4 @ 18" O.C.	#4 @ 12" O.C.	-	(2) #4
5'-0"	1'-6"	8"	5"	10"	#4 @ 18" O.C.	#4 @ 12" O.C.	-	(3) #4
6'-0"	2'-3"	8"	5"	10"	#4 @ 18" O.C.	#4 @ 12" O.C.	-	(4) #4
7'-0"	2'-6"	8"	9"	10"	#4 @ 9" O.C.	#4 @ 9" O.C.	-	(5) #4
8'-0"	2'-9"	8"	1'-0"	12"	#5 @ 12" O.C.	#4 @ 12" O.C.	#5 @ 18" O.C.	(5) #5
9'-0"	3'-3"	8"	1'-3"	13"	#5 @ 9" O.C.	#4 @ 9" O.C.	#4 @ 18" O.C.	(6) #5
10'-0"	4'-3"	8"	1'-6"	15"	#6 @ 9" O.C.	#4 @ 9" O.C.	#4 @ 18" O.C.	(7) #5
11'-0"	4'-6"	10"	2'-0"	15"	#6 @ 9" O.C.	#4 @ 9" O.C.	#4 @ 18" O.C.	(8) #5

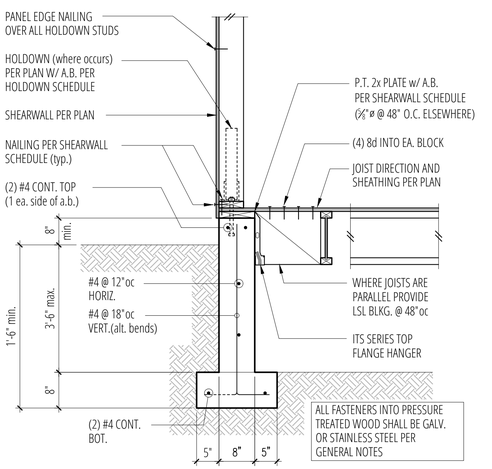
9 Retaining Wall Schedule with Slab on Grade

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



11 Stud Wall at Top of Basement Wall

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



12 Exterior Framing (Dropped Joist)

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

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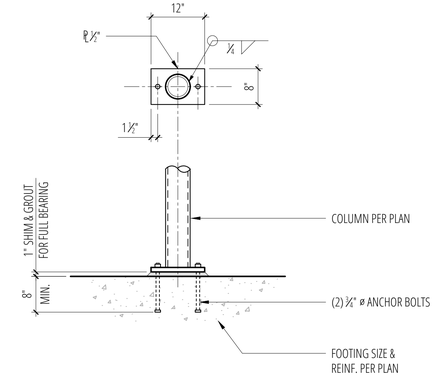
Concrete Details

Sheet No.

S3.2

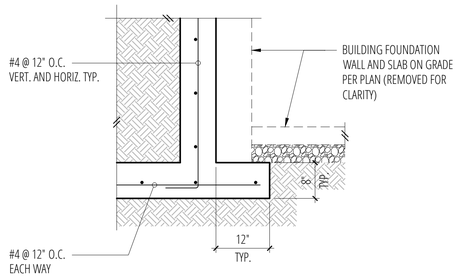


1 SCALE: 3/4"=1'-0"

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

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

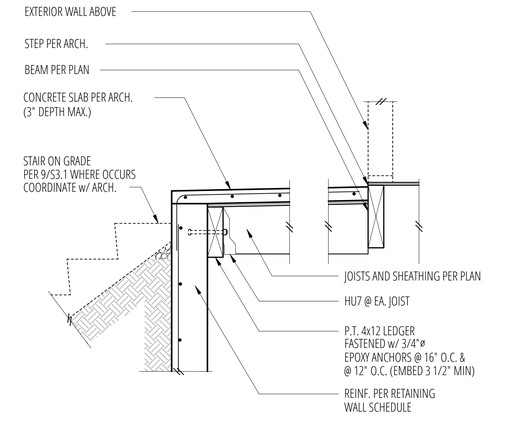
4 Baseplate Connection at Steel Column
SCALE: 3/4"=1'-0"



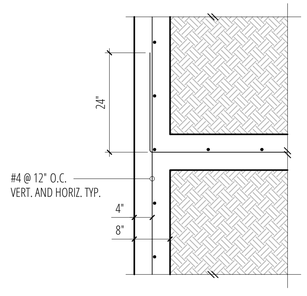
5 SCALE: 3/4"=1'-0"

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

7 Planter Wall Footing and Reinforcing
SCALE: 3/4"=1'-0"



8 Slab on Grade / Framing at Entry
SCALE: 3/4"=1'-0"

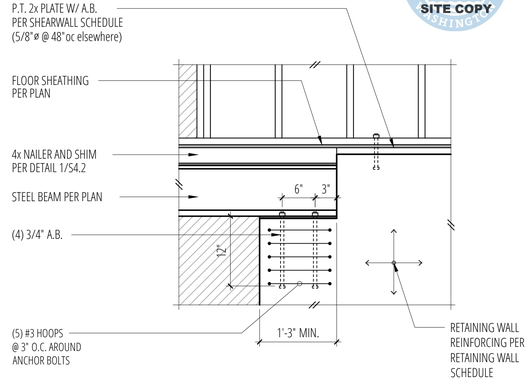


PLAN VIEW

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

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

11 Planter Wall Reinforcing
SCALE: 3/4"=1'-0"



12 Steel Beam Pocket at Retaining Wall
SCALE: 3/4"=1'-0"

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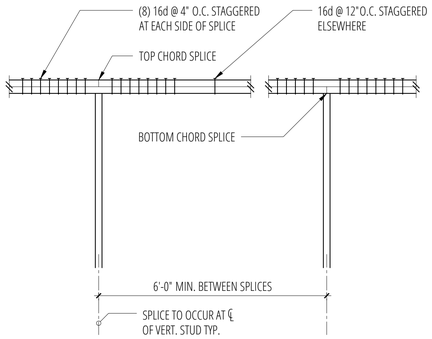
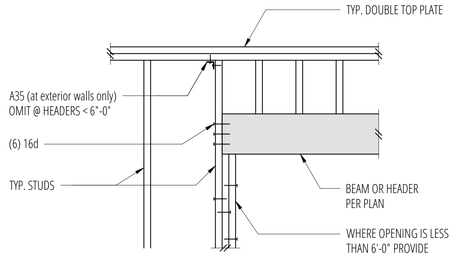


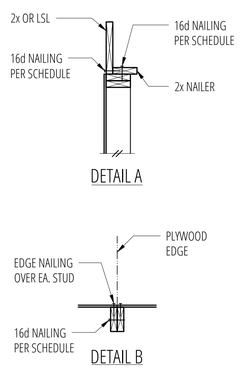
1 Typical Top Plate Splice

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



2 Typical Header Support

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



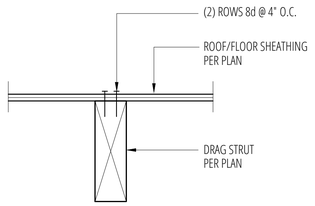
SHEARWALL SCHEDULE ①②⑥⑦⑧

MARK	SHEATHING	PANEL EDGE NAILING	TOP PLATE CONNECTION		BASE PLATE CONNECTION	
			IF TJI	IF 2x OR LSL ⑨	AT WOOD	AT CONCRETE
W6	15/32" CDX PLYWOOD	8d @ 6" OC	16d @ 6" OC	A35 @ 24" OC ⑩	16d @ 6" OC	⅝" ø A.B. @ 48" OC
W4	15/32" CDX PLYWOOD	8d @ 4" OC	16d @ 3" OC	A35 @ 16" OC ⑩	16d @ 3" OC ⑪	⅝" ø A.B. @ 32" OC
W3 ④	15/32" CDX PLYWOOD	8d @ 3" OC	(2) ROWS 16d @ 6" OC	A35 @ 12" OC ⑩	16d @ 3" OC ⑪	⅝" ø A.B. @ 16" OC
W2 ④	15/32" CDX PLYWOOD	8d @ 2" OC	(2) ROWS 16d @ 4½" OC	A35 @ 9" OC ⑩	(2) ROWS 16d @ 4½" OC ⑫	⅝" ø A.B. @ 12" OC
2W3 ⑤	15/32" CDX PLYWD. EA. SIDE	8d @ 3" OC EA. SIDE	N/A	A35 @ 6" OC	(2) ROWS 16d @ 3" OC ⑫	⅝" ø A.B. @ 16" OC
2W2 ⑤	15/32" CDX PLYWD. EA. SIDE	8d @ 2" OC EA. SIDE	N/A	HGA10 @ 8" OC	(2) ROWS 16d @ 2" OC ⑫	⅝" ø A.B. @ 12" OC

1. BLOCK PANEL EDGES WITH 2x MIN. LAID FLAT AND NAIL PANELS TO INTERMEDIATE SUPPORTS WITH 8d @ 12" OC
2. 8d NAILS SHALL BE 0.131" ø x 2½" (COMMON) - 16d NAILS SHALL BE 0.135" ø x 3½" (BOX)
3. EMBED ANCHOR BOLTS AT LEAST 7" EXPANSION BOLTS MAY BE SUBSTITUTED FOR ANCHOR BOLTS WITH 4" EMBEDMENT. ALL BOLTS SHALL HAVE 3" x 3" x ¼" PLATE WASHERS.
4. 3x STUDS OR DOUBLE STUDS NAILED TOGETHER W/ BASE PLATE NAILING ARE REQUIRED AT ABUTTING PANEL EDGES OF W3 AND W2. SEE DETAIL B. WHERE 3x STUDS ARE USED FOR W2, STAGGER NAILS AT ADJOINING PANEL EDGES.
5. 3x FOUNDATION SILL PLATES ARE REQUIRED FOR 2W3 AND 2W2. 3x STUDS ARE REQUIRED AT ABUTTING PANEL EDGES AND PANEL JOINTS SHALL BE OFFSET EACH SIDE OF WALL. STAGGER NAILS AT ADJOINING PANEL EDGES. 3x STUDS, MIN. , REQUIRED AT END OF SHEARWALL.
6. TWO STUDS MINIMUM ARE REQUIRED AT EACH END OF ALL SINGLE-SIDED SHEARWALLS. ALL END STUDS SHALL RECEIVE PANEL EDGE NAILING. SEE PLANS AND HOLDOWN SCHEDULE FOR ALTERNATE REQUIREMENTS.
7. ALL EXTERIOR WALLS SHALL BE W6, UNLESS NOTED OTHERWISE
8. 7/16" O.S.B. MAY BE SUBSTITUTED FOR 15/32" CDX.
9. LTP4'S MAY BE SUBSTITUTED FOR A35'S AT CONTRACTORS OPTION.
10. A 2X NAILER ATTACHED W/ BASE PLATE NAILING PER DETAIL A MAY BE SUBSTITUTED FOR A35'S AT CONTRACTORS OPTION.
11. STAGGER NAILS IN ROW W/ ½" MIN. OFFSET.
12. MINIMUM OFFSET BETWEEN ROWS ½", AND MINIMUM RIM OR JOIST 3½" WIDE.

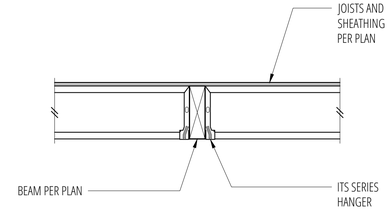
3 Shearwall Schedule

SCALE: N.T.S.



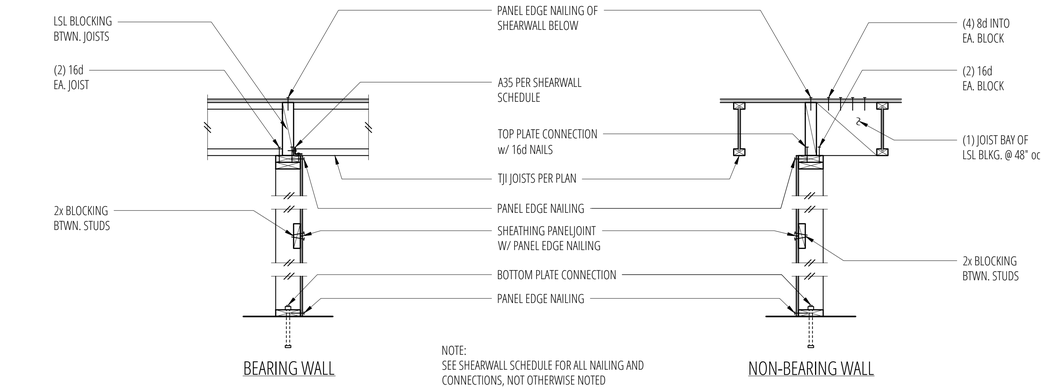
5 Typical Drag Strut (D.S.)

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



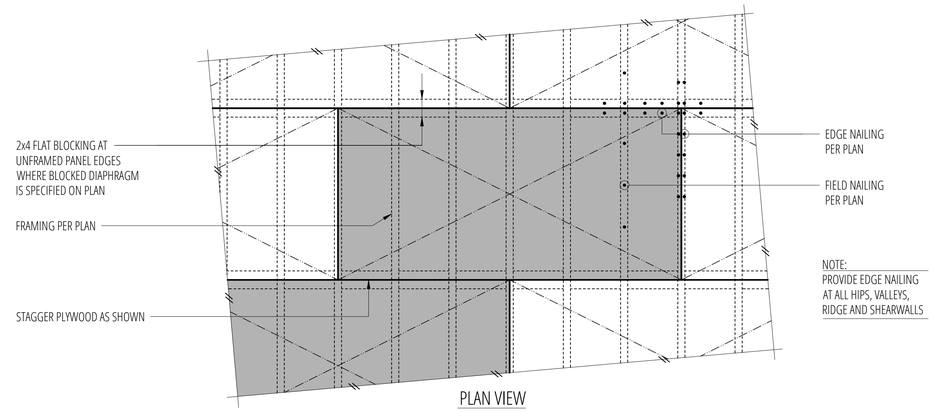
6 Typical Flush Beam

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



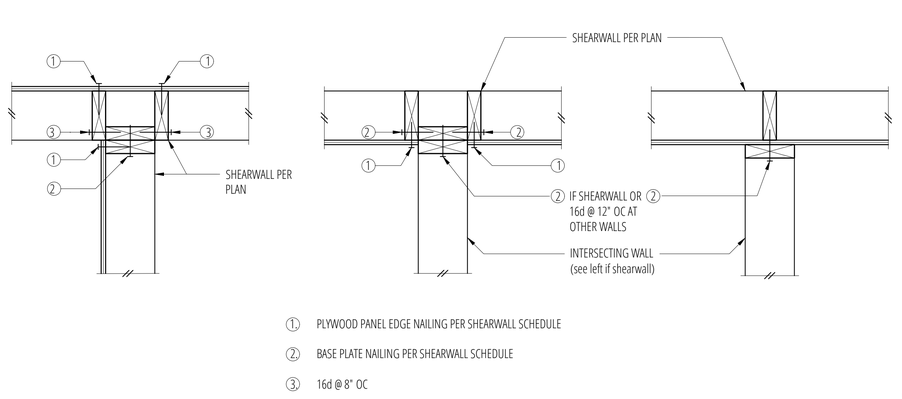
7 Typical Shearwall Construction

SCALE: N.T.S.



9 Typical Diaphragm Sheathing and Nailing

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



① PLYWOOD PANEL EDGE NAILING PER SHEARWALL SCHEDULE

② BASE PLATE NAILING PER SHEARWALL SCHEDULE

③ 16d @ 8" OC

11 Typical Shearwall Intersections

SCALE: N.T.S.

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November 08, 2018
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buker ENGINEERING LLC
PO Box 55124
Seattle, WA 98155

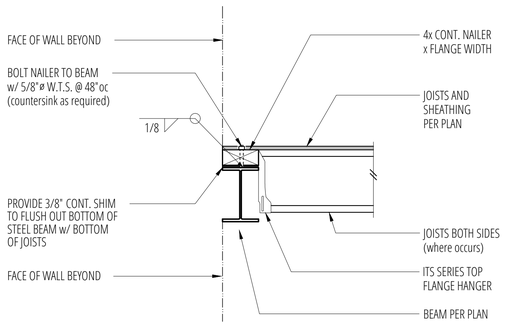
DANIEL R. BUKER — STATE OF WASHINGTON — 44090 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

East Mercer - Parcel 1
8375 E Mercer Way
Mercer Island, WA, 98040

No.	Date	Issue
	7/13/17	Permit
1	3/12/18	Corrections
2	6/13/18	Corrections

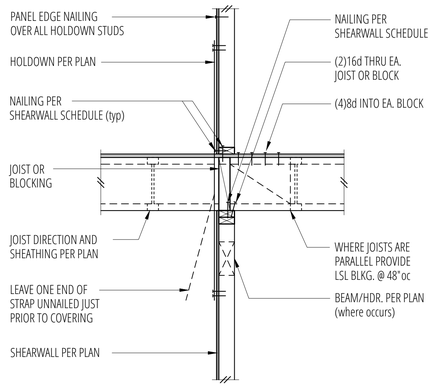
Sheet Contents
Floor Framing Details

Sheet No.
S4.1



1 Exterior Framing at Steel Beam

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



2 Interior Shearwall (w/TJI's)

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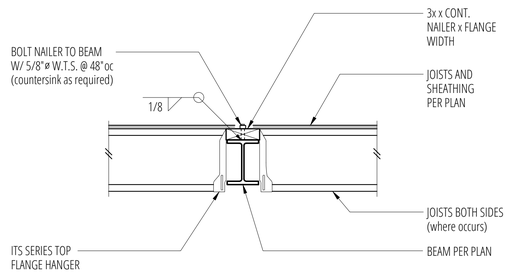
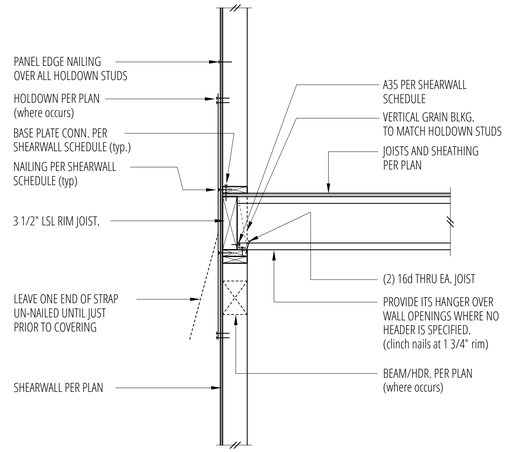


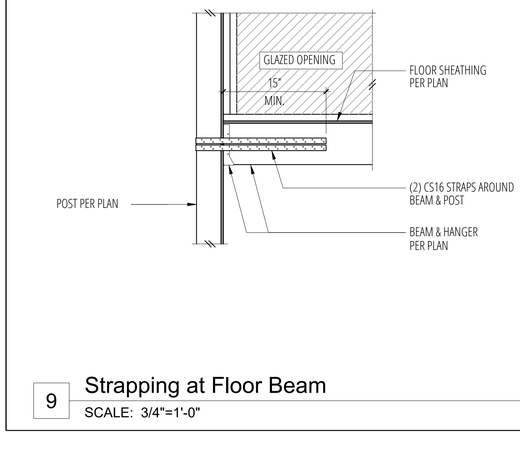
3 Joists Hung from Steel Beam (w/TJI's)

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



4 Perpendicular Framing at Exterior walls

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



5 SSW Over Steel Beam

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

6 Bearing Condition at Steel Floor Beam

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

7 Typical CS16 Holdown Strap

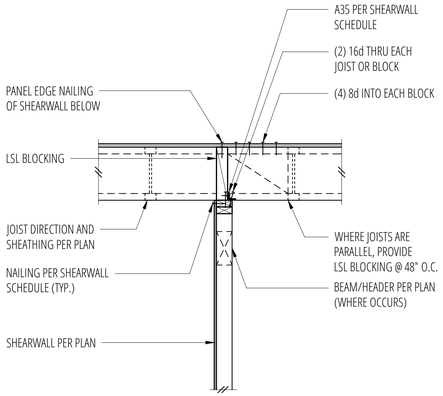
SCALE: 3/4"=1'-0"

8 Parallel Framing at Exterior Walls

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

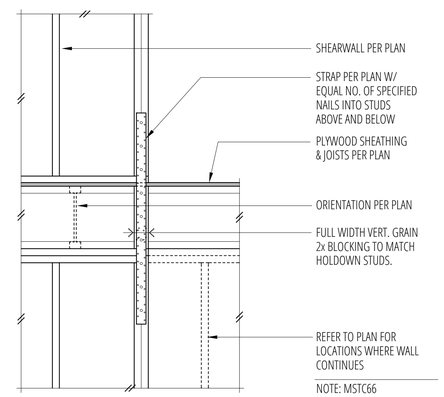
9 Strapping at Floor Beam

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



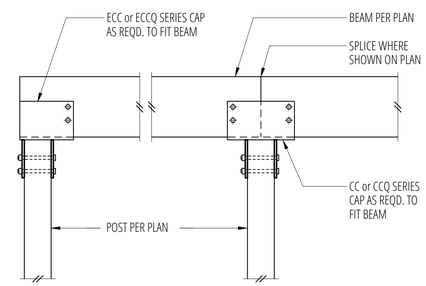
10 Interior Shearwall Below (w/TJI's)

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



11 Typical MST/MSTC Strap

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



12 CC/CCQ Series Connection

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

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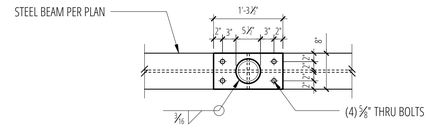
Sheet Contents

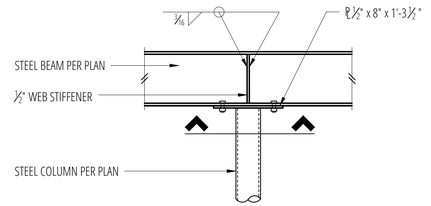
Floor Framing Details

Sheet No.

S4.2



Section

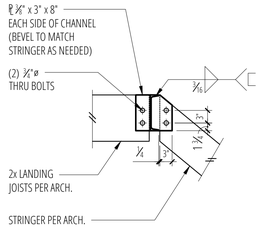


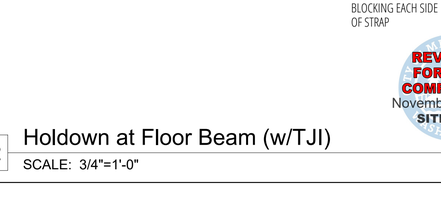
1 SCALE: 3/4"=1'-0"

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

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

4 Steel Column Support at Steel Beam
SCALE: 3/4"=1'-0"



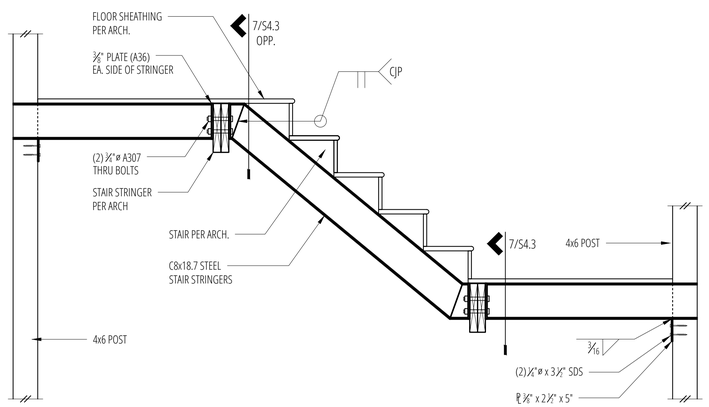


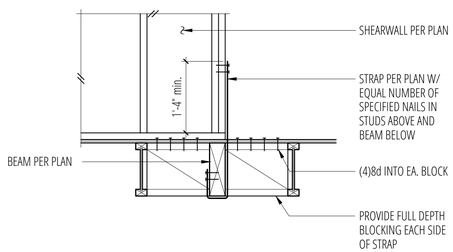
5 SCALE: 3/4"=1'-0"

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

7 Stringer and Landing Connection
SCALE: 3/4"=1'-0"

8 Cantilever at Exterior Wall
SCALE: 3/4"=1'-0"





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

11 Bent Steel Stair Stringer
SCALE: 3/4"=1'-0"

12 Holdown at Floor Beam (w/TJI)
SCALE: 3/4"=1'-0"

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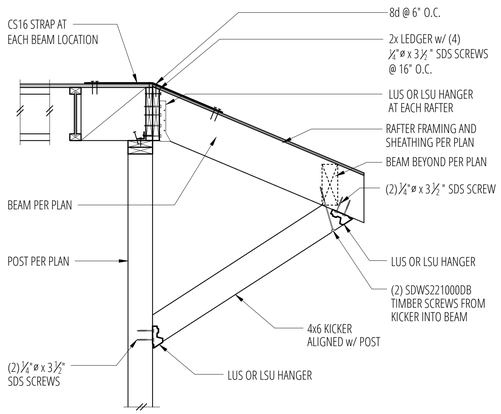
Floor Framing Details

Sheet No.

S4.3



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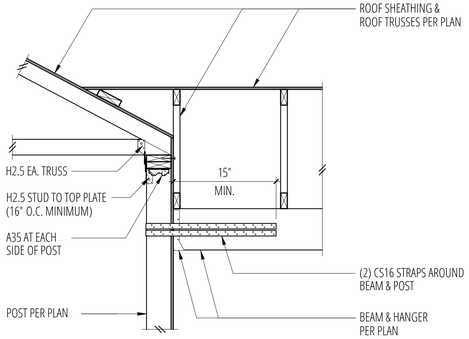
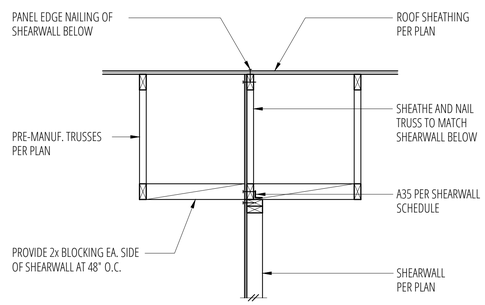
SCALE: 3/4"=1'-0"

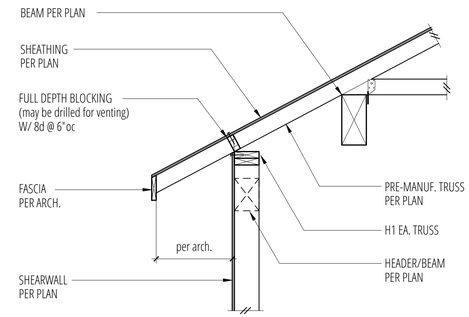


2 Canopy Kneebrace
SCALE: 3/4"=1'-0"



3 Strapping at Roof Beam
SCALE: 3/4"=1'-0"

4 Shearwall Extension Through Truss Depth
SCALE: 3/4"=1'-0"



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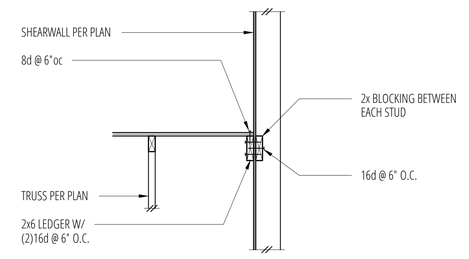
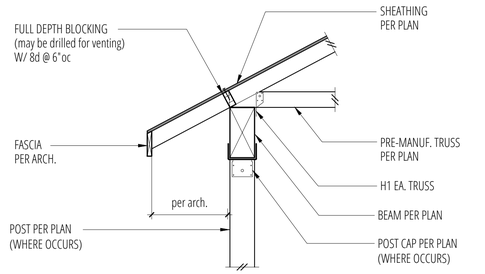
SCALE: 3/4"=1'-0"

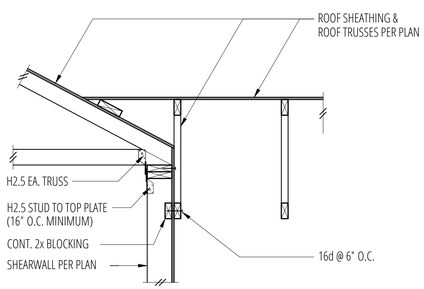


6 Extended Tail Truss at Exterior Wall
SCALE: 3/4"=1'-0"

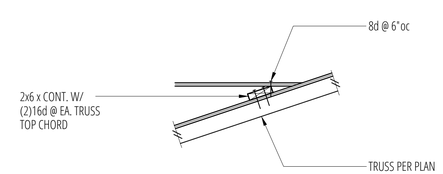
7 Trusses Parallel to Exterior Wall
SCALE: 3/4"=1'-0"



8 Beam & Post at Roof
SCALE: 3/4"=1'-0"

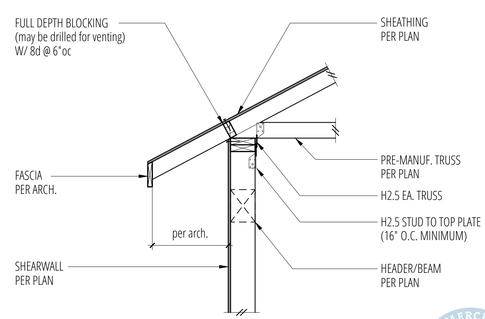


9
SCALE: 3/4"=1'-0"



10 Change in Roof Height
SCALE: 3/4"=1'-0"

11 Overframing Connection
SCALE: 3/4"=1'-0"



12 Exterior Bearing Wall at Roof
SCALE: 3/4"=1'-0"

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Sheet No.
S5.1

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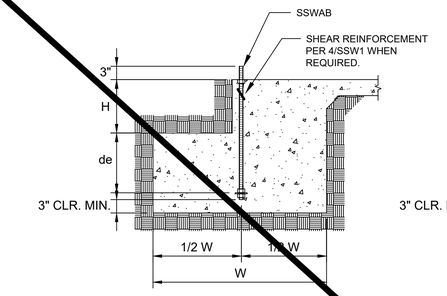
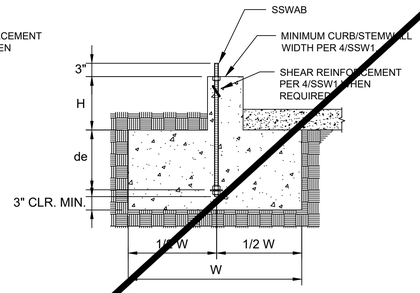
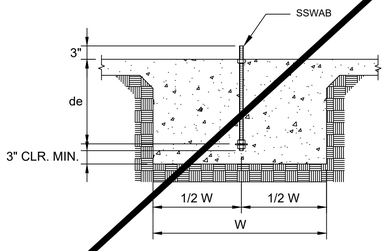


SLAB ON GRADE FOUNDATION

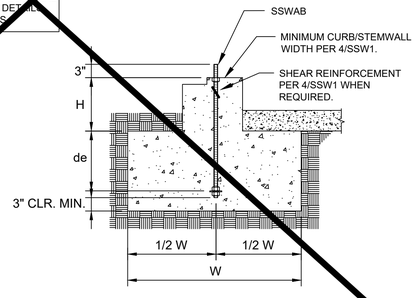


CURB OR STEMWALL FOUNDATION

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



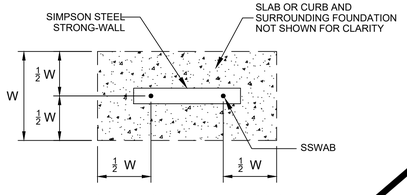
INTERIOR FOUNDATION



BRICK LEDGE FOUNDATION

NOTES:
1. SEE 2/SSW1 AND 3/SSW1 FOR DIMENSIONS AND ADDITIONAL NOTES.
2. SEE 4/SSW1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.
3. MAXIMUM H = le - de. SEE 5/SSW1 AND 6/SSW1 FOR le.

STEEL STRONG-WALL ANCHORAGE - TYPICAL SECTIONS 1



SEE TABLES BELOW FOR DIMENSIONS

FOUNDATION PLAN VIEW

STEEL STRONG-WALL ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	SSWAB 3/4" ANCHOR BOLT ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)	SSWAB 1" ANCHOR BOLT ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)
SEISMIC	CRACKED	STANDARD	8,800	22	8	16,100	33	11
			9,600	24	8	17,100	35	12
		HIGH STRENGTH	18,200	46	12	33,000	51	17
			19,900	48	12	35,300	54	18
	UNCRACKED	STANDARD	8,800	19	7	15,700	28	10
			9,600	21	7	17,100	30	10
		HIGH STRENGTH	18,600	43	11	32,300	44	15
			19,900	45	11	35,300	47	16
WIND	CRACKED	STANDARD	5,100	14	6	6,200	16	6
			7,400	18	6	11,400	24	8
			9,600	22	8	17,100	32	11
		HIGH STRENGTH	11,400	24	8	21,100	36	12
			13,600	27	9	27,300	42	14
			15,900	30	10	31,800	46	16
			19,900	35	12	35,300	50	17
	UNCRACKED	STANDARD	5,000	12	6	6,400	14	6
			7,800	16	6	12,500	22	8
			9,600	19	7	17,100	28	10
		HIGH STRENGTH	12,500	22	8	21,900	32	11
			14,300	24	8	26,400	38	12
			17,000	27	9	31,500	40	14
			19,900	30	10	35,300	43	15

NOTES:
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF SSWAB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
6. REFER TO 1/SSW1 FOR de.

SSWAB TENSION ANCHORAGE SCHEDULE 2500 PSI 2

STEEL STRONG-WALL ANCHORAGE SOLUTIONS FOR 3500 PSI CONCRETE

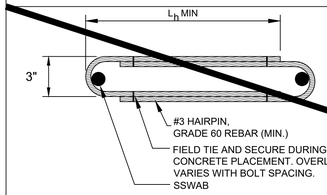
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	SSWAB 3/4" ANCHOR BOLT ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)	SSWAB 1" ANCHOR BOLT ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)
SEISMIC	CRACKED	STANDARD	9,000	20	7	15,700	29	10
			9,600	21	7	17,100	31	11
		HIGH STRENGTH	18,200	32	11	33,000	46	16
			19,900	34	12	35,300	48	16
	UNCRACKED	STANDARD	8,800	17	6	15,700	25	9
			9,600	19	7	17,100	27	9
		HIGH STRENGTH	18,600	28	10	32,500	40	14
			19,900	30	10	35,300	42	14
WIND	CRACKED	STANDARD	6,000	14	6	7,300	16	6
			7,300	16	6	13,500	24	8
			9,600	20	7	17,100	29	10
		HIGH STRENGTH	11,800	22	8	22,700	34	12
			13,500	24	8	27,400	38	13
			17,000	28	10	32,300	42	14
			19,900	32	11	35,300	45	15
	UNCRACKED	STANDARD	6,000	12	6	7,500	18	6
			7,500	14	6	12,800	20	7
			9,600	17	6	17,100	25	9
		HIGH STRENGTH	12,800	20	[illegible]	21,300	28	10
			14,800	[illegible]	8	26,000	32	11
			16,900	24	8	31,300	36	12
			[illegible]900	27	9	35,300	39	13

STEEL STRONG-WALL ANCHORAGE SOLUTIONS FOR4500 PSI CONCRETE

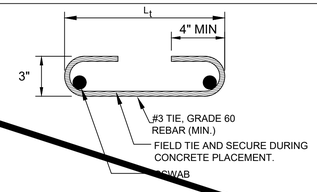
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	SSWAB 3/4" ANCHOR BOLT ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)	SSWAB 1" ANCHOR BOLT ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)
SEISMIC	CRACKED	STANDARD	8,700	18	6	16,000	27	9
			9,600	20	[illegible]	17,100	29	10
		HIGH STRENGTH	17,800	[illegible]	10	32,100	42	14
			19,900	32	11	35,300	45	15
	UNCRACKED	STANDARD	[illegible]800	16	6	15,700	23	8
			9,600	17	6	17,100	25	9
		HIGH STRENGTH	17,800	25	9	32,500	37	13
			19,900	27	9	35,300	39	13
WIND	CRACKED	STANDARD	5,400	12	6	6,800	14	6
			8,300	16	6	11,600	20	7
			9,600	18	6	17,100	26	9
		HIGH STRENGTH	11,600	20	7	21,400	30	10
			13,400	22	8	25,800	34	12
			17,300	26	9	31,000	38	13
			19,900	29	10	35,300	42	14
	UNCRACKED	STANDARD	6,800	12	6	6,800	12	6
			8,500	14	6	12,400	18	6
			9,600	16	6	17,100	23	8
		HIGH STRENGTH	12,400	18	6	21,600	26	9
			14,500	20	7	26,700	30	10
			16,800	[illegible]	8	32,200	34	12
			19,900	25	[illegible]	35,300	36	12

NOTES:
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF SSWAB ANCHOR BOLT. STANDARD (ASTM FI554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
6. SEE 1/SSW1 AND 2/SSW1 FOR W AND de.

SSWAB TENSION ANCHORAGE SCHEDULE 3500/4500 PSI 3



HAIRPIN SHEAR REINFORCEMENT

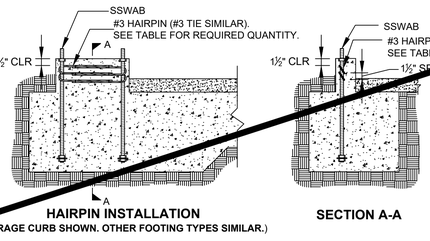


TIE SHEAR REINFORCEMENT

STEEL STRONG-WALL SHEAR ANCHORAGE

MODEL	SEISMIC[3] L_t OR L_h (in.)	SEISMIC[3] SHEAR REINFORCEMENT	SEISMIC[3] MIN. CURB / STEMWALL WIDTH (in.)	WIND[4] SHEAR REINFORCEMENT	WIND[4] MIN. CURB / STEMWALL WIDTH (in.)	WIND[4] ASD ALLOWABLE SHEAR LOAD V (lbs.)[6] 6" MIN CURB / STEMWALL UNCRACKED	6" MIN CURB / STEMWALL CRACKED	8" MIN CURB / STEMWALL UNCRACKED	8" MIN CURB / STEMWALL CRACKED
SSW12	9	(1) #3 TIE	6	NONE REQUIRED	-	1230	880	1440	1030
SSW15	12	(2) #3 TIES	6	NONE REQUIRED	-	1590	1135	1810	1295
SSW18	14	(1) #3 HAIRPIN	8[5]	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE STEEL STRONG-WALL PANEL			
SSW21	[illegible]	(2) #3 HAIRPIN	8[5]	(1) #3 HAIRPIN	6				
SSW24	17	(2) #3 HAIRPIN	8[5]	(1) #3 HAIRPIN	6				

NOTES:
1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ASSUME MINIMUM f'c=2,500 PSI CONCRETE. SEE DETAILS 1/SSW1 TO 3/SSW1 FOR TENSION ANCHORAGE.
2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR PANELS INSTALLED ON A WOOD FLOOR, INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B.
5. MINIMUM CURB/STEMWALL WIDTH IS 6" WHEN STANDARD STRENGTH SSWAB IS USED.
6. USE (1) #3 TIE FOR SSW12 AND SSW15 WHEN THE STEEL STRONG-WALL PANEL DESIGN SHEAR FORCE EXCEEDS THE TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
7. CONCRETE EDGE DISTANCE FOR ANCHORS MUST COMPLY WITH ACI 318-11 D.8.2.

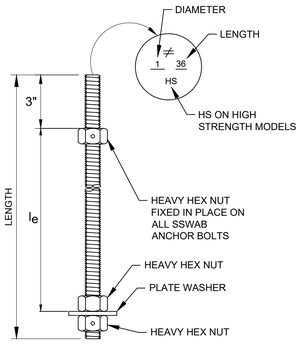


HAIRPIN INSTALLATION
(GARAGE CURB SHOWN. OTHER FOOTING TYPES SIMILAR.)

SECTION A-A

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

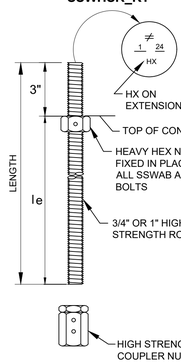
SSW ANCHOR BOLTS 5



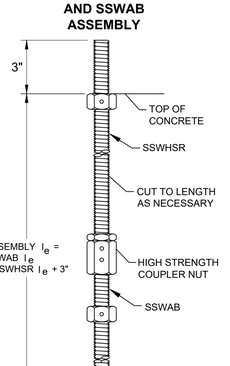
STEEL STRONG-WALL WIDTH	MODEL NO.	DIAMETER	LENGTH	le
12" MODEL	SSWAB3/4x24	3/4"	24"	19"
	SSWAB3/4x24HS	3/4"	24"	19"
	SSWAB3/4x30	3/4"	30"	25"
	SSWAB3/4x30HS	3/4"	30"	25"
	SSWAB3/4x36HS	3/4"	36"	31"
15", 18", 21 AND 24" MODELS	SSWAB1x24	1"	24"	19"
	SSWAB1x24HS	1"	24"	19"
	SSWAB1x30	1"	30"	25"
	SSWAB1x30HS	1"	30"	25"
	SSWAB1x36HS	1"	36"	31"

SSW ANCHOR BOLT EXTENSION 6

SSWHSR_KT



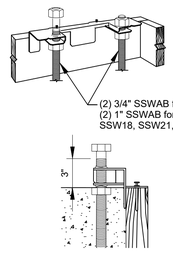
SSWHSR AND SSWAB ASSEMBLY



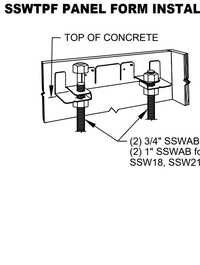
SSW WIDTH	MODEL NO.	DIAMETER	TOTAL LENGTH	le
12" MODEL	SSWHSR3/4-2KT	3/4"	24"	21"
	SSWHSR3/4-3KT	3/4"	36"	33"
15", 18", 21 AND 24" MODELS	SSWHSR1-2KT	1"	24"	21"
	SSWHSR1-3KT	1"	36"	33"

SSW ANCHOR BOLT TEMPLATES 7

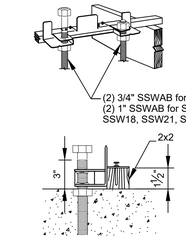
SSWT EXTERIOR INSTALLATION



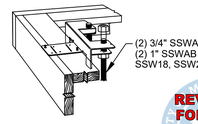
SSWTPF PANEL FORM INSTALLATION



SSWT INTERIOR INSTALLATION



SSWTBL BRICK LEDGE INSTALLATION



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November 08, 2018
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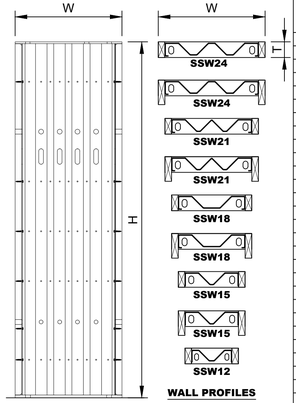
NO.	DATE	REVISIONS
1	9/21/2009	2006 IBC REVISIONS
2	4/16/2014	2012 IBC REVISIONS

SIMPSON STRONG-TIE COMPANY, INC.
HOME OFFICE:
5956 W. LAS POSITAS BLVD.
PLEASANTON, CA 94588
TEL: (800) 999-5099

SIMPSON Strong-Tie THERE IS NO EQUAL

STEEL STRONG-WALL
ANCHORAGE DETAILS
ENGINEERED DESIGNS

NAME	
DATE	4-16-2014
SCALE	N.T.S.
CHECKED	
SHEET	SSW1
OF	SHEETS
JOB NO.	

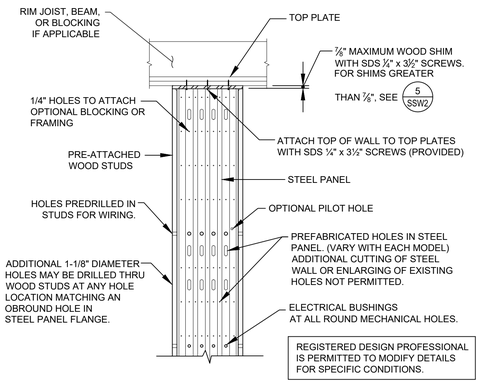


STEEL STRONG-WALL MODELS

STD. WALL MODEL NO.	-STK WALL MODEL NO.	H (in)	T (in)	HOLDOWN ANCHOR BOLTS[2]	QTY. OF TOP OF WALL SCREWS[1]
SSW12x7	- -	80	3 1/2	(2) 3/4"	4
SSW15x7	- -	80	3 1/2	(2) 1"	6
SSW18x7	- -	80	3 1/2	(2) 1"	9
SSW21x7	- -	80	3 1/2	(2) 1"	12
SSW24x7	- -	80	3 1/2	(2) 1"	14
SSW12x7.4	- -	85 1/2	3 1/2	(2) 3/4"	4
SSW15x7.4	- -	85 1/2	3 1/2	(2) 1"	6
SSW18x7.4	- -	85 1/2	3 1/2	(2) 1"	9
SSW21x7.4	- -	85 1/2	3 1/2	(2) 1"	12
SSW24x7.4	- -	85 1/2	3 1/2	(2) 1"	14
SSW12x8	- -	93 1/4	3 1/2	(2) 3/4"	4
SSW15x8	SSW15x8-STK	93 1/4	3 1/2	(2) 1"	6
SSW18x8	SSW18x8-STK	93 1/4	3 1/2	(2) 1"	9
SSW21x8	SSW21x8-STK	93 1/4	3 1/2	(2) 1"	12
SSW24x8	SSW24x8-STK	93 1/4	3 1/2	(2) 1"	14
SSW12x9	- -	105 1/4	3 1/2	(2) 3/4"	4
SSW15x9	SSW15x9-STK	105 1/4	3 1/2	(2) 1"	6
SSW18x9	SSW18x9-STK	105 1/4	3 1/2	(2) 1"	9
SSW21x9	SSW21x9-STK	105 1/4	3 1/2	(2) 1"	12
SSW24x9	SSW24x9-STK	105 1/4	3 1/2	(2) 1"	14
SSW12x10	- -	117 1/4	3 1/2	(2) 3/4"	4
SSW15x10	SSW15x10-STK	117 1/4	3 1/2	(2) 1"	6
SSW18x10	SSW18x10-STK	117 1/4	3 1/2	(2) 1"	9
SSW21x10	SSW21x10-STK	117 1/4	3 1/2	(2) 1"	12
SSW24x10	SSW24x10-STK	117 1/4	3 1/2	(2) 1"	14
SSW15x11	SSW15x11-STK	129 1/4	5 1/2	(2) 1"	6
SSW18x11	SSW18x11-STK	129 1/4	5 1/2	(2) 1"	9
SSW21x11	SSW21x11-STK	129 1/4	5 1/2	(2) 1"	12
SSW24x11	SSW24x11-STK	129 1/4	5 1/2	(2) 1"	14
SSW15x12	SSW15x12-STK	141 1/4	5 1/2	(2) 1"	6
SSW18x12	SSW18x12-STK	141 1/4	5 1/2	(2) 1"	9
SSW21x12	SSW21x12-STK	141 1/4	5 1/2	(2) 1"	12
SSW24x12	SSW24x12-STK	141 1/4	5 1/2	(2) 1"	14
SSW18x13	SSW18x13-STK	153 1/4	5 1/2	(2) 1"	9
SSW21x13	SSW21x13-STK	153 1/4	5 1/2	(2) 1"	12
SSW24x13	SSW24x13-STK	153 1/4	5 1/2	(2) 1"	14

TABLE NOTES:
1. SDS¼" x 3½" SCREWS PROVIDED WITH WALL.
2. SEE SHEET SSW1 FOR ANCHORAGE SOLUTIONS.

STEEL STRONG-WALL MODELS 1



REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

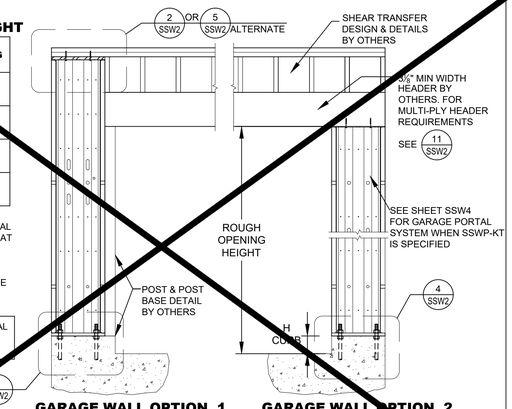
SINGLE-STORY SSW ON CONCRETE 2

GARAGE HEADER ROUGH OPENING HEIGHT

MODEL No.	H CURB	ROUGH OPENING HEIGHT
SSW12x7 SSW15x7 SSW18x7 SSW21x7 SSW24x7	5½"	7' - 1½"
	6"	7' - 2"
SSW12x8 SSW15x8 SSW18x8 SSW21x8 SSW24x8	5½"	8' - 2¾"
	6"	8' - 3¾"

1. THE HEIGHT OF THE GARAGE CURB ABOVE THE GARAGE SLAB IS CRITICAL FOR THE ROUGH HEADER OPENING AT GARAGE RETURN WALLS.
2. SHIMS ARE NOT PROVIDED WITH STEEL STRONG-WALL.
3. FURRING ON UNDERSIDE OF GARAGE HEADER MAY BE NECESSARY FOR LESSER ROUGH OPENING HEIGHTS.

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



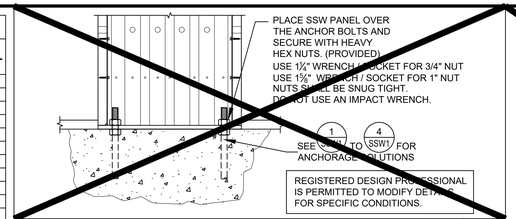
GARAGE WALL OPTION 1

GARAGE WALL OPTION 2
FOR GARAGE WALL OPTION 2

NOTE:
7-FT. HIGH STEEL STRONG-WALL MODELS ARE 80", 2" TALLER THAN 7-FT. HIGH WOOD STRONG-WALL SHEARWALLS

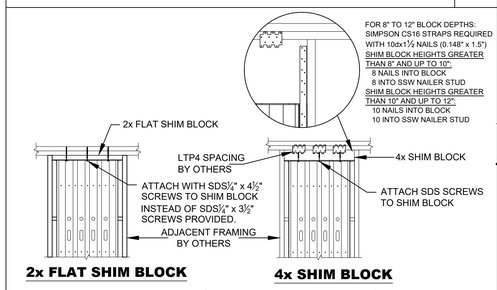
REGISTERED DESIGN PROFESSIONAL SHALL DESIGN FOR:
1. SHEAR TRANSFER
2. OUT OF PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT.

ALTERNATE GARAGE WALL OPTIONS 3



REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

STRONG-WALL ON CONCRETE 4



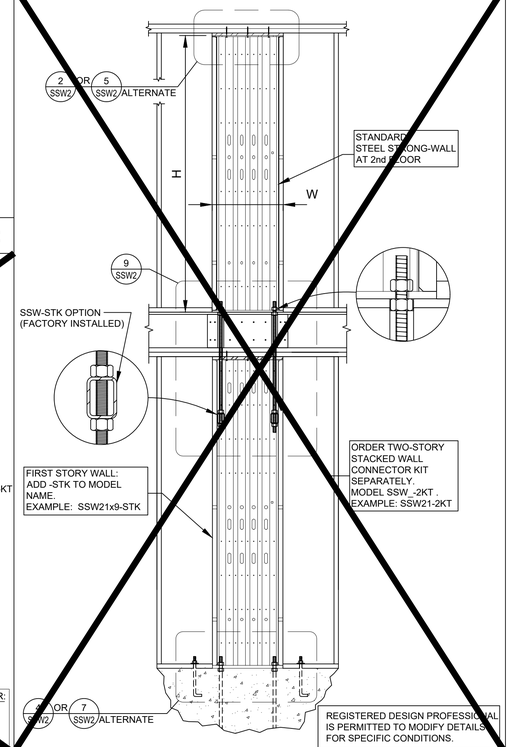
2x FLAT SHIM BLOCK **4x SHIM BLOCK**

RAKE WALL **CRIPPLE WALL**

REGISTERED DESIGN PROFESSIONAL SHALL DESIGN FOR:
1. SHEAR TRANSFER
2. OUT OF PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT.

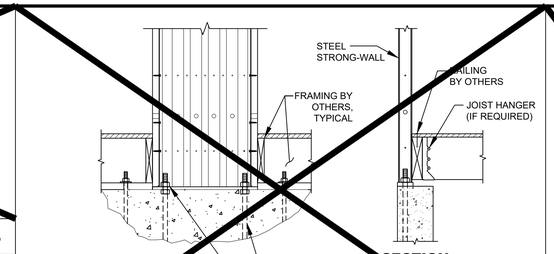
REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

TOP OF WALL HEIGHT ADJUSTMENTS 5



REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

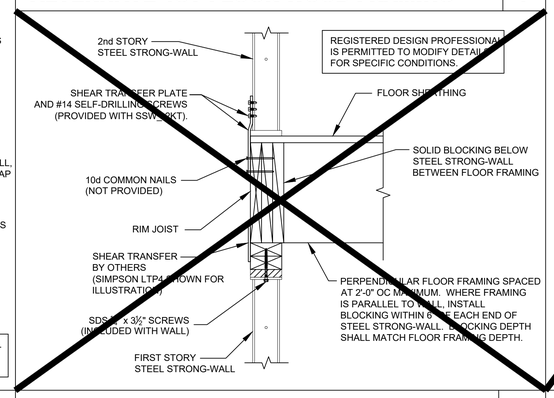
TWO-STORY STACKED 6



SECTION

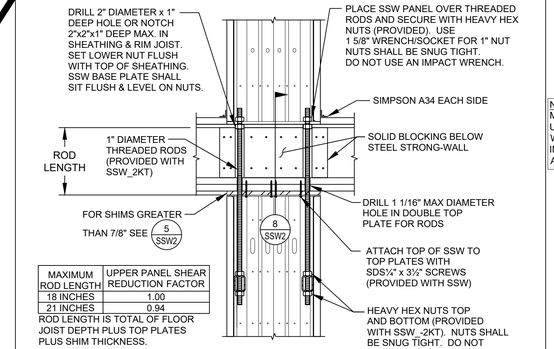
REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

ALTERNATE 1ST FLOOR WOOD FRAMING 7



REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

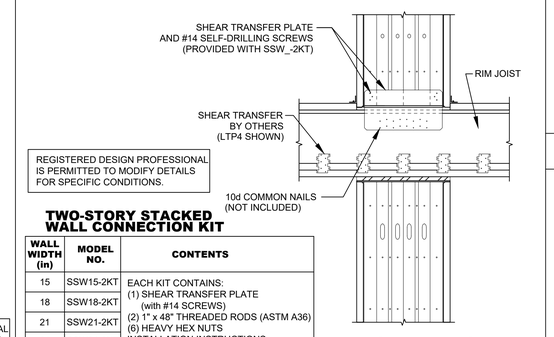
TWO-STORY STACKED FLOOR SECTION 8



MAXIMUM ROD LENGTH	UPPER PANEL SHEAR REDUCTION FACTOR
18 INCHES	1.00
21 INCHES	0.94

ROD LENGTH IS TOTAL OF FLOOR JOIST DEPTH PLUS TOP PLATES PLUS SHIM THICKNESS.

INTERIOR ELEVATION



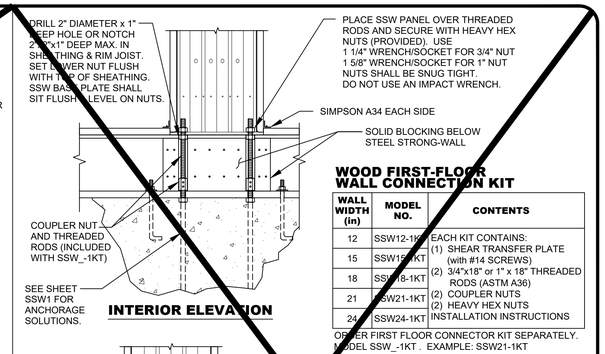
REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

TWO-STORY STACKED WALL CONNECTION KIT

WALL WIDTH (in)	MODEL NO.	CONTENTS
15	SSW15-2KT	EACH KIT CONTAINS: (1) SHEAR TRANSFER PLATE (with #14 SCREWS) (2) 1" x 48" THREADED RODS (ASTM A36) (6) HEAVY HEX NUTS INSTALLATION INSTRUCTIONS
18	SSW18-2KT	
21	SSW21-2KT	
24	SSW24-2KT	

EXTERIOR ELEVATION

TWO-STORY STACKED FLOOR FRAMING 9

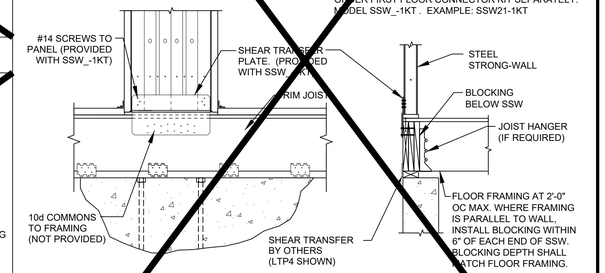


INTERIOR ELEVATION

WOOD FIRST-FLOOR WALL CONNECTION KIT

WALL WIDTH (in)	MODEL NO.	CONTENTS
12	SSW12-1KT	EACH KIT CONTAINS: (1) SHEAR TRANSFER PLATE (with #14 SCREWS) (2) 3/4"x18" or 1" x 18" THREADED RODS (ASTM A36) (2) COUPLER NUTS (2) HEAVY HEX NUTS INSTALLATION INSTRUCTIONS
15	SSW15-1KT	
18	SSW18-1KT	
21	SSW21-1KT	
24	SSW24-1KT	

ORDER FIRST FLOOR CONNECTOR KIT SEPARATELY. MODEL SSW_-1KT . EXAMPLE: SSW21-1KT

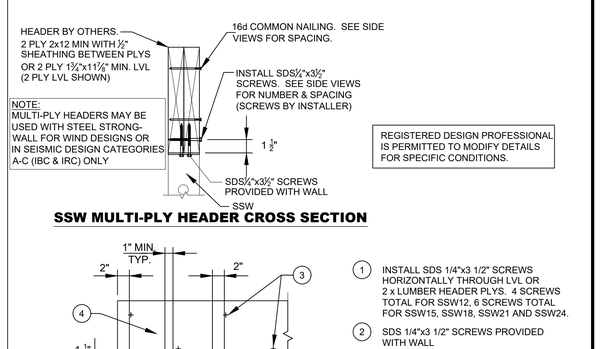


EXTERIOR ELEVATION **SECTION**

FIRST FLOOR AT WOOD FRAMING NOTES:
1. USE WOOD FIRST-FLOOR ALLOWABLE LOAD TABLES FROM THE STRONG-WALL CATALOG FOR THIS INSTALLATION.
2. USE ALTERNATE DETAIL 7 SSW2 TO ACHIEVE MAXIMUM ON-CONCRETE ALLOWABLE LOADS.
3. FOR TWO-STORY STACKED STEEL STRONG-WALLS WITH WOOD FIRST FLOOR, USE ALTERNATE DETAIL 7 SSW2
4. REGISTERED DESIGN PROFESSIONAL SHALL DESIGN FOR SHEAR TRANSFER FROM RIM JOIST TO SILL PLATE AND SILL PLATE TO FOUNDATION.

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

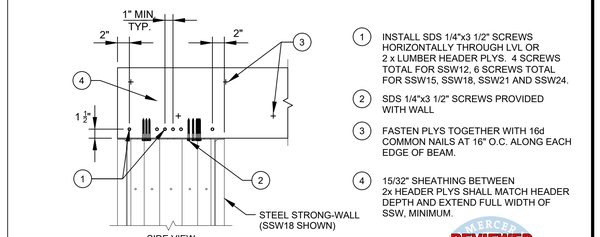
FIRST FLOOR AT WOOD FRAMING 10



NOTE:
MULTI-PLY HEADERS MAY BE USED WITH STEEL STRONG-WALL FOR WIND DESIGNS OR IN SEISMIC DESIGN CATEGORIES A-C (IBC & IRC) ONLY

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

SSW MULTI-PLY HEADER CROSS SECTION



1. INSTALL SDS ¼"x3 1/2" SCREWS HORIZONTALLY THROUGH LVL OR 2 x LUMBER HEADER PLYS. 4 SCREWS TOTAL FOR SSW12, 6 SCREWS TOTAL FOR SSW15, SSW18, SSW21 AND SSW24.
2. SDS ¼"x3 1/2" SCREWS PROVIDED WITH WALL
3. FASTEN PLYS TOGETHER WITH 16d COMMON NAILS AT 16" O.C. ALONG EACH EDGE OF BEAM.
4. 15/32" SHEATHING BETWEEN 2x HEADER PLYS SHALL MATCH HEADER DEPTH AND EXTEND FULL WIDTH OF SSW, MINIMUM.

SSW WITH MULTI-PLY HEADER

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MULTI-PLY HEADERS 11

1. STEEL STRONG-WALL SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY, INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY, INC." IS AN ISO 9001 REGISTERED COMPANY.
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE SPECIFIER.
4. ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STEEL STRONG-WALL SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE SPECIFIER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
6. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE SPECIFIER.
7. SIMPSON STRONG-TIE COMPANY, INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
8. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.

NOTES 12

NO.	DATE	REVISIONS
1	9/21/2009	2006 IBC REVISIONS
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SIMPSON STRONG-TIE COMPANY, INC.
HOME OFFICE: 5956 W. LAS POSITAS BLVD. PLEASANTON, CA 94588
TEL: (800) 999-5099

SIMPSON Strong-Tie THERE IS NO EQUAL

STEEL STRONG-WALL
FRAMING DETAILS
ENGINEERED DESIGNS

SIMPSON Strong-Tie THERE IS NO EQUAL

NAME
DATE 4-16-2014
SCALE N.T.S.
CHECKED
SHEET **SSW2**
OF SHEETS
JOB NO.