GENERAL NOTES:

THESE GENERAL NOTES ARE TO BE USED AS A SUPPLEMENT TO THE DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, GENERAL NOTES AND SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE CONTRACTOR AFTER THE DISCOVERY OF A DISCREPANCY SHALL BE DONE AT THE CONTRACTORS OWN RISK.

ALL METHODS AND MATERIALS TO CONFORM TO THE 2021 INTERNATIONAL BUILDING CODE, 2021 INTERNATIONAL RESIDENTIAL CODE, 2021 WASHINGTON STATE ENERGY CODE, AS AMENDED AND ADOPTED BY APPLICABLE JURISDICTION, AND WASHINGTON ADMINISTRATIVE CODE.

DESIGN CRITERIA (IRC 301): THE ENGINEERED LATERAL DESIGN FOR THE BUILDING IS IN ACCORDANCE WITH THE 2021 INTERNATIONAL BUILDING CODE AND IS PROVIDED BY THE ENGINEER OF RECORD.

DESIGN LOADS:
SEE LOADING & DESIGN PARAMETERS PROVIDED BY THE ENGINEER OF RECORD.

CONCRETE FOUNDATIONS:
CONCRETE FOUNDATIONS SHALL BE DESIGNED IN ACCORDANCE WITH IRC CHAPTER 4.

MIN. CONCRETE COMPRESSIVE STRENGTH (f'c) : 3,000 PSI (IRC R404.1.3.3.1)
MIN. YIELD STRENGTH OF STEEL REINFORCEMENT: 60,000 PSI (R404.1.3.3.7.1)
CONCRETE MIXING & DELIVERY SHALL COMPLY WITH ASTM C 94 OR ASTM C 685 (IRC R404.1.3.3.2)
MIN. REINFORCEMENT COVER: 3" CAST AGAINST EARTH; 1.5" FOR #5 & SMALLER, 2" FOR #6 & LARGER TO REMOVABLE FORMS (IRC R404.1.3.3.7.4)

FORMS SHALL BE MADE OF AN APPROVED MATERIAL AND SHALL PROVIDE SUFFICIENT STRENGTH TO CONTAIN CONCRETE DURING THE CONCRETE PLACEMENT OPERATION (IRC R404.1.3.3.6)

CONCRETE SHALL BE CONSOLIDATED BY SUITABLE MEANS DURING PLACEMENT AND SHALL BE WORKED AROUND EMBEDDED ITEMS AND REINFORCEMENT AND INTO CORNER OF FORMS. WHERE STAY-IN-PLACE FORMS ARE USED, CONCRETE SHALL BE CONSOLIDATED BY INTERNAL VIBRATION (IRC 404.1.3.3.5)

VERTICAL AND HORIZONTAL WALL REINFORCEMENT SHALL BE THE LONGEST LENGTHS PRACTICAL. WHERE SPLICES ARE NECESSARY IN REINFORCEMENT, THE LENGTH SHALL BE IN ACCORDANCE WITH TABLE R608.5.4(1) AND FIGURE R608.5.4(1). THE MAXIMUM GAP BETWEEN NON-CONTACT PARALLEL BARS AT A LAP SPLICE SHALL NOT EXCEED THE SMALLER OF ONE-FIFTH THE REQUIRED LAP LENGTH AND 6 INCHES.
FOR GRADE 60 STEEL #4 BAR (TABLE R608.5.4(1)):
- -LAP SPLICE LENGTH-TENSION = 30 INCHES
- -TENSION DEVELOPMENT LENGTH FOR STRAIGHT BAR = 23 INCHES
- -TENSION DEVELOPMENT LENGTH FOR 90-DEGREE AND 180-DEGREE WITH NOT LESS THAN 2.5 INCHES OF SIDE COVER PERPENDICULAR TO PLANE OF HOOK AND 90-DEGREE STANDARD HOOKS WITH NOT LESS THAN 2 INCHES OF COVER ON THE BAR EXTENSION BEYOND HOOK = 9 INCHES
- -TENSION DEVELOPMENT LENGTH FOR BAR WITH 90-DEGREE AND 180 DEGREE STANDARD HOOK HAVING LESS COVER THAN REQUIRED ABOVE = 12 INCHES.

WALL ANCHORAGE (IRC R602.11):
BRACED WALL LINE SILLS SHALL BE ANCHORED TO CONC. OR MASONRY FNDS. IN ACCORDANCE WITH SECTIONS R403.1.6 & R602.11.1. THE PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOT. PLATE ON THE SIDE(S) WITH SHTHG. OR OTHER MATERIAL WITH NOMINAL UNIT SHEAR CAPACITY GREATER THAN 400 PLF. FOR WIND OR SEISMIC.

DAMPPROOFING & WATERPROOFING (IRC R406):
FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND FLOORS BELOW GRADE SHALL BE DAMPPROOFED FROM THE TOP OF THE FOOTING TO THE FINISHED GRADE. CONCRETE WALLS SHALL BE DAMPPROOFED OR WATERPROOFED BY APPLYING ANY ONE OF THE MATERIALS LISTED IN R406.1 & R406.2

VAPOR BARRIERS/GROUND COVERS:
AN APPROVED VAPOR RETARDER SHALL BE INSTALLED ON THE INTERIOR SIDE OF FRAME WALLS (IRC R702.7)
-PVA (VAPOR RETARDER) PAINT WITH A DRY CUP PERM RATING OF 1.0 MAX. SHALL BE USED AS THE VAPOR RETARDER FOR ALL EXTERIOR WALLS AND ALL CEILINGS WITHOUT HEATED SPACE ABOVE (IBC 1405.3.3).
- GROUND COVER (W.A.C. 51-51-0408, IRC R408.1 & R408.2 EXC.): 6 MIL BLACK POLYETHYLENE OR APPROVED EQUAL SHALL BE LAID OVER THE GROUND WITHIN CRAWL SPACES AND SHALL BE OVERLAPPED 6" MINIMUM AT THE JOINTS AND SHALL EXTEND TO THE FOUNDATION WALL. THERE SHALL BE A MINIMUM 1 S.F. OF NET VENTILATION AREA PER 300 S.F. UNDER FLOOR AREA. THERE SHALL BE ONE VENT WITHIN 3' OF EACH CORNER OF THE FOUNDATION WALL WITHIN THE UNDER FLOOR AREA. THIS SHALL BE THE MINIMUM REQUIREMENT FOR GROUND COVER AT ALL UNDER FLOOR SPACES WITH EXPOSED EARTH. CONTRACTOR MAY USE CLASS I VAPOR RETARDER AND REDUCE THE REQUIRED NET AREA OF VENTILATION OPENINGS PER CODE EXCEPTION.

EMERGENCY ESCAPE OPENINGS (IRC R310):
BASEMENTS, HABITABLE ATTICS AND SLEEPING ROOMS SHALL HAVE AT LEAST ONE OPERABLE EMERGENCY ESCAPE OPENING. OPENING SHALL BE NO LESS 5.7 SQUARE FT. NET CLEAR HT. SHALL BE NO LESS THAN 24". NET CLEAR WIDTH SHALL BE NO LESS THAN 20". WINDOW SILLS SHALL BE NO MORE THAN 44" ABOVE FINISHED FLOOR. OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE.

WINDOW FALL PROTECTION (IRC 312.2)
WINDOW FALL PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS R312.2.1 & R312.2.2
R312.2.1 WINDOW SILLS. IN DWELLING UNITS, WHERE THE TOP OF THE SILL OF AN OPERABLE WINDOW OPENING IS LOCATED LESS THAN 24" ABV. THE FIN. FLR. & GREATER THAN 72" ABV. THE FIN. GR. OR OTHER SURF. BLW. ON THE EXT. OF THE BLDG., THE OPERABLE WINDOW SHALL COMPLY W/ R312.2.1(1-3)
R312.2.2 WINDOW OPENING CONTROL DEVICES. WINDOW OPENING CONTROL DEVICES SHALL COMPLY W/ ASTM F 2090. THE WINDOW OPENING CONTROL DEVICE, AFTER OPERATION TO RELEASE THE CONTROL DEVICE ALLOWING THE WINDOW TO FULLY OPEN, SHALL NOT REDUCE THE NET CLEAR OPENING AREA OF THE WINDOW UNIT TO LESS THAN THE AREA REQ'D. BY SECTION R310.2.1.

SMOKE ALARMS (IRC R314):
SMOKE ALARMS ARE TO BE INSTALLED IN EACH SLEEPING ROOM, OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF BEDROOMS, ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS AND HABITABLE ATTICS. ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WITH BATTERY BACK-UP. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVERCURRENT PROTECTION. SMOKE ALARMS SHALL BE INTERCONNECTED AND COMPLY WITH HOUSEHOLD FIRE WARNING EQUIPMENT PROVISIONS OF NFPA 72.

LOCAL INTERMITTENT KITCHEN EXHAUST SYSTEM (WAC 51-51-1505 M1505.4.4.3)
KITCHEN RANGE HOODS FOR DOMESTIC COOKING APPLIANCES SHALL MEET OR EXCEED EITHER THE MINIMUM AIRFLOW OR THE MINIMUM CAPTURE EFFICIENCY IN ACCORDANCE WITH TABLE M1505.4.4.3. CAPTURE EFFICIENCY RATINGS SHALL BE DETERMINED IN ACCORDANCE WITH ASTM E3087. PER TABLE M1505.4.4.1 KITCHEN EXHAUST RATE SHALL BE DETERMINED BY REQ'D RATES ILLUSTRATED IN TABLE M1505.4.4.3. THOSE RATES ARE 65% CE OR 160 CFM FOR HOOD OVER ELECTRIC RANGE, 80% CE OR 250 CFM FOR HOOD OVER COMBUSTION RANGE.

MAKEUP AIR REQUIRED (IRC M1503.6)
WHERE ONE OR MORE GAS, LIQUID OR SOLID FUEL-BURNING APPLIANCE THAT IS NEITHER DIRECT-VENT NOR USES A MECH. DRAFT VENTING SYSTEM IS LOCATED WITHIN A DWELLING UNIT'S AIR BARRIER, EA. EXH. SYSTEM CAPABLE OF EXHAUSTING IN EXCESS OF 400 C.F.M. SHALL BE MECHANICALLY OR PASSIVELY PROVIDED WITH MAKEUP AIR AT A RATE APPROX. EQ. TO THE EXH. AIR RATE. SUCH MAKEUP AIR SYSTEMS SHALL BE EQUIPPED WITH NOT FEWER THAN ONE DAMPER COMPLYING WITH M1503.6.2.

FIREBLOCKING (IRC 302.11):
SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES AND BETWEEN TOP STORY AND ROOF SPACE.
FIREBLOCKING REQ'D LOCATIONS PER TABLE R302.1(1) & TABLE R302.1(2).
FIREBLOCKING MATERIAL TO COMPLY W/ R302.11.1.

WATER-RESISTANT GYPSUM BACKING BOARD (IRC 702.4.2):
GYPSUM BOARD USED AS A BACKER BOARD FOR CERAMIC TILE SHALL CONFORM TO ASTM C1396, C1178 OR C1278. WATER-RESISTANT GYPSUM BOARD SHALL NOT BE INSTALLED OVER A VAPOR RETARDER IN A SHOWER OR TUB COMPARTMENT. CUT OR EXPOSED EDGES, INCLUDING THOSE AT WALL INTERSECTIONS, SHALL BE SEALED AS RECOMMENDED BY THE MANUFACTURER.

FASTENERS FOR PRESERVATIVE TREATED WOOD (IRC R317.3.1):
FASTENERS, INCLUDING NUTS AND WASHERS, FOR PRESERVATIVE TREATED WOOD SHALL BE HOT DIPPED ZINC-COATED, GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. COATING TYPES & WTS. FOR CONNECTORS IN CONT. W/ PRESERVATIVE TREATED WD. SHALL BE IN ACCORDANCE W/ THE CONNECTOR MFR'S. RECOMMENDATIONS & W/ ASTM A 153

DRIP EDGE (IRC R905.2.8.5):
A DRIP EDGE SHALL BE PROVIDED AT EAVES AND RAKE EDGES OF SHINGLE ROOFS AND SHALL EXTEND AT LEAST .25 INCHES BELOW SHEATHING AND AT LEAST 2" UP ROOF DECK

APPLIANCE LOCATION, GENERAL (IFGC 303.1):
APPLIANCES SHALL BE LOCATED AS REQ'D BY THIS SECTION, SPECIFIC REQMTS. ELSEWHERE IN THIS CODE & THE CONDITIONS OF THE EQUIPMENT & APPLIANCE LISTING.

DIRECT VENT FIREPLACE EXHAUST (IFGC 503.8):
THE CLEARANCES FOR THROUGH-THE-WALL DIRECT-VENT TERMINALS SHALL BE IN ACCORDANCE WITH TABLE 503.8. THE BOTTOM OF THE VENT TERMINAL AND THE AIR INTAKE SHALL BE LOCATED NOT LESS THAN 12 INCHES ABOVE FINISHED GROUND LEVEL.
VENT LOCATION SHALL BE IN ACCORDANCE WITH APPLIANCE MFR. INSTRUCTIONS. FOR INPUT RATING IN EXCESS OF 150,000 BTU/HR MIN. CLEARANCES SHALL BE NO LESS THAN THOSE SPECIFIED IN 503.8 (2).

COMBUSTION, VENTILATION & DILUTION AIR (IRC G2407 & IFGC 304):
ALL FUEL BURNING APPLIANCES LOCATED WITHIN THE BUILDING ENVELOPE SHALL OBTAIN COMBUSTION AIR ACCORDING TO THESE CHAPTERS & IN ACCORDANCE WITH THE APPLIANCE MFR. SPECIFICATIONS.

INTERIOR STAIRWAY ILLUMINATION (IRC R303.7):
INTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE TO ILLUMINATE THE LANDINGS AND TREADS. THE LIGHT SOURCE SHALL BE CAPABLE OF ILLUMINATING TREADS AND LANDINGS TO LEVELS OF NOT LESS THAN 1 FOOTCANDLE (11 LUX) AS MEASURED AT THE CENTER OF TREADS AND LANDINGS. THERE SHALL BE A WALL SWITCH AT EACH FLOOR LEVEL TO CONTROL THE LIGHT SOURCE WHERE THE STAIRWAY HAS SIX OR MORE RISERS.
EXCEPTION: A SWITCH IS NOT REQUIRED WHERE REMOTE, CENTRAL OR AUTOMATIC CONTROL OF LIGHTING IS PROVIDED.

EXTERIOR STAIRWAY ILLUMINATION (IRC R303.8):
EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED AT THE TOP LANDING OF THE STAIRWAY.

UNVENTED ATTIC AND UNVENTED ENCLOSED RAFTER ASSEMBLIES (R806.5):
UNVENTED ATTICS & UNVENTED ENCLOSED RF. FRM'G. ASSEMBLIES CREATED BY CLGS. THAT ARE APPLIED DIRECTLY TO THE UNDERSIDE OF THE RF. FRM'G. MEMBERS & STRUCT. RF. SHTG. APPLIED DIRECTLY TO THE TOP OF THE RF. FRM'G. MEMBERS/RAFTERS, SHALL BE PERMITTED WHERE ALL OF THE CONDITIONS ARE MET WITHIN R806.5.1-5 & TABLE R806.5.

HANDRAILS (R311.7.8):
HANDRAILS SHALL BE PROVIDED ON NOT LESS THAN ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT WITH FOUR OR MORE RISERS.
HANDRAILS SHALL COMPLY WITH R311.7.8.1 HEIGHT, R311.7.8.2 CONTINUITY, R311.7.8.3 GRIPSIZE & R311.7.8.4 EXTERIOR PLASTIC COMPOSITE HANDRAILS (WHERE APPLICABLE).

CLOTHES DRYER EXHAUST DUCT TERMINATION (M1502.3):
EXH. DUCTS SHALL TERMINATE ON THE OUTSIDE OF THE BLDG. EXH. DUCT TERMINATIONS SHALL BE IN ACCORDANCE W/ THE DRYER'S MFR. INSTALLATION INSTRUCTIONS. IF THE MFRS. INSTRUCTIONS DO NOT SPECIFY A TERMINATION LOC., THE EXH. DUCT SHALL TERMINATE NOT LESS THAN 3' IN ANY DIRECTION FROM OPNGS. INTO BLDGS. EXH. DUCT TERMINATIONS SHALL BE EQUIPPED W/ A BACKDRAFT DAMPER. SCREENS SHALL NOT BE INSTALLED AT THE DUCT TERMINATION.

PROTECTION OF WOOD & WOOD-BASED PRODUCTS AGAINST DECAY (R317):
PROTECTION OF WD. & WD.-BASED PRODUCTS FROM DECAY SHALL BE PROVIDED IN LOCATIONS SPECIFIED IN R317.1.1-7 BY THE USE OF NATURALLY DURABLE WD. OR WD. THAT IS PRESERVATIVE-TREATED IN ACCORDANCE W/ AWPA U1 FOR THE SPECIES, PRODUCT, PRESERVATIVE & END USE. PRESERVATIVE SHALL BE LISTED IN SECT. 4 OF AWPA U1. ALL SUCH WD. & WD.-BASED PRODUCTS SHALL COMPLY W/ SECTION R317.

ROOF DRAINAGE (R903.4):
UNLESS ROOFS ARE SLOPED TO DRAIN OVER ROOF EDGES, ROOF DRAINS SHALL BE INSTALLED AT EACH LOW POINT OF THE ROOF. WHERE ROOF DRAINS ARE REQ'D., SECONDARY (EMERGENCY OVERFLOW) DRAINS OR SCUPPERS SHALL BE EMPLOYED IN ACCORDANCE W/ R903.4.1.

GLAZING (R308)
HAZARDOUS LOCATIONS (R308.4):
THE LOCATIONS SPECIFIED IN SECTIONS R308.4.1-7 SHALL BE CONSIDERED TO BE SPECIFIC HAZARDOUS LOCATIONS FOR THE PURPOSED OF GLAZING.

GROUNDING ELECTRODE SYSTEM (2014 NEC 250.50):
ALL GROUNDING ELECTRODES AS DESCRIBED IN 250.52(A)(1) THROUGH (A)(7) THAT ARE PRESENT AT EACH BUILDING OR STRUCTURE SERVED SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM. WHERE NONE OF THESE GROUNDING ELECTRODES EXIST, ONE OR MORE OF THE GROUNDING ELECTRODES SPECIFIED IN 250.52(A)(4) THROUGH (A)(8) SHALL BE INSTALLED AND USED.

ADHERED MASONRY VENEER INSTALLATION, CLEARANCES (R703.12):
ON EXTERIOR STUD WALLS, ADHERED MASONRY SHALL BE INSTALLED:
1. MIN. 4" ABV EARTH
2. MIN. 2" ABV. PAVED AREAS; OR
3. MIN. 1/2" ABV. EXT. WALKING SURFACES THAT ARE SUPPORTED BY THE SAME FND. THAT SUPPORTS EXT. WALL

ELECTRIC VEHICLE CHARGING (W.A.C. 51-51-0309, R309.6):
R309.6.2 DEDICATED CIRCUIT FOR ELECT. VEHICLE CHARGING. A MIN. OF ONE 40-AMP DEDICATED 208/240-VOLT BRANCH CIRCUIT SHALL BE INSTALLED IN THE ELECT. PNL. FOR EA. DWELLING UNIT.
THE BRANCH CIRCUIT SHALL TERMINATE AT A JUNCTION BOX, RECEPTACLE OUTLET, OR ELECT. VEHICLE CHARGING EQPMT.

CLIMATIC & GEOGRAPHICAL DESIGN CRITERIA												
GROUND SNOW LOAD	WIND SPEED	TOPOGRAPHICAL EFFECTS	SEISMIC DESIGN CATEGORY	WEATHERING	FROST LINE DEPTH	TERMITE	DECAY	WINTER DESIGN TEMP	ICE BARRIER UNDER-LAYMENT REQUIRED	FLOOD HAZARD	AIR FREEZING INDEX	MEAN ANNUAL TEMP
25	110	YES	D2	MODERATE	12"	SLIGHT TO MODERATE	SLIGHT TO MODERATE	24	NO	N/A	113	53° F

ARCHITECTURAL ABBREVIATION LIST:

ABV -- ABOVE
ACST -- ACOUSTIC
ADDL -- ADDITIONAL
ADDM -- ADDENDUM
ADJ -- ADJACENT
A/E -- ARCHITECT-ENGINEER
AFF -- ABOVE FINISHED FLOOR
AHU -- AIR HANDLING UNIT
ALT -- ALTERNATE
ALUM -- ALUMINUM
ANSI -- AMERICAN NATIONAL STANDARDS INSTITUTE
APRX -- APPROXIMATE
ARCH -- ARCHITECTURAL
ASPH -- ASPHALT
ASTM -- AMERICAN SOCIETY FOR TESTING MATERIALS
AVG -- AVERAGE

B/B -- BACK-TO-BACK
B/D -- BIDDER DESIGNED
BA -- BATHROOM
BC -- BOTTOM CHORD
BD -- BOARD
BF -- BALLOON FRAME
BLDG -- BUILDING
BLKG -- BLOCKING
BLW -- BELOW
BM -- BEAM
BO -- BOTTOM OF
BRM -- BEDROOM
BRKT -- BRACKET
BSMT -- BASEMENT
BTWN -- BETWEEN
BWA -- BEARING WALL ABOVE

C/C -- CENTER TO CENTER
CABT -- CABINET
CB -- CATCH BASIN
CEM -- CEMENT
CJ -- CONTROL JOINT
CL -- CENTER LINE (SEE ALSO SYMBOLS LEGEND)
CLG -- CEILING
CLO -- CLOSET
CLR -- CLEAR
CMU -- CONCRETE MASONRY UNIT
CNSTR -- CONSTRUCTION
CNTLVR -- CANTILEVERED
CO -- CLEANOUT
COL -- COLUMN
COMP -- COMPOSITION
CONC -- CONCRETE
CONN -- CONNECTION
CONT -- CONTINUOUS
CONTR -- CONTRACTOR
COORD -- COORDINATE
CPT -- CARPET
CTR -- CENTER, CENTERED
CU -- CUBIC
CW -- COLD WATER

D -- DRYER
DEG -- DEGREE
DEMO -- DEMOLISH, DEMOLITION
DIA -- DIAMETER
DIAG -- DIAGONAL
DIM -- DIMENSION
DING -- DINING
DN -- DOWN
DR -- DOOR
DS -- DOWNSPOUT
DTL -- DETAIL
DW -- DISHWASHER
DWG -- DRAWING
DWL -- DOWEL

E -- EAST
EA -- EACH
ELEV -- ELEVATION
ENTR -- ENTRY, ENTRANCE
ENCL -- ENCLOSURE, ENCLOSED
EQUIP -- EQUIPMENT
ETR -- EXISTING TO REMAIN
EXC -- EXCAVATE, EXCAVATION
EXH -- EXHAUST
EXST -- EXISTING
EXST GR -- EXISTING GRADE
EXT -- EXTERIOR

FD -- FOOTING DRAIN
FE -- FIRE EXTINGUISHER
FIN -- FINISH, FINISHED
FIN/FIN -- FINISH TO FINISH
FIXT -- FIXTURE
FLG -- FLANGE
FLR -- FLOOR
FLSHG -- FLASHING
FNDN -- FOUNDATION
FOC -- FACE OF COLUMN
FOF -- FACE OF FRAME
FP -- FIREPLACE
FR -- FIRE RATED
FRP -- FIRE RETARDANT PLYWOOD
FRPF -- FIREPROOF, FIREPROOFING
FRTW -- FIRE RETARDANT TREATED WOOD
FT -- FOOT, FEET
FTG -- FOOTING
FURN -- FURNITURE

GA -- GAUGE
GALV -- GALVANIZED
GAR -- GARAGE
GDR -- GUARDRAIL
GEN -- GENERAL
GFCI -- GROUND FAULT CIRCUIT INTERRUPTER
GL -- GLASS, GLAZING
GLB -- GLUED LAMINATED BEAM
GT -- GIRDER TRUSS
GWB -- GYPSOM WALL BOARD

H -- HIGH
HB -- HOSE BIBB
HC -- HOLLOW CORE
HD -- HOOD
HDW -- HARDWARE
HGT -- HEIGHT
HORIZ -- HORIZONTAL, HORIZONTALLY
HRL -- HANDRAIL
HS -- HARD SURFACE
HSS -- HOLLOW STRUCTURAL SECTIONS
HTR -- HEATER
HVAC -- HEATING, VENTING & AIR CONDITIONING
HW -- HOT WATER

IBC -- INTERNATIONAL BUILDING CODE
IF -- INSIDE FACE
IFC -- INTERNATIONAL FIRE CODE
IN -- INCHES
INCL -- INCLUDED, INCLUDING, INCLUDES
INFO -- INFORMATION
INSUL -- INSULATION, INSULATED
INV EL -- INVERT ELEVATION
IPC -- INTERNATIONAL PLUMBING CODE
IRC -- INTERNATIONAL RESIDENTIAL CODE
ISO -- ISOLATE, ISOLATED

JT -- JOINT
KIT -- KITCHEN

L -- LONG, LENGTH
LAM -- LAMINATED
LBS -- POUNDS
LH -- LEFT HAND
LIN -- LINEN
LN -- LINE
LND -- LAUNDRY
LSL -- LAMINATED STRAND LUMBER
LTG -- LIGHTING
LVL -- LAMINATED VENEER LUMBER

MAX -- MAXIMUM
MBA -- MASTER BATHROOM
MBR -- MASTER BEDROOM
MECH -- MECHANICAL
MEMB -- MEMBRANE
MFR -- MANUFACTURER
MIN -- MINIMUM
MISC -- MISCELLANEOUS
MTL -- METAL
MTRL -- MATERIAL
MULL -- MULLION
MW -- MICROWAVE

N -- NORTH
NIC -- NOT IN CONTRACT
NFPA -- NATIONAL FIRE PROTECTION ASSOCIATION
NTS -- NOT TO SCALE

O/ -- OVER
O/O -- OUT TO OUT
OC -- ON CENTER
OF -- OUTSIDE FACE
OFF -- OFFICE
OH -- OVERHEAD
OH DR -- OVERHEAD DOOR
UNO -- UNLESS NOTED OTHERWISE
OPNG -- OPENING
OPP -- OPPOSITE
OPT -- OPTION
OSB -- ORIENTED STRAND BOARD
OTL -- OUTLET

PA -- POST ABOVE
PB -- POST BELOW
PF -- PORTAL FRAME
PL -- POINT LOAD
PLBG -- PLUMBING
PLT -- PLATE, PLATED
PLWD -- PLYWOOD
PNL -- PANEL
PR -- PAIR
PREFAB -- PREFABRICATED
PRIM -- PRIMARY
PROP -- PROPERTY
PRTN -- PARTITION
PSL -- PARTICLE STRAND LUMBER (PARALLAM)
PT -- PRESSURE TREATED
PTRY -- PANTRY
PVG -- PAVING
PWDR -- POWDER ROOM

R&S -- ROD AND SHELF
R -- RISER
RAD -- RADIUS
REF -- REFRIGERATOR
REINF -- REINFORCE, REINFORCED, REINFORCING
REQD -- REQUIRED
REV -- REVISION
RFG -- ROOFING
RH -- RIGHT HAND
RM -- ROOM
RND -- ROUND
RO -- ROUGH OPENING
RV -- ROOF VENTILATOR

S -- SOUTH
SC -- SOLID CORE
SCHD -- SCHEDULE
SDG -- SIDING
SECT -- SECTION
SF -- SQUARE FEET
SGD -- SLIDING GLASS DOOR
SH -- SHOWER
SIM OPP -- SIMILAR AT OPPOSITE CONDITION
SLDG -- SLIDING
SLNT -- SEALANT
SOG -- SLAB ON GRADE
SPEC -- SPECIFICATION
SQ -- SQUARE
SST -- STAINLESS STEEL
STAG -- STAGGER, STAGGERED
STL -- STEEL
STOR -- STORAGE
STRD -- STANDARD
STRUCT -- STRUCTURE, STRUCTURAL
SUBFLR -- SUBFLOOR
SW -- SHEAR WALL

T&B -- TOP AND BOTTOM
T&G -- TONGUE AND GROOVE
T -- TREAD
TC -- TOP CHORD
TEMP -- TEMPERATURE
THK -- THICKNESS
THRESH -- THRESHOLD
T.O. -- TOP OF
TOC -- TOP OF CONCRETE (ELEVATION)
TOIL -- TOILET
TOR -- TOP OF RAIL (ELEVATION)
TOW -- TOP OF WALL (ELEVATION)
TR -- TRIMMER
TRAN -- TRANSOM
TYP -- TYPICAL

UL -- UNDERWRITERS LABORATORIES
UTL -- UTILITY

VERT -- VERTICAL, VERTICALLY
VEST -- VESTIBULE
VIF -- VERIFY IN FIELD
VTO -- VENT TO OUTSIDE

W/ -- WITH
W/O -- WITHOUT
W -- WEST
W -- WIDE, WIDTH
WC -- WATER CLOSET
WD -- WOOD
WH -- WATER HEATER
WIC -- WALK IN CLOSET
WIN -- WINDOW
WP -- WATERPROOF
WPFG -- WATERPROOFING
WRB -- WEATHER RESISTANT BARRIER
WS -- WATERSTOP
WT -- WEIGHT
WTHPRF -- WEATHERPROOF
YD -- YARD DRAIN

CONDITIONED FLOOR AREA	
MAIN FLOOR PLAN	2,457 SF
UPPER FLOOR PLAN	2,261 SF
TOTAL	4,718 SF
GARAGE	697 SF
COVERED PORCH	79 SF
COVERED PATIO	312 SF
UNCOVERED PATIO	241 SF

WINDOWS LEXICON:

ACT -- ACTIVE
AWN -- AWNING
CS -- CASEMENT; (L)=HINGE LOCATION LEFT SIDE AS VIEWED FROM OUTSIDE
DH -- DOUBLE HUNG
FX -- FIXED
OX -- SLIDING ("X" DENOTES OPERABLE PORTION, "O" DENOTES FIXED PORTION FROM OUTSIDE)
PIC -- PICTURE
SG -- SAFETY GLAZING
SGD -- SLIDING GLASS DOOR
SH -- SINGLE HUNG

SCOPE OF WORK:

CONSTRUCT NEW DETACHED
SINGLE-FAMILY RESIDENCE w/
ATTACHED GARAGE

OCCUPANCY: R3
CONSTRUCTION TYPE: VB

PROPERTY INFORMATION:

PARCEL NUMBER: TBD
ADDRESS: TBD
ZONING: RENTON R-6
LOT AREA: 8,778 SF

PROJECT CONSULTANTS:

SURVEY:
CORE DESIGN
ROBERT WEST
12100 NE 195TH ST, SUITE #300
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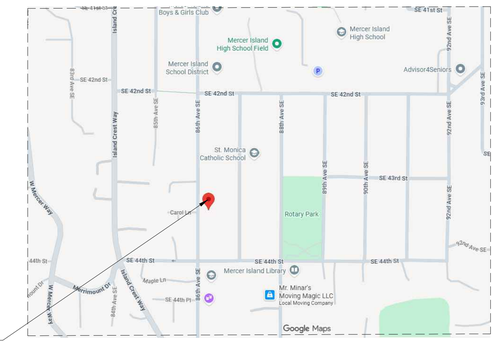
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7220 TRADE STREET, SUITE 350
SAN DIEGO, CA 92121
P. 619-650-0010

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FIRE SPRINKLER REQUIREMENTS:
A NFPA 13D FULL COVERAGE FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13D FULL COVERAGE AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE.
A SEPARATE FIRE PERMIT IS REQUIRED.



PROJECT LOCATION
4332 86TH AVE SE
MERCER ISLAND, WA 98040
PARCEL # 3622500045

VICINITY MAP

SYMBOLS LEGEND

SEE PLAN SHEETS FOR ADDITIONAL SYMBOL LEGEND INFORMATION. REFER TO SPECIFICATIONS AND B/D DOCUMENTS FOR MORE DETAILED INFORMATION

- SD — DENOTES 110V SMOKE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARM. SEE GENERAL NOTES THIS SHEET
- CO — DENOTES 110V COMBINATION SMOKE DETECTOR/CARBON MONOXIDE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS
- HD — DENOTES HEAT DETECTOR
- 50 CFM MIN. BATH FAN
- WHF — WHOLE HOUSE FAN - SEE WSEC GENERAL NOTES SHEET G-2
- T — WHOLE HOUSE FAN INTERMITTENT TIMER - SEE W.S.E.C NOTES ON SHEET G-2
- ELECTRICAL OUTLET
- GFI — GROUND FAULT CIRCUIT INTERRUPTER
- FLR — HEAT REGISTER
- S — WALL SWITCH LOCATION
- CEILING MOUNTED LIGHT FIXTURE
- TV — COAXIAL OUTLET
- DATA OUTLET
- X:12 — ROOF SLOPE (PLAN)
- X:12 — ROOF SLOPE (ELEVATION)
- RISE/RUN — ROOF SLOPE (PROFILE, ELEVATION)
- J — AF-50 ROOF VENT (ROUGH OPENING CUT BY FRAMER)
- F — 6" ROUND BATHROOM FAN JACK (ROUGH OPENING CUT BY FRAMER)
- WH — 6" ROUND WHOLE HOUSE FAN JACK (ROUGH OPENING CUT BY FRAMER)
- B-VENT — 3" ROUND FURNACE B-VENT (ROUGH OPENING CUT BY FRAMER)
- ROOF VENT
- CONCRETE
- RAISED STEM WALL
- SUBGRADE SOIL
- RIGID INSULATION
- BATT INSULATION
- SHADED WALLS INDICATE BEARING WALLS
- PL — POINT LOAD LOCATION, SEE ROOF PLAN, UPPER FLR PLAN & MAIN FLR PLAN. PROVIDE BLOCKING WHERE NECESSARY
- HOLD DOWN PER STRUCT.
- TRUSS SECTION
- "I" JOIST
- 14"x7" SCREENED FND VENT. SEE "CRAWL VENTILATION" SHEET A1 FOR VENTING CALCULATIONS
- SLAB STEP
- (CONCEALED/INVERTED FLANGE) FRAMING HANGERS
- 4x4 / (4x)

CERTIFICATE (WSEC 401.3)
A PERMANENT CERTIFICATE SHALL BE COMPLETED BY THE BUILDER OR REGISTERED DESIGN PROFESSIONAL & POSTED ON A WALL IN THE SPACE WHERE THE FURNACE IS LOCATED, A UTILITY ROOM, OR AN APPROVED LOCATION INSIDE THE BUILDING AND LIST THE FOLLOWING:

1. THE PREDOMINANT R-VALUES OF INSUL. INSTALLED IN OR ON CLG./RF., WALLS, FND. (SLAB, BLW.-GR. WALL, &/OR FLR.) & DUCTS OUTSIDE CONDITIONED SPACES.
2. U-FACTORS FOR FENESTRATION & THE SOLAR HEAT GAIN COEFFICIENT (SHGC) OF FENESTRATION. WHERE THERE IS MORE THAN ONE VALUE FOR EACH COMPONENT, THE CERT. SHALL INDICATE THE AREA WEIGHTED AVG. VALUE.
3. THE RESULTS FROM ANY REQ'D DUCT SYS. AND BLDG ENVELOPE AIR LEAKAGE TESTING DONE ON THE BLDG.
4. THE RESULTS FROM THE WHOLE-HOUSE MECH. VENT. SYS. FLOW RATE TEST.
5. THE TYPES, SIZES AND EFFICIENCIES OF HEATING, COOLING, WHOLE-HOUSE MECH. VENT., & SERVICE WTR. HEATING APPLIANCES. WHERE A GAS-FIRED UNVENTED ROOM HTR., ELECT. FURN., OR BASEBOARD ELECT. HTR. IS INSTALLED IN THE RESIDENCE, THE CERTIFICATE SHALL LIST "GAS-FIRED UNVENTED ROOM HEATER," "ELECTRIC FURNACE" OR "BASEBOARD ELECTRIC HEATER," AS APPROPRIATE. AN EFFICIENCY SHALL NOT BE LISTED FOR GAS-FIRED UNVENTED RM. HTRS., ELECT. FURNACES OR ELECT. BASEBOARD HTRS.
6. WHERE ON-SITE PHOTOVOLTAIC PNL. SYSTEMS HAVE BEEN INSTALLED, THE ARRAY CAPACITY, INVERTER EFFICIENCY, PNL. TILT, ORIENTATION AND ESTIMATED ANNUAL ELECT. GENERATION SHALL BE NOTED ON THE CERT.
7. THE CODE EDITION UNDER WHICH THE STRUCT. WAS PERMITTED, AND THE COMPLIANCE PATH USED.

THE CODE OFFICIAL MAY REQUIRE THAT DOCUMENTATION FOR ANY REQ'D TEST RESULTS INCLUDE AN ELECTRONIC RECORD OF THE TIME, DATE AND LOC. OF THE TEST. A DATE-STAMPED SMART PHONE PHOTO OR AIR LEAKAGE TESTING SOFTWARE MAY BE USED TO SATISFY THIS REQ'MT.

-VENTILATING SYSTEM USED: WHOLE HOUSE FAN (IRC M1505, WAC 51-51-1505)

-WHOLE HOUSE MECHANICAL VENTILATION SYSTEM SHALL BE FOUND TO BE IN COMPLIANCE WITH THE INSTALLATION OF HEAT RECOVERY SYSTEM PER ENERGY CREDIT OPTION 2.2 AS CHOSEN AND DESCRIBED PREVIOUSLY IN THIS NARRATIVE.

A PERMANENT CERTIFICATE SHALL BE COMPLETED BY THE BUILDER OR OTHER APPROVED PARTY AND POSTED ON A WALL IN THE SPACE WHERE THE FURNACE IS LOCATED, A UTILITY ROOM, OR AN APPROVED LOCATION INSIDE THE BUILDING. WHEN LOCATED ON AN ELECTRICAL PANEL, THE CERTIFICATE SHALL NOT COVER OR OBSTRUCT THE VISIBILITY OF THE CIRCUIT DIRECTORY LABEL, SERVICE DISCONNECT LABEL, OR OTHER REQUIRED LABELS. THE CERTIFICATE SHALL INDICATE THE FOLLOWING: INSULATION R-VALUES FOR ALL BUILDING FRAMING AND FOUNDATION/SLAB COMPONENTS, DUCT INSULATION OUTSIDE CONDITIONED AREAS, GLAZING U VALUES AND/OR SHGC VALUES, TYPE AND EFFICIENCY OF HEATING/COOLING SYSTEM AND HEATING EQUIPMENT, DUCT LEAKAGE RATES INCLUDING TEST CONDITIONS AND AIR LEAKAGE RESULTS (WSEC 401.3).

HIGH EFFICACY LIGHTING EQUIPMENT (WSEC 404.1):
ALL PERMANENTLY INSTALLED LIGHTING FIXTURES, EXCLUDING KITCHEN APPLIANCE LIGHTING FIXTURES, SHALL CONTAIN ONLY HIGH-EFFICACY LIGHTING SOURCES.

BLDG. THERMAL ENVELOPE TESTING (WAC 51-11R-40240 R402.4.1.2):
THE BUILDING OR DWELLING UNIT SHALL BE TESTED FOR AIR LEAKAGE. TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH RESNET/ICC 380, ASTM E779 OR ASTM E1827. TEST PRESSURE AND LEAKAGE RATE SHALL COMPLY WITH SECTION R402.1.3. A WRITTEN REPORT OF THE TEST RESULTS, INCLUDING VERIFIED LOCATION AND TIME STAMP OF THE DATE OF THE TEST, SHALL BE SIGNED BY THE TESTING AGENCY AND PROVIDED TO THE BUILDING OWNER AND CODE OFFICIAL. TESTING SHALL BE PERFORMED AT ANY TIME AFTER CREATION OF ALL PENETRATIONS OF THE BUILDING THERMAL ENVELOPE. ONCE VISUAL INSPECTION HAS CONFIRMED AIR SEALING HAS BEEN CONDUCTED IN ACCORDANCE WITH TABLE R402.4.1.1, OPERABLE WINDOWS AND DOORS MFR'D. BY SMALL BUSINESS ARE PERMITTED TO BE SEALED OFF AT THE FRAME PRIOR TO THE TEST. TESTING OF SINGLE-FAMILY DWELLINGS AND TOWNHOUSES SHALL BE CONDUCTED IN ACCORDANCE WITH RESNET/ICC 380. TEST PRESSURE AND LEAKAGE RATE SHALL COMPLY WITH SECTION R402.1.3.1. DURING TESTING:

1. EXTERIOR WINDOWS AND DOORS, FIREPLACE AND STOVE DOORS SHALL BE CLOSED, BUT NOT SEALED, BEYOND THE INTENDED WEATHERSTRIPPING OR OTHER INFILTRATION CONTROL MEASURES;
2. DAMPERS INCLUDING EXHAUST, INTAKE, MAKEUP AIR, BACKDRAFT AND FLUE DAMPERS SHALL BE CLOSED, BUT NOT SEALED BEYOND INTENDED INFILTRATION CONTROL MEASURES;
3. INTERIOR DOORS, IF INSTALLED AT THE TIME OF THE TEST, SHALL BE OPEN. ACCESS HATCHES TO CONDITIONED CRAWL SPACES AND CONDITIONED ATTICS SHALL BE OPEN;
4. EXTERIOR OR INTERIOR TERMINATIONS FOR CONTINUOUS VENTILATION SYSTEMS AND HEAT RECOVERY VENTILATORS SHALL BE SEALED;
5. HEATING AND COOLING SYSTEMS, IF INSTALLED AT THE TIME OF THE TEST, SHALL BE TURNED OFF; AND
6. SUPPLY AND RETURN REGISTERS, IF INSTALLED AT THE TIME OF THE TEST, SHALL BE FULLY OPEN.

DUCT SEALING (WSEC 403.3.2):
DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED.

EAVE BAFFLE (R402.2.3):
FOR AIR-PERMEABLE INSUL. IN VENTED ATTICS, A BAFFLE SHALL BE INSTALLED ADJ. TO SOFFIT & EAVE VENTS. BAFFLES SHALL MAINTAIN A NET FREE AREA OPNG. EQ. TO OR GREATER THAN THE SIZE OF THE VENT. THE BAFFLE SHALL EXTEND OVER THE TOP OF THE ATTIC INSUL. THE BAFFLE SHALL BE PERMITTED TO BE ANY SOLID MATERIAL. THE BAFFLE SHALL BE INSTALLED TO THE OUTER EDGE OF THE EXT. WALL TOP PLATE SO AS TO PROVIDE MAX. SPACE FOR ATTIC INSUL. COVERAGE OVER THE TOP PLATE. WHERE SOFFIT VENTING IS NOT CONTINUOUS, BAFFLES SHALL BE INSTALLED CONTINUOUSLY TO PREVENT VENTILATION AIR IN THE EAVE SOFFIT FROM BYPASSING THE BAFFLE.

DUCT INSULATION & INSTALLATION (WSEC 403.3.1):
DUCTS OUTSIDE THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED TO A MINIMUM R-8, DUCTS WITHIN A CONCRETE SLAB OR IN THE GROUND SHALL BE INSULATED TO R-10 WITH INSULATION DESIGNED TO BE USED BELOW GRADE. BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS. INSTALLATION OF DUCTS IN EXTERIOR WALLS, FLOORS OR CEILINGS SHALL NOT DISPLACE REQUIRED ENVELOPE INSULATION.

AIR LEAKAGE (WSEC 402.4):
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. SEE ENERGY CREDIT SELECTIONS FOR REQUIREMENTS BEYOND PRESCRIPTIVE COMPLIANCE.

RECESSED LIGHTING FIXTURES (WSEC 402.4.5):
WHEN INSTALLED IN THE BUILDING ENVELOPE SHALL BE:
-TYPE IC RATED AND CERTIFIED UNDER ASTM E283 TO HAVE NO MORE THAN 2.0 CFM AIR MOVEMENT
-THE LIGHTING FIXTURE SHALL BE TESTED AT 75 PASCALS OR 1.57 LBS/SF PRESSURE DIFFERENCE AND LABELED SHOWING COMPLIANCE
-SHALL BE INSTALLED WITH A GASKET OR CAULK AT THE WALL OR CLG. TO PREVENT AIR LEAKAGE

ACCESS HATCHES & DOORS (WSEC 402.2.4):
ACCESS DOORS FROM CONDITIONED SPACES TO UNCONDITIONED SPACES (E.G., ATTICS & CRAWL SPACES) SHALL BE WEATHERSTRIPPED & INSULATED TO A LEVEL EQUIVALENT TO THE INSULATION ON THE SURROUNDING SURFACES. ACCESS SHALL BE PROVIDED TO ALL EQUIPMENT THAT PREVENTS DAMAGING OR COMPRESSING THE INSULATION. A WOOD FRAMED OR EQUIVALENT BAFFLE OR RETAINER IS REQUIRED TO BE PROVIDED WHEN LOOSE FILL INSULATION IS INSTALLED, THE PURPOSE OF WHICH IS TO PREVENT THE LOOSE FILL INSULATION FROM SPILLING INTO THE LIVING SPACE WHEN THE ATTIC ACCESS IS OPENED, & TO PROVIDE A PERMANENT MEANS OF MAINTAINING THE INSTALLED R-VALUE OF THE LOOSE FILL INSULATION.
EXCEPTION: VERTICAL DOORS THAT PROVIDE ACCESS FROM CONDITIONED TO UNCONDITIONED SPACES SHALL BE PERMITTED TO MEET THE FENESTRATION REQUIREMENTS OF TABLE R402.1.1.

SLAB ON GRADE FLOORS (WSEC 402.2.9):
THE MIN. THERMAL RESISTANCE OF THE INSUL. AROUND THE PERIMETER OF UNHEATED OR HEATED SLAB-ON-GRADE FLRS. SHALL BE AS SPECIFIED IN TABLE R402.1.1. THE INSUL. SHALL BE PLACED ON THE OUTSIDE OF THE FND. OR ON THE INSIDE OF THE FND. WALL. THE INSUL. SHALL EXTEND DOWNWARD FROM THE TOP OF THE SLAB FOR A MIN. DIST. AS SHOWN IN THE TABLE OR TO THE TOP OF THE FTG., WHICHEVER IS LESS, OR DOWNWARD TO AT LEAST THE BOT. OF THE SLAB AND THEN HORIZ. TO THE INT. OR EXT. FOR THE TOTAL DIST. SHOWN IN THE TABLE. A 2"x2" MAX. PRESSURE TREATED NAILER MAY BE PLACED AT THE FIN. FLR. ELEV. FOR ATTACHMENT OF INT. FIN. MATERIALS. INSULATION EXTENDING AWAY FROM THE BLDG. SHALL BE PROTECTED BY PAVM'T. OR BY A MIN. OF 10" OF SOIL.

Project Information
Mercer Island - Lot 9
4332 86th Ave SE
Mercer Island, WA 98040

Contact Information
Tom Adams
4044 148th Ave NE, Redmond, WA 98052
permitting@cadehillhomes.com
206-280-7210

Messages / Comments * RESULT= PASS

Note: Review required for custom entries: - Overhead Glazing- Vertical Glazing- Flat/Vaulted Ceilings
UA Reduction = 0.09, Proposed UA is better than baseline by 0%
-
Vertical glazing area of proposed design exceeds 15% of floor area. Baseline window area set to 15% of floor area
-
Whole House Mechanical Ventilation Airflow Rate: 95 CFM with Run Time Percent of 100%, Balanced, Distributed
-
Maximum allowable total measured duct leakage: 183 CFM25

* Results assume your inputs are complete and correct. Results do not constitute an approval. Analysis should be reviewed by your AHJ.

ANALYSIS SET UP

What code compliance pathway are you using?	Total UA Alternative, Whole Building Trade Off Analysis
Project Building Type?	New Construction
Occupancy Type?	R3 Single family dwellings and townhouses
Code Version?	WSEC 2021
Classification:	Medium Dwelling Unit – 4571 sq. ft.
Baseline Description:	Code Baseline - Maximum baseline window area is 15% of floor area.
About Your Selection:	No exempt window or door areas
	-

RESULTS - Comparison of Baseline and Proposed Design **

Component Performance, R occupancies	Baseline U	Baseline Area	Baseline UA	Proposed Design U	Proposed Design Area	Proposed Design UA
Doors U =	0.300	63	19.0	0.300	63	19.0
Overhead Glazing U =	0.500	80	40.0	0.450	80	36.0
Vertical Glazing U =	0.300	606	181.7	0.206	1,111	229.1
Flat/Vaulted Ceilings U =	0.024	2,358	56.6	0.025	2,358	59.1
Wall (above grade) U =	0.056	4,005	224.3	0.054	3,500	189.0
Floors over Crawlspace U =	0.029	2,687	77.9	0.025	2,687	67.2
Slab on Grade F =	0.540	0	0.0		0	0.0
Below Grade Wall U =	N/A	0			0	0.0
Below Grade Slab F =	N/A	0			0	0.0

* Values from Table R402.1.2 (Oct 2023)

Baseline UA Total	599.5	Proposed UA Total	599.4
Required Credits	8.0	Proposed Credits	8.0 from Tables 406.2 and 406.3
		UA Percent Reduction	0%
		UA Reduction	0.1

** Results assume your inputs are complete and correct. Results do not constitute an approval. Analysis should be reviewed by your AHJ.

Table R406.2 Energy Equalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
4	For heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) or Table C403.3.2(9) OR Air to Water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590	Variable Refrigerant Heat Pump or Air-to-Water Heat Pump	3.0	5.0	8.0

Table R406.3 Energy Credits

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope	Not Selected	0.0	-
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	Per Section R402.4.1.2 /1.5 ACH50 / For R-2, 0.20 cfm per ft2 at 50 Pa. / HRV with min SHR eff of 0.75 per IRC Section M1505.3 or IMC Section 403.8
3.1 -3.10	High Efficiency HVAC	Option 3.6	1.0	Air source ducted Heat Pump w/ Min HSPF2 of 10 (HSPF of 11). If htg design temp is 23F or below,a cold climate variable capacity heat pump is required.
3.11	High Efficiency HVAC: Smart Thermostat	Not Selected	0.0	-
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-
5.1	Efficient Water Heating: Drain Heat Recovery	Not Selected	0.0	-
5.2	Efficient Water Heating: Compact Hot Water Distribution	Option 5.2	0.5	Compact Hot Water Distribution System Max volume between heat source and fixture is 16 Oz per section R403.5.2, on demand circ. Pump may be required.
5.3-5.8	Efficient Water Heating	Option 5.6	2.0	Electric heat pump water heater meeting NEEA Tier 3.
6	Renewable Electric Energy	Not Selected	0.0	
7	Appliance Package	Not Selected	0.0	-
		Energy Credits	5.0	

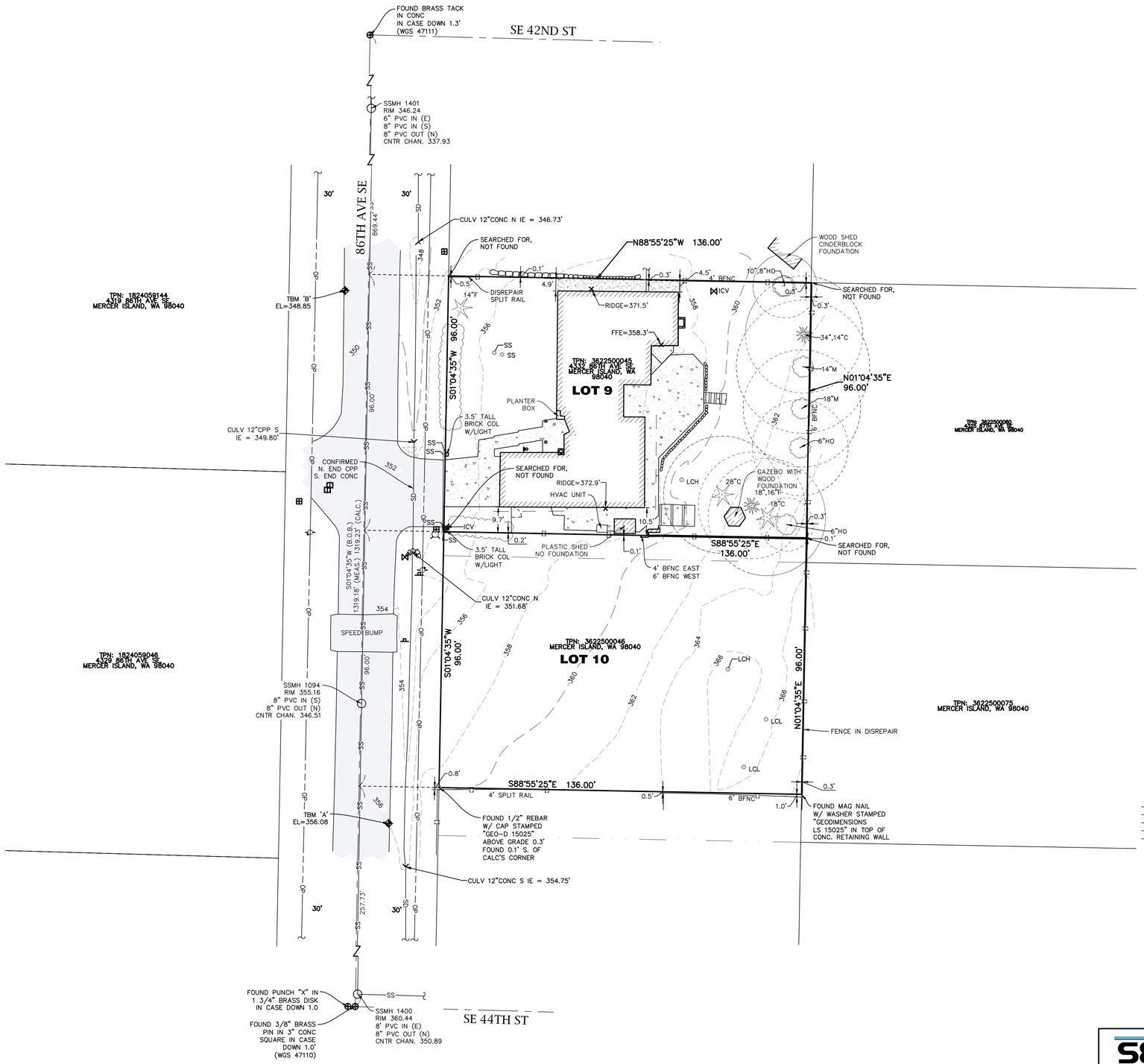
*Refer to WSEC 2015 Table R406.2 for complete option descriptions and requirements

THERMAL ENVELOPE DETAILS - Proposed Design

Conditioned Floor Area, Proposed Design	4,571 sq. ft
Classification	Medium Dwelling Unit
Notes	

Exterior Doors

Plan ID	Component Description	Ref.	Door U	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
	Code Baseline, U=0.30	-	0.30	1	6	0	7	0	42	12.6
	Code Baseline, U=0.30	-	0.30	1	2	0	8	0	21	6.4
									0	0.0
									0	0.0
									0	0.0



PORTION OF SW 1/4, NW 1/4 , SEC. 18, TWP. 24N., RGE. 05E., W.M.
CITY OF MERCER ISLAND, KING COUNTY WASHINGTON

LEGEND

⊕	FOUND MONUMENT IN CASE
⊠	FOUND PK/MAG NAIL
○	FOUND REBAR AND CAP AS NOTED
◯	SANITARY SEWER MANHOLE
o SS	SANITARY SEWER CLEANOUT
	FIRE HYDRANT
	WATER METER
⋈	WATER VALVE
	HOSE BIB
⋈ ICV	IRRIGATION CONTROL VALVE
	GAS METER
	GAS VALVE
	UTILITY POLE W/UNDERGROUND CONDUIT
	CULVERT
	SIGN
	LINE CONTINUES
o LCH	LOCAL HIGH POINT
o LCL	LOCAL LOW POINT
12"M 12"M 12"M	CLUSTER
12"C	CEDAR
12"F	FIR
12"A	ALDER
12"CY	CHERRY
12"DT	DECIDUOUS
12"HO	HOLLY
12"M	MAPLE
12"O	OAK
SD	STORM DRAIN LINE
SS	SANITARY SEWER LINE
OP	OVERHEAD POWER LINE
D	DITCH LINE
	WOOD FENCE LINE (BFNC)
	EXISTING RETAINING WALL
	ROCKERY
	CONCRETE PAVING
	ASPHALT PAVING
	GRAVEL SURFACE
	BUILDINGS

BASIS OF BEARINGS

BASIS OF BEARING IS NORTH 01°04'35" EAST BETWEEN THE FOUND WGS MONUMENTS AT THE INTERSECTION OF SE 44TH ST AND 86TH AVE SE TO THE MONUMENT AT THE INTERSECTION OF SE 42ND ST AND 86TH AVE SE.

HORIZONTAL DATUM

NAD '83/'11 – WASHINGTON STATE PLANE, NORTH ZONE

VERTICAL DATUM

NAVD '88

BENCHMARKS

ORIGINATING BENCHMARK: WGS CONTROL POINT 47110
FOUND PUNCH IN 3/8" BRASS PIN STAMPED IN CASE AT INTERSECTION OF 86TH AVE SE AND SE 44TH ST
ELEVATION: 359.37'

TEMPORARY BENCHMARKS:

TBM 'A'
SET MAG NAIL WITH WASHER SET 0.4' WEST OF EAST EDGE OF PAVING X ±13' SOUTH OF NW CORNER SPLIT RAIL FENCE AT SW CORNER OF THE PROPERTY.

ELEVATION = 356.08

TBM B
SET MAG WITH WASHER 0.4' EAST OF WEST EDGE PAVING X ±72' NORTH OF CENTRELINE DRIVEWAY FOR HOUSE #4332.

ELEVATION = 348.85

LEGAL DESCRIPTION

LOT 9, BLOCK 1, ISLAND CREST ACCORDING TO PLAT RECORDED IN VOLUME 46 OF PLATS, PAGE 72, IN KING COUNTY WASHINGTON; EXCEPT THE SOUTH 18 FEET THEREOF

EQUIPMENT NOTES

PRIMARY CONTROL POINTS AND ACCESSIBLE MONUMENT POSITIONS WERE FIELD MEASURED UTILIZING GLOBAL POSITIONING SYSTEM (GPS) SURVEY TECHNIQUES USING TRIMBLE R12i GPS/GNSS EQUIPMENT. MONUMENT POSITIONS THAT WERE NOT DIRECTLY OBSERVED USING GPS SURVEY TECHNIQUES WERE TIED INTO THE CONTROL POINTS UTILIZING TRIMBLE S7 TOTAL STATIONS FOR THE MEASUREMENT OF BOTH ANGLES AND DISTANCES. THIS SURVEY MEETS OR EXCEEDS THE STANDARDS SET BY WACS 332-130-080/090.

NOTES

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON MAY 8, 2024 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

THIS SURVEY DISCLOSES FACTORS OF RECORD AND ON THE GROUND AFFECTING THE SUBJECT PROPERTY BOUNDARY, BUT IT DOES NOT PURPORT TO LEGALLY RESOLVE RELATED PROPERTY LINE DISPUTES. WHERE AMBIGUITIES ARE NOTED, AXIS RECOMMENDS THAT THE OWNER CONSULT WITH LEGAL COUNSEL TO DETERMINE HOW BEST TO INTERPRET THEIR PROPERTY RIGHTS AND ADDRESS ANY POTENTIAL PROPERTY LINE DISPUTES.

UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON ASBUILT FIELD LOCATION OF EXISTING STRUCTURES. FIELD LOCATION OF UTILITIES BASED ON LOCATOR PAINT MARKINGS AND LOCATIONS BASED ON UTILITY MAPS FROM CITY AND UTILITY DRAWINGS INDICATING REPORTED UTILITY INSTALLATIONS. OTHER UTILITIES MAY EXIST. NO SUB-SURFACE EXPLORATION WAS MADE TO VERIFY UTILITY ROUTINGS AND THE ROUTING OF ALL BURIED UTILITIES SHOULD BE CONFIRMED WITH THE UTILITY PURVEYOR AND EXPOSED IN AREAS CRITICAL TO DESIGN FOR VERIFICATION.

2' CONTOURS INTERVAL DERIVED FROM DIRECT FIELD OBSERVATION.

THE AVERAGE CONTOUR ELEVATION WITHIN THE VICINITY OF THE BUILDING FOOTPRINT IS ACCURATE WITHIN 6 INCHES VERTICALLY AND HORIZONTALLY FROM ACTUAL ELEVATIONS.

THIS SURVEY MEETS UNITED STATES NATIONAL MAP ACCURACY STANDARDS FOR VERTICAL ACCURACY OF ONE HALF THE CONTOUR INTERVAL.

REFERENCES

(R1) PLAT OF ISLAND CREST RECORDED IN VOLUME 46, PAGE 72, OF PLATS IN KING COUNTY, WASHINGTON

(R2) SURVEY DONE BY GOLDSMITH LAND DEVELOPMENT SERVICES RECORDED UNDER RECORDING NUMBER 20141029900017, IN KING COUNTY, WASHINGTON.

S&F Land Services
Your Proven Geospatial Partner
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BELLEVUE, WA 98004
(503) 345-0328
WWW.SFLANDS.COM EMAIL: INFO@SFLANDS.COM

DATE	JOB NO.	FIELD	DRAWN	CHECKED
3/31/2026	24-020	ABG	CP	ZN

SURVEY FOR:
CADE HILL HOMES

LOT 9 BOUNDARY AND
TOPOGRAPHIC SURVEY

4332 86TH AVE SE,
MERCER ISLAND, WA 98040

ZANE LEE NAPE
STATE OF WASHINGTON
21004
REGISTERED
PROFESSIONAL LAND SURVEYOR
3/31/26

SW 1/4 OF THE NW 1/4, SEC. 18, TWP. 24N, RGE. 5E W.M.

4332 86TH AVENUE SE

PROJECT INFORMATION

PARCEL NUMBER:	3622500045
ADDRESS:	4332 86TH AVENUE SE, MERCER ISLAND, WASHINGTON 98040
SITE AREA:	13,056 SF (0.30 AC)
TOTAL NUMBER OF LOTS:	1
ZONING:	SINGLE-FAMILY ZONE (R-9.6)
PROPOSED USE:	SINGLE-FAMILY
SANITARY SEWER PROVIDER:	CITY OF MERCER ISLAND
WATER PROVIDER:	CITY OF MERCER ISLAND
SETBACKS:	20' FRONT, 25' REAR, 16.32' SIDE (17% OF LOT WIDTH = 96' * 0.17)

BASIS OF BEARINGS

BASIS OF BEARING IS NORTH 01°04'35" EAST BETWEEN THE FOUND WGS MONUMENTS AT THE INTERSECTION OF SE 44TH ST AND 86TH AVE SE TO THE MONUMENT AT THE INTERSECTION OF SE 42ND ST AND 86TH AVE SE.

HORIZONTAL DATUM

NAD '83/'11 - WASHINGTON STATE PLANE, NORTH ZONE

VERTICAL DATUM

NAVD '88

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ELEVATION: 356.08'

TBM B
SET MAG WITH WASHER 0.4' EAST OF WEST EDGE PAVING X ±72' NORTH OF CENTERLINE DRIVEWAY FOR HOUSE #4332.

ELEVATION: 348.85'

LEGAL DESCRIPTION

LOT 9 BLOCK 1, ISLAND CREST ACCORDING TO PLAT RECORDED IN VOLUME 46 OF PLATS, PAGE 72, IN KING COUNTY, WASHINGTON; EXCEPT THE SOUTH 9 FEET THEREOF

EQUIPMENT NOTES

PRIMARY CONTROL POINTS AND ACCESSIBLE MONUMENT POSITIONS WERE FIELD MEASURED UTILIZING GLOBAL POSITIONING SYSTEM (GPS) SURVEY TECHNIQUES USING TRIMBLE R12i GPS/GNSS EQUIPMENT. MONUMENT POSITIONS THAT WERE NOT DIRECTLY OBSERVED USING GPS SURVEY TECHNIQUES WERE TIED INTO THE CONTROL POINTS UTILIZING TRIMBLE S7 TOTAL STATIONS FOR THE MEASUREMENT OF BOTH ANGLES AND DISTANCES. THIS SURVEY MEETS OR EXCEEDS THE STANDARDS SET BY WACS 332-130-080/090.

SURVEY NOTES

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON MAY 8, 2024 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

THIS SURVEY DISCLOSES FACTORS OF RECORD AND ON THE GROUND AFFECTING THE SUBJECT PROPERTY BOUNDARY, BUT IT DOES NOT PURPORT TO LEGALLY RESOLVE RELATED PROPERTY LINE DISPUTES. WHERE AMBIGUITIES ARE NOTED, AXIS RECOMMENDS THAT THE OWNER CONSULT WITH LEGAL COUNSEL TO DETERMINE HOW BEST TO INTERPRET THEIR PROPERTY RIGHTS AND ADDRESS ANY POTENTIAL PROPERTY LINE DISPUTES.

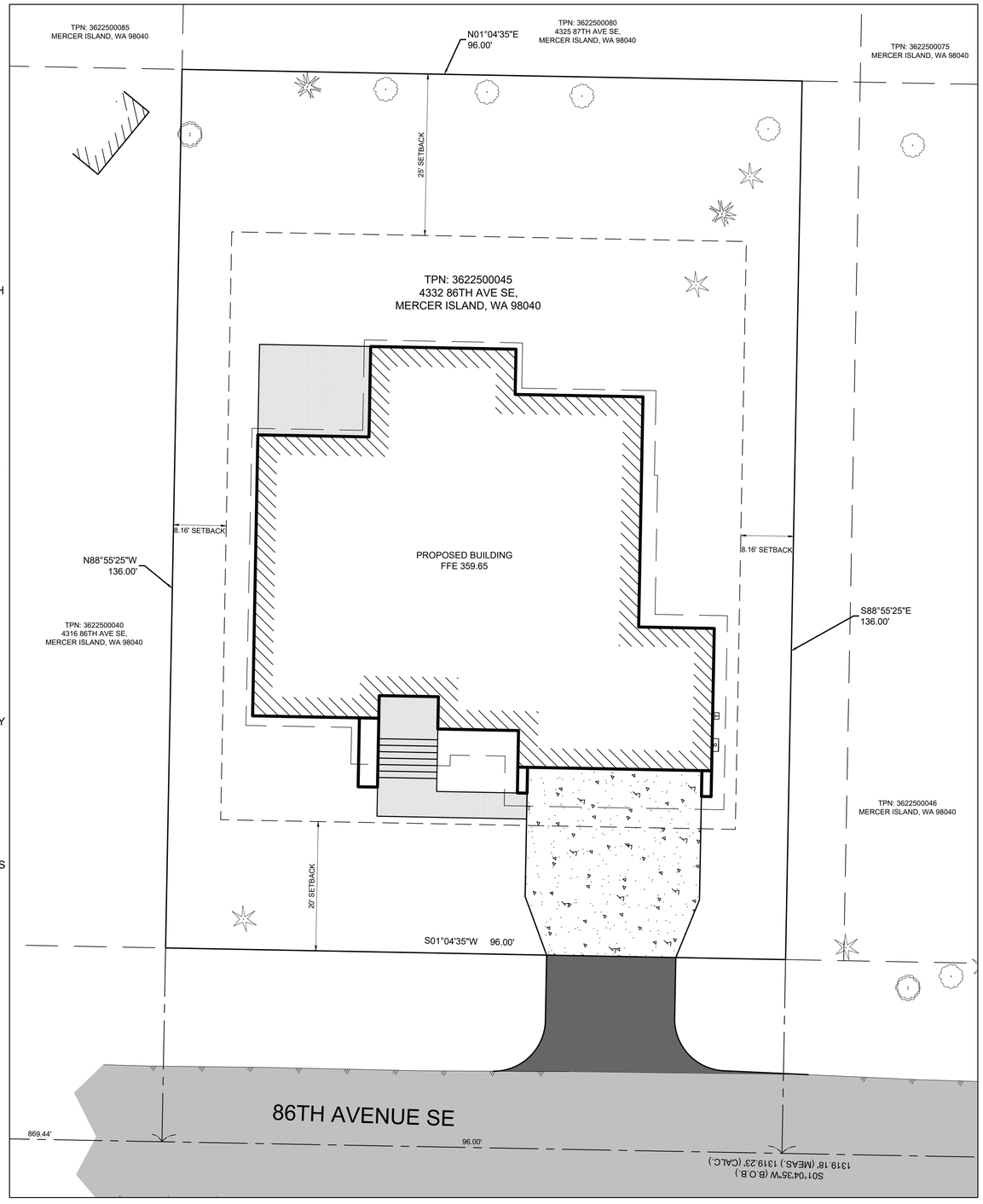
UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON ASBUILT FIELD LOCATION OF EXISTING STRUCTURES. FIELD LOCATION OF UTILITIES BASED ON LOCATOR PAINT MARKINGS AND LOCATIONS BASED ON UTILITY MAPS FROM CITY AND UTILITY DRAWINGS INDICATING REPORTED UTILITY INSTALLATIONS. OTHER UTILITIES MAY EXIST. NO SUB-SURFACE EXPLORATION WAS MADE TO VERIFY UTILITY ROUTINGS AND THE ROUTING OF ALL BURIED UTILITIES SHOULD BE CONFIRMED WITH THE UTILITY PURVEYOR AND EXPOSED IN AREAS CRITICAL TO DESIGN FOR VERIFICATION.

2' CONTOURS INTERVAL DERIVED FROM DIRECT FIELD OBSERVATION.

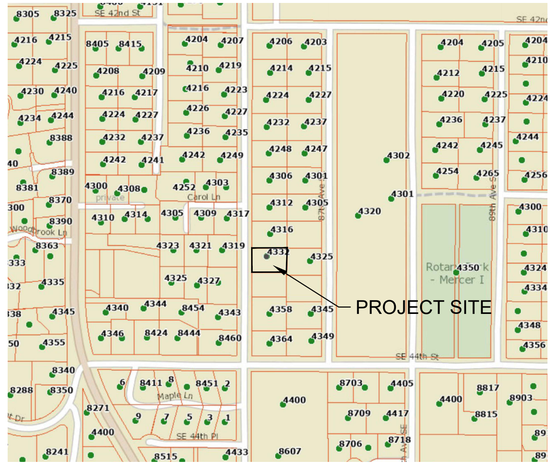
THIS SURVEY MEETS UNITED STATES NATIONAL MAP ACCURACY STANDARDS FOR VERTICAL ACCURACY OF ONE HALF THE CONTOUR INTERVAL.

REFERENCES

1. THE PLAT OF ISLAND CREST RECORDED IN VOLUME 46, PAGE 72, OF PLATS IN KING COUNTY, WASHINGTON
2. SURVEY DONE BY GOLDSMITH LAND DEVELOPMENT SERVICES RECORDED UNDER RECORDING NUMBER 20141029900017, IN KING COUNTY, WASHINGTON.



SITE PLAN
1" = 10'



VICINITY MAP
1" = 300'

PROJECT TEAM

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SHEET INDEX

C1 - COVER SHEET
C2 - GENERAL NOTES & LEGEND
C3 - DEMOLITION & TESC PLAN
C4 - GRADING PLAN
C5 - DRAINAGE PLAN
C6 - UTILITY PLAN
C7 - DETAILS (SHEET 1 OF 5)
C8 - DETAILS (SHEET 2 OF 5)
C9 - DETAILS (SHEET 3 OF 5)
C10 - DETAILS (SHEET 4 OF 5)
C11 - DETAILS (SHEET 5 OF 5)

EXISTING UTILITY NOTE
UNDERGROUND UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION. THERE IS NO GUARANTEE THAT ALL UTILITY LINES ARE SHOWN, OR THAT THE LOCATION, SIZE AND MATERIAL IS ACCURATE. THE CONTRACTOR SHALL UNCOVER ALL INDICATED PIPING WHERE CROSSING, INTERFERENCES, OR CONNECTIONS OCCUR PRIOR TO TRENCHING OR EXCAVATION FOR ANY PIPE OR STRUCTURE, TO DETERMINE ACTUAL LOCATIONS, SIZE AND MATERIAL. THE CONTRACTOR SHALL MAKE THE APPROPRIATE PROVISION FOR PROTECTION OF EXISTING INFRASTRUCTURE. THE CONTRACTOR SHALL NOTIFY ONE CALL AT 811 (WASHINGTON811.COM) AND ARRANGE FOR FIELD LOCATION OF EXISTING INFRASTRUCTURE PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES.

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GARRETT R. WINE — STATE OF WASHINGTON — 47364 — REGISTERED PROFESSIONAL ENGINEER
4/17/2026

NO.	REVISION HISTORY	DATE
A	PERMIT SUBMITTAL	12/31/25
B	RESPONSE TO 1ST REVIEW COMMENTS	4/17/26

4332 86TH AVENUE SE
COVER SHEET

4332 86TH AVENUE SE
MERCER ISLAND, WASHINGTON 98040

PROJECT: 25-0018.01
DATE: 04/17/2026
DRAWN BY: GW
CHECKED BY: GW

COVER

C1

W:_WE\PROJECTS\25-0018.01 4332MI\DRAWINGS\PLANS\C1 - COVER SHEET.DWG
04/17/2026 BY GARRETT WINE

EROSION/SEDIMENTATION CONTROL NOTES

1. THE RECOMMENDED CONSTRUCTION SEQUENCE SHALL BE AS FOLLOWS:
    1. CONDUCT PRE-CONSTRUCTION MEETING.
    2. FLAG OR FENCE CLEARING LIMITS.
    3. POST SIGN WITH NAME AND PHONE NUMBER OF TESC SUPERVISOR.
    4. INSTALL CATCH BASIN PROTECTION DOWNSTREAM AND AS DETERMINED BY THE CITY INSPECTOR.
    5. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).
    6. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
    7. GRADE AND STABILIZE CONSTRUCTION ROADS.
    8. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
    9. MAINTAIN EROSION CONTROL MEASURE IN ACCORDANCE WITH CITY OF MERCER ISLAND STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
    10. RELOCATE EROSION CONTROL MEASURES OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE CITY OF MERCER ISLAND TESC MINIMUM REQUIREMENTS.
    11. COVER ALL AREAS WITHIN THE SPECIFIED TIME FRAME WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, CRUSHED ROCK OR EQUIVALENT.
    12. STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN 7 DAYS.
    13. SEED OR SOD ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.
    14. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BEST MANAGEMENT PRACTICES REMOVED IF APPROPRIATE.
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 THIS ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/TESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THE PLANS SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT / TESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. A STABILIZED CONSTRUCTION ENTRANCE 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. A COPY OF THE APPROVED ESC PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
6. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
7. THE ESC FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THE APPROVED PLANS. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE CITY OF MERCER ISLAND INSPECTOR.
8. 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 (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS. ADDITIONALLY, MORE ESC FACILITIES MAY BE REQUIRED TO ENSURE COMPLETE SILTATION CONTROL. THEREFORE, DURING THE COURSE OF CONSTRUCTION IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY THEIR ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES OVER AND ABOVE THE MINIMUM REQUIREMENTS AS MAY BE NEEDED.
9. THE ESC FACILITIES SHALL BE INSPECTED BY THE APPLICANT / TESC SUPERVISOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT DOCUMENTING THE REVIEWS OF THE ESC FACILITIES.
10. ALL DENUDED SOILS MUST BE STABILIZED WITH AN APPROVED TESC METHOD (E.G. SEEDING, MULCHING, PLASTIC COVERING, CRUSHED ROCK) WITHIN THE FOLLOWING TIMELINES:
    - MAY 1 TO SEPTEMBER 30 - SOILS MUST BE STABILIZED WITHIN 7 DAYS OF GRADING.
    - OCTOBER 1 TO APRIL 30 - SOILS MUST BE STABILIZED WITHIN 2 DAYS OF GRADING.
    - STABILIZE SOILS AT THE END OF THE WORKDAY PRIOR TO A WEEKEND, HOLIDAY, OR PREDICTED RAIN EVENT.
11. ANY AREA NEEDING TESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
12. THE TESC 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.
13. 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.
14. 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.
15. COVER MEASURES SHALL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL.
16. PRIOR TO THE BEGINNING OF THE WET SEASON (OCTOBER 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 DOWN-SLOPE 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, EPSECIALLY AFTER STORM EVENTS. IF THE FILTER BECOMES CLOGGED, IT SHALL BE CLEANED OR REPLACED.
4. CONTRACTORS SHALL VERIFY LOCATIONS AND DEPTHS OF UTILITIES.
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."
8. PROTECT ADJACENT PROPERTIES FROM INCREASED RUNOFF OR SEDIMENTATION DUE TO THE CONSTRUCTION PROJECT THROUGH THE USE OF APPROPRIATE "BEST MANAGEMENT PRACTICES" (BMPS). EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO, SEDIMENT TRAPS, SEDIMENT PONDS, FILTER FABRIC FENCES, VEGETATIVE BUFFER STRIPS, OR BIO-ENGINEERED 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 CITY OF MERCER ISLAND.
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. SILT 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.
20. 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.
21. NEW INSTALLED SIDE SEWER REQUIRES A 4 PSI AIR TEST OR PROVIDE 10' OF HYDROSTATIC HEAD TEST.
22. THE LIMITS AND EXTENTS OF THE PAVEMENT IN THE PUBLIC RIGHT-OF-WAY SHALL BE DETERMINED BY THE CITY ENGINEER PRIOR TO FINALIZING THE PROJECT.

EXISTING UTILITY NOTE

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2. THE CONTRACTOR SHALL UNCOVER ALL INDICATED PIPING WHERE CROSSING, INTERFERENCES, OR CONNECTIONS OCCUR PRIOR TO TRENCHING OR EXCAVATION FOR ANY PIPE OR STRUCTURE, TO DETERMINE ACTUAL LOCATIONS, SIZE AND MATERIAL.
3. THE CONTRACTOR SHALL MAKE THE APPROPRIATE PROVISION FOR PROTECTION OF EXISTING INFRASTRUCTURE.

LEGEND

- SURVEY MONUMENT
- BENCHMARK
- EX. SANITARY SEWER MANHOLE
- EX. TYPE I CATCH BASIN
- EX. STORM DRAINAGE MANHOLE
- EX. WATER VALVE
- EX. WATER METER
- EX. IRRIGATION VALVE
- EX. NATURAL GAS VALVE
- EX. NATURAL GAS METER
- EX. UTILITY POLE
- EX. LIGHT POLE
- EX. ELECTRIC METER
- EX. TRAFFIC SIGNAGE
- 130 EX. MAJOR CONTOUR
- 128 EX. MINOR CONTOUR
- EX. EDGE OF ASPHALT
- EX. FENCE LINE
- G EX. NATURAL GAS LINE
- OHPT EX. OVERHEAD POWER AND TELECOMMUNICATIONS LINE
- SS EX. SANITARY SEWER LINE
- EX. STORM DRAINAGE LINE
- W EX. WATER LINE
- EX. ASPHALT
- EX. CONCRETE
- EX. GRAVEL
- EX. ROCKERY WALL
- SILT FENCE
- TREE PROTECTION FENCE
- TEMPORARY STOCKPILE
- STORM DRAIN PROTECTION INSERT
- TEMPORARY DEWATERING PIT W/ SUMP PUMP
- EX. EVERGREEN TREE
- EX. DRIPLINE
- EX. DECIDUOUS TREE
- YARD DRAIN
- STORM DRAIN CLEAN OUT
- SANITARY SEWER CLEAN OUT
- TYPE I CATCH BASIN
- NATURAL GAS METER
- ELECTRIC METER
- TRENCH DRAIN
- 130 PROPOSED MAJOR CONTOUR
- 128 PROPOSED MINOR CONTOUR
- SD STORM DRAIN LINE
- FD FOUNDATION DRAIN LINE
- SS SANITARY SEWER LINE
- W WATER LINE
- TREE PROTECTION FENCE
- ASPHALT
- CONCRETE DRIVEWAY
- CONCRETE SIDEWALK

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PROFESSIONAL ENGINEER
4/17/2026

NO.	REVISION HISTORY	DATE
A	PERMIT SUBMITTAL	12/31/25
B	RESPONSE TO 1ST REVIEW COMMENTS	4/17/26

4332 86TH AVENUE SE
GENERAL NOTES & LEGEND

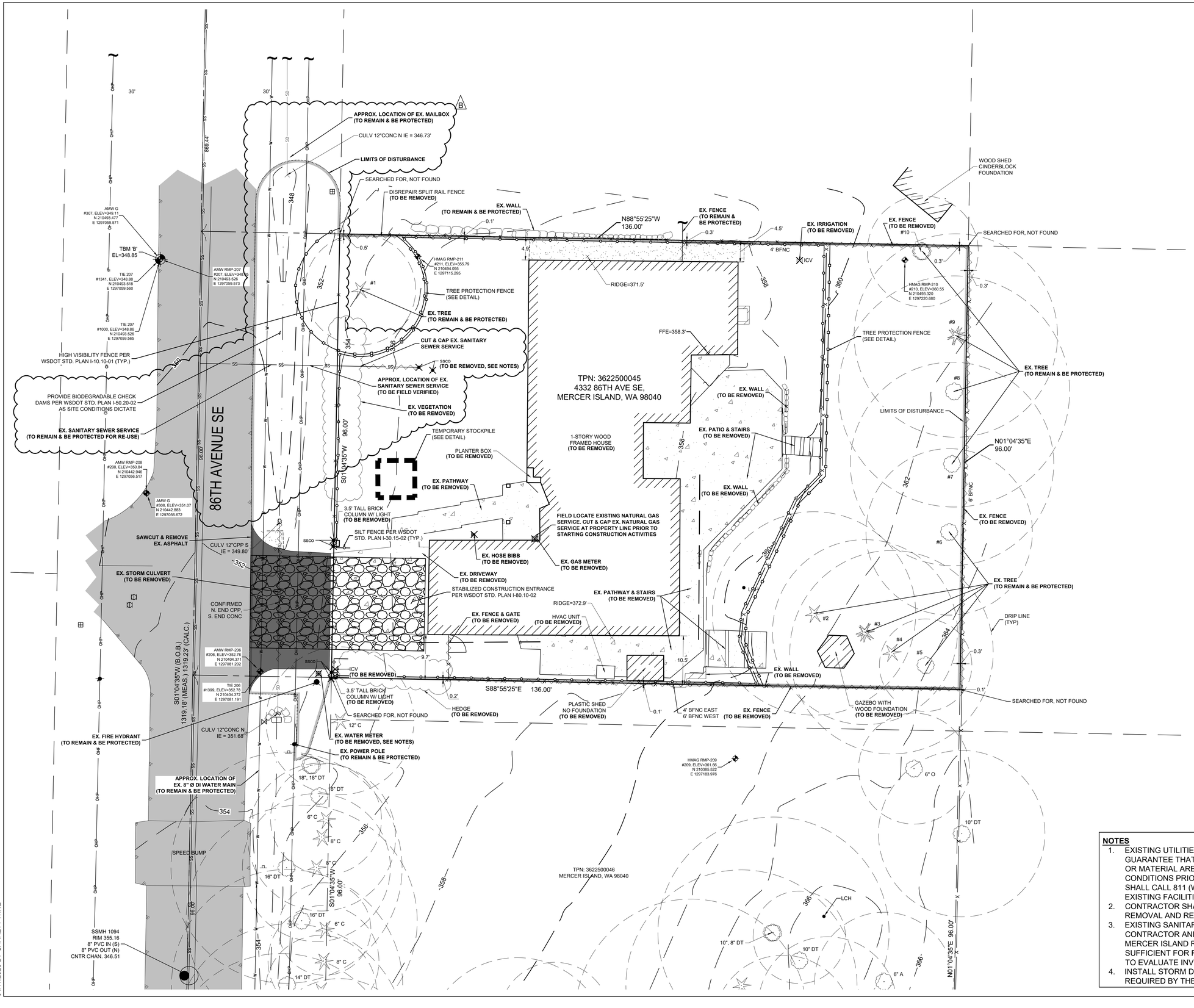
4332 86TH AVENUE SE
MERCER ISLAND, WASHINGTON 98040

PROJECT: 25-0018.01
DATE: 04/17/2026
DRAWN BY: GW
CHECKED BY: GW

NOTES & LEGEND

C2

W:_WE\PROJECTS\25-0018.01 4332MI\DRAWING\PLANS\C2 - GENERAL NOTES & LEGEND.DWG
04/17/2026 BY GARRETT WINE



NOTES

1. EXISTING UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION. THERE IS NO GUARANTEE THAT ALL UTILITY LINES ARE SHOWN, OR THAT THE LOCATION, SIZE, OR MATERIAL ARE ACCURATE. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONDUCTING LAND DISTURBING ACTIVITIES. CONTRACTOR SHALL CALL 811 (WASHINGTON811.COM) AND ARRANGE FOR FIELD LOCATION OF EXISTING FACILITIES BEFORE CONSTRUCTION.
2. CONTRACTOR SHALL COORDINATE WITH PUGET SOUND ENERGY FOR THE REMOVAL AND RE-FEED OF ELECTRIC AND NATURAL GAS SERVICES.
3. EXISTING SANITARY SEWER SERVICE LINE LOCATION TO BE FIELD VERIFIED BY CONTRACTOR AND EVALUATED FOR RE-USE IN ACCORDANCE WITH CITY OF MERCER ISLAND REQUIREMENTS. IF EXISTING SERVICE LINE IS DETERMINED TO BE SUFFICIENT FOR RE-USE, CONTRACTOR SHALL COORDINATE WITH CIVIL ENGINEER TO EVALUATE INVERT ELEVATIONS AND POTENTIAL CROSSING CONFLICTS.
4. INSTALL STORM DRAIN INLET PROTECTION ON PROPOSED CATCH BASINS AND AS REQUIRED BY THE CITY OF MERCER ISLAND INSPECTOR, SEE DETAIL ON SHEET C7.

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4/17/2026

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4332 86TH AVENUE SE DEMOLITION & TESC PLAN

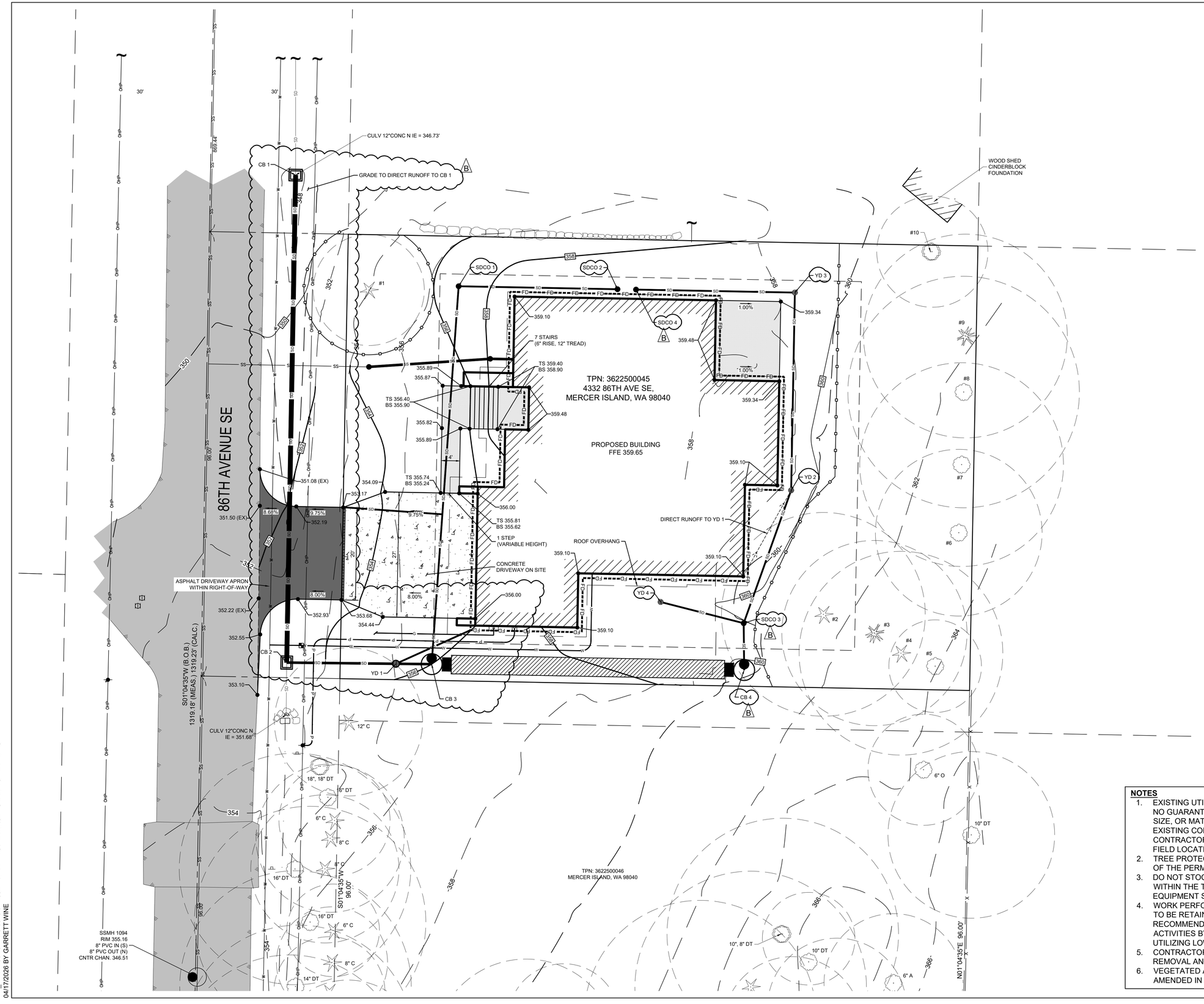
4332 86TH AVENUE SE
MERCER ISLAND, WASHINGTON 98040

PROJECT: 25-0018.01
DATE: 04/17/2026
DRAWN BY: GW
CHECKED BY: GW

DEMO & TESC

C3

W:_WE\PROJECTS\25-0018.01 4332MIDRAWING\PLANS\C3 - DEMOLITION & TESC PLAN.DWG
04/17/2026 BY GARRETT WINE



NOTES

1. EXISTING UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION. THERE IS NO GUARANTEE THAT ALL UTILITY LINES ARE SHOWN, OR THAT THE LOCATION, SIZE, OR MATERIAL ARE ACCURATE. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONDUCTING LAND DISTURBING ACTIVITIES. CONTRACTOR SHALL CALL 811 (WASHINGTON811.COM) AND ARRANGE FOR FIELD LOCATION OF EXISTING FACILITIES BEFORE CONSTRUCTION.
2. TREE PROTECTION MEASURES SHALL REMAIN IN PLACE FOR THE DURATION OF THE PERMIT.
3. DO NOT STOCKPILE CONSTRUCTION MATERIALS, SUPPLIES, SOILS, OR DEBRIS WITHIN THE TREE PROTECTION FENCES, NOR ALLOW VEHICLE PARKING OR EQUIPMENT STORAGE.
4. WORK PERFORMED WITHIN THE CRITICAL ROOT ZONES OF EXISTING TREES TO BE RETAINED SHALL BE PERFORMED IN ACCORDANCE WITH ARBORIST RECOMMENDATIONS. THIS MAY INCLUDE COMPLETING CONSTRUCTION ACTIVITIES BY HAND UNDER THE SUPERVISION OF THE ARBORIST OR BY UTILIZING LOW IMPACT CONSTRUCTION PRACTICES SUCH AS AIR EXCAVATION.
5. CONTRACTOR SHALL COORDINATE WITH PUGET SOUND ENERGY FOR THE REMOVAL AND RE-FEED OF ELECTRIC AND NATURAL GAS SERVICES.
6. VEGETATED AREAS WITHIN THE LIMITS OF DISTURBANCE SHALL HAVE SOILS AMENDED IN ACCORDANCE WITH THE SOIL AMENDMENT DETAIL ON SHEET C7.

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NO.	REVISION HISTORY	DATE
A	PERMIT SUBMITTAL	12/31/25
B	RESPONSE TO 1ST REVIEW COMMENTS	4/17/26

4332 86TH AVENUE SE GRADING PLAN

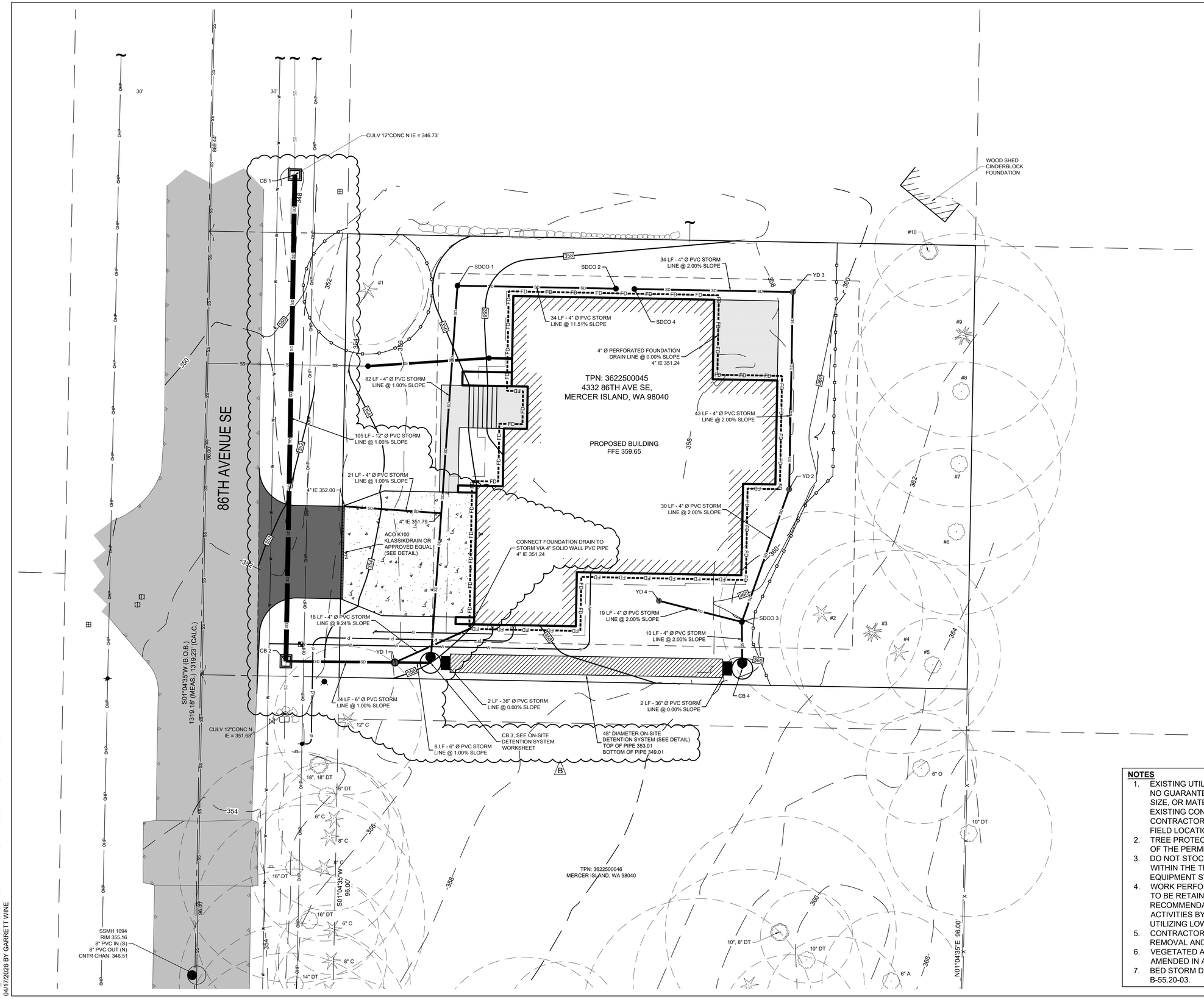
4332 86TH AVENUE SE
MERCER ISLAND, WASHINGTON 98040

PROJECT:	25-0018.01
DATE:	04/17/2026
DRAWN BY:	GW
CHECKED BY:	GW

GRADING

C4

W:_WE\PROJECTS\25-0018.01 4332MIDRAWINGS\PLANS\C4 - GRADING PLAN.DWG
04/17/2026 BY GARRETT WINE



GRAPHIC SCALE

10 0 5 10 20

(1" = 10')

STRUCTURE TABLE

CB 1, TYPE 1 W/ FRAME AND VANED GRATE PER WSDOT STD. PLAN B-5.20-03 N: 210511.75 E: 1297087.04 RIM: ±348.50 12" IE 346.73 (IN-S) EX. 12" IE 346.73 (OUT-N)	CB 4, TYPE 2 - 54" W/ FRAME & GRATE PER WSDOT STD. PLAN B-30.15-00 (OR APPROVED EQUAL, SEE ON-SITE DETENTION SYSTEM WORKSHEET) N: 210404.86 E: 1297183.91 RIM: 360.21 4" IE 354.90 (IN-N) 36" IE 349.51 (OUT-W)
CB 2, TYPE 1 PER WSDOT STD. PLAN B-5.20-03 W/ RECTANGULAR SOLID METAL COVER PER WSDOT STD. PLAN B-30.20-04 N: 210406.47 E: 1297085.11 RIM: 353.67 6" IE 349.20 (IN-E) EX. 12" IE 351.17 (IN-S) 12" IE 348.70 (OUT-N)	SDCO 3 N: 210414.97 E: 1297183.81 RIM: 359.83 4" IE 355.10 (IN-N, IN-W, OUT-S)
YD 1 (18") N: 210406.22 E: 1297108.69 RIM: 355.56 4" IE 349.61 (IN-NE) 6" IE 349.44 (IN-E, OUT-W)	YD 2 (12") N: 210443.68 E: 1297194.05 RIM: 358.90 4" IE 355.71 (IN-N, OUT-S)
CB 3, TYPE 2 - 54" Ø OUTLET CONTROL STRUCTURE W/ SOLID LOCKING LID (SEE ON-SITE DETENTION SYSTEM WORKSHEET DETAIL & WSDOT STD. PLAN B-10.20-03) N: 210406.13 E: 1297116.42 RIM: 356.00 4" IE 351.47 (IN-N) 36" IE 349.51 (IN-E) 6" IE 349.51 (OUT-W)	YD 3 (12") N: 210486.38 E: 1297194.86 RIM: 359.15 4" IE 356.56 (IN-W, OUT-S)
SDCO 1 N: 210487.74 E: 1297122.25 RIM: 356.89 4" IE 352.28 (IN-E, OUT-S)	SDCO 4 N: 210487.03 E: 1297160.55 RIM: 358.82 4" IE 357.25 (OUT-E)
SDCO 2 N: 210487.10 E: 1297156.55 RIM: 358.82 4" IE 356.23 (OUT-W)	YD 4 (12") N: 210419.56 E: 1297165.87 RIM: 358.70 4" IE 355.47 (OUT-E)

NOTES

1. EXISTING UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION. THERE IS NO GUARANTEE THAT ALL UTILITY LINES ARE SHOWN, OR THAT THE LOCATION, SIZE, OR MATERIAL ARE ACCURATE. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONDUCTING LAND DISTURBING ACTIVITIES. CONTRACTOR SHALL CALL 811 (WASHINGTON811.COM) AND ARRANGE FOR FIELD LOCATION OF EXISTING FACILITIES BEFORE CONSTRUCTION.
2. TREE PROTECTION MEASURES SHALL REMAIN IN PLACE FOR THE DURATION OF THE PERMIT.
3. DO NOT STOCKPILE CONSTRUCTION MATERIALS, SUPPLIES, SOILS, OR DEBRIS WITHIN THE TREE PROTECTION FENCES, NOR ALLOW VEHICLE PARKING OR EQUIPMENT STORAGE.
4. WORK PERFORMED WITHIN THE CRITICAL ROOT ZONES OF EXISTING TREES TO BE RETAINED SHALL BE PERFORMED IN ACCORDANCE WITH ARBORIST RECOMMENDATIONS. THIS MAY INCLUDE COMPLETING CONSTRUCTION ACTIVITIES BY HAND UNDER THE SUPERVISION OF THE ARBORIST OR BY UTILIZING LOW IMPACT CONSTRUCTION PRACTICES SUCH AS AIR EXCAVATION.
5. CONTRACTOR SHALL COORDINATE WITH PUGET SOUND ENERGY FOR THE REMOVAL AND RE-FEED OF ELECTRIC AND NATURAL GAS SERVICES.
6. VEGETATED AREAS WITHIN THE LIMITS OF DISTURBANCE SHALL HAVE SOILS AMENDED IN ACCORDANCE WITH THE SOIL AMENDMENT DETAIL ON SHEET C7.
7. BED STORM DRAINAGE PIPE IN ACCORDANCE WITH WSDOT STANDARD PLAN B-55.20-03.

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4044 148TH AVENUE NE
REDMOND, WASHINGTON 98052
(206) 351-7801

GARRETT R. WINE
STATE OF WASHINGTON
97366
REGISTERED
PROFESSIONAL ENGINEER
4/17/2026

NO.	REVISION HISTORY	DATE
A	PERMIT SUBMITTAL	12/31/25
B	RESPONSE TO 1ST REVIEW COMMENTS	4/17/26

4332 86TH AVENUE SE DRAINAGE PLAN

4332 86TH AVENUE SE
MERCER ISLAND, WASHINGTON 98040

PROJECT: 25-0018.01
DATE: 04/17/2026
DRAWN BY: GW
CHECKED BY: GW

DRAINAGE

C5

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04/17/2026 BY GARRETT WINE

SSMH 1401
RIM 346.24
6" PVC IN (E)
8" PVC IN (S)
8" PVC OUT (N)
CNTR CHAN. 337.93

SSCO 1 PER STD. DETAIL S-19 (TYP.)
RIM 354.39
6" IE ±343.08 (IN-E, OUT-W)

EX. 35 LF - 6" Ø SANITARY SEWER SERVICE (ASSUMED 2.00% SLOPE)

EX. 6" IE ±342.38 (IN-E)
EX. 8" IE ±342.38 (IN-S, OUT-N)

86TH AVENUE SE
96.00' (R.O.W.)

SSCO 2
RIM 358.12
6" IE 348.32 (IN-E, OUT-W)

HOUSE SEWER CONNECTION PER STD. DETAIL S-18

5 LF - 6" Ø PVC SANITARY SEWER SERVICE @ 20.00% SLOPE

6" IE 349.32 (OUT-W)
CONTINUATION THROUGH STRUCTURE BY OTHERS

TPN: 3622500045
4332 86TH AVE SE,
MERCER ISLAND, WA 98040

26 LF - 6" Ø PVC SANITARY SEWER SERVICE @ 20.00% SLOPE

PROPOSED BUILDING
FFE 359.65

WOOD SHED
CINDERBLOCK FOUNDATION

WATER CONTINUATION THROUGH STRUCTURE BY OTHERS

NATURAL GAS METER, CONTINUATION THROUGH STRUCTURE BY OTHERS

CONNECT TO EXISTING NATURAL GAS STUB AT PROPERTY BOUNDARY (FIELD LOCATE EX. GAS SERVICE PRIOR TO CONSTRUCTION)

1" WATER METER INSTALLATION PER STD. DETAIL W-13 W/ PLASTIC METER BOX PER STD. DETAIL W-18A

85 LF - 1.5" Ø POLY WATER SERVICE

CONNECT TO EX. WATER MAIN (APPROX. LOCATION, TO BE FIELD VERIFIED)

S01°04'35"W (M.&B.)
1319.18' (CALC.)

WATER SERVICE TRENCH SECTION PER STD. DETAIL W-3

POWER METER, CONTINUATION THROUGH STRUCTURE BY OTHERS

TRANSITION AERIAL ELECTRIC SERVICE TO UNDERGROUND SERVICE

TPN: 3622500046
MERCER ISLAND, WA 98040

S01°04'35"W
96.00'

N01°04'35"E
96.00'

SSMH 1094
RIM 355.16
8" PVC IN (S)
8" PVC OUT (N)
CNTR CHAN. 346.51

GRAPHIC SCALE
10 0 5 10 20
(1" = 10')

CROSSING TABLE

① BOTTOM OF 12" SD: 347.14 TOP OF EX. 6" SS: ±343.24 CLEARANCE: ±3.90'	⑦ BOTTOM OF GAS: 353.16 TOP OF 4" SD: 351.86 CLEARANCE: 1.30'
② BOTTOM OF WATER: 351.35 TOP OF 12" SD: 348.75 CLEARANCE: 2.60'	⑧ BOTTOM OF 4" SD: 352.12 TOP OF 6" SS: 347.22 CLEARANCE: 4.90'
③ BOTTOM OF ELECTRIC: 351.37 TOP OF 6" SD: 349.26 CLEARANCE: 2.11'	⑨ BOTTOM OF WATER: 353.23 TOP OF 4" SD: 350.71 CLEARANCE: 2.52'
④ BOTTOM OF WATER: 353.23 TOP OF 4" SD: 351.83 CLEARANCE: 1.40'	⑩ BOTTOM OF ELECTRIC: 353.36 TOP OF 4" SD: 351.03 CLEARANCE: 2.33'
⑤ BOTTOM OF 4" SD: 351.50 TOP OF 4" SD (FROM FD): 350.75 CLEARANCE: 0.75'	⑪ BOTTOM OF GAS: 353.44 TOP OF 4" SD: 351.36 CLEARANCE: 2.08'
⑥ BOTTOM OF ELECTRIC: 353.16 TOP OF 4" SD: 351.85 CLEARANCE: 1.31'	

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7. BED SANITARY SEWER PIPE IN ACCORDANCE WITH STANDARD DETAIL S-4.

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(206) 351-7801

GARRETT R. WINE
STATE OF WASHINGTON
17366
REGISTERED PROFESSIONAL ENGINEER
4/17/2026

NO.	REVISION HISTORY	DATE
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4332 86TH AVENUE SE UTILITY PLAN

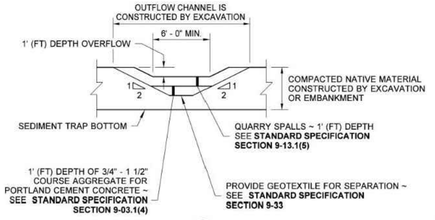
4332 86TH AVENUE SE
MERCER ISLAND, WASHINGTON 98040

PROJECT: 25-0018.01
DATE: 04/17/2026
DRAWN BY: GW
CHECKED BY: GW

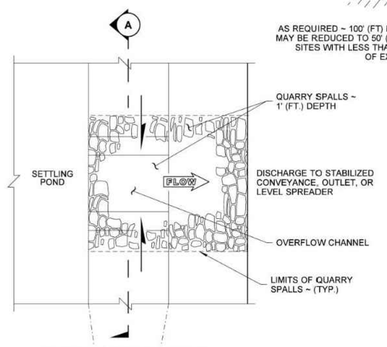
UTILITY

C6

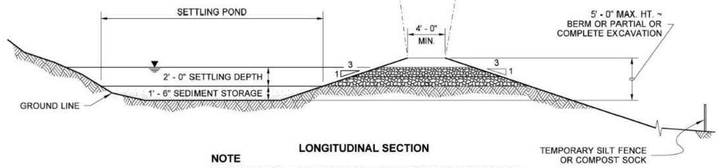
W:_WE\PROJECTS\25-0018.01 4332MI\DRAWING\PLANS\C6 - UTILITY PLAN.DWG
04/17/2026 BY GARRETT WINE



SECTION (A)



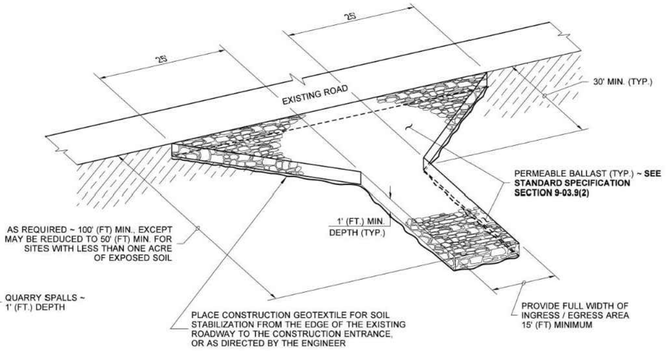
PARTIAL PLAN VIEW OF BERM
SHOWN LARGER FOR CLARITY



LONGITUDINAL SECTION

NOTE
PLACE GEOTEXTILE UNDER THE SPILLWAY AND SIDE SLOPES. PROVIDE A CONTINUOUS LAYER BETWEEN THE GRAVEL/ROCK AND THE NATIVE EARTHEN MATERIAL.

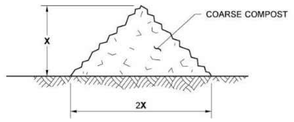
TEMPORARY SEDIMENT TRAP



ISOMETRIC VIEW

STABILIZED CONSTRUCTION ENTRANCE

STABILIZED CONSTRUCTION ENTRANCE SHALL MEET THE REQUIREMENTS OF **STANDARD SPECIFICATION SECTION 8-01.3(7).**



X = 1' - 0" FOR SLOPES 4H:1V OR FLATTER
X = 1' - 6" FOR SLOPES STEEPER THAN 4H:1V

TYPICAL SECTION

COMPOST BERM DETAIL

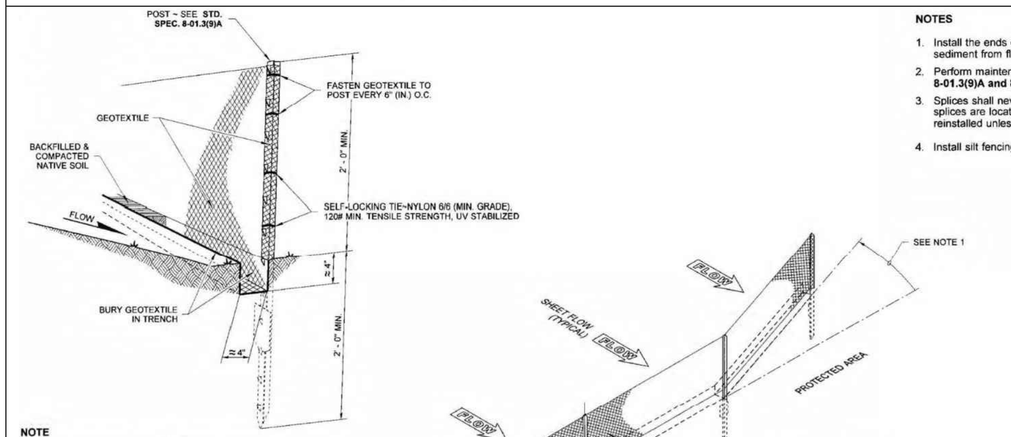
STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
JULI DEE HARTWIG
LICENSE NO. 1422
DATE: 06-21-17

MISCELLANEOUS EROSION CONTROL DETAILS

STANDARD PLAN I-80.10-02

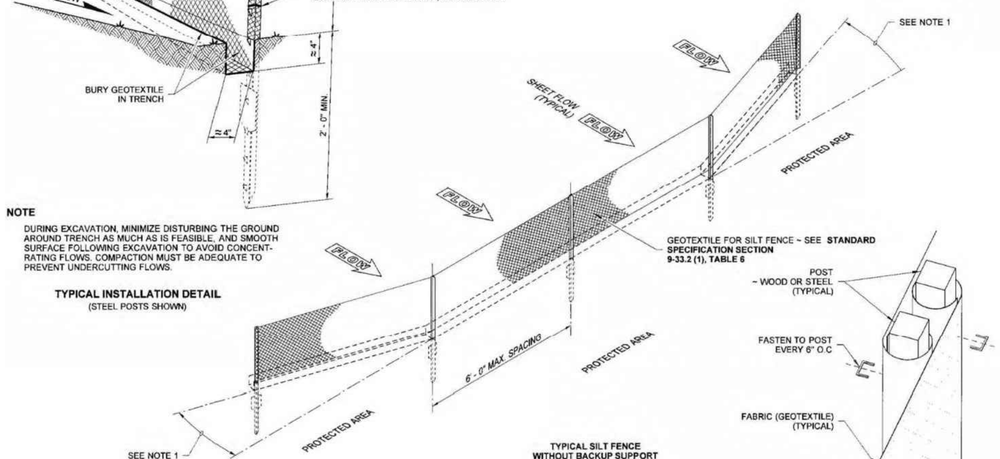
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Carpenter, Jeff
Jul 15 2016 2:28 PM
STATE DESIGN ENGINEER
Washington State Department of Transportation

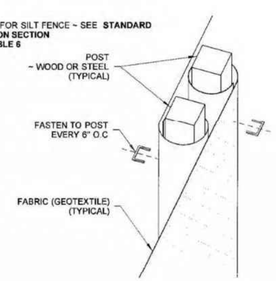


NOTE
DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE, AND SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENTRATING FLOWS. COMPACTION MUST BE ADEQUATE TO PREVENT UNDERCUTTING FLOWS.

TYPICAL INSTALLATION DETAIL
(STEEL POSTS SHOWN)



TYPICAL SILT FENCE WITHOUT BACKUP SUPPORT
ISOMETRIC
(STEEL POSTS SHOWN)



SPLICED FENCE SECTIONS SHALL BE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP.

SPLICE DETAIL
(WOOD POSTS SHOWN)

NOTES

1. Install the ends of the silt fence to point slightly upslope to prevent sediment from flowing around the ends of the fence.
2. Perform maintenance in accordance with **Standard Specifications 8-01.3(9)A and 8-01.3(15)**.
3. Splices shall never be placed in low spots or sump locations. If splices are located in low or sump areas, the fence may need to be reinstalled unless the Project Engineer approves the installation.
4. Install silt fencing parallel to mapped contour lines.

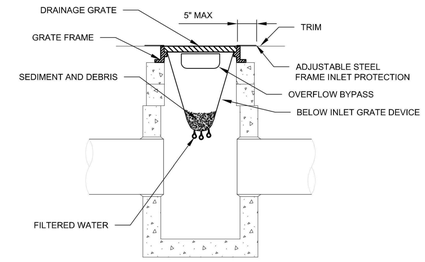
STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
SANDRA L. SALISBURY
CERTIFICATE NO. 000860
March 11, 2013

SILT FENCE

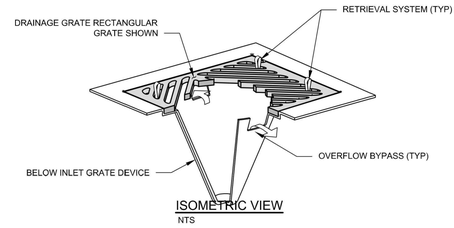
STANDARD PLAN I-30.15-02

SHEET 1 OF 1 SHEET

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STATE DESIGN ENGINEER — DATE
Washington State Department of Transportation



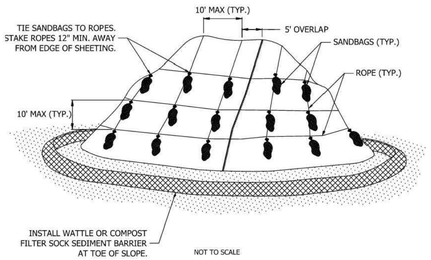
SECTION VIEW
NTS



ISOMETRIC VIEW
NTS

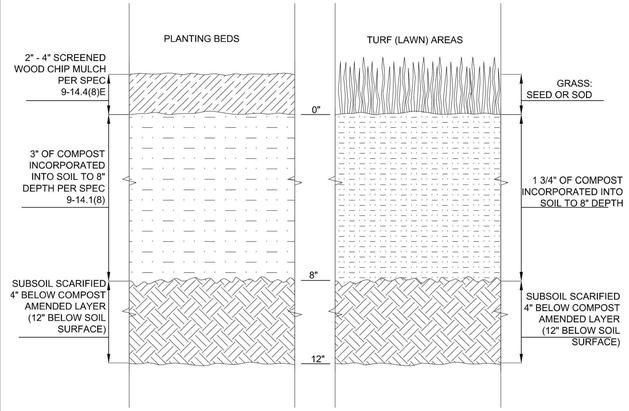
NOTES:
1. SIZE THE BELOW INLET GRATE DEVICE (BIGD) FOR THE STORMWATER STRUCTURE IT WILL SERVICE
2. THE BIGD SHALL HAVE A BUILT-IN HIGH-FLOW RELIEF SYSTEM (OVERFLOW BYPASS)
3. THE RETRIEVAL SYSTEM MUST ALLOW REMOVAL OF THE BIGD WITHOUT SPILLING THE COLLECTED MATERIAL

STORM DRAIN INLET PROTECTION



NOTES
1. INSTALL PLASTIC SHEETING VERTICALLY DOWN SLOPE.
2. INSTALL PLASTIC SHEETING SO EDGES OVERLAP AND ARE SHINGLED AWAY FROM PREVAILING WINDS.
3. PLASTIC SHEETING SHALL BE BLACK MIN 6 MIL.
4. COVER MEASURES SHALL BE INSTALLED IF AN AREA IS TO REMAIN UNWORKED FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON (MAY 1 TO SEPTEMBER 30) OR FOR MORE THAN TWO CONSECUTIVE WORKING DAYS DURING THE WET SEASON (OCTOBER 1 TO APRIL 30).
5. DURING THE WET SEASON, EXPOSED STOCKPILE SLOPES WITH AN INCLINE OF 3 HORIZONTAL TO 1 VERTICAL (3H:1V) OR STEEPER AND WITH MORE THAN TEN FEET OF VERTICAL RELIEF SHALL BE COVERED IF THEY ARE TO REMAIN UNWORKED FOR MORE THAN 12 HOURS.

TEMPORARY STOCKPILE



SOIL AMENDMENT AND DEPTH
NTS

NOTES:
1. ALL SOIL AREAS DISTURBED OR COMPACTED DURING CONSTRUCTION, AND NOT COVERED BY BUILDINGS OR PAVEMENT, SHALL BE AMENDED WITH COMPOST TO A MINIMUM 8 INCH DEPTH, AND SUBSOIL SCARIFIED 4 INCH BELOW THAT COMPOST-AMENDED LAYER, FOR A FINISHED 12 INCH OF UN-COMPACTED DEPTH IN ALL LANDSCAPE AREAS. (SPEC 9-14.1(14))
2. PLANTING BED AND TURF AREA SOIL PREPARATION ARE THE SAME, EXCEPT FOR AMOUNT OF COMPOST AMENDMENT, AND MULCH ADDED TO PLANTING BEDS.
3. COMPOST SHALL BE TILLED INTO 8 INCH DEPTH INTO EXISTING SOIL, OR PLACE 8 INCHES OF COMPOST-AMENDED SOIL, PER SOIL SPECIFICATION. SUBSOIL SHALL BE SCARIFIED (LOOSENED) 4 INCHES BELOW AMENDED LAYER, TO PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFICATION WOULD DAMAGE TREE ROOTS.
4. TURF AREAS SHALL RECEIVE 1.75 INCHES OF COMPOST TILLED INTO 8-INCH DEPTH, OR PLACE 8 INCHES OF IMPORTED SOIL CONTAINING 20-25% COMPOST BY VOLUME. THEN PLANT GRASS SEED OR SOD PER SPECIFICATIONS.
5. PLANTING BEDS SHALL RECEIVE 3 INCHES OF COMPOST TILLED INTO 8-INCH DEPTH, OR PLACE 8 INCHES OF IMPORTED SOIL CONTAINING 35-40% COMPOST BY VOLUME. MULCH AFTER PLANTING, WITH 2-4 INCHES OF ARBORIST WOOD CHIP MULCH OR APPROVED EQUAL.

SOIL AMENDMENT

WINE ENGINEERING, PLLC
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EB #5, LLC

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(206) 351-7801

GARRETT R. WINE
STATE OF WASHINGTON
17386
REGISTERED PROFESSIONAL ENGINEER
4/17/2026

NO.	REVISION HISTORY	DATE
A	PERMIT SUBMITTAL	12/31/25
B	RESPONSE TO 1ST REVIEW COMMENTS	4/17/26

4332 86TH AVENUE SE
DETAILS (SHEET 1 OF 5)

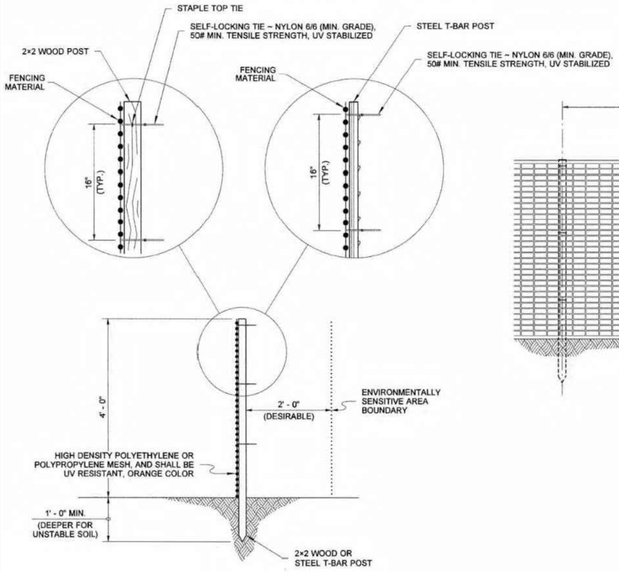
4332 86TH AVENUE SE
MERCER ISLAND, WASHINGTON 98040

PROJECT: 25-0018.01
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CHECKED BY: GW

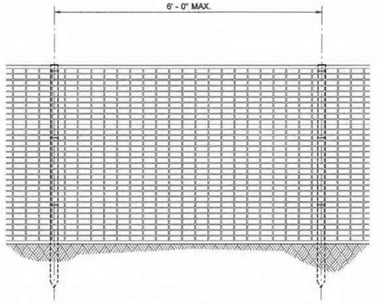
DETAILS (1 OF 5)

C7

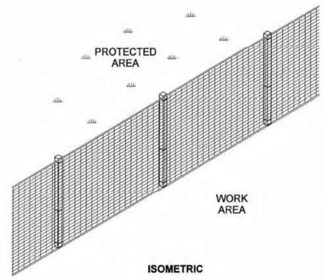
W:_WE\PROJECTS\25-0018.01 4332MI\DRAWING\PLANS\C7 - DETAILS (SHEET 1 OF 5).DWG
04/17/2026 BY GARRETT WINE



TYPICAL SECTION



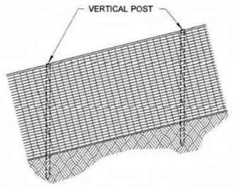
ELEVATION



ISOMETRIC

NOTE

1. Post shall have sufficient strength and durability to support the fence through the life of the project.



ELEVATION

FENCE ON SLOPE

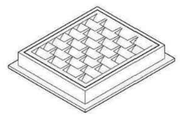
STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
MARK W. MAURER
CERTIFICATE NO. 000598
8/10/2009

HIGH VISIBILITY FENCE

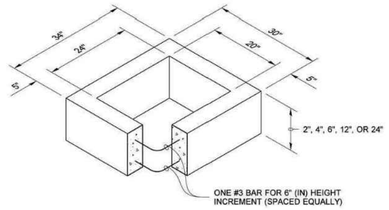
STANDARD PLAN I-10.10-01

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
STATE DESIGN ENGINEER — DATE 8/11/09
Washington State Department of Transportation



FRAME AND VANED GRATE



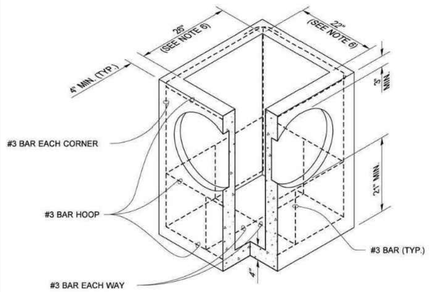
RECTANGULAR ADJUSTMENT SECTION

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

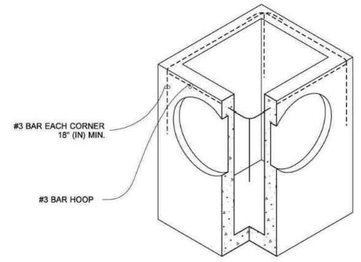
★ CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION,** fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification Section 9-04.3**.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
6. The opening shall be measured at the top of the **Precast Base Section**.
7. All pickup holes shall be grouted full after the basin has been placed.



PRECAST BASE SECTION



(SEE NOTE 1)

ALTERNATIVE PRECAST BASE SECTION

JULIE HEILMAN
STATE OF WASHINGTON
41819
REGISTERED
PROFESSIONAL ENGINEER

Julie Heilman
Julie Heilman
2020.09.01 07:52:50 -07'00'

CATCH BASIN TYPE 1

STANDARD PLAN B-5.20-03

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Roark, Steve
Digitally signed by Roark, Steve
Date: 2020.09.09 09:45:23 -07'00'
STATE DESIGN ENGINEER
Washington State Department of Transportation

WE
WINE ENGINEERING, PLLC
PO BOX 34334
LAS VEGAS, NEVADA 89133
(864) 520-6130

EB #5, LLC

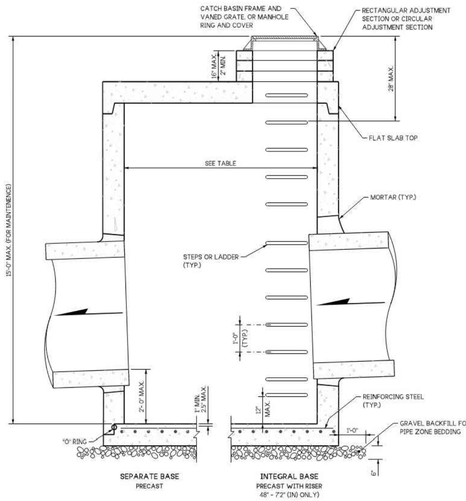
4044 148TH AVENUE NE
REDMOND, WASHINGTON 98052
(206) 351-7801

GARRETT R. WINE
STATE OF WASHINGTON
17366
REGISTERED
PROFESSIONAL ENGINEER
4/17/2026

NO.	REVISION HISTORY	DATE
A	PERMIT SUBMITTAL	12/31/25
B	RESPONSE TO 1ST REVIEW COMMENTS	4/17/26

NOTES:

1. No steps are required when height is 4' or less.
2. The bottom of the precast catch basin may be sloped to facilitate cleaning.
3. The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
4. Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification Section 9-04.3**.
5. Pipe allowances will vary depending on the pipe material used. Contact the Region Hydraulics Engineer for assistance.



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

PIPE ALLOWANCES					
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER				
	CONCRETE	ALL METAL	CPSSP PP ④	SOLID WALL PVC ②	PROFILE WALL PVC ③
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	48"
144"	78"	96"	60"	48"	48"

① Corrugated Polyethylene Storm Sewer Pipe (See Standard Specification Section 9-05.20)
② (See Standard Specification Section 9-05.12(1))
③ (See Standard Specification Section 9-05.12(2))
④ Polypropolyne Pipe (See Standard Specification Section 9-05.24)

JULIE HEILMAN
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41819
REGISTERED
PROFESSIONAL ENGINEER

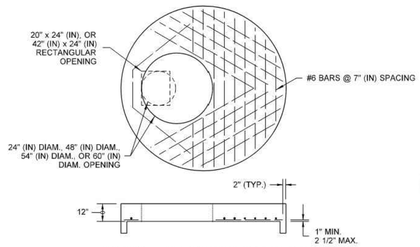
Aug 23, 2023

CATCH BASIN TYPE 2

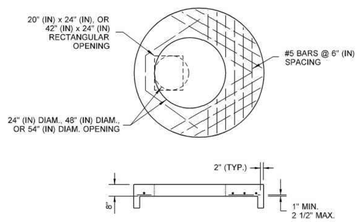
STANDARD PLAN B-10.20-03

SHEET 1 OF 1 SHEET

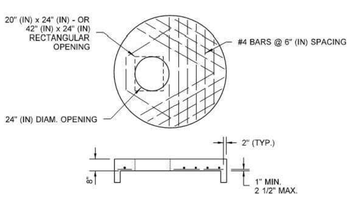
APPROVED FOR PUBLICATION
Aug 23, 2023
STATE DESIGN ENGINEER
Washington State Department of Transportation



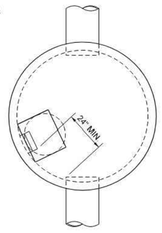
84" (IN) or 96" (IN) FLAT SLAB TOP



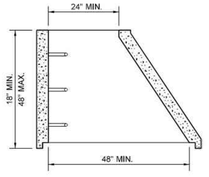
72" (IN) FLAT SLAB TOP



48" (IN), 54", or 60" (IN) FLAT SLAB TOP



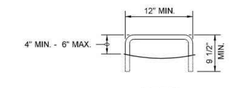
TYPICAL ORIENTATION FOR ACCESS AND STEPS



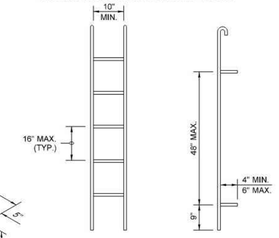
ECCENTRIC CONE SECTION

NOTE

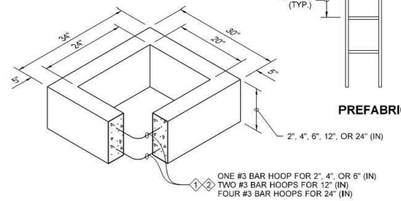
1. Ladder rungs for manholes and catch basins shall meet the requirements of **AASHTO M 199.**



STEP

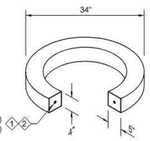


PREFABRICATED LADDER



RECTANGULAR ADJUSTMENT SECTION

1. As an acceptable alternative to rebar, wire mesh having a minimum area of 0.12 square inches per foot may be used for adjustment sections.
2. As an acceptable alternative to conventional steel reinforcment, manufacturers shall use Synthetic Structural Fibers meeting the requirements of **Standard Specification Section 9-05.50(10)**.



CIRCULAR ADJUSTMENT SECTION

For rectangular and circular adjustment sections, approved alternate material compositions are acceptable in lieu of precast concrete designs

JULIE HEILMAN
STATE OF WASHINGTON
41819
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PROFESSIONAL ENGINEER

Julie Heilman
Heilman, Julie
Jan 25 2017 3:01 PM

MISCELLANEOUS DETAILS FOR DRAINAGE STRUCTURES

STANDARD PLAN B-30.90-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Carpenter, Jeff
Jan 26 2017 8:52 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation

4332 86TH AVENUE SE DETAILS (SHEET 2 OF 5)

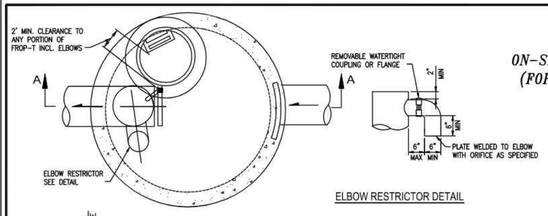
4332 86TH AVENUE SE
MERCER ISLAND, WASHINGTON 98040

PROJECT:	25-0018.01
DATE:	04/17/2026
DRAWN BY:	GW
CHECKED BY:	GW

DETAILS (2 OF 5)

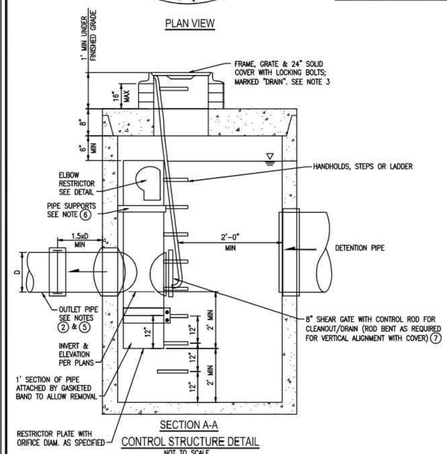
W:_WE\PROJECTS\25-0018.01 4332MIDRAWING\PLANS\C8 - DETAILS (SHEET 2 OF 5).DWG
04/17/2026 BY GARRETT WINE

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



ELBOW RESTRICTOR DETAIL

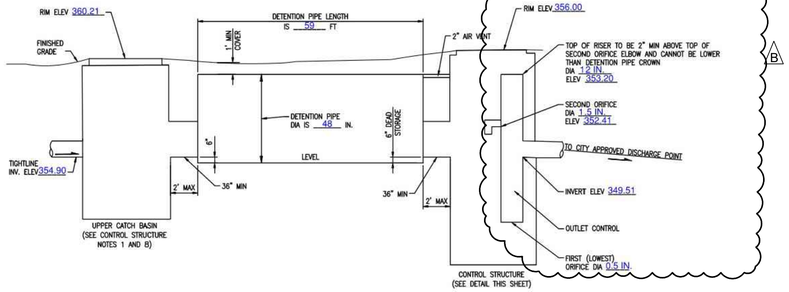
PLAN VIEW



SECTION A-A

CONTROL STRUCTURE DETAIL
NOT TO SCALE

OWNER: EB #5, LLC
PERMIT #:
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 5,469
SOIL TYPE: QUATERNARY VASHON TILL (Qvt)
ADDRESS: 4332 86TH AVENUE SE, MERCER ISLAND, WA 98040
DETENTION PIPE DIA (INCH): 48
PIPE MATERIAL: LCPE
DETENTION PIPE LENGTH (FT): 59
PREPARED BY: WINE ENGINEERING, PLLC
PHONE: (864) 520-6130
DATE: APRIL 16, 2025
ORIFICE #1 DIA 0.5 INCH, ELEV 349.51
ORIFICE #2 DIA 1.5 INCH, ELEV 352.41



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

CONTROL STRUCTURE NOTES

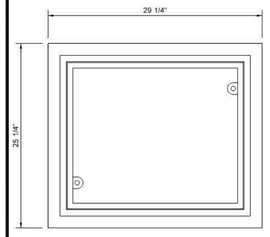
1. USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
2. OUTLET PIPE: MIN. 6 INCH.
3. METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
4. FRAME AND LADDER OR STEPS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

ON-SITE DETENTION SYSTEM NOTES:

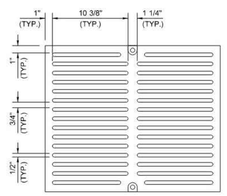
1. CALL DEVELOPMENT SERVICES (206-275-7605) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
2. RESPONSIBILITY FOR OPERATION AND MAINTANANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE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

NOTES

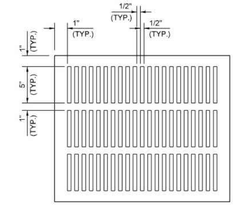
1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC × 2" (in) Allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
2. All grates shall be 20" (in) x 24" (in).
3. Grate alternatives shown for informational purposes. Grate design varies by manufacturer and must meet ADA requirements.
4. Refer to **Standard Specification Section 9-05.15 and 9-05.15 (2)** for additional requirements.



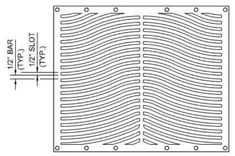
PLAN VIEW
GRATE FRAME
FOR DETAILS NOT SHOWN
SEE STANDARD PLAN B-30.10



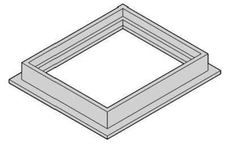
PLAN VIEW
GRATE
ALTERNATIVE 1

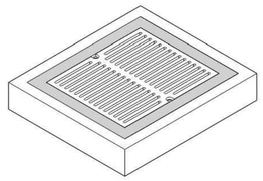


PLAN VIEW
GRATE
ALTERNATIVE 2



PLAN VIEW
GRATE
ALTERNATIVE 3





ISOMETRIC VIEWS
(GRATE ALTERNATIVE 1 SHOWN)

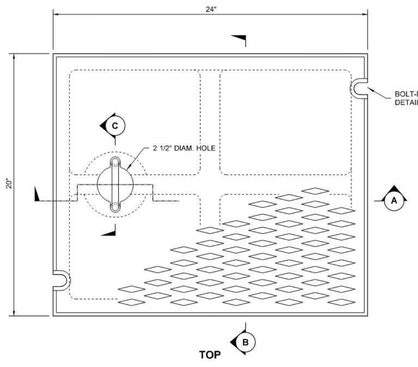
JULIE HEILMAN — STATE OF WASHINGTON — 21819 — REGISTERED PROFESSIONAL ENGINEER
Heilman, Julie
Feb 20 2018 12:53 PM

ADA GRATES FOR RECTANGULAR FRAMES

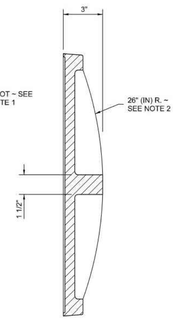
STANDARD PLAN B-30.15-00

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Carpenter, Jeff
Feb 27 2018 7:56 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation



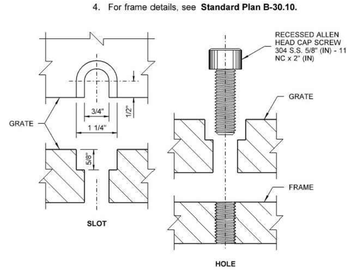
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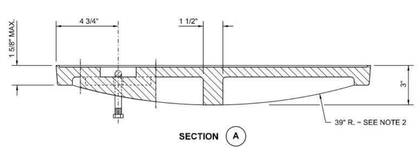
SECTION (B)

NOTES

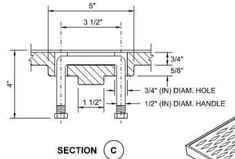
1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC × 2" (in) allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
2. Alternative reinforcing designs are acceptable in lieu of the rib design.
3. Refer to **Standard Specification Section 9-05.15** and **9-05.15(2)** for additional requirements.
4. For frame details, see **Standard Plan B-30.10.**



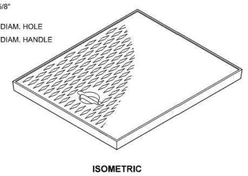
BOLT-DOWN DETAILS
SEE NOTE 1



SECTION (A)



SECTION (C)



ISOMETRIC

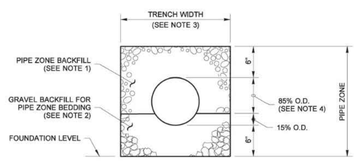
JULIE HEILMAN — STATE OF WASHINGTON — 21819 — REGISTERED PROFESSIONAL ENGINEER
Heilman, Julie
Feb 20 2018 12:53 PM

RECTANGULAR SOLID METAL COVER

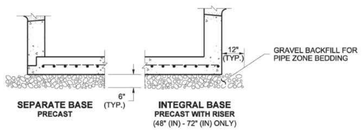
STANDARD PLAN B-30.20-04

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Carpenter, Jeff
Feb 27 2018 7:57 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation



CONCRETE AND DUCTILE IRON PIPE

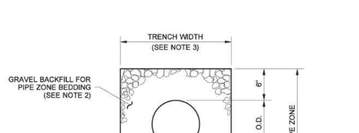


TYPICAL CONDITION FOR DRAINAGE STRUCTURE

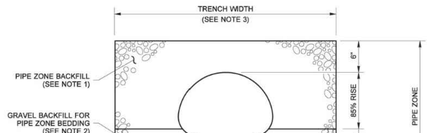
THIS DETAIL APPLIES TO **STANDARD PLANS B-6.20, B-6.40, B-8.60, B-10.20, B-10-40, B-15.20,B-15.40, B-15.60, B-25.20, B-25.60, B-35.20** AND **B-35.40.**

NOTES

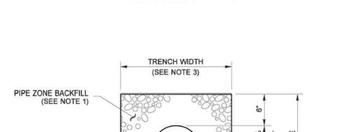
1. See **Standard Specifications Section 7-08.3(3)** for Pipe Zone Backfill.
2. See **Standard Specifications Section 9-03.12(3)** for Gravel Backfill for Pipe Zone Bedding.
3. See **Standard Specifications Section 2-09.4** for Measurement of Trench Width.
4. For sanitary sewer installation, concrete pipe shall be imbedded to spring line.



THERMOPLASTIC PIPE



PIPE ARCHES



METAL AND STEEL RIB REINFORCED POLYETHYLENE PIPE

CLEARANCE BETWEEN PIPES FOR MULTIPLE INSTALLATIONS		
PIPE	**SIZE**	**MINIMUM DISTANCE BETWEEN BARRELS**
CIRCULAR PIPE (DIAMETER)	UP TO 48"	24"
METAL PIPE ARCH (SPAN)	48" AND LARGER	DIAMETER/2 OR 36" WHICHEVER IS LESS

JULIE HEILMAN — STATE OF WASHINGTON — 21819 — REGISTERED PROFESSIONAL ENGINEER
Heilman, Julie
Aug 17, 2021

PIPE ZONE BEDDING AND BACKFILL

STANDARD PLAN B-55.20-03

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Aug 17, 2021
STATE DESIGN ENGINEER
Washington State Department of Transportation

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EB #5, LLC

4044 148TH AVENUE NE
REDMOND, WASHINGTON 98052
(206) 351-7801

GARRETT R. WINE — STATE OF WASHINGTON — 37380 — REGISTERED PROFESSIONAL ENGINEER
4/17/2026

NO.	REVISION HISTORY	DATE
A	PERMIT SUBMITTAL	12/31/25
B	RESPONSE TO 1ST REVIEW COMMENTS	4/17/26

4332 86TH AVENUE SE DETAILS (SHEET 3 OF 5)

4332 86TH AVENUE SE
MERCER ISLAND, WASHINGTON 98040

PROJECT: 25-0018.01
DATE: 04/17/2026
DRAWN BY: GW
CHECKED BY: GW

DETAILS (3 OF 5)

C9

W:_WE\PROJECTS\25-0018.01 4332MIID\DRAWING\PLANS\C9 - DETAILS (SHEET 3 OF 5).DWG
04/17/2026 BY GARRETT WINE

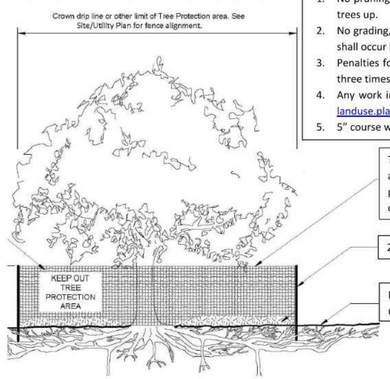
TREE PROTECTION AREA (TPZ)

KEEP OUT!

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

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

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



Notes

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

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

2" x 6" steel posts or approved equal

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

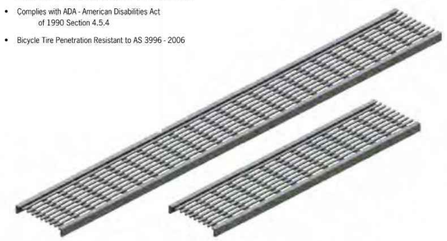
Any Work in the protected area must be with the permission of the Land Use and Planning Division at landuse.planning@mercergov.org

ACO DRAIN

Type 447D/448D Longitudinal stainless steel grade (ADA)

Product Features

- Certified to EN 1433 Load Class B - 28,000 lbs - 581 psi
- Uses 'DrainLok' boltless locking system
- Suitable for use with K100, KS100, and H100K-8 channels
- Manufactured from 16 gauge, grade 304 stainless steel
- Complies with ADA - American Disabilities Act of 1990 Section 4.5.4
- Bicycle Tire Penetration Resistant to AS 3996 - 2006



Specifications

General
The surface drainage system shall be ACO Drain K100, KS100, and H100K-8 channels*, complete with ACO Type 447D/448D longitudinal stainless steel grate with 'DrainLok' locking as manufactured by ACO, Inc. or similar approved.

Materials
The covers shall be manufactured from stainless steel and have ***minimum*** properties as follows:

- ***Independently certified to meet Load Class B to EN 1433 - 28.000 lbs - 581 psi***
- ***16 gauge, grade 304 stainless steel***
- ***Intake area of 46.9 sq. in. (302.57 cm²) per half meter of grate***

The overall width of 4.85" (123mm) and overall length of 39.37" (1000mm) (Type 447D) and 19.69" (500mm) (Type 448D). Slots measure 1.61" (40.89mm) by 0.24" (6.09mm).

Installation
The trench drain system and grates shall be installed in accordance with the manufacturer's installation instructions and recommendations.

* delete as appropriate

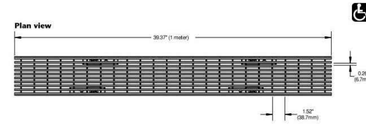
April 2018 www.ACODrain.us

ACO Specification Information

ACO DRAIN

Type 447D/448D Longitudinal stainless steel grade (ADA)

Plan view

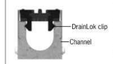


Side elevation



Description	Part No.	Length inches (mm)	Width inches (mm)	Weight lbs.
DrainLok grate				
Type 447D Longitudinal stainless steel grate	**142215**	39.37 (1000)	4.85 (123)	8.0
Type 448D Longitudinal stainless steel grate	**142216**	19.69 (500)	4.85 (123)	4.0

'DrainLok' locking mechanism



ACO DrainLok™ is a patented, boltless locking system that removes the need for bolts and bars and improves the hydraulic capacity of the channel. The DrainLok™ mechanism simply clips into the channel edge rail for rapid installation. ACO DrainLok™ grates are fitted with an anti-shunt mechanism that restricts unwanted grate movement when installed, improving durability and longevity of the system.

ACO, Inc.
Northeast Sales Office
9470 Pinecone Drive
Mentor, OH 44060
Tel: (440) 639-7230
Toll free: (800) 543-4764
Fax: (440) 639-7235

West Sales Office
825 W. Beechcraft St.
Casa Grande, AZ 85122
Tel: (520) 421-9988
Toll Free: (888) 490-9552
Fax: (520) 421-9899

Southeast Sales Office
4211 Pleasant Road
Fort Mill, SC 29708
Toll free: (800) 543-4764
Fax: (803) 802-1063

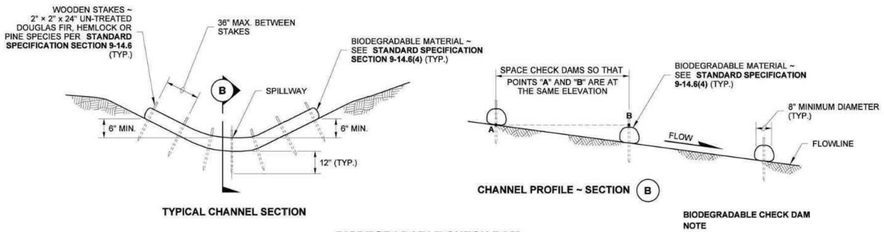
Follow us on
Electronic Contact:
info@ACODrain.us
www.ACODrain.us

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SPEC INFO ACO

April 2018 www.ACODrain.us

ACO Specification Information



GENERAL NOTES

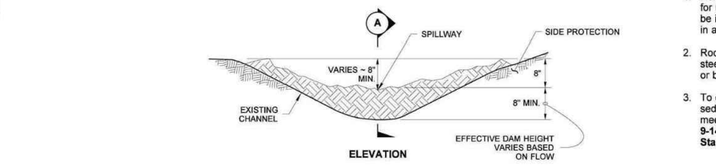
1. Check Dams shall meet the requirements of **Standard Specification Sections 8-01.3(6) and 9-14.6(4).**
2. In channels, install the sloped ends of the Check Dam a minimum of 8" higher than the spillway to ensure water flows over the dam and not around it.
3. Perform maintenance in accordance with **Standard Specification Section 8-01.3(15).**
4. Remove Check Dams in accordance with **Standard Specification Section 8-01.3(16).**

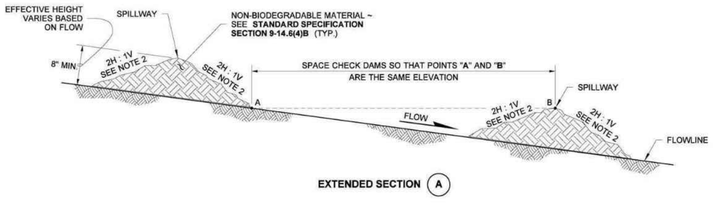
BIODEGRADABLE CHECK DAM NOTE

1. Biodegradable Check Dams may need additional or modified staking to prevent undercutting or scouring.

NON-BIODEGRADABLE CHECK DAM NOTES

1. Non-Biodegradable Manufactured Check Dam devices approved for use under **Standard Specification Section 9-14.6(4)B** shall be installed per manufacturer's recommendations and shall perform in accordance with **Standard Specification Section 8-01.3(6).**
2. Rock Check Dams with slopes parallel to the roadway that are steeper than 10 H : 1 V shall be placed outside of the clear zone or behind traffic barrier.
3. To ensure adequate detention time, Rock Check Dams used as sediment control may need to be enhanced with plastic that meets the requirements of **Standard Specification Section 9-14.6(3)** or fabric that meets the geotextile requirements of **Standard Specification Section 9-33.2(1), Table 6.**





STATE OF WASHINGTON JULI DEE HARTWIG NO. 1422 EXP. 09/21/2023 LANDSCAPE ARCHITECT

Jul 6, 2022

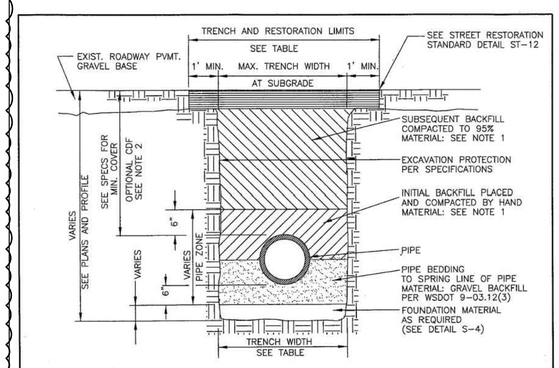
CHECK DAMS ON CHANNELS

STANDARD PLAN I-50.20-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Mark Gaines Jul 6, 2022
STATE DESIGN ENGINEER
Washington State Department of Transportation

B



NOTES

1. ALL TRENCH BACKFILL IN PUBLIC RIGHT-OF-WAY OR ROADWAY AREAS SHALL BE CRUSHED SURFACING PER WSDOT 9-09.9(3) OR BANK RUN GRAVEL PER WSDOT 9-03.19, COMPACTED IN 6" LIFTS.
2. CDF FOR BACKFILL MAY BE REQUIRED BY CITY ENGINEER WHEN PROPER COMPACTION AROUND EXISTING UTILITIES MAY NOT BE POSSIBLE. CDF SHALL BE PER WSDOT 2-09.3(1)E.
3. SEE S-4 FOR PIPE BEDDING DETAILS.

TRENCH WIDTH

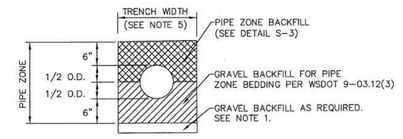
PIPE SIZE	PIPE ZONE MAX. TRENCH WIDTH	MAX. TRENCH WIDTH AT SUBGRADE	MAX. RESTORATION WIDTH AT SURFACE
SIDE SEWER	2'-0"	2'-0"	6'-0"
4" OR 6"	2'-2"	3'-0"	8'-0"
8"	2'-4"	4'-0"	8'-0"
10"	2'-6"	4'-0"	8'-0"
12"	2'-8"	4'-6"	8'-6"

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
SEWER TRENCH DETAIL

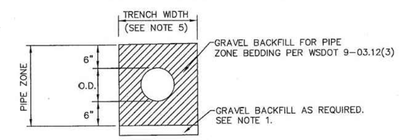
6-5-2009	NO SCALE	S-3

REV DATE | | | | | | APPROVED

BEDDING FOR RIGID PIPE MATERIAL



BEDDING FOR FLEXIBLE PIPE MATERIAL



NOTES

1. EXCAVATE UNSTABLE MATERIAL DOWN TO FIRM SOIL. REPLACE WITH GRAVEL BACKFILL PER WSDOT 9-03.12(3) AS DIRECTED BY THE CITY ENGINEER.
2. PROVIDE UNIFORM SUPPORT UNDER BARREL.
3. HAND TAMP UNDER HAUNCHES.
4. COMPACT BEDDING AND BACKFILL MATERIAL TO 95% MAX. DENSITY EXCEPT DIRECTLY OVER PIPE. HAND TAMP ONLY UNTIL MINIMUM 6" ABOVE TOP OF PIPE.
5. 30" MAXIMUM TRENCH WIDTH FOR PIPE UP TO AND INCLUDING 12", FOR PIPE LARGER THAN 12", USE O.D. PLUS 16".

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
PIPE BEDDING

6-5-2009	NO SCALE	S-4

REV DATE | | | | | | APPROVED

DRAWN BY: FERN LIDDELL

W:_WE\PROJECTS\25-0018.01 4332MIDRAWING\PLANS\C10 - DETAILS (SHEET 4 OF 5).DWG
04/17/2026 BY GARRETT WINE

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GARRETT R. WINE STATE OF WASHINGTON 97360 REGISTERED PROFESSIONAL ENGINEER
4/17/2026

NO.	REVISION HISTORY	DATE
A	PERMIT SUBMITTAL	12/31/25
B	RESPONSE TO 1ST REVIEW COMMENTS	4/17/26

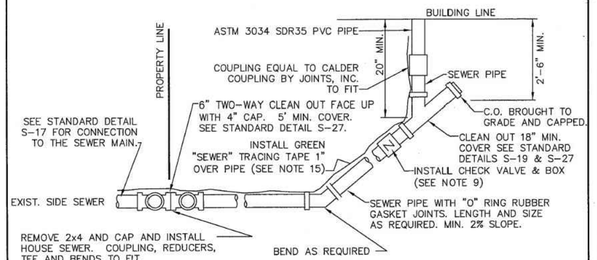
4332 86TH AVENUE SE
DETAILS (SHEET 4 OF 5)

4332 86TH AVENUE SE
MERCER ISLAND, WASHINGTON 98040

PROJECT: 25-0018.01
DATE: 04/17/2026
DRAWN BY: GW
CHECKED BY: GW

DETAILS (4 OF 5)

C10



BUILDING CONNECTION

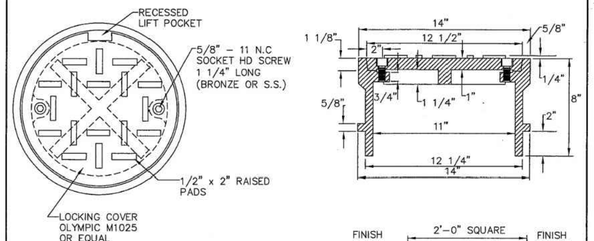
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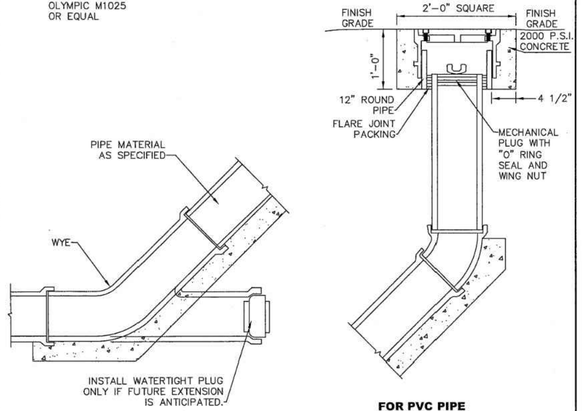
1. ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
3. ALL HOUSE PLUMBING OUTLETS MUST BE CONNECTED TO THE SEWER. NO DOWN SPOUTS OR STORM DRAINAGE MAY BE CONNECTED TO THE SEWER SYSTEM.
4. 18" MINIMUM COVERAGE OVER PIPE.
5. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH $\frac{1}{8}$ BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
6. 4" SEWER PIPE MINIMUM SIZE ON PROPERTY. 2% MINIMUM GRADE.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT SEWER ORDINANCES.
8. ALL CONSTRUCTION REQUIRES A PLAN SHOWING PROPERTY AND DIMENSIONS AND COMPLETION OF SIDE SEWER APPLICATION AND MAINTENANCE AGREEMENT, AS NEEDED.
9. BACK WATER VALVE (CHECK VALVE) IS REQUIRED:
   A. IF CONNECTED TO A SHARED SIDE SEWER.
   B. IF CONNECTION AT HOUSE IS LOWER THAN BOTH UPSTREAM AND DOWNSTREAM MANHOLE.
   C. SEE S-23 & S-24 FOR LAKE LINE REQUIREMENTS.
10. AS-BUILT DRAWING SHOWING LOCATION OF SIDE SEWER & ALL BENDS, C.O. ETC., IN RELATION TO THE HOUSE IS REQUIRED AFTER INSPECTION & INSTALLATION. SEE STANDARD DETAIL S-38 FOR A TYPICAL "AS BUILT".
11. THE MINIMUM PIPE SIZE FOR SIDE SEWERS SHALL BE:
    6" – WITHIN THE PUBLIC RIGHT-OF-WAY.
    4" – SINGLE FAMILY RESIDENCES.
    6" – 2 TO 6 SINGLE FAMILY RESIDENCES.
    6" – BUILDINGS OTHER THAN SINGLE FAMILY RESIDENCES.
12. UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
HOUSE SEWER CONNECTION

6-5-2009	NO SCALE	S-18

REV DATE | APPROVED





FOR PVC PIPE

NOTES

1. SEE S-27 FOR INSTALLATION DETAILS.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
CLEAN OUT DETAIL

6-5-2009	NO SCALE	S-19

REV DATE | APPROVED

DISCONNECTION

WHEN DEMOLISHING AN EXISTING BUILDING, THE BUILDING SIDE SEWER SHALL BE DISCONNECTED PRIOR TO REMOVAL OF BUILDING FOUNDATIONS. THE CONTRACTOR SHALL INSTALL A MECHANICAL PLUG WITH NON-SHRINK GROUT AT THE END OF THE SIDE SEWER TO REMAIN IN PLACE. DISCONNECTION'S SHALL BE PERFORMED IN THE PRESENCE OF THE CITY'S UTILITY INSPECTOR. THE CONTRACTOR SHALL PROVIDE AN AS-BUILT DRAWING DEPICTING THE DISCONNECTED SIDE SEWER UPON COMPLETION OF THE WORK.

RECONNECTION

WHEN RECONNECTING TO AN EXISTING SIDE SEWER, THE POINT OF RECONNECTION WILL BE DETERMINED BASED ON THE MAGNITUDE OF THE CONSTRUCTION ON THE PROPERTY.

1. PARTIAL INTERIOR REMODEL AND/OR BUILDING ADDITION WITH NO ADDITIONAL PLUMBING FIXTURES – NO SIDE SEWER REPLACEMENT REQUIRED UNLESS A KNOWN PROBLEM EXISTS IN THE SIDE SEWER.
2. PARTIAL INTERIOR REMODEL AND/OR BUILDING ADDITION WITH ADDITIONAL PLUMBING FIXTURES– ASSESS CONDITION OF EXISTING SIDE SEWER THROUGH VIDEO INSPECTION FROM BUILDING TO PROPERTY LINE AND REPLACE AS NEEDED.
3. COMPLETE INTERIOR REMODEL OF RESIDENCE – ASSESS CONDITION OF EXISTING SIDE SEWER THROUGH VIDEO INSPECTION FROM BUILDING TO PROPERTY LINE AND REPLACE AS NEEDED. IF EXISTING SIDE SEWER IS ASBESTOS CEMENT OR CONCRETE, SIDE SEWER SHALL BE REPLACED FROM BUILDING TO PROPERTY LINE, UNLESS THE APPLICANT PROVES, TO THE SATISFACTION OF THE CITY ENGINEER, THAT THE SIDE SEWER IS WATER TIGHT AND IN SOUND CONDITION.*
4. COMPLETE INTERIOR REMODEL AND BUILDING ADDITION – NEW SIDE SEWER FROM BUILDING TO PROPERTY LINE.*
5. CONSTRUCTION OF A NEW SINGLE FAMILY RESIDENCE – NEW SIDE SEWER FROM BUILDING TO PROPERTY LINE.*

BACK WATER VALVE INSTALLATION PER CITY ENGINEER, IF SCENARIO 2, 3, 4, OR 5 IS DIRECTLY ATTACHED TO THE LAKE LINE OR THE ELEVATION OF THE LOWEST DRAIN IN THE RESIDENCE IS LOWER THAN THE RIM ELEVATION OF THE UPSTREAM SEWER MANHOLE ON THE MAIN.

VIDEO INSPECTION OF THE EXISTING SIDE SEWER, BETWEEN THE PROPERTY LINE AND THE SEWER MAIN SHALL BE PERFORMED FOR SCENARIOS NUMBER 4 AND 5.

PROVIDE A COPY OF THE VIDEO DOCUMENTATION (VIDEO AND HARDCOPY REPORT) TO THE CITY ENGINEER.

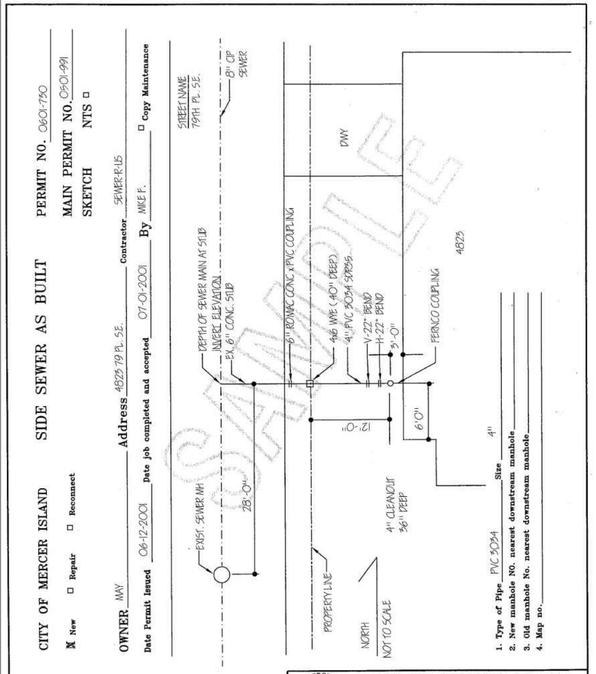
REPLACEMENT OR REPAIR OF THAT PORTION OF THE SIDE SEWER BETWEEN THE PROPERTY LINE AND THE SEWER MAIN, WILL BE DETERMINED BY THE CITY ENGINEER, BASED ON THE VIDEO INSPECTION.

*IF THE EXISTING SIDE SEWER IS PVC AND IS LESS THAN TEN YEARS OLD, THE SIDE SEWER DOES NOT HAVE TO BE REPLACED IF A VIDEO INSPECTION AND/OR HYDROSTATIC PRESSURE TEST CONFIRMS THAT THE SIDE SEWER IS IN PROPER WORKING CONDITION. THESE TESTS SHALL BE PERFORMED AFTER ALL HEAVY EQUIPMENT THAT COULD DAMAGE THE SIDE SEWER IS OFF OF THE SITE.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
RESIDENTIAL SIDE SEWER DISCONNECTION & RECONNECTION

6-5-2009	NO SCALE	S-22

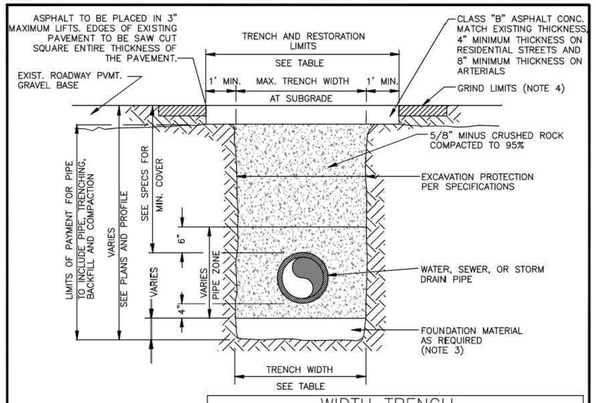
REV DATE | APPROVED



CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
"AS-BUILT" DRAWING

6-5-2009	NO SCALE	S-38

REV DATE | APPROVED



WIDTH TRENCH			
PIPE SIZE	PIPE ZONE MAX. TRENCH WIDTH	MAX. TRENCH WIDTH AT SUBGRADE	MAX. RESTORATION WIDTH AT SURFACE
WATER SERVICES	2'-0"	2'-0"	4'-0"
4" OR 6"	2'-2"	3'-0"	5'-0"
8"	2'-4"	4'-0"	6'-0"
10"	2'-6"	4'-0"	6'-0"
12"	2'-8"	4'-6"	6'-6"
16"	3'-0"	5'-0"	7'-0"

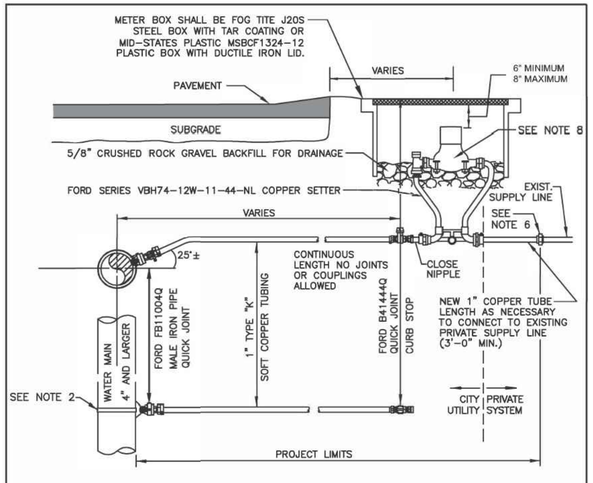
NOTES

1. CALL IN LOCATES TWO BUSINESS DAYS BEFORE YOU DIG. (1-800-424-5555)
2. IN RIGHT-OF-WAY USE 100% 5/8 MINUS CRUSHED ROCK FOR BEDDING, PIPE ZONE AND BACKFILL
3. FOUNDATION MATERIAL SHALL BE 1 ¼" MINUS CRUSHED ROCK OR OTHER AGGREGATE AS APPROVED BY CITY ENGINEER.
4. GRIND AND OVERLAY LIMITS SHALL EXTEND A MINIMUM OF 10' PAST THE END OF TRENCH AREAS.
5. SEAL ALL FINAL PATCHING AND PAVING SEAMS WITH LIQUID ASPHALT. SQUEEGEE OR MOP THE SEALER. COVER WITH DRY SAND.

CITY OF MERCER ISLAND
STANDARD DETAILS
WATER
TRENCH SECTION

3-29-2021	NO SCALE	W-3

REV DATE | APPROVED



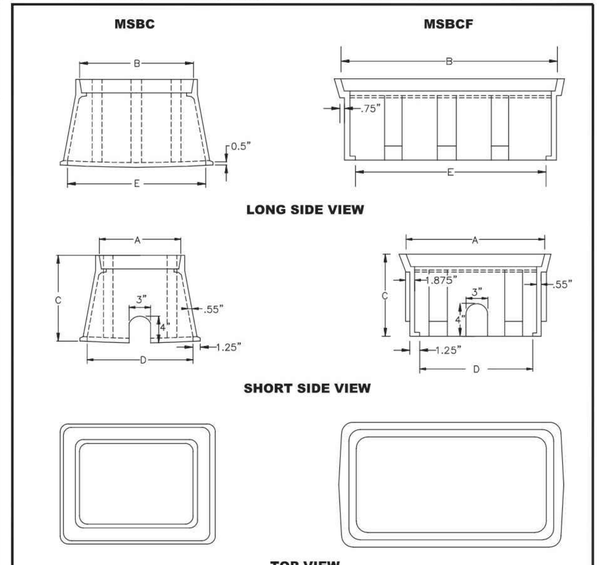
NOTES

1. WATER SERVICES SHALL COMPLY WITH THE REDUCTION OF LEAD IN DRINKING WATER ACT DATED 01/04/2014.
2. ON EXISTING WATER MAINS USE NYLON COATED D.I. SADDLE WITH STAINLESS STEEL DOUBLE STRAPS, ROMAC 202NS, OR APPROVED EQUAL.
3. MINIMUM DISTANCE BETWEEN CORP STOPS SHALL BE 18" MINIMUM DISTANCE BETWEEN TAPS, BETWEEN CORP STOP AND PIPE ENDS SHALL BE 24", ALL HORIZONALLY STAGGERED.
4. PLASTIC METER BOXES SHALL NOT BE INSTALLED WITHIN ROADWAY, SIDEWALK, OR DRIVEWAYS.
5. UPON CITY ENGINEER'S APPROVAL, METER BOXES ARE ALLOWED TO BE INSTALLED IN PORTLAND CEMENT CONCRETE PAVEMENT OR SIDEWALK.
6. WHEN CONNECTING TO EXISTING PRIVATE SUPPLY LINE CONTAINING FERROUS METAL, PROVIDE INSULATING COUPLING (DB SERIES WITH C21 SERIES ADAPTERS) AND PROVIDE REDUCER AS NECESSARY TO MATCH EXISTING PRIVATE SUPPLY LINE DIAMETER.
7. SERVICE LINE SHALL BE PERPENDICULAR TO THE WATER MAIN AND STRAIGHT TO WATER METER, UNLESS OTHERWISE APPROVED BY CITY ENGINEER. PROVIDE WINDING SLACK IN THE SERVICE LINE BETWEEN THE MAIN AND WATER METER.
8. WATER METER SUPPLIED BY CITY.
9. ALL FITTINGS TO BE BRASS COMPRESSION TYPE, FORD QUICK JOINT OR EQUAL.
10. NO SERVICE CONNECTIONS BETWEEN BLOW-OFF AND END OF MAIN.

CITY OF MERCER ISLAND
STANDARD DETAILS
WATER
1" WATER METER INSTALLATION

05-02-2023	NO SCALE	W-13

REV DATE | APPROVED



WATER SERVICE SIZE	PART NO.	A	B	C	D	E
1"	MSBCF1324-12	13.75"	23.1875"	12"	12.125"	24.5"
2"	MSBC1730-18	17.625"	30.5"	18"	22.875"	35"

NOTES:

1. METER BOX SHALL BE MID-STATES PLASTICS AS SHOWN, WITH A DUCTILE IRON LID WITH A FLIP OR HINGED INSPECTION LID TO INCLUDE A 3/4" PICK HOLE.
2. PLASTIC WATER METER BOXES SHALL NOT BE INSTALLED WITHIN A DRIVING OR PARKING AREA.

CITY OF MERCER ISLAND
STANDARD DETAILS
WATER
1" & 2" PLASTIC WATER METER BOX

12-23-2013	NO SCALE	W-18A

REV DATE | APPROVED

WINE ENGINEERING, PLLC
PO BOX 34334
LAS VEGAS, NEVADA 89133
(864) 520-6130

EB #5, LLC

4044 148TH AVENUE NE
REDMOND, WASHINGTON 98052
(206) 351-7801

GARRETT R. WINE
STATE OF WASHINGTON
17360
REGISTERED PROFESSIONAL ENGINEER
4/17/2026

NO.	REVISION HISTORY	DATE
A	PERMIT SUBMITTAL	12/31/25
B	RESPONSE TO 1ST REVIEW COMMENTS	4/17/26

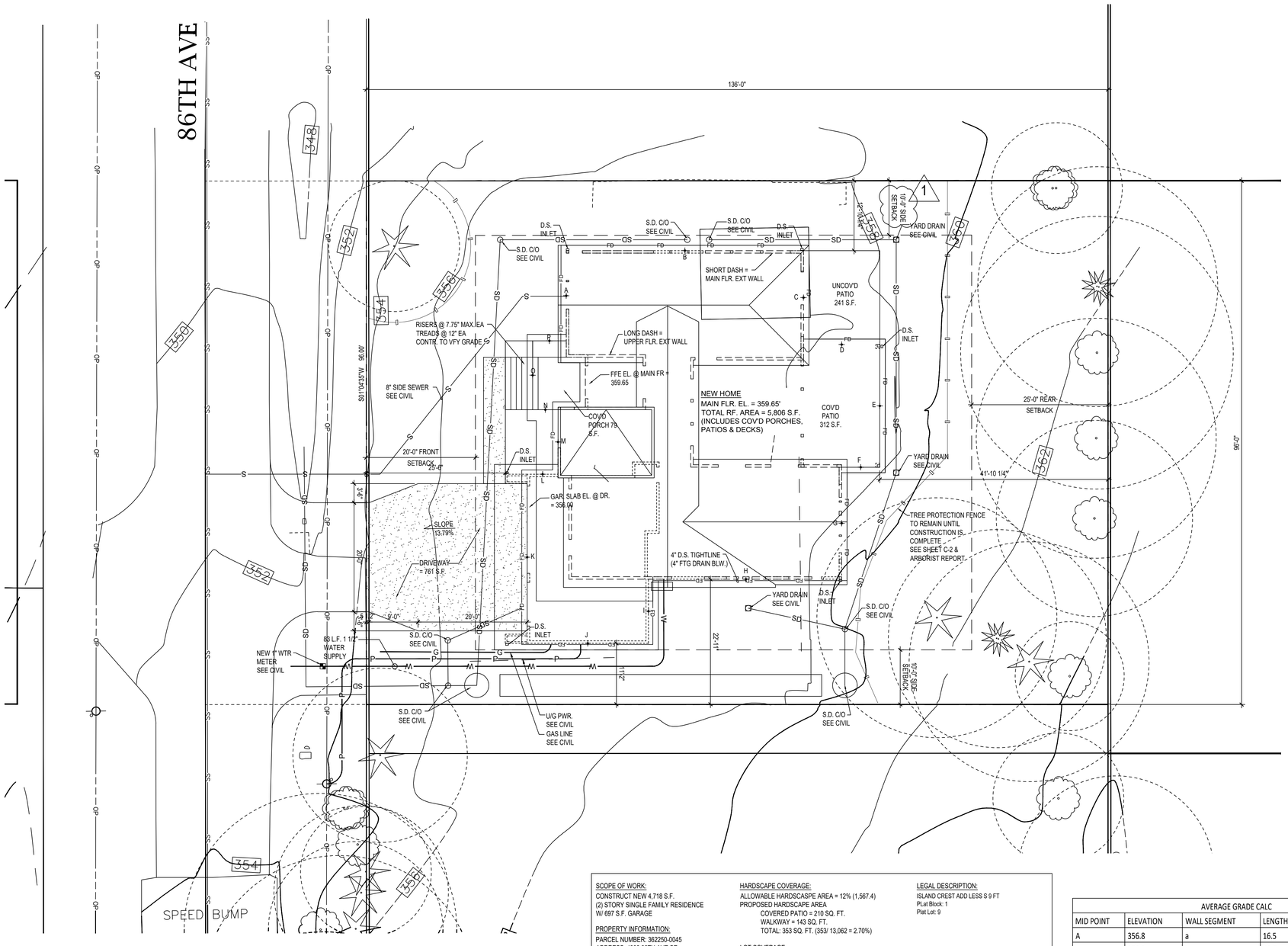
4332 86TH AVENUE SE
DETAILS (SHEET 5 OF 5)
4332 86TH AVENUE SE
MERCER ISLAND, WASHINGTON 98040

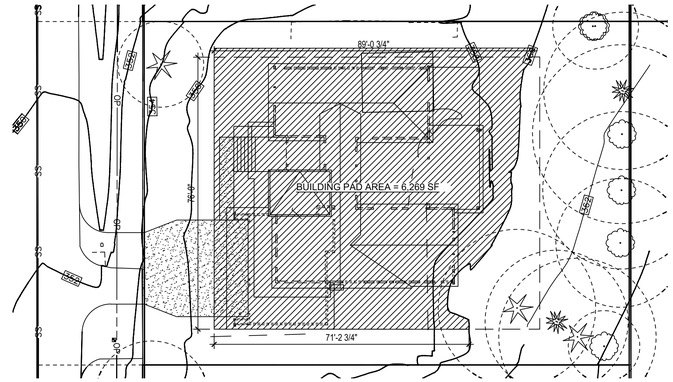
PROJECT: 25-0018.01
DATE: 04/17/2026
DRAWN BY: GW
CHECKED BY: GW

DETAILS (5 OF 5)

C11

W:_WE\PROJECTS\25-0018.01 4332MIDRAWING\PLANS\C11 - DETAILS (SHEET 5 OF 5).DWG
04/17/2026 BY GARRETT WINE





BUILDING PAD

SCALE: 1" = 20'-0"

LEGEND

- WATER
- POWER
- SEWER
- STORM DRAIN
- SETBACK LIMIT
- PARCEL BOUNDARY
- EXISTING GRADE CONTOUR
- FINISHED GRADE CONTOUR
- EXISTING GRADE CONTOUR TO BE REMOVED

SITE PLAN

SCALE: 1" = 10'-0"

0 20 40

SCALE IN FEET

N

SCOPE OF WORK:
CONSTRUCT NEW 4,718 S.F.
(2) STORY SINGLE FAMILY RESIDENCE
W/ 697 S.F. GARAGE

PROPERTY INFORMATION:
PARCEL NUMBER: 362250-0045
ADDRESS: 4332 86TH AVE SE
ZONING: R-9.6
LOT AREA: 13,062 SF

LAND USE DIMENSION REQM'TS.:
FRONT SETBACK: 20'
SIDE SETBACK: 17% OF LOT WIDTH
=16.32 FT TOTAL, 5.44FT MIN.
REAR SETBACK: 25'
MAX. LOT. COVERAGE
(LESS THAN 15%): 40%
MAX. HARDSCAPE: 9%
MAX. BLDG HT: 30'
MAX. GFA: 40%

HARDSCAPE COVERAGE:
ALLOWABLE HARDSCASPE AREA = 12% (1,567.4)
PROPOSED HARDSCAPE AREA
COVERED PATIO = 210 SQ. FT.
WALKWAY = 143 SQ. FT.
TOTAL: 353 SQ. FT. (353/ 13,062 = 2.70%)

LOT COVERAGE:
STRUCTURE FOOTPRINT, INCL. DRIVEWAY PATIOS & PORCHES W/ ROOFS = 4,698 SQ. FT.
ALLOWABLE LOT COVERAGE = 40% (5,224.8)
PROPOSED LOT COVERAGE = 4698/ 13,062 = 35.96%

GROSS FLOOR AREA
MAIN FLOOR = 2,457 SQ. FT.
UPPER FLOOR = 2,261 SQ. FT.
GARAGE = 697 SQ. FT.
TOTAL = 5,415 SQ. FT.
BSMT EXCLUDED = -104 SQ. FT.
STAIR MODIFIER = -89 SQ. FT.
PROPOSED GFA = 5,222 SQ. FT.
5,222 / 13,062 = 0.3997 = 39.97%

HEIGHT LIMIT:
AVG. FIN. GR. = 357.9
ALLOWABLE BUILDING HEIGHT = 387.9
HIGHEST RF. RIDGE = 387.7 (SEE ELEVATIONS)
PROPOSED BLDG HT = 387.7-357.9 = 29.8'

DOWNHILL BLDG FACADE
ALLOWABLE FACADE HEIGHT = 30'-0"
NORTH/LEFT ELEV = 23.75'
SOUTH/RIGHT ELEV = 24.08'

LEGAL DESCRIPTION:
ISLAND CREST ADD LESS S 9 FT
PLat Block: 1
Plat Lot: 9

OWNER:
EB#5, LLC.
4332 86TH AVE SE
MERCER ISLAND, WA. 98040

FIRE SPRINKLER REQUIREMENTS:
A NFPA 13D FULL COVERAGE FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13D FULL COVERAGE AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE.
A SEPARATE FIRE PERMIT IS REQUIRED.

AVERAGE GRADE CALC					
MID POINT	ELEVATION	WALL SEGMENT	LENGTH		
A	356.8	a	16.5		5887.2
B	358.3	b	43.5		15586.05
C	358.3	c	17.2		6162.76
D	358.3	d	14		5016.2
E	358.3	e	22.5		8061.75
F	358.3	f	7		2508.1
G	358	g	20.5		7339
H	358.3	h	33.5		12003.05
I	358.3	i	11.75		4210.025
J	358.3	j	22.25		7972.175
K	358.3	k	31		11107.3
L	356.6	l	5.7		2032.62
M	356.8	m	11.8		4210.24
N	356.6	n	4.7		1676.02
O	356.6	o	12.6		4493.16
P	356.6	p	6.2		2210.92
		SUM	280.7		100476.6
AVERAGE GRADE		=	358.0		

NOTES:

1. REFER TO ACCOMPANYING PLANS, CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN & STORM DRAINAGE REPORT FOR DETAILED ENGINEERING, INCLUDING SURFACE WATER MANAGEMENT, EROSION & SEDIMENT CONTROL, AND UTILITY CONNECTIONS.
2. SEE ENGINEER'S TESC PLAN FOR EXISTING BUILDING TO BE REMOVED, FOR SOIL AMENDMENT AND RESTORATION AND FOR ALL REQUIRED EROSION CONTROL DETAILS.
3. SEE ARCHITECT'S ACCOMPANYING SHEET C-2 AND ACCOMPANYING ARBORIST'S REPORT FOR TREE DISPOSITION.
4. REPLACEMENT TREE LOCATED IN THE R.O.W. NEAR S.E. LOT BNDY CORNER SHALL COMPLY WITH R.Z.C. 21.72.080.C TREE REPLACEMENT REQUIREMENTS.
5. STREET TREE LOCATED IN THE R.O.W. NEAR THE N.E. LOT BNDY CORNER SHALL COMPLY WITH R.Z.C. 21.32.050 LANDSCAPE STDS & R.Z.C. 21.32.090 STREET TREES CRITERIA.

SITE ADDRESS:
4332 86TH AVE SE
MERCER ISLAND, WA 98040
PARCEL # 3622500045

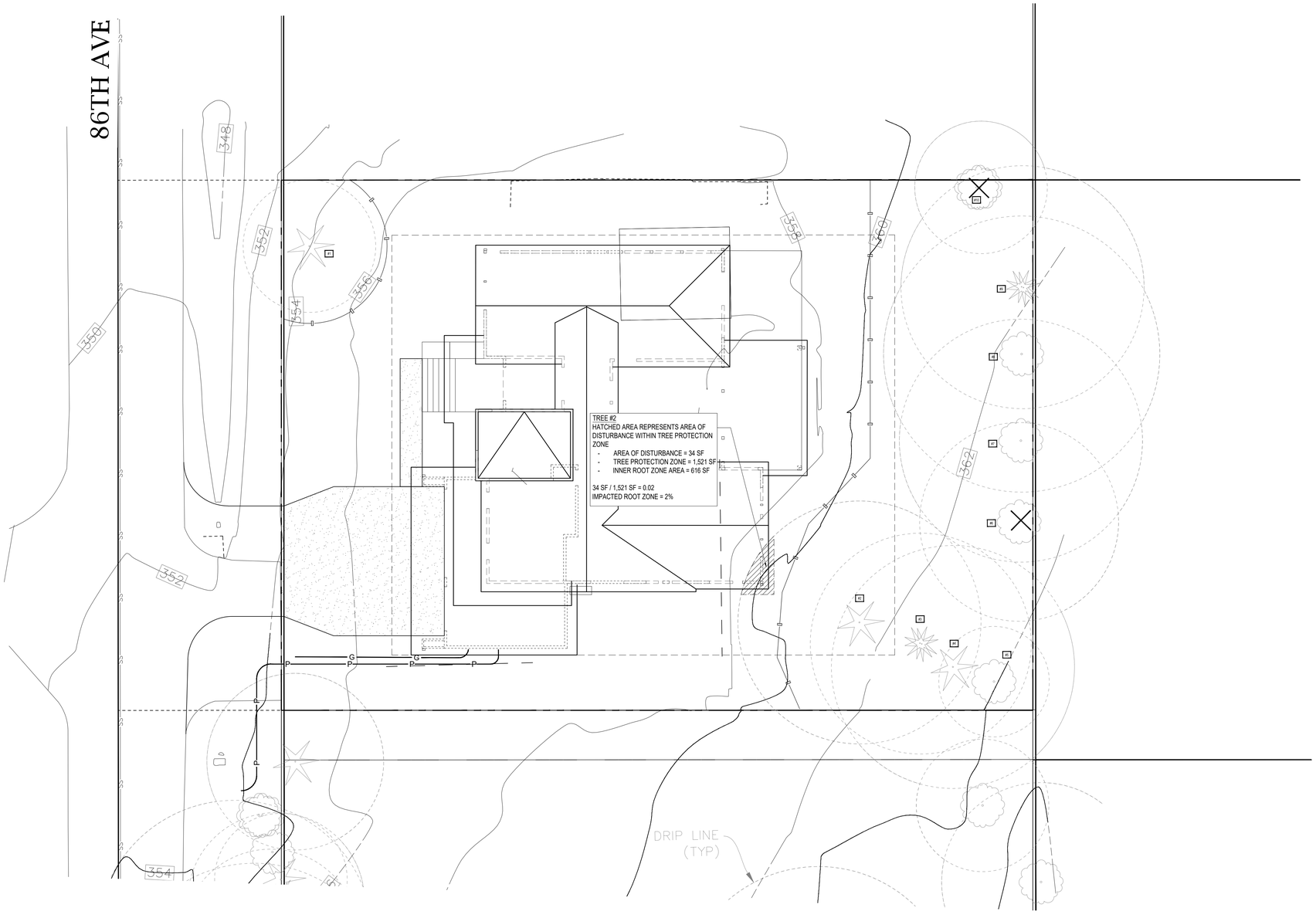
EB#5, LLC

CADE HILL HOMES
4044 148th Ave NE, Redmond, WA 98052
206-351-7801

ARCHITECTURAL SITE PLAN

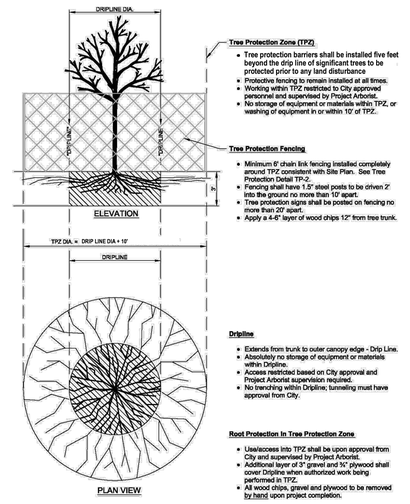
PERMIT REVISION DATE:	04-20-2026
PERMIT SET	12-31-25

AC1



NOTES:

1. ALL EXISTING STRUCTURES TO BE DEMOLISHED & REMOVED, INCLUDING EXISTING RESIDENCE, ALL SIDEWALKS & DRIVEWAYS, ALL STAIRS & PATIOS, ALL LANDSCAPING FEATURES, INCLUDING ROCKERIES.
2. ALL EXISTING UTILITIES & ASSOCIATED PIPING, CONDUIT, METERS, HARDWARE & EQUIPMENT SERVING THE EXISTING STRUCTURE TO BE LOCATED & REMOVED, CONDUIT & PIPE STUBBED AT PROPERTY BOUNDARY PER CITY OF REDMOND ZONING & BLDG CODES. PER KING COUNTY CODE AND IN LIAISON WITH THE RESPECTIVE UTILITIES.
3. IF INFORMATION ON PLANS DIFFERS FROM INFORMATION GATHERED OR DETERMINED IN FIELD, OR IF CONFLICT EXISTS DURING CONSTRUCTION, CONTRACTOR SHALL CONTACT OWNER IMMEDIATELY TO VERIFY IF ADDITIONAL DESIGN OR INFORMATION IS NEEDED (APPROVAL FROM THE CITY OF REDMOND MAY BE REQUIRED).
4. FOR COMPREHENSIVE TREE DISPOSTION, REFER TO ARBORIST REPORT ACCOMPANYING THE PERMIT SUBMITTAL DOCUMENTS.
5. ALL TREES NOT WITHIN THE PROPERTY BOUNDARY, BUT FOR WHICH THE DRIPLINES LIE WITHIN THE BOUNDARY SHALL BE PROTECTED FROM DAMAGE & ANY IMPACTS REVIEWED BY THE ARBORIST.
6. TREE REMOVAL SHALL NOT BE EXECUTED DURING DEMOLITION.
7. TREE PROTECTION FENCING SHALL EXTEND TO DRIPLINE OF ALL IMPACTED TREES DURING DEMOLITION. FENCING & ACCOMPANYING SIGNAGE SHALL BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITY PER CITY OF REDMOND STANDARDS.



TREE PROTECTION FENCE DETAIL

LEGEND

- TREE PROTECTION FENCING (INSTALLED AT LIMIT OF DISTURBANCE)
- PROPERTY BOUNDARY
- EXISTING GRADE CONTOUR
- FINISHED GRADE CONTOUR
- EXISTING GRADE CONTOUR TO BE REMOVED
- PROPOSED STRUCTURE FOOTPRINT
- TREE PROTECTION ZONE

TESC PLAN

SCALE: 1" = 10'-0"

0 10 20
SCALE IN FEET

N

SITE DATA:

PARCEL NUMBER: 548720-0020
OWNER: EB#2, LLC.

Root Zone Impacts

Site: Lot 9 -- 4332 86th Ave SE, Mercer Island, WA — Date: 6/5/2024

Tree #	Species	DBH	Disposition		Root Zone (tree face radius)		Distance tree face to:		Impacted Root Zone	Purpose	Impact
		(in)	Retain	Remove	Outer (ft)	Inner (ft)	Excavation (ft)	Fill (ft)	(%)*		
On Site											
1	Sitka spruce	14.1	X		14	7					None
2	Western red cedar	28.5	X		29	14	17'-1"		2%	FDN excation	Minor
3*	Grand fir	28.2	X		28	14					None
4	Western red cedar	19.8	X		20	10					None
5	Holly	8.0	X		8	4					None
6	Norway maple	6.0	X		6	3					None
7	Norway maple	19.9	X		20	10					None
8	Red maple	15.1	X		15	8					None
9*	Redwood	42	X		42	21					None
10*	Holly	12.8	X		13	6					None

*A calculation of the total area (square feet) of proposed disturbance in the outer half of the tree's drip line divided by the total area of the outer half of the dripline {square feet) that cannot exceed 33 percent or 1 /3 of the outer dripline.

SITE ADDRESS:
4332 86TH AVE SE
MERCER ISLAND, WA 98040
PARCEL # 3622500045

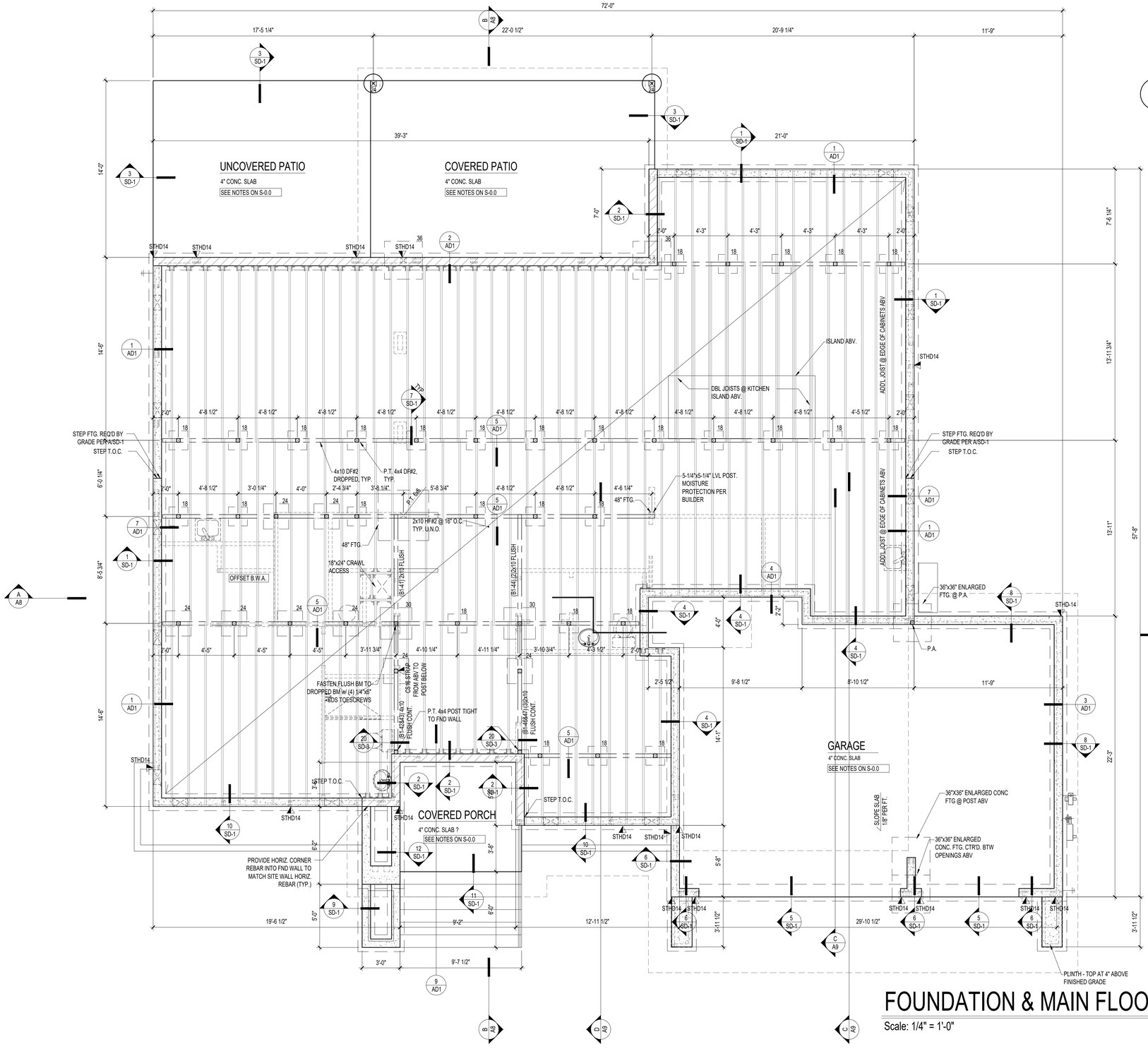
EB#5, LLC

CADE HILL HOMES
4044 148th Ave NE, Redmond, WA 98052
206-351-7801

TREE RETENTION PLAN
SCALE: 1" = 10'

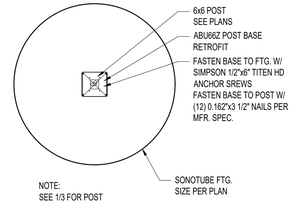
PERMIT REVISION DATE:	
12-31-25	PERMIT SET
04-20-2026	1

AC2



FOUNDATION & MAIN FLOOR FRAMING PLAN

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



1 PLAN DETAIL

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

NOTES:

1. 8" STEM WALL WITH 16"x8" FOOTING TYPICAL U.N.O.- SEE DETAILS FOR NOTES & REINFORCING.
2. ANCHOR BOLTS, HOLDOWNS & PLATE WASHERS PER ENGINEER OF RECORD- SEE STRUCT.
3. ALL WOOD IN DIRECT CONTACT WITH THE GROUND OR CONCRETE TO BE AN APPROVED PRESSURE-PRESERVATIVE TREATED WOOD
4. CONNECTORS IN CONTACT W/ CONCRETE OR PRESSURE TREATED LUMBER TO BE HOT-DIPPED GALVANIZED OR OTHER APPROVED METHOD OF PROTECTION.
5. 18"x24" MINIMUM CRAWL ACCESS, 16"x24" CRAWL ACCESS IN PERIMETER WALL IF APPLICABLE.
6. CRAWL SPACE GIRDER BMS. 4x10 TYP. U.N.O. SEE STRUCT. CALC. BM. (B1-)
7. ISOLATED FTG. POSTS P.T. 4x4 TYP U.N.O. EXC. P.T. 4x6 POST @ BM SPLICE AS REQ'D. CONN. PER 7/SD-1.
8. PROVIDE MIN. 1" SP. BETW. END OF BMS. & FND. WALL.
9. PROVIDE A GROUND ELECTRODE SYSTEM: AN ELECTRODE ENCASED BY @ LEAST 2" OF CONCRETE, LOCATED WITHIN & NEAR THE BOT. OF A CONC. FTG. THAT IS IN DIRECT CONTACT WITH THE EARTH, CONSISTING OF 20' OF BARE COPPER & SIZED PER TABLE 250-66, 2023 NEC.
10. TYP. FLR. FRAMING 2x10 HF#2 @ 16" O.C. PROVIDE LB210AZ @ TOP FLANGE HANGER CONDITION. DBL JOISTS TO UTILIZE BA410 HNGRS. JOISTS SPACED SO THAT SHEATHING EDGES ALIGN AT JOISTS O/C.
11. ALL CONNECTORS NOTED ARE SPECIFIED AS SIMPSON MFR'D. HARDWARE U.N.O. ANY SUBSTITUTION FOR SPECIFIED CONNECTORS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. ANY DEVIATION FROM MFR. SPECIFIED INSTALLATION PROCEDURE MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
12. PRE-CAST SONOTUBE FOOTINGS MAY BE UTILIZED AT THE REAR COVERED PATIO IN LIEU OF POURED IN PLACE FOOTINGS. THE SONOTUBES MUST BE IN SOUND STRUCTURAL CONDITION, FREE OF VOIDS, CRACKS, OR OTHER STRUCTURAL IMPERFECTIONS PRIOR TO INSTALLING THEM DOWN TO 95% COMPACTED FILL OR VIRGIN SOIL BELOW THE FROST LINE.

LEGEND

14"x7" SCREENED FND. VENT OR RIM VENT. SEE "CRAWL VENTILATION" ABOVE FOR VENTILATION CALCULATION

PL — POINT LOAD LOCATION, SEE ROOF PLAN & UPPER FLR. FRAM'G. PLAN PROVIDE BLOCKING WHERE NECESSARY

ABBREVIATIONS

P.A.	-	POST ABOVE
T&B	-	TOP AND BOTTOM
TR	-	TRIMMER
B.F.	-	BALLOON FRAMED
B.W.A.	-	BEARING WALL ABOVE
ASD	-	ALLOWABLE STRESS DESIGN

HOLD-DOWN SCHEDULE

HD-1	SIMPSON STHD14(RJ) HOLD-DOWN
HD-5	SIMPSON CS16 STRAP TIE (14" END LENGTH)
HD-6	SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)
HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

TYP. CRAWL SPACE POSTS

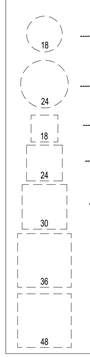
P.T. 4x4 W/ 2x4 CLEATS EA. SIDE & (2) A35 CLIPS EA. SIDE @ BASE OF POST W/ 3/16"x1 1/4" TAPCON SREWS (4'-0" MAX. POST HT. ON ASPHALT SHINGLE ON PLAIN CONC. FTG. 8" SIZE PER PLAN) TYP. U.N.O.

CRAWL VENTILATION

PER WASHINGTON STATE AMENDMENT TO I.R.C. R408.1 & R408.2, 1 S.F. NET AREA PER 300 S.F. OF UNDER-FLOOR AREA SHALL BE PROVIDED. ONE VENT SHALL BE LOCATED WITHIN 3 FT. OF EACH CORNER OF THE BUILDING. 6 MIL BLACK POLYETHYLENE OR APPROVED EQ. SHALL BE LAID OVER THE GROUND THOUGHOUT THE UNDER-FLOOR AREA OVER ALL EXPOSED EARTH. THERE SHALL BE A MIN. 6" OVERLAP AT JOINTS AND IT SHALL EXTEND TO THE FOUNDATION WALLS.

CRAWL AREA: ----------2,456 S.F.
VENT AREA REQUIRED:------ 2,456/300= 8.19 S.F.
VENTS REQUIRED:
14"x7"x.75= 73.5/144=0.51 S.F. (EA)---------- 8.19/0.51= 15 VENTS
VENTS PROVIDED: 16 VENTS

ISOLATED FOOTING SCHEDULE



---------- 18"Ø SONOTUBE TO FROST
---------- 24"Ø SONOTUBE TO FROST
---------- 18" SQ. x 8" DEEP FTG.
---------- 24" SQ. x 8" DEEP FTG.
---------- 30" SQ. x 8" DEEP FTG.
---------- 36" SQ. x12" DEEP FTG.
---------- 48" SQ. x 12" FTG w/ #4 REBAR @ 12" o.c. EA WAY

SITE ADDRESS:
4332 86TH AVE SE
MERCER ISLAND, WA 98040
PARCEL # 3622500045

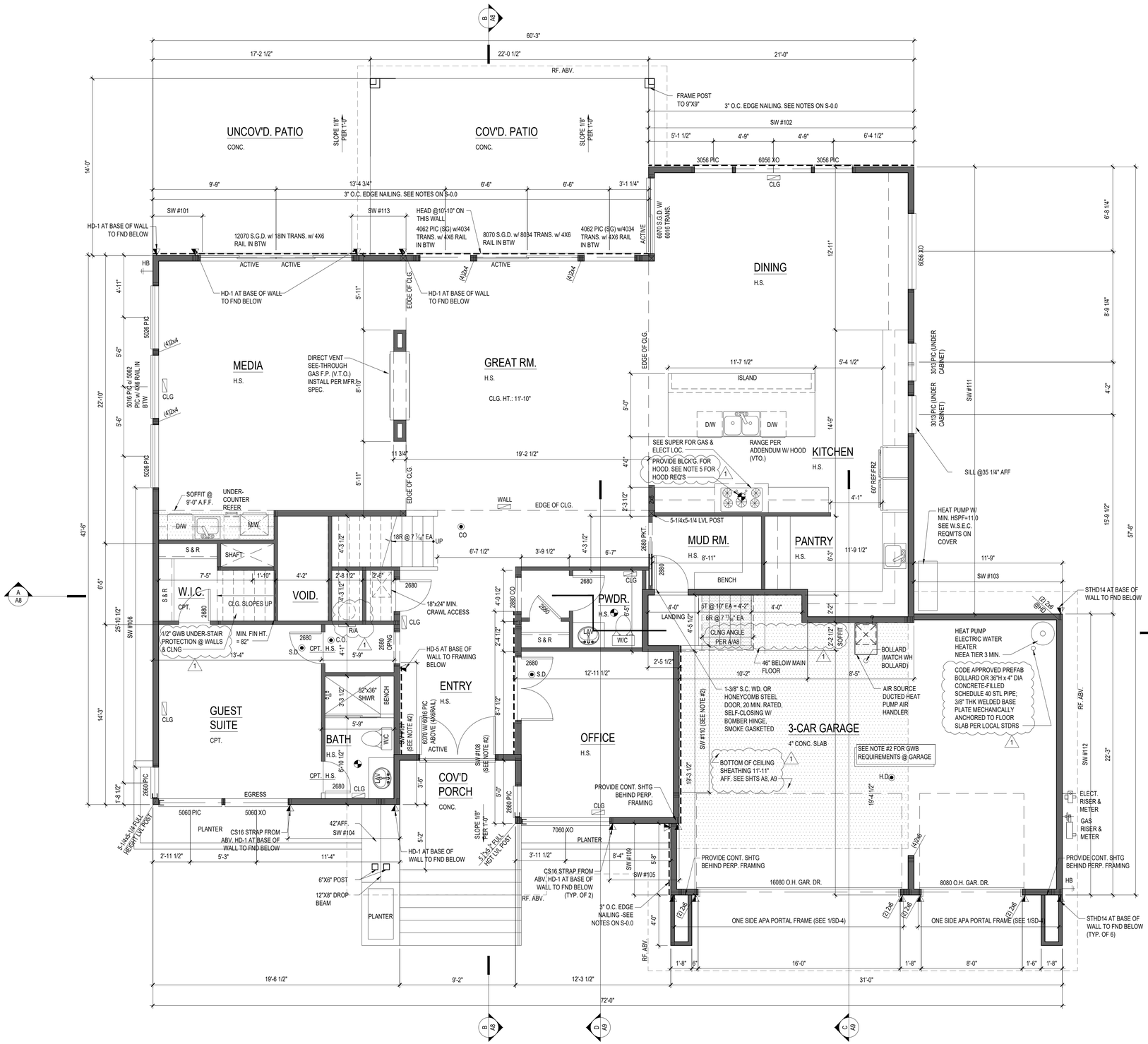
EB#5, LLC

CADE HILL HOMES
4044 148th Ave NE, Redmond, WA 98052
206-351-7801

FOUNDATION & MAIN FLOOR FRAMING PLAN

04-29-2026	PERMIT REVISION DATE
12-31-25	PERMIT SET

A1



MAIN FLOOR PLAN

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

LEGEND

- S.D. ---- DENOTES 110V. SMOKE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS SEE NOTE ON COVER
- CO ---- DENOTES 110V. COMBINATION SMOKE DETECTOR/CARBON MONOXIDE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS
- H.D. ---- DENOTES HEAT DETECTOR
- ---- 50 CFM MIN. BATH FAN
- WHF ---- WHOLE HOUSE FAN - SEE COVER SHEET

ABBREVIATIONS

S & R	-	SHELF AND ROD
F.P.	-	FIREPLACE
V.T.O.	-	VENT TO OUTSIDE
S.C.	-	SOLID CORE
T&B	-	TOP AND BOTTOM
S.G.D.	-	SLIDING GLASS DOOR
HB	-	HOSE BIBB
TR	-	TRIMMER
B.F.	-	BALLOON FRAME
P.F.	-	PORTAL FRAME
R.O.	-	ROUGH OPENING

NOTES:

1. FILL CAVITY AT 4x EXTERIOR HEADERS W/ RIGID INSULATION TO R-10.
2. 1/2" GWB REQUIRED BETWEEN GARAGE AND LIVING SPACE ON WALLS AND SUPPORTING STRUCTURE. 5/8" TYPE 'X' REQUIRED ON GARAGE CEILING WHEN HABITABLE SPACE IS ABOVE GARAGE. ALL STRUCTURAL BEAMS AND POSTS WITH THE GARAGE SPACE SHALL BE WRAPPED WITH 1/2" MINIMUM GYPSUM BOARD.
3. ALL EXTERIOR HEADERS TO BE 4x10 DF#2 (TYP. U.N.O.) SEE STRUCT. BM. CALC. B1. ALL INTERIOR HEADERS TO BE 4x10 D.F.#2 (TYP. U.N.O). SEE STRUCT. BM. CALC. B2.
4. SW-x DENOTES SHEAR WALL TYP. SEE STRUCT. FOR SCHEDULE, DETAILS & NOTES. ALL SHEAR WALLS SW-6 TYP. U.N.O.
5. 250 CFM INTERMITTENT EXHAUST HOOD RATED MAX 3 SONES. MAKEUP AIR REQUIRED WHEN CFM EXCEEDS 400. 50 CFM MIN. INTERMITTENT EXH FAN AT BATHROOMS. MIN EFFICACY RATING:
   HRV = 1.2 CFM/WATT (ANY FLOW RATE)
   RANGE HOOD = 2.8 CFM/WATT (ANY FLOW RATE)
   1 BATH FANS = 2.8 CFM/WATT @ LESS THAN 90 CFM
   = 3.5 CRM/WATT @ 90 CFM OR MORE
6. DIMENSIONS ARE TO EDGE OF FRAMING UNLESS NOTED OTHERWISE.
7. SEE BUILDING ELEVATIONS FOR LOCATIONS OF ALL SAFETY GLAZING. SEE NOTE ON COVER FOR SAFETY GLAZING REQMT'S.
8. BEAMS DENOTED "FLUSH" TAKEN TO MEAN ALIGNED WITH PLATE ELEV.
9. AT (3) 2x POST IN CORNER, BEAR FRONT WINDOW HEADER ON POST & SIDE WINDOW HEADER TO HEADER WITH HUCQ410-SDS.
10. SEE BUILDING ELEVATIONS FOR LOCATIONS OF ALL EMERGENCY ESCAPE OPENING LOCATIONS. SEE NOTE ON COVER FOR EMERGENCY ESCAPE OPENING REQMT'S.
11. EXTERIOR WALLS: 2x6 DF#2 @ 16" O.C. U.N.O. INTERIOR WALLS: 2x4 DF#2 @ 16" O.C. U.N.O. STRUCTURAL DETAILS SHALL TAKE PRECEDENCE OVER ANY CONFLICT WITH INFORMATION DEPICTED IN THE PLANS.
12. ALL CONNECTORS NOTED ARE SPECIFIED AS SIMPSON MFR'D. HARDWARE U.N.O. ANY SUBSTITUTION FOR SPECIFIED CONNECTORS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. ANY DEVIATION FROM MFR. SPECIFIED INSTALLATION PROCEDURE MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
13. DOORS TO BE FRAMED WITH 5" RETURN OR CENTERED IN SPACE AS ILLUSTRATED U.N.O.
14. ONE (1) 40 AMP DEDICATED 208/240V BRANCH CIRCUIT SHALL BE INSTALLED IN THE PRPOSED ELECTRICAL SERVICE PANEL. BRANCH CIRCUIT SHALL TERMINATE AT J-BOX, OUTLET, OR CHARGING EQUIPMENT.(PER WAC 51-50-0429).
15. FIREBLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BTW STORIES AND BTW TOP STORY AND ROOF SPACES PER IRC 302.11

WINDOW LEXICON:

CS = CASEMENT, (L)= HINGE LOC. LEFT SIDE AS VIEWED FROM OUTSIDE
FX = FIXED
PIC = PICTURE
AWN = AWNING
DH = DOUBLE HUNG
SH = SINGLE HUNG
OX = SLIDING, X DENOTES OPERABLE PORTION,
O DENOTES FIXED PORTION
NOTE: SEE COVER SHEET W.S.E.C. NOTES FOR FENESTRATION U-VALUE.

HOLD-DOWN SCHEDULE

HD-1	SIMPSON STHD14(RJ) HOLD-DOWN
HD-5	SIMPSON CS16 STRAP TIE (14" END LENGTH)
HD-6	SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)
HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

AREA CALCULATION (SQ. FT.)	
MAIN FLOOR	2,457
UPPER FLOOR	2,261
TOTAL	4,718
GARAGE	697
COVERED FRONT PORCH	79
DECK	-
UNCOVERED PATIO	241
COVERED PATIO	312
GROSS FLOOR AREA	5,222
CALCULATION: 5,222 SF / 13,062 SF SITE AREA	0.399
GFA RATIO	39.9%

N

0 4' 8' 16'

SITE ADDRESS:
4332 86TH AVE SE
MERCER ISLAND, WA 98040
PARCEL # 3622500045

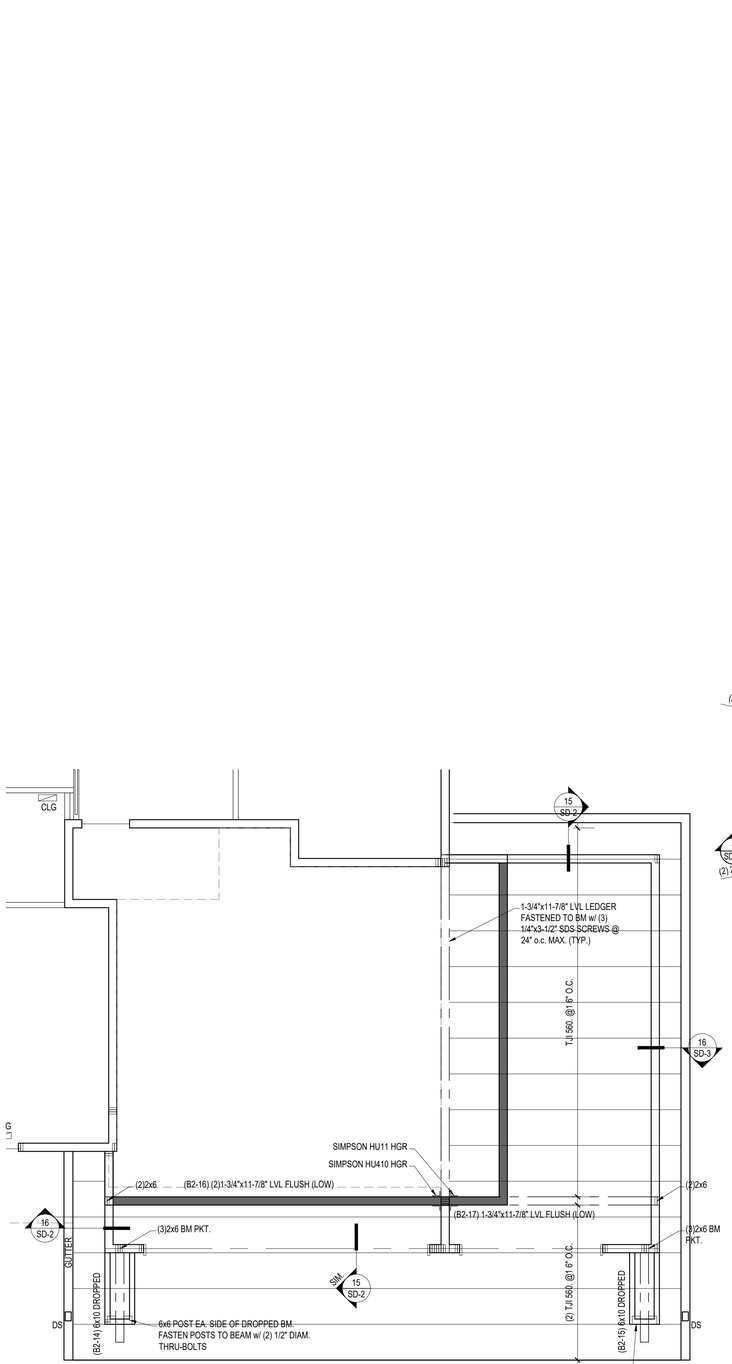
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MAIN FLOOR PLAN

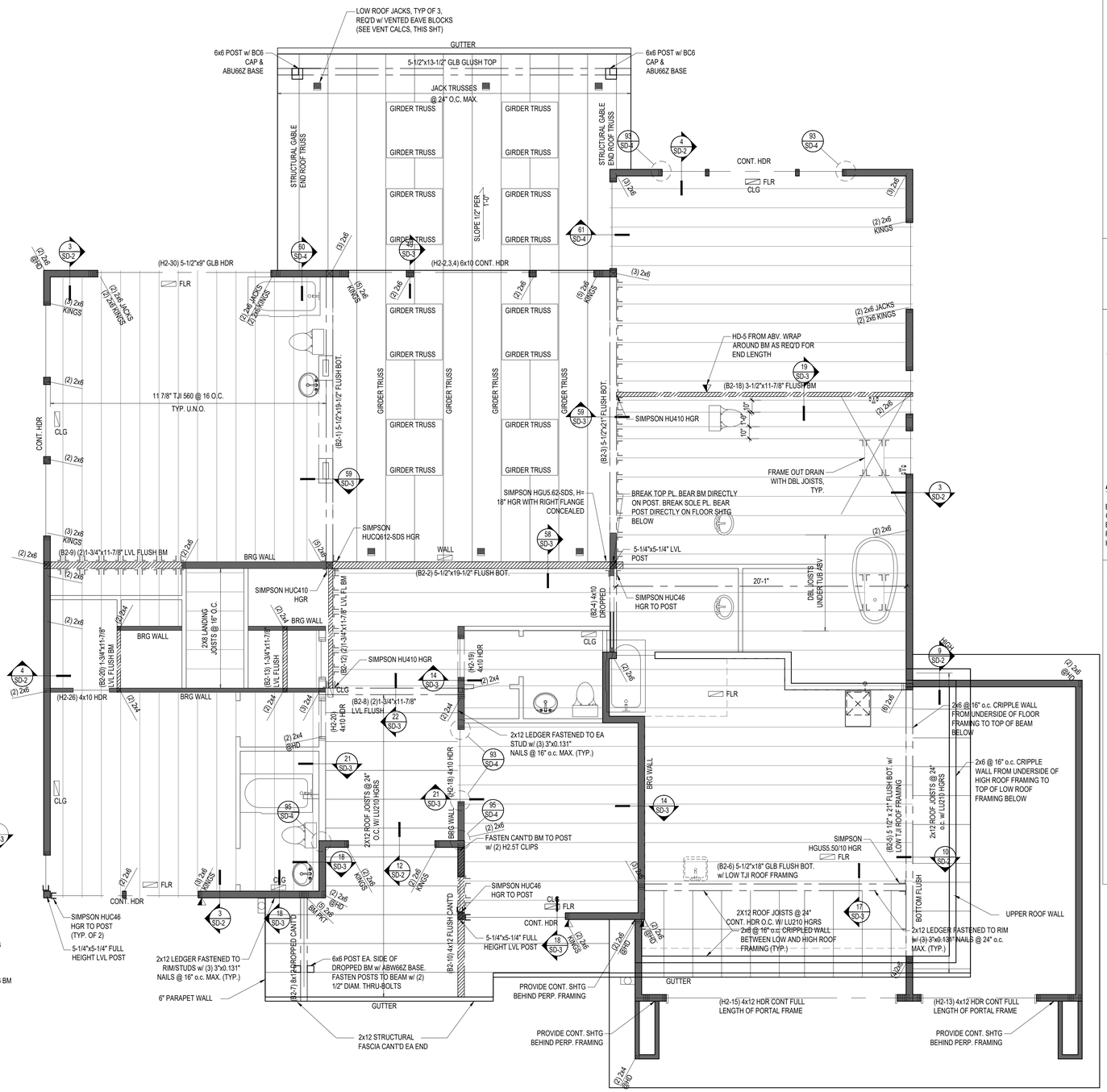
04-20-2026 PERMIT REVISION DATE:
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A2



GARAGE ROOF FRAMING PLAN

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



UPPER FLOOR FRAMING PLAN

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

TYPICAL FLOOR FRAMING:

11 7/8" TJI @ 16" O.C. (UNLESS NOTED OTHERWISE)

4x10 HDRS @ ALL EXTERIOR DOORS & WINDOWS (TYP, UNO)

NOTES:

1. ALL FLR. TRUSS HANGERS & HARDWARE TO BE SPECIFIED BY THE TRUSS MANUFACTURER
2. ANY DEVIATION FROM THE TRUSS LAYOUT SHOWN MUST BE APPROVED BY THE TRUSS MFR. AND BY THE OWNER.
3. FLOOR TRUSS DESIGNS AND DETAILS SHALL BE PREPARED & STAMPED BY AN ENGINEER REGISTERED IN WASHINGTON STATE AND SHALL BE PROVIDED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO INSTALLATION. FLR. TRUSS DRAWINGS SHALL REMAIN ON THE JOB SITE.
4. DROPPED BEAMS & HEADERS ARE SPECIFIED ON THE FLOOR BELOW. FLUSH BEAMS ARE SPECIFIED ON FRAMING PLANS.
5. DRAFTSTOPPING LOCATED SO THAT UPPER FLR. AREA OVER USABLE SPACE WHERE AREAS ARE GREATER THAN 1,000 SQ. FT. SHALL BE SEGREGATED INTO APPROX. EQUAL AREAS BY MIN. 1/2" GWB. OR APPROVED MATERIAL PER R302.12.
6. SEE UPPER & MAIN FLOOR PLANS FOR DIMENSIONS AND NOTES NOT SHOWN HERE
7. ALL HVAC SYSTEM COMPONENTS SHALL BE INSTALLED IN THE FLOOR FRAMING WITHIN THE BUILDING ENVELOPE AND IN ALL INSTANCES WITHIN A CONDITIONED SPACE EXCEPT WHERE ALLOWED PER 2018 W.S.E.C. SEE NOTE ON COVER.
8. CONTRACTOR SHALL VERIFY THE TRANSFER OF ALL POINT LOADS FROM THE RF. DOWN THROUGH THE FRAMING AND INTO THE FND.
9. SEE MAIN FLR. PLAN FOR ALL EXTERIOR HEADERS.
10. ALL WALLS 12' OR TALLER SHALL BE 2x6 HF #2 OR BETTER.
11. ALL CONNECTORS NOTED ARE SPECIFIED AS SIMPSON MFRD. HARDWARE U.N.O. ANY SUBSTITUTION FOR SPECIFIED CONNECTORS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. ANY DEVIATION FROM MFR. SPECIFIED INSTALLATION PROCEDURE MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

STRUCTURAL NOTES:

1. ALL EXT. HEADERS TO BE 4x10 DF #2 U.N.O. (H2-)
2. SHEATH PER STANDARD EXT NAILING SPEC (SEE NOTES ON S-0.0)
3. SHEATH PER 3" o.c. EDGE NAILING SPEC (SEE NOTES ON S-0.0)

LEGEND

- ----SHADED WALLS INDICATE BEARING WALLS
- PL ----POINT LOAD LOCATION
- ----DRAFTSTOPPING
- ----HVAC DUCT
- ----ROOF VENT

ABBREVIATIONS

B.W.A.	-	BEARING WALL ABOVE
G.T.	-	GIRDER TRUSS
B.F.	-	BALLOON FRAME
P.A.	-	POST ABOVE
HGR.	-	HANGER

LOW ROOF VENTILATION:

ROOF AREA: ---------- 700 S.F. UPPER RF.

VENTILATION REQUIRED:
700x144/300= ---------- 336 S.I.
PER R806.2, EXCEPTION 2, AT LEAST 40% & NOT MORE THAN 50% OF THE REQ'D. VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3' BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQ'D VENTILATION PROVIDED SHALL BE LOCATED IN THE BOT. 1/3 OF THE ATTIC SP.
UPPER PORTION OF ATTIC SP: GREATER THAN 336x0.4=134.4 S.I. & LESS THAN 336x0.5=168 S.I.

VENTILATION PROVIDED:
- LOWER VENTS:
VENT BLOCKS- 11x7.1 (PER BLOCK)= 78 S.I.
LOW ROOF VENTS (49 S.I. EA.)
TOTAL ROOF VENTS = 3 x 49= 147 S.I.
TOTAL LOWER VENTING = 225 S.I.

- UPPER VENTS:
ROOF VENTS (49 S.I. EA.)
TOTAL ROOF VENTS = 3 x 49= 147 S.I.

TOTAL ROOF S.I. PROVIDED
225 + 147 = 372 S.I.
UPPER ROOF VENTILATION- 147/372 = 40%

N

0 4' 8' 16'

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206-351-7801

UPPER FLOOR FRAMING PLAN

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A3



UPPER FLOOR PLAN

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

LEGEND

S.D. ---- DENOTES 110V. SMOKE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS

CO ---- DENOTES 110V. COMBINATION SMOKE DETECTOR/CARBON MONOXIDE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS

---- 50 CFM MIN. BATH FAN

WHF ---- WHOLE HOUSE FAN- SEE W.S.E.C. NOTES ON COVER SHEET

T ---- WHOLE HOUSE FAN INTERMITTENT TIMER- SEE NOTE 1 & W.S.E.C. NOTES ON COVER SHEET FOR FRACTIONAL ON TIME

---- HOLD DOWN PER STRUCT.

FLR ---- HEAT REGISTER

ABBREVIATIONS

S & R - SHELF AND ROD
F.P. - FIREPLACE
V.T.O. - VENT TO OUTSIDE
S.C. - SOLID CORE
T&B - TOP AND BOTTOM
S.G.D. - SLIDING GLASS DOOR
HB - HOSE BIBB
TR - TRIMMER
B.F. - BALLOON FRAME

NOTES:

1. AFFIX LABEL NEAR WHOLE HOUSE FAN CONTROL THAT READS "WHOLE HOUSE VENTILATION CONTROL- SEE OPERATING INSTRUCTIONS".
2. FILL CAVITY AT 4x EXTERIOR HEADERS W/ RIGID INSULATION TO R-10.
3. ALL HEADERS TO BE 4x10 DF#2 (TYP. U.N.O.) SEE STRUCT. BM. CALC. B1.
4. SW-x DENOTES SHEARWALL TYP. SEE S-SHEETS FOR SCHEDULE, DETAILS & NOTES.
5. SKYLIGHTS SHALL BE FULLY TEMPERED SAFETY GLASS. WHERE SKYLIGHTS ARE INSTALLED IN A ROOF W/ PITCH FLATTER THE 3:12, THE SKYLIGHT SHALL BE MOUNTED ON A CURB 4" MIN, ABV. THE ROOF PLANE.
6. DIMENSIONS ARE TO EDGE OF FRAMING UNLESS NOTED OTHERWISE.
7. TYPICAL EXTERIOR SHEAR WALL S6 U.N.O.
8. SEE BUILDING ELEVATIONS FOR LOCATIONS OF ALL SAFETY GLAZING. SEE NOTE ON COVER FOR SAFETY GLAZING REQMTS.
9. FURNACE TO COMPLY W/ CURRENT W.S.E.C. REQMTS. SEE W.S.E.C. NOTE ON COVER.
10. SEE BUILDING ELEVATIONS FOR ALL REQUIRED ESCAPE WINDOW LOCATIONS.
11. ALL DOOR RETURNS TO BE 5" MIN. U.N.O.

HOLD-DOWN SCHEDULE

HD-1 SIMPSON STHD14(RJ) HOLD-DOWN
HD-5 SIMPSON CS16 STRAP TIE (14" END LENGTH)
HD-6 SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)
HD-7 SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

WINDOW LEXICON:

CS = CASEMENT, (L) = HINGE LOC. LEFT SIDE AS VIEWED FROM OUTSIDE
FX = FIXED
PIC = PICTURE
AWN = AWNING
DH = DOUBLE HUNG
SH = SINGLE HUNG
OX = SLIDING, X DENOTES OPERABLE PORTION, O DENOTES FIXED PORTION
NOTE: SEE COVER SHEET W.S.E.C. NOTES FOR FENESTRATION U-VALUE.

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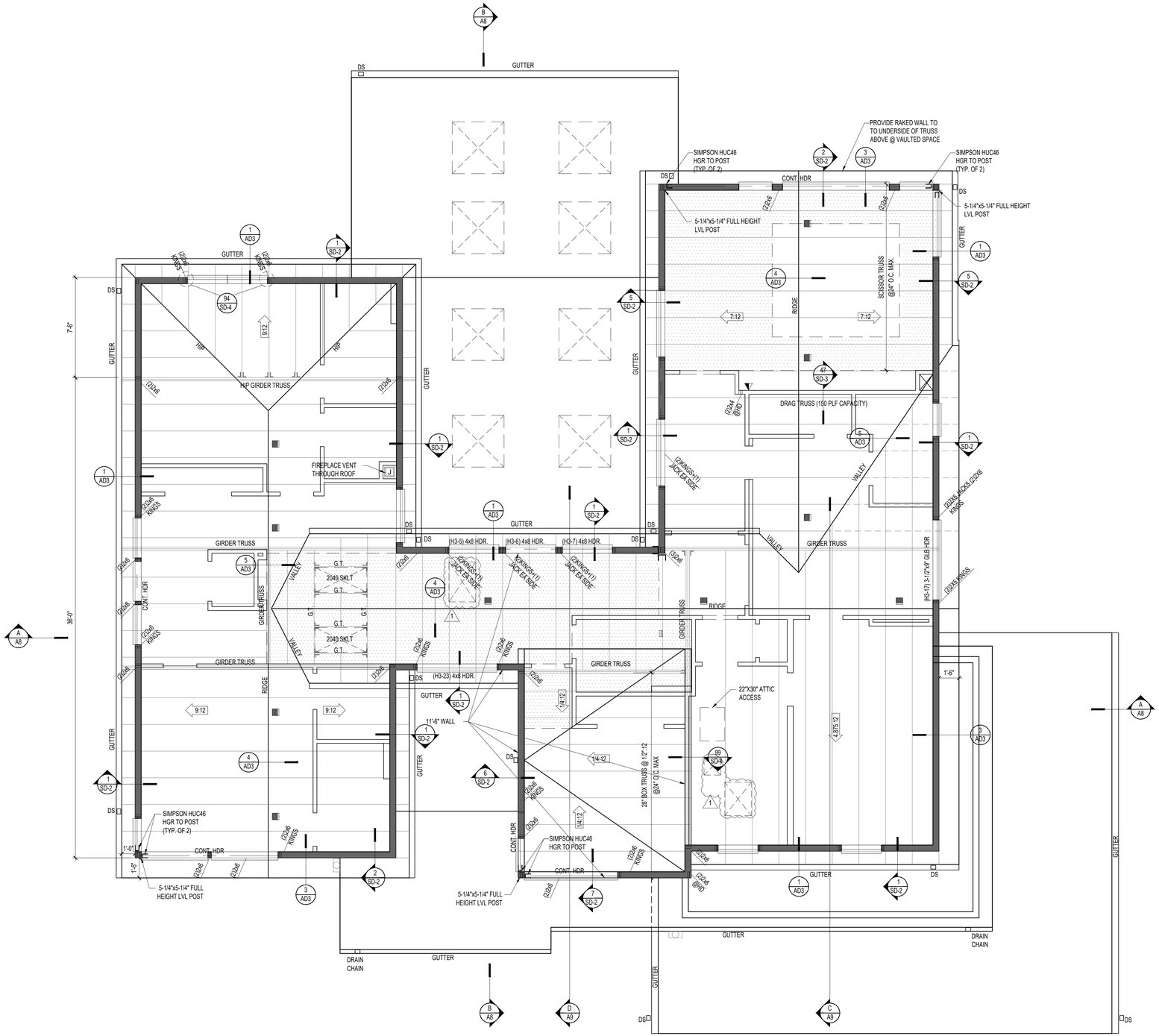
UPPER FLOOR PLAN

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N

0 4' 8' 16'

A4



Roof Plan

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

ROOF VENTILATION:

ROOF AREA: ---------- 2,261 S.F. UPPER RF.

VENTILATION REQUIRED:
2,261x144/300= ---------- 1,085 S.I.
PER R806.2, EXCEPTION 2, AT LEAST 40% & NOT MORE THAN 50% OF THE REQ'D. VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3' BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQ'D VENTILATION PROVIDED SHALL BE LOCATED IN THE BOT. 1/3 OF THE ATTIC SP.
UPPER PORTION OF ATTIC SP: GREATER THAN 1085x0.4=434 S.I. & LESS THAN 1085x0.5=543 S.I.

VENTILATION PROVIDED:
- LOWER VENTS:
VENT BLOCKS- 84x7.1 (PER BLOCK)= 596.4 S.I.

- UPPER VENTS:
ROOF VENTS (49 S.I. EA.)
TOTAL ROOF VENTS = 10 x 49= 490 S.I.

TOTAL ROOF S.I. PROVIDED
596.4 + 490 = 1086.4 S.I.
UPPER ROOF VENTILATION- 490/1086.4 = 45.10%

NOTES:

1. VENT BLOCKS TO HAVE (3) 2" DIAMETER SCREENED HOLES LOCATION NOTED PER PLAN. NOTE: VENTED EAVES AND GABLE END VENTS ARE NOT PERMITTED WHEN BUILDING IS LOCATED 5' FROM A PROPERTY LINE.
2. PROVIDE SOLID BEARING UNDER ALL GIRDER TRUSSES OF MULTIPLE STUDS TO MATCH TRUSS WIDTH, U.N.O.
3. ALL TRUSS BOTTOM CHORDS TO BE DESIGNED AS ATTICS WITHOUT STORAGE (10 PSF LL). TRUSSES SHALL BE DESIGNED WITH A BOTTOM CHORD OPENING LESS THAN 42"x24" WHERE (2) OR MORE TRUSSES HAVE THE SAME WEB CONFIGURATION.
4. ROOF TRUSSES & DESIGN TO CONFORM TO IRC R802.10.1
5. ROOF OVERFRAMING: 2x4 RAFTERS @ 24" O.C. W/ 2x4 POST SUPPORT @ 48" O.C. STAGGERED. BRACE POSTS OVER 6'-0" (IN 2x FLAT DIRECTION).
6. TRUSS DESIGNS AND DETAILS SHALL BE PREPARED & STAMPED BY AN ENGINEER REGISTERED IN WASHINGTON STATE AND SHALL BE PROVIDED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO INSTALLATION. TRUSS DRAWINGS SHALL REMAIN ON THE JOB SITE.
7. DROPPED BEAMS & HEADERS ARE SPECIFIED ON THE FLOOR BELOW. FLUSH BEAMS ARE SPECIFIED ON FRAMING PLANS
8. ANY DEVIATION FROM THE TRUSS LAYOUT MUST BE APPROVED BY OWNER AND BY THE TRUSS MFR.
9. CONTRACTOR SHALL VERIFY THE TRANSFER OF ALL POINT LOADS FROM THE ROOF DOWN THROUGH THE FRAMING AND INTO THE FOUNDATION.
10. AT ALL GABLE END CONDITIONS WITH SLOPED CEILING, BUILD STUD WALL TIGHT TO UNDERSIDE OF TRUSS.
11. ALL WALLS 12' OR TALLER SHALL BE 2x6 HF#2 OR BETTER.
12. ALL SPECIFIED CONNECTORS TO BE MFD. BY SIMPSON U.N.O. ANY DEVIATION FROM SPECIFIED CONNECTORS TO BE APPROVED BY ENGINEER OF RECORD.

STRUCTURAL NOTES:

1. ALL EXT. HEADERS TO BE 4x10 DF #2 U.N.O. (H3-)
2. SHEATH PER STANDARD EXT. NAILING SPEC (SEE NOTES ON S-0.0

TRUSSES SHALL NOT BE CUT OR ALTERED WITHOUT PRIOR CONSENT FROM KR PROPERTIES OR THE TRUSS MFR.

0 4' 8' 16'

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MERCER ISLAND, WA 98040
PARCEL # 3622500045

EB#5, LLC

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206-351-7801

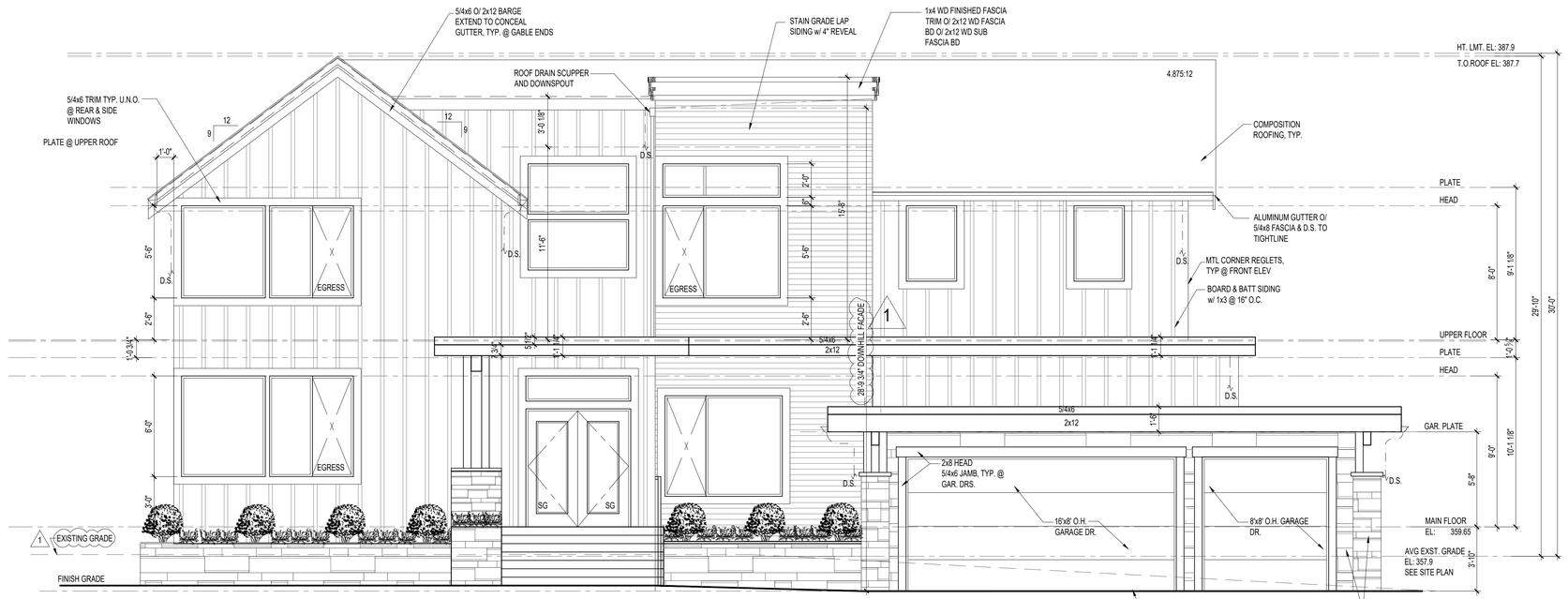
ROOF PLAN

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A5

NOTES:

1. TRUSS MFR. TO VERIFY ALL PLATE HEIGHTS WHERE PARALLEL CHORD TRUSSES HAVE BEEN SPECIFIED.

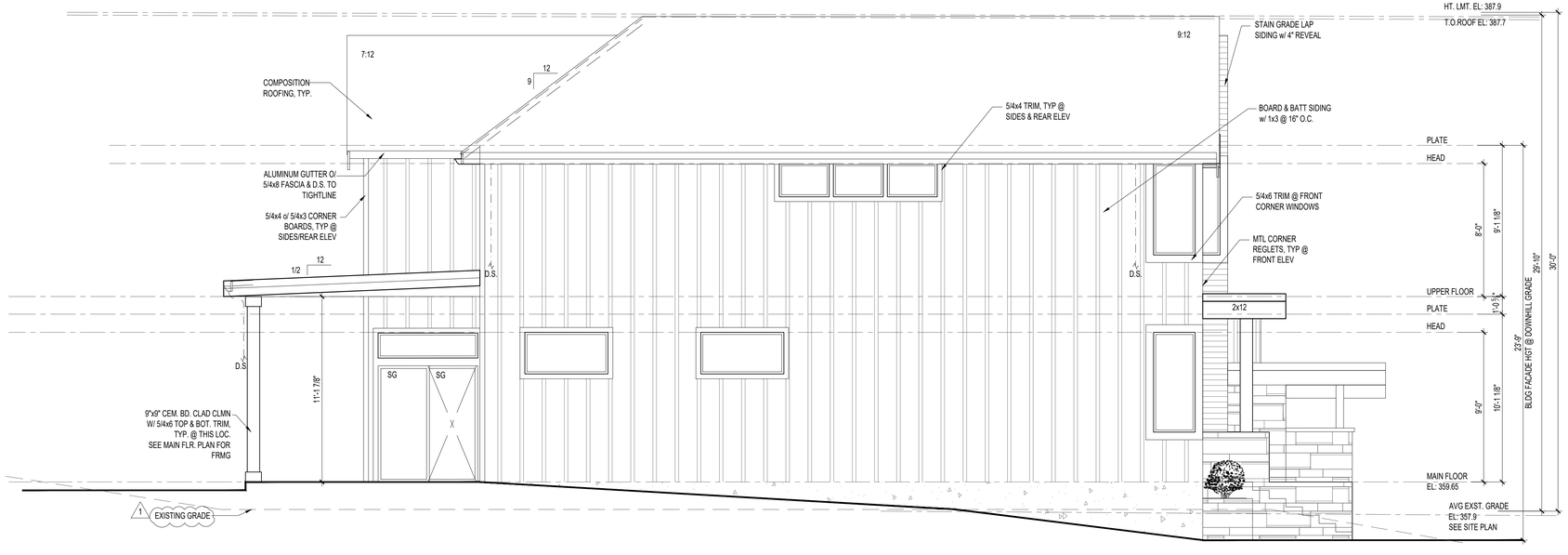


FRONT ELEVATION (WEST)

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

DOWNHILL FACADE PER MICC 19.02.020(E)(2)

1



LEFT ELEVATION (NORTH)

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

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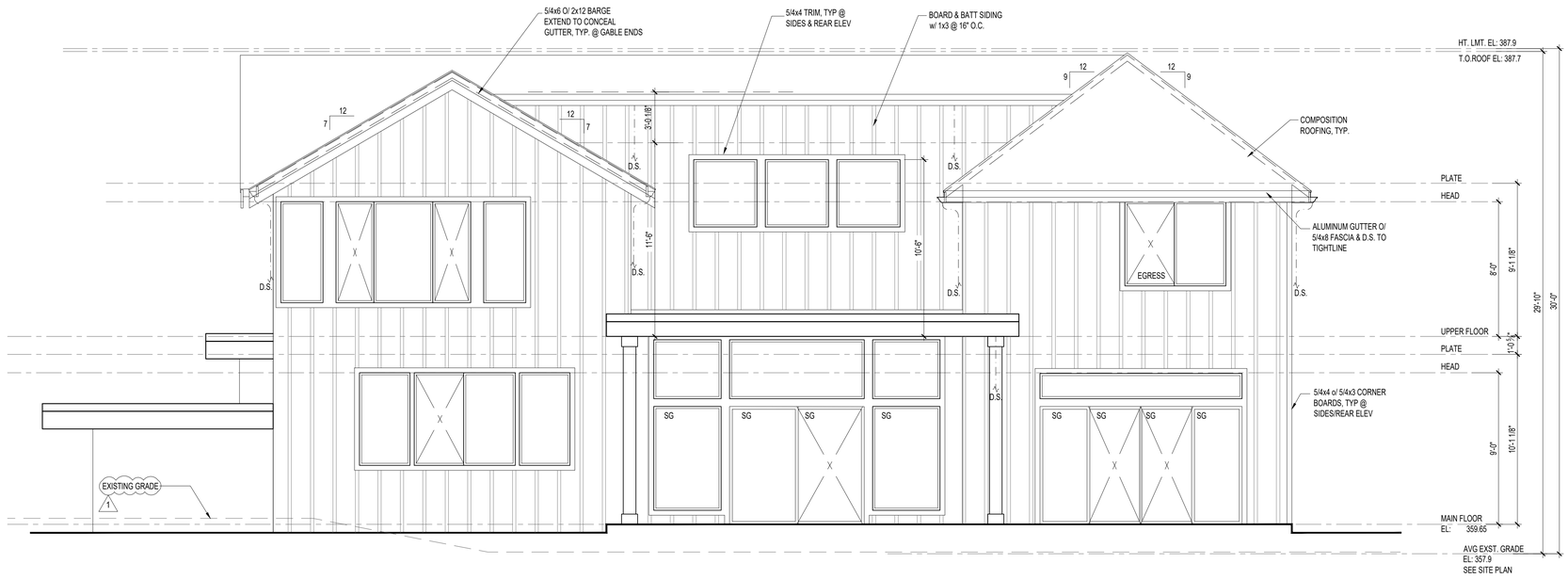
BUILDING ELEVATIONS

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	PERMIT REVISION DATE:
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A6

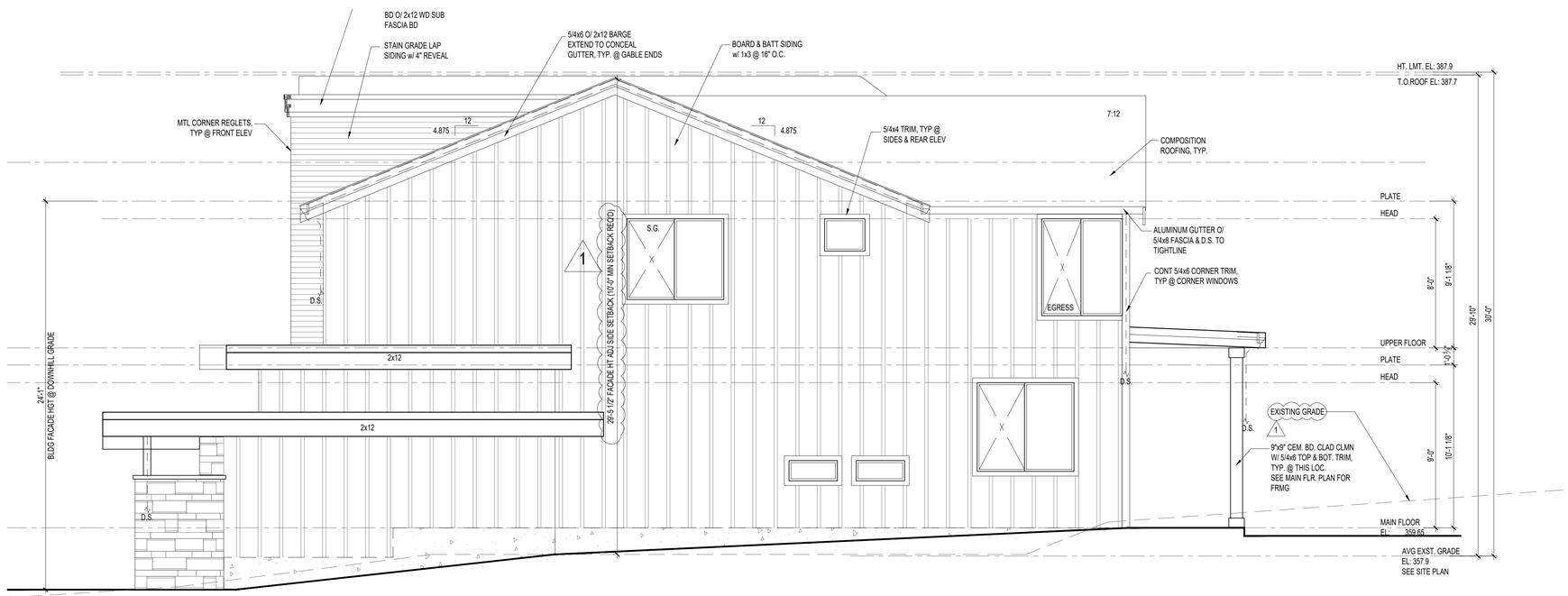
NOTES:

1. TRUSS MFR. TO VERIFY ALL PLATE HEIGHTS WHERE PARALLEL CHORD TRUSSES HAVE BEEN SPECIFIED.



REAR ELEVATION (EAST)

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



RIGHT ELEVATION (SOUTH)

SCALE: 1/4" = 1'-0" ADJOINING SIDE YARD SETBACK PER MICC 19.02.020(C)(1)(c)(ii) 1

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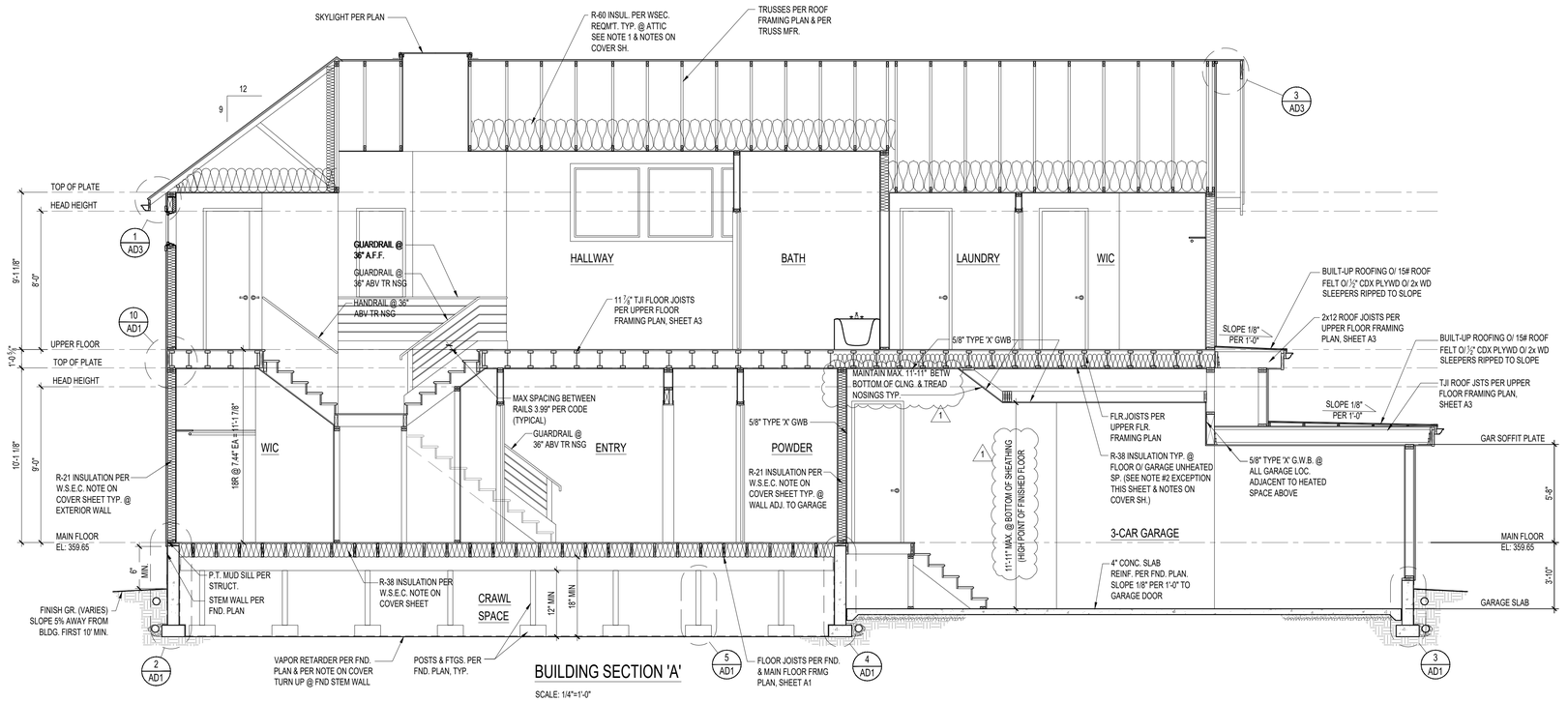
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BUILDING ELEVATIONS

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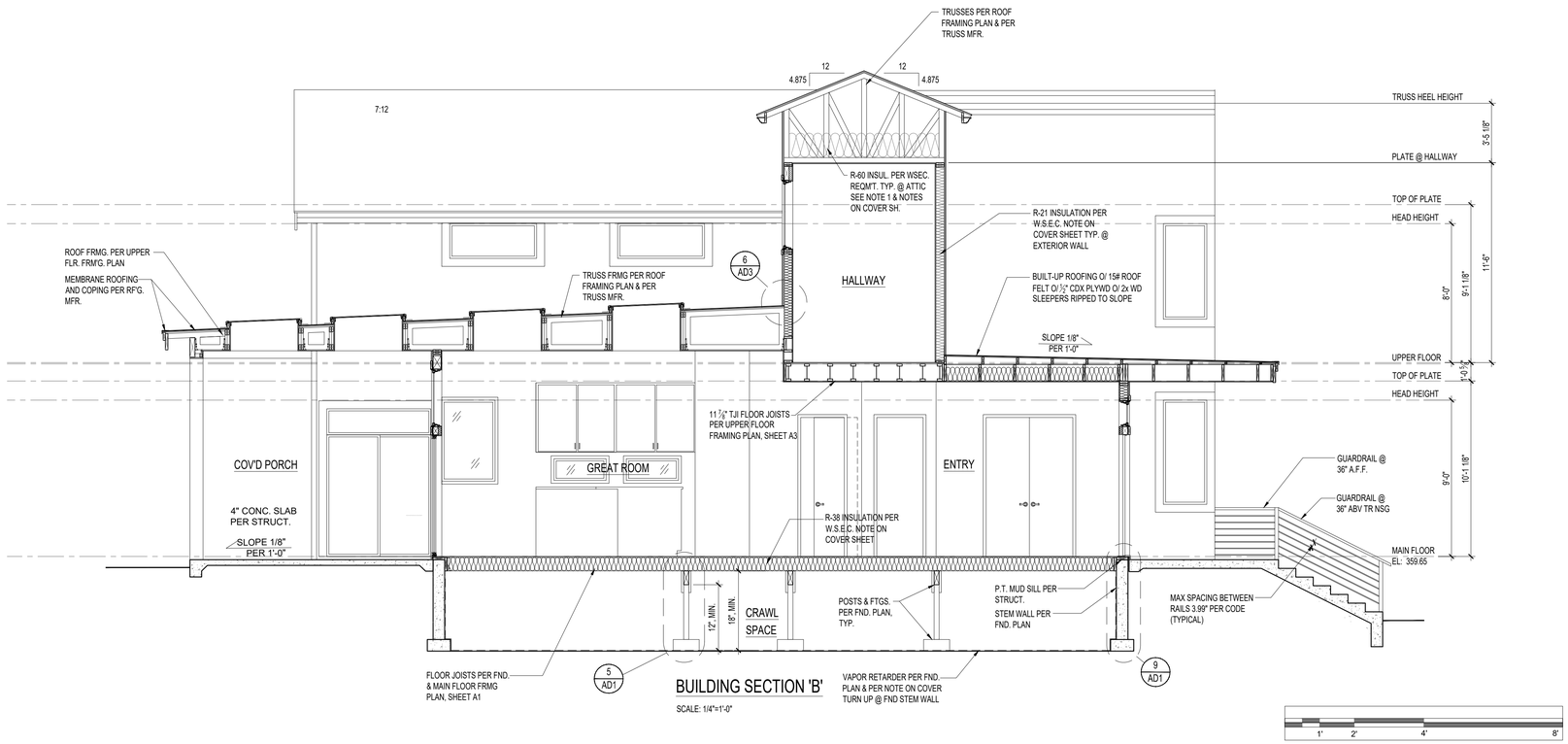


BUILDING SECTION 'A'

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

NOTES:

1. THE THICKNESS OF BLOWN-IN OR SPRAYED ROOF/CEILING INSULATION SHALL BE WRITTEN IN INCHES ON MARKERS THAT ARE INSTALLED AT LEAST ONE FOR EVERY 300 S.F. THROUGHOUT THE ATTIC SPACE. THE MARKERS SHALL BE AFFIXED TO THE TRUSSES OR JOISTS AND MARKED WITH THE MIN. INITIAL INSTALLED THICKNESS WITH NUMBERS A MIN. OF 1" IN HEIGHT. EACH MARKER SHALL FACE THE ATTIC ACCESS OPENING (WSEC. 303.1.1.1).
2. FLR. FRAMING CAVITY INSUL. SHALL BE INSTALLED TO MAINTAIN PERMANENT CONTACT WITH THE UNDERSIDE OF THE SUBFLOOR DECKING. INSUL. SUPPORTS SHALL BE INSTALLED SO SPACING IS NO MORE THAN 24" O.C. FND. VENTS SHALL BE PLACED SO THAT THE TOP OF THE VENT IS BELOW THE LOWER SURFACE OF THE FLR. INSUL.
   EXCEPTION:
   SUBSTANTIAL CONTACT WITH THE SURFACE BEING INSULATED IS NOT REQUIRED IN ENCLOSED FLOOR/CEILING ASSEMBLIES CONTAINING DUCTS WHERE FULL R-VALUE INSULATION IS INSTALLED BETWEEN THE DUCT AND THE EXTERIOR SURFACE.
3. TRUSS MFR. TO VERIFY ALL PLATE HEIGHTS WHERE PARALLEL CHORD TRUSSES HAVE BEEN SPECIFIED.



BUILDING SECTION 'B'

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

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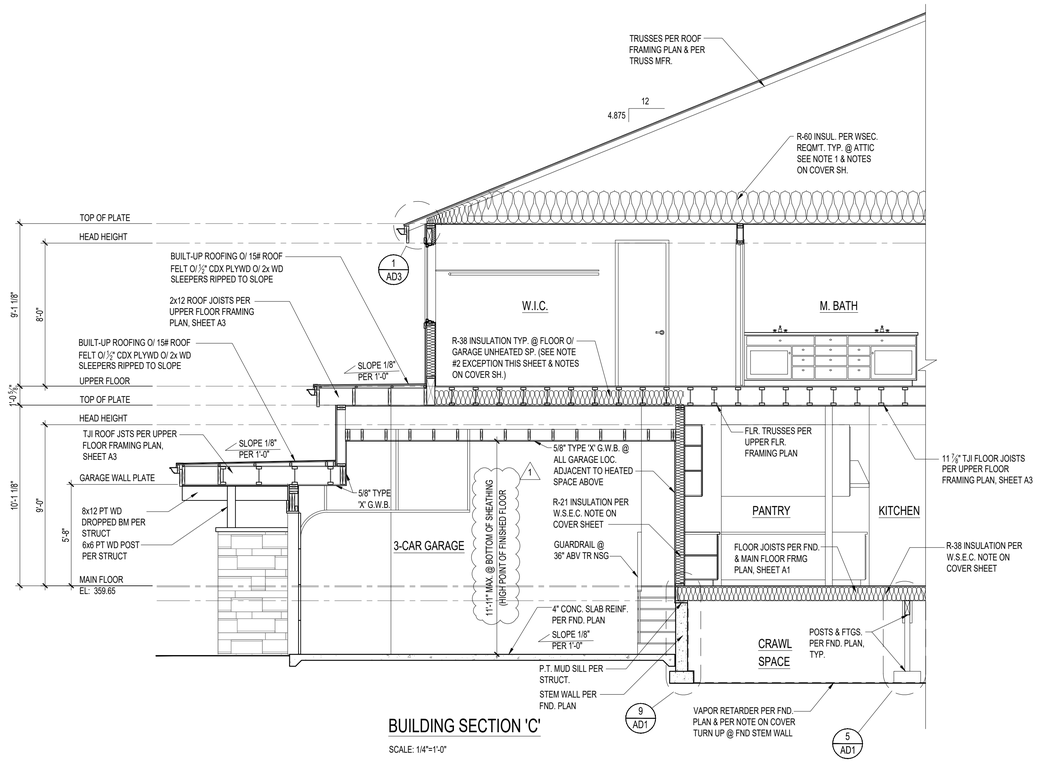
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BUILDING SECTIONS

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A8

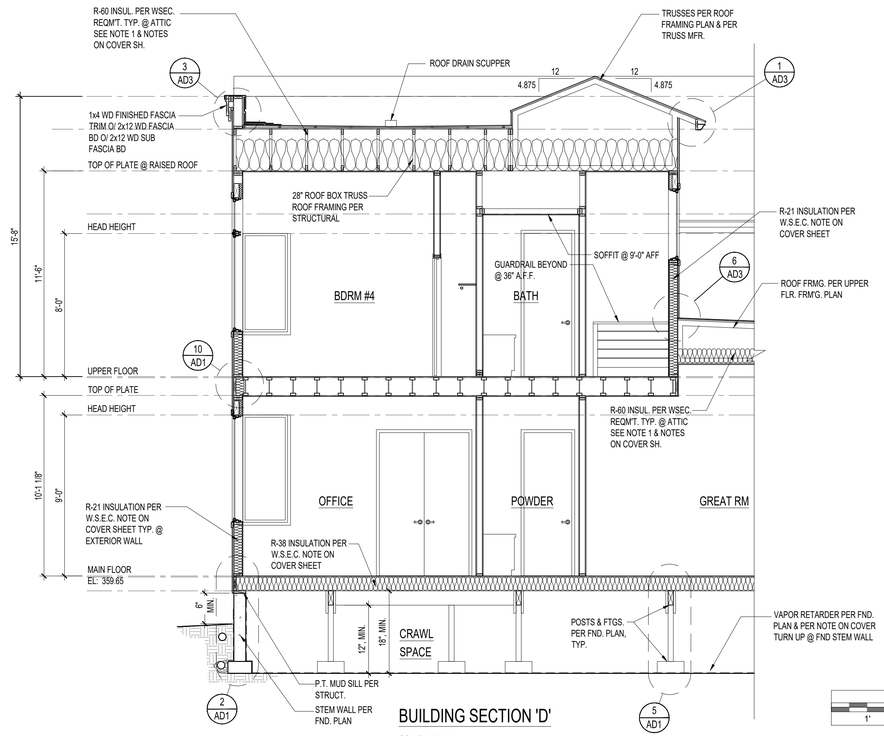


BUILDING SECTION 'C'

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

NOTES:

1. THE THICKNESS OF BLOWN-IN OR SPRAYED ROOF/CEILING INSULATION SHALL BE WRITTEN IN INCHES ON MARKERS THAT ARE INSTALLED AT LEAST ONE FOR EVERY 300 S.F. THROUGHOUT THE ATTIC SPACE. THE MARKERS SHALL BE AFFIXED TO THE TRUSSES OR JOISTS AND MARKED WITH THE MIN. INITIAL INSTALLED THICKNESS WITH NUMBERS A MIN. OF 1" IN HEIGHT. EACH MARKER SHALL FACE THE ATTIC ACCESS OPENING (WSEC. 303.1.1.1).
2. FLR. FRAMING CAVITY INSUL. SHALL BE INSTALLED TO MAINTAIN PERMANENT CONTACT WITH THE UNDERSIDE OF THE SUBFLOOR DECKING. INSUL. SUPPORTS SHALL BE INSTALLED SO SPACING IS NO MORE THAN 24" O.C. FND. VENTS SHALL BE PLACED SO THAT THE TOP OF THE VENT IS BELOW THE LOWER SURFACE OF THE FLR. INSUL.
   EXCEPTION:
   SUBSTANTIAL CONTACT WITH THE SURFACE BEING INSULATED IS NOT REQUIRED IN ENCLOSED FLOOR/CEILING ASSEMBLIES CONTAINING DUCTS WHERE FULL R-VALUE INSULATION IS INSTALLED BETWEEN THE DUCT AND THE EXTERIOR SURFACE.
3. TRUSS MFR. TO VERIFY ALL PLATE HEIGHTS WHERE PARALLEL CHORD TRUSSES HAVE BEEN SPECIFIED.
4. PROVIDE R-10 RIGID INSULATION AT ALL WINDOW AND DOOR HEADER CAVITIES.



BUILDING SECTION 'D'

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

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4332 86TH AVE SE
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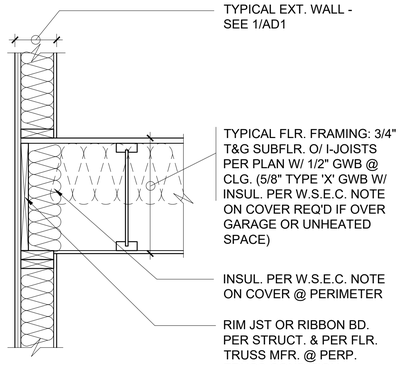
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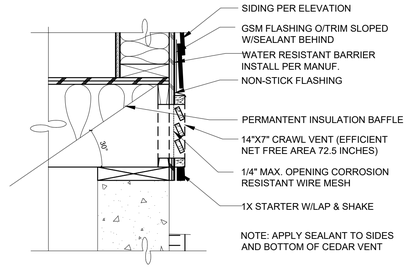
BUILDING SECTIONS

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PERMIT SET	
12-31-25	

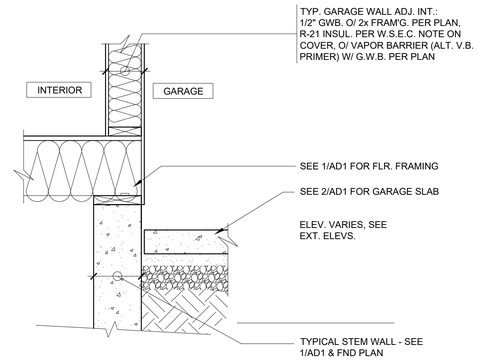
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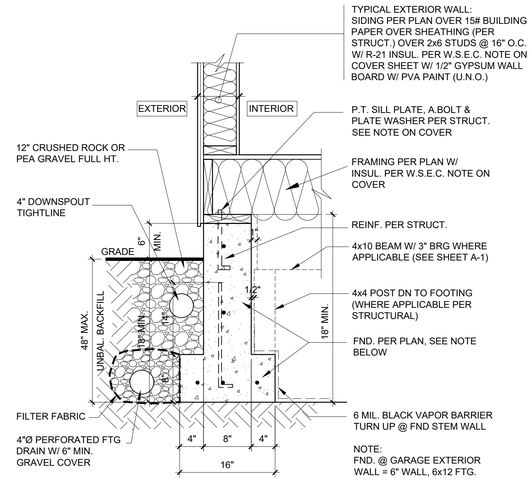
10 TYP. WALL @ UPPER FLR. FRAMING
SCALE: 1" = 1'-0"



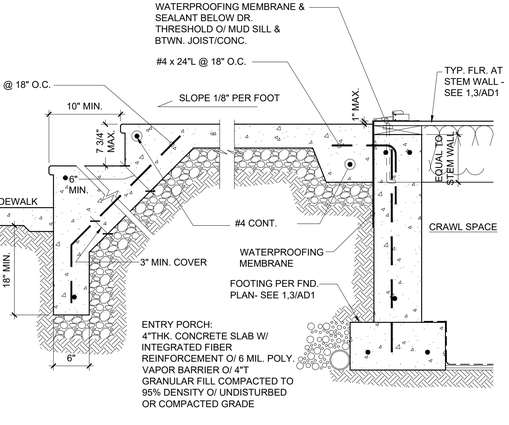
7 CRAWL SPACE VENT DETAIL
SCALE: 1 1/2" = 1'-0"



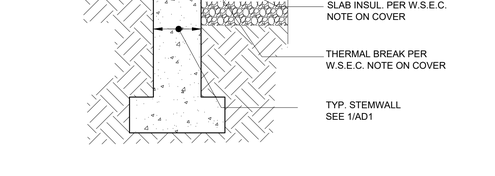
4 GARAGE SLAB @ INT. WALL
SCALE: 1" = 1'-0"



1 TYPICAL STEM WALL
SCALE: 1" = 1'-0"



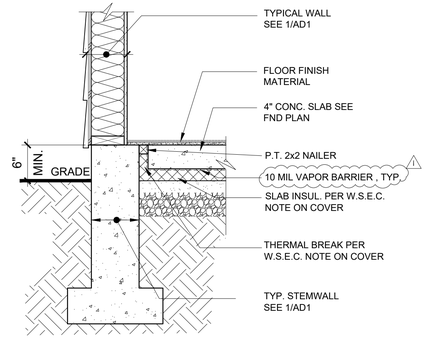
8 WALL PENETRATION DETAILS
SCALE: 3/4"= 1'-0"



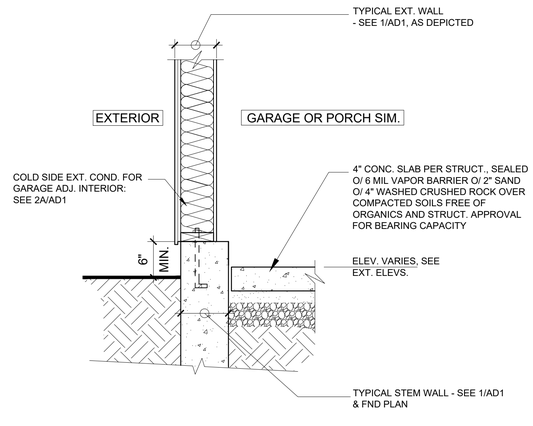
5 TYPICAL ISOLATED FOOTING
SCALE: 1" = 1'-0"

2 TYPICAL STEM WALL-RAISED
SCALE: 1" = 1'-0"

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



6 BASEMENT SLAB
SCALE: 1" = 1'-0"



3 GARAGE SLAB @ EXT. WALL
SCALE: 1" = 1'-0"

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PARCEL # 3622500045

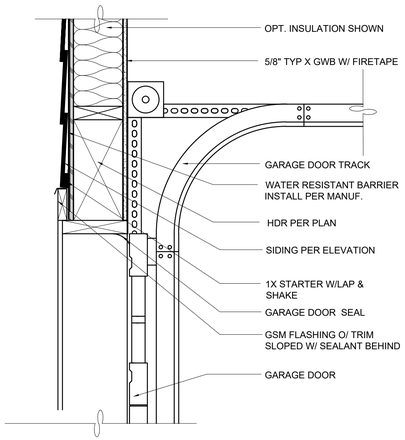
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206-351-7801

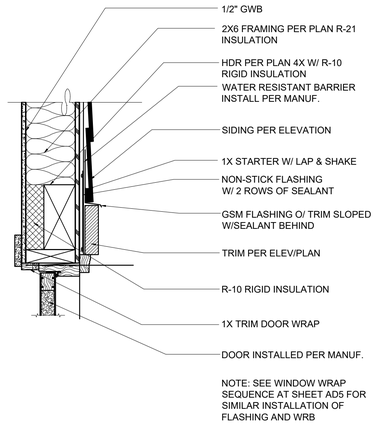
ARCHITECTURAL DETAILS

PERMIT REVISION DATE:	
12-31-25	PERMIT SET
04-20-2026	△

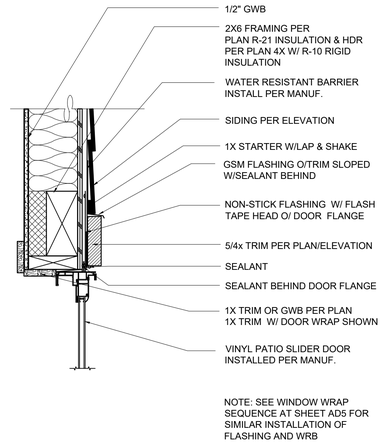
AD1



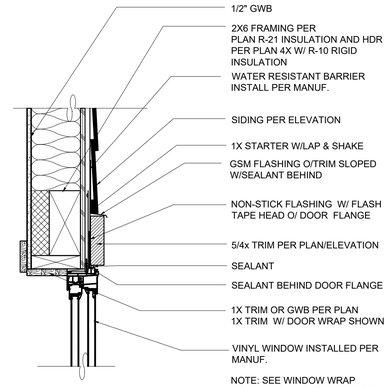
10 GARAGE DOOR HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



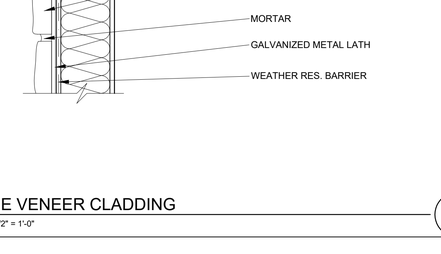
7 SWING DOOR HEAD EXTERIOR TRIM DETAIL
SCALE: 1 1/2" = 1'-0"



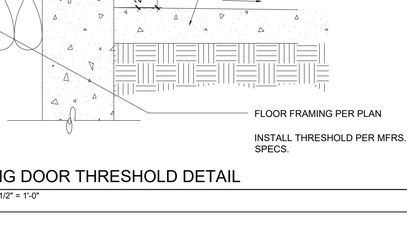
4 PATIO SLIDER GLASS DOOR HEAD EXT. TRIM DETAIL
SCALE: 1 1/2" = 1'-0"



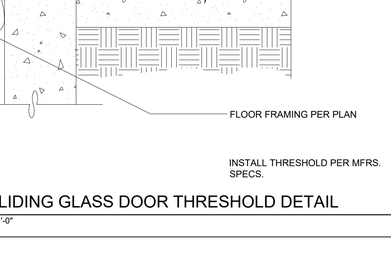
1 WINDOW HEAD EXTERIOR TRIM DETAIL
SCALE: 1 1/2" = 1'-0"



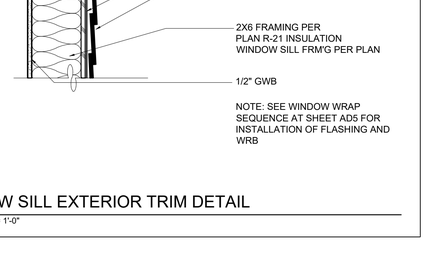
11 GARAGE DOOR JAMB DETAIL
SCALE: 1 1/2" = 1'-0"



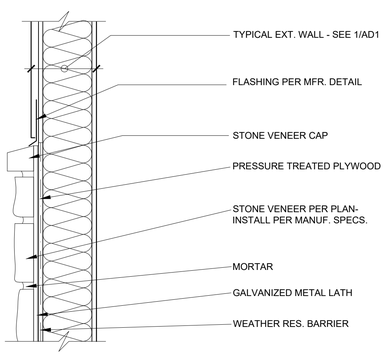
8 SWING DOOR JAMB EXTERIOR TRIM DETAIL
SCALE: 1 1/2" = 1'-0"



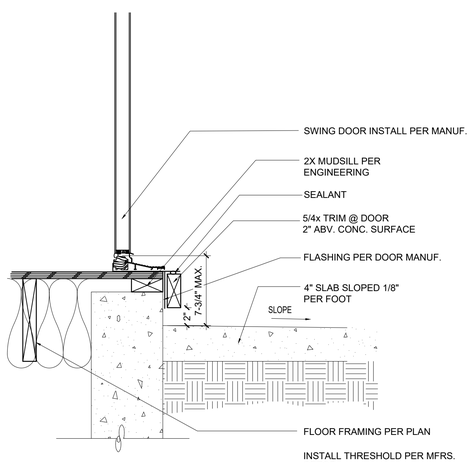
5 PATIO SLIDING GLASS DOOR JAMB EXT. TRIM DETAIL
SCALE: 1 1/2" = 1'-0"



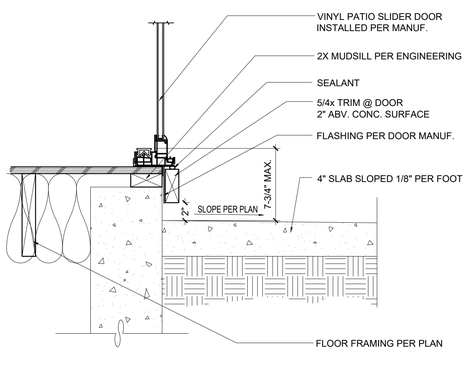
2 WINDOW JAMB EXTERIOR TRIM DETAIL
SCALE: 1 1/2" = 1'-0"



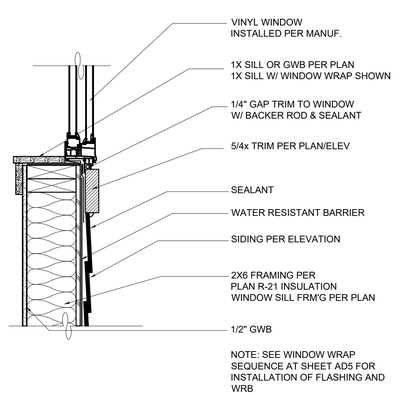
12 STONE VENEER CLADDING
SCALE: 1 1/2" = 1'-0"



9 SWING DOOR THRESHOLD DETAIL
SCALE: 1 1/2" = 1'-0"



6 PATIO SLIDING GLASS DOOR THRESHOLD DETAIL
SCALE: 1 1/2" = 1'-0"



3 WINDOW SILL EXTERIOR TRIM DETAIL
SCALE: 1 1/2" = 1'-0"

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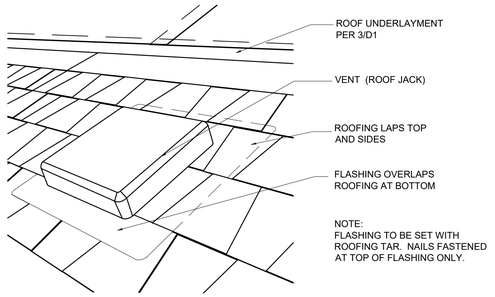
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206-351-7801

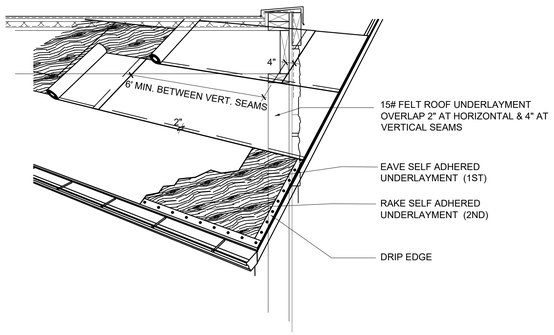
ARCHITECTURAL DETAILS

PERMIT REVISION DATE:	
04-30-2026	
PERMIT SET	
12-31-25	

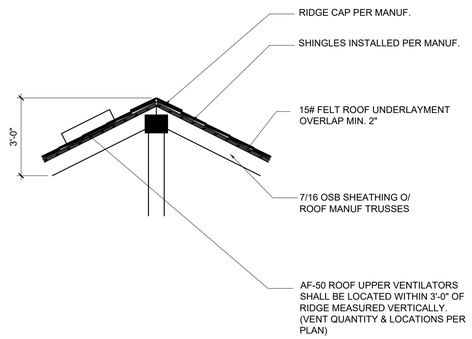
AD2



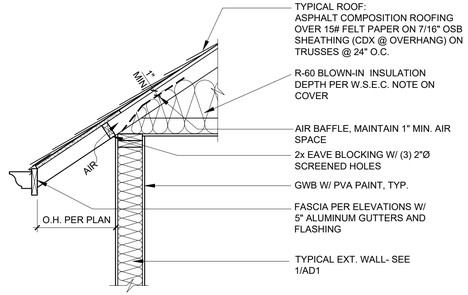
10 ROOF VENT FLASHING DETAIL
SCALE: NOT TO SCALE



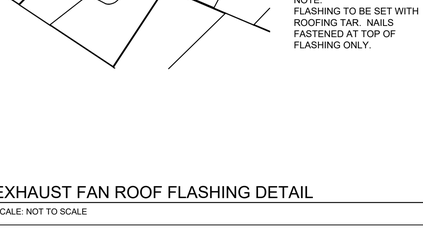
7 ROOF UNDERLAYMENT DETAIL
SCALE: 3/4" = 1'-0"



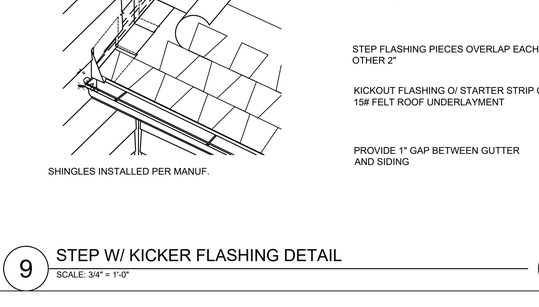
4 TYPICAL ROOFM RIDGE DETAIL
SCALE: 3/4" = 1'-0"



1 TYPICAL ROOF- VENTED EAVE
SCALE: 3/4" = 1'-0"



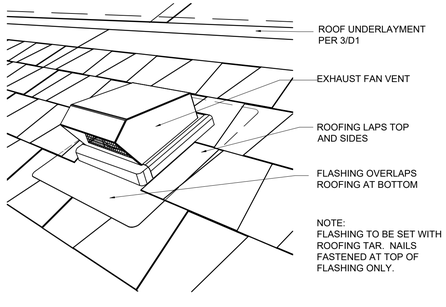
11 VENT STACK ROOF PENETRATION DETAIL
SCALE: NOT TO SCALE



8 STEP FLASHING DETAIL
SCALE: 3/4" = 1'-0"

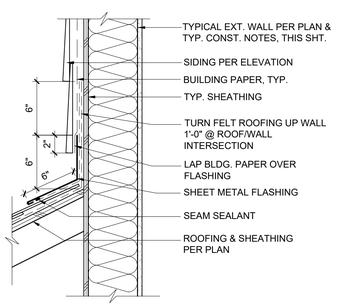
5 TYPICAL VALLEY FLASHING DETAIL (CLOSED CUT)
SCALE: 1" = 1'-0"

2 SHED ROOF UPPER EAVE DETAIL
SCALE: 3/4" = 1'-0"

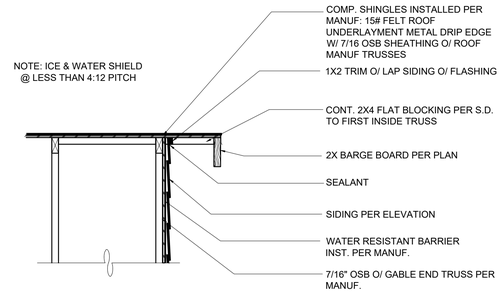


12 EXHAUST FAN ROOF FLASHING DETAIL
SCALE: NOT TO SCALE

9 STEP W/ KICKER FLASHING DETAIL
SCALE: 3/4" = 1'-0"



6 TYPICAL ROOF TO WALL DETAIL
SCALE: 1 1/2" = 1'-0"



3 TYPICAL RAKE DETAIL
SCALE: 3/4" = 1'-0"

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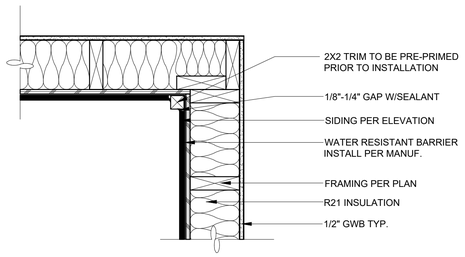
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ARCHITECTURAL DETAILS

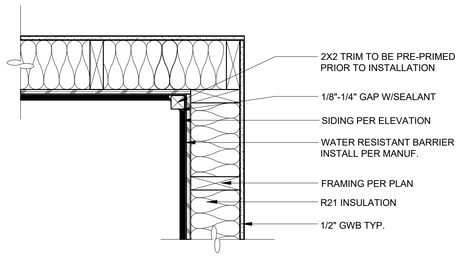
PERMIT REVISION DATE:	
12-31-25	PERMIT SET
04-30-2026	1

AD3



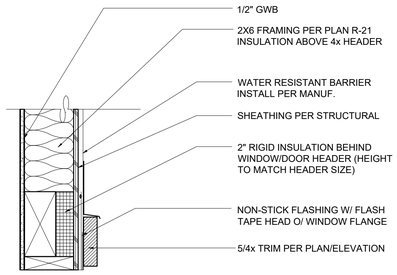
10 INSIDE CORNER EXTERIOR TRIM

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



7 INSIDE CORNER EXTERIOR TRIM (FOR USE AT INTERMEDIATE FRAMING ONLY)

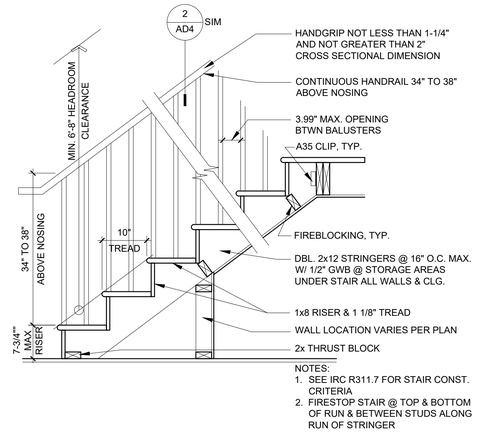
SCALE: 1 1/2" = 1'-0"



NOTE:
SEE SHEET AD2 FOR MORE DETAILED INFORMATION FOR DOOR AND WINDOW OPENING

4 WINDOW/DOOR HEAD FRAMING DETAIL (FOR USE AT INTERMEDIATE FRAMING ONLY)

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

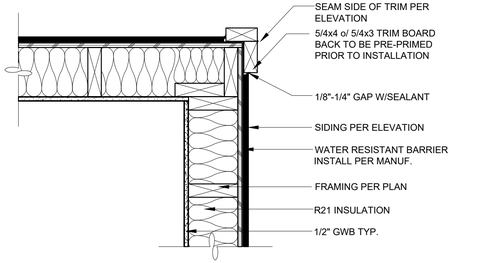


NOTES:
1. SEE IRC R311.7 FOR STAIR CONST. CRITERIA
2. FIRESTOP STAIR @ TOP & BOTTOM OF RUN & BETWEEN STUDS ALONG RUN OF STRINGER

1 TYPICAL STAIR DETAIL

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

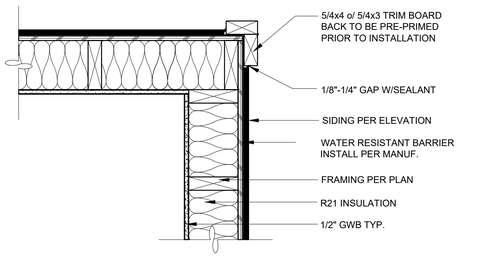
NOTE:
FOR FRONT ELEV, PROVIDE MTL REGLETS @ CORNERS PER MANUF



11 OUTSIDE CORNER EXTERIOR TRIM

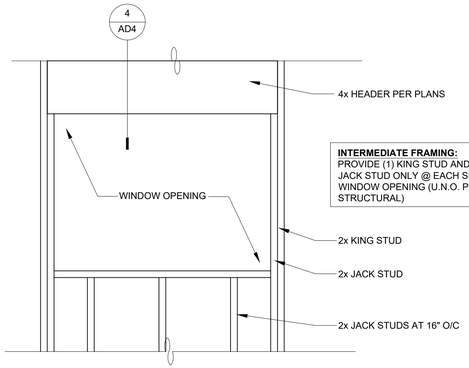
SCALE: 1 1/2" = 1'-0"

NOTE:
FOR FRONT ELEV, PROVIDE MTL REGLETS @ CORNERS PER MANUF



8 OUTSIDE CORNER EXTERIOR TRIM (FOR USE AT INTERMEDIATE FRAMING ONLY)

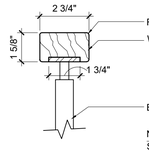
SCALE: 1 1/2" = 1'-0"



INTERMEDIATE FRAMING:
PROVIDE (1) KING STUD AND (1) JACK STUD ONLY @ EACH SIDE OF WINDOW OPENING (U.N.O. PER STRUCTURAL)

5 WINDOW/DOOR HEAD FRAMING ELEVATION (FOR USE AT INTERMEDIATE FRAMING ONLY)

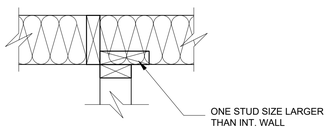
SCALE: NOT TO SCALE



NOTE:
SEE NOTE ON COVER SHEET FOR RELEVANT CODE COMPLIANCE INFORMATION.

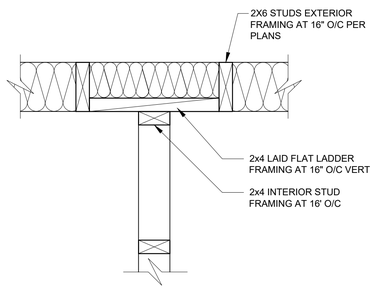
2 STAIR HANDRAIL DETAIL

SCALE: 3" = 1'-0"



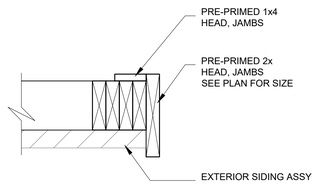
12 WALL INTERSECTION FRAMING DETAIL

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



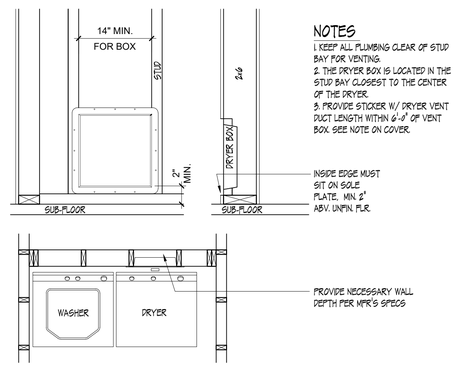
9 WALL INTERESECTION FRAMING DETAIL (FOR USE AT INTERMEDIATE FRAMING ONLY)

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



6 GARAGE DOOR JAMB DETAIL

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



NOTES
1. KEEP ALL PLUMBING CLEAR OF STUD BAY FOR VENTING.
2. THE DRYER BOX IS LOCATED IN THE STUD BAY CLOSEST TO THE CENTER OF THE DRYER.
3. PROVIDE STICKER W/ DRYER VENT DUCT LENGTH WITHIN 6'-0" OF VENT BOX. SEE NOTE ON COVER.

3 DRYER EXHAUST BOX INSTALLATION

SCALE: 1" = 1'-0"

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ARCHITECTURAL DETAILS

12-31-25	PERMIT SET	
	PERMIT REVISION DATE:	04-20-2026

AD4

GARAGE SLAB

4" CONC. SLAB ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL

PORCH SLAB

4" CONC. SLAB ON GRADE ON 10 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL

GENERAL STRUCTURAL NOTES

FOUNDATION

- DESIGN IS BASED ON 2021 INTERNATIONAL RESIDENTIAL CODE & 2021 INTERNATIONAL BUILDING CODE
- DESIGN LOADS:
  SOIL 1,500 PSF ALLOWABLE BEARING PRESSURE
- CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS IN 28 DAYS, U.N.O.:
  f'_c = 3,000 psi.* ..... FOUNDATION WALLS
  3,000 psi.* ..... FOOTINGS
  2,500 psi ..... INTERIOR SLABS ON GRADE
  3,500 psi.* ..... GARAGE & EXT. SLABS ON GRADE
  f_y = 60,000 psi

  * ALL CONCRETE HAS BEEN DESIGNED FOR 2500 PSI, ANYTHING GREATER THAN THIS SPECIFICATION IS FOR WEATHERING ONLY.
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 7% AIR ENTRAINMENT.
- FOUNDATION WALL DESIGN IS BASED ON BACKFILL SOIL PRESSURE OF 55 PCF AT-REST, 35 PCF ACTIVE & 7H SEISMIC SURCHARGE.
- TYPICAL REINFORCEMENT DETAILS: LAP ALL REBAR 24" MIN, BEND BARS AND LAP AT CORNERS; PROVIDE 6" HOOK INTO SUPPORTING FOOTINGS WHEN FOOTINGS INTERSECT; PROVIDE 3" MINIMUM COVER AT THE BOTTOM BARS AND 1 1/2" COVER AT THE SIDES.
- FOUNDATION WALLS SHALL BE BRACED, PRIOR TO BACKFILLING, BY EITHER ADEQUATE TEMPORARY BRACING OR INSTALLATION OF FIRST FLOOR DECK.
- ALL FOOTINGS SHALL BEAR BELOW FROST LINE. CONSULT SOILS REPORT/ LOCAL MUNICIPALITY FOR MINIMUM DEPTH BELOW GRADE.
- FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 95% COMPACTED FILL.
- PROVIDE CONTROL JOINTS AT ALL INSIDE CORNERS OF SLAB EDGES, AND OTHER LOCATIONS WHERE SLAB CRACKS ARE LIKELY TO DEVELOP. (15'-0" O.C.)
- FASTEN SILL PLATES TO FOUNDATION WALLS WITH ⅝" DIA. ANCHOR BOLTS w/ MIN. 3"x3"x¼" PLATE WASHERS (EDGE OF WASHER TO BE LOCATED WITHIN ½" OF EXTERIOR EDGE OF SILL PLATE) PROVIDE A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAXIMUM FROM PLATE ENDS, U.N.O. (SEE FND. DETAILS).
- ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT W/ CONCRETE OR MASONRY FOUNDATION SHALL BE PRESERVATIVE TREATED HEM FIR #2.
- ARCH/BUILDER TO VERIFY ALL DIMENSIONS

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.J) HOLD-DOWN
HD-5	SIMPSON CS16 STRAP TIE (14" END LENGTH)
HD-6	SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)
HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

MEANS & METHODS NOTES

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS FINISHED AND ALL PLAN, DETAIL, AND NOTE SPECIFICATIONS HAVE BEEN COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS, AND TIE-DOWNS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING REQUIRED TO STABILIZE AND PROTECT EXISTING AND ADJACENT STRUCTURES AND SYSTEMS DURING COURSE OF DEMOLITION AND CONSTRUCTION OF THE PROJECT.

STRUCTURAL DESIGN AND SPECIFICATIONS ASSUME THAT ALL SUPPORTING AND NON-SUPPORTING ELEMENTS IN CONTACT WITH FLOOR FRAMING ARE LEVEL, INCLUDING, BUT NOT LIMITED TO; FOUNDATIONS, SLABS ON GRADE, BEAMS, WALLS, AND NON-BEARING ELEMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LEVELNESS AND MAKE ADJUSTMENTS AS NECESSARY, INCLUDING CONSIDERATION OF THOSE AREAS THAT MAY BE WITHIN CONTRACTUAL, INDUSTRY, OR WARRANTY TOLERANCES.

ADDITIONAL NOTES FOR TRUSS & I-JOIST MANUFACTURER

ROOF TRUSS, FLOOR TRUSS AND ENGINEERED JOISTS SHALL BE DESIGNED TO MEET THE DIFFERENTIAL DEFLECTION CRITERIA BELOW, UNLESS NOTED OTHERWISE ON PLAN. MULHERN & KULP CANNOT BE HELD RESPONSIBLE FOR ANY STRUCTURAL ISSUES RELATED TO ANY BUILDING COMPONENT IF COMPONENT SHOP DRAWINGS ARE NOT SUBMITTED TO MK FOR REVIEW PRIOR TO FABRICATION, DELIVERY, OR INSTALLATION.

TRUSSES SHALL BE DESIGNED SO THAT DIFFERENTIAL DEFLECTION BETWEEN ADJACENT PARALLEL TRUSSES OR GIRDER TRUSSES DOES NOT EXCEED THE FOLLOWING:

A. ROOF TRUSSES:
   1/4" DEAD LOAD
B. FLOOR TRUSSES, ATTIC TRUSSES, & I-JOISTS:
   1/8" DEAD LOAD
C. FLOOR TRUSSES & ATTIC TRUSSES ADJACENT TO FLOOR FRAMING BY OTHERS:
   LIMIT ABSOLUTE TRUSS DEFLECTION TO
   3/16" DEAD LOAD. (NOT DIFFERENTIAL DEFLECTION)

LOADING AND DESIGN PARAMETERS

GRAVITY DESIGN LOADS:

DEAD LOAD (PSF):

ROOF TRUSS (TOP CHORD):	10
ROOF TRUSS (BOT. CHORD):	7
ROOF RAFTERS :	10
FLOOR (JOISTS) :	10
TILE FLOORS :	10

LIVE LOAD (PSF):

ROOF :	20
RESIDENTIAL LIVING AREAS :	40
RESIDENTIAL SLEEPING AREAS :	30
RESIDENTIAL WOOD DECKS :	60
GARAGE :	50

SNOW LOAD:

GROUND SNOW LOAD (P_g) (PSF) :	25
FLAT ROOF SNOW LOAD (P_f) (PSF) :	25
SNOW EXPOSURE FACTOR (C_e) :	1.1
SNOW LOAD IMPORTANCE FACTOR (I) :	1.0
THERMAL FACTOR (C_t) :	1.2

LATERAL DESIGN LOADS:

WIND LOAD: (IBC 1609)

SPEED (V_{ult}) (MPH) :	100
WIND RISK CATEGORY :	II
IMPORTANCE FACTOR (I_w) :	1.0
EXPOSURE CATEGORY :	B
INTERNAL PRESSURE COEFF. ((GC_{pi}) :	±0.18
TOPOGRAPHIC FACTOR (K_{zt}) :	1.6

SEISMIC LOAD: (IBC 1613)

SEISMIC RISK CATEGORY :	II
SEISMIC IMPORTANCE FACTOR (I_e) :	1.0

MAPPED SPECTRAL RESPONSE :
S_s: 1.214 S_1: 0.444
SITE CLASS : D (DEFAULT)
SPECTRAL RESPONSE COEFF. :
S_{DS}: 0.849 S_{D1}:0.549
SEISMIC DESIGN CATEGORY: D
BASIC SEISMIC-FORCE-RESISTING SYS : LIGHT FRAMED WALLS W/ WOOD STRUCTURAL PANELS
ULTIMATE BASE SHEAR
TRANS: 14k LONG: 14k
SEISMIC RESPONSE COEFF. (C_s) :
TRANS: 0.157 LONG: 0.157
RESPONSE MODIFICATION FACTOR (R) :
WOOD STRUCTURAL PANELS:
TRANS: 6.5 LONG: 6.5
ANALYSIS PROCEDURE USED:
EQUIVALENT LATERAL FORCE

LATERAL BRACING NOTES

THIS HOME HAS BEEN ENGINEERED TO RESIST LATERAL FORCES RESULTING FROM:
100 MPH WIND SPEED, EXP. B
(ASCE 7-16 WIND MAP, PER IRC R301.2.1.1)
RISK CAT. 2 & SEISMIC CAT. D2.

100 MPH WIND IN 2021 IRC MAP

ENGINEERED DESIGN WAS COMPLETED PER 2021 IBC (SECTION 1604 & 1613) & ASCE 7-16, AS PERMITTED BY R301.1.3 OF THE 2021 IRC. ACCORDINGLY, THIS HOME, AS DOCUMENTED AND DETAILED HEREWITHIN, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES, AND DOES NOT NEED TO CONFORM TO THE PRESCRIPTIVE PROVISIONS OF R602.10.

STANDARD EXTERIOR WALL SHEATHING SPECIFICATIONS

(INTERIOR WALL SPECIFICATION WHERE NOTED ON PLANS)

- 7/16" OSB OR 15/32" PLYWOOD:

  FASTEN SHEATHING w/ 2½"x0.131" NAILS @ 6"o.c. AT ALL SUPPORTED PANEL EDGES AND 12" O.C. IN THE PANEL FIELD. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED PER THIS SPECIFICATION U.N.O. ON PLANS.

3" o.c. EDGE NAILING

(WHERE NOTED ON PLANS)

- 7/16" OSB OR 15/32" PLYWOOD:

  ONLY AT LOCATIONS INDICATED ON PLANS - SHEATHE WALL SHOWN WITH ⅞" OSB. FASTEN SHEATHING w/ 2½"x0.131" NAILS @ 3" O.C. AT EDGES AND 12" O.C. AT CENTER. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE AND 3" O.C. FASTENING.

NOTES:

1. LATERAL ANALYSIS ASSUMES STUD SPACING @ 16" o.c.
2. ALL SHEAR WALLS SHALL HAVE DOUBLE TOP PLATES FASTENED TOGETHER w/ 3"x0.131" NAILS @ 8" O.C. USE (1)29½"x0.135" NAILS AT EACH LAP SPLICE, (6) EACH SIDE OF JOINT (TYP. U.N.O)
3. ALL EXTERIOR WALLS ARE CONTINUOUSLY SHEATHED.
4. ALL INTERIOR SHEAR WALLS AND EXTERIOR WALLS ARE SHEATHED ABOVE AND BELOW OPENINGS.

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B.W.A.), OR SHEARWALL ABOVE (S.W.A.)
- BEAM / HEADER
- INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
- AREA OF OVERFRAMING
- JL METAL HANGER
- INDICATES POST ABOVE (P.A.), PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLDOWN.

GENERAL STRUCTURAL NOTES

DESIGN PARAMETERS

- DESIGN IS BASED ON 2021 INTERNATIONAL RESIDENTIAL CODE & 2021 INTERNATIONAL BUILDING CODE
- WOOD FRAME ENGINEERING IS BASED ON NDS, "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" - LATEST EDITION.

GENERAL FRAMING

- EXTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (w/ DOUBLE TOP PLATE) HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, U.N.O.
- INTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (w/ DOUBLE TOP PLATE) HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, U.N.O.
- ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x "STUD" GRADE MEMBERS SPACED @ 24" O.C. (MAX.)
- ALL WALLS TALLER THEN TYP. PLATE HEIGHT SHALL BE CONSIDERED BALLOON FRAMED & SHALL BE CONSTRUCTED FROM FLOOR TO UNDERSIDE OF FRAMING AT NEXT LEVEL. B.F. WALLS SHALL BE 2x6 HEM FIR (HF) #2 GRADE LUMBER, OR BETTER. U.N.O.
- ALL SHEATHING AND LEDGERS ARE TO BE DIRECTLY APPLIED AND FASTENED TO FRAMING. DO NOT PROVIDE CONTINUOUS INSULATION BETWEEN FRAMING AND SHEATHING/LEDGERS
- ALL HEADERS SHALL BE SUPPORTED BY (1)2x JACK STUD & (1)2x KING STUD, MINIMUM.
  - THE NUMBER OF STUDS SPECIFIED AT A SUPPORT INDICATES THE NUMBER OF JACK STUDS REQUIRED, U.N.O..
- BUILT-UP POSTS SHALL BE 2x4 OR 2x6 HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, U.N.O. & SOLID WOOD COLUMNS SHALL BE SPRUCE PINE FIR (SPF) #2 GRADE LUMBER, OR BETTER, U.N.O.
- ALL 2x6 AND LARGER SOLID SAWN BEAMS/HEADERS SHALL BE HEM FIR #2 (HF #2) OR BETTER. ALL 4x6 AND LARGER SOLID SAWN LUMBER SHALL BE DOUG FIR #2 (DF #2) OR BETTER.
- ALL FRAMING LUMBER SHALL BE KILN DRIED TO 15% MC (KD-15).
- ALL TYP. NAIL FASTENER REQUIREMENTS ARE NOTED IN GENERAL NOTES, IN DETAILS, OR ON PLANS. ALL NAILS SPECIFIED ARE MIN DIAMETER AND LENGTH REQUIRED FOR CONNECTION. ALL HANGER NAILS SHALL BE INSTALLED PER MANFACTURER'S REQUIREMENTS FOR MAX CHARTED CAPACITY. NOTE: HANGERS USE COMMON NAIL DIAMETERS NOT TYPICAL FRAMING GUN NAILS.
- FASTEN ALL BEAMS TO COLUMNS, OR FLUSH BEAMS TO SUPPORTING BEAMS, w/ (4) 3"x0.131" TOENAILS (MIN.), TYP. U.N.O.
- PROVIDE SOLID BLOCKING IN FLOOR SYSTEM UNDER ALL POSTS & HOLD-DOWNS CONTINUOUS TO FOUNDATION/BEARING. BLOCKING TO MATCH POST ABOVE.
- ENGINEERED LUMBER TO MEET OR EXCEED THE FOLLOWING:
  - LSL MEMBERS - Fb=2325 PSI; Fv=310 PSI; E=1.55x10^6 PSI
  - LVL MEMBERS - Fb=2600 PSI; Fv=285 PSI; E=2.0x10^6 PSI
  - GLB MEMBERS - Fb(+)=2400 PSI; Fb(-)=1650 PSI; Fv=265 PSI; E=1.8x10^6 PSI; DF/DF; 24F-V4 (U.N.O)
- ENGINEERED LUMBER POSTS TO MEET OR EXCEED THE FOLLOWING:
  - LVL MEMBERS - Fb=2400 PSI; Fc⊥=2500 PSI; E=1.8x10^6 PSI
- FACE NAIL MULTI-PLY 2x BEAMS & HEADERS W/ 3-ROWS OF 3"x0.131" NAILS (MIN.) @ 12" O.C. STAGGERED. APPLY NAILING FROM BOTH FACES @ 3-PLY OR MORE CONDITIONS. UTILIZE 2 ROWS OF NAILS FOR 2x6 & 2x8 MEMBERS.
- TRUSS SHOP DWGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PROPOSED CONSTRUCTION SHALL BE SUBMITTED TO BUILDING DESIGNER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY IN ACCORDANCE WITH TPI-1 2.3.2.3 & 2.3.4.3.
- REFER TO IRC FASTENING SCHEDULE TABLE R602.3(1) FOR ALL CONNECTIONS, TYP. U.N.O.
- BUILDER RESPONSIBLE TO DETERMINE CORROSION-RESISTANCE REQUIREMENTS AND COMPATIBILITY OF HARDWARE, FASTENERS AND CONNECTORS FOR ENVIRONMENTAL EXPOSURE AND IN CONTACT W/ PRESERVATIVE-TREATED WOOD OF ACTUAL FINAL CONDITIONS AND SOURCED MATERIALS. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORD. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS, NOT LESS THAN ASTM A653, TYPE G185 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, SHALL BE USED.

FLOOR FRAMING

- I-JOISTS/TRUSSES SHALL BE DESIGNED BY MANUF. TO MEET OR EXCEED L/480 LIVE LOAD DEFLECTION CRITERIA AND SHALL RUN CONTINUOUS OVER SUPPORTS WHEREVER POSSIBLE. ALL LOADS SHOWN ON PLAN FOR MANUF. DESIGNS ARE ASD LEVEL LOADS, U.N.O. (EXCLUDES STONE/MARBLE OR WET BED CONSTRUCTED FLOORS - CONTACT MK FOR EXCLUDED DESIGNS).
- ALL METAL I-JOIST/TRUSS HANGERS SHALL BE SPECIFIED BY I-JOIST/TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
- 2x FLOOR JOISTS HAVE BEEN DESIGNED TO MEET OR EXCEED L/360 LIVE LOAD DEFLECTION CRITERIA.
- TYPICAL 2x JOIST HANGERS (U.N.O. ON PLANS):
  SINGLE PLY: SIMPSON LUS210
  DOUBLES: SIMPSON LUS210-2
- FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED 'STURD-I-FLOOR' 24" O.C, EXPOSURE 1 (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS W/ GLUE AND 2 ½" x 0.131" NAILS @ 6"o.c. @ PANEL EDGES & @ 12"o.c. FIELD.
- ALL FLUSH CONNECTIONS SHALL BE CONNECTED WITH HANGER APPROPRIATE FOR MEMBER SIZE. U.N.O.
- FASTEN HANGERS TO SINGLE PLY FLUSH BEAMS W/ ½" LONG NAILS.

ROOF FRAMING

- FASTEN EACH ROOF TRUSS TO TOP PLATE W/ (4) 3"x0.131" TOENAILS (MIN.) & (1) 'SIMPSON' H2.5T CLIP @ ALL BEARING POINTS. PROVIDE (2) 'SIMPSON' H2.5T CLIPS AT 2-PLY GIRDER TRUSSES, (3) 'SIMPSON' H2.5T CLIPS AT 3-PLY GIRDER TRUSSES AT ALL BEARING POINTS.
- FASTEN EACH ROOF RAFTER TO TOP PLATE WITH (1) 'SIMPSON' H2.5T CLIP. PROVIDE (2) 'SIMPSON' H2.5T CLIPS AT FLUSH BEAMS IN THE ROOF - AT ALL BEARING POINTS.
- ROOF SHEATHING SHALL BE 7/16" A.P.A. RATED SHEATHING 24/16 EXPOSURE 1 (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS w/ 2 ½" x 0.131" NAILS @ 6"o.c. AT PANEL EDGES & @ 6" O.C. AT INTERMEDIATE SUPPORTS. ROOF SHEATHING SHALL EXTEND BELOW ALL INSTANCES OF OVERFRAMING. BLOCKING SHALL BE INSTALLED AS REQUIRED TO LIMIT ROOF SHEATHING SPANS TO 24" MAX.
- ALL METAL HANGERS SHALL BE SPECIFIED BY THE TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
- ROOF TRUSS SHOP DRAWINGS & CALCULATIONS SHALL BE DESIGNED FOR UNBALANCED SNOW LOADING PER ASCE 7-16, SECTION 7.6.
- ERECT AND INSTALL ROOF TRUSSES PER WTCA & TPI'S BCSI 1-08 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."
- FASTEN OVER-FRAMED TRUSS SETS TO TRUSSES BELOW w/ (2) 3"x0.131" TOENAILS AT EA. TRUSS.
- FASTEN ALL INTERIOR NON-BEARING PARTITION WALLS TO TRUSS BOTTOM CHORD ABOVE WITH SIMPSON STC CLIPS AT 24" o.c. MAX. PROVIDE BLOCKING BETWEEN THE TRUSS BOTTOM CHORDS AS REQUIRED FOR THE PARALLEL CONDITIONS.

seal:

NICHOLAS J. MARTINOTTI — STATE OF WASHINGTON — 56478 — REGISTERED PROFESSIONAL ENGINEER

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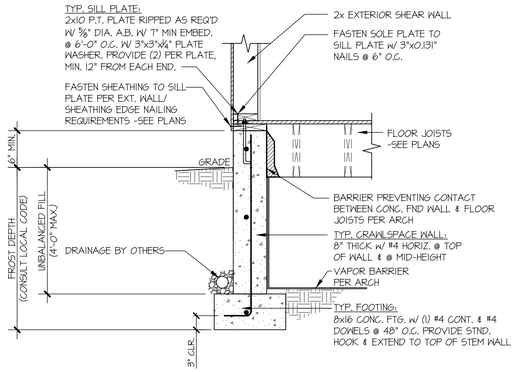
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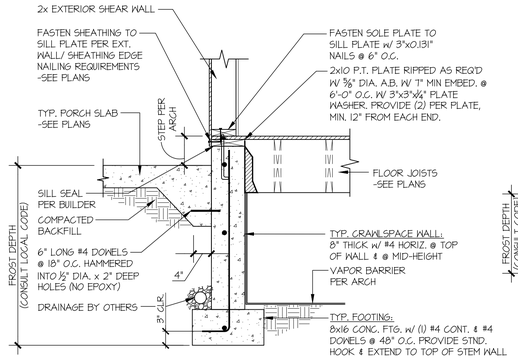
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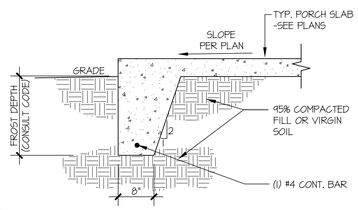
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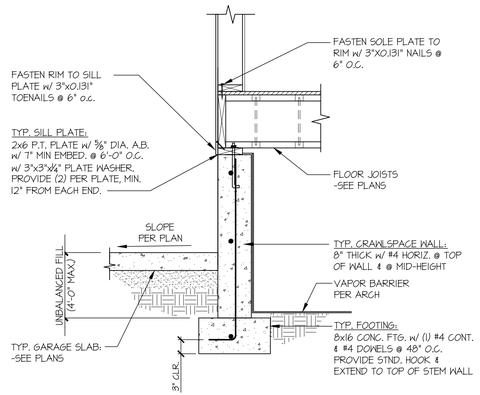
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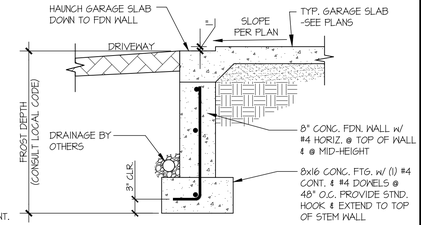
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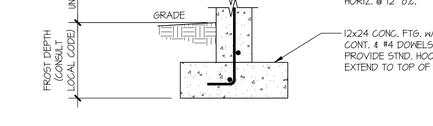
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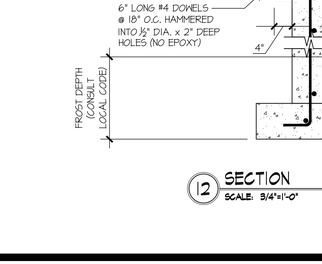
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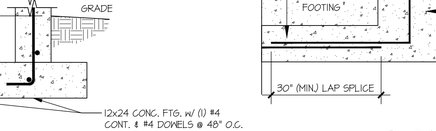
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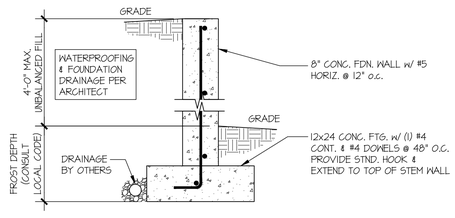
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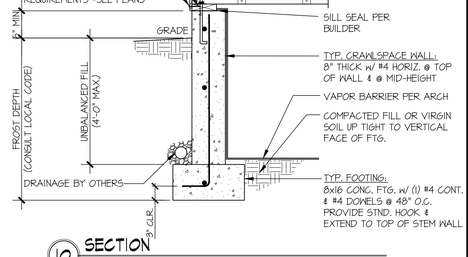
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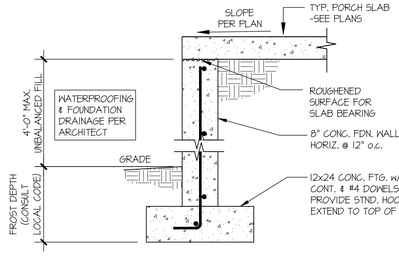
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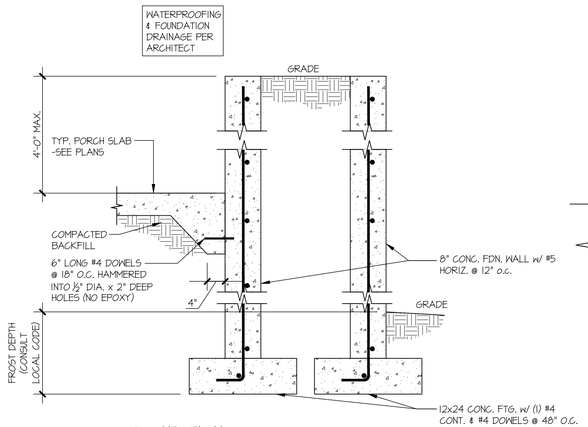
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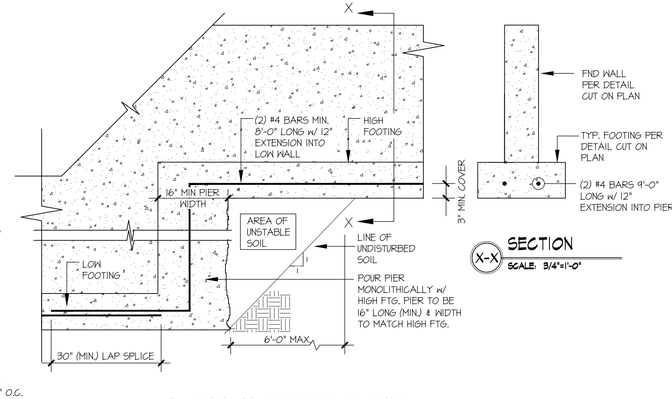
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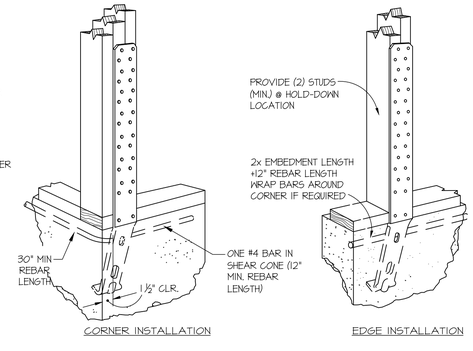


12 SECTION
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A TYPICAL STEPPED FOOTING
SCALE: 3/4"=1'-0"

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



B TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE
SIMPSON STHD HD @ FOUNDATION

seal:

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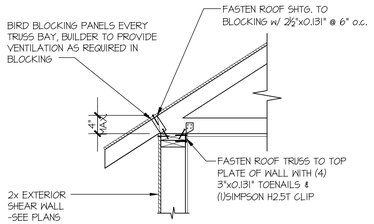
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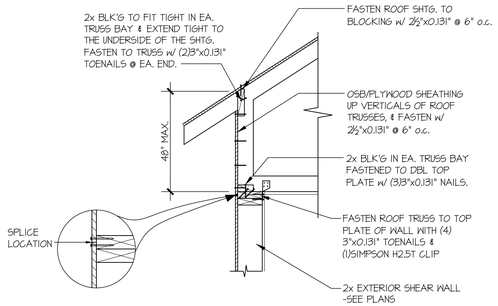
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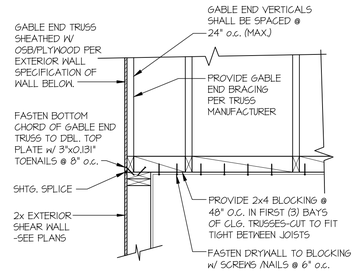
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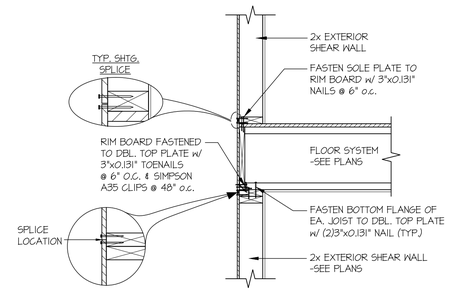
1 SECTION
SCALE: 3/4"=1'-0" HEEL HEIGHT UP TO 4" MAX.



1 SECTION
SCALE: 3/4"=1'-0" HEEL HEIGHT UP TO 48" MAX.



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



3 SECTION
SCALE: 3/4"=1'-0" PERPENDICULAR FRAMING

4 SECTION
SCALE: 3/4"=1'-0" PARALLEL FRAMING

5 SECTION
SCALE: 3/4"=1'-0" HEEL HEIGHT UP TO 4" MAX.

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

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

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

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

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

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

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

seal:
NICHOLAS J. MARTINOVICH
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER
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7220 Trade Street, Suite 255, San Diego, CA 92121
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M&K project number:
01B-25121

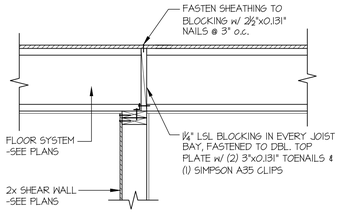
project mgr: NJM
drawn by: MPM
issue date: 10-10-25

REVISIONS:
date: initial:

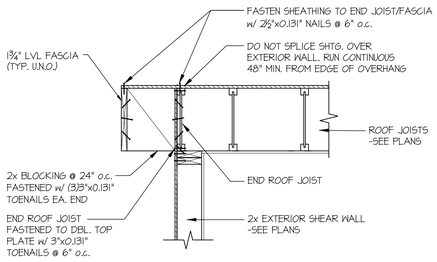
CADE HILL HOMES

STRUCTURAL DETAILS
4332 86TH AVE SE
MERCER ISLAND, WASHINGTON

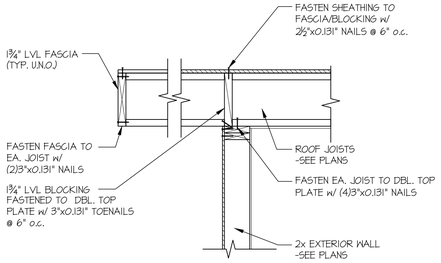
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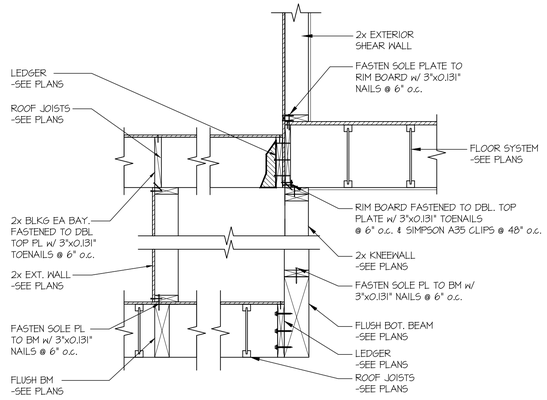
14 SECTION
SCALE: 3/4"=1'-0"



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

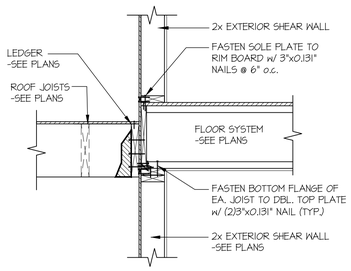


16 SECTION
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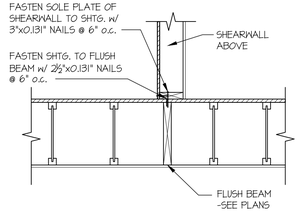


17 SECTION
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PARALLEL FRAMING

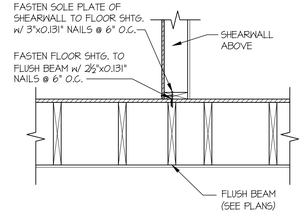
SEE DETAIL 3/SD-2 FOR ADD'L INFO NOT SHOWN HERE



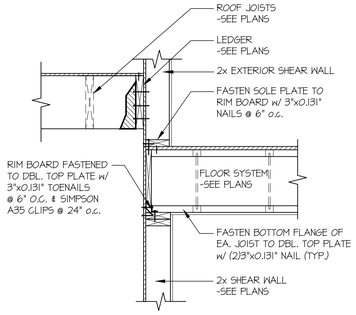
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PERPENDICULAR FRAMING



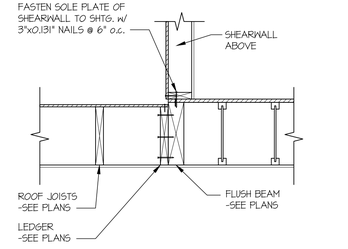
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SCALE: 3/4"=1'-0"
PARALLEL FRAMING



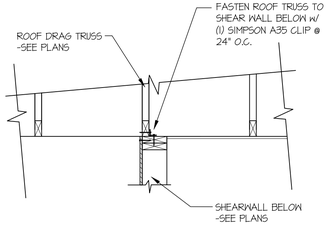
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SCALE: 3/4"=1'-0"
PARALLEL FRAMING



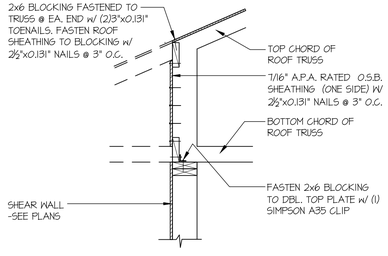
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SCALE: 3/4"=1'-0"
PERPENDICULAR FRAMING



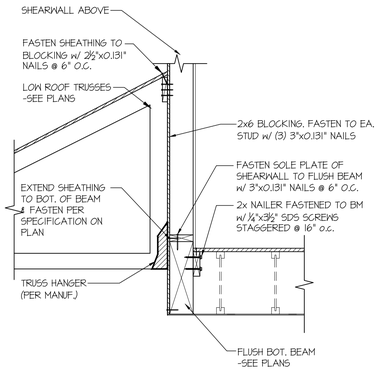
22 SECTION
SCALE: 3/4"=1'-0"
PARALLEL FRAMING



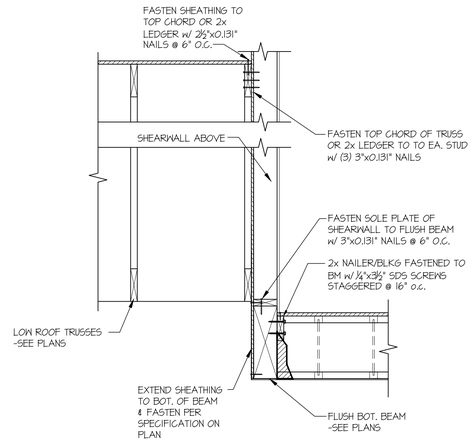
47 SECTION
SCALE: 3/4"=1'-0"



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



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



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

seal:

NICHOLAS J. MARTINOTTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER

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M&K project number:
01B-25121

project mgr: NJM
drawn by: MPM
issue date: 10-10-25

REVISIONS:

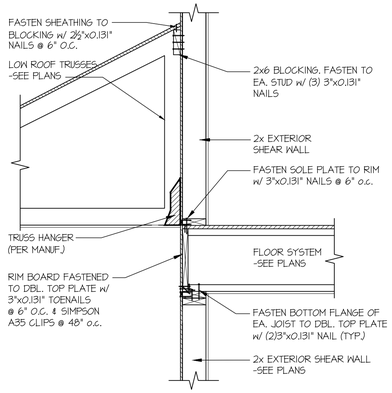
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CADE HILL HOMES

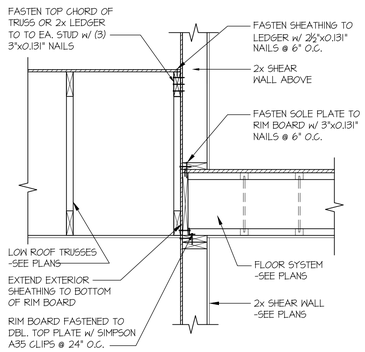
STRUCTURAL DETAILS

4332 86TH AVE SE
MERCER ISLAND, WASHINGTON

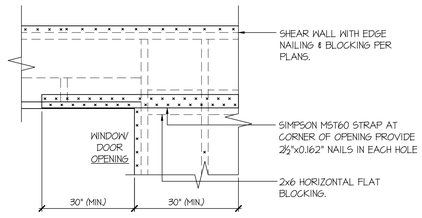
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SD-3



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

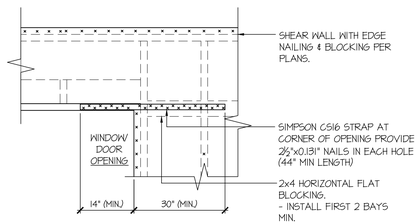


61 SECTION
SCALE: 3/4"=1'-0"



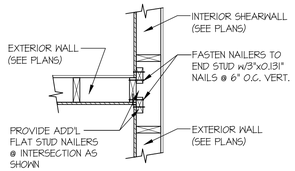
- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS

92 SECTION
SCALE: NTS

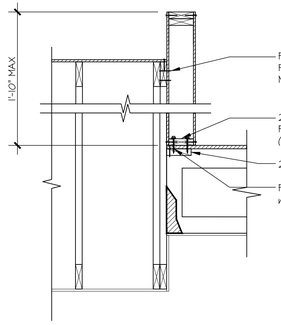


- DETAIL SIMILAR AT BOTTOM CORNERS OF WINDOWS.
- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS
- IF MIN LENGTH IS NOT PROVIDED RUN STRAP TO END OF WALL

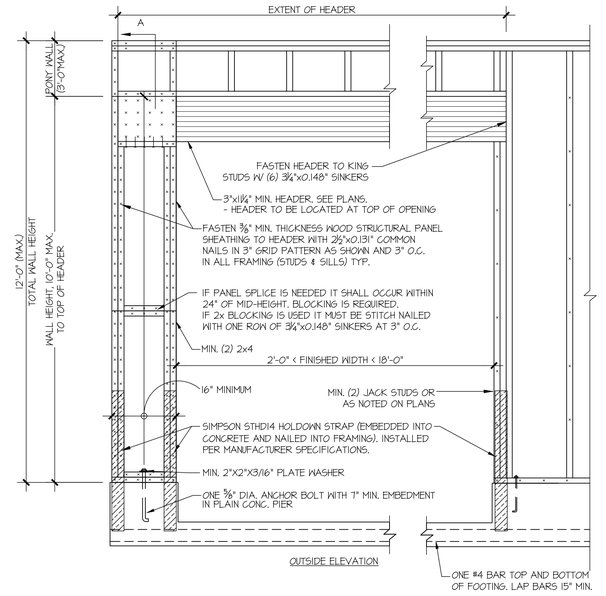
94 SECTION
SCALE: NTS

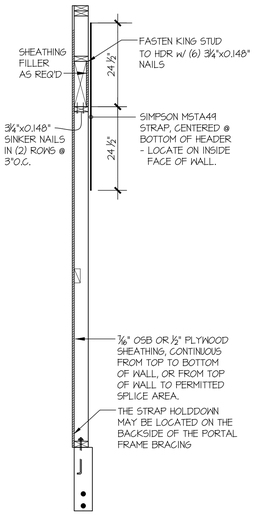


95 SECTION
SCALE: 3/4"=1'-0" SHT6. ON SAME FACE

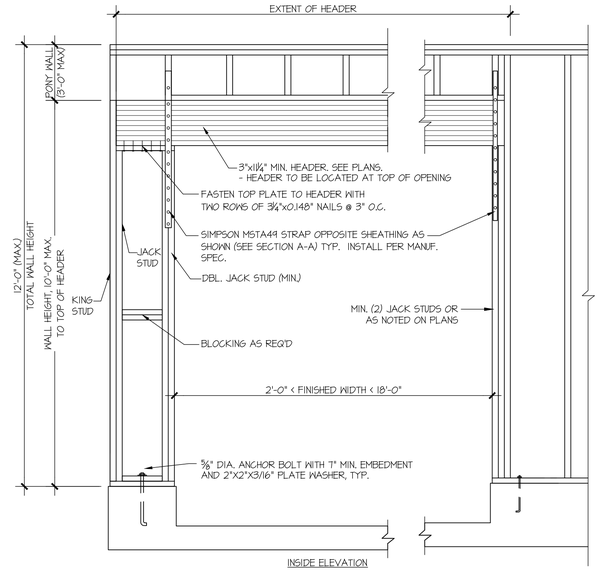


99 SECTION
SCALE: 3/4"=1'-0" PERPENDICULAR FRAMING

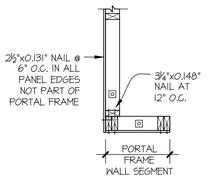




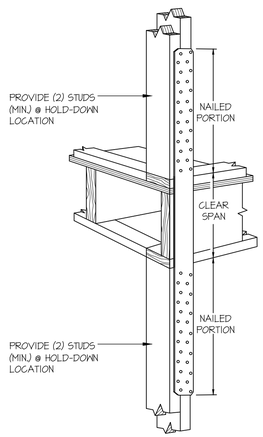
SECTION A-A THROUGH PIER



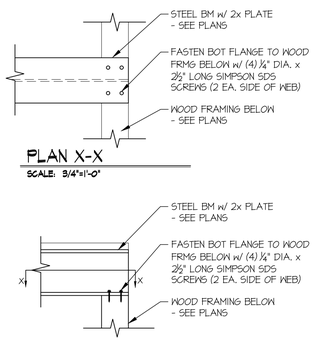
NOTE: ALL SHEATHABLE AREAS O EXTERIOR WALL SHALL BE FULLY SHEATHED WITH ½" PLYWOOD OR



PLAN VIEW OF CORNER DETAIL



A TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE
SIMPSON STRAP HD @ FLOOR FRAMING



B STL BM TO WOOD FRMG CONNECTION
SCALE: 3/4"=1'-0"

1 APA PORTAL FRAME DETAIL WITH HOLDOWNS
SCALE: N.T.S. SEE APA FORM No. TT-100H FOR MORE INFO.

seal:

NICHOLAS J. MARTINOTH — STATE OF WASHINGTON — 56478 — REGISTERED PROFESSIONAL ENGINEER

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CADE HILL HOMES

STRUCTURAL DETAILS

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sheet: SD-4