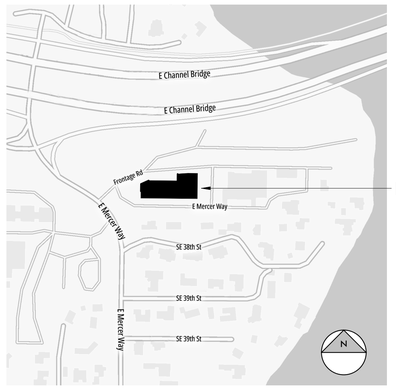
# BARNABIE POINT PROJECT

## VICINITY MAP

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## PROJECT DATA

PROJECT NAME AND DESCRIPTION
BARNABIE POINT PROJECT
3-STORY MIXED-USE BUILDING HOUSING A PRESCHOOL-8 PRIVATE SCHOOL AND COMMUNITY MULTIPURPOSE SPACE ON LEVELS 0, 1 AND 2; AND COMMUNITY OFFICE RENTAL SPACE ON LEVELS 2 AND 3.

FILE NUMBER
CUP24-001

OWNER
HERZL-NER-TAMID CONSERVATIVE CONGREGATION

ADDRESS
3700 E MERCER WAY
MERCER ISLAND, WA 98040

ZONING DESIGNATION
B, R-9.6

LEGAL DESCRIPTION
PARCEL A: (APN 082405-9045-07)
THAT PORTION OF GOVERNMENT LOT 11, SECTION 8, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON; TOGETHER WITH THAT PORTION OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT THE INTERSECTION OF THE WEST LINE OF GOVERNMENT LOT 11 WITH THE NORTH LINE OF DOYLE-HANSEN ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 75 OF PLATS, PAGE 24, RECORDS OF KING COUNTY, WASHINGTON;
THENCE SOUTH 89°09'34" EAST SLONG THE NORTH OF SAID DOYLE-HANSEN ADDITION, A DISTANCE OF 253.49 FEET TO THE WEST LINE OF LOT 7 OF CHANNEL CREST, ACCORDING TO THE PLAT THEREOF RECORDED IN COLUME 72 OF PLATS, PAGE 63, RECORDS OF KING COUNTY, WASHINGTON;
THENCE NORTH 01°12'29" EAST ALONG SAID WEST LINE, A DISTANCE OF 111.48 FEET TO THE SOUTH LINE OF TRACT "A" OF SAID CHANNEL CREST,
THENCE SOUTH 85°39'49" WEST ALONG SAID SOUTH LINE 173.15 FEET TO SOUTHEASTERLY LINE OF LAND CONVEYED TO STATE OF WASHINGTON TOLL BRIDGE AUTHORITY UNDER RECORDING NO. 3032009;
THENCE SOUTH 65°24'55" WEST ALONG SOUTHEASTERLY LINE TO THE EASTERLY MARGIN OF EAST MERCER WAY, AS CONVEYED TO KING COUNTY UNDER RECORDING NO. 923897;
THENCE SOUTH 01°02'29" WEST TO THE NORTH LINE OF SAID DOYLE-HANSEN ADDITION;
THENCE SOUTH 89°09'34" EAST ALONG SAID NORTH LINE 70.61FEET TO THE POINT OF BEGINNING.

PARCEL B: (APN 210700-0010-06)
LOTS 1 THROUGH 5, INCLUSIVE, DOYLE-HANSEN ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 75 OF PLATS, PAGE 24, RECORDS OF KING COUNTY, WASHINGTON.

PARCEL C: (APN 151560-0010-06)
LOTS 1 THROUGH 7, INCLUSIVE, CHANNEL CREST, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 72 OF PLATS, PAGE 63, RECORDS OF KING COUNTY, WASHINGTON;

TOGETHER WITH AN UNDIVIDED 7/8THS INTEREST IN TRACT "A" OF SAID PLAT.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

ASSESSOR'S PARCEL NUMBER
0824059045, 1515600010, 2107000010, 151560TRCT

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| 2 | SURVEY PROVIDED FOR REFERENCE ONLY |
| 3 | SURVEY PROVIDED FOR REFERENCE ONLY |
| 4 | SURVEY PROVIDED FOR REFERENCE ONLY |
| 5 | SURVEY PROVIDED FOR REFERENCE ONLY |
| 6 | SURVEY PROVIDED FOR REFERENCE ONLY |
| 7 | SURVEY PROVIDED FOR REFERENCE ONLY |
| C0.00 | COVER SHEET |
| C0.10 | OVERALL SITE PLAN |
| C1.00 | OVERALL DEMO PLAN |
| C1.01 | DEMO PLAN |
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| S-404 | STEEL FRAMING DETAILS |
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| S-502 | COLD-FORMED STEEL FRAMING DETAILS |


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## SHEET INDEX


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SHEET COUNT: 227


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anjali grant design LLC


9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

BARNABIE POINT PROJECT
3700 E MERCER WAY

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

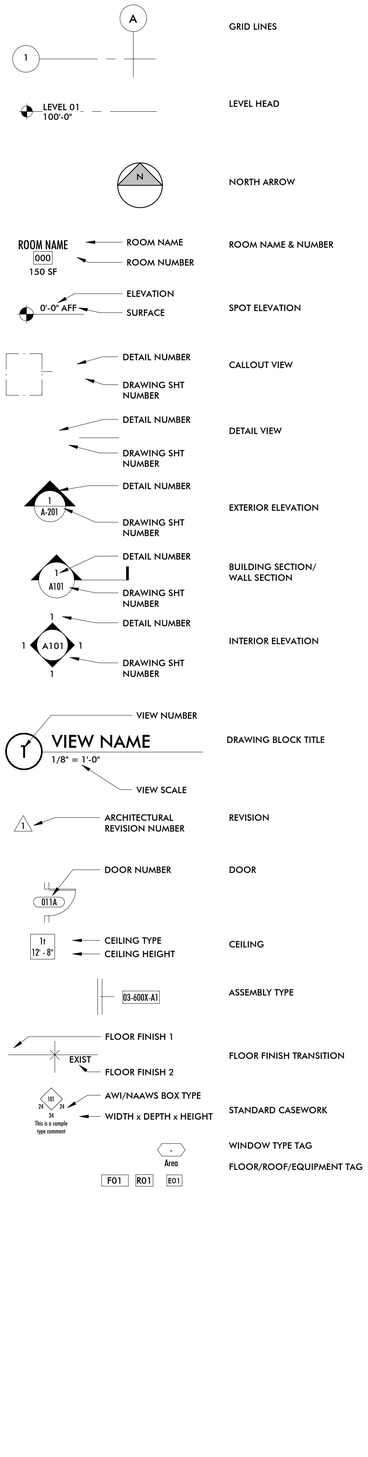
PROJECT:

SHEET INDEX, ABBREVIATIONS, SYMBOL LEGEND, GENERAL NOTES

A-001


6/4/2025 11:02:59 AM C:\Users\Elaine\Vatex\Documents\BP_PSB_R24_elaine.T60R.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

## SYMBOLS

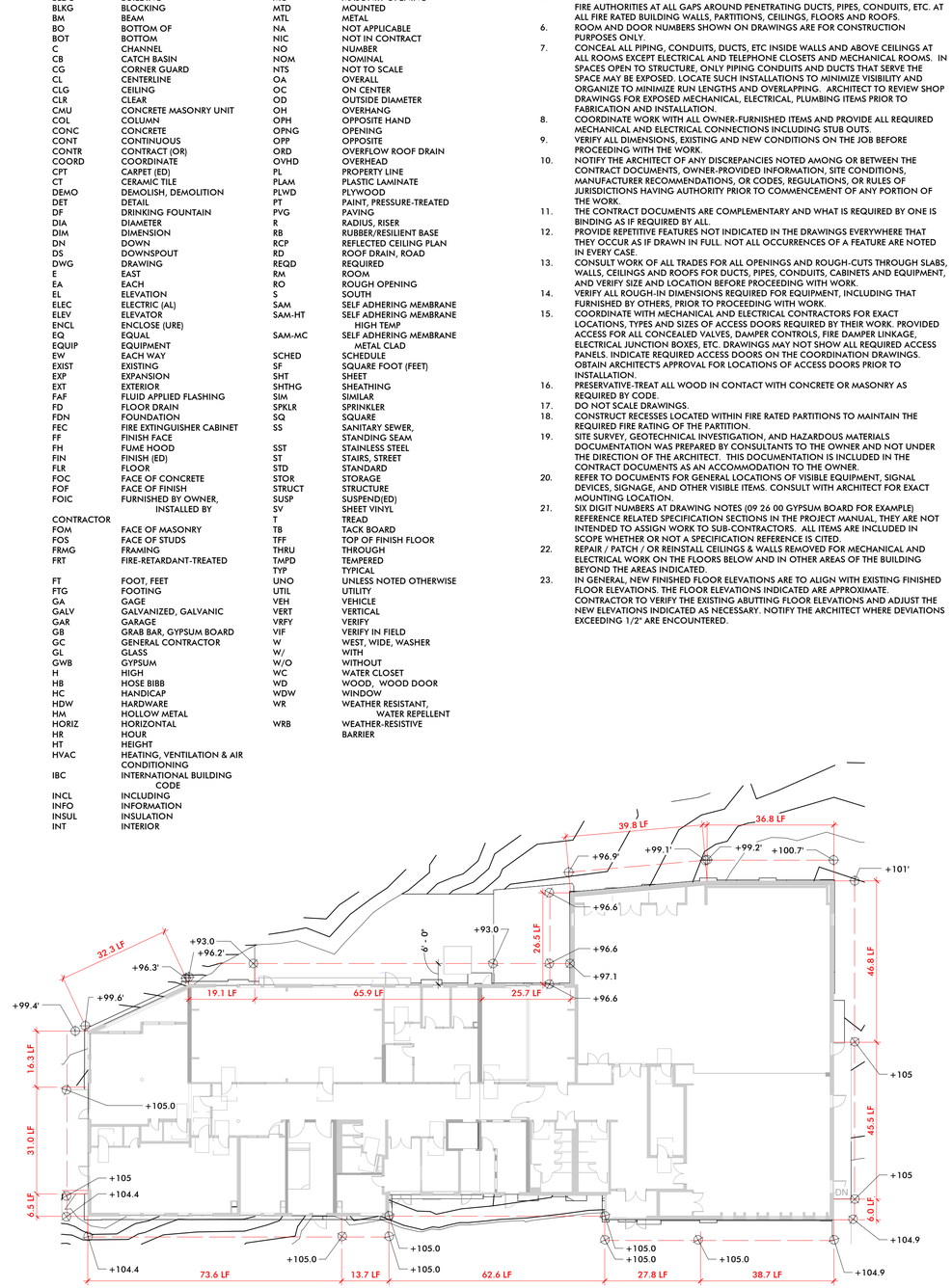



## ABBREVIATIONS

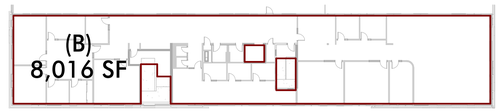
| | |
|---|---|
| AB | ANCHOR BOLT |
| ACT | ACOUSTICAL CEILING TILE |
| ADDL | ADDITIONAL |
| AFF | ABOVE FINISH FLOOR |
| AL | ALUMINUM |
| ANOD | ANODIZE(D) |
| APPROX | APPROXIMATE |
| ARCH | ARCHITECT |
| BD | BOARD |
| BITUM | BITUMINOUS |
| BLDG | BUILDING |
| BLKG | BLOCKING |
| BM | BEAM |
| BO | BOTTOM OF |
| BOT | BOTTOM |
| C | CHANNEL |
| CB | CATCH BASIN |
| CG | CORNER GUARD |
| CL | CENTERLINE |
| CLG | CEILING |
| CLR | CLEAR |
| CMU | CONCRETE MASONRY UNIT |
| COL | COLUMN |
| CONC | CONCRETE |
| CONT | CONTINUOUS |
| CONTR | CONTRACT (OR) |
| COORD | COORDINATE |
| CPT | CARPET (ED) |
| CT | CERAMIC TILE |
| DEMO | DEMOLISH, DEMOLITION |
| DET | DETAIL |
| DF | DRINKING FOUNTAIN |
| DIA | DIAMETER |
| DIM | DIMENSION |
| DN | DOWN |
| DS | DOWNSPOUT |
| DWG | DRAWING |
| E | EAST |
| EA | EACH |
| EL | ELEVATION |
| ELEC | ELECTRIC (AL) |
| ELEV | ELEVATOR |
| ENCL | ENCLOSE (URE) |
| EQ | EQUAL |
| EQUIP | EQUIPMENT |
| EW | EACH WAY |
| EXIST | EXISTING |
| EXP | EXPANSION |
| EXT | EXTERIOR |
| FAF | FLUID APPLIED FLASHING |
| FD | FLOOR DRAIN |
| FDN | FOUNDATION |
| FEC | FIRE EXTINGUISHER CABINET |
| FF | FINISH FACE |
| FH | FUME HOOD |
| FIN | FINISH (ED) |
| FLR | FLOOR |
| FOC | FACE OF CONCRETE |
| FOF | FACE OF FINISH |
| FOIC | FURNISHED BY OWNER, INSTALLED BY CONTRACTOR |
| FOM | FACE OF MASONRY |
| FOS | FACE OF STUDS |
| FRMG | FRAMING |
| FRT | FIRE-RETARDANT-TREATED |
| FT | FOOT, FEET |
| FTG | FOOTING |
| GA | GAGE |
| GALV | GALVANIZED, GALVANIC |
| GAR | GARAGE |
| GB | GRAB BAR, GYPSUM BOARD |
| GC | GENERAL CONTRACTOR |
| GL | GLASS |
| GWB | GYPSUM |
| H | HIGH |
| HB | HOSE BIBB |
| HC | HANDICAP |
| HDW | HARDWARE |
| HM | HOLLOW METAL |
| HORIZ | HORIZONTAL |
| HR | HOUR |
| HT | HEIGHT |
| HVAC | HEATING, VENTILATION & AIR CONDITIONING |
| IBC | INTERNATIONAL BUILDING CODE |
| INCL | INCLUDING |
| INFO | INFORMATION |
| INSUL | INSULATION |
| INT | INTERIOR |
| JAN | JANITOR |
| LAV | LAVATORY |
| MAS | MASONRY |
| MATL | MATERIAL |
| MAX | MAXIMUM |
| MECH | MECHANICAL |
| MFD | MANUFACTURED |
| MFR | MANUFACTURE (R) |
| MIN | MINIMUM, MINUTE |
| MISC | MISCELLANEOUS |
| MO | MASONRY OPENING |
| MTD | MOUNTED |
| MTL | METAL |
| NA | NOT APPLICABLE |
| NIC | NOT IN CONTRACT |
| NO | NUMBER |
| NOM | NOMINAL |
| NTS | NOT TO SCALE |
| OA | OVERALL |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER |
| OH | OVERHANG |
| OPH | OPPOSITE HAND |
| OPNG | OPENING |
| OPP | OPPOSITE |
| ORD | OVERFLOW ROOF DRAIN |
| OVHD | OVERHEAD |
| PL | PROPERTY LINE |
| PLAM | PLASTIC LAMINATE |
| PLWD | PLYWOOD |
| PT | PAINT, PRESSURE-TREATED |
| PVG | PAVING |
| R | RADIUS, RISER |
| RB | RUBBER/RESILIENT BASE |
| RCP | REFLECTED CEILING PLAN |
| RD | ROOF DRAIN, ROAD |
| REQD | REQUIRED |
| RM | ROOM |
| RO | ROUGH OPENING |
| S | SOUTH |
| SAM | SELF ADHERING MEMBRANE |
| SAM-HT | SELF ADHERING MEMBRANE HIGH TEMP |
| SAM-MC | SELF ADHERING MEMBRANE METAL CLAD |
| SCHED | SCHEDULE |
| SF | SQUARE FOOT (FEET) |
| SHT | SHEET |
| SHTHG | SHEATHING |
| SIM | SIMILAR |
| SPKLR | SPRINKLER |
| SQ | SQUARE |
| SS | SANITARY SEWER, STANDING SEAM |
| SST | STAINLESS STEEL |
| ST | STAIRS, STREET |
| STD | STANDARD |
| STOR | STORAGE |
| STRUCT | STRUCTURE |
| SUSP | SUSPEND(ED) |
| SV | SHEET VINYL |
| T | TREAD |
| TB | TACK BOARD |
| TFF | TOP OF FINISH FLOOR |
| THRU | THROUGH |
| TMPD | TEMPERED |
| TYP | TYPICAL |
| UNO | UNLESS NOTED OTHERWISE |
| UTIL | UTILITY |
| VEH | VEHICLE |
| VERT | VERTICAL |
| VRFY | VERIFY |
| VIF | VERIFY IN FIELD |
| W | WEST, WIDE, WASHER |
| W/ | WITH |
| W/O | WITHOUT |
| WC | WATER CLOSET |
| WD | WOOD, WOOD DOOR |
| WDW | WINDOW |
| WR | WEATHER RESISTANT, WATER REPELLENT |
| WRB | WEATHER-RESISTIVE BARRIER |

## GENERAL NOTES

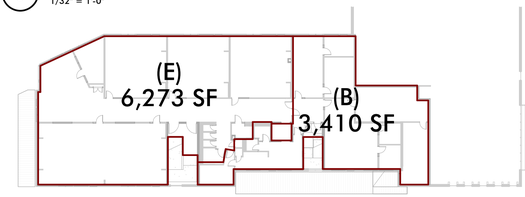
1. COMPLY WITH APPLICABLE CODES AND ORDINANCES IN FORCE AT TIME OF BUILDING PERMIT ISSUANCE.
2. READ, UNDERSTAND AND COMPLY WITH ALL APPLICABLE PROVISIONS OF THE CONSTRUCTION DOCUMENTS FOR THE PROJECT.
3. UNLESS OTHERWISE NOTED, PLAN DIMENSIONS SHOWN ARE TO THE FACE OF STUD AT NEW INTERIOR PARTITIONS; FACE OF WALL AT EXISTING WALLS.
4. PLACE DOORS NOT LOCATED BY DIMENSION ON PLANS SIX INCHES FROM FACE OF ADJOINING PARTITION TO HINGE EDGE OF DOOR OPENING. PROVIDE 18" MINIMUM CLEAR FROM FACE OF ADJOINING PARTITION OR OTHER OBSTRUCTION TO STRIKE JAMB EDGE OF DOOR OPENING, UNLESS OTHERWISE NOTED. NOTIFY ARCHITECT IF REQUIRED CLEARANCES ARE NOT AVAILABLE.
5. PROVIDE FIRE-RESISTANT CLOSURE MEETING THE REQUIREMENTS OF THE GOVERNING FIRE AUTHORITIES AT ALL GAPS AROUND PENETRATING DUCTS, PIPES, CONDUITS, ETC. AT ALL FIRE RATED BUILDING WALLS, PARTITIONS, CEILINGS, FLOORS AND ROOFS.
6. ROOM AND DOOR NUMBERS SHOWN ON DRAWINGS ARE FOR CONSTRUCTION PURPOSES ONLY.
7. CONCEAL ALL PIPING, CONDUITS, DUCTS, ETC INSIDE WALLS AND ABOVE CEILINGS AT ALL ROOMS EXCEPT ELECTRICAL AND TELEPHONE CLOSETS AND MECHANICAL ROOMS. IN SPACES OPEN TO STRUCTURE, ONLY PIPING CONDUITS AND DUCTS THAT SERVE THE SPACE MAY BE EXPOSED. LOCATE SUCH INSTALLATIONS TO MINIMIZE VISIBILITY AND ORGANIZE TO MINIMIZE RUN LENGTHS AND OVERLAPPING. ARCHITECT TO REVIEW SHOP DRAWINGS FOR EXPOSED MECHANICAL, ELECTRICAL, PLUMBING ITEMS PRIOR TO FABRICATION AND INSTALLATION.
8. COORDINATE WORK WITH ALL OWNER-FURNISHED ITEMS AND PROVIDE ALL REQUIRED MECHANICAL AND ELECTRICAL CONNECTIONS INCLUDING STUB OUTS.
9. VERIFY ALL DIMENSIONS, EXISTING AND NEW CONDITIONS ON THE JOB BEFORE PROCEEDING WITH THE WORK.
10. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES NOTED AMONG OR BETWEEN THE CONTRACT DOCUMENTS, OWNER-PROVIDED INFORMATION, SITE CONDITIONS, MANUFACTURER RECOMMENDATIONS, OR CODES, REGULATIONS, OR RULES OF JURISDICTIONS HAVING AUTHORITY PRIOR TO COMMENCEMENT OF ANY PORTION OF THE WORK.
11. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE IS BINDING AS IF REQUIRED BY ALL.
12. PROVIDE REPETITIVE FEATURES NOT INDICATED IN THE DRAWINGS EVERYWHERE THAT THEY OCCUR AS IF DRAWN IN FULL. NOT ALL OCCURRENCES OF A FEATURE ARE NOTED IN EVERY CASE.
13. CONSULT WORK OF ALL TRADES FOR ALL OPENINGS AND ROUGH-CUTS THROUGH SLABS, WALLS, CEILINGS AND ROOFS FOR DUCTS, PIPES, CONDUITS, CABINETS AND EQUIPMENT, AND VERIFY SIZE AND LOCATION BEFORE PROCEEDING WITH WORK.
14. VERIFY ALL ROUGH-IN DIMENSIONS REQUIRED FOR EQUIPMENT, INCLUDING THAT FURNISHED BY OTHERS, PRIOR TO PROCEEDING WITH WORK.
15. COORDINATE WITH MECHANICAL AND ELECTRICAL CONTRACTORS FOR EXACT LOCATIONS, TYPES AND SIZES OF ACCESS DOORS REQUIRED BY THEIR WORK. PROVIDED ACCESS FOR ALL CONCEALED VALVES, DAMPER CONTROLS, FIRE DAMPER LINKAGE, ELECTRICAL JUNCTION BOXES, ETC. DRAWINGS MAY NOT SHOW ALL REQUIRED ACCESS PANELS. INDICATE REQUIRED ACCESS DOORS ON THE COORDINATION DRAWINGS. OBTAIN ARCHITECTS APPROVAL FOR LOCATIONS OF ACCESS DOORS PRIOR TO INSTALLATION.
16. PRESERVATIVE-TREAT ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY AS REQUIRED BY CODE.
17. DO NOT SCALE DRAWINGS.
18. CONSTRUCT RECESSES LOCATED WITHIN FIRE RATED PARTITIONS TO MAINTAIN THE REQUIRED FIRE RATING OF THE PARTITION.
19. SITE SURVEY, GEOTECHNICAL INVESTIGATION, AND HAZARDOUS MATERIALS DOCUMENTATION WAS PREPARED BY CONSULTANTS TO THE OWNER AND NOT UNDER THE DIRECTION OF THE ARCHITECT. THIS DOCUMENTATION IS INCLUDED IN THE CONTRACT DOCUMENTS AS AN ACCOMMODATION TO THE OWNER.
20. REFER TO DOCUMENTS FOR GENERAL LOCATIONS OF VISIBLE EQUIPMENT, SIGNAL DEVICES, SIGNAGE, AND OTHER VISIBLE ITEMS. CONSULT WITH ARCHITECT FOR EXACT MOUNTING LOCATION.
21. SIX DIGIT NUMBERS AT DRAWING NOTES (09 26 00 GYPSUM BOARD FOR EXAMPLE) REFERENCE RELATED SPECIFICATION SECTIONS IN THE PROJECT MANUAL, THEY ARE NOT INTENDED TO ASSIGN WORK TO SUB-CONTRACTORS. ALL ITEMS ARE INCLUDED IN SCOPE WHETHER OR NOT A SPECIFICATION REFERENCE IS CITED.
22. REPAIR / PATCH / OR REINSTALL CEILINGS & WALLS REMOVED FOR MECHANICAL AND ELECTRICAL WORK ON THE FLOORS BELOW AND IN OTHER AREAS OF THE BUILDING BEYOND THE AREAS INDICATED.
23. IN GENERAL, NEW FINISHED FLOOR ELEVATIONS ARE TO ALIGN WITH EXISTING FINISHED FLOOR ELEVATIONS. THE FLOOR ELEVATIONS INDICATED ARE APPROXIMATE. CONTRACTOR TO VERIFY THE EXISTING ABUTTING FLOOR ELEVATIONS AND ADJUST THE NEW ELEVATIONS INDICATED AS NECESSARY. NOTIFY THE ARCHITECT WHERE DEVIATIONS EXCEEDING 1/2" ARE ENCOUNTERED.



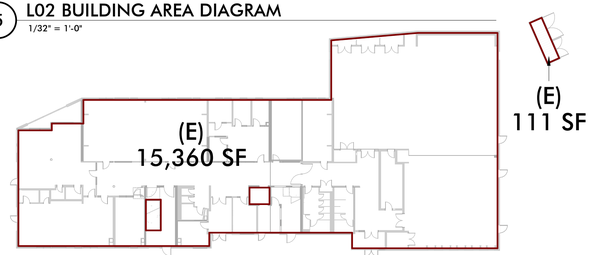

1 AVERAGE GRADE PLANE DIAGRAM
1" = 20'-0"



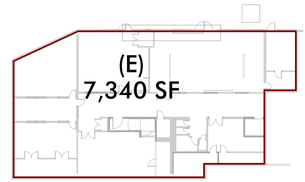

6 L03 BUILDING AREA DIAGRAM
1/32" = 1'-0"




5 L02 BUILDING AREA DIAGRAM
1/32" = 1'-0"




4 L01 BUILDING AREA DIAGRAM
1/32" = 1'-0"




2 B01 BUILDING AREA DIAGRAM
1/32" = 1'-0"

| | | SURVEY ELEVATION | | | | |
|---|---|---|---|---|---|---|
| WALL LENGTH | | START | END | AVERAGE | LENGTH X ELEVATION | |
| 32.3 | LF | 99.6 | 96.3 | 98 | 3163.8 | |
| 19.1 | LF | 96.2 | 93 | 94.6 | 1806.9 | |
| 69.1 | LF | 93 | 93 | 93 | 6426.3 | |
| 22.5 | LF | 93 | 98 | 95.5 | 2148.8 | |
| 26.5 | LF | 96.6 | 96.6 | 96.6 | 2559.9 | |
| 39.8 | LF | 96.9 | 99.1 | 98 | 3899.4 | |
| 36.8 | LF | 99.2 | 100.7 | 100 | 3678.5 | |
| 46.8 | LF | 101 | 105 | 103 | 4821.1 | |
| 38.7 | LF | 104.9 | 105 | 105 | 4061.6 | |
| 27.8 | LF | 105 | 105 | 105 | 2919 | |
| 6.1 | LF | 105 | 105 | 105 | 640.5 | |
| 62.6 | LF | 105 | 105 | 105 | 6573 | |
| 6.1 | LF | 105 | 105 | 105 | 640.5 | |
| 13.7 | LF | 105 | 105 | 105 | 1438.5 | |
| 73.6 | LF | 105 | 104.4 | 104.7 | 7705.9 | |
| 6.5 | LF | 104.4 | 105 | 104.7 | 680.6 | |
| 31 | LF | 105 | 105 | 105 | 3255 | |
| 16.3 | LF | 101 | 99.4 | 100.2 | 1633.3 | |
| 626.8 | PERIMETER | | | | 63459.6 | TOTAL |
| | | | | | | |
| 101.2 | | AVERAGE GRADE PLANE = TOTAL LENGTH X ELEVATION/PERIMETER | | | | |

| GROSS FLOOR AREA | | |
|---|---|---|
| Level | Area | Comments |
| L02 | 3,410 SF | (B) |
| L03 | 8,016 SF | (B) |
| | 11,426 SF | |
| B01 | 7,340 SF | (E) |
| L01 | 15,472 SF | (E) |
| L02 | 6,273 SF | (E) |
| | 29,086 SF | |
| | 40,511 SF | |

[BE] FLOOR AREA, GROSS. The floor area within the inside perimeter of the exterior walls of the building under consideration, exclusive of vent shafts and courts, without deduction for corridors, stairways, ramps, closets, the thickness of interior walls, columns or other features. The floor area of a building, or portion thereof, not provided with surrounding exterior walls shall be the usable area under the horizontal projection of the roof or floor above. The gross floor area shall not include shafts with no openings or interior courts.

[BG] GRADE PLANE. A reference plane representing the average of finished ground level adjoining the building at exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line or, where the lot line is more than 6 feet from the building, between the building and a point 6 feet from the building.

[BG] STORY ABOVE GRADE PLANE. Any story having its finished floor surface entirely above grade plane, or in which the finished surface of the floor next above is:

1. More than 6 feet above grade plane; or
2. More than 12 feet above the finished ground level at any point.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anjali grant design LLC

9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

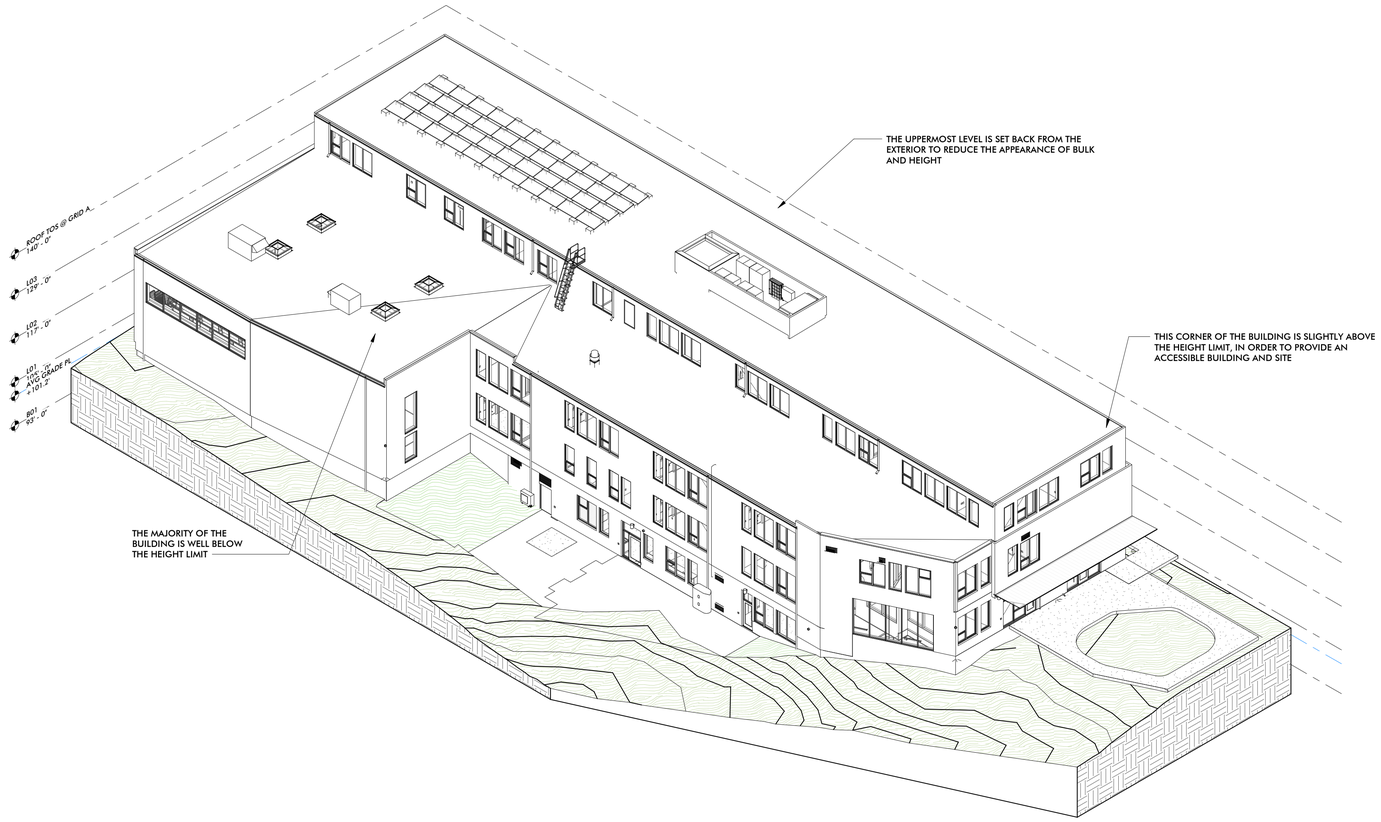
| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

GENERAL INFORMATION, GROSS FLOOR AREA AND GRADE PLANE DIAGRAMS

A-002


6/4/2025 11:00:02 AM C:\Users\Eamay\Desktop\Documents\BPP_PSB_R24_eamayTEMP.rvt
© ANJALI GRANT DESIGN LLC OMGHAA, SHEET SIZE: 24" X 36"




## 6 HEIGHT DIAGRAM

| ORIENTATION | FAÇADE LENGTH | | START | END | AVERAGE HEIGHT | | WEIGHTING FACTOR | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 24 | LF | | | 28.3 | FT | 0.04 | 1.1 | | |
| NORTH | 9.5 | LF | 28.3 | 29.6 | 28.95 | FT | 0.02 | 0.4 | | |
| NORTH | 29 | LF | 29.6 | 31.9 | 30.75 | FT | 0.05 | 1.5 | | |
| NORTH | 12.8 | LF | | | 31.9 | FT | 0.02 | 0.7 | | |
| NORTH | 23.4 | LF | 31.9 | 36.9 | 34.4 | FT | 0.04 | 1.3 | | |
| NORTH | 69.3 | LF | | | 36.9 | FT | 0.11 | 4.2 | | |
| NORTH | 19.1 | LF | 36.9 | 34.4 | 35.65 | FT | 0.03 | 1.1 | | |
| NORTHWEST | 24.3 | LF | 33.5 | 30.5 | 32 | FT | 0.04 | 1.3 | | |
| NORTHWEST | 8 | LF | | | 30.5 | FT | 0.01 | 0.4 | | |
| WEST | 26.5 | LF | 33.5 | 31 | 32.25 | FT | 0.04 | 1.4 | | |
| WEST | 12.4 | LF | 29.7 | 28.6 | 29.15 | FT | 0.02 | 0.6 | | |
| WEST | 2.9 | LF | 38.2 | 37.9 | 38.05 | FT | 0 | 0.2 | | |
| WEST | 31 | LF | 35.3 | 35.9 | 35.6 | FT | 0.05 | 1.8 | | |
| WEST | 1 | LF | 0 | 0 | 26.2 | FT | 0 | 0 | | |
| WEST | 7.5 | LF | 35.9 | 36.6 | 36.25 | FT | 0.01 | 0.4 | | |
| EAST | 41.4 | LF | 36 | 35.2 | 35.6 | FT | 0.07 | 2.4 | | |
| EAST | 9.2 | LF | | | 25.7 | FT | 0.01 | 0.4 | | |
| EAST | 46.8 | LF | 25.7 | 29.4 | 27.55 | FT | 0.08 | 2.1 | | |
| SOUTH | 64.2 | LF | 36.5 | 36 | 36.25 | FT | 0.1 | 3.8 | | |
| SOUTH | 152.2 | LF | | | 36 | FT | 0.25 | 8.9 | | |
| | 614.5 | LF | | | | | | 33.9 | FT | HEIGHT AS A WEIGHTED AVERAGE |

19.04.050 D. BUILDING HEIGHT LIMIT. MAXIMUM ALLOWABLE BUILDING HEIGHT SHALL BE THE LESSER OF (1) THREE STORIES OR (2) 36 FEET, CALCULATED USING THE METHOD DESCRIBED IN MICC 19.11.030(A)(3).

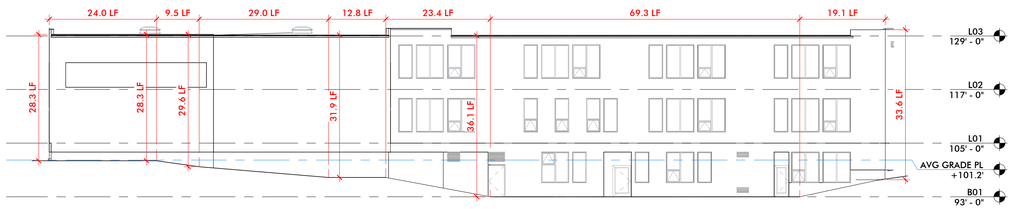
19.11.030 (A)(3) CALCULATION OF BUILDING HEIGHT

A. THE INTENT OF THE BUILDING HEIGHT CALCULATION IN THIS SECTION IS TO LIMIT THE VISUAL MASS OF A BUILDING SO THAT IT DOES NOT APPEAR TO EXCEED THE MAXIMUM HEIGHT LIMIT IN SUBSECTION (A)(1) OF THIS SECTION.

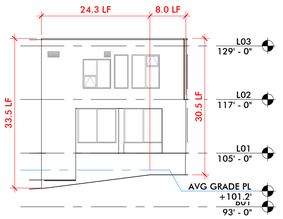
B. THE MAXIMUM ALLOWABLE BUILDING HEIGHT IN SUBSECTION (A)(1) OF THIS SECTION SHALL BE CALCULATED AS THE VERTICAL DISTANCE MEASURED FROM THE BASE OF A BUILDING FACADE TO THE HIGHEST POINT OF THE ROOF STRUCTURE EXCLUDING APPURTENANCES. THE BASE OF THE BUILDING FACADE SHALL BE MEASURED FROM THE ADJACENT PUBLIC SIDEWALK IF APPLICABLE, OR FROM THE LOWER OF EXISTING OR FINISHED GRADE ALONG BUILDING FACADES THAT ARE NOT ADJACENT TO A PUBLIC SIDEWALK. SEE FIGURE 4.

C. IF THE BASES OF THE OPPOSITE BUILDING FACADES ARE NOT AT APPROXIMATELY THE SAME ELEVATION, THEN THE BUILDING MUST BE CONFIGURED TO GO DOWN IN HEIGHT AS BETWEEN THE HIGHER AND LOWER FACADES IN A MANNER SIMILAR TO FIGURE 4 OR IN AN EQUIVALENT MANNER SUCH THAT THE AVERAGE OF THE BUILDING HEIGHTS CALCULATED BETWEEN THE FACADES IS APPROXIMATELY EQUAL TO OR LESS THAN THE MAXIMUM PERMITTED BUILDING HEIGHT.

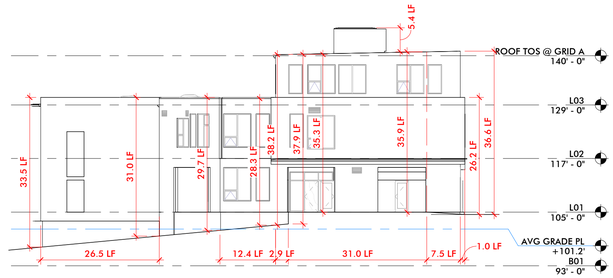
19.11.030 (A)(5).... IF NECESSARY, ROOFTOP APPURTENANCES MAY EXTEND UP TO TEN FEET ABOVE THE MAXIMUM BUILDING HEIGHT ALLOWED, PROVIDED THERE IS A FUNCTIONAL NEED FOR THE APPURTENANCE AND THAT FUNCTIONAL NEED CANNOT BE MET WITH AN APPURTENANCE OF A LESSER HEIGHT.



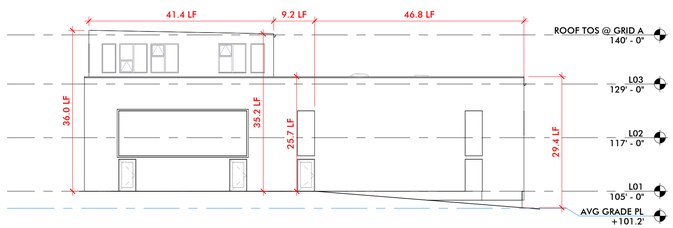

## 5 NORTH ELEVATION HEIGHT DIAGRAM
1/16" = 1'-0"




## 4 NW ELEVATION HEIGHT DIAGRAM
1/16" = 1'-0"




## 3 WEST ELEVATION HEIGHT DIAGRAM
1/16" = 1'-0"




## 2 EAST ELEVATION HEIGHT DIAGRAM
1/16" = 1'-0"




## 1 SOUTH ELEVATION HEIGHT DIAGRAM
1/16" = 1'-0"

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anjali grant design LLC

9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
# BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 BUILDING PERMIT |

PROJECT:

HEIGHT DIAGRAMS

A-003

6/4/2025 9:01:19 AM D:\REVIT LOCAL\BPP_PSB_R24_anjaliwillis.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

## BUILDING CODE REFERENCES

| Code Reference | Code Section | Code Excerpt and Commentary |
|---|---|---|
| CO | CODES USED | |
| WSBC 2021 | Definitions | GRADE PLANE. A reference plane representing the average of finished ground level adjoining the building at exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line or, where the lot line is more than 6 feet from the building, between the building and a point 6 feet from the building. |
| WSBC 2021 | 302.1 Occupancy Classification | Group A Assembly<br>Group B Business<br>Group E Educational |
| WSBC 2021 | 303.1.3 Associated With Group E Occupancies | A room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy. |
| Mercer Island TITLE 17 | Section 502.1 Amended — General Building Heights and Areas, General, Address Identification. | New and existing buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than six (6) inches high with a minimum stroke width of 1/2 inch. Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained. |
| WSBC 2021 | Table 504.3 Allowable Building Height in Feet Above Grade Plane | Occupancy Classification A, B, E, F, M, S, U<br>Sprinklered, Type IIB: 75 feet |
| WSBC 2021 | Table 504.4 Allowable Number of Stories Above Grade Plane | A-3 Occupancy: 3 stories (see 303.1.3, not considered a separate occupancy)<br>B Occupancy: 4 stories<br>E Occupancy: 3 stories |
| WSBC 2021 | Table 506.2 Allowable Area Factor | A-3 Occupancy: 28,500 sf (see 303.1.3, not considered a separate occupancy)<br>B Occupancy: 69,000 sf<br>E Occupancy: 43,500 sf |
| WSBC 2021 | TABLE 506.3.3 FRONTAGE INCREASE FACTOR | 75-100% of building perimeter has 30' or greater open space. |
| WSBC 2021 | 508.3.1 [Nonseparated] Occupancy Classification | Nonseparated occupancies shall be individually classified in accordance with Section 302.1. The requirements of this code shall apply to each portion of the building based on the occupancy classification of that space. In addition, the most restrictive provisions of Chapter 9 that apply to the nonseparated occupancies shall apply to the total nonseparated occupancy area. |
| WSBC 2021 | 508.3.2 Allowable Building Area, Height and Number of Stories | The allowable building area, height and number of stories of the building or portion thereof shall be based on the most restrictive allowances for the occupancy groups under consideration for the type of construction of the building in accordance with Section 503.1. |
| WSBC 2021 | Chapter 6 Types of Construction | Type IIB (noncombustible) |
| WSBC 2021 | 603.1 Allowable Materials | Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3:<br>2. Thermal and acoustical insulation, other than foam plastics, having a flame spread index of not more than 25.<br>3. Foam plastics in accordance with Chapter 26.<br>4. Roof coverings that have an A, B or C classification.<br>5. Interior floor finish and floor covering materials installed in accordance with Section 804.<br>6. Millwork such as doors, door frames, window sashes and frames.<br>7. Interior wall and ceiling finishes installed in accordance with Section 803.<br>8. Trim installed in accordance with Section 806.<br>10. Finish flooring installed in accordance with Section 805.<br>12. Stages and platforms constructed in accordance with Sections 410.2 and 410.3, respectively.<br>14. Blocking such as for handrails, millwork, cabinets and window and door frames. |
| WSBC 2021 | 704.3 Protection of the Primary Structural Frame Other Than Columns | Members of the primary structural frame other than columns that are required to have protection to achieve a fire-resistance rating and support more than two floors or one floor and roof, or support a load-bearing wall or a nonload-bearing wall more than two stories high, shall be provided individual encasement protection by protecting them on all sides for the full length, including connections to other structural members, with materials having the required fire-resistance rating.<br>Exception: Individual encasement protection on all sides shall be permitted on all exposed sides provided that the extent of protection is in accordance with the required fire-resistance rating, as determined in Section 703. |
| WSBC 2021 | 704.4.1 Light-Frame Construction | Studs, columns and boundary elements that are integral elements in walls of light-frame construction and are located entirely between the top and bottom plates or tracks shall be permitted to have required fire-resistance ratings provided by the membrane protection provided for the wall. |
| WSBC 2021 | 705.2.1 Types I and II Construction | Projections from walls of Type I or II construction shall be of noncombustible materials or combustible materials as allowed by Sections 705.2.3.1 and 705.2.4. |
| WSBC 2021 | TABLE 705.5 Fire-Resistance Rating Requirements for Exterior Walls Based on Fire Separation Distance | Construction Type IIB; fire separation distance of 10 feet or more;<br>Occupancy Groups A, B, E; 0 hours |
| WSBC 2021 | 707.3.1 Shaft Enclosures | The fire-resistance rating of the fire barrier separating building areas from a shaft shall comply with Section 713.4. |
| WSBC 2021 | 707.3.2 Interior Exit Stairway and Ramp Construction | The fire-resistance rating of the fire barrier separating building areas from an interior exit stairway or ramp shall comply with Section 1023.1. |
| WSBC 2021 | 707.5 Continuity | Fire barriers shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above and shall be securely attached thereto. Such fire barriers shall be continuous through concealed space, such as the space above a suspended ceiling. Joints and voids at intersections shall comply with Sections 707.8 and 707.9<br>Exceptions:<br>1. Shaft enclosures shall be permitted to terminate at a top enclosure complying with Section 713.12.<br>1. Interior exit stairway and ramp enclosures required by Section 1023 and exit access stairway and ramp enclosures required by Section 1019 shall be permitted to terminate at a top enclosure complying with Section 713.12. |
| WSBC 2021 | 707.5.1 Supporting Construction | The supporting construction for a fire barrier shall be protected to afford the required fire-resistance rating of the fire barrier supported. Hollow vertical spaces within a fire barrier shall be fireblocked in accordance with Section 718.2 at every floor level. |
| WSBC 2021 | 713.12 Enclosure at Top | The top of shaft enclosures shall comply with one of the following:<br>1. Extend to the underside of the roof sheathing, deck or slab of the building, and the roof assembly shall comply with the requirements for the type of construction as specified in Table 601. |

## BUILDING CODE REFERENCES

| Code Reference | Code Section | Code Excerpt and Commentary |
|---|---|---|
| WSBC 2021 | 713.14 Elevator, Dumbwaiter and Other Hoistways | Elevator, dumbwaiter and other hoistway enclosures shall be constructed in accordance with Sections 712 and 713, and Chapter 30. |
| Mercer Island TITLE 17 | IBC Section 903.2 Amended — Fire Protection Systems, Automatic Sprinkler Systems, Where Required. | Approved automatic sprinkler systems shall be installed in all newly constructed buildings and structures with a gross floor area of 5,000 square feet or greater and shall be provided in the locations described in Sections 903.2.1 through 903.2.12. |
| Mercer Island TITLE 17 | IBC Section 907.2 Amended — Where Required—New Buildings and Structures. | An approved fire alarm system installed in accordance with the provisions of this Code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23. For all newly constructed buildings with a gross floor area of 3,000 or greater square feet an approved manual and automatic fire alarm system shall be installed. The system shall provide occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this Code.<br>A minimum of one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or water-flow detection devices. Where other sections of this Code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.<br>Exceptions:<br>1. The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service. |
| WSBC 2021 | Section 905 Standpipe Systems | Class III standpipe systems shall be installed throughout buildings where any of the following conditions exist:<br>2. The floor level of the highest story is located more than 30 feet above the lowest level of fire department vehicle access.<br>Exceptions:<br>Class I standpipes are allowed in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. |
| WSBC 2021 | [F] 905.4 Location of Class I Standpipe Hose Connections | Class I standpipe hose connections shall be provided in all of the following locations:<br>1. In every required interior exit stairway, a hose connection shall be provided for each story above and below grade plane. Hose connections shall be located at the main floor landing unless otherwise approved by the fire code official.<br>2. On each side of the wall adjacent to the exit opening of a horizontal exit. Exception: Where floor areas adjacent to a horizontal exit are reachable from an interior exit stairway hose connection by a 30-foot hose stream from a nozzle attached to 100 feet of hose, a hose connection shall not be required at the horizontal exit.<br>5. Where the roof has a slope less than 4 units vertical in 12 units horizontal , a hose connection shall be located to serve the roof or at the highest landing of an interior exit stairway with access to the roof provided in accordance with Section 1011.12. |
| WSBC 2021 | [F] 907.2.3 Group E | Group E occupancies shall be provided with a manual fire alarm system that initiates the occupant notification signal utilizing one of the following:<br>1. An emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6; or<br>2. A system developed as part of a safe school plan adopted in accordance with RCW 28A.320.125 or developed as part of an emergency response system consistent with the provisions of RCW 28A.320.126. |
| WSBC 2021 | 1005.3.1 Stairways | Exception 1. For other than Group H and I-2 occupancies, the capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairways by a means of egress capacity factor of 0.2 inch per occupant in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2. |
| WSBC 2021 | 100.53.2 Other egress components | Exception 1. For other than Group H and I-2 occupancies, the capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.15 inch per occupant in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2. |
| WSBC 2021 | 1005.6 Egress Convergence | Where the means of egress from stories above and below converge at an intermediate level, the capacity of the means of egress from the point of convergence shall be not less than the largest minimum width or the sum of the required capacities for the stairways or ramps serving the two adjacent stories, whichever is larger. |
| WSBC 2021 | 1005.7.1 Doors | Doors, when fully opened, shall not reduce the required width by more than 7 inches. Doors in any position shall not reduce the required width by more than one-half. |
| WSBC 2021 | 1006.2.1.1 Three or More Exits or Exit Access Doorways | Three exits or exit access doorways shall be provided from any space with an occupant load of 501 to 1,000. Four exits or exit access doorways shall be provided from any space with an occupant load greater than 1,000. |
| WSBC 2021 | 1006.3.4 Single Exits | A single exit or access to a single exit shall be permitted from any story or occupied roof where one of the following conditions exists:<br>1. The occupant load, number of dwelling units and exit access travel distance within the portion of the building served by the single exit do not exceed the values in Table 1006.3.4(1) or 1006.3.4(2).<br>2. Rooms, areas and spaces complying with Section 1006.2.1 with exits that discharge directly to the exterior at the level of exit discharge, are permitted to have one exit or access to a single exit. |
| WSBC 2021 | TABLE 1006.3.4(2) | STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES [than R-2]<br>First story above or below grade plane, occupancy B/E: 49 max occ load per story<br>First story above or below grade plane, occupancy S: 29 max occ load per story<br>Third story above grade plane and higher - Not Permitted |
| WSBC 2021 | 1007.1.1 Two Exits or Exit Access Doorways | 1007.1.1 Two Exits or Exit Access Doorways<br>Where two exits, exit access doorways, exit access stairways or ramps, or any combination thereof, are required from any portion of the exit access, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between them. Interlocking or scissor stairways shall be counted as one exit stairway.<br>Exception 2. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance shall be not less than one-third of the length of the maximum overall diagonal dimension of the area served. |
| WSBC 2021 | 1007.1.2 Three or More Exits or Exit Access Doorways | Where access to three or more exits is required, not less than two exit or exit access doorways shall be arranged in accordance with the provisions of Section 1007.1.1. Additional required exit or exit access doorways shall be arranged a reasonable distance apart so that if one becomes blocked, the others will be available. |

## BUILDING CODE REFERENCES

| Code Reference | Code Section | Code Excerpt and Commentary |
|---|---|---|
| WSBC 2021 | 1007.1.3.1 Three or More Exit Access Stairways or Ramps | Where more than two exit access stairways or ramps provide the required means of egress, not less than two shall be arranged in accordance with Section 1007.1.3. |
| WSBC 2021 | 1009.1 Accessible Means of Egress Required | Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required by Section 1006.2 or 1006.3 from any accessible space, each accessible portion of the space shall be served by not less than two accessible means of egress. |
| WSBC 2021 | 1009.2.1 Elevators Required | In buildings where a required accessible floor or occupied roof is four or more stories above or below a level of exit discharge, not less than one required accessible means of egress shall be an elevator complying with Section 1009.4. (Not applicable.) |
| WSBC 2021 | 1009.2 Continuity and Components | Each required accessible means of egress shall be continuous to a public way and shall consist of one or more of the following components:<br>1. Accessible routes complying with Section 1104.<br>2. Interior exit stairways complying with Sections 1009.3 and 1023. |
| WSBC 2021 | 1009.3.2 Stairway Width | Stairways shall have a clear width of 48 inches minimum between handrails. Exceptions: 1. The clear width of 48 inches between handrails is not required in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2. |
| WSBC 2021 | 1009.3.3 Area of Refuge | Stairways shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from an area of refuge complying with Section 1009.6.<br>Exceptions: 2. Areas of refuge are not required at stairways in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2. |
| WSBC 2021 | 1011.2 Width and Capacity | The required capacity of stairways shall be determined as specified in Section 1005.1, but the minimum width shall be not less than 44 inches. Exceptions: 1. Stairways serving an occupant load of less than 50 shall have a width of not less than 36 inches. |
| WSBC 2021 | 1011.6 Stairway Landings | The width of landings, measured perpendicularly to the direction of travel, shall be not less than the width of stairways served. Every landing shall have a minimum depth, measured parallel to the direction of travel, equal to the width of the stairway or 48 inches, whichever is less. Doors opening onto a landing shall not reduce the landing to less than one-half the required width. When fully open, the door shall not project more than 7 inches into the required width of a landing. |
| WSBC 2021 | 1011.7.3 Enclosures Under Interior Stairways | The walls and soffits within enclosed usable spaces under enclosed and unenclosed stairways shall be protected by 1-hour fire-resistance-rated construction or the fire-resistance rating of the stairway enclosure, whichever is greater. Access to the enclosed space shall not be directly from within the stairway enclosure. |
| WSBC 2021 | 1014.6 Handrail Extensions | Handrails shall return to a wall, guard or the walking surface or shall be continuous to the handrail of an adjacent flight of stairs or ramp run. Where handrails are not continuous between flights, the handrails shall extend horizontally not less than 12 inches beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. |
| WSBC 2021 | 1013.1 Where Required | Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. The path of egress travel to exits and within exits shall be marked by readily visible exit signs to clearly indicate the direction of egress travel in cases where the exit or the path of egress travel is not immediately visible to the occupants. Intervening means of egress doors within exits shall be marked by exit signs. Exit sign placement shall be such that any point in an exit access corridor or exit passageway is within 100 feet or the listed viewing distance of the sign, whichever is less, from the nearest visible exit sign.<br>Exceptions: 1. Exit signs are not required in rooms or areas that require only one exit or exit access. |
| WSBC 2021 | 1016.2 Egress Through Intervening Spaces | Egress through intervening spaces shall comply with this section.<br>2. Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas and the area served are accessory to one or the other, are not a Group H occupancy and provide a discernible path of egress travel to an exit.<br>5. Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes. |
| WSBC 2021 | 1017.2 [Exit Access] Limitations | Exit access travel distance shall not exceed the values given in Table 1017.2.<br>Occupancy A, E, F-1, M, R, S-1 - 250 feet with sprinkler system<br>Occupancy B - 300 feet with sprinkler system |
| WSBC 2021 | 1020.2 Construction | Corridors shall be fire-resistance rated in accordance with Table 1020.2. The corridor walls required to be fire-resistance rated shall comply with Section 708 for fire partitions.<br>Occupancy A, B, E, F, M, S, U - 0 hours required fire-resistance rating with sprinkler system |
| WSBC 2021 | 1023.1 General | Interior exit stairways and ramps serving as an exit component in a means of egress system shall comply with the requirements of this section. Interior exit stairways and ramps shall be enclosed and lead directly to the exterior of the building or shall be extended to the exterior of the building with an exit passageway conforming to the requirements of Section 1024, except as permitted in Section 1028.2. An interior exit stairway or ramp shall not be used for any purpose other than as a means of egress and a circulation path. |
| WSBC 2021 | 1023.2 Construction | Enclosures for interior exit stairways and ramps shall be constructed as fire barriers in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both. Interior exit stairway and ramp enclosures shall have a fire-resistance rating of not less than 2 hours where connecting four stories or more and not less than 1 hour where connecting less than four stories. The number of stories connected by the interior exit stairways or ramps shall include any basements, but not any mezzanines. |
| WSBC 2021 | 1023.5 Penetrations | Penetrations into or through interior exit stairways and ramps are prohibited except for the following:<br>1. Equipment and ductwork necessary for independent ventilation or pressurization.<br>2. Fire protection systems.<br>3. Security systems.<br>4. Two-way communication systems.<br>5. Electrical raceway for fire department communication systems.<br>6. Electrical raceway serving the interior exit stairway and ramp and terminating at a steel box not exceeding 16 square inches (0.010 m2).<br>7. Structural elements supporting the interior exit stairway or ramp or enclosure, such as beams or joists.<br>Such penetrations shall be protected in accordance with Section 714. There shall not be penetrations or communication openings, whether protected or not, between adjacent interior exit stairways and ramps.<br>Exception: Membrane penetrations shall be permitted on the outside of the interior exit stairway and ramp. Such penetrations shall be protected in accordance with Section 714.4.2. |
| WSBC 2021 | 1023.7 Interior Exit Stairway and Ramp Exterior Walls | Exterior walls of the interior exit stairway or ramp shall comply with the requirements of Section 705 for exterior walls. |
| WSBC 2021 | 1023.8 Barrier at Level of Exit Discharge | An interior exit stairway and ramp shall not continue below its level of exit discharge unless an approved barrier is provided at the level of exit discharge to prevent persons from unintentionally continuing into levels below. Directional exit signs shall be provided as specified in Section 1013. |
| WSBC 2021 | 1025.2 Markings Within Exit Components | Egress path markings shall be provided in interior exit stairways, interior exit ramps and exit passageways, in accordance with Sections 1025.2.1 through 1025.2.6.3. |

## BUILDING CODE REFERENCES

| Code Reference | Code Section | Code Excerpt and Commentary |
|---|---|---|
| WSBC 2021 | 1030.1 General | A room or space used for assembly purposes that contains seats, tables, displays, equipment or other material shall comply with this section. |
| WSBC 2021 | 1030.1.1 Bleachers | Bleachers, grandstands and folding and telescopic seating, that are not building elements, shall comply with ICC 300. |
| WSBC 2021 | 1030.3 Assembly Other Exits | In addition to having access to a main exit, each level in a building used for assembly purposes having an occupant load greater than 300 and provided with a main exit, shall be provided with additional means of egress that shall provide an egress capacity for not less than one-half of the total occupant load served by that level and shall comply with Section 1007.1. In a building used for assembly purposes where there is not a well-defined main exit or where multiple main exits are provided, exits for each level shall be permitted to be distributed around the perimeter of the building, provided that the total width of egress is not less than 100 percent of the required width. |
| WSBC 2021 | 1030.5 Interior Balcony and Gallery Means of Egress | For balconies, galleries or press boxes having a seating capacity of 50 or more located in a building, room or space used for assembly purposes, not less than two means of egress shall be provided, with one from each side of every balcony, gallery or press box. |
| WSBC 2021 | 1103.2.2 Employee Work Areas | Spaces and elements within employee work areas shall only be required to comply with Sections 907.5.2.3.1, 1009 and 1104.3.1 and shall be designed and constructed so that individuals with disabilities can approach, enter and exit the work area. Work areas, or portions of work areas, other than raised courtroom stations in accordance with Section 1109.4.1.4, that are less than 300 square feet in area and located 7 inches or more above or below the ground or finished floor where the change in elevation is essential to the function of the space shall be exempt from all requirements. |
| WSBC 2021 | 1104.1 Site Arrival Points | At least one accessible route within the site shall be provided from public transportation stops, accessible parking, accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served. |
| WSBC 2021 | 1104.2 Within a Site | At least one accessible route shall connect accessible buildings, accessible facilities, accessible elements and accessible spaces that are on the same site.<br>Exceptions:<br>1. An accessible route is not required between accessible buildings, accessible facilities, accessible elements and accessible spaces that have, as the only means of access between them, a vehicular way not providing for pedestrian access.<br>2. An accessible route to recreational facilities shall only be required to the extent specified in Section 1111. |
| WSBC 2021 | 1104.3.1 Employee Work Areas | Common use circulation paths, located within employee work areas that are less than 1,000 sf in size and defined by permanently installed partitions, counters, casework or furnishings, shall not be required to be accessible routes. |
| WSBC 2021 | 1104.4 Multistory Buildings and Facilities | At least one accessible route shall connect each accessible story, mezzanine and occupied roofs in multilevel buildings and facilities.<br>Exceptions:<br>1. An accessible route is not required to stories, mezzanines and occupied roofs that have an aggregate area of not more than 3,000 square feet and are located above and below accessible levels. |
| WSBC 2021 | 1106.2 Required | Where parking is provided, accessible parking spaces shall be provided in compliance with Table 1106.2, except as required by Sections 1106.3 through 1106.5. Where more than one parking facility is provided on a site, the number of parking spaces required to be accessible shall be calculated separately for each parking facility. |
| | | 43 parking spaces are required per 19.04.040 16.D. Parking is shared. Two accessible parking spaces are required; 3 are provided. |
| WSBC 2021 | 1106.6 Van Spaces | For every six or fraction of six accessible parking spaces, at least one shall be a van-accessible parking space. |
| WSBC 2021 | 1110.2 Toilet and Bathing Facilities | Each toilet room and bathing room shall be accessible. Exception 3. Where multiple single-user all-gender toilet rooms or bathing rooms are clustered at a single location, at least 50 percent shall be accessible. |
| WSBC 2021 | TABLE 1109.2.2.1 ACCESSIBLE WHEELCHAIR SPACES | Seating capacity 101-300: 5 wheelchair spaces. |
| WSBC 2022 | 1109.2.3 Companion Seats | At least one companion seat shall be provided for each wheelchair space required |
| WSBC 2023 | 1109.2.7 Assistive Listening Systems | Each building, room or space used for assembly purposes where audible communications are integral to the use of the space shall have an assistive listening system. |
| Mercer Island TITLE 17 | IFC Section 503 Amended — Fire Apparatus Access Roads. | Fire apparatus access roads shall be provided and maintained in accordance with Sections 503.1.1 through 503.1.3 and/or local street, road and access standards as determined by the fire code official.<br>503.1.1 Buildings and facilities. Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.<br>Exception: The fire code official is authorized to increase the dimension of 150 feet where:<br>1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.<br>2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.<br>503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, exclusive of shoulders, except for approved security gates in accordance with Appendix D Section D103.5, and an unobstructed vertical clearance of not less than 13 feet 6 inches. |
| Mercer Island TITLE 17 | IFC Section 507.5.1 Amended — Fire Hydrant Systems, Where Required. | Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 150 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.<br>Exception:<br>For buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2, or 903.3.1.3, the distance requirement shall be 600 feet. |
| Mercer Island TITLE 17 | IFC Section 507.5.1.1 Amended — Hydrant for Standpipe Systems. | 507.5.1.1 Hydrant for standpipe and fire sprinkler systems. Buildings equipped with a standpipe System installed in accordance with Section 905 or a fire sprinkler system installed in accordance with Section 903 shall have a fire hydrant within 15 feet of the fire department connections.<br>Exception: The distance shall be permitted to exceed 15 feet where approved by the fire code official. |
| Mercer Island TITLE 17 | IFC Section 510 Amended — Emergency Responder Radio Coverage. | 510.1 Emergency responder radio coverage in new buildings. Approved radio coverage for emergency responders within the building meeting any of the following conditions:<br>1. High rise buildings; (does not apply)<br>2. The total building area is 50,000 square feet or more; (does not apply)<br>3. The total basement area is 10,000 square feet or more; (does not apply) or<br>4. Buildings or structures where the Fire or Police Chief determined that in-building radio coverage is critical because of its unique design, location, or occupancy. |

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anjali grant design LLC

9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

BUILDING CODE NOTES

A-004

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© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

| PLUMBING COUNTS PER CHAPTER 29 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PROGRAM SPACE | AREA | OCC LOAD | | 1/2 OCC LOAD | TOILETS | | | | | | LAVS | | | | | |
| | | | | | male | | female | | all-gender | | male | | female | | all-gender | |
| | | | | | REQ | PROV | REQ | PROV | REQ | PROV | REQ | PROV | REQ | PROV | REQ | PROV |
| Multipurpose Room | | 747 | per A-004 | 374 | 2.99 | | 5.75 | | | | 1.87 | | 1.87 | | | |
| Kitchen | | 2 | per A-004 | 1 | 0.01 | | 0.01 | | | | 0.005 | | 0.... | | | |
| Total | | | | | 4 | 4 | 6 | 6 | | | 2 | 2 | 2 | 3 | | |
| | | | | | | | | | | | | | | | | |
| Group E Gross Area per A-003 | 29086 | 290.86 | 100 gsf/student | 145.43 | 4.16 | | 5.82 | | | | 1.71 | | 2.91 | | | |
| Total | | | | | | | | | 10 | 10 | | | | | 5 | 10 |
| | | | | | | | | | | | | | | | | |
| Group E staff areas | | 20 | per A-004 | | | | | | 1 | 2 | | | | | 1 | 2 |
| Group B | | 78 | per A-004 | | | | | | 3 | 6 | | | | | 2 | 6 |
| | | | | | | | | | | | | | | | | |

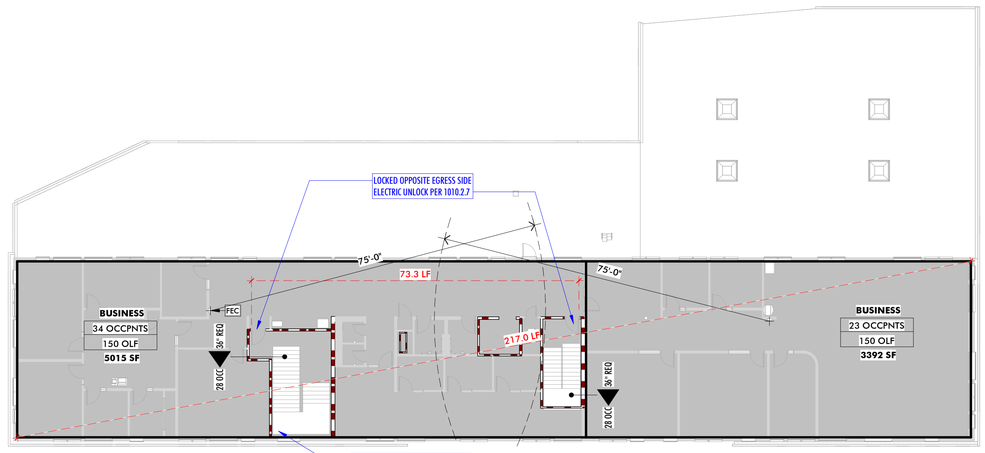
| OCCUPANT LOAD | | | |
|---|---|---|---|
| FUNCTION OF SPACE | AREA | OLF | OCCUPANT LOAD |
| B01 | | | |
| BUSINESS | 1,655 SF | 150 | 11 |
| CLASSRM-VOC | 836 SF | 50 | 17 |
| CLASSRM-VOC | 1,393 SF | 50 | 28 |
| STOR/MECH | 1,415 SF | 300 | 5 |
| STOR/MECH | 352 SF | 300 | 2 |
| | | | 63 |
| L01 | | | |
| ASSEMBLY | 5,228 SF | 7 | 747 |
| BUSINESS | 751 SF | 150 | 5 |
| BUSINESS | 162 SF | 150 | 2 |
| BUSINESS | 156 SF | 150 | 2 |
| CHILD CARE/CLASSRM | 835 SF | 20 | 42 |
| CHILD CARE/CLASSRM | 844 SF | 20 | 43 |
| CLASSROOM | 749 SF | 20 | 38 |
| CLASSROOM | 1,521 SF | 20 | 76 |
| CLASSROOM | 291 SF | 20 | 15 |
| KITCHEN | 235 SF | 200 | 2 |
| STOR/MECH | 72 SF | 300 | 1 |
| STOR/MECH | 104 SF | 300 | 1 |
| STOR/MECH | 27 SF | 300 | 1 |
| STOR/MECH | 52 SF | 300 | 1 |
| | | | 976 |
| L02 | | | |
| ASSEMBLY | 715 SF | 15 | 48 |
| BUSINESS | 3,049 SF | 150 | 21 |
| CLASSROOM | 751 SF | 20 | 38 |
| CLASSROOM | 745 SF | 20 | 38 |
| CLASSROOM | 753 SF | 20 | 38 |
| CLASSROOM | 1,582 SF | 20 | 80 |
| CLASSROOM | 189 SF | 20 | 10 |
| STORE/ MECH | 484 SF | 300 | 2 |
| | | | 275 |
| L03 | | | |
| BUSINESS | 5,015 SF | 150 | 34 |
| BUSINESS | 3,392 SF | 150 | 23 |
| | | | 57 |
| Grand total | | | 1371 |

REQUIRED EGRESS WIDTH
DIRECTION OF REQUIRED EXIT
32" REQ / 36" PROV
20 OCC
NUMBER OF OCCUPANTS SERVED BY EXIT
NOMINAL SIZE OF DOOR OPENING

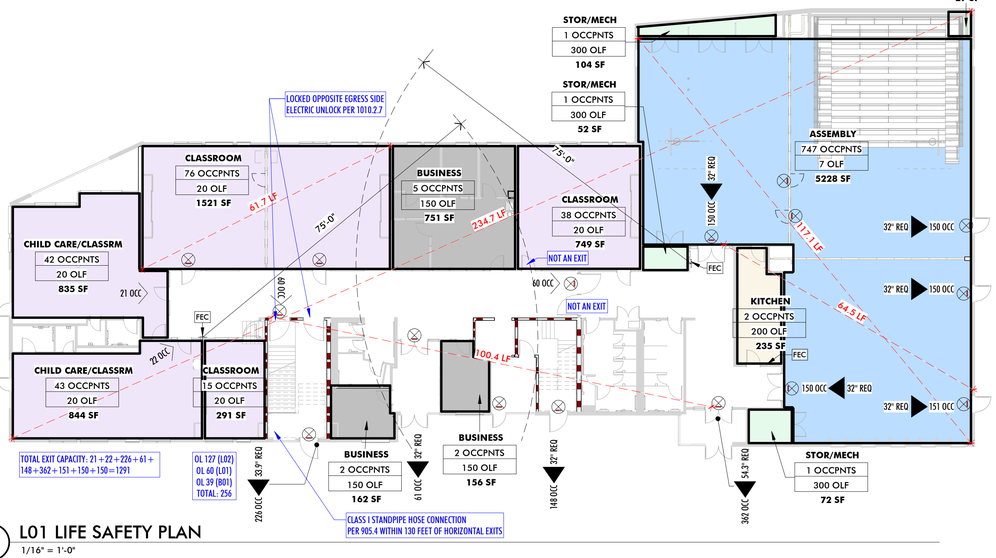
FUNCTION OF SPACE
1000 OCCPNTS — NUMBER OF OCCUPANTS
10 OLF — OCCUPANT LOAD FACTOR
150 SF — NET OR GROSS AREA SHOWN

FEC — FIRE EXTINGUISHER CABINET
FE — WALL-MOUNTED FIRE EXTINGUISHER
EXIT SIGN

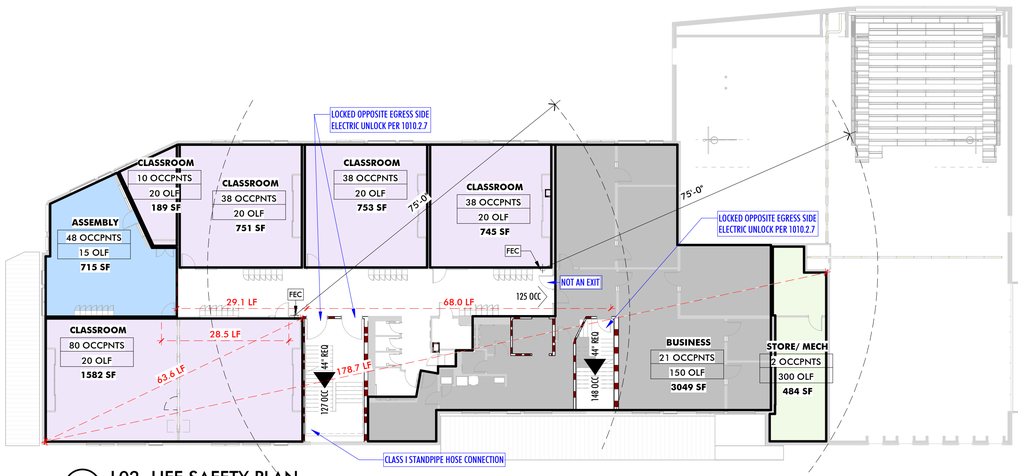
## CODE SYMBOLS
1/4" = 1'-0"



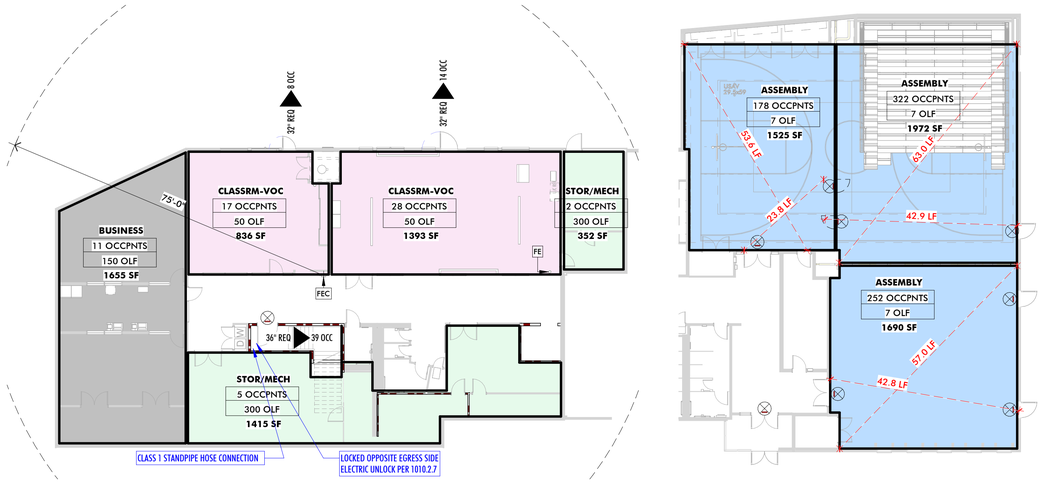

5 L03 LIFE SAFETY PLAN
1/16" = 1'-0"




3 L01 LIFE SAFETY PLAN
1/16" = 1'-0"




4 L02 LIFE SAFETY PLAN
1/16" = 1'-0"




1 B01 LIFE SAFETY PLAN
1/16" = 1'-0"




6 L01 ASSEMBLY WITH OPERABLE WALLS
1/16" = 1'-0"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9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

LIFE SAFETY PLANS

A-005


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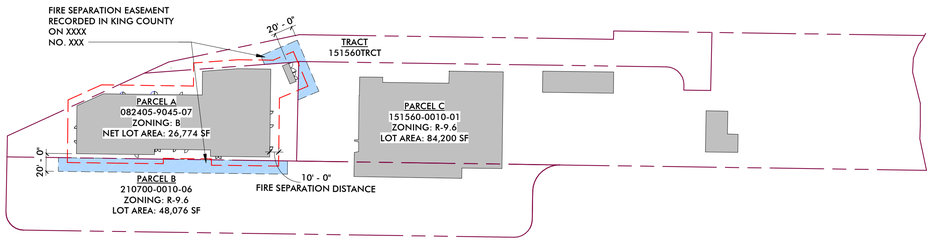
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"



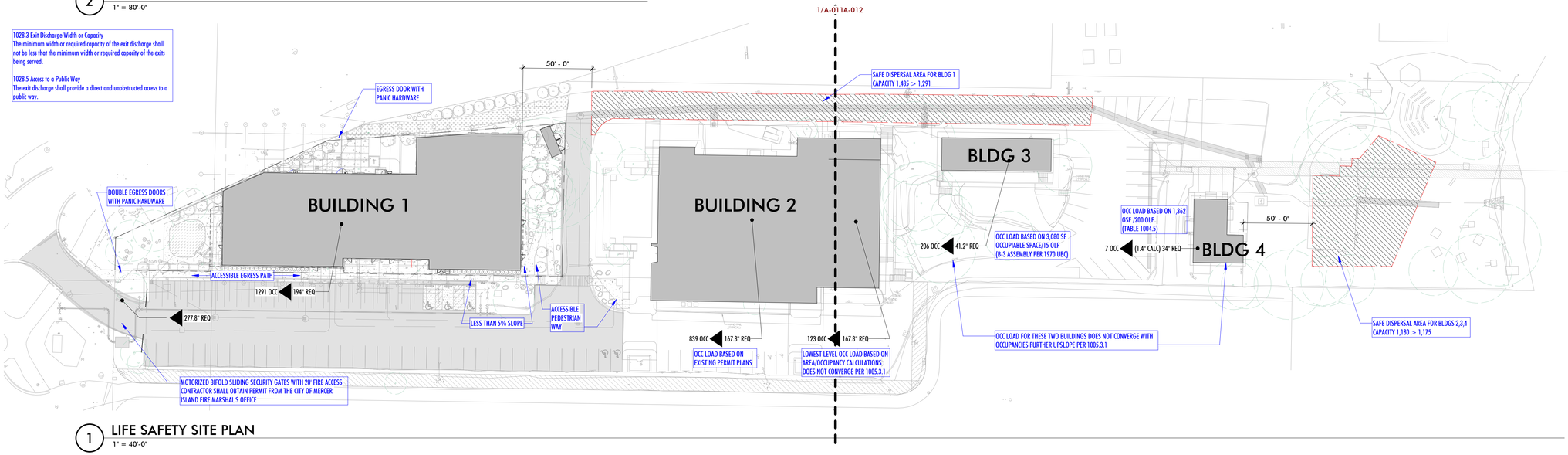

FIRE SEPARATION DISTANCE. The distance measured from the building face to one of the following:

1. The closest interior lot line.
2. To the centerline of a street, an alley or public way.
3. To an imaginary line between two buildings on the lot.

PUBLIC WAY. A street, alley or other parcel of land open to the outside air leading to a street, that has been deeded, dedicated or otherwise permanently appropriated to the public for public use and which has a clear width and height of not less than 10 feet.

## 2 FIRE SEPARATION DIAGRAM

1" = 80'-0"




## 1 LIFE SAFETY SITE PLAN

1" = 40'-0"

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9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
# BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 BUILDING PERMIT |

PROJECT:

LIFE SAFETY SITE PLANS

A-006

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© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

| WINDOW AREA SCHEDULE | | |
|---|---|---|
| | MARK | AREA |
| EAST | W1.2L | 40 SF |
| EAST | W2.1L | 80 SF |
| EAST | W4.2L | 40 SF |
| | | 160 SF |
| NORTH | W1.1L | 84 SF |
| NORTH | W1.2L | 361 SF |
| NORTH | W1L | 324 SF |
| NORTH | W2.2L | 42 SF |
| NORTH | W2L | 46 SF |
| NORTH | W3L | 69 SF |
| NORTH | W4.1L | 63 SF |
| NORTH | W4.2L | 80 SF |
| NORTH | W4L | 208 SF |
| NORTH | W5.1L | 42 SF |
| NORTH | W5.2L | 361 SF |
| NORTH | W5L | 324 SF |
| | | 2,005 SF |
| SOUTH | W1 | 185 SF |
| SOUTH | W1.2 | 321 SF |
| SOUTH | W1.3 | 126 SF |
| SOUTH | W2 | 231 SF |
| SOUTH | W2.1 | 200 SF |
| SOUTH | W2.2 | 84 SF |
| SOUTH | W4 | 93 SF |
| SOUTH | W4.2 | 140 SF |
| SOUTH | W4.3 | 42 SF |
| SOUTH | W4.4 | 33 SF |
| SOUTH | W5.2 | 40 SF |
| SOUTH | W5.3 | 29 SF |
| | | 1,524 SF |
| WEST | W1.2L | 80 SF |
| WEST | W1L | 139 SF |
| WEST | W4.2L | 40 SF |
| WEST | W4L | 69 SF |
| WEST | W5.2L | 40 SF |
| | | 368 SF |
| | | 4,058 SF |

| EXTERIOR WALL AREA SCHEDULE | | |
|---|---|---|
| Comments | Type | AREA |
| EAST | CONCRETE WALL ASSEMBLY | 869 SF |
| EAST | FRAMED WALL ASSEMBLY | 2,928 SF |
| | | 3,797 SF |
| NORTH | CONCRETE WALL ASSEMBLY | 596 SF |
| NORTH | FRAMED WALL ASSEMBLY | 8,375 SF |
| | | 8,972 SF |
| SOUTH | CONCRETE WALL ASSEMBLY | 1,347 SF |
| SOUTH | FRAMED WALL ASSEMBLY | 7,552 SF |
| | | 8,899 SF |
| WEST | CONCRETE WALL ASSEMBLY | 623 SF |
| WEST | FRAMED WALL ASSEMBLY | 1,874 SF |
| | | 2,497 SF |
| | | 24,165 SF |

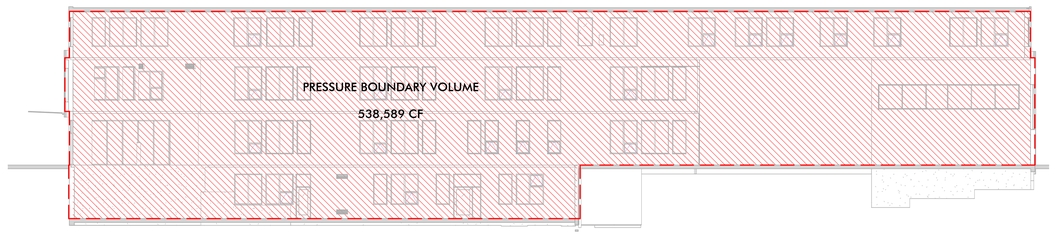
**WINDOW TO WALL AREAS:**
EAST 18%
NORTH 27%
SOUTH 25%
WEST 26%

| EXTERIOR STOREFRONT AREA SCHEDULE | | |
|---|---|---|
| | MARK | Area |
| EAST | SF-5 | 62 SF |
| EAST | SF-8.1L | 82 SF |
| EAST | SF-8L | 288 SF |
| EAST | SF-9.1L | 27 SF |
| EAST | SF-9.2L | 77 SF |
| | | 538 SF |
| NORTH | SF-10L | 173 SF |
| NORTH | SF-11L | 62 SF |
| NORTH | SF-12L | 33 SF |
| NORTH | SF-13L | 193 SF |
| | | 462 SF |
| SOUTH | SF-1.1 | 36 SF |
| SOUTH | SF-1.2 | 50 SF |
| SOUTH | SF-2 | 88 SF |
| SOUTH | SF-3 | 97 SF |
| SOUTH | SF-4 | 58 SF |
| SOUTH | SF-6 | 147 SF |
| SOUTH | SF-7 | 245 SF |
| | | 720 SF |
| WEST | SF-9.1L | 27 SF |
| WEST | SF-9.2L | 39 SF |
| WEST | SF-14L | 106 SF |
| WEST | SF-15L | 108 SF |
| | | 279 SF |
| | | 1,998 SF |

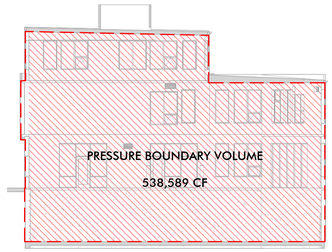
## WALL AREA LEGEND

FRAMED WALL ASSEMBLY

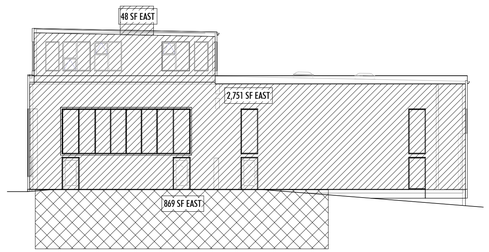
CONCRETE WALL ASSEMBLY




11 AIR BARRIER DIAGRAM @ W-E SECTION
1/16" = 1'-0"



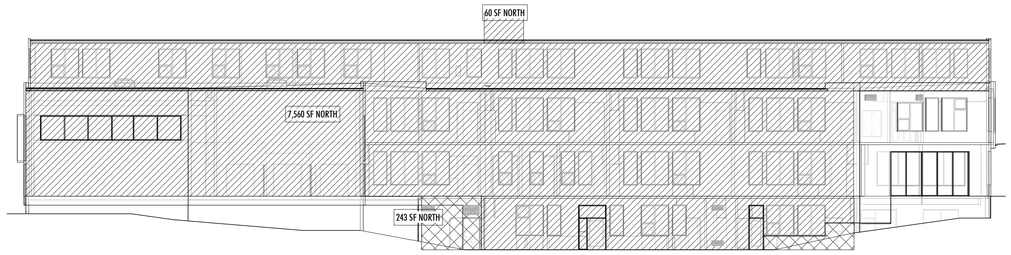

10 AIR BARRIER DIAGRAM @ N-S SECTION
1/16" = 1'-0"




9 EAST ELEVATION ENVELOPE DIAGRAM
1/16" = 1'-0"



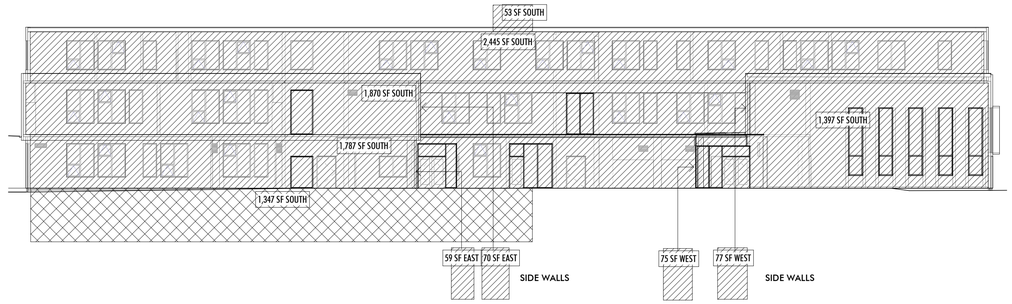

8 WEST ELEVATION ENVELOPE DIAGRAM
1/16" = 1'-0"



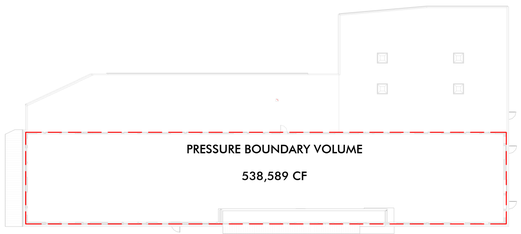

7 NORTH ELEVATION ENVELOPE DIAGRAM
1/16" = 1'-0"



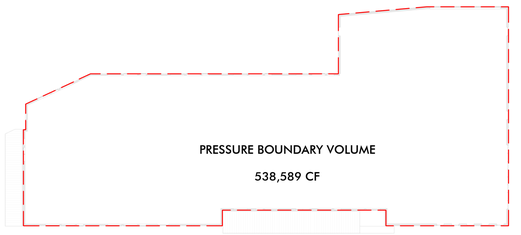

6 NW ELEVATION
1/16" = 1'-0"



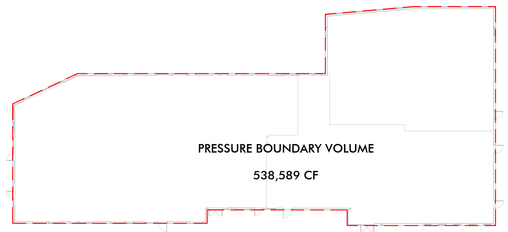

5 SOUTH ELEVATION ENVELOPE DIAGRAM
1/16" = 1'-0"



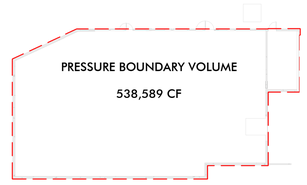

4 LEVEL 03 AIR BARRIER DIAGRAM
1/32" = 1'-0"




3 LEVEL 02 AIR BARRIER DIAGRAM
1/32" = 1'-0"




2 LEVEL 01 AIR BARRIER DIAGRAM
1/32" = 1'-0"




1 LEVEL B01 AIR BARRIER DIAGRAM
1/32" = 1'-0"

3427 BEACON AVE S
SEATTLE 98144
ANJALI@AGRANTDESIGN.COM
206-512-4209

anjali grant design LLC

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ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 BUILDING PERMIT |

PROJECT:

ENERGY CODE DIAGRAMS

A-007

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| BPP ENERGY CODE | |
|---|---|
| Code Section | Code Excerpt and Commentary |
| C103.2 Informatiion on Construction Documents | Details shall include, but are not limited to, as applicable:<br>1. Energy compliance path per Section C401 or C501.<br>2. Insulation materials and their R-values.<br>3. Fenestration U-factors and SHGCs.<br>4. Area-weighted U-factor and SHGC calculations.<br>5. Mechanical system design criteria. (see M sheets)<br>6. Mechanical and service water heating system and equipment types, sizes and efficiencies. (see M sheets)<br>7. Economizer description. (see M sheets)<br>8. Equipment and systems controls. (see M sheets)<br>9. Fan motor horsepower (hp) and controls. (see M sheets)<br>10. Duct sealing, duct and pipe insulation and location. (see M sheets)<br>11. Lighting fixture schedule with wattage and control narrative. (see E sheets)<br>12. Location of daylight zones on floor plan. (see E sheets)<br>13. Air barrier details including all air barrier boundaries and associated square foot calculations on all six sides of the air barrier as applicable. |
| C401.2 Application | This project is complying with the Total Building Performance option, which requires compliance with Section C407. |
| C401.4 Thermal Envelope Certificate | A permanent thermal envelope certificate shall be completed by an approved party. Such certificate shall be posted on a wall in the space where the space conditioning equipment is located, a utility room or other approved location. If 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. A copy of the certificate shall also be included in the construction files for the project. The certificate shall include:<br>1. R-values of insulation installed in or on ceilings, roofs, walls, foundations and slabs, crawlspace walls and floors, and ducts outside conditioned spaces.<br>2. U-factors and solar heat gain coefficients (SHGC) of fenestration.<br>3. Results from any building envelope air leakage testing performed on the building. Where there is more than one value for any component of the building envelope, the certificate shall indicate the area-weighted average value where available. If the area-weighted average is not available, the certificate shall list each value that applies to 10 percent or more of the total component area. |
| C402.2.7 Airspaces | Where the R-value of an airspace is used for compliance in accordance with Section C401.2, the airspace shall be enclosed in an unventilated cavity constructed to minimize airflow into and out of the enclosed airspace. Airflow shall be deemed minimized where the enclosed airspace is located on the interior side of the continuous air barrier and is bounded on all sides by building components.<br>EXCEPTION: The thermal resistance of airspaces located on the exterior side of the continuous air barrier and adjacent to and behind the exterior wall covering material shall be determined in accordance with ASTM C1363 modified with an airflow entering the bottom and exiting the top of the airspace at a minimum air movement rate of not less than 70 mm/sec. |
| C402.5.1.1 Air Barrier Construction | Construction documents shall contain a diagram showing the building's pressure boundary in plan(s) and section(s) and a calculation of the area of the pressure boundary to be considered in the test. |
| C402.5.3 Building Thermal Envelope Testing | The building thermal envelope shall be tested in accordance with ASTM E779, ANSI/RESNET/ICC 380, ASTM E3158 or ASTM E1827 or an equivalent method approved by the code official. The measured air leakage shall not exceed 0.25 cfm/ft2 (1.27 L/s × m2) of the building thermal envelope area at a pressure differential of 0.3 inch water gauge (75 Pa).<br><br>Where the measured air leakage rate exceeds 0.25 cfm/ft2 (2.0 L/s x m2) corrective action shall be taken to seal leaks in the air barrier. Post-corrective action testing and repeated corrective action measures will be taken until the required air leakage rating is achieved. Final passing of the air leakage test results shall be submitted to the code official. |
| C402.5.9 Vestibules | All building entrances shall be protected with an enclosed vestibule, with all doors opening into and out of the vestibule equipped with self-closing devices. Vestibules shall be designed so that in passing through the vestibule it is not necessary for the interior and exterior doors to open at the same time. For the purposes of this section, "building entrances" shall include exit-only doors in buildings where separate doors for entering and exiting are provided. ... Interior and exterior doors shall have a minimum distance between them of not less than 7 feet. The exterior envelope of conditioned vestibules shall comply with the requirements for a conditioned space.<br>EXCEPTION: Vestibules are not required for the following:<br>1. Doors not intended to be used as building entrances.<br>2. Doors between an enclosed space smaller than 3,000 square feet in area and the exterior of the building or the building entrance lobby, where those doors do not comprise one of the primary building entrance paths to the remainder of the building. The space must be enclosed and separated without transfer air paths from the primary building entrance paths. If there are doors between the space and the primary entrance path, then the doors shall be equipped with self-closing devices so the space acts as a vestibule for the primary building entrance. |
| C408.1 General | A building commissioning process led by a certified commissioning professional and functional testing requirements shall be completed for mechanical systems in Section C403; service water heating systems in Section C404; controlled receptacle and lighting control systems in Section C405; equipment, appliances and systems installed to comply with Sections C406 or C407; energy metering in Section C409; and refrigeration systems in Section C410.<br>C408.1 General<br>A building commissioning process led by a certified commissioning professional and functional testing requirements shall be completed for mechanical systems in Section C403; service water heating systems in Section C404; controlled receptacle and lighting control systems in Section C405; equipment, appliances and systems installed to comply with Sections C406 or C407; energy metering in Section C409; and refrigeration systems in Section C410.<br>EXCEPTION: Buildings, or portions thereof, which are exempt from Sections C408.2 through C408.7 may be excluded from the commissioning process.<br>1. Mechanical systems that are not required to comply with Section C403.3.5 are exempt from the commissioning process where the installed total mechanical equipment capacity is less than 180,000 Btu/h (15 tons) cooling capacity and less than 240,000 Btu/h (20 tons) heating capacity and energy recovery ventilation (ERV) equipment is less than 300 cfm capacity.<br>2. Service water heating systems are exempt from the commissioning process in buildings where the largest service water heating system capacity is less than 200,000 Btu/h and where there are any of the following:<br>2. 1. No pools or permanent spas.<br>2.2. No solar thermal water heating.<br>2.3. No recirculation pumps.<br>2.4. No heat pump water heaters, except fully-packaged for individual residential dwelling unit use.<br>3. Lighting control systems are exempt from the commissioning process in buildings where both the total installed lighting load is less than 10 kW and the lighting load controlled by occupancy sensors or automatic daylighting controls is less than 5 kW.<br>4. Refrigeration systems are exempt from the commissioning process in buildings if they are limited to self-contained units. |
| C411.1 On-Site Renewable Energy | Each new building or addition larger than 10,000 square feet of gross conditioned floor area shall include a renewable energy generation system consisting of not less than 0.5 W/ft2 or 1.7 Btu/ft2 multiplied by the sum of the gross conditioned floor area. |
| | |
| WAC 51-50-0429 429.2 Electric vehicle (EV) charging infrastructure. | Buildings and accessory structures shall be provided with EV charging stations, EV-Ready parking spaces, and EV-capable parking spaces in accordance with Table 429.2. Calculations shall be rounded up to the nearest whole number. Where a building contains more than one occupancy, the electric vehicle charging infrastructure percentages of Table 429.2 shall be applied to the number of spaces required for each occupancy. |
| Table 429.2 | 10% of total parking spaces for RV Charging Stations, EV-Ready Parking Spaces and EV-Capable Parking Spaces<br>Exception: Group A/Group E occupancies shall comply with either: 2.1. designated employee spaces; 2.2 one of each 200 spaces shall be EV-Ready, one shall be an EV charging station. |
| 429.4 Electric vehicle charging infrastructure for accessible parking spaces. | Ten percent of the accessible parking spaces, rounded to the next whole number, shall be EV Charging Stations. Additional 10 percent of the accessible parking spaces, rounded to the next whole number, shall be EV Ready. |
| | Existing parking is shared. For the new building, code-required parking is computed as follows:<br>1. Office use: 33 x 75% = 25 (3)<br>2. School: 24 x 75% = 18 (1 per exception 2.2) |
| | Total: 4 |

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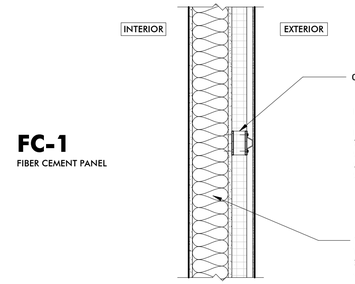
## ENVELOPE NOTES

1. IDENTIFICATION MARK SHALL BE APPLIED TO ALL INSULATION MATERIALS AND INSULATION INSTALLED SUCH THAT THE MARK IS READILY OBSERVABLE DURING INSPECTION
2. STAGGER EDGE JOINTS BETWEEN LAYERS WHERE TWO OR MORE LAYERS OF RIGID INSULATION ARE USED.

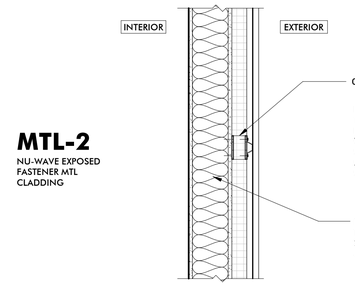



**FC-1**
FIBER CEMENT PANEL

07 CASCADIA CLIP

PAINTED FIBER CEMENT CLADDING O/
1" X 4" METAL FURRING CHANNEL O/
NONMETALLIC CLIPS W/ R-12.5 2.5" XPS INSUL O/
WATER-RESISTIVE BARRIER O/
5/8" GYPSUM SHEATHING O/
METAL STUDS W/R-21 MIN MINERAL WOOL BATT O/
5/8" GYPSUM WALLBOARD, SEALED AND PRIMED

NOTE:
1. FILL ENTIRE CAVITY WITH BATT
2.WHERE SIDING EXTENDS BELOW L01 SLAB, BACK-UP WALL IS CONCRETE

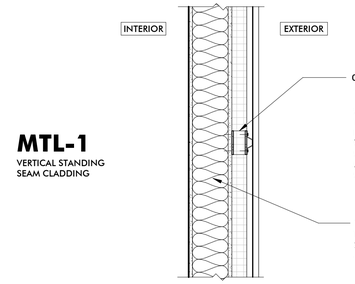



**MTL-2**
NU-WAVE EXPOSED FASTENER MTL CLADDING

07 CASCADIA CLIP

EXPOSED FASTENER METAL SIDING O/
1" X 4" METAL FURRING CHANNEL O/
NONMETALLIC CLIPS W/ R-12.5 2.5" XPS INSUL O/
WATER-RESISTIVE BARRIER O/
5/8" GYPSUM SHEATHING O/
METAL STUDS W/R-21 MIN MINERAL WOOL BATT O/
5/8" GYPSUM WALLBOARD, SEALED AND PRIMED

NOTE:
1. FILL ENTIRE CAVITY WITH BATT
2.WHERE SIDING EXTENDS BELOW L01 SLAB, BACK-UP WALL IS CONCRETE

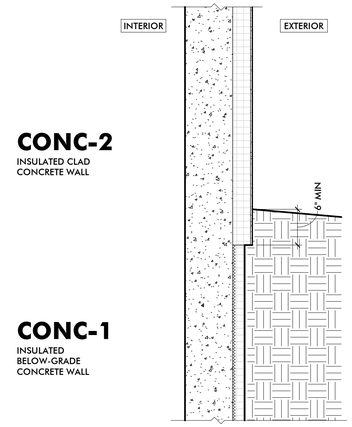



**MTL-1**
VERTICAL STANDING SEAM CLADDING

07 CASCADIA CLIP

SELECT SEAM SHINGLE CLADDING O/
1" X 4" METAL FURRING CHANNEL O/
NONMETALLIC CLIPS W/ R-12.5 2.5" XPS INSUL O/
WATER-RESISTIVE BARRIER O/
5/8" GYPSUM SHEATHING O/
METAL STUDS W/R-21 MIN MINERAL WOOL BATT O/
5/8" GYPSUM WALLBOARD, SEALED AND PRIMED

NOTE:
1. FILL ENTIRE CAVITY WITH BATT
2.WHERE SIDING EXTENDS BELOW L01 SLAB, BACK-UP WALL IS CONCRETE



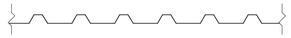

**CONC-2**
INSULATED CLAD CONCRETE WALL

PRE-FABRICATED INSULATED CLADDING O/
CONCRETE WALL PER STRUCTURAL

**CONC-1**
INSULATED BELOW-GRADE CONCRETE WALL

BELOW-GRADE WATERRPOOFING ASSEMBLY O/
R-10 XPS INSULATION O/
CONCRETE WALL PER STRUCTURAL

## 2 WALL ASSEMBLIES - ENVELOPE
1" = 1'-0"



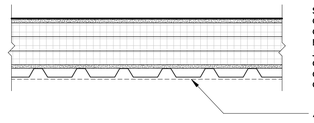
**R-3**
METAL CANOPY

STRUCTURAL METAL ROOFING
O/ STRUCTURAL FRAMING
HIGH-PERFORMANCE COATING AT UNDERSIDE



**R-2**
MOD BIT CANOPY

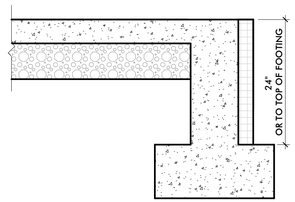
SBS-MODIFIED MEMBRANE ROOFING
O/ COVERBOARD
O/25 PSI POLYISO RIGID INSULATION. INSTALL IN MULTIPLE LAYERS AND STAGGER JOINTS
O/ VAPOR BARRIER
O/ 1/4" THERMAL BARRIER BOARD
O/ R-3 ROOF



**R-1**
MOD BIT

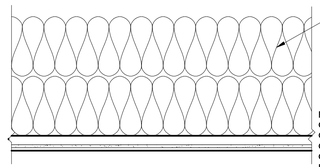
SBS-MODIFIED MEMBRANE ROOFING
O/ COVERBOARD
O/ R-20 MINIMUM + R-38 AVERAGE 25 PSI POLYISO RIGID INSULATION. INSTALL IN 3 LAYERS AND STAGGER JOINTS
O/ VAPOR BARRIER
O/ 5/8" THERMAL BARRIER BOARD
O/ METAL DECKING PER STRUCTURAL

ACOUSTICAL DECK AT GYM ROOF




**FL-1**
SLAB ON GRADE

SLAB ON GRADE PER STRUCTURAL O/ GRAVEL
R-10 RIGID INSULATION AT PERIMETER



**SOF-1**
UNVENTED METAL SOFFIT

FILL ENTIRE VOID WITH BATT INSULATION

PREFINISHED METAL SOFFIT PANELS
O/ WATER-RESISTIVE BARRIER
O/ 1/2" GYPSUM SHEATHING
O/ 1-1/2" MTL FRAMING
O/ R-30 BATT INSULATION
FIRE RATING:0

## 1 HORIZONTAL ASSEMBLIES - ENVELOPE
1" = 1'-0"

anjali grant design LLC
3427 BEACON AVE S
SEATTLE 98144
ANJALI@AGRANTDESIGN.COM
206-512-4209

9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

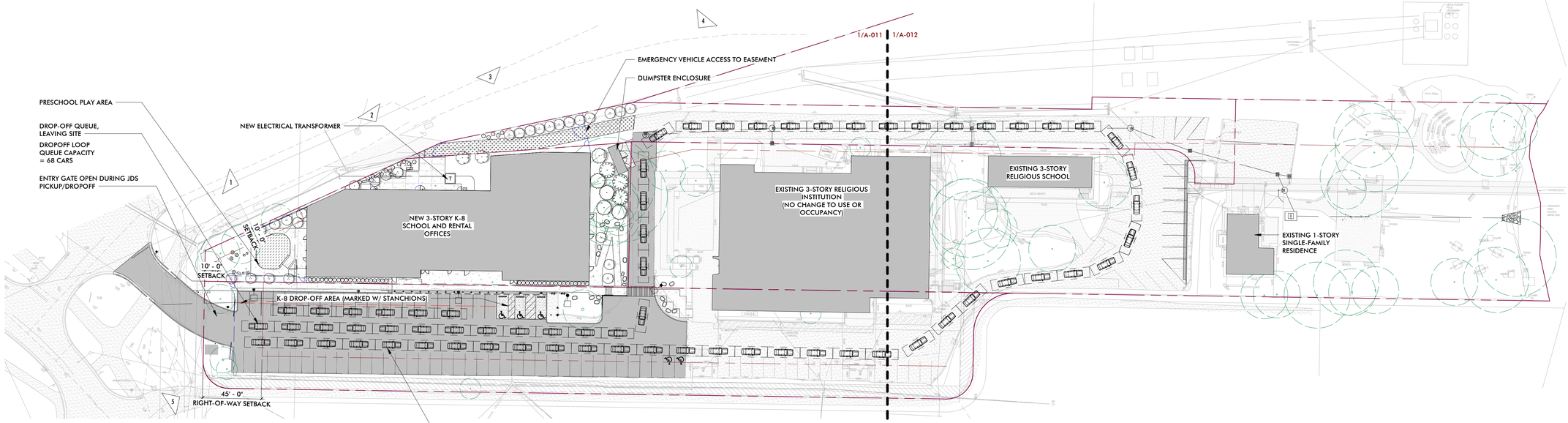
3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

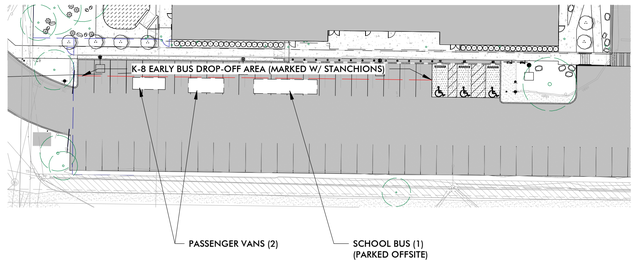
ENVELOPE ASSEMBLIES

A-008



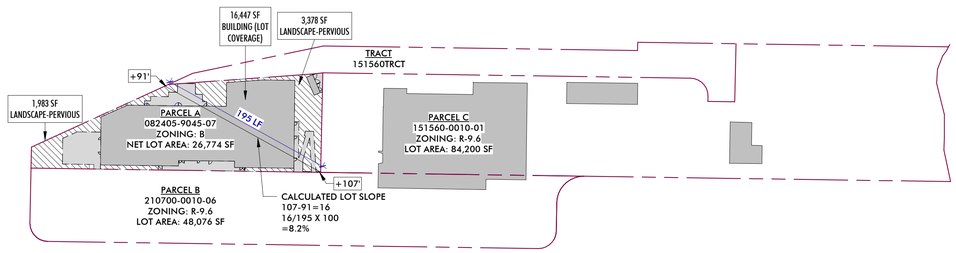

## 5 SITE PLAN-OVERALL

1" = 40'-0"




## 4 BUS DROP-OFF (PRIOR TO PARENT DROP-OFF)

1" = 40'-0"



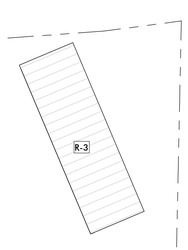

## 3 SITE DIAGRAM

1" = 80'-0"

MINIMUM LANDSCAPE REQUIREMENT FOR BUSINESS (B) ZONE - 25% OF GROSS LOT AREA.
LOT AREA: 26,881 SF
MINIMUM LANDSCAPE REQUIREMENT: 6,720 SF
MINIMUM PERVIOUS LANDSCAPE: 75% OF 6720 = 5,040 SF

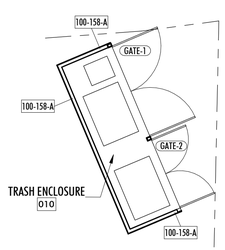
**LOT AREAS (B-ZONED PARCEL)**

| Comments | AREA | % OF TOTAL LOT AREA |
|---|---|---|
| BUILDING (LOT COVERAGE) | 16,417 SF | 61% |
| | 16,417 SF | 61% |
| LANDSCAPE-IMPERVIOUS | 3,925 SF | 15% |
| | 3,925 SF | 15% |
| LANDSCAPE-PERVIOUS | 3,855 SF | 14% |
| LANDSCAPE-PERVIOUS | 1,983 SF | 7% |
| LANDSCAPE-PERVIOUS | 304 SF | 1% |
| LANDSCAPE-PERVIOUS | 449 SF | 2% |
| | 6,591 SF | 24% |
| | 26,933 SF | 100% |



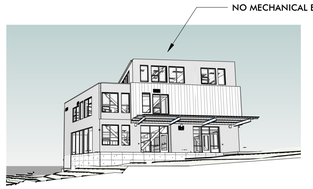

## 2 TRASH ENCLOSURE ROOF PLAN

1/8" = 1'-0"



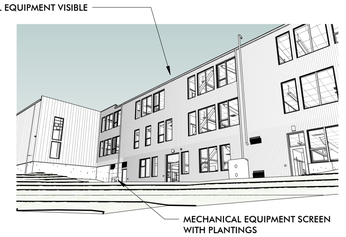

## 1 TRASH ENCLOSURE

1/8" = 1'-0"

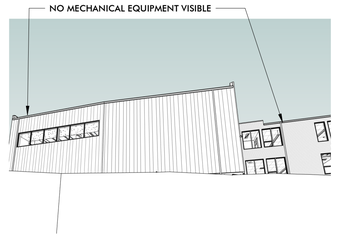



VIEW 1 FROM PUBLIC WAY

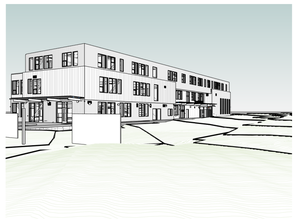
NOTE : CAMERA IS LOCATED 5.5' ABOVE FINISHED GRADE; EQUIPMENT ON LEVEL 3 IS SCREENED AS IT IS VISIBLE FROM THE WEST AND SOUTH (ACROSS THE PARKING LOT)



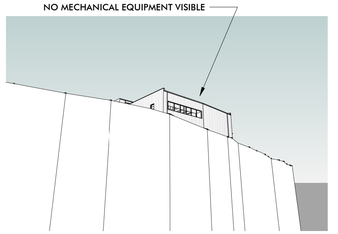

VIEW 2 FROM PUBLIC WAY




VIEW 3 FROM NORTH WALKWAY



VIEW 5 FROM SOUTHWEST




VIEW 4 FROM PUBLIC WAY

PROJECT NAME AND DESCRIPTION
BARNABIE POINT PROJECT
3-STORY MIXED-USE BUILDING HOUSING A PRESCHOOL-8 PRIVATE SCHOOL AND COMMUNITY MULTIPURPOSE SPACE ON LEVELS 0, 1 AND 2; AND COMMUNITY OFFICE RENTAL SPACE ON LEVELS 2 AND 3.

FILE NUMBER
CUP24-001

OWNER
HERZL-NER-TAMID CONSERVATIVE CONGREGATION

ADDRESS
3700 E MERCER WAY
MERCER ISLAND, WA 98040

ZONING DESIGNATION
B, R-9.6

LEGAL DESCRIPTION
PARCEL A: (APN 082405-9045-07)
THAT PORTION OF GOVERNMENT LOT 11, SECTION 8, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON; TOGETHER WITH THAT PORTION OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT THE INTERSECTION OF THE WEST LINE OF GOVERNMENT LOT 11 WITH THE NORTH LINE OF DOYLE-HANSEN ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 75 OF PLATS, PAGE 24, RECORDS OF KING COUNTY, WASHINGTON;
THENCE SOUTH 89°09'34" EAST SLONG THE NORTH OF SAID DOYLE-HANSEN ADDITION, A DISTANCE OF 253.49 FEET TO THE WEST LINE OF LOT 7 OF CHANNEL CREST, ACCORDING TO THE PLAT THEREOF RECORDED IN COLUME 72 OF PLATS, PAGE 63, RECORDS OF KING COUNTY, WASHINGTON;
THENCE NORTH 01°12'29" EAST ALONG SAID WEST LINE, A DISTANCE OF 111.48 FEET TO THE SOUTH LINE OF TRACT "A" OF SAID CHANNEL CREST;
THENCE SOUTH 85°39'49" WEST ALONG SAID SOUTH LINE 173.15 FEET TO SOUTHEASTERLY LINE OF LAND CONVEYED TO STATE OF WASHINGTON TOLL BRIDGE AUTHORITY UNDER RECORDING NO. 3032009;
THENCE SOUTH 65°24'55" WEST ALONG SOUTHEASTERLY LINE TO THE EASTERLY MARGIN OF EAST MERCER WAY, AS CONVEYED TO KING COUNTY UNDER RECORDING NO. 923897;
THENCE SOUTH 01°02'29" WEST TO THE NORTH LINE OF SAID DOYLE-HANSEN ADDITION;
THENCE SOUTH 89°09'34" EAST ALONG SAID NORTH LINE 70.61FEET TO THE POINT OF BEGINNING.

PARCEL B: (APN 210700-0010-06)
LOTS 1 THROUGH 5, INCLUSIVE, DOYLE-HANSEN ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 75 OF PLATS, PAGE 24, RECORDS OF KING COUNTY, WASHINGTON.

PARCEL C: (APN 151560-0010-06)
LOTS 1 THROUGH 7, INCLUSIVE, CHANNEL CREST, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 72 OF PLATS, PAGE 63, RECORDS OF KING COUNTY, WASHINGTON;

TOGETHER WITH AN UNDIVIDED 7/8THS INTEREST IN TRACT "A" OF SAID PLAT.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

ASSESSOR'S PARCEL NUMBER
0824059045, 1515600010, 2107000010, 151560TRCT


anjali grant design LLC
3427 BEACON AVE S
SEATTLE 98144
ANJALI@AGRANTDESIGN.COM
206-512-4209


9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

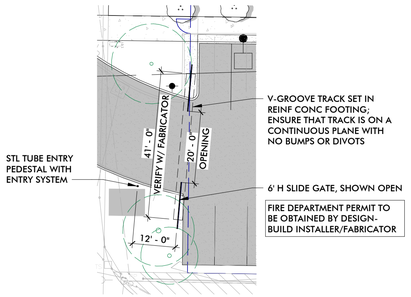
| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 BUILDING PERMIT |

PROJECT:

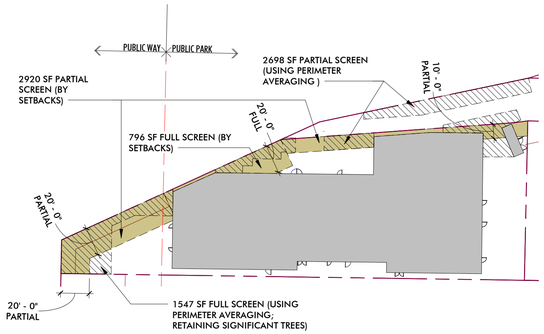
LAND USE/SITE PLAN

A-010


6/4/2025 11:03:44 AM C:\Users\Anjali\Desktop\Documents\BP\P_PSR_R24_washa7E65R.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"




2 VEHICLE GATE
1" = 20'-0"



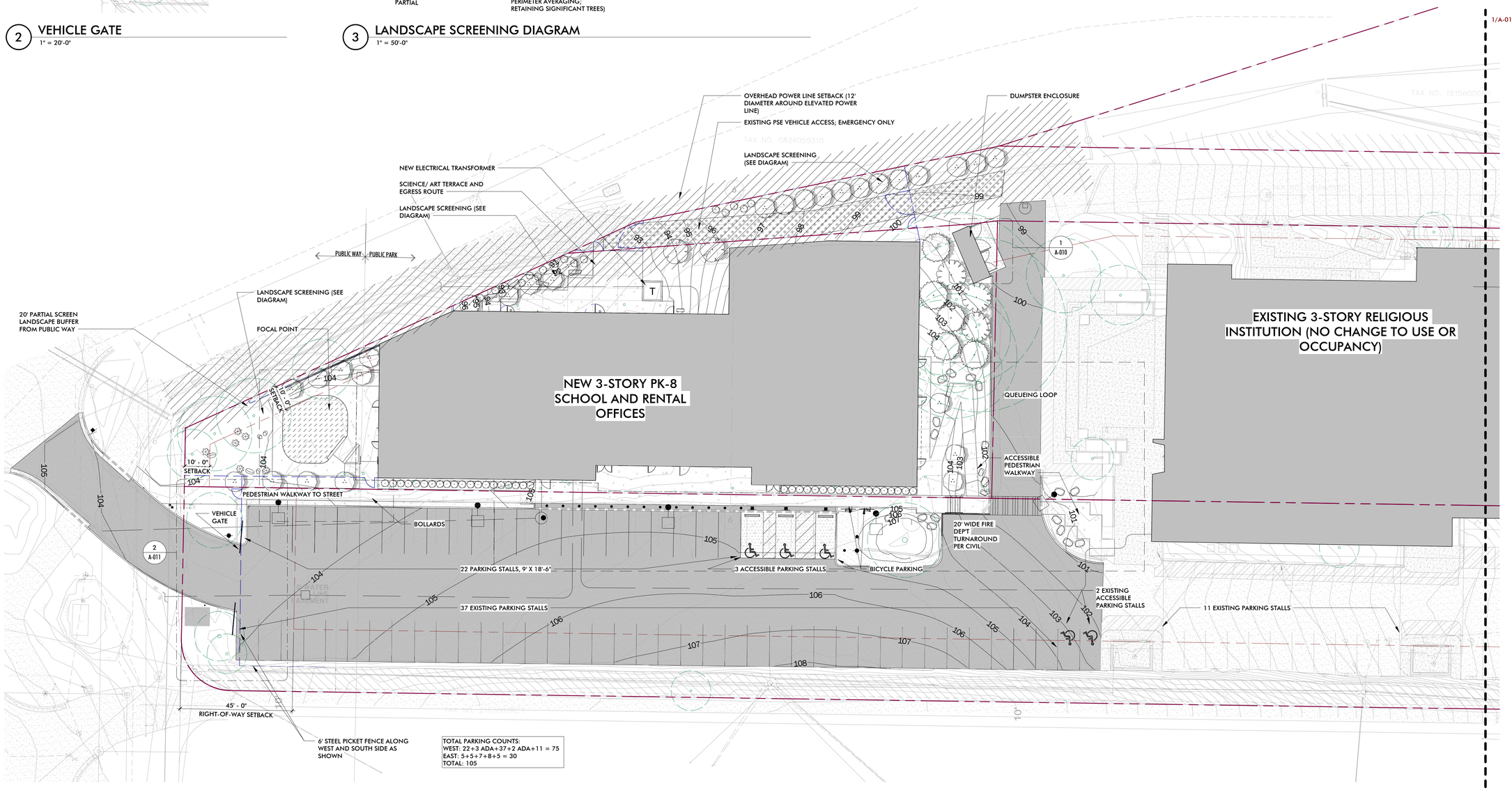

MERCER ISLAND MUNICIPAL CODE
19.12.040 B.1.
LANDSCAPE AREA. LANDSCAPE DESIGN SHALL ADDRESS ALL AREAS OF A SITE NOT COVERED BY STRUCTURES OR USED BY AUTOMOBILES.

B.7.A. PERIMETER SCREEN TYPES AND WIDTHS BY USE AND LOCATION

| | |
|---|---|
| INSTITUTIONAL USE ADJACENT TO PUBLIC WAY: | 20 FEET PARTIAL |
| INSTITUTIONAL USE ADJACENT TO PUBLIC PARK: | 20 FEET FULL |
| INSTITUTIONAL USE ADJACENT TO INSTITUTIONAL USE/UTILITY: | 10 FEET PARTIAL |

B.7.B. PERIMETER WIDTH AVERAGING. AVERAGING OF SCREEN WIDTHS MAY BE ALLOWED, IF THE OBJECTIVES OF THIS SECTION, THE MINIMUM LANDSCAPE AREA REQUIREMENTS SET FORTH IN MICC 19.12.040(B)(4) AND THE FOLLOWING CRITERIA ARE MET:
I. PLANT MATERIAL IS CLUSTERED TO MORE EFFECTIVELY SCREEN PARKING AREAS AND STRUCTURES; AND
II. SIGNIFICANT TREES ARE RETAINED.

3 LANDSCAPE SCREENING DIAGRAM
1" = 50'-0"




TOTAL PARKING COUNTS:
WEST: 22+3 ADA+37+2 ADA+11 = 75
EAST: 5+5+7+8+5 = 30
TOTAL: 105

1 SITE PLAN-ENLARGED WEST
1" = 20'-0"


3427 BEACON AVE S
SEATTLE 98144
ANJALI@AGRANTDESIGN.COM
206-512-4209


anjali grant design LLC

9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

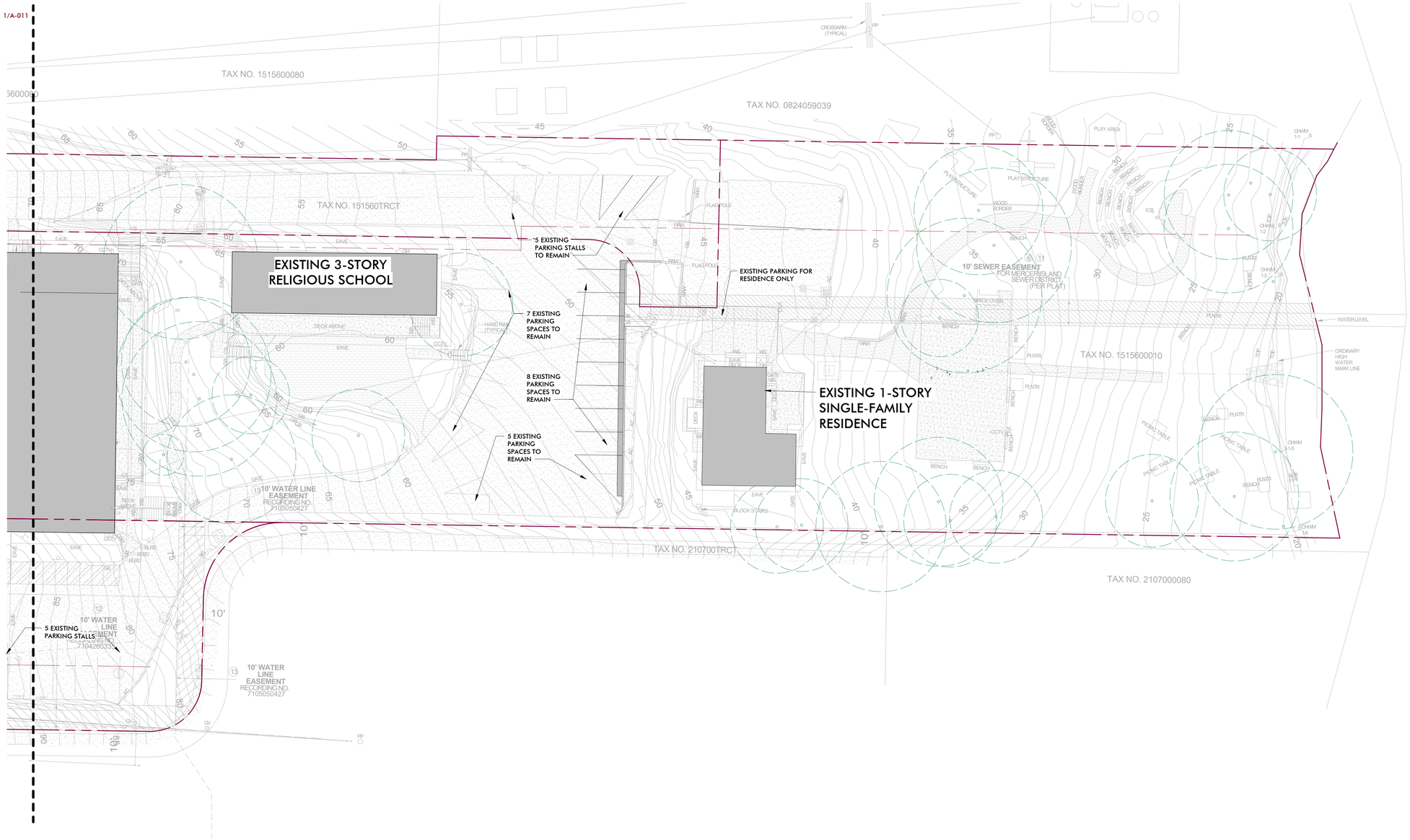
| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

SITE PLAN ENLARGED-WEST

A-011


6/4/2025 10:53:02 AM D:\REVIT LOCAL\BIPP_PS8_RQ4_anjaseattle.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"




1 SITE PLAN-ENLARGED EAST
1" = 20'-0"

N

anjali grant design LLC
3427 BEACON AVE S
SEATTLE 98144
ANJALI@AGRANTDESIGN.COM
206-512-4209

9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

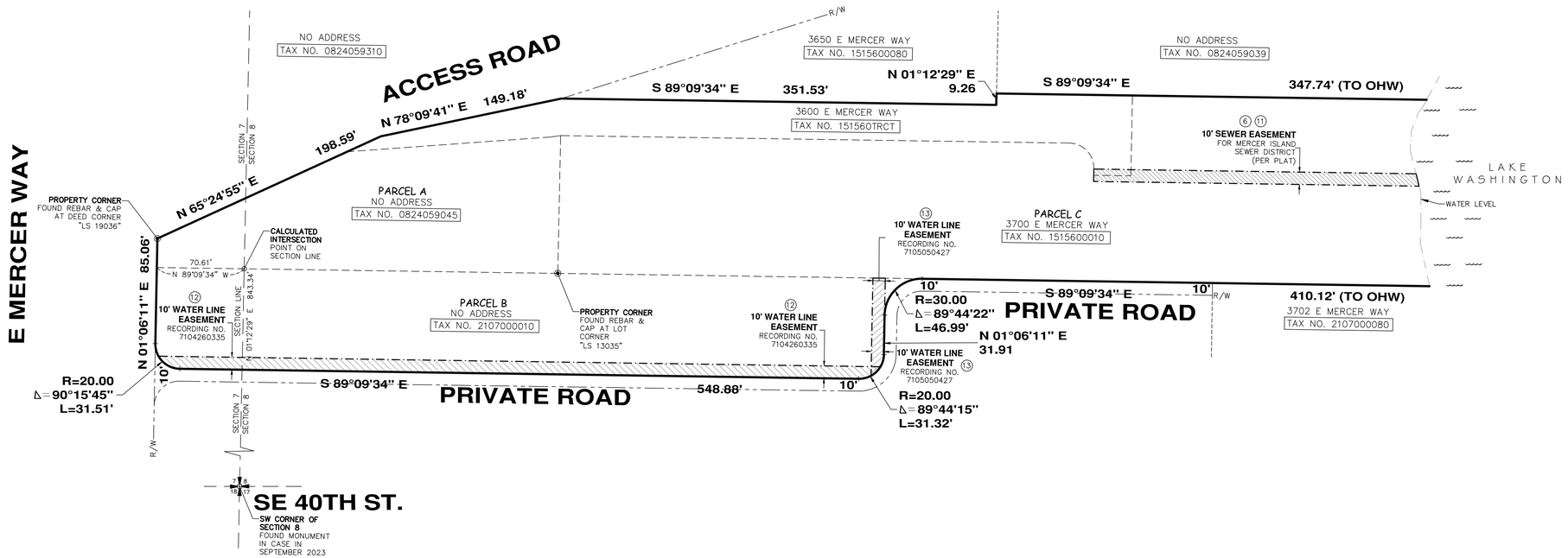
PROJECT:

SITE PLAN ENLARGED-EAST

A-012

6/4/2025 11:00:48 AM C:\Users\Elaina\Yadav\Documents\BIP7_PSB_RD4_eaisha71850R.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

# CONTROL DIAGRAM
## (1" = 50')




NORTH

SCALE: 1" = 50'

0 25 50 100

## NOTES:

1. THIS SURVEY WAS PERFORMED BY FIELD TRAVERSE USING A 10 SECOND "TOTAL STATION". THIS SURVEY MEETS OR EXCEEDS THE STANDARDS FOR LAND BOUNDARY SURVEYS AS SET FORTH IN WAC CHAPTER 332-130-090.
2. CONTOUR INTERVAL = 1 FT.
3. VERTICAL DATUM = NAVD'88, AS PER DIRECT OBSERVATIONS USING GPS EQUIPMENT ON SEPTEMBER 14TH, 2023.
4. HORIZONTAL DATUM = NAD 83/11 (EPOCH 2010).
5. COMBINED UPLAND PARCEL AREA = 180,686 FT².
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT. THEREFORE EASEMENTS AFFECTING THE PROPERTY, IF ANY, ARE NOT SHOWN HEREON.
7. TREES AS SHOW HEREON HAVE BEEN MAPPED TO THE BEST OF OUR ABILITY DURING THE COURSE OF THIS SURVEY. HOWEVER, ALL ONSITE TREES THAT COULD AFFECT PROJECT DEVELOPMENT MAY NOT BE SHOWN. THEREFORE, PRIOR TO DESIGN A CERTIFIED ARBORIST SHOULD BE CONSULTED TO VERIFY THE SPECIFIC GENUS, TRUNK DIAMETER, DRIP LINE, LOCATION AND NUMBER OF QUALIFYING TREES UPON THIS SITE.

## DEED DESCRIPTIONS:

PARCEL A: (TAX PARCEL NO. 082405-9045-07)

THAT PORTION OF GOVERNMENT LOT 11, SECTION 8, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON; TOGETHER WITH THAT PORTION OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
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THENCE SOUTH 01°02'29" WEST TO THE NORTH LINE OF SAID DOYLE-HANSEN ADDITION; THENCE SOUTH 89°09'34" EAST ALONG SAID NORTH LINE 70.61 FEET TO THE POINT OF BEGINNING.

PARCEL B: (TAX PARCEL NO. 210700-0010-06)

LOTS 1 THROUGH 5, INCLUSIVE, DOYLE-HANSEN ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 75 OF PLATS, PAGE 24, RECORDS OF KING COUNTY, WASHINGTON.

PARCEL C: (TAX PARCEL NO. 151560-0010-01)

LOTS 1 THROUGH 7, INCLUSIVE, CHANNEL CREST, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 72 OF PLATS, PAGE 63, RECORDS OF KING COUNTY, WASHINGTON;TOGETHER WITH AN UNDIVIDED 7/8THS INTEREST IN TRACT "A" OF SAID PLAT. SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

## UNDERGROUND UTILITY NOTE:

UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS APPROXIMATE ONLY AND IS BASED UPON OBSERVED GROUND EVIDENCE, THE CITY OF MERCER ISLAND PUBLIC GIS DATABASE, LOCAL AS-BUILT AND PLAN SETS PROVIDED BY CLIENT & PSE GAS RECORDS. AND ALSO AS PER TIES TO ABOVE GROUND STRUCTURES. CHADWICK AND WINTERS ASSUMES NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS & LOCATIONS OR ACCEPTS RESPONSIBILITY FOR UNDERGROUND UTILITIES NOT DISCLOSED IN SAID RECORDS. THE FINAL LOCATION OF EXISTING UNDERGROUND UTILITIES IN AREAS CRITICAL TO DESIGN SHOULD BE ESTABLISHED BY CONTACTING THE UTILITY OWNER OR AGENCY. 1-800-424-5555 SHOULD ALWAYS BE CALLED PRIOR TO CONSTRUCTION.

## OVERHEAD POWER LINE NOTE:

WE HAVE DETERMINED TO THE BEST OF OUR ABILITY THE OVERHEAD HIGH VOLTAGE POWER LINE WHICH IS CLOSEST TO THE PROJECT SITE AND HAVE DISPLAYED ITS HORIZONTAL AND VERTICAL LOCATION HEREON. HOWEVER, ADDITIONAL OVERHEAD SERVICE LINES MAY EXIST WHICH ARE NOT OBVIOUS TO US BY FIELD OBSERVATION AND POTENTIALLY IMPACT PROJECT DESIGN. THEREFORE, PRIOR TO DESIGN AND CONSTRUCTION WE RECOMMEND THAT PSE/SEATTLE CITY LIGHT BE CONSULTED REGARDING THE POSSIBLE EXISTENCE OF ADDITIONAL SERVICE LINES NOT DISPLAYED HEREON WHICH SHOULD BE CONSIDERED FOR PROJECT DESIGN.

## SET CONTENTS:


SHEET 1 - CONTROL DIAGRAM
SHEET 2 - TITLE REPORT SCHEDULE B EXCEPTIONS
SHEET 3 - TOPOGRAPHIC SURVEY (WEST)
SHEET 4 - TOPOGRAPHIC SURVEY (EAST)
SHEET 5 - ARBOR EXHIBIT (WEST)
SHEET 6 - ARBOR EXHIBIT (EAST)
SHEET 7 - ARBOR TABLE




BRANDON E. WINTERS STATE OF WASHINGTON 45803 REGISTERED PROFESSIONAL LAND SURVEYOR

DATE: 12/2/2024

# TOPOGRAPHIC SURVEY
## 3700 EAST MERCER WAY
## MERCER ISLAND, WASHINGTON


CHADWICK WINTERS
LAND SURVEYING AND MAPPING
1422 N.W. 85TH ST., SEATTLE, WA 98117
PHONE: 206.297.0996
FAX: 206.297.0997
WEB: WWW.CHADWICKWINTERS.COM


| | |
|---|---|
| PROJECT #: | 23-7964 |
| DRAWING: | 23-7964 TOPO |
| CLIENT: | AUDREY COVNER |
| DATE: | 12/2/2024 |
| DRAWN BY: | TTB |

# TITLE REPORT SCHEDULE B EXCEPTIONS:

THIS SURVEY IS RELIANT UPON THE INFORMATION CONTAINED WITHIN CHICAGO TITLE INSURANCE COMPANY, TITLE CERTIFICATE NO. 0264638-16, DATED OCTOBER 30, 2023. ITEMS CIRCLED BELOW ARE SHOWN ON MAP.

1. RIGHT OF THE STATE OF WASHINGTON TO REMOVE OR DEPOSIT EARTH MATERIAL UPON SAID PREMISES IN EXTENSION OF SLOPES FOR GRADE OR EMBANKMENT, WITH RIGHT OF INGRESS AND EGRESS GRANTED BY INSTRUMENTS RECORDED UNDER RECORDING NOS. 3032001, 3034650 AND 3038601.

2. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

| | |
|---|---|
| GRANTED TO: | PUGET SOUND POWER & LIGHT COMPANY |
| PURPOSE: | ELECTRIC TRANSMISSION AND/OR DISTRIBUTION LINE AND APPURTENANCES |
| RECORDING DATE: | JUNE 15, 1950 |
| RECORDING NO.: | 4025491 |
| AFFECTS: | A PORTION OF SAID PREMISES |

SURVEYORS NOTE: DESCRIPTION TOO GENERAL, NOT PLOTTABLE.

3. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

| | |
|---|---|
| GRANTED TO: | MERCER ISLAND SEWER DISTRICT |
| PURPOSE: | SEWER PIPE LINE OR LINES, CONNECTIONS AND APPURTENANCES WITH RIGHT OF INGRESS AND EGRESS |
| RECORDING DATE: | MAY 6, 1959 |
| RECORDING NO.: | 5028729 |
| AFFECTS: | A PORTION OF SAID PREMISES |

SURVEYORS NOTE: AS CONSTRUCTED, NOT PLOTTABLE.

4. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

| | |
|---|---|
| GRANTED TO: | MERCER ISLAND SEWER DISTRICT |
| PURPOSE: | SEWER LINE OR LINES, CONNECTIONS AND APPURTENANCES WITH RIGHT OF INGRESS AND EGRESS |
| RECORDING DATE: | AUGUST 4, 1959 |
| RECORDING NO.: | 5064115 |
| AFFECTS: | A PORTION OF SAID PREMISES |

5. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

| | |
|---|---|
| GRANTED TO: | PUGET SOUND POWER & LIGHT COMPANY |
| PURPOSE: | ELECTRIC TRANSMISSION AND/OR DISTRIBUTION LINES AND EQUIPMENT |
| RECORDING DATE: | SEPTEMBER 28, 1960 |
| RECORDING NO.: | 5206698 |
| AFFECTS: | A PORTION OF SAID PREMISES |

SURVEYORS NOTE: AS CONSTRUCTED, NOT PLOTTABLE.

6. COVENANTS, CONDITIONS, RESTRICTIONS, RECITALS, RESERVATIONS, EASEMENTS, EASEMENT PROVISIONS, ENCROACHMENTS, DEDICATIONS, BUILDING SETBACK LINES, NOTES, STATEMENTS, AND OTHER MATTERS, IF ANY, BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS SET FORTH ON THE PLAT OF CHANNEL CREST:

RECORDING NO: 5543277
(AFFECTS: PARCEL C)

7. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

| | |
|---|---|
| GRANTED TO: | PUGET SOUND POWER & LIGHT COMPANY |
| PURPOSE: | ELECTRIC TRANSMISSION AND/OR DISTRIBUTION LINE, FACILITIES AND EQUIPMENT |
| RECORDING DATE: | JULY 19, 1963 |
| RECORDING NO.: | 5612241 |
| AFFECTS: | A PORTION OF SAID PREMISES |

SURVEYORS NOTE: AS CONSTRUCTED, NOT PLOTTABLE.

8. COVENANTS, CONDITIONS, RESTRICTIONS, RECITALS, RESERVATIONS, EASEMENTS, EASEMENT PROVISIONS, ENCROACHMENTS, DEDICATIONS, BUILDING SETBACK LINES, NOTES, STATEMENTS, AND OTHER MATTERS, IF ANY, BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS SET FORTH ON THE PLAT OF DOYLE-HANSEN ADDITION:

RECORDING NO: 5699123
(AFFECTS: PARCEL B)

9. RELINQUISHMENT OF ALL EXISTING, FUTURE OR POTENTIAL EASEMENTS FOR ACCESS, LIGHT, VIEW AND AIR, AND ALL RIGHTS OF INGRESS, EGRESS AND REGRESS TO, FROM AND BETWEEN SAID LAND AND THE HIGHWAY OR HIGHWAYS TO BE CONSTRUCTED ON LANDS CONVEYED BY DEED:

| | |
|---|---|
| TO: | STATE OF WASHINGTON |
| DATED: | JULY 13, 1967 |
| RECORDING DATE: | DECEMBER 13, 1967 |
| RECORDING NO.: | 6277737 |

SURVEYORS NOTE: DEED FOR I-90.

10. AGREEMENT AND THE TERMS AND CONDITIONS THEREOF, AS DISCLOSED IN DOCUMENT:

| | |
|---|---|
| RECORDING DATE: | AUGUST 12, 1968 |
| RECORDING NO.: | 6389877 |
| REGARDING: | OPTION TO HOOK ON TO A WATERLINE SERVING SAID PREMISES |

(AFFECTS: A PORTION OF LOTS 3 THROUGH 7 OF PARCEL C)

11. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS DISCLOSED IN A DOCUMENT:

| | |
|---|---|
| PURPOSE: | EXISTING WATER PUMP, PIPES AND OTHER EQUIPMENT |
| RECORDING DATE: | AUGUST 12, 1968 |
| RECORDING NO.: | 6389878 |

AFFECTS: A PORTION OF LOT 1 OF PARCEL C

12. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS DISCLOSED IN A DOCUMENT:

| | |
|---|---|
| GRANTED TO: | WATER DISTRICT NO. 91, KING COUNTY, WASHINGTON |
| PURPOSE: | WATER MAIN(S) AND WATER UTILITIES AND APPURTENANCES |
| RECORDING DATE: | APRIL 26, 1971 |
| RECORDING NO.: | 7104260335 |
| AFFECTS: | A PORTION OF PARCEL B |

13. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

| | |
|---|---|
| GRANTED TO: | WATER DISTRICT NO. 91, KING COUNTY, WASHINGTON |
| PURPOSE: | WATER MAIN AND APPURTENANCES |
| RECORDING DATE: | MAY 5, 1971 |
| RECORDING NO.: | 7105050427 |
| AFFECTS: | A PORTION OF LOT 5 OF PARCEL B |

14. NOTICE OF CHARGES FOR CONNECTION TO WATER AND SEWER SYSTEMS AND THE TERMS AND CONDITIONS THEREOF:

| | |
|---|---|
| EXECUTED BY: | CITY OF BELLEVUE |
| RECORDING DATE: | NOVEMBER 9, 1977 |
| RECORDING NO.: | 7711090948 |

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.

15. CONCOMITANT ZONING AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:

| | |
|---|---|
| RECORDING DATE: | MAY 24, 1979 |
| RECORDING NO.: | 7905240807 |
| (AFFECTS: PARCEL A) | |

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.

16. NOTICE OF CHARGES BY WATER, SEWER AND STORM AND SURFACE WATER UTILITIES AND THE TERMS AND CONDITIONS THEREOF:

| | |
|---|---|
| EXECUTED BY: | CITY OF BELLEVUE |
| RECORDING DATE: | DECEMBER 20, 1996 |
| RECORDING NO.: | 9612200938 |

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.

17. FAT, OIL AND GREASE AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:

| | |
|---|---|
| BETWEEN: | HERZL-NER TAMID CONSERVATIVE CONGREGATION |
| AND: | CITY OF MERCER ISLAND |
| RECORDING DATE: | JUNE 27, 2019 |
| RECORDING NO.: | 20190627000163 |

(AFFECTS: PARCEL C)

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.

18. QUESTION OF LOCATION OF LATERAL BOUNDARIES OF SAID SECOND CLASS TIDELANDS OR SHORELANDS.

SURVEYORS NOTE: BLANKET IN NATURE, NOT PLOTTABLE.

19. ANY QUESTION THAT MAY ARISE DUE TO SHIFTING AND CHANGING IN THE COURSE, BOUNDARIES OR HIGH WATER LINE OF LAKE WASHINGTON.

SURVEYORS NOTE: BLANKET IN NATURE, NOT PLOTTABLE.

20. RIGHTS OF THE STATE OF WASHINGTON IN AND TO THAT PORTION, IF ANY, OF THE LAND WHICH LIES BELOW THE LINE OF ORDINARY HIGH WATER OF LAKE WASHINGTON.

SURVEYORS NOTE: BLANKET IN NATURE, NOT PLOTTABLE.

21. ANY PROHIBITION OR LIMITATION OF USE, OCCUPANCY OR IMPROVEMENT OF THE LAND RESULTING FROM THE RIGHTS OF THE PUBLIC OR RIPARIAN OWNERS TO USE ANY PORTION WHICH IS NOW OR WAS FORMERLY COVERED BY WATER.

SURVEYORS NOTE: BLANKET IN NATURE, NOT PLOTTABLE.

22. PARAMOUNT RIGHTS AND EASEMENTS IN FAVOR OF THE UNITED STATES FOR COMMERCE, NAVIGATION, FISHERIES AND THE PRODUCTION OF POWER.

SURVEYORS NOTE: BLANKET IN NATURE, NOT PLOTTABLE.

23. THE PROPERTY HEREIN DESCRIBED IS CARRIED ON THE TAX ROLLS AS EXEMPT AS TO GENERAL REAL PROPERTY TAXES (NOT SPECIAL TAXES AND CHARGES). HOWEVER, IT WILL BECOME TAXABLE ON THE DATE OF THE EXECUTION OF A CONVEYANCE TO A TAXABLE ENTITY AND SUBJECT TO THE LIEN OF REAL PROPERTY TAXES FOR THE BALANCE OF THE YEAR FROM THAT DATE:

| | |
|---|---|
| TAX ACCOUNT NO.: | 082405-9045-07, 210700-0010-06 AND 151560-0010-01 |
| LEVY CODE: | 1031 |

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.

24. SPECIAL TAXES AND CHARGES, PAYABLE FEBRUARY 15, DELINQUENT IF FIRST HALF UNPAID ON MAY 1, SECOND HALF DELINQUENT IF UNPAID ON NOVEMBER 1 OF THE TAX YEAR (AMOUNTS DO NOT INCLUDE INTEREST AND PENALTIES):

| | |
|---|---|
| YEAR: | 2023 |
| TAX ACCOUNT NO.: | 082405-9045-07 |
| LEVY CODE: | 1031 |
| ASSESSED VALUE-LAND: | $1,686,000.00 |
| ASSESSED VALUE-IMPROVEMENTS: | $0.00 |
| SPECIAL TAXES AND CHARGES: | |
| BILLED: | $12.30 |
| PAID: | $12.30 |
| UNPAID: | $0.00 |
| (AFFECTS: PARCEL A) | |

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.

25. SPECIAL TAXES AND CHARGES, PAYABLE FEBRUARY 15, DELINQUENT IF FIRST HALF UNPAID ON MAY 1, SECOND HALF DELINQUENT IF UNPAID ON NOVEMBER 1 OF THE TAX YEAR (AMOUNTS DO NOT INCLUDE INTEREST AND PENALTIES):

| | |
|---|---|
| YEAR: | 2023 |
| TAX ACCOUNT NO.: | 210700-0010-06 |
| LEVY CODE: | 1031 |
| ASSESSED VALUE-LAND: | $2,163,400.00 |
| ASSESSED VALUE-IMPROVEMENTS: | $0.00 |
| SPECIAL TAXES AND CHARGES: | |
| BILLED: | $12.30 |
| PAID: | $12.30 |
| UNPAID: | $0.00 |

(AFFECTS: PARCEL B)

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.

26. SPECIAL TAXES AND CHARGES, PAYABLE FEBRUARY 15, DELINQUENT IF FIRST HALF UNPAID ON MAY 1, SECOND HALF DELINQUENT IF UNPAID ON NOVEMBER 1 OF THE TAX YEAR (AMOUNTS DO NOT INCLUDE INTEREST AND PENALTIES):

| | |
|---|---|
| YEAR: | 2023 |
| TAX ACCOUNT NO.: | 151560-0010-01 |
| LEVY CODE: | 1031 |
| ASSESSED VALUE-LAND: | $3,620,600.00 |
| ASSESSED VALUE-IMPROVEMENTS: | $1,200,600.00 |
| SPECIAL TAXES AND CHARGES: | |
| BILLED: | $12.57 |
| PAID: | $12.57 |
| UNPAID: | $0.00 |

(AFFECTS: PARCEL C)

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.

27. CITY, COUNTY OR LOCAL IMPROVEMENT DISTRICT ASSESSMENTS, IF ANY.

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.

28. LIABILITY FOR SEWER TREATMENT CAPACITY CHARGES, IF ANY, AFFECTING CERTAIN AREAS OF KING, PIERCE AND SNOHOMISH COUNTIES. SAID CHARGES COULD APPLY TO PROPERTY CONNECTING TO THE METROPOLITAN SEWERAGE FACILITIES OR RECONNECTING OR CHANGING ITS USE AND/OR STRUCTURE AFTER FEBRUARY 1, 1990.

PLEASE CONTACT THE KING COUNTY WASTEWATER TREATMENT DIVISION, CAPACITY CHARGE PROGRAM, FOR FURTHER INFORMATION AT 206-296-1450 OR FAX NO. 206-263-6823 OR EMAIL AT CAPCHARGEESCROW@KINGCOUNTY.GOV.

* A MAP SHOWING SEWER SERVICE AREA BOUNDARIES AND INCORPORATED AREAS CAN BE FOUND ONLINE. UNRECORDED SEWER CAPACITY CHARGES ARE NOT A LIEN ON TITLE TO THE LAND.

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.

29. A DEED OF TRUST TO SECURE AN INDEBTEDNESS IN THE AMOUNT SHOWN BELOW:

| | |
|---|---|
| AMOUNT: | $200,000.00 |
| DATED: | JANUARY 23, 2018 |
| TRUSTOR/GRANTOR: | HERZL-NER TAMID CONSERVATIVE CONGREGATION, A WASHINGTON NOT FOR PROFIT CORPORATION |
| TRUSTEE: | MARV STRASBURG, P.S., A CORPORATION |
| BENEFICIARY: | BRUCE GLADNER AND MARY GLADNER, HUSBAND AND WIFE |
| RECORDING DATE: | JANUARY 26, 2018 |
| RECORDING NO.: | 20180126001153 |
| (AFFECTS: PARCEL A) | |

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.

30. A DEED OF TRUST TO SECURE AN INDEBTEDNESS IN THE AMOUNT SHOWN BELOW:

| | |
|---|---|
| AMOUNT: | $200,000.00 |
| DATED: | JANUARY 23, 2018 |
| TRUSTOR/GRANTOR: | HERZL-NER TAMID CONSERVATIVE CONGREGATION, A WASHINGTON NOT FOR PROFIT CORPORATION |
| TRUSTEE: | MARV STRASBURG, P.S., A CORPORATION |
| BENEFICIARY: | LEWIS EDELHEIT AND SUSAN EDELHEIT, HUSBAND AND WIFE |
| RECORDING DATE: | JANUARY 26, 2018 |
| RECORDING NO.: | 20180126001154 |

(AFFECTS: PARCEL A)

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.

31. ANY UNRECORDED LEASEHOLDS, RIGHT OF VENDORS AND HOLDERS OF SECURITY INTERESTS ON PERSONAL PROPERTY INSTALLED UPON THE LAND AND RIGHTS OF TENANTS TO REMOVE TRADE FIXTURES AT THE EXPIRATION OF THE TERMS.

SURVEYORS NOTE: NOT A SURVEY MATTER, NOT PLOTTABLE.



BRANDON E. WINTERS STATE OF WASHINGTON 45803 REGISTERED PROFESSIONAL LAND SURVEYOR

DATE: 12/2/2024

# TOPOGRAPHIC SURVEY
## 3700 EAST MERCER WAY
## MERCER ISLAND, WASHINGTON

CHADWICK WINTERS
LAND SURVEYING AND MAPPING
1422 N.W. 85TH ST., SEATTLE, WA 98117
PHONE: 206.297.0996
FAX: 206.297.0997
WEB: WWW.CHADWICKWINTERS.COM

| | |
|---|---|
| PROJECT #: | 23-7964 |
| DRAWING: | 23-7964 TOPO |
| CLIENT: | AUDREY COVNER |
| DATE: | 12/2/2024 |
| DRAWN BY: | TTB |

# SITE TOPO (WEST)

NORTH

SCALE: 1" = 20'

0 10 20 40

ACCESS ROAD

NO ADDRESS
TAX NO. 0824059310

149.18'

N 78°09'41" E

198.59'

N 65°24'55" E

PARCEL A
NO ADDRESS
TAX NO. 0824059045

3650 E MERCER WAY
TAX NO. 1515600080

S 89°09'34" E

3600 E MERCER WAY
TAX NO. 151560TRCT

PARCEL C
BUILDING
3700 E MERCER WAY
TAX NO. 1515600010

MATCH LINE (SHEET 4)

PROPERTY CORNER
FOUND REBAR & CAP
AT DEED CORNER
"LS 19036"

MERCER ISLAND BOAT LAUNCH SIGN

E MERCER WAY

N 01°06'11" E 85.06'

CALCULATED INTERSECTION
POINT ON SECTION LINE

10' WATER LINE EASEMENT
RECORDING NO.
7104260335

N 89°09'34" W 70.61'

SECTION LINE
N 01°12'29" E 843.34'

SECTION 7
SECTION 8

PARCEL B
NO ADDRESS
TAX NO. 2107000010

PROPERTY CORNER
FOUND REBAR & CAP AT LOT CORNER
"LS 13035"

NO ADDRESS
TAX NO. 2107007RCT

S 89°09'34" E

PRIVATE ROAD

548.88'

R=20.00
Δ=90°15'45"
L=31.51'

SURFACE MONUMENT
FOUND MONUMENT AT GRADE LEVEL IN SEPTEMBER 2023
"CMI 23038/22/1992"

## LEGEND:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | ASPHALT SURFACE | CP | CONCRETE PIPE | | GAS METER (GM) | X" OT | ORNAMENTAL TREE | T | TELEPHONE LINE (UNDERGROUND) |
| AC | ASPHALT CURB | CRW | CONCRETE RETAINING WALL | | GAS VALVE (GV) | PLNTR | PLANTER | TS | TELEPHONE SENTRY |
| | AREA DRAIN (AD) | CS | CONCRETE STAIRS | GB | GRADE BREAK | PP | POWER POLE | TOE | TOE OF SLOPE |
| | BOLLARD (BLRD) | DI | DUCTILE IRON PIPE | GUY | OVERHEAD GUY WIRE | | PAINTED UTILITY LINE LOCATION | TOP | TOP OF SLOPE |
| | BRICK SURFACE | DR | DOOR | | GUY ANCHOR | P | POWER LINE (UNDERGROUND) | USW | UN-SHIELDED WIRE (OHP) |
| BS | BRICK STAIRS | X' DT | DECIDUOUS TREE | GP | GUY POLE | PSD | STORM DRAIN LINE | | WOOD FENCE (WF) |
| BOV | BLOW OFF VALVE (WATER) | X' ET | EVERGREEN TREE | IE | INVERT ELEVATION | SD | SERVICE DRAIN LINE (STORM) | W | WATER LINE |
| CC | CONCRETE CURB | | ELECTRICAL JUNCTION BOX (EJB) | ICB | IRRIGATION BOX | PSS | SANITARY SEWER | WDM | WATER DOWN MARKER |
| CCTV | CLOSED CIRCUIT TV CAMERA | | ELECTRIC METER (EM) | | LIGHT POLE (METAL) | PS | PARKING SPACE | WM | WATER METER |
| CD | CONDUIT DROP | ET | ELECTRIC TRANSFORMER | | LIGHT POLE (WOOD) | R/W | RIGHT OF WAY | | WATER GATE VALVE (WMH) |
| | CHAIN LINK FENCE (CLF) | EV | ELECTRIC VAULT | | MAIL BOX (MB) (PRIVATE) | (R) | RECORD INFORMATION | | WATER VALVE |
| | CONCRETE SURFACE | FDC | FIRE DEPT CONNECTION | OET | OVERHEAD TRANSFORMER | | ROCKERY | WRW | WOOD RETAINING WALL |
| COL | COLUMN | FH | FIRE HYDRANT | OHC | OVERHEAD COMMUNICATION | | SDMH/SSMH (STORM/SEWER MANHOLE) | WS | WOOD STAIRS |
| | | GDM | GAS DOWN MARKER | OHP | OVERHEAD POWER | SSS | SANITARY SIDE SEWER (RECORD) | XC | EXTRUDED CURB |
| | | G | GAS LINE | OHWM | ORDINARY HIGH WATER LEVEL | | SIGN (AS NOTED) | | YARD LIGHT (YL) |

SHEET 3 OF 7

BRANDON E. WINTERS
STATE OF WASHINGTON
45803
REGISTERED
PROFESSIONAL LAND SURVEYOR

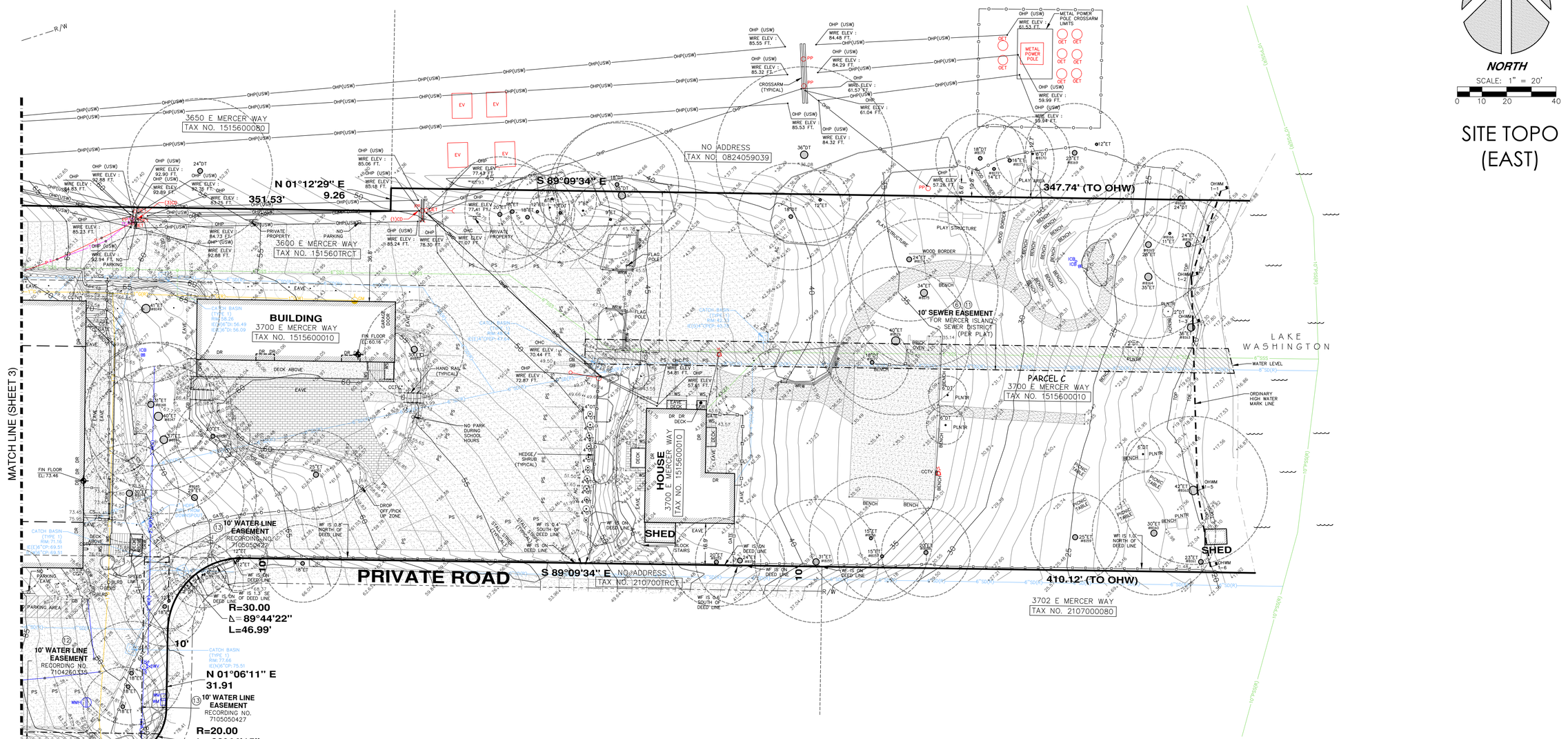
DATE: 12/2/2024

# TOPOGRAPHIC SURVEY
## 3700 EAST MERCER WAY
## MERCER ISLAND, WASHINGTON


CHADWICK WINTERS

LAND SURVEYING AND MAPPING
1422 N.W. 85TH ST., SEATTLE, WA 98117
PHONE: 206.297.0996
FAX: 206.297.0997
WEB: WWW.CHADWICKWINTERS.COM


PROJECT #: 23-7964
DRAWING: 23-7964 TOPO
CLIENT: AUDREY COVNER
DATE: 12/2/2024
DRAWN BY: TTB




## LEGEND:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | ASPHALT SURFACE | CP | CONCRETE PIPE | | GAS METER (GM) | X' OT | ORNAMENTAL TREE | T | TELEPHONE LINE (UNDERGROUND) |
| AC | ASPHALT CURB | CRW | CONCRETE RETAINING WALL | | GAS VALVE (GV) | PLNTR | PLANTER | TS | TELEPHONE SENTRY |
| | AREA DRAIN (AD) | CS | CONCRETE STAIRS | GB | GRADE BREAK | PP | POWER POLE | TOE | TOE OF SLOPE |
| | BOLLARD (BLRD) | DI | DUCTILE IRON PIPE | GUY | OVERHEAD GUY WIRE | | PAINTED UTILITY LINE LOCATION | TOP | TOP OF SLOPE |
| | BRICK SURFACE | DR | DOOR | | GUY ANCHOR | P | POWER LINE (UNDERGROUND) | USW | UN-SHIELDED WIRE (OHP) |
| BS | BRICK STAIRS | X' DT | DECIDUOUS TREE | GP | GUY POLE | PSD | STORM DRAIN LINE | | WOOD FENCE (WF) |
| BOV | BLOW OFF VALVE (WATER) | X' ET | EVERGREEN TREE | IE | INVERT ELEVATION | SD | SERVICE DRAIN LINE (STORM) | W | WATER LINE |
| CC | CONCRETE CURB | | ELECTRICAL JUNCTION BOX (EJB) | ICB | IRRIGATION BOX | PSS | SANITARY SEWER | WDM | WATER DOWN MARKER |
| CCTV | CLOSED CIRCUIT TV CAMERA | | ELECTRIC METER (EM) | | LIGHT POLE (METAL) | PS | PARKING SPACE | WM | WATER METER |
| CD | CONDUIT DROP | ET | ELECTRIC TRANSFORMER | | LIGHT POLE (WOOD) | R/W | RIGHT OF WAY | | WATER GATE VALVE (WMH) |
| | CHAIN LINK FENCE (CLF) | EV | ELECTRIC VAULT | | MAIL BOX (MB) (PRIVATE) | (R) | RECORD INFORMATION | | WATER VALVE |
| | CONCRETE SURFACE | FDC | FIRE DEPT CONNECTION | OET | OVERHEAD TRANSFORMER | | ROCKERY | WRW | WOOD RETAINING WALL |
| COL | COLUMN | FH | FIRE HYDRANT | OHC | OVERHEAD COMMUNICATION | | SDMH/SSMH (STORM/SEWER MANHOLE) | WS | WOOD STAIRS |
| | | GDM | GAS DOWN MARKER | OHP | OVERHEAD POWER | SSS | SANITARY SIDE SEWER (RECORD) | XC | EXTRUDED CURB |
| | | G | GAS LINE | OHWM | ORDINARY HIGH WATER LEVEL | | SIGN (AS NOTED) | | YARD LIGHT (YL) |



BRANDON E. WINTERS STATE OF WASHINGTON 45803 REGISTERED PROFESSIONAL LAND SURVEYOR

DATE: 12/2/2024

# TOPOGRAPHIC SURVEY
## 3700 EAST MERCER WAY
## MERCER ISLAND, WASHINGTON

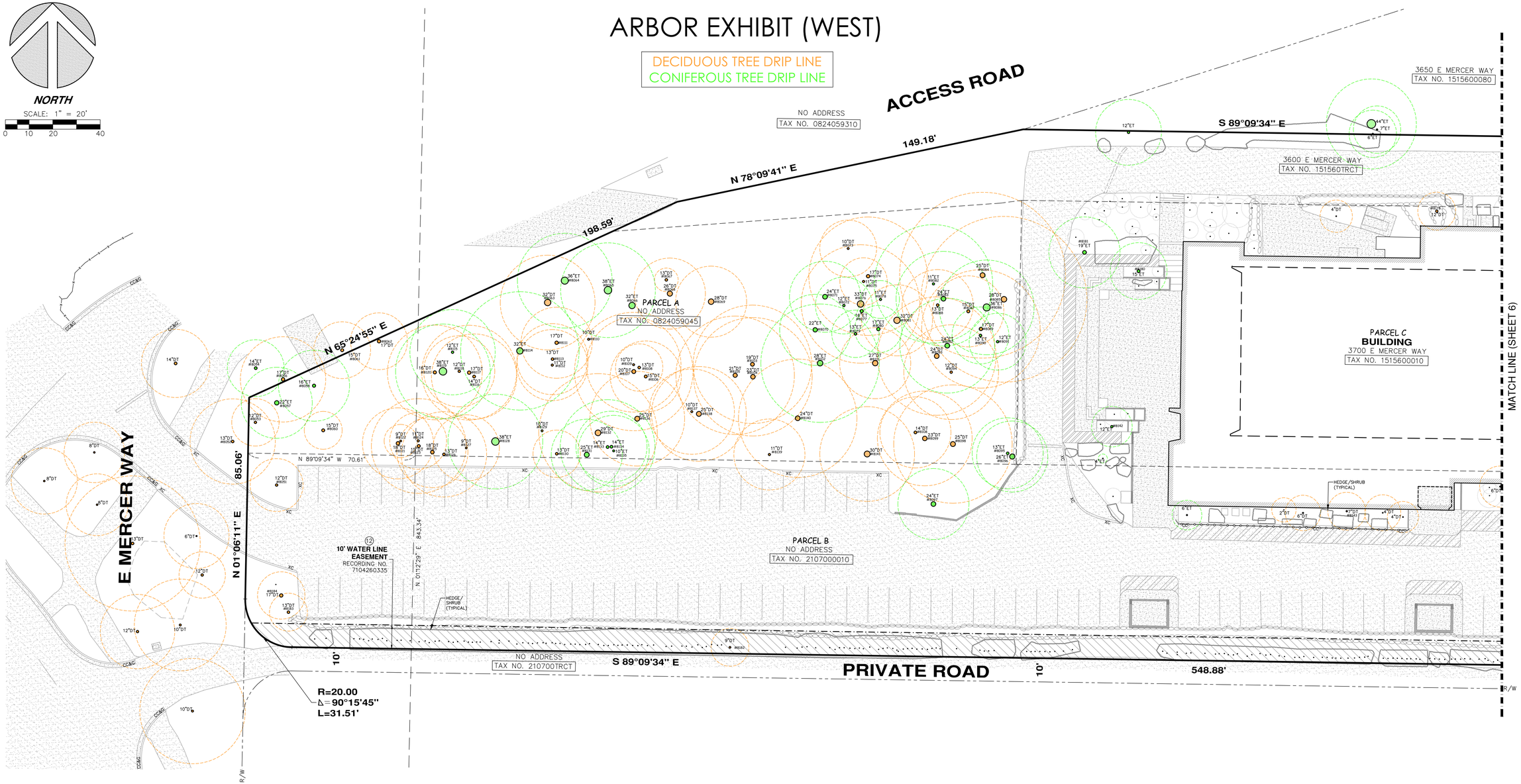
CHADWICK WINTERS
LAND SURVEYING AND MAPPING
1422 N.W. 85TH ST., SEATTLE, WA 98117
PHONE: 206.297.0996
FAX: 206.297.0997
WEB: WWW.CHADWICKWINTERS.COM

| | |
|---|---|
| PROJECT #: | 23-7964 |
| DRAWING: | 23-7964 TOPO |
| CLIENT: | AUDREY COVNER |
| DATE: | 12/2/2024 |
| DRAWN BY: | TTB |

# ARBOR EXHIBIT (WEST)

DECIDUOUS TREE DRIP LINE
CONIFEROUS TREE DRIP LINE

NORTH
SCALE: 1" = 20'
0 10 20 40




SHEET 5 OF 7

# TOPOGRAPHIC SURVEY
## 3700 EAST MERCER WAY
## MERCER ISLAND, WASHINGTON

BRANDON E. WINTERS
STATE OF WASHINGTON
45803
REGISTERED
PROFESSIONAL LAND SURVEYOR
DATE: 12/2/2024

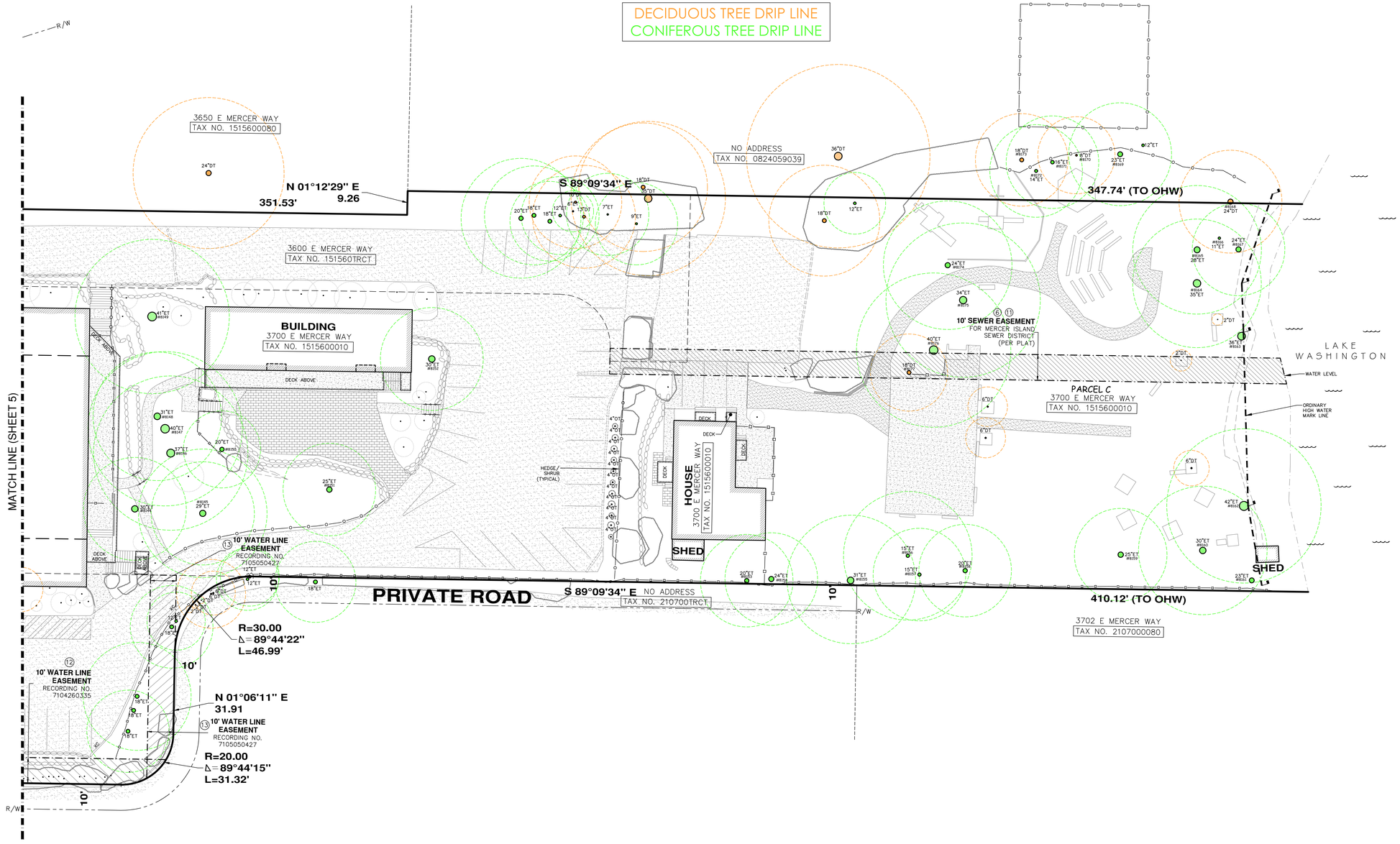

CHADWICK WINTERS
LAND SURVEYING AND MAPPING
1422 N.W. 85TH ST., SEATTLE, WA 98117
PHONE: 206.297.0996
FAX: 206.297.0997
WEB: WWW.CHADWICKWINTERS.COM


PROJECT #: 23-7964
DRAWING: 23-7964 TOPO
CLIENT: AUDREY COVNER
DATE: 12/2/2024
DRAWN BY: TTB

# ARBOR EXHIBIT (EAST)

DECIDUOUS TREE DRIP LINE
CONIFEROUS TREE DRIP LINE

NORTH
SCALE: 1" = 20'
0 10 20 40




SHEET 6 OF 7

BRANDON E. WINTERS
STATE OF WASHINGTON
45803
REGISTERED
PROFESSIONAL LAND SURVEYOR
DATE: 12/2/2024

# TOPOGRAPHIC SURVEY
## 3700 EAST MERCER WAY
## MERCER ISLAND, WASHINGTON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| | |
|---|---|
| PROJECT #: | 23-7964 |
| DRAWING: | 23-7964 TOPO |
| CLIENT: | AUDREY COVNER |
| DATE: | 12/2/2024 |
| DRAWN BY: | TTB |

**ARBOR TABLE PROVIDED BY DAVEY RESOURCE GROUP**

| Tree ID | DSH (in) | Avg. Drip line (ft) | Height (ft) | Species | Condition | Exceptional Tree Status | Preserve Priority |
|---|---|---|---|---|---|---|---|
| 8051 | 14 | 12 | 27 | Purple leaf plum (Prunus cerasifera) | Fair | Grove | 3 |
| 8052 | 13 | 18 | 27 | Norway maple (Acer platanoides) | Good | Grove | 2 |
| 8053 | 12.2 | 10 | 33 | Ash spp (Fraxius spp) | Fair | Grove | 3 |
| 8054 | 14 | 12 | 30 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 |
| 8055 | 12 | 10 | 27 | Norway maple (Acer platanoides) | Good | Grove | 2 |
| 8056 | 17 | 18 | 24 | Norway maple (Acer platanoides) | Fair | Grove | 2 |
| 8057 | 22 | 15 | 72 | Douglas fir (Pseudotsuga menziesii) | Fair | Grove | 2 |
| 8058 | 16 | 15 | 66 | Douglas fir (Pseudotsuga menziesii) | Fair | Grove | 2 |
| 8059 | 17 | 8 | 18 | Willow spp (Salix spp) | Very Poor | Exceptional (Grove) | 3 |
| 8060 | 15 | 8 | 51 | Black cottonwood (Populus trichocarpa) | Good | Grove | 3 |
| 8061 | 15 | 12 | 27 | Norway maple (Acer platanoides) | Good | Grove | 2 |
| 8062 | 17 | 12 | 20 | Norway maple (Acer platanoides) | Fair | Grove | 2 |
| 8063 | 32 | 20 | 70 | Willow spp (Salix spp) | Fair | Exceptional (Grove) | 2 |
| 8064 | 36 | 20 | 77 | Western red cedar (Thuja pilcata) | Poor | Exceptional (Grove) | 2 |
| 8065 | 38 | 20 | 77 | Western red cedar (Thuja pilcata) | Critical | Exceptional (Grove) | 3 |
| 8066 | 32 | 20 | 70 | Western red cedar (Thuja pilcata) | Very Poor | Exceptional (Grove) | 3 |
| 8067 | 13 | 5 | 17 | Big leaf maple (Acer macrophyllum) | Critical | Grove | 3 |
| 8068 | 25.8 | 15 | 55 | Big leaf maple (Acer macrophyllum) | Very Poor | Grove | 3 |
| 8069 | 28 | 15 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8070 | 22 | 15 | 60 | Western red cedar (Thuja pilcata) | Poor | Grove | 2 |
| 8071 | 24 | 15 | 50 | Western red cedar (Thuja pilcata) | Poor | Grove | 3 |
| 8072 | 12 | 12 | 60 | Western red cedar (Thuja pilcata) | Poor | Grove | 3 |
| 8073 | 10 | 12 | 55 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8074 | 17 | 25 | 75 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8075 | 11 | 10 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8076 | 33.4 | 25 | 80 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8077 | 16 | 0 | 65 | Western red cedar (Thuja pilcata) | Dead | Grove | 4 |
| 8078 | 11 | 8 | 40 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 |
| 8079 | 13 | 10 | 27 | Western red cedar (Thuja pilcata) | Poor | Grove | 3 |
| 8080 | 17 | 10 | 51 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 |
| 8081 | 32.3 | 15 | 69 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8082 | 11 | 25 | 50 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8083 | 24 | 20 | 60 | Douglas fir (Pseudotsuga menziesii) | Fair | Grove | 2 |
| 8084 | 25 | 35 | 60 | Big leaf maple (Acer macrophyllum) | Good | Grove | 2 |
| 8085 | 28.2 | 35 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8086 | 36 | 20 | 60 | Western red cedar (Thuja pilcata) | Fair | Exceptional (Grove) | 2 |
| 8087 | 14.7 | 15 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8088 | 13 | 15 | 50 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8089 | 17 | 25 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8090 | 13 | 12 | 60 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 |
| 8091 | 12 | 12 | 60 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 |
| 8092 | 24 | 20 | 60 | Western red cedar (Thuja pilcata) | Critical | Grove | 3 |
| 8094 | 12 | 20 | 65 | Big leaf maple (Acer macrophyllum) | Good | Grove | 2 |
| 8093 | 24 | 25 | 65 | Big leaf maple (Acer macrophyllum) | Good | Grove | 2 |
| 8095 | 13 | 15 | 63 | Douglas fir (Pseudotsuga menziesii) | Good | Grove | 2 |
| 8096 | 26 | 15 | 42 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 |
| 8097 | 24 | 15 | 60 | Western red cedar (Thuja pilcata) | Good | Grove | 2 |
| 8098 | 25 | 25 | 60 | Big leaf maple (Acer macrophyllum) | Poor | Grove | 3 |
| 8099 | 23 | 20 | 60 | Big leaf maple (Acer macrophyllum) | Poor | Grove | 3 |
| 8100 | 14.2 | 15 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8101 | 27 | 25 | 50 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8102 | 28 | 25 | 81 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 |
| 8103 | 19 | 25 | 74 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8104 | 23 | 25 | 80 | Big leaf maple (Acer macrophyllum) | Good | Grove | 2 |
| 8105 | 21 | 25 | 80 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8106 | 14.9 | 15 | 60 | Big leaf maple (Acer macrophyllum) | Very Poor | Grove | 3 |
| 8107 | 20 | 25 | 65 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8108 | 13.5 | 10 | 51 | Big leaf maple (Acer macrophyllum) | Very Poor | Grove | 3 |
| 8109 | 10 | 20 | 50 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8110 | 10 | 0 | 50 | Big leaf maple (Acer macrophyllum) | Dead | Grove | 4 |
| 8111 | 17 | 15 | 66 | Big leaf maple (Acer macrophyllum) | Good | Grove | 2 |
| 8112 | 11 | 15 | 50 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8113 | 13 | 15 | 50 | Big leaf maple (Acer macrophyllum) | Poor | Grove | 3 |
| 8114 | 32 | 25 | 80 | Western red cedar (Thuja pilcata) | Critical | Exceptional (Grove) | 3 |
| 8115 | 12 | 18 | 42 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8116 | 14 | 18 | 40 | Black locust (Robinia pseudoacacia) | Very Poor | Grove | 3 |
| 8117 | 17 | 20 | 45 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8118 | 12 | 15 | 45 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8120 | 16 | 20 | 46 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8119 | 38 | 20 | 80 | Western red cedar (Thuja pilcata) | Fair | Exceptional (Grove) | 2 |
| 8121 | 18 | 15 | 66 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8122 | 9 | 7 | 66 | Ash spp (Fraxius spp) | Fair | Grove | 3 |
| 8123 | 14.8 | 20 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8124 | 11 | 12 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8125 | 18.4 | 15 | 66 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8126 | 13 | 18 | 66 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8127 | 9 | 14 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8128 | 38 | 20 | 84 | Western red cedar (Thuja pilcata) | Fair | Exceptional (Grove) | 2 |
| 8129 | 10 | 0 | 55 | Red alder (Alnus rubra) | Critical | Grove | 3 |
| 8130 | 13 | 10 | 45 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8131 | 25 | 15 | 54 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 |
| 8132 | 29 | 25 | 54 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8133 | 14 | 20 | 54 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 |
| 8134 | 13.6 | 15 | 50 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 |
| 8135 | 10 | 15 | 45 | Douglas fir (Pseudotsuga menziesii) | Fair | Grove | 2 |
| 8136 | 25 | 20 | 80 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8137 | 10 | 18 | 65 | Big leaf maple (Acer macrophyllum) | Very Poor | Grove | 3 |
| 8138 | 25 | 20 | 70 | Big leaf maple (Acer macrophyllum) | Very Poor | Grove | 3 |
| 8139 | 10.8 | 15 | 33 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8140 | 24 | 25 | 54 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 |
| 8141 | 29.7 | 20 | 54 | Big leaf maple (Acer macrophyllum) | Very Poor | Grove | 3 |
| 8142 | 11 | 8 | 39 | Yellow cedar (Callitropsis nootkatensis) | Fair | Not Specific | 2 |
| 8143 | 7.7 | 8 | 39 | Vine maple (Acer circinatum) | Fair | Not Specific | 2 |
| 8144 | 30 | 20 | 81 | Western red cedar (Thuja pilcata) | Good | Exceptional | 2 |
| 8145 | 29 | 25 | 84 | Western red cedar (Thuja pilcata) | Good | Not Specific | 2 |
| 8146 | 37 | 30 | 93 | Western red cedar (Thuja pilcata) | Fair | Exceptional | 2 |
| 8147 | 40 | 30 | 93 | Western red cedar (Thuja pilcata) | Fair | Exceptional | 2 |
| 8148 | 31 | 25 | 90 | Western red cedar (Thuja pilcata) | Good | Exceptional | 2 |
| 8149 | 41 | 30 | 95 | Lawsons cypress (Chamaecyparis lawsoniana) | Fair | Exceptional | 2 |
| 8150 | 20 | 15 | 78 | Western red cedar (Thuja pilcata) | Fair | Not Specific | 2 |
| 8151 | 25 | 18 | 84 | Douglas fir (Pseudotsuga menziesii) | Good | Not Specific | 2 |
| 8152 | 30.1 | 20 | 60 | Western red cedar (Thuja pilcata) | Fair | Not Specific | 2 |
| 8153 | 20 | 18 | 80 | Douglas fir (Pseudotsuga menziesii) | Good | Not Specific | 2 |
| 8154 | 24 | 18 | 81 | Douglas fir (Pseudotsuga menziesii) | Good | Not Specific | 2 |
| 8155 | 31 | 25 | 85 | Western red cedar (Thuja pilcata) | Fair | Exceptional | 2 |
| 8156 | 15 | 25 | 80 | Douglas fir (Pseudotsuga menziesii) | Good | Not Specific | 2 |
| 8157 | 15 | 18 | 80 | Douglas fir (Pseudotsuga menziesii) | Fair | Not Specific | 2 |
| 8158 | 20 | 18 | 78 | Douglas fir (Pseudotsuga menziesii) | Fair | Not Specific | 2 |
| 8159 | 25 | 18 | 42 | Ash spp (Fraxius spp) | Fair | Exceptional | 2 |
| 8160 | 30 | 25 | 93 | Douglas fir (Pseudotsuga menziesii) | Critical | Exceptional | 3 |
| 8161 | 22.9 | 0 | 45 | Ash spp (Fraxius spp) | Critical | Not Specific | 3 |
| 8162 | 42 | 30 | 78 | Douglas fir (Pseudotsuga menziesii) | Good | Exceptional | 2 |
| 8163 | 36 | 0 | 99 | Douglas fir (Pseudotsuga menziesii) | Critical | Exceptional | 4 |
| 8164 | 35 | 25 | 94 | Douglas fir (Pseudotsuga menziesii) | Fair | Exceptional | 2 |
| 8165 | 28 | 25 | 114 | Douglas fir (Pseudotsuga menziesii) | Fair | Not Specific | 2 |
| 8166 | 11 | 0 | 68 | Douglas fir (Pseudotsuga menziesii) | Dead | Not Specific | 4 |
| 8167 | 24 | 18 | 129 | Douglas fir (Pseudotsuga menziesii) | Very Poor | Not Specific | 3 |
| 8168 | 24 | 20 | 75 | Ash spp (Fraxius spp) | Very Poor | Not Specific | 3 |
| 8169 | 23 | 20 | 78 | Deodar cedar (Cedrus deodara) | Good | Not Specific | 2 |
| 8170 | 9 | 15 | 24 | Sugar maple (Acer saccharum) | Good | Not Specific | 2 |
| 8171 | 16 | 18 | 78 | Deodar cedar (Cedrus deodara) | Good | Not Specific | 2 |
| 8172 | 14 | 18 | 42 | Deodar cedar (Cedrus deodara) | Good | Not Specific | 2 |
| 8173 | 18 | 18 | 42 | Big leaf maple (Acer macrophyllum) | Poor | Not Specific | 3 |
| 8174 | 24 | 25 | 57 | Douglas fir (Pseudotsuga menziesii) | Fair | Not Specific | 2 |
| 8175 | 34 | 30 | 83 | Douglas fir (Pseudotsuga menziesii) | Fair | Exceptional | 2 |
| 8176 | 41 | 30 | 90 | Douglas fir (Pseudotsuga menziesii) | Fair | Exceptional | 2 |
| 8177 | 18.2 | 15 | 24 | Cherry (Prunus spp) | Fair | Not Specific | 2 |
| 8178 | 12 | 8 | 18 | Cherry (Prunus spp) | Fair | Not Specific | 2 |
| 8179 | 20 | 8 | 20 | Cherry (Prunus spp) | Fair | Not Specific | 2 |
| 8180 | 14.8 | 12 | 49 | Yellow cedar (Callitropsis nootkatensis) | Fair | Not Specific | 2 |
| 8181 | 19.2 | 15 | 48 | Yellow cedar (Callitropsis nootkatensis) | Fair | Not Specific | 2 |
| 8182 | 9.1 | 8 | 21 | English Hawthorn (Crataegus monogyna) | Fair | Not Specific | 3 |
| 8183 | 12.7 | 8 | 18 | Cherry (Prunus spp) | Fair | Not Specific | 2 |
| 8184 | 17.5 | 10 | 20 | Cherry (Prunus spp) | Fair | Not Specific | 2 |



BRANDON E. WINTERS
STATE OF WASHINGTON
45803
REGISTERED
PROFESSIONAL LAND SURVEYOR

DATE: 12/2/2024

# TOPOGRAPHIC SURVEY
## 3700 EAST MERCER WAY
## MERCER ISLAND, WASHINGTON

CHADWICK WINTERS
LAND SURVEYING AND MAPPING
1422 N.W. 85TH ST., SEATTLE, WA 98117
PHONE: 206.297.0996
FAX: 206.297.0997
WEB: WWW.CHADWICKWINTERS.COM

PROJECT #: 23-7964
DRAWING: 23-7964 TOPO
CLIENT: AUDREY COVNER
DATE: 12/2/2024
DRAWN BY: TTB

# Barnabie Point Project

## PERMIT SET

## GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT CITY OF MERCER ISLAND DEVELOPMENT STANDARDS; THE CURRENT EDITION OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION; AND THE ADOPTED EDITION OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON.
2. ALL WORK WITHIN THE PLAT AND CITY RIGHT-OF-WAY SHALL BE SUBJECT TO THE INSPECTION OF THE CITY.
3. PRIOR TO ANY SITE CONSTRUCTION INCLUDING CLEARING/LOGGING OR GRADING, THE SITE CLEARING LIMITS SHALL BE LOCATED AND FIELD IDENTIFIED BY THE PROJECT SURVEYOR (OR PROJECT ENGINEER) AS REQUIRED BY THESE PLANS. THE PROJECT SURVEYOR'S NAME AND PHONE NUMBER IS BRANDON WINTERS, 206.297.0996.
4. THE DEVELOPER, CONTRACTOR AND PROJECT ENGINEER IS RESPONSIBLE FOR WATER QUALITY AS DETERMINED BY THE MONITORING PROGRAM ESTABLISHED BY THE PROJECT ENGINEER.
5. PRIOR TO ANY SITE WORK, THE CONTRACTOR SHALL CONTACT THE CITY OF MERCER ISLAND COMMUNITY DEVELOPMENT DEPARTMENT AT 425-263-8000 TO SCHEDULE A PRECONSTRUCTION CONFERENCE.
6. ENGINEERED AS-BUILT DRAWINGS IN ACCORDANCE WITH THE CURRENT ADOPTED INTERNATIONAL BUILDING CODE SHALL BE REQUIRED PRIOR TO FINAL SITE APPROVAL.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS FOR UTILITY, ROAD, AND RIGHT-OF-WAY CONSTRUCTION.
8. THE CONSTRUCTION STORMWATER POLLUTION PREVENTION (SWPP) FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED SWPPP PLANS PRIOR TO ANY GRADING OR LAND CLEARING. THESE FACILITIES MUST BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION AND LANDSCAPING IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. SEDIMENT LADEN WATERS SHALL NOT ENTER THE NATURAL DRAINAGE SYSTEM.
9. A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) OR SWPPP SUPERVISOR SHALL BE RESPONSIBLE FOR MAINTAINING THE CONSTRUCTION SWPP FACILITIES, AS OUTLINED IN THE APPROVED SWPPP, OR AS MODIFIED FROM TIME TO TIME. CONTACT INFORMATION FOR THE CESCL (OR SWPPP SUPERVISOR) FOR THE PROJECT SHALL BE GIVEN TO THE CITY.
10. NONCOMPLIANCE WITH THE REQUIREMENTS FOR EROSION CONTROLS, WATER QUALITY AND CLEARING LIMITS MAY RESULT IN REVOCATION OF PROJECT PERMITS, PLAN APPROVAL, AND BOND FORECLOSURES.
11. TRENCH BACKFILL OF NEW UTILITIES AND STORM DRAINAGE FACILITIES SHALL BE COMPACTED TO 95% MAXIMUM DENSITY (MODIFIED PROCTOR) UNDER ROADWAYS AND 90% MAXIMUM DENSITY (MODIFIED PROCTOR) OFF ROADWAYS. COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS 7-08.3(3) AND 2-03.3(14) D OF THE WSDOT STANDARD SPECIFICATIONS.
12. THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. LOCATION OF UTILITIES SHOWN ON CONSTRUCTION PLANS ARE BASED ON BEST RECORDS AVAILABLE AND ARE SUBJECT TO VARIATION. FOR ASSISTANCE IN UTILITY LOCATION, CALL 811.
13. PRIOR TO CONSTRUCTION THE OWNER AND/OR CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE PUBLIC WORKS DIRECTOR WHEN CONFLICTS EXIST BETWEEN THE PLANS AND FIELD CONDITIONS. CONFLICTS SHALL BE RESOLVED (INCLUDING PLAN AND PROFILE REVISIONS) AND RESUBMITTED FOR APPROVAL PRIOR TO PROCEEDING WITH CONSTRUCTION.
14. THE CONTRACTOR SHALL KEEP TWO SETS OF PLANS ON SITE AT ALL TIMES FOR RECORDING AS-BUILT INFORMATION; ONE SET SHALL BE SUBMITTED TO THE PROJECT ENGINEER, AND ONE SET SHALL BE SUBMITTED TO THE CITY AT COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF WORK.
15. A GRADING PERMIT ISSUED PURSUANT TO THE CURRENT ADOPTED INTERNATIONAL BUILDING CODE, AND APPROVAL OF THE TEMPORARY EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE OBTAINED FROM THE COMMUNITY DEVELOPMENT DEPARTMENT PRIOR TO ANY ON-SITE GRADING WORK NOT EXPRESSLY EXEMPT BY THE CURRENT ADOPTED INTERNATIONAL BUILDING CODE.

## LEGAL DESCRIPTION

PARCEL A: (TAX PARCEL NO. 082405-9045-07)

THAT PORTION OF GOVERNMENT LOT 11, SECTION 8, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON; TOGETHER WITH THAT PORTION OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT THE INTERSECTION OF THE WEST LINE OF GOVERNMENT LOT 11 WITH THE NORTH LINE OF DOYLE-HANSEN ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 75 OF PLATS, PAGE 24, RECORDS OF KING COUNTY, WASHINGTON; THENCE SOUTH 89°09'34" EAST ALONG THE NORTH OF SAID DOYLE-HANSEN ADDITION, A DISTANCE OF 253.49 FEET TO THE WEST LINE OF LOT 7 OF CHANNEL CREST, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 72 OF PLATS, PAGE 63, RECORDS OF KING COUNTY, WASHINGTON;
THENCE NORTH 01°12'29" EAST ALONG SAID WEST LINE, A DISTANCE OF 111.48 FEET TO THE SOUTH LINE OF TRACT "A" OF SAID CHANNEL CREST;
THENCE SOUTH 85°39'49" WEST ALONG SAID SOUTH LINE 173.15 FEET TO SOUTHEASTERLY LINE OF LAND CONVEYED TO STATE OF WASHINGTON TOLL BRIDGE AUTHORITY UNDER RECORDING NO. 3032009; THENCE SOUTH 65°24'55" WEST ALONG SAID SOUTHEASTERLY LINE TO THE EASTERLY MARGIN OF EAST MERCER WAY, AS CONVEYED TO KING COUNTY UNDER RECORDING NO. 923897;
THENCE SOUTH 01°02'29" WEST TO THE NORTH LINE OF SAID DOYLE-HANSEN ADDITION; THENCE SOUTH 89°09'34" EAST ALONG SAID NORTH LINE 70.61 FEET TO THE POINT OF BEGINNING.

PARCEL B: (TAX PARCEL NO. 210700-0010-06)

LOTS 1 THROUGH 5, INCLUSIVE, DOYLE-HANSEN ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 75 OF PLATS, PAGE 24, RECORDS OF KING COUNTY, WASHINGTON.

PARCEL C: (TAX PARCEL NO. 151560-0010-01)

LOTS 1 THROUGH 7, INCLUSIVE, CHANNEL CREST, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 72 OF PLATS, PAGE 63, RECORDS OF KING COUNTY, WASHINGTON;TOGETHER WITH AN UNDIVIDED 7/8THS INTEREST IN TRACT "A" OF SAID PLAT. SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

## VERTICAL DATUM

VERTICAL DATUM = NAVD'88, AS PER DIRECT OBSERVATIONS USING GPS EQUIPMENT ON SEPTEMBER 14TH, 2023.

## HORIZONTAL DATUM

HORIZONTAL DATUM = NAD 83/11 (EPOCH 2010).

## SITE DATA

| | |
|---|---|
| SITE ADDRESS: | 3800 E MERCER WAY, MERCER ISLAND, WA 98040 |
| TAX PARCEL NUMBER: | 0824059045, 2107000010, 1515600010, 151560TRCT |
| ZONING: | B AND R-9.6 |

## EARTHWORK QUANTITIES[1]

| | |
|---|---|
| STRIPPING (6") | 1,067 CY |
| EXCAVATION | 3,488 CY |
| FILL | 739 CY |

NOTE: THE QUANTITIES SHOWN ARE PRELIMINARY ESTIMATES ONLY AND INTENDED FOR MUNICIPAL PERMITTING AND REVIEW FEES. THE CONTRACTOR SHALL IGNORE THESE QUANTITIES, THEY ARE EXCLUDED FROM THE BID DOCUMENT INFORMATION. THESE VOLUMES SHALL NOT BE USED BY THE CONTRACTOR AS A BASIS FOR ANY CONTRACTUAL INFORMATION. THE CONTRACTOR SHALL PREPARE THEIR OWN EARTHWORK QUANTITIES BASED ON THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO DRAWINGS, SPECIFICATIONS, AND THE GEOTECHNICAL REPORT.

## Sheet List Table


| | |
|---|---|
| C0.00 | COVER SHEET |
| C0.10 | OVERALL SITE PLAN |
| C1.00 | OVERALL DEMO PLAN |
| C1.01 | DEMO PLAN |
| C1.02 | DEMO PLAN |
| C2.00 | OVERALL MASS EXCAVATION AND TESC PLAN |
| C2.01 | MASS EXCAVATION AND TESC PLAN |
| C2.02 | MASS EXCAVATION AND TESC PLAN |
| C2.10 | TESC DETAILS |
| C2.11 | TESC DETAILS |
| C3.00 | OVERALL GRADING PLAN |
| C3.01 | GRADING PLAN |
| C3.02 | GRADING PLAN |
| C3.10 | GRADING DETAILS |
| C3.20 | GRADING SECTIONS |
| C4.00 | OVERALL STORM DRAINAGE PLAN |
| C4.01 | STORM DRAINAGE PLAN |
| C4.02 | STORM DRAINAGE PLAN |
| C4.10 | STORM DRAINAGE DETAILS |
| C4.20 | STORM DRAINAGE PROFILES |
| C5.00 | OVERALL UTILITY PLAN |
| C5.01 | UTILITY PLAN |
| C5.02 | UTILITY PLAN |
| C5.10 | UTILITY DETAILS |
| C5.11 | UTILITY DETAILS |
| C5.12 | UTILITY DETAILS |
| C5.20 | UTILITY PROFILES |
| C6.00 | OVERALL PAVING AND STRIPING PLAN |
| C6.01 | PAVING AND STRIPING PLAN |
| C6.02 | PAVING AND STRIPING PLAN |
| C6.10 | PAVING DETAILS |
| C6.11 | PAVING DETAILS |
| C7.00 | OVERALL FIRE ACCESS PLAN |

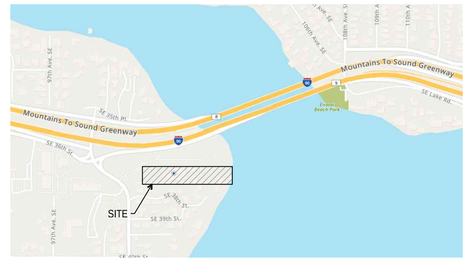

OWNER: HERZL-NER TAMID CONSERVATIVE CONGREGATION


ARCHITECT: ANJALI GRANT DESIGN
3427 BEACON AVE S
SEATTLE, WA 98144
CONTACT: ANJALI GRANT
ANJALI@AGRANTDESIGN.COM
206.512.4209

ENGINEER: JACOBSON CONSULTING ENGINEERS
255 S. KING STREET, SUITE #800
SEATTLE, WA 98104
CONTACT: ALAN JACOBSON
ALAN@JACOBSONENGINEERS.COM
206.399.6233

GENERAL CONTRACTOR: EXXEL PACIFIC
11820 NORTHUP WAY SUITE #300
BELLEVUE, WA 98005
CONTACT: SAM STEVENS
SAMS@EXXELPACIFIC.COM
206.715.1782


## VICINITY MAP





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anjali grant design LLC

REGISTERED PROFESSIONAL ENGINEER
ALAN D. JACOBSON
STATE OF WASHINGTON
43667
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 |
| | | BUILDING PERMIT |

PROJECT:
COVER SHEET

C0.00

JACOBSON CONSULTING ENGINEERS


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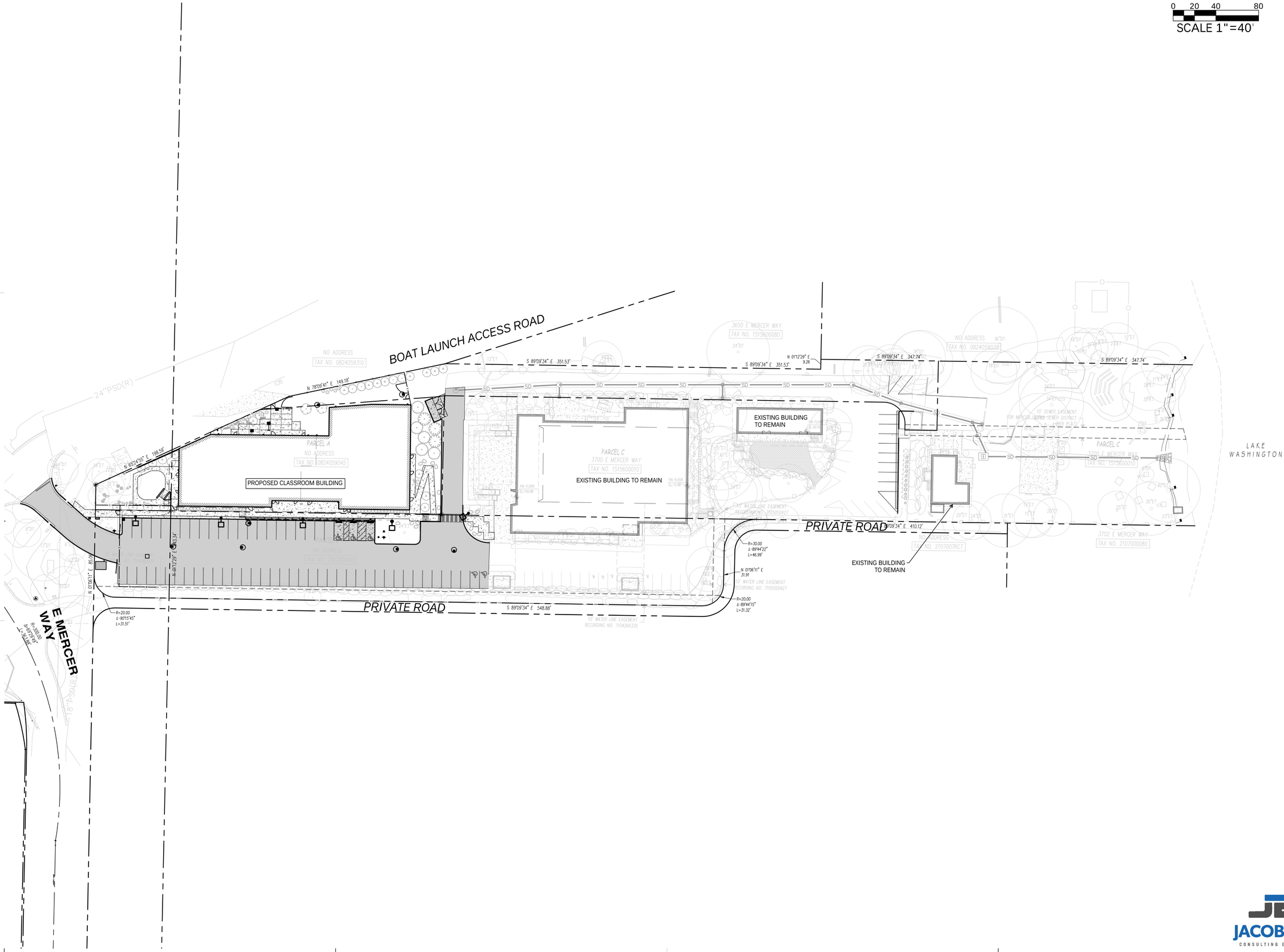
© ANJALI GRANT DESIGN, LLC ORIGINAL SHEET SIZE: 22" x 34"




Call before you Dig. 8-1-1
or 1-800-424-5555
UNDERGROUND SERVICE (USA)

0 20 40 80
SCALE 1"=40'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JERALD A. JACOBSON
STATE OF WASHINGTON
43667
REGISTERED PROFESSIONAL ENGINEER
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|

4 JUNE 2025
BUILDING PERMIT

PROJECT:
OVERALL SITE PLAN

C0.10

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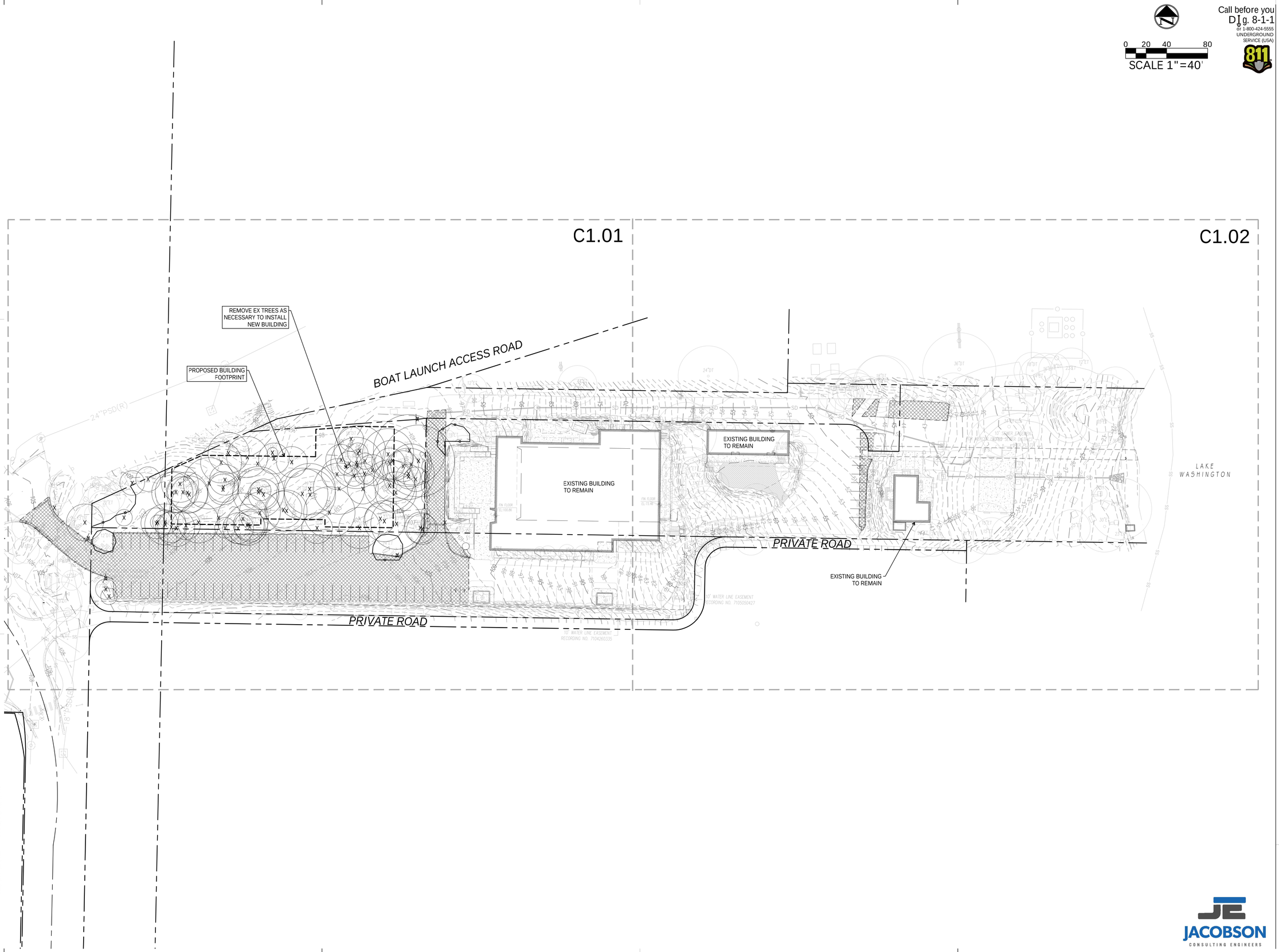


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anjali grant design LLC

JERALD A. JACOBSON
STATE OF WASHINGTON
43667
REGISTERED PROFESSIONAL ENGINEER
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
OVERALL DEMO PLAN

C1.00

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CONSULTING ENGINEERS


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0 10 20 40
SCALE 1"=20'

## LEGEND

- PROPERTY LINE — N 79°33'06" E – 46.81'
- SAWCUT LINE
- REMOVE CURBING
- REMOVE ASPHALT PAVEMENT
- REMOVE CONCRETE PAVEMENT
- REMOVE TREE(S)
- (VEG) TREE PROTECTION

BOAT LAUNCH ACCESS ROAD

PROTECT EX VAULTS

REMOVE EX SIGN

SAWCUT EX ASPHALT

APPROXIMATE BUILDING FOOTPRINT

REMOVE EX. TREE (TYP)

REMOVE ALL TREES INSIDE OF BUILDING FOOTPRINT (TYP)

TREE PROTECTION (TYP) SEE DETAIL 5/C2.10

REMOVE EX ROCKERY

ACCESS ROAD

SAWCUT AND REMOVE EX. ASPHALT

REMOVE EX SIGN

REMOVE EX CURB AND GUTTER

PROTECT EX CB TO REMAIN

REMOVE EX TREE (TYP)

REMOVE EX CURB (TYP)

PROTECT EX SSMH TO REMAIN

APPROXIMATE BUILDING FOOTPRINT

REMOVE EX CURB (TYP)

REMOVE EX TREE (TYP)

REMOVE EX SIGN

SAWCUT EX ASPHALT

PROTECT EX ROCKERY TO REMAIN

PROTECT EX UTILITY POLE

PROTECT EX ROCKERY TO REMAIN

PRIVATE ROAD

LEAVE EXISTING ASPHALT PAVING IN PLACE AS LONG AS POSSIBLE TO MINIMIZE EXPOSED SOILS. REMOVE IMMEDIATELY PRIOR TO REGRADING AND NEW PAVING

MATCHLINE - SEE SHEET C1.02

NO ADDRESS
TAX NO. 0824059310

NO ADDRESS
TAX NO. 210700TRCT

PARCEL A
3650 E MERCER WAY
TAX NO. 1515600080

PARCEL C
3700 E MERCER WAY
TAX NO. 1515600010

6600 E MERCER WAY
TAX NO. 1515600070

E MERCER WAY


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anjali grant design LLC

REGISTERED PROFESSIONAL ENGINEER
ANJALI A. D. A. JACOBSON
STATE OF WASHINGTON
43667
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
DEMO PLAN

C1.01

JACOBSON CONSULTING ENGINEERS


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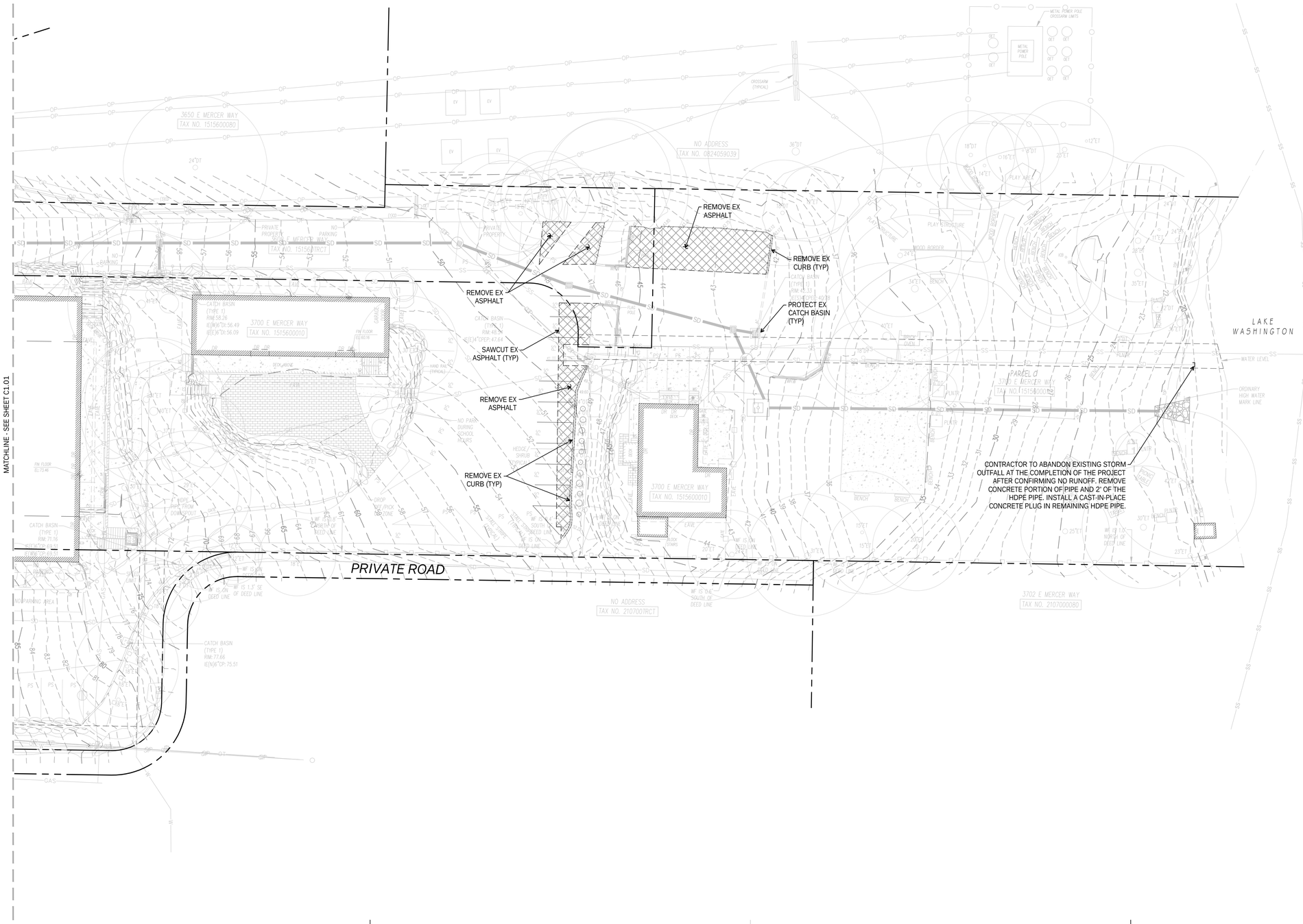


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43667
REGISTERED PROFESSIONAL ENGINEER
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 BUILDING PERMIT |

PROJECT:
DEMO PLAN

C1.02

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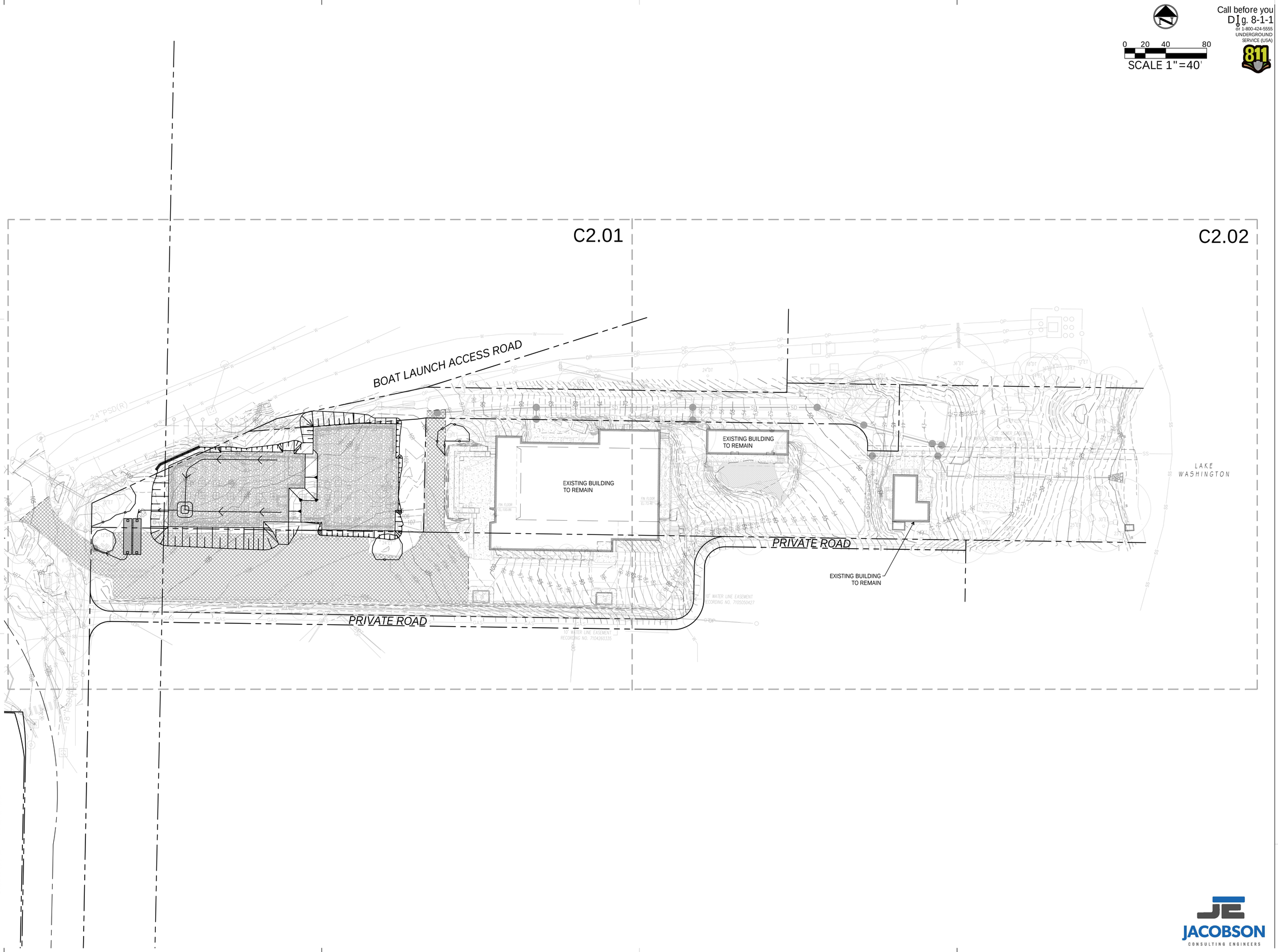


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3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
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PROJECT:
OVERALL MASS EXCAVATION AND TESC PLAN

C2.00

JACOBSON
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0 10 20 40
SCALE 1"=20'

## LEGEND

- VEG — TREE PROTECTION
- SF — SILT FENCE
- INLET PROTECTION
- BOE = BOTTOM OF EXCAVATION — SEE DETAIL 4/C2.11

BOAT LAUNCH ACCESS ROAD

NOTE: BOE IS TO BOTTOM OF SLAB SECTION. ASSUME VERTICAL NEAT CUTS AT ALL FOOTINGS INCLUDING BRACE FRAME FOOTINGS.

TREE PROTECTION (TYP) SEE DETAIL 5/C2.10

NOTE: TEMPORARY CONSTRUCTION SLOPE EASEMENT REQUIRED FOR WORK DONE BEYOND PROPERTY LINE

SEE ONLY 7 SECTION 8

ECOLOGY BLOCK WALL 6/C2.10

BOTTOM OF EXCAVATION = 91.33

LOWER LEVEL BUILDING FFE STEP

1H:1V

BOTTOM OF EXCAVATION = 103.33

TEMPORARY SUMP AND PUMP TO SETTLEMENT TANKS SEE DETAIL 3/C2.10

INTERCEPTOR SWALE SEE DETAIL 9/C2.10

B01 93.00
BOE 91.33

12'

L01 105.00
BOE 103.33

STORMWATER SETTLEMENT TANKS (2) 18,900 GALLON CAPACITY 11/C2.10

SEE DETAIL 4/C2.11 FOR SLAB SECTION

8/C2.10

4/C2.10

INLET PROTECTION (TYP) SEE DETAIL 12/C2.10

DISCHARGE CLEAN CONSTRUCTION RUNOFF TO STORM SYSTEM

LEAVE EXISTING ASPHALT PAVING IN PLACE AS LONG AS POSSIBLE TO MINIMIZE EXPOSED SOILS. REMOVE IMMEDIATELY PRIOR TO REGRADING AND NEW PAVING

ACCESS ROAD

PRIVATE ROAD

E MERCER WAY

NO ADDRESS
TAX NO. 0824059310

NO ADDRESS
TAX NO. 210700TRCT

3650 E MERCER WAY
TAX NO. 1515600080

6600 E MERCER WAY
TAX NO. 1515600070

PARCEL C
3700 E MERCER WAY
TAX NO. 1515600010

MATCHLINE - SEE SHEET C2.02


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PROJECT:
MASS EXCAVATION AND TESC PLAN

C2.01

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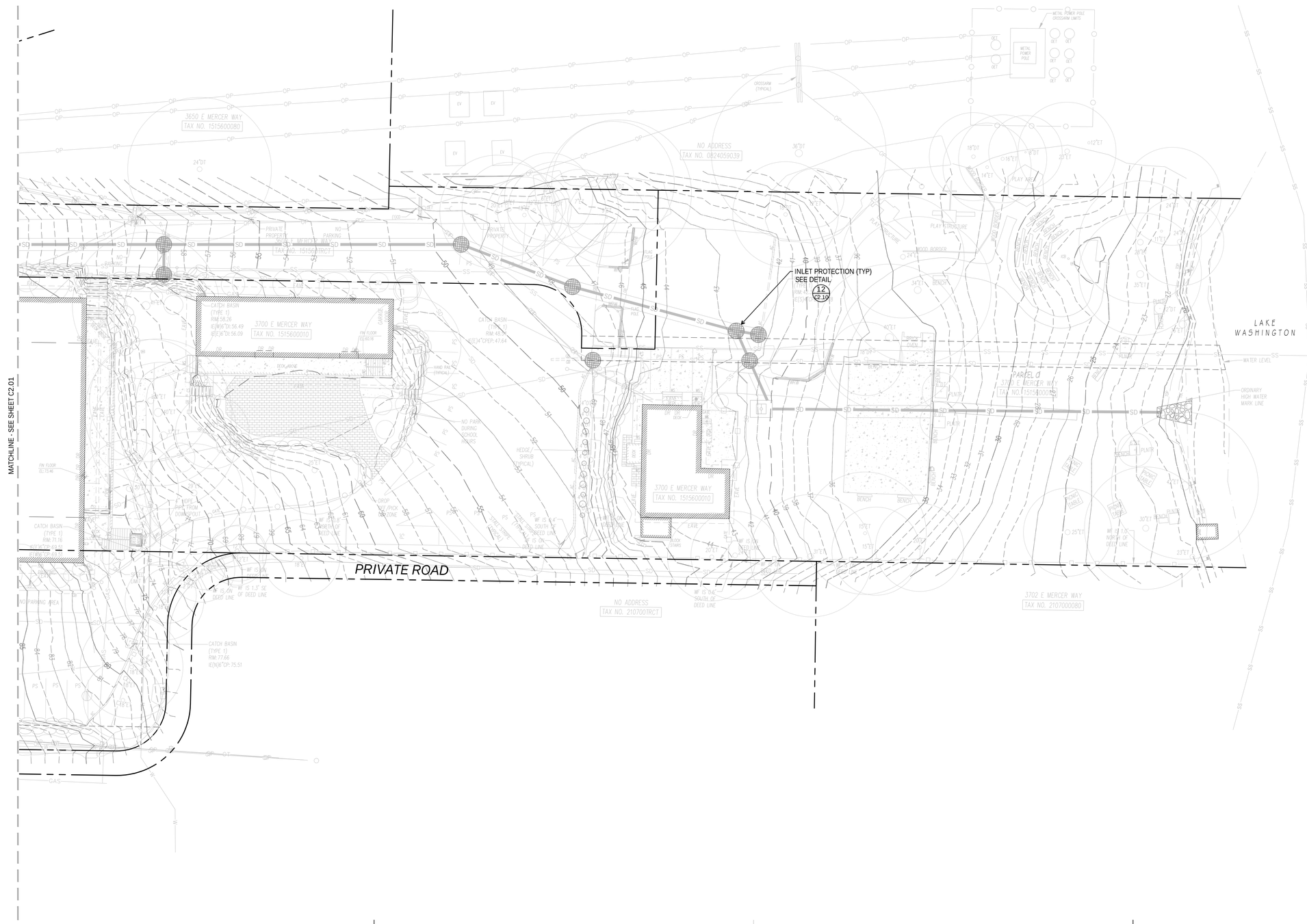


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## LEGEND

- VEG — TREE PROTECTION
- SF — SILT FENCE
- INLET PROTECTION


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3700 EAST MERCER WAY
# BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
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PROJECT:
MASS EXCAVATION AND TESC PLAN

C2.02

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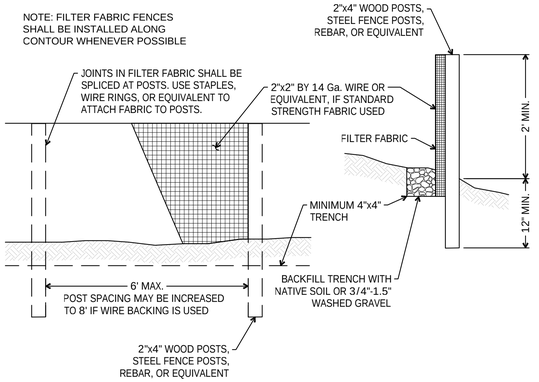
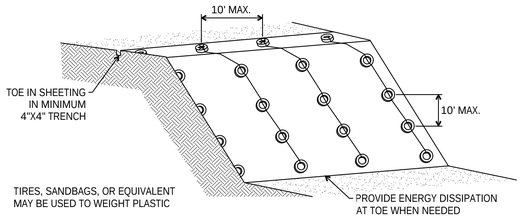
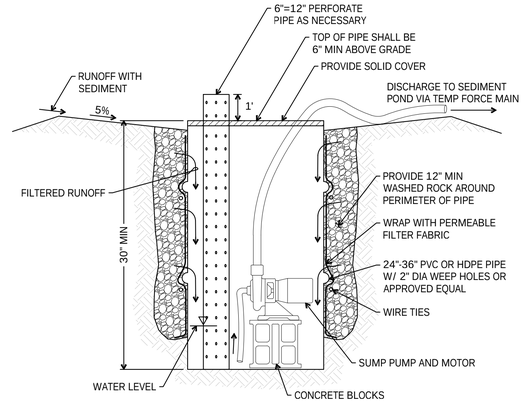


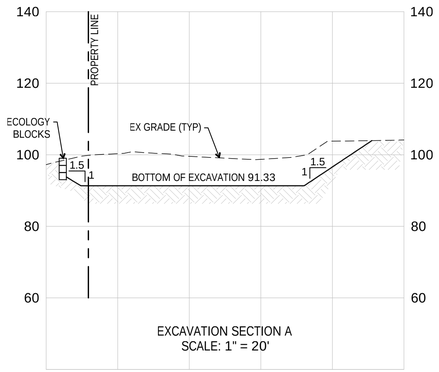

NTS
Silt Fence 1




NTS
Plastic Sheeting 2




NTS
Temporary Sump and Pump 3

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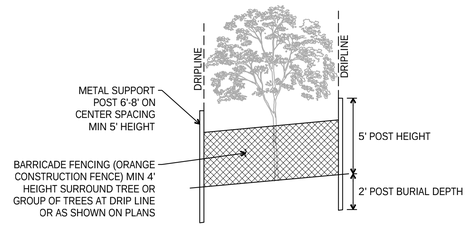
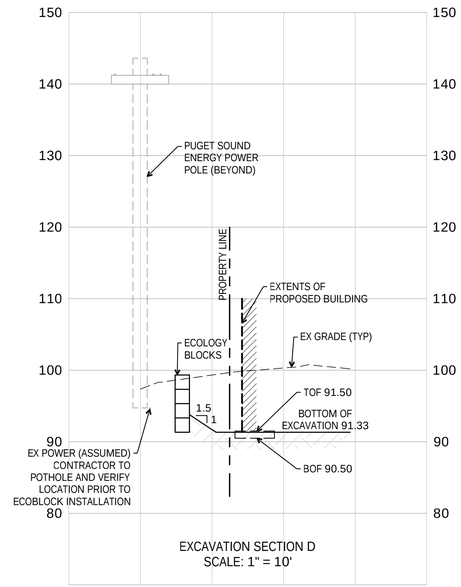
Section A 4




NOTES:

1. A MINIMUM 4 FOOT HIGH TEMPORARY FENCE MUST BE PLACED AT THE DRIP LINE OF TREES PRIOR TO THE COMMENCEMENT OF CLEARING OR EARTHWORK. NOTIFY THE CLEARING AND GRADING INSPECTOR TO GET BOTH THE INSPECTION AND WRITTEN APPROVAL OF FLAGGED TREES AND TEMPORARY PROTECTION FENCING AROUND TREES TO BE SAVED PER THE APPROVED CLEARING AND GRADING PLAN.
2. NO STOCKPILING OF MATERIAL AND NO VEHICULAR TRAFFIC ARE ALLOWED WITHIN THE LIMITS OF THE TEMPORARY FENCING. FILLING, EXCAVATION, AND CLEARING MUST BE ACCOMPLISHED BY HAND METHODS ONLY.
3. ROOTS OF TREES TO BE SAVED WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE TREATED IN THE FOLLOWING WAY: FOR DAMAGED ROOTS OVER 1" IN DIAMETER, MAKE A CLEAN, STRAIGHT CUT TO REMOVE THE DAMAGED PORTION OF THE ROOT. ALL EXPOSED ROOTS WILL BE TEMPORARILY COVERED WITH DAMP BURLAP OR WOOD SHAVINGS TO PREVENT DRYING AND COVERED WITH EARTH AS SOON AS POSSIBLE.
4. SEE TREE PROTECTION AND TESC PLANS FOR LOCATION OF EXISTING TREES TO RECEIVE TEMPORARY FENCING.
5. SEE SPECIFICATIONS FOR PRUNING, WATERING, AND OTHER MAINTENANCE REQUIREMENTS

NTS
Tree Protection 5

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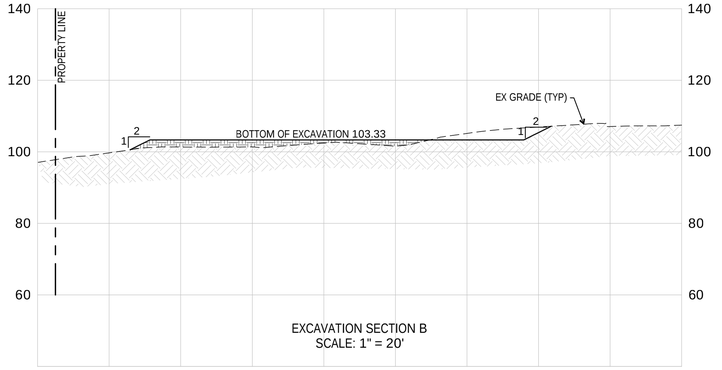
Section D 6

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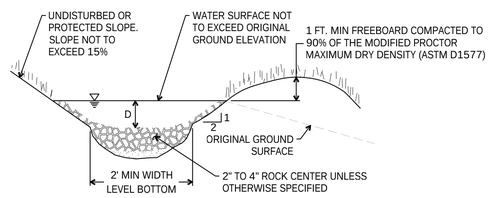
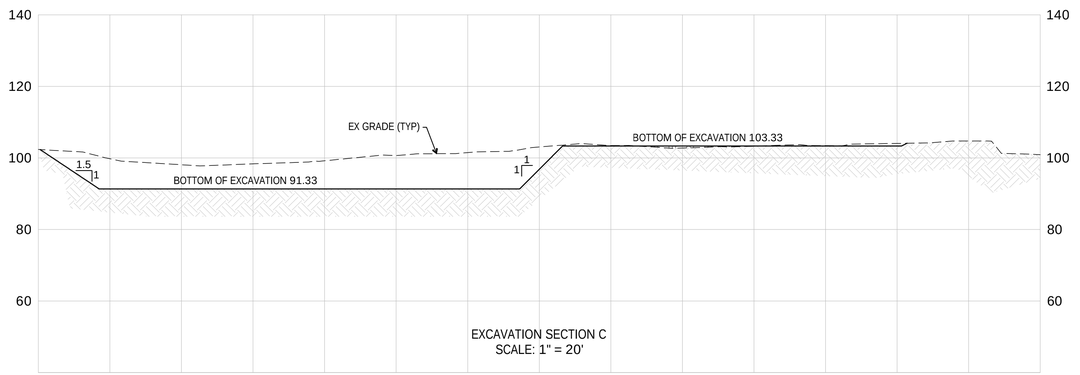
Section B 8



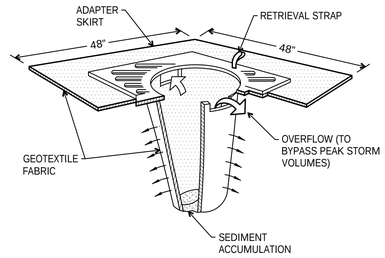

NOTES:

1. PROVIDE ROCK CHECK DAMS EVERY 50 FT. OR EVERY 5' OF VERTICAL FALL.
2. DIMENSIONS: 1 FT MINIMUM DEPTH(D) BY 2 FT MINIMUM BOTTOM WIDTH
3. SWALE GRADE SHOULD NOT EXCEED 5%. SIDE SLOPES SHOULD BE 2:1 OR LESS.
4. OUTLET SHALL CONSIST OF RIP RAP DISCHARGING TO STABILIZED OUTLET, SEDIMENT POND OR LEVEL SPREADER.
5. IF DESIGNED AS A PERMANENT DRAINAGE FEATURE, MAY BE USED IN COMBINATION WITH INTERCEPTOR DRAIN.

NTS
Interceptor Swale 9




Scale: 1"=20'
Section C 11




INLET PROTECTION NOTE:
FILTERS SHALL BE INSPECTED AFTER EACH STORM EVENT AND CLEANED OR REPLACES WHEN 1/3 FULL.

NTS
Inlet Protection 12

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PROJECT:
TESC DETAILS

C2.10

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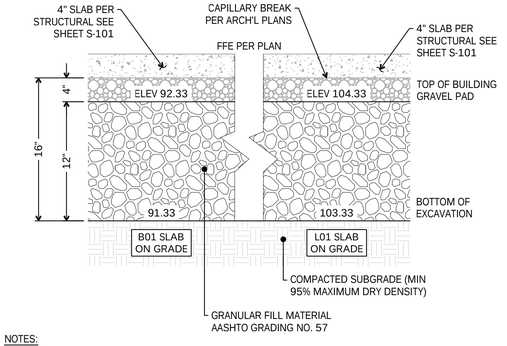


NOTES:

1. ALL SURFACES COMPACTED TO 95%

NTS Not Used 1

NTS Not Used 2

NTS Not Used 3

NTS Gravel Building Pad 4

NTS Not Used 5

NTS Not Used 6

NTS Not Used 7

NTS Not Used 8

NTS Not Used 9

NTS Not Used 10

NTS Not Used 11

NTS Not Used 12




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PROJECT:
TESC DETAILS

C2.11

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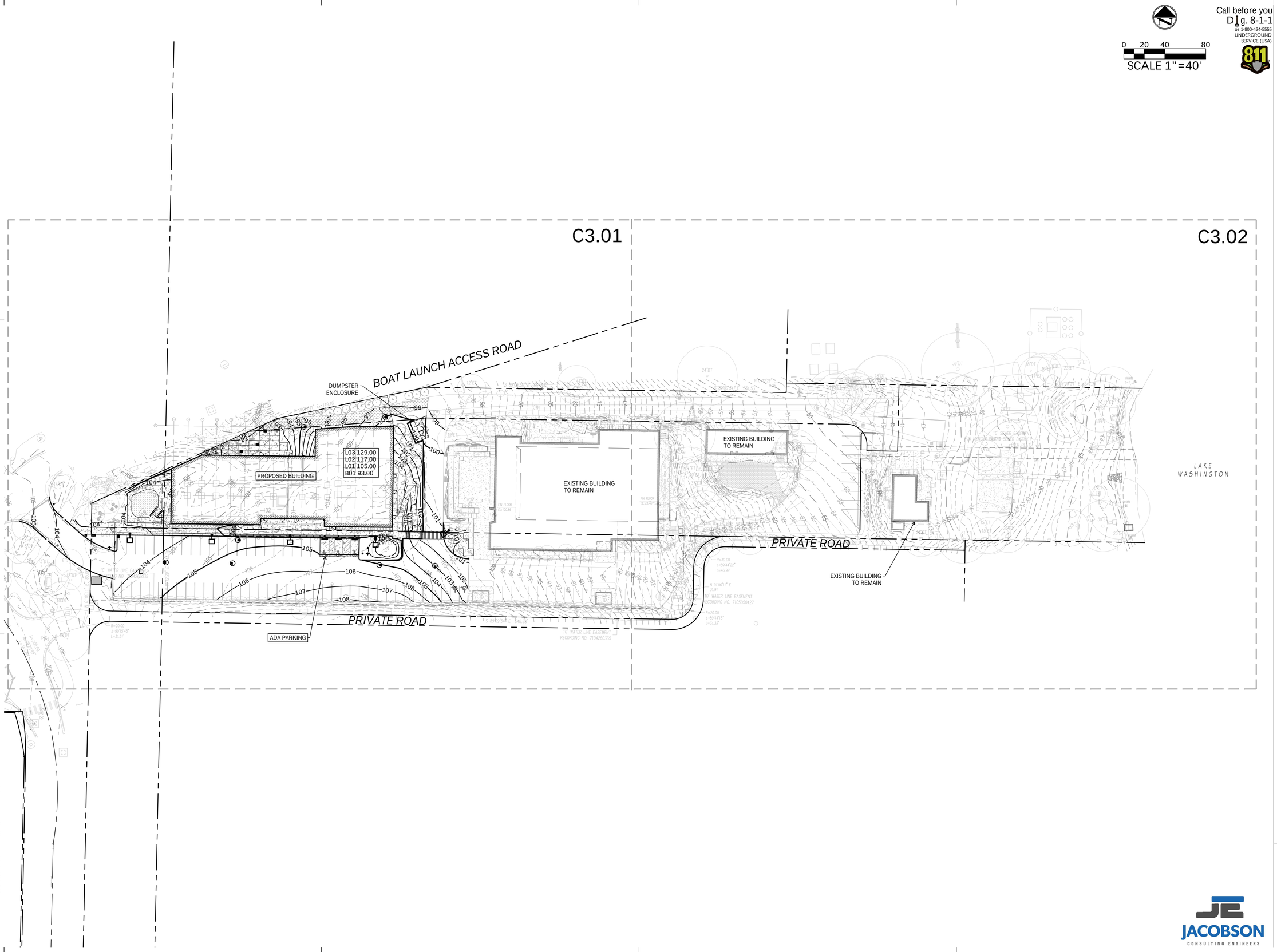


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| NO. | DATE | DESCRIPTION |
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PROJECT:
OVERALL GRADING PLAN

C3.00

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0 10 20 40
SCALE 1"=20'

## LEGEND

PROPERTY LINE — N 79°33'06" E – 46.81'
CONTOUR (INDEX) — 110
CONTOUR — 109
SPOT ELEVATION — 109.36 / TC 109.86 BC 109.36
GRADE BREAK — RIDGE / VALLEY

BOAT LAUNCH ACCESS ROAD
PRIVATE ROAD
E MERCER WAY
ACCESS ROAD

NO ADDRESS
TAX NO. 0824059310

3650 E MERCER WAY
TAX NO. 1515600080

6600 E MERCER WAY

PARCEL A
NO ADDRESS
TAX NO. 2107005045

PARCEL B
NO ADDRESS
TAX NO. 2107007RCT

PARCEL C
3700 E MERCER WAY
TAX NO. 1515600010

CATCH BASIN (TYPE 2) RIM: 86.41 IE(SW)12": 81.22 IE(W)36"CMP: 78.91 IE(S)36"CMP: 72.49

CATCH BASIN (TYPE 1) RIM: 89.44 *UNABLE TO OPEN

CATCH BASIN (TYPE 1) RIM: 102.57 IE(S)12"CPP: 101.77

CATCH BASIN (TYPE 2) RIM: 104.05 IE(NW)4"CPEP: 102.53 IE(S)16"CMP: 100.25 IE(W)24"CMP: 98.05

SD B5 CB TYPE II - 48" RIM 99.90
SD B4 CB TYPE II - 48" RIM 95.29
SD B3 CB TYPE I RIM 92.63
SD B2 CB TYPE I RIM 92.83
SD B1 CB TYPE I RIM 92.94
SD A1 CB TYPE I RIM 103.01
SD A2 CB TYPE II - 48" RIM 104.30
SD A3 CB TYPE II - 48" RIM 105.29
SD A4 CB TYPE II - 48" RIM 105.07
SD A5 CB TYPE II - 48" RIM 102.97
A1 SSMH - 48" RIM 104.74

CIP RETAINING WALL
RAISE EX SSMH RIM TO GRADE
RAISE EX CB RIM TO GRADE
ADA COMPLIANT TRENCH DRAIN
FOR GRADING IN THIS AREA SEE DETAIL 7/C3.10
FOR GRADING IN THIS AREA SEE DETAIL 4/C3.10

GARBAGE ENCLOSURE
TRANSFORMER PAD
L03 129.00
L02 117.00
L01 105.00
B01 93.00

TC 100.39 BC 100.04
TC 99.96 BC 99.93
TC 99.93 BC 99.92
TC 100.07 BC 100.04
99.28(EX)
99.75(EX)
91.93(EX)
91.60(EX)
104.18(EX)
TC 104.65 (EX) BC 104.15 (EX)
TC 104.41 BC 103.91
TC 104.39 BC 103.89
103.31(EX)
105.62(EX)
TC 106.14 (EX) BC 105.64 (EX)
TC 105.10 BC 104.60
TC 105.06 BC 104.56
TC 104.70 BC 104.20
TC 104.69 BC 104.19
TC 104.05 BC 103.55
TC 104.04 BC 103.54
TC 103.49 BC 102.99
TC 103.63 BC 103.13
TC 103.66 BC 103.16
TC 104.00 BC 103.50

20'
99.00
93.00
92.92
92.85
92.77
92.80
92.62
96.48
101.13
105.00

MATCHLINE - SEE SHEET C3.02

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3700 EAST MERCER WAY
BARNABIE POINT PROJECT

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PROJECT:
GRADING PLAN

C3.01

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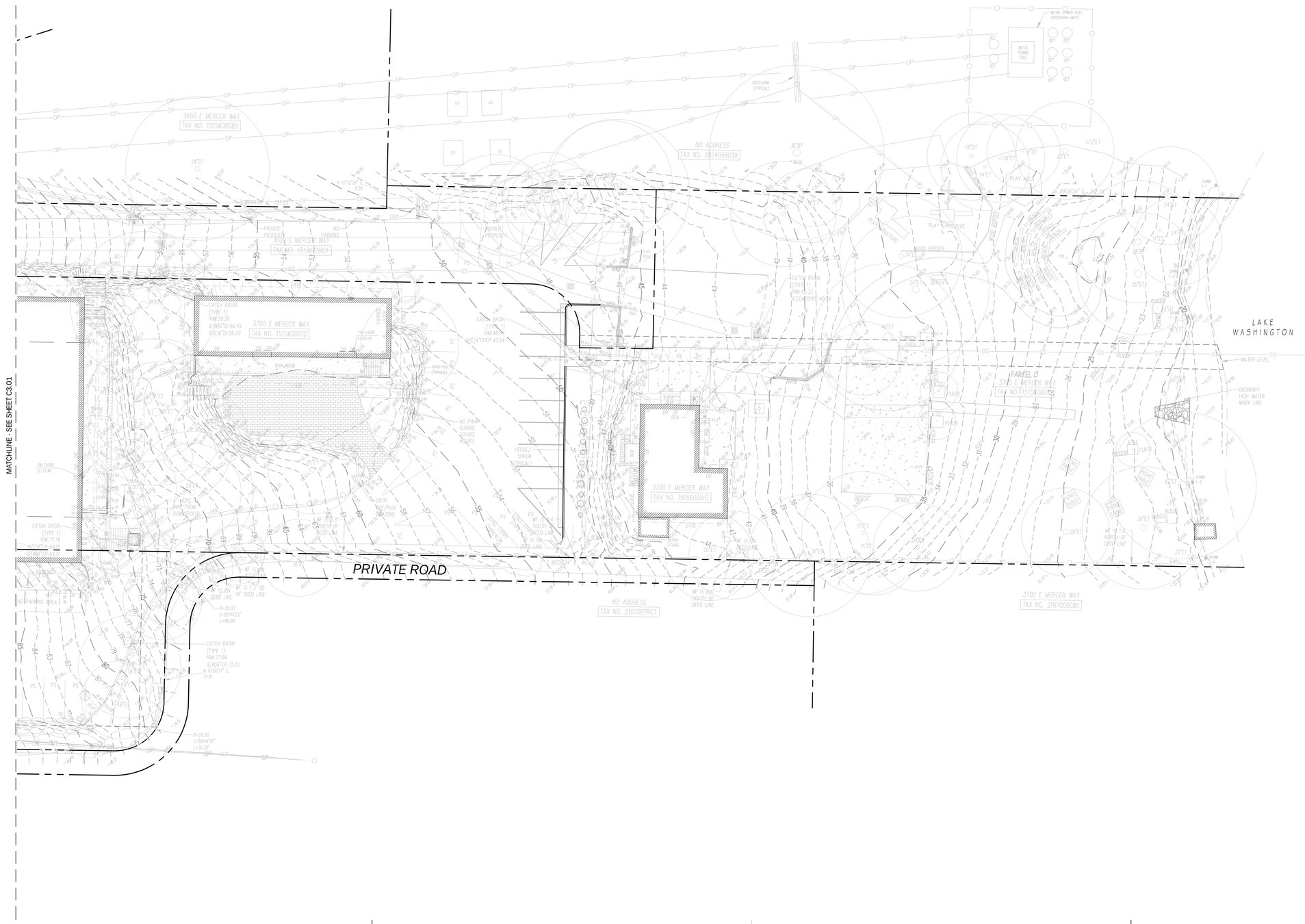
0 10 20 40
SCALE 1"=20'

## LEGEND

PROPERTY LINE — N 79°33'06" E – 46.81'
CONTOUR (INDEX) — 110
CONTOUR — 109
SPOT ELEVATION — 109.36 / TC 109.86 BC 109.36
GRADE BREAK — RIDGE / VALLEY





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PROJECT:
GRADING PLAN

C3.02

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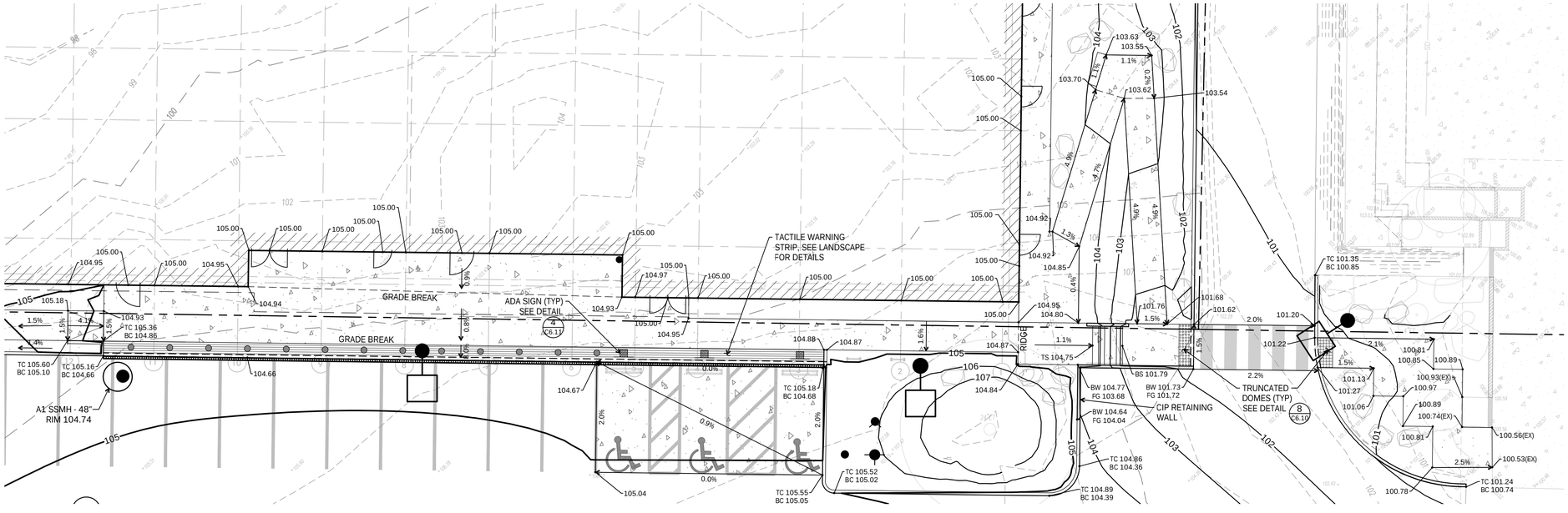


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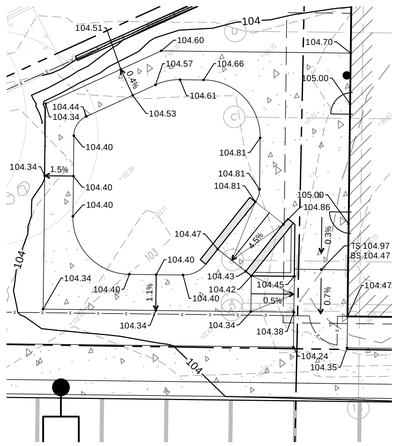
Detailed Grading Enlargement 4



NTS
Not Used 9

Scale: 1"=10'
Detailed Play Area Enlargement 7

NTS
Not Used 8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PROJECT:
GRADING DETAILS

C3.10

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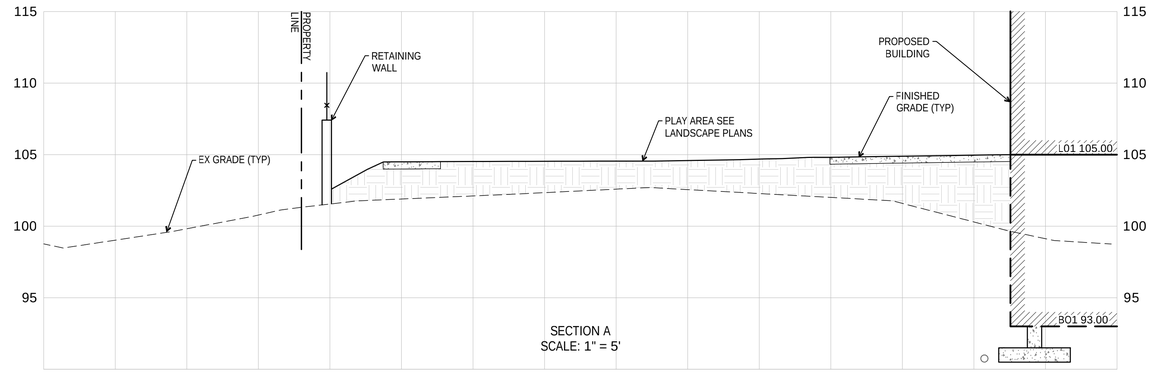
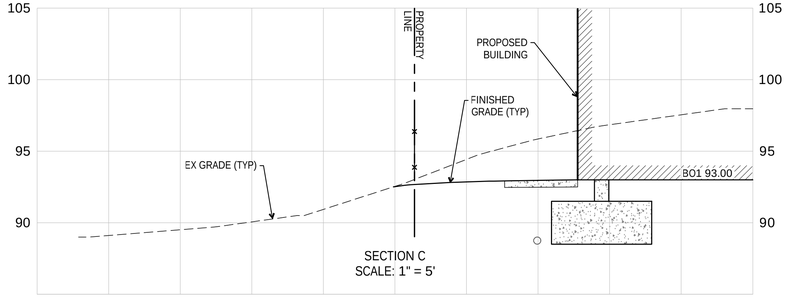



SECTION A
SCALE: 1" = 5'

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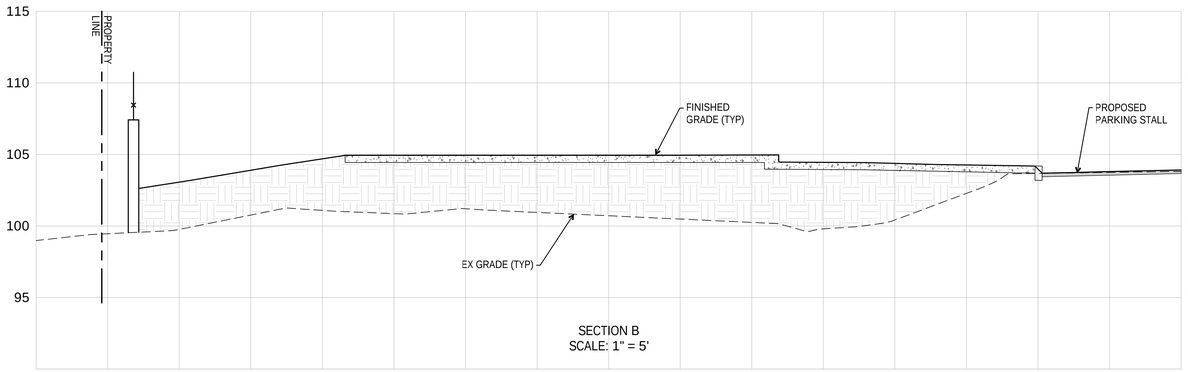
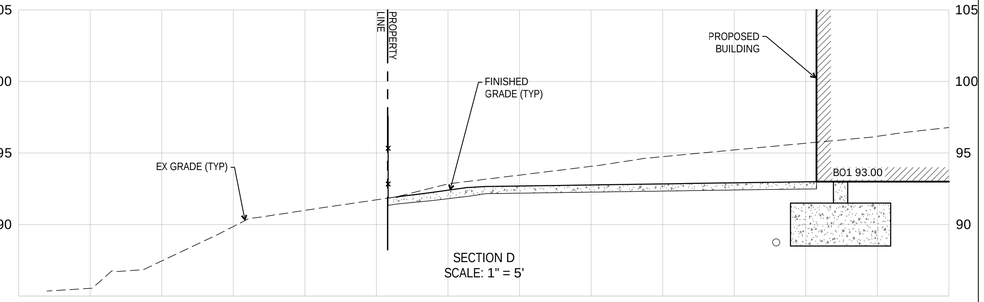



SECTION B
SCALE: 1" = 5'

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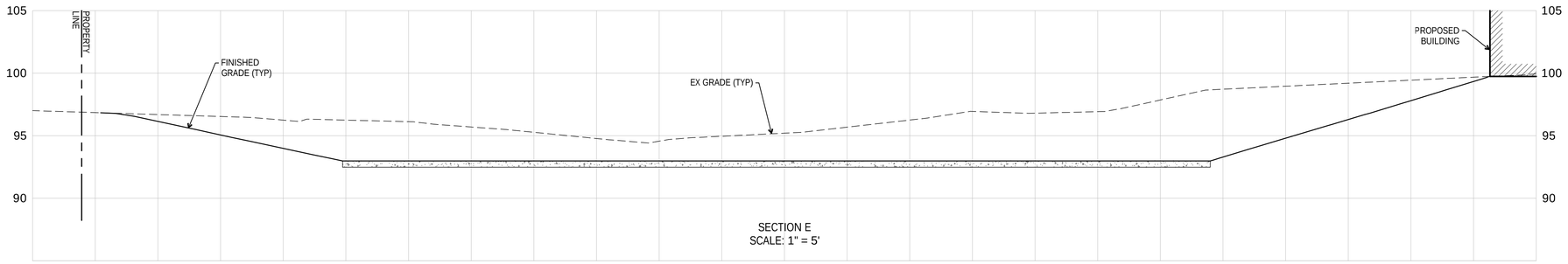
SCALE: 1" = 5'




SECTION E
SCALE: 1" = 5'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206-512-4209


anjali grant design LLC




3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
GRADING SECTIONS

C3.20

JACOBSON
CONSULTING ENGINEERS


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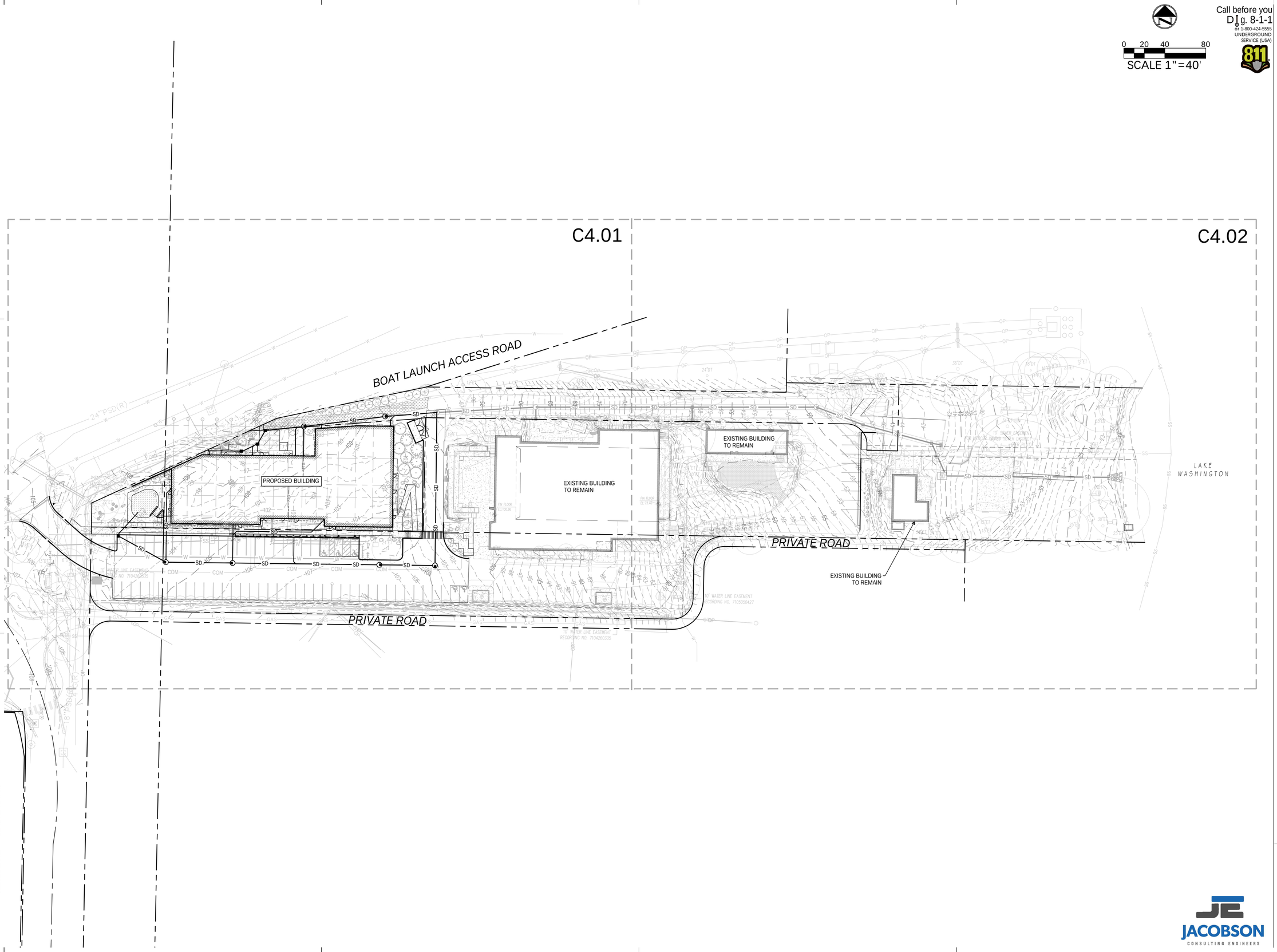


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206-512-4209


anjali grant design LLC

JERALD A. JACOBSON
STATE OF WASHINGTON
43667
REGISTERED PROFESSIONAL ENGINEER
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
OVERALL STORM DRAINAGE PLAN

C4.00

JACOBSON
CONSULTING ENGINEERS

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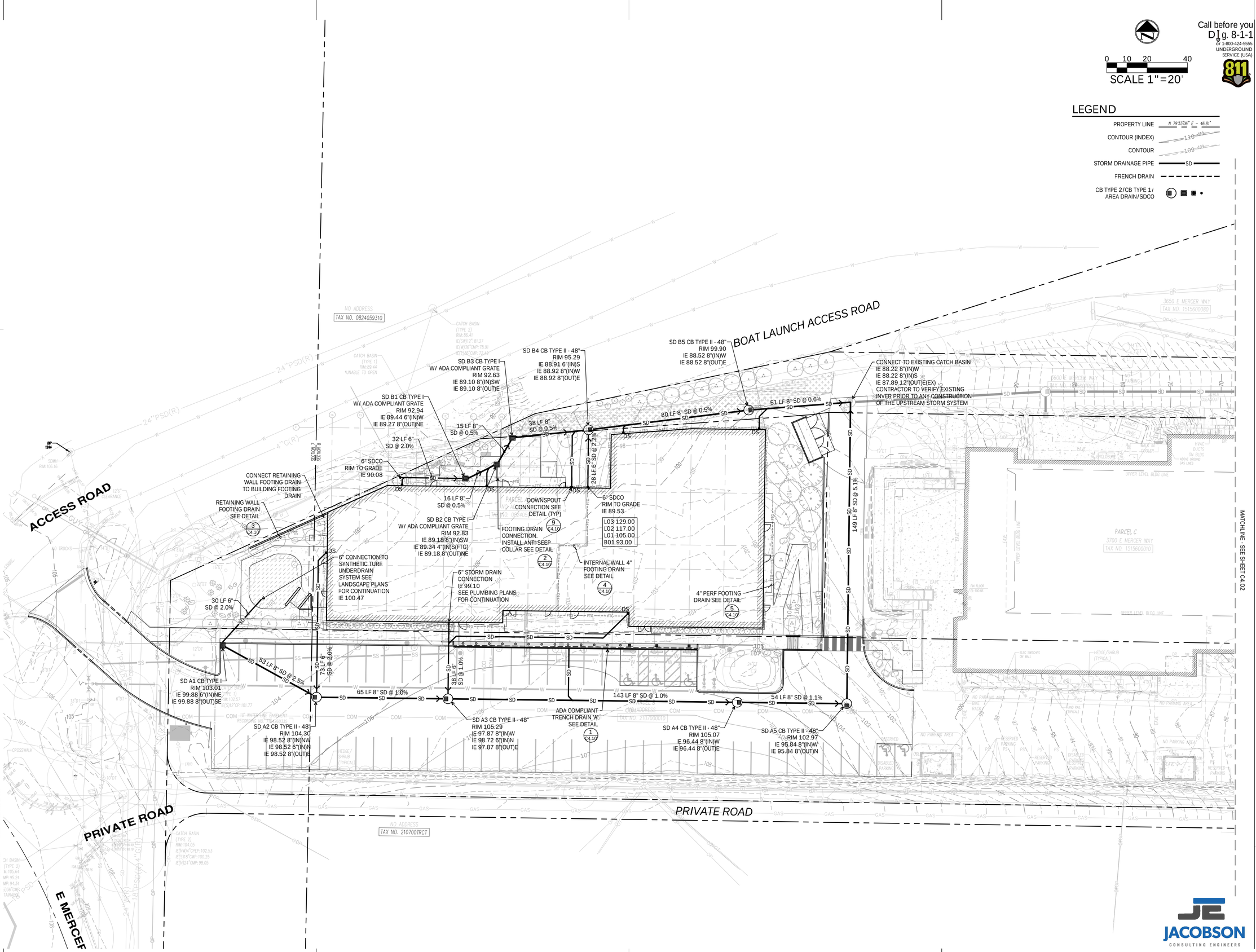
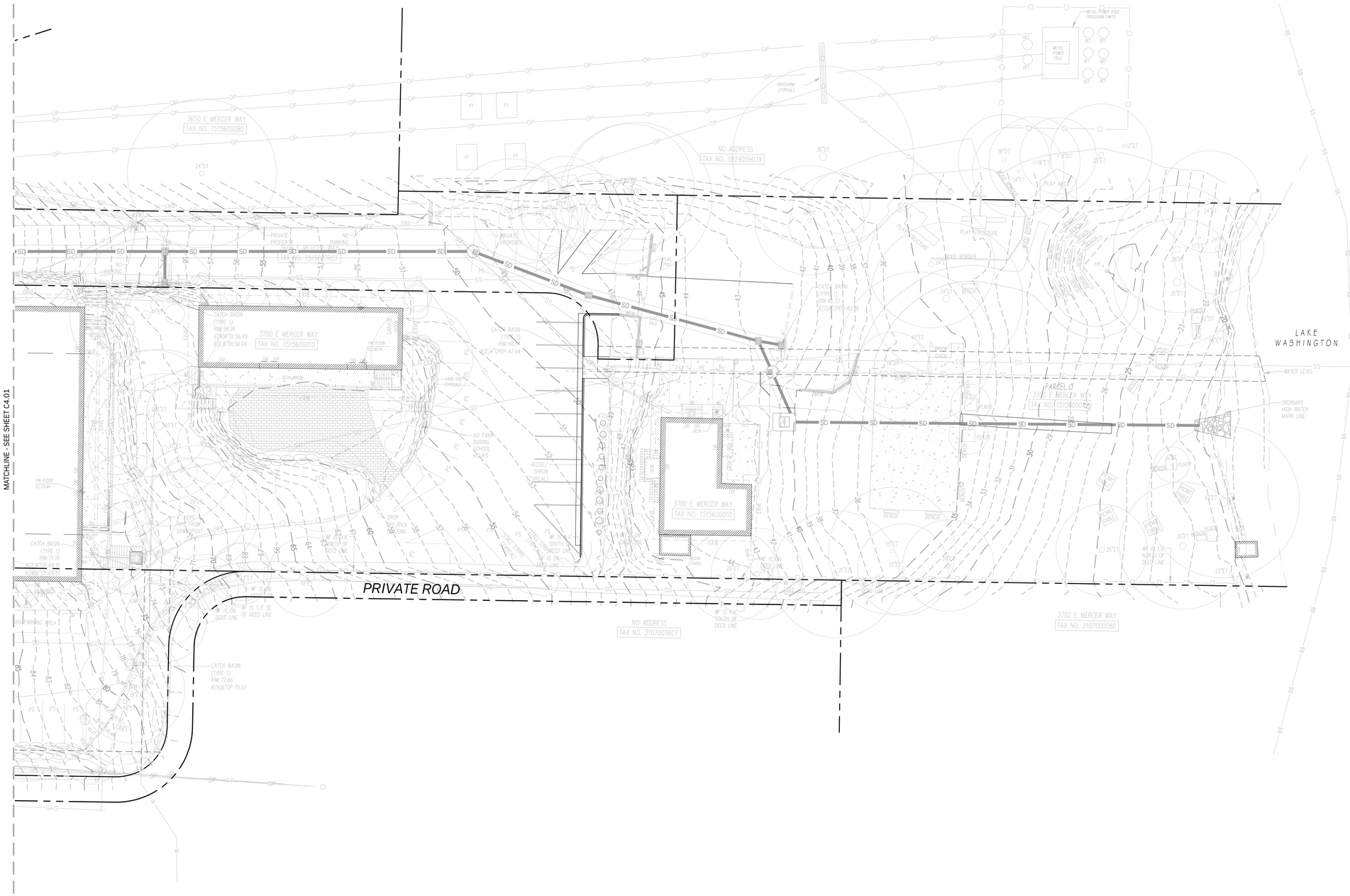
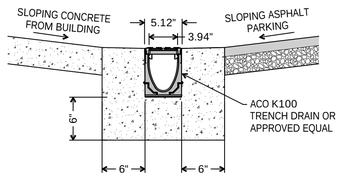

SCALE 1"=20'
0 10 20 40
LEGEND
PROPERTY LINE
CONTOUR (INDEX)
CONTOUR
STORM DRAINAGE PIPE
FRENCH DRAIN
CB TYPE 2/CB TYPE 1/ AREA DRAIN/SDCO
BOAT LAUNCH ACCESS ROAD
ACCESS ROAD
PRIVATE ROAD
PRIVATE ROAD
E MERCER
SD A1 CB TYPE I
RIM 103.01
IE 99.88 6"(IN)NE
IE 99.88 8"(OUT)SE
SD A2 CB TYPE II - 48"
RIM 104.30
IE 98.52 8"(IN)NW
IE 98.52 6"(IN)N
IE 98.52 8"(OUT)E
SD A3 CB TYPE II - 48"
RIM 105.29
IE 97.87 8"(IN)W
IE 98.72 6"(IN)N
IE 97.87 8"(OUT)E
SD A4 CB TYPE II - 48"
RIM 105.07
IE 96.44 8"(IN)W
IE 96.44 8"(OUT)E
SD A5 CB TYPE II - 48"
RIM 102.97
IE 95.84 8"(IN)W
IE 95.84 8"(OUT)N
SD B1 CB TYPE I
W/ ADA COMPLIANT GRATE
RIM 92.94
IE 89.44 6"(IN)W
IE 89.27 8"(OUT)NE
SD B2 CB TYPE I
W/ ADA COMPLIANT GRATE
RIM 92.83
IE 89.18 8"(IN)SW
IE 89.34 4"(IN)S(FTG)
IE 89.18 8"(OUT)NE
SD B3 CB TYPE I
W/ ADA COMPLIANT GRATE
RIM 92.63
IE 89.10 8"(IN)SW
IE 89.10 8"(OUT)E
SD B4 CB TYPE II - 48"
RIM 95.29
IE 88.91 6"(IN)S
IE 88.92 8"(IN)W
IE 88.92 8"(OUT)E
SD B5 CB TYPE II - 48"
RIM 99.90
IE 88.52 8"(IN)W
IE 88.52 8"(OUT)E
CONNECT TO EXISTING CATCH BASIN
IE 88.22 8"(IN)W
IE 88.22 8"(IN)S
IE 87.89 12"(OUT)E(EX)
CONTRACTOR TO VERIFY EXISTING
INVER PRIOR TO ANY CONSTRUCTION
OF THE UPSTREAM STORM SYSTEM
53 LF 8" SD @ 2.5%
73 LF 6" SD @ 2.0%
65 LF 8" SD @ 1.0%
38 LF 6" SD @ 1.0%
143 LF 8" SD @ 1.0%
54 LF 8" SD @ 1.1%
149 LF 8" SD @ 5.1%
51 LF 8" SD @ 0.6%
80 LF 8" SD @ 0.5%
38 LF 8" SD @ 0.5%
15 LF 8" SD @ 0.5%
32 LF 6" SD @ 2.0%
30 LF 6" SD @ 2.0%
16 LF 8" SD @ 0.5%
28 LF 6" SD @ 2.0%
6" SDCO RIM TO GRADE IE 90.08
6" SDCO RIM TO GRADE IE 89.53
L03 129.00
L02 117.00
L01 105.00
B01 93.00
CONNECT RETAINING WALL FOOTING DRAIN TO BUILDING FOOTING DRAIN
RETAINING WALL FOOTING DRAIN SEE DETAIL 3/C4.10
DOWNSPOUT CONNECTION SEE DETAIL (TYP) 9/C4.10
FOOTING DRAIN CONNECTION, INSTALL ANTI-SEEP COLLAR SEE DETAIL 2/C4.10
INTERNAL WALL 4" FOOTING DRAIN SEE DETAIL 4/C4.10
4" PERF FOOTING DRAIN SEE DETAIL 5/C4.10
ADA COMPLIANT TRENCH DRAIN "A" SEE DETAIL 1/C4.10
6" CONNECTION TO SYNTHETIC TURF UNDERDRAIN SYSTEM SEE LANDSCAPE PLANS FOR CONTINUATION IE 100.47
6" STORM DRAIN CONNECTION IE 99.10 SEE PLUMBING PLANS FOR CONTINUATION
NO ADDRESS TAX NO. 0824059310
NO ADDRESS TAX NO. 210700TRCT
3650 E MERCER WAY TAX NO. 1515600080
6600 E MERCER WAY PARCEL A TAX NO. 2107000070
PARCEL C 3700 E MERCER WAY TAX NO. 1515600010
MATCHLINE - SEE SHEET C4.02
SECTION 7
SECTION 8
SDMH RIM: 106.16
CATCH BASIN (TYPE 2) RIM: 86.41
CATCH BASIN (TYPE 1) RIM: 89.44 *UNABLE TO OPEN
CATCH BASIN (TYPE 2) RIM: 104.05
CATCH BASIN (TYPE 2) M: 105.64 MP: 95.24 MP: 94.34 S196"CMP
24"PSD(R)
4"G(R)
12"W
8"W
6"W
12"SS
8"SS
6"SS
12"D
8"D
6"D
12"GAS
8"GAS
6"GAS
12"T
8"T
6"T
12"OHP
12"OP
8"OP
6"OP
12"COM
8"COM
6"COM
12"FTG
8"FTG
6"FTG
12"CRUSHED RECYCLED CONCRETE
10" WATER LINE ASBUILT
E(S)12"CP: 101.77
E(W)12"CP: 102.57
E(W)12"CP: 102.53
E(S)18"CMP: 100.25
E(N)24"CMP: 98.05
E(W)4"CPEP: 102.53
E(S)18"CMP: 100.25
E(N)24"CMP: 98.05
E(W)6"CMP: 78.91
E(N)36"CMP: 72.49
UPPER LEVEL BLDG LINE
LOWER LEVEL BLDG LINE
EAVE
RAILING
WALK-IN COOLER
HVAC DUCTS ON BLDG ABOVE GROUND GAS LINES
ELEC SWITCHES ON WALL
HEDGE/SHRUB (TYPICAL)
BIKE RACKS
HAND RAIL (TYPICAL)
NO PARKING AREA
RESERVED PARKING
DESIGNATED PARKING
DISABLED PARKING
CROSSWALK
SIGN (TYP)
SIGN
SIGN
SIGN


MATCHLINE - SEE SHEET C4.01
3650 E MERCER WAY
TAX NO. 1515600080
NO ADDRESS
TAX NO. 0824059039
3700 E MERCER WAY
TAX NO. 1515600010
PRIVATE ROAD
NO ADDRESS
TAX NO. 2107001TRCT
3702 E MERCER WAY
TAX NO. 2107000080
PARCEL D
3700 E MERCER WAY
TAX NO. 1515400005
LAKE WASHINGTON
WATER LEVEL
ORDINARY HIGH WATER MARK LINE
PRIVATE PROPERTY
NO PARKING
NO PARKING AREA
PLAY AREA
PLAY STRUCTURE
WOOD BORDER
BENCH
PICNIC TABLE
PLANTER
CATCH BASIN (TYPE 1) RIM:58.26 IE(W)6"Dr:56.49 IE(E)6"Dr:56.09
CATCH BASIN (TYPE 1) RIM:77.66 IE(N)6"OP:75.51
CATCH BASIN (TYPE 1) RIM:45.33 IE(S)4"OPEP:40.18
IE(E)4"OPEP:47.64
CATCH BASIN (TYPE 1) RIM:71.16 IE(N)6"OP:67.66
METAL POWER POLE
METAL POWER POLE CROSSARM LIMITS
CROSSARM (TYPICAL)
FLAG POLE
HAND RAIL (TYPICAL)
HEDGE SHRUB (TYPICAL)
NO PARK DURING SCHOOL HOURS
DROP OFF/PICK UP ZONE
ROCKERY
ROCK STAIRS
DECK
GRADE BEAM
EXPANSION JOINT
STRUCTURAL WALL
RETAINING WALL
ROCKERY WALL
HOPE DOWNSPOUT
FW FLOOR EL?3.46
FW FLOOR EL?3.16
WF IS 1.3' SE OF DEED LINE
WF IS 15.0N OF DEED LINE
WF IS ON DEED LINE
WF IS 0.4' SOUTH OF DEED LINE
WF IS 0.4' NORTH OF DEED LINE
WF IS ON DEED LINE
SD
SS
OP
EV
GAS
W
GAS
GAS
GAS

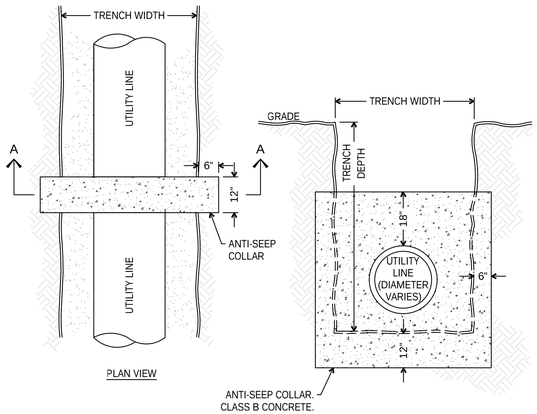



NOTES:

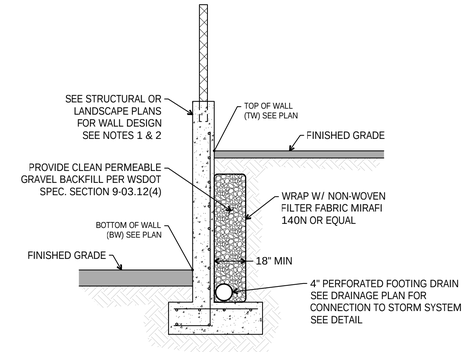
1. TRENCH DRAIN WILL BE SLOPED ON EITHER SIDE TO THE CENTER OF THE TRENCH DRAIN TO THE K1 SERIES 900 CATCH BASIN
2. TRENCH DRAIN GRATE TO BE IRON AGE 'ARGO'

| ACO K100 TRENCH DRAIN NUMBERS | SHALLOW DEPTH | DEEP DEPTH |
|---|---|---|
| · K1-1 TO K1-17<br>· K1 SERIES 900 CATCH BASIN<br>· K1-17 TO K1-1 | 3.94" | 7.28" |

NTS
Trench Drain 1



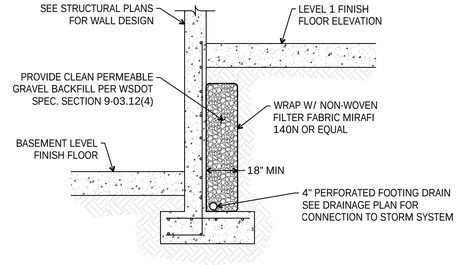

NTS
Anti-Seep Collar 2



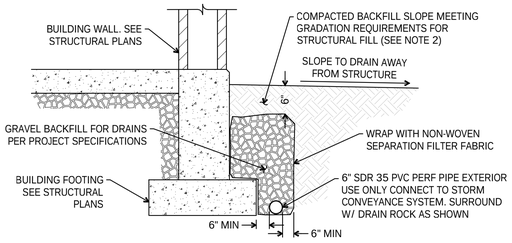

NOTES:

1. FOR WALLS HIGHER THAN 4-FT, SEE STRUCTURAL PLANS
2. FOR WALLS LESS THAN 4-FT, SEE LANDSCAPE PLANS

NTS
Wall Drain 3



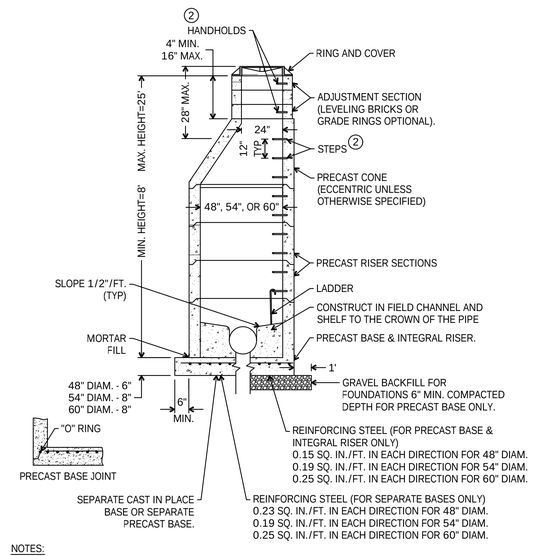

NTS
Internal Wall Foundation Drain 4




NOTES:

1. PIPE SHALL BE PLACED NO LOWER THAN 3" BELOW BOTTOM OF FOOTING
2. STRUCTURAL FILL SHALL MEET THE REQUIREMENTS OF SECTION 02200 OF THE PROJECT SPECIFICATIONS

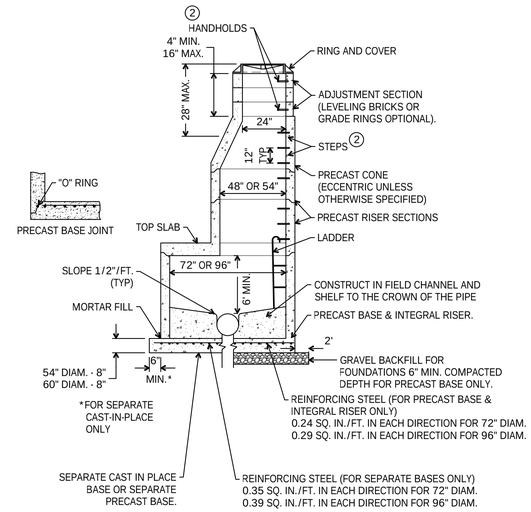
NTS
Footing Drain with Filter Fabric 5




NOTES:

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
2. HANDHOLDS IN ADJUSTMENT SECTION SHALL HAVE 3" MIN. CLEARANCE. STEPS IN MANHOLE SHALL HAVE 6" MIN. CLEARANCE. SEE FIG. 7-011,"MANHOLE DETAILS." HANDHOLDS SHALL BE PLACED IN ALTERNATING GRADE RINGS OR LEVELING BRICK COURSE WITH A MIN. OF ONE HAND HOLD BETWEEN THE LAST STEP AND TOP OF THE MANHOLE.
3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000. ALL PRECAST CONCRETE SHALL BE CLASS 4000. NON-REINFORCED CONCRETE IN CHANNEL AND SHELF SHALL BE CLASS 3000.
4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE WALL THICKNESS OF 2 IN. MIN. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT. PIPES SHALL BE INSTALLED ONLY IN FACTORY KNOCKOUTS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. KNOCKOUT OR CUTOUT HOLE SIZE SHALL EQUAL PIPE OUTER DIAM. PLUS MANHOLE WALL THICKNESS. MAX. HOLE SIZE SHALL BE 36 IN. FOR 48 IN. MANHOLE, 42 IN. FOR 54 IN. MANHOLE, 48 IN. FOR 60 IN. M.H., 60 IN. FOR 72 IN. M.H. MIN. DISTANCE BETWEEN HOLES SHALL BE 8 IN.
6. MANHOLE RINGS AND COVERS SHALL BE IN ACCORDANCE WITH SEC. 7.05 AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621D. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
7. ALL BASE REINFORCING STEEL SHALL HAVE A MIN. YIELD STRENGTH OF 60,000 PSI AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1 IN. MIN. CLEARANCE.
8. FOR HEIGHTS OF 12 FT. OR LESS, MIN. SOIL BEARING VALUE SHALL EQUAL 3,300 LBS. PER SQ. FT. FOR HEIGHTS OVER 12 FT. MIN. SOIL BEARING VALUE SHALL EQUAL 3,800 LBS. PER SQ. FT.
9. FOR DETAILS SHOWING GRADE RING, LADDER, STEPS, HANDHOLDS AND TOP SLABS. SEE FIG. 7-011, "MANHOLE DETAILS."
10. SEE THE WSDOT/APWA STANDARD SPECIFICATIONS SEC. 7-05.3 FOR JOINT REQUIREMENTS.
11. SEE THE WSDOT/APWA STANDARD SPECIFICATIONS SECTION 9-05.15 FOR METAL CASTINGS REQUIREMENTS.

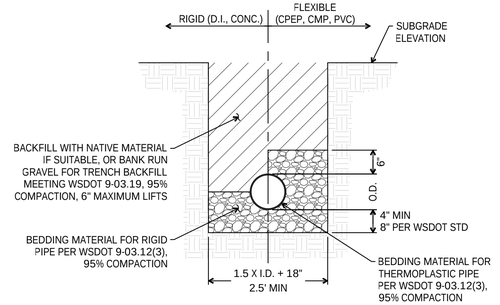
NTS
Type I Catch Basin 10




NOTES:

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE WSDOT/APWA STANDARD SPECIFICATIONS.
2. HANDHOLDS IN ADJUSTMENT SECTION SHALL HAVE 3" MIN. CLEARANCE. STEPS IN MANHOLE SHALL HAVE 6" MIN. CLEARANCE. SEE FIG. 7-011,"MANHOLE DETAILS." HANDHOLDS SHALL BE PLACED IN ALTERNATING GRADE RINGS OR LEVELING BRICK COURSE WITH A MIN. OF ONE HAND HOLD BETWEEN THE LAST STEP AND TOP OF THE MANHOLE.
3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000. ALL PRECAST CONCRETE SHALL BE CLASS 4000. NON-REINFORCED CONCRETE IN CHANNEL AND SHELF SHALL BE CLASS 3000.
4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE WALL THICKNESS OF 2 IN. MIN. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT. PIPES SHALL BE INSTALLED ONLY IN FACTORY KNOCKOUTS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. KNOCKOUT OR CUTOUT HOLE SIZE SHALL EQUAL PIPE OUTER DIAM. PLUS MANHOLE WALL THICKNESS. MAX. HOLE SIZE SHALL BE 60 IN. FOR 72 IN. MANHOLE, 84 IN. FOR 96 IN. MANHOLE. MIN. DISTANCE BETWEEN HOLES SHALL BE 12 IN.
6. MANHOLE RINGS AND COVERS SHALL BE IN ACCORDANCE WITH SEC. 7.05 AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621D. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
7. ALL BASE REINFORCING STEEL SHALL HAVE A MIN. YIELD STRENGTH OF 60,000 PSI AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1 IN. MIN. CLEARANCE.
8. FOR HEIGHTS OF 12 FT. OR LESS, MIN. SOIL BEARING VALUE SHALL EQUAL 3,300 LBS. PER SQ. FT. FOR HEIGHTS OVER 12 FT. MIN. SOIL BEARING VALUE SHALL EQUAL 3,800 LBS. PER SQ. FT.
9. FOR DETAILS SHOWING GRADE RING, LADDER, STEPS, HANDHOLDS AND TOP SLABS. SEE FIG. 7-011, "MANHOLE DETAILS."
10. SEE THE WSDOT/APWA STANDARD SPECIFICATIONS SEC. 7-05.3 FOR JOINT REQUIREMENTS.
11. SEE THE WSDOT/APWA STANDARD SPECIFICATIONS SECTION 9-05.15 FOR METAL CASTINGS REQUIREMENTS.

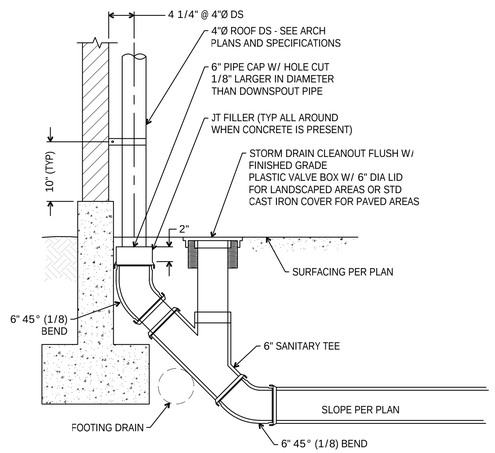
NTS
Type II Catch Basin 11




NOTE:

BACKFILL MATERIAL SHALL NOT HAVE PARTICLE SIZE GREATER THAN 1" WITHIN 6" OF THE PIPE OR THE CONTRACTOR HAS THE OPTION TO USE GRAVEL BACKFILL PIPE ZONE BEDDING CONFORMING TO WSDOT 9-03.12(3)

NTS
Pipe Bedding and Backfill 8




NTS
Downspout Connection with Exterior Cleanout 9

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206-512-4209

anjali grant design LLC




3700 EAST MERCER WAY
BARNABIE POINT PROJECT

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4 JUNE 2025
BUILDING PERMIT

PROJECT:
STORM DRAINAGE DETAILS

C4.10

JACOBSON
CONSULTING ENGINEERS

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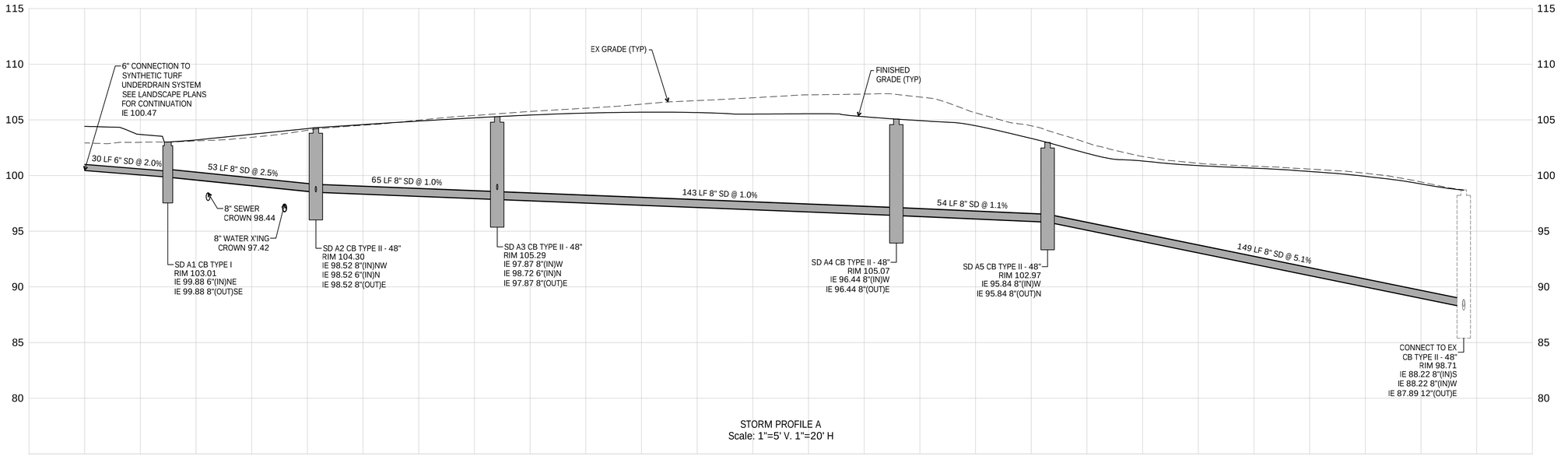
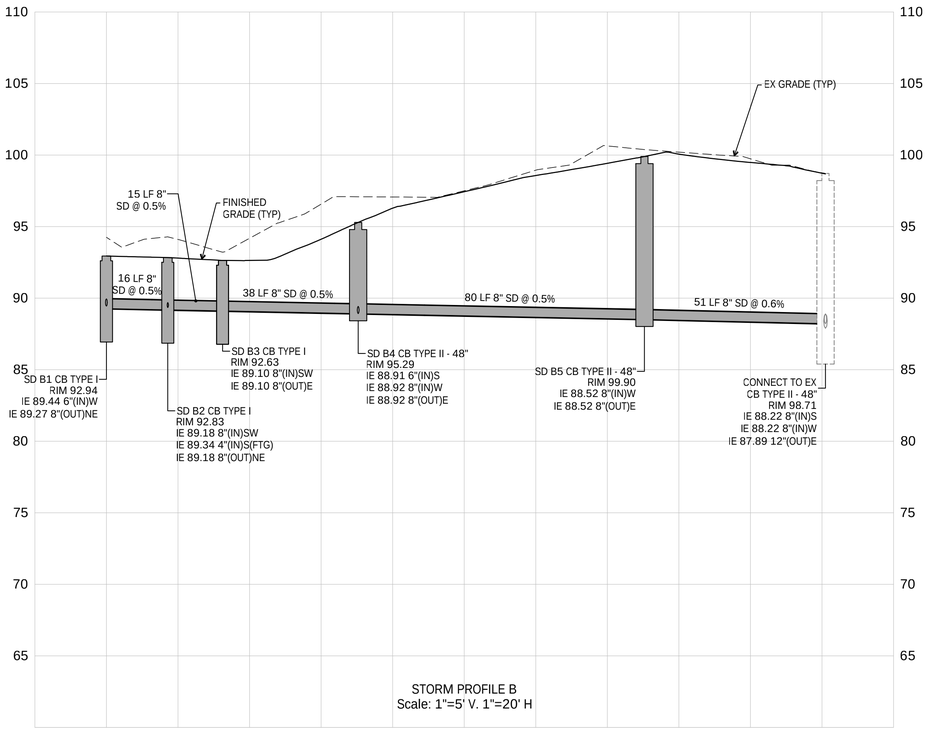



STORM PROFILE A
Scale: 1"=5' V. 1"=20' H




STORM PROFILE B
Scale: 1"=5' V. 1"=20' H

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ANJALI@AGRANTDESIGN.COM
206-512-4209

anjali grant design LLC

JEFFREY D. A. JACOBSON
STATE OF WASHINGTON
43667
REGISTERED PROFESSIONAL ENGINEER
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

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| | | 4 JUNE 2025 |
| | | BUILDING PERMIT |

PROJECT:
STORM DRAINAGE PROFILES

C4.20

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CONSULTING ENGINEERS

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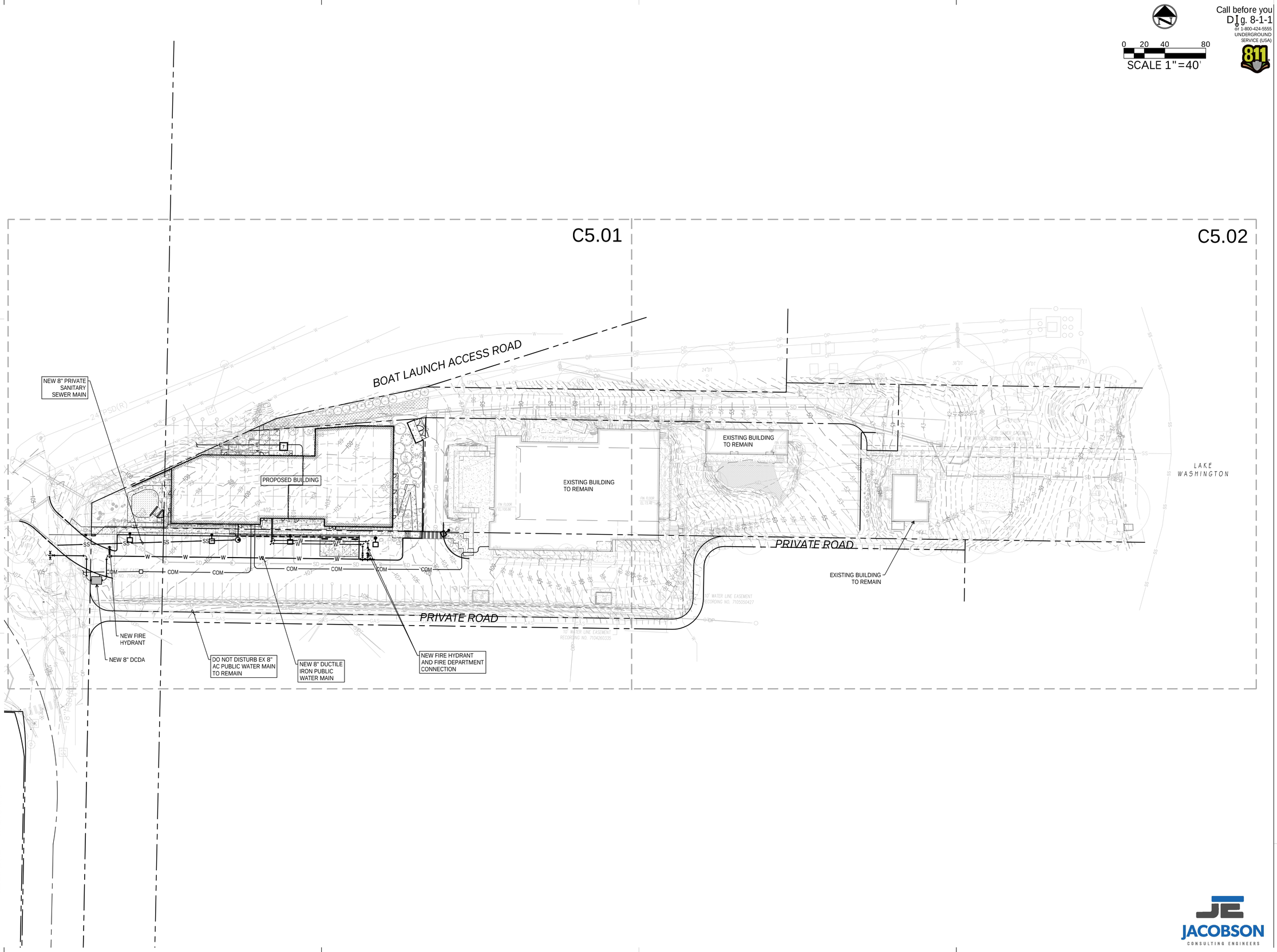


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0 20 40 80
SCALE 1"=40'


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anjali grant design LLC

JERALD A. JACOBSON
STATE OF WASHINGTON
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REGISTERED PROFESSIONAL ENGINEER
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
OVERALL UTILITY PLAN

C5.00

JACOBSON
CONSULTING ENGINEERS


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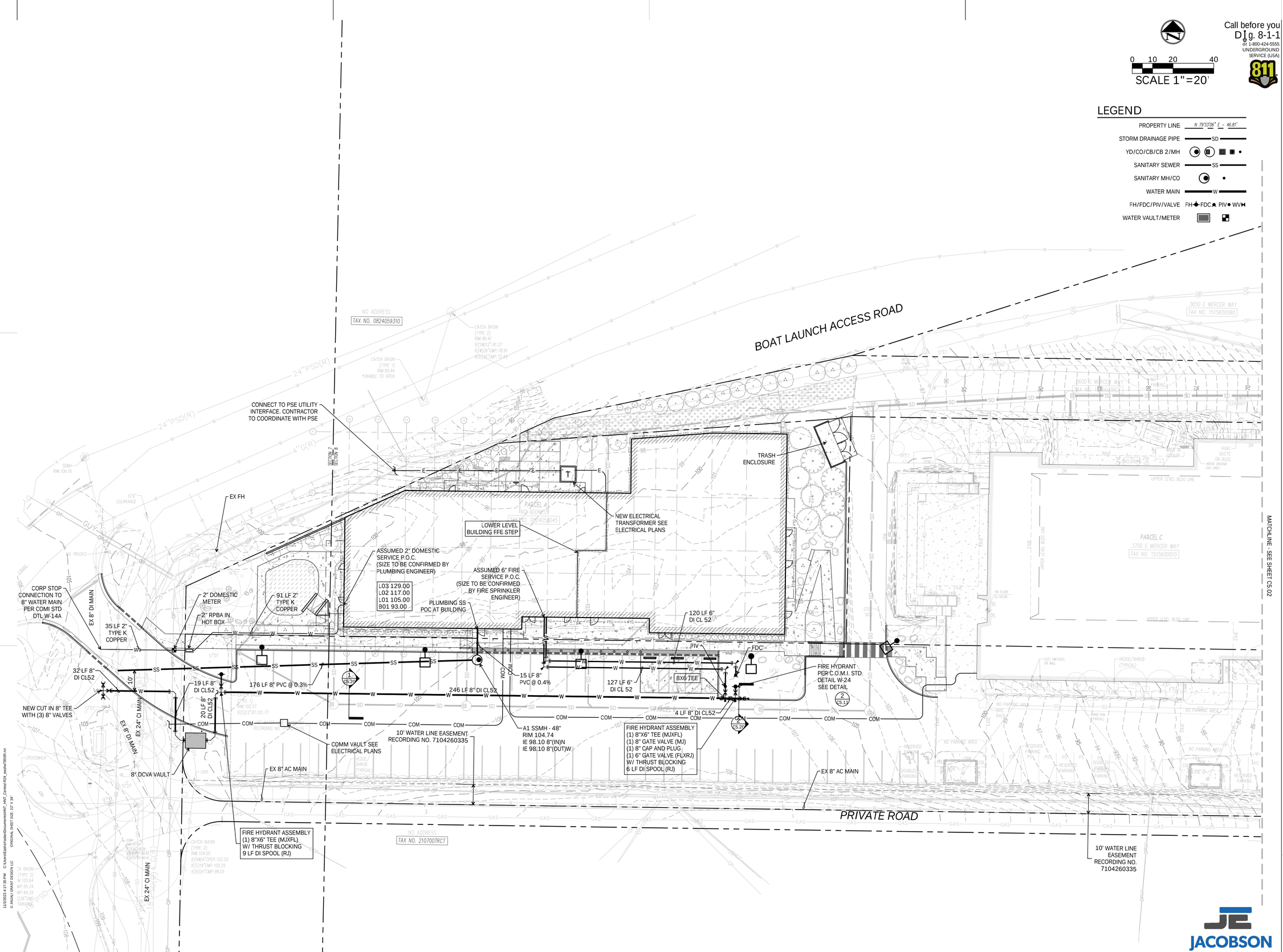



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05/30/2025

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# BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
UTILITY PLAN

C5.01

JACOBSON
CONSULTING ENGINEERS


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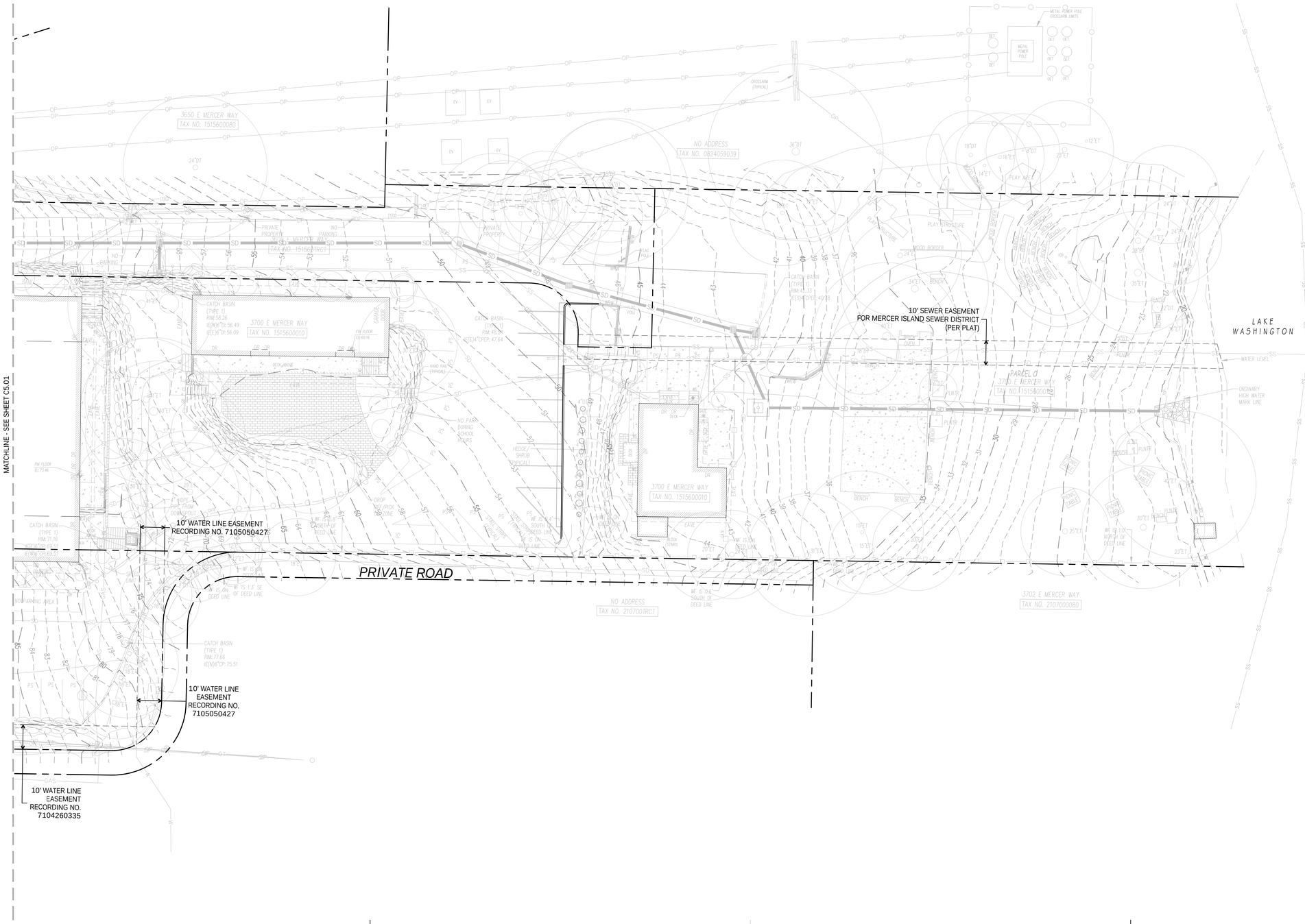
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 22" X 34"

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© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 22" X 34"

0 10 20 40
SCALE 1"=20'

Call before you Dig. 8-1-1 or 1-800-424-5555 UNDERGROUND SERVICE (USA)

## LEGEND

| | |
|---|---|
| PROPERTY LINE | N 79°33'06" E – 46.81' |
| STORM DRAINAGE PIPE | SD |
| YD/CO/CB 2/MH | |
| SANITARY SEWER | SS |
| SANITARY MH/CO | |
| WATER MAIN | W |
| FH/FDC/PIV/VALVE | FH FDC PIV WV |
| WATER VAULT/METER | |


3427 BEACON AVE S
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ANJALI@AGRANTDESIGN.COM
206-512-4209

anjali grant design LLC


REGISTERED PROFESSIONAL ENGINEER
EARL A. D. A. JACOBSON
STATE OF WASHINGTON
43667
05/30/2025

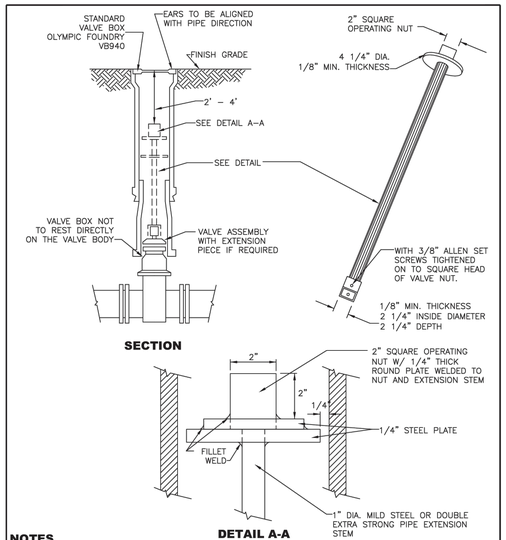
3700 EAST MERCER WAY
# BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 |
| | | BUILDING PERMIT |

PROJECT:
UTILITY PLAN

C5.02

JACOBSON
CONSULTING ENGINEERS



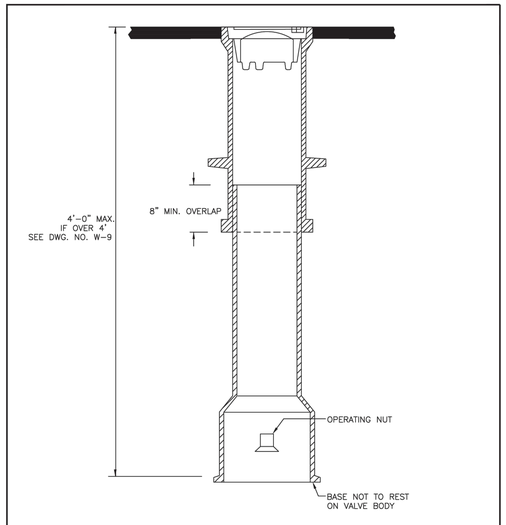

**NOTES**

1. EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN FOUR (4) FEET BELOW FINISHED GRADE.
2. EXTENSIONS ARE TO BE A MINIMUM OF ONE (1) FOOT LONG. ONLY ONE EXTENSION PER VALVE WILL BE ALLOWED.
3. ALL EXTENSIONS ARE TO BE MADE OF CAST OR DUCTILE IRON, SIZED AS NOTED AND PAINTED WITH TWO COATS ASPHALTIC VARNISH.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
WATER
WATER VALVE EXTENSION

| REV DATE | | | | | | |
|---|---|---|---|---|---|---|
| | | | | 12–23–2013 | NO SCALE | **W-9** |
| | | | | | | APPROVED |

NTS
Water Valve Extension **1**

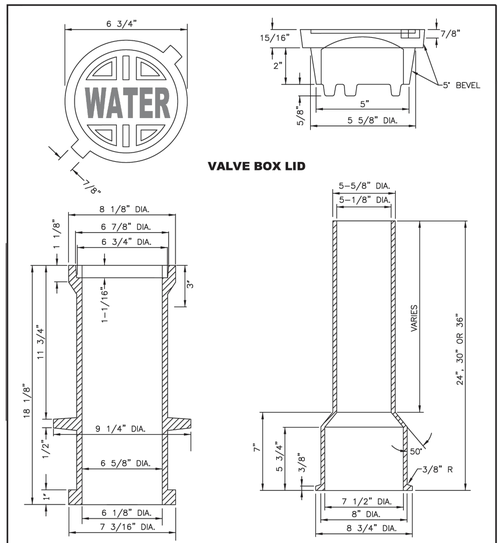



**NOTES**

1. VALVE BOX RISER WITH PAVING LUGS SHALL BE OLYMPIC NO. VB2 OR EQUAL.
2. MINIMUM VALVE BOX BOTTOM LENGTH OVERALL = 21 1/16". SHORT RISERS ARE NOT PERMITTED.
3. SEE DWG. NO. W–7 FOR DETAILS.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
WATER
WATER VALVE BOX

| REV DATE | | | | | | |
|---|---|---|---|---|---|---|
| | | | | 12–23–2013 | NO SCALE | **W-8** |
| | | | | | | APPROVED |



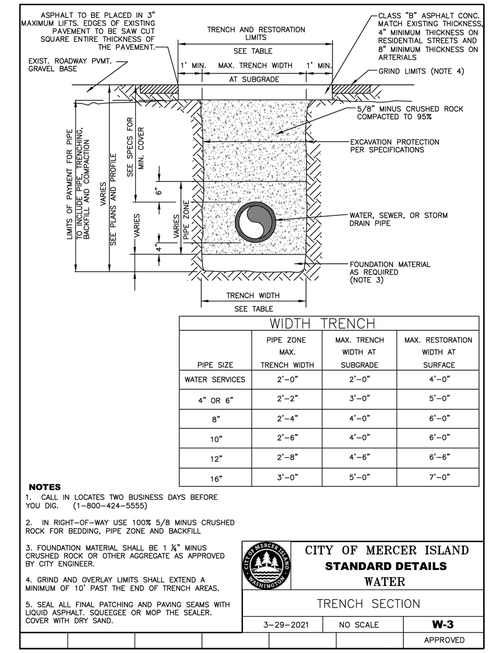

**NOTES**

1. VALVE BOX SHALL BE OLYMPIC FOUNDRY PART NO. VB940 OR EQUAL.
2. THE TOP AND LID SHALL HAVE A MACHINED FIT.
3. LOCKING LID, WHEN REQUIRED, SHALL BE OLYMPIC FOUNDRY PART NO. 13–5200 OR EQUAL.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
WATER
WATER VALVE BOX

| REV DATE | | | | | | |
|---|---|---|---|---|---|---|
| | | | | 3–20–2006 | NO SCALE | **W-7** |
| | | | | | | APPROVED |

NTS
Water Valve Box **3**




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" |

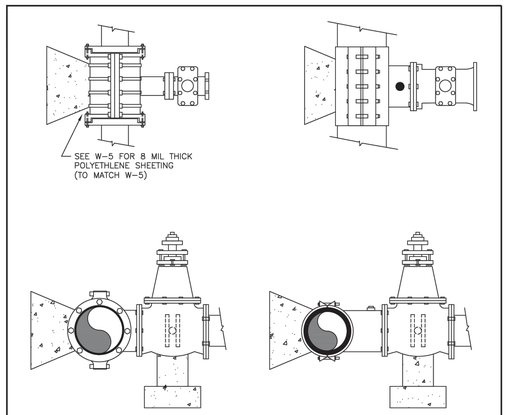
**NOTES**

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** |
| | | | | | | APPROVED |

NTS
Trench Section **4**








**DUCTILE IRON TAPPING TEE MECHANICAL JOINT SLEEVE**

INSTALLED ON ASBESTOS CEMENT PIPE, CAST IRON PIPE AND DUCTILE IRON PIPE

**STAINLESS STEEL TAPPING TEE**

INSTALLED ON ASBESTOS CEMENT PIPE, CAST IRON PIPE AND DUCTILE IRON PIPE

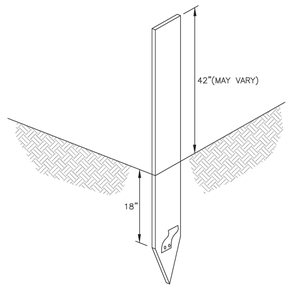
**NOTES**

1. STAINLESS STEEL TAPPING TEES SHALL HAVE FULL CIRCLE SEAL.
2. STEEL TAPPING TEES SHALL BE EPOXY COATED.
3. NO SIZE ON SIZE TAPS. TAP SHALL BE AT LEAST 2" SMALLER DIAMETER THAN THE EXISTING MAIN.
4. TAPPING TEES SHALL BE MULLER OR EQUAL.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
WATER
TAPPING TEE

| REV DATE | | | | | | |
|---|---|---|---|---|---|---|
| | | | | 8–12–2009 | NO SCALE | **W-11** |
| | | | | | | APPROVED |

NTS
Tapping Tee **5**




**NOTES**

1. PROVIDE A VALVE MARKER POST FOR EACH VALVE OUTSIDE OF THE PAVEMENT.
2. THE FIBERGLASS VALVE MARKER POST SHALL BE BLUE IN COLOR, 3 3/4" WIDE (FLAT), 60" LONG, AND FURNISHED WITH A 2" x 2", HIGH–INTENSITY WHITE REFLECTOR (250 CANDLE POWER) AND A FLEXIBLE ANCHOR BARB. VALVE MARKER SHALL BE CARSONITE UTILITY MARKER CUM 375 OR EQUAL.
3. THE POST SHALL BE SITUATED IN A SAFE, REASONABLY CONSPICUOUS LOCATION, AND AT A RIGHT ANGLE TO THE ROADWAY FROM THE VALVE.
4. STENCIL FOOTAGE MEASUREMENT ON FRONT OF MARKER USING BRIGHT WHITE PAINT.

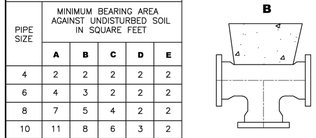
CITY OF MERCER ISLAND
**STANDARD DETAILS**
**WATER**
VALVE MARKER POST

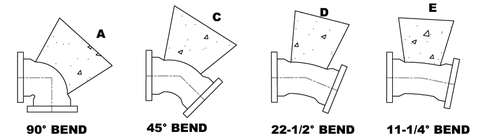
| REV DATE | | | | | | |
|---|---|---|---|---|---|---|
| | | | | 7–01–2014 | NO SCALE | **W-10** |
| | | | | | | APPROVED |

NTS
Valve Marker Post **6**

**THRUST BLOCKING TABLE**

| PIPE SIZE | MINIMUM BEARING AREA AGAINST UNDISTURBED SOIL IN SQUARE FEET | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| 4 | 2 | 2 | 2 | 2 | 2 |
| 6 | 4 | 3 | 2 | 2 | 2 |
| 8 | 7 | 5 | 4 | 2 | 2 |
| 10 | 11 | 8 | 6 | 3 | 2 |
| 12 | 16 | 12 | 9 | 5 | 3 |
| 14 | 22 | 16 | 12 | 6 | 3 |
| 16 | 29 | 20 | 16 | 8 | 4 |




**NOTES**

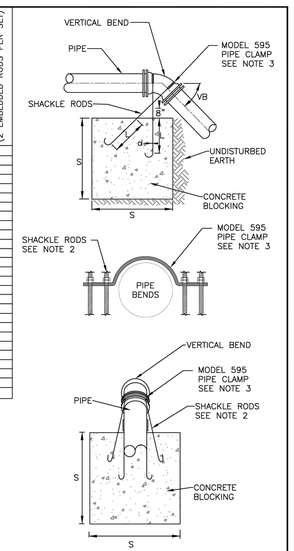
1. ROMAC MJ WEDGE ACTION RETAINER MAY BE SUBSTITUTED FOR VERTICAL BLOCKING UPON PRIOR APPROVAL OF THE CITY ENGINEER.
2. CONCRETE THRUST BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH.
3. THRUST BLOCKS SHALL BE CAST–IN–PLACE AND BE CONSTRUCTED WITH CLASS 3000 OR COMMERCIAL CONCRETE.
4. BLOCK SHALL BEAR AGAINST FITTINGS ONLY AND SHALL BE CLEAR OF BOLTS AND JOINTS TO PERMIT TAKING UP OR DISMANTLING JOINT. WRAP FITTINGS WITH 8 MIL THICK POLYETHYLENE SHEETING PRIOR TO POURING CONCRETE.
5. BEARING AREA MUST BE ADJUSTED FOR HIGHER INTERNAL PRESSURES AND LOWER SOIL BEARING VALUES.
6. THE CONTRACTOR SHALL INSTALL BLOCK WHICH IS ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY STAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
WATER
HORIZONTAL CONCRETE BLOCKING

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | 3–30–2021 | NO SCALE | **W-5A** |

VERTICAL THRUST BLOCKING FOR 11 1/4° – 22 1/2° – 45°

| PIPE SIZE NOM. DIAMETER – INCHES | TEST PRESSURE P.S.I. | VERTICAL BEND DEGREES | VB AMOUNT CONCERT BLOCKING – CU. FT. | S LENGTH OF SIDE FEET | d SHACKLE ROD DIA. – INCHES | L DEPTH OF ROD IN CONCRETE INCHES | NUMBER OF TIE RODS (SETS (2 EMBEDDED RODS PER SET) |
|---|---|---|---|---|---|---|---|
| 3" | 250 | 11–1/4 | 3.4 | 1.5 | 5/8" | 12" | 2 |
| | | 22–1/2 | 5.4 | 1.75 | 5/8" | 12" | 2 |
| | | 45 | 11.4 | 2.25 | 5/8" | 12" | 2 |
| 4" | 250 | 11–1/4 | 5.4 | 1.75 | 5/8" | 12" | 2 |
| | | 22–1/2 | 11.4 | 2.25 | 5/8" | 12" | 2 |
| | | 45 | 20.8 | 2.75 | 5/8" | 12" | 2 |
| 6" | 250 | 11–1/4 | 11.4 | 2.25 | 5/8" | 12" | 2 |
| | | 22–1/2 | 27.0 | 3.0 | 5/8" | 12" | 2 |
| | | 45 | 42.9 | 3.5 | 5/8" | 12" | 2 |
| 8" | 250 | 11–1/4 | 20.8 | 2.75 | 5/8" | 12" | 2 |
| | | 22–1/2 | 42.9 | 3.5 | 5/8" | 12" | 2 |
| | | 45 | 76.8 | 4.25 | 5/8" | 12" | 2 |
| 10" | 250 | 11–1/4 | 34.3 | 3.25 | 5/8" | 12" | 2 |
| | | 22–1/2 | 64.0 | 4.0 | 5/8" | 12" | 2 |
| | | 45 | 125 | 5.0 | 5/8" | 12" | 2 |
| 12 | 250 | 11–1/4 | 42.9 | 3.5 | 5/8" | 12" | 2 |
| | | 22–1/2 | 91.1 | 4.5 | 5/8" | 12" | 2 |
| | | 45 | 166 | 5.5 | 5/8" | 12" | 4 |
| 14" | 250 | 11–1/4 | 52.7 | 3.75 | 3/4" | 12" | 2 |
| | | 22–1/2 | 107 | 4.75 | 3/4" | 24" | 2 |
| | | 45 | 190 | 5.75 | 3/4" | 24" | 4 |
| 16" | 250 | 11–1/4 | 64.0 | 4.0 | 3/4" | 24" | 2 |
| | | 22–1/2 | 125 | 5.0 | 3/4" | 24" | 4 |
| | | 45 | 216 | 6.0 | 3/4" | 24" | 4 |
| 18" | 250 | 11–1/4 | 64.0 | 4.0 | 3/4" | 24" | 2 |
| | | 22–1/2 | 145 | 5.25 | 3/4" | 24" | 4 |
| | | 45 | 244 | 6.25 | 3/4" | 24" | 4 |




**BLOCKING FOR VERTICAL BENDS**

**NOTES**

1. CONCRETE SHALL BE 3000 PSI CONCRETE
2. SHACKLE RODS/ALL THREAD SHALL BE ZINC PLATED. REFER TO CHART FOR SIZE AND NUMBER OF SHACKLE RODS. REFER TO PIPE CLAMP FOR INSTALLATION OF SHACKLE ROD. AFTER CONCRETE IS PLACED, 24 HOURS LATER INSTALL NUT AND WASHER AND TIGHTEN SHACKLE RODS NUTS ON PIPE CLAMP.
3. ANVIL PIPE CLAMP 595 FITS 4"–24" DIA.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
WATER
VERTICAL CONCRETE BLOCKING

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | 3–30–2021 | NO SCALE | **W-5B** |
| | | | | | | APPROVED |

NTS
Concrete Blocking **7**

JACOBSON
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anjali grant design LLC

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43667
STATE OF WASHINGTON
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 BUILDING PERMIT |

PROJECT:
UTILITY DETAILS

C5.10

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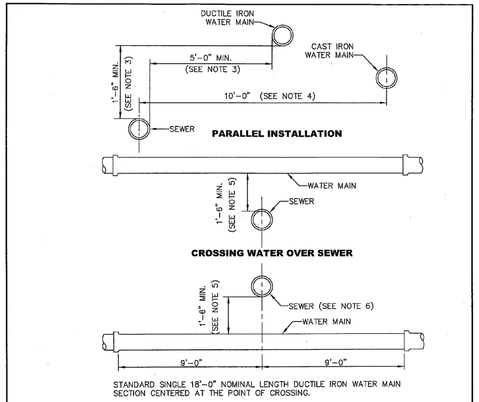



**NOTES**

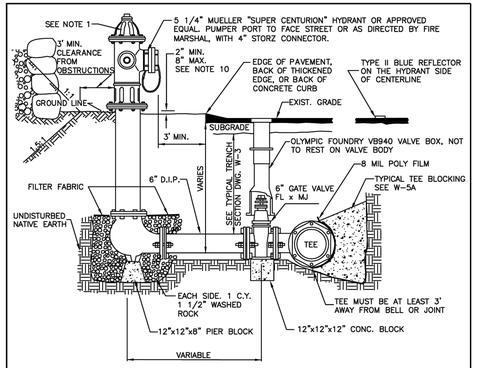
1. ANY EXCEPTIONS TO THE STANDARD PLAN MAY BE APPROVED BY THE CITY ENGINEER.
2. "SEWER" INCLUDES SANITARY SEWER, COMBINED SEWER AND SIDE SEWER.
3. WHERE MINIMUM CLEARANCES CANNOT BE MET, SEWER SHALL BE CONSTRUCTED OF MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS INCLUDING WATER MAIN PRESSURE TESTING REQUIREMENTS.
4. NO VERTICAL CLEARANCE REQUIRED.
5. IF VERTICAL SEPARATION CANNOT BE MET, WATER MAIN SHALL BE A STANDARD SINGLE 18'-0" NOMINAL LENGTH DUCTILE IRON WATER MAIN SECTION CENTERED AT THE POINT OF CROSSING.
6. SEWER SHALL HAVE ADEQUATE FOUNDATION SUPPORT TO PREVENT SETTLEMENT ON THE WATER MAIN AN TO PREVENT DEFLECTION OF WATER MAIN JOINTS.
7. CROSSINGS AT AN ANGLE BETWEEN 90° AND 45° MAY OCCUR BETWEEN 9'-0" AND 6'-0" OF WATER MAIN JOINT FOR CROSSINGS LESS THAN 45° , SEE NOTE 1.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER
WATER & SEWER CLEARANCES AND MATERIAL REQUIREMENTS

| 6-5-2009 | NO SCALE | S-2 |
|---|---|---|

REV DATE | APPROVED

NTS
Utility Clearances and Requirements
1




**NOTE:**

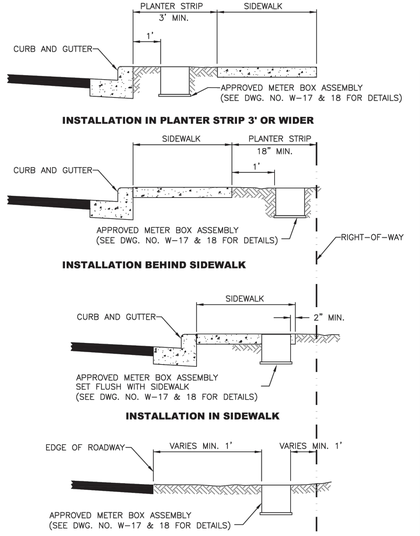
1. 1-5 1/4" M.V.O. HYDRANT WITH 2-2 1/2" N.T.S. M.J. INLET WITH LUGS, BRASS-TO-BRASS SUB-SEAT AND 1-4 1/2" PUMPER, SEATTLE STANDARD PIPE THREAD WITH 4" STORZ CONNECTOR HARRINGTON MODEL NO. HPHA40-40-004/CAP, SIZE 4.875-INCH BY 6-INCH.
2. NO DOMESTIC CONNECTIONS CAN BE MADE TO THE FIRE HYDRANT RUNS.
3. ANY FIRE HYDRANT RUN OVER 18 FEET IN LENGTH OF PIPE SHALL HAVE RESTRAINED JOINT GASKETS.
4. USE ROMA GRIP, OR APPROVED EQUAL, PIPE RESTRAINERS AT VALVE AND HYDRANT BASE.
5. HYDRANT SHALL BE PAINTED WITH 2 COATS OF FARWEST #250 HIGH GLOSS WHITE PAINT, OR APPROVED EQUAL, APPLIED WITH A PAINT BRUSH. DO NOT APPLY PAINT TO STORZ FITTING, BRASS PORT THREADS, OR BELOW SAFETY FLANGE.
6. BOLLARDS MAY BE USED TO PROTECT THE HYDRANT WHEN NO CURBS ARE PRESENT OR IN EXPOSED AREAS OF PARKING LOTS.
7. STRAIGHT PIPE TO HYDRANTS FROM MAIN, NO BENDS.
8. REMOVE CHAINS FROM HYDRANT CAPS.
9. VALVE AND HYDRANT MUST BE PLUMB.
10. THIS DISTANCE IS MEASURED FROM BOTTOM OF SAFETY FLANGE TO LEVEL OF FINISH GRADE BELOW HYDRANT.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
WATER
FIRE HYDRANT CONNECTION

| 02-23-2021 | NO SCALE | W-24 |
|---|---|---|

REV DATE | APPROVED

NTS
Fire Hydrant Connection
2




CITY OF MERCER ISLAND
**STANDARD DETAILS**
WATER
WATER METER PLACEMENT

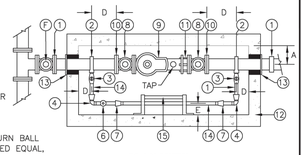
| 3-20-2006 | NO SCALE | W-16 |
|---|---|---|

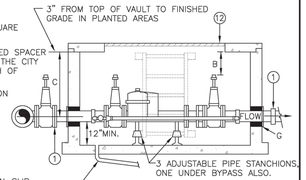
REV DATE | APPROVED

NTS
Water Meter Placement
3

**MATERIAL LIST, 3" & 4" METER**

1. FLEX. CPLG. TO FIT, ROMAC 501 OR APPROVED EQUAL. (4" X 3" REDUCER, M.J. FOR 3" METER INSTALLATION)
2. DOUBLE STRAP SADDLE, ROMAC 202NU OR APPROVED EQUAL.
3. 2" IPXIP BALL CORP. FORD FB500-7 OR APPROVED EQUAL.
4. 2" BRASS 90° BEND.
6. 2" FORD B11-777 FIPS X FIPS 1/4 TURN BALL VALVE (WITH LOCKING EAR), OR APPROVED EQUAL, WITH ONE 2" X 6" BRASS NIPPLE.
7. FORD QUICK JOINT C85-77Q OR APPROVED EQUAL.
8. M&H C515 STYLE 7000 FLG X FLG RESILIENT SEATED GATE VALVE WITH SQUARE OPERATING NUT OR APPROVED EQUAL.
9. METRON METER WITH 2" TAPPED FLANGED SPACER AND SENSUS RADIO MXU PROVIDED BY THE CITY AT THE CONTRACTORS EXPENSE. LENGTH OF VARIES BY SIZE
10. FLG X SPOOL, 12" MINIMUM. CONNECTION AT GATE VALVE MAY USE OPTIONAL EZ FLANGE 1000 OR APPROVED EQUAL.
11. CPLG ADPT, FLG ROMAC FCA 501 OR APPROVED EQUAL.
12. PRECAST VAULT TO BE APPROPRIATELY SIZED FOR SIZE OF WATER SERVICE. ACCESS HATCH TO BE LW PRODUCTS, HS-30, 3' X 5' SINGLE DOOR WITH NON-SLIP FINISH, LID OPENING TO BE PLACED FOR PROPER LADDER ACCESS.
13. ROMA-GRIP RESTRAINT OR APPROVED EQUAL.
14. 2" BRASS PIPE CUT AND THREADED TO FIT.
15. LADDER PER W-27C.
17. WHEN INSTALLING VAULT IN SIDEWALK OR PAVED AREAS, SET FRAME AND HATCH AT FINISHED GRADE. VAULT TOP SLAB SHALL REMAIN BELOW GRADE.




NOTES:

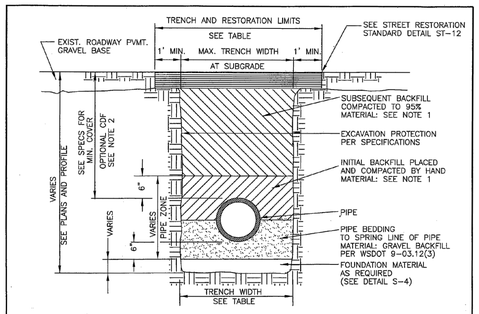
A. – 9.5" MIN.
B. – 6.0" MIN.
C. – 2.5" MIN.
D. – 1.0" MIN.
E. – 4.0" MIN.
F. – PIPING FROM MAIN TO VAULT SHALL BE D.I. WITH A 4" MIN. TAP.
G. – PIPE OPENINGS SHALL BE CORED AND SEALED USING A LINK SEAL OR APPROVED EQUAL. NO GROUT PERMITTED.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
**WATER**
3" & 4" DOMESTIC METER INSTALLATION

| 9-03-2014 | NO SCALE | W-15 |
|---|---|---|

REV DATE | APPROVED

NTS
Domestic Meter Installation
4




| 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" |

**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.

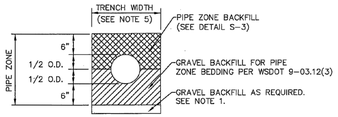
CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER
SEWER TRENCH DETAIL

| 6-5-2009 | NO SCALE | S-3 |
|---|---|---|

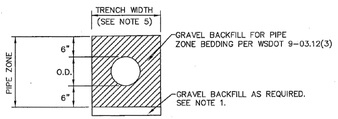
REV DATE | APPROVED

NTS
Sewer Trench
5

**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

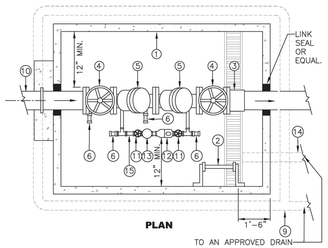
| 6-5-2009 | NO SCALE | S-4 |
|---|---|---|

REV DATE | APPROVED

NTS
Pipe Bedding
6

**GENERAL NOTES**

A. SEE W-19B FOR MATERIAL LIST.
B. VALVE ASSEMBLY TO BE CENTERED IN VAULT.
C. TEE AND GATE VALVE REQUIRED ON MAIN.
D. WHEN DOUBLE CHECK VALVE ASSEMBLY IS USED IN SAME LINE WITH DOMESTIC BUILDING METER, METERED DETECTOR BYPASS SHALL BE OMITTED.
E. ASSEMBLY TO BE MAINTAINED BY OWNER AND ANNUAL CERTIFICATION IS REQUIRED.
F. THE CITY OF MERCER ISLAND MUST TEST AND CERTIFY THE FIRE LINE BEFORE CONNECTION TO THE CITY SYSTEM IS ALLOWED.
G. FIRELINE SHALL NOT BE PUT INTO SERVICE UNTIL THE DOUBLE CHECK VALVE ASSEMBLY IS APPROVED BY THE CITY.
H. VAULT PENETRATIONS SHALL BE BE CORE DRILLED.
I. A THRUST RING OR APPROVED EQUAL SHALL BE INSTALLED ON INLET SIDE OF PIPE RESTRAINED JOINT.
J. MATERIALS FOR BY PASS SHALL BE ALL BRASS AND COPPER WITH SWIVEL COUPLINGS BETWEEN SHUT-OFF VALVES FOR REPLACEMENT.




CITY OF MERCER ISLAND
**STANDARD DETAILS**
**WATER**
DOUBLE DETECTOR CHECK VALVE ASSEMBLY

| 7-01-2014 | NO SCALE | W-19A |
|---|---|---|

REV DATE | APPROVED

| KEY NO. | QUANTITY 4" | QUANTITY 6" & 8" | MATERIAL |
|---|---|---|---|
| 1 | 1 | – | PRE CAST CONCRETE VAULT AS APPROVED BY THE CITY ENGINEER |
| 1 | – | 1 | PRE CAST CONCRETE VAULT AS APPROVED BY THE CITY ENGINEER |
| 1 | 1 | – | PRE CAST CONCRETE VAULT AS APPROVED BY THE CITY ENGINEER |
| 1 | – | 1 | PRE CAST CONCRETE VAULT AS APPROVED BY THE CITY ENGINEER |
| 1 | – | 1 | PRE CAST CONCRETE VAULT AS APPROVED BY THE CITY ENGINEER |
| 1 | 1 | 1 | LW PRODUCTS ALUMINUM, SINGLE DOOR, H-20 OR EQUAL. |
| 2 | 1 | 1 | FABRICATED BOLT-ON LADDER. USE THREE SETS OF MOUNTING BRACKETS ATTACHED TO VAULT WALL WITH 5/8" DIAMETER CORROSION RESISTANT ANCHOR BOLTS (HILTI KWIK BOLT, PHILIPS RED HEAD OR APPROVED EQUAL). ALL STEEL FOR LADDER SHALL BE A-36, OSHA APPROVED HOT DIPPED GALVANIZED AFTER FABRICATION. SEE DRAWING NO. W-27C. |
| 3 | 1 | – | 4" DIAMETER FLEXIBLE FLANGED COUPLING ADAPTER ROCKWELL TYPE 912 |
| 3 | – | 1 | 8" OR 6" DIAMETER FLEXIBLE FLANGED COUPLING ADAPTER ROCKWELL TYPE 912 |
| 4 | 1 | – | 4" O.S. & Y. GATE VALVE U.L. APPROVED |
| 4 | – | 1 | 8" OR 6" O.S. & Y. GATE VALVE U.L. APPROVED |
| 5 | 1 | – | 4" D.S.H.S. APPROVED DOUBLE CHECK VALVE ASSEMBLY, INCLUDING 2 O.S. & Y. GATE VALVES, TEST COCK, 3/4" DOUBLE CHECK VALVE, SINGLE OR MULTI JET METER (TO READ IN CUBIC FEET) AND 3/4" BRASS OR COPPER BYPASS WITH IN LINE VALVE. |
| 5 | – | 1 | 8" OR 6" D.S.H.S. APPROVED DOUBLE CHECK VALVE ASSEMBLY, INCLUDING 2 O.S. & Y. GATE VALVES, TEST COCK, 3/4" DOUBLE CHECK VALVE, SINGLE OR MULTI JET METER (TO READ IN CUBIC FEET) AND 3/4" BRASS OR COPPER BYPASS WITH IN LINE VALVES. |
| 6 | 1 | 1 | 3/4" DIAMETER TEST COCKS |
| 7 | 2 | 2 | ADJUSTABLE PIPE SADDLE SUPPORT (ITT GRINNEL FIG 264 OR APPROVED EQUAL). ATTACH TO VAULT FLOOR WITH FOUR 1/2" DIAMETER CORROSION RESISTANT ANCHOR BOLTS (HILT KWI BOLT, PHILIPS RED HEAD OR APPROVED EQUAL). SEE DRAWING NO. W-27C. |
| 8 | – | – | PEA GRAVEL BACKFILL FOR PIPE BEDDING UNDER PRECAST CONCRETE UTILITY VAULT. |
| 9 | – | – | 4" DIAMETER UNDERDRAIN, CONNECT TO DRAINAGE SYSTEM, SCHEDULE 200 PERFORATED PVC WITH GALVANIZED SCREEN EACH END. |
| 10 | – | – | 4" DIAMETER CL. 52 DUCTILE IRON PIPE |
| 10 | – | – | 6" OR 8" DIAMETER CL. 52 DUCTILE IRON PIPE |
| 11 | 1 | 1 | 3/4" GATE VALVE U.L. LISTED |
| 12 | 1 | 1 | 5/8" x 3/4" ACCULINK MULTINET MASTER METER WITH SENSUS COMPATABLE MXU READ IN CU. FT. MULTI-JET |
| 13 | 1 | 1 | 3/4" DOUBLE CHECK VALVE |
| 14 | 1 | 1 | SOLID PVC PIPE SUMP DRAIN. SIZE PER MANUFACTURER'S RECOMMENDATION. CONNECT TO DRAINAGE STRUCTURE AS APPROVED |
| 15 | 1 | 1 | 3/4" "Y" STRAINER |

**NOTES**

1. ALL VAULT, BASED AND TOPS TO BE COATED WITH DAMPPROOFING.
2. SIZE DETERMINED ON BASIS OF ACTUAL FIRE DEMAND.
3. SEE W-19A FOR ADDITIONAL DETAILED MATERIAL NOTES.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
**WATER**
MATERIAL LIST
DOUBLE DETECTOR CHECK

| 7-01-2014 | NO SCALE | W-19B |
|---|---|---|

REV DATE | APPROVED

NTS
Double Detector Check Valve Assembly
8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206-512-4209


anjali grant design LLC

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ANJALI D. A. JACOBSON
STATE OF WASHINGTON
43667
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
UTILITY DETAILS

C5.11


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3700 EAST MERCER WAY
BARNABIE POINT PROJECT

NO. DATE DESCRIPTION

4 JUNE 2025
BUILDING PERMIT

PROJECT:
UTILITY DETAILS

C5.12

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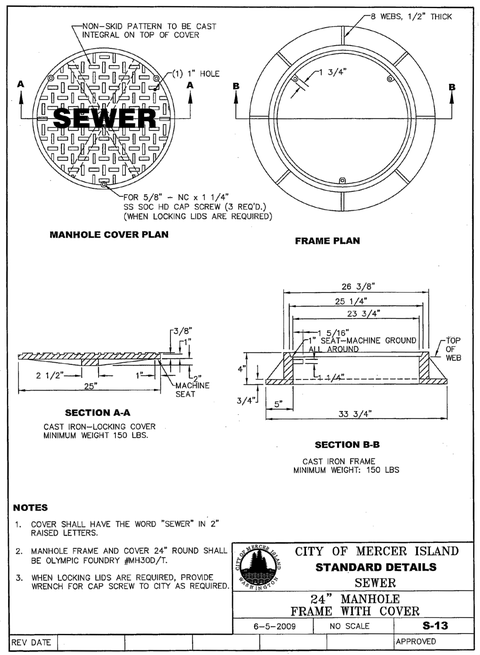
NTS
Not Used
1




**NOTES**

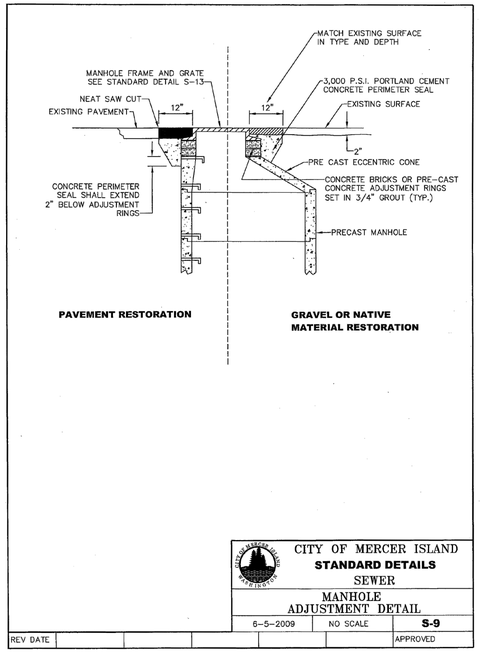
1. COVER SHALL HAVE THE WORD "SEWER" IN 2" RAISED LETTERS.
2. MANHOLE FRAME AND COVER 24" ROUND SHALL BE OLYMPIC FOUNDRY #MH30D/T.
3. WHEN LOCKING LIDS ARE REQUIRED, PROVIDE WRENCH FOR CAP SCREW TO CITY AS REQUIRED.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER
24" MANHOLE FRAME WITH COVER

| 6–5–2009 | NO SCALE | S-13 |
|---|---|---|

REV DATE | APPROVED

NTS
Manhole Frame with Cover
2

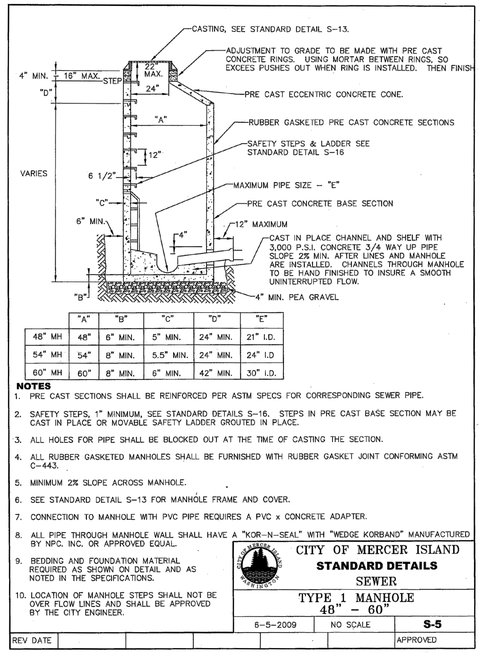



CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER
MANHOLE ADJUSTMENT DETAIL

| 6–5–2009 | NO SCALE | S-9 |
|---|---|---|

REV DATE | APPROVED

NTS
Manhole Adjustment
3




| | "A" | "B" | "C" | "D" | "E" |
|---|---|---|---|---|---|
| 48" MH | 48" | 6" MIN. | 5" MIN. | 24" MIN. | 21" I.D. |
| 54" MH | 54" | 8" MIN. | 5.5" MIN. | 24" MIN. | 24" I.D |
| 60" MH | 60" | 8" MIN. | 6" MIN. | 42" MIN. | 30" I.D. |

**NOTES**

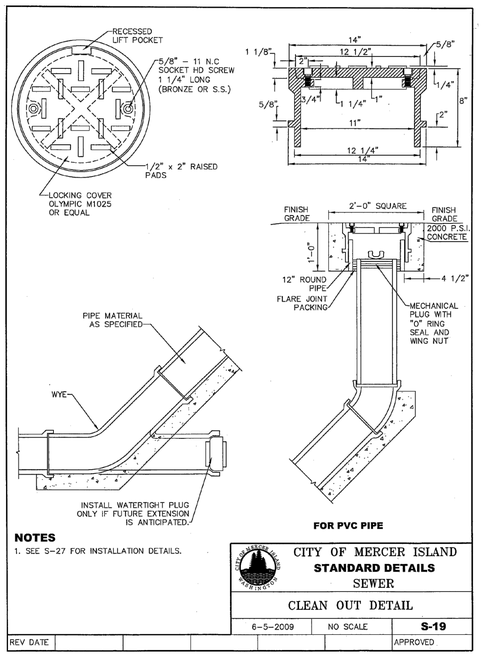
1. PRE CAST SECTIONS SHALL BE REINFORCED PER ASTM SPECS FOR CORRESPONDING SEWER PIPE.
2. SAFETY STEPS, 1" MINIMUM, SEE STANDARD DETAILS S–16. STEPS IN PRE CAST BASE SECTION MAY BE CAST IN PLACE OR MOVABLE SAFETY LADDER GROUTED IN PLACE.
3. ALL HOLES FOR PIPE SHALL BE BLOCKED OUT AT THE TIME OF CASTING THE SECTION.
4. ALL RUBBER GASKETED MANHOLES SHALL BE FURNISHED WITH RUBBER GASKET JOINT CONFORMING ASTM C–443.
5. MINIMUM 2% SLOPE ACROSS MANHOLE.
6. SEE STANDARD DETAIL S–13 FOR MANHOLE FRAME AND COVER.
7. CONNECTION TO MANHOLE WITH PVC PIPE REQUIRES A PVC x CONCRETE ADAPTER.
8. ALL PIPE THROUGH MANHOLE WALL SHALL HAVE A "KOR–N–SEAL" WITH "WEDGE KORBAND" MANUFACTURED BY NPC, INC. OR APPROVED EQUAL.
9. BEDDING AND FOUNDATION MATERIAL REQUIRED AS SHOWN ON DETAIL AND AS NOTED IN THE SPECIFICATIONS.
10. LOCATION OF MANHOLE STEPS SHALL NOT BE OVER FLOW LINES AND SHALL BE APPROVED BY THE CITY ENGINEER.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER
TYPE 1 MANHOLE 48" – 60"

| 6–5–2009 | NO SCALE | S-5 |
|---|---|---|

REV DATE | APPROVED

NTS
Type I Manhole
4




**NOTES**

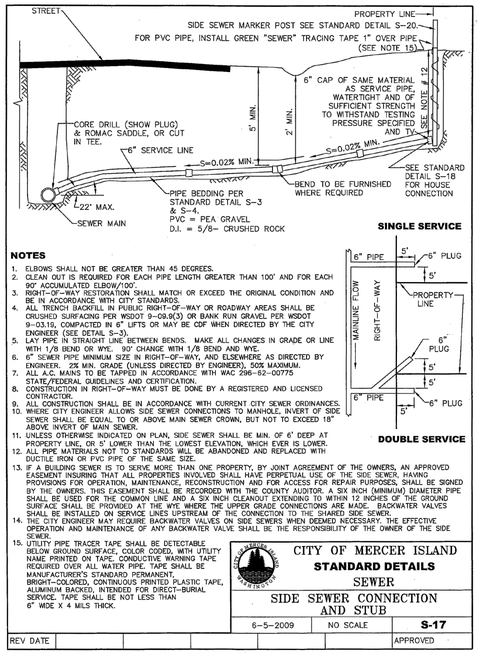
1. SEE S–27 FOR INSTALLATION DETAILS.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER
CLEAN OUT DETAIL

| 6–5–2009 | NO SCALE | S-19 |
|---|---|---|

REV DATE | APPROVED

NTS
Cleanout
5




**NOTES**

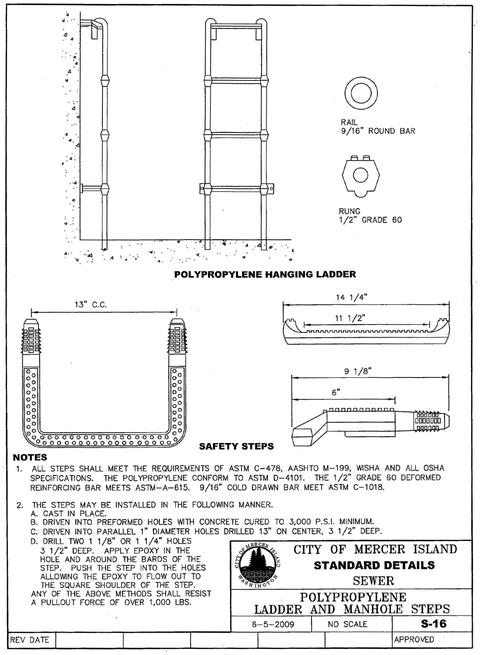
1. ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
3. RIGHT–OF–WAY RESTORATION SHALL MATCH OR EXCEED THE ORIGINAL CONDITION AND BE IN ACCORDANCE WITH CITY STANDARDS.
4. ALL TRENCH BACKFILL IN PUBLIC 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 4" LIFTS OR MAY BE CDF WHEN DIRECTED BY THE CITY ENGINEER (SEE DETAIL S–3).
5. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH 1/8 BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
6. 6" SEWER PIPE MINIMUM SIZE IN RIGHT–OF–WAY, AND ELSEWHERE AS DIRECTED BY ENGINEER. 2% MIN. GRADE (UNLESS DIRECTED BY ENGINEER), 50% MAXIMUM.
7. ALL A.C. MAINS TO BE TAPPED IN ACCORDANCE WITH WAC 296–62–00775 STATE/FEDERAL GUIDELINES AND CERTIFICATION.
8. CONSTRUCTION IN RIGHT–OF–WAY MUST BE DONE BY A REGISTERED AND LICENSED CONTRACTOR.
9. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT CITY SEWER ORDINANCES.
10. WHERE CITY ENGINEER ALLOWS SIDE SEWER CONNECTIONS TO MANHOLE, INVERT OF SIDE SEWER SHALL BE EQUAL TO OR ABOVE MAIN SEWER CROWN, BUT NOT TO EXCEED 18" ABOVE INVERT OF MAIN SEWER.
11. UNLESS OTHERWISE INDICATED ON PLAN, SIDE SEWER SHALL BE MIN. OF 6' DEEP AT PROPERTY LINE, OR 5' LOWER THAN THE LOWEST ELEVATION, WHICH EVER IS LOWER.
12. ALL PIPE MATERIALS NOT TO STANDARDS WILL BE ABANDONED AND REPLACED WITH DUCTILE IRON OR PVC PIPE OF THE SAME SIZE.
13. IF A BUILDING SEWER IS TO SERVE MORE THAN ONE PROPERTY, BY JOINT AGREEMENT OF THE OWNERS, AN APPROVED EASEMENT INSURING THAT ALL PROPERTIES INVOLVED SHALL HAVE PERPETUAL USE OF THE SIDE SEWER, HAVING PROVISIONS FOR OPERATION, MAINTENANCE, RECONSTRUCTION AND FOR ACCESS FOR REPAIR PURPOSES, SHALL BE SIGNED BY THE OWNERS. THIS EASEMENT SHALL BE RECORDED WITH THE COUNTY AUDITOR. A SIX INCH (MINIMUM) DIAMETER PIPE SHALL BE USED FOR THE COMMON LINE AND A SIX INCH CLEANOUT EXTENDING TO WITHIN 12 INCHES OF THE GROUND SURFACE SHALL BE PROVIDED AT THE WYE WHERE THE UPPER GRADE CONNECTIONS ARE MADE. BACKWATER VALVES SHALL BE INSTALLED ON SERVICE LINES UPSTREAM OF THE CONNECTION TO THE SHARED SIDE SEWER.
14. THE CITY ENGINEER MAY REQUIRE BACKWATER VALVES ON SIDE SEWERS WHEN DEEMED NECESSARY. THE EFFECTIVE OPERATION AND MAINTENANCE OF ANY BACKWATER VALVE SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE SIDE SEWER.
15. 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
SIDE SEWER CONNECTION AND STUB

| 6–5–2009 | NO SCALE | S-17 |
|---|---|---|

REV DATE | APPROVED

NTS
Side Sewer Connection and Stub
6




**NOTES**

1. ALL STEPS SHALL MEET THE REQUIREMENTS OF ASTM C–478, AASHTO M–199, WISHA AND ALL OSHA SPECIFICATIONS. THE POLYPROPYLENE CONFORM TO ASTM D–4101. THE 1/2" GRADE 60 DEFORMED REINFORCING BAR MEETS ASTM–A–615. 9/16" COLD DRAWN BAR MEET ASTM C–1018.
2. THE STEPS MAY BE INSTALLED IN THE FOLLOWING MANNER.
   A. CAST IN PLACE.
   B. DRIVEN INTO PREFORMED HOLES WITH CONCRETE CURED TO 3,000 P.S.I. MINIMUM.
   C. DRIVEN INTO PARALLEL 1" DIAMETER HOLES DRILLED 13" ON CENTER, 3 1/2" DEEP.
   D. DRILL TWO 1 1/8" OR 1 1/4" HOLES 3 1/2" DEEP. APPLY EPOXY IN THE HOLE AND AROUND THE BARDS OF THE STEP. PUSH THE STEP INTO THE HOLES ALLOWING THE EPOXY TO FLOW OUT TO THE SQUARE SHOULDER OF THE STEP. ANY OF THE ABOVE METHODS SHALL RESIST A PULLOUT FORCE OF OVER 1,000 LBS.

CITY OF MERCER ISLAND
**STANDARD DETAILS**
SEWER
POLYPROPYLENE LADDER AND MANHOLE STEPS

| 6–5–2009 | NO SCALE | S-16 |
|---|---|---|

REV DATE | APPROVED

NTS
Polypropylene Ladder and Manhole Steps
7

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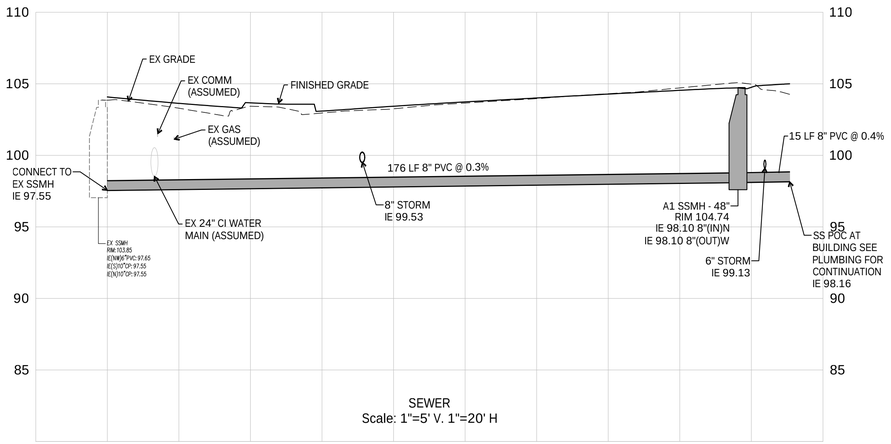


SEWER
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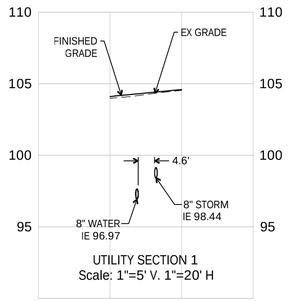


UTILITY SECTION 1
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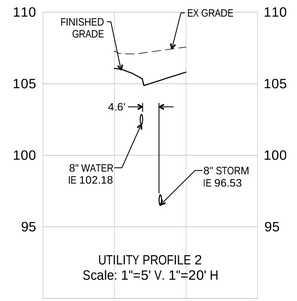
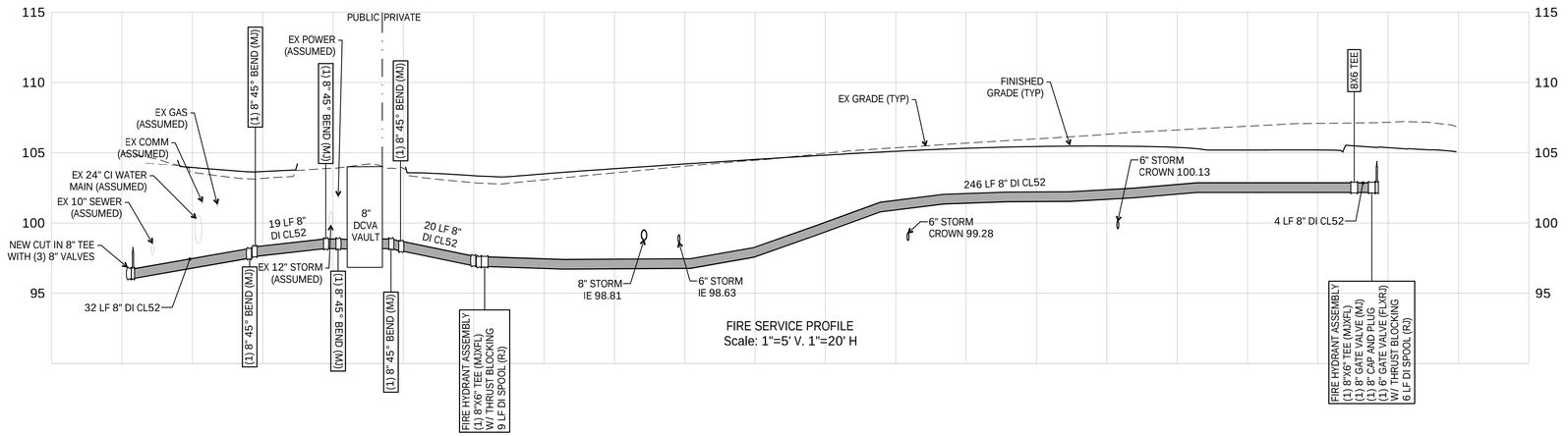



UTILITY PROFILE 2
Scale: 1"=5' V. 1"=20' H




FIRE SERVICE PROFILE
Scale: 1"=5' V. 1"=20' H

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STATE OF WASHINGTON
43667
REGISTERED PROFESSIONAL ENGINEER
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 BUILDING PERMIT |

PROJECT:
UTILITY PROFILES

C5.20

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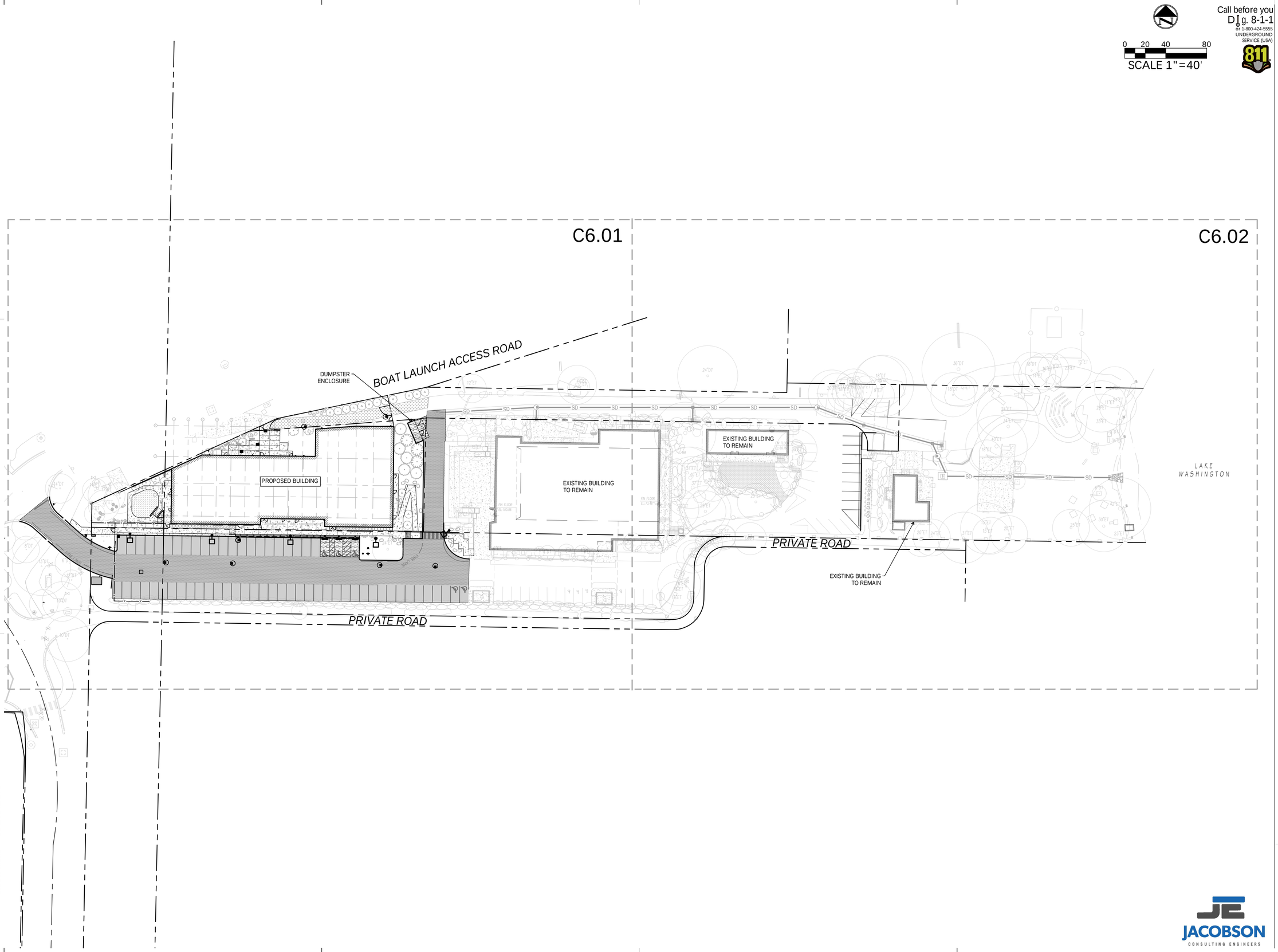


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JERALD A. JACOBSON
STATE OF WASHINGTON
43667
REGISTERED PROFESSIONAL ENGINEER
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
OVERALL PAVING AND STRIPING PLAN

C6.00

JACOBSON
CONSULTING ENGINEERS


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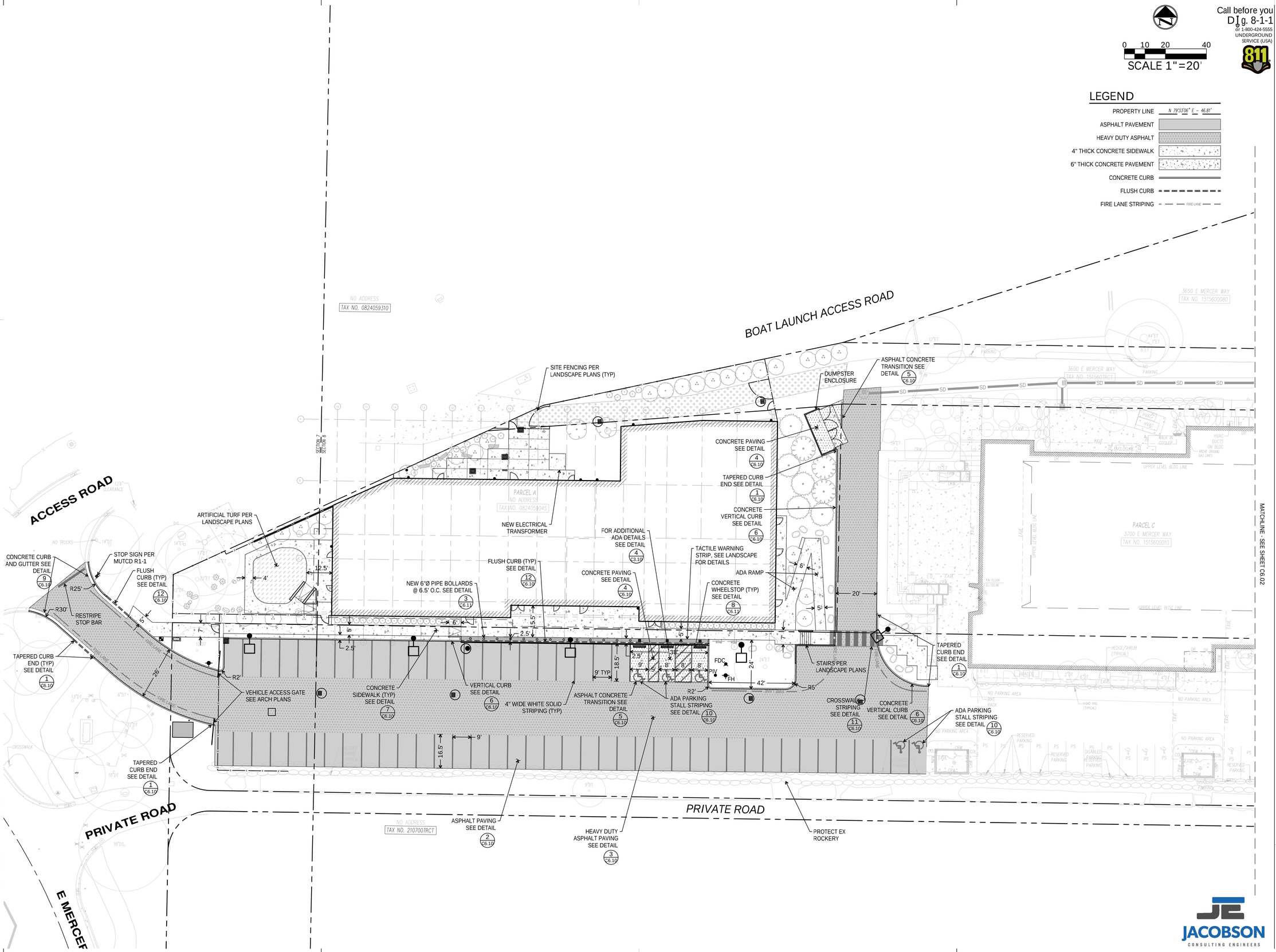



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05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

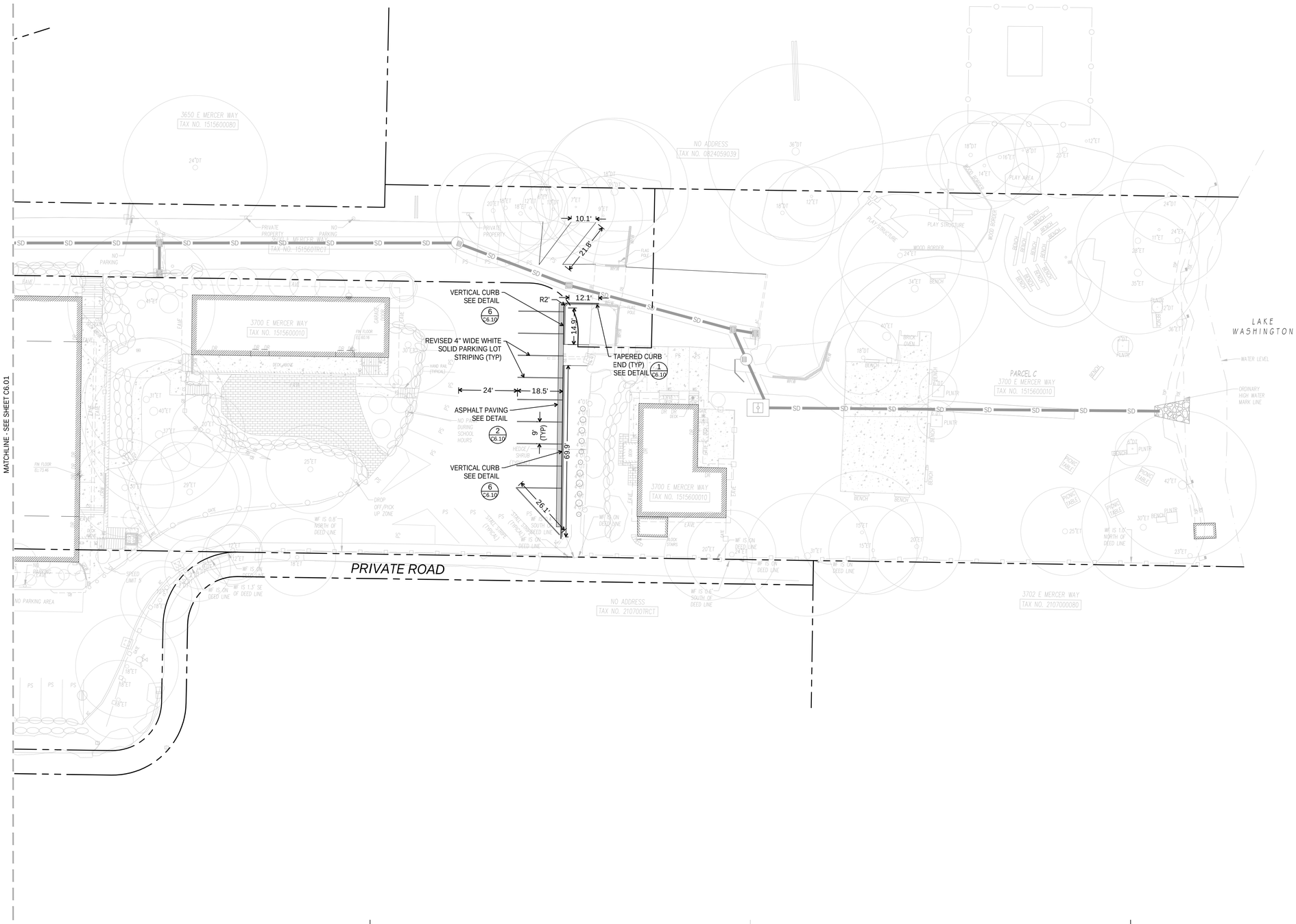
| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
PAVING AND STRIPING PLAN

C6.01

JACOBSON
CONSULTING ENGINEERS


11/2/2023 4:17:30 PM C:\Users\EashaYadav\Documents\HNT_HNT_Central R24_eashaTB5SR.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 22" X 34"




MATCHLINE - SEE SHEET C6.01

0 10 20 40
SCALE 1"=20'

Call before you Dig. 8-1-1
or 1-800-424-5555
UNDERGROUND SERVICE (USA)

## LEGEND

| | |
|---|---|
| PROPERTY LINE | N 79°33'06" E - 46.81' |
| ASPHALT PAVEMENT | |
| 4" THICK CONCRETE SIDEWALK | |
| 6" THICK CONCRETE PAVEMENT | |

3427 BEACON AVE S
SEATTLE 98144
ANJALI@AGRANTDESIGN.COM
206-512-4209

anjali grant design LLC

GERALD A JACOBSON
STATE OF WASHINGTON
43667
REGISTERED PROFESSIONAL ENGINEER
05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
PAVING AND STRIPING PLAN

C6.02

JACOBSON
CONSULTING ENGINEERS

11/2/2023 4:17:30 PM C:\Users\EstherA\Desktop\Documents\#ATT_UNIT_Central R26_estherTREVOR.rvt
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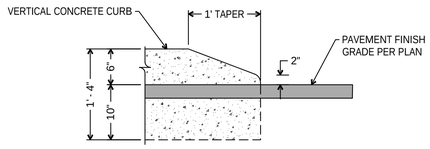
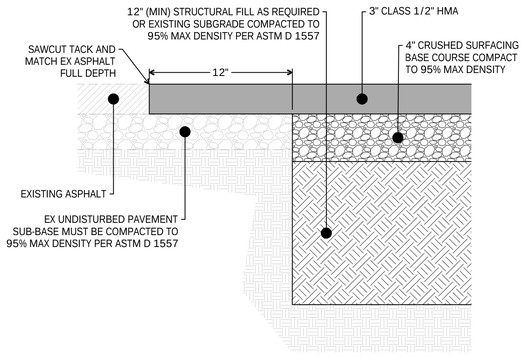


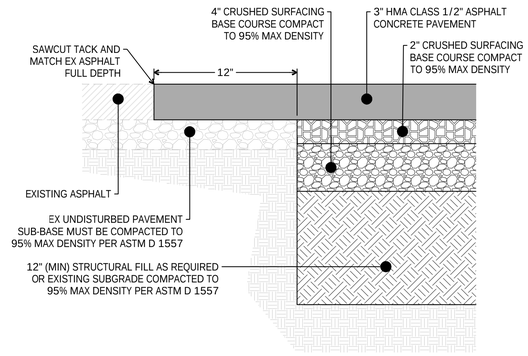

NTS
Curb Taper
1




NOTES:

1. ASPHALT PAVEMENT SHALL BE PLACED IN (2) LIFTS. FINAL LIFT SHALL BE CONSTRUCTED WITH THE OVERLAY OF THE EXISTING ASPHALT ONLY AFTER BUILDING IMPROVEMENTS ARE COMPLETE

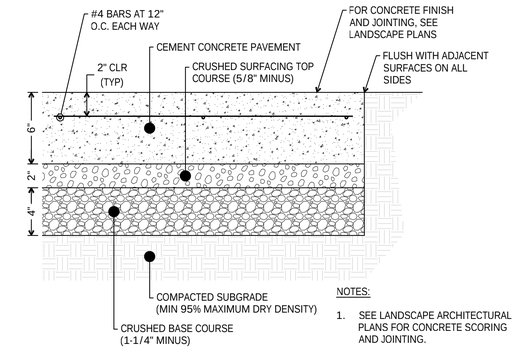
NTS
Light Asphalt Paving
2




NOTES:

1. ASPHALT PAVEMENT SHALL BE PLACED IN (2) LIFTS. FINAL LIFT SHALL BE CONSTRUCTED WITH THE OVERLAY OF THE EXISTING ASPHALT ONLY AFTER BUILDING IMPROVEMENTS ARE COMPLETE

NTS
Heavy Asphalt Paving
3




NOTES:

1. SEE LANDSCAPE ARCHITECTURAL PLANS FOR CONCRETE SCORING AND JOINTING.
2. CEMENT CONCRETE SHALL BE CLASS 4000

NOTES:

1. DEPTHS ARE COMPACTED THICKNESS
2. WHERE PERMEABLE BALLAST IS USED FOR CONSTRUCTION ACCESS AND STAGING, SOME RUTTING AND DISTURBANCE OF THE SURFACE MAY OCCUR. THE CONTRACTOR SHALL REMOVE AFFECTED AREAS AND REPLACE THEM WITH PROPERLY COMPACTED CRUSHED ROCK PRIOR TO FINAL SURFACING. WHERE PERMEABLE BALLAST IS USED, NO CRUSHED SURFACING BASE COURSE WILL BE REQUIRED UNLESS DIRECTED BY THE GEOTECHNICAL ENGINEER. SEE SHEET C3.06

NTS
Concrete Paving
4

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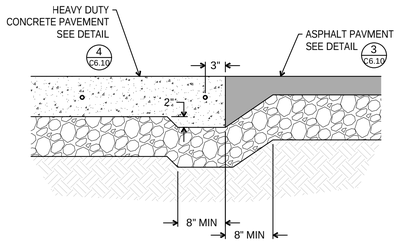
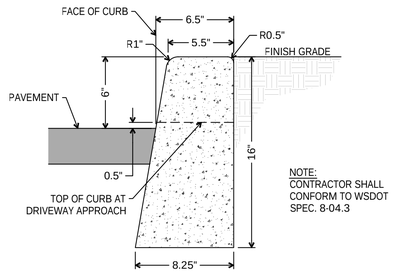
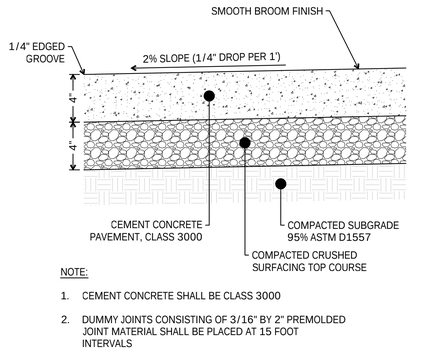



NTS
Asphalt Concrete Transition
5



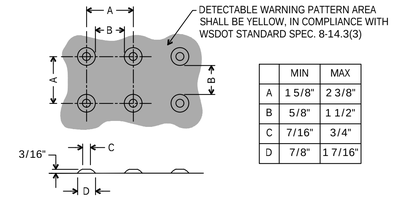

NTS
Vertical Curb
6




NOTE:

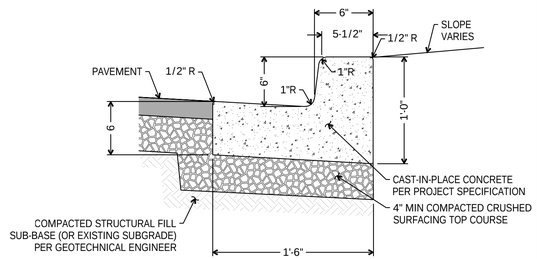
1. CEMENT CONCRETE SHALL BE CLASS 3000
2. DUMMY JOINTS CONSISTING OF 3/16" BY 2" PREMOLDED JOINT MATERIAL SHALL BE PLACED AT 15 FOOT INTERVALS

NTS
Concrete Sidewalk
7




| | MIN | MAX |
|---|---|---|
| A | 1 5/8" | 2 3/8" |
| B | 5/8" | 1 1/2" |
| C | 7/16" | 3/4" |
| D | 7/8" | 1 7/16" |

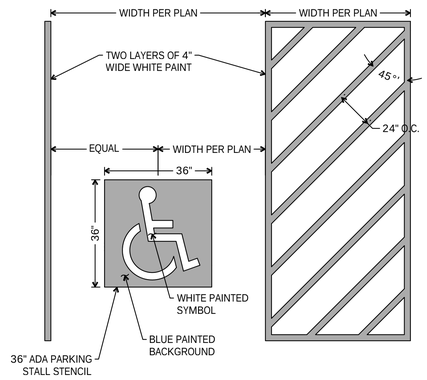
NTS
Truncated Domes
8



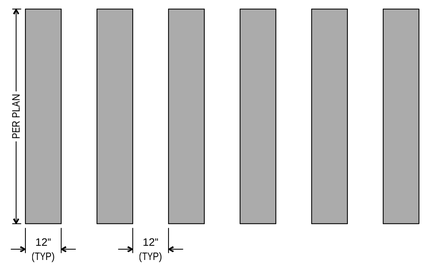

NOTES:

1. FORMS SHALL BE STEEL AND SET TRUE TO LINE AND GRADE (INSPECTION IS REQUIRED PRIOR TO PLACEMENT OF CONCRETE).
2. CONCRETE SHALL BE CEMENT CONCRETE CLASS 5-3/4 SACK OR 6 SACK, 4,000 PSI.
3. 10' THRU JOINT, ON CENTER.

NTS
Concrete Curb and Gutter
9



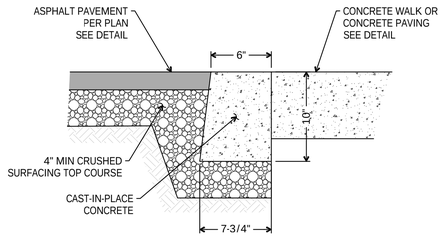

NTS
ADA Symbol and Blockout Striping
10




NOTES:

1. STRIPING COLOR SHALL BE "WHITE" AND PAINTED PER PROJECT SPECIFICATIONS
2. STRIPING DIMENSIONS SHALL MEET MUTC SPECIFICATION 3B-18 AND FIGURE 3-14C.

NTS
Crosswalk Striping
11




NTS
Flush Curb
12

JACOBSON CONSULTING ENGINEERS

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
PAVING DETAILS

C6.10

11/2/2023 4:17:30 PM C:\Users\EstherVrieler\Documents\NT_LINT_Central R24_esshe178558.rvt
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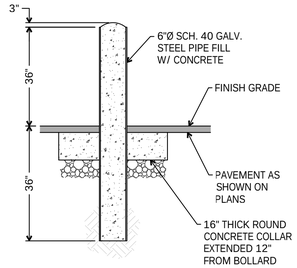
NTS
Not Used
1

NTS
Not Used
2

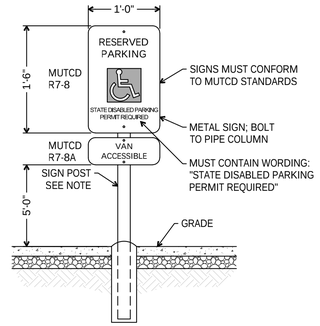



FIXED BOLLARD

NOTES:

1. PAINT STEEL AND CONCRETE DARK BRONZE COLOR
2. SUBMIT COLOR SAMPLE FOR APPROVAL PRIOR TO PAINTING

NTS
Pipe Bollard
3




NOTE: FOR SIGNS MOUNTED ON BUILDING FACE, NO POST NEEDED.

NTS
Accessible Parking Sign
4

NTS
Not Used
5

NTS
Not Used
6

NTS
Not Used
7




ATTACHMENT DETAIL

NTS
Wheel Stop
8

NTS
Not Used
9

NTS
Not Used
10

NTS
Not Used
11


3427 BEACON AVE S
SEATTLE 98144
ANJALI@AGRANTDESIGN.COM
206-512-4209


anjali grant design LLC




3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
PAVING DETAILS

C6.11

JACOBSON
CONSULTING ENGINEERS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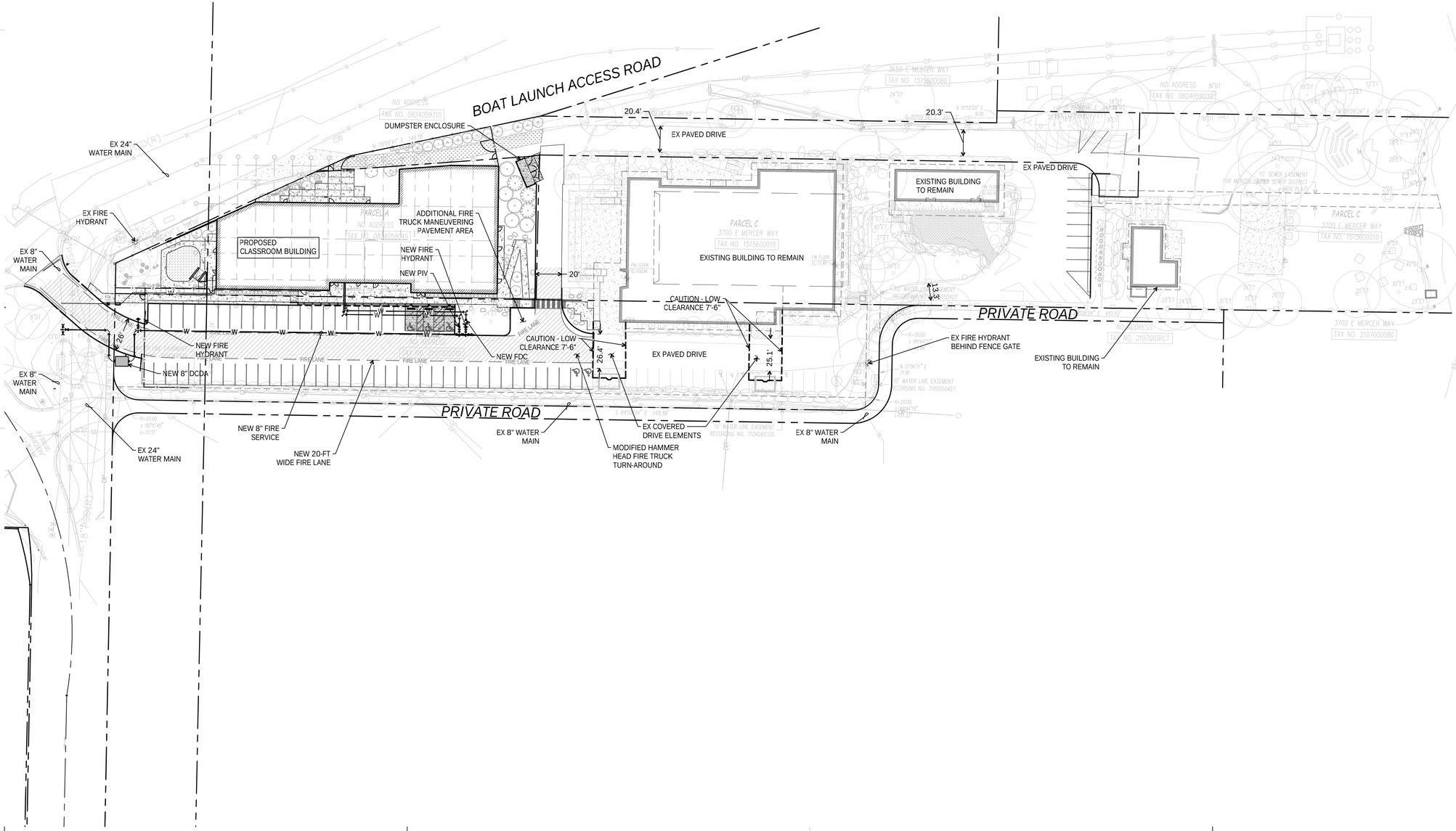


0 20 40 80
SCALE 1"=40'

Call before you Dig. 8-1-1 or 1-800-424-5555 UNDERGROUND SERVICE (USA)

811

3427 BEACON AVE S
SEATTLE 98144
ANJALI@AGRANTDESIGN.COM
206-512-4209

anjali grant design LLC

GERALD A. JACOBSON
STATE OF WASHINGTON
43667
REGISTERED PROFESSIONAL ENGINEER

05/30/2025

3700 EAST MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:
OVERALL FIRE ACCESS PLAN

C7.00

JACOBSON
CONSULTING ENGINEERS

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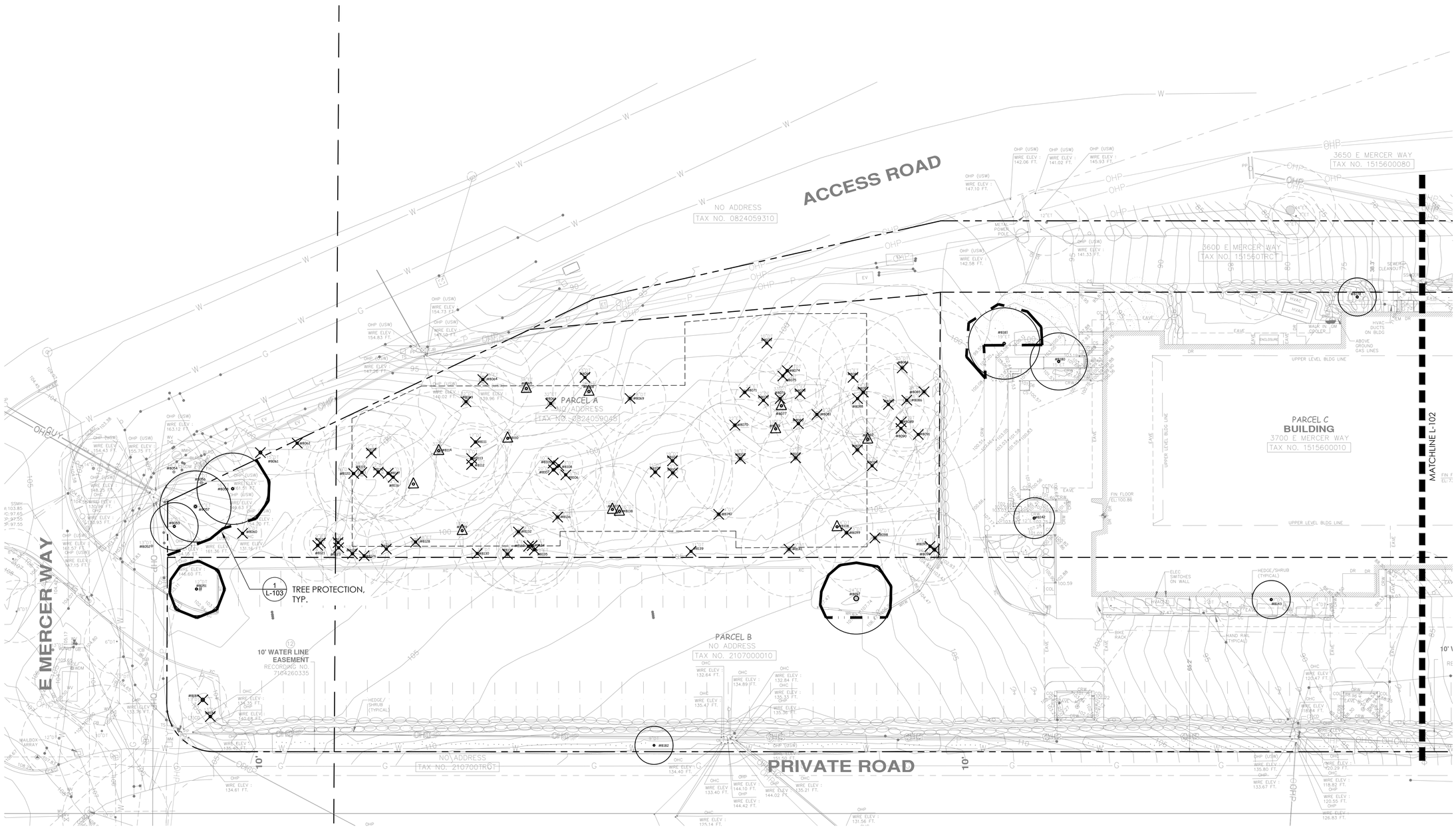


1 Tree Protection Plan - West

scale 1" = 20' - 0"

0 20 40

TREE PROTECTION

TREE PROTECTION PER CITY OF MERCER ISLAND
REFER TO DET. 1, SHEET L-103

SIGNIFICANT TREES

SIGNIFICANT TREE TO REMAIN & BE PROTECTED:
REFER TO TREE TABLE, SHEET L-103 FOR IDENTIFICATION & SIZE.

TREE TO BE REMOVED:
REFER TO TREE TABLE, SHEET L-103 FOR IDENTIFICATION & SIZE.

TREE TO BE REMOVED:
TREE IN POOR CONDITION PER ARBORIST TREE REPORT.
REFER TO TREE TABLE, SHEET L-103 FOR IDENTIFICATION & SIZE.

NOTE: Tree identification, canopy dripline, and diameter at standard height (dsh) based on tree report by Davey Resource Group, Inc., Contact: Ian Scott, dated September 29, 2023

Karen Kiest
Landscape Architects
111 west john street suite 306
seattle washington 98119
tel 206 323 6032

NOT FOR CONSTRUCTION

3700 E MERCER WAY
BARNABIE POINT K-8

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 6/4/2025 | BUILDING PERMIT |

PROJECT: HNTS

TREE PROTECTION PLAN - WEST

L-101

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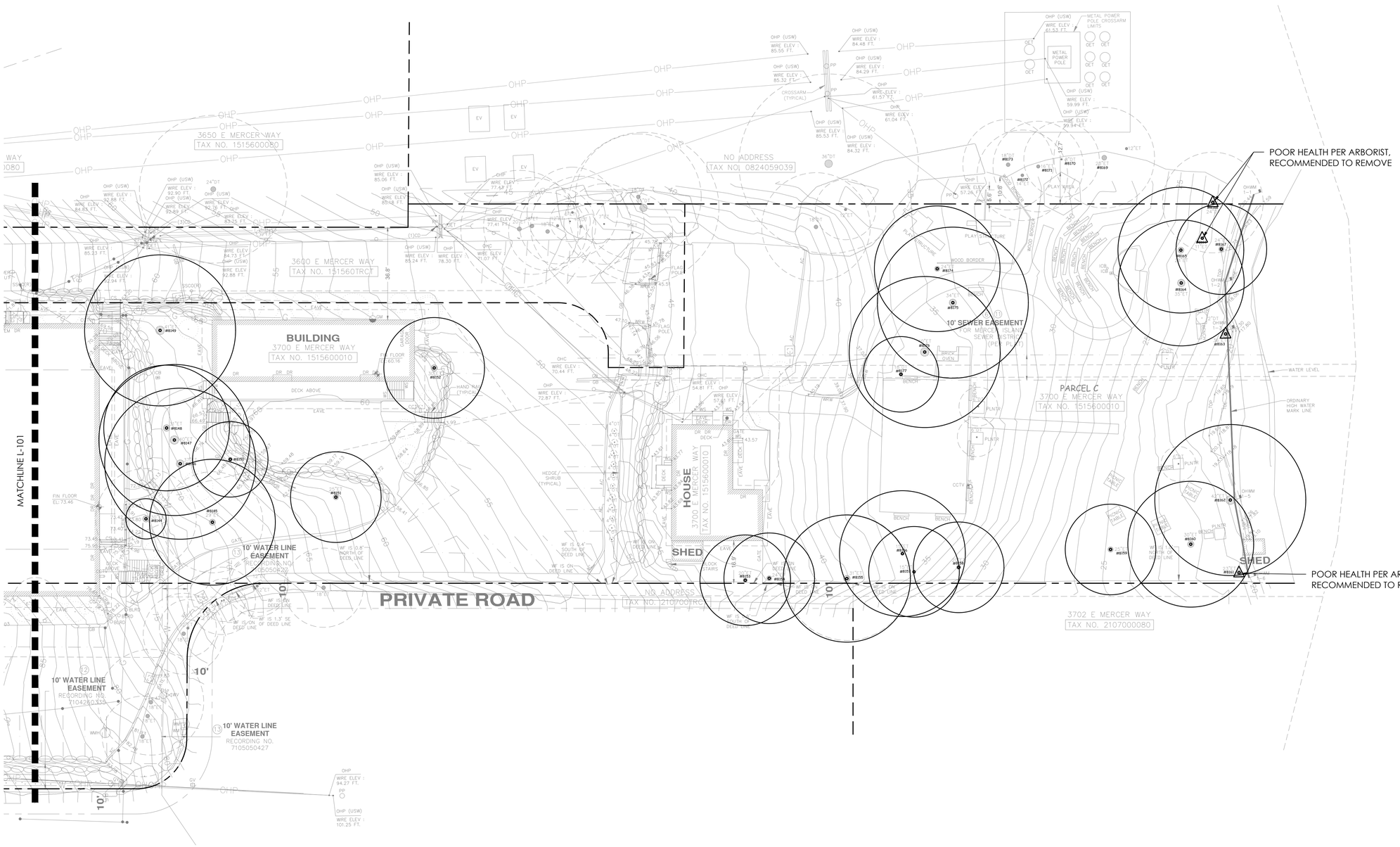


1 Tree Protection Plan - East
scale 1" = 20' - 0"

0 20 40

| SIGNIFICANT TREES | |
|---|---|
| | SIGNIFICANT TREE TO REMAIN & BE PROTECTED: REFER TO TREE TABLE, SHEET L-103 FOR IDENTIFICATION & SIZE. |
| | TREE TO BE REMOVED: REFER TO TREE TABLE, SHEET L-103 FOR IDENTIFICATION & SIZE. |
| | TREE TO BE REMOVED: TREE IN POOR CONDITION PER ARBORIST TREE REPORT. REFER TO TREE TABLE, SHEET L-103 FOR IDENTIFICATION & SIZE. |

NOTE: Tree identification, canopy dripline, and diameter at standard height (dsh) based on tree report by Davey Resource Group, Inc., Contact: Ian Scott, dated September 29, 2023


Karen Kiest
Landscape Architects
111 west john street suite 306
seattle washington 98119
tel 206 323 6032


NOT FOR CONSTRUCTION

3700 E MERCER WAY
BARNABIE POINT K-8

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 6/4/2025 | BUILDING PERMIT |

PROJECT: HNTS

TREE PROTECTION PLAN - EAST

L-102


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ARBOR TABLE PROVIDED BY DAVEY RESOURCE GROUP

| Tree ID | DSH (in) | Avg. Dripline (ft) | Height (ft) | Species | Condition | Exceptional Tree Status | Preserve Priority | To Be Removed | Arborist Recommends Removal | Off-Site |
|---|---|---|---|---|---|---|---|---|---|---|
| 8051 | 14 | 12 | 27 | Purple leaf plum (Prunus cerasifera) | Fair | Grove | 3 | | | |
| 8052 | 13 | 18 | 27 | Norway maple (Acer platanoides) | Good | Grove | 2 | | | x |
| 8053 | 12.2 | 10 | 33 | Ash spp (Fraxius spp) | Fair | Grove | 3 | | | |
| 8054 | 14 | 12 | 30 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 | | | x |
| 8055 | 12 | 10 | 27 | Norway maple (Acer platanoides) | Good | Grove | 2 | | | |
| 8056 | 17 | 18 | 24 | Norway maple (Acer platanoides) | Fair | Grove | 2 | | | x |
| 8057 | 22 | 15 | 72 | Douglas fir (Pseudotsuga menziesii) | Fair | Grove | 2 | | | |
| 8058 | 16 | 15 | 66 | Douglas fir (Pseudotsuga menziesii) | Fair | Grove | 2 | | | |
| 8059 | 17 | 8 | 18 | Willow spp (Salix spp) | Very Poor | Exceptional (Grove) | 3 | | x | |
| 8060 | 15 | 8 | 51 | Black cottonwood (Populus trichocarpa) | Good | Grove | 3 | | | |
| 8061 | 15 | 12 | 27 | Norway maple (Acer platanoides) | Good | Grove | 2 | | | x |
| 8062 | 17 | 12 | 20 | Norway maple (Acer platanoides) | Fair | Grove | 2 | | | |
| 8063 | 32 | 20 | 70 | Willow spp (Salix spp) | Fair | Exceptional (Grove) | 2 | 1 | | |
| 8064 | 36 | 20 | 77 | Western red cedar (Thuja pilcata) | Poor | Exceptional (Grove) | 2 | 1 | x | |
| 8065 | 38 | 20 | 77 | Western red cedar (Thuja pilcata) | Critical | Exceptional (Grove) | 3 | 1 | x | |
| 8066 | 32 | 20 | 70 | Western red cedar (Thuja pilcata) | Very Poor | Exceptional (Grove) | 3 | 1 | x | |
| 8067 | 13 | 5 | 17 | Big leaf maple (Acer macrophyllum) | Critical | Grove | 3 | 1 | x | |
| 8068 | 25.8 | 15 | 55 | Big leaf maple (Acer macrophyllum) | Very Poor | Grove | 3 | 1 | x | |
| 8069 | 28 | 15 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8070 | 22 | 15 | 60 | Western red cedar (Thuja pilcata) | Poor | Grove | 2 | 1 | x | |
| 8071 | 24 | 15 | 50 | Western red cedar (Thuja pilcata) | Poor | Grove | 3 | 1 | x | |
| 8072 | 12 | 12 | 60 | Western red cedar (Thuja pilcata) | Poor | Grove | 3 | 1 | x | |
| 8073 | 10 | 12 | 55 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8074 | 17 | 25 | 75 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8075 | 11 | 10 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8076 | 33.4 | 25 | 80 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8077 | 16 | 0 | 65 | Western red cedar (Thuja pilcata) | Dead | Grove | 4 | 1 | x | |
| 8078 | 11 | 8 | 40 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 | | | |
| 8079 | 13 | 10 | 27 | Western red cedar (Thuja pilcata) | Poor | Grove | 3 | 1 | | |
| 8080 | 17 | 10 | 51 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 | 1 | | |
| 8081 | 32.3 | 15 | 69 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8082 | 11 | 25 | 50 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8083 | 24 | 20 | 60 | Douglas fir (Pseudotsuga menziesii) | Fair | Grove | 2 | | | |
| 8084 | 25 | 35 | 60 | Big leaf maple (Acer macrophyllum) | Good | Grove | 2 | | | |
| 8085 | 28.2 | 35 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8086 | 36 | 20 | 60 | Western red cedar (Thuja pilcata) | Fair | Exceptional (Grove) | 2 | 1 | | |
| 8087 | 14.7 | 15 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8088 | 13 | 15 | 50 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8089 | 17 | 25 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | | | |
| 8090 | 13 | 12 | 60 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 | | | |
| 8091 | 12 | 12 | 60 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 | | | |
| 8092 | 24 | 20 | 60 | Western red cedar (Thuja pilcata) | Critical | Grove | 3 | 1 | x | |
| 8093 | 24 | 25 | 65 | Big leaf maple (Acer macrophyllum) | Good | Grove | 2 | 1 | | |
| 8094 | 12 | 20 | 65 | Big leaf maple (Acer macrophyllum) | Good | Grove | 2 | 1 | | |
| 8095 | 13 | 15 | 63 | Douglas fir (Pseudotsuga menziesii) | Good | Grove | 2 | | | |
| 8096 | 26 | 15 | 42 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 | | | |
| 8097 | 24 | 15 | 60 | Western red cedar (Thuja pilcata) | Good | Grove | 2 | | | |
| 8098 | 25 | 25 | 60 | Big leaf maple (Acer macrophyllum) | Poor | Grove | 3 | | x | |
| 8099 | 23 | 20 | 60 | Big leaf maple (Acer macrophyllum) | Poor | Grove | 3 | 1 | x | |
| 8100 | 14.2 | 15 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | | | |
| 8101 | 27 | 25 | 50 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8102 | 28 | 25 | 81 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 | 1 | | |
| 8103 | 19 | 25 | 74 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8104 | 23 | 25 | 80 | Big leaf maple (Acer macrophyllum) | Good | Grove | 2 | 1 | | |
| 8105 | 21 | 25 | 80 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8106 | 14.9 | 15 | 60 | Big leaf maple (Acer macrophyllum) | Very Poor | Grove | 3 | 1 | x | |
| 8107 | 20 | 25 | 65 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8108 | 13.5 | 10 | 51 | Big leaf maple (Acer macrophyllum) | Very Poor | Grove | 3 | 1 | x | |
| 8109 | 10 | 20 | 50 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8110 | 10 | 0 | 50 | Big leaf maple (Acer macrophyllum) | Dead | Grove | 4 | 1 | x | |
| 8111 | 17 | 15 | 66 | Big leaf maple (Acer macrophyllum) | Good | Grove | 2 | 1 | | |
| 8112 | 11 | 15 | 50 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8113 | 13 | 15 | 50 | Big leaf maple (Acer macrophyllum) | Poor | Grove | 3 | 1 | x | |
| 8114 | 32 | 25 | 80 | Western red cedar (Thuja pilcata) | Critical | Exceptional (Grove) | 3 | 1 | x | |
| 8115 | 12 | 18 | 42 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8116 | 14 | 18 | 40 | Black locust (Robinia pseudoacacia) | Very Poor | Grove | 3 | 1 | x | |
| 8117 | 17 | 20 | 45 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8118 | 12 | 15 | 45 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8119 | 38 | 20 | 80 | Western red cedar (Thuja pilcata) | Fair | Exceptional (Grove) | 2 | 1 | | |
| 8120 | 16 | 20 | 46 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8121 | 18 | 15 | 66 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8122 | 9 | 7 | 66 | Ash spp (Fraxius spp) | Fair | Grove | 3 | 1 | | |
| 8123 | 14.8 | 20 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8124 | 11 | 12 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8125 | 18.4 | 15 | 66 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8126 | 13 | 18 | 66 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8127 | 9 | 14 | 60 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8128 | 38 | 20 | 84 | Western red cedar (Thuja pilcata) | Fair | Exceptional (Grove) | 2 | 1 | | |
| 8129 | 10 | 0 | 55 | Red alder (Alnus rubra) | Critical | Grove | 3 | 1 | x | |
| 8130 | 13 | 10 | 45 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8131 | 25 | 15 | 54 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 | 1 | | |
| 8132 | 29 | 25 | 54 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8133 | 14 | 20 | 54 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 | 1 | | |
| 8134 | 13.6 | 15 | 50 | Western red cedar (Thuja pilcata) | Fair | Grove | 2 | 1 | | |
| 8135 | 10 | 15 | 45 | Douglas fir (Pseudotsuga menziesii) | Fair | Grove | 2 | 1 | | |
| 8136 | 25 | 20 | 80 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8137 | 10 | 18 | 65 | Big leaf maple (Acer macrophyllum) | Very Poor | Grove | 3 | 1 | x | |
| 8138 | 25 | 20 | 70 | Big leaf maple (Acer macrophyllum) | Very Poor | Grove | 3 | 1 | x | |
| 8139 | 10.8 | 15 | 33 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8140 | 24 | 25 | 54 | Big leaf maple (Acer macrophyllum) | Fair | Grove | 2 | 1 | | |
| 8141 | 29.7 | 20 | 54 | Big leaf maple (Acer macrophyllum) | Very Poor | Grove | 3 | 1 | x | |
| 8142 | 11 | 8 | 39 | Yellow cedar (Callitropsis nootkatensis) | Fair | Not Specific | 2 | | | |
| 8143 | 7.7 | 8 | 39 | Vine maple (Acer circinatum) | Fair | Not Specific | 2 | | | |
| 8144 | 30 | 20 | 81 | Western red cedar (Thuja pilcata) | Good | Exceptional | 2 | | | |
| 8145 | 29 | 25 | 84 | Western red cedar (Thuja pilcata) | Good | Not Specific | 2 | | | |
| 8146 | 37 | 30 | 93 | Western red cedar (Thuja pilcata) | Fair | Exceptional | 2 | | | |
| 8147 | 40 | 30 | 93 | Western red cedar (Thuja pilcata) | Fair | Exceptional | 2 | | | |
| 8148 | 31 | 25 | 90 | Western red cedar (Thuja pilcata) | Good | Exceptional | 2 | | | |
| 8149 | 41 | 30 | 95 | Lawsons cypress (Chamaecyparis lawsor | Fair | Exceptional | 2 | | | |
| 8150 | 20 | 15 | 78 | Western red cedar (Thuja pilcata) | Fair | Not Specific | 2 | | | |
| 8151 | 25 | 18 | 84 | Douglas fir (Pseudotsuga menziesii) | Good | Not Specific | 2 | | | |
| 8152 | 30.1 | 20 | 60 | Western red cedar (Thuja pilcata) | Fair | Not Specific | 2 | | | |
| 8153 | 20 | 18 | 80 | Douglas fir (Pseudotsuga menziesii) | Good | Not Specific | 2 | | | |
| 8154 | 24 | 18 | 81 | Douglas fir (Pseudotsuga menziesii) | Good | Not Specific | 2 | | | |
| 8155 | 31 | 25 | 85 | Western red cedar (Thuja pilcata) | Fair | Exceptional | 2 | | | |
| 8156 | 15 | 25 | 80 | Douglas fir (Pseudotsuga menziesii) | Good | Not Specific | 2 | | | |
| 8157 | 15 | 18 | 80 | Douglas fir (Pseudotsuga menziesii) | Fair | Not Specific | 2 | | | |
| 8158 | 20 | 18 | 78 | Douglas fir (Pseudotsuga menziesii) | Fair | Not Specific | 2 | | | |
| 8159 | 25 | 18 | 42 | Ash spp (Fraxius spp) | Fair | Exceptional | 2 | | | |
| 8160 | 30 | 25 | 93 | Douglas fir (Pseudotsuga menziesii) | Critical | Exceptional | 3 | | x | |
| 8161 | 22.9 | 0 | 45 | Ash spp (Fraxius spp) | Critical | Not Specific | 3 | 1 | x | |
| 8162 | 42 | 30 | 78 | Douglas fir (Pseudotsuga menziesii) | Good | Exceptional | 2 | | | |
| 8163 | 36 | 0 | 99 | Douglas fir (Pseudotsuga menziesii) | Critical | Exceptional | 4 | 1 | x | |
| 8164 | 35 | 25 | 94 | Douglas fir (Pseudotsuga menziesii) | Fair | Exceptional | 2 | | | |
| 8165 | 28 | 25 | 114 | Douglas fir (Pseudotsuga menziesii) | Fair | Not Specific | 2 | | | |
| 8166 | 11 | 0 | 68 | Douglas fir (Pseudotsuga menziesii) | Dead | Not Specific | 4 | 1 | x | |
| 8167 | 24 | 18 | 129 | Douglas fir (Pseudotsuga menziesii) | Very Poor | Not Specific | 3 | | x | |
| 8168 | 24 | 20 | 75 | Ash spp (Fraxius spp) | Very Poor | Not Specific | 3 | | x | |
| 8169 | 23 | 20 | 78 | Deodar cedar (Cedrus deodara) | Good | Not Specific | 2 | | | x |
| 8170 | 9 | 15 | 24 | Sugar maple (Acer saccharum) | Good | Not Specific | 2 | | | x |
| 8171 | 16 | 18 | 78 | Deodar cedar (Cedrus deodara) | Good | Not Specific | 2 | | | x |
| 8172 | 14 | 18 | 42 | Deodar cedar (Cedrus deodara) | Good | Not Specific | 2 | | | x |
| 8173 | 18 | 18 | 42 | Big leaf maple (Acer macrophyllum) | Poor | Not Specific | 3 | | x | x |
| 8174 | 24 | 25 | 57 | Douglas fir (Pseudotsuga menziesii) | Fair | Not Specific | 2 | | | |
| 8175 | 34 | 30 | 83 | Douglas fir (Pseudotsuga menziesii) | Fair | Exceptional | 2 | | | |
| 8176 | 41 | 30 | 90 | Douglas fir (Pseudotsuga menziesii) | Fair | Exceptional | 2 | | | |
| 8177 | 18.2 | 15 | 24 | Cherry (Prunus spp) | Fair | Not Specific | 2 | | | |
| 8178 | 12 | 8 | 18 | Cherry (Prunus spp) | Fair | Not Specific | 2 | | | |
| 8179 | 20 | 8 | 20 | Cherry (Prunus spp) | Fair | Not Specific | 2 | | | |
| 8180 | 14.8 | 12 | 49 | Yellow cedar (Callitropsis nootkatensis) | Fair | Not Specific | 2 | | | |
| 8181 | 19.2 | 15 | 48 | Yellow cedar (Callitropsis nootkatensis) | Fair | Not Specific | 2 | | | |
| 8182 | 9.1 | 8 | 21 | English Hawthorn (Crataegus monogyna | Fair | Not Specific | 3 | | | |
| 8183 | 12.7 | 8 | 18 | Cherry (Prunus spp) | Fair | Not Specific | 2 | 1 | | |
| 8184 | 17.5 | 10 | 20 | Cherry (Prunus spp) | Fair | Not Specific | 2 | 1 | | |

# TREE PROTECTION AREA (TPZ)

# KEEP OUT!

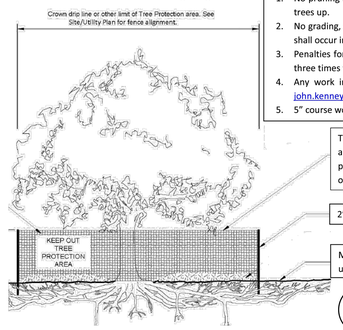
## DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

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

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

Notes

1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
3. Penalties for damaging by root damage/compaction or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.160).
4. Any work in approved TPZ must be with the permission of the City Arborist (206) 275-7713, john.kenney@mercergov.org.
5. 5" course woodchips within the tree protection zone, but not against the tree trunk.




Tree protection fence: 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

1 TREE PROTECTION DETAIL
SCALE: 3/8" = 1' - 0"

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

## TREE INVENTORY AND REPLACEMENT NOTES

1. ARBOR INFORMATION PER ARBORIST REPORT BY DAVEY TREE RESOURCE GROUP, INC., DATED SEPTEMBER 29, 2023. CONTACT: IAN SCOTT
2. FOR TREE NUMBERS IDENTIFIED ON PLANS, SEE SHEETS L-101 AND L-102
3. TREES TO BE REMOVED COLUMN DETERMINED BY ARCHITECTURAL AND LANDSCAPE PLANS, AND ARBORIST NOTES ON CONDITION.
4. NO WORK SHOWN IN RIGHT OF WAY
5. PER CITY OF MERCER ISLAND COMMUNITY PLANNING AND DEVELOPMENT, REPLACEMENT TREES SHALL BE CONIFERS AT LEAST SIX FEET TALL AND OR DECIDUOUS AT LEAST ONE AND ONE-HALF INCHES IN DIAMETER AT BASE.
7. TREE REPLACEMENTS TO BE FURTHER REVIEWED WITH THE CITY.
8. REQUEST THAT TREE REPLACEMENT CALCULATIONS EXCLUDE THE TREES RECOMMENDED TO BE REMOVED PER THE ARBORIST REPORT.
9. INSTALL MINIMUM (1) WATER BAG PER TREE. REPLACEMENT TREES SHALL BE MAINTAINED FOR FIVE YEARS AFTER PLANTING.
10. (**4**) REPLACEMENT TREES SHOWN ON PLAN.

## TREE REPLACEMENT CALCULATION NOTES

** TREES DETERMINED IN THE ARBORIST REPORT TO BE OF POOR/VERY POOR/CRITICAL/DEAD CONDITION (QTY. 31) HAVE NOT BEEN INCLUDED IN TREE INVENTORY AND REPLACEMENT WORKSHEET.

1. PER MICC 19.10.060 - TREE REMOVAL, IN THE B ZONING DESIGNATION, A TREE PERMIT IS REQUIRED AND WILL BE GRANTED IF IT MEETS ANY OF THE FOLLOWING CRITERIA:
   A. IT IS NECESSARY FOR PUBLIC SAFELY, REMOVAL OF HAZARDOUS TREES OR REMOVAL OF DISEASED OR DEAD TREES
2. PER MICC 19.10.070 - TREE REPLACEMENT, REPLACEMENT IS REQUIRED FOR ANY TREES THAT ARE REMOVED, ACCORDING TO REPLACEMENT RATIOS IN THIS SECTION. AT LEAST HALF OF THE TREES NEED TO BE PACIFIC NORTHWEST NATIVES. TREES NEED TO BE AT LEAST 10' APART FROM EACH OTHER, STRUCTURES, FENCES AND UTILITIES.

   THE CITY ARBORIST MAY REDUCE THE NUMBER OF REPLACEMENT TREES AS FOLLOWS, WHERE OTHER MEASURES DESIGNED TO MITIGATE THE TREE LOSS BY RESTORING THE TREE CANOPY COVERAGE AND ITS ASSOCIATED BENEFITS ARE CONSIDERED TO BE EFFECTIVE AND CONSISTENT WITH THE PURPOSES OF THIS CHAPTER. THE CITY ARBORIST MAY CONSIDER:

   A. REPLACEMENT OF HAZARDOUS, UNDESIRED, OR SHORT-LIVED TREES WITH HEALTHY NEW TREES THAT HAVE A GREATER CHANCE OF LONG-TERM SURVIVAL.

   IF REQUESTED AND PROJECT CAN SHOW NO ROOM EXISTS ON SITE FOR REPLACEMENTS, THE REMAINDER CAN BE FEE IN LIEU IF REQUESTED.
3. GROVE DETERMINATION NOT INCLUDED IN TREE REPLACEMENT CALCULATIONS.

# CITY OF MERCER ISLAND

**COMMUNITY PLANNING & DEVELOPMENT**
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org

## MERCER ISLAND TREE INVENTORY & REPLACEMENT SUBMITTAL INFORMATION

**PROJECT INFORMATION**

| | |
|---|---|
| Property Owner Name: | Herzl-Ner Tamid |
| Site Address or Parcel Number: | 3700 East Mercer Way |
| Project Contact Name: | Dana Warren |
| Contact Email Address: | DanaWarren@msn.com |
| Contact Phone Number: | 206-226-3100 |

**EXCEPTIONAL TREES**

**Exceptional Trees- means a tree or group of trees that because of its unique historical, ecological or aesthetic value constitutes an important community resource. A tree that is rare or exceptional by virtue of its size, species, condition, cultural/historical importance, age, and/or contribution as part of a tree grove. Trees with a diameter of more than 36 inches, or with a diameter that is equal to or greater than the diameter listed in the Exceptional Tree Table* shown in MICC 19.16 under Tree, Exceptional.

List the total number of trees for each category and the tree identification numbers from the arborist report.

Number of trees 36" or greater: 8
List tree numbers:

Number of trees 24" or greater (including 36" or greater): 36
List tree numbers:

Number of trees from Exceptional Tree Table (MICC 19.16): 17
List tree numbers:

**LARGE REGULATED TREES**

\\chfs1\share\CPD\FORMS\1Current Forms\Engineering Forms\Tree\MercerIslandTreeInventory.docx
02/2022

**Large Regulated Trees- means any tree with a diameter of 10 inches or more, and any tree that meets the definition of an Exceptional Tree.*

Number of Large Regulated Trees on site: 96 (A)
List tree numbers:

Number of Large Regulated Trees on site proposed for removal: 48 (B)
List tree numbers:

**Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30%**: 50 %

**RIGHT OF WAY TREES**

*Right of Way Trees- means a tree that is located in the street right of way adjacent to the project property.*

Number of Large Regulated Trees in right of way:
List tree numbers:

Number of Large Regulated Trees in right of way proposed for removal:
List tree numbers:

Reason for removal:

**TREE REPLACEMENT**

**Tree replacement- removed trees must be replaced based on the ratio in the table below. Replacement trees shall be conifers at least six feet tall and or deciduous at least one and one-half inches in diameter at base.

| Diameter of Removed Tree (measured 4.5' above ground) | Tree replacement Ratio | Number of Trees Proposed for Removal | Number of Tree Required for Replacement Based on Size/Type |
|---|---|---|---|
| Less than 10"* | 1 | 2 | 2 |
| 10" up to 24" | 2 | 34 | 68 |
| Greater than 24" up to 36" | 3 | 10 | 30 |
| Greater than 36" and any Exceptional Tree | 6 | 2 | 12 |
| | **TOTAL TREE REPLACEMENTS** | | 112 |

***no replacement tree is needed if the tree fits all of the following;***
***Less than 10 inches in diameter, not an exceptional tree, and not a replacement tree from another tree permit. ***


Karen Kiest
Landscape Architects
111 west john street suite 306
seattle washington 98119
tel 206 323 6032


STATE OF WASHINGTON — KAREN S. KIEST — 849 — REGISTERED LANDSCAPE ARCHITECT — EXP. 01/05/2026

NOT FOR CONSTRUCTION

3700 E MERCER WAY
BARNABIE POINT K-8

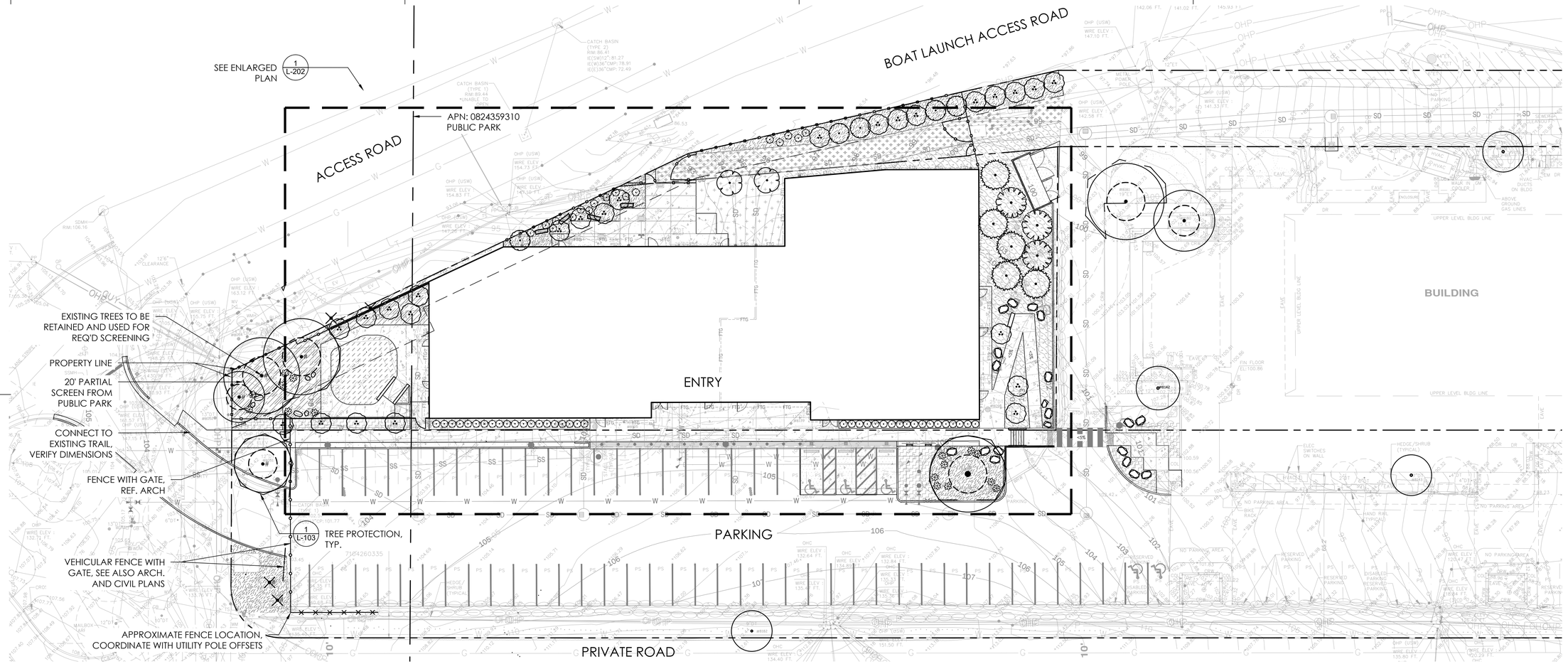
| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 6/4/2025 | BUILDING PERMIT |

PROJECT: HNTS

TREE INVENTORY & REPLACEMENT

L-103

© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE 24" X 36"




# 1 Landscape Plan - West

scale 1" = 20' - 0"

0 20 40

## MATERIALS LIST

CONCRETE PAVING
PEDESTRIAN C.I.P. CONC. PAVING BROOM FINISH, SAND-COATED EXP. JOINTS, SAWCUT JOINTS, SCORING TO BE INDICATED ON CONSTRUCTION PLANS, REF ALSO CIVIL

#
TREE PROTECTION
EXISTING TREE TO REMAIN WITH TREE PROTECTION FENCING, SEE ALSO ARBORIST'S NOTES

LOGS
8'-12' MIN. LOGS, SET PARTIALLY INTO GROUND

BIKE RACK
TOFINO NO SCRATCH SURFACE MOUNT RACK, BY SPORTWORKS, INSTALL PER MFG. RECOMMENDATIONS

SEAT
TBD, BENCH ON CAST IN PLACE CONCRETE, OR, STONE SET ON GRAVEL

SITE LIGHTING
REF. ELECTRICAL

FENCING
REF. ARCH & CIVIL FOR ADDL. INFORMATION

PERIMETER FENCE - NORTH
6' HT., SECURITY

WEST AUTO ENTRY FENCE & GATE
AUTO ENTRY SECURITY

WEST STUDENT AREA FENCE
4' HT. MIN.

SOUTH SIDE
CONFIRM PLACEMENT AT ROCKERY, TREES, UTILITY POLES

BOULDERS
CASCADE GRANITE, AVAIL. FROM MARENAKOS ROCK CENTER, 425.392.3313

(A) 24"X36"

(B) 48"X48"X24", BURY 1/3 HT

## REFERENCE NOTES SCHEDULE

| SYMBOL | DESCRIPTION |
|---|---|
| | ACCESS PATH: HYDROSEED, PER SPEC |
| | ARBORIST WOOD CHIP MULCH, 4" DEPTH |
| | SYNTHETIC TURF SURFACING |
| | ENGINEERED WOOD FIBER SAFETY SURFACING |

## TREE NOTES

1. PROVIDE TREE PROTECTION FOR TREES SHOWN TO REMAIN. SEE DETAIL L-103, SEE ALSO ARBORIST'S REPORT.
2. FOR REPLACEMENT TREE REQUIREMENTS, SEE SHEET L-103 TREE INVENTORY AND REPLACEMENT. REFER TO TREE REPLACEMENT CALCULATIONS FOR REQUIRED QUANTITIES.
3. ASSUME MIN. ONE WATER BAG PER TREE.

## PLANTING NOTES

1. PROVIDE 1-YEAR MAINTENANCE AND WATER FOR HEALTHY ESTABLISHMENT OF ALL PLANTINGS.
2. ALL AREAS WITHIN LIMIT OF DISTURBANCE SHALL BE RESTORED.
3. PROVIDE GROUND COVERS IN ALL SHRUB PLANTING AREAS. GROUND COVERS SHALL BE SPACED USING TRIANGULAR PATTERN, TO PROVIDE TOTAL COVERAGE OF LANDSCAPE AREA IN THREE YEARS.
4. ADJUST TREE LOCATIONS AS NECESSARY TO BE 8 FEET CLEAR FROM CENTER LINES OF UNDERGROUND UTILITIES.
5. ADJUST TREE LOCATIONS AS NECESSARY TO BE 5 FEET CLEAR MINIMUM FROM FENCING.

## LANDSCAPE CODE NOTES

PER MICC 19.12.040 - LANDSCAPE DESIGN AND OUTDOOR SPACES, THE FOLLOWING INFORMATION:

1. PERIMETER LANDSCAPE SCREENS: WHERE EXISTING UNDERGROWTH WILL BE RETAINED, THE SHRUB AND GROUNDCOVER REQUIREMENTS FOR ALL SCREEN TYPES MAY BE ADJUSTED, PROVIDED THE OBJECTIVES OF THIS SECTION ARE MET.
2. **FULL SCREEN**: PROVIDE A DENSE VEGETATED SEPARATION BETWEEN DISSIMILAR USES ON ADJACENT PROPERTIES. A FULL SCREEN SHOULD BLOCK VIEWS FROM ADJACENT PROPERTIES AS SEEN AT THE PEDESTRIAN EYE LEVEL IN ALL SEASONS WITHIN THREE YEARS OF INSTALLATION. THE NUMBER OF TREES PROVIDED SHALL BE PROPORTIONAL TO **ONE TREE FOR EVERY TEN FEET OF LANDSCAPE PERIMETER LENGTH**.
3. **PARTIAL SCREEN**: PROVIDE A MODERATE VEGETATED SEPARATION BETWEEN USES ON ADJACENT PROPERTIES AND INTERMITTENT VIEWS TO ADJACENT PROPERTIES. A PARTIAL SCREEN SHALL PROVIDE THE DESIRED SCREENING FUNCTION AS SEEN AT THE PEDESTRIAN EYE LEVEL IN ALL SEASONS WITHIN THREE YEARS OF INSTALLATION. THE NUMBER OF TREES PROVIDED SHALL BE PROPORTIONATE TO **ONE TREE FOR EVERY 20 FEET OF LANDSCAPE PERIMETER LENGTH**.
4. THE FOLLOWING PLANTING TYPES SHOULD BE USED: NATIVE OR NORTHWEST-ADAPTED PLANTS SHOULD BE USED FOR ALL OPEN SPACE AND BUFFER LOCATIONS AND DROUGHT TOLERANT PLANTINGS SHOULD BE USED IN A MAJORITY OF PLANTINGS.
5. GROUNDCOVER SHOULD BE USED TO ENSURE PLANTING AREAS ARE ATTRACTIVE, MINIMIZE MAINTENANCE AND THE POTENTIAL FOR ENCROACHMENT OF INVASIVE PLANT MATERIAL. GROUNDCOVER SHOULD BE PLANTED AND SPACED TO ACHIEVE TOTAL COVERAGE WITHIN THREE YEARS AFTER INSTALLATION.

## PLANT SCHEDULE

| SYMBOL | BOTANICAL NAME | COMMON NAME | SIZE | COND | DROUGHT | SPACING |
|---|---|---|---|---|---|---|
| **CONIFERS** | | | | | | |
| | PSEUDOTSUGA MENZIESII | DOUGLAS FIR | 6` HT. | B&B | NATIVE | |
| | THUJA PLICATA | WESTERN RED CEDAR | 6` HT. | B&B | NATIVE | |
| **DECIDUOUS TREES** | | | | | | |
| | ACER CIRCINATUM MULTI-STEM, MIN. 3 STEMS, 8-10` HT (1-1/2" DBH OR EQUIVALENT) | VINE MAPLE | 8` HT. | B&B | NATIVE | |
| | CORNUS NUTTALLII | PACIFIC DOGWOOD | 8` HT. | B&B | NATIVE | |
| | RHAMNUS PURSHIANA | CASCARA | 1.5" CAL. | B&B | NATIVE | |
| **SHRUBS** | | | | | | |
| | POLYSTICHUM MUNITUM | WESTERN SWORD FERN | 1 GAL. | CONT. | NATIVE | 36" o.c. |
| | VACCINIUM OVATUM | EVERGREEN HUCKLEBERRY | 5 GAL. | CONT. | NATIVE | 36" o.c. |
| **SHRUB AREAS** | | | | | | |
| | NATIVE SHRUB & GROUNDCOVERS | | | | | |
| | GAULTHERIA SHALLON | SALAL | 1 GAL. | CONT. | NATIVE | 40% @ 24" o.c. |
| | POLYSTICHUM MUNITUM | WESTERN SWORD FERN | 1 GAL. | CONT. | NATIVE | 20% @ 24" o.c. |
| | VACCINIUM OVATUM | EVERGREEN HUCKLEBERRY | 5 GAL. | CONT. | NATIVE | 20% @ 24" o.c. |
| | MAHONIA NERVOSA | OREGON GRAPE | 1 GAL. | CONT. | NATIVE | 20% @ 24" o.c. |
| **GROUND COVERS** | | | | | | |
| | NATIVE GROUNDCOVER | | | | | |
| | ARCTOSTAPHYLOS UVA-URSI | KINNIKINNICK | 1 GAL. | CONT. | NATIVE | 10% @ 24" o.c. |
| | GAULTHERIA SHALLON | SALAL | 1 GAL. | CONT. | NATIVE | 40% @ 24" o.c. |
| | MAHONIA NERVOSA | OREGON GRAPE | 1 GAL. | CONT. | NATIVE | 30% @ 24" o.c. |
| | POLYSTICHUM MUNITUM | WESTERN SWORD FERN | 1 GAL. | CONT. | NATIVE | 20% @ 24" o.c. |
| **SOD/SEED** | | | | | | |
| | LAWN MIX | HYDROSEED, PER SPEC | SEED | | | |

© ANJALI GRANT DESIGN LLC
ORIGINAL SHEET SIZE: 24" X 36"

Karen Kiest
Landscape Architects
111 west john street suite 306
seattle washington 98119
tel 206 323 6032

STATE OF WASHINGTON KAREN L. KIEST 22850 REGISTERED LANDSCAPE ARCHITECT EXP. 07/19/2026

NOT FOR CONSTRUCTION

3700 E MERCER WAY
BARNABIE POINT K-8

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 6/4/2025 | BUILDING PERMIT |

PROJECT: HNTS

LANDSCAPE PLAN

L-201

ACCESS ROAD

CATCH BASIN (TYPE 1) RIM: 89.44 *UNABLE TO OPEN

BUFFER TREES, TYP., THIS AREA

UNDERGROUND UTILITY

ACCESS PATH

FENCE 6' HT & GATE

8' MIN. TYP.

5' CLR. TYP.

10' FULL SCREEN FROM PUBLIC PARK

10' MAX. THIS AREA

BUFFER TREES, TYP., THIS AREA

LOCATE TREES PER TRANSFORMER & UTILITY CLEARANCE REQ'TS., TYP.

TRASH ENCLOSURE, REF. ARCH

OVERHEAD POWER

20' PARTIAL SCREEN FROM PUBLIC PARK

SECURITY FENCE ON RETAINING WALL, SEE ALSO CIVIL

TRANSFORMER PAD

BUFFER TREES, TYP., THIS AREA

ARBORIST WOODCHIPS

20' MAX., THIS AREA

4' MIN.

CONCRETE PAVING, REF. CIVIL

+105'

4' MIN.

PLAY TURF AREA FOR 2-5 YR PLAY EQUIPMENT, REF. CIVIL FOR DRAIN

5'

SEAT WALL

RISER W/RAILS

FENCE & GATE

ENTRY

IRRIGATED LANDSCAPE, TYP.

BIKE RACK, TYP.

TREE PROTECTION 1 L-103

BOULDERS & FERNS

1'-6"

6'-6" TYP.

TACTILE WARNING STRIP, REF. CIVIL

FIXED BOLLARD & ACCESSIBLE EDGE, TYP., REF. CIVIL

CATCH BASIN (TYPE 1)

NO PARKING

<5%

<5%

1 Landscape Plan - Enlargement
scale 1" = 10' - 0"

0 10 20

© ANJALI GRANT DESIGN LLC

ORIGINAL SHEET SIZE: 24" X 36"

Karen Kiest
Landscape Architects
111 west john street suite 306
seattle washington 98119
tel 206 323 6032

STATE OF WASHINGTON KAREN S. KIEST 849 EXP. 07/19/2026 REGISTERED LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

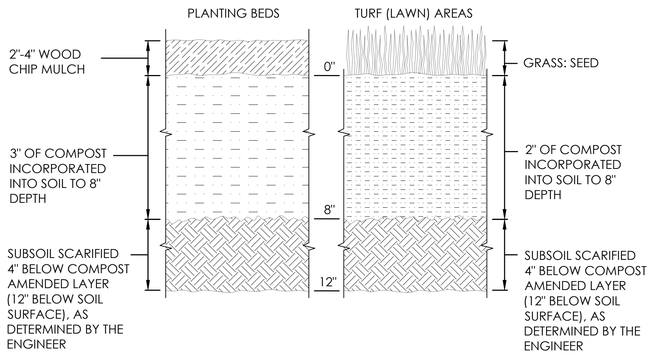
3700 E MERCER WAY
BARNABIE POINT K-8

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 6/4/2025 | BUILDING PERMIT |

PROJECT: HNTS

LANDSCAPE PLAN - ENLARGEMENT

L-202

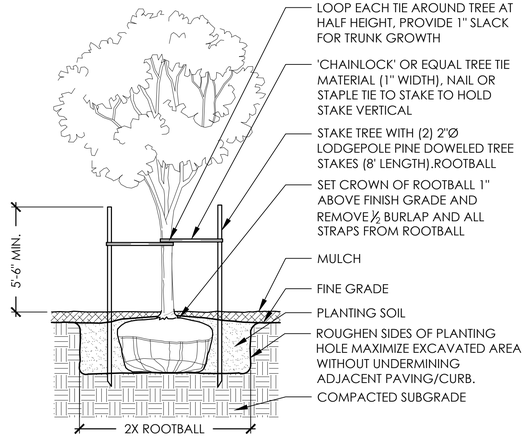



NOTES:

1. ALL SOIL AREAS DISTURBED OR COMPACTED DURING CONSTRUCTION, AND NOT COVERED BY BUILDINGS OR PAVEMENT, SHALL BE AMENDED WITH COMPOST AS DESCRIBED BELOW.
2. SUBSOIL SHOULD BE SCARIFIED (LOOSENED) 4 INCHES BELOW AMENDED LAYER, TO PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFICATION WOULD DAMAGE TREE ROOTS OR AS DETERMINED BY THE ENGINEER.
3. COMPOST SHALL BE TILLED IN TO 8 INCH DEPTH INTO EXISTING SOIL, OR PLACE 8 INCHES OF COMPOST-AMENDED SOIL, PER SOIL SPECIFICATION.
4. TURF AREAS SHALL RECEIVE 1.75 INCHES OF COMPOST TILLED IN TO 8-INCH DEPTH, OR MAY SUBSTITUTE 8" OF IMPORTED SOIL CONTAINING 20-25% COMPOST BY VOLUME. THEN PLANT GRASS SEED OR SOD PER SPECIFICATION.
5. PLANTING BEDS SHALL RECEIVE 3 INCHES OF COMPOST TILLED IN TO 8-INCH DEPTH, OR MAY SUBSTITUTE 8" OF IMPORTED SOIL CONTAINING 35-40% COMPOST BY VOLUME. MULCH AFTER PLANTING, WITH 2-4 INCHES OF ARBORIST WOOD CHIP MULCH OR APPROVED EQUAL.
6. SETBACKS: TO PREVENT UNEVEN SETTLING, DO NOT COMPOST-AMEND SOILS WITHIN 3 FEET OF UTILITY INFRASTRUCTURES (POLES, VAULTS, METERS ETC.). WITHIN ONE FOOT OF PAVEMENT EDGE, CURBS AND SIDEWALKS SOIL SHOULD BE COMPACTED TO APPROXIMATELY 90% PROCTOR TO ENSURE A FIRM SURFACE.

## 1 SOIL AMENDMENT AND DEPTH

SCALE: NTS

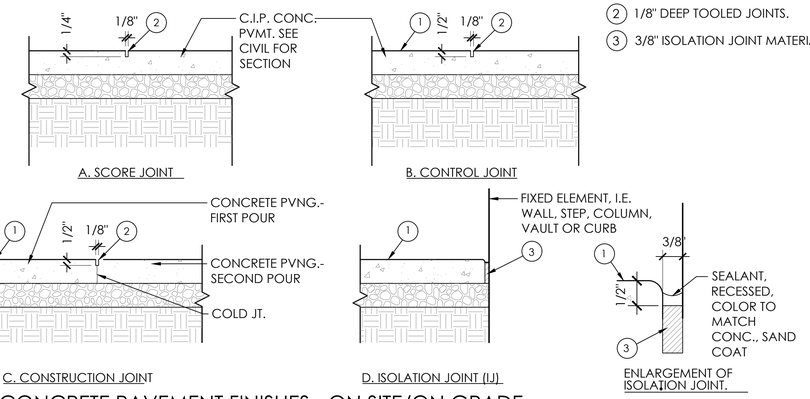



## 2 DECIDUOUS TREE PLANTING

SCALE: 1" = 1'-0"

LEGEND

1. CONCRETE PVMT: FINISH PER PLANS
2. 1/8" DEEP TOOLED JOINTS.
3. 3/8" ISOLATION JOINT MATERIAL.




## 3 CONCRETE PAVEMENT FINISHES - ON SITE/ON GRADE

SCALE: 1" = 1'-0"

© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

Karen Kiest
Landscape Architects
111 west john street suite 306
seattle washington 98119
tel 206 323 6032

STATE OF WASHINGTON KAREN S. KIEST 849 REGISTERED LANDSCAPE ARCHITECT EXP. 07/19/2026

NOT FOR CONSTRUCTION

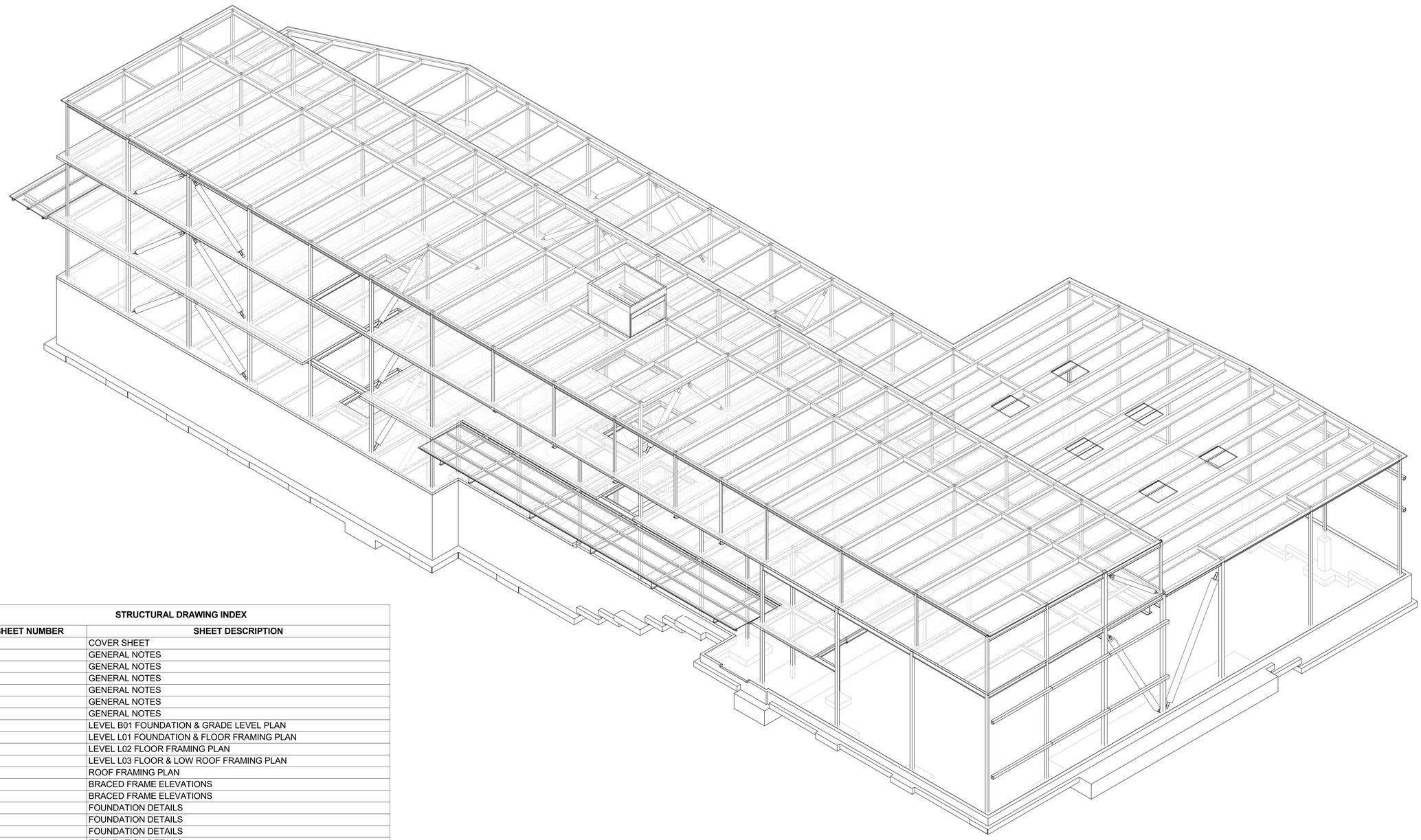
3700 E MERCER WAY
BARNABIE POINT K-8

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 6/4/2025 | BUILDING PERMIT |

PROJECT: HNTS

LANDSCAPE DETAILS

L-203



| STRUCTURAL DRAWING INDEX | |
|---|---|
| **SHEET NUMBER** | **SHEET DESCRIPTION** |
| S-000 | COVER SHEET |
| S-001 | GENERAL NOTES |
| S-002 | GENERAL NOTES |
| S-003 | GENERAL NOTES |
| S-004 | GENERAL NOTES |
| S-005 | GENERAL NOTES |
| S-006 | GENERAL NOTES |
| S-100 | LEVEL B01 FOUNDATION & GRADE LEVEL PLAN |
| S-101 | LEVEL L01 FOUNDATION & FLOOR FRAMING PLAN |
| S-102 | LEVEL L02 FLOOR FRAMING PLAN |
| S-103 | LEVEL L03 FLOOR & LOW ROOF FRAMING PLAN |
| S-104 | ROOF FRAMING PLAN |
| S-201 | BRACED FRAME ELEVATIONS |
| S-202 | BRACED FRAME ELEVATIONS |
| S-301 | FOUNDATION DETAILS |
| S-302 | FOUNDATION DETAILS |
| S-303 | FOUNDATION DETAILS |
| S-304 | FOUNDATION DETAILS |
| S-401 | STEEL FRAMING DETAILS |
| S-402 | STEEL FRAMING DETAILS |
| S-403 | STEEL FRAMING DETAILS |
| S-404 | STEEL FRAMING DETAILS |
| S-405 | STEEL FRAMING DETAILS |
| S-406 | STEEL FRAMING DETAILS |
| S-407 | STEEL FRAMING DETAILS |
| S-420 | STEEL FRAMING DETAILS |
| S-421 | STEEL FRAMING DETAILS |
| S-422 | STEEL FRAMING DETAILS |
| S-423 | STEEL FRAMING DETAILS |
| S-501 | COLD-FORMED STEEL FRAMING DETAILS |
| S-502 | COLD-FORMED STEEL FRAMING DETAILS |
| S-503 | COLD-FORMED STEEL FRAMING DETAILS |
| S-504 | COLD-FORMED STEEL FRAMING DETAILS |
| Grand total: 33 | |

5/30/2025 1:56:38 PM C:_Revit Models\23500 HNT Pk-12 R2024 (Central)_BRoyd@pcs-structural.com.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

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PCS
Structural *Solutions*
Seattle | Tacoma | Portland
www.pcs-structural.com

3700 E MERCER WAY
# BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|

04 JUNE 2025
BUILDING PERMIT

PROJECT:

COVER SHEET

S-000

## GENERAL NOTES

THESE GENERAL NOTES ARE TO BE USED AS A SUPPLEMENT TO THE SPECIFICATIONS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATIONS, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK. THE GENERAL CONTRACTOR SHALL VERIFY AND COORDINATE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION. THE STRUCTURE HAS BEEN DESIGNED TO RESIST CODE SPECIFIED VERTICAL AND LATERAL FORCES AFTER THE CONSTRUCTION OF ALL STRUCTURAL ELEMENTS HAS BEEN COMPLETED. STABILITY OF THE STRUCTURE PRIOR TO COMPLETION IS THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THIS RESPONSIBILITY INCLUDES BUT IS NOT LIMITED TO JOB SITE SAFETY; ERECTION MEANS, METHODS, AND SEQUENCES; TEMPORARY SHORING, FORMWORK, BRACING; USE OF EQUIPMENT AND CONSTRUCTION PROCEDURES. PROVIDE ADEQUATE RESISTANCE TO LOADS ON THE STRUCTURES DURING CONSTRUCTION PER SEI/ASCE STANDARD NO. 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION."

CONSTRUCTION OBSERVATION BY THE STRUCTURAL ENGINEER IS FOR GENERAL CONFORMANCE WITH DESIGN ASPECTS ONLY AND IS NOT INTENDED IN ANY WAY TO REVIEW THE CONTRACTOR'S CONSTRUCTION PROCEDURES.

STANDARDS
ALL METHODS, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2021 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED AND ADOPTED BY THE LOCAL BUILDING OFFICIAL OR APPLICABLE JURISDICTION.

CONTRACT DRAWINGS / DIMENSIONS

ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. CONSULTANT DRAWINGS BY OTHER DISCIPLINES ARE SUPPLEMENTARY TO ARCHITECTURAL DRAWINGS. REPORT DIMENSIONAL OMISSIONS OR DISCREPANCIES BETWEEN ARCHITECTURAL DRAWINGS AND STRUCTURAL, MECHANICAL, ELECTRICAL OR CIVIL DRAWINGS TO ARCHITECT PRIOR TO PROCEEDING WITH WORK.

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS. PRIMARY STRUCTURAL ELEMENTS ARE DIMENSIONED ON STRUCTURAL PLANS AND DETAILS AND OVERALL LAYOUT OF STRUCTURAL PORTION OF WORK. SOME SECONDARY ELEMENTS ARE NOT DIMENSIONED, SUCH AS WALL CONFIGURATIONS, INCLUDING EXACT DOOR AND WINDOW LOCATIONS, ALCOVES, SLAB SLOPES AND DEPRESSIONS, CURBS, ETC. VERTICAL DIMENSIONAL CONTROL IS DEFINED BY ARCHITECTURAL WALL SECTIONS AND BUILDING SECTIONS. STRUCTURAL DETAILS SHOW DIMENSIONAL RELATIONSHIPS TO CONTROL DIMENSIONS DEFINED BY ARCHITECTURAL DRAWINGS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN **BOTH** ARCHITECTURAL AND STRUCTURAL DRAWINGS.

## DESIGN CRITERIA

VERTICAL LOADS

| AREA | DESIGN DEAD LOAD | LIVE LOAD (2) | PARTITION LOAD | CONCENTRATED LOADS |
|---|---|---|---|---|
| ROOF | 15 PSF | 25 PSF (1) | -- | 300# |
| ROOF (SOLAR) | 25 PSF (5) | 25 PSF (1) | -- | 300# |
| CLASSROOM | 50 PSF | 40 PSF | -- | 1,000# |
| MECHANICAL ROOM | 75 PSF | 40 PSF | +EQUIPMENT | |
| OFFICE | 75 PSF | 50 PSF | +15 PSF | 2,000# |
| CORRIDORS (ABOVE 1ST FLR) | 75 PSF | 80 PSF | -- | 2,000# |
| CORRIDORS (1ST FLR) | 75 PSF | 100 PSF | -- | 2,000# |
| STAIRS | 30 PSF | 100 PSF | -- | 300# |
| ASSEMBLY (MOVEABLE SEATS) | 75 PSF | 100 PSF (4) | -- | |

(1) DRIFT AND UNBALANCED SNOW LOAD PER ASCE 7-16, CHAPTER 7.
(2) LIVE LOADS EXCEPT SNOW LOADS ARE REDUCED PER IBC SECTION 1607.12.
(3) LIVE LOAD REDUCTION NOT PERMITTED EXCEPT AS NOTED IN IBC SECTION 1607.12.
(4) LIVE LOAD REDUCTION NOT PERMITTED.
(5) INCLUDES 10 PSF FOR SOLAR READINESS.

SNOW: (MINIMUM ROOF SNOW LOAD = 25 PSF ROOFS WITH SLOPES LESS THAN 5% INCLUDE 5 PSF ADDITIONAL RAIN ON SNOW LOAD SURCHARGE IN ADDITION TO THE DESIGN SNOW LOAD)

Pg = 16 PSF = GROUND SNOW LOAD
Pf = 0.7CeCtIsPg = FLAT ROOF SNOW LOAD
Ps = CsPf = SLOPED ROOF SNOW LOAD
Is = 1.1 Ce = 1.1, Ct = 1.1, Cs = VARIES

LATERAL FORCES

LATERAL FORCES ARE TRANSMITTED BY DIAPHRAGM ACTION OF ROOF AND FLOORS TO BRACED FRAME/SHEAR WALLS. LOADS ARE THEN TRANSFERRED TO FOUNDATION BY BRACED FRAME/SHEAR WALL ACTION WHERE ULTIMATE DISPLACEMENT IS RESISTED BY PASSIVE PRESSURE OF EARTH AND/OR SLIDING FRICTION. OVERTURNING IS RESISTED BY DEAD LOAD OF THE STRUCTURE.

LATERAL FORCE RESISTING SYSTEM: ALL MEMBERS AND CONNECTIONS REFERRED TO AS LATERAL FORCE RESISTING SYSTEM (LFRS) SHALL COMPLY WITH REQUIREMENTS OF THE SEISMIC FORCE RESISTING SYSTEM AND THE WIND FORCE RESISTING SYSTEM SET FORTH IN THE SPECIAL INSPECTION REQUIREMENTS OF IBC SECTION 1704 AND 1705, AND AS NOTED IN THE STATEMENT OF SPECIAL INSPECTIONS.

WIND:

THE BUILDING MEETS THE CRITERIA TO USE THE "ENCLOSED, PARTIALLY ENCLOSED, AND OPEN BUILDING OF ALL HEIGHTS PROCEDURE" PER ASCE 7-16.

- EXPOSURE CATEGORY = C
- BASIC WIND SPEED, (3 SEC. GUST), $V_{ULT}$ = 105 MPH; $V_{ASD}$ = 85 MPH
- RISK CATEGORY PER IBC TABLE 1604.5 = III
- TOPOGRAPHIC FACTOR $K_{ZT}$ = 1.32
- INTERNAL PRESSURE COEFFICIENT (ENCLOSED) = ± 0.18
- FOR WIND UPLIFT MAP SEE SHEET S-005
- COMPONENTS AND CLADDING LOADS, SEE SHEET S-005

SEISMIC: (ASCE 7-16) V = CsW

WHERE $Cs = \frac{S_{DS}}{(\frac{R}{Ie})}$ ; WITH

Cs MINIMUM = 0.044 $S_{DS}I_E \geq 0.01$
OR
Cs MINIMUM = $\frac{0.5S_1}{\frac{R}{Ie}}$ FOR $S_1 > 0.6g$

Cs MAXIMUM = $\frac{S_{D1}}{T(\frac{R}{Ie})}$ FOR $T \leq T_L$
OR
Cs MAXIMUM = $\frac{S_{D1}T_L}{T^2(\frac{R}{Ie})}$ FOR $T > T_L$

SEISMIC IMPORTANCE FACTOR, Ie = 1.25
RISK CATEGORY OF BUILDING PER IBC TABLE 1604.5 = III
SPECTRAL RESPONSE ACCELERATIONS $S_S$ = 1.397 & $S_1$ = 0.486
SITE CLASS PER TABLE 20.3-1 = D
DESIGN SPECTRAL RESPONSE ACCELERATIONS $S_{DS}$ = 0.931 & $S_{D1}$ = 0.590
SEISMIC DESIGN CATEGORY = D
W = EFFECTIVE SEISMIC WEIGHT OF BUILDING = 2820 KIPS
ANALYSIS PROCEDURE USED = MODALRESPONSE SPECTRUM ANALYSIS
SEISMIC FORCE-RESISTING SYSTEM PER TABLE 12.2-1:
ABOVE FLOOR LEVEL 1:
STEEL BUCKLING RESTRAINED BRACE FRAMES
RESPONSE MODIFICATION FACTOR, R = 8
OVERSTRENGTH FACTOR, Ω = 2 1/2
DEFLECTION AMPLIFICATION FACTOR, Cd = 5
Cs = 0.146
DESIGN BASE SHEAR V = 410 KIPS
REDUNDANCY FACTOR PER 12.3.4, ρ= 1.3
FLOOR LEVEL 1 AND BELOW:
STEEL BUCKLING RESTRAINED BRACE FRAMES AND SPECIAL REINFORCED CONCRETE SHEAR WALLS
RESPONSE MODIFICATION FACTOR, R = 5
OVERSTRENGTH FACTOR, Ω = 2 1/2
DEFLECTION AMPLIFICATION FACTOR, Cd = 5
Cs = 0.234
DESIGN BASE SHEAR V = 660 KIPS
REDUNDANCY FACTOR PER 12.3.4, ρ= 1.3

PIPES, DUCTS AND MECHANICAL EQUIPMENT SUPPORTED OR BRACED FROM STRUCTURE SHALL CONFORM TO SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION, INC. PUBLICATION "SEISMIC RESTRAINT MANUAL: GUIDELINES FOR MECHANICAL SYSTEMS". SPRINKLER LINE ATTACHMENTS SHALL CONFORM TO NFPA PAMPHLET 13.

FOUNDATION DESIGN CRITERIA ("SUBSURFACE EXPLORATION, GEOLOGIC HAZARD, AND PRELIMINARY GEOTECHNICAL ENGINEERING REPORT - HERZL-NER TAMID CONSERVATIVE CONGREGATION K-12 EXPANSION" BY ASSOCIATED EARTH SCIENCES, OCTOBER 2023).

ALLOWABLE SOIL BEARING PRESSURE: 3000 PSF

ACTIVE PRESSURE - RESTRAINED: 55 PCF +15H SEISMIC SURCHARGE
ACTIVE PRESSURE - UNRESTRAINED: 35 PCF +10H SEISMIC SURCHARGE
PASSIVE RESISTANCE: 300 PCF (INCLUDES F.O.S. ≥ 1.5)
COEFFICIENT OF FRICTION: .30 (INCLUDES F.O.S. ≥ 1.5)
*1/3 INCREASE ALLOWED FOR SEISMIC OR WIND LOADING
STATIC DIFFERENTIAL SETTLEMENT: 1/2" MAX OVER 50 FEET PER GEO-TECHNICAL REPORT.

ALL FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED EARTH OR "STRUCTURAL BACKFILL". NATIVE EARTH BEARING SHALL BE SURFACE COMPACTED. AREAS OVER-EXCAVATED SHALL BE BACKFILLED WITH LEAN CONCRETE (f'c= 2000 PSI) OR "STRUCTURAL BACKFILL". AREAS DESIGNATED "STRUCTURAL BACKFILL" SHALL BE FILLED WITH APPROVED WELL-GRADED BANKRUN MATERIAL. MAXIMUM SIZE OF ROCK 4". FROZEN SOIL, ORGANIC MATERIAL AND DELETERIOUS MATTER NOT ALLOWED. COMPACT TO AT LEAST 95% OF ITS MAXIMUM DENSITY AS DETERMINED BY ASTM D1557. CONTRACTOR SHALL EXERCISE EXTREME CARE DURING EXCAVATION TO AVOID DAMAGE TO BURIED LINES, TANKS, AND OTHER CONCEALED ITEMS. UPON DISCOVERY, DO NOT PROCEED WITH WORK UNTIL RECEIVING WRITTEN INSTRUCTIONS FROM ARCHITECT. A COMPETENT REPRESENTATIVE OF THE OWNER SHALL INSPECT ALL FOOTING EXCAVATIONS FOR SUITABILITY OF BEARING SURFACES PRIOR TO PLACEMENT OF REINFORCING STEEL. PROVIDE DRAINAGE AND DEWATERING AROUND ALL WORK TO AVOID WATER-SOFTENED FOOTINGS.

FREE DRAINING BACKFILL MATERIAL FOR RETAINING & BASEMENT WALLS

A CLEAN, FREE DRAINING, WELL GRADED GRANULAR MATERIAL CONFORMING TO ASTM D2487 GW OR SW WHOSE MAXIMUM PARTICLE SIZE DOES NOT EXCEED 3/4" AND WHOSE FINES CONTENT (MATERIAL PASSING THE NO. 200 SIEVE) DOES NOT EXCEED 5%,

WITH A MAXIMUM DUST RATIO $\frac{\text{\% PASSING U.S. NO. 200 SIEVE}}{\text{\% PASSING U.S. NO. 40 SIEVE}}$ = 2/3 MAX.

## CONCRETE

CAST-IN-PLACE CONCRETE

CODES, SPECIFICATIONS, AND STANDARDS. CONCRETE WORK SHALL CONFORM TO THE FOLLOWING CODES, SPECIFICATIONS, AND STANDARDS, AND THE STANDARDS AND SPECIFICATIONS THEY REFERENCE. THE CONTRACTOR SHALL OBTAIN AND HAVE READILY AVAILABLE ON SITE THE LATEST VERSION OF THE "ACI MANUAL OF CONCRETE PRACTICE":

ACI:
1. ACI-117 'SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS AND COMMENTARY'.
2. ACI-301 'SPECIFICATIONS FOR CONCRETE CONSTRUCTION'.
3. ACI-302.1 'GUIDE TO CONCRETE FLOOR AND SLAB CONSTRUCTION'.
4. ACI-304 'GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE'.
5. ACI-305.1 'SPECIFICATIONS FOR HOT WEATHER CONCRETING'.
6. ACI-306.1 'STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING'.
7. ACI-308.1 'STANDARD SPECIFICATION FOR CURING CONCRETE'.
8. ACI-309 'GUIDE FOR CONSOLIDATION OF CONCRETE'.
9. ACI-311.4 'GUIDE FOR CONCRETE INSPECTION'.
10. ACI-315 'GUIDE TO PRESENTING REINFORCING STEEL DESIGN DETAILS'.
11. ACI-318 'BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE'.
12. ACI-506.2 'SPECIFICATION FOR SHOTCRETE'.
13. ACI 347 'GUIDE TO FORMWORK FOR CONCRETE'.
14. ACI 303 'GUIDE TO CAST-IN-PLACE ARCHITECTURAL CONCRETE PRACTICE'.

ASTM:
1. ASTM C33 'STANDARD SPECIFICATION FOR CONCRETE AGGREGATES'.
2. ASTM C94 'STANDARD SPECIFICATION FOR READY-MIX CONCRETE'.
3. ASTM C150 'STANDARD SPECIFICATION FOR PORTLAND CEMENT'.
4. ASTM C260 'STANDARD SPECIFICATION FOR AIR-ENTRAINED ADMIXTURES FOR CONCRETE'.
5. ASTM C309 'STANDARD SPECIFICATION FOR LIQUID MEMBRANE-FORMING COMPOUNDS FOR CURING CONCRETE'.
6. ASTM C494 'STANDARD SPECIFICATION FOR CHEMICAL ADMIXTURES FOR CONCRETE'.
7. ASTM C595 'STANDARD SPECIFICATION FOR BLENDED HYDRAULIC CEMENTS'.
8. ASTM C618 'STANDARD SPECIFICATION FOR ... COAL-ASH...'.
9. ASTM C989 'STANDARD SPECIFICATION FOR SLAG...'.
10. ASTM C1017 'STANDARD SPECIFICATION FOR CHEMICAL ADMIXTURES FOR USE IN PRODUCING FLOWING CONCRETE'.
11. ASTM C1116 'STANDARD SPECIFICATION FOR FIBER-REINFORCED CONCRETE'.
12. ASTM C1218 'STANDARD TEST METHOD FOR WATER-SOLUBLE CHLORIDE IN MORTAR AND CONCRETE'.
13. ASTM C1315 'STANDARD SPECIFICATION FOR LIQUID MEMBRANE-FORMING COMPOUNDS HAVING SPECIAL PROPERTIES FOR CURING AND SEALING CONCRETE'

MIX DESIGNS: THE CONTRACTOR SHALL DESIGN CONCRETE MIXES THAT MEET OR EXCEED THE REQUIREMENTS OF THE CONCRETE MIX TABLE. ALL CONCRETE MIXES SHALL BE NORMAL WEIGHT, UNLESS NOTED OTHERWISE. THE MIX DESIGNS SHALL FACILITATE ANTICIPATED PLACEMENT METHODS, WEATHER, REBAR CONGESTION, ARCHITECTURAL FINISHES, CONSTRUCTION SEQUENCING, STRUCTURAL DETAILS, AND ALL OTHER FACTORS REQUIRED TO PROVIDE A STRUCTURALLY SOUND, AESTHETICALLY ACCEPTABLE FINISHED PRODUCT. WATER REDUCING ADMIXTURES WILL LIKELY BE REQUIRED TO MEET THESE REQUIREMENTS. CONCRETE MIX DESIGNS SHALL CLEARLY INDICATE THE TARGET SLUMP. SLUMP TOLERANCE SHALL BE ± 1-1/2 INCHES.

AGGREGATE: COARSE AND FINE AGGREGATE SHALL CONFORM TO ASTM C33

CEMENT: CEMENT SHALL CONFORM TO ASTM C150, TYPE II PORTLAND CEMENT OR ASTM C595 - TYPE IL PORTLAND LIMESTONE CEMENT, UNLESS NOTED OTHERWISE. CEMENT IN CONCRETE EXPOSED TO EARTH SHALL BE TYPE II OR TYPE IL-MS.

FLYASH: SHALL CONFORM TO ASTM C618 CLASS C OR F, MAXIMUM LOSS OF IGNITION SHALL BE 1.0%.

SLAG: GROUND GRANULATED BLAST-FURNACE (GGBF) SLAG SHALL CONFORM TO ASTM C989 GRADE 100 OR 120.

ALTERNATE MIX DESIGNS: VARIATIONS TO THE MIX DESIGN PROPORTIONS MAY BE ACCEPTED IF SUBSTANTIATED IN ACCORDANCE WITH ACI 318, CHAPTER 19. PROVIDE SUBMITTALS A MINIMUM OF TWO WEEKS PRIOR TO BID FOR DETERMINATION OF ACCEPTABILITY.

ADMIXTURES: ADMIXTURES SHALL BE BY MASTER BUILDERS, W.R. GRACE, OR PRE-APPROVED EQUAL. ALL MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED.

WATER: SHALL BE CLEAN AND POTABLE.

MAXIMUM CHLORIDE CONTENT: THE MAXIMUM WATER SOLUBLE CHLORIDE CONTENT SHALL NOT EXCEED 0.15% BY WEIGHT OF CEMENTITIOUS MATERIAL UNLESS NOTED OTHERWISE.

CONCRETE EXPOSED TO WEATHER: PROVIDE 5.0% TOTAL AIR CONTENT FOR ALL CONCRETE EXPOSED TO WEATHER. TOTAL AIR CONTENT IS THE SUM OF ENTRAINED AIR PROVIDED BY ADMIXTURES AND NATURALLY OCCURRING ENTRAPPED AIR. AIR CONTENT SHALL BE TESTED PRIOR TO BEING PLACED IN THE PUMP HOPPER OR BUCKET; IT IS NOT REQUIRED TO BE TESTED AT THE DISCHARGE END OF THE PUMP HOSE. THE TOLERANCE ON ENTRAPPED AIR SHALL BE +2.0% AND -1.5% WITH THE AVERAGE OF ALL TESTS NOT LESS THAN THE SPECIFIED AMOUNT.

TOTAL CEMENTITIOUS MATERIAL: THE SUM OF ALL CEMENT PLUS FLYASH AND SLAG. AT THE CONTRACTORS OPTION FLYASH OR SLAG MAY BE SUBSTITUTED FOR CEMENT BUT SHALL NOT EXCEED 25% BY WEIGHT OF TOTAL CEMENTITIOUS MATERIAL. IN NO CASE SHALL THE AMOUNT OF FLYASH OR SLAG BE LESS THAN REQUIRED BY THE CONCRETE MIX DESIGN TABLE. FOOTING MIXES SHALL CONTAIN NOT LESS THAN **5 SACKS** OF CEMENTITIOUS MATERIAL PER CUBIC YARD, ALL OTHER MIXES SHALL CONTAIN NOT LESS THAN **5-1/2 SACKS** OF CEMENTITIOUS MATERIAL PER CUBIC YARD, UNLESS NOTED OTHERWISE.

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3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 04 JUNE 2025 BUILDING PERMIT |

PROJECT:

GENERAL NOTES

S-001

5/30/2025 1:56:43 PM C:_Revit Models\23500 HNT Pk-12 PDDS (Central)_BPlow@pcs-structural.com.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

| ITEM | DESIGN f'c (PSI) (AT 28 DAYS U.N.O.) | MAX. W/C RATIO | MIN. FLYASH OR SLAG (PCY) | AGGREGATE GRADING ASTM AASHTO | NOTES |
|---|---|---|---|---|---|
| SLABS ON GRADE - UNO | 4000 | 0.45 | 100 | 57 OR 67 | 1 |
| ARCHITECTURALLY EXPOSED SLABS ON GRADE | 4000 | 0.45 | 100 | 57 OR 67 | 1, 2, 3 |
| FOUNDATIONS - UNO | 3000 | 0.50 | -- | 57 OR 67 | |
| STEM WALLS AND OTHER WALLS EXPOSED TO EARTH OR WEATHER | 4500 | 0.45 | 100 | 57 OR 67 | |
| STEM WALLS AND OTHER WALLS - UNO | 4000 | 0.50 | 100 | 57 OR 67 | |
| ARCHITECTURALLY EXPOSED ELEVATED DECKS, TOPPING SLABS, AND SLABS ON METAL DECK | 5000 | 0.40 | 100 | 57 OR 67 | |
| ELEVATED DECKS, TOPPING SLABS, AND SLABS ON METAL DECK - UNO | 4000 | 0.45 | -- | 57 OR 67 | |
| COLUMNS AND SHEAR WALLS | 4000 | 0.50 | -- | 7 OR 8 | |
| CONTROLLED DENSITY FILL (CDF) | 200 | -- | -- | SAND | 4 |
| ALL OTHER CONCRETE | 4000 | 0.50 | -- | 57 OR 67 | |

CONCRETE MIX NOTES:

1. FIBROUS CONCRETE REINFORCEMENT SHALL BE "FIBERMESH 150HP" MANUFACTURED BY SIKA OR PRE-APPROVED EQUAL AND SHALL CONFORM TO ASTM C1116 TYPE III AND SHALL BE 100 PERCENT VIRGIN POLYPROPYLENE. FIBRILLATED FIBERS CONTAINING NO REPROCESSED OLEFIN MATERIALS AND SPECIFICALLY MANUFACTURED FOR USE AS CONCRETE SECONDARY REINFORCEMENT. DOSAGE SHALL FOLLOW MANUFACTURER'S RECOMMENDATION BUT NOT LESS THAN 1.5 LB/CU. YD.
2. MAXIMUM WATER CONTENT 240 PCY.
3. THIS MIX SHALL CONTAIN 1 GALLON PER CY OF "ECLIPSE FLOOR 200" SHRINKAGE REDUCING ADMIXTURE BY GCP APPLIED TECHNOLOGIES, MASTER BUILDERS MASTERLIFE CRA 007 OR APPROVED ALTERNATE. FOR CONCRETE REQUIRING AN AIR ENTRAINMENT ADMIXTURE, GCP "ECLIPSE 4500" OR MASTERLIFE "SRA 035" SHALL BE USED.
4. SAND - CEMENT CONCRETE GROUT.

CONCRETE PLACEMENT

PLACE CONCRETE FOLLOWING ALL APPLICABLE ACI RECOMMENDATIONS. CONCRETE SHALL BE PROPERLY CONSOLIDATED PER ACI 309 USING INTERIOR MECHANICAL VIBRATORS, DO NOT OVER-VIBRATE. CONCRETE SHALL BE POURED MONOLITHICALLY BETWEEN CONSTRUCTION OR EXPANSION JOINTS. IF CONCRETE IS PLACED BY THE PUMP METHOD, HORSES SHALL BE PROVIDED TO SUPPORT THE HOSE, THE HOSE SHALL NOT BE ALLOWED TO RIDE ON THE REINFORCING. WEATHER FORECASTS SHALL BE MONITORED AND ACI RECOMMENDATIONS FOR HOT AND COLD WEATHER CONCRETING SHALL BE FOLLOWED AS REQUIRED. CONCRETE SHALL NOT FREE FALL MORE THAN 5 FEET DURING PLACEMENT WITHOUT WRITTEN APPROVAL OF STRUCTURAL ENGINEER.

FLOATING & FINISHING OPERATIONS

WATER SHALL NOT BE ADDED TO THE CONCRETE SURFACE DURING FLOATING & FINISHING OPERATIONS. PRE-APPROVED EVAPORATION RETARDER SPECIFICALLY DESIGNED FOR FLOATING & FINISHING OPERATIONS ARE ACCEPTABLE.

FORMED SURFACES:

| FORMWORK CLASS OF SURFACE PER ACI 347 TABLE 5.3.1 | |
|---|---|
| ITEM | CLASS OF FINISH |
| ALL SURFACES EXPOSED TO PUBLIC VIEW, U.N.O. | A |
| ALL SURFACES RECEIVING A COURSE TEXTURED COATING SUCH AS PLASTER OR STUCCO, UNLESS NOTED OTHERWISE | B |
| ALL OTHER SURFACES, UNLESS NOTED OTHERWISE | C |

FORMWORK STRIPPING:

COLUMNS & WALLS: COLUMNS AND WALLS NOT SUPPORTING FRAMING WEIGHT MAY BE STRIPPED AS SOON AS FORMS CAN BE REMOVED WITHOUT DAMAGING THE CONCRETE AND THE CONCRETE HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 500 PSI.

COLD WEATHER PLACEMENT:

1. COLD WEATHER IS DEFINED BY ACI 306 AS "A PERIOD WHEN FOR MORE THAN 3 SUCCESSIVE DAYS THE MEAN DAILY TEMPERATURE DROPS BELOW 40° F."
2. NO CONCRETE SHALL BE PLACED ON FROZEN OR PARTIALLY FROZEN GROUND. THAWING THE GROUND WITH HEATERS IS PERMISSIBLE.
3. CONCRETE MIX TEMPERATURES SHALL BE AS SHOWN BELOW. HEATING OF WATER AND/OR AGGREGATES MAY BE REQUIRED TO ATTAIN THESE TEMPERATURES.
4. THE CONCRETE MAY REQUIRE PROTECTION FOR 4-7 DAYS AFTER POURING. IF TEMPERATURES REMAIN BELOW FREEZING, INSULATING BLANKET COVERAGE IS REQUIRED. IF TEMPERATURES ARE SLIGHTLY BELOW FREEZING (30° F MIN.) AT NIGHT AND ABOVE FREEZING DURING THE DAY, KRAFT PAPER WITH COMPLETE COVERAGE MAY BE USED IN LIEU OF INSULATED BLANKETS.
5. NO ADDITIVES CONTAINING CHLORIDES SHALL BE USED. USE "POZZUTEC 20+" BY MASTER BUILDERS OR "POLARSET" BY W.R. GRACE OR PRE-APPROVED EQUAL.

| CONDITION OF PLACEMENT AND CURING | | WALLS & SLABS | FOOTINGS |
|---|---|---|---|
| MIN. TEMP. FRESH CONCRETE AS MIXED FOR WEATHER INDICATED, DEGREES F. | ABOVE 30° F.<br>0° TO 30° F.<br>BELOW 0° F. | 60°<br>65°<br>70° | 55°<br>60°<br>65° |
| MIN. TEMP. FRESH CONCRETE AS PLACED AND MAINTAINED, DEGREES F. | | 55° | 50° |
| MAX. ALLOWABLE GRADUAL DROP IN TEMP. THROUGHOUT FIRST 24 HOURS AFTER END OF PROTECTION, DEGREES F. | | 50° | 40° |

HOT OR WINDY WEATHER PLACEMENT

HOT WEATHER IS DEFINED BY ACI 305 AS "ANY COMBINATION OF HIGH AIR TEMPERATURE, LOW RELATIVE HUMIDITY, AND WIND VELOCITY, TENDING TO IMPAIR THE QUALITY OF FRESH HARDENED CONCRETE. ACI 305 FIGURE 2.1.5 SHALL BE USED BY THE CONTRACTOR TO ESTIMATE THE RATE OF EVAPORATION. WHEN THE ESTIMATED RATE OF EVAPORATION IS GREATER THAN 0.2 PSF/HOUR THE PLACEMENT SHALL BE CONSIDERED A HOT WEATHER PLACEMENT. PRECAUTIONS AGAINST PLASTIC SHRINKAGE CRACKING ARE NECESSARY. PRECAUTIONS TAKEN BY THE CONTRACTOR VARY DEPENDING UPON THE FACTORS ASSOCIATED WITH WATER EVAPORATION AND INCLUDE BUT ARE NOT LIMITED TO:

1. LIMITING CONCRETE TEMPERATURE TO 100°F AT TIME OF PLACEMENT.
2. APPLICATION OF AN EVAPORATION RETARDER.
3. USE OF FOG SPRAY.
4. REDUCTION OF POUR SIZE.
5. PLACING CONCRETE AT NIGHT.

CONTROL AND CONSTRUCTION JOINTS

CONSTRUCTION JOINTS SHALL MEET THE REQUIREMENTS OF ACI 301 SECTIONS 2.2.2.5 AND 5.3.2.6. SPECIAL BONDING METHODS PER SECTION 5.3.2.6 SHALL BE SATISFIED BY ITEM 6 BELOW UNLESS OTHERWISE DETAILED ON THE STRUCTURAL DRAWINGS. WHERE CONSTRUCTION JOINTS ARE NOT SHOWN ON PLAN OR ADDITIONAL CONSTRUCTION JOINTS ARE REQUIRED SUBMIT PROPOSED JOINTING FOR STRUCTURAL ENGINEERS APPROVAL. PROVIDE CONSTRUCTION JOINTS AS INDICATED BELOW UNLESS NOTED OTHERWISE ON THE PLANS:

1. SLABS ON GRADE: PROVIDE CONSTRUCTION AND/OR CONTROL JOINTS AT 16 FEET O.C. MAXIMUM FOR UNEXPOSED SLABS ON GRADE AND 12 FEET O.C. FOR EXPOSED SLABS ON GRADE. COORDINATE JOINTS WITH ARCHITECTURAL DRAWINGS.
2. WALLS AND COLUMNS: COORDINATE CONSTRUCTION JOINTS WITH ARCHITECTURAL REVEALS.
3. BONDING AGENT: WHERE BONDING AGENT IS SPECIFICALLY CALLED OUT ON THE STRUCTURAL DRAWINGS USE "WELD CRETE" BY LARSEN PRODUCTS CORPORATION OR PRE-APPROVED EQUAL. FOLLOW ALL MANUFACTURERS RECOMMENDATIONS.
4. ATTACHMENT OF NEW CONCRETE TO EXISTING: WHERE SHOWN, ROUGHEN CONCRETE TO A MINIMUM AMPLITUDE OF 1/4" USING IMPACT HAMMER. REMOVE ALL LOOSE OR DAMAGED CONCRETE, THOROUGHLY FLUSH ALL SURFACES WITH POTABLE WATER, AIR BLAST WITH OIL FREE COMPRESSED AIR TO REMOVE ALL WATER.
5. SLAB ON METAL DECK: SHALL NOT BE SAW CUT UNLESS SPECIFICALLY CALLED OUT ON DRAWINGS.

EMBEDDED ITEMS

1. NO ALUMINUM ITEMS SHALL BE EMBEDDED IN ANY CONCRETE.
2. ALL EMBED PLATES SHALL BE SECURELY FASTENED IN PLACE.
3. ALL EMBEDDED STEEL ITEMS EXPOSED TO EARTH SHALL BE GALVANIZED.
4. ALL EMBEDDED STEEL ITEMS EXPOSED TO WEATHER SHALL BE PAINTED UNLESS NOTED AS GALVANIZED. SEE DRAWINGS AND SPECIFICATIONS FOR PAINT, PRIMER, AND GALVANIZING REQUIREMENTS.
5. EMBEDDED CONDUIT IS NOT PERMITTED IN CONCRETE SLABS ON METAL DECK UNLESS SPECIFICALLY NOTED ON THE STRUCTURAL DRAWINGS.
6. EMBEDDED FLEXIBLE CONDUIT IS PERMITTED IN OTHER CAST IN PLACE CONCRETE SLABS WITH A THICKNESS GREATER OR EQUAL TO 5-1/2 INCHES. WHERE PERMITTED IT MAY BE PLACED ON TOP OF THE BOTTOM MAT OF REINFORCING. THE OUTSIDE DIAMETER OF THE CONDUIT SHALL NOT BE GREATER THAN 1-INCH. A MINIMUM OF 2-INCHES CLEAR SHALL BE PROVIDED BETWEEN CONDUIT AND PARALLEL REINFORCING. SPACE CONDUITS A MINIMUM OF 12-INCHES APART, WHERE THIS IS NOT POSSIBLE NOTIFY ENGINEER FOR ADDITIONAL REINFORCING REQUIREMENTS.

CONCRETE CURING AND SEALING

CURING PROCEDURES SHALL COMMENCE IMMEDIATELY AFTER FINISHING CONCRETE TO MAINTAIN CONCRETE IN A MOIST CONDITION. VERIFY CURING AND/OR SEALING PRODUCTS ARE COMPATIBLE WITH FLOOR COVERINGS SHOWN ON THE ARCHITECTURAL DRAWINGS. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS. SLABS ARE DEFINED AS SLABS ON GRADE, CONCRETE ON METAL DECK, ELEVATED POST-TENSIONED OR MILD REINFORCED DECKS, AND TOPPING SLABS.

| ITEM | CONCRETE CURING NOTES |
|---|---|
| SLABS EXPOSED TO EARTH OR WEATHER OR VEHICLE OR FORKLIFT TRAFFIC INCLUDING LOADING DOCKS | 1, (3 OR 4 OR 5), 6 |
| ALL OTHER SLABS | 1, (3 OR 4 OR 5) |
| FORMED SURFACES EXCLUDING FOUNDATIONS | 2 |
| SHOTCRETE WALLS | 4 |
| ALL OTHER CONCRETE | NONE |

CONCRETE CURING NOTES:

1. WHEN THE ESTIMATED EVAPORATION RATE IS GREATER THAN 0.2 PSF/HOUR PROVIDE A SPRAY APPLIED EVAPORATION RETARDER IMMEDIATELY AFTER CONCRETE PLACEMENT. THE EVAPORATION RATE MAY BE CALCULATED PER ACI 305 FIGURE 2.1.5.
2. APPLY A LIQUID MEMBRANE FORMING CURING COMPOUND, CONFORMING TO ASTM C309 TYPE 1 CLASS B SPECIFICATIONS, PER MANUFACTURER'S RECOMMENDATIONS TO ALL FORMED SURFACES IMMEDIATELY AFTER FINAL FORM REMOVAL. NOT REQUIRED IF FORMWORK REMAINS IN PLACE FOR MORE THAN 7 DAYS.
3. PROVIDE PRE-APPROVED CONTINUOUS WET CURE METHOD FOR A MINIMUM OF 14 DAYS.
4. APPLY A LIQUID MEMBRANE FORMING CURING COMPOUND, CONFORMING TO ASTM C309 TYPE 1 CLASS B SPECIFICATIONS OR ASTM C1315 TYPE 1 CLASS A SPECIFICATIONS, PER MANUFACTURER'S RECOMMENDATIONS IMMEDIATELY AFTER FINAL FINISHING. CURING COMPOUND SHALL BE COMPATIBLE WITH ARCHITECTURAL FLOOR COVERINGS AND SEALERS.
5. PROVIDE "ULTRACURE DOT" MOISTURE RETAINING COVER BY MCTECH GROUP, OR APPROVED EQUAL, FOR A MINIMUM OF 14 DAYS.
6. APPLY A SILANE SEALER WITH MINIMUM SOLIDS CONTENT OF 40% PER MANUFACTURER'S RECOMMENDATIONS.

GROUT

NON-SHRINK GROUT: MASTER BUILDERS "MASTERFLOW 928" OR PRE-APPROVED EQUAL. GROUT SHALL CONFORM TO CRD-C621 AND ASTM C1107 WHEN TESTED AT A FLUID CONSISTENCY PER CRD-C611-85 FOR 30 MINUTES. GROUT MAY BE PLACED FROM A 25 SECOND FLOW TO A STIFF PACKING CONSISTENCY. FILL OR PACK ENTIRE SPACE UNDER PLATES OR SHAPES. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PREPARATION, INSTALLATION, AND CURING. 28-DAY MINIMUM STRENGTH SHALL BE 7,500 PSI MINIMUM

## REINFORCING STEEL

REINFORCING STEEL SHALL CONFORM TO:

ASTM A615, GRADE 60 TYPICAL UNLESS NOTED OTHERWISE.

ASTM A615 GRADE 40 WHERE NOTED AS Fy = 40 ON DRAWINGS, HIGHER GRADES MAY NOT BE SUBSTITUTED.

ASTM A706 GRADE 60 FOR ALL MOMENT FRAME HORIZONTAL BEAM BARS, MOMENT FRAME VERTICAL COLUMN BARS, VERTICAL SHEAR WALL BARS, ALL COUPLING BEAM BARS (EXCEPT TIES), AND ALL ANCHORAGE REINFORCING AT BASE PLATES OF STEEL COLUMNS PART OF MOMENT FRAME/BRACED FRAME. PER ACI 318, ASTM A615 GRADE 60 MAY BE SUBSTITUTED FOR THESE MEMBERS IF THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18 KSI, THE RATIO OF ACTUAL ULTIMATE TENSILE STRENGTH TO ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25, AND IF THE ELONGATION OVER AN 8" GAGE LENGTH MEETS THE FOLLOWING:

| BAR SIZE | MINIMUM ELONGATION |
|---|---|
| #3 - #6 | 14% ≥ |
| #7 - #11 | 12% ≥ |
| #14, #18 | 10% ≥ |

ASTM A706 GRADE 60 FOR ALL WELDED BARS.

DETAIL FABRICATE AND PLACE PER ACI 315 AND ACI 318.

WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A1064. LAP ONE FULL MESH ON SIDES AND ENDS BUT NOT LESS THAN 8 INCHES. WELDED WIRE REINFORCING SHALL BE SUPPORTED TO WITHSTAND CONCRETE PLACEMENT. PULLING OF MESH INTO PLACE AFTER PLACEMENT IS NOT ALLOWED.

REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE, Fy=60 KSI (UNLESS NOTED OTHERWISE)

| BAR SIZE | MINIMUM LAP SPLICE LENGTHS ("Ls") | | MINIMUM DEVELOPMENT LENGTHS ("Ld") | | MINIMUM EMBEDMENT LENGTH FOR STANDARD END HOOKS ("Ldh") |
|---|---|---|---|---|---|
| | TOP BARS (1) | OTHER BARS | TOP BARS (1) | OTHER BARS | |
| #3 | 2'-0" | 1'-6" | 1'-6" | 1'-3" | 0'-6" |
| #4 | 2'-8" | 2'-0" | 2'-0" | 1'-7" | 0'-6" |
| #5 | 3'-4" | 2'-7" | 2'-7" | 2'-0" | 0'-8" |
| #6 | 4'-0" | 3'-1" | 3'-1" | 2'-4" | 0'-10" |
| #7 | 5'-10" | 4'-6" | 4'-6" | 3'-6" | 1'-0" |
| #8 | 6'-8" | 5'-2" | 5'-2" | 3'-11" | 1'-3" |
| #9 | 7'-6" | 5'-10" | 5'-10" | 4'-6" | 1'-6" |
| #10 | 8'-6" | 6'-6" | 6'-6" | 5'-0" | 1'-9" |
| #11 | 9'-5" | 7'-3" | 7'-3" | 5'-7" | 2'-1" |
| #14 | MECHANICAL SPLICE REQUIRED | | 8'-8" | 6'-8" | 5'-6" |
| #18 | MECHANICAL SPLICE REQUIRED | | 11'-7" | 8'-11" | 8'-5" |

SPLICE TABLE NOTES:

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

MECHANICAL COUPLERS: "LENTON" BY NVENT, "CADWELD" BY NVENT, "BAR-LOCK" BY DAYTON SUPERIOR L-SERIES, OR PRE-APPROVED EQUAL. COUPLERS SHALL BE TYPE 2 PER ACI 318 SECTION 18.2.7.1.

FORM SAVERS: "LENTON" BY NVENT THREADED FORM SAVERS TYPE FS OR APPROVED EQUAL.

REINFORCING STEEL COVER

PROVIDE CONCRETE COVER OVER REINFORCEMENT AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH ---------- 3"
EXPOSED TO WEATHER OR EARTH ---------- 2"
TIES ON BEAMS AND COLUMNS ---------- 1-1/2"
WALLS AND SLABS NOT EXPOSED TO WEATHER---- 3/4"
AUGERCAST PILES ---------- 2-1/2"

CONCRETE INSERTS: THREADED DOWEL BAR SUBSTITUTIONS SHALL BE MANUFACTURED BY RICHMOND SCREW ANCHOR CO., INC., OR PRE-APPROVED EQUAL AND SHALL BE CAPABLE OF DEVELOPING THE FULL TENSILE CAPACITY OF THE BAR.

## POST-INSTALLED ANCHORS

POST-INSTALLED ANCHORS: SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH REBAR. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. INSTALLER SHALL BE QUALIFIED AND TRAINED BY THE MANUFACTURER. HOLES SHALL BE HAMMER DRILLED ONLY (ROTARY DRILLED ONLY AT UNREINFORCED MASONRY - NO HAMMER TOOLS).

SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW, SHALL BE SUBMITTED FOR APPROVAL A MINIMUM OF 2 WEEKS PRIOR TO BID, ALONG WITH CALCULATIONS THAT SHALL BE STAMPED BY A PROFESSIONAL ENGINEER (LICENSED IN THE STATE OF THE PROJECT) DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE BUILDING CODE.

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PCS Structural Solutions
Seattle | Tacoma | Portland
www.pcs-structural.com

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 04 JUNE 2025 BUILDING PERMIT |

PROJECT:

GENERAL NOTES

S-002

5/30/2025 1:56:47 PM C:_Revit Models\22-550 HNT Ph-12 R2024 (Central)_BPloyd@pcs-structural.com.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

CONCRETE ANCHORS:

- ADHESIVE ANCHORS: HILTI HIT-HY 200 V3 (ICC-ESR-4868), HILTI HIT-RE 500 V3 (ICC-ESR-3814), DEWALT PURE 110+ (ICC-ESR-3298) OR SIMPSON SET-3G (ICC-ESR-4057) OR PRE-APPROVED EQUAL.
  - *CONCRETE SHALL BE A MINIMUM OF 21 DAYS OLD AT TIME OF INSTALLATION.
  - *CONCRETE SHALL BE IN THE TEMPERATURE RANGE AS REQUIRED BY THE CONCRETE MANUFACTURER.
  - *HOLE SHALL BY HAMMER-DRILLED ONLY.
  - *DO NOT INSTALL IN WATER-FILLED HOLES.
  - *INSTALLER OF HORIZONTAL OR UPWARDLY INCLINED (ANY POSITION EXCEPT DIRECTLY DOWNWARD) ANCHORS SHALL ALSO BE CERTIFIED BY THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM.
- EXPANSION ANCHORS: KWIKBOLT TZ2 (ICC ESR-4266) BY HILTI, INC., OR PRE-APPROVED EQUAL.
- SCREW ANCHORS: KWIK HUS-EZ (ICC ESR-3027) BY HILTI, INC., OR PRE-APPROVED EQUAL.

## STRUCTURAL STEEL

DETAILING, FABRICATION AND ERECTION

ALL WORKMANSHIP SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION, 15TH EDITION, THE AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS JULY 7, 2016, THE AISC CODE OF STANDARD PRACTICE, JUNE 15, 2016 AND THE AISC SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS, JULY 12, 2016.

STEEL MEMBERS ARE EQUALLY SPACED BETWEEN COLUMNS AND/OR DIMENSION POINTS UNLESS NOTED OTHERWISE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION AIDES AND JOINT PREPARATIONS THAT INCLUDE BUT ARE NOT LIMITED TO, ERECTION ANGLES, LIFT HOLES, AND OTHER AIDES, WELDING PROCEDURES, REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, WELD EXTENSION TABS, COPES, SURFACE ROUGHNESS VALUES AND TAPERS OF UNEQUAL PARTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLIANCE WITH ALL CURRENT OSHA REQUIREMENTS.

HOLES, COPES OR OTHER CUTS OR MODIFICATIONS OF THE STRUCTURAL STEEL MEMBERS SHALL NOT BE MADE IN THE FIELD WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

STEEL FABRICATORS

ALL STEEL FABRICATION SHALL BE PERFORMED BY A FABRICATOR CERTIFIED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION. THE FABRICATOR SHALL BE DESIGNATED AN AISC CERTIFIED PLANT, CATEGORY BU AT THE TIME OF BID AND SHALL MAINTAIN THIS CERTIFICATION FOR THE DURATION OF THE PROJECT.

NON-AISC CERTIFIED STEEL FABRICATORS SHALL HAVE FIVE YEARS MINIMUM EXPERIENCE ON SIMILAR PROJECTS OF EQUAL OR LARGER COMPLEXITY AND SCOPE. QUALIFICATIONS SHALL BE SUBMITTED TWO WEEKS PRIOR TO BID.

STEEL ERECTORS

ALL STEEL ERECTION SHALL BE PERFORMED BY AN ERECTOR CERTIFIED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION. THE ERECTOR SHALL BE DESIGNATED AN AISC CERTIFIED ERECTOR, CATEGORY CSE AT THE TIME OF BID AND SHALL MAINTAIN THIS CERTIFICATION FOR THE DURATION OF THE PROJECT.

NON-AISC CERTIFIED STEEL ERECTORS MAY BE ACCEPTABLE PROVIDED THEY HAVE A MINIMUM OF (5) YEARS EXPERIENCE ON PROJECTS OF EQUAL OR LARGER COMPLEXITY AND SCOPE. QUALIFICATIONS SHALL BE SUBMITTED TO STRUCTURAL ENGINEER (2) WEEKS PRIOR TO BID.

STEEL DETAILERS

ALL STEEL DETAILING SHALL BE PERFORMED BY A DETAILER WITH FIVE YEARS MINIMUM EXPERIENCE ON SIMILAR PROJECTS OF EQUAL OR LARGER COMPLEXITY AND SCOPE. QUALIFICATIONS SHALL BE SUBMITTED TWO WEEKS PRIOR TO BID.

MATERIAL PROPERTIES

WIDE FLANGE SECTIONS: ASTM A992 (Fy = 50 KSI)

H-PILES: ASTM A572 (Fy = 50 KSI)

OTHER SHAPES AND PLATES: ASTM A36 (Fy = 36 KSI) TYP. U.N.O.; ASTM A572 (Fy = 50 KSI) WHERE INDICATED

HOLLOW STRUCTURAL SECTIONS: RECTANGULAR & SQUARE - ASTM A500, GRADE C (Fy = 50 KSI) ROUND - ASTM A500, GRADE C (Fy = 46 KSI)

STRUCTURAL STEEL PIPES: ASTM A53, GRADE B, TYPE E OR S (Fy = 35 KSI)

MACHINE BOLTS (M.B.): ASTM A307, GRADE A

HIGH-STRENGTH BOLTS: ASTM 3125, GRADE F1852, UNLESS NOTED OTHERWISE, ASTM 3125, GRADE F2280 WHERE INDICATED

ANCHOR BOLTS (A.B.): ASTM F1554, GRADE 36, UNLESS NOTED OTHERWISE, ASTM F1554, GRADE 105 WHERE INDICATED.

WIDE FLANGE STRUCTURAL MEMBERS WHICH ARE ASTM A6 GROUP 3 SHAPES WITH FLANGE THICKNESS 1-1/2" THICK AND THICKER, AND ALL ASTM A6 GROUP 4 AND 5 SHAPES AND PLATE THAT IS 1-1/2" THICK OR THICKER SHALL HAVE A CHARPY V-NOTCH (CVN) TOUGHNESS OF 20 FT-LBS @ 70 DEG F.

STAINLESS STEEL BOLTS: BOLTS SPECIFIED AS STAINLESS STEEL SHALL BE ASTM F593 S30400 ALLOY GROUP 1 (Fy = 30 KSI MINIMUM). NUTS SHALL BE ASTM F594. STAINLESS STEEL BOLTS SHALL BE INSTALLED SNUG-TIGHT BRING ALL THE CONNECTED PLIES INTO FIRM CONTACT. STAINLESS STEEL LOCK WASHERS SHOULD BE USED UNDER BOTH THE BOLT HEAD AND NUT. DURING INSTALLATION, GALLING AND SEIZER OF STAINLESS STEEL BOLTS SHALL BE PREVENTED BY A METHOD APPROVED BY THE ENGINEER OR RECORD.

ANCHOR BOLTS (A.B.): ASTM F1554, GRADE 36, UNLESS NOTED OTHERWISE, ASTM F1554, GRADE 105 WHERE INDICATED.

WIDE FLANGE STRUCTURAL MEMBERS WHICH ARE ASTM A6 GROUP 3 SHAPES WITH FLANGE THICKNESS 1-1/2" THICK AND THICKER, AND ALL ASTM A6 GROUP 4 AND 5 SHAPES AND PLATE THAT IS 1-1/2" THICK OR THICKER SHALL HAVE A CHARPY V-NOTCH (CVN) TOUGHNESS OF 20 FT-LBS @ 70 DEG F.

## WELDING

STRUCTURAL STEEL: WELD IN ACCORDANCE WITH "STRUCTURAL WELDING CODE" AWS D1.1.

LATERAL FORCE-RESISTING SYSTEM: WELD IN ACCORDANCE WITH "STRUCTURAL WELDING CODE SEISMIC SUPPLEMENT" AWS D1.8.

REINFORCING STEEL: WELD IN ACCORDANCE WITH "REINFORCING STEEL WELDING CODE" AWS D1.4. WELD ONLY WITH SPECIFIC APPROVAL OF THE STRUCTURAL ENGINEER. IN NO CASE SHALL A WELD BE MADE WITHIN 6 BAR DIAMETERS OF A "COLD BEND".

CERTIFICATION: ALL WELDING SHALL BE PERFORMED BY WABO CERTIFIED WELDERS. WELDERS SHALL BE PREQUALIFIED FOR EACH POSITION AND WELD TYPE WHICH THE WELDER WILL BE PERFORMING.

WELD TABS (ALSO KNOWN AS WELD "EXTENSION" TABS OR "RUN OFF" TABS) SHALL BE USED. AFTER THE WELD HAS BEEN COMPLETED THE WELD TABS SHALL BE REMOVED AND THE WELD END GROUND TO A SMOOTH CONTOUR. WELD "DAMS" OR "END DAMS" SHALL NOT BE USED.

THE PROCESS CONSUMABLES FOR ALL WELD FILLER METAL INCLUDING TACK WELDS, ROOT PASS AND SUBSEQUENT PASSES DEPOSITED IN A JOINT SHALL BE COMPATIBLE.

ALL WELD FILLER METAL AND WELD PROCESS SHALL PROVIDE THE TENSILE STRENGTH AND CHARPY V-NOTCH RATINGS AS FOLLOWS:

GRAVITY FRAME

| WELD TYPE | FILLER METAL TENSILE STRENGTH | CHARPY V-NOTCH (CVN) RATING |
|---|---|---|
| FILLET | 70 KSI | ----- |
| PARTIAL PENETRATION | 70 KSI | ----- |
| COMPLETE PENETRATION | 70 KSI | 20 FT-LBS @ 40 DEG F |

LATERAL FORCE-RESISTING SYSTEM

| WELD TYPE | FILLER METAL TENSILE STRENGTH | CHARPY V-NOTCH (CVN) RATING |
|---|---|---|
| FILLET | 70 KSI | 20 FT-LBS @ 0 DEG F |
| PARTIAL PENETRATION | 70 KSI | 20 FT-LBS @ 0 DEG F |
| COMPLETE PENETRATION | 70 KSI | 20 FT-LBS @ 0 DEG F |
| FILLET (1) | 70 KSI | 40 FT-LBS @ 70 DEG F |
| PARTIAL PENETRATION (1) | 70 KSI | 40 FT-LBS @ 70 DEG F |
| COMPLETE PENETRATION (1) | 70 KSI | 40 FT-LBS @ 70 DEG F |

(1) DCW LOCATIONS ARE INDICATED IN THE DETAILS.

WELDED CONNECTIONS INSPECTION:

1. ALL WELDING SHALL BE CHECKED BY VISUAL MEANS AND BY OTHER METHODS DEEMED NECESSARY BY THE WELDING INSPECTOR.
2. ALL FULL PENETRATION WELDS TO MEMBERS WHICH FORM A PORTION OF THE LATERAL FORCE-RESISTING SYSTEM SHALL BE CHECKED 100 PERCENT BY ULTRASONIC TESTING.
3. THE CONTRACTOR SHALL SUBMIT A WRITTEN WELDING PROCEDURE SPECIFICATION FOR SHOP AND FIELD WELDING OF ALL LATERAL FORCE-RESISTING SYSTEM CONNECTIONS FOR APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD PRIOR TO FABRICATION.

THE STANDARDS OF ACCEPTANCE FOR WELDS TESTED BY ULTRASONIC METHODS SHALL CONFORM TO AWS D1.1.

ALL WELDS FOUND TO BE DEFECTIVE SHALL BE REPAIRED AND REINSPECTED BY THE SAME METHODS ORIGINALLY USED, AND THIS REPAIR AND REINSPECTION SHALL BE PAID FOR BY THE CONTRACTOR

## GENERAL REQUIREMENTS

HIGH-STRENGTH BOLTS: ALL A325 HIGH-STRENGTH BOLTS (HSB) INDICATED AS A325 IN THE DRAWINGS SHALL BE ASTM F3125, GRADE F1852, UNLESS OTHERWISE INDICATED AS A490. ALL HSB INDICATED AS A490 SHALL BE ASTM F3125, GRADE F2280. ALL HSB SHALL BE BY "LEJEUNE BOLT COMPANY" OR PRE-APPROVED EQUAL AND SHALL BE INSTALLED PER SECTION 8.2 OF THE "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS", JUNE 2020 BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC SPECIFICATION). ALL BOLT HOLES SHALL BE STANDARD ROUND HOLES UNLESS NOTED OTHERWISE. THE FAYING SURFACES OF ALL PLIES WITHIN THE GRIP OF SLIP-CRITICAL BOLTS (A325SC OR A490SC) SHALL MEET THE REQUIREMENTS FOR A CLASS A SURFACE PER SECTION 3.2 OF THE RCSC SPECIFICATION.

BOLTED CONNECTIONS INSPECTION: CONNECTIONS MADE WITH BEARING TYPE BOLTS SHALL BE INSPECTED PER SECTION 9.1 AND CONNECTIONS MADE WITH SLIP-CRITICAL TYPE BOLTS (A325SC OR A490SC) SHALL BE INSPECTED PER SECTION 9.3 OF RCSC SPECIFICATION.

ADHESIVE ANCHOR RODS: FULLY THREADED ASTM F1554, GRADE 36 UNLESS NOTED OTHERWISE.

HEADED STUDS: SHALL BE "H4L HEADED CONCRETE ANCHORS" FOR STUDS 5/8" DIAMETER AND SMALLER AND "S3L SHEAR CONNECTORS" FOR STUDS 3/4" DIAMETER AND LARGER AS MANUFACTURED BY NELSON STUD WELDING, INC. OR PRE-APPROVED EQUAL AND SHALL CONFORM TO AWS D1.1. ALL HEADED STUDS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS USING A NELSON WELD GUN, UNLESS NOTED OTHERWISE ON DETAILS. ALL WELDS SHALL BE MADE AND INSPECTED IN ACCORDANCE WITH AWS D1.1.

DEFORMED BAR ANCHORS: SHALL BE "D2L DEFORMED BAR ANCHORS" AS MANUFACTURED BY NELSON STUD WELDING, INC. OR PRE-APPROVED EQUAL AND SHALL CONFORM TO AWS D1.1. ALL DEFORMED BAR ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS USING A NELSON WELD GUN, UNLESS NOTED OTHERWISE ON DETAILS. ALL WELDS SHALL BE MADE AND INSPECTED IN ACCORDANCE WITH AWS D1.1.

FINISH: STRUCTURAL STEEL SHALL BE UNPAINTED, UNLESS NOTED OTHERWISE, AND SHALL BE CLEAN OF LOOSE RUST, LOOSE MILL SCALE, OIL, GREASE AND OTHER FOREIGN SUBSTANCES AND SHALL MEET THE REQUIREMENTS OF SSPC-SP1. WHERE STRUCTURAL STEEL IS NOTED TO BE PAINTED, ALL AREAS COMPRISING THE FAYING SURFACES OF BOLTED CONNECTIONS MADE WITH SLIP-CRITICAL TYPE BOLTS (A325SC OR A490SC) SHALL COMPLY WITH THE REQUIREMENTS OF THE RCSC SPECIFICATION. WHERE STRUCTURAL STEEL IS NOTED TO BE GALVANIZED, IT SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123, A384, AND A385. ALL SURFACES WITHIN TWO INCHES OF ANY FIELD WELD LOCATION SHALL BE FREE OF MATERIALS THAT WOULD PREVENT PROPER WELDING OR PRODUCE OBJECTIONABLE FUMES. FIELD TOUCH-UP OF PRIMED, PAINTED, AND GALVANIZED SURFACES SHALL BE PERFORMED TO REPAIR COATING ABRASIONS, AS WELL AS TO PROTECT ALL AREAS AT CONNECTIONS.

BUCKLING-RESTRAINED BRACE:
PROVIDE ALL PARTS, MATERIALS AND LABOR REQUIRED FOR THE DESIGN, DELIVERY AND TESTING OF BUCKLING-RESTRAINED BRACES, WHICH ARE DESIGNED BY THE MANUFACTURER TO MEET STIFFNESS, YIELD STRENGTH AND ELONGATION REQUIREMENTS AS INDICATED ON THE DRAWINGS AND SPECIFICATION. DESIGN OF BRACES SHALL BE BASED ON CONNECTION TYPES AND PROPORTIONS INDICATED ON THE DRAWINGS.

COMPOSITE FLOOR DECK: SHALL CONTAIN THE MINIMUM PROPERTIES SHOWN ON THE STRUCTURAL DRAWINGS AND SHALL BE "FORMLOK" AS MANUFACTURED BY VERCO MANUFACTURING CO., "W COMPOSITE" AS MANUFACTURED BY ASC STEEL DECK, "EPICORE" AS MANUFACTURED BY EPIC METALS, OR PRE-APPROVED EQUAL. THE FLOOR UNITS SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM A653, AND GALVANIZED PER ASTM A924. SUBMIT SHOP DRAWINGS SHOWING LAYOUT AND FASTENING PATTERN. ALL ACCESSORIES INCLUDING EDGE FORMS, CLOSURE, ETC. SHALL BE PROVIDED TO COMPLETE THE INSTALLATION OF THE COMPOSITE FLOOR.

METAL ROOF DECK: SHALL CONTAIN THE MINIMUM PROPERTIES SHOWN ON THE STRUCTURAL DRAWINGS AND SHALL BE MANUFACTURED BY VERCO MANUFACTURING CO., ASC STEEL DECK, EPIC METALS, OR PRE-APPROVED EQUAL. THE ROOF DECK SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM A611 OR A653, AND SHALL BE GALVANIZED PER ASTM A924. THE ROOF DECK SHALL BE PLACED ON THE SUPPORTING FRAMEWORK WITH A MINIMUM END LAP OF TWO INCHES. SUBMIT SHOP DRAWINGS SHOWING LAYOUT AND FASTENING PATTERN. ALL ACCESSORIES SHALL BE PROVIDED TO COMPLETE THE ERECTION OF THE STEEL DECK.

PREFABRICATED METAL STAIRS AND LANDINGS: SHALL BE DESIGNED PER AISC AND IBC REQUIREMENTS. STRINGERS AND LANDINGS SHALL BE DESIGNED FOR A MINIMUM OF 100 PSF LIVE LOAD. INDIVIDUAL TREADS SHALL BE DESIGNED FOR 300 POUND CONCENTRATED LOAD. EGRESS STAIRS AND LANDINGS SHALL BE DESIGNED WITH CONNECTIONS THAT ALLOW FOR SLIDING OR PROVIDE DUCTILITY TO ACCOMMODATE A HORIZONTAL SEISMIC INTERSTORY DRIFT OF 2" BETWEEN EACH LEVEL PER SECTION 13.5.10 OF ASCE 7-16. THE STAIR DESIGN CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD SHOWING THE COMPLETE ASSEMBLY AND ATTACHMENTS TO THE SURROUNDING STRUCTURE. THE ATTACHMENTS SHALL BE DETAILED SUCH THAT NO TORQUE IS APPLIED TO THE SURROUNDING STRUCTURAL MEMBERS. THE CALCULATIONS AND SHOP DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.

## COLD-FORMED STEEL FRAMING CONSTRUCTION:

THE DESIGN, INSTALLATION AND CONSTRUCTION OF COLD-FORMED CARBON OR LOW-ALLOY STEEL, STRUCTURAL AND NON-STRUCTURAL STEEL FRAMING, SHALL BE IN ACCORDANCE WITH IBC SECTION 2211 AND AMERICAN IRON AND STEEL INSTITUTE (AISI) STANDARD S100-16 AND S240-20 AND SHALL BE MANUFACTURED BY A MEMBER OF THE STEEL STUD MANUFACTURER'S ASSOCIATION (SSMA), CERTIFIED STEEL STUD ASSOCIATION (CSSA), STEEL FRAMING INDUSTRY ASSOCIATION (SFIA), OR PRE-APPROVED EQUAL, IN ACCORDANCE WITH A CURRENT ICC EVALUATION SERVICE REPORT, AISI S202-20 AND S240-20. ALL 54 MIL AND HEAVIER GALVANIZED MEMBERS SHALL BE FORMED FROM STEEL THAT MEETS THE REQUIREMENTS OF ASTM A653, QUALITY SQ, GRADE 50, CLASS 1, FY= 50 KSI. ALL 43 MIL AND LIGHTER GALVANIZED MEMBERS SHALL BE FORMED FROM STEEL THAT MEETS THE REQUIREMENTS OF ASTM A653, QUALITY SQ, GRADE 33, FY=33 KSI. BRIDGING PER MANUFACTURER'S REQUIREMENTS AND AS SHOWN IN THE STRUCTURAL DRAWINGS SHALL BE IN PLACE PRIOR TO PLACING OF ANY CONSTRUCTION LOADS. ALL RUNS SHALL BE RIGIDLY ANCHORED TO END WALLS.

EXTERIOR WALL AND BEARING WALL COLD-FORMED STEEL FRAMING: COLD-FORMED STEEL FRAMING MEMBERS SHALL MEET THE TYPE, SIZE AND THICKNESS AS INDICATED ON THE STRUCTURAL PLANS AND SPECIFICATIONS.

INTERIOR NON-BEARING WALL, CEILING, SOFFIT, AND OTHER MISC. COLD-FORMED STEEL FRAMING: COLD-FORMED STEEL FRAMING MEMBERS SHALL MEET THE TYPE, SIZE, AND THICKNESS AS INDICATED IN THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS, AND SHALL CONFORM TO THE MINIMUM PERSCRIPTIVE REQUIREMENTS OF THE GYPSUM CONSTRUCTION HANDBOOK BY CGC, INC. FRAMING CONDITIONS THAT EXCEED THE WEIGHT, SPAN OR HEIGHT LIMITATIONS SHALL BE CONSTRUCTED USING APPLICABLE DETAILS ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, DETAILING, FABRICATION AND ERECTION OF ALL COLD-FORMED FRAMING NOT SPECIFICALLY DETAILED IN THE GYPSUM CONSTRUCTION HANDBOOK OR ON THE STRUCTURAL DRAWINGS. THE DESIGN AND DETAILING OF THE COLD-FORMED STEEL FRAMING AND CONNECTION TO THE STRUCTURE SHALL BE PREPARED UNDER THE DIRECTION OF AND SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT AND SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO CONSTRUCTION.

COLD-FORMED STEEL FRAMING SUBSTITUTION: AT THE CONTRACTOR'S OPTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, DETAILING, FABRICATION AND ERECTION OF THE INTERIOR NON-BEARING COLD-FORMED STEEL FRAMING, NOT OCCURING AT BRICK VENEER, AND THE CONNECTION OF THE COLD-FORMED STEEL FRAMING TO THE STRUCTURE. THE DESIGN AND DETAILING OF THE COLD-FORMED STEEL FRAMING AND CONNECTION TO THE STRUCTURE SHALL BE PREPARED UNDER THE DIRECTION OF AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT AND SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO CONSTRUCTION.

POWDER ACTUATED FASTENERS: SHALL BE X-U UNIVERSAL KNURLED SHANK FASTENER BY HILTI OR PRE-APPROVED EQUAL. INSTALL PER ALL MANUFACTURER'S PUBLISHED RECOMMENDATIONS. COLD-FORMED STEEL TO STRUCTURAL STEEL: UNLESS NOTED OTHERWISE, PROVIDE 0.157" SHANK DIAMETER X-U LOW-VELOCITY FASTENER - FASTENER TIP SHALL PENETRATE STRUCTURAL STEEL. COLD-FORMED STEEL TO CONCRETE: UNLESS NOTED OTHERWISE, PROVIDE 0.157" SHANK DIAMETER X-U LOW-VELOCITY FASTENER - EMBED 1-1/2" MINIMUM INTO CONCRETE, UNLESS NOTED OTHERWISE.

SLIP CONNECTIONS: THE STEEL NETWORK "VERTICLIP" OR PRE-APPROVED EQUAL. MATCH CLIP WITH STUD SIZE AND THICKNESS. ATTACH PER MANUFACTURER'S REQUIREMENTS.

METAL-BACKED GWB STRUCTURAL PANELS: SHALL BE "SURE-BOARD SERIES 200" STRUCTURAL PANELS BY CALIFORNIA EXPANDED METAL PRODUCTS CO. (CEMCO), OR APPROVED EQUAL. PANELS ARE TO BE INSTALLED VERTICALLY WITH ALL EDGES BLOCKED.

## MISCELLANEOUS:

PRE-APPROVED SUBSTITUTIONS: SUBSTITUTIONS MAY BE ALLOWED ONLY IF THEY MEET THE REQUIREMENTS OF THESE GENERAL NOTES AND THE SPECIFICATIONS, AND IF COMPLETE WRITTEN ENGINEERING DATA FOR EACH CONDITION REQUIRED FOR THIS PROJECT IS PROVIDED TO THE STRUCTURAL ENGINEER TWO WEEKS PRIOR TO BID DATE AND APPROVED IN WRITTEN ADDENDA BY THE ARCHITECT. DATA IS TO INDICATE CODE BASIS BY YEAR, AUTHORITY FOR STRESSES AND STRESS INCREASES, IF ANY, AND AMOUNT OF EXPECTED DEFLECTION FOR FLEXURAL MEMBERS UNDER (1) TOTAL LOAD AND (2) LIVE LOAD ONLY. ALL INCREASED COSTS IN MECHANICAL, SPRINKLER, ELECTRICAL OR GENERAL INSTALLATION AND ANY ARCHITECTURAL OR STRUCTURAL REDESIGN RESULTING FROM SUBSTITUTION SHALL BE BORNE BY THE GENERAL CONTRACTOR.

SHOP DRAWINGS/SUBMITTALS

THE FOLLOWING SHOP DRAWINGS/SUBMITTALS SHALL BE PROVIDED FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO FABRICATION OR DELIVERY.

| | | STRUCTURAL ENGR. | BLDG. DEPT. |
|---|---|---|---|
| 1. | CONCRETE MIX DESIGNS | X | X |
| 2. | REINFORCING STEEL SHOP DRAWINGS | X | |
| 3. | STRUCTURAL STEEL | X | X |
| 4. | METAL DECK | X | X |
| 5. | COLD-FORMED STEEL FRAMING | X | X |
| 6. | PREFABRICATED METAL STAIRS AND LANDINGS | X | X |
| 7. | MISCELLANEOUS STEEL | X | X |
| 8. | EMBEDS AND PENETRATIONS IN CONCRETE | X | X |
| 9. | CONTRACTOR'S STATEMENT OF RESPONSIBILITY | X | X |

DEFERRED SUBMITTALS

THE FOLLOWING ARE NOT INCLUDED WITH THE BUILDING PERMIT DRAWINGS AND SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL AS A DEFERRED SUBMITTAL. SUBMITTALS SHALL BE STAMPED BY A ENGINEER LICENSED IN THE STATE OF THE PROJECT AS NOTED.

| | | ENGINEER STAMP REQUIRED |
|---|---|---|
| 1. | COLD-FORMED STEEL FRAMING | PE |
| 2. | BUCKLING RESTRAIND BRACES | PE |

SPECIAL INSPECTION: SPECIAL INSPECTION SHALL BE PROVIDED BY AN INDEPENDENT TESTING LABORATORY PER THE REQUIREMENTS OF IBC CHAPTER 17 AND THE LOCAL BUILDING OFFICIAL OR APPLICABLE JURISDICTION AND THE CONTRACT DOCUMENTS. THE SPECIAL INSPECTOR SHALL SUBMIT INSPECTION REPORTS AND A FINAL SIGNED REPORT TO THE BUILDING OFFICIAL FOR THE ITEMS LISTED IN THE QUALITY ASSURANCE/SPECIAL INSPECTION SECTION:

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3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
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| | | 04 JUNE 2025 BUILDING PERMIT |

PROJECT:

GENERAL NOTES

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## STATEMENT OF SPECIAL INSPECTIONS:

SPECIAL INSPECTION: SPECIAL INSPECTION SHALL BE PROVIDED PER THE REQUIREMENTS OF IBC SECTION 1704 AND 1705 AND AS NOTED HEREIN.

| STRUCTURAL SYSTEM | VERIFICATION AND INSPECTION | CONTINUOUS | PERIODIC | COMMENTS | REFERENCES |
|---|---|---|---|---|---|
| SOILS | VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY | | X | | IBC 1705.6 |
| | VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL | | X | | |
| | PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS | | X | | |
| | DURING FILL PLACEMENT, VERIFY USE OF PROPER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL. | X | | | |
| | PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY | | X | | |
| | CONSTRUCTION OF AGGREGATE PIER | X | | | IBC 1705.8 |
| STEEL CONSTRUCTION | VISUAL WELDING INSPECTION | | | SPECIAL INSPECTIONS IN THIS SECTION **MAY BE** WAIVED WHERE FABRICATION IS PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED IN ACCORDANCE WITH IBC SECTION 1704.2.5 **AND WITH THE APROVAL OF THE BUILDING OFFICIAL.** | AISC 360 CHAPTER N5.4<br>AISC 341 CHAPTER J6.1 |
| | A. INSPECTION PRIOR TO WELDING | | X | | TABLE N5.4-1; TABLE J6.1 |
| | B. INSPECTION DURING WELDING | | X | | TABLE N5.4-2; TABLE J6.2 |
| | C. INSPECTION AFTER WELDING | | X | | TABLE N5.4-3; TABLE J6.3 |
| | NON-DESTRUCTIVE TESTING OF WELDED JOINTS | X | | | AISC 360 CHAPTER N5.5<br>AISC 341 CHAPTER J6.2 |
| | HIGH STRENGTH BOLTING INSPECTION | | | | AISC 360 CHAPTER N5.6<br>AISC 341 CHAPTER J7 |
| | A. INSPECTION PRIOR TO BOLTING | | X | | TABLE N5.6-1; TABLE J7.1 |
| | B. INSPECTION DURING BOLTING | | X | | TABLE N5.6-2; TABLE J7.2 |
| | C. INSPECTION AFTER BOLTING | | X | | TABLE N5.6-3; TABLE J7.3 |
| | INSPECTION OF GALVANIZED STRUCTURAL STEEL MAIN MEMBERS | | X | | AISC 360 CHAPTER N5.7 |
| | OTHER INSPECTION TASKS | | | | AISC 360 CHAPTER N5.8<br>AISC 341 CHAPTER J8 |
| | A. ANCHOR RODS AND OTHER EMBEDMENTS PRIOR TO CONCRETE PLACEMENT | | X | | AISC 360 CHAPTER N5.8 |
| | B. INSPECT STEEL FRAME FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS | | X | | AISC 360 CHAPTER N5.8 |
| | C. REDUCED BEAM SECTION INSPECTION | | X | | AISC 341 TABLE J8.1 |
| | D. PROTECTED ZONE INSPECTION | | X | | AISC 341 TABLE J8.1 |
| | INSPECTION OF COMPOSITE (SEISMIC FORCE RESISTING SYSTEM (SFRS)) STRUCTURES | | | | AISC 341 CHAPTER J9 |
| | A. INSPECTION OF COMPOSITE (SFRS) STRUCTURES PRIOR TO CONCRETE PLACEMENT | | X | | TABLE J9.1 |
| | B. INSPECTION OF COMPOSITE (SFRS) STRUCTURES DURING CONCRETE PLACEMENT | | X | | TABLE J9.2 |
| | C. INSPECTION OF COMPOSITE (SFRS) STRUCTURES AFTER CONCRETE PLACEMENT | | X | | TABLE J9.3 |
| STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL | MATERIAL VERIFICATION OF COLD-FORMED STEEL DECK:<br>A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS | | X | | APPLICABLE ASTM MATERIAL STANDARDS & IBC 2210.1.1 |
| | B. MANUFACTURER'S CERTIFIED TEST REPORTS | | X | | |
| | INSPECTION OF WELDING<br>A. COLD-FORM STEEL DECK WELDS | | X | | AWS D1.3<br>AWS D1.4 |
| | B. OPEN WEB STEEL JOISTS & JOIST GIRDERS | X | | | IBC 1705.2.3<br>SJI SPECIFICATIONS |
| | 1. END CONNECTIONS - WELDING OR BOLTED | | X | | LISTED IN SECTION 2207.1 |
| | 2. BRIDGING - HORIZONTAL OR DIAGONAL | | | | |
| | a. STANDARD BRIDGING | | X | | |
| | b. BRIDGING THAT DIFFERS FROM THE SJI SPECIFICATIONS LISTED IN SECTION 2207.1 | | X | | SJI SPECIFICATIONS LISTED IN SECTION 2207.1 |
| CONCRETE | INSPECT REINFORCEMENT AND VERIFY PLACEMENT | | X | SPECIAL INSPECTIONS NOT REQUIRED FOR THE FOLLOWING CONDITIONS:<br><br>NON-STRUCTURAL SLAB ON GRADE<br><br>CONCRETE FOUNDATION WALLS WITH F'c ≤ 2500 PSI<br><br>ISOLATED SPREAD FOOTINGS FOR BUILDINGS THREE-STORIES AND LESS ABOVE GRADE PLANE<br><br>CONTINUOUS FOOTINGS SUPPORTING WALLS OF THREE-STORIES AND LESS ABOVE GRADE PLANE WHERE WALLS ARE LIGHT-FRAME CONSTRUCTION AND STRUCTURAL DESIGN IS BASED ON F'c ≤ 2500 PSI<br><br>PERIODIC INSPECTION TO INCLUDE A QUANTITY OF 10% WITH A MINIMUM OF (5) ANCHORS INSPECTED PER INSTALLER ON A DAILY BASIS. | ACI 318: CH 20, 25.2, 25.3, 26.6-1 TO 26.6-3, IBC 1908 |
| | ANCHORS CAST IN CONCRETE-PRIOR TO AND DURING PLACEMENT OF CONCRETE | | X | | ACI 318: 26.7<br>AISC 360 SECTION N7 |
| | VERIFY USE OF REQUIRED DESIGN MIX | | X | | ACI 318, CH 19 |
| | PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE | X | | | ASTM C172, C31<br>ACI 318: 26.4, 26.12 |
| | CONCRETE PLACEMENT FOR PROPER APPLICATION | X | | | ACI 318: 26.5 |
| | MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES | | X | | ACI 318: 26.5.3 TO 26.5.5 |
| | ANCHORS POST-INSTALLED IN HARDENED CONCRETE (MECHANICAL ANCHORS INSTALLED IN ANY DIRECTION AND ADHESIVE ANCHORS INSTALLED DOWNWARD) | | X | | ACI 318: 26.7<br>MFR EVAL REPORT<br>MFR PUBLISHED INSTALLATION INSTRUCTIONS |
| | ANCHORS POST-INSTALLED IN HARDENED CONCRETE (ADHESIVE ANCHORS INSTALLED HORIZONTAL OR UPWARDLY INCLINED) | X | | | ACI 318: 26.7<br>MFR EVAL REPORT<br>MFR PUBLISHED INSTALLATION INSTRUCTIONS |

| STRUCTURAL SYSTEM | VERIFICATION AND INSPECTION | CONTINUOUS | PERIODIC | COMMENTS | REFERENCES |
|---|---|---|---|---|---|
| CONCRETE (CONT.) | INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED | | X | | ACI 318: 26.11.1.2(b) |
| | MATERIAL VERIFICATION OF REINFORCEMENT STEEL FOR ASTM A615 REINFORCING | | X | MANUFACTURER SHALL PROVIDE MILL TEST REPORTS. CONTINUOUS INSPECTION FOR ALL WELDS GREATER THAN 5/16" FILLET. PERIODIC INSPECTION FOR FILLET WELD 5/16" AND SMALLER | ACI 318: 26.6.4<br>AWS D1.4<br>IBC 1705.3.1 |
| | TESTING OF MATERIALS | | X | | IBC 1705.3.2 |
| | INSPECTION OF WELDING FOR REINFORCING STEEL | | X | | AWS D1.3<br>AWS D1.4<br>ACI 318 SECTION 26.6.4 |
| | A. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706 | | | | |
| | B. REINFORCING STEEL IN MOMENT FRAMES AND BOUNDARY ELEMENTS | X | | | |
| | C. SHEAR REINFORCEMENT | X | | | |
| | D. OTHER REINFORCING STEEL | X | | | |
| COLD-FORMED STEEL FRAMING | SCREW ATTACHMENT, WELDING, BOLTING, ANCHORING AND FASTENING OF ELEMENTS OF SEISMIC RESISTING SYSTEM INCLUDING SHEAR WALLS, BRACES, DIAPHRAGMS, COLLECTORS (DRAG STRUTS) AND HOLDOWNS | | X | NOT REQUIRED WHERE SHEATHING IS GYPSUM BOARD OR FIBERBOARD OR WHEN THE SHEATHING IS WOOD STRUCTURAL PANEL OR STEEL SHEETS ON (1) SIDE AND WITH SCREWS SPACED GREATER THAN 4" O.C. | IBC 1705..12.2, 1705.13.3<br>AWS D1.3 |
| | EXTERIOR WALLS | | X | | IBC 1705.11.3, 1705.12.5 |
| FIRE-RESISTANT MATERIALS | SPRAYED FIRE-RESISTANT MATERIALS | | X | | IBC 1705.15 |
| | MASTIC AND INTUMESCENT COATINGS | | X | | IBC 1705.16 |
| SUSPENDED CEILINGS | ANCHORAGE AND SEISMIC BRACING | | X | | |
| EMERGENCY OR STANDBY POWER SYSTEMS | ANCHORAGE OF EQUIPMENT TO STRUCTURE | | X | | IBC 1705.13.6 |
| ELECTRICAL EQUIPMENT | ANCHORAGE OF EQUIPMENT TO STRUCTURE | | X | SPECIAL INSPECTION ONLY REQUIRED IN SEISMIC DESIGN CATEGORY E OR F | IBC 1705.13.6 |
| MECHANICAL AND ELECTRICAL SYSTEMS | MINIMUM CLEARANCE TO SPRINKLER PIPING OF 3" | | X | | IBC 1705.13.6 |
| TIE-BACK ASSEMBLY | AUGERING - OBSERVE DRILLING OPERATIONS, VERIFY DIAMETER, VERIFY EXTENT TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL, MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT. | X | | PERFORMED BY PROJECT GEOTECHNICAL ENGINEER | IBC 1705.6, 1705.8 |
| | GROUT - VERIFY USE OF REQUIRED DESIGN MIX, SAMPLING OF FRESH GROUT, SLUMP TEST, TEMPERATURE OF GROUT AT TIME OF MAKE SPECIMENS, MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNICS, RECORD GROUT VOLUMES, VERIFY STRENGTH PRIOR TO STRESSING. | X | | | IBC 1705.8 |
| | ANCHOR - VERIFY MATERIALS AND PLACEMENT | X | | | IBC 1705.3 |
| | TEST LOADS AND LOCK OFF LOAD - TEST PROCEDURE, MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT. | X | | | IBC 1705.7,<br>IBC 1810.3.3.1.3 |
| | MONITOR MOVEMENT - FOR THE SPECIFIED PERIOD OF TIME AFTER STRESSING, VERIFY AND REPORT ANY SHIFTING OF THE WALL. | | X | | IBC 1705.8 |

TESTING AND SPECIAL INSPECTION REPORTS SHALL BE PREPARED FOR EACH INSPECTION ITEM ON A DAILY BASIS WHENEVER WORK IS PERFORMED ON THAT ITEM. REPORTS SHALL BE DISTRIBUTED TO OWNER, CONTRACTOR, BUILDING OFFICIAL, ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.

STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD OR DESIGNATED REPRESENTATIVE IN ACCORDANCE WITH IBC 1704.6. STRUCTURAL OBSERVATION SHALL BE PERFORMED AS FOLLOWS:

- PERIODIC VISUAL OBSERVATION OF STRUCTURAL SYSTEMS FOR GENERAL CONFORMANCE TO CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES.
- REVIEW OF TESTING AND INSPECTION REPORTS.
- REPORTS SHALL BE PREPARED FOR EACH SITE VISIT AND SHALL BE DISTRIBUTED TO ARCHITECT.

GENERAL CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL INCLUDE ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL INSPECTION REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTION.

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| NO. | DATE | DESCRIPTION |
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| | 04 JUNE 2025 | BUILDING PERMIT |

PROJECT:

GENERAL NOTES

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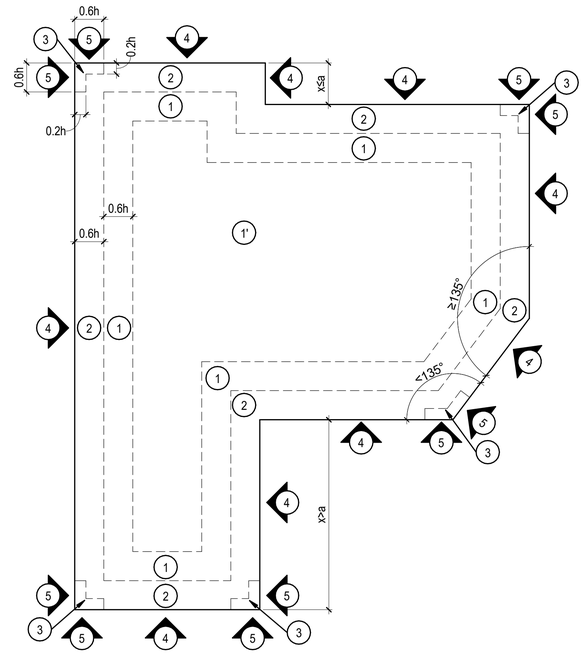
| ROOF SURFACES [1] | | | | | |
|---|---|---|---|---|---|
| EFFECTIVE WIND AREA | POSITIVE PRESSURES (PSF) | NEGATIVE PRESSURES (PSF) | | | |
| | | ZONE [3] | | | |
| | ALL ZONES | 1' | 1 | 2 | 3 |
| 10 SF | 16.0 | -20.5 | -35.7 | -47.1 | -64.1 |
| 20 SF | 16.0 | -20.5 | -33.3 | -44.0 | -58.1 |
| 50 SF | 16.0 | -20.5 | -30.2 | -40.0 | -50.1 |
| 100 SF | 16.0 | -20.5 | -27.9 | -37.0 | -44.0 |

| WALL SURFACES [1] | | | | |
|---|---|---|---|---|
| EFFECTIVE WIND AREA | POSITIVE PRESSURE (PSF) | | NEGATIVE PRESSURE (PSF) | |
| | ZONE [2] | | | |
| | 4 | 5 | 4 | 5 |
| 10 SF | 22.4 | 22.4 | -24.3 | -30.0 |
| 20 SF | 21.4 | 21.4 | -23.3 | -28.0 |
| 50 SF | 20.0 | 20.0 | -21.9 | -25.3 |
| 100 SF | 19.0 | 19.0 | -20.9 | -23.3 |
| 500 SF | 16.7 | 16.7 | -18.6 | -18.6 |

| ROOF OVERHANGS [1] | | | | |
|---|---|---|---|---|
| EFFECTIVE WIND AREA | NEGATIVE PRESSURE (PSF) | | | |
| | ZONE [3] | | | |
| | 1' | 1 | 2 | 3 |
| 10 SF | -32.3 | -32.3 | -43.6 | -60.7 |
| 20 SF | -31.7 | -31.7 | -39.6 | -53.7 |
| 50 SF | -30.9 | -30.9 | -34.3 | -44.3 |
| 100 SF | -30.4 | -30.4 | -30.2 | -37.3 |
| 500 SF | -29.0 | -29.0 | -20.9 | -20.9 |

1. VALUES SHOWN IN TABLE ARE GROSS ULTIMATE WIND PRESSURES.
2. WALL ZONES ARE AS DEFINED BY FIGURE 30.3-1 IN ASCE 7-16 FOR LOW RISE BUILDINGS.
3. ROOF ZONES ARE AS DEFINED BY FIGURES 30.3-2 THROUGH 30.3-7 IN ASCE 7-16 FOR LOW RISE BUILDINGS.




ENCLOSED AND PARTIALLY ENCLOSED FLAT/HIP/GABLE ROOF WITH θ ≤ 7° - OR MONOSLOPE ROOF WITH θ ≤ 3° - COMPONENTS AND CLADDING WIND PRESSURE ZONES

NOTES:

1. a = 10 FT; h = 48 FT.
2. IF OVERHANGS EXIST, THE EDGE DISTANCE, A, SHALL BE MEASURED FROM THE OUTSIDE EDGE OF THE OVERHANG.
3. IF x ≤ a, ZONES 3 AND 5 NEED NOT APPLY AT CORNER.
4. DIAGRAMS ARE GENERIC REPRESENTATIONS OF PROJECT WIND PRESSURES ZONES TO AID WITH APPLICATION OF WIND PRESSURES. SEE PLANS FOR EXACT REPRESENTATION OF THE BUILDING.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S-005


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| ABBREVIATION LIST | | | |
|---|---|---|---|
| @ | AT | HDR | HEADER |
| A.B. | ANCHOR BOLT | HGR | HANGER |
| ADD'L | ADDITIONAL | HORIZ. | HORIZONTAL |
| A.F.F. | ABOVE FINISH FLOOR | HSS | HOLLOW STRUCTURAL SECTION |
| ALT. | ALTERNATE | HT | HEIGHT |
| ARCH. | ARCHITECTURAL | INT. | INTERIOR |
| BLD'G | BUILDING | JST | JOIST |
| BLK'G | BLOCKING | JT | JOINT |
| BM | BEAM | L | ANGLE |
| B.O.F. | BOTTOM OF FOOTING | L.F.R.S. | LATERAL FORCE-RESISTING SYSTEM |
| BOT. | BOTTOM | L.L. | LIVE LOAD |
| BRB | BUCKLING RESTRAINED BRACE | LLH | LONG LEG HORIZONTAL |
| BRG | BEARING | LLV | LONG LEG VERTICAL |
| BTWN | BETWEEN | LOC. | LOCATION |
| B.U. | BUILT UP | LSL | LAMINATED STRAND LUMBER |
| (C= ) | CAMBER | LVL | LAMINATED VENEER LUMBER |
| CANT. | CANTILEVER | MAX. | MAXIMUM |
| CFS | COLD-FORMED STEEL | M.B. | MACHINE BOLT |
| C.J. | CONTROL/CONSTRUCTION JOINT | MECH. | MECHANICAL |
| ℄ | CENTERLINE | MEZZ. | MEZZANINE |
| CLR. | CLEARANCE | MFR | MANUFACTURER |
| CLT | CROSS-LAMINATED TIMBER | MIN. | MINIMUM |
| CMU | CONCRETE MASONRY UNIT | MISC. | MISCELLANEOUS |
| COL. | COLUMN | MTL | METAL |
| CONC. | CONCRETE | MT SCREW | MASS TIMBER SCREW |
| CONN. | CONNECTION | N.F. | NEAR FACE |
| CONST. | CONSTRUCTION | N.S. | NEAR SIDE |
| CONT. | CONTINUOUS | NTS | NOT TO SCALE |
| CONTR. | CONTRACTOR | O.C. | ON CENTER |
| COORD. | COORDINATE | OPN'G | OPENING |
| C.P. | COMPLETE PENETRATION | OPP. | OPPOSITE |
| CTR'D | CENTERED | P.A.F. | POWDER ACTUATED FASTENER |
| C.Y. | CUBIC YARD | PERP. | PERPENDICULAR |
| DBL. | DOUBLE | PL | PLATE |
| DCW | DEMAND CRITICAL WELD | P.P. | PARTIAL PENETRATION |
| D.F. | DOUGLAS FIR | P.P.T. | PRESERVATIVE PRESSURE TREATED |
| DIA. OR ⌀ | DIAMETER | P.S.F. | POUNDS PER SQUARE FOOT |
| DIAG. | DIAGONAL | PSL | PARALLAM |
| DIM. | DIMENSION | P.T. | POST TENSION |
| D.L. | DEAD LOAD | PW. | PLYWOOD |
| DLT | DOWEL-LAMINATED TIMBER | REINF. | REINFORCEMENT |
| DWG | DRAWING | REQ'D | REQUIRED |
| DWL | DOWEL | SCHED. | SCHEDULE |
| (E) | EXISTING | SCL | STRUCTURAL COMPOSITE LUMBER |
| EA. | EACH | SHT'G | SHEATHING |
| E.F. | EACH FACE | SIM. | SIMILAR |
| EL. | ELEVATION | S.O.G. | SLAB ON GRADE |
| ELEV. | ELEVATOR | SQ. | SQUARE |
| ENGR | ENGINEER | STD | STANDARD |
| EQ. | EQUAL | STIFF. | STIFFENER |
| E.W. | EACH WAY | STL | STEEL |
| EXP. | EXPANSION | STRUCT. | STRUCTURAL |
| EXT. | EXTERIOR | T&B | TOP & BOTTOM |
| FDN | FOUNDATION | T&G | TONGUE AND GROOVE |
| F.F. | FAR FACE | THR'D | THREADED |
| FLR | FLOOR | T.O.F. | TOP OF FOOTING |
| F.O.M. | FACE OF MASONRY | T.O.S. | TOP OF STEEL |
| F.O.S. | FACE OF STUD | TRT'D | TREATED |
| FRM'G | FRAMING | TYP. | TYPICAL |
| F.R.T. | FIRE RETARDANT TREATED | U.N.O. | UNLESS NOTED OTHERWISE |
| F.S. | FAR SIDE | U.T. | ULTRASONIC TESTED |
| FTG | FOOTING | VERT. | VERTICAL |
| GA. | GAGE/GAUGE | W/ | WITH |
| GALV. | GALVANIZED | W.P. | WORK POINT |
| GL. | GLULAM | WT | WEIGHT |
| GR. | GRADE | W.W.R. | WELDED WIRE REINFORCING |
| GWB | GYPSUM WALL BOARD | | |


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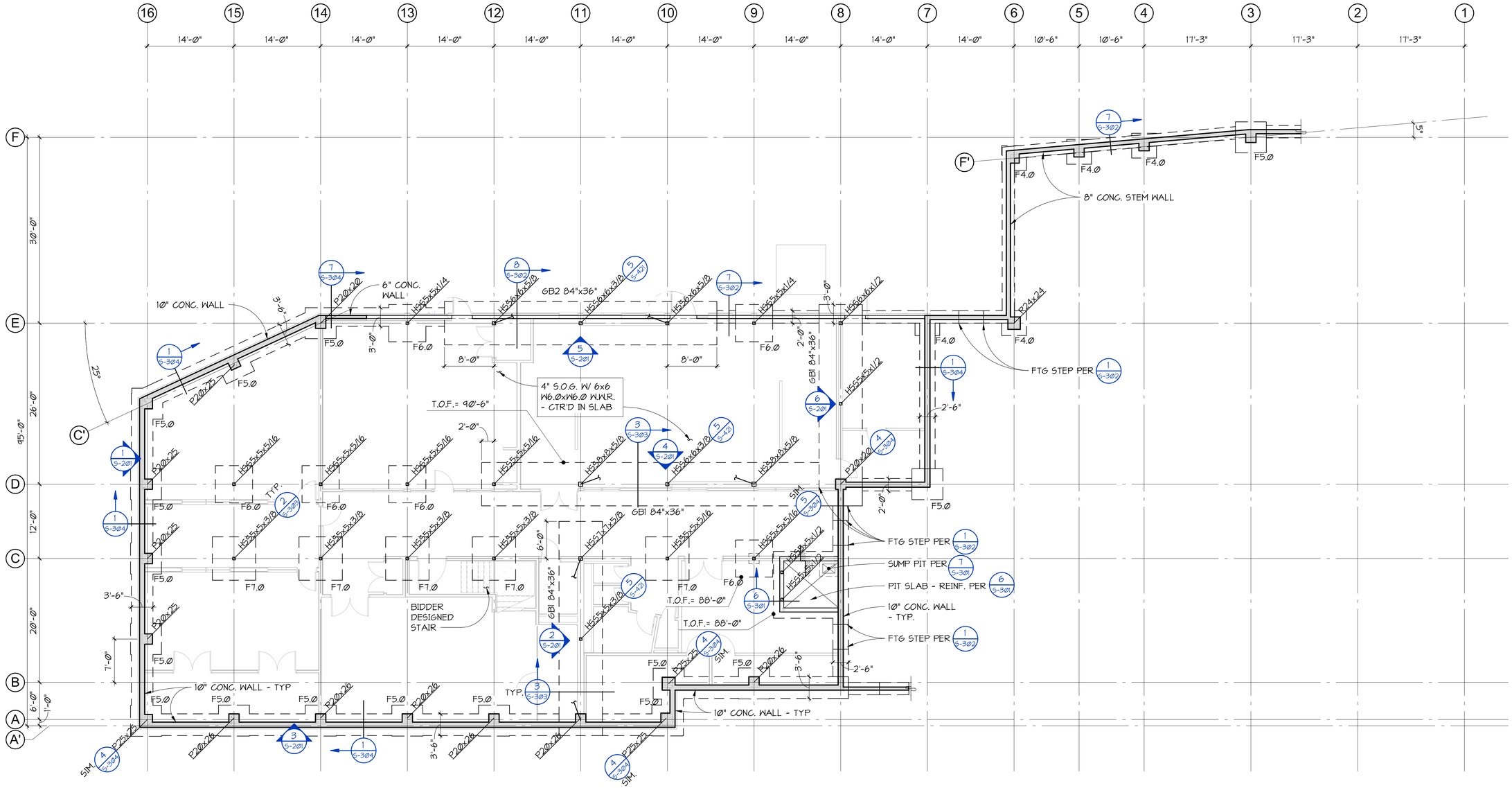





1 S-100 1/8" = 1'-0"

# LEVEL B01 FOUNDATION & GRADE LEVEL PLAN

FOUNDATION NOTES

1. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
2. TOP OF SLAB = 93'-0" UNLESS NOTED OTHERWISE.
3. TOP OF FOOTING ELEVATIONS = 91'-6" UNLESS NOTED OTHERWISE ON PLANS AND DETAILS.
4. "F_" INDICATES CONCRETE SPREAD FOOTING - SEE 1/S-303 FOR DETAIL AND SCHEDULE.
5. "GB-__"x_"" INDICATES CONCRETE GRADE BEAM TYPE, WIDTH AND DEPTH - SEE 3/S-303 FOR DETAIL AND SCHEDULE.
6. HSS5x5x3/8 W10x45 INDICATES STEEL COLUMNS ORIGINATING AT FOUNDATION LEVEL. ALL COLUMNS ARE CONTINUOUS TO ROOF UNLESS NOTED OTHERWISE. FOR TYPICAL ANCHOR ROD/BOLT DETAIL - SEE 1/S-403.
7. INDICATES CONCRETE WALL.
8. INDICATES CONCRETE WALL FOOTING, 1'-6" WIDE UNLESS NOTED OTHERWISE - SEE SHEETS S-302 AND S-303 FOR TYPICAL FOUNDATION DETAILS.
9. X X.XX INDICATES STEEL BRACED FRAME - SEE ELEVATIONS FOR MEMBER SIZES AND DETAILS. ALL MEMBERS AND CONNECTIONS ARE PART OF THE SEISMIC FORCE RESISTING SYSTEM.
10. FOR TYPICAL CONCRETE SLAB-ON-GRADE DETAILS - SEE SHEET S-301.
11. FOR TYPICAL PLACEMENT OF CONCRETE WALL REINFORCEMENT, STEPS IN FOOTINGS, AND FOUNDATION CONSTRUCTION JOISTS - SEE DETAILS 3/S-302, 1/S-302, AND 5/S-302.
12. NON-STRUCTURAL STUD WALLS ARE NOT SHOWN OR ARE SHOWN SCREENED. FOR LOCATIONS - SEE ARCHITECTURAL DRAWINGS.
13. P_"x"x" INDICATES CONCRETE PILASTER SIZE.

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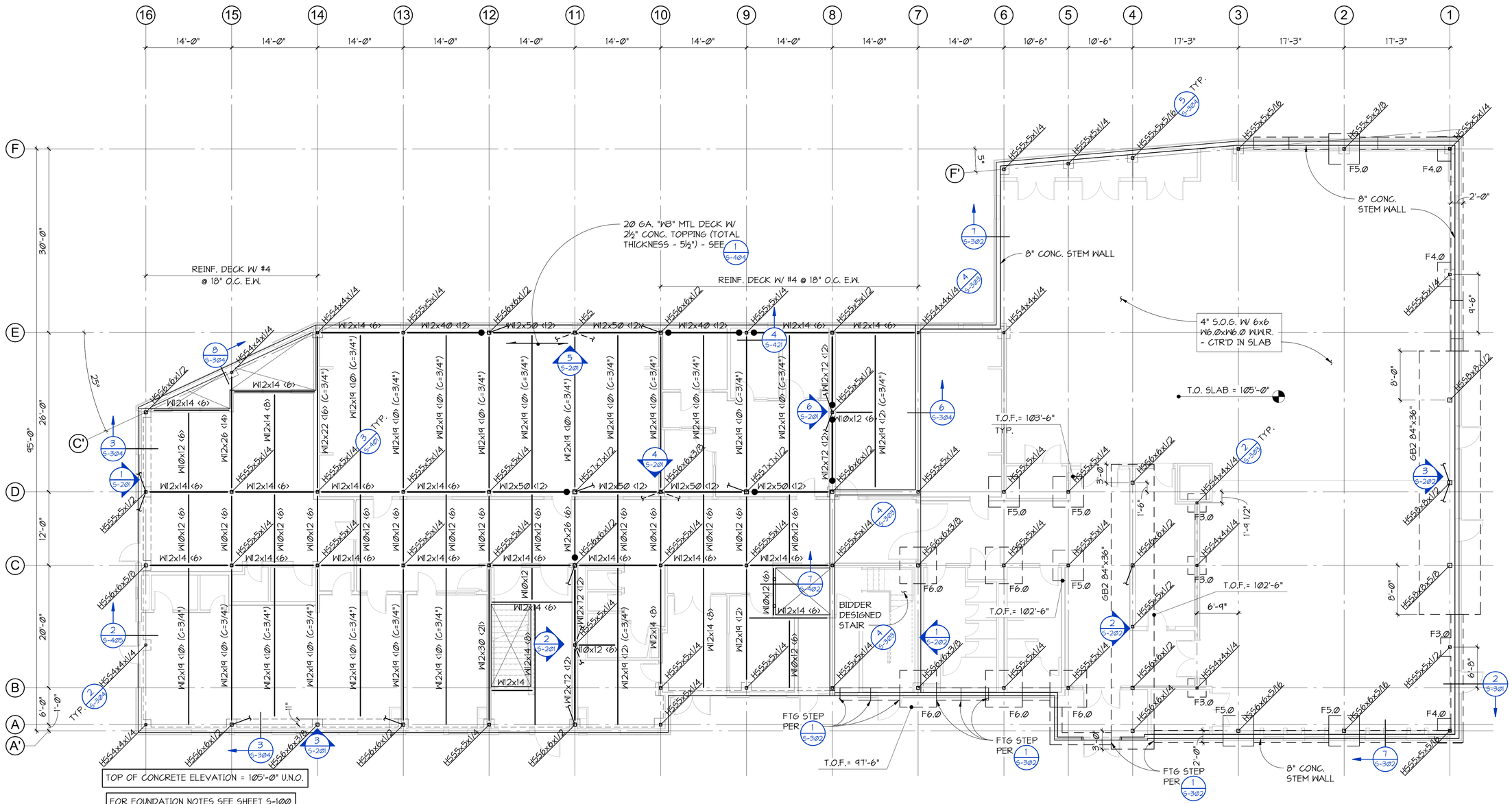
LEVEL B01 FOUNDATION & GRADE LEVEL PLAN

S-100



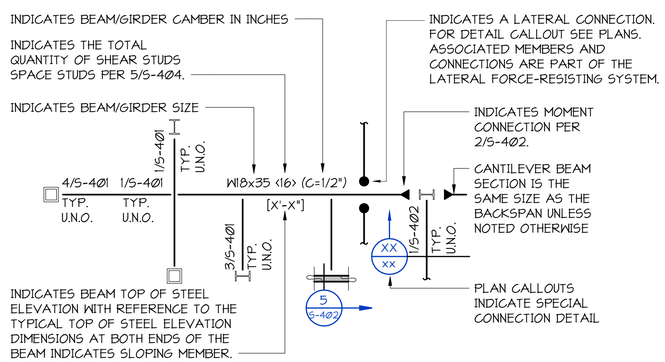

NORTH

1/S-101 1/8" = 1'-0"

# LEVEL L01 FOUNDATION & FLOOR FRAMING PLAN

FLOOR FRAMING NOTES

1. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
2. INDICATES PENETRATION IN FLOOR OR ROOF STRUCTURE. NOT ALL OPENINGS ARE SHOWN. FOR ADDITIONAL OPENINGS IN ROOF - SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
3. HSS5x5x3/8 W10x45 — INDICATES STEEL COLUMNS ORIGINATING AT FLOOR LEVEL UNLESS NOTED OTHERWISE.
4. INDICATES STEEL COLUMN DISCONTINUOUS AT FLOOR OR ROOF.
5. HSS W — INDICATES COLUMN CONTINUING FROM LEVEL BELOW TO LEVEL ABOVE.
6. INDICATES SPAN DIRECTION OF METAL DECK. FOR TYPICAL COMPOSITE DECK AND METAL DECK DETAILS - SEE SHEETS S-404, S-405 AND S-406.
7. X / X.XX — INDICATES STEEL BRACED FRAME - SEE ELEVATIONS FOR MEMBER SIZES AND DETAILS. ALL MEMBERS AND CONNECTIONS ARE PART OF THE SEISMIC FORCE RESISTING SYSTEM.
8. NON-STRUCTURAL STUD WALLS ARE NOT SHOWN OR ARE SHOWN SCREENED. FOR LOCATIONS - SEE ARCHITECTURAL DRAWINGS.
9. INDICATES DEPRESSED OR SLOPED SLAB. FOR SLOPE AND EXACT LOCATION - SEE ARCHITECTURAL DRAWINGS. MAXIMUM DEPRESSION = 1/2".
10. 1500# — INDICATES MAXIMUM WEIGHT OF MECHANICAL UNIT HUNG BELOW STRUCTURE - SEE MECHANICAL AND ARCHITECTURAL FOR LOCATION.
11. 1500# — INDICATES MAXIMUM WEIGHT OF MECHANICAL UNIT - SEE MECHANICAL AND ARCHITECTURAL FOR LOCATION AND HOUSEKEEPING PADS.
12. FOR TYPICAL STEEL CONNECTION DETAILS - SEE SHEET S-401. SEE BRACED FRAME ELEVATIONS FOR CONNECTION CALLOUTS. ALL MEMBERS AND CONNECTIONS THAT ARE PART OF A BRACED FRAME SHALL BE CONSIDERED PART OF THE LATERAL FORCE-RESISTING SYSTEM.





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LEVEL L01 FOUNDATION & FLOOR FRAMING PLAN

S-101


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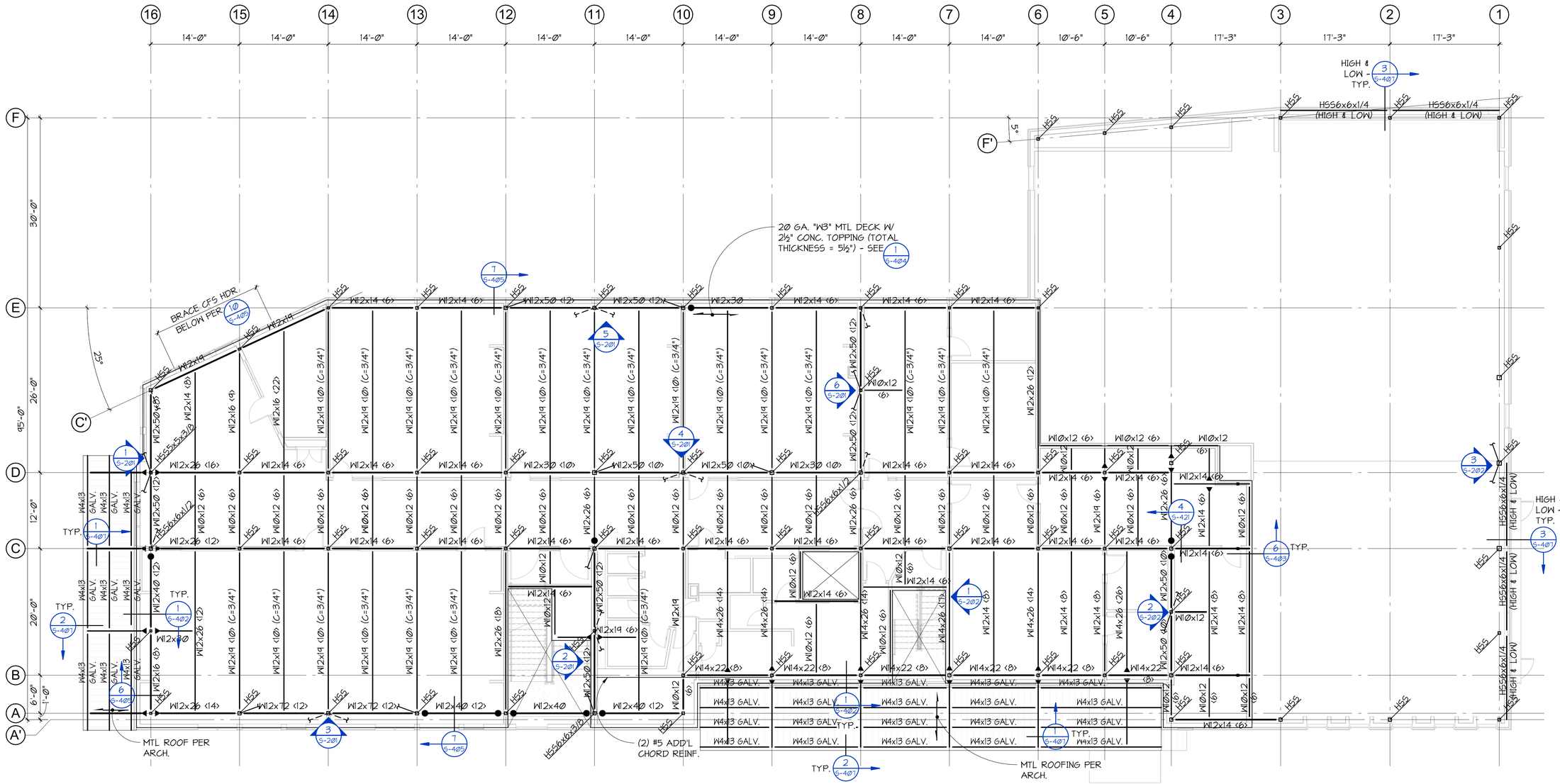


TOP OF CONCRETE ELEVATION = 117'-0" U.N.O.

SEE SHEETS S-101 AND S-104 FOR PLAN NOTES

NORTH

1 S-102 LEVEL L02 FLOOR FRAMING PLAN

1/8" = 1'-0"


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LEVEL L02 FLOOR FRAMING PLAN

S-102


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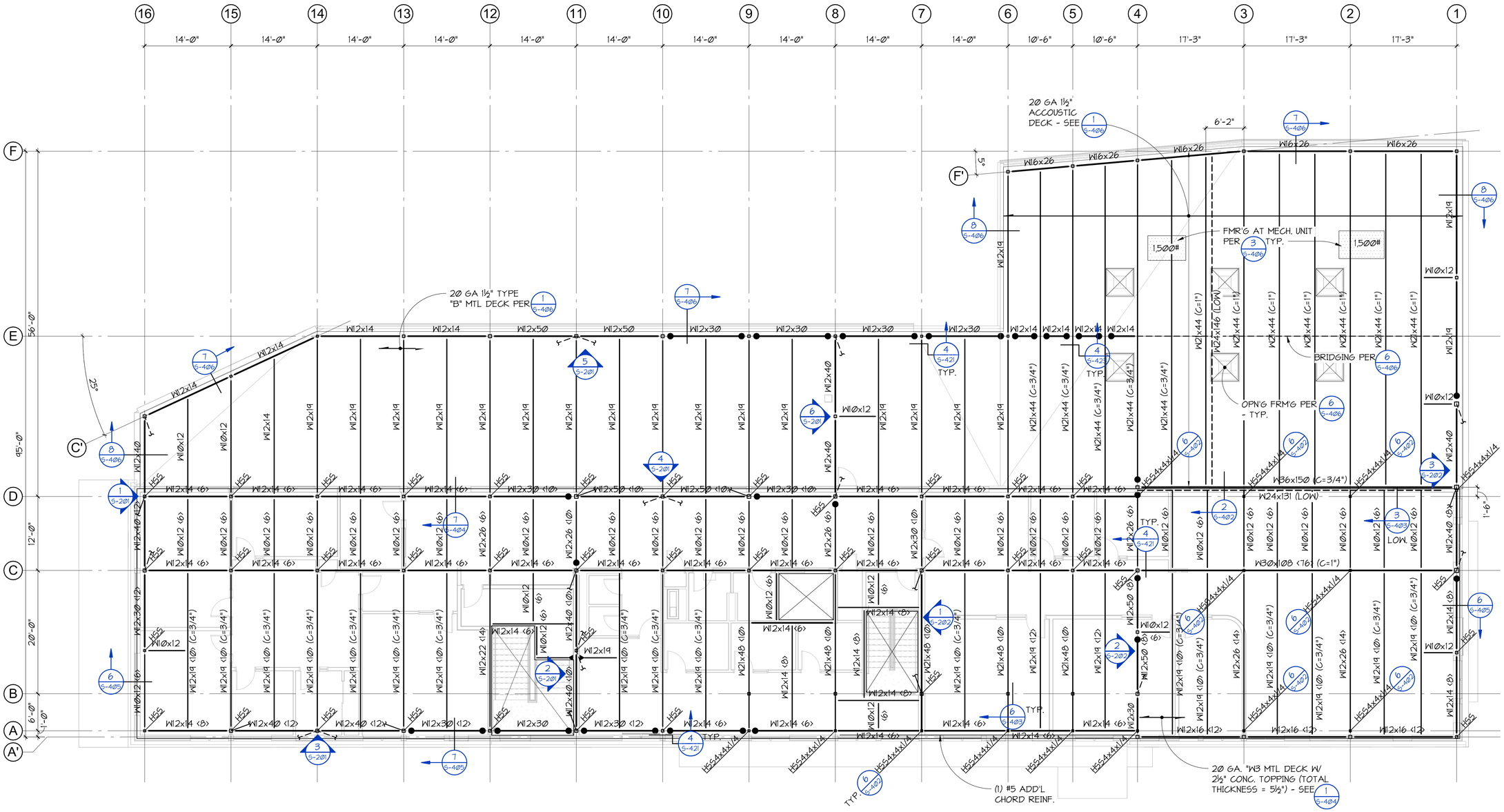


TOP OF CONCRETE ELEVATION = 129'-0" U.N.O.

SEE SHEETS S-101 AND S-104 FOR PLAN NOTES

NORTH

1 S-103 LEVEL L03 FLOOR & LOW ROOF FRAMING PLAN

1/8" = 1'-0"


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LEVEL L03 FLOOR & LOW ROOF FRAMING PLAN

S-103


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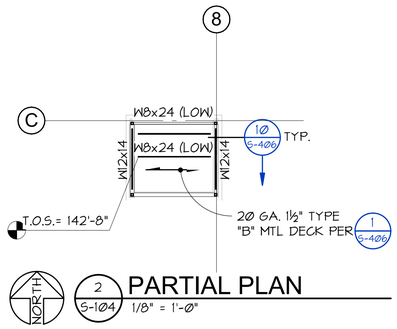
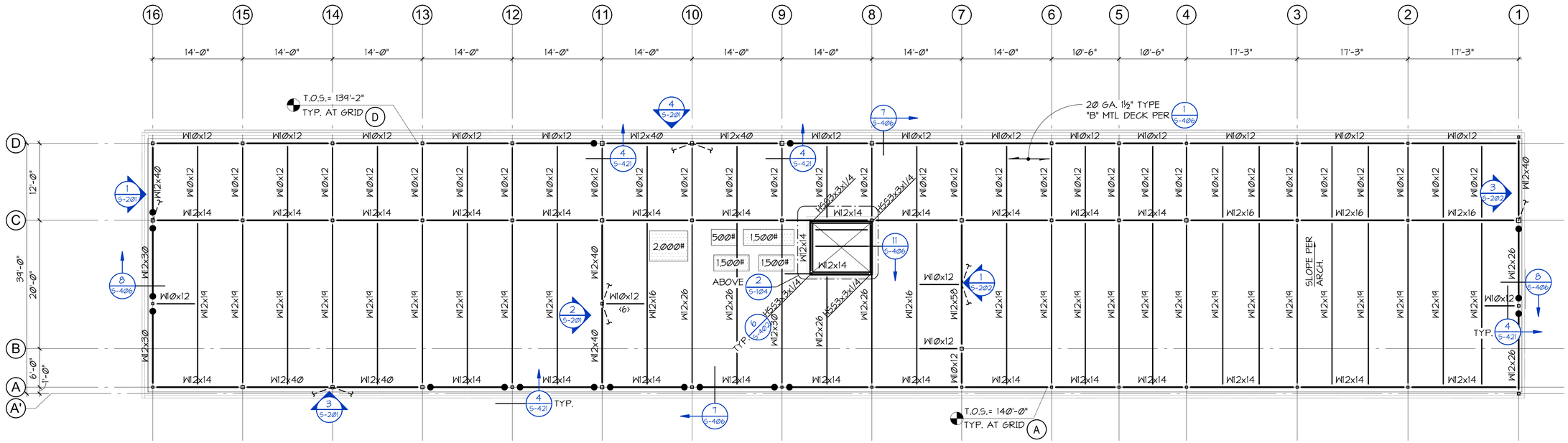



PARTIAL PLAN

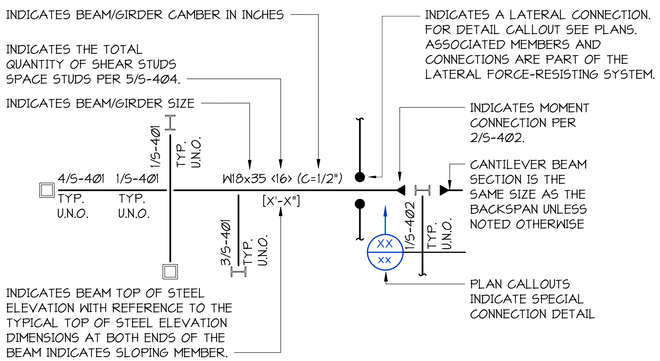



ROOF FRAMING PLAN

NORTH 1 S-104 1/8" = 1'-0"

ROOF FRAMING NOTES

1. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
2. INDICATES PENETRATION IN FLOOR OR ROOF STRUCTURE. NOT ALL OPENINGS ARE SHOWN. FOR ADDITIONAL OPENINGS IN ROOF SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
3. INDICATES SPAN DIRECTION OF METAL DECK. FOR TYPICAL METAL DECK DETAILS - SEE SHEET S-406.
4. INDICATES STEEL COLUMN DISCONTINUOUS AT FLOOR OR ROOF.
5. INDICATES STEEL BRACED FRAME. SEE ELEVATIONS FOR MEMBER SIZES AND DETAILS. ALL MEMBERS AND CONNECTIONS ARE PART OF THE SEISMIC FORCE RESISTING SYSTEM.
6. 1500# INDICATES MAXIMUM WEIGHT OF MECHANICAL UNIT HUNG BELOW STRUCTURE - SEE MECHANICAL AND ARCHITECTURAL FOR LOCATION.
7. 1500# INDICATES MAXIMUM WEIGHT OF MECHANICAL UNIT - SEE MECHANICAL AND ARCHITECTURAL FOR LOCATION AND HOUSEKEEPING PADS. SEE 3/S-406 FOR ADDED STEEL FRAMING AT UNIT.
8. FOR TYPICAL STEEL CONNECTION DETAILS - SEE SHEET S-401. SEE BRACED FRAME ELEVATIONS FOR CONNECTION CALLOUTS. ALL MEMBERS AND CONNECTIONS THAT ARE PART OF A BRACED FRAME SHALL BE CONSIDERED PART OF THE LATERAL FORCE-RESISTING SYSTEM.




9. SEE ARCH FOR FALL RESTRAINT LOCATIONS. SEE 5/S-403 FOR ADDITIONAL REQUIREMENTS.

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ROOF FRAMING PLAN

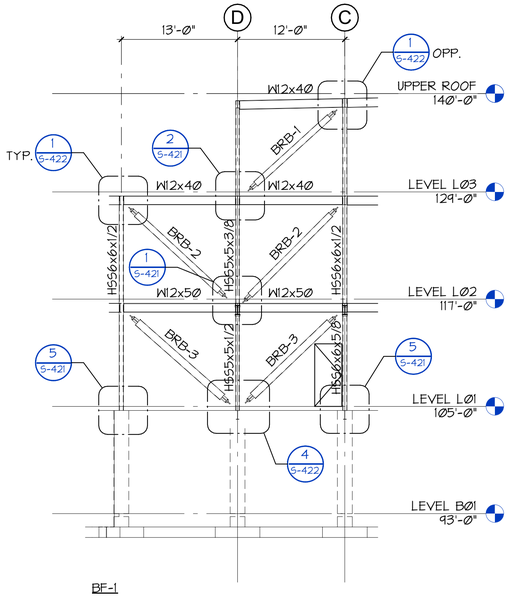
S-104

# BUCKLING RESTRAINED BRACE SCHEDULE

| BRACED FRAME | BRACE TYPE | BRACE AXIAL FORCE (KIPS) | AREA OF STEEL CORE ($IN^2$) | STIFFNESS MODIFICATION FACTOR (KF) | MAXIMUM INELASTIC STORY DRIFT $\Delta M$ (in.) | MAXIMUM CASING SIZE (INxIN) | REDUNDANCY ($\rho$) |
|---|---|---|---|---|---|---|---|
| BF-1 | BRB-1 | 40 | 2.0 | 1.3 | 1.2 | 8x8 | 1.3 |
| | BRB-2 | 50 | 2.0 | 1.35 | 1.0 | 8x8 | |
| | BRB-3 | 65 | 3.0 | 1.30 | 1.0 | 10x10 | |
| BF-2 | BRB-4 | 15 | 2.0 | 1.35 | 0.5 | 8x8 | |
| | BRB-5 | 45 | 2.0 | 1.25 | 1.0 | 8x8 | |
| | BRB-6 | 55 | 2.5 | 1.35 | 0.75 | 8x8 | |
| | BRB-7 | 55 | 2.5 | 1.45 | 0.5 | 8x8 | |
| BF-3 | BRB-8 | 30 | 2.0 | 1.30 | 0.75 | 8x8 | |
| | BRB-9 | 60 | 2.5 | 1.35 | 1.0 | 8x8 | |
| | BRB-10 | 130 | 5.5 | 1.25 | 1.0 | 10x10 | |
| BF-4 | BRB-11 | 35 | 2.25 | 1.45 | 0.75 | 8x8 | |
| | BRB-12 | 85 | 3.25 | 1.30 | 1.0 | 10x10 | |
| | BRB-13 | 75 | 3.25 | 1.30 | 0.75 | 10x10 | |
| | BRB-14 | 75 | 3.25 | 1.35 | 0.5 | 10x10 | |
| BF-5 | BRB-15 | 65 | 2.5 | 1.35 | 1.0 | 8x8 | |
| | BRB-16 | 75 | 3.0 | 1.30 | 1.0 | 8x8 | |
| | BRB-17 | 75 | 3.0 | 1.35 | 0.5 | 8x8 | |
| BF-6 | BRB-18 | 35 | 2.0 | 1.30 | 1.0 | 8x8 | |
| | BRB-19 | 40 | 2.5 | 1.35 | 0.75 | 8x8 | |
| BF-7 | BRB-20 | 20 | 2.5 | 1.50 | 0.5 | 8x8 | |
| BF-8 | BRB-21 | 90 | 3.5 | 1.40 | 1.0 | 10x10 | |
| | BRB-22 | 125 | 6.0 | 1.45 | 0.75 | 10x10 | |
| BF-9 | BRB-23 | 35 | 2.0 | 1.45 | 1.0 | 8x8 | |
| | BRB-24 | 70 | 3.0 | 1.20 | 2.1 | 10x10 | |

BUCKLING RESTRAINED BRACE SCHEDULE NOTES:

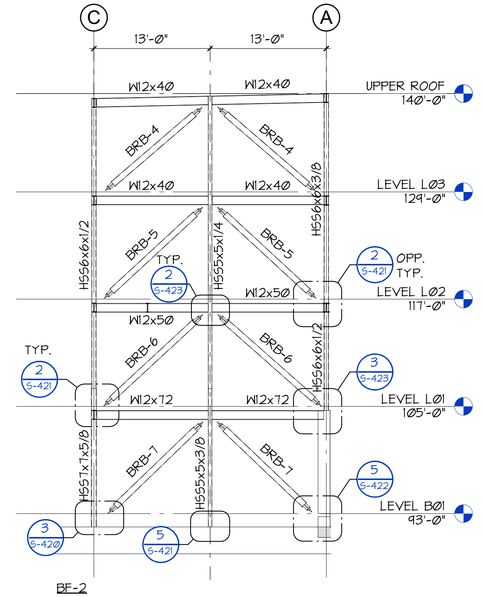
1. ALL MEMBERS AND CONNECTIONS ARE PART OF THE LATERAL FORCE-RESISTING SYSTEM.
2. BUCKLING RESTRAINED BRACES ARE TO BE TESTED PER THE PROVISIONS OF THE AISC341-16. SUPPLIER TO SUBMIT PROOF OF EACH BRACES COMPLIANCE WITH THE QUALIFIED LOAD AND STRAIN RANGES.
3. Pu GIVEN IS THE GOVERNING CODE LEVEL FORCE IN THE BRACE, USING LRFD FORCE LEVELS.
   Pu ≤ Ø.9 x Asc x Fymin.
4. Fysc IS THE ACTUAL YIELD STRESS OF THE STEEL CORE AS DETERMINED BY COUPON TESTING. 38ksi ≤ Fysc ≤ 46ksi. CHARPY TESTING REQUIRED WHEN THICKNESS OF CORE MATERIAL EXCEEDS 2".
5. BRACE STIFFNESS Keff TO BE KFxAscxE/Lwp±1Ø%. WHERE THE VALUES FOR STIFFNESS MODIFICATION FACTOR (KF) AND Asc ARE TAKEN FROM THE TABLE AND Lwp IS THE WORKPOINT TO WORKPOINT LENGTH OF THE BRACE.
6. BRACE STRAINS TO BE ESTIMATED USING 2x$\Delta_M$DRIFTS.
7. MAXIMUM $\beta$ω NOT TO EXCEED 2.1Ø. MAXIMUM $\beta$ NOT TO EXCEED 1.45.
8. WELDED, BOLTED, SCREWED OR SHOT IN ATTACHMENTS FOR NON-STRUCTURAL ELEMENTS ARE PROHIBITED IN THE PROTECTED ZONE - SEE 2/S-42Ø.




BF-1

1 S-2Ø1 **BRACED FRAME ELEVATION**

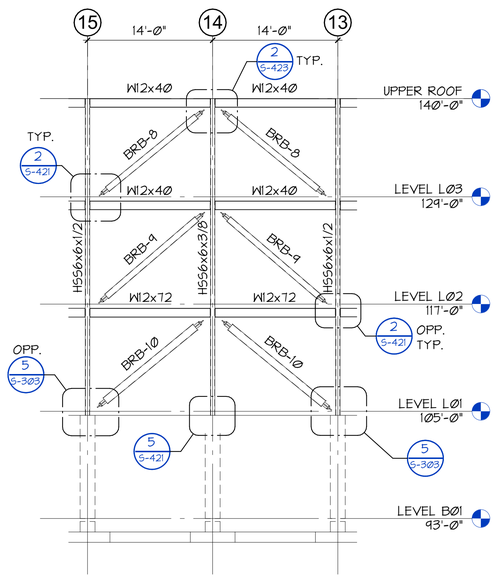
1/8" = 1'-Ø"




BF-2

2 S-2Ø1 **BRACED FRAME ELEVATION**

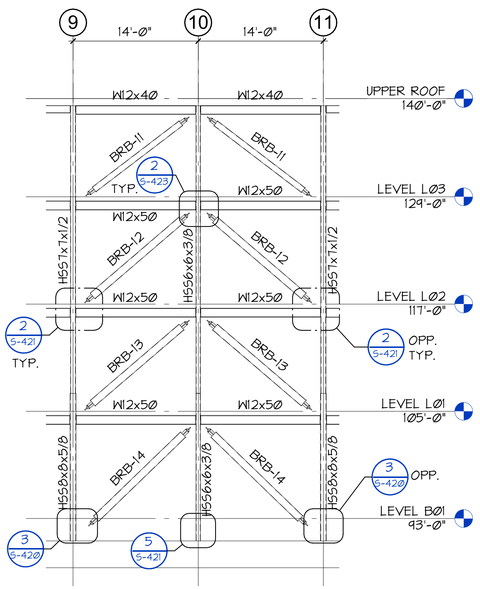
1/8" = 1'-Ø"




BF-3

3 S-2Ø1 **BRACED FRAME ELEVATION**

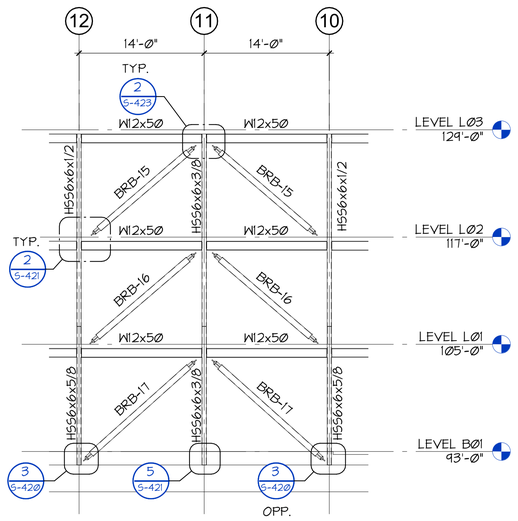
1/8" = 1'-Ø"




BF-4

4 S-2Ø1 **BRACED FRAME ELEVATION**

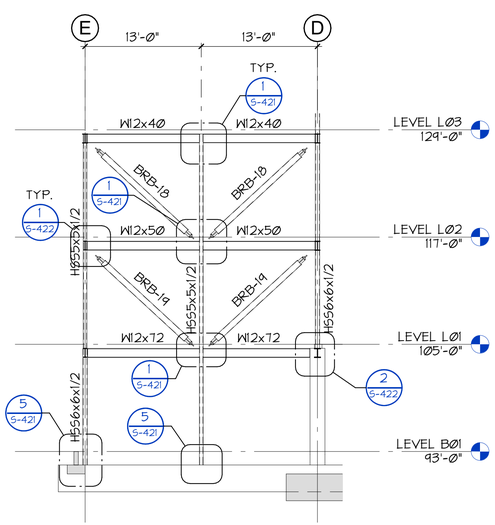
1/8" = 1'-Ø"




BF-5

5 S-2Ø1 **BRACED FRAME ELEVATION**

1/8" = 1'-Ø"




BF-6

6 S-2Ø1 **BRACED FRAME ELEVATION**

1/8" = 1'-Ø"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BRACED FRAME ELEVATIONS

# S-201


5/30/2025 1:57:42 PM C:_Revit Models\23080 HWT Pls 12 R2024 (Central)_BRyan@pcs-structural.com.rvt
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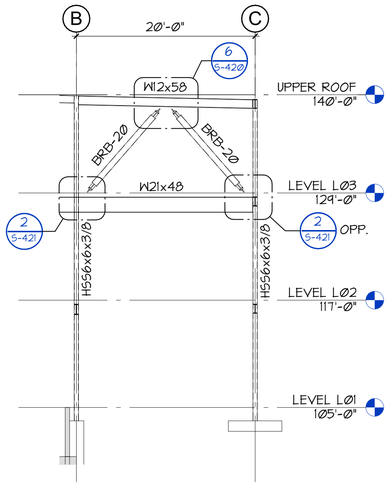
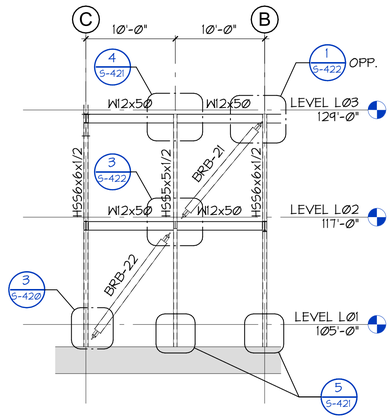



BF-7

1 S-202 BRACE FRAME ELEVATION

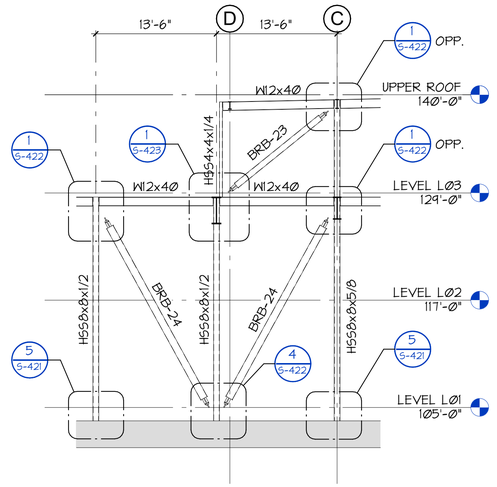
1/8" = 1'-0"




BF-8

2 S-202 BRACED FRAME ELEVATION

1/8" = 1'-0"




BF-9

3 S-202 BRACED FRAME ELEVATION

1/8" = 1'-0"

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BRACED FRAME ELEVATIONS

S-202

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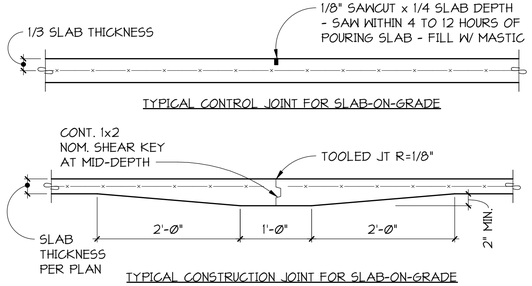
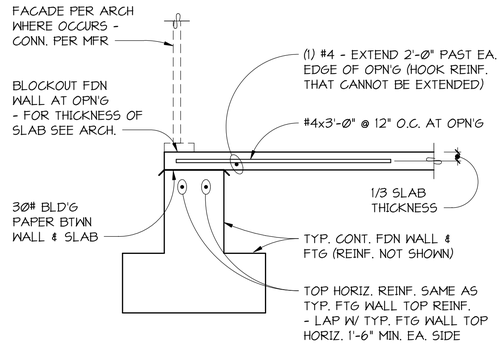
NOTE:
LOCATE JOINTS AT NON-BEARING WALLS WHERE POSSIBLE - SUBMIT PATTERN TO ARCHITECT FOR APPROVAL.




TYPICAL CONTROL JOINT FOR SLAB-ON-GRADE

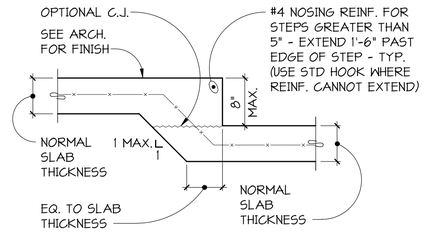
TYPICAL CONSTRUCTION JOINT FOR SLAB-ON-GRADE

1 / S-301 DETAIL
NO SCALE



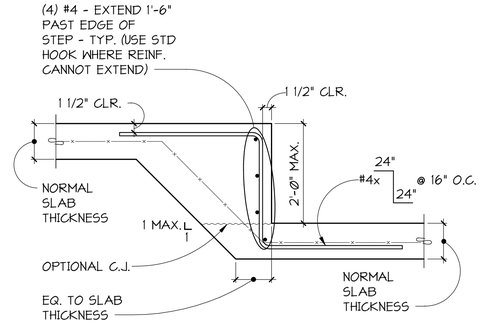

TYPICAL SLAB AT EXTERIOR OPENING

2 / S-301 SECTION
NO SCALE



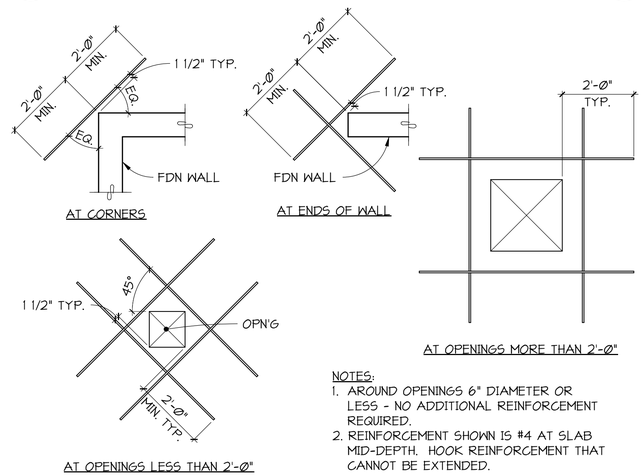

TYPICAL 8" OR LESS SLAB STEPS OR DEPRESSIONS

3 / S-301 DETAIL
NO SCALE




TYPICAL 8" TO 24" SLAB STEPS OR DEPRESSIONS

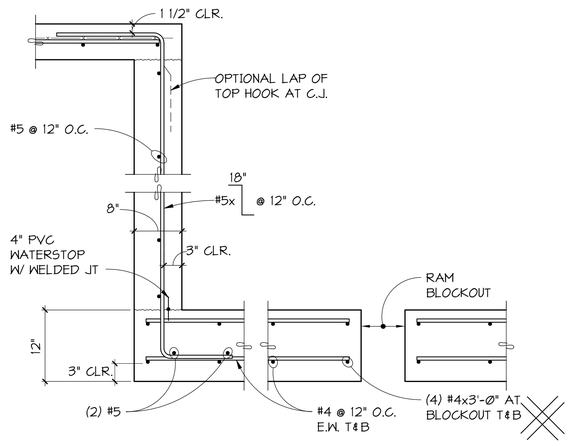
4 / S-301 DETAIL
NO SCALE




NOTES:
1. AROUND OPENINGS 6" DIAMETER OR LESS - NO ADDITIONAL REINFORCEMENT REQUIRED.
2. REINFORCEMENT SHOWN IS #4 AT SLAB MID-DEPTH. HOOK REINFORCEMENT THAT CANNOT BE EXTENDED.

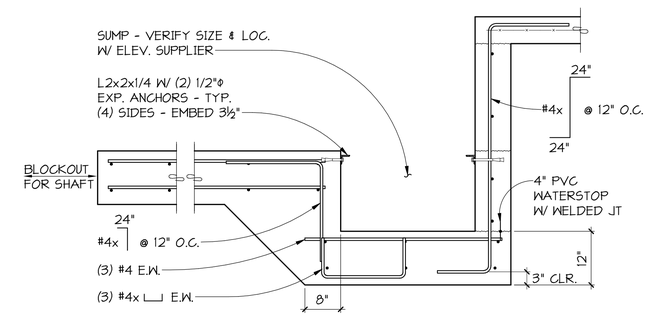
TYPICAL SLAB-ON-GRADE DISCONTINUITY REINFORCEMENT

5 / S-301 PLAN DETAILS
NO SCALE



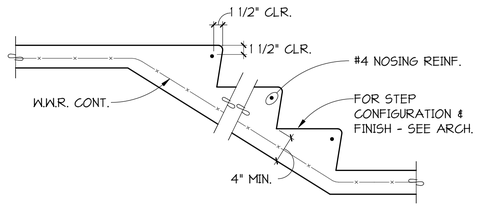

TYPICAL ELEVATOR PIT

6 / S-301 SECTION
NO SCALE




TYPICAL ELEVATOR PIT SUMP

7 / S-301 SECTION
NO SCALE




TYPICAL STAIR ON GRADE

8 / S-301 SECTION
NO SCALE

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S-301

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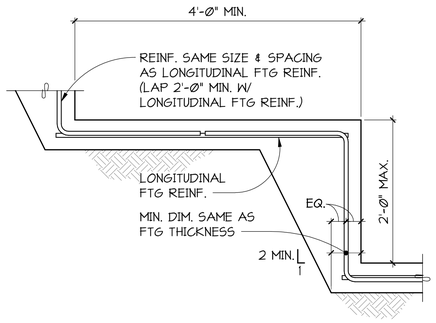
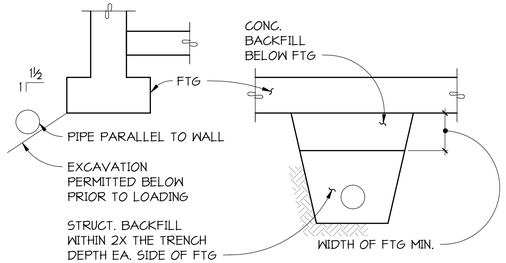



TYPICAL STEPPED FOOTING

1 / S-302 DETAIL
NO SCALE

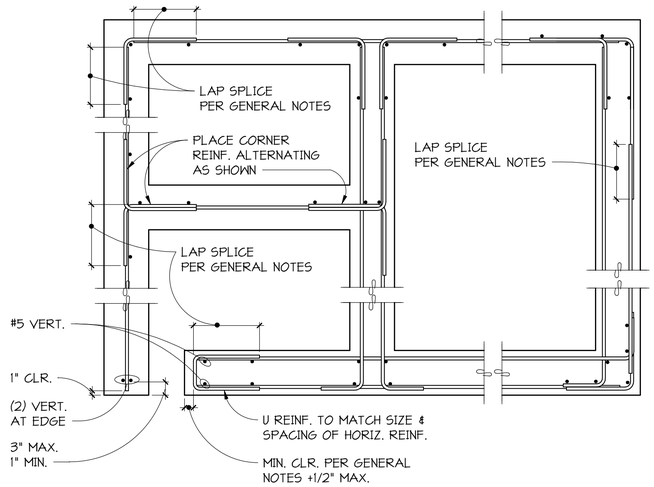



TYPICAL FOR PARALLEL PIPES ADJACENT TO FOOTINGS

TYPICAL FOR PERPENDICULAR PIPES UNDER FOOTINGS

NOTES:
1. FOUNDATIONS SHALL NOT BE LOADED PRIOR TO COMPLETING STRUCTURAL BACKFILL UNDER AND NEAR FOOTINGS.
2. CONCRETE BACKFILL SHALL BE USED UNDER FOOTINGS WHERE 95% COMPACTION CANNOT BE ACCOMPLISHED.
3. ALL STRUCTURAL BACKFILL NOTED SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY PER ASTM.
4. A PIPE SLEEVE SHALL BE PROVIDED FOR SHALLOW PIPES CAST IN CONCRETE.
5. PIPES SHALL NOT BE PLACED IN THE FOOTING WITHOUT SPECIFIC APPROVAL FROM THE ENGINEER.
6. FOR VARIATIONS CONTACT ENGINEER.

2 / S-302 SECTION
NO SCALE




NOTES:
1. VERTICAL REINFORCEMENT SHOWN IS ADDITIONAL IF NORMAL STEM WALL REINFORCEMENT IS NOT IN PROPER LOCATION.
2. CORNER REINFORCEMENT IS SAME SIZE AND SPACING AS HORIZONTAL REINFORCEMENT.
3. STANDARD HOOK MAY BE SUBSTITUTED FOR CORNER REINFORCEMENT - SEE NOTE #5.
4. REINFORCEMENT AT ALL CORNERS, ENDS, AND INTERSECTIONS OF WALLS SHALL BE PLACED IN ACCORDANCE WITH APPROPRIATE DETAIL SHOWN.
5. USE STANDARD HOOK FOR EMBEDMENT LESS THAN 24" PAST FACE OF WALL.

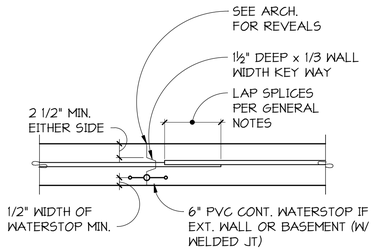
TYPICAL REINFORCEMENT PLACEMENT FOR CAST IN PLACE CONCRETE WALLS AND STEM WALLS

3 / S-302 DETAIL
NO SCALE



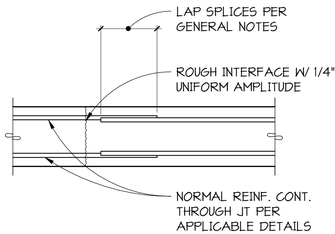

TYPICAL AT OPENINGS IN CAST IN PLACE CONCRETE WALLS

4 / S-302 SECTION
NO SCALE




TYPICAL AT VERTICAL WALL JOINTS

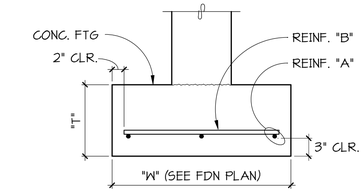
NOTE:
OBTAIN APPROVAL OF ENGINEER FOR LOCATION OF ANY CONSTRUCTION JOINT.




TYPICAL AT CONCRETE GRADE BEAMS AND FOOTINGS

TYPICAL CONSTRUCTION JOINTS FOR CAST IN PLACE CONCRETE WALLS, GRADE BEAMS, AND FOOTINGS

5 / S-302 SECTION
NO SCALE




| WIDTH "W" | "T" | REINFORCEMENT "A" CONTINUOUS | REINFORCEMENT "B" |
|---|---|---|---|
| 1'-6" | 10" | (2) #5 | --- |
| 2'-0" | 12" | (2) #5 | --- |
| 2'-6" | 12" | (3) #5 | #5 @ 24" O.C. |
| 3'-0" | 14" | (4) #5 | #5 @ 24" O.C. |
| 3'-6" | 14" | (4) #5 | #5 @ 18" O.C. |
| 4'-0" | 20" | (5) #5 | #6 @ 12" O.C. |

NOTES:
1. FOOTINGS SHALL BEAR ON UNDISTURBED OR COMPACTED MATERIAL PER GENERAL NOTES.
2. EXTEND FOOTINGS 6" MINIMUM PAST ENDS OF WALL UNLESS OTHERWISE NOTED.
3. WHERE FOOTINGS CHANGE WIDTHS LAP REINFORCEMENT "A". LAP SPLICE PER GENERAL NOTES.

TYPICAL CONTINUOUS FOOTING

6 / S-302 SECTION
NO SCALE




TYPICAL FOUNDATION AT EXTERIOR COLD-FORMED STEEL STUD WALL

7 / S-302 SECTION
NO SCALE




8 / S-302 SECTION
1" = 1'-0"

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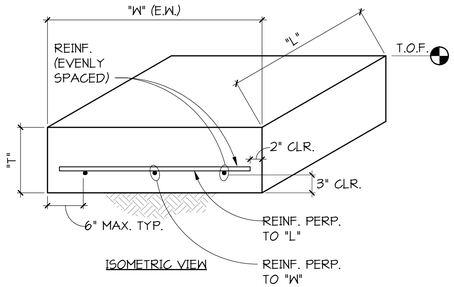
| MARK | DIMENSIONS | | | REINFORCEMENT EACH WAY - UNLESS NOTED OTHERWISE |
|---|---|---|---|---|
| | "W" | "L" | "T" | |
| F3.0 | 3'-0" | 3'-0" | 12" | (4) #4 |
| F4.0 | 4'-0" | 4'-0" | 12" | (4) #5 |
| F5.0 | 5'-0" | 5'-0" | 14" | (5) #5 |
| F6.0 | 6'-0" | 6'-0" | 14" | (6) #6 |
| F7.0 | 7'-0" | 7'-0" | 18" | (7) #6 |

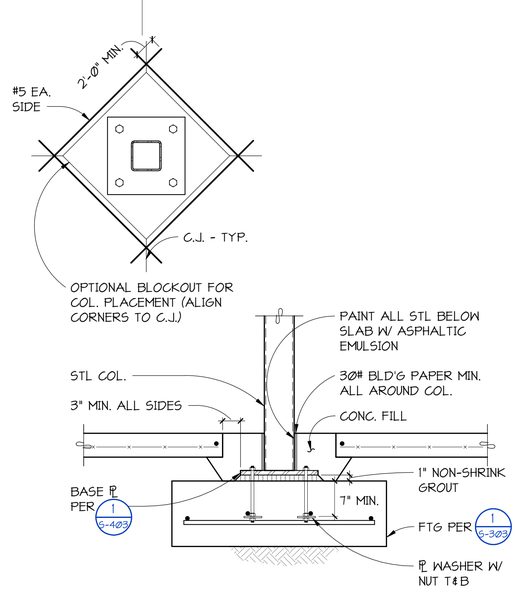



ISOMETRIC VIEW

NOTES:
1. CENTER ALL FOOTINGS ON COLUMN ABOVE EXCEPT AS SHOWN OTHERWISE.
2. FOOTINGS SHALL BEAR ON UNDISTURBED OR COMPACTED MATERIAL PER GENERAL NOTES. DESIGN BEARING PRESSURE IS 3000 POUNDS PER SQUARE FOOT.

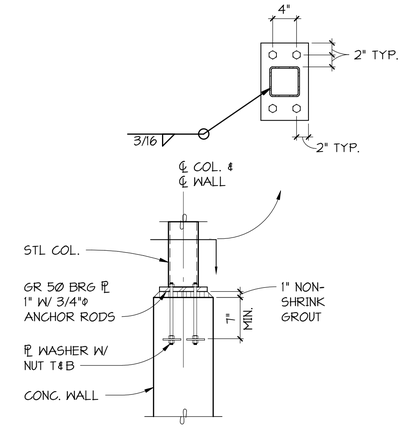
TYPICAL CONCRETE SPREAD FOOTING

1 S-303 **SECTION**
NO SCALE




TYPICAL STEEL COLUMN AT SPREAD FOOTING

2 S-303 **SECTION**
NO SCALE



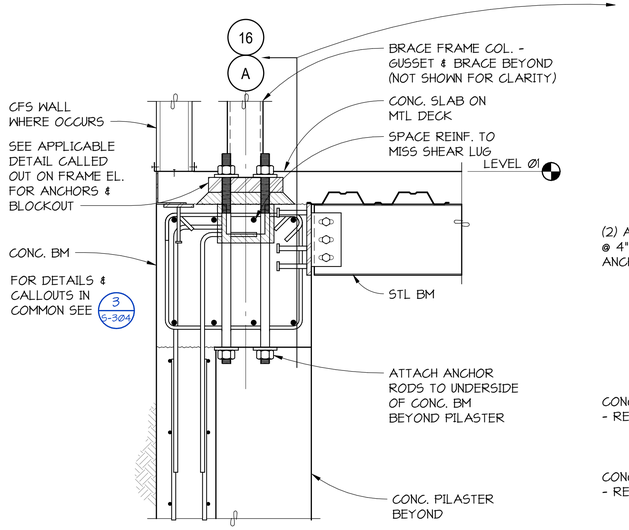

4 S-303 **SECTION**
1" = 1'-0"

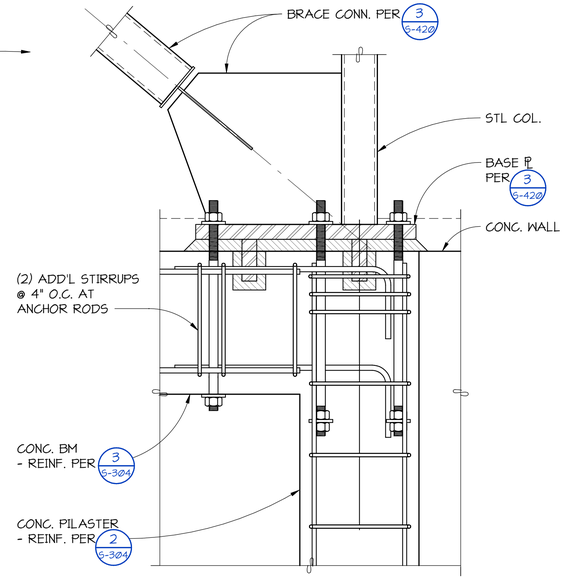



| REINFORCEMENT SCHEDULE | | | | |
|---|---|---|---|---|
| | TOP REINFORCEMENT | BOTTOM REINFORCEMNT | CROSS TIES | ANCHOR ROD EMBEDMENT |
| GB1 | (8) #8 | (8) #8 | (4) #5 | 24" |
| GB2 | (12) #8 | (12) #9 | (4) #5 | 24" |

TYPICAL GRADE BEAM REINFORCING AND SCHEDULE

3 S-303 **SECTION**
NO SCALE




5 S-303 **SECTION**
1" = 1'-0"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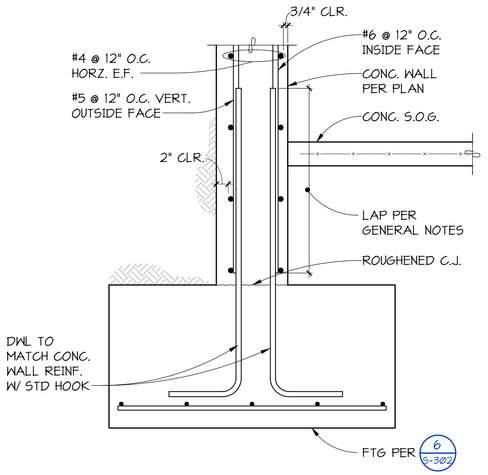
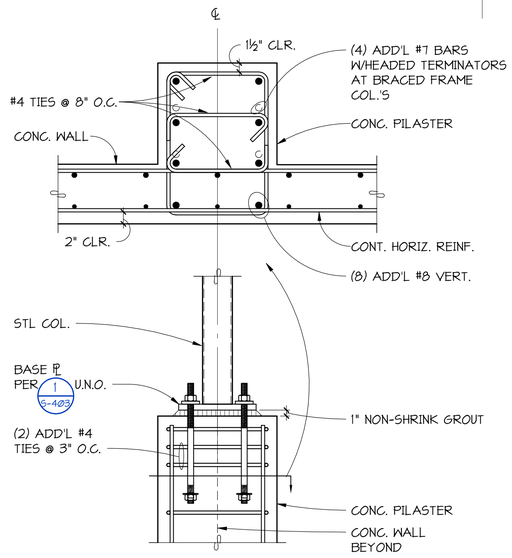


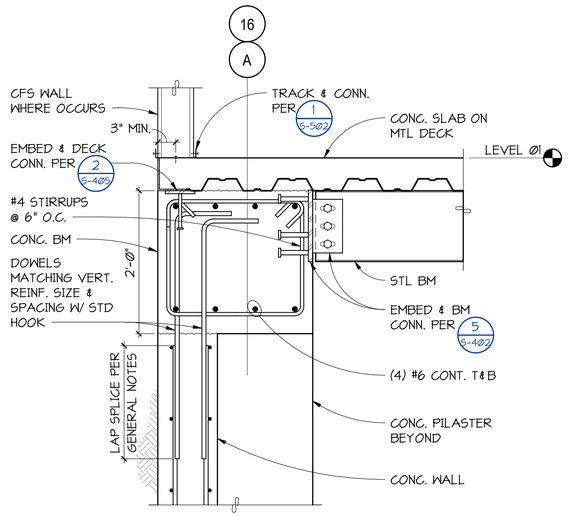

TYPICAL BASEMENT WALL CONNECTION TO FOOTING

1 S-304 **SECTION**
NO SCALE

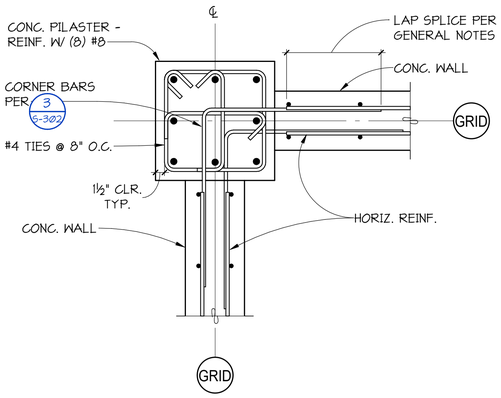



TYPICAL BASEMENT WALL PILASTER

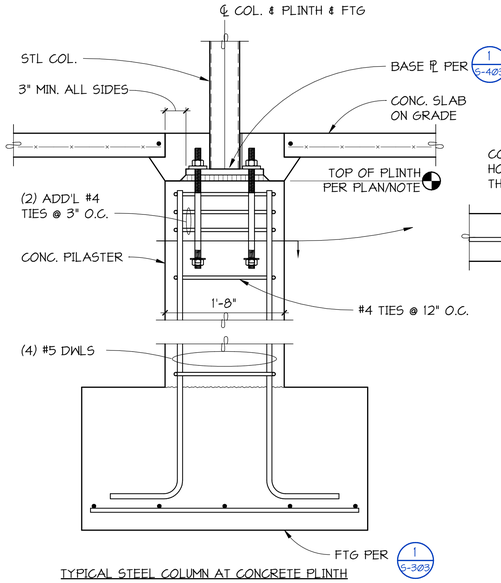
2 S-304 **SECTION**
NO SCALE




3 S-304 **SECTION**
1" = 1'-Ø"

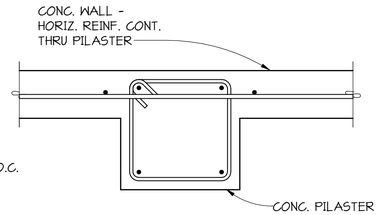



4 S-304 **PLAN DETAIL**
1" = 1'-Ø"

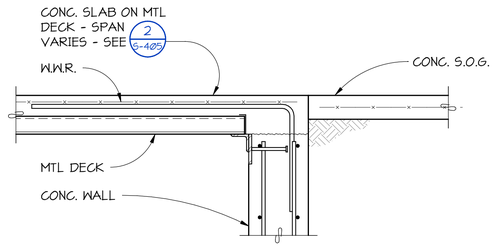



TYPICAL STEEL COLUMN AT CONCRETE PLINTH

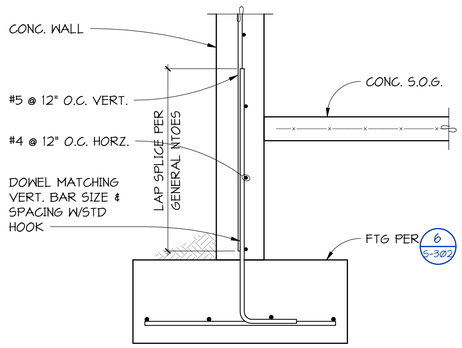
5 S-304 **SECTION**
1" = 1'-Ø"



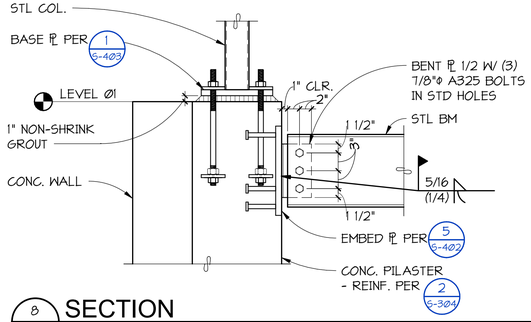

PLINTH AT PILASTER




6 S-304 **SECTION**
1" = 1'-Ø"




7 S-304 **SECTION**
1" = 1'-Ø"




8 S-304 **SECTION**
1" = 1'-Ø"

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FOUNDATION DETAILS

**S-304**

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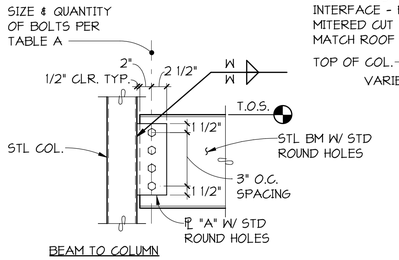
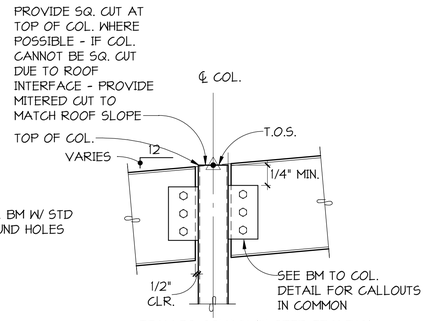
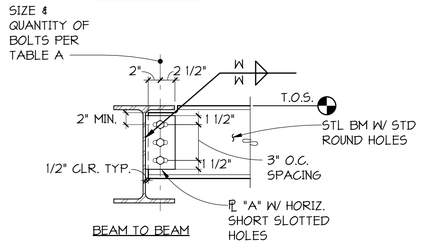


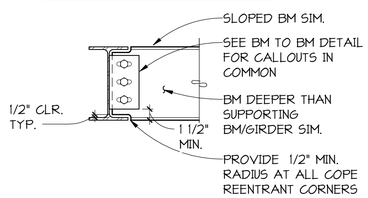

BEAM TO COLUMN



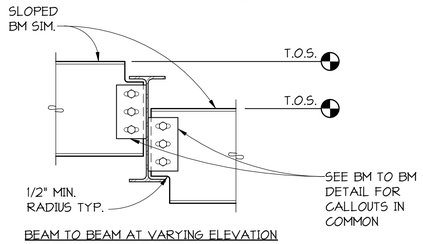

BEAM TO COLUMN (SLOPED FRAMING)




BEAM TO BEAM




BEAM TO BEAM SAME DEPTH




BEAM TO BEAM AT VARYING ELEVATION

| TABLE A | | | |
|---|---|---|---|
| SUPPORTED BEAM SIZE | QUANTITY OF 7/8" DIAMETER A325N BOLTS | SHEAR PLATE THICKNESS "A" | WELD "W" NOTE 1. |
| W10 | 2 | 3/8" | 5/16" |
| W12, W14 | 3 | 3/8" | 5/16" |
| W16, W18 | 4 | 3/8" | 5/16" |
| W21 | 5 | 3/8" | 5/16" |
| W24 | 6 | 3/8" | 5/16" |
| W27 | 7 | 3/8" | 5/16" |
| W30 | 7 | 3/8" | 5/16" |
| W33 | 8 | 3/8" | 5/16" |

NOTE:
1. WELD SIZE SHOWN IS FOR BEAM/GIRDERS FRAMING PERPENDICULAR INTO SUPPORTS. FOR SKEWED FRAMING CONNECTIONS - SEE TYPICAL STEEL DETAIL 2 / S-401

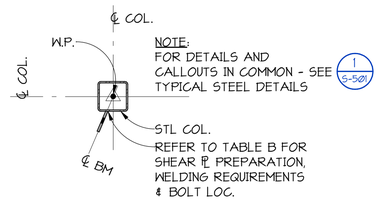
TYPICAL STEEL DETAIL

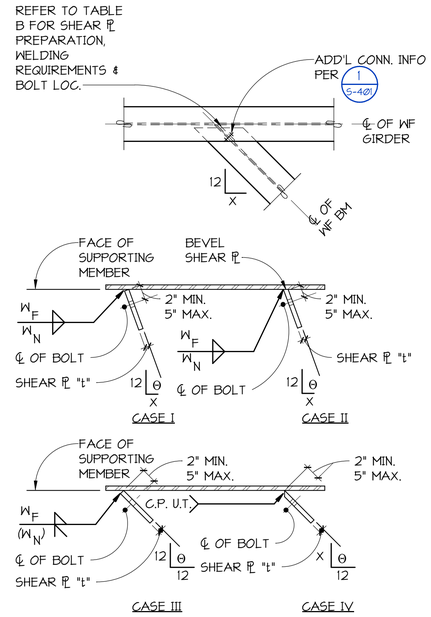
## 1 / S-401 DETAIL

NO SCALE

| TABLE B | | | | | |
|---|---|---|---|---|---|
| "t" | SKEW ANGLE Ø | DETAIL CASE | X | $W_N$ | $W_F$ |
| 3/8" | Ø ≤ 2° | CASE I | X ≤ 1/2 | 5/16 | 5/16 |
| 3/8" | 2° < Ø ≤ 11° | CASE I | 1/2 < X ≤ 2 5/16 | 3/8 | 5/16 |
| 3/8" | 11° < Ø ≤ 25° | CASE I | 2 5/16 < X ≤ 5 1/2 | 1/2 | 5/16 |
| 3/8" | 25° < Ø ≤ 30° | CASE I | 5 1/2 < X ≤ 7 | 9/16 | 5/16 |
| 3/8" | 30° < Ø < 45° | CASE II | 7 < X < 12 | 3/8 | 5/16 |
| 3/8" | Ø = 45° | CASE III | X = 12 | 1/4* | 5/16 |
| 3/8" | Ø > 45° | CASE IV | X < 12 | CP | - |

NOTES:
1. THE NUT MAY BE PLACED ON THE ACUTE ANGLE SIDE OF SHEAR PLATE. WHEN THIS SITUATION OCCURS, THE BOLT ASSEMBLY MAY BE INSTALLED AS SNUG TIGHT IN LIEU OF FULLY PRETENSIONED.
2. PROVIDE A COMPLETE PENETRATION WELD OF THE SHEAR PLATE TO THE SUPPORTING MEMBER WHERE THERE IS INSUFFICIENT CLEARANCE TO PLACE FILLET WELDS ON BOTH SIDES OF THE SHEAR PLATE.
3. *$W_N$ IS THE EFFECTIVE THROAT OF A PARTIAL PENETRATION WELD.

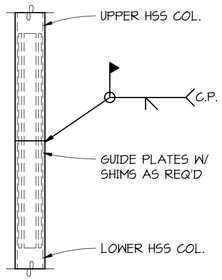



TYPICAL STEEL DETAIL AT ANGLED CONNECTIONS

## 2 / S-401 DETAIL

NO SCALE

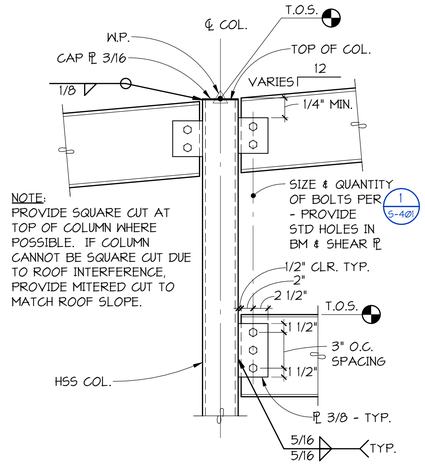



NOTE: COLUMN SPLICES SHALL BE LOCATED 4'-0" ABOVE FINISHED FLOOR ELEVATION U.N.O.

TYPICAL HSS COLUMN SPLICE

## 3 / S-401 SECTION

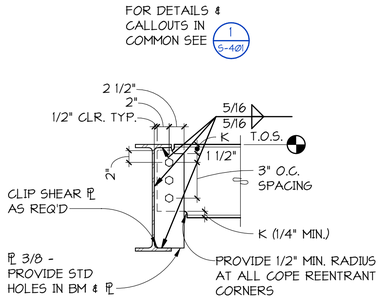
1" = 1'-0"




TYPICAL BEAM FRAMING INTO HOLLOW STRUCTURAL STEEL COLUMN

## 4 / S-401 DETAIL

NO SCALE




TYPICAL BEAM FRAMING AT FULL DEPTH SHEAR PLATE

## 5 / S-401 DETAIL

NO SCALE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STEEL FRAMING DETAILS

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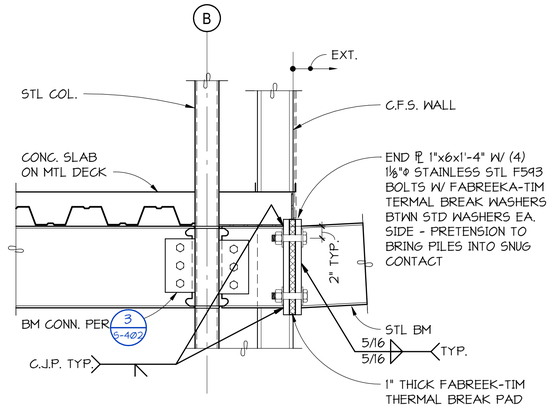
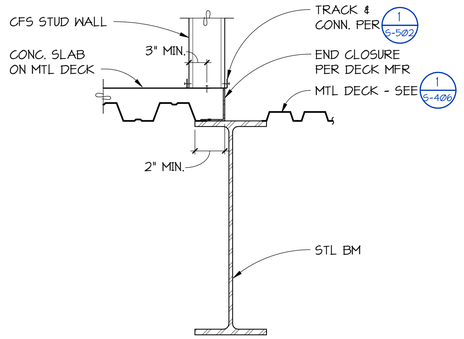
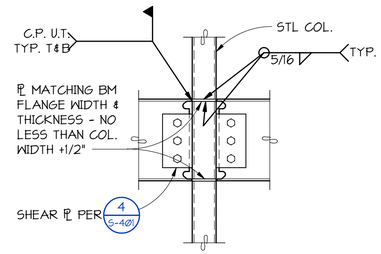



1 S-402 **SECTION**
1" = 1'-0"

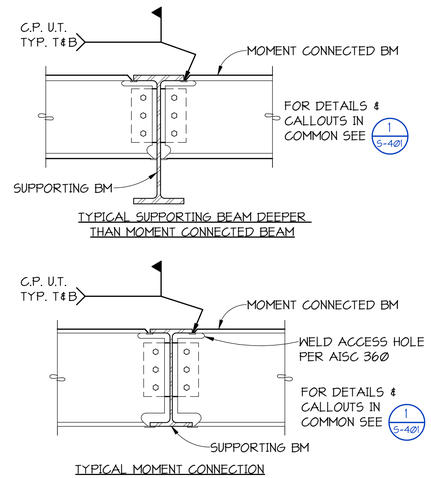



2 S-402 **SECTION**
1" = 1'-0"

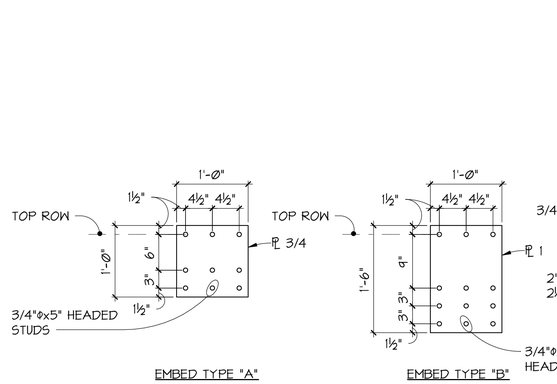



TYPICAL MOMENT CONNECTION AT HOLLOW STRUCTURAL SECTION COLUMN

3 S-402 **SECTION**
1" = 1'-0"

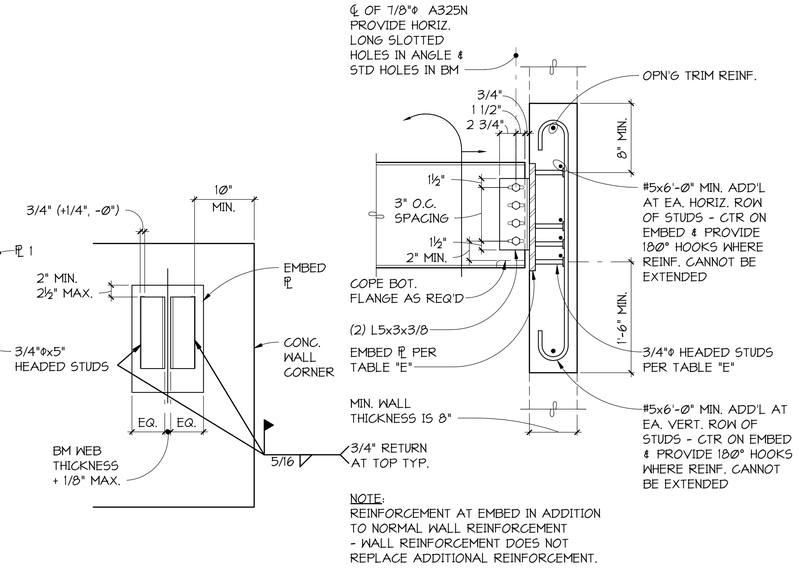



4 S-402 **DETAIL**
NO SCALE




EMBED TYPE "A" EMBED TYPE "B"

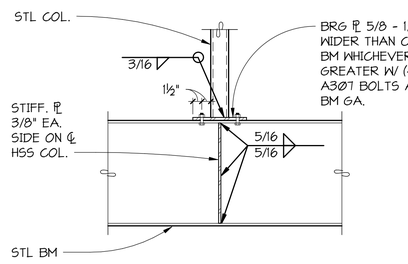
| TABLE E | | |
|---|---|---|
| BEAM SIZE | EMBED PLATE TYPE | QUANTITY OF 7/8" DIAMETER A325N BOLTS |
| W10 | "A" | 2 |
| W12, W14, W16 | "A" | 3 |
| W18, W21, W24 | "B" | 4 |
| W27, W30 | "B" | 5 |




NOTE:
REINFORCEMENT AT EMBED IN ADDITION TO NORMAL WALL REINFORCEMENT - WALL REINFORCEMENT DOES NOT REPLACE ADDITIONAL REINFORCEMENT.

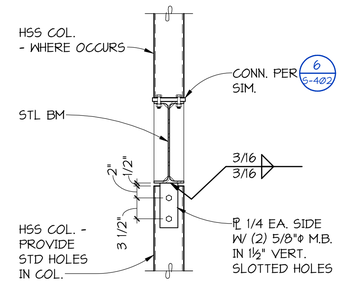
TYPICAL STEEL EMBED CONNECTION

5 S-402 **DETAIL**
NO SCALE




TYPICAL STEEL BEAM CONNECTION TO COLUMN ABOVE

6 S-402 **DETAIL**
NO SCALE




7 S-402 **SECTION**
NO SCALE

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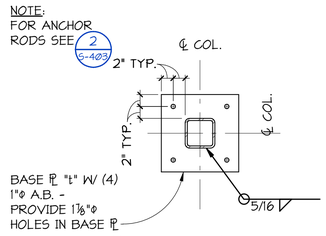


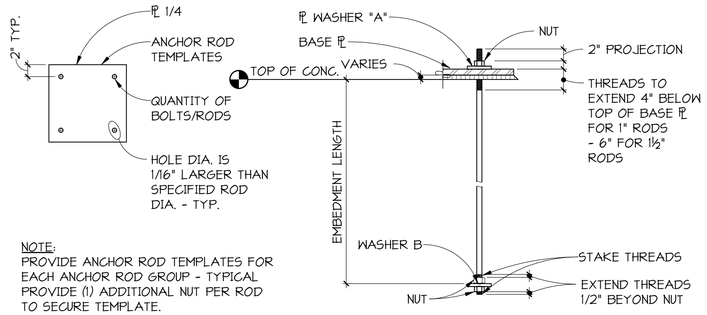

HOLLOW STRUCTURAL SECTION

| COLUMN SIZE | "t" (IN.) |
|---|---|
| HSS6x6 AND SMALLER | 1" |

TYPICAL GRAVITY COLUMN BASE PLATE

1 S-403 **DETAIL**

NO SCALE



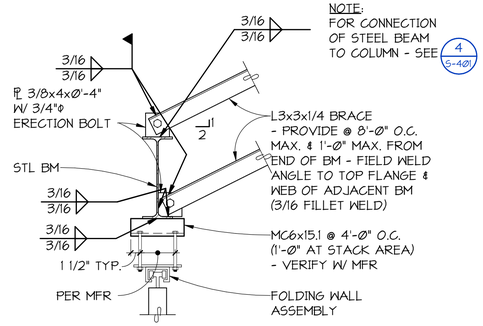

NOTE:
PROVIDE ANCHOR ROD TEMPLATES FOR EACH ANCHOR ROD GROUP - TYPICAL PROVIDE (1) ADDITIONAL NUT PER ROD TO SECURE TEMPLATE.

| ANCHOR ROD | | WASHER | | NUT |
|---|---|---|---|---|
| SIZE | MATERIAL | TYPE | SIZE | |
| 1"ø | F1554 GR. 36 | A | PL 3/8x3xØ'-3" W/ 1⅛"ø HOLE CTR'D | A563 GR. A HEAVY HEX |
| | | B | ASTM F844 CARBON FLAT WASHER | |

TYPICAL ANCHOR ROD/BOLT DETAIL

2 S-403 **DETAIL**

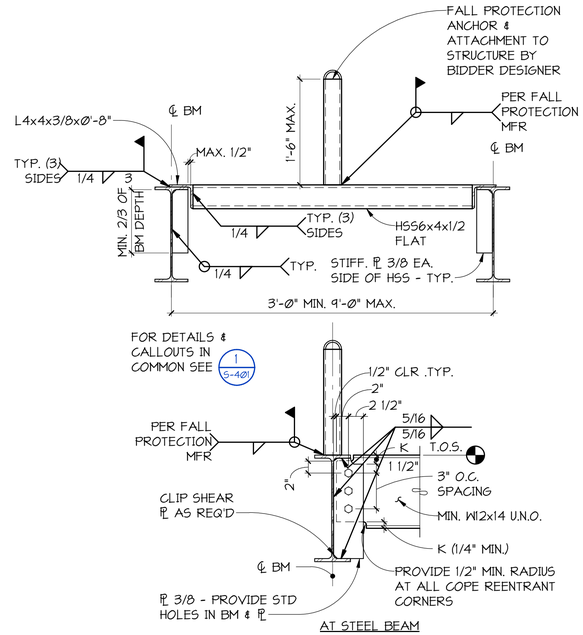
NO SCALE




TYPICAL MOVEABLE PARTITION SUPPORT BEAM

3 S-403 **SECTION**

NO SCALE

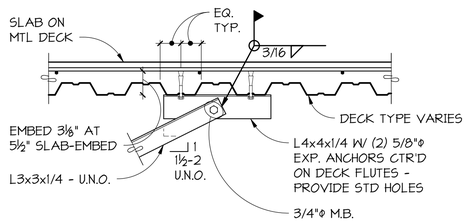



AT STEEL BEAM

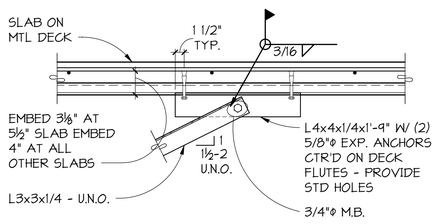
TYPICAL FALL RESTRAINT ANCHOR AT STEEL BEAM

5 S-403 **DETAIL**

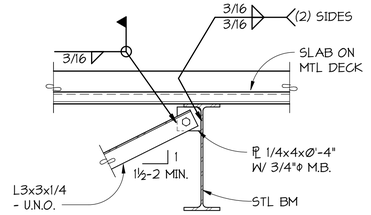
NO SCALE




KICKER PERPENDICULAR TO DECK FLUTES - DECK WITH CONCRETE TOPPING ONLY



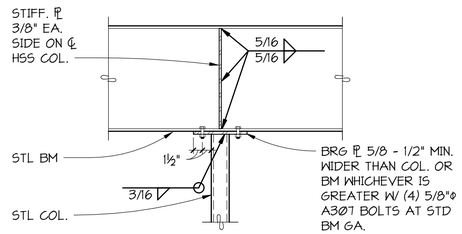

KICKER CONNECTION PARALLEL TO DECK FLUTES - DECK WITH CONCRETE TOPPING ONLY




KICKER CONNECTION TO STEEL BEAM

4 S-403 **SECTION**

NO SCALE




TYPICAL STEEL BEAM CONNECTION TO COLUMN BELOW

6 S-403 **SECTION**

1" = 1'-0"

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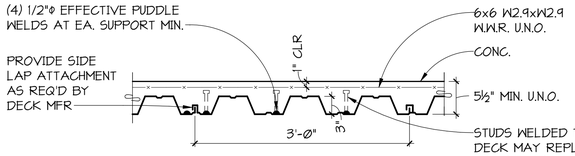
STEEL FRAMING DETAILS

S-403

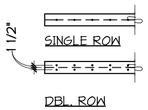


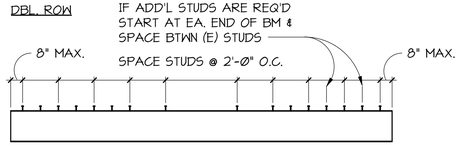

| TYPE "W-3" MIN. DECK PROPERTIES | | |
|---|---|---|
| GAGE | I = (in.⁴/ft.) | +S/-S = (in.³/ft) |
| 20 | .907 | .510/.528 |
| 18 | 1.213 | .752/.768 |
| 16 | 1.516 | .968/.966 |

NOTES:
1. (2) SPAN MINIMUM, (3) SPAN PREFERRED. WHERE SIMPLE SPAN SHOWN ON DRAWINGS, GENERAL CONTRACTOR TO PROVIDE SHORING.
2. AT SUPPORTS PARALLEL TO CORRUGATIONS, PROVIDE PUDDLE WELDS @ 24" O.C. MAXIMUM.
3. CONDUIT NOT PERMITTED IN SLAB.
4. SECTION PROPERTIES ARE BASED ON Fy = 50 KSI.

TYPICAL COMPOSITE FLOOR DECK

## 1 S-404 DETAIL
NO SCALE

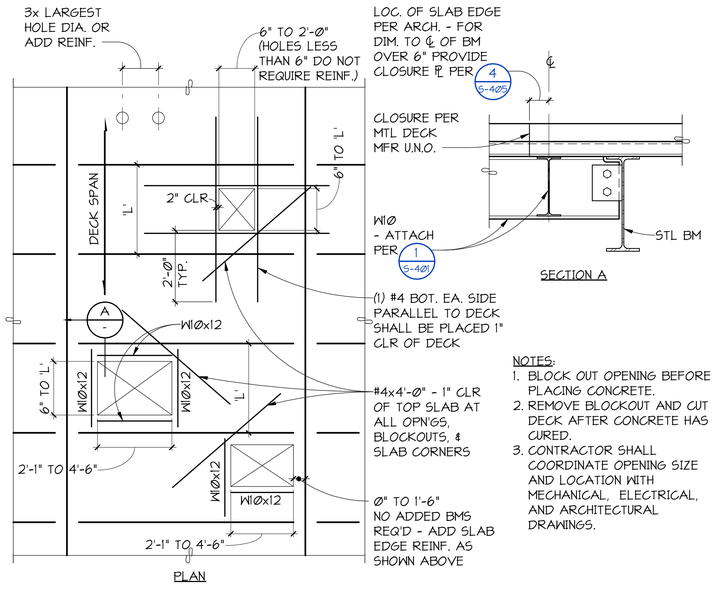



NOTES:
1. LOCATE STUDS AT CENTER OF BEAM FLANGE.
2. STUDS ARE 3/4"ø x 4½" LONG AFTER WELDING.
3. SEE FRAMING PLANS FOR NUMBER OF STUDS.
4. ALL BEAMS WITH STUDS ARE COMPOSITE STEEL BEAMS.
5. PROVIDE A DOUBLE ROW OF STUDS AT BEAMS WHERE THE REQUIRED NUMBER OF STUDS EXCEEDS THE NUMBER THAT CAN FIT IN A SINGLE ROW AT 6" ON CENTER AT DECK PARALLEL TO BEAM OR 12" ON CENTER AT DECK PERPENDICULAR TO BEAM. STUDS SHOULD BE LOCATED IN DECK FLUTES PER AISC STRONG POSITION.

TYPICAL COMPOSITE BEAM DETAIL

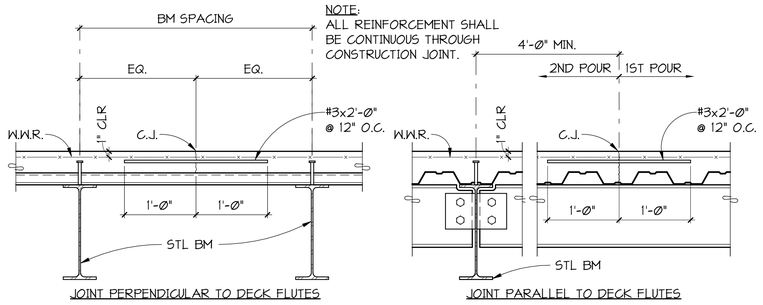
## 5 S-404 DETAIL
NO SCALE




NOTES:
1. BLOCK OUT OPENING BEFORE PLACING CONCRETE.
2. REMOVE BLOCKOUT AND CUT DECK AFTER CONCRETE HAS CURED.
3. CONTRACTOR SHALL COORDINATE OPENING SIZE AND LOCATION WITH MECHANICAL, ELECTRICAL, AND ARCHITECTURAL DRAWINGS.

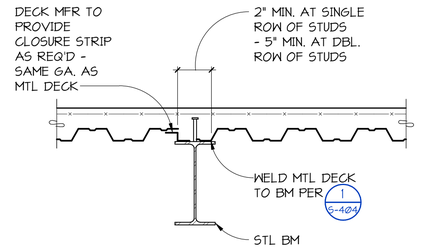
TYPICAL FLOOR PENETRATION REINFORCEMENT

## 2 S-404 DETAIL
NO SCALE



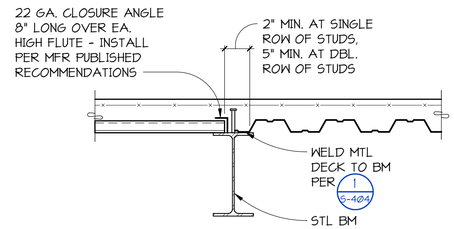

TYPICAL COMPOSITE DECK CONSTRUCTION JOINT

## 6 S-404 SECTION
NO SCALE



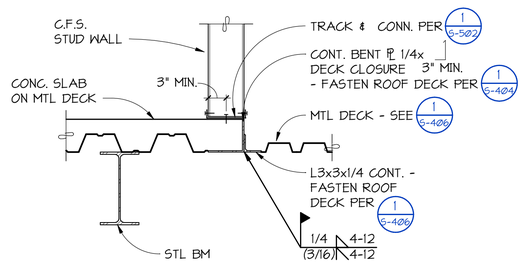

TYPICAL AT METAL DECK PARALLEL TO BEAM

## 3 S-404 SECTION
NO SCALE




TYPICAL AT METAL DECK TRANSITION AT BEAM

## 4 S-404 SECTION
NO SCALE




## 7 S-404 SECTION
1" = 1'-0"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PROJECT:

STEEL FRAMING DETAILS

S-404


5/30/2025 1:58:26 PM C:_Revit Models\25080 HNT Pk-12 R2024 (Central)_BPrice@pcs-structural.com.rvt
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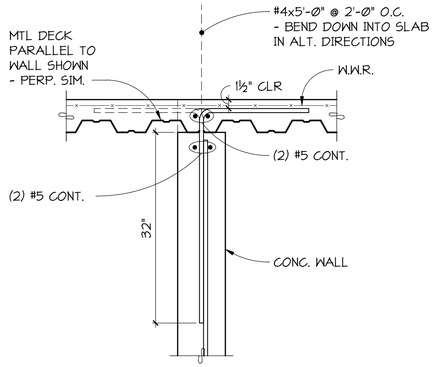
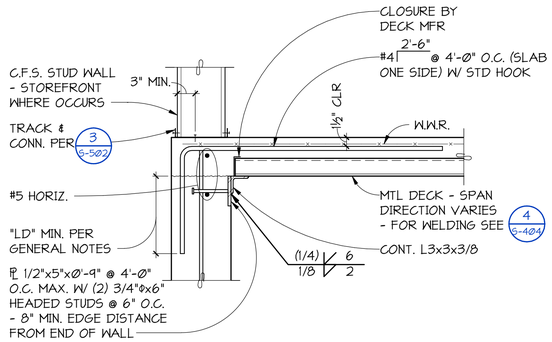


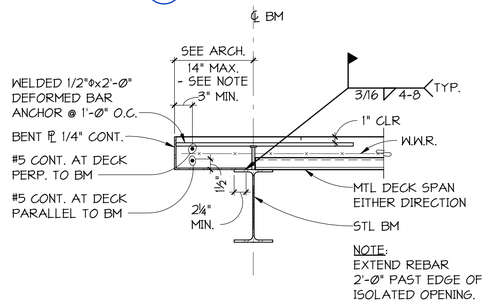

TYPICAL CONNECTION OF METAL FLOOR DECK TO TOP OF CONCRETE WALL

1 S-405 **SECTION** NO SCALE



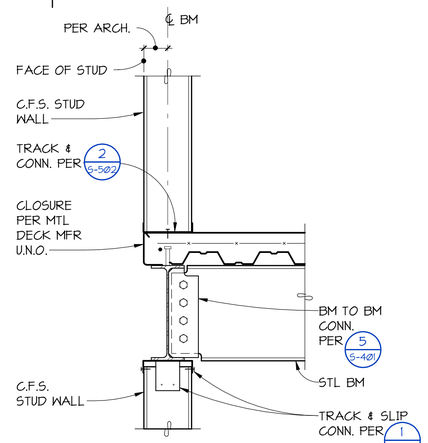

TYPICAL FLOOR METAL DECK CONNECTION AT CONCRETE WALL

2 S-405 **SECTION** NO SCALE




TYPICAL SLAB EDGE CONDITION - OVER 6" OVERHANG

3 S-405 **SECTION** NO SCALE




TYPICAL EXTERIOR WALL AT FLOOR EDGE GIRDER

4 S-405 **SECTION** NO SCALE




TYPICAL EXTERIOR WALL AT FLOOR EDGE BEAM

5 S-405 **SECTION** NO SCALE




TYPICAL EXTERIOR WALL AT FLOOR EDGE BEAM

6 S-405 **SECTION** NO SCALE




TYPICAL EXTERIOR WALL AT FLOOR EDGE BEAM

7 S-405 **SECTION** NO SCALE




TYPICAL BYPASS EXTERIOR WALL AT FLOOR EDGE BEAM

8 S-405 **SECTION** NO SCALE




TYPICAL BYPASS EXTERIOR WALL AT FLOOR EDGE BEAM

9 S-405 **SECTION** NO SCALE




TYPICAL SPANDREL EXTERIOR WALL AT FLOOR EDGE BEAM

10 S-405 **SECTION** NO SCALE




11 S-405 **SECTION** 1" = 1'-0"

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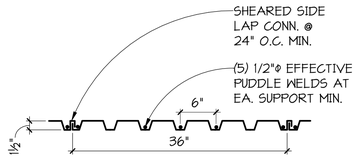
STEEL FRAMING DETAILS

S-405

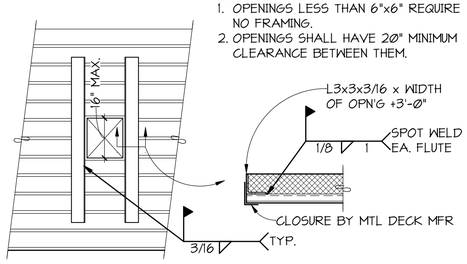



| TYPE "B" DECK PROPERTIES | | |
|---|---|---|
| GAGE | I = (in.⁴/ft.) | +S/-S = (in.³/ft) |
| 20 | .219 | .230/.237 |
| 18 | .302 | .314/.331 |
| 16 | .381 | .399/.410 |

NOTES:
1. (2) SPAN MINIMUM, (3) PREFERRED.
2. AT SUPPORTS PARALLEL TO CORRUGATIONS, PROVIDE PUDDLE WELDS AT 24" ON CENTER MAXIMUM.
3. "SHEARED SIDE LAP" CONNECTION REFERS TO "PUNCHLOK" BY VERCO DECKING, INC. OR "DELTAGRIP" BY ASC STEEL DECK, OR PREAPPROVED EQUAL.
4. MINIMUM DECK PROPERTIES AND WELD PATTERN SHOWN. PROVIDE HEAVIER GAGE AND/OR WELD PATTERN AS REQUIRED TO DEVELOP DIAPHRAGM SHEARS.
5. SECTION PROPERTIES ARE BASED ON Fy = 50 KSI.

TYPICAL ROOF METAL DECK

1 / S-406 DETAIL
NO SCALE

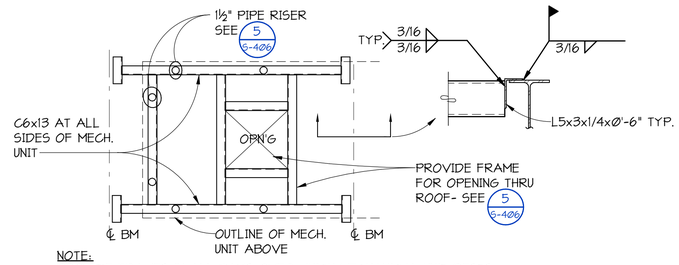



NOTES:
1. OPENINGS LESS THAN 6"x6" REQUIRE NO FRAMING.
2. OPENINGS SHALL HAVE 20" MINIMUM CLEARANCE BETWEEN THEM.

TYPICAL AT ISOLATED OPENINGS IN NON-COMPOSITE METAL DECK LESS THAN 16 INCH SQUARE

2 / S-406 DETAIL
NO SCALE

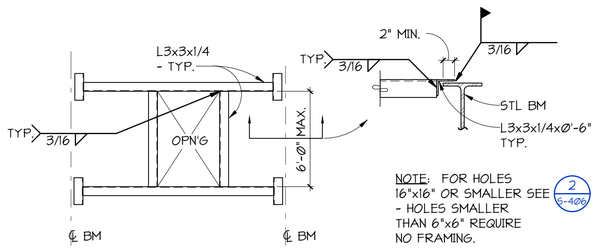
NOTE:
PROVIDE FRAMES IN ALL BAYS OVER WHICH MECHANICAL UNIT RESTS. VERIFY SIZE AND LOCATION OF UNIT WITH MECHANICAL CONTRACTOR




NOTE:
PROVIDE FRAMES IN ALL BAYS OVER WHICH MECHANICAL UNIT RESTS. VERIFY SIZE AND LOCATION OF UNIT WITH MECHANICAL CONTRACTOR

TYPICAL MECHANICAL UNIT SUPPORT FRAME (MAX. WT = 6000#)

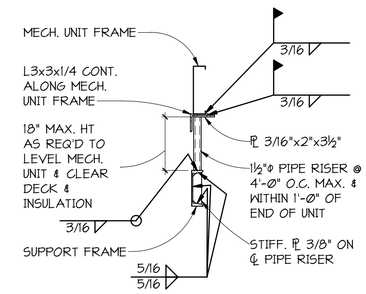
3 / S-406 DETAIL
NO SCALE




NOTE: FOR HOLES 16"x16" OR SMALLER SEE 2 / S-406 - HOLES SMALLER THAN 6"x6" REQUIRE NO FRAMING.

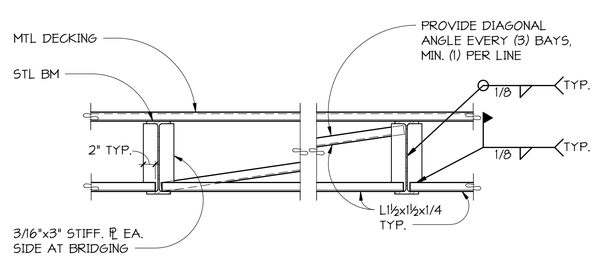
TYPICAL FRAMING AT OPENINGS IN METAL ROOF DECK (MAXIMUM LOAD = 600 POUNDS)

4 / S-406 DETAIL
NO SCALE



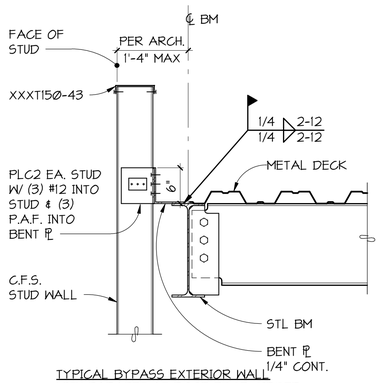

RISER SUPPORT FOR MECHANICAL UNIT FRAME

5 / S-406 DETAIL
NO SCALE



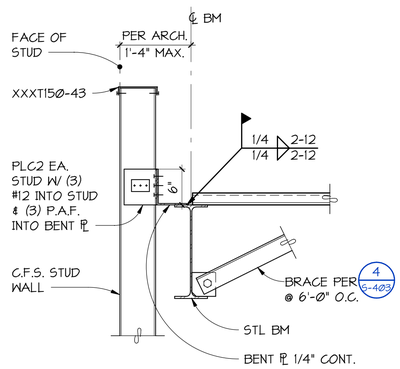

TYPICAL STEEL BEAM BRIDGING

6 / S-406 SECTION
NO SCALE



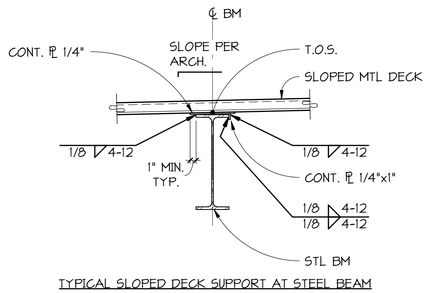

TYPICAL BYPASS EXTERIOR WALL WITH PARAPET AT ROOF EDGE GIRDER

7 / S-406 SECTION
NO SCALE



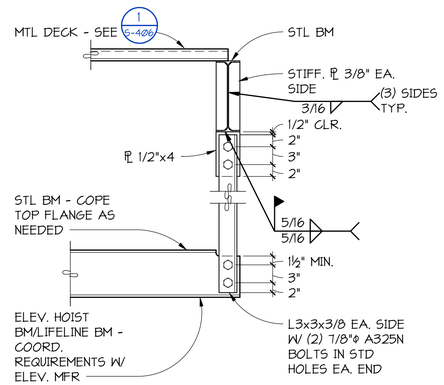

TYPICAL BYPASS EXTERIOR WALL WITH PARAPET AT ROOF EDGE BEAM

8 / S-406 SECTION
NO SCALE

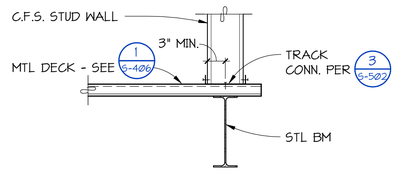



TYPICAL SLOPED DECK SUPPORT AT STEEL BEAM

9 / S-406 SECTION
1" = 1'-0"




10 / S-406 SECTION
1" = 1'-0"




11 / S-406 SECTION
1" = 1'-0"

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STEEL FRAMING DETAILS

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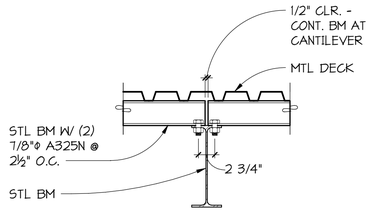
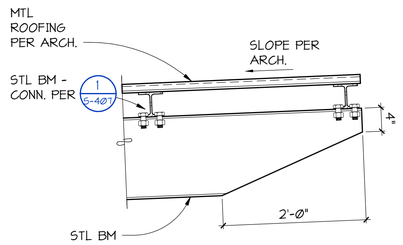
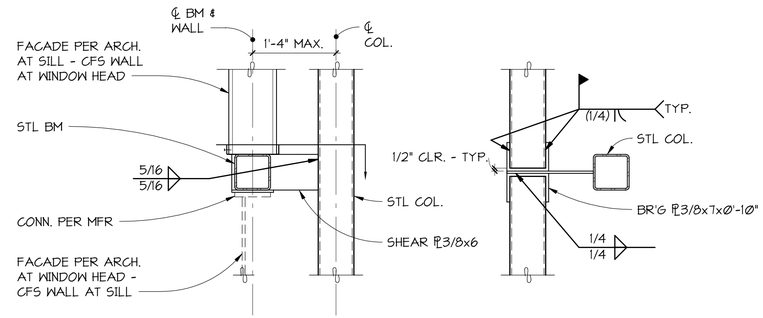



NOTE:
ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.

1 S-407 SECTION
1" = 1'-0"




2 S-407 SECTION
1" = 1'-0"




3 S-407 SECTION
1" = 1'-0"

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STEEL FRAMING DETAILS

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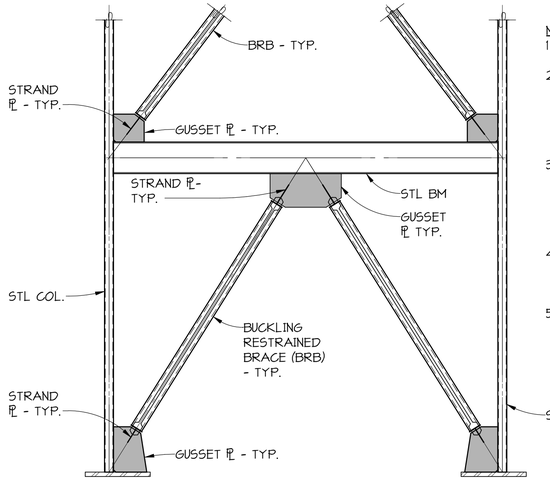
| BUCKLING RESTRAINED BRACE AND GUSSET CONNECTION SCHEDULE | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BRACED FRAME | BRACE TYPE | GUSSET PLATE THICKNESS (in.) | BRACE/GUSSET WELD | | BEAM WELD | | COLUMN WELD | | CHEVRON WELD | |
| | | | "Dwg" | "Lwg" | Wb1 | Lwb1(in.) | Wc1[5] | Lwc1(in.) | Wb2 | Lwb2(in.) |
| BF-1 | BRB-1 | 5/8" | 1/4 | 8 | 3/8 | 14 | 1/4 | 10 | - | - |
| | BRB-2 | 3/4" | 1/4 | 8 | 1/2 | 15 | 3/8 | 11 | - | - |
| | BRB-3 | 3/4" | 5/16 | 8 | 7/16 | 16 | 5/16 | 13 | - | - |
| BF-2 | BRB-4 | 5/8" | 1/4 | 8 | 5/16 | 20 | 1/4 | 14 | - | - |
| | BRB-5 | 5/8" | 1/4 | 8 | 5/16 | 14 | 1/4 | 10 | - | - |
| | BRB-6 | 3/4" | 1/4 | 10 | 7/16 | 15 | 5/16 | 11 | - | - |
| | BRB-7 | 3/4" | 1/4 | 11 | 7/16 | 21 | 1/4 | 20 | - | - |
| BF-3 | BRB-8 | 5/8" | 1/4 | 8 | 1/4 | 23 | 1/4 | 11 | - | - |
| | BRB-9 | 3/4" | 1/4 | 10 | 5/16 | 22 | 1/4 | 12 | - | - |
| | BRB-10 | 7/8" | 3/8 | 11 | 7/16 | 21 | 5/16 | 13 | - | - |
| BF-4 | BRB-11 | 5/8" | 1/4 | 9 | 3/8 | 19 | 1/4 | 12 | - | - |
| | BRB-12 | 7/8" | 5/16 | 10 | 9/16 | 18 | 5/16 | 13 | - | - |
| | BRB-13 | 7/8" | 5/16 | 10 | 7/16 | 18 | 5/16 | 13 | - | - |
| | BRB-14 | 7/8" | 3/8 | 9 | 9/16 | 23 | 5/16 | 21 | - | - |
| BF-5 | BRB-15 | 3/4" | 1/4 | 10 | 1/2 | 18 | 5/16 | 12 | - | - |
| | BRB-16 | 3/4" | 5/16 | 10 | 1/2 | 18 | 5/16 | 13 | - | - |
| | BRB-17 | 3/4" | 5/16 | 10 | 1/2 | 23 | 1/4 | 20 | - | - |
| BF-6 | BRB-18 | 5/8" | 1/4 | 8 | 5/16 | 17 | 1/4 | 12 | - | - |
| | BRB-19 | 3/4" | 1/4 | 10 | 7/16 | 16 | 1/4 | 13 | - | - |
| BF-7 | BRB-20 | 3/4" | 1/4 | 11 | 5/16 | 18 | 1/4 | 13 | 1/4 | 16 |
| BF-8 | BRB-21 | 3/4" | 1/4 | 12 | 1/2 | 21 | 1/4 | 22 | - | - |
| | BRB-22 | 7/8" | 3/8 | 14 | 9/16 | 21 | 3/8 | 25 | - | - |
| BF-9 | BRB-23 | 3/4" | 1/4 | 11 | 7/16 | 22 | 1/4 | 14 | - | - |
| | BRB-24 | 3/4" | 1/4 | 10 | 7/16 | 12 | 1/4 | 22 | - | - |

BUCKLING RESTRAINED BRACE SCHEDULE NOTES

1. SEE SHEET S-201 FOR BUCKLING RESTRAINED BRACE FRAME CALLOUTS.
2. WORK THIS SCHEDULE WITH DETAILS ON SHEETS S-420, S-421, AND S-422.
3. ALL GUSSET PLATES SHALL BE A572 GRADE 50.
4. COORDINATE ALL DIMENSIONS WITH BUCKLING RESTRAINED BRACE MANUFACTURER PRIOR TO FABRICATION.
5. WELD SIZE INDICATED IS MINIMUM ASSUMING NO GAP BETWEEN GUSSET EDGE AND COLUMN. IF, AT FIT UP, THE GAP IS GREATER THAN 1/16", THE LEG OF THE FILLET WELD SHALL BE INCREASED BY THE AMOUNT OF THE ROOT OPENING UP TO 3/16" MAXIMUM GAP.
6. FINAL DESIGN OF BUCKLING RESTARINED BRACES, GUSSET, AND CONNECTION WELDS ARE PER THE BUCKLING RESTRAINED BRACE MANUFACTURER.




BUCKLING RESTRAINED BRACE PROTECTED ZONE

NOTES:

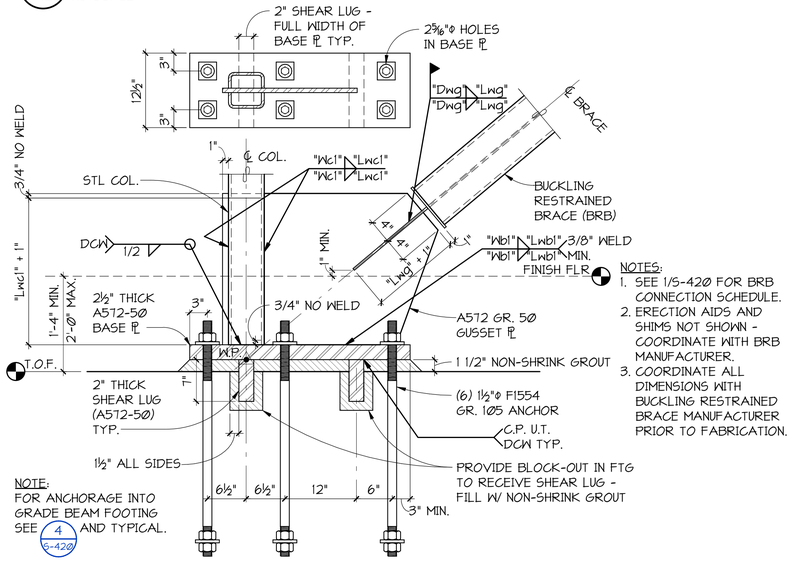
1. SHADED REGIONS INDICATE PROTECTED ZONES.
2. WELDED, BOLTED, SCREWED, OR SHOT IN ATTACHMENTS ARE PROHIBITED WITHIN THE SHADED REGION DEFINED IN THIS DETAIL.
3. ANY OTHER CONNECTIONS TO THE BRACE ARE TO BE APROVED BY THE ENGINEER OF RECORD AND THE BUCKLING RESTRAINED BRACE MANUFACTURER.
4. GENERAL CONTRACTOR TO DESIGN AND PROVIDE SUPPORTS AS REQUIRED TO AVOID PROTECTED ZONES.
5. GENERAL CONTRACTOR COORDINATE WITH BRB MANUFACTURER TO VERIFY PROTECTED ZONE AREA.

## 1 S-420 SCHEDULE

NO SCALE

## 2 S-420 DETAIL

NO SCALE




NOTES:

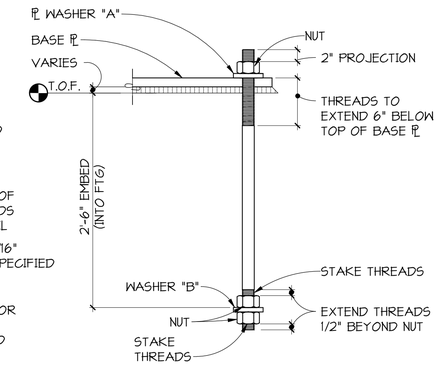
1. SEE 1/S-420 FOR BRB CONNECTION SCHEDULE.
2. ERECTION AIDS AND SHIMS NOT SHOWN - COORDINATE WITH BRB MANUFACTURER.
3. COORDINATE ALL DIMENSIONS WITH BUCKLING RESTRAINED BRACE MANUFACTURER PRIOR TO FABRICATION.

NOTE:
FOR ANCHORAGE INTO GRADE BEAM FOOTING SEE 4/S-420 AND TYPICAL.

TYPICAL BUCKLING RESTRAINED BRACE FOUNDATION CONNECTION

## 3 S-420 DETAIL

NO SCALE







NOTE:
PROVIDE ANCHOR ROD TEMPLATES FOR EACH ANCHOR ROD GROUP TYPICAL. PROVIDE (1) ADDITIONAL NUT PER ROD TO SECURE TEMPLATE.

| ANCHOR ROD | | WASHER | | NUT |
|---|---|---|---|---|
| SIZE | MATERIAL | TYPE | SIZE | |
| 1 1/2"ø | F1554 GR. 105 | A | PL 3/4x5xØ-5" W/ 2 1/16"ø HOLE CTR'D | A563 GR. DH HEAVY HEX |
| | | B | ASTM F844 CARBON FLAT WASHER | |

TYPICAL ANCHOR ROD/BOLT AT BUCKLING RESTRAINED BRACED FRAMES

## 4 S-420 DETAIL

NO SCALE




TYPICAL COLUMN SPLICE AT BRACED FRAMES

## 5 S-420 DETAIL

NO SCALE




NOTES:

1. SEE 1/S-420 FOR BUCKLING RESTRAINED BRACE CONNECTION SCHEDULE.
2. ERECTION AIDS AND SHIMS NOT SHOWN - COORDINATE WITH BUCKLING RESTRAINED BRACE MANUFACTURER.
3. COORDINATE ALL DIMENSIONS WITH BUCKLING RESTRAINED BRACE MANUFACTURER PRIOR TO FABRICATION.

TYPICAL BUCKLING RESTRAINED BRACE CHEVRON CONNECTION

## 6 S-420 SECTION

NO SCALE




NOTE:
ANY OTHER CONNECTIONS TO THE BRACE ARE TO BE APPROVED BY THE ENGINEER OF RECORD.

## 7 S-420 SECTION

NO SCALE

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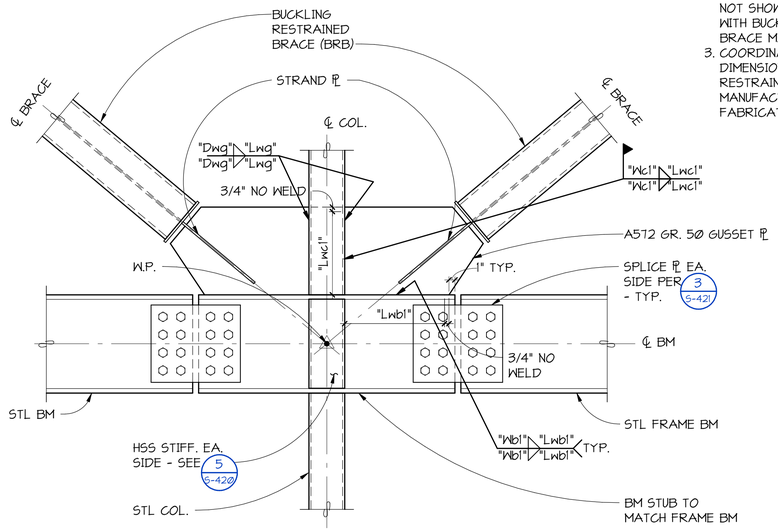
PROJECT:

STEEL FRAMING DETAILS

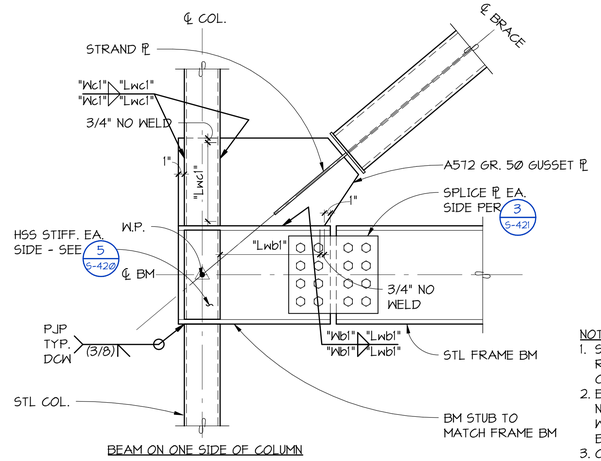
S-420




BEAM ON BOTH SIDES OF COLUMN

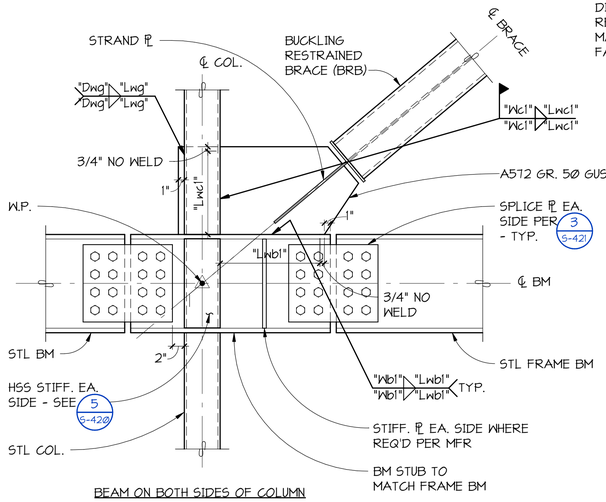
NOTES:
1. SEE 1/S-420 FOR BUCKLING RESTRAINED BRACE CONNECTION SCHEDULE.
2. ERECTION AIDS AND SHIMS NOT SHOWN - COORDINATE WITH BUCKLING RESTRAINED BRACE MANUFACTURER.
3. COORDINATE ALL DIMENSIONS WITH BUCKLING RESTRAINED BRACE MANUFACTURER PRIOR TO FABRICATION.

1 S-421 **SECTION**
NO SCALE




BEAM ON ONE SIDE OF COLUMN

NOTES:
1. SEE 1/S-420 FOR BUCKLING RESTRAINED BRACE CONNECTION SCHEDULE.
2. ERECTION AIDS AND SHIMS NOT SHOWN - COORDINATE WITH BUCKLING RESTRAINED BRACE MANUFACTURER.
3. COORDINATE ALL DIMENSIONS WITH BUCKLING RESTRAINED BRACE MANUFACTURER PRIOR TO FABRICATION.

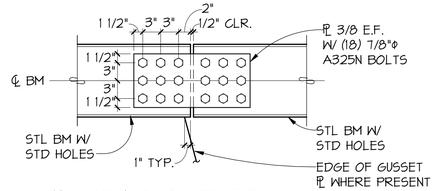



BEAM ON BOTH SIDES OF COLUMN

TYPICAL BUCKLING RESTRAINED BRACE BEAM-COLUMN-BRACE CONNECTION

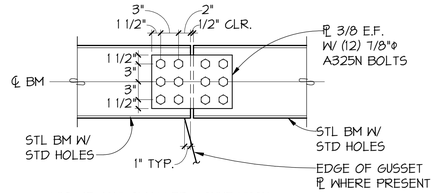
2 S-421 **SECTION**
NO SCALE

NOTE:
ALL FAYING SURFACES SHALL BE CLASS A




W12x50 AND LARGER CONNECTION

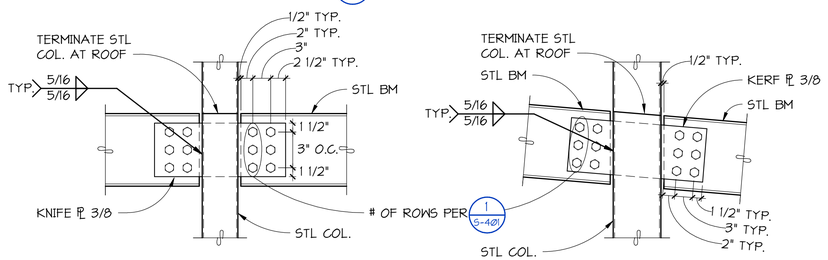
NOTE:
ALL FAYING SURFACES SHALL BE CLASS A




W12x45 AND SMALLER CONNECTION

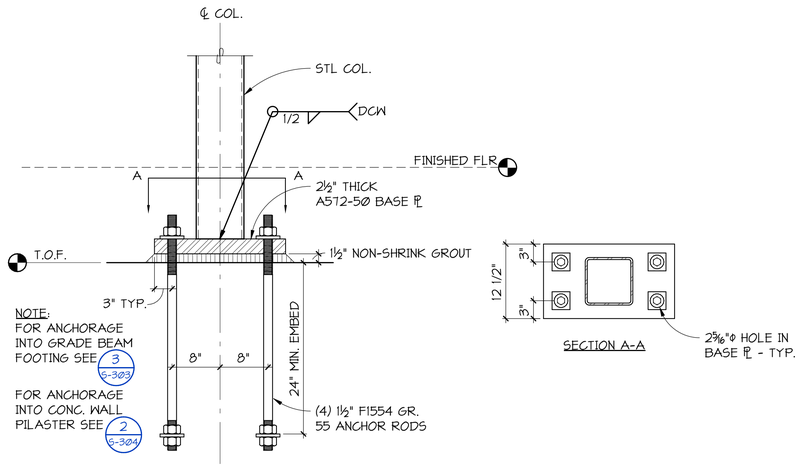
3 S-421 **SECTION**
NO SCALE

NOTES:
1. ALL FAYING SURFACES SHALL BE CLASS A.
2. ALL BOLT HOLES SHALL BE STANDARD SIZE.
3. ATTACH PERPENDICULAR STEEL BEAM PER 1 S-401 UNLESS NOTED OTHERWISE ON PLAN.




CONNECTION AT SLOPED BEAMS

4 S-421 **SECTION**
NO SCALE




SECTION A-A

TYPICAL BRACE FRAME COLUMN FOUNDATION CONNECTION

5 S-421 **SECTION**
1" = 1'-0"

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3700 E MERCER WAY
BARNABIE POINT PROJECT

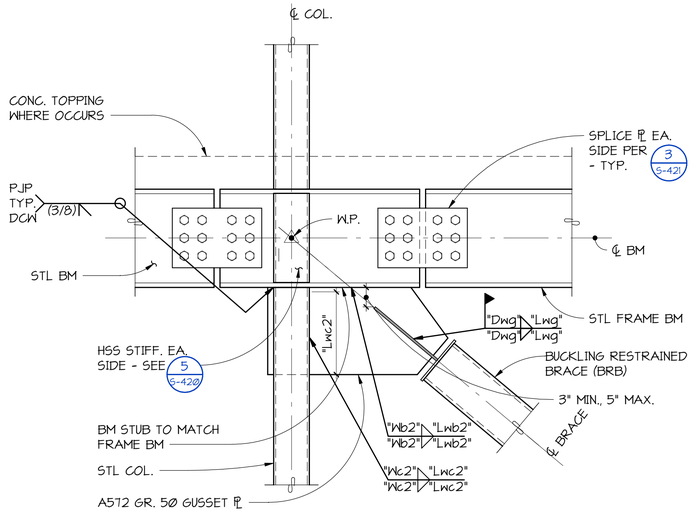
| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04 JUNE 2025 | BUILDING PERMIT |

PROJECT:

STEEL FRAMING DETAILS

S-421

5/30/2025 1:58:49 PM C:_Revit Models\22590 HNT Ph-72 R2024 (Central)_BFloyd@pcs-structural.com.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

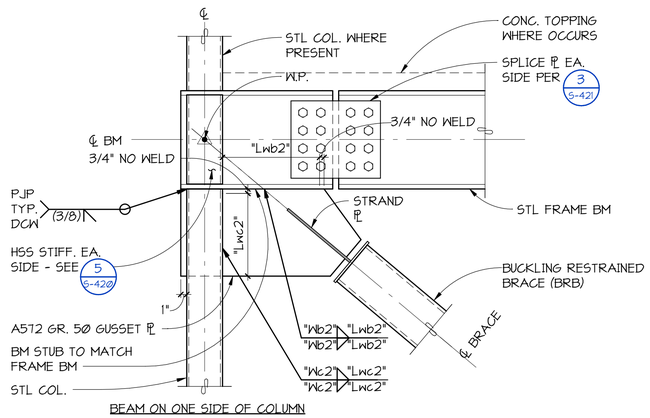



BEAM ON BOTH SIDES OF COLUMN

## 1 S-422 SECTION

1" = 1'-0"

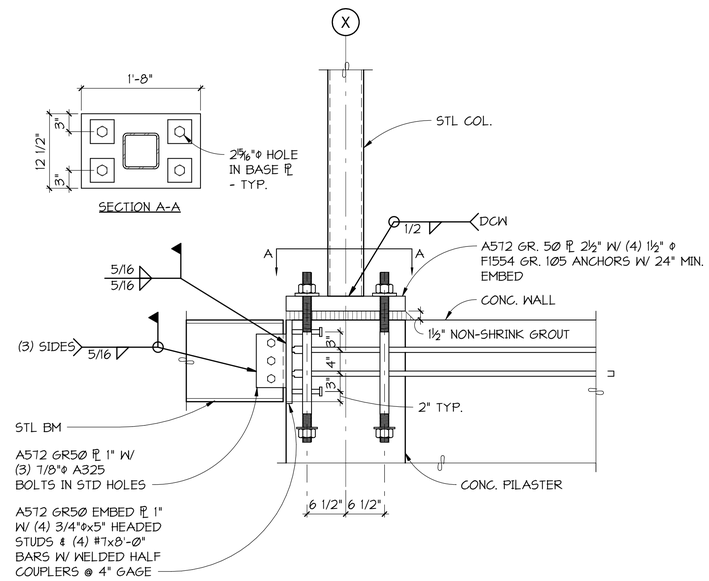
NOTES:
1. SEE 1/S-420 FOR BUCKLING RESTRAINED BRACE CONNECTION SCHEDULE.
2. ERECTION AIDS AND SHIMS NOT SHOWN - COORDINATE WITH BUCKLING RESTRAINED BRACE MANUFACTURER.
3. COORDINATE ALL DIMENSIONS WITH BUCKLING RESTRAINED BRACE MANUFACTURER PRIOR TO FABRICATION.



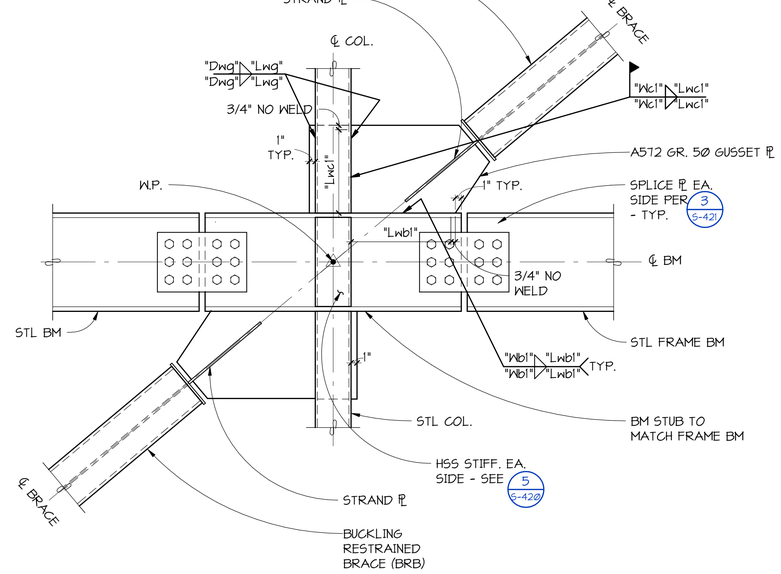

BEAM ON ONE SIDE OF COLUMN

## 2 S-422 SECTION

1" = 1'-0"

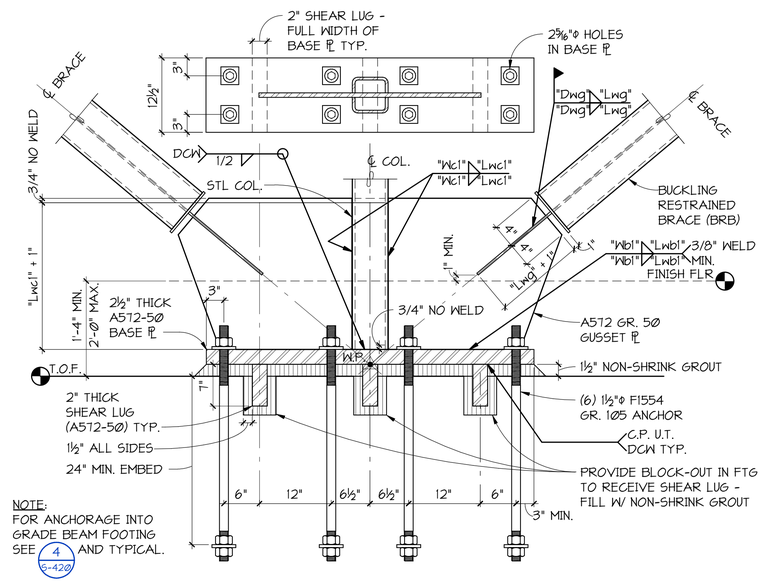



NOTES:
1. SEE 1/S-420 FOR BRB CONNECTION SCHEDULE.
2. ERECTION AIDS AND SHIMS NOT SHOWN - COORDINATE WITH BRB MANUFACTURER.
3. COORDINATE ALL DIMENSIONS WITH BUCKLING RESTRAINED BRACE MANUFACTURER PRIOR TO FABRICATION.




## 3 S-422 SECTION

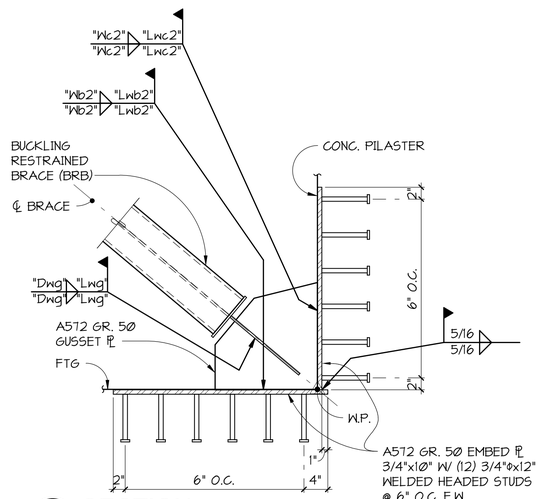
1" = 1'-0"




NOTE:
FOR ANCHORAGE INTO GRADE BEAM FOOTING SEE 4 S-420 AND TYPICAL.

## 4 S-422 SECTION

1" = 1'-0"




## 5 S-422 SECTION

1" = 1'-0"

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| NO. | DATE | DESCRIPTION |
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PROJECT:

STEEL FRAMING DETAILS

S-422

5/30/2025 1:58:55 PM C:_Revit Models\23500 HNT Pa-12 R2024 (Central)_BRoy@pcs-structural.com.rvt
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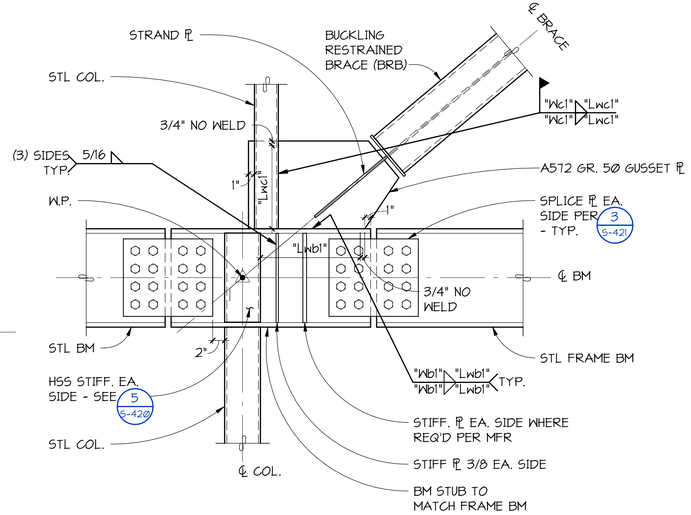
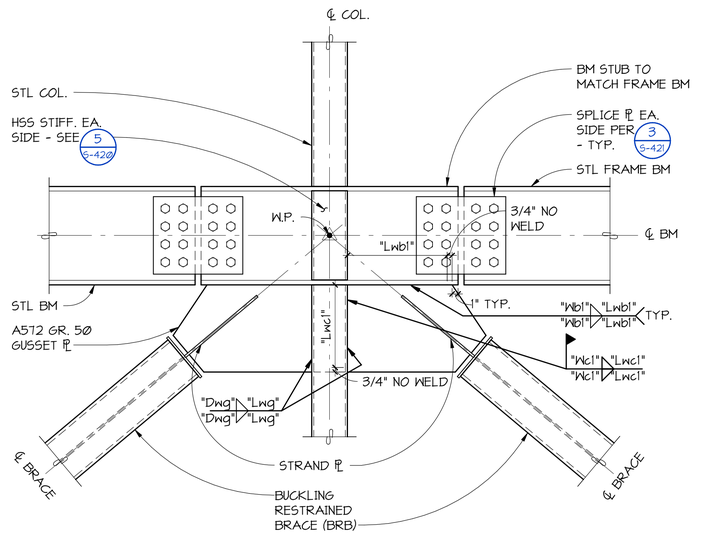
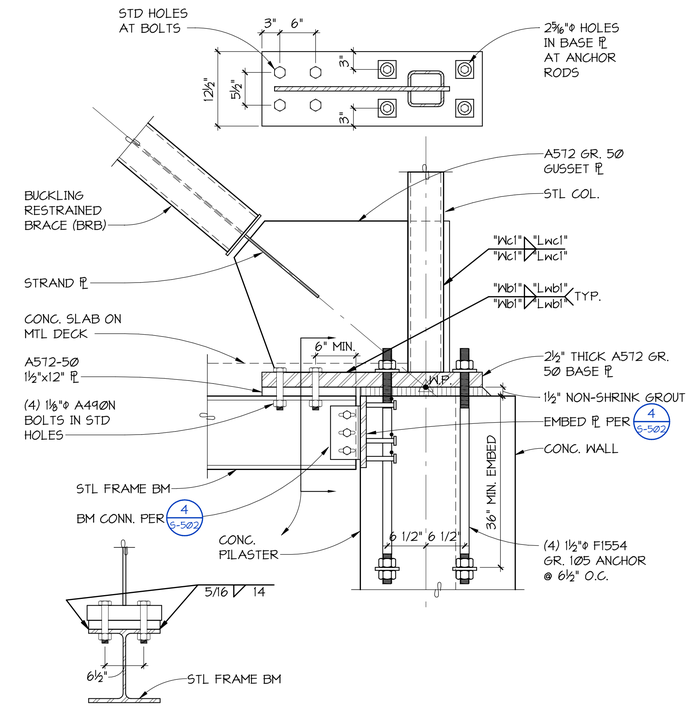


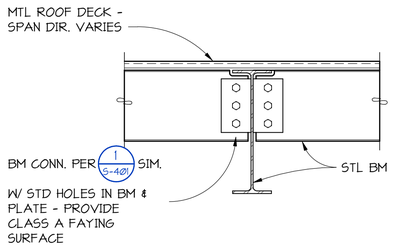

1 S-423 SECTION
1" = 1'-0"




2 S-423 SECTION
1" = 1'-0"




3 S-423 SECTION
1" = 1'-0"




4 S-423 SECTION
1" = 1'-0"

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|---|---|---|

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PROJECT:

STEEL FRAMING DETAILS

S-423

5/30/2025 1:58:59 PM C:\...Revit Models\23080 HNT Pe-12 R2024 (Central)_BPtoy@pcs-structural.com.rvt
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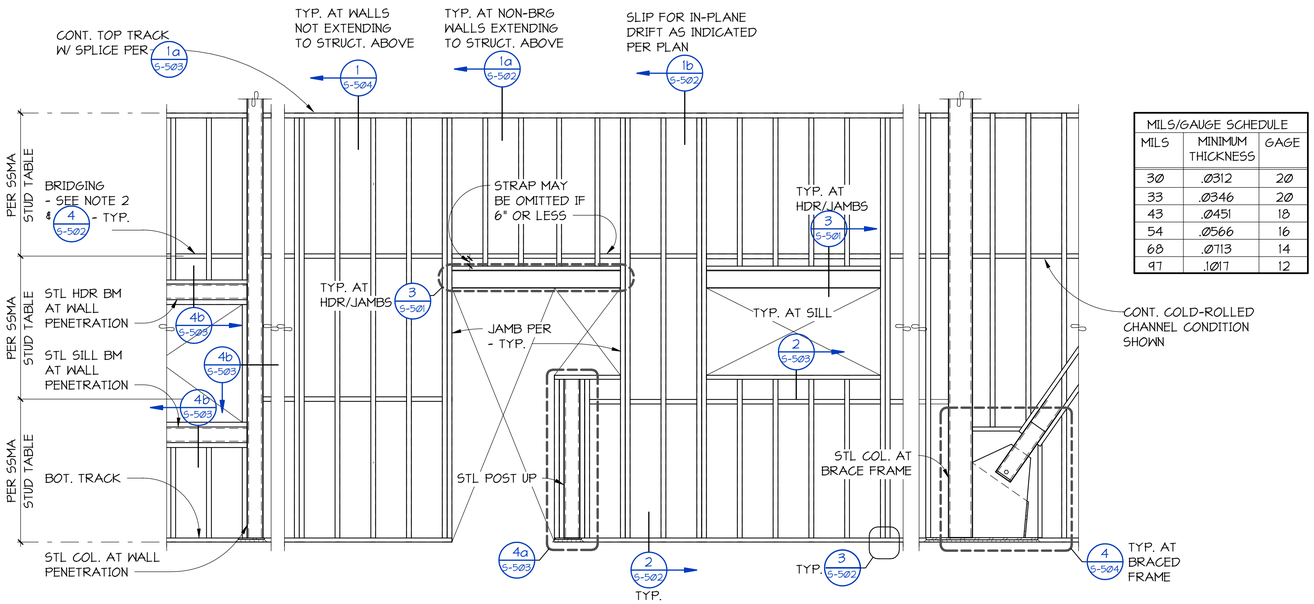



| MILS/GAUGE SCHEDULE | | |
|---|---|---|
| MILS | MINIMUM THICKNESS | GAGE |
| 30 | .0312 | 20 |
| 33 | .0346 | 20 |
| 43 | .0451 | 18 |
| 54 | .0566 | 16 |
| 68 | .0713 | 14 |
| 97 | .1017 | 12 |

COLD-FORMED STEEL STUD WALL FRAMING NOTES:

1. ALL NON-BEARING WALL STUDS SHALL BE PER 2/S-501 UNLESS NOTED OTHERWISE. FOR WALL TYPE AND PROPER LOCATION SEE ARCHITECTURAL DRAWINGS.
2. PROVIDE BRIDGING AT ALL NON-BEARING WALLS WITHOUT FULL HEIGHT QUALIFIED SHEATHING EITHER SIDE OF STUD PER 4/S-502 NOTE #1.
3. FOR TYPICAL COLD-FORMED STEEL JOIST CEILING FRAMING SCHEDULE AND DETAIL - SEE 5/S-503.
4. ALL WELDS SHALL BE 1/8" FILLET MAXIMUM. FOR MATERIALS THINNER THAN Ø.15", EFFECTIVE THROAT SHALL NOT BE LESS THAN THINNEST MATERIAL. WELD IN ACCORDANCE WITH "STRUCTURAL WELDING CODE -- SHEET METAL" AWS D1.3.
5. STUD PUNCHOUTS SHALL NOT BE SPACED LESS THAN 24" ON CENTER, NOR WITHIN 10" CLEAR OF MEMBER END AT STUDS, HEADERS, BEAMS, JOISTS, ETC. FOR TYPICAL ALLOWABLE PUNCHOUT DETAIL - SEE 3/S-503.
6. SCREWS SHALL BE THREAD-FORMING OR THREAD-CUTTING, WITH OR WITHOUT A SELF DRILLING POINT. SCREWS SHALL BE INSTALLED AND TIGHTENED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MINIMUM SPACING IS THREE SCREW DIAMETERS. A MINIMUM OF (3) THREADS SHALL BE ENGAGED.
7. FOR TYPICAL COLD-FORMED STEEL WALL CORNER REQUIREMENTS - SEE 1b/S-503.
8. FOR POWDER ACTUATED FASTENER REQUIREMENTS - SEE GENERAL NOTES.

TYPICAL NON-BEARING COLD-FORMED STEEL STUD WALL FRAMING

## 1 S-501 ELEVATION
NO SCALE

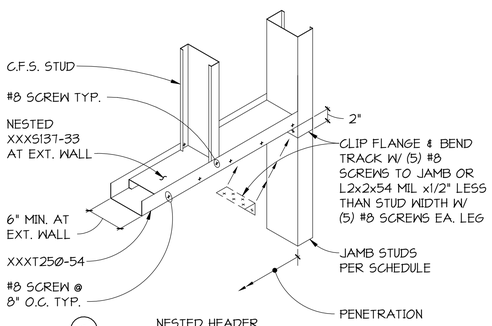
| EXTERIOR NON-BEARING COLD-FORMED STEEL WALL STUDS 20 PSF (ASD) LOAD, L/360 DEFLECTION LIMIT | | | | | |
|---|---|---|---|---|---|
| REQUIRED BRIDGING TYPE | STUD SIZE | STUD MIL | | | |
| | | 33 MIL | 43 MIL | 54 MIL | 68 MIL |
| | | STUDS SPACED @ 16" O.C. MAXIMUM | | | |
| | | MAXIMUM STUD HEIGHT ALLOWED | | | |
| 1 OR 2 OR 3 | 4005137 | 10'-11" | 11'-11" | 12'-9" | 13'-7" |
| | 4005162 | 11'-5" | 12'-5" | 13'-4" | 14'-3" |
| | 4005200 | 12'-0" | 13'-2" | 14'-1" | 15'-1" |
| | 6005137 | 15'-1" | 16'-5" | 17'-7" | 18'-10" |
| | 6005162 | 15'-9" | 17'-2" | 18'-5" | 19'-8" |
| | 6005200 | 16'-6" | 18'-0" | 19'-4" | 20'-9" |
| 1 OR 3 | 8005137 | - | 20'-9" | 22'-4" | 23'-11" |
| | 8005162 | - | 21'-7" | 23'-2" | 24'-11" |
| | 8005200 | - | 22'-7" | 24'-3" | 26'-1" |

NOTES:
1. FOR TYPICAL COLD-FORMED STEEL WALL STUD BRIDGING DETAIL SEE 4/S-502.
2. INFORMATION SHOWN FOR S125 STUDS TAKEN FROM THE GYPSUM CONSTRUCTION HAND BOOK BY CGC INC. - INFORMATION SHOWN FOR ALL OTHER STUDS TAKEN FROM ICC ES LEGACY REPORT ER-4943P*.
3. 43 MIL MINIMUM REQUIRED AT MASONRY VENEER.

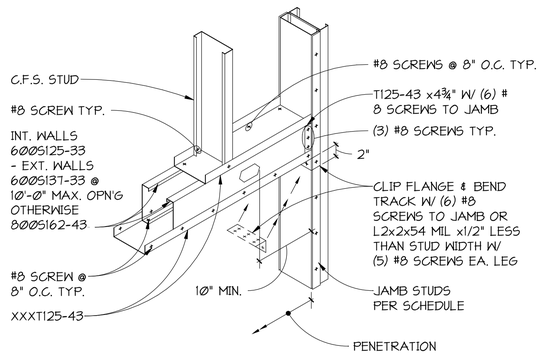
| INTERIOR NON-BEARING COLD-FORMED STEEL WALL STUDS 5 PSF (ASD) LIVE LOAD, L/360 DEFLECTION LIMIT | | | |
|---|---|---|---|
| REQUIRED BRIDGING TYPE | STUD SIZE | STUD MIL | |
| | | 18 MIL | 33 MIL |
| | | STUD SPACING | |
| | | 16" O.C. | 16" O.C. |
| | | MAXIMUM STUD HEIGHT ALLOWED | |
| 4 | 1625125 | 8'-2" | 8'-5" |
| | 2505125 | 9'-10" | 11'-2" |
| | 3625125 | 12'-4" | 14'-3" |
| | 4005125 | 13'-4" | 15'-11" |
| | 6005125 | 17'-11" | 21'-4" |
| REQUIRED BRIDGING TYPE | STUD SIZE | STUD MIL | |
| | | 43 MIL | 54 MIL |
| | | STUD SPACING | |
| | | 16" O.C. | 16" O.C. |
| | | MAXIMUM STUD HEIGHT ALLOWED | |
| 1 OR 2 OR 3 OR 4 | 4005137 | 17'-2" | 18'-5" |
| | 4005162 | 18'-0" | 19'-3" |
| | 4005200 | 19'-0" | 20'-4" |
| | 6005137 | 23'-8" | 25'-5" |
| | 6005162 | 24'-4" | 26'-6" |
| | 6005200 | 26'-0" | 27'-11" |
| 1 OR 3 OR 4 | 8005137 | 30'-0" | 32'-2" |
| | 8005162 | 31'-2" | 33'-6" |
| | 8005200 | 32'-7" | 35'-0" |

## 2 S-501 SCHEDULE
NO SCALE

NOTES:
1. FOR CONNECTION TO STRUCTURE ABOVE - SEE 1/S-502 & 1/S-504.
2. FOR CONNECTION TO STRUCTURE BELOW - SEE 2/S-502.
3. HEADER AND STUDS SHALL BE CONTINUOUS - NO SPLICES ALLOWED.




a NESTED HEADER
4'-0" MAXIMUM PENETRATION SIZE
(NOT ALLOWED AT DOORS)
(6005 MINIMUM AT EXTERIOR)




b BOX HEADER
12'-0 MAXIMUM PENETRATION UNLESS NOTED OTHERWISE
8'-0' MAXIMUM PENETRATION AT 4" EXTERIOR WALL
10'-0" MAXIMUM PENETRATION AT 4" OR 3⅝" INTERIOR WALL

| EXTERIOR NON-BEARING COLD FORMED STEEL STUD WALL PENETRATION JAMB SCHEDULE 20 PSF (ASD) WIND LOAD | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| STUD SIZE AND MIL | MAXIMUM PENETRATION (FEET) | MINIMUM NUMBER STUD(S) AT JAMB | | | | | | | |
| | | (1) | | (2) | | (3) | | (4) | |
| | | HORIZONTAL DEFLECTION LIMIT OF WALL HEIGHT | | | | | | | |
| | | L / 360 | L / 600 | L / 360 | L / 600 | L / 360 | L / 600 | L / 360 | L / 600 |
| | | MAXIMUM JAMB HEIGHT (FEET) | | | | | | | |
| 4005137-33 | 4 | 9 | - | 12 | 10 | 14 | 11 | 15 | 13 |
| | 8 | - | - | - | - | 11 | 9 | 12 | 10 |
| 6005137-33 | 4 | 11 | 11 | 15 | 14 | 16 | 16 | 16 | 16 |
| | 8 | - | - | - | - | 11 | 11 | 15 | 14 |
| | 12 | - | - | - | - | - | - | 10 | 10 |
| 8005162-43 | 4 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| | 8 | 12 | 12 | 16 | 16 | 16 | 16 | 16 | 16 |
| | 12 | 9 | 9 | 11 | 11 | 12 | 12 | 16 | 16 |

| INTERIOR NON-BEARING COLD FORMED STEEL STUD WALL PENETRATION JAMB SCHEDULE 5 POUNDS PER SQUARE FOOT (ASD) LIVE LOAD - L/360 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| STUD SIZE AND MIL | MAXIMUM PENETRATION (FEET) | MINIMUM NUMBER OF BUILT-UP STUDS AT JAMB | | | STUD DEPTH | STUD WIDTH AND MIL | MAXIMUM PENETRATION WIDTH (FEET) WITH SINGLE JAMB STUD | | |
| | | (2) | (3) | (4) | | | (4) | (8) | (12) |
| | | MAXIMUM JAMB HEIGHT (FEET) | | | | | MAXIMUM JAMB HEIGHT (FEET) | | |
| 3625125-33 OR 4005125-33 | 4 | 12 | 15 | - | 3625 OR 4005 | 125-33 | 10 | - | - |
| | | | | | | 137-43 | 12 | - | - |
| | 8 | 10 | 12 | 14 | | 162-54 | 13 | 11 | - |
| | | | | | | 200-54 | 14 | 12 | 10 |
| 6005125-33 | 4 | 16 | - | - | 6005 | 125-33 | 11 | - | - |
| | | | | | | 137-43 | 14 | - | - |
| | 8 | 13 | 16 | - | | 162-54 | - | 15 | - |
| | | | | | | 200-54 | - | - | 15 |
| | 12 | 9 | 14 | 16 | | | | | |

TYPICAL NON-BEARING COLD-FORMED STEEL WALL PENETRATION AT 16'-0" MAXIMUM STUD HEIGHT - JAMB STUD SCHEDULE

## 3 S-501 DETAIL
NO SCALE

5/30/2025 1:59:04 PM C:_Revit Models\23580 HWT Ph-12 R2024 (Central)_BRoy@pcs-structural.com.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

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PROJECT:

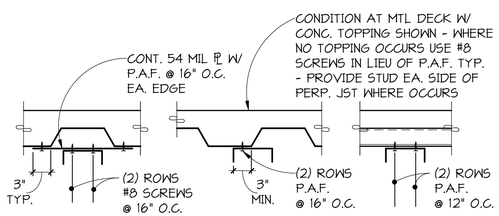
COLD-FORMED STEEL FRAMING DETAILS

S-501

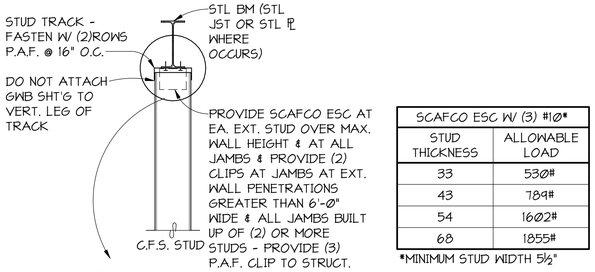
| SLOTTED TOP TRACK THICKNESS | | | |
|---|---|---|---|
| 2½" TRACK WITH 3/4" GAP | | | |
| TRACK THICKNESS (MILS) | ALLOWABLE LOAD (POUNDS) | EXTERIOR WALL HEIGHT | INTERIOR WALL HEIGHT |
| 33 | 106 | 10'-7" | 31'-10" |
| 43 | 174 | 17'-5" | 52'-4" |
| 54 | 344 | 34'-5" | |
| 68 | 475 | 47'-7" | |
| 3" MIN. TRACK W/ 1" GAP | | | |
| TRACK THICKNESS (MILS) | ALLOWABLE LOAD (POUNDS) | EXTERIOR WALL HEIGHT | INTERIOR WALL HEIGHT |
| 33 | 47 | NOT ALLOWED | 14'-1" |
| 43 | 92 | NOT ALLOWED | 27'-8" |
| 54 | 177 | 17'-11" | |
| 68 | 299 | 29'-11" | |

*DISTANCE BETWEEN WALL STUD SUPPORTS

TOP TRACK SCHEDULE

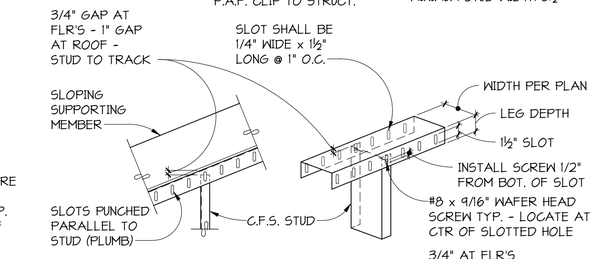



TOP TRACK TYPICAL CONNECTION TO STRUCTURE ABOVE

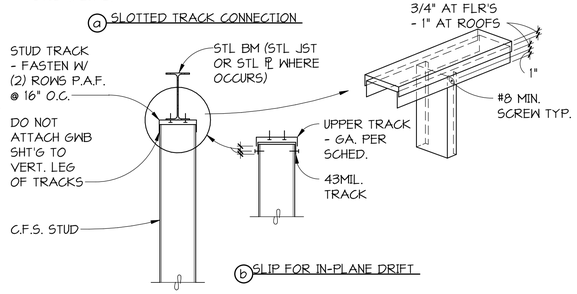



| SCAFCO ESC W/ (3) #10* | |
|---|---|
| STUD THICKNESS | ALLOWABLE LOAD |
| 33 | 530# |
| 43 | 789# |
| 54 | 1602# |
| 68 | 1855# |

*MINIMUM STUD WIDTH 5½"




ⓐ SLOTTED TRACK CONNECTION



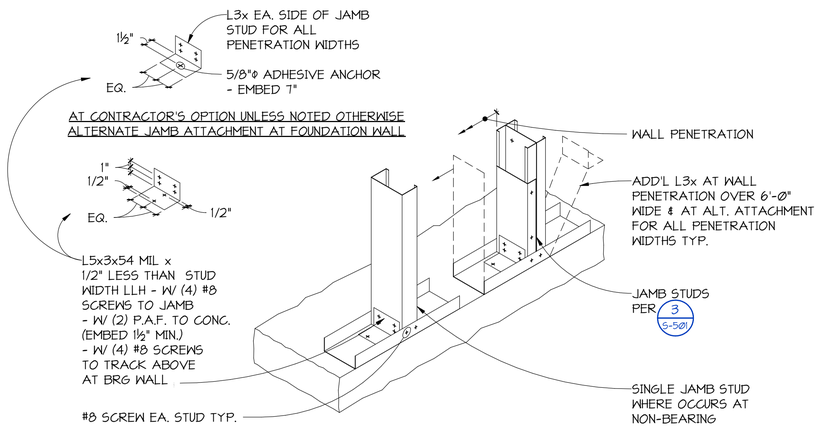

ⓑ SLIP FOR IN-PLANE DRIFT

TYPICAL NON-BEARING COLD-FORMED STEEL WALL EXTENDING TO STRUCTURE ABOVE

## 1 S-502 SECTION

NO SCALE

NOTE:
PROVIDE LOAD BEARING SHIMS OR GROUT BETWEEN UNDERSIDE OF WALL BOTTOM TRACK OR RIM TRACK AND SUPPORT BELOW AT STUD OR JOIST LOCATION WHERE GAP GREATER THAN 1/4" OCCURS.



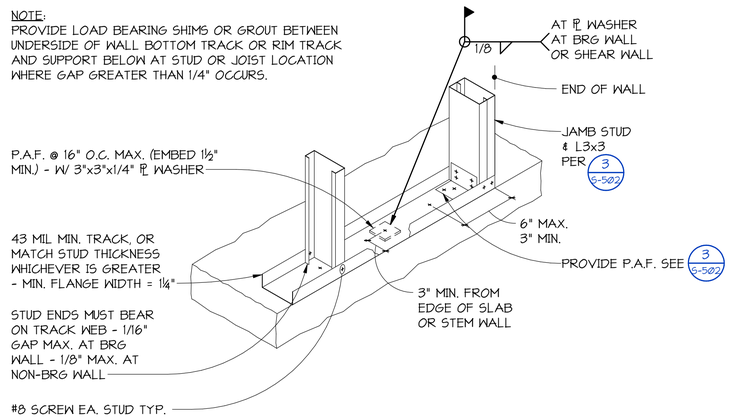

TYPICAL COLD-FORMED STEEL JAMB STUD ATTACHMENT

## 3 S-502 DETAIL

NO SCALE

5/30/2025 1:59:09 PM C:_Revit Models\22-050 HNT Ph-12 R2024 (Central)_BP.hyndt@pcs-structural.com.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

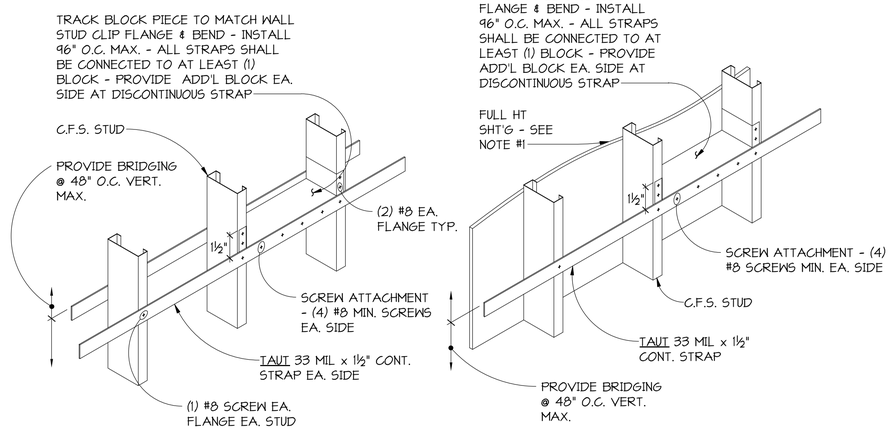
NOTE:
PROVIDE LOAD BEARING SHIMS OR GROUT BETWEEN UNDERSIDE OF WALL BOTTOM TRACK OR RIM TRACK AND SUPPORT BELOW AT STUD OR JOIST LOCATION WHERE GAP GREATER THAN 1/4" OCCURS.




TYPICAL COLD-FORMED STEEL STUD AND TRACK ATTACHMENT

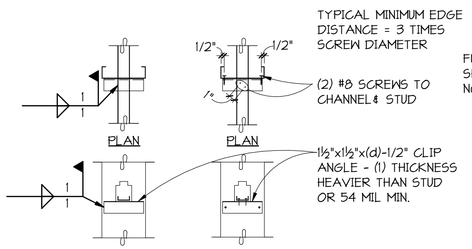
## 2 S-502 DETAIL

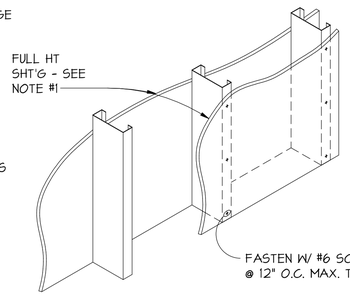
NO SCALE

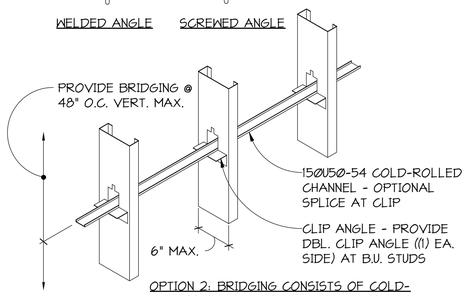



OPTION 1: BRIDGING CONSISTS OF DOUBLE FLAT STRAP WITH BLOCKING

OPTION 3: BRIDGING CONSISTS OF SINGLE FLAT STRAP WITH BLOCK AND FULL HEIGHT SHEATHING OPPOSITE FACE




OPTION 2: BRIDGING CONSISTS OF COLD-ROLLED CHANNEL WITH CLIP ANGLE (6" MAXIMUM STUD SIZE)

OPTION 4: FULL HEIGHT SHEATHING EACH FACE

NOTES:

1. QUALIFIED SHEATHING SHALL BE GYPSUM WALL BOARD, GYPSHEATHING, PLYWOOD, OR ORIENTED STRAND BOARD ONLY AND SHALL OCCUR FULL HEIGHT OF WALL.
2. OPTIONS 3 & 4 ARE NOT ALLOWED FOR STUD BRACING AT LOAD BEARING WALL CONDITION.

TYPICAL BRIDGING AT COLD-FORMED STEEL WALL

## 4 S-502 DETAIL

NO SCALE

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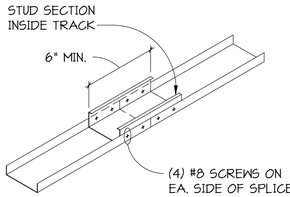
|---|---|---|
| | | 04 JUNE 2025 BUILDING PERMIT |

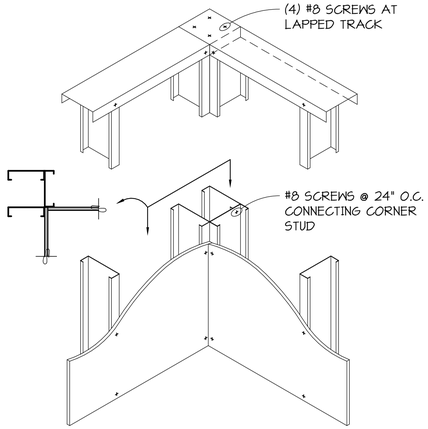
PROJECT:

COLD-FORMED STEEL FRAMING DETAILS

S-502

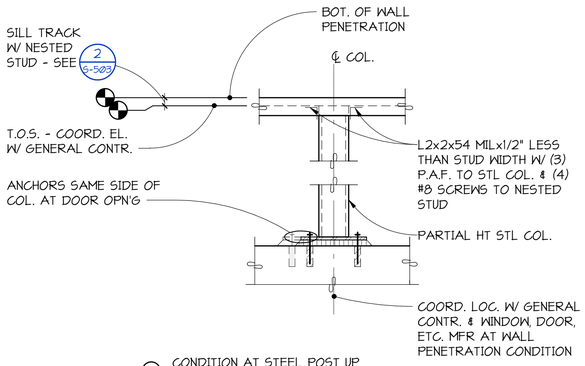



ⓐ TYPICAL COLD-FORMED STEEL
BOTTOM/TOP TRACK SPLICE

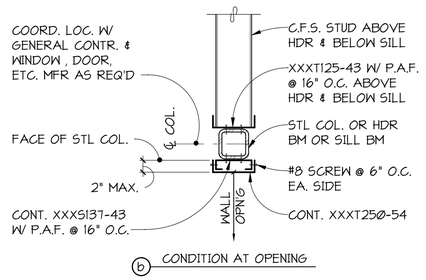



ⓑ TYPICAL COLD-FORMED
STEEL WALL CORNER

## 1 S-503 DETAIL
NO SCALE

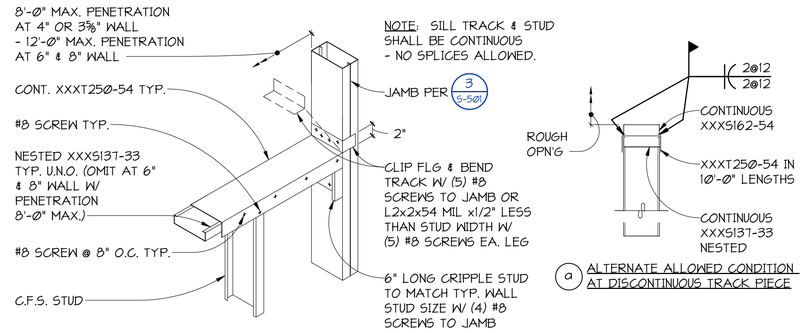



ⓐ CONDITION AT STEEL POST UP




ⓑ CONDITION AT OPENING

## 4 S-503 DETAIL
NO SCALE



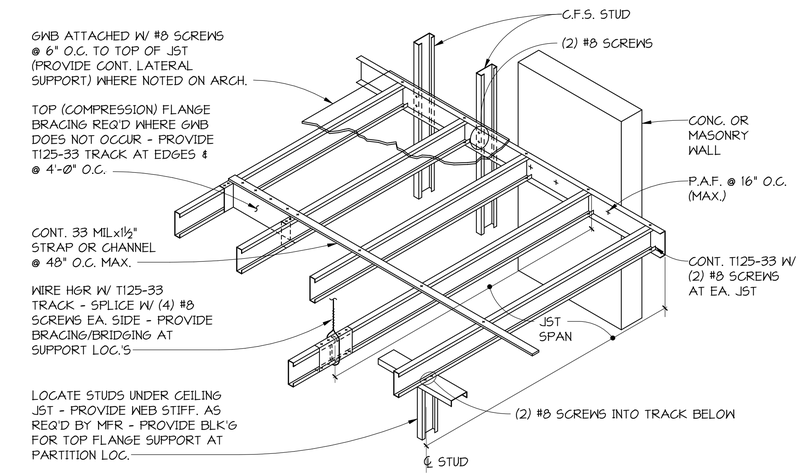




ⓐ ALTERNATE ALLOWED CONDITION
AT DISCONTINUOUS TRACK PIECE

TYPICAL SILL AT COLD-FORMED STEEL WALL PENETRATION AT 16'-Ø" MAXIMUM STUD HEIGHT

## 2 S-503 DETAIL
NO SCALE



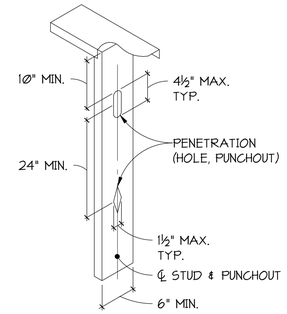

TYPICAL COLD-FORMED STEEL CEILING FRAMING DETAIL

COLD-FORMED STEEL JOIST CEILING FRAMING SCHEDULE 10 POUNDS PER SQUARE FOOT
(ASD) LIVE LOAD, 1/240 DEFLECTION LIMIT, (2) LAYERS MAXIMUM OF 5/8" GYPSUM WALL BOARD

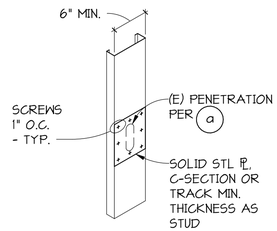
| JOIST SIZE | STUD MIL | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 18 MIL | | | | | | 33 MIL | | | | | |
| | JOIST SPACING | | | | | | | | | | | |
| | 12" O.C. | | 16" O.C. | | 24" O.C. | | 12" O.C. | | 16" O.C. | | 24" O.C. | |
| | NUMBER OF CONTINUOUS SPANS | | | | | | | | | | | |
| | ONE | TWO+ | ONE | TWO+ | ONE | TWO+ | ONE | TWO+ | ONE | TWO+ | ONE | TWO+ |
| | MAXIMUM JOIST SPAN ALLOWED | | | | | | | | | | | |
| 250S | 6'-9" | 6'-11 | 5'-4" | 5'-9" | - | 4'-4" | 8'-3" | 10'-Ø" | 7'-6" | 8'-9" | 6'-4" | 7'-1" |
| 362S | 7'-3" | 6'-8" | 5'-5" | 5'-3" | - | - | 11'-Ø" | 13'-3" | 10'-Ø" | 11'-6" | 8'-4" | 9'-4" |
| 400S | 9'-Ø" | 6'-3" | 7'-6" | 4'-10" | 5'-Ø" | - | 11'-11" | 14'-3" | 10'-10" | 12'-4" | 9'-Ø" | 9'-9" |
| 600S | - | - | - | - | - | - | 16'-6" | 16'-10" | 14'-9" | 13'-10" | 12'-Ø" | 10'-2" |

NOTES:
1. BRACE TOP FLANGE AT 48" ON CENTER MAXIMUM.
2. INFORMATION SHOWN TAKEN FROM THE GYPSUM CONSTRUCTION HAND BOOK BY CGC INCORPORATED.
3. SEE ARCHITECTURAL DRAWING FOR LATERAL SUPPORT OF SUSPENDED FRAMING.

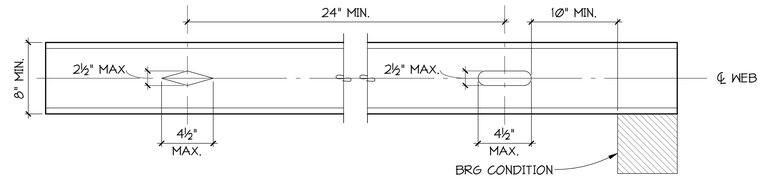
## 5 S-503 DETAIL
NO SCALE




ⓐ TYPICAL ALLOWABLE COLD-FORMED
STEEL STUD PUNCHOUT




ⓑ TYPICAL INFILL OF FACTORY COLD-FORMED
STEEL STUD PUNCHOUT




ⓒ TYPICAL ALLOWABLE COLD-FORMED
STEEL JOIST PUNCHOUT

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COLD-FORMED STEEL
FRAMING DETAILS

S-503

5/30/2025, 1:59:14 PM C:_Revit Models\23080 HWT Pk-12 R22024 (Central)_BRyan@pcs-structural.com.rvt
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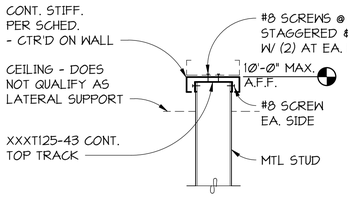
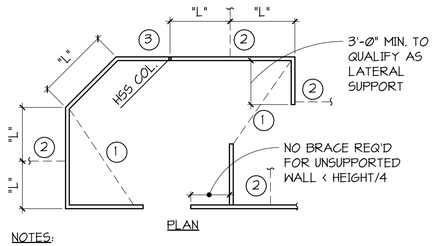



TOP OF WALL STIFFENER

| TOP OF WALL STIFFENER SCHEDULE | |
|---|---|
| UNBRACED WALL LENGTH "L" | STIFFENER MEMBER CONTINUOUS |
| < 10' | NONE REQ'D |
| 10'-13' | 600S137-33 |
| 13'-16' | (2) 600S137-33 |
| 16'-24' | (2) 800S162-43 |



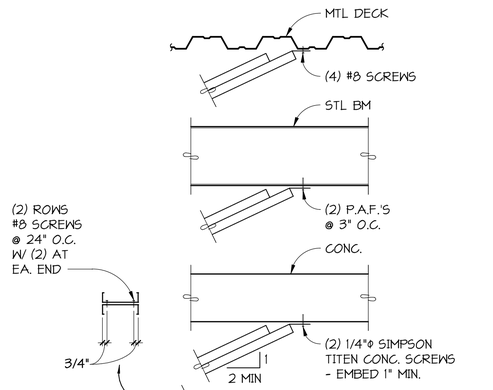

PLAN

NOTES:

1. THIS PLAN IS AN EXAMPLE ONLY. IT DOES NOT REPRESENT A SPECIFIC WALL.
2. "L" INDICATES UNBRACED LENGTH OF WALLS - SEE SCHEDULE FOR TOP OF WALL STIFFENER SIZE.
3. AT CONTRACTORS OPTION, IN LIEU OF TOP OF WALL STIFFENER:
   - (1) INDICATES HORIZONTAL BRACE EXTENDING TO ADJACENT CORNER - SEE 3/S-504.
   - (2) INDICATES BRACE UP TO STRUCTURE - SEE 2/S-504.
   - (3) INDICATES WALL BRACED AT HOLLOW STRUCTURAL SECTION COLUMN - PROVIDE L2"x2"x1/2" LESS THAN STUD WIDTH x54MIL. WITH (4) #8 SCREWS TO TOP TRACK. - WELD CONNECTION ANGLE TO HOLLOW STRUCTURAL SECTION COLUMN OR PROVIDE (4) POWER ACTUATED FASTENERS AT CONTRACTOR'S OPTION.
4. ALL TOP TRACK SPLICES SHALL BE AT BRACE LOCATIONS.

TYPICAL LATERAL SUPPORT FOR COLD-FORMED STEEL STUD WALLS NOT EXTENDING TO STRUCTURE ABOVE

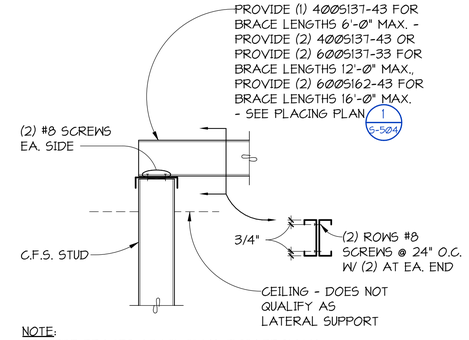
1 S-504 **DETAIL** NO SCALE




NOTE:
PROVIDE BRACES AT 10'-0" MAXIMUM FROM WALL INTERSECTIONS OR CORNERS AND AT 10'-0" ON CENTER.

TYPICAL COLD-FORMED STEEL STUD WALL BRACE UP TO STRUCTURE

2 S-504 **DETAIL** NO SCALE



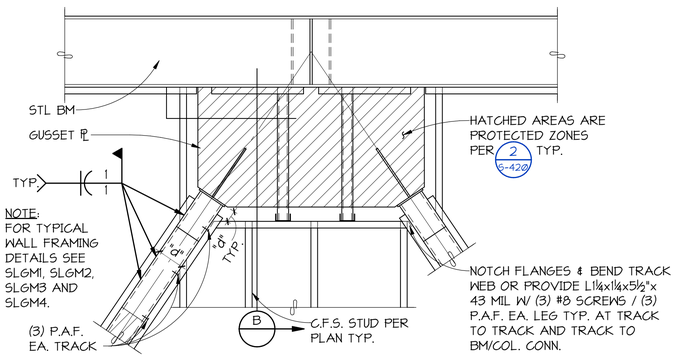

NOTE:
PROVIDE BRACES AT 10'-0" MAXIMUM FROM WALL INTERSECTIONS OR CORNERS AND AT 10'-0" ON CENTER.

TYPICAL COLD-FORMED STEEL STUD WALL HORIZONTAL BRACE

3 S-504 **DETAIL** NO SCALE

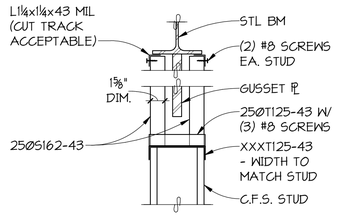
NOTES:

1. DETAIL SHOWS TOP CONDITION - BASE SIMILAR.
2. FOR TYPICAL WALL FRAMING DETAILS - SEE S-501, S-502, S-503, AND S-504.
3. NO POWER ACTUATED FASTENERS, SCREWS OR WELDING PERMITTED AT BRACE OR GUSSET IN PROTECTED (HATCHED) AREAS PER 2/S-420.
4. ATTACH TRACK TO BRACE WITH WELDS OR POWER ACTUATED FASTENERS IN NON-PROTECTED ZONES ONLY. USE EITHER WELD OR POWER ACTUATED FASTNERS AS NOTED.

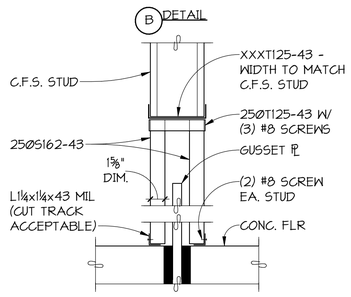



TYPICAL COLD-FORMED STEEL STUD FRAMING AT BRACED FRAME

4 S-504 **SECTION** NO SCALE




BRACE FRAME INFILL FRAMING AT STEEL BEAM




TYPICAL BRACE FRAME INFILL FRAMING AT FLOOR

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COLD-FORMED STEEL FRAMING DETAILS

**S-504**

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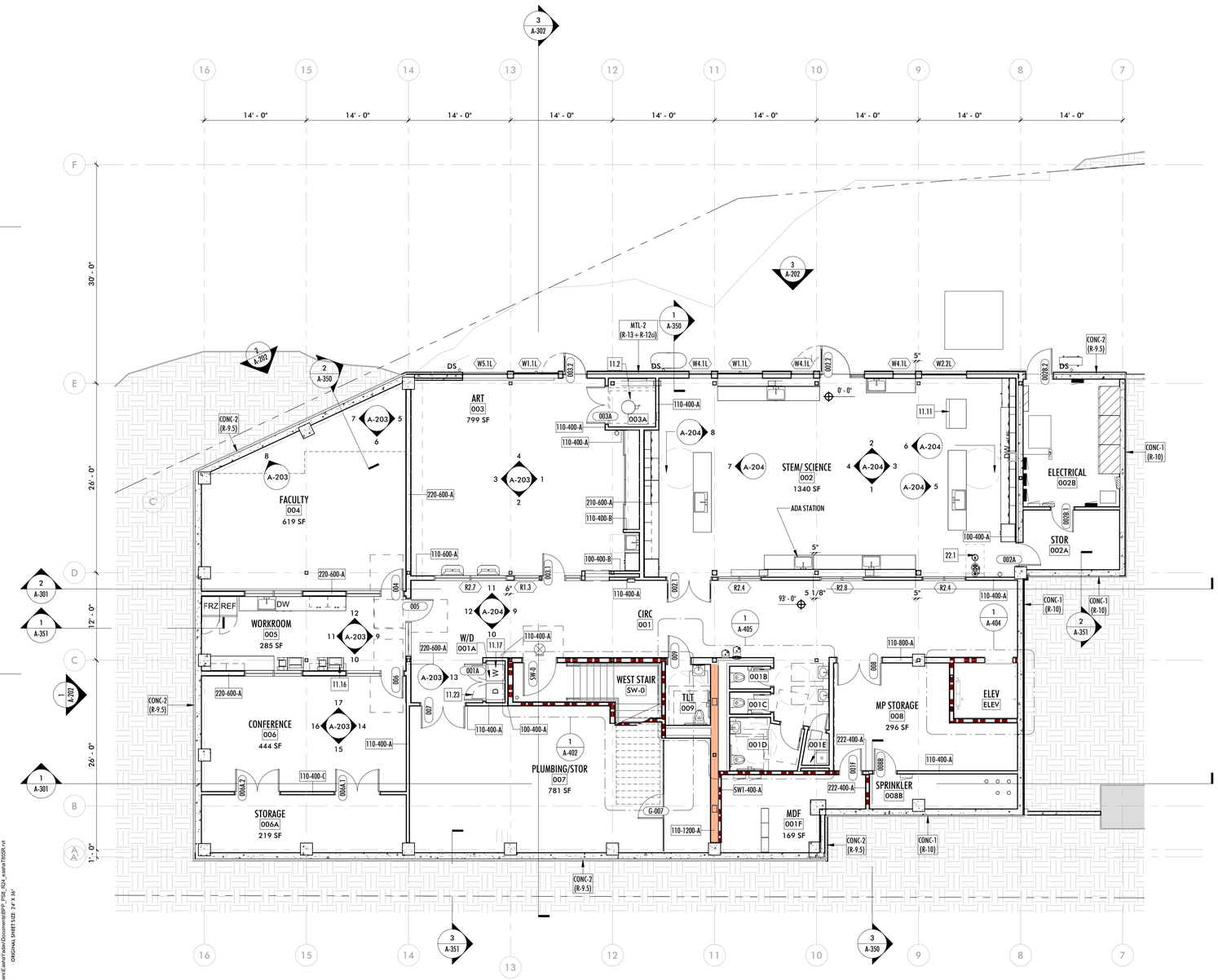
## FIRE ASSEMBLY LEGEND

- 2 HOUR RATED ASSEMBLY
- 1 HOUR RATED ASSEMBLY

## KEYNOTES

| | Keynote Text |
|---|---|
| 11.2 | FOIO KILN |
| 11.11 | FUME HOOD |
| 11.16 | FOIO COPY MACHINE |
| 11.17 | FOIC WASHER+DRYER, SIDE BY SIDE |
| 11.23 | CONDENSING DRYER |
| 22.1 | EYEWASH STATION, SEE PLUMBING DRAWINGS |




1 LEVEL B01 FLOOR PLAN
1/8" = 1'-0"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B01 FLOOR PLAN

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## KEYNOTES

Keynote Text




1 LEVEL B01 FURN PLAN
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B01 FURN PLAN

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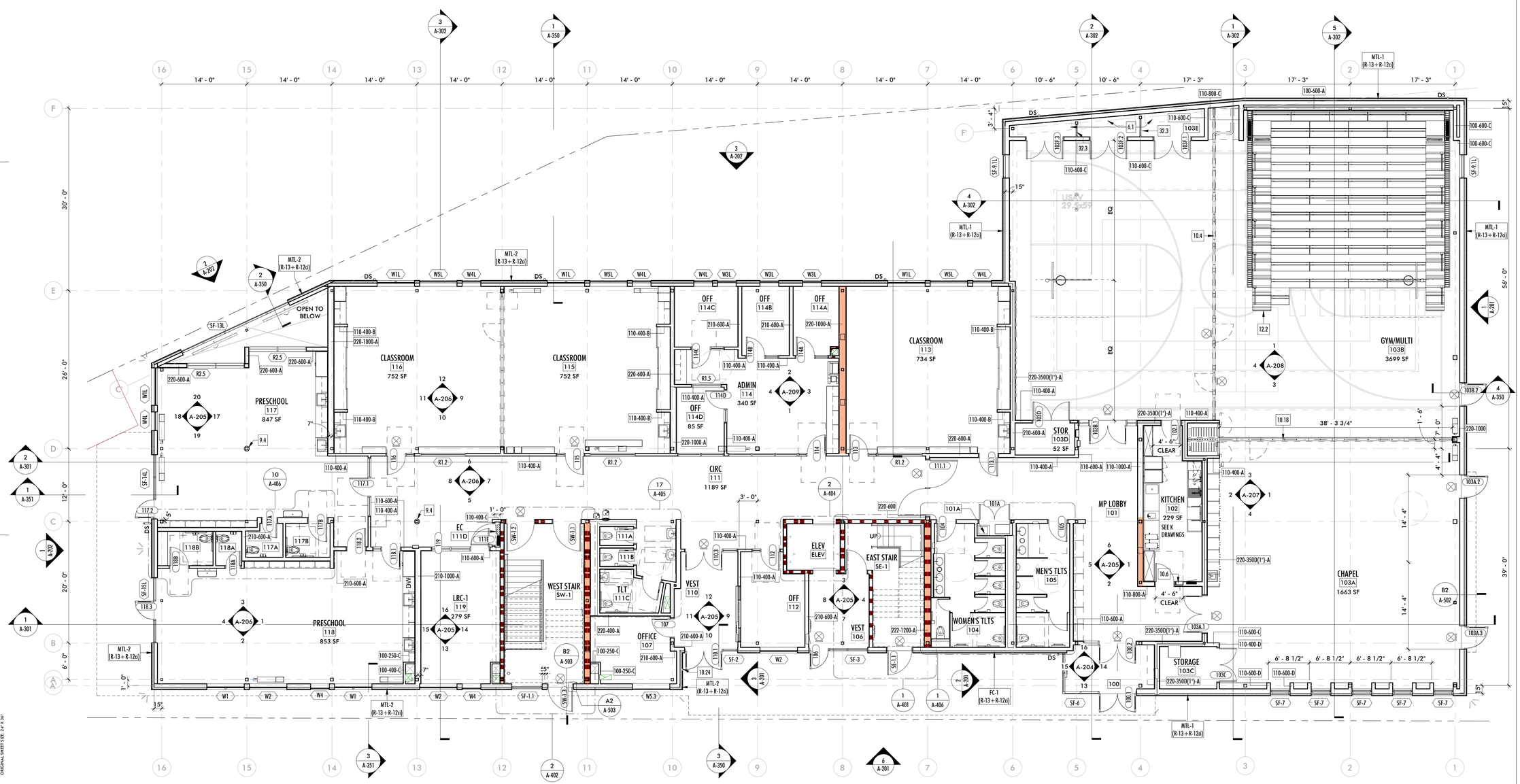
## FIRE ASSEMBLY LEGEND

2 HOUR RATED ASSEMBLY

1 HOUR RATED ASSEMBLY

## KEYNOTES

| | Keynote Text |
|---|---|
| 6.1 | ADJUSTABLE SHELVES AND STANDARDS, 18" DEEP |
| 9.4 | 5' HIGH FABRIC-WRAPPED PADDING AT COLUMN; (2) WELDED EYEBOLTS AT 7'-2" AFF |
| 10.4 | 10 22 39 FOLDING PANEL PARTITION, 22' TALL |
| 10.6 | FULLY RECESSED FIRE EXTINGUISHER CABINET |
| 10.18 | 10 22 39 FOLDING PANEL PARTITION, 18' TALL |
| 10.24 | KNOX BOX PER CITY OF MI REQUIREMENTS |
| 12.2 | TELESCOPIC SEATING |
| 32.3 | 7' HIGH CHAINLINK FENCE PARTITION |




1 LEVEL 01
1/8" = 1'-0"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PROJECT:

L01 FLOOR PLAN

A-101


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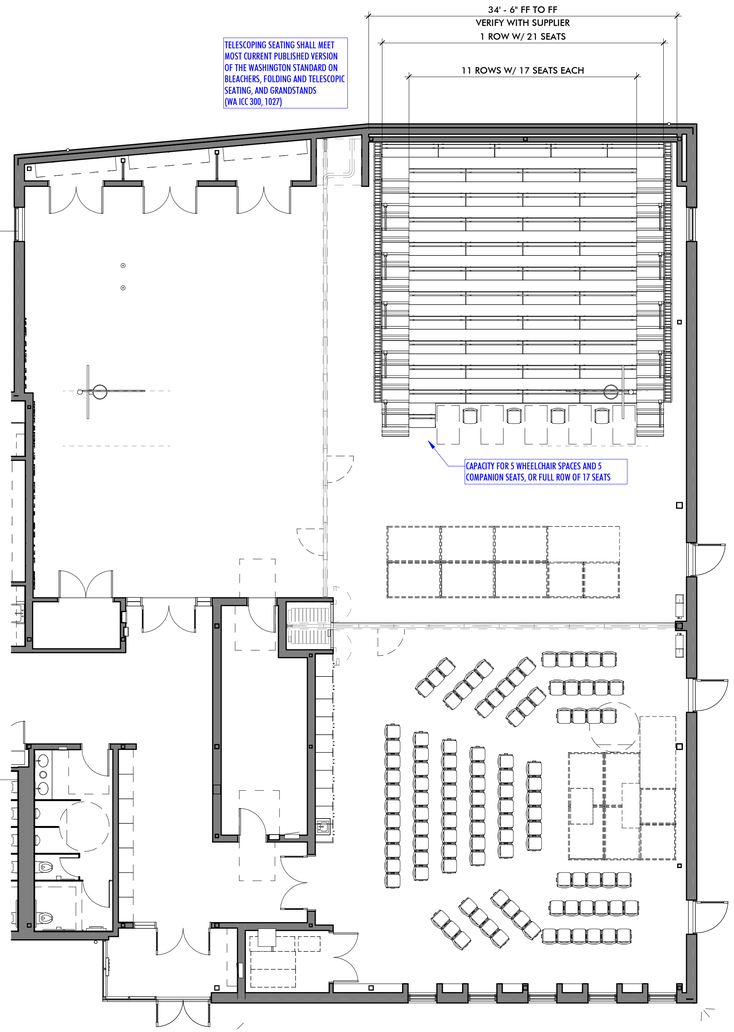
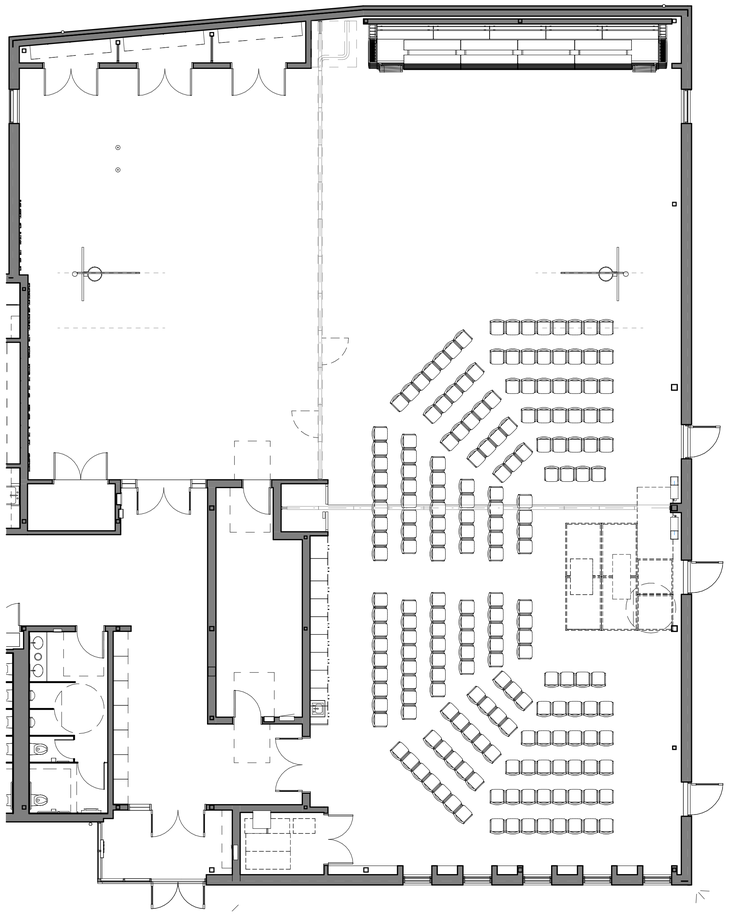
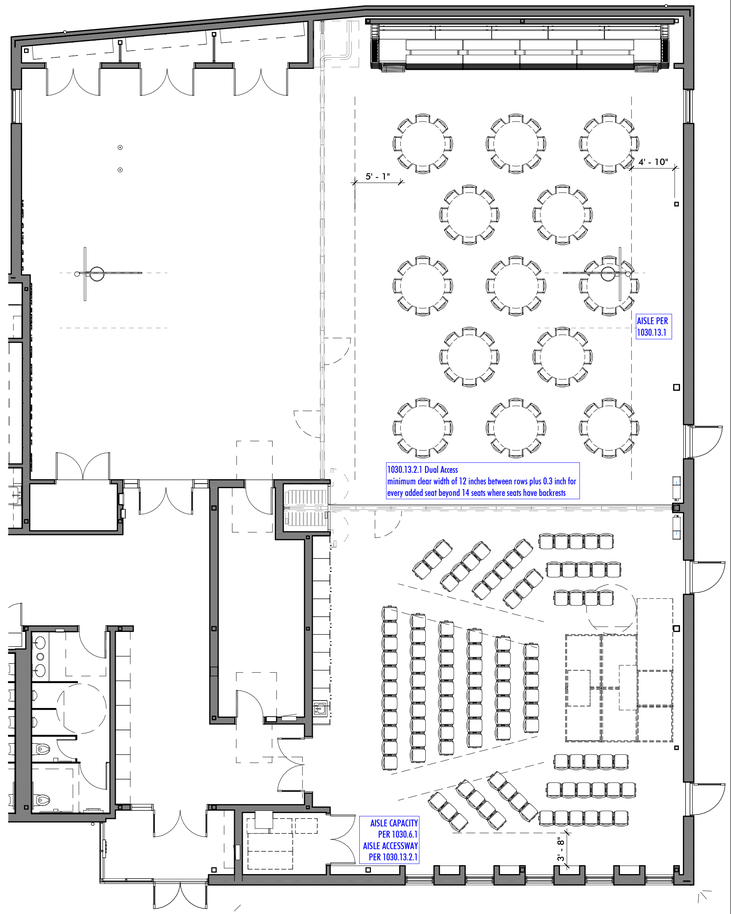



3 ASSEMBLY + 100-PERSON CHAPEL
1/8" = 1'-0"



2 200-PERSON CHAPEL
1/8" = 1'-0"




1 BANQUET SEATING + 100-PERSON CHAPEL
1/8" = 1'-0"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BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
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| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

L01 ASSEMBLY PLANS

A-101A


6/4/2025 11:03:56 AM C:\Users\EashaYadav\Documents\BIPP_PS8_R24_eashaTESSR.rvt
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## KEYNOTES

Keynote Text




1 LEVEL 01 FURN PLAN
1/8" = 1'-0"


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|---|---|---|
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PROJECT:

L01 FURN PLAN

A-101F


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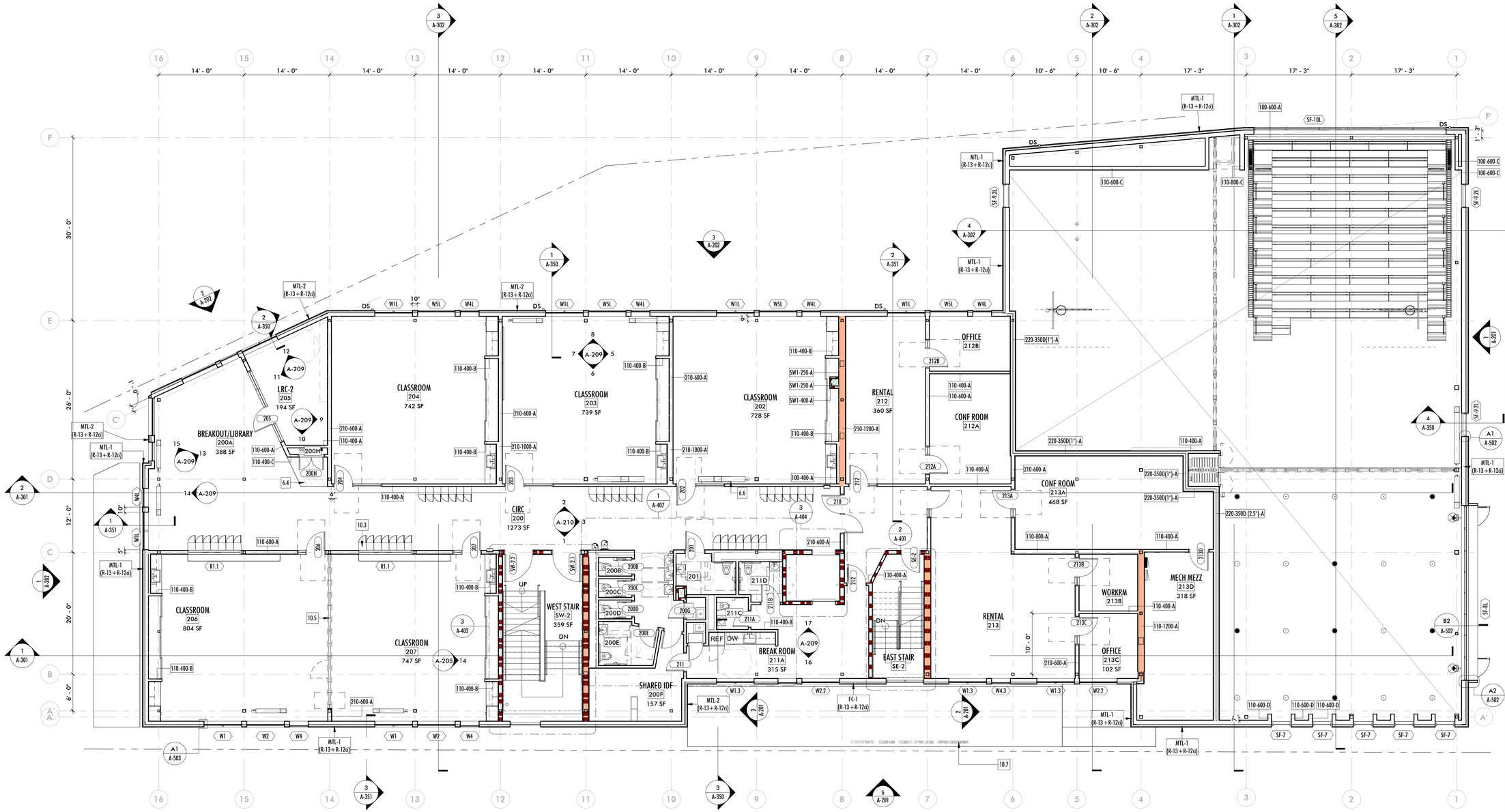
## FIRE ASSEMBLY LEGEND

- 2 HOUR RATED ASSEMBLY
- 1 HOUR RATED ASSEMBLY

## KEYNOTES

| | Keynote Text |
|---|---|
| 6.4 | BENCH |
| 6.6 | 10" WIDE BENCH/CANE RAIL |
| 10.3 | 10 51 00 METAL LOCKERS |
| 10.5 | 10 22 39 FOLDING PANEL PARTITION WITH WHITEBOARD FINISH |
| 10.7 | 10 14 00 custom cut-out metal letters |




1 LEVEL 02
1/8" = 1'-0"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| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 BUILDING PERMIT |

PROJECT:

L02 FLOOR PLAN

A-102


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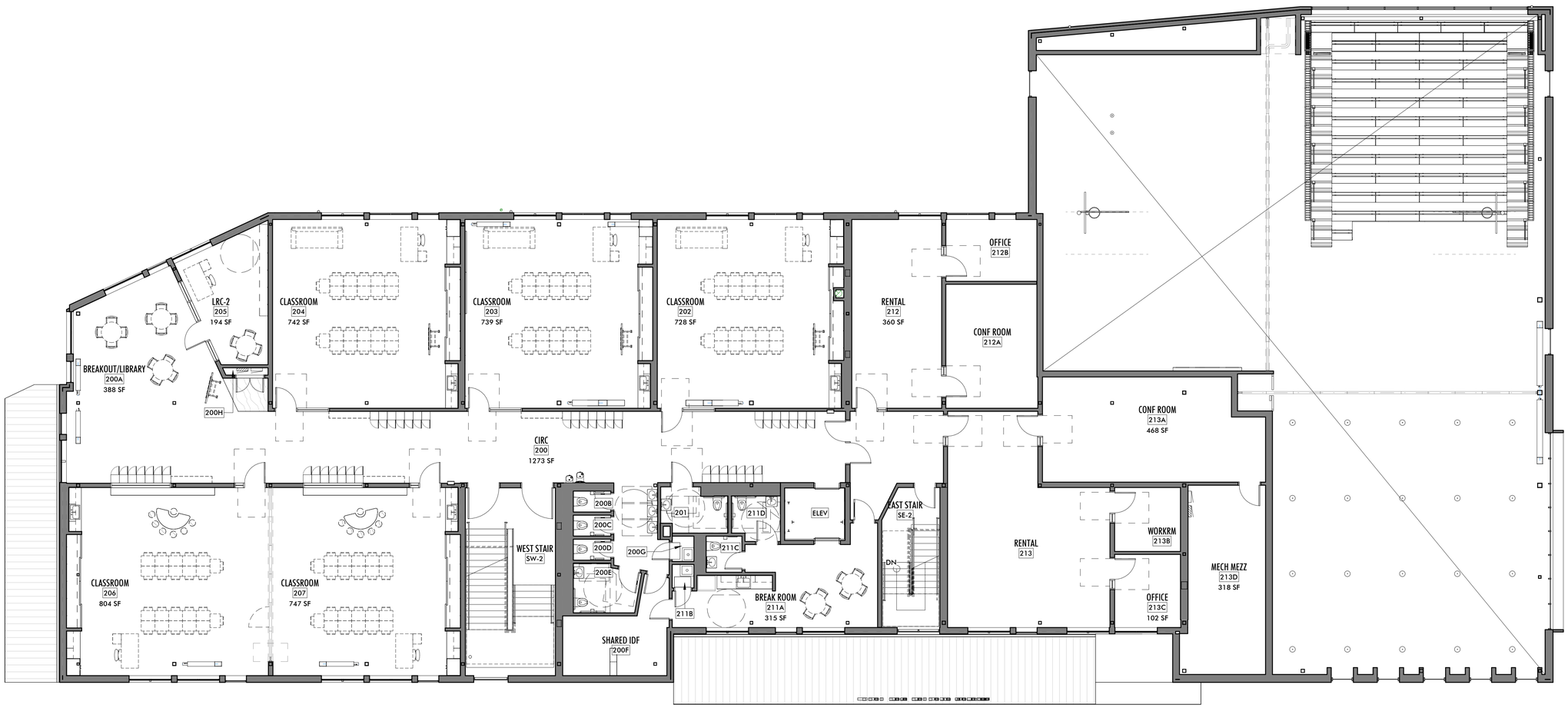
## KEYNOTES

Keynote Text




1 LEVEL 02 FURN PLAN
1/8" = 1'-0"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PROJECT:

L02 FURN PLAN

# A-102F


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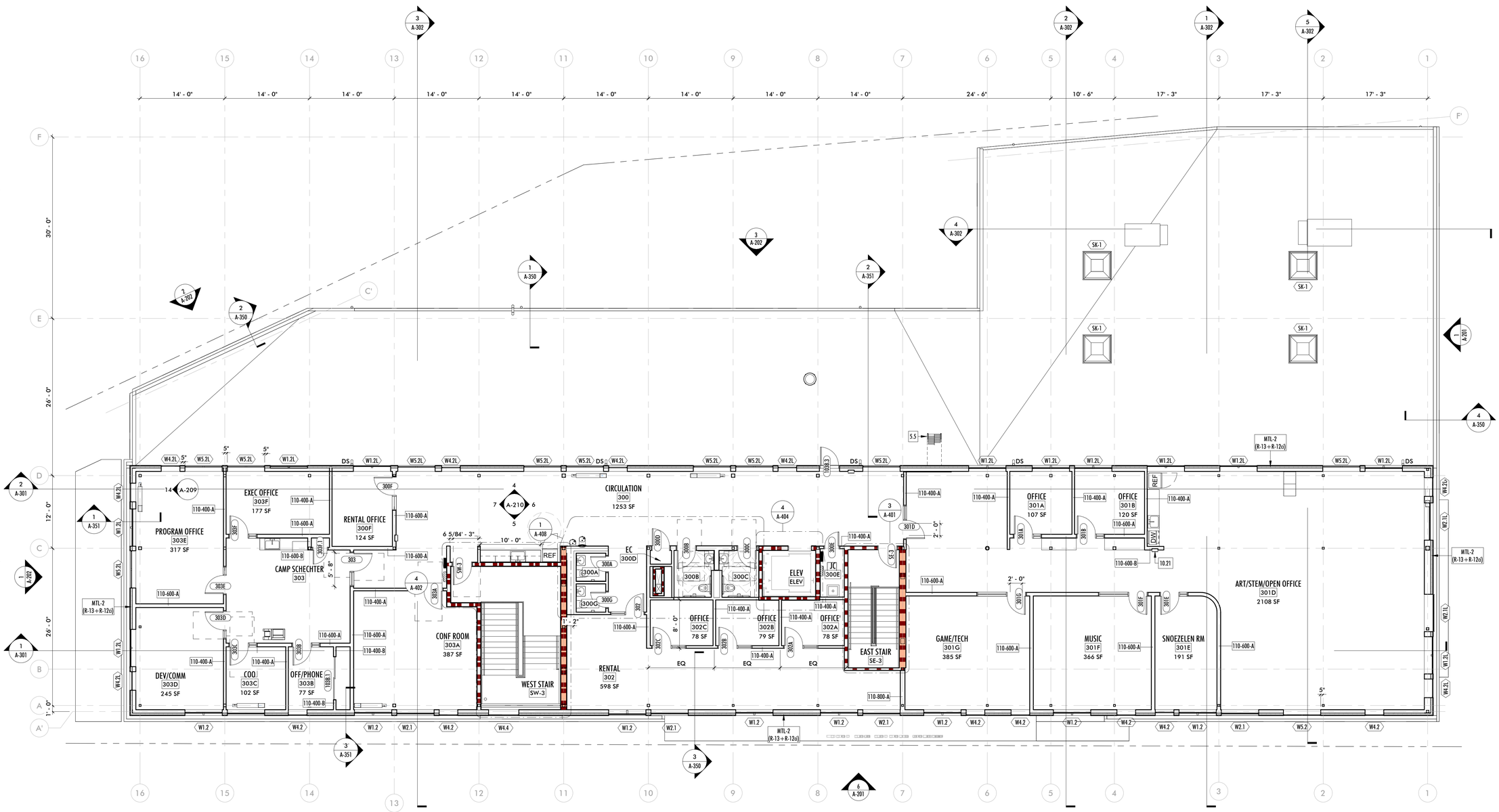
## FIRE ASSEMBLY LEGEND

- 2 HOUR RATED ASSEMBLY
- 1 HOUR RATED ASSEMBLY

## KEYNOTES

| | Keynote Text |
|---|---|
| 5.5 | ALTERNATING TREAD STAIR WITH PLATFORM |
| 10.21 | SEMI-RECESSED FIRE EXTINGUISHER CABINET |




1 LEVEL 03
1/8" = 1'-0"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# BARNABIE POINT PROJECT

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PROJECT:

L03 FLOOR PLAN

# A-103


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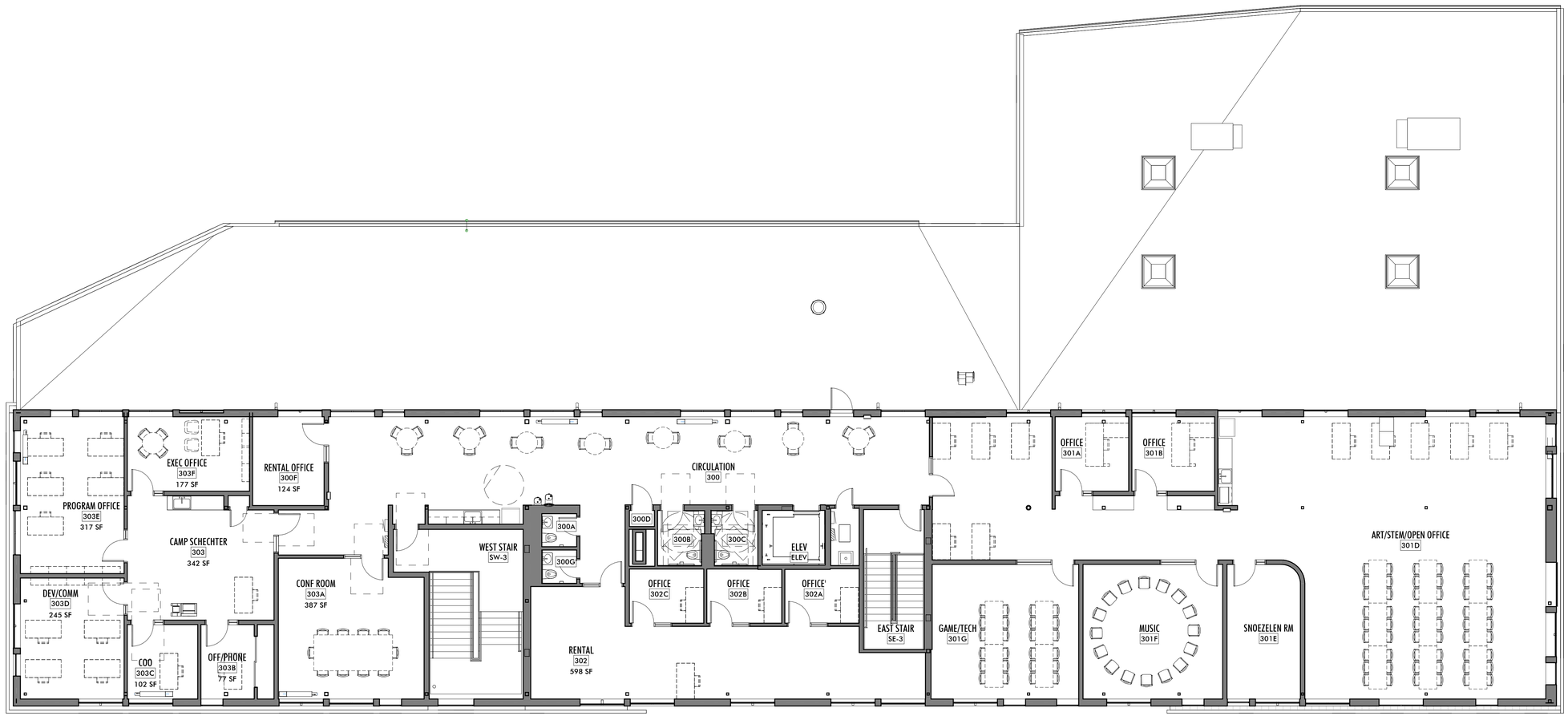
## KEYNOTES

Keynote Text




1 LEVEL 03 FURN PLAN
1/8" = 1'-0"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| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 BUILDING PERMIT |

PROJECT:

L03 FURN PLAN

# A-103F


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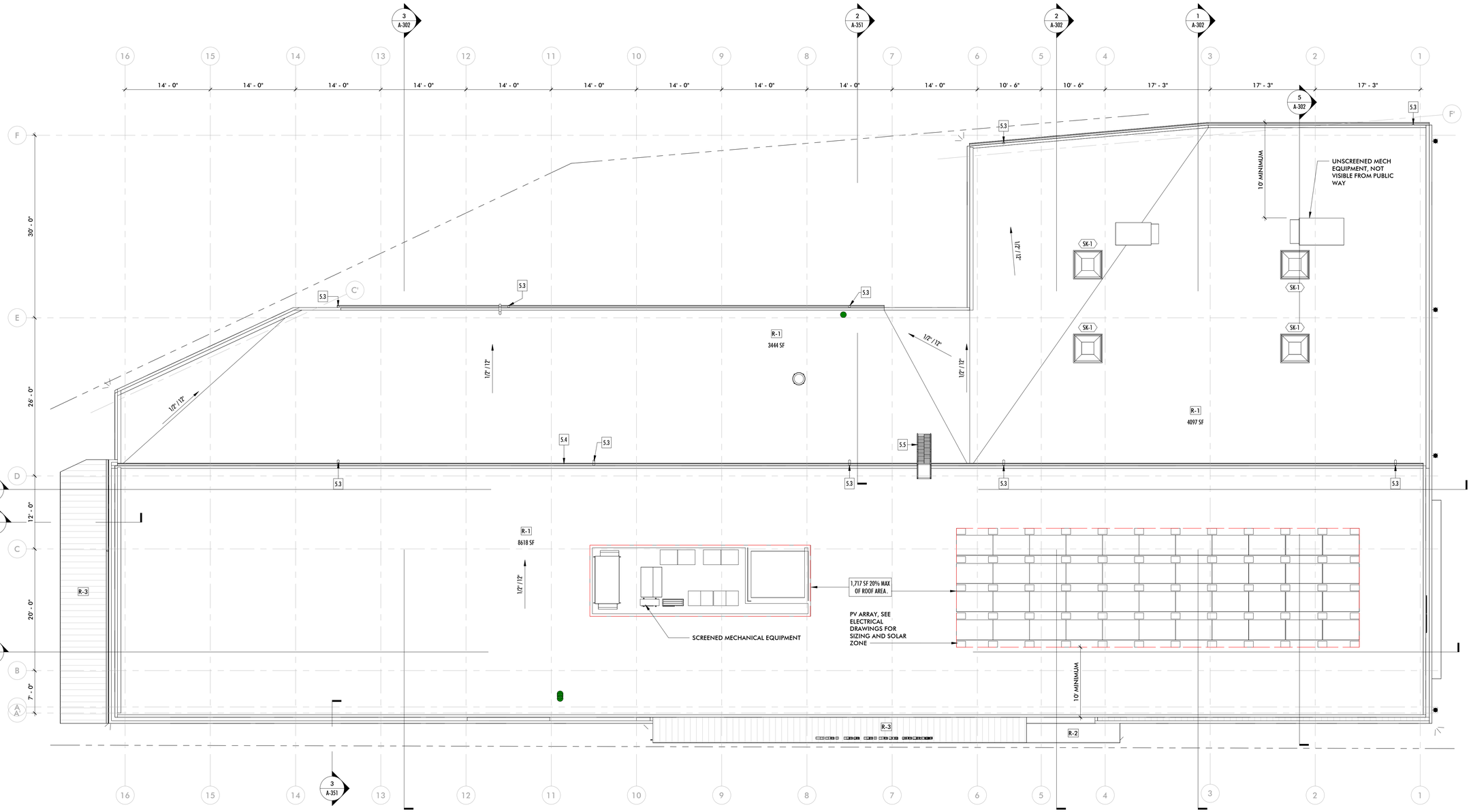
## FIRE ASSEMBLY LEGEND

- 2 HOUR RATED ASSEMBLY
- 1 HOUR RATED ASSEMBLY

## KEYNOTES

| | Keynote Text |
|---|---|
| 5.3 | 4" ROUND COATED SHT MTL DOWNSPOUT; TRANSITION TO 7" PTD GALV SCHEDULE 20 PIPE AT GRADE |
| 5.4 | 6" RECTANGULAR SHT MTL GUTTER |
| 5.5 | ALTERNATING TREAD STAIR WITH PLATFORM |




1 ROOF PLAN
1/8" = 1'-0"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| NO. | DATE | DESCRIPTION |
|---|---|---|
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PROJECT:

ROOF PLAN

A-104


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## CEILING GENERAL NOTES

A. LIGHT FIXTURES AND ELECTRICAL EQUIPMENT SHOWN FOR LOCATION AND ORIENTATION ONLY.
B. MECHANICAL DUCTS, DIFFUSERS AND GRILLES SHOWN FOR LOCATION ONLY.
C. CENTER ALL LIGHTS, EQUIPMENT, SIGNS ETC, U.N.O.

## FIRE ASSEMBLY LEGEND

2 HOUR RATED ASSEMBLY

1 HOUR RATED ASSEMBLY

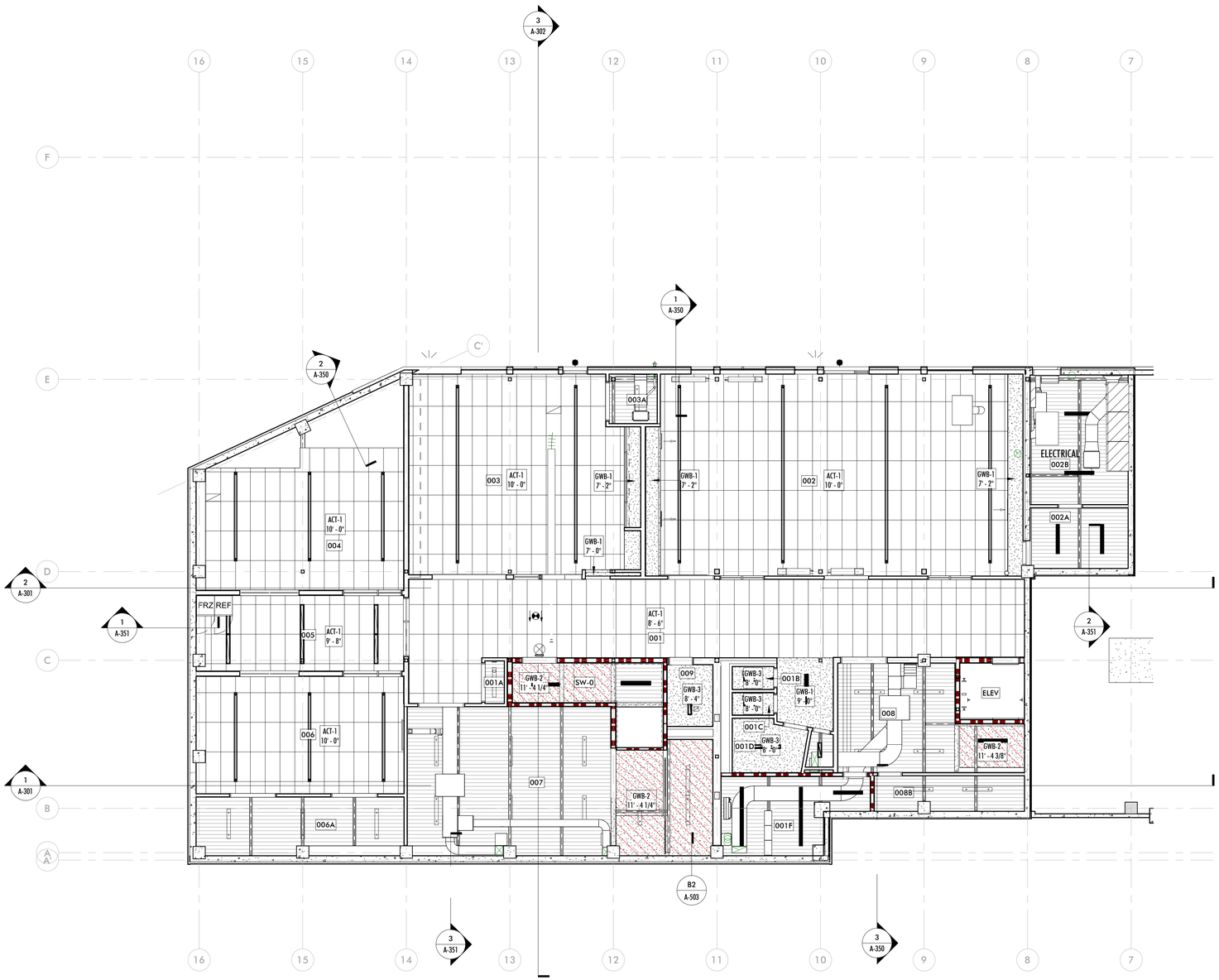
## CEILING LEGEND

EXIT SIGN

OPEN TO STRUCTURE

## KEYNOTES

| | Keynote Text |
|---|---|




1 B01 RCP
1/8" = 1'-0"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PROJECT:

B01 RCP

A-110


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B. MECHANICAL DUCTS, DIFFUSERS AND GRILLES SHOWN FOR LOCATION ONLY.
C. CENTER ALL LIGHTS, EQUIPMENT, SIGNS ETC, U.N.O.

## FIRE ASSEMBLY LEGEND

2 HOUR RATED ASSEMBLY

1 HOUR RATED ASSEMBLY

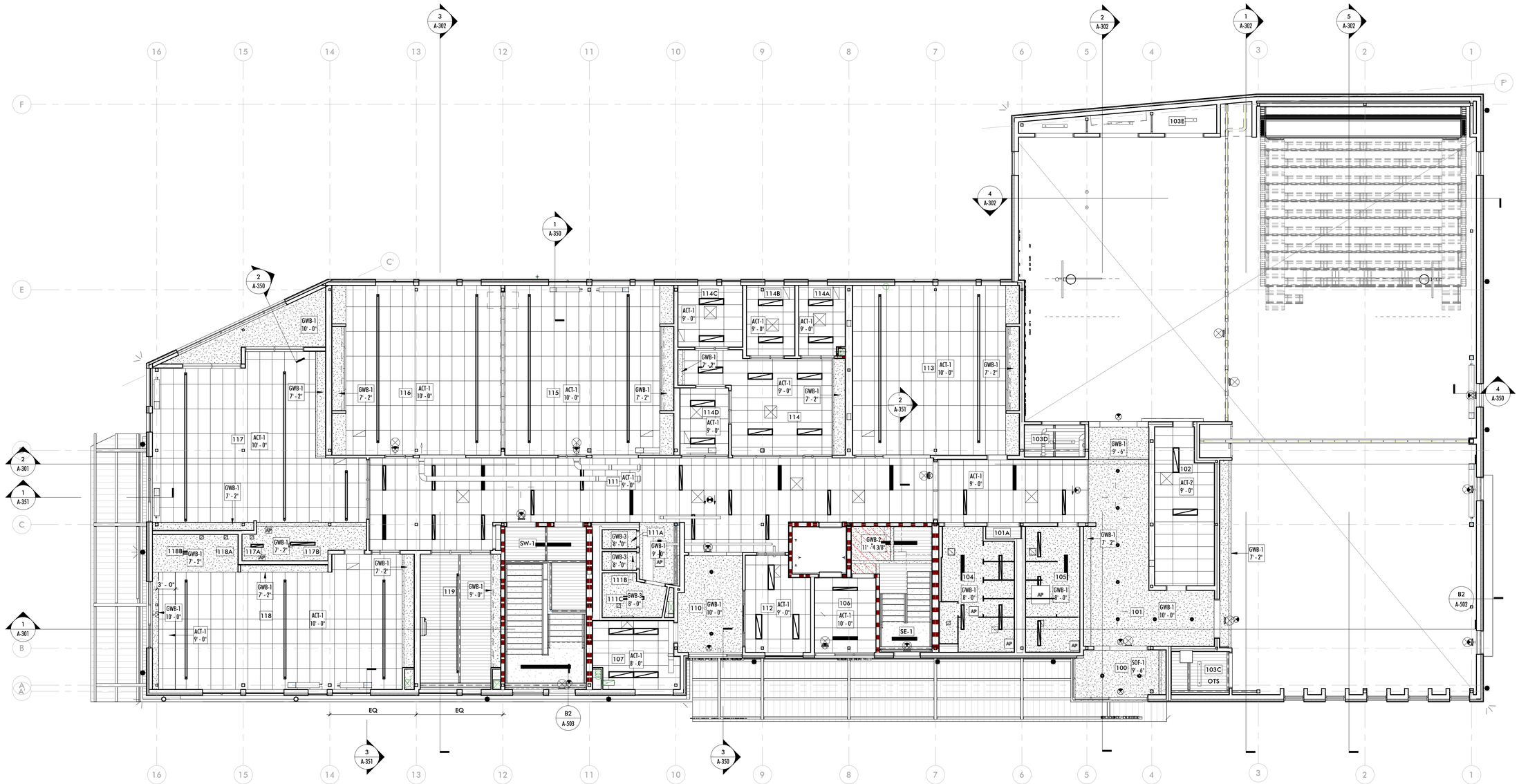
## CEILING LEGEND

EXIT SIGN

OPEN TO STRUCTURE

## KEYNOTES

Keynote Text




1 L01 RCP
1/8" = 1'-0"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PROJECT:

L01 RCP

# A-111


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B. MECHANICAL DUCTS, DIFFUSERS AND GRILLES SHOWN FOR LOCATION ONLY.
C. CENTER ALL LIGHTS, EQUIPMENT, SIGNS ETC, U.N.O.

## FIRE ASSEMBLY LEGEND

2 HOUR RATED ASSEMBLY

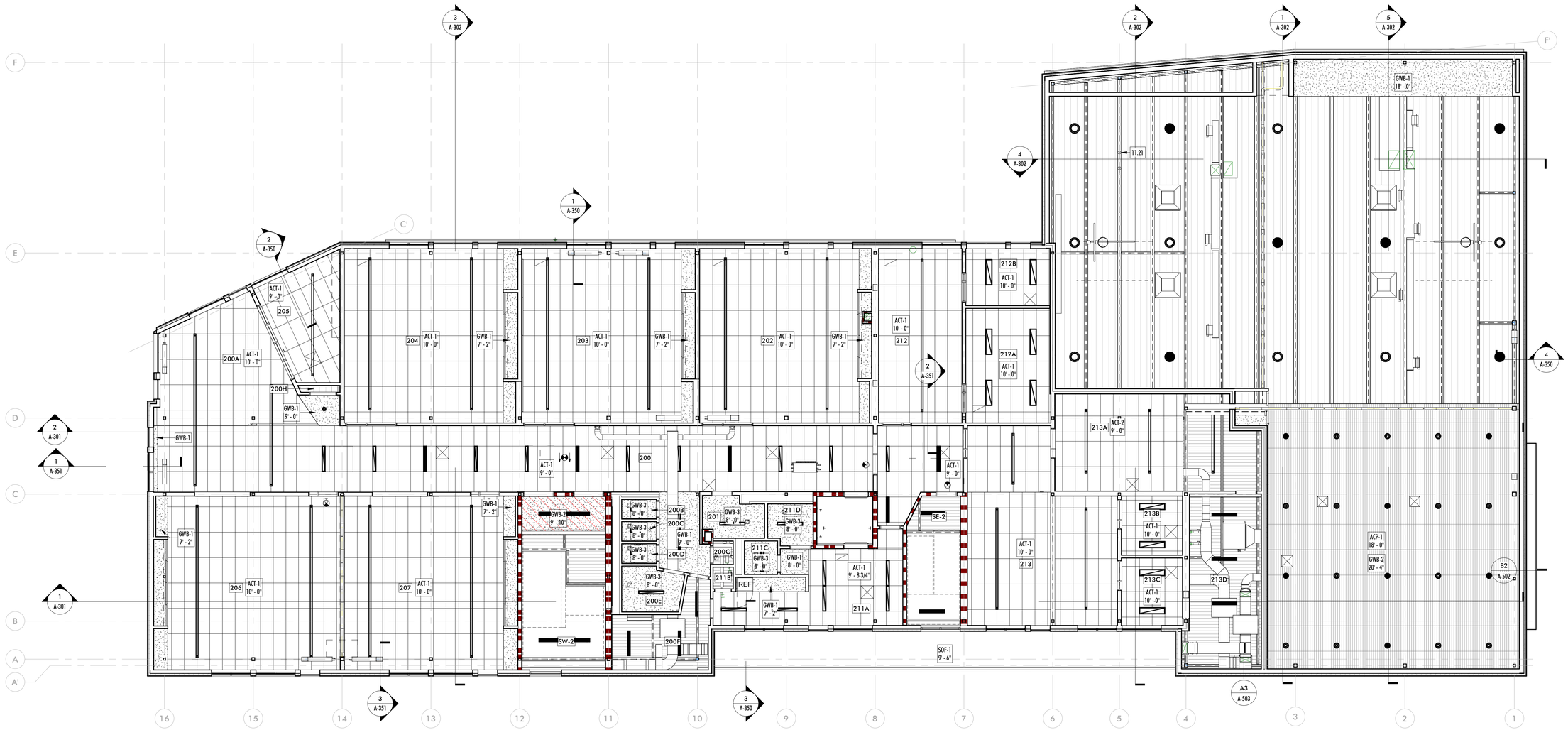
1 HOUR RATED ASSEMBLY

## CEILING LEGEND

EXIT SIGN

OPEN TO STRUCTURE

| KEYNOTES | |
|---|---|
| | Keynote Text |
| 11.21 | CLIMBING ROPES |




2 L02 RCP
1/8" = 1'-0"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PROJECT:

L02 RCP

A-112


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B. MECHANICAL DUCTS, DIFFUSERS AND GRILLES SHOWN FOR LOCATION ONLY.
C. CENTER ALL LIGHTS, EQUIPMENT, SIGNS ETC, U.N.O.

## FIRE ASSEMBLY LEGEND

2 HOUR RATED ASSEMBLY

1 HOUR RATED ASSEMBLY

## CEILING LEGEND

EXIT SIGN

OPEN TO STRUCTURE

## KEYNOTES

| | |
|---|---|
| | Keynote Text |


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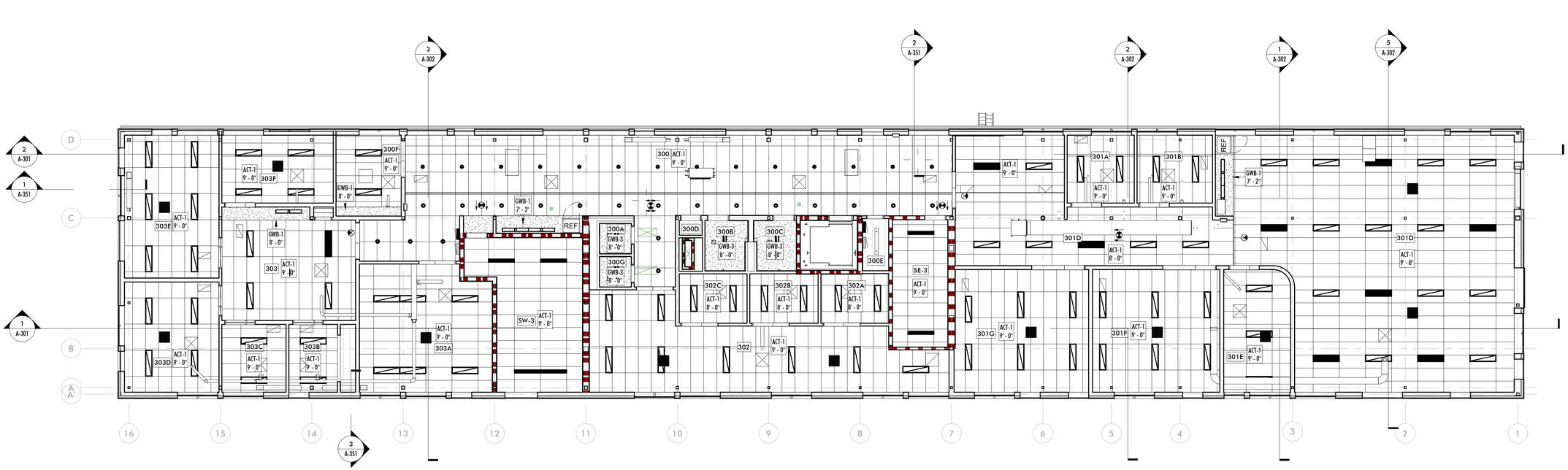


1 L03 RCP
1/8" = 1'-0"

| NO. | DATE | DESCRIPTION |
|---|---|---|
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PROJECT:

L03 RCP

# A-113


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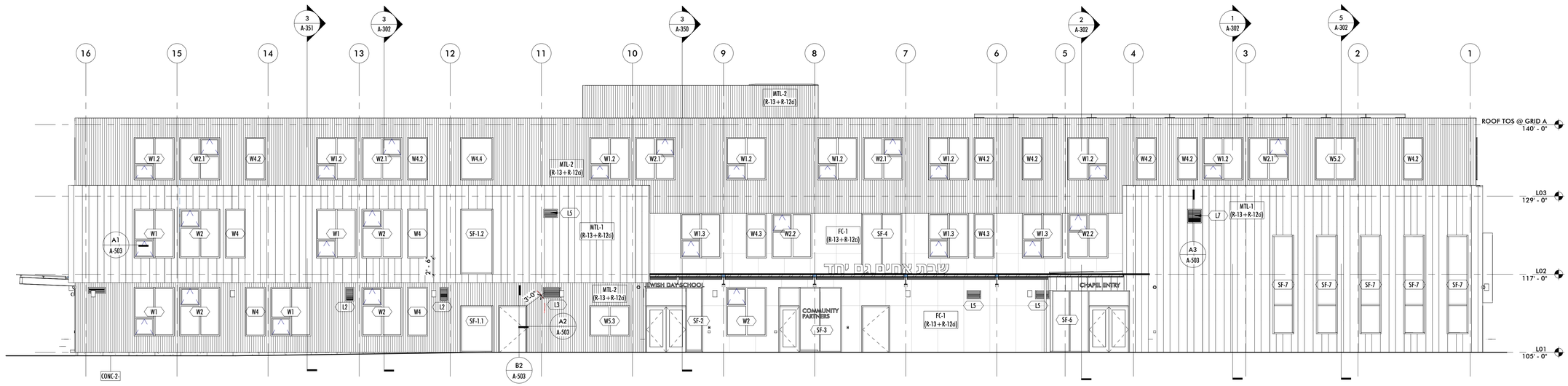
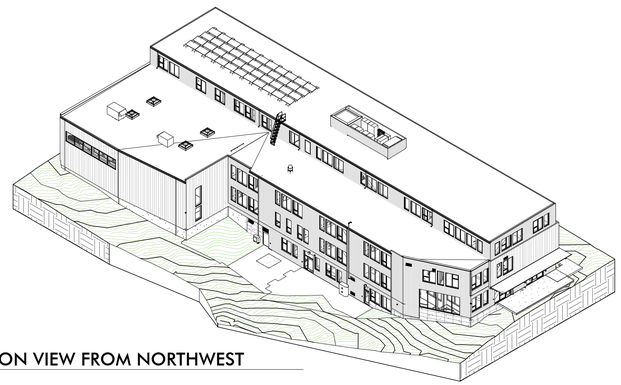
## KEYNOTES

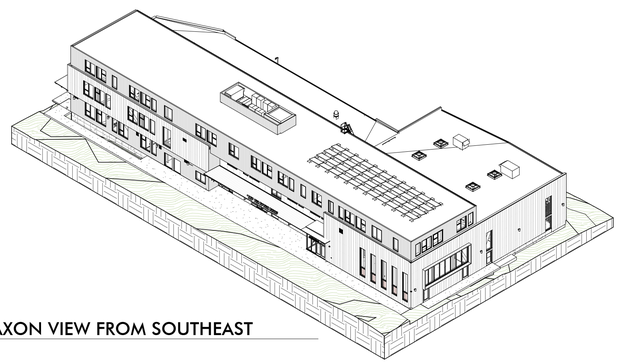
| | Keynote Text |
|---|---|
| 10.24 | KNOX BOX PER CITY OF MI REQUIREMENTS |



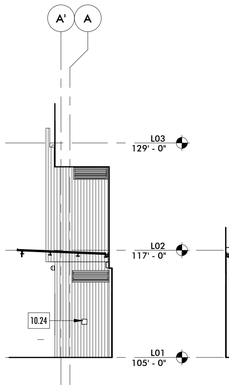

6 SOUTH ELEVATION
1/8" = 1'-0"



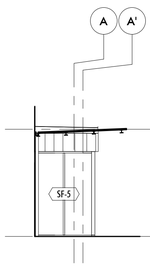
5 AXON VIEW FROM NORTHWEST



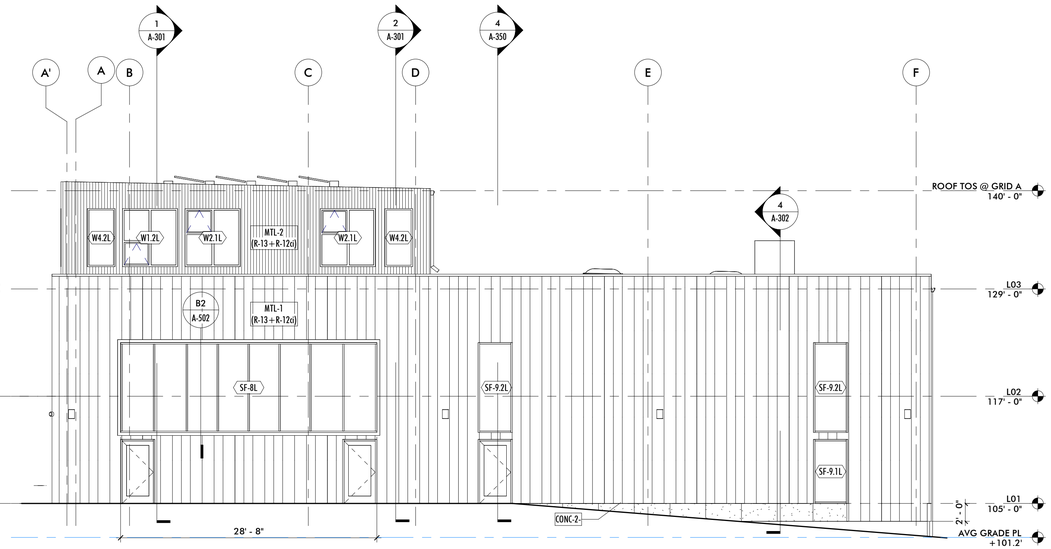
4 AXON VIEW FROM SOUTHEAST




3 ENTRY WEST
1/8" = 1'-0"




2 ENTRY EAST
1/8" = 1'-0"




1 EAST ELEVATION
1/8" = 1'-0"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PROJECT:

EXTERIOR ELEVATIONS

A-201


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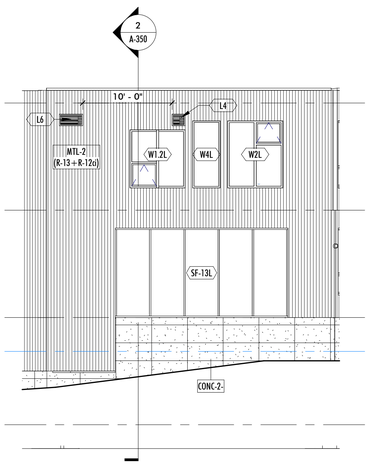
## KEYNOTES

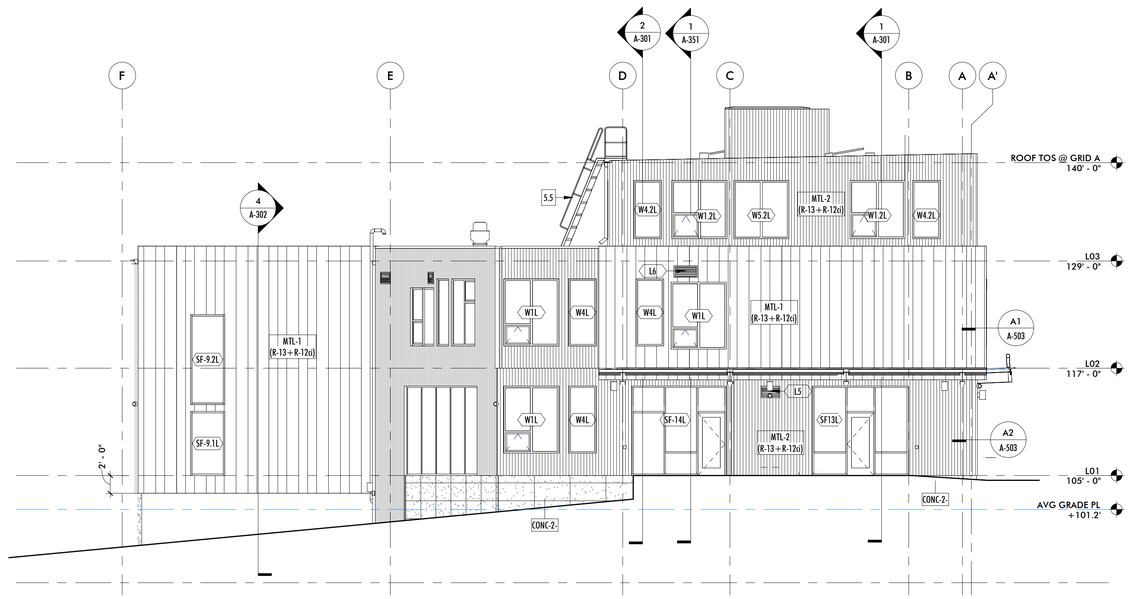
| | Keynote Text |
|---|---|
| 5.5 | ALTERNATING TREAD STAIR WITH PLATFORM |
| 22.2 | BUSHMAN 265 RAINWATER TANK WITH FIRST FLUSH DIVERTER; CONNECT OVERFLOW TO STORM SYSTEM |




3 NORTH ELEVATION
1/8" = 1'-0"




2 NORTHWEST ELEVATION
1/8" = 1'-0"




1 WEST ELEVATION
1/8" = 1'-0"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| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 BUILDING PERMIT |

PROJECT:

EXTERIOR ELEVATIONS

A-202


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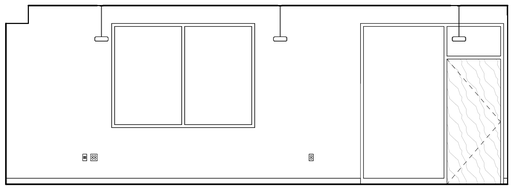
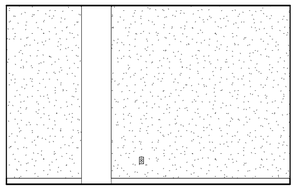
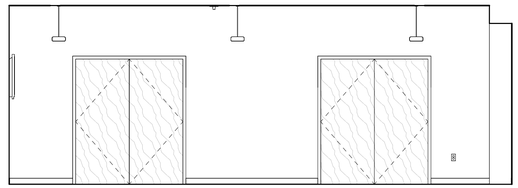


17 CONFERENCE 006 NORTH
1/4" = 1'-0"



16 CONFERENCE 006 WEST
1/4" = 1'-0"



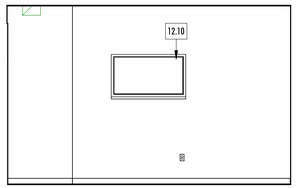
15 CONFERENCE 006 SOUTH
1/4" = 1'-0"

## WALL FINISH LEGEND

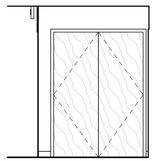
- ACOUSTICAL WALL PANEL, 2" THICK
- CERAMIC TILE 1
- CERAMIC TILE 2
- VENEER PLYWD PANELING
- VENEER PLYWD ACOUSTICAL PANELS
- TACKBOARD
- FIBER REINFORCED LAMINATE
- GYM WALL PAD
- FABRIC-WRAPPED ACOUSTICAL PANELS

## KEYNOTES

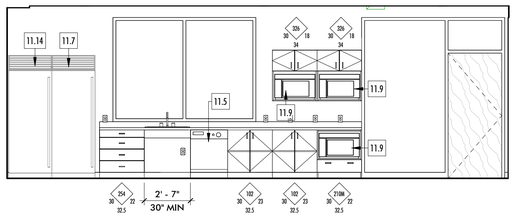
| | Keynote Text |
|---|---|
| 6.1 | ADJUSTABLE SHELVES AND STANDARDS, 18" DEEP |
| 10.1 | 10 11 00 DOUBLE-TRACK SLIDING WHITEBOARD |
| 10.2 | 10 11 23 Tackboard |
| 11.5 | FOIC DISHWASHER |
| 11.7 | FOIC REFRIGERATOR |
| 11.9 | FOIC MICROWAVE |
| 11.14 | FOIC FREEZER |
| 11.16 | FOIO COPY MACHINE |
| 12.10 | FOIO TV |



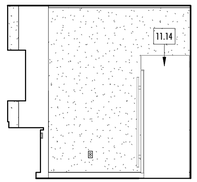

14 CONFERENCE 006 EAST
1/4" = 1'-0"



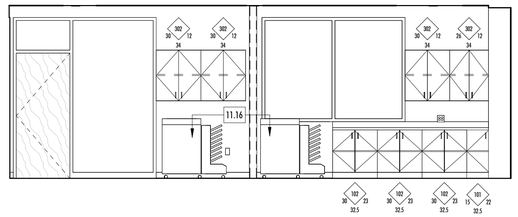
13 001A EAST
1/4" = 1'-0"



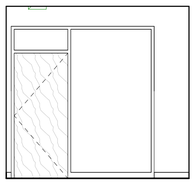

12 WORKROOM 005 NORTH
1/4" = 1'-0"



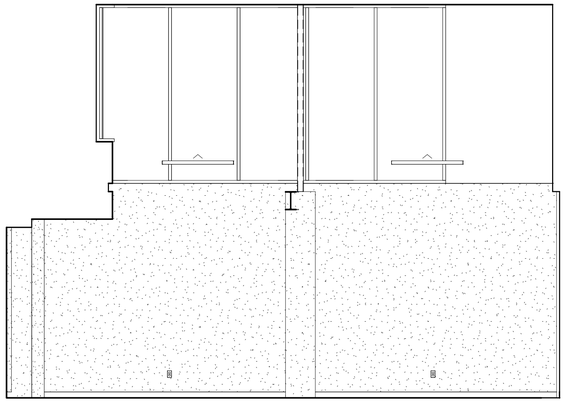

11 WORKROOM 005 WEST
1/4" = 1'-0"



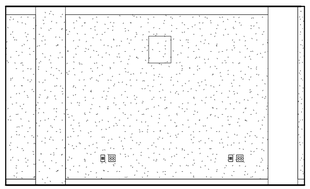

10 WORKROOM 005 SOUTH
1/4" = 1'-0"



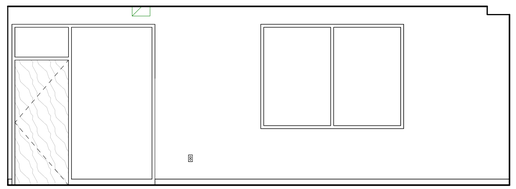
9 WORKROOM 005 EAST
1/4" = 1'-0"



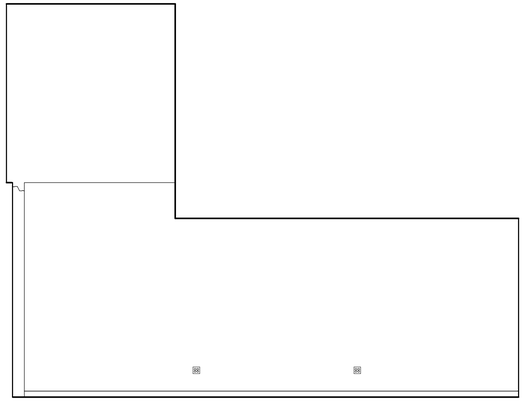
8 FACULTY 004 NORTH
1/4" = 1'-0"



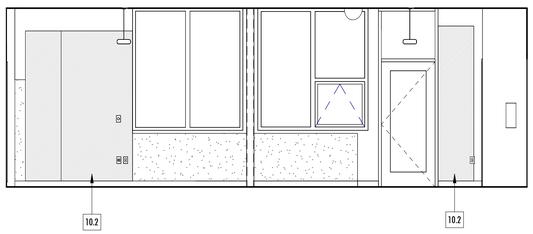
7 FACULTY 004 WEST
1/4" = 1'-0"



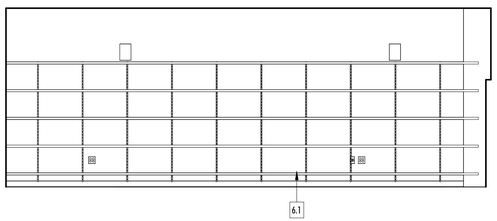
6 FACULTY 004 SOUTH
1/4" = 1'-0"



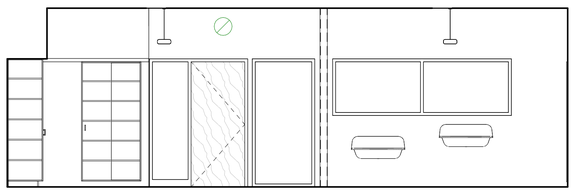
5 FACULTY 004 EAST
1/4" = 1'-0"



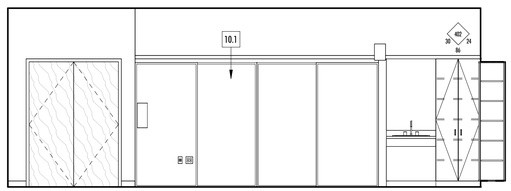

4 ART ROOM 003 NORTH
1/4" = 1'-0"




3 ART ROOM 003 WEST
1/4" = 1'-0"



2 ART ROOM 003 SOUTH
1/4" = 1'-0"




1 ART ROOM 003 EAST
1/4" = 1'-0"

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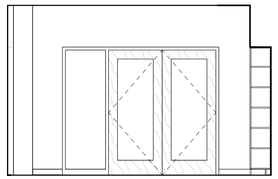
| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

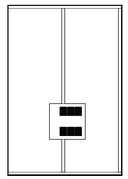
INTERIOR ELEVATIONS LEVEL 0

A-203

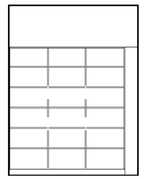
6/4/2025 11:04:40 AM C:\Users\Evelyn\Yadav\Documents\BPP_R24_evelyn.YTEGOR.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"



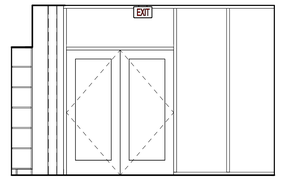
16 VESTIBULE 100 NORTH
1/4" = 1'-0"



15 VESTIBULE 100 WEST
1/4" = 1'-0"



14 VESTIBULE 100 EAST
1/4" = 1'-0"



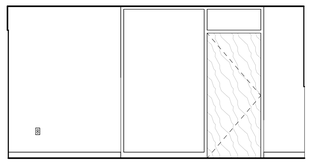

13 VESTIBULE 100 SOUTH
1/4" = 1'-0"

## WALL FINISH LEGEND

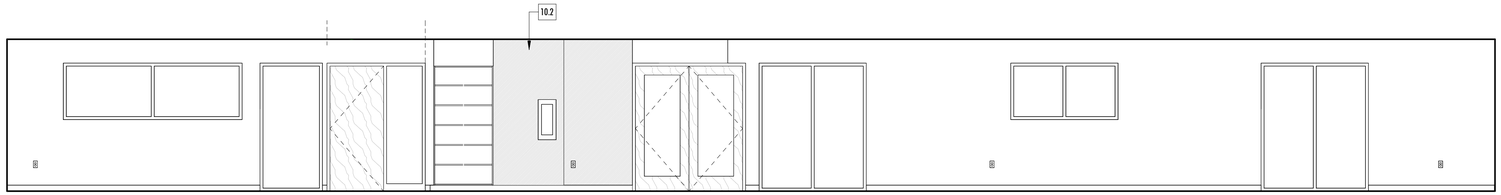
- ACOUSTICAL WALL PANEL, 2" THICK
- CERAMIC TILE 1
- CERAMIC TILE 2
- VENEER PLYWD PANELING
- VENEER PLYWD ACOUSTICAL PANELS
- TACKBOARD
- FIBER REINFORCED LAMINATE
- GYM WALL PAD
- FABRIC-WRAPPED ACOUSTICAL PANELS

## KEYNOTES

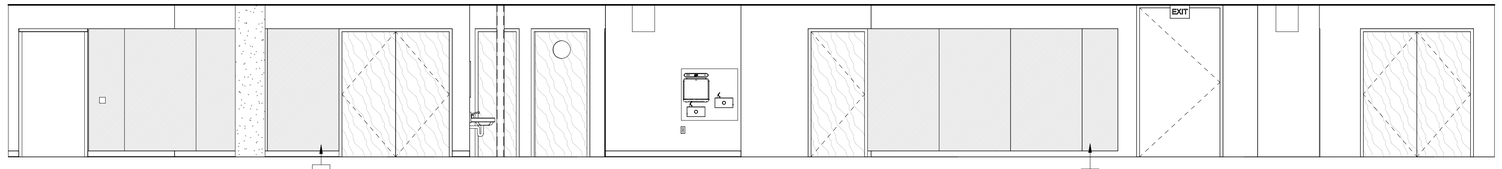
| | Keynote Text |
|---|---|
| 10.2 | 10 11 23 Tackboard |
| 10.15 | FOIO 3D PRINTER |
| 10.16 | FOIO LASER CUTTER |
| 10.23 | SURFACE-MOUNTED FIRE EXTINGUISHER |
| 11.5 | FOIC DISHWASHER |
| 11.8 | FOIC UNDERCOUNTER REFRIGERATOR |
| 11.9 | FOIC MICROWAVE |
| 11.11 | FUME HOOD |
| 12.11 | FOIO FLAMMABLE CABINET |
| 22.1 | EYEWASH STATION, SEE PLUMBING DRAWINGS |
| 26.3 | 26 24 16 ELECTRICAL PANELBOARD |



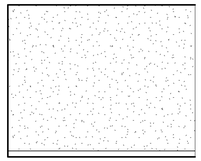
12 CORRIDOR 001 WEST
1/4" = 1'-0"



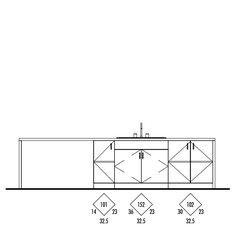

11 CORRIDOR 001 NORTH
1/4" = 1'-0"



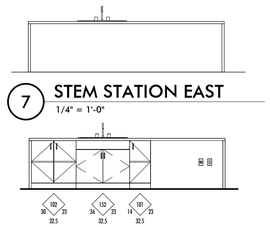

10 CORRIDOR 001 SOUTH
1/4" = 1'-0"



9 CORRIDOR 001 EAST
1/4" = 1'-0"



8 STEM STATION WEST
1/4" = 1'-0"

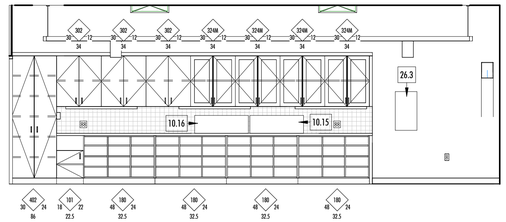


7 STEM STATION EAST
1/4" = 1'-0"

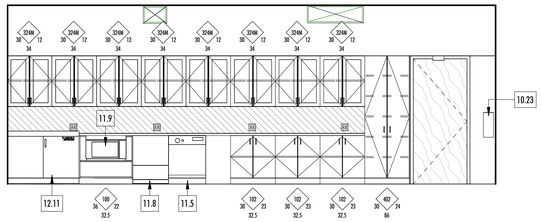
6 SCIENCE STATION EAST
1/4" = 1'-0"



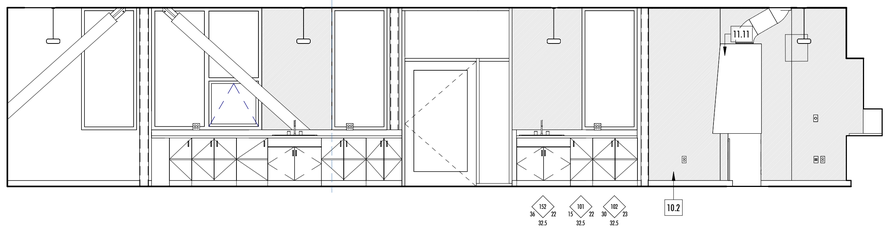

5 FUME HOOD & SCIENCE STATION WEST
1/4" = 1'-0"



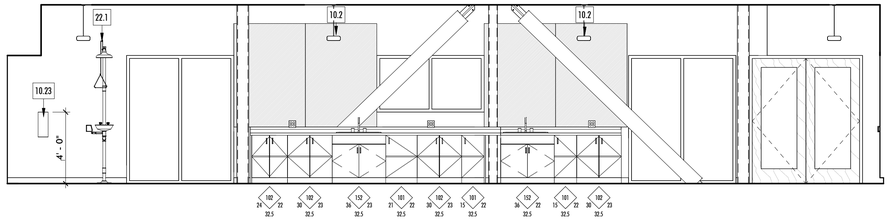

4 SCIENCE/ STEAM 002 WEST
1/4" = 1'-0"




3 SCIENCE/ STEAM 002 EAST
1/4" = 1'-0"




2 SCIENCE/ STEAM 002 NORTH
1/4" = 1'-0"




1 SCIENCE/ STEAM 002 SOUTH
1/4" = 1'-0"

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| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

INTERIOR ELEVATIONS LEVEL 0/1

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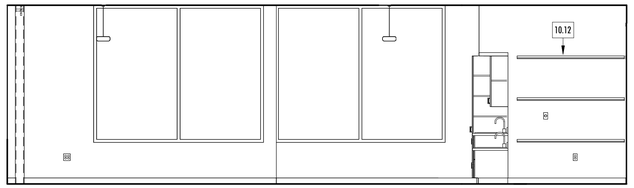
## WALL FINISH LEGEND

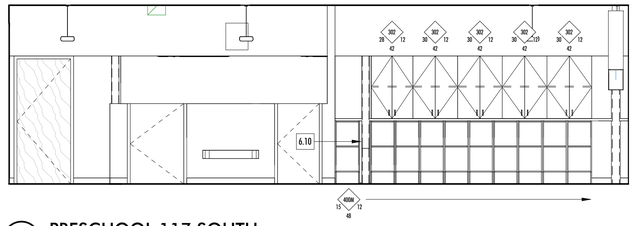
- ACOUSTICAL WALL PANEL, 2" THICK
- CERAMIC TILE 1
- CERAMIC TILE 2
- VENEER PLYWD PANELING
- VENEER PLYWD ACOUSTICAL PANELS
- TACKBOARD
- FIBER REINFORCED LAMINATE
- GYM WALL PAD
- FABRIC-WRAPPED ACOUSTICAL PANELS

## KEYNOTES

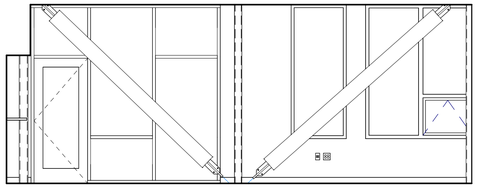
| | Keynote Text |
|---|---|
| 6.10 | 06 41 16 PLAM COUNTERTOP |
| 10.10 | SEMI-RECESSED DEFIBRILLATOR CABINET |
| 10.12 | DISPLAY RAIL |
| 10.21 | SEMI-RECESSED FIRE EXTINGUISHER CABINET |



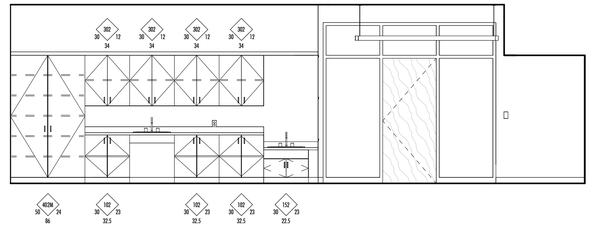

20 PRESCHOOL 117 NORTH
1/4" = 1'-0"



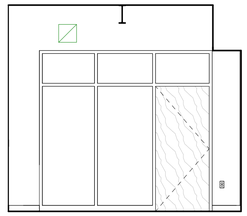

19 PRESCHOOL 117 SOUTH
1/4" = 1'-0"



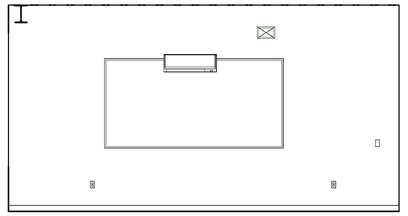
18 PRESCHOOL 117 WEST
1/4" = 1'-0"



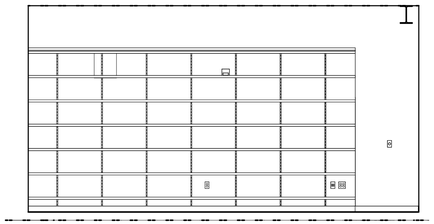
17 PRESCHOOL 117 EAST
1/4" = 1'-0"



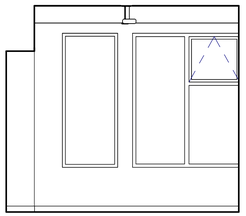
16 LRC 119 NORTH
1/4" = 1'-0"



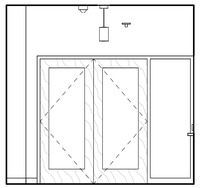
15 LRC 119 WEST
1/4" = 1'-0"



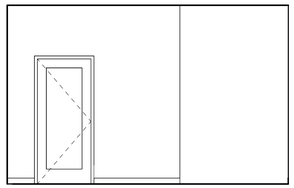
14 LRC 119 EAST
1/4" = 1'-0"



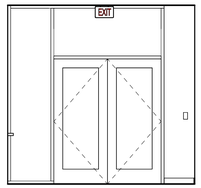
13 LRC 119 SOUTH
1/4" = 1'-0"



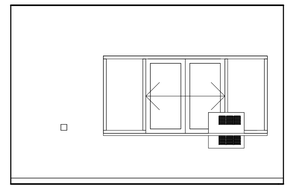
12 VESTIBULE 110 NORTH
1/4" = 1'-0"



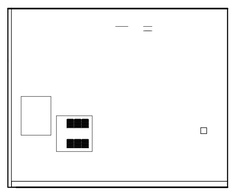
11 VESTIBULE 110 WEST
1/4" = 1'-0"



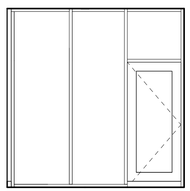

10 VESTIBULE 110 SOUTH
1/4" = 1'-0"



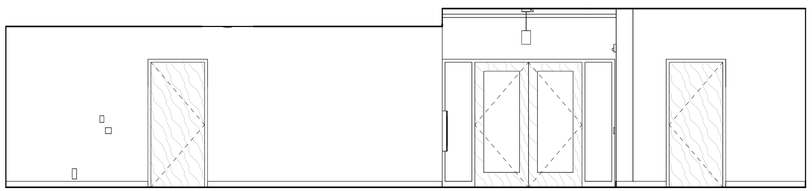
9 VESTIBULE 110 EAST
1/4" = 1'-0"



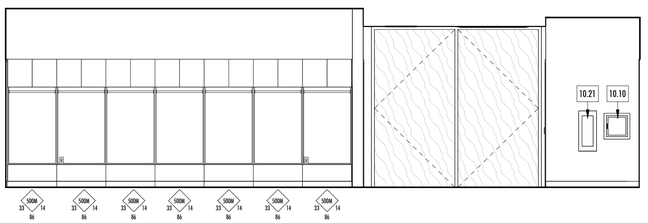
8 VESTIBULE 106 W
1/4" = 1'-0"



7 VESTIBULE 106 S
1/4" = 1'-0"



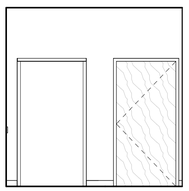
6 LOBBY 101 NORTH
1/4" = 1'-0"



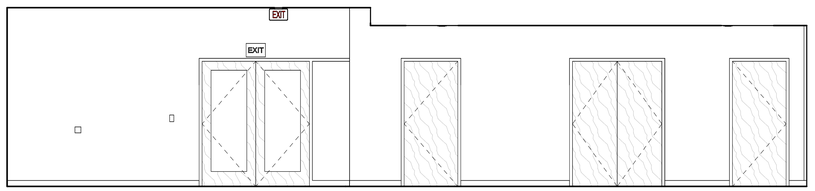

5 LOBBY 101 WEST
1/4" = 1'-0"



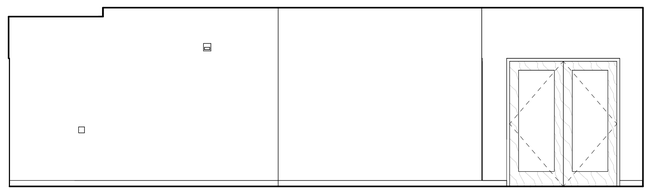
4 VESTIBULE 106 E
1/4" = 1'-0"



3 VESTIBULE 106 N
1/4" = 1'-0"




2 LOBBY 101 SOUTH
1/4" = 1'-0"



1 LOBBY 101 EAST
1/4" = 1'-0"

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STATE OF WASHINGTON

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| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

INTERIOR ELEVATIONS LEVEL 1

A-205

6/4/2025 11:04:59 AM C:\Users\Eamin\Desktop\Documents\BIP_PSB_R24_eamin.rvt
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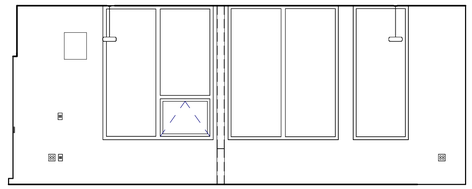
## WALL FINISH LEGEND

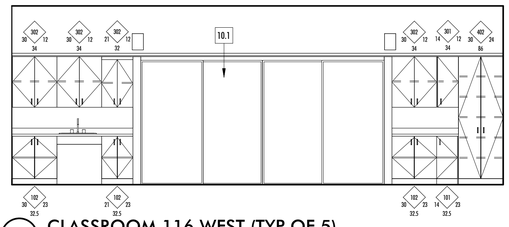
- ACOUSTICAL WALL PANEL, 2" THICK
- CERAMIC TILE 1
- CERAMIC TILE 2
- VENEER PLYWD PANELING
- VENEER PLYWD ACOUSTICAL PANELS
- TACKBOARD
- FIBER REINFORCED LAMINATE
- GYM WALL PAD
- FABRIC-WRAPPED ACOUSTICAL PANELS

## KEYNOTES

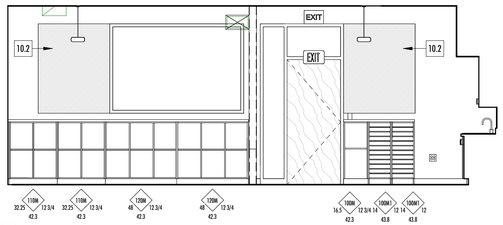
| | Keynote Text |
|---|---|
| 10.1 | 10 11 00 DOUBLE-TRACK SLIDING WHITEBOARD |
| 10.2 | 10 11 23 Tackboard |
| 10.5 | 10 22 39 FOLDING PANEL PARTITION WITH WHITEBOARD FINISH |
| 10.12 | DISPLAY RAIL |
| 10.21 | SEMI-RECESSED FIRE EXTINGUISHER CABINET |
| 11.5 | FOIC DISHWASHER |



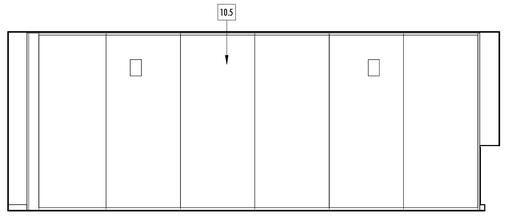
12 CLASSROOM 116 NORTH (TYP OF 5)
1/4" = 1'-0"



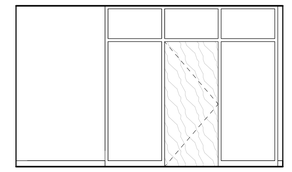

11 CLASSROOM 116 WEST (TYP OF 5)
1/4" = 1'-0"



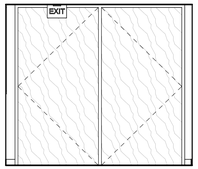

10 CLASSROOM 116 SOUTH (TYP OF 5)
1/4" = 1'-0"



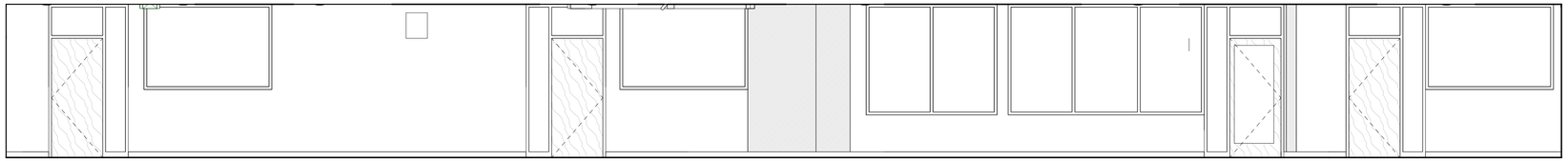

9 CLASSROOM 116 EAST (TYP OF 2)
1/4" = 1'-0"



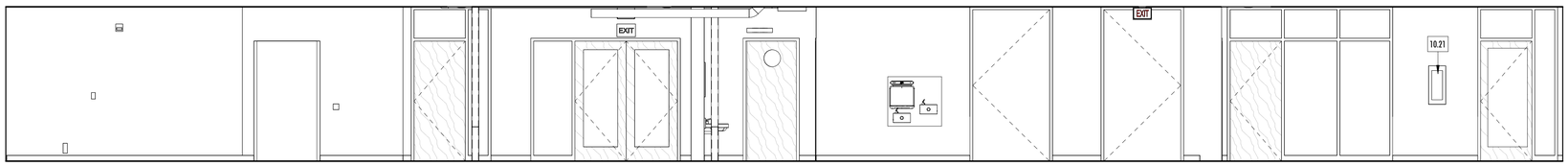
8 CORRIDOR 111 WEST
1/4" = 1'-0"



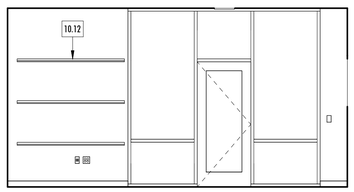

7 CORRIDOR 111 EAST
1/4" = 1'-0"



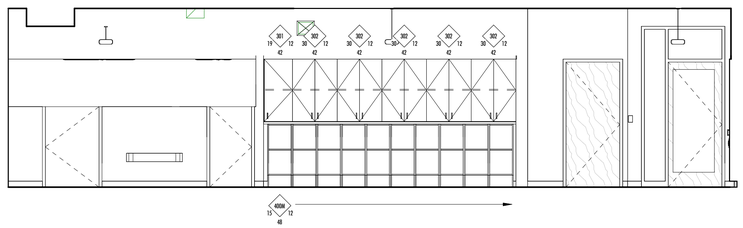
6 CORRIDOR 111 NORTH
1/4" = 1'-0"



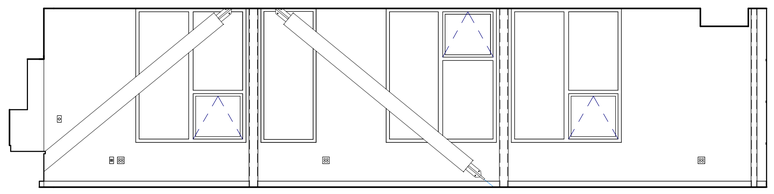

5 CORRIDOR 111 SOUTH
1/4" = 1'-0"



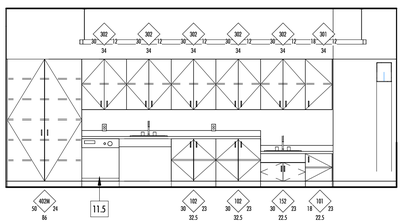

4 PRESCHOOL 118 WEST
1/4" = 1'-0"



3 PRESCHOOL 118 NORTH
1/4" = 1'-0"



2 PRESCHOOL 118 SOUTH
1/4" = 1'-0"




1 PRESCHOOL 118 EAST
1/4" = 1'-0"

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9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

INTERIOR ELEVATIONS LEVEL 1

A-206

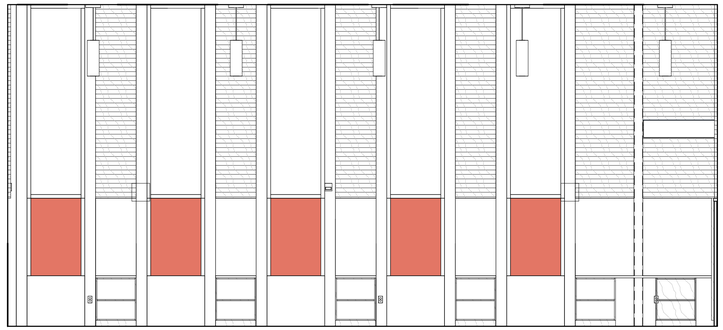
6/4/2025 11:04:55 AM C:\Users\Anjali\Yadav\Documents\BIM_PSB_R24_anjaliaTT6S5R.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

## WALL FINISH LEGEND

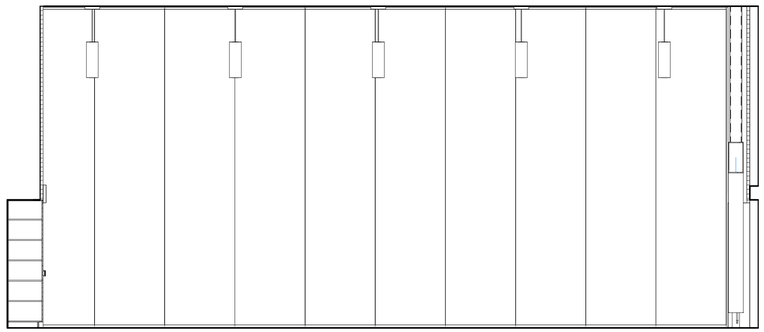
- ACOUSTICAL WALL PANEL, 2" THICK
- CERAMIC TILE 1
- CERAMIC TILE 2
- VENEER PLYWD PANELING
- VENEER PLYWD ACOUSTICAL PANELS
- TACKBOARD
- FIBER REINFORCED LAMINATE
- GYM WALL PAD
- FABRIC-WRAPPED ACOUSTICAL PANELS

## KEYNOTES

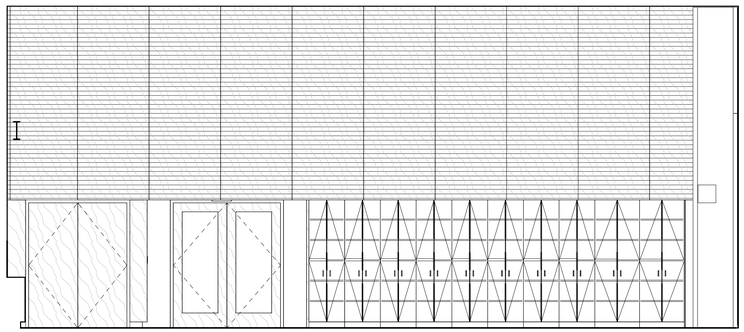
Keynote Text



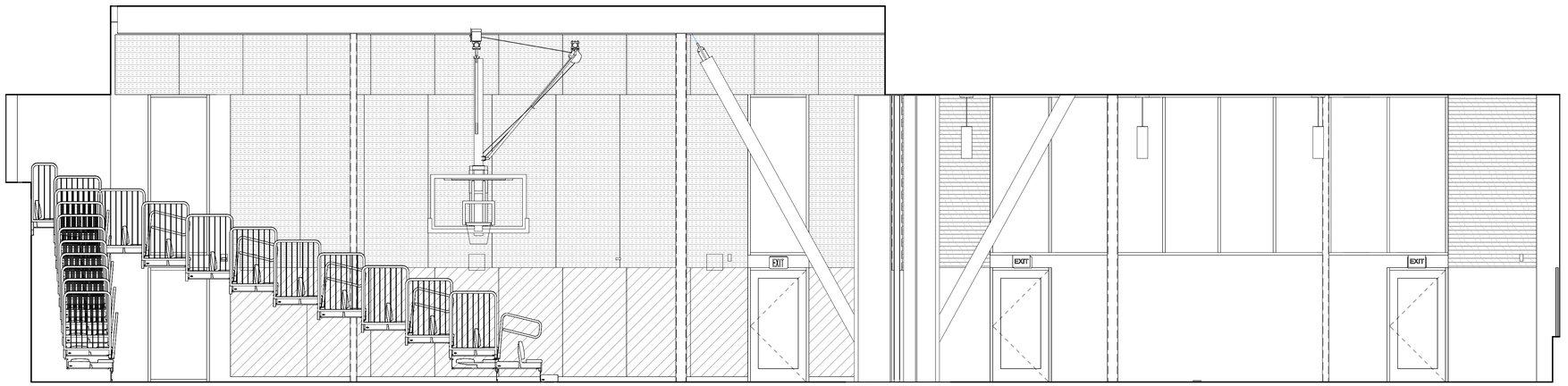
4 CHAPEL/ MUSIC 103A SOUTH
1/4" = 1'-0"



3 CHAPEL/ MUSIC 103A NORTH
1/4" = 1'-0"



2 CHAPEL/ MUSIC 103A WEST
1/4" = 1'-0"




1 CHAPEL/ MUSIC 103A EAST
1/4" = 1'-0"

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ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

INTERIOR ELEVATIONS LEVEL 1

A-207

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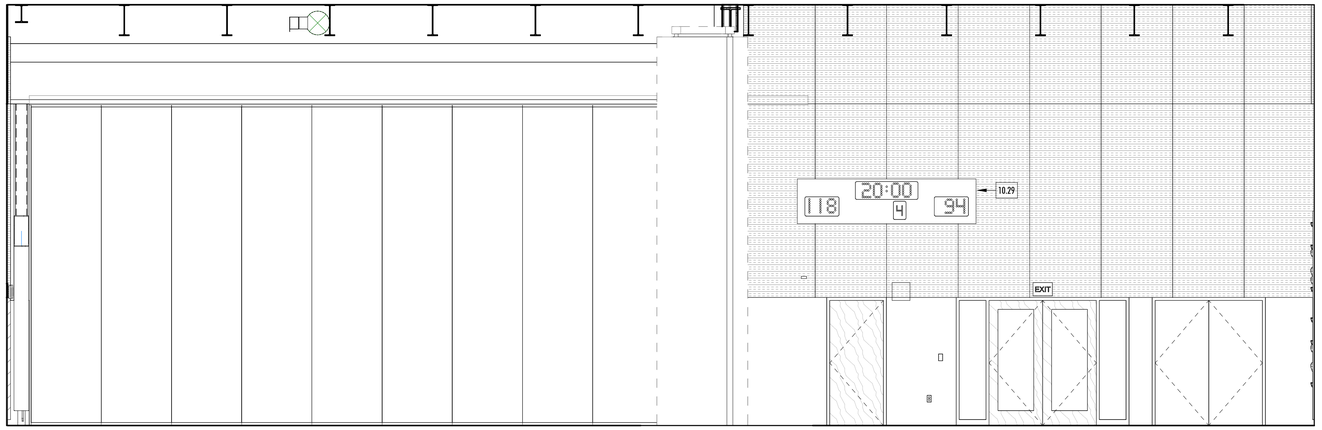
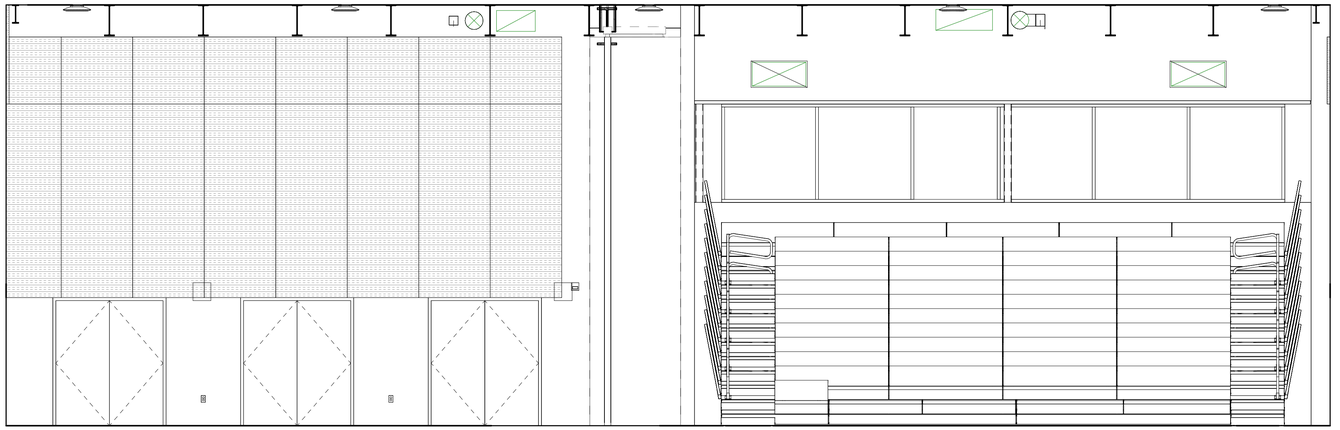
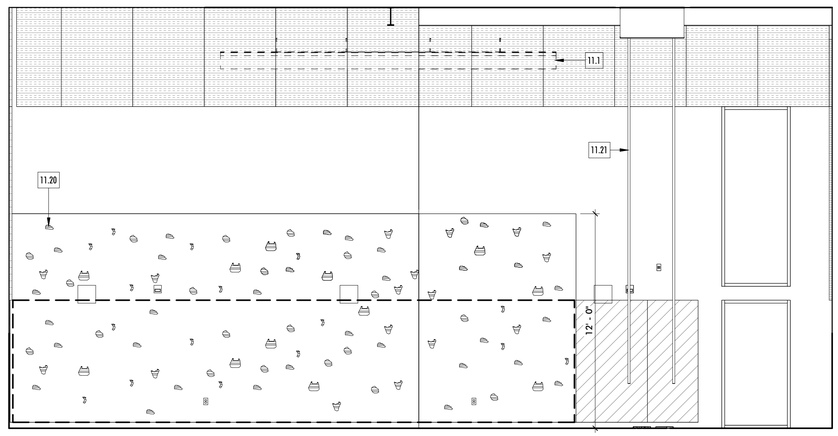
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"




3 MP 103B SOUTH
1/4" = 1'-0"



1 MP 103B NORTH
1/4" = 1'-0"




4 MP 103B WEST
1/4" = 1'-0"

## WALL FINISH LEGEND

- ACOUSTICAL WALL PANEL, 2" THICK
- CERAMIC TILE 1
- CERAMIC TILE 2
- VENEER PLYWD PANELING
- VENEER PLYWD ACOUSTICAL PANELS
- TACKBOARD
- FIBER REINFORCED LAMINATE
- GYM WALL PAD
- FABRIC-WRAPPED ACOUSTICAL PANELS

## KEYNOTES

| | Keynote Text |
|---|---|
| 10.29 | SCOREBOARD WITH REMOTE CONTROL CONSOLE |
| 11.1 | 11 50 00 Projection Screen |
| 11.20 | CLIMBING WALL WITH CRASH PADS HANGING IN FRONT OF WALL |
| 11.21 | CLIMBING ROPES |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STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|

4 JUNE 2025
BUILDING PERMIT

PROJECT:

INTERIOR ELEVATIONS LEVEL 1

A-208

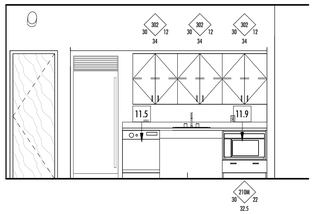

6/4/2025 11:04:59 AM C:\Users\Easha\Yadav\Documents\BPP_PSB_RQ4_easha\T850R.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

## WALL FINISH LEGEND

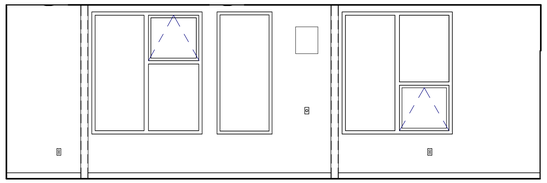
- ACOUSTICAL WALL PANEL, 2" THICK
- CERAMIC TILE 1
- CERAMIC TILE 2
- VENEER PLYWD PANELING
- VENEER PLYWD ACOUSTICAL PANELS
- TACKBOARD
- FIBER REINFORCED LAMINATE
- GYM WALL PAD
- FABRIC-WRAPPED ACOUSTICAL PANELS

## KEYNOTES

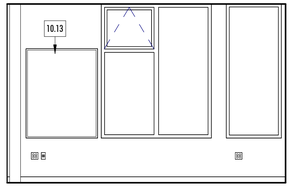
| | Keynote Text |
|---|---|
| 6.8 | SOLID WOOD BENCH |
| 6.9 | FILLER PANEL, SCRIBE TO BRACE FRAME |
| 10.1 | 10 11 00 DOUBLE-TRACK SLIDING WHITEBOARD |
| 10.2 | 10 11 23 Tackboard |
| 10.13 | WHITEBOARD |
| 10.17 | 10 11 00 SINGLE-TRACK SLIDING WHITEBOARD (IN FRONT OF TACKBOARD) |
| 11.5 | FOIC DISHWASHER |
| 11.9 | FOIC MICROWAVE |



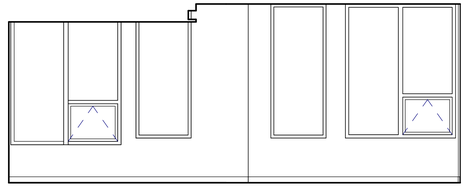

17 BREAK ROOM 211 NORTH
1/4" = 1'-0"



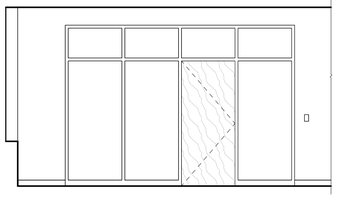
16 BREAK ROOM 211 SOUTH
1/4" = 1'-0"



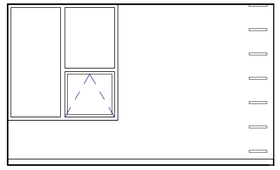

15 BREAKOUT 200A NORTH
1/4" = 1'-0"



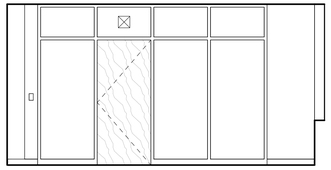
14 BREAKOUT 200A WEST
1/4" = 1'-0"



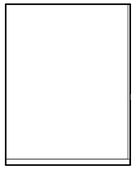
13 BREAKOUT 200A EAST
1/4" = 1'-0"



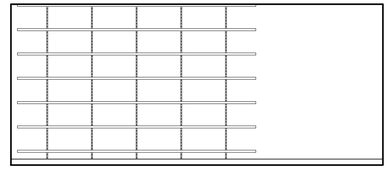
12 LRC 205 NORTH
1/4" = 1'-0"



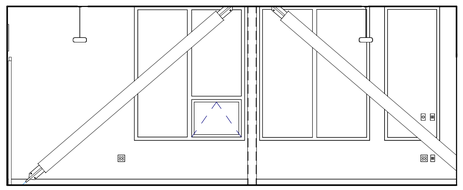
11 LRC 205 WEST
1/4" = 1'-0"



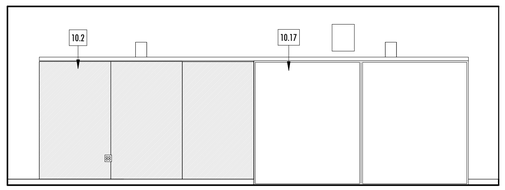
10 LRC 205 SOUTH
1/4" = 1'-0"



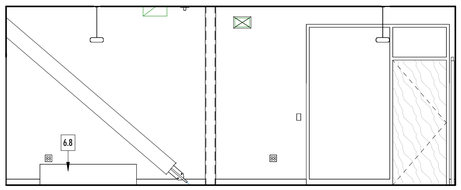
9 LRC 205 EAST
1/4" = 1'-0"



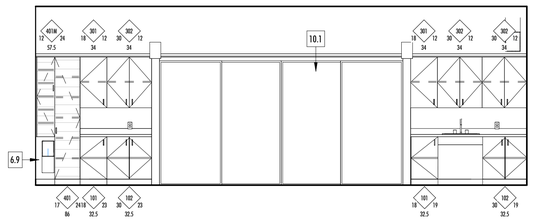
8 CLASSROOM 203 NORTH (TYP OF 3)
1/4" = 1'-0"



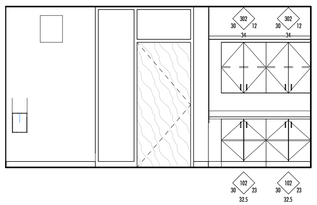

7 CLASSROOM 203 WEST (TYP OF 3)
1/4" = 1'-0"



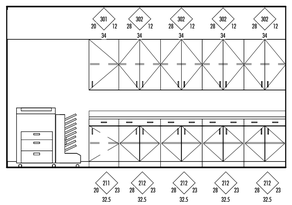

6 CLASSROOM 203 SOUTH (TYP OF 3)
1/4" = 1'-0"



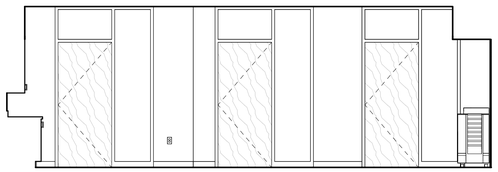

5 CLASSROOM 203 EAST (TYP OF 3)
1/4" = 1'-0"



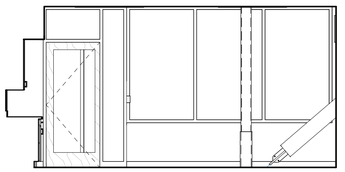
4 ADMIN 114 WEST
1/4" = 1'-0"



3 ADMIN 114 EAST
1/4" = 1'-0"



2 ADMIN 114 NORTH
1/4" = 1'-0"



1 ADMIN 114 SOUTH
1/4" = 1'-0"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9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
# BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 4 JUNE 2025 BUILDING PERMIT |

PROJECT:

INTERIOR ELEVATIONS LEVEL 1/2

# A-209


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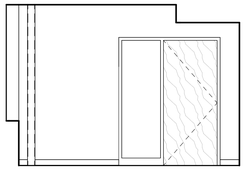
## WALL FINISH LEGEND

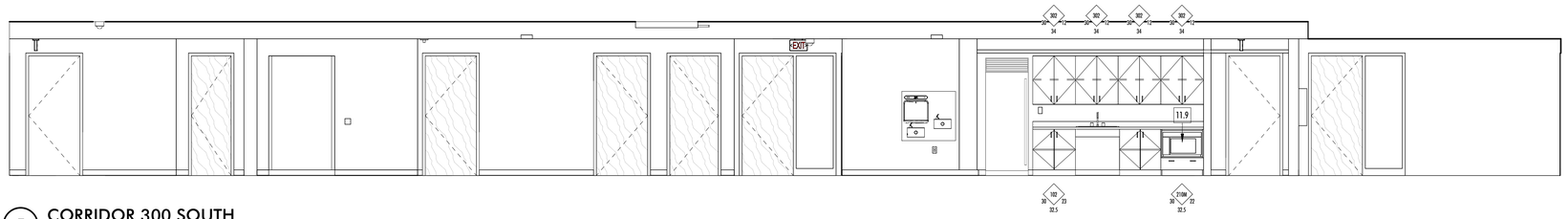
- ACOUSTICAL WALL PANEL, 2" THICK
- CERAMIC TILE 1
- CERAMIC TILE 2
- VENEER PLYWD PANELING
- VENEER PLYWD ACOUSTICAL PANELS
- TACKBOARD
- FIBER REINFORCED LAMINATE
- GYM WALL PAD
- FABRIC-WRAPPED ACOUSTICAL PANELS

## KEYNOTES

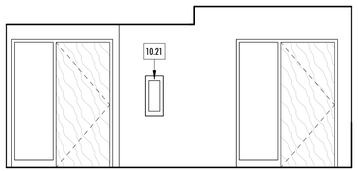
| | Keynote Text |
|---|---|
| 10.2 | 10 11 23 Tackboard |
| 10.3 | 10 51 00 METAL LOCKERS |
| 10.21 | SEMI-RECESSED FIRE EXTINGUISHER CABINET |
| 11.9 | FOIC MICROWAVE |



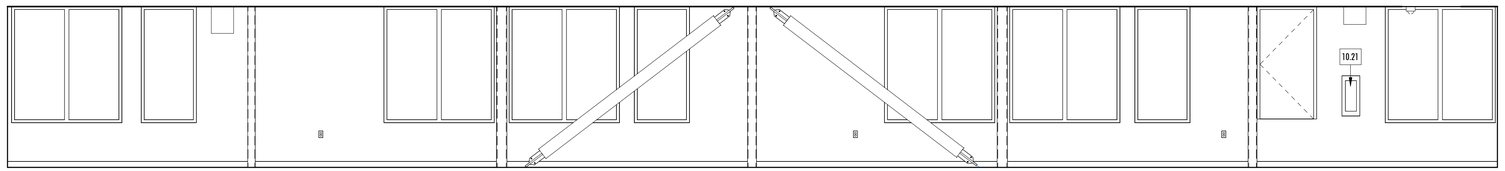
6 CORRIDOR 300 EAST
1/4" = 1'-0"



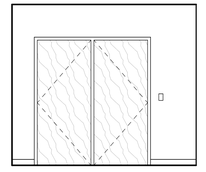

5 CORRIDOR 300 SOUTH
1/4" = 1'-0"




7 CORRIDOR 300 WEST
1/4" = 1'-0"




4 CORRIDOR 300 NORTH
1/4" = 1'-0"



3 CORRIDOR 200 EAST
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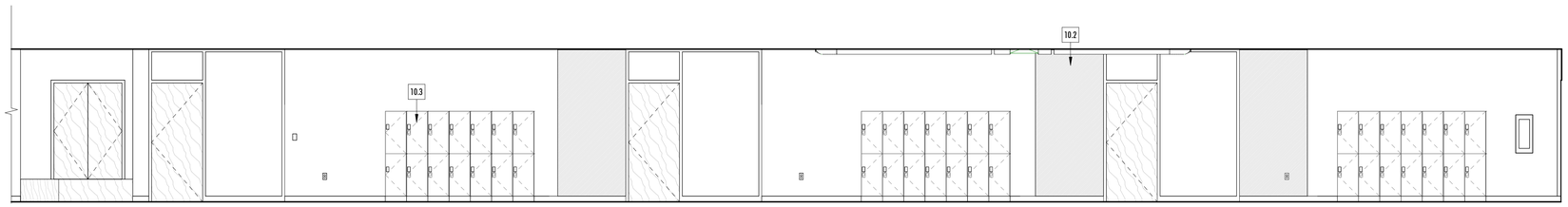
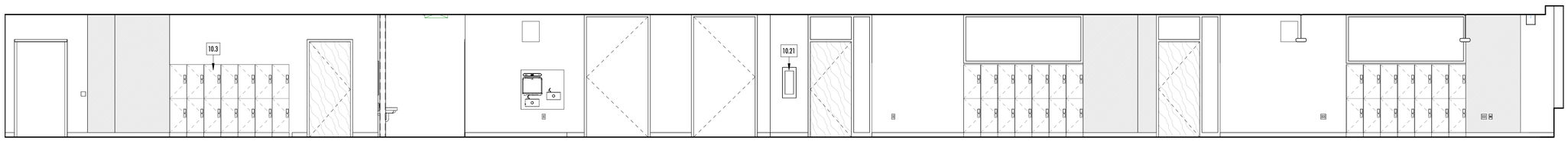



2 CORRIDOR 200 NORTH
1/4" = 1'-0"




1 CORRIDOR 200 SOUTH
1/4" = 1'-0"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INTERIOR ELEVATIONS LEVEL 2/3

A-210


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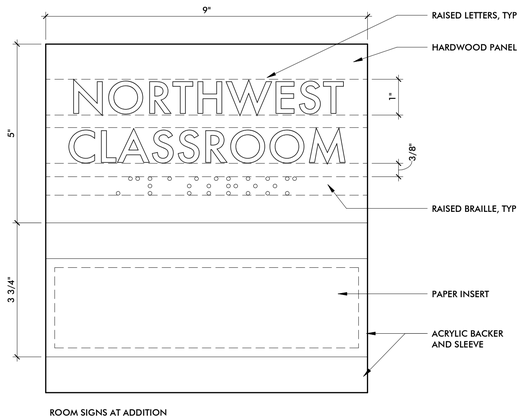
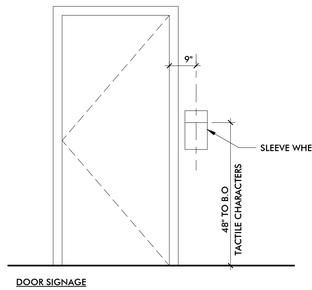



ROOM SIGNS AT ADDITION

## SIGNAGE

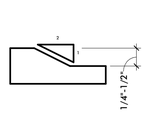


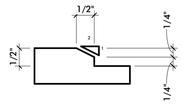

DOOR SIGNAGE

## ROOM SIGNAGE MOUNTING DETAILS

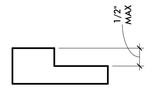
## THRESHOLD DIAGRAM

IF PROVIDED, THRESHOLDS AT DOORWAYS SHALL BE 1/2 INCH MAXIMUM IN HEIGHT. RAISED THRESHOLDS AND CHANGES IN LEVEL AT DOORWAYS SHALL COMPLY WITH SECTIONS 302 AND 303.




CHANGES IN LEVEL GREATER THAN 1/4 INCH IN HEIGHT AND NOT MORE THAN 1/2 INCH MAXIMUM IN HEIGHT SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2 PER ANSI 303.3

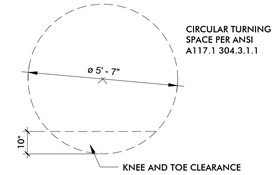



CHANGES IN LEVEL OF 1/4 INCH MAXIMUM IN HEIGHT SHALL BE PERMITTED TO BE VERITCAL PER ANSI 303.2

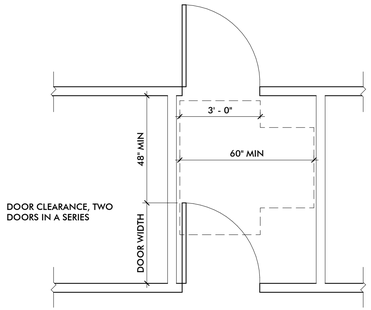
## APPLICABLE CODES

2017 ICC A117.1
2021 WASHINGTON STATE BUILDING CODE (WSBC)
2021 WASHINGTON STATE ENERGY CODE (WSEC)

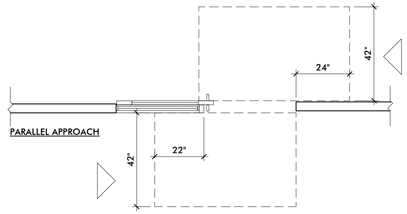
## TURNING & FLOOR CLEARANCES



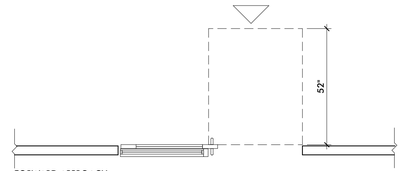

## MANEUVERING CLEARANCES AT DOORS



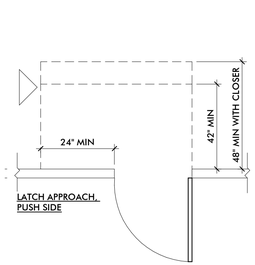

DOOR CLEARANCE, TWO DOORS IN A SERIES



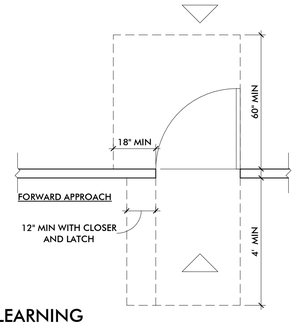

PARALLEL APPROACH

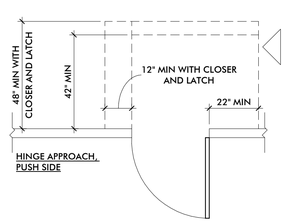



FORWARD APPROACH

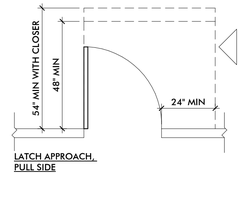



LATCH APPROACH, PUSH SIDE



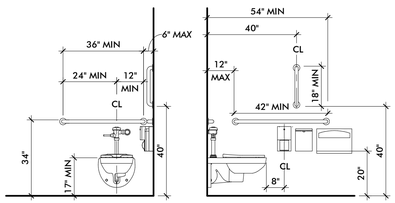




HINGE APPROACH, PUSH SIDE



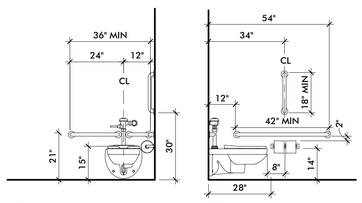

LATCH APPROACH, PULL SIDE

### ADULTS



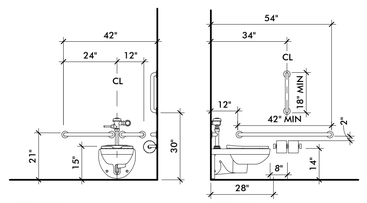

REAR WALL SIDE WALL

### CHILDREN 3-5 EARLY LEARNING



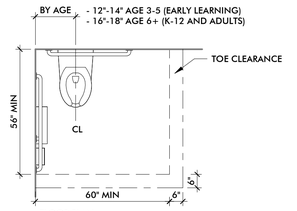

REAR WALL SIDE WALL

### CHILDREN 6+



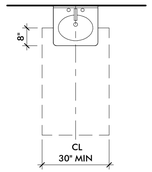

REAR WALL SIDE WALL

### ACCESSIBLE RESTROOM

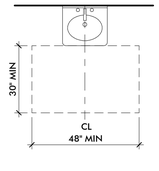



FLOOR PLAN

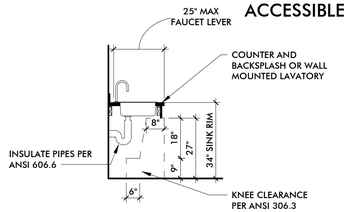
## ACCESSIBLE SINK CLEARANCES



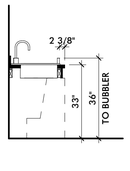

FRONT APPROACH



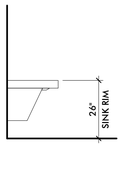

PARALLEL APPROACH




ADULT ACCESSIBLE SINK, FRONT APPROACH

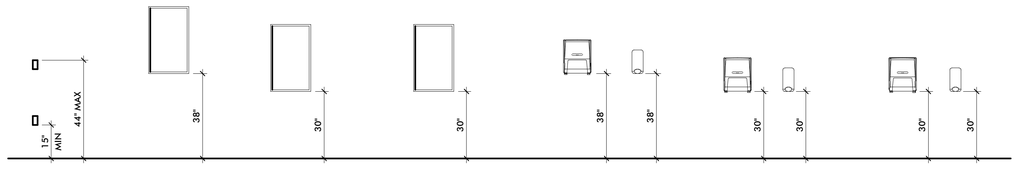



ADULT ACCESSIBLE SINK WITH BUBBLER, FRONT APPROACH




CHILD ACCESSIBLE SINK, PARALLEL APPROACH

## MOUNTING HEIGHTS




SWITCHES, OUTLETS/RECEPTACLES | ADULT MIRROR | CHILDREN 3-5 EARLY LEARNING MIRROR | CHILDREN 6+ MIRROR | ADULT PT AND SOAP DISPENSER | CHILDREN 3-5 EARLY LEARNING PT AND SOAP DISPENSER | CHILDREN 6+ PT AND SOAP DISPENSER

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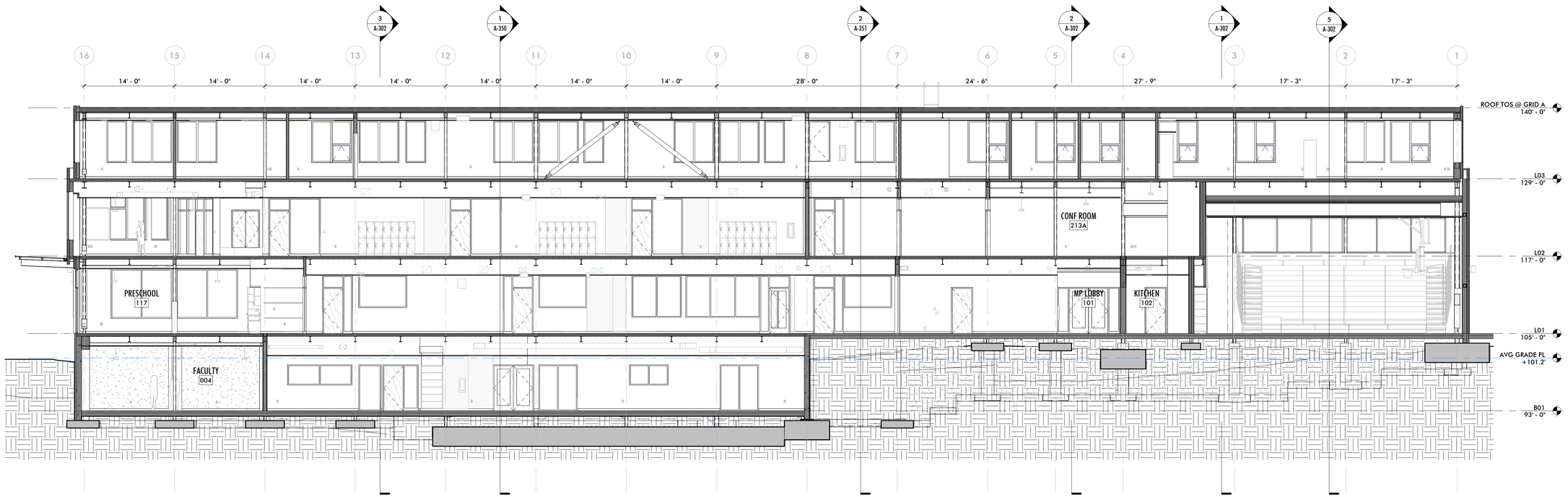
ADA STANDARD DETAILS, TYP MOUNTING HEIGHTS AND SIGNAGE

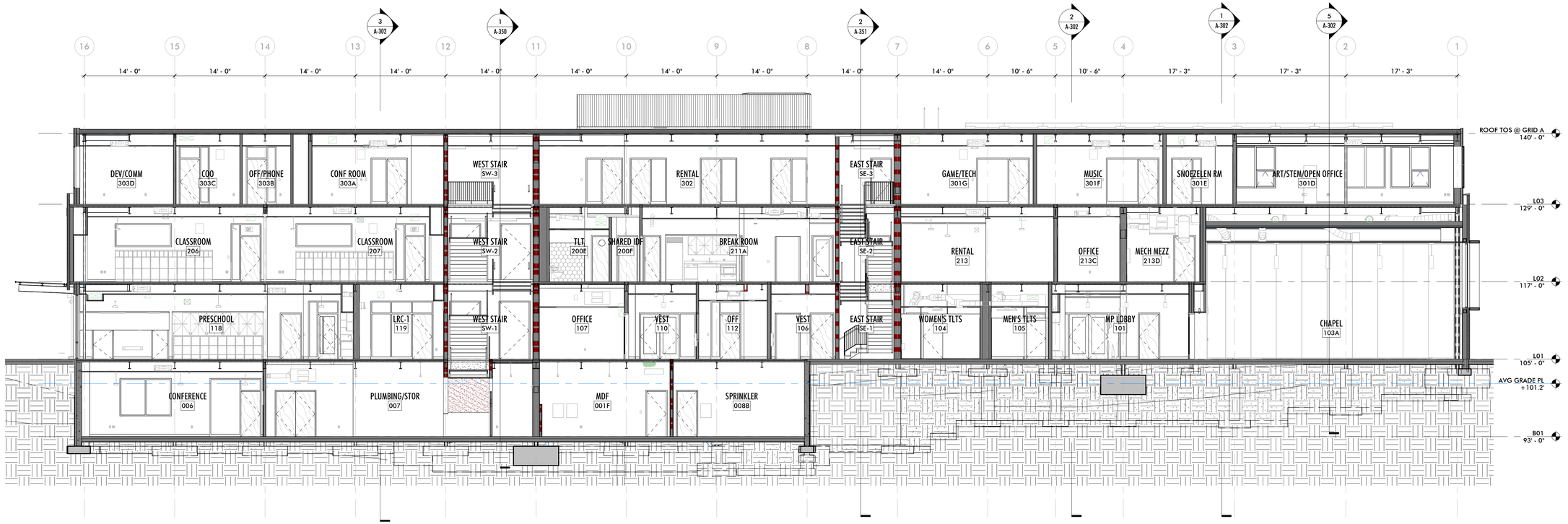
A-252

## KEYNOTES

| Keynote Text |
|---|




2 EAST-WEST SECTION THRU MULTIPURPOSE
1/8" = 1'-0"




1 EAST-WEST SECTION THROUGH MUSIC
1/8" = 1'-0"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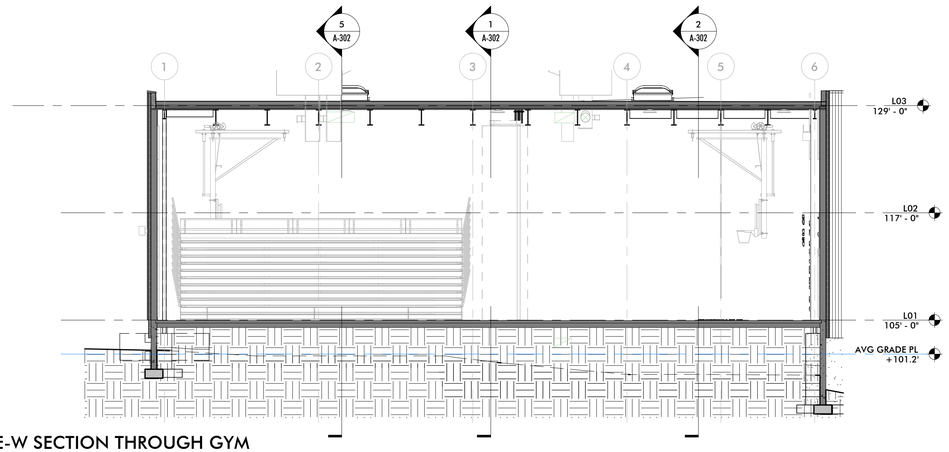
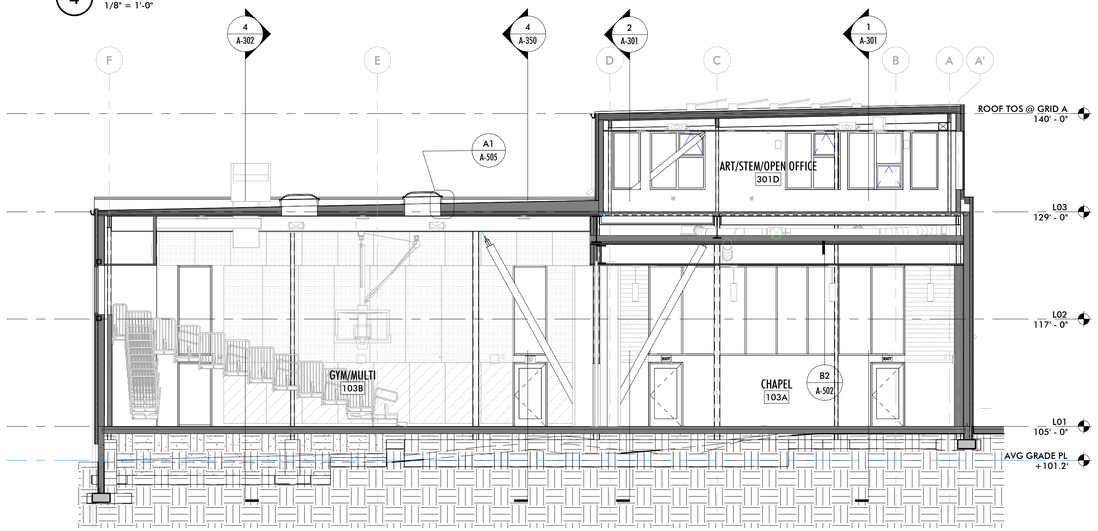
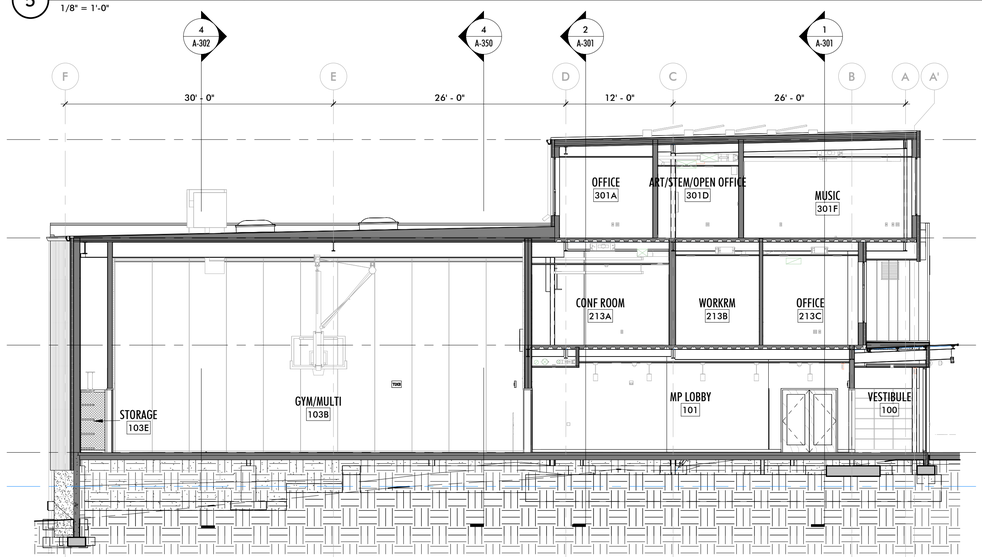


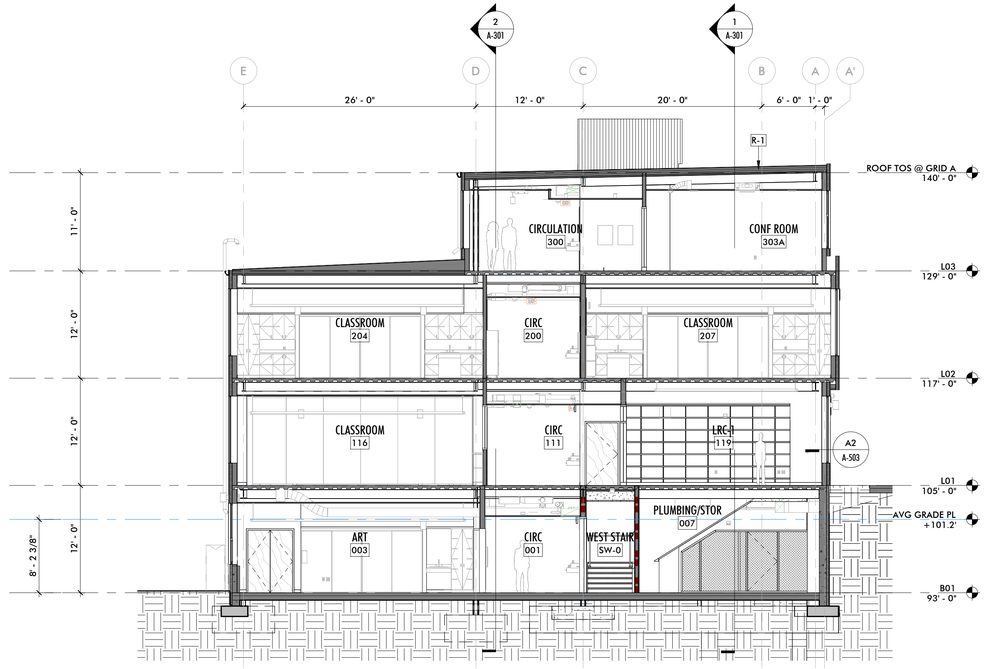

## 4 E-W SECTION THROUGH GYM
1/8" = 1'-0"



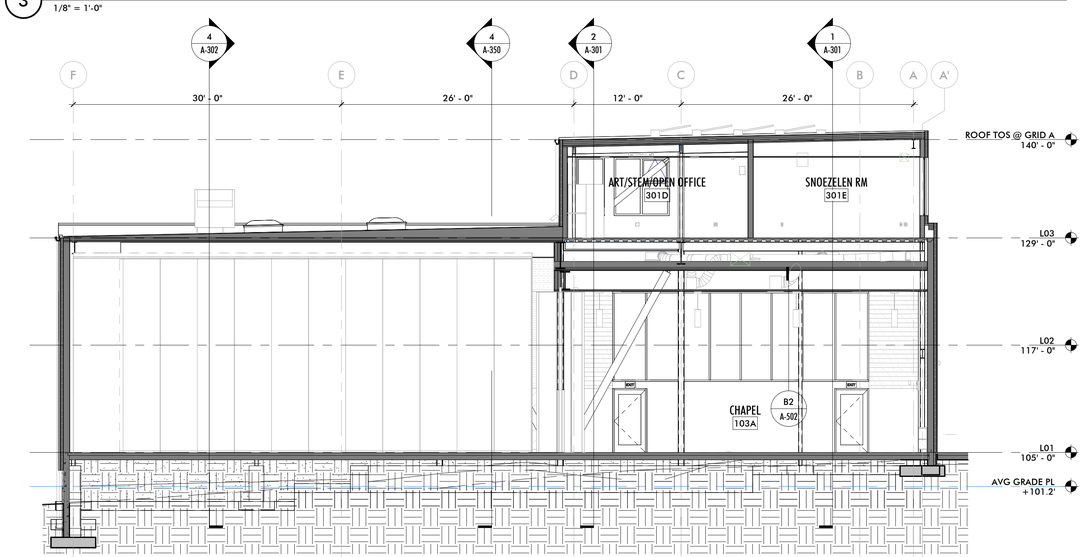

## 5 N-S SECTION AT GYM/MPR
1/8" = 1'-0"




## 2 NORTH-SOUTH SECTION AT GRID 5
1/8" = 1'-0"




## 3 NORTH-SOUTH SECTION AT GRID 13
1/8" = 1'-0"




## 1 NORTH-SOUTH SECTION THROUGH MULTIPURPOSE & MUSIC
1/8" = 1'-0"

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A-302

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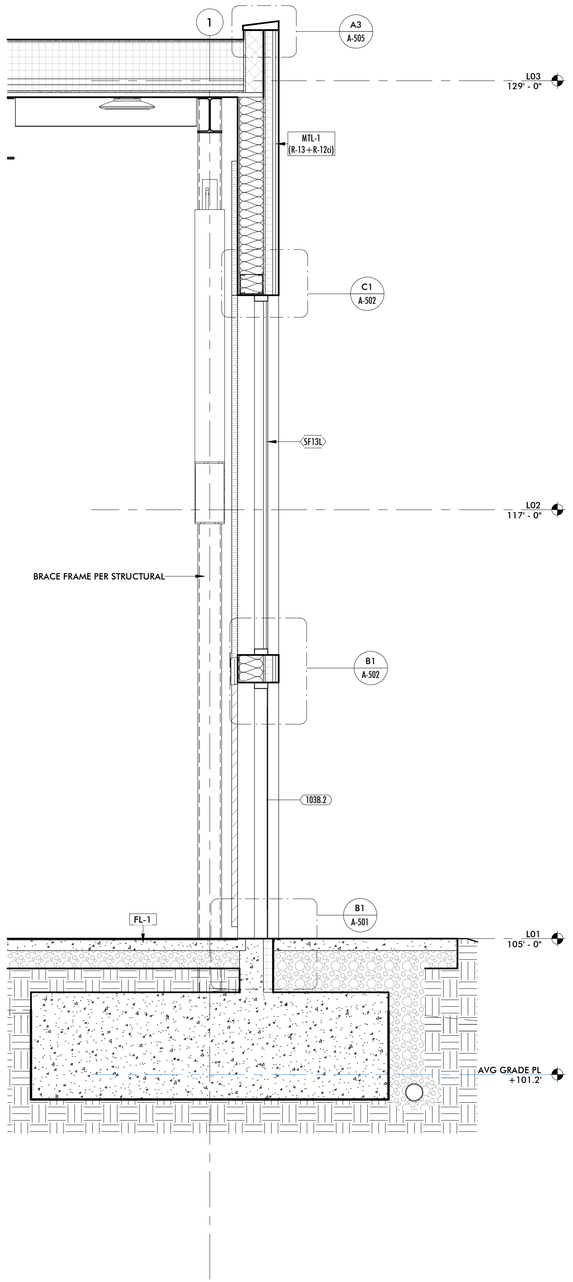
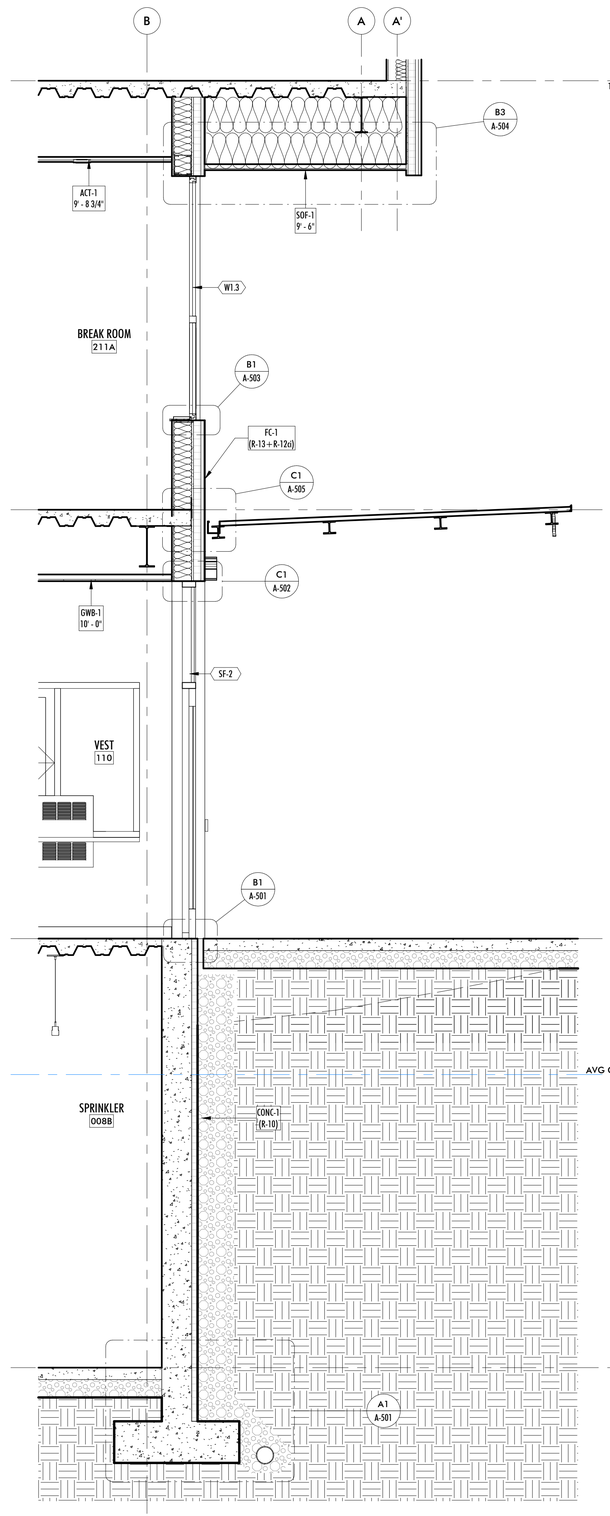



4 WALL SECTION AT MP ROOM EAST WALL
1/2" = 1'-0"




3 WALL SECTION AT ENTRY
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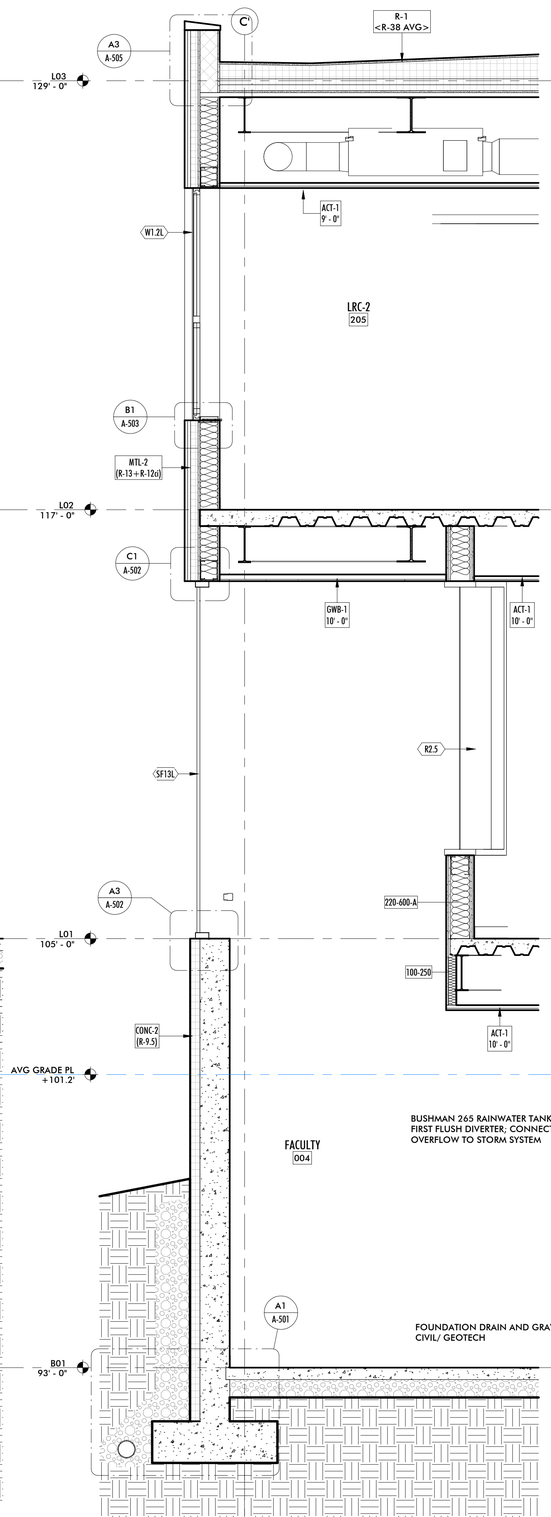
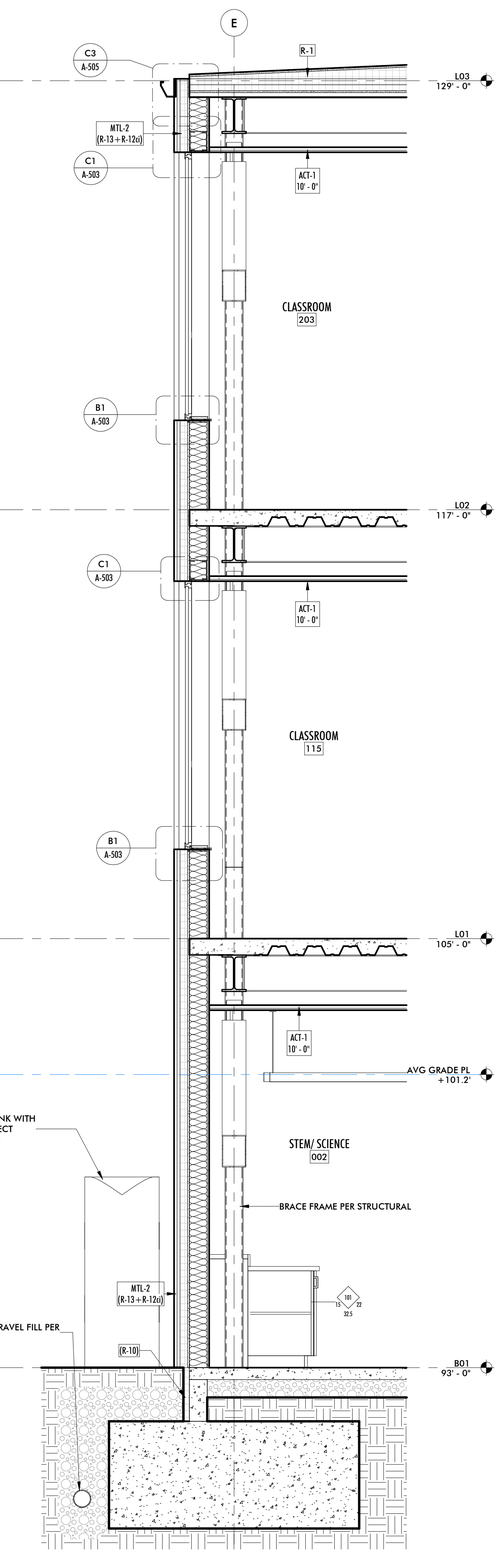



2 WALL SECTION AT FACULTY
1/2" = 1'-0"




1 SECTION AT SCIENCE ROOM N
1/2" = 1'-0"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WALL SECTIONS

A-350


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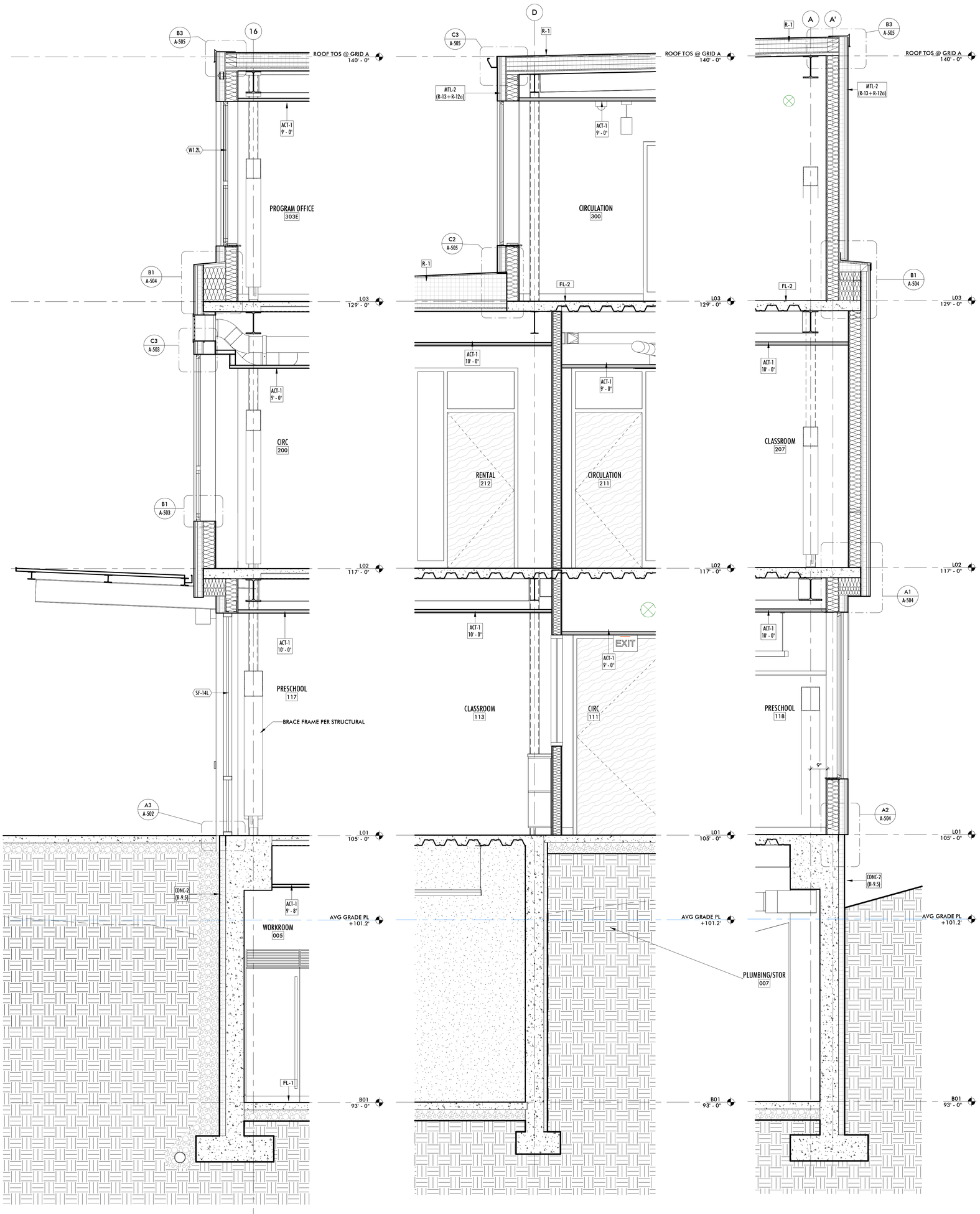


1 WALL SECTION AT GRID 16
1/2" = 1'-0"

2 WALL SECTION AT GRID D
1/2" = 1'-0"

3 WALL SECTION AT GRID A
1/2" = 1'-0"

# A-351

WALL SECTIONS

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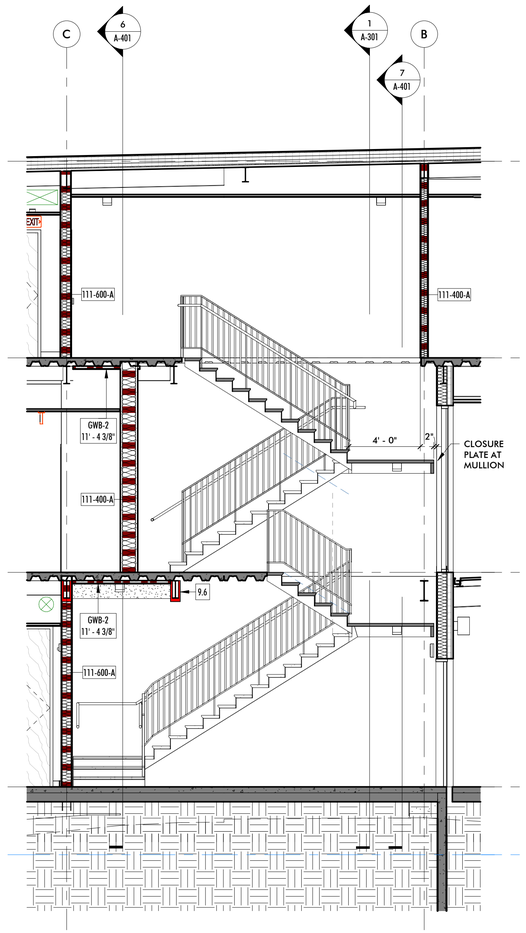
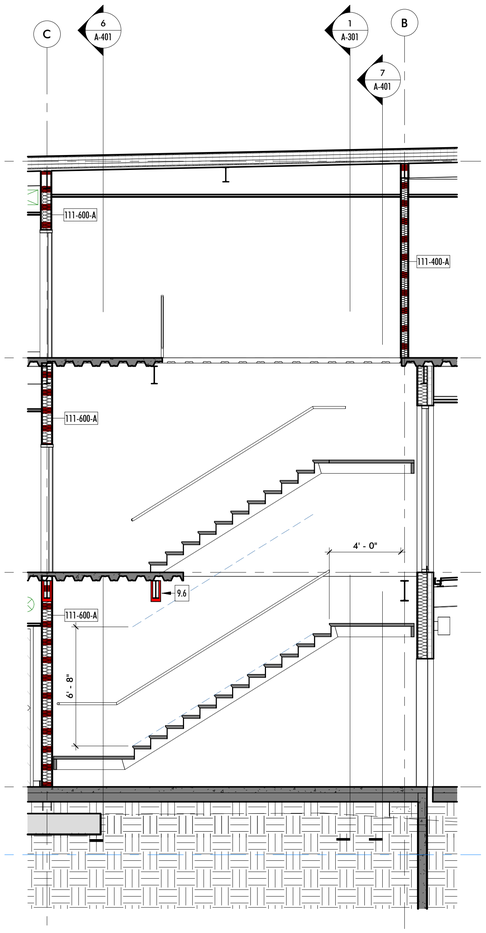



9 SE STAIR N-S WEST RUN
1/4" = 1'-0"

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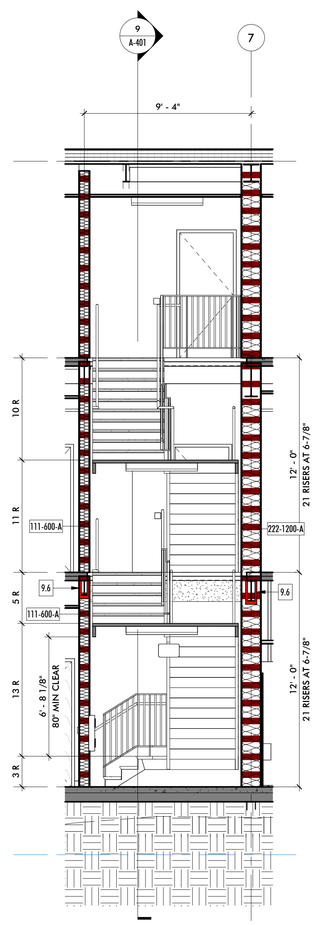
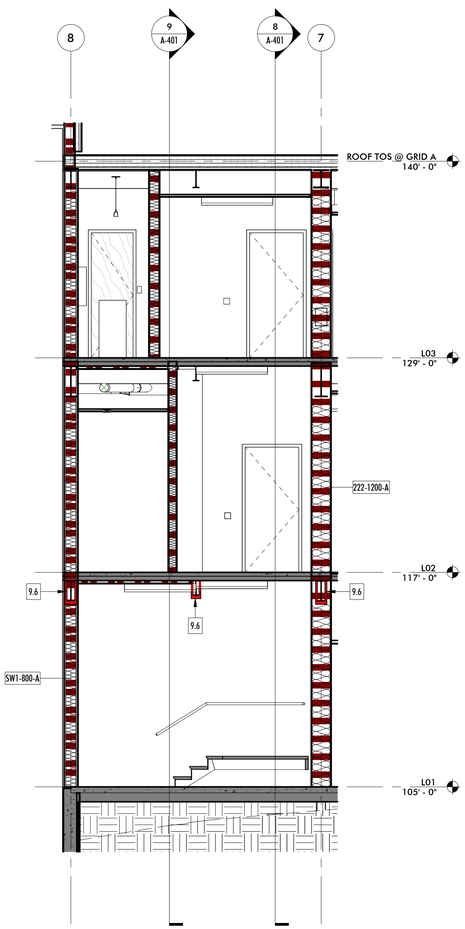
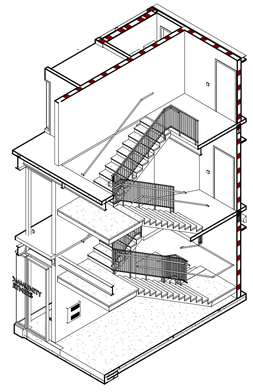
1/4" = 1'-0"




7 SE STAIR E-W SOUTH LANDING
1/4" = 1'-0"




6 SE STAIR E-W NORTH LANDING
1/4" = 1'-0"



5 SE STAIR AXON

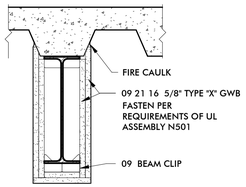
PROVIDE EGRESS PATH MARKINGS PER WSBC 1025.2.1 THROUGH 1025.2.6.3

## FIRE ASSEMBLY LEGEND

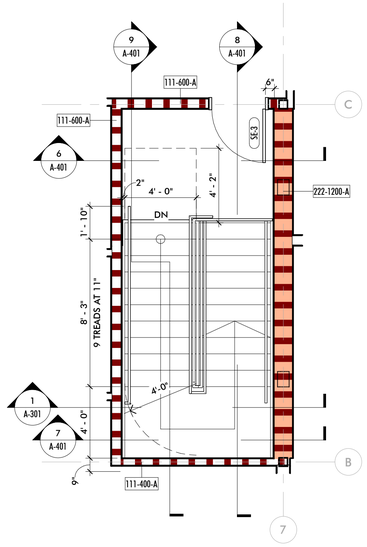
2 HOUR RATED ASSEMBLY

1 HOUR RATED ASSEMBLY

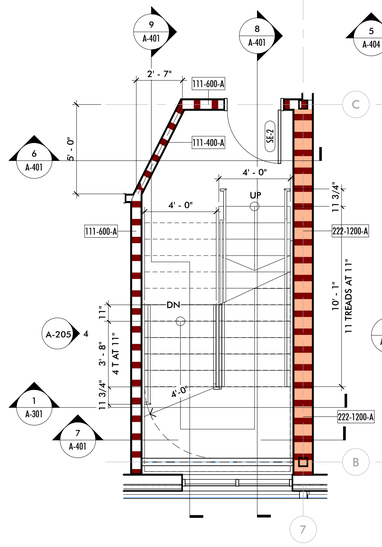
| KEYNOTES | |
|---|---|
| | Keynote Text |
| 9.6 | UL N501 2HOUR RATED BEAM ENCLOSURE |



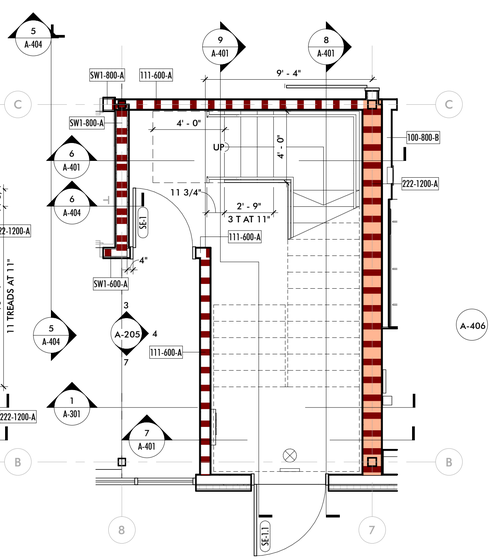

4 UL ASSEMBLY N501 2HR
1 1/2" = 1'-0"




3 EAST STAIR LEVEL 03
1/4" = 1'-0"




2 EAST STAIR LEVEL 02
1/4" = 1'-0"




1 EAST STAIR LEVEL 01
1/4" = 1'-0"

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STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
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PROJECT:

STAIRS

A-401

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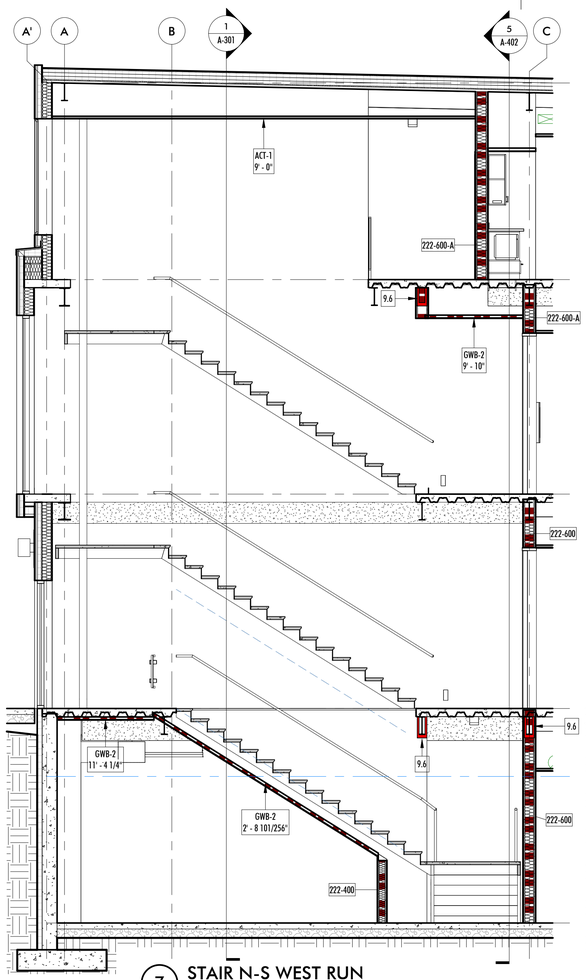
PROVIDE EGRESS PATH MARKINGS PER WSBC 1025.2.1 THROUGH 1025.2.6.3

## FIRE ASSEMBLY LEGEND

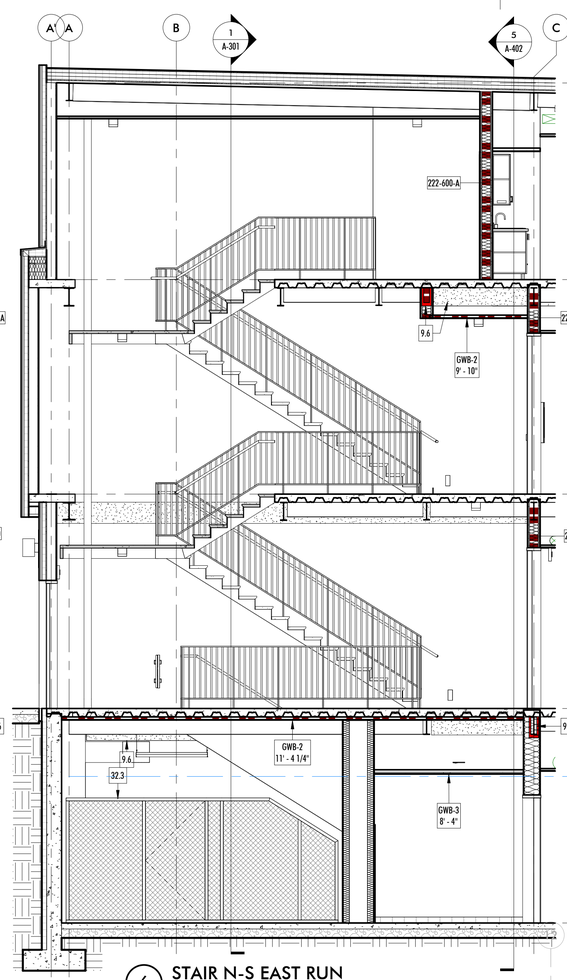
2 HOUR RATED ASSEMBLY

1 HOUR RATED ASSEMBLY

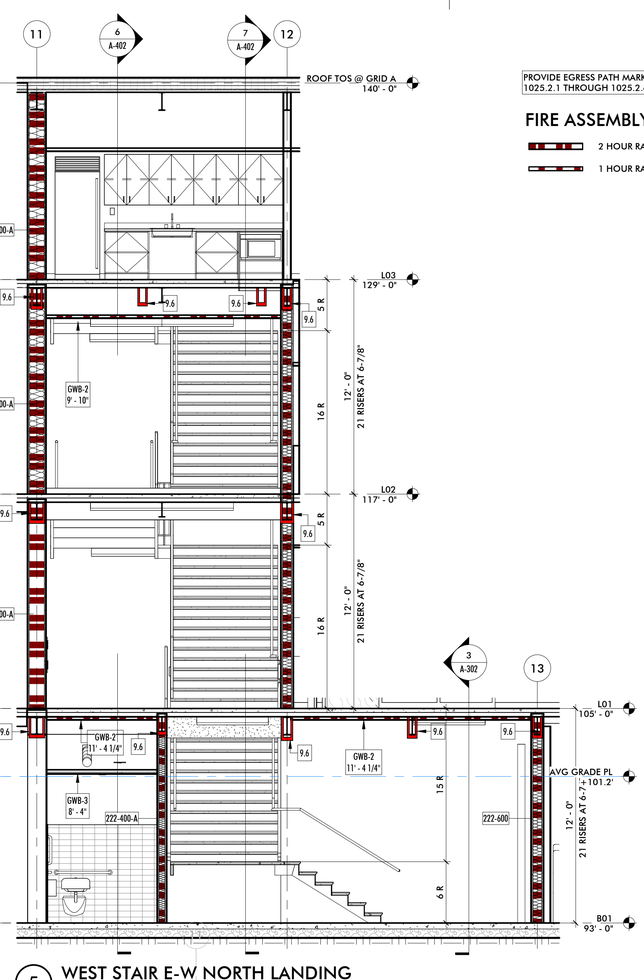
| KEYNOTES | |
|---|---|
| | Keynote Text |
| 9.6 | UL N501 2HOUR RATED BEAM ENCLOSURE |
| 10.22 | BARRIER GATE, PROVIDE SOLID BLOCKING IN WALL |
| 21.1 | CLASS 1 STANDPIPE |
| 32.3 | 7' HIGH CHAINLINK FENCE PARTITION |



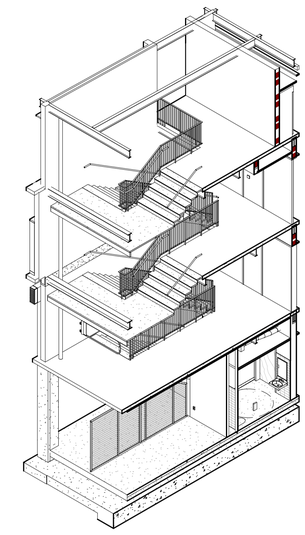

7 STAIR N-S WEST RUN
1/4" = 1'-0"



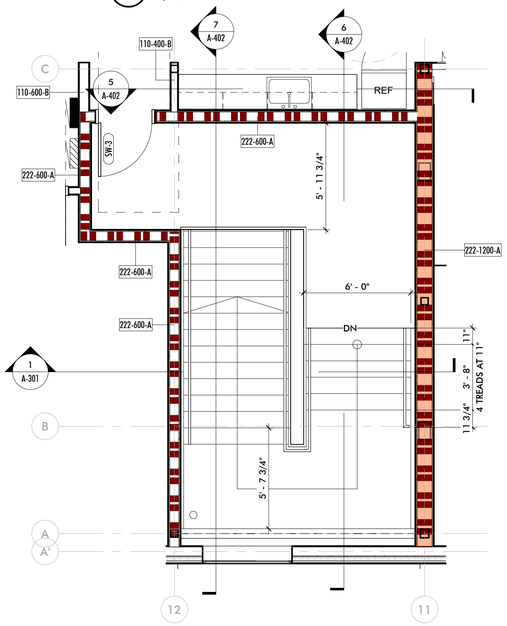

6 STAIR N-S EAST RUN
1/4" = 1'-0"



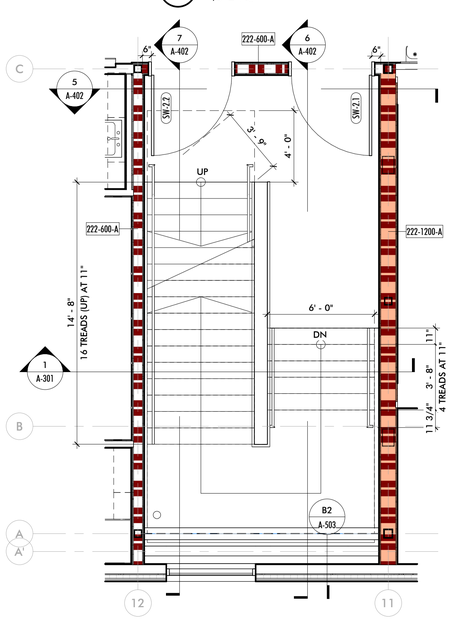

5 WEST STAIR E-W NORTH LANDING
1/4" = 1'-0"



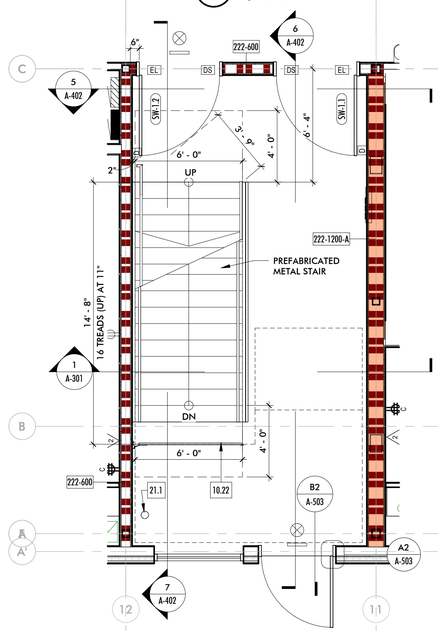
8 SW STAIR AXON



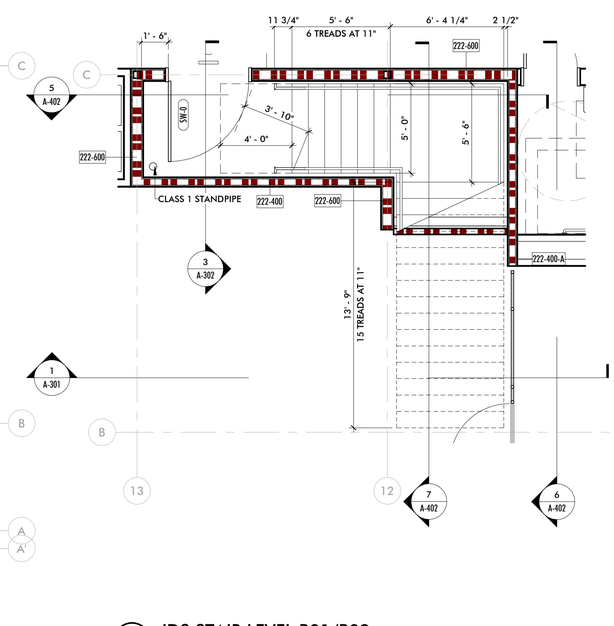

4 WEST STAIR LEVEL 03
1/4" = 1'-0"




3 WEST STAIR LEVEL 02
1/4" = 1'-0"




2 WEST STAIR LEVEL 01
1/4" = 1'-0"




1 JDS STAIR LEVEL B01/B02
1/4" = 1'-0"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STAIRS

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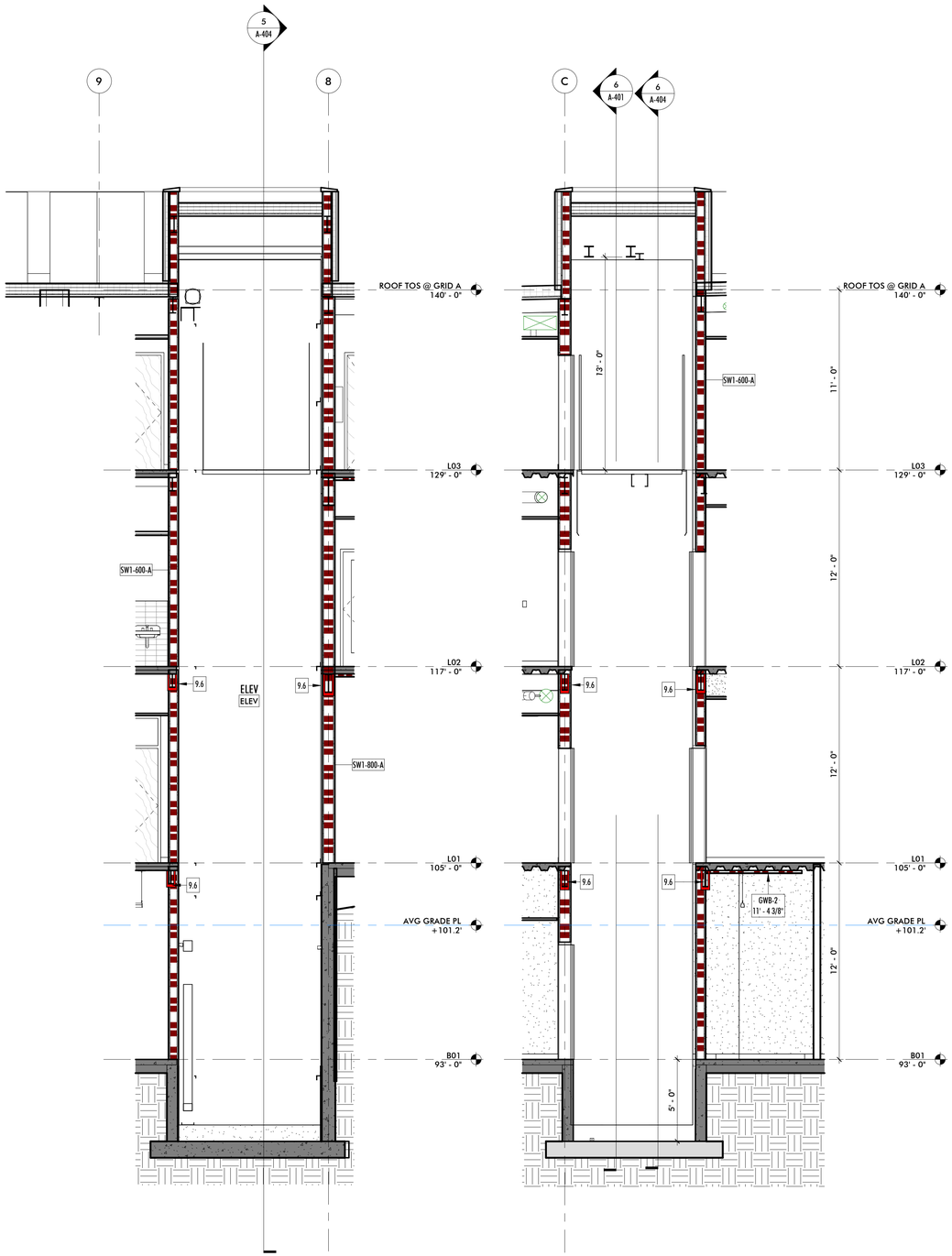
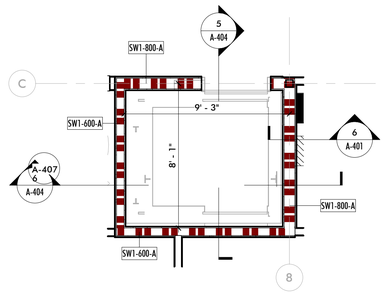
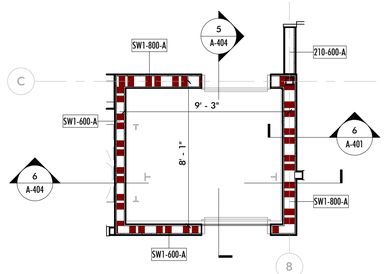



## 6 ELEVATOR E-W
1/4" = 1'-0"

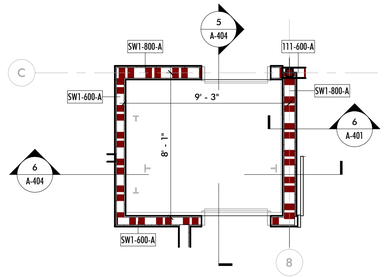
## 5 ELEVATOR N-S
1/4" = 1'-0"



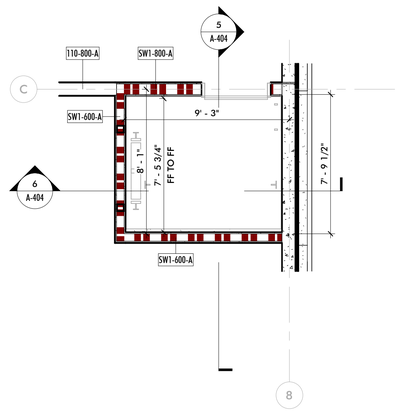

## 4 ELEVATOR L03
1/4" = 1'-0"




## 3 ELEVATOR L02
1/4" = 1'-0"




## 2 ELEVATOR L01
1/4" = 1'-0"




## 1 ELEVATOR B01
1/4" = 1'-0"

2 HOUR RATED ASSEMBLY

1 HOUR RATED ASSEMBLY

## FIRE ASSEMBLY LEGEND
1/8" = 1'-0"

ELEVATOR NOTES
1. ASME A17.1/CSA B44 SECTION 2.8. PIPES, DUCTS, CONDUITS, AND EQUIPMENT NOT USED FOR THE OPERATION OF THE ELEVATORS ARE PROHIBITED IN HOISTWAYS.
2. ASME RULE 2.2.2. WATERPROOF AS NECESSARY TO PREVENT ENTRY OF GROUND WATER. SUMP PUMPS MAY BE INSTALLED FOR FLOOD CONTROL BUT NOT APPROVED TO MAINTAIN A DRY PIT.
3. ASME RULE 2.2.4. PROVIDE PIT LADDER.
4. COMPLY WITH SEISMIC REQUIREMENTS.
5. ACCOMMODATE PEOPLE WITH DISABILITIES.
6. ASME SECTION 2.4 AND 3.4. PROVIDE PROPER TOP CAR RUNBYS, CLEARANCES AND REFUGE SPACE.
7. ASME RULE 2.1.1.2 AND 2.11.14. GROUT ALL MASONRY JAMBS AND HEADERS TO RETAIN FIRE RATING OF HOISTWAY. IN OTHER THAN MASONRY, PROVIDE LABELED ENTRANCE ASSEMBLIES INSTALLED AS TESTED.
8. PROVIDE CALCULATIONS AND DRAWINGS TO SDCI FOR APPROVAL OF THE STRESSES AS NOTED IN THE APPLICABLE RULES OF ASME SECTION 2.9.
9. PROVIDE CALCULATIONS FOR APPROVAL OF THE ABILITY OF THE PIT FLOOR AND STRUCTURE TO WITHSTAND THE ELEVATOR BUFFER ENGAGEMENT REACTIONS.
10. ASME 2.27.1. PROVIDE MEANS OF TWO-WAY CONVERSATION BETWEEN EACH ELEVATOR AND A READILY ACCESSIBLE POINT (MAIN ELEVATOR LOBBY) OUTSIDE THE HOISTWAY.
11. ASME 2.27.1.1.2 THIS STRUCTURE IS CONSIDERED AS UNATTENDED, AND AN ADDITIONAL EMERGENCY SIGNALING DEVICES SHALL BE PROVIDED (PHONE TO ANSWERING SERVICE).
12. ASME 2.27.1.1.5 PROVIDE AN EMERGENCY POWER SUPPLY FOR THE DEVICES REQUIRED BY 2.27.1 THE SUPPLY SHALL BE CAPABLE OF OPERATING THE AUDIBLE DEVICE FOR AT LEAST ONE HOUR AND THE MEANS OF A TWO-WAY CONVERSATION FOR AT LEAST FOUR HOURS.
13. COMPLY WITH APPLICABLE CODES.

PIT LADDER SHALL:
1. BE NONCOMBUSTIBLE.
2. BE LOCATED (6 IN.) FROM FRONT OF HOISTWAY AT LOWEST LANDING.
3. EXTEND NOT LESS THAN (48 IN.) ABOVE THE SILL OF THE ACCESS DOOR OR HAND GRIPS SHALL BE PROVIDED.
4. HAVE RUNGS, CLEATS, OR STEPS THAT ARE AT LEAST (16 IN.) WIDE UNLESS "UNAVOIDABLE OBSTRUCTIONS ARE ENCOUNTERED."
5. HAVE THE RUNGS, CLEATS, OR STEPS SPACED (12 IN.) ON CENTER.
6. HAVE A CLEAR DISTANCE OF (4.5 IN.) FROM THE CENTERLINE OF THE RUNGS, CLEATS, OR STEPS TO THE WALL OF THE HOISTWAY.
7. IF PROVIDED WITH SIDERAILS, HAVE NOT LESS THAN (4.5 IN.) OF CLEARANCE FROM THE CENTERLINE OF THE SIDERAILS TO THE NEAREST PERMANENT OBJECT.
8. BE ABLE TO SUSTAIN A LOAD OF 300LBS MINIMUM.

| KEYNOTES | |
|---|---|
| | Keynote Text |
| 9.6 | UL N501 2HOUR RATED BEAM ENCLOSURE |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| | | 4 JUNE 2025 BUILDING PERMIT |

PROJECT:

ELEVATOR

A-404


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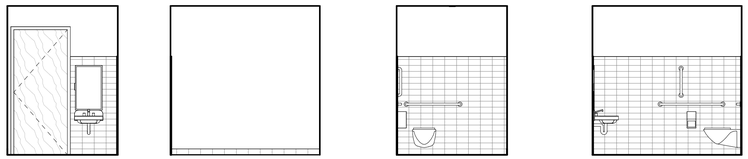
6/4/2025 11:05:42 AM C:\Users\Estelle\Documents\BPP_PSB_R24_estelleTMS5R.rvt ORIGINAL SHEET SIZE: 24" X 36"

## WALL FINISH LEGEND

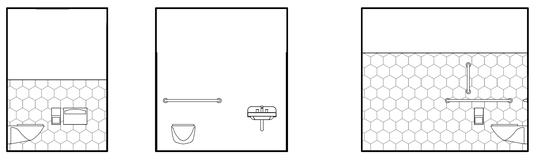
- ACOUSTICAL WALL PANEL, 2" THICK
- CERAMIC TILE 1
- CERAMIC TILE 2
- VENEER PLYWD PANELING
- VENEER PLYWD ACOUSTICAL PANELS
- TACKBOARD
- FIBER REINFORCED LAMINATE
- GYM WALL PAD
- FABRIC-WRAPPED ACOUSTICAL PANELS

## KEYNOTES

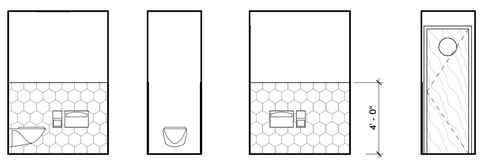
| | Keynote Text |
|---|---|
| 9.3 | FRL |
| 10.20 | MIRROR 24" X 72" |



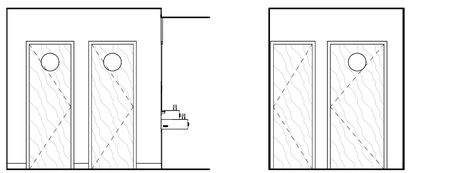
16 NORTH 1/4" = 1'-0"
15 WEST 1/4" = 1'-0"
14 SOUTH 1/4" = 1'-0"
13 EAST TLT 009 1/4" = 1'-0"



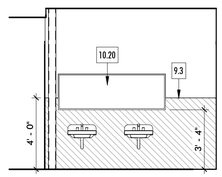
12 NORTH 1/4" = 1'-0"
11 WEST 1/4" = 1'-0"
10 STUDENT ADA STALL TYP S 1/4" = 1'-0"



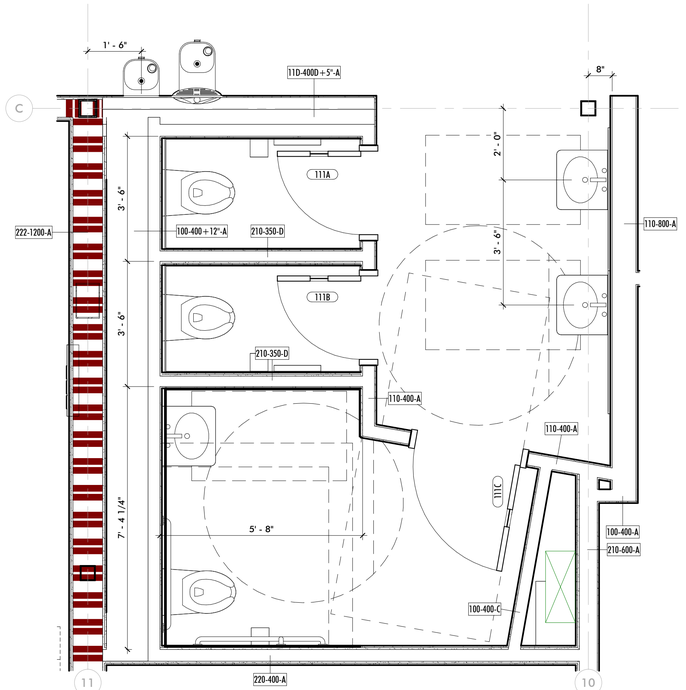

8 NORTH 1/4" = 1'-0"
7 WEST 1/4" = 1'-0"
6 SOUTH 1/4" = 1'-0"
5 STUDENT STALL TYP E 1/4" = 1'-0"



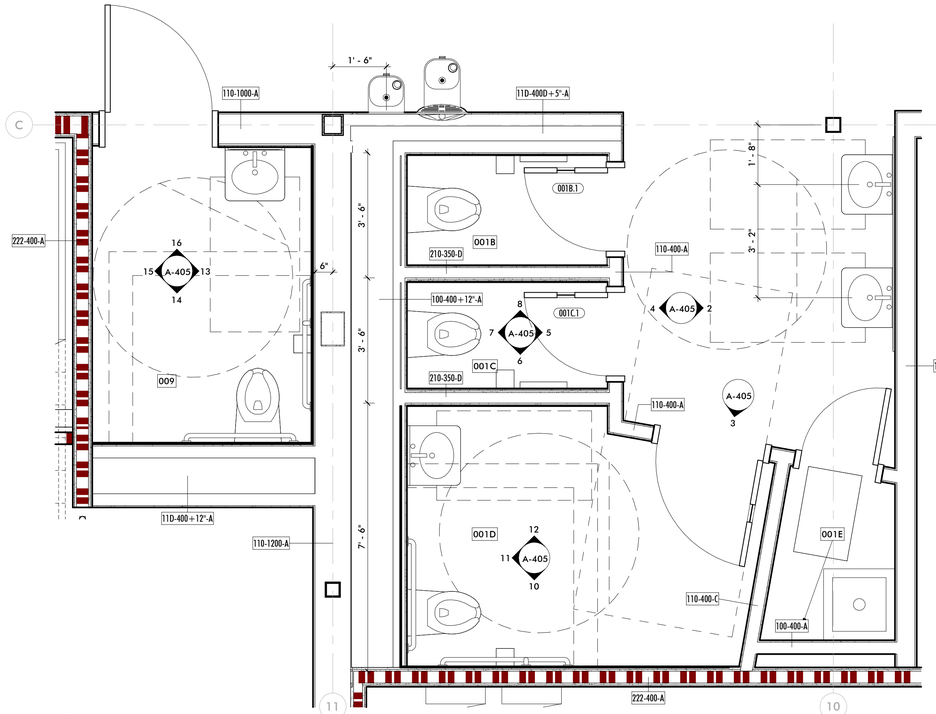
4 STUDENT TLTS W 1/4" = 1'-0"
3 STUDENT TLTS S 1/4" = 1'-0"




2 STUDENT TLTS E 1/4" = 1'-0"




17 TLTS 111A-111C 1/2" = 1'-0"




1 TLTS 001B-001D 1/2" = 1'-0"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PROJECT:

RESTROOMS

A-405


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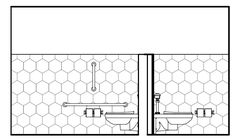
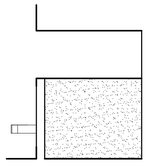


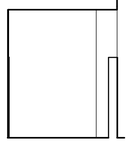
16 TLT 118A-B NORTH
1/4" = 1'-0"



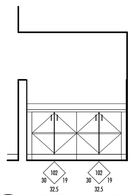
15 TLT 118A WEST
1/4" = 1'-0"



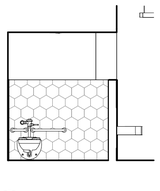
14 TLT 118A-B SOUTH
1/4" = 1'-0"



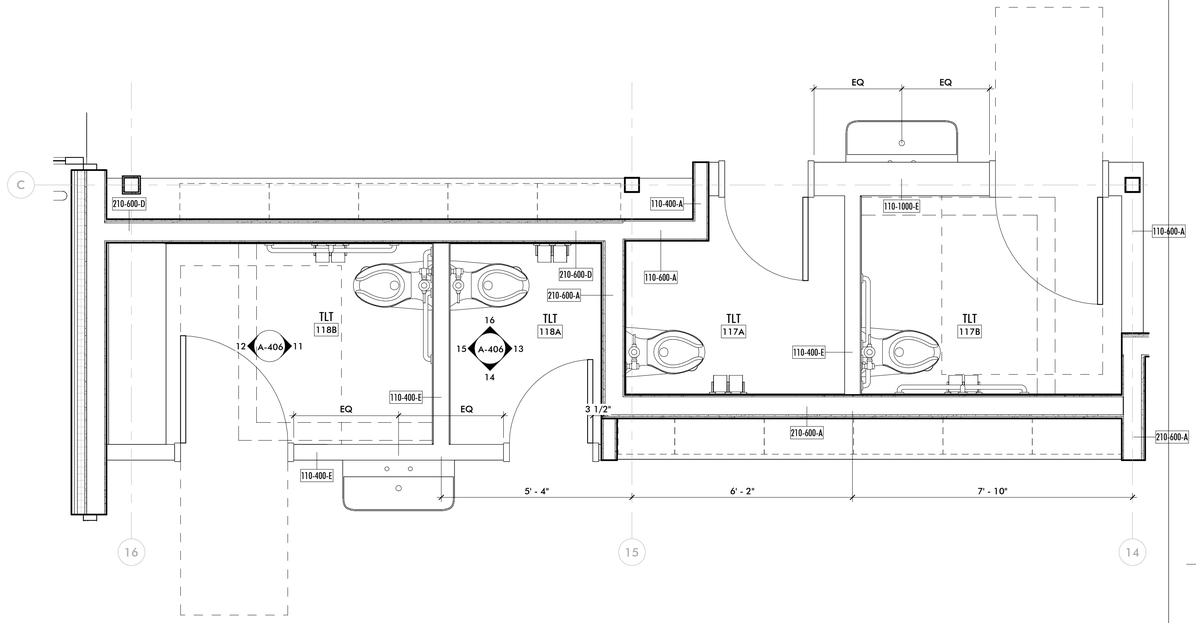
13 TLT 118A EAST
1/4" = 1'-0"



12 TLTS 118B WEST
1/4" = 1'-0"



11 TLTS 118B EAST
1/4" = 1'-0"



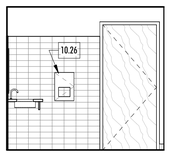

10 TLTS 117A-B, 118A-B
1/2" = 1'-0"

## WALL FINISH LEGEND

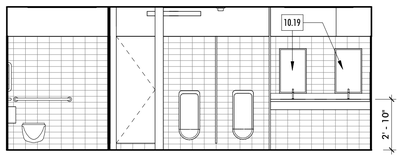
- ACOUSTICAL WALL PANEL, 2" THICK
- CERAMIC TILE 1
- CERAMIC TILE 2
- VENEER PLYWD PANELING
- VENEER PLYWD ACOUSTICAL PANELS
- TACKBOARD
- FIBER REINFORCED LAMINATE
- GYM WALL PAD
- FABRIC-WRAPPED ACOUSTICAL PANELS

## KEYNOTES

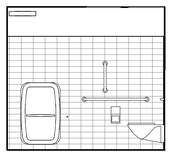
| | Keynote Text |
|---|---|
| 6.11 | 8" SS TRASH RING |
| 10.19 | MIRROR 18" X 30" |
| 10.25 | SURFACE-MOUNTED CHANGING TABLE |
| 10.26 | RECESSED SS C-FOLD PT DISPENSER |
| 10.27 | RECESSED MEDICINE CABINET |
| 10.28 | SEMI-CUSTOM MIRROR, 27" X 52" |



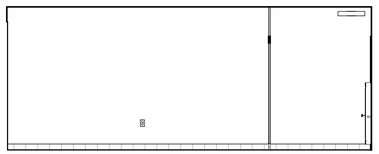

9 NORTH
1/4" = 1'-0"



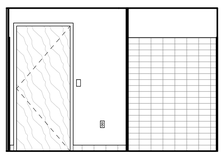

8 WEST
1/4" = 1'-0"



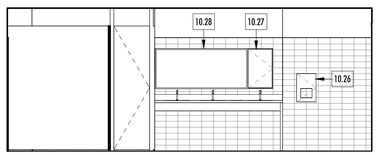
7 SOUTH
1/4" = 1'-0"



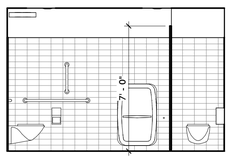
6 EAST TLTS 105
1/4" = 1'-0"



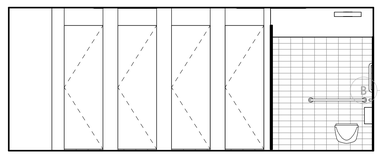
5 NORTH
1/4" = 1'-0"



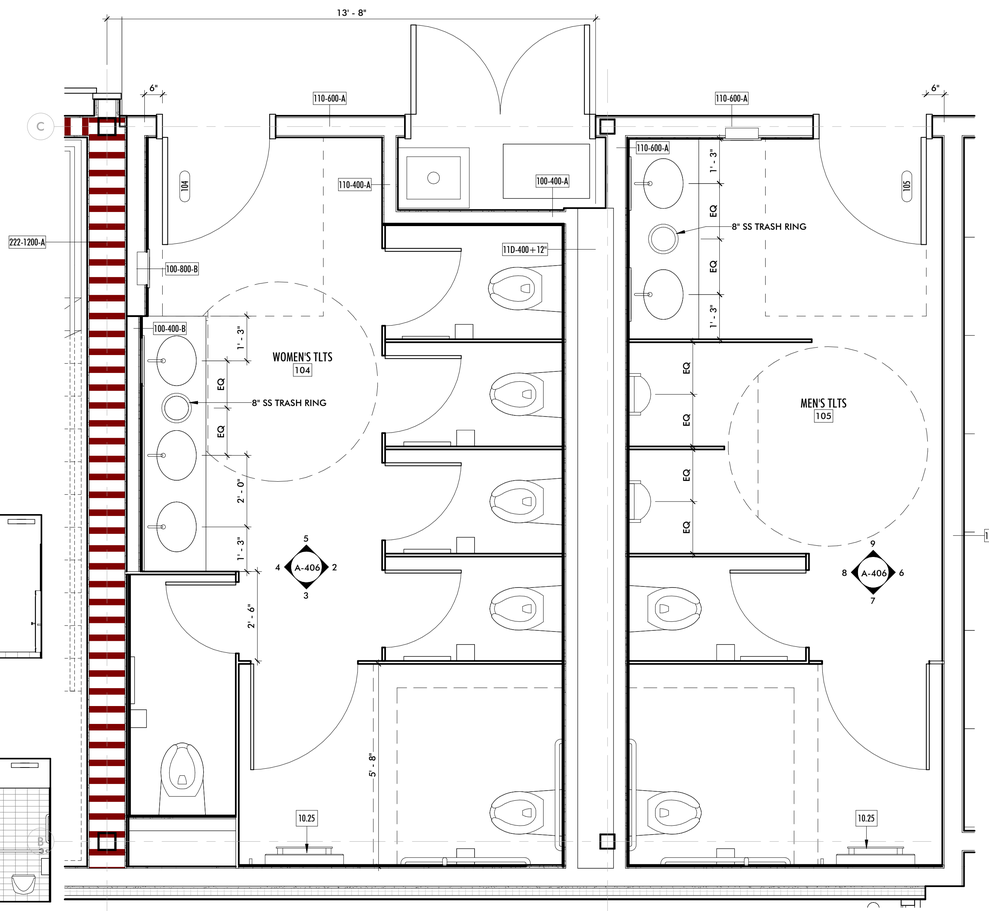

4 WEST
1/4" = 1'-0"




3 SOUTH
1/4" = 1'-0"



2 EAST TLTS 104
1/4" = 1'-0"




1 TLTS 104, 105
1/2" = 1'-0"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A-406


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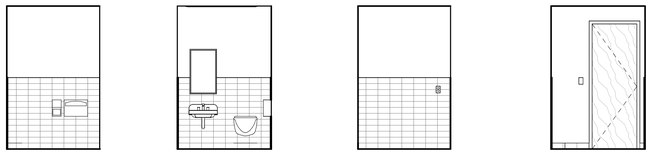
## WALL FINISH LEGEND

- ACOUSTICAL WALL PANEL, 2" THICK
- CERAMIC TILE 1
- CERAMIC TILE 2
- VENEER PLYWD PANELING
- VENEER PLYWD ACOUSTICAL PANELS
- TACKBOARD
- FIBER REINFORCED LAMINATE
- GYM WALL PAD
- FABRIC-WRAPPED ACOUSTICAL PANELS

## KEYNOTES

| | Keynote Text |
|---|---|
| 9.3 | FRL |
| 10.19 | MIRROR 18" X 30" |



16 NORTH 1/4" = 1'-0"



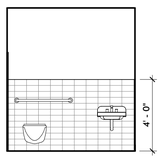
15 WEST 1/4" = 1'-0"



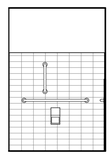
14 SOUTH 1/4" = 1'-0"



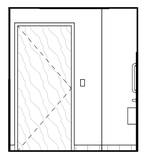
13 EAST TLT 211C 1/4" = 1'-0"



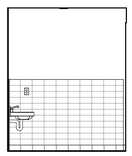

12 NORTH 1/4" = 1'-0"



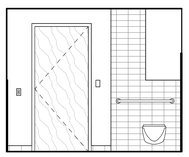
11 WEST 1/4" = 1'-0"



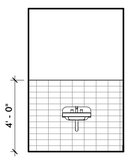
10 SOUTH 1/4" = 1'-0"



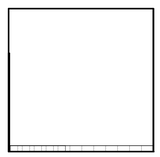
9 EAST TLT 211A 1/4" = 1'-0"



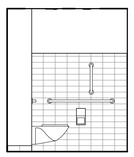
8 NORTH 1/4" = 1'-0"



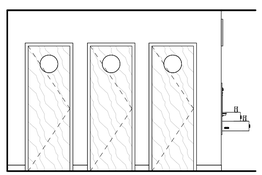

7 WEST 1/4" = 1'-0"



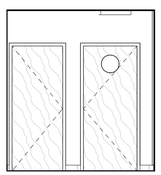
6 SOUTH 1/4" = 1'-0"



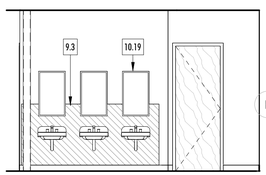
5 EAST TLT 201 1/4" = 1'-0"



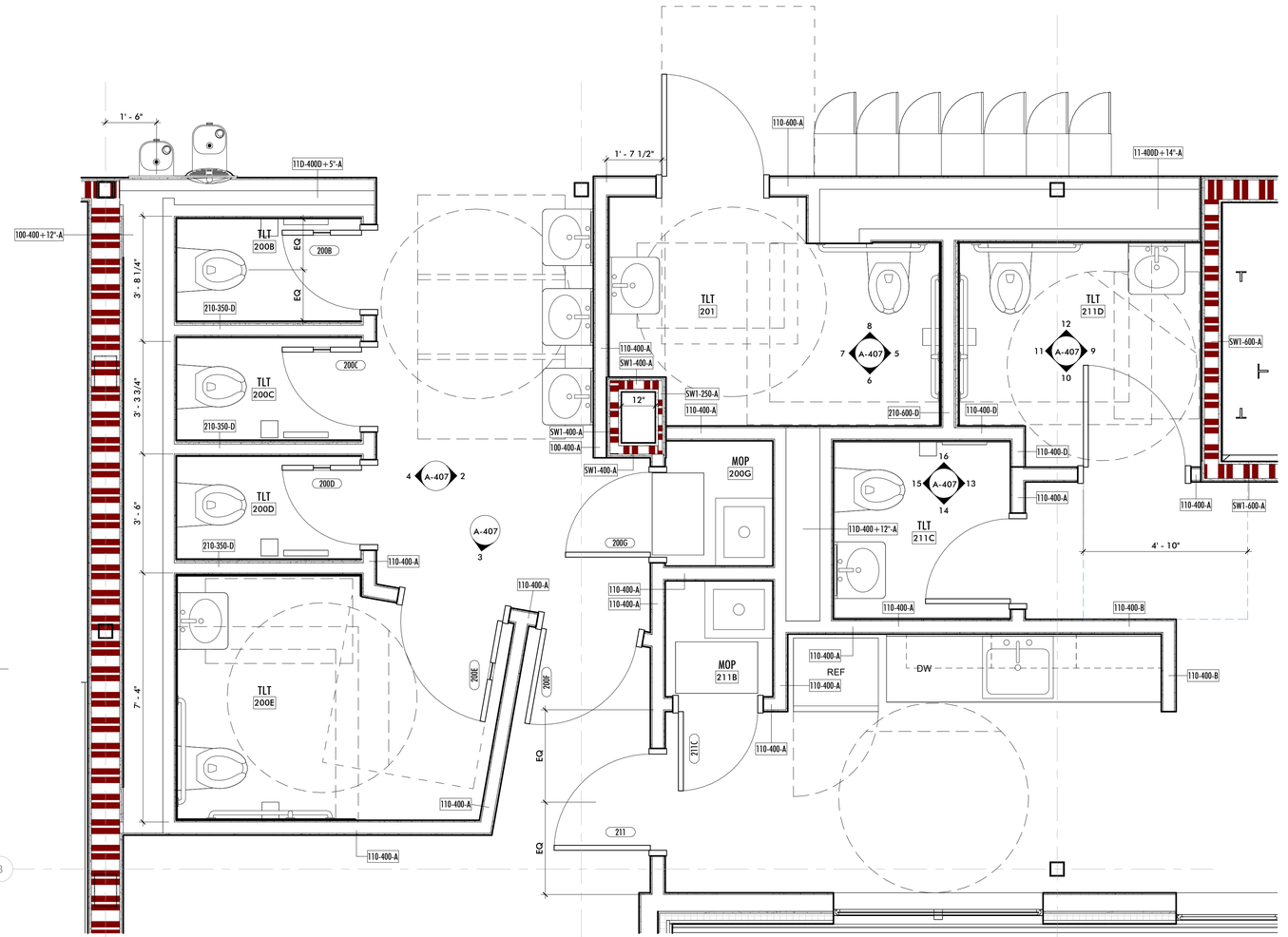
4 WEST 1/4" = 1'-0"



3 L02 STUDENT TLTS S 1/4" = 1'-0"




2 L02 STUDENT TLTS E 1/4" = 1'-0"





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17 A-209 16 RESTROOMS

A-407


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## WALL FINISH LEGEND

- ACOUSTICAL WALL PANEL, 2" THICK
- CERAMIC TILE 1
- CERAMIC TILE 2
- VENEER PLYWD PANELING
- VENEER PLYWD ACOUSTICAL PANELS
- TACKBOARD
- FIBER REINFORCED LAMINATE
- GYM WALL PAD
- FABRIC-WRAPPED ACOUSTICAL PANELS

## KEYNOTES

| | |
|---|---|
| | Keynote Text |


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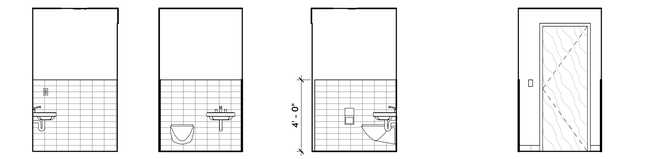


9 NORTH 1/4" = 1'-0"



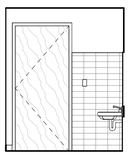
8 WEST 1/4" = 1'-0"




7 SOUTH 1/4" = 1'-0"



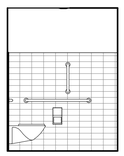
6 300G E (300A SIM) 1/4" = 1'-0"



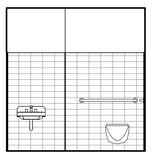
5 NORTH 1/4" = 1'-0"



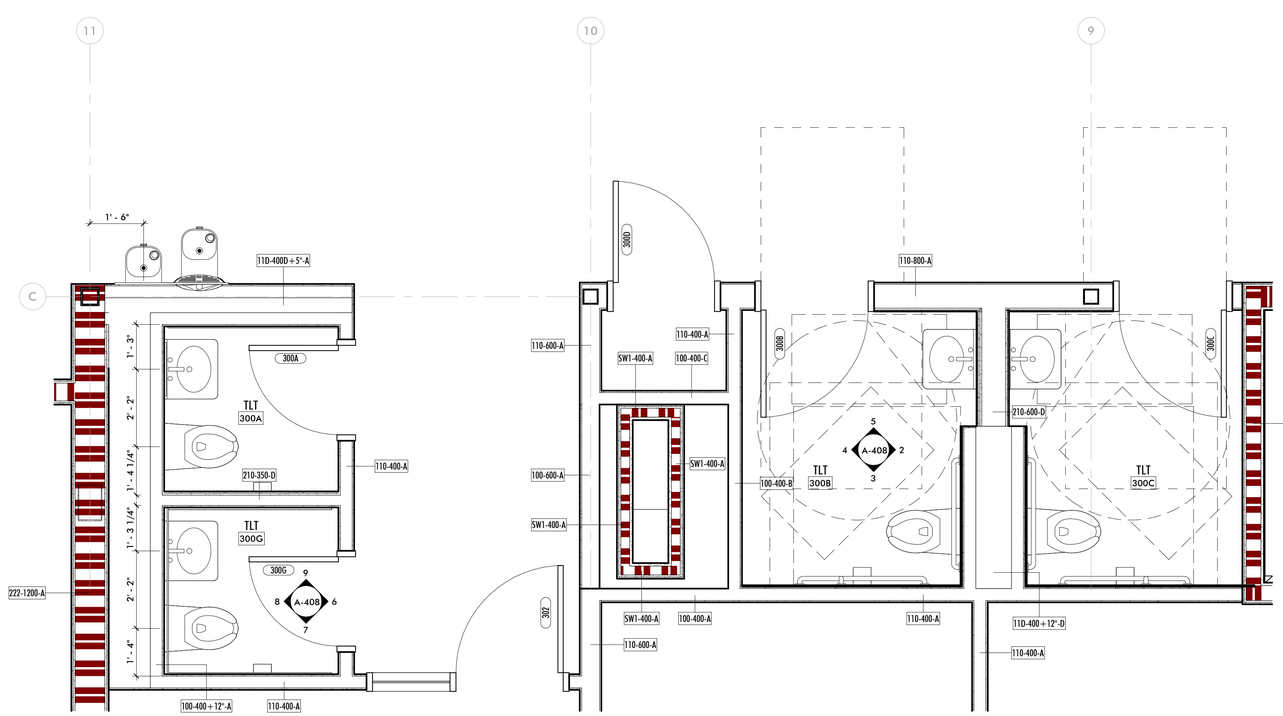
4 WEST 1/4" = 1'-0"



3 SOUTH 1/4" = 1'-0"



2 300B E (300C SIM OPP) 1/4" = 1'-0"




1 TLT 300A, 300B, 300C 1/2" = 1'-0"

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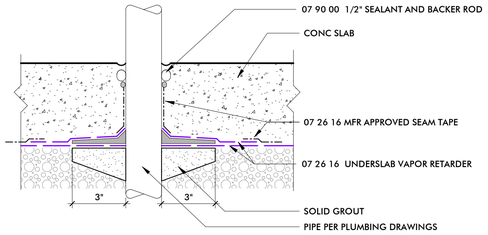
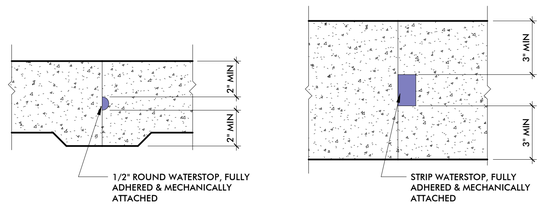
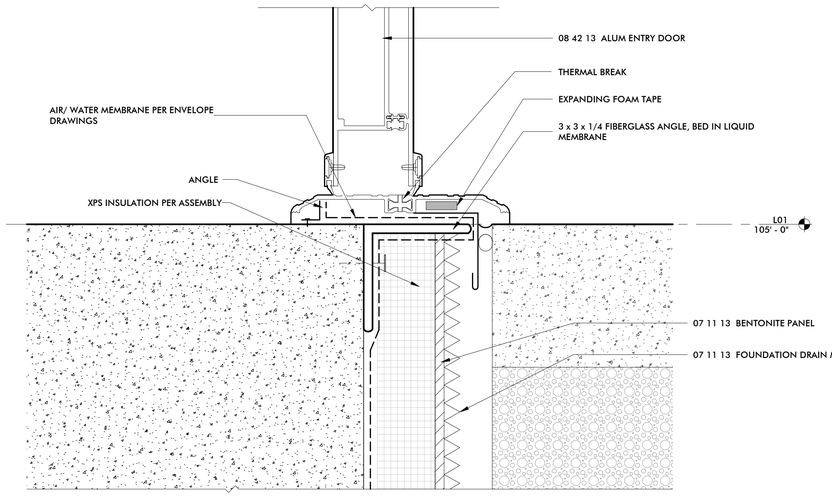


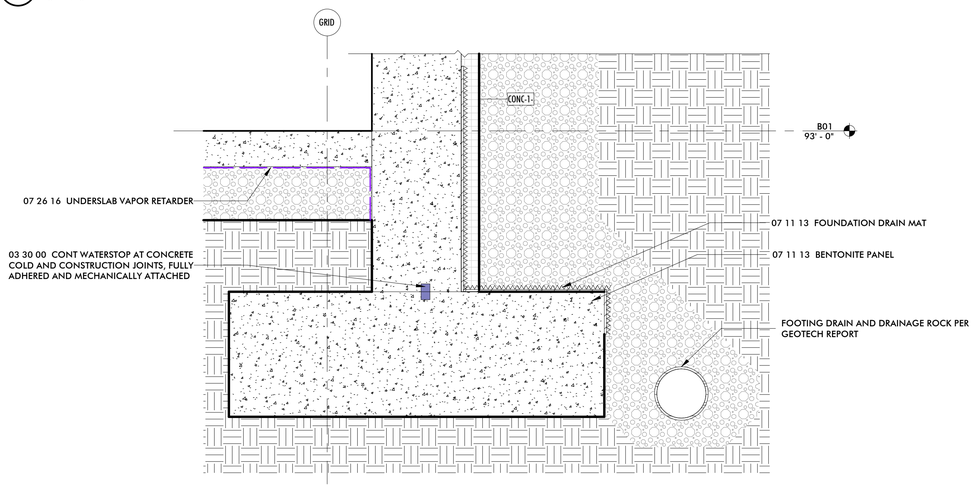

D1 TYP PIPE PENETRATION THROUGH SLAB-ON-GRADE
3" = 1'-0"




C1 TYP WATERSTOP DTL
3" = 1'-0"




B1 SLAB DTL AT ENTRY
6" = 1'-0"




A1 FOOTING DTL TYP
1 1/2" = 1'-0"

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EXTERIOR DETAILS - FOUNDATION

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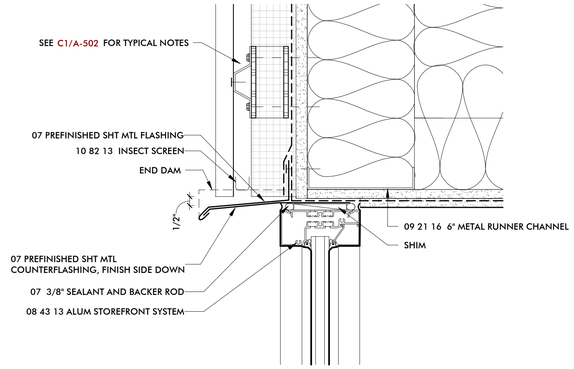
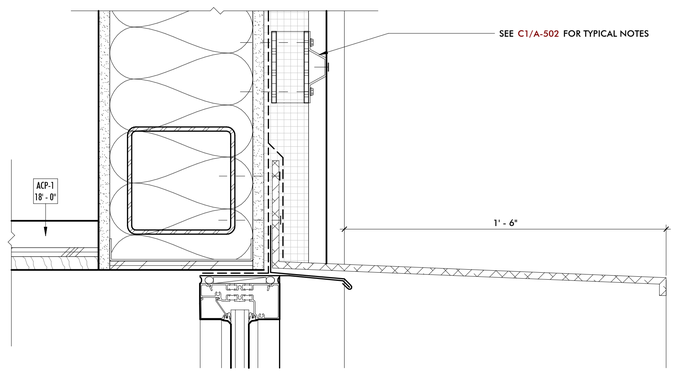
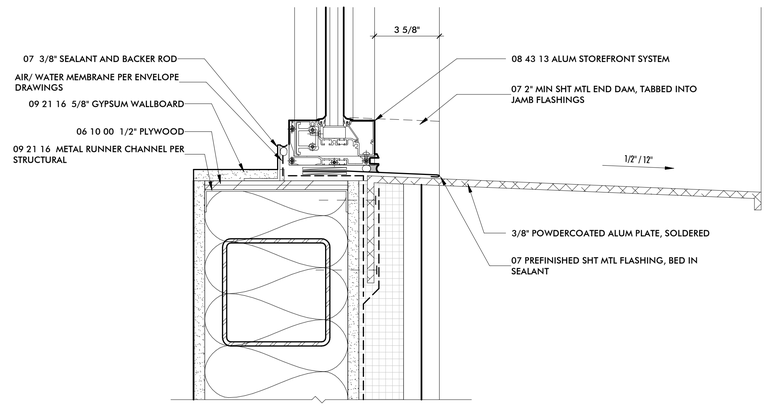
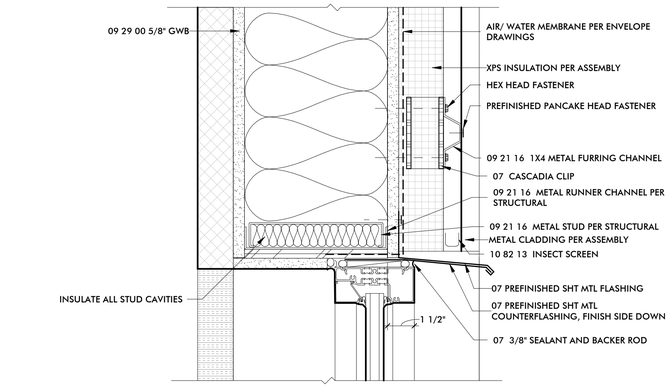



B3 STOREFRONT HEAD AT ENTRY SOFFIT
3" = 1'-0"



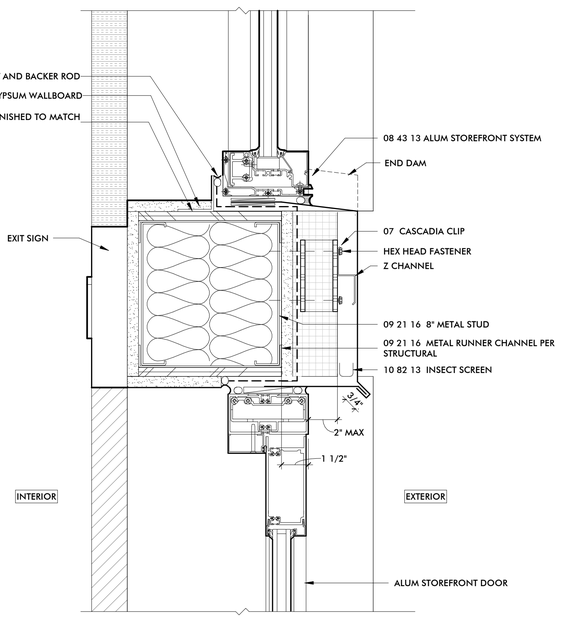

B2 FLASHING SHROUD AT EAST WALL
3" = 1'-0"



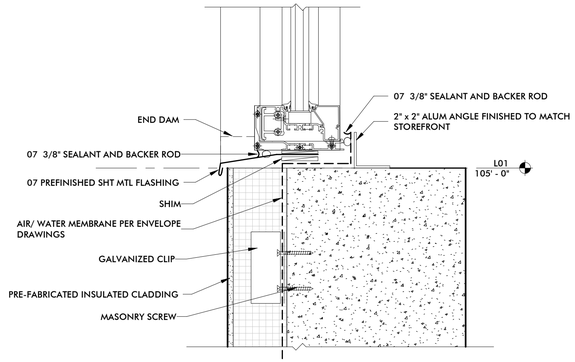

C1 STOREFRONT HEAD DTL TYP
3" = 1'-0"



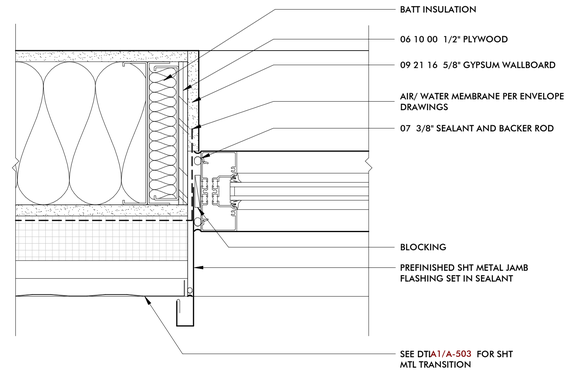

A2 FLASHING SHROUD EAST WALL JAMB
3" = 1'-0"




B1 STOREFRONT SILL/ HEAD TYP
3" = 1'-0"




A3 STOREFRONT SILL AT CONC
3" = 1'-0"




A1 TYP STOREFRONT JAMB
3" = 1'-0"

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EXTERIOR DETAILS - OPENINGS

A-502

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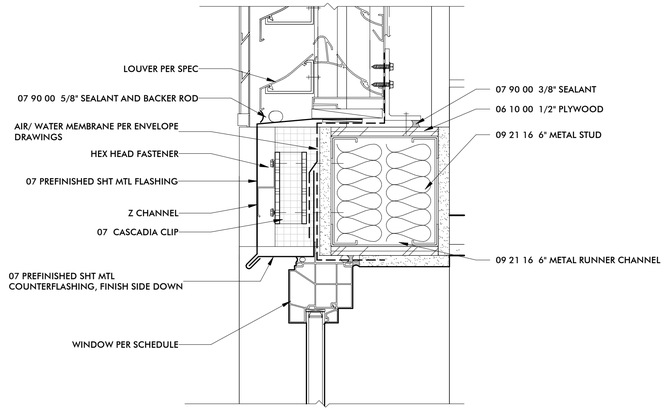
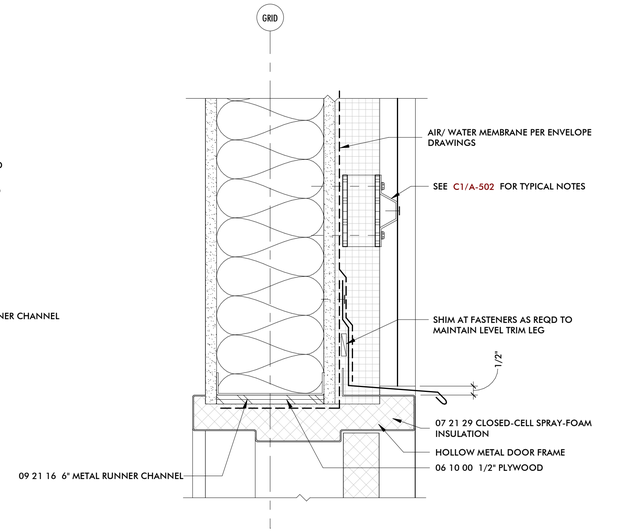
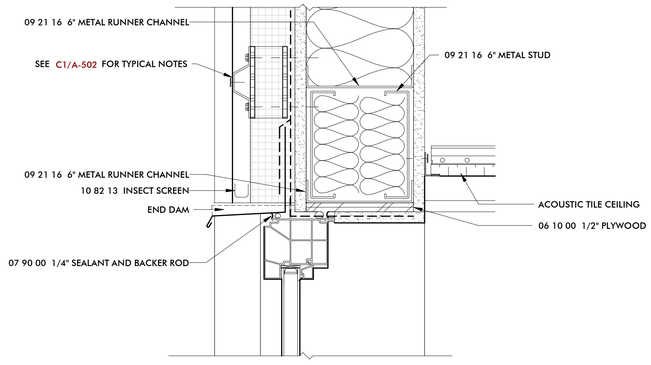
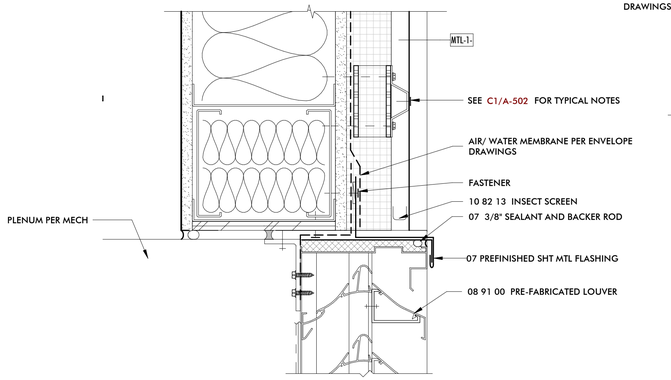


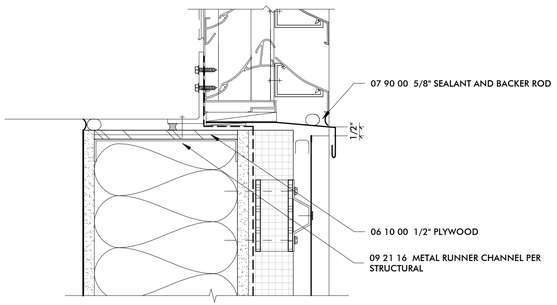

C3 LOUVER TO WDW SILL/HEAD
3" = 1'-0"



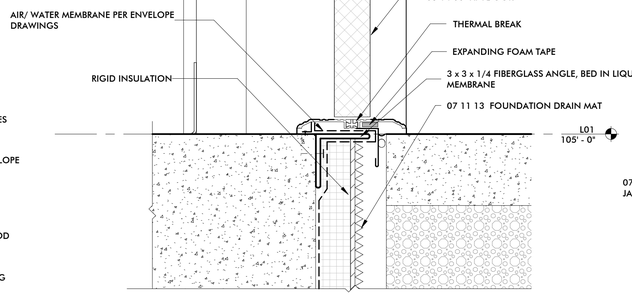




C1 WDW HEAD TYP
3" = 1'-0"

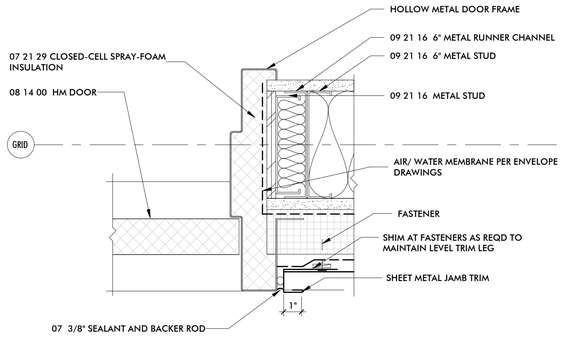


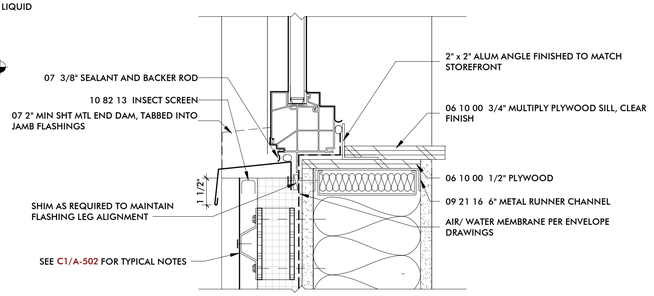

A3 TYP LOUVER DETAIL
3" = 1'-0"



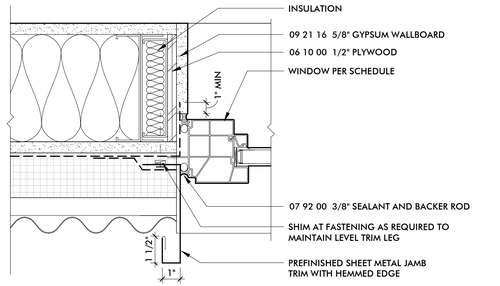

B2 HM DOOR HEAD AND SILL
3" = 1'-0"




A2 HM DOOR JAMB DTL
3" = 1'-0"




B1 WDW SILL TYP
3" = 1'-0"




A1 PLAN - WINDOW JAMB AT SIDING
3" = 1'-0"

6/4/2025 11:00:05 AM C:\Users\EstherYoder\Documents\@PD_PDB_R24_eseth7EOSR.rvt
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9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

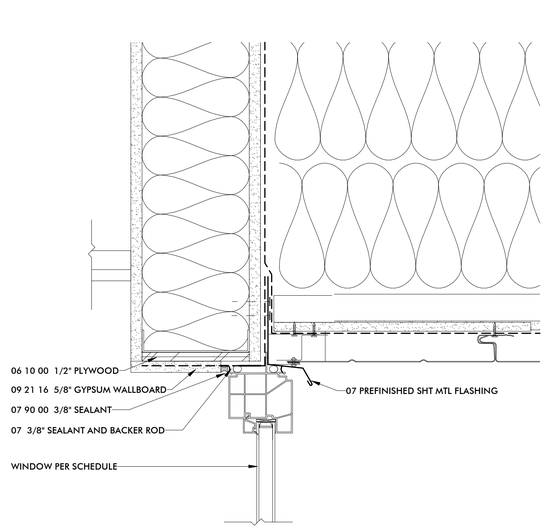
3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

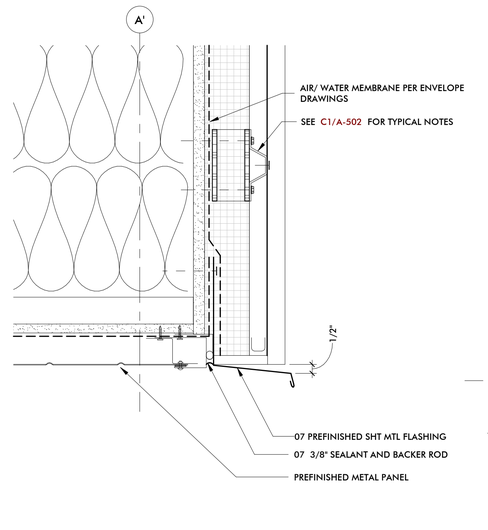
PROJECT:

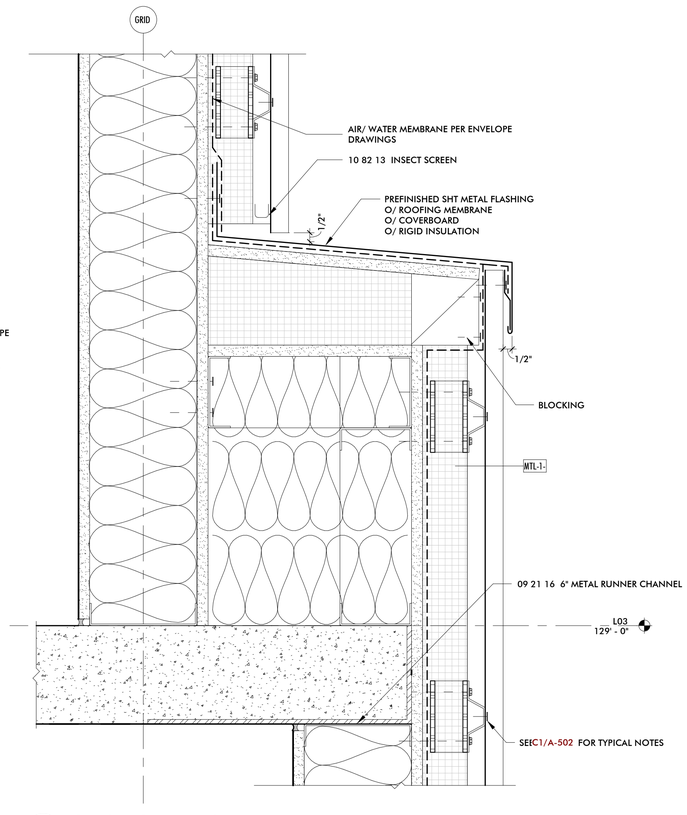
EXTERIOR DETAILS - OPENINGS

A-503

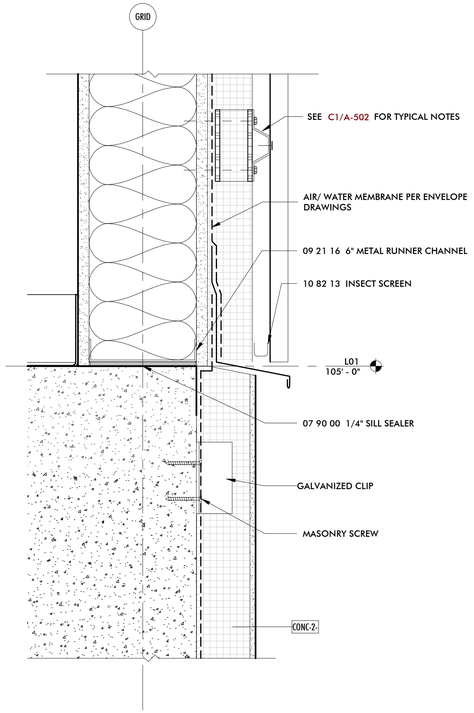



B3 SOFFIT DTL
3" = 1'-0"

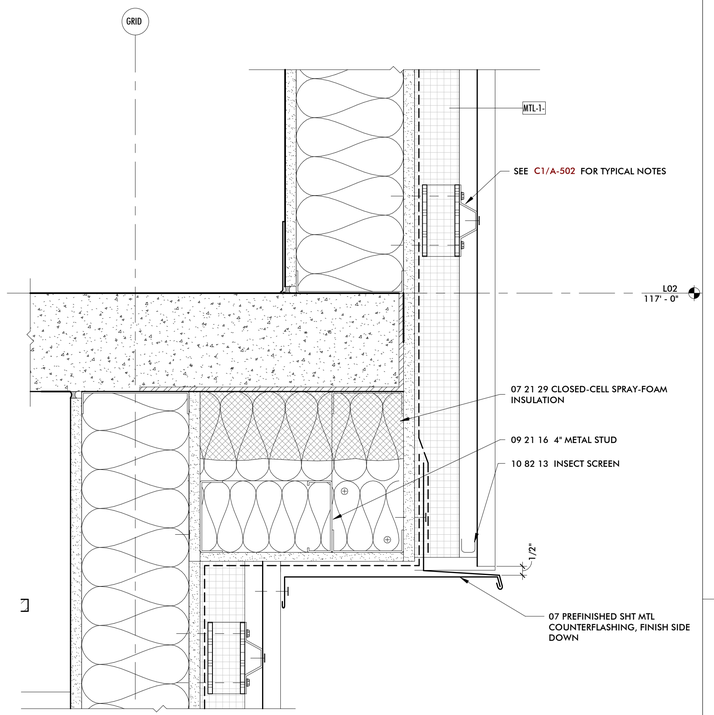



B1 OFFSET SLAB EDGE AT L03
3" = 1'-0"




A2 FRAME TO CONC WALL TYP
3" = 1'-0"




A1 OFFSET SLAB EDGE AT L02
3" = 1'-0"

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PROJECT:

EXTERIOR DETAILS - WALLS+SOFFITS

A-504

6/4/2025 11:06:07 AM C:\Users\ElaineY.adm\Documents\BIPP_R24_elaineY.RVT
ORIGINAL SHEET SIZE: 24" X 36"
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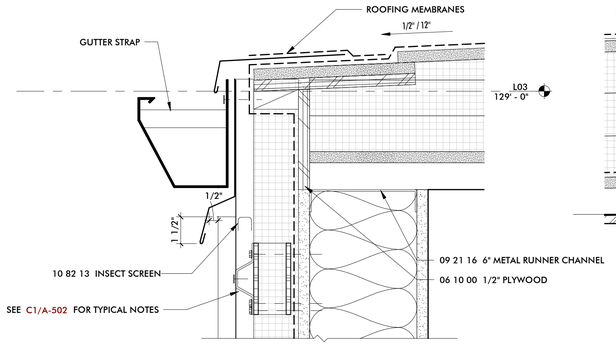
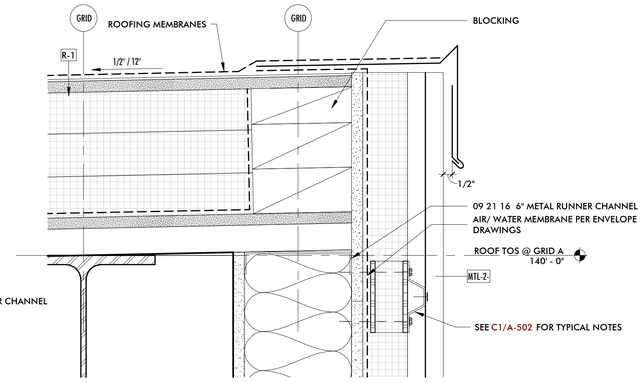
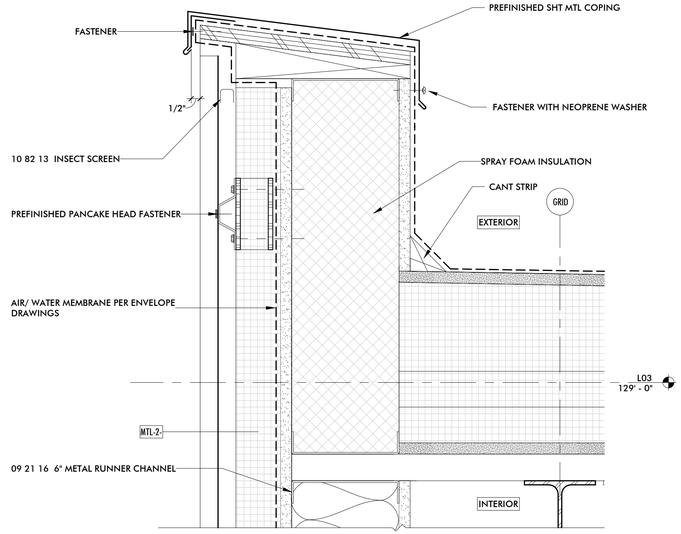


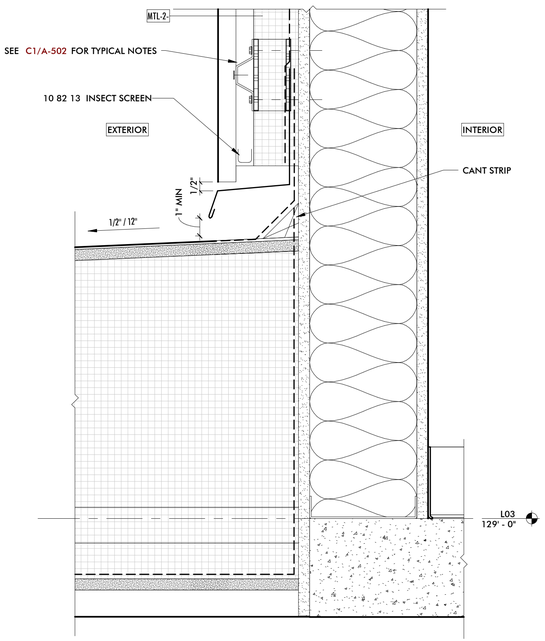

C3 GUTTER TYP
3" = 1'-0"



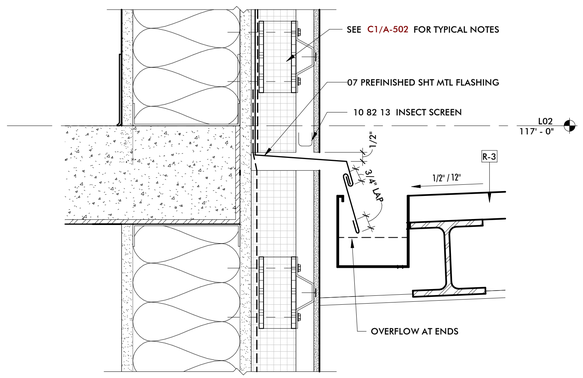

B3 ROOF GRAVEL EDGE TYP
3" = 1'-0"



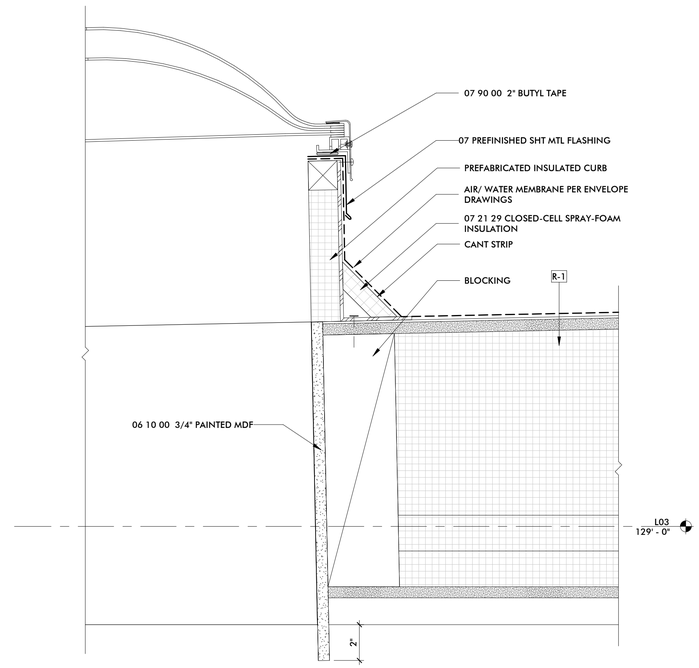

A3 ROOF PARAPET DETAIL TYP
3" = 1'-0"




C2 ROOF TO WALL TYP
3" = 1'-0"




C1 CANOPY ROOF TO WALL DTL AT ENTRY
3" = 1'-0"




A1 SKYLIGHT DTL
3" = 1'-0"

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PROJECT:

EXTERIOR DETAILS - ROOF

A-505

6/4/2025 11:06:09 AM C:\Users\EashaYadav\Documents\BIPP_R08_R24_eashaTI05SR.rvt
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## Casework Schedule

| ROOM NO. | ROOM NAME | AWI/NAAWS MODEL | Depth | Height | Width | Count |
|---|---|---|---|---|---|---|
| | | 417M | 1' - 6" | 7' - 0" | 3' - 4" | 1 |
| | | | | | | |
| 002 | STEM/ SCIENCE | 100 | 1' - 10" | 2' - 8 1/2" | 3' - 0" | 1 |
| 002 | STEM/ SCIENCE | 101 | 1' - 11" | 2' - 8 1/2" | 1' - 2" | 2 |
| 002 | STEM/ SCIENCE | 101 | 1' - 10" | 2' - 8 1/2" | 1' - 3" | 4 |
| 002 | STEM/ SCIENCE | 101 | 1' - 10" | 1' - 10 1/2" | 1' - 6" | 1 |
| 002 | STEM/ SCIENCE | 101 | 1' - 10" | 2' - 8 1/2" | 1' - 9" | 2 |
| 002 | STEM/ SCIENCE | 102 | 1' - 10" | 2' - 8 1/2" | 2' - 0" | 2 |
| 002 | STEM/ SCIENCE | 102 | 1' - 11" | 2' - 8 1/2" | 2' - 6" | 11 |
| 002 | STEM/ SCIENCE | 152 | <varies> | 2' - 8 1/2" | 3' - 0" | 6 |
| 002 | STEM/ SCIENCE | 180 | 2' - 0" | 2' - 8 1/2" | 4' - 0" | 4 |
| 002 | STEM/ SCIENCE | 302 | 1' - 0" | 2' - 10" | 2' - 6" | 3 |
| 002 | STEM/ SCIENCE | 324M | 1' - 0" | 2' - 10" | 2' - 6" | 12 |
| 002 | STEM/ SCIENCE | 402 | 2' - 0" | 7' - 2" | 2' - 6" | 2 |
| 002 | | | | | | |
| 003 | ART | 152 | 1' - 11" | 2' - 8 1/2" | 2' - 9 3/16" | 1 |
| 003 | ART | 402 | 2' - 0" | 7' - 2" | 2' - 6" | 1 |
| 003 | | | | | | |
| 005 | WORKROOM | 101 | 1' - 10" | 2' - 8 1/2" | 1' - 3" | 1 |
| 005 | WORKROOM | 102 | 1' - 11" | 2' - 8 1/2" | 2' - 6" | 5 |
| 005 | WORKROOM | 152 | 1' - 10" | 2' - 8 1/2" | 2' - 7" | 1 |
| 005 | WORKROOM | 210M | 1' - 10" | 2' - 8 1/2" | 2' - 6" | 1 |
| 005 | WORKROOM | 254 | 1' - 10" | 2' - 8 1/2" | 2' - 6" | 1 |
| 005 | WORKROOM | 302 | 1' - 0" | 2' - 10" | 2' - 2" | 1 |
| 005 | WORKROOM | 302 | 1' - 0" | 2' - 10" | 2' - 6" | 3 |
| 005 | WORKROOM | 326 | 1' - 6" | 2' - 10" | 2' - 6" | 2 |
| 005 | | | | | | |
| 100 | VESTIBULE | 427 | 1' - 2" | 7' - 2" | 6' - 6" | 1 |
| 100 | | | | | | |
| 101 | MP LOBBY | 500M | 1' - 2" | 7' - 2" | 2' - 9" | 7 |
| 101 | | | | | | |
| 103A | CHAPEL | 100 | 1' - 0" | 2' - 8 1/2" | 2' - 3" | 6 |
| 103A | CHAPEL | 412M | 2' - 0" | 7' - 2" | 2' - 0" | 8 |
| 103A | CHAPEL | 412M | 2' - 0" | 7' - 2" | 2' - 6" | 2 |
| 103A | | | | | | |
| 104 | WOMEN'S TLTS | S256301 | | | | 1 |
| 104 | | | | | | |
| 105 | MEN'S TLTS | S256301 | | | | 1 |
| 105 | | | | | | |
| 113 | CLASSROOM | 100M1 | 1' - 0" | 3' - 7 3/4" | 1' - 2" | 1 |
| 113 | CLASSROOM | 101 | 1' - 11" | 2' - 8 1/2" | 1' - 2" | 1 |
| 113 | CLASSROOM | 102 | 1' - 11" | 2' - 8 1/2" | 1' - 9" | 1 |
| 113 | CLASSROOM | 102 | 1' - 11" | 2' - 8 1/2" | 2' - 6" | 2 |
| 113 | CLASSROOM | 110M | 1' - 0 3/4" | 3' - 6 1/4" | 2' - 8 1/4" | 1 |
| 113 | CLASSROOM | 120M | 1' - 0 3/4" | 3' - 6 1/4" | 4' - 0" | 3 |
| 113 | CLASSROOM | 302 | 1' - 0" | 2' - 8" | 1' - 9" | 1 |
| 113 | CLASSROOM | 302 | 1' - 0" | 2' - 10" | 2' - 6" | 3 |
| 113 | CLASSROOM | 402 | 2' - 0" | 7' - 2" | 2' - 6" | 1 |
| 113 | | | | | | |
| 114 | ADMIN | 102 | 1' - 11" | 2' - 8 1/2" | 2' - 6" | 2 |
| 114 | ADMIN | 211 | 1' - 11" | 2' - 8 1/2" | 1' - 8" | 1 |
| 114 | ADMIN | 212 | 1' - 11" | 2' - 8 1/2" | 2' - 4" | 4 |
| 114 | ADMIN | 301 | 1' - 0" | 2' - 10" | 1' - 8" | 1 |
| 114 | ADMIN | 302 | 1' - 0" | 2' - 10" | 2' - 4" | 4 |
| 114 | ADMIN | 302 | 1' - 0" | 2' - 10" | 2' - 6" | 2 |

## Casework Schedule

| ROOM NO. | ROOM NAME | AWI/NAAWS MODEL | Depth | Height | Width | Count |
|---|---|---|---|---|---|---|
| 114 | | | | | | |
| 115 | CLASSROOM | | 2' - 0" | 2' - 8 1/2" | 1' - 0 15/16" | 1 |
| 115 | CLASSROOM | 100M1 | 1' - 0" | 3' - 7 3/4" | 1' - 2" | 2 |
| 115 | CLASSROOM | 101 | 1' - 11" | 2' - 8 1/2" | 1' - 2" | 1 |
| 115 | CLASSROOM | 102 | 1' - 11" | 2' - 8 1/2" | 1' - 9" | 1 |
| 115 | CLASSROOM | 102 | 1' - 11" | 2' - 8 1/2" | 2' - 6" | 2 |
| 115 | CLASSROOM | 110M | 1' - 0 3/4" | 3' - 6 1/4" | 2' - 8 1/4" | 4 |
| 115 | CLASSROOM | 120M | 1' - 0 3/4" | 3' - 6 1/4" | 4' - 0" | 1 |
| 115 | CLASSROOM | 301 | 1' - 0" | 2' - 10" | 1' - 2" | 1 |
| 115 | CLASSROOM | 302 | 1' - 0" | 2' - 8" | 1' - 9" | 1 |
| 115 | CLASSROOM | 302 | 1' - 0" | 2' - 10" | 2' - 6" | 3 |
| 115 | CLASSROOM | 401 | 2' - 0" | 7' - 2" | 1' - 5" | 1 |
| 115 | CLASSROOM | 401M | 2' - 0" | 4' - 9 1/2" | 1' - 0" | 1 |
| 115 | | | | | | |
| 116 | CLASSROOM | 100M | 1' - 0 3/4" | 3' - 6 1/4" | 1' - 4 1/2" | 1 |
| 116 | CLASSROOM | 100M1 | 1' - 0" | 3' - 7 3/4" | 1' - 2" | 2 |
| 116 | CLASSROOM | 101 | 1' - 11" | 2' - 8 1/2" | 1' - 2" | 1 |
| 116 | CLASSROOM | 102 | 1' - 11" | 2' - 8 1/2" | 1' - 9" | 1 |
| 116 | CLASSROOM | 102 | 1' - 11" | 2' - 8 1/2" | 2' - 6" | 2 |
| 116 | CLASSROOM | 110M | 1' - 0 3/4" | 3' - 6 1/4" | 2' - 8 1/4" | 2 |
| 116 | CLASSROOM | 120M | 1' - 0 3/4" | 3' - 6 1/4" | 4' - 0" | 2 |
| 116 | CLASSROOM | 152 | 1' - 11" | 2' - 8 1/2" | 2' - 6" | 1 |
| 116 | CLASSROOM | 301 | 1' - 0" | 2' - 10" | 1' - 2" | 1 |
| 116 | CLASSROOM | 302 | 1' - 0" | 2' - 8" | 1' - 9" | 1 |
| 116 | CLASSROOM | 302 | 1' - 0" | 2' - 10" | 2' - 6" | 3 |
| 116 | CLASSROOM | 402 | 2' - 0" | 7' - 2" | 2' - 6" | 1 |
| 116 | | | | | | |
| 117 | PRESCHOOL | | 1' - 0 3/4" | 3' - 6 3/8" | 0' - 7 1/4" | 1 |
| 117 | PRESCHOOL | 102 | 1' - 11" | 2' - 8 1/2" | 2' - 6" | 3 |
| 117 | PRESCHOOL | 152 | 1' - 11" | 1' - 10 1/2" | 2' - 6" | 1 |
| 117 | PRESCHOOL | 152 | 1' - 11" | 2' - 8 1/2" | 2' - 6" | 1 |
| 117 | PRESCHOOL | 302 | 1' - 0" | 3' - 6" | 2' - 4" | 1 |
| 117 | PRESCHOOL | 302 | 1' - 0" | 2' - 10" | 2' - 6" | 4 |
| 117 | PRESCHOOL | 302 | 1' - 0" | 3' - 6" | 2' - 6" | 4 |
| 117 | PRESCHOOL | 400M | 1' - 0" | 4' - 0" | 1' - 3" | 10 |
| 117 | PRESCHOOL | 402M | 2' - 0" | 7' - 2" | 4' - 2" | 1 |
| 117 | | | | | | |
| 118 | PRESCHOOL | 101 | 1' - 11" | 1' - 10 1/2" | 1' - 6" | 1 |
| 118 | PRESCHOOL | 102 | 1' - 11" | 2' - 8 1/2" | 2' - 6" | 2 |
| 118 | PRESCHOOL | 152 | 1' - 11" | 1' - 10 1/2" | 2' - 6" | 1 |
| 118 | PRESCHOOL | 152 | 1' - 10" | 2' - 8 1/2" | 2' - 11" | 1 |
| 118 | PRESCHOOL | 301 | 1' - 0" | 2' - 10" | 1' - 6" | 1 |
| 118 | PRESCHOOL | 301 | 1' - 0" | 3' - 6" | 1' - 7" | 1 |
| 118 | PRESCHOOL | 302 | 1' - 0" | 2' - 10" | 2' - 6" | 5 |
| 118 | PRESCHOOL | 302 | 1' - 0" | 3' - 6" | 2' - 6" | 5 |
| 118 | PRESCHOOL | 400M | 1' - 0" | 4' - 0" | 1' - 3" | 10 |
| 118 | PRESCHOOL | 402M | 2' - 0" | 7' - 2" | 4' - 2" | 1 |
| 118 | | | | | | |
| 118B | TLT | 102 | 1' - 7" | 2' - 8 1/2" | 2' - 6" | 2 |
| 118B | | | | | | |
| 202 | CLASSROOM | 101 | <varies> | 2' - 8 1/2" | 1' - 6" | 2 |
| 202 | CLASSROOM | 102 | <varies> | 2' - 8 1/2" | 2' - 6" | 2 |
| 202 | CLASSROOM | 152 | 1' - 7" | 2' - 8 1/2" | 2' - 6" | 1 |
| 202 | CLASSROOM | 301 | 1' - 0" | 2' - 10" | 1' - 6" | 2 |
| 202 | CLASSROOM | 302 | 1' - 0" | 2' - 10" | 2' - 6" | 3 |
| 202 | CLASSROOM | 402 | 2' - 0" | 7' - 2" | 2' - 6" | 1 |
| 202 | | | | | | |
| 203 | CLASSROOM | | 2' - 0" | 2' - 8 1/2" | 1' - 0 15/16" | 1 |
| 203 | CLASSROOM | 101 | <varies> | 2' - 8 1/2" | 1' - 6" | 2 |
| 203 | CLASSROOM | 102 | <varies> | 2' - 8 1/2" | 2' - 6" | 2 |
| 203 | CLASSROOM | 152 | 1' - 7" | 2' - 8 1/2" | 2' - 6" | 1 |
| 203 | CLASSROOM | 301 | 1' - 0" | 2' - 10" | 1' - 6" | 2 |
| 203 | CLASSROOM | 302 | 1' - 0" | 2' - 10" | 2' - 6" | 3 |
| 203 | CLASSROOM | 401 | 2' - 0" | 7' - 2" | 1' - 5" | 1 |
| 203 | CLASSROOM | 401M | 2' - 0" | 4' - 9 1/2" | 1' - 0" | 1 |
| 203 | | | | | | |
| 204 | CLASSROOM | 101 | <varies> | 2' - 8 1/2" | 1' - 6" | 2 |
| 204 | CLASSROOM | 102 | <varies> | 2' - 8 1/2" | 2' - 6" | 2 |
| 204 | CLASSROOM | 152 | 1' - 7" | 2' - 8 1/2" | 2' - 6" | 1 |
| 204 | CLASSROOM | 301 | 1' - 0" | 2' - 10" | 1' - 6" | 2 |
| 204 | CLASSROOM | 302 | 1' - 0" | 2' - 10" | 2' - 6" | 3 |
| 204 | CLASSROOM | 402 | 2' - 0" | 7' - 2" | 2' - 6" | 1 |
| 204 | | | | | | |
| 206 | CLASSROOM | 100M1 | 1' - 0" | 4' - 11" | 1' - 3" | 11 |
| 206 | CLASSROOM | 101 | <varies> | 2' - 8 1/2" | 1' - 6" | 2 |
| 206 | CLASSROOM | 102 | <varies> | 2' - 8 1/2" | 2' - 6" | 2 |
| 206 | CLASSROOM | 152 | 1' - 7" | 2' - 8 1/2" | 2' - 6" | 1 |
| 206 | CLASSROOM | 301 | 1' - 0" | 2' - 10" | 1' - 6" | 2 |
| 206 | CLASSROOM | 302 | 1' - 0" | 2' - 10" | 2' - 6" | 3 |
| 206 | CLASSROOM | 402 | 2' - 0" | 7' - 2" | 2' - 6" | 1 |
| 206 | | | | | | |
| 207 | CLASSROOM | 100M1 | 1' - 0" | 4' - 11" | 1' - 3" | 11 |
| 207 | CLASSROOM | 101 | <varies> | 2' - 8 1/2" | 1' - 6" | 2 |
| 207 | CLASSROOM | 102 | <varies> | 2' - 8 1/2" | 2' - 6" | 2 |
| 207 | CLASSROOM | 152 | 1' - 7" | 2' - 8 1/2" | 2' - 6" | 1 |
| 207 | CLASSROOM | 301 | 1' - 0" | 2' - 10" | 1' - 6" | 2 |

## ROOM FINISH SCHEDULE

| ROOM NO. | ROOM NAME | FINISH: WALL (U.N.O.) | FINISH: FLOOR | FINISH: BASE | ROOM FINISH NOTES |
|---|---|---|---|---|---|
| B01 | | | | | |
| 001 | CIRC | GWB-PT | LINO-1 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 001A | W/D | GWB-PT | CONC, SEALED | RB | |
| 001B | TLT | CT | CT | RB | |
| 001C | TLT | CT | CT | RB | |
| 001D | TLT | CT | CT | RB | |
| 001E | MOP | GWB-PT | CONC, SEALED | RB | |
| 001F | MDF | GWB-PT | CONC, SEALED | RB | |
| 002 | STEM/ SCIENCE | GWB-PT | RUBBER | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 002A | STOR | GWB-PT | CONC, SEALED | RB | |
| 002B | ELECTRICAL | GWB-PT | CONC, SEALED | RB | |
| 003 | ART | GWB-PT | RUBBER | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 003A | KILN | FRP | CONC, SEALED | RB | |
| 004 | FACULTY | GWB-PT | CPT | RB | |
| 005 | WORKROOM | GWB-PT | CPT | RB | |
| 006 | CONFERENCE | GWB-PT | CPT | RB | |
| 006A | STORAGE | GWB-PT | CONC, SEALED | RB | |
| 007 | PLUMBING/STOR | GWB-PT | CONC, SEALED | RB | |
| 008 | MP STORAGE | GWB-PT | CONC, SEALED | RB | |
| 008B | SPRINKLER | GWB-PT | CONC, SEALED | RB | |
| 009 | TLT | GWB-PT | CONC, SEALED | RB | |
| ELEV | ELEV | GWB-PT | LINO-1 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| SW-0 | WEST STAIR | GWB-PT | CONC, SEALED | RB | |
| L01 | | | | | |
| 010 | TRASH ENCLOSURE | GWB-PT | CONC, SEALED | RB | |
| 100 | VESTIBULE | GWB-PT | WOM | RB | |
| 101 | MP LOBBY | GWB-PT | LINO-1 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 101A | MOP | FRP/GWB-PT | CONC, SEALED | RB | FRP TO 4' AFF |
| 102 | KITCHEN | FRP | QT | RB | |
| 103A | CHAPEL | GWB-PT/WD | CPT | RB | |
| 103B | GYM/MULTI | GWB-PT | SSF | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 103C | STORAGE | GWB-PT | SSF | RB | |
| 103D | STOR | GWB-PT | SSF | RB | |
| 103E | STORAGE | GWB-PT | CONC, SEALED | RB | |
| 104 | WOMEN'S TLTS | CT | CT | RB | |
| 105 | MEN'S TLTS | CT | CT | RB | |
| 106 | VEST | GWB-PT | WOM | RB | |
| 107 | OFFICE | GWB-PT | CPT | RB | |
| 110 | VEST | GWB-PT | WOM | RB | |
| 111 | CIRC | GWB-PT | LINO-1 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 111A | TLT | CT | CT | RB | |
| 111B | TLTS | CT | CT | RB | |
| 111C | TLT | CT | CT | RB | |
| 111D | EC | GWB-PT | CONC, SEALED | RB | |
| 112 | OFF | GWB-PT | CPT | RB | |
| 113 | CLASSROOM | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 114 | ADMIN | GWB-PT | CPT | RB | |
| 114A | OFF | GWB-PT | CPT | RB | |
| 114B | OFF | GWB-PT | CPT | RB | |
| 114C | OFF | GWB-PT | CPT | RB | |
| 114D | OFF | GWB-PT | CPT | RB | |
| 115 | CLASSROOM | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 116 | CLASSROOM | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 117 | PRESCHOOL | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 117A | TLT | CT | CT | RB | |
| 117B | TLT | CT | CT | RB | |
| 118 | PRESCHOOL | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 118A | TLT | CT | CT | RB | |
| 118B | TLT | CT | CT | RB | |
| 119 | LRC-1 | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| SE-1 | EAST STAIR | GWB-PT | CONC, SEALED | RB | |
| SW-1 | WEST STAIR | GWB-PT | CONC, SEALED | RB | |

## ROOM FINISH SCHEDULE

| ROOM NO. | ROOM NAME | FINISH: WALL (U.N.O.) | FINISH: FLOOR | FINISH: BASE | ROOM FINISH NOTES |
|---|---|---|---|---|---|
| L02 | | | | | |
| 200 | CIRC | GWB-PT | LINO-1 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 200A | BREAKOUT/LIBRARY | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 200B | TLT | CT | CT | RB | |
| 200C | TLT | CT | CT | RB | |
| 200D | TLT | CT | CT | RB | |
| 200E | TLT | CT | CT | RB | |
| 200F | SHARED IDF | GWB-PT | CONC, SEALED | RB | |
| 200G | MOP | CT | CT | RB | |
| 200H | EC | GWB-PT | CONC, SEALED | RB | |
| 201 | TLT | CT | CT | RB | |
| 202 | CLASSROOM | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 203 | CLASSROOM | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 204 | CLASSROOM | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 205 | LRC-2 | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 206 | CLASSROOM | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 207 | CLASSROOM | GWB-PT | LINO-2 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 211 | CIRCULATION | GWB-PT | LINO-1 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 211A | BREAK ROOM | GWB-PT | LINO-1 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 211B | MOP | FRP/GWB-PT | CONC, SEALED | RB | FRP TO 4' AFF |
| 211C | TLT | CT | CT | RB | |
| 211D | TLT | CT | CT | RB | |
| 212 | RENTAL | GWB-PT | CPT | RB | |
| 212A | CONF ROOM | GWB-PT | CPT | RB | |
| 212B | OFFICE | GWB-PT | CPT | RB | |
| 213 | RENTAL | GWB-PT | CPT | RB | |
| 213A | CONF ROOM | GWB-PT | CPT | RB | |
| 213B | WORKRM | GWB-PT | CPT | RB | |
| 213C | OFFICE | GWB-PT | CPT | RB | |
| 213D | MECH MEZZ | GWB-PT | CONC, SEALED | RB | |
| SE-2 | EAST STAIR | GWB-PT | CONC, SEALED | RB | |
| SW-2 | WEST STAIR | GWB-PT | CONC, SEALED | RB | |
| L03 | | | | | |
| 300 | CIRCULATION | GWB-PT | LINO-1 | RB | SEE ELEVATIONS FOR APPLIED WALL PANELS |
| 300A | TLT | CT | CT | RB | |
| 300B | TLT | CT | CT | RB | |
| 300C | TLT | CT | CT | RB | |
| 300D | EC | GWB-PT | CONC, SEALED | RB | |
| 300E | JC | GWB-PT | CONC, SEALED | RB | |
| 300F | RENTAL OFFICE | GWB-PT | CPT | RB | |
| 300G | TLT | CT | CT | RB | |
| 301A | OFFICE | GWB-PT | CPT | RB | |
| 301B | OFFICE | GWB-PT | CPT | RB | |
| 301D | ART/STEM/OPEN OFFICE | GWB-PT | CPT | RB | |
| 301E | SNOEZELEN Rm | GWB-PT | CPT | RB | |
| 301F | MUSIC | GWB-PT | CPT | RB | |
| 301G | GAME/TECH | GWB-PT | CPT | RB | |
| 302 | RENTAL | GWB-PT | CPT | RB | |
| 302A | OFFICE' | GWB-PT | CPT | RB | |
| 302B | OFFICE | GWB-PT | CPT | RB | |
| 302C | OFFICE | GWB-PT | CPT | RB | |
| 303 | CAMP SCHECHTER | GWB-PT | CPT | RB | |
| 303A | CONF ROOM | GWB-PT | CPT | RB | |
| 303B | OFF/PHONE | GWB-PT | CPT | RB | |
| 303C | COO | GWB-PT | CPT | RB | |
| 303D | DEV/COMM | GWB-PT | CPT | RB | |
| 303E | PROGRAM OFFICE | GWB-PT | CPT | RB | |
| 303F | EXEC OFFICE | GWB-PT | CPT | RB | |
| SE-3 | EAST STAIR | GWB-PT | CONC, SEALED | RB | |
| SW-3 | WEST STAIR | GWB-PT | CONC, SEALED | RB | |

## TACKBOARD

| ROOM NO. | ROOM NAME | TYPE | AREA |
|---|---|---|---|
| | | TACKBOARD | 27 SF |
| | | TACKBOARD, 4' W | 46 SF |
| | | | 73 SF |
| 001 | CIRC | TACKBOARD | 31 SF |
| 001 | CIRC | TACKBOARD, 4' W | 164 SF |
| 001 | CIRC | TACKBOARD, 4' W | 33 SF |
| 001 | | | 228 SF |
| 002 | STEM/ SCIENCE | TACKBOARD | 27 SF |
| 002 | STEM/ SCIENCE | TACKBOARD, 4' W | 46 SF |
| 002 | STEM/ SCIENCE | TACKBOARD, 4' W | 116 SF |
| 002 | | | 189 SF |
| 003 | ART | TACKBOARD, 4' W | 34 SF |
| 003 | | | 34 SF |
| 111 | CIRC | TACKBOARD | 5 SF |
| 111 | CIRC | TACKBOARD, 4' W | 35 SF |
| 111 | | | 40 SF |
| 113 | CLASSROOM | TACKBOARD, 4' W | 40 SF |
| 113 | | | 40 SF |
| 115 | CLASSROOM | TACKBOARD, 4' W | 40 SF |
| 115 | | | 40 SF |
| 116 | CLASSROOM | TACKBOARD, 4' W | 40 SF |
| 116 | | | 40 SF |
| 200 | CIRC | TACKBOARD | 12 SF |
| 200 | CIRC | TACKBOARD, 4' W | 104 SF |
| 200 | CIRC | TACKBOARD, 4' W | 104 SF |
| 200 | | | 219 SF |
| 200A | BREAKOUT/LIBRARY | TACKBOARD, 4' W | 31 SF |
| 200A | | | 31 SF |
| 203 | CLASSROOM | TACKBOARD, 4' W | 26 SF |
| 203 | CLASSROOM | TACKBOARD, 4' W | 53 SF |
| 203 | | | 79 SF |
| 204 | CLASSROOM | TACKBOARD, 4' W | 107 SF |
| 204 | | | 107 SF |

## ACOUSTICAL WALL PANELS

| ROOM NO. | ROOM NAME | TYPE | AREA |
|---|---|---|---|
| | | AWP-FABRIC | 12 SF |
| | | AWP-FABRIC | 270 SF |
| | | AWP-FABRIC | 16 SF |
| | | AWP-FABRIC | 14 SF |
| | | AWP-FABRIC | 377 SF |
| | | AWP-FABRIC | 59 SF |
| | | | 748 SF |
| 103A | CHAPEL | AWP-WOOD | 74 SF |
| 103A | CHAPEL | AWP-WOOD | 26 SF |
| 103A | CHAPEL | AWP-WOOD | 26 SF |
| 103A | CHAPEL | AWP-WOOD | 390 SF |
| 103A | CHAPEL | AWP-WOOD | 62 SF |
| 103A | CHAPEL | AWP-WOOD | 73 SF |
| 103A | CHAPEL | AWP-WOOD | 84 SF |
| 103A | | | 735 SF |
| 103B | GYM/MULTI | AWP-FABRIC | 35 SF |
| 103B | GYM/MULTI | AWP-FABRIC | 953 SF |
| 103B | GYM/MULTI | AWP-FABRIC | 47 SF |
| 103B | GYM/MULTI | AWP-FABRIC | 60 SF |
| 103B | | | 1095 SF |

ROOM FINISH SCHEDULE LEGEND

| | |
|---|---|
| 095100 ACT | ACOUSTICAL CEILING TILE |
| 096813 CPT | CARPET TILE |
| FRL | FIBERGLASS REINFORCED LAMINATE |
| FRP | FIBERGLASS REINFORCED PANEL |
| 092116 GB | GYPSUM BOARD |
| 099000 PT | PAINT |
| 096500 RB | RUBBER BASE |
| LINO | LINOLEUM |
| VB | VENTED BASE |
| 124813 WOM | WALK OFF MAT |


3427 BEACON AVE S
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ANJALI@AGRANTDESIGN.COM
206-512-4209

anjali grant design LLC


9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

ROOM FINISH AND CASEWORK SCHEDULE

A-601


6/4/2025 11:00:11 AM C:\Users\Anjali\Yadav\Documents\BP21_PSB_R24_anjaliTT650R.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

# DOOR & FRAME SCHEDULE - EXTERIOR

| DOOR NO. | OPERATION | DOOR PANEL | | | | | | DOOR FRAME | | | HEAD | JAMB | SILL | UL LABEL | HARDWARE | COMMENTS | NFRC VALUES | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TYPE | MATL | FINISH | WIDTH | HEIGHT | THICKNESS | TYPE | MATL | FINISH | | | | | | | U-FACTOR | VT | SHGC |
| B01 | | | | | | | | | | | | | | | | | | | |
| 002.2 | SWING | EXT-S-FG | AL | PVDF | 4' - 0" | 7' - 0" | 0' - 2 1/4" | PER ELEVS | AL | PVDF | | | | N/A | AC, NR | | 0.60 | | 0.33 MAX |
| 002B.2 | SWING | S-F | HM | PT | 3' - 6" | 7' - 0" | 0' - 1 3/4" | HM-1 | HM | PT | | | | N/A | AC, NR | | 0.37 | | |
| 003.2 | SWING | EXT-S-FG | AL | PVDF | 3' - 0" | 7' - 0" | 0' - 2 1/4" | PER ELEVS | AL | PVDF | | | | N/A | AC, NR | | 0.60 | | 0.33 MAX |
| GATE-1 | SWING-DOUBLE | D-GATE | STL | FF | 11' - 0" | 6' - 8" | 0' - 1 3/4" | | STL | PT | | | | N/A | | | | | |
| L01 | | | | | | | | | | | | | | | | | | | |
| 100.1 | SWING-DOUBLE | EXT-D-FG | AL | PVDF | 6' - 0" | 7' - 0" | 0' - 2 1/4" | PER ELEVS | AL | PVDF | | | | N/A | | | 0.60 | | |
| 103A.2 | SWING | EXT-S-FG | AL | PVDF | 3' - 6" | 7' - 0" | 0' - 2 1/4" | PER ELEVS | AL | PVDF | | | | N/A | PH, NR | | 0.60 | | 0.33 MAX |
| 103A.3 | SWING | EXT-S-FG | AL | PVDF | 3' - 6" | 7' - 0" | 0' - 2 1/4" | PER ELEVS | AL | PVDF | | | | N/A | PH, NR | | 0.60 | | 0.33 MAX |
| 103B.2 | SWING | EXT-S-FG | AL | PVDF | 3' - 6" | 7' - 0" | 0' - 2 1/4" | PER ELEVS | AL | PVDF | | | | N/A | PH, NR | | 0.60 | | 0.33 MAX |
| 106 | SWING | EXT-S-FG | AL | PVDF | 3' - 0" | 7' - 0" | 0' - 2 1/4" | PER ELEVS | AL | PVDF | | | | N/A | PH, AC, NR | | 0.60 | | 0.33 MAX |
| 110.1 | SWING-DOUBLE | EXT-D-FG | AL | PVDF | 6' - 0" | 7' - 0" | 0' - 2 1/4" | PER ELEVS | AL | PVDF | | | | N/A | PH, AC, NR | | 0.60 | | 0.33 MAX |
| 117.2 | SWING | EXT-S-FG | AL | PVDF | 3' - 0" | 7' - 0" | 0' - 2 1/4" | PER ELEVS | AL | PVDF | | | | N/A | AC, NR | | 0.60 | | 0.33 MAX |
| 118.3 | SWING | EXT-S-FG | AL | PVDF | 3' - 0" | 7' - 0" | 0' - 2 1/4" | PER ELEVS | AL | PVDF | | | | N/A | AC, NR | | 0.60 | | 0.33 MAX |
| GATE-2 | SWING-DOUBLE | D-GATE | STL | FF | 8' - 4" | 6' - 8" | 0' - 1 3/4" | | STL | PT | | | | N/A | | | | | |
| SE-1.1 | SWING | S-F | HM | PT | 4' - 0" | 7' - 0" | 0' - 1 3/4" | HM-1 | HM | PT | | | | N/A | PH, NR | | 0.37 | | |
| SW-1.3 | SWING | S-F | HM | PT | 4' - 0" | 7' - 0" | 0' - 1 3/4" | HM-1 | HM | PT | | | | N/A | PH, NR | | 0.37 | | |
| L03 | | | | | | | | | | | | | | | | | | | |
| 103B.3 | SWING | S-F | HM | PT | 3' - 0" | 7' - 0" | 0' - 1 3/4" | HM-9 | HM | PT | | | | N/A | | | 0.37 | | |

## WINDOW SCHEDULE EXTERIOR

| TYPE MARK | Count | ROUGH OPENING | | | | ORIENTATION | STC RATING | NFRC VALUES | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | WIDTH | HEIGHT | SILL HEIGHT | HEAD HEIGHT | | | SHGC | U-FACTOR | VT |
| SK-1 | 4 | 4' - 0" | 3' - 0" | | | | STC 37 | 0.35 MAX | U-0.50 MAX | 0.40 MIN |
| W1 | 4 | 6' - 2" | 7' - 6" | 2' - 6" | 10' - 0" | SOUTH | STC 30 | 0.33 MAX | U-0.26 MAX | |
| W1.1L | 2 | 6' - 2" | 6' - 10" | 3' - 2" | 10' - 0" | NORTH | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W1.2 | 8 | 6' - 2" | 6' - 6" | 2' - 6" | 9' - 0" | SOUTH | STC 30 | 0.33 MAX | U-0.26 MAX | |
| W1.2L | 1 | 6' - 2" | 6' - 6" | 2' - 6" | 9' - 0" | EAST | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W1.2L | 9 | 6' - 2" | 6' - 6" | 2' - 6" | 9' - 0" | NORTH | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W1.2L | 2 | 6' - 2" | 6' - 6" | 2' - 6" | 9' - 0" | WEST | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W1.3 | 3 | 6' - 2" | 6' - 10" | 2' - 6" | 9' - 4" | SOUTH | STC 30 | 0.33 MAX | U-0.26 MAX | |
| W1L | 7 | 6' - 2" | 7' - 6" | 2' - 6" | 10' - 0" | NORTH | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W1L | 1 | 6' - 2" | 7' - 6" | 2' - 1 9/16" | 9' - 7 9/16" | WEST | STC 37 | 0.33 MAX | U-0.26 MAX | |
| W1L | 2 | 6' - 2" | 7' - 6" | 2' - 6" | 10' - 0" | WEST | STC 37 | 0.33 MAX | U-0.26 MAX | |
| W2 | 5 | 6' - 2" | 7' - 6" | 2' - 6" | 10' - 0" | SOUTH | STC 30 | 0.33 MAX | U-0.26 MAX | |
| W2.1 | 5 | 6' - 2" | 6' - 6" | 2' - 6" | 9' - 0" | SOUTH | STC 30 | 0.33 MAX | U-0.26 MAX | |
| W2.1L | 2 | 6' - 2" | 6' - 6" | 2' - 6" | 9' - 0" | EAST | STC 37 | 0.33 MAX | U-0.26 MAX | |
| W2.2 | 2 | 6' - 2" | 6' - 10" | 2' - 6" | 9' - 4" | SOUTH | STC 30 | 0.33 MAX | U-0.26 MAX | |
| W2.2L | 1 | 6' - 2" | 6' - 10" | 3' - 2" | 10' - 0" | NORTH | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W2L | 1 | 6' - 2" | 7' - 6" | 2' - 6" | 10' - 0" | NORTH | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W3L | 3 | 3' - 1" | 7' - 6" | 2' - 6" | 10' - 0" | NORTH | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W4 | 4 | 3' - 1" | 7' - 6" | 2' - 6" | 10' - 0" | SOUTH | STC 30 | 0.33 MAX | U-0.26 MAX | |
| W4.1L | 3 | 3' - 1" | 6' - 10" | 3' - 2" | 10' - 0" | NORTH | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W4.2 | 7 | 3' - 1" | 6' - 6" | 2' - 6" | 9' - 0" | SOUTH | STC 30 | 0.33 MAX | U-0.26 MAX | |
| W4.2L | 2 | 3' - 1" | 6' - 6" | 2' - 6" | 9' - 0" | EAST | STC 37 | 0.33 MAX | U-0.26 MAX | |
| W4.2L | 4 | 3' - 1" | 6' - 6" | 2' - 6" | 9' - 0" | NORTH | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W4.2L | 2 | 3' - 1" | 6' - 6" | 2' - 6" | 9' - 0" | WEST | STC 37 | 0.33 MAX | U-0.26 MAX | |
| W4.3 | 2 | 3' - 1" | 6' - 10" | 2' - 6" | 9' - 4" | SOUTH | STC 30 | 0.33 MAX | U-0.26 MAX | |
| W4.4 | 1 | 5' - 0" | 6' - 6" | 2' - 6" | 9' - 0" | SOUTH | STC 30 | 0.33 MAX | U-0.26 MAX | |
| W4L | 9 | 3' - 1" | 7' - 6" | 2' - 6" | 10' - 0" | NORTH | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W4L | 3 | 3' - 1" | 7' - 6" | 2' - 6" | 10' - 0" | WEST | STC 37 | 0.33 MAX | U-0.26 MAX | |
| W5.1L | 1 | 6' - 2" | 6' - 10" | 3' - 2" | 10' - 0" | NORTH | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W5.2 | 1 | 6' - 2" | 6' - 6" | 2' - 6" | 9' - 0" | SOUTH | STC 30 | 0.33 MAX | U-0.26 MAX | |
| W5.2L | 9 | 6' - 2" | 6' - 6" | 2' - 6" | 9' - 0" | NORTH | STC 37 | 0.53 MAX | U-0.26 MAX | |
| W5.2L | 1 | 6' - 2" | 6' - 6" | 2' - 6" | 9' - 0" | WEST | STC 37 | 0.33 MAX | U-0.26 MAX | |
| W5.3 | 1 | 6' - 2" | 4' - 8" | 2' - 6" | 7' - 2" | SOUTH | STC 30 | 0.33 MAX | U-0.26 MAX | |
| W5L | 7 | 6' - 2" | 7' - 6" | 2' - 6" | 10' - 0" | NORTH | STC 37 | 0.53 MAX | U-0.26 MAX | |

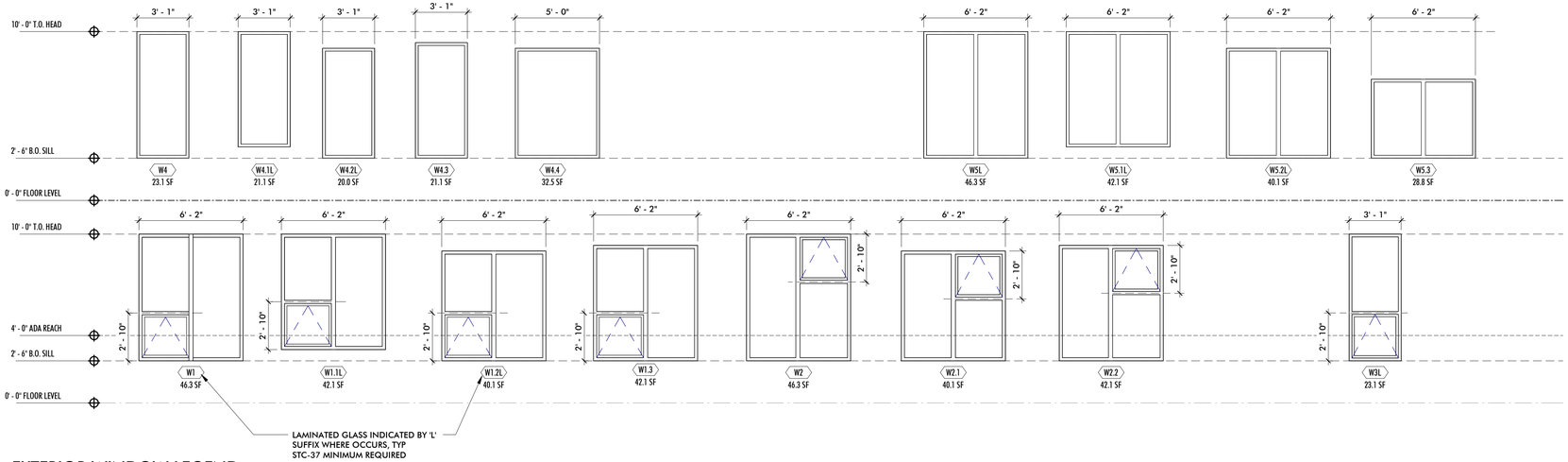
## LOUVER SCHEDULE

| MARK | COUNT | WIDTH | HEIGHT |
|---|---|---|---|
| L2 | 2 | 1' - 2" | 2' - 0" |
| L4 | 1 | 1' - 4" | 1' - 2" |
| L5 | 4 | 2' - 0" | 1' - 2" |
| L7 | 1 | 2' - 0" | 2' - 0" |
| L1 | 1 | 2' - 6" | 0' - 10" |
| L12 | 2 | 2' - 6" | 1' - 0" |
| L6 | 2 | 2' - 6" | 1' - 2" |
| L3 | 1 | 2' - 6" | 1' - 6" |
| L8 | 1 | 2' - 8" | 2' - 0" |
| L9 | 1 | 3' - 6" | 2' - 0" |
| L10 | 1 | 3' - 8" | 1' - 2" |
| L11 | 1 | 4' - 0" | 1' - 2" |

Grand total: 18




SKYLIGHT LEGEND
1/4" = 1'-0"




1 EXTERIOR WINDOW LEGEND
1/4" = 1'-0"

anjali grant design LLC
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206-512-4209

9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

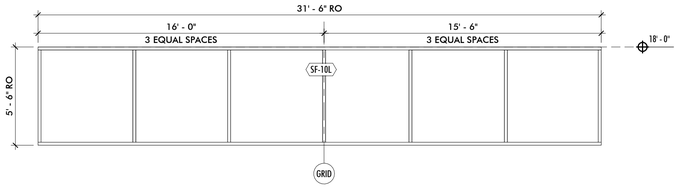
PROJECT:

EXT OPENINGS & SCHEDULE

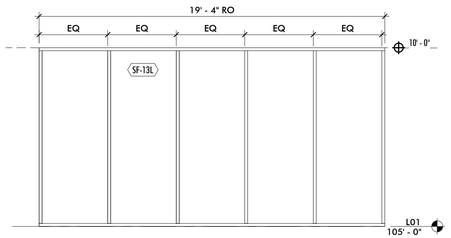
A-602

6/4/2025 11:06:13 AM C:\Users\EJahn\Fadas\Documents\BIPP_R25B_R24_asahiLTEGSR.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

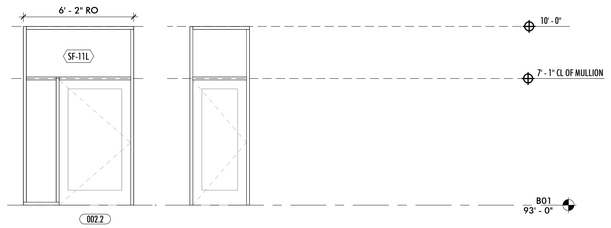
| EXTERIOR STOREFRONT & RIBBON WINDOW | | | | | |
|---|---|---|---|---|---|
| MARK | LENGTH | HEIGHT | COUNT | Type Comments | U-FACTOR |
| SF-1.1 | 5' - 0" | 7' - 2" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-1.2 | 5' - 0" | 10' - 0" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-2 | 8' - 9" | 10' - 0" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-3 | 9' - 8" | 10' - 0" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-4 | 6' - 2" | 9' - 4" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-5 | 6' - 6 1/2" | 9' - 6" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-6 | 15' - 6 1/2" | 9' - 6" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-7 | 3' - 3" | 15' - 2" | 5 | 651 UT | U-0.34 fixed, U-0.36 operable |
| SF-8.1L | 3' - 10" | 7' - 2" | 3 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-8L | 28' - 8" | 10' - 0 3/4" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-9.1L | 3' - 10" | 7' - 2" | 2 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-9.2L | 3' - 10" | 10' - 0 3/4" | 3 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-10L | 31' - 6" | 5' - 6" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-11L | 6' - 2" | 10' - 0" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-12L | 3' - 4" | 10' - 0" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-13L | 19' - 4" | 10' - 0" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-14L | 10' - 7" | 10' - 0" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |
| SF-15L | 10' - 9" | 10' - 0" | 1 | 451 UT W/ STC RATED/LAMINATED GLASS | U-0.34 fixed, U-0.36 operable |



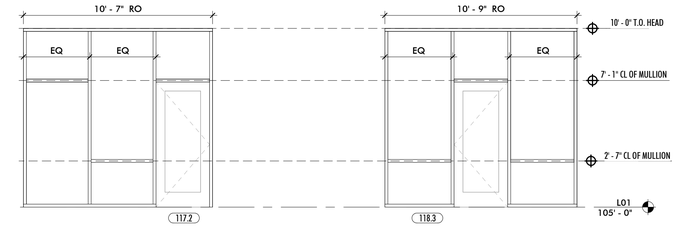

## 8 STOREFRONT NORTHEAST
1/4" = 1'-0"



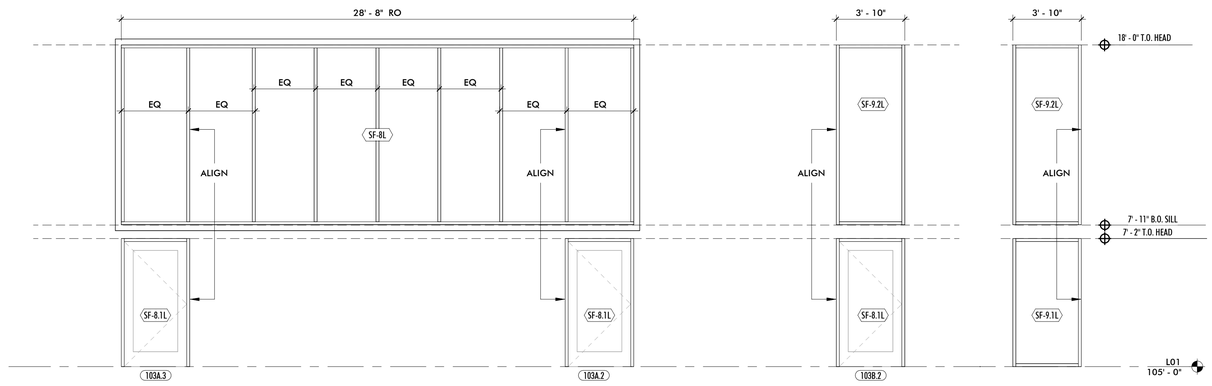

## 9 STOREFRONT NORTHWEST
1/4" = 1'-0"



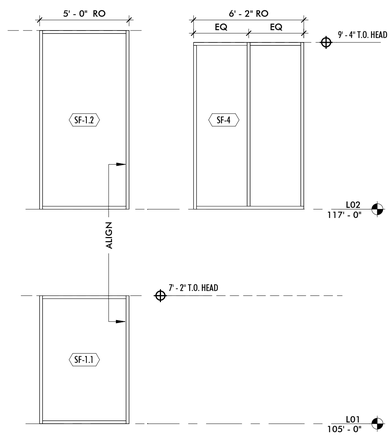

## 7 STOREFRONT NORTH
1/4" = 1'-0"



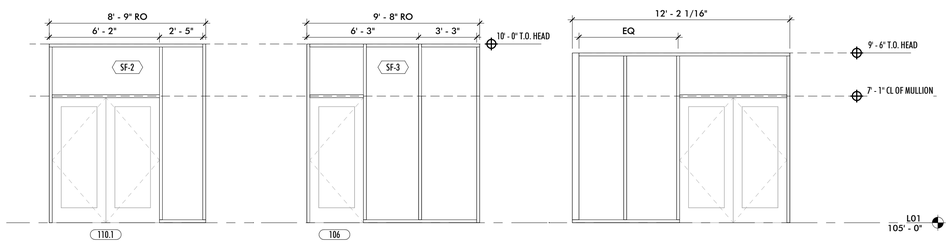

## 6 STOREFRONTS WEST
1/4" = 1'-0"



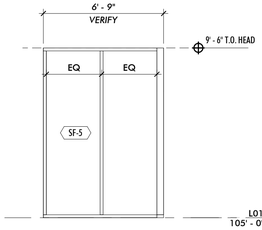

## 5 STOREFRONT EAST/WEST
1/4" = 1'-0"



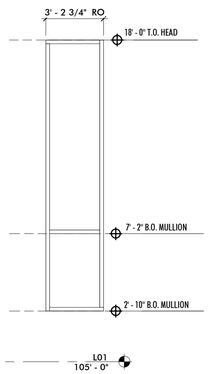

## 3 STOREFRONTS SOUTH
1/4" = 1'-0"




## 2 STOREFRONTS ENTRY
1/4" = 1'-0"




## 4 SF EAST ENTRY
1/4" = 1'-0"




## 1 STOREFRONTS SOUTH MP
1/4" = 1'-0"


3427 BEACON AVE S
SEATTLE 98144
ANJALI@AGRANTDESIGN.COM
206-512-4209

anjali grant design LLC


9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

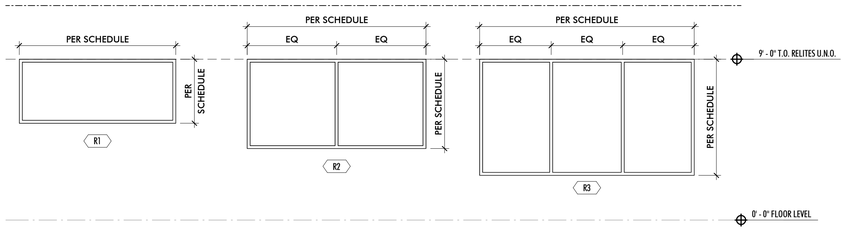
PROJECT:

EXTERIOR STOREFRONT & CURTAIN WALL

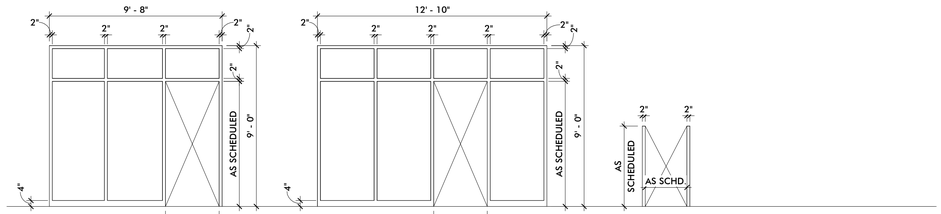
A-603


6/4/2025 11:06:15 AM C:\Users\Evelyn\Documents\BPP_R24_evelynTM50R.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

| RELITE SCHEDULE INTERIOR | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| TYPE MARK | COUNT | WIDTH | HEIGHT | SILL HEIGHT | HEAD HEIGHT | GLAZING TYPE | FINISH | DETAILS SILL | COMMENTS |
| R1.1 | 2 | 8' - 9" | 3' - 7" | 5' - 5" | 9' - 0" | | | | |
| R1.2 | 3 | 7' - 6" | 5' - 0" | 4' - 0" | 9' - 0" | | | | |
| R1.3 | 1 | 3' - 6" | 7' - 2" | 0' - 0" | 7' - 2" | | | | |
| R1.5 | 1 | 4' - 11" | 6' - 6" | 2' - 6" | 9' - 0" | | | | |
| R2.2 | 2 | 8' - 0" | 5' - 10" | 3' - 2" | 9' - 0" | | | | |
| R2.4 | 2 | 6' - 0" | 7' - 2" | 0' - 0" | 7' - 2" | | | | |
| R2.5 | 2 | 9' - 6" | 7' - 8" | 2' - 4" | 10' - 0" | | | | |
| R2.6 | 1 | 7' - 8" | 6' - 6" | 2' - 6" | 9' - 0" | | | | |
| R2.7 | 1 | 10' - 0" | 3' - 2" | 4' - 0" | 7' - 2" | | | | |
| R2.8 | 1 | 6' - 0" | 3' - 2" | 4' - 0" | 7' - 2" | | | | |
| R3.1 | 1 | 11' - 6" | 6' - 6" | 2' - 6" | 9' - 0" | | | | |



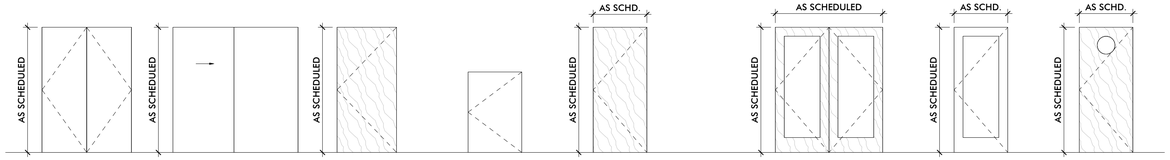

## 9 INTERIOR RELITE LEGEND
1/4" = 1'-0"



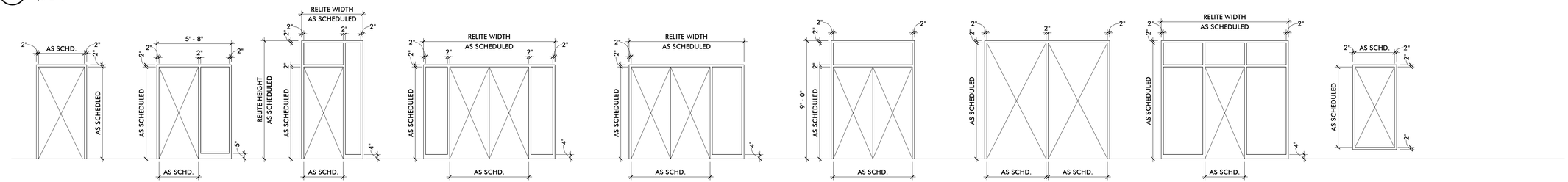

HM-11
TRANSOM + SIDELITE + TOPLITE

HM-12
SIDELITE + TRANSOM + SIDELITE + TOPLITE

WD-1
WOOD




## DOOR PANEL TYPES
1/4" = 1'-0"




HM-1
HOLLOW METAL

HM-2
SIDELITE

HM-3
SIDELITE + TRANSOM

HM-4
SIDELITE ON BOTH SIDES

HM-5
SIDELITE ON ONE SIDE

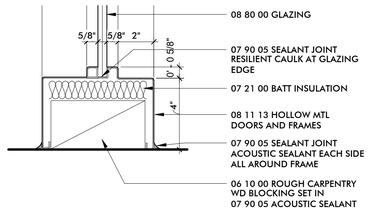
HM-6
TRANSOM

HM-7

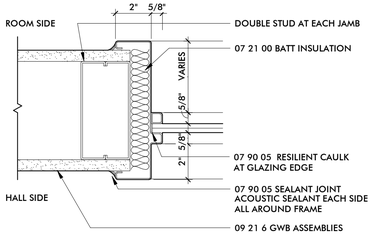
HM-8
TRANSOM+RELITES BOTH SIDES

HM-9
HOLLOW METAL

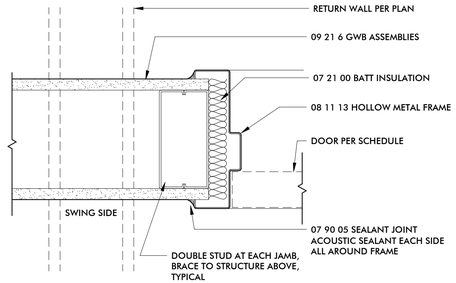
## DOOR FRAME TYPES
1/4" = 1'-0"



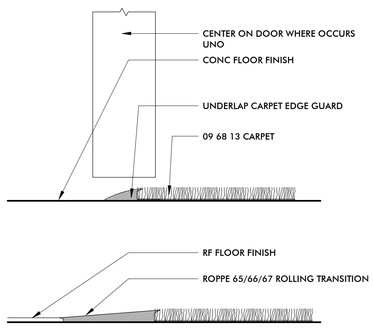

## 8 HM RELITE SILL
3" = 1'-0"



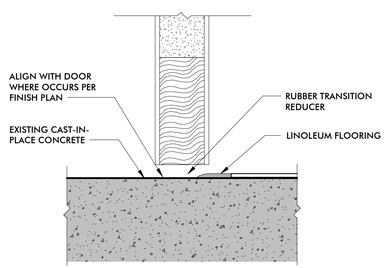

## 7 HM RELITE HEAD/JAMB/SILL
3" = 1'-0"



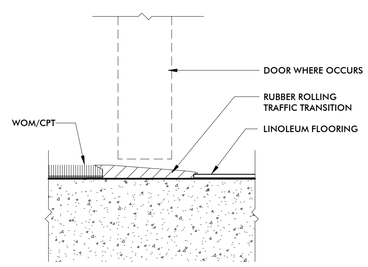

## 6 HM DOOR HEAD/JAMB
3" = 1'-0"



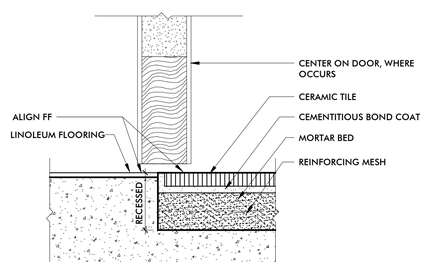

## 5 RF/ CONC CPT TRANSITION
6" = 1'-0"



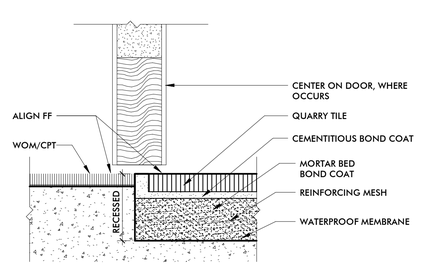

## 4 FLOOR TRANSITION CONC-S-LINO
6" = 1'-0"




## 3 FLOOR TRANSITION WOM/CPT-LINO
6" = 1'-0"




## 2 FLOOR TRANSITION LINO-CT
6" = 1'-0"




## 1 FLOOR TRANSITION WOM-QT
6" = 1'-0"


anjali grant design LLC
3427 BEACON AVE S
SEATTLE 98144
ANJALI@AGRANTDESIGN.COM
206-512-4209


9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

RELITE & DOOR TYPES & INTERIOR DTLS

A-606


6/4/2025 11:00:18 AM C:\Users\EathanYaller\Documents\BIPD_PDB_R24_eaeha7fl5SR.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

# DOOR & FRAME SCHEDULE - INTERIOR

| DOOR NO. | LOCATION FROM ROOM NAME | LOCATION FROM ROOM NO. | LOCATION TO ROOM NAME | LOCATION TO ROOM NO. | OPERATION | DOOR PANEL MARK | DOOR PANEL MATL | DOOR PANEL FIN | DOOR PANEL WIDTH | DOOR PANEL HEIGHT | DOOR PANEL THK | DOOR FRAME TYPE | DOOR FRAME MATL | DOOR FRAME FIN | RELITE HEIGHT | RELITE WIDTH | HEAD | JAMB | SILL | UL LABEL | HARDWARE | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B01 | | | | | | | | | | | | | | | | | | | | | | |
| 001A | W/D | 001A | CIRC | 001 | SWING-DOUBLE | D-F | WD | CF | 5' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 001B.1 | CIRC | 001 | TLT | 001B | SWING | S-PH | WD | CF | 2' - 4" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 001C.1 | CIRC | 001 | TLT | 001C | SWING | S-PH | WD | CF | 2' - 4" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 001D | TLT | 001D | CIRC | 001 | SWING | S-PH | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 001E | MOP | 001E | CIRC | 001 | SWING | S-F | WD | CF | 2' - 2" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 001F | MDF | 001F | MP STORAGE | 008 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | 90 MIN | AC | |
| 002.1 | CIRC | 001 | STEM/ SCIENCE | 002 | SWING-DOUBLE | D-FG | WD | CF | 6' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 002A | STOR | 002A | STEM/ SCIENCE | 002 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 002B.1 | ELECTRICAL | 002B | STOR | 002A | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 003.1 | CIRC | 001 | ART | 003 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-2 | HM | PT | 8' - 0" | 5' - 6" | | | | N/A | | |
| 003A | KILN | 003A | ART | 003 | SWING-DOUBLE | D-F | HM | CF | 5' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 004 | WORKROOM | 005 | FACULTY | 004 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 8' - 0" | | | | N/A | | |
| 005 | WORKROOM | 005 | CIRC | 001 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 8' - 6" | 8' - 0" | | | | N/A | | |
| 006 | WORKROOM | 005 | CONFERENCE | 006 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 8' - 0" | | | | N/A | | |
| 006A.1 | CONFERENCE | 006 | STORAGE | 006A | SWING-DOUBLE | D-F | WD | CF | 6' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 006A.2 | CONFERENCE | 006 | STORAGE | 006A | SWING-DOUBLE | D-F | WD | CF | 6' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 007 | CIRC | 001 | PLUMBING/STOR | 007 | SWING-DOUBLE | D-F | WD | CF | 6' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 008 | CIRC | 001 | MP STORAGE | 008 | SWING-DOUBLE | D-F | WD | CF | 6' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 008B | MP STORAGE | 008 | SPRINKLER | 008B | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 009 | TLT | 009 | CIRC | 001 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| G-007 | PLUMBING/STOR | 007 | PLUMBING/STOR | 007 | SWING | D-GATE | | | 3' - 4" | 6' - 8" | 1 3/4" | | | | | | | | | N/A | | |
| SW-0 | CIRC | 001 | WEST STAIR | SW-0 | SWING | S-F | PT | HM | 4' - 6" | 8' - 4" | 1 3/4" | HM-1 | HM | PT | | | | | | 90 MIN | PH, AC, HO, EU | |
| L01 | | | | | | | | | | | | | | | | | | | | | | |
| 100.2 | MP LOBBY | 101 | VESTIBULE | 100 | SWING-DOUBLE | D-FG | WD | CF | 6' - 0" | 7' - 0" | 1 3/4" | HM-5 | HM | PT | 7' - 2" | 8' - 9" | | | | N/A | AC, NR | |
| 101A | MOP | 101A | MP LOBBY | 101 | SWING-DOUBLE | D-F | WD | CF | 5' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 102 | KITCHEN | 102 | MP LOBBY | 101 | SWING | S-F | WD/LAM | CF/FF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 102.1 | GYM/MULTI | 103B | KITCHEN | 102 | SWING | S-F | WD/LAM | CF/FF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 103A.1 | MP LOBBY | 101 | CHAPEL | 103A | SWING-DOUBLE | D-FG | WD | CF | 6' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | PH, AC, NR | |
| 103B.1 | GYM/MULTI | 103B | MP LOBBY | 101 | SWING-DOUBLE | D-FG | WD | CF | 6' - 0" | 7' - 0" | 1 3/4" | HM-4 | HM | PT | 7' - 2" | 9' - 8" | | | | N/A | PH, AC, NR | |
| 103C | STORAGE | 103C | CHAPEL | 103A | SWING-DOUBLE | D-F | WD | CF | 5' - 6" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 103D | STOR | 103D | GYM/MULTI | 103B | SWING-DOUBLE | D-F | WD | WB | 6' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 103F.1 | GYM/MULTI | 103B | STORAGE | 103E | SWING-DOUBLE | D-F | WD | WB | 6' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 103F.2 | STORAGE | 103E | GYM/MULTI | 103B | SWING-DOUBLE | D-F | WD | WB | 6' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 103F.3 | STORAGE | 103E | GYM/MULTI | 103B | SWING-DOUBLE | D-F | WD | WB | 6' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 104 | WOMEN'S TLTS | 104 | MP LOBBY | 101 | SWING | S-F | WD/LAM | CF/FF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 105 | MP LOBBY | 101 | MEN'S TLTS | 105 | SWING | S-F | WD/LAM | CF/FF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 107 | VEST | 110 | OFFICE | 107 | SWING | S-FG | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 110.3 | CIRC | 111 | VEST | 110 | SWING-DOUBLE | D-FG | WD | CF | 6' - 0" | 7' - 0" | 1 3/4" | HM-5 | HM | PT | 7' - 2" | 8' - 9" | | | | N/A | PH, AC, NR | |
| 111.1 | MP LOBBY | 101 | CIRC | 111 | SWING (2) | S-F | PT | HM | 4' - 6" | 8' - 10" | 1 3/4" | HM-7 | HM | PT | 9' - 6" | 9' - 6" | | | | N/A | | |
| 111A | CIRC | 111 | TLT | 111A | SWING | S-PH | WD | CF | 2' - 4" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 111B | CIRC | 111 | TLTS | 111B | SWING | S-PH | WD | CF | 2' - 4" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 111C | TLT | 111C | CIRC | 111 | SWING | S-PH | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 111E | | | CIRC | 111 | SWING | S-F | WD | CF | 3' - 6" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | PH EAST, HO, AC, NR WEST | |
| 112 | OFF | 112 | CIRC | 111 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | | |
| 113 | CIRC | 111 | CLASSROOM | 113 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | | |
| 113.1 | CLASSROOM | 113 | MP LOBBY | 101 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |

# DOOR & FRAME SCHEDULE - INTERIOR

| DOOR NO. | LOCATION FROM ROOM NAME | LOCATION FROM ROOM NO. | LOCATION TO ROOM NAME | LOCATION TO ROOM NO. | OPERATION | DOOR PANEL MARK | DOOR PANEL MATL | DOOR PANEL FIN | DOOR PANEL WIDTH | DOOR PANEL HEIGHT | DOOR PANEL THK | DOOR FRAME TYPE | DOOR FRAME MATL | DOOR FRAME FIN | RELITE HEIGHT | RELITE WIDTH | HEAD | JAMB | SILL | UL LABEL | HARDWARE | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 114 | ADMIN | 114 | CIRC | 111 | SWING | S-FG | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | | |
| 114A | OFF | 114A | ADMIN | 114 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 5' - 6" | | | | N/A | | |
| 114B | OFF | 114B | ADMIN | 114 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 5' - 6" | | | | N/A | | |
| 114C | OFF | 114C | ADMIN | 114 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 5' - 6" | | | | N/A | | |
| 114D | OFF | 114D | ADMIN | 114 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 5' - 6" | | | | N/A | | |
| 115 | CLASSROOM | 115 | CIRC | 111 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | PH | |
| 116 | CLASSROOM | 116 | CIRC | 111 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | PH | |
| 117.1 | PRESCHOOL | 117 | CIRC | 111 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-8 | HM | PT | 9' - 0" | 9' - 8" | | | | N/A | | |
| 117A | PRESCHOOL | 117 | TLT | 117A | SWING | S-H | WD/LAM | CF | 2' - 4" | 4' - 6" | 1 3/4" | WD-1 | WD | CF | | | | | | N/A | | |
| 117B | TLT | 117B | PRESCHOOL | 117 | SWING | S-H | WD/LAM | CF | 3' - 0" | 4' - 6" | 1 3/4" | WD-1 | WD | CF | | | | | | N/A | | |
| 118.1 | CIRC | 111 | PRESCHOOL | 118 | SWING | S-FG | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | | |
| 118.2 | PRESCHOOL | 118 | PRESCHOOL | 117 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 118A | PRESCHOOL | 118 | TLT | 118A | SWING | S-H | WD/LAM | CF | 2' - 4" | 4' - 6" | 1 3/4" | WD-1 | WD | CF | | | | | | N/A | | |
| 118B | TLT | 118B | PRESCHOOL | 118 | SWING | S-H | WD/LAM | CF | 3' - 0" | 4' - 6" | 1 3/4" | WD-1 | WD | CF | | | | | | N/A | | |
| 119 | LRC-1 | 119 | CIRC | 111 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-11 | HM | PT | 9' - 0" | 9' - 8" | | | | N/A | | |
| SE-1 | EAST STAIR | SE-1 | VEST | 106 | SWING | S-F | PT | HM | 3' - 4" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | 60 MIN | AC | |
| SW-1.1 | WEST STAIR | SW-1 | CIRC | 111 | SWING | S-F | PT | HM | 4' - 6" | 8' - 10" | 1 3/4" | HM-1 | HM | PT | | | | | | 90 MIN | PH, AC, HO, EU | |
| SW-1.2 | CIRC | 111 | WEST STAIR | SW-1 | SWING | S-F | PT | HM | 4' - 6" | 8' - 10" | 1 3/4" | HM-1 | HM | PT | | | | | | 90 MIN | PH, AC, HO, EU | |
| L02 | | | | | | | | | | | | | | | | | | | | | | |
| 200B | CIRC | 200 | TLT | 200B | SWING | S-PH | WD | CF | 2' - 4" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 200C | CIRC | 200 | TLT | 200C | SWING | S-PH | WD | CF | 2' - 4" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | NC | |
| 200D | CIRC | 200 | TLT | 200D | SWING | S-PH | WD | CF | 2' - 4" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 200E | TLT | 200E | CIRC | 200 | SWING | S-PH | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | NC | |
| 200F | CIRC | 200 | SHARED IDF | 200F | SWING | S-F | WD | CF | 2' - 10" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 200G | CIRC | 200 | MOP | 200G | SWING | S-F | WD | CF | 2' - 6" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 200H | | | BREAKOUT/LIBRARY | 200A | SWING-DOUBLE | D-F | WD | CF | 4' - 0" | 5' - 8" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 201 | CIRC | 200 | TLT | 201 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 202 | CIRC | 200 | CLASSROOM | 202 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 8' - 0" | | | | N/A | | |
| 203 | CIRC | 200 | CLASSROOM | 203 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 8' - 0" | | | | N/A | | |
| 204 | CLASSROOM | 204 | CIRC | 200 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 8' - 0" | | | | N/A | | |
| 205 | LRC-2 | 205 | BREAKOUT/LIBRARY | 200A | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 1/2" | HM-12 | HM | PT | 9' - 0" | 13' - 0" | | | | N/A | | |
| 206 | CLASSROOM | 206 | CIRC | 200 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | PH | |
| 207 | CLASSROOM | 207 | CIRC | 200 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | PH | |
| 210 | CIRC | 200 | CIRCULATION | 211 | SWING (2) | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-7 | HM | PT | 9' - 6" | 6' - 6" | | | | N/A | | |
| 211 | BREAK ROOM | 211A | SHARED IDF | 200F | SWING | S-F | WD | CF | 2' - 10" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 211A | BREAK ROOM | 211A | TLT | 211C | SWING | S-F | WD | CF | 2' - 6" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 211B | TLT | 211D | BREAK ROOM | 211A | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 211C | BREAK ROOM | 211A | MOP | 211B | SWING | S-F | WD | CF | 2' - 4" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 212 | BREAK ROOM | 211A | CIRCULATION | 211 | SWING | S-FG | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 212 | CIRCULATION | 211 | RENTAL | 212 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | | |
| 212A | RENTAL | 212 | CONF ROOM | 212A | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | | |
| 212B | OFFICE | 212B | RENTAL | 212 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | | |
| 213A | RENTAL | 213 | CONF ROOM | 213A | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | | |
| 213B | RENTAL | 213 | WORKRM | 213B | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | | |
| 213C | RENTAL | 213 | OFFICE | 213C | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | | |
| 213D | CONF ROOM | 213A | MECH MEZZ | 213D | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| GATE-5 | CIRCULATION | 211 | RENTAL | 213 | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-3 | HM | PT | 9' - 0" | 4' - 8" | | | | N/A | | |
| SE-2 | CIRCULATION | 211 | EAST STAIR | SE-2 | SWING | S-F | PT | HM | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | 60 MIN | PH, AC, EU | |
| SW-2.1 | WEST STAIR | SW-2 | CIRC | 200 | SWING | S-F | PT | HM | 4' - 6" | 8' - 10" | 1 3/4" | HM-1 | HM | PT | | | | | | 90 MIN | PH, AC, HO, EU | |
| SW-2.2 | CIRC | 200 | WEST STAIR | SW-2 | SWING | S-F | PT | HM | 4' - 6" | 8' - 10" | 1 3/4" | HM-1 | HM | PT | | | | | | 90 MIN | PH, AC, HO, EU | |
| L03 | | | | | | | | | | | | | | | | | | | | | | |
| 103B.1 | | | OFF/PHONE | 303B | | | WD | CF | 7' - 0" | 7' - 0" | 1 3/4" | | | | 7' - 1" | 7' - 2" | | | | | | |
| 300A | TLT | 300A | CIRCULATION | 300 | SWING | S-F | WD | CF | 2' - 6" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 300B | CIRCULATION | 300 | TLT | 300B | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 300C | CIRCULATION | 300 | TLT | 300C | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 300D | CIRCULATION | 300 | EC | 300D | SWING | S-F | WD | CF | 2' - 10" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 300E | JC | 300E | CIRCULATION | 300 | SWING | S-F | WD | CF | 2' - 4" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 300F | CIRCULATION | 300 | RENTAL OFFICE | 300F | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-2 | HM | PT | 8' - 0" | 5' - 8" | | | | N/A | | |
| 300G | TLT | 300G | CIRCULATION | 300 | SWING | S-F | WD | CF | 2' - 6" | 7' - 0" | 1 3/4" | HM-1 | HM | PT | | | | | | N/A | | |
| 301A | ART/STEM/OPEN OFFICE | 301D | OFFICE | 301A | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-2 | HM | PT | 8' - 0" | 4' - 8" | | | | N/A | | |
| 301B | ART/STEM/OPEN OFFICE | 301D | OFFICE | 301B | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-2 | HM | PT | 8' - 0" | 4' - 8" | | | | N/A | | |
| 301D | CIRCULATION | 300 | ART/STEM/OPEN OFFICE | 301D | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-2 | HM | PT | 8' - 0" | 5' - 8" | | | | N/A | | |
| 301E | ART/STEM/OPEN OFFICE | 301D | SNOEZELEN RM | 301E | SWING | S-F | WD | CF | 3' - 0" | 7' - 0" | 1 3/4" | HM-2 | HM | PT | 8' - 0" | 4' - 8" | | | | N/A | | |

## DOOR SCHEDULE LEGEND

| | |
|---|---|
| AL | ALUMINUM |
| CF | CLEAR FINISH |
| FF | FACTORY FINISH |
| HM | HOLLOW METAL |
| LAM | PLASTIC LAMINATE |
| PT | PAINTED |
| WD | WOOD |

HARDWARE NOTES

| | |
|---|---|
| PH | PANIC HARDWARE |
| AC | ACCESS CONTROL |
| HO | MAG-LOCK HOLD-OPEN |
| EU | LOCKED IN DIRECTION OPPOSITE EGRESS, ELECTRIC UNLOCK |
| NR | NO RE-ENTRY |
| NC | NO CLOSER |

6/4/2025 11:00:18 AM C:\Users\Anjali\Desktop\Documents\BIP_PSB_FDA_eaiha7t6S5R.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

3427 BEACON AVE S
SEATTLE 98144
ANJALI@AGRANTDESIGN.COM
206-512-4209

anjali grant design LLC

9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

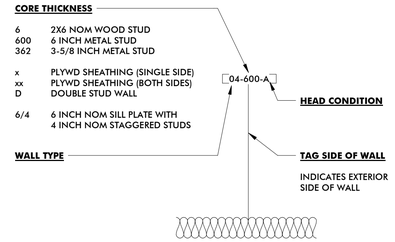
| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

INTERIOR DOOR SCHEDULE

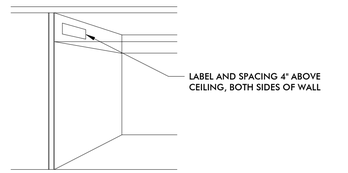
A-607

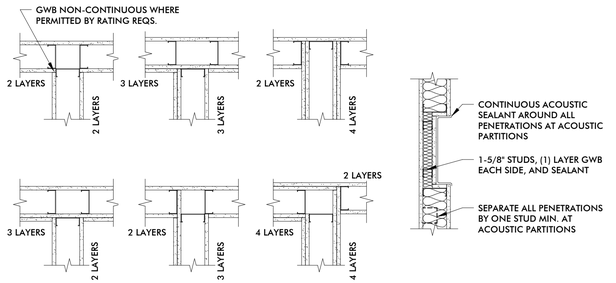
## WALL TAG LEGEND



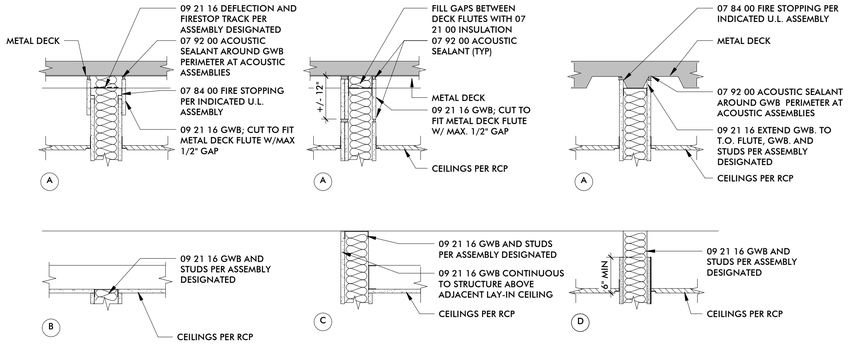

## WALL NOTES

1. PARTITION TYPE SYMBOLS ARE NOTED ON THE FLOOR PLANS.
2. STUDS ARE 16" O.C. UNLESS NOTED OTHERWISE.
3. REFERENCE CODE PLAN FOR LOCATION AND EXTENTS OR LIMITS OF RATED PARTITIONS.
4. ALL FIRE-RATED ASSEMBLIES ARE BASED UPON IBC, U.L. AND U.S. GYPSUM ASSOCIATION (GA) TEST DATA. FIRE RATED PARTITIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TESTING AGENCIES. REFER TO SPECIFIC TEST REPORTS INDICATED FOR REQUIRED COMPONENTS AND ASSEMBLY.
5. 1-HOUR WALL RATING CONTINUES THROUGH INTERSECTIONS WITH NON-RATED WALLS, TYPICAL.
6. AT ALL TOILET ROOMS AND SHOWER ROOMS, SUBSTITUTE FACE LAYER GWB WITH (1) LAYER WATER RESISTANT GWB.
7. ALL OTHER PARTITIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFIC MATERIALS MANUFACTURER AND INDUSTRY STANDARDS.
8. PROVIDE ALL NECESSARY ANCHORAGE BLOCKING, BACKING AND FRAMING FOR WALL MOUNTED CABINETS, SHELVING, MIRRORS, EQUIPMENT, DOORSTOPS, HOLD-OPENS, TOILET ROOM PARTITIONS & ACCESSORIES AND OTHER LOCATIONS AS REQUIRED BY MANUFACTURER SPECIFICATIONS OR INDUSTRY STANDARDS.
9. PROVIDE BRACING AT ALL LOCATIONS PER US GYPSUM GUIDELINES FOR PARTITION FRAMING.
10. ACOUSTIC PARTITIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF TESTING AGENCIES, REFER TO SPECIFIC TEST REPORTS FOR REQUIRED COMPONENTS AND ASSEMBLY. PROVIDE ACOUSTIC SEALANT AROUND WALL PERIMETER & OPENINGS AT BASE GWB LAYER. SEAL ALL PENETRATIONS & OFFSET BY (1) STUD MINIMUM. INSTALL STUD RUNNER WITH ACOUSTIC FOAM TAPE WHERE DESIGNATED BY ASSEMBLY.
11. COMPLETELY SEAL AROUND PENETRATIONS THROUGH ACOUSTICAL WALLS. FILL DEPTH OF GAPS AROUND CUT-OUTS FOR ELECTRICAL BOXES, PIPES AND PLUMBING, AND OTHER PENETRATIONS. PROVIDE INSULATION BETWEEN THE CONCEALED FACE OF FINISH MATERIALS (WITHIN THE STUD OR JOIST CAVITY) AND PIPES, PLUMBING, THE BACK OF BOXES, OR OTHER RECESSED FIXTURES.
12. INSTALL ACOUSTIC INSULATION BLANKET, UNO.
13. AT FURRING ASSEMBLIES PROVIDE NAILING AS PER GA. NO. ASSOCIATED TO THAT ASSEMBLY.
14. MAINTAIN FIRE RESISTANCE RATING FOR ALL CONSTRUCTION INDICATED AT THROUGH-WALL PENETRATIONS, BUILT-IN WALL FIXTURES, ACCESSORIES, AND BEHIND MAILBOXES, FIRE EXTINGUISHER CABINETS, PLUMBING FIXTURES, ELECTRIC PANELS AND SIMILAR ITEMS, IN COMPLIANCE WITH REQUIREMENTS OF APPLICABLE CODES. COORDINATE CONSTRUCTION OF FIRE-RATED ASSEMBLIES WITH DESIGNATED DESIGN NUMBER.
15. WHERE LARGER STUDS OR FURRING ARE REQUIRED TO COVER DUCTS, PIPING, CONDUIT, ETC, THE LARGER STUD SIZE OR FURRING SHALL BE PROVIDED AND SHALL EXTEND THE FULL SURFACE OF THE WALL LENGTH AND HEIGHT WHERE THE FURRING OCCURS.
16. FRAME AND FINISH OPENINGS FOR MECHANICAL AND ELECTRICAL SYSTEMS AS REQUIRED BY MECHANICAL/ELECTRICAL DOCUMENTS.
17. COORDINATE WITH STRUCTURAL DRAWINGS FOR REQUIRED SHEARWALL SHEATHING. PROVIDE IN ADDITION TO COMPONENTS INDICATED ON WALL TYPE DETAILS AS REQUIRED.
18. PROVIDE LABELS AT RATED WALLS PER THE DIAGRAM BELOW.
19. REFERENCE PROJECT SPECIFICATIONS:
    01 73 23 BRACING AND ANCHORING
    06 10 00 ROUGH CARPENTRY FOR BLOCKING REQUIREMENTS
    07 21 00 BATT INSULATION
    07 84 00 FIRE STOPPING
    07 90 05 JOINT AND ACOUSTIC SEALANTS
    09 21 16 GYPSUM BOARD ASSEMBLIES

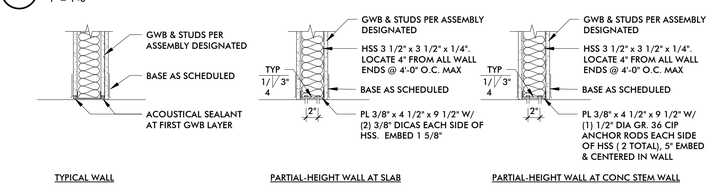


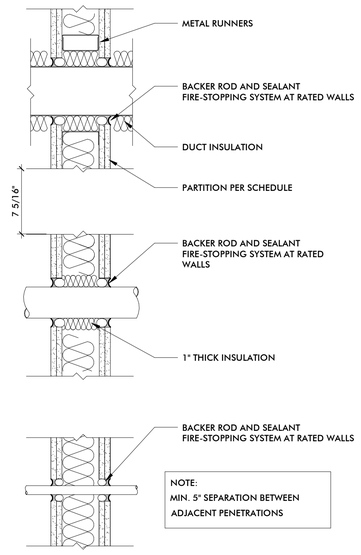

## 1 TYP WALL INTERSECTIONS
1" = 1'-0"




## 5 PARTITION TOP CONDITIONS
1" = 1'-0"

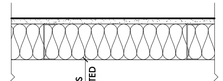



## 4 TYP WALL BASE CONDITIONS
1" = 1'-0"



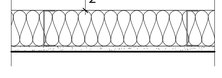

## 2 TYP WALL PENETRATIONS
1 1/2" = 1'-0"

**100**
FURRING WALL
FIRE:0



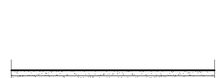
5/8" GYPSUM WALLBOARD
METAL STUD FRAMING
ACOUSTICAL BATT INSULATION

**110**
FIRE:0
SOUND: STC 40



5/8" GYPSUM WALLBOARD
20 GA METAL STUD FRAMING
ACOUSTICAL BATT INSULATION
5/8" GYPSUM WALLBOARD

**210**
FIRE:0
SOUND: STC 45



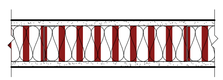
2 LAYERS 5/8" GYPSUM WALLBOARD
20 GA METAL STUD FRAMING
ACOUSTICAL BATT INSULATION
5/8" GYPSUM WALLBOARD

**220**
FIRE:0
SOUND: STC 50



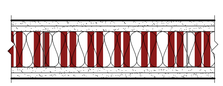
2 LAYERS 5/8" GYPSUM WALLBOARD
20 GA METAL STUD FRAMING
ACOUSTICAL BATT INSULATION
2 LAYERS 5/8" GYPSUM WALLBOARD

**111**
1-HR RATED ASSEMBLY
FIRE:1 HOUR
SOUND: STC 40



TYPE X 5/8" GYPSUM WALLBOARD
20 GA METAL STUD FRAMING
ACOUSTICAL BATT INSULATION
TYPE X 5/8" GYPSUM WALLBOARD

**222**
2-HR RATED ASSEMBLY
FIRE:2 HOURS
SOUND: STC 50



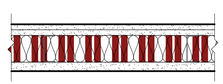
2 LAYERS TYPE X 5/8" GYPSUM WALLBOARD
20 GA METAL STUD FRAMING
ACOUSTICAL BATT INSULATION
2 LAYERS TYPE X 5/8" GYPSUM WALLBOARD

**11D**
DOUBLE STUD WALL
FIRE:0
SOUND: STC 56




5/8" GYPSUM WALLBOARD
METAL STUD FRAMING
ACOUSTICAL BATT INSULATION
AIR SPACE AS NOTED
METAL STUD FRAMING
ACOUSTICAL BATT INSULATION
5/8" GYPSUM WALLBOARD

**SW1**
2-HR-RATED SHAFT WALL
FIRE:2 HOURS



2 LAYERS 5/8" TYPE X GYPSUM WALLBOARD
METAL C-H STUD FRAMING
ACOUSTICAL BATT INSULATION
1" TYPE X GYPSUM COREBOARD

## 3 INTERIOR WALL ASSEMBLIES
1 1/2" = 1'-0"

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© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

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9596 REGISTERED ARCHITECT
ANJALI GRANT
STATE OF WASHINGTON

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

INTERIOR WALL ASSEMBLIES

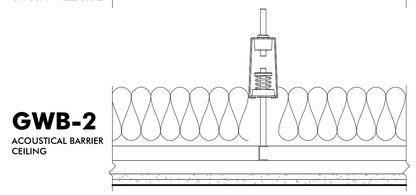
A-701



**GWB-1**
GYPSUM WALLBOARD

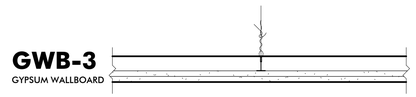
CEILING SUSPENSION SYSTEM; BRACING PER SEISMIC CEILING DIAGRAM
5/8" GYPSUM WALLBOARD

CONTRACTOR'S OPTION TO USE LIGHT-GAGE METAL FRAMING
FIRE RATING:0



**GWB-2**
ACOUSTICAL BARRIER CEILING

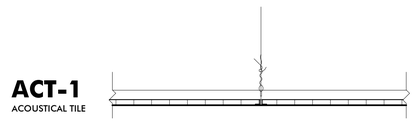
ACOUSTICAL BATT INSULATION
MASON 30N SPRING CEILING HANGERS
STEEL CEILING GRID FRAMING
2 LAYERS 5/8" GYPSUM WALLBOARD
FIRE RATING:0



**GWB-3**
GYPSUM WALLBOARD

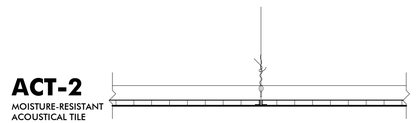
CEILING SUSPENSION SYSTEM; BRACING PER SEISMIC CEILING DIAGRAM
5/8" GYPSUM WALLBOARD
5/8" GYPSUM WALLBOARD

CONTRACTOR'S OPTION TO USE LIGHT-GAGE METAL FRAMING
FIRE RATING:0



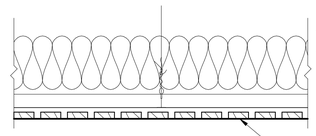
**ACT-1**
ACOUSTICAL TILE

SUSPENDED 2X4 ACOUSTIC CEILING TILE
BRACING PER SEISMIC CEILING BRACING DIAGRAM
FIRE RATING:0



**ACT-2**
MOISTURE-RESISTANT ACOUSTICAL TILE

SUSPENDED 2X4 MOISTURE-RESISTANT ACOUSTIC CEILING TILE
BRACING PER SEISMIC CEILING BRACING DIAGRAM
FIRE RATING:0

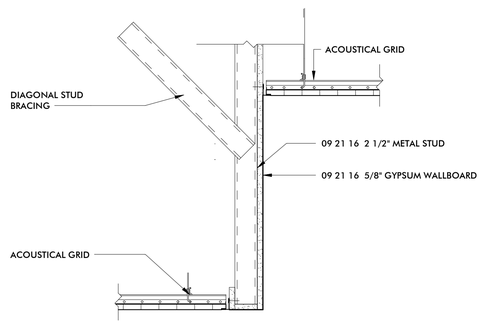


**ACP-1**
SUSPENDED WOOD SLAT CEILING

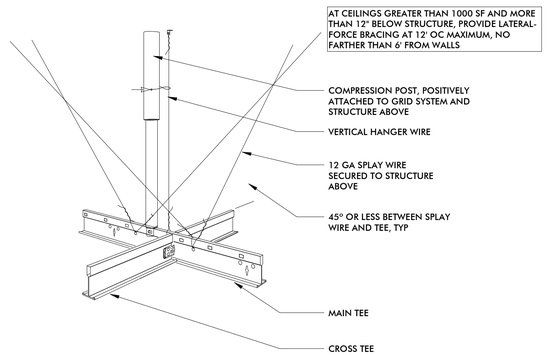
ACOUSTICAL BATT INSULATION
CEILING SUSPENSION SYSTEM, BRACING PER SEISMIC ZONE
CROSS PIECE BACKER
9WOOD PANELIZED LINEAR 2100
FIRE RATING:0

DIV 9 3/4" X 2-1/4" ACTUAL

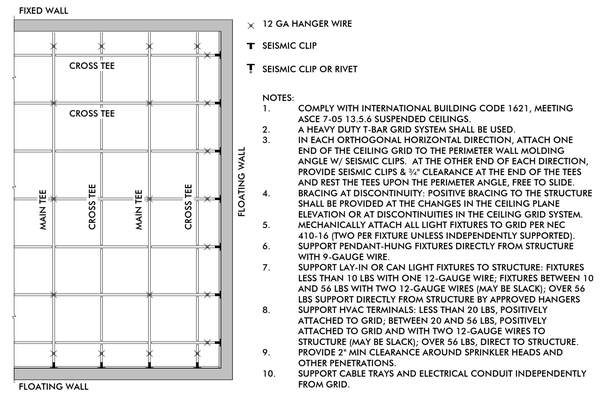
## 4 CEILING ASSEMBLIES
1 1/2" = 1'-0"




## 3 ACT CHANGE IN LEVEL
1 1/2" = 1'-0"




## 2 LATERAL FORCE BRACING DETAIL
1 1/2" = 1'-0"




NOTES:
1. COMPLY WITH INTERNATIONAL BUILDING CODE 1621, MEETING ASCE 7-05 13.5.6 SUSPENDED CEILINGS.
2. A HEAVY DUTY T-BAR GRID SYSTEM SHALL BE USED.
3. IN EACH ORTHOGONAL HORIZONTAL DIRECTION, ATTACH ONE END OF THE CEILING GRID TO THE PERIMETER WALL MOLDING ANGLE W/ SEISMIC CLIPS. AT THE OTHER END OF EACH DIRECTION, PROVIDE SEISMIC CLIPS & ¾" CLEARANCE AT THE END OF THE TEES AND REST THE TEES UPON THE PERIMETER ANGLE, FREE TO SLIDE.
4. BRACING AT DISCONTINUITY: POSITIVE BRACING TO THE STRUCTURE SHALL BE PROVIDED AT THE CHANGES IN THE CEILING PLANE ELEVATION OR AT DISCONTINUITIES IN THE CEILING GRID SYSTEM.
5. MECHANICALLY ATTACH ALL LIGHT FIXTURES TO GRID PER NEC 410-16 (TWO PER FIXTURE UNLESS INDEPENDENTLY SUPPORTED).
6. SUPPORT PENDANT-HUNG FIXTURES DIRECTLY FROM STRUCTURE WITH 9-GAUGE WIRE.
7. SUPPORT LAY-IN OR CAN LIGHT FIXTURES TO STRUCTURE: FIXTURES LESS THAN 10 LBS WITH ONE 12-GAUGE WIRE; FIXTURES BETWEEN 10 AND 56 LBS WITH TWO 12-GAUGE WIRES (MAY BE SLACK); OVER 56 LBS SUPPORT DIRECTLY FROM STRUCTURE BY APPROVED HANGERS
8. SUPPORT HVAC TERMINALS: LESS THAN 20 LBS, POSITIVELY ATTACHED TO GRID; BETWEEN 20 AND 56 LBS, POSITIVELY ATTACHED TO GRID AND WITH TWO 12-GAUGE WIRES TO STRUCTURE (MAY BE SLACK); OVER 56 LBS, DIRECT TO STRUCTURE.
9. PROVIDE 2" MIN CLEARANCE AROUND SPRINKLER HEADS AND OTHER PENETRATIONS.
10. SUPPORT CABLE TRAYS AND ELECTRICAL CONDUIT INDEPENDENTLY FROM GRID.

## 1 SEISMIC CEILING GRID PLAN
3/4" = 1'-0"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| NO. | DATE | DESCRIPTION |
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| | 4 JUNE 2025 | BUILDING PERMIT |

PROJECT:

CEILING ASSEMBLIES

A-702


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# GENERAL NOTES

## I. Introduction

B.E.E. Consulting, LLC (BEE) has created building envelope concept design details for the **Barnabie Point K-8**. The Building Envelope drawings are intimately related to the materials specified in the project material specifications and building inspection. Details provided by BEE are only for use on the **Barnabie Point K-8** and are © copyrighted.

Each sheet in this set of Building Envelope drawings, bearing the BEE Titleblock and Logo in the upper right corner, was prepared by BEE and is accounted for in the drawing index on the title page. In its original form, this set was prepared for **Herzl-Ner Tamid Synagogue** for a specific project.

The act of submitting for government approval of building permit, a set of drawings bearing the BEE titleblock and logo, which has been altered in any way by **Herzl-Ner Tamid Synagogue**, by any third party, or for a project other than that which it was originally prepared by BEE without the prior written consent of BEE shall constitute consent by **Herzl-Ner Tamid Synagogue** to defend, indemnify, and hold harmless BEE from and against any and all claims, suits, demands, liabilities, losses, and costs arising in whole or in part out of or in any way connected with the use of the such altered drawings by **Herzl-Ner Tamid Synagogue** or any third party.

Such alterations shall include, but shall not be limited to, the addition or removal of individual sheets, the modifications of any graphic or textual information contained within a sheet prepared by BEE. The removal of this statement, and any construction inconsistent with that which has been shown by BEE in its original drawing set.

## II. General

**A. Water Penetration Resistance Field Testing**

For all windows, doors, and skylights a mock setup will be water intrusion tested in field. Mock setup may be created in-situ or be free standing as best suits the needs of the project, provided it allows for the following parameters to be achieved.

At least one (1) window of each operational type will be tested to the Specified Field Test Pressure specified below, in accord with the current version of ASTM E1105. For windows and doors such as aluminum, wood clad aluminum, vinyl, or fiberglass windows and doors, Procedure B (cyclic) test will be used for 4 cycles each 5 minutes in duration, with a pressure reduced to 0 psf for one minute between cycles. For storefront and curtain wall assemblies, Procedure A (Uniform) test will be used for a single cycle of 15 minutes in duration. The initial test will be inclusive of both installation interface and window product. In the case of failure (defined as any water intrusion observed on the interior that is not in a drainage area), the representative sample will be expanded to three (3) specimens in order to obtain statistical confidence. In the case of failure during retest, the representative sample will be expanded to five (5) additional specimens. In the case of a failure during second retest, a meeting will be held with all parties concerned to determine necessary actions. In the case of failure, the responsible party will be held financially liable for the cost of retesting, and any related wall assembly or cladding deconstruction needed to obtain passing results. This test specification supersedes AAMA Voluntary Specification for Field Testing.

Regardless of AAMA deductions for field installed product, the minimum Water Resistance Field Test Pressure (during field test), as determined by the consultant, shall be:

- 6.0 psf for storefronts
- 6.0 psf for swing doors
- 6.0 psf for windows

The above referenced test pressures should be placed on the purchase order prior to ordering the windows or doors.

Doors are to be installed and tested in a similar fashion as windows.

**B. Louvers**

Louvers through the building envelope shall be designed for exterior use in accord with wind and rain exposure conditions.

**C. Sealant Performance Requirements**

All sealants shall be validated and approved by the Sealant Waterproofing and Restoration Institute (SWRI).

Sealant and Self Adhesive Membrane (S.A.M.) combinations shall have documentation from the manufacturer that adhesion is acceptable prior to construction.

As part of the quality control procedures, sealant dependant installations require an adhesion test performed on site by the contractor.

**D. Laboratory Test Reports**

All windows and doors shall be pre-tested by the manufacturer to design conditions.

The associated test records and certifications shall be submitted to project team.

**E. Contractor Responsibility**

It shall be the specific duty and responsibility of each trade and supplier to examine all project drawings, details and specifications, and to provide and furnish proper equipment, hardware, fixtures, materials, etc., pertaining to their part of the work shown or listed in any part of these documents. Quality control, adverse material reactions, and compliance to industry standard workmanship are the responsibility of the contractor.

Any omissions or contradictions in these documents shall be called to the attention of BEE prior to submitting a bid. Bids received shall be considered to include all items shown and/or specified or scheduled for a complete project. The contractor shall note that the waterproofing details do not always reflect the Architectural details and are intended to supplement the architectural details not replace them.

Installers are to be certified by manufacturer's approved warranty requirements.

**F. Material Warranty**

Products shall be installed to comply with manufacturer's warranty requirements. All waterproofing material and installation warranties shall be transferable to new building ownership within the warranty's period.

Specified Membrane Roof Systems are designed to receive the 20 year No Dollar Limit (NDL) coverage for the roofing system itself. Warranty coverage apart from this (including, but not limited to overburden, plant establishment, and wind riders) should be considered in the procurement process, with manufacturer confirmation of system eligibility for enhanced coverage at the time of Submittal.

**G. Material Submittals/Substitutions**

All recommended materials may be exchanged for materials with equal performance specifications. All material substitutions and submittals must be submitted to and approved by the responsible members of the design team. Substitutions and submittals shall include, but are not limited to, product data sheets, intended locations for use, installer certifications as required, sample warranties, testing and or certification data as required.

**H. Fasteners**

All fasteners, including nuts and washers, in contact with preservative-treated wood shall be of hot-dipped zinc coated galvanized steel or stainless steel.

## III. Construction

**A. Inspection**

Building inspection shall be performed throughout the duration of construction. The frequency of inspection is identified in the contract. Inspections will be performed on site. Inspections will be documented and recorded as deemed necessary by the Project Manager.

**B. Dry-in Requirements**

Prior to the end of each shift, the structure will be temporarily weather protected using industry recognized standards to prevent damage to existing work in place and the structure.

The General Contractor (GC) shall provide quality assurance procedures, facilitate inspections and coordinate testing and verification to maintain the material standards and enveloping practices as specified herein. This shall also include periodically documenting the moisture content by weight at a minimum of three (3) locations of framing, sheathing and gypsum. Additionally, the temperature and moisture content of concrete slabs shall be monitored and periodically documented to comply with any relative waterproofing installations that are to be conducted. Documented signs of excessive water or humidity are exhibited by, but not limited to:

Interior condensation on window. Warping, staining, or delamination of fiber cement, gypsum or wood based products (i.e. construction products that are absorptive). Organic growth (mold, fungi, mildew). Water intrusion/leaks and or damage.

Roofs need to be installed prior to construction drying and wet substrates/framing shall not be directly covered with roofing or other finish materials. Permanently installed HVAC equipment is not to be used for the purpose of construction drying. Any questions pertaining to the allowable moisture percentage of specific materials shall be referred to the most applicable edition of the building code.

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| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

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BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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THESE DRAWINGS ARE FOR GENERAL ARRANGEMENT OF MATERIALS ON SITE CONDITIONS GOVERN. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS.

SHEET NAME:

NOTES & SPECIFICATIONS

SHEET NUMBER:

BE000

## IV. Building Envelope Materials

### 071700 Bentonite Waterproofing

**A. Bentonite Panel Systems**

CETCO System

Note: Compression strength of insulation per CETCO recommendations.
All laps at hydrostatic shotcrete require foundation sealant.

- Available from CETCO

**Bentonite Panel**: Voltex DS
**Bentonite Mastic**: Bentoseal
**Waterstop**: Waterstop RX-101, with WB-Adhesive (3"min. cover)
Waterstop RX-101T, with WB-Adhesive (3"min. cover)
**Foundation Drain Mat**: Aquadrain 15x
Aquadrain 100BD (used at base of wall)
**Transition Membrane**: Envirosheet

### 071900 Water Repellents

Notes: For use at exposed, vertical concrete at exterior building envelope.
All exposed, vertical concrete shall be treated.
All concrete cold joints at exposed concrete require waterstop.

**A. Concrete & Concrete Block/Brick Sealer**

Blok-Guard & Graffiti Control WB 6

Note: Two coats required.

- Available from Prosoco

### 072119 Foamed-In-Place Insulation

**A. Spray Foam Insulation**

Notes: The applied spray foam must be installed by a certified installer.
A copy of the ICC-ES report for the product used must be provided on the job site for field inspector verification.

Heatlok HFO Pro

Note: ICC-ES, ESR 4073

- Available from Huntsman Building Solutions

**B. Air Barrier Foam**

CF 812

- Available from Hilti

### 072500 Weather Resistant Barrier (W.R.B.)

**A. Primary W.R.B. SA/W.R.B. SA Liner**

WrapShield SA Self-Adhered

- Available from VaproShield

**D. Liquid Applied Flashing**

VaproLiqui-Flash

- Available from VaproShield

**E. W.R.B. Accessories**

**Screw Head Caps**

VaproCaps

- Available from VaproShield

**Quickflash Device**

Quickflash Device

Note: Use @ Electrical Boxes & Pipe Penetrations

- Available from Quickflash Weatherproofing Products

**Sill Pans**

Note: 5/8" min. upstand, extending 1/2" min. above bottom edge of Window.

**a) L-Angle**

Note: For use with SAM and/or Liquid applied sill pans.
If window is fastened to L-angle then confirm with window manufacturer for guage and fastening requirements.

1/8" Anodized Aluminum L-angle
22ga L-angle

**Shims**

1/8" Plastic Horseshoe Shims

- Available from Atlas Supply

**SA Shims**

1/4" VaproShims SA

Note: Used behind Horizontal Furring

- Available from VaproShield

**G. Exterior Insulation**

Notes: R Value per Architect
Compressive strength per cladding manufacturer

Rigid Insulation Per Arch

**H. Furring Systems**

Notes: Furring of all material types to be minimum of 3/4" deep & maintain 1/2" gaps at butt joints, floor plate level, and sill flanges.
Furring of all material types to be kept ½" clear from inside & outside corners
All rainscreen cavities shall have approved closure accessories to prevent debris & insect entry.

**Perforated Horizontal Hat Channel**

Perforated Horizontal Metal Hat Channel

Note: SA shims required for Rainscreen drainage.

**Z-Girt**

Metal Z-Girt

**Thermal Clip**

GreenGirt Clip

- Available from SMARTci

Cascadia Clip (Fiberglass Thermal Spacer)

- Available from Cascadia Windows & Doors

### 072600 Vapor Barriers/Retarders

**A. Underslab Vapor Barrier**

Note: Use 12" min lap and tape at all seams

Stego Wrap 15-mil

- Available from Stego Industries

**B. Interior Vapor Retarder**

Note: Install on the interior gypsum wall board of all assemblies that are a part of the thermal barrier.
For non-vented roof, do not apply Interior Vapor Retarder to the ceiling at roof level.

PVA Primer

### 074600 Siding

Note: All rainscreen cavities need to have approved closure accessories to prevent debris & insect entry.

Metal Wall Panels
Fiber Cement Wall Panels

### 075000 Roofing Membrane

Notes: All roofing shall slope positively to a drain with at least ¼" per linear foot slope. No water ponding is admissible.
All applicators must be approved by manufacturer.

Warranty Notes:
30yr NDL

**A. Roofing Membrane**

Sopralene 180/250 Torch Down
Field Base Ply: Sopralene Flam 180
Intermediate Sheet: Sopralene Flam 180
Field Cap Ply: Sopralene Flam 180 FR GR
Flashing Base Ply: Sopralene Flam Stick
Flashing Cap Ply: Sopralene Flam 250 FR GR

- Available from Soprema

**B. Liquid Applied Roofing**

Note: Use to detail curbs & penetrations.

Alsan RS 230 PMMA

Note: For use with Soprema Roofing Systems.

- Available from Soprema

**C. Roof Vapor Barrier**

Note: Self-Adhesive Vapor Barrier per roofing manufacturer recommendation. Seal vapor barrier at all transitions and laps per manufacturer recommendation.
Hot mop/torch applied vapor barrier per roofing manufacturer. All hot applied vapor barriers installed over combustible substrates require a suitably attached receiver sheet as recommend by the manufacturer.

**D. Protection Board**

Note: Per Roofing Membrane Manufacturer recommendation.

**E. Roofing Accessories**

**Roof Rigid Insulation**

Notes: R Value per Architect
Polyiso Insulation per manufacturer

### 076200 Sheet Metal Flashing and Trim

**A. Flashings**

Note: All Saddle Flashings and Sill Pans shall be fully soldered.
22ga Sheet Metal Coping, w/ Standing Seams
24ga Sheet Metal Head Flashings, w/ End Dams
24ga Sheet Metal Saddle Flashings
24ga Sheet Metal Through Wall Flashing, w/ 4" Bayonet Seams & End Dams

Note: Through Wall Flashings are required at every other floor & at each floor exceeding twenty feet.

### 076500 Self-Adhesive Membrane (S.A.M.)

Notes: All Self-Adhered Membrane (S.A.M.) types to be roller applied.
Prime substrates per manufacturer recommendation prior to installing S.A.M.
Confirm compatibility between S.A.M. and other envelope products with manufacturer warranties.
Use approved primer when adhering to Concrete, Exterior Gypsum and Wood.

**A. S.A.M. 1**

Perm-A-Barrier Wall Flashing

- Available from GCP Applied Technologies

**B. S.A.M. 2**

3" VaproTape UV Black

- Available from VaproShield

**C. S.A.M. Foil Faced**

Protecto Seal 45 Butyl

- Available from Protecto Wrap Company

**D. S.A.M. HT - High Temperature**

Grace Ultra

Note: Not for use in conjunction with PVC materials.

- Available from GCP Applied Technologies

### 079000 Joint Protection

**A. Compressive Foam**

Backerseal

- Available from Emseal

**B. Neoprene Pad**

TEX-NEO60

Note: 60 Duro Neoprene Sheet

- Available by Texcel

**C. Sill Seal**

Protecto Energy Plate Liner

- Available from Protecto Wrap Company

### 079200 Joint Sealants

**A. Sealant 1**

MasterSeal NP 150

- Available from BASF Master Builders Solutions

**B. Sealant 2**

Dowsil 758 Silicone

- Available from Dow Chemical Company

**C. Sealant 4**

Dowsil 795 Silicone

- Available from Dow Chemical Company

**D. Sealant 5**

Dowsil 758 Silicone

- Available from Dow Chemical Company

**E. Sealant 6**

Sikaflex-2c SL

- Available from Sika

**G. Sealant 7**

SikaLastomer-511

- Available from Sika Corporation

BA-98

- Available from Pecora Corporation

### 081000 Doors and Frames

Flanged Thermally Broken Hollow Metal Doors

Note: Provide with welded flange.
Weather stripping/sweeps required at all exterior doors and door separating conditioned and unconditioned space.

- Available from Ceco Door

### 085000 Windows

**A. Flanged:**

Vinyl

**B. Storefronts**

Kawneer

**C. Curtain Wall**

Kawneer

### 089000 Louvers and Vents

24ga Metal Vents

- Available from Allied Building Products
- Available from Primex Manufacturing

### 220000 Plumbing

Note: Drains used shall be warrantable with Waterproofing System

**Drains**

Thunderbird Flanged Drain

- Available from Thunderbird Products

### 260000 Electrical

**Conduit**

Water-tight PVC Coated Flexible Metallic Conduit YF-707

- Available from Delikon

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BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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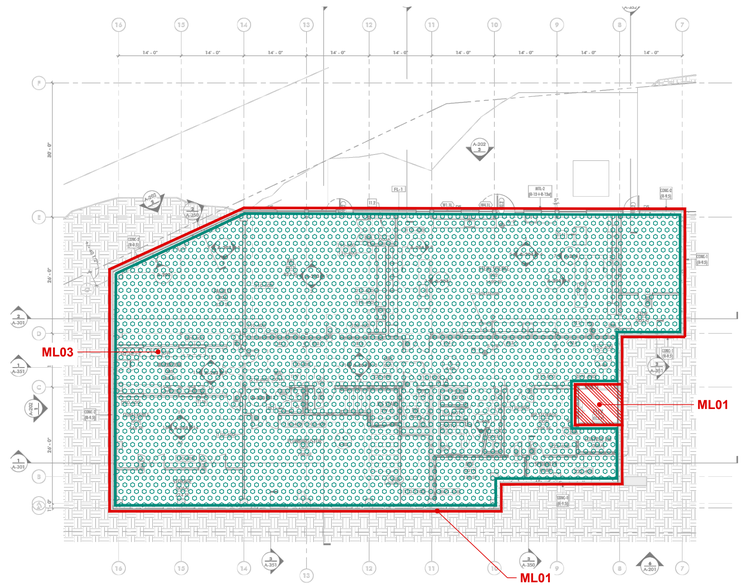
SHEET NAME:

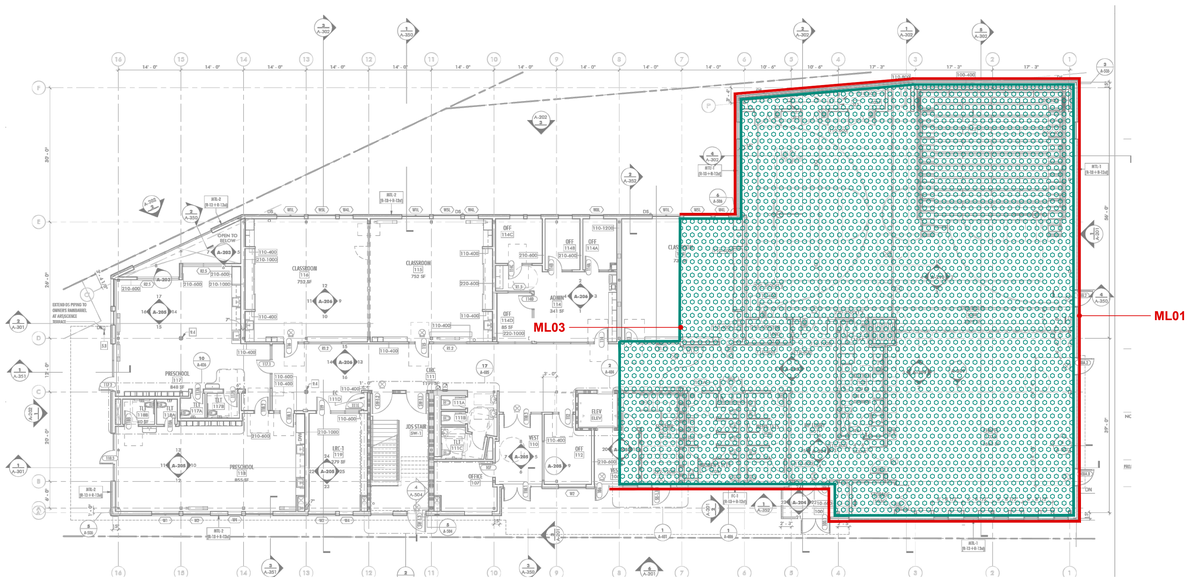
SPECIFICATIONS CONTINUED

SHEET NUMBER:

BE001




## LEVEL B01




## LEVEL L01

**MATERIAL LOCATION KEY**

| | |
|---|---|
| ML01 | BENTONITE PANEL SYSTEMS |
| ML03 | UNDERSLAB VAPOR BARRIER |

PLAN VIEWS WERE TAKEN FROM ARCH SET DATED 05.12.2025. THEY ARE DIAGRAMMATIC AND SHOULD NOT BE USED FOR MATERIAL TAKE-OFFS. FINAL BLDG PLANS SHOULD BE VERIFIED.

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PATRICK McMAHON
STATE OF WASHINGTON
28029365
REGISTERED
PROFESSIONAL ENGINEER

# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
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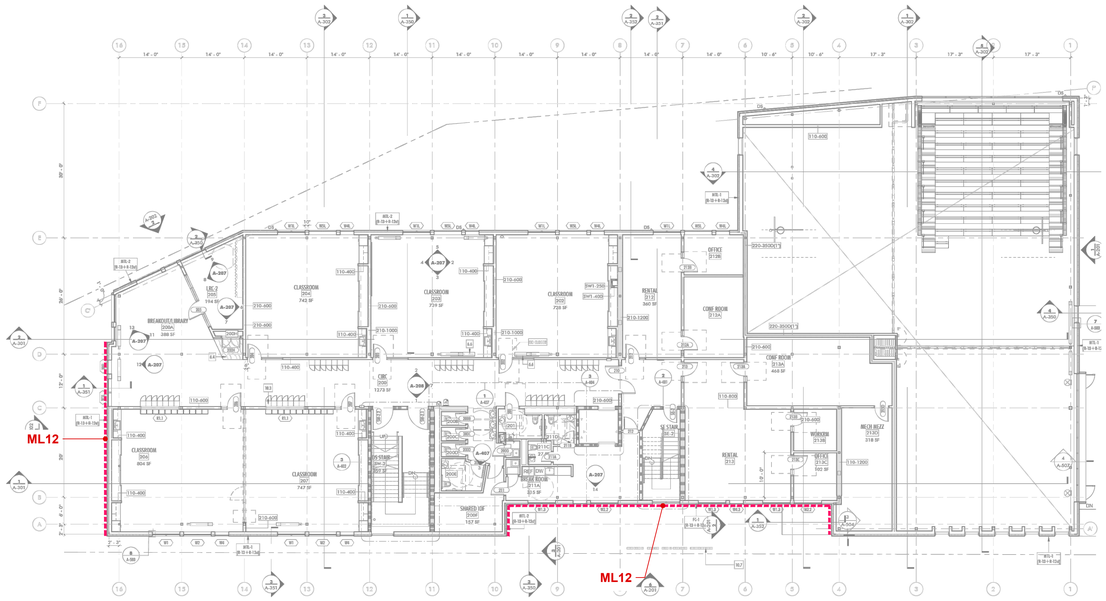
SHEET NAME:

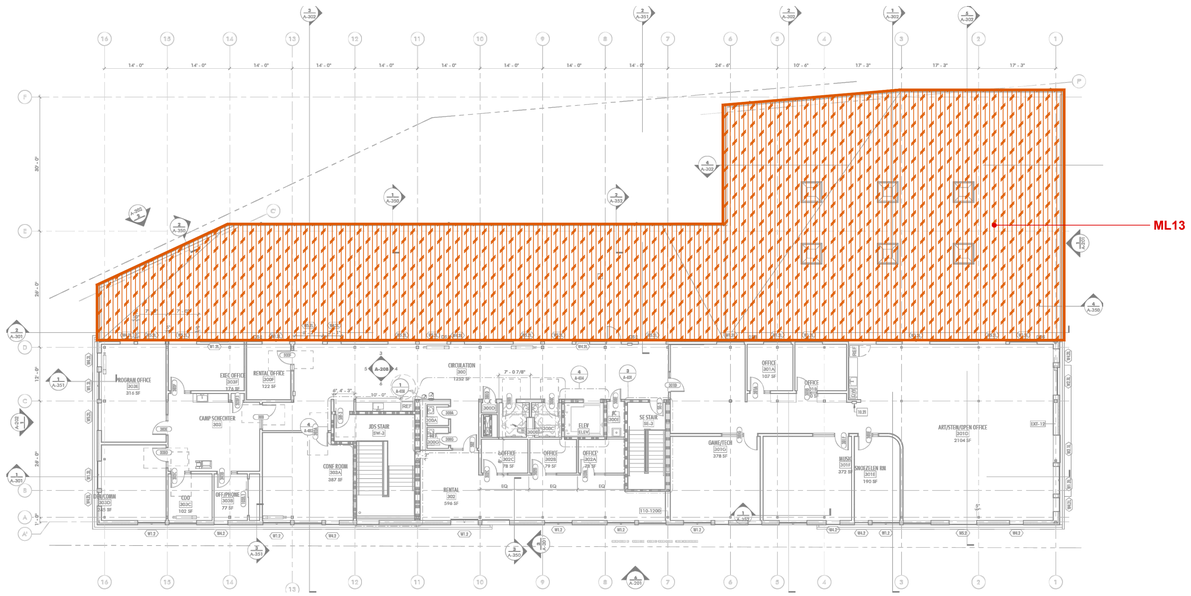
MATERIAL LOCATION DIAGRAMS

SHEET NUMBER:

BE002




## LEVEL L02




## LEVEL L03

**MATERIAL LOCATION KEY**

ML12 ------ KNIFE PLATE ATTACHMENTS

ML13 ROOFING MEMBRANE

PLAN VIEWS WERE TAKEN FROM ARCH SET DATED 05.12.2025. THEY ARE DIAGRAMMATIC AND SHOULD NOT BE USED FOR MATERIAL TAKE-OFFS. FINAL BLDG PLANS SHOULD BE VERIFIED.

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# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

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PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Baulista |
| DRAFTER: | Shamil Khayrutdinov |

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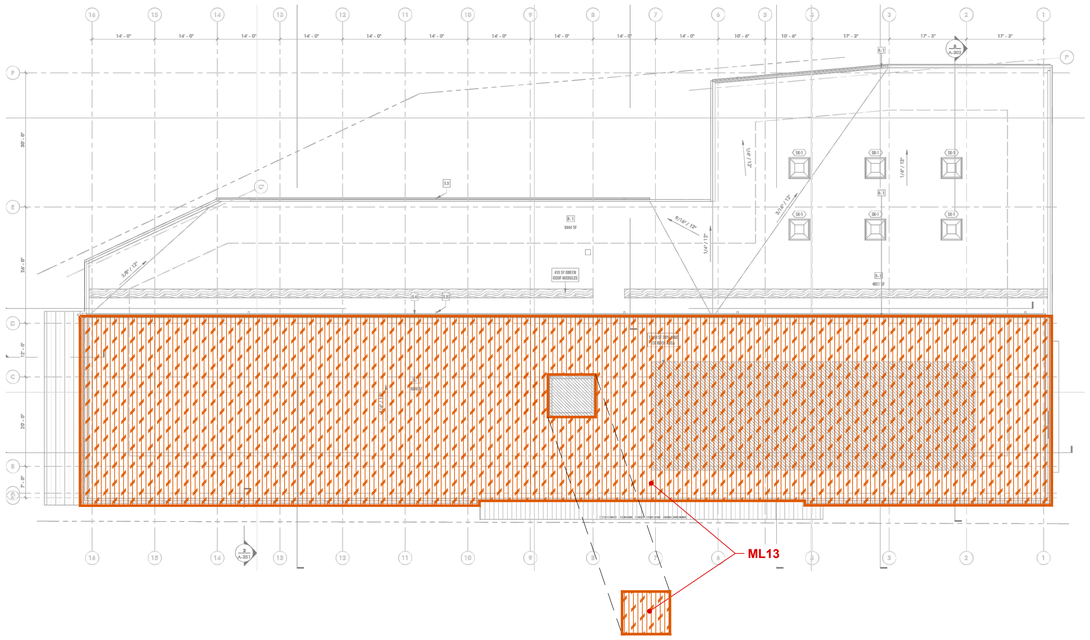
SHEET NAME:

MATERIAL LOCATION DIAGRAMS

SHEET NUMBER:

BE003




# ROOF PLAN

**MATERIAL LOCATION KEY**

ML13 ROOFING MEMBRANE

PLAN VIEWS WERE TAKEN FROM ARCH SET DATED 05.12.2025, THEY ARE DIAGRAMMATIC AND SHOULD NOT BE USED FOR MATERIAL TAKE-OFFS. FINAL BLDG PLANS SHOULD BE VERIFIED.

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BARNABIE POINT PROJECT
3700 E Mercer Way
Mercer Island, WA 98040

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PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

P.E.: Patrick McMahon
P.M.: Patrick McMahon
ENERGY: Katya Bautista
DRAFTER: Shamil Khayrutdinov

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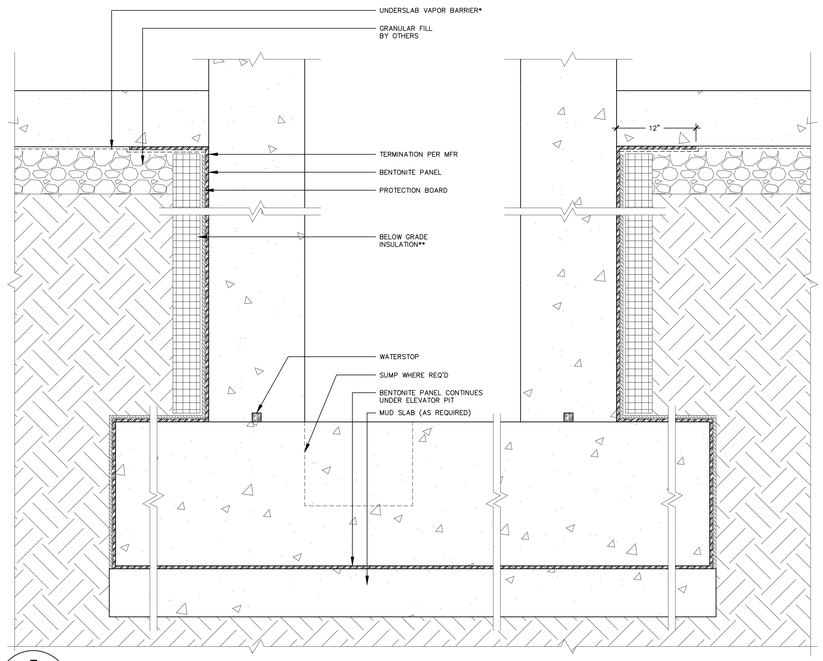
SHEET NAME:

MATERIAL LOCATION DIAGRAMS

SHEET NUMBER:

BE004




NOTES:
1. FRAMING PER ARCH.
2. *USE 12" LAPS & SEAL ALL PENETRATIONS, SEAMS, AND PERIMETER CONDITIONS W/ APPROVED ACCESSORIES PER MANUFACTURER.
3. REFER TO GEOTECH REPORT FOR DRAINAGE RECOMMENDATION.
4. **COMPRESSION STRENGTH OF INSULATION PER BENTONITE MFR.

5 BE100 SECTION: TYPICAL ELEVATOR PIT

SCALE: NTS

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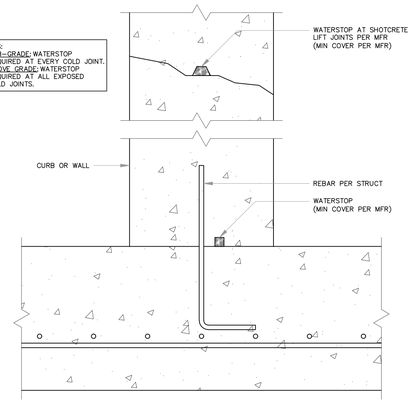
NOTES:
1. SUB-GRADE: WATERSTOP REQUIRED AT EVERY COLD JOINT.
2. ABOVE GRADE: WATERSTOP REQUIRED AT ALL EXPOSED COLD JOINTS.




3 BE100 SECTION: CONCRETE COLD JOINT

SCALE: NTS

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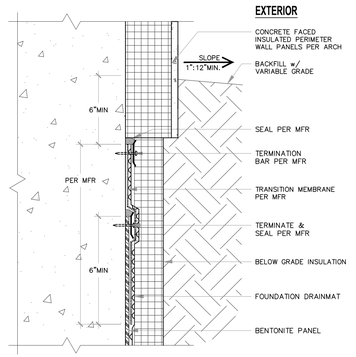
NOTES:
1. FNDN WALL PER STRUCT
2. BENTONITE PANEL INSTALL, TRANSITION, & TERMINATE & SEAL PER MFR




4 BE100 SECTION: TERMINATION AT GRADE

SCALE: NTS

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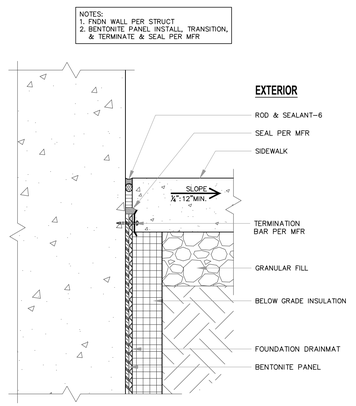
NOTES:
1. FNDN WALL PER STRUCT
2. BENTONITE PANEL INSTALL, TRANSITION, & TERMINATE & SEAL PER MFR




8 BE100 SECTION: TERMINATION AT SIDEWALK

SCALE: NTS

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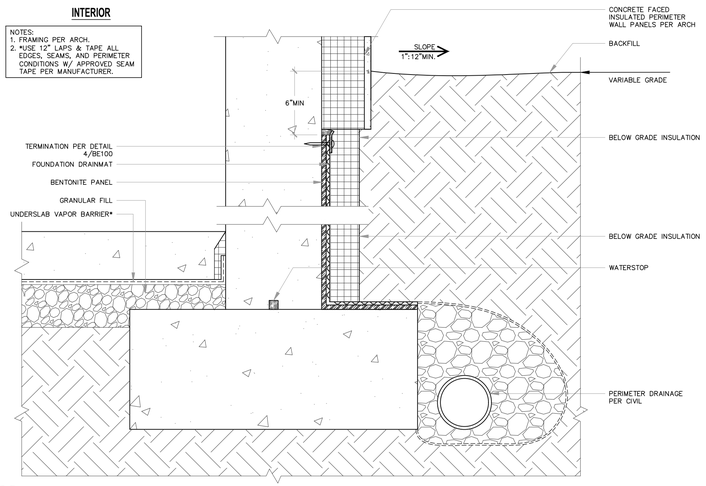
INTERIOR

NOTES:
1. FRAMING PER ARCH.
2. *USE 12" LAPS & TAPE ALL EDGES, SEAMS, AND PERIMETER CONDITIONS W/ APPROVED SEAM TAPE PER MANUFACTURER.

EXTERIOR




9 BE100 SECTION: TYPICAL FOOTING

SCALE: NTS

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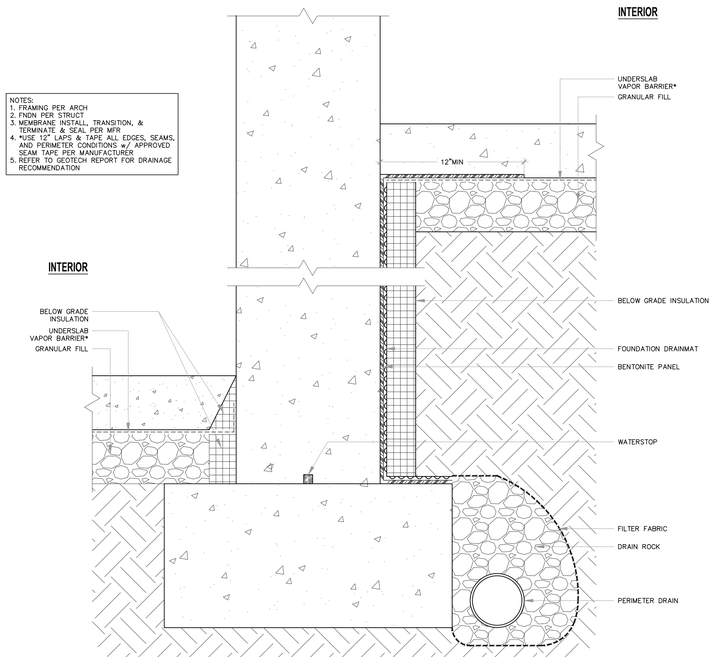
NOTES:
1. FRAMING PER ARCH
2. FNDN PER STRUCT
3. MEMBRANE INSTALL, TRANSITION, & TERMINATE & SEAL PER MFR
4. *USE 12" LAPS & TAPE ALL EDGES, SEAMS, AND PERIMETER CONDITIONS w/ APPROVED SEAM TAPE PER MANUFACTURER
5. REFER TO GEOTECH REPORT FOR DRAINAGE RECOMMENDATION

INTERIOR




11 BE100 SECTION: INTERIOR FOOTING STEP

SCALE: NTS

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PATRICK McMAHON
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24029265
REGISTERED
PROFESSIONAL ENGINEER

# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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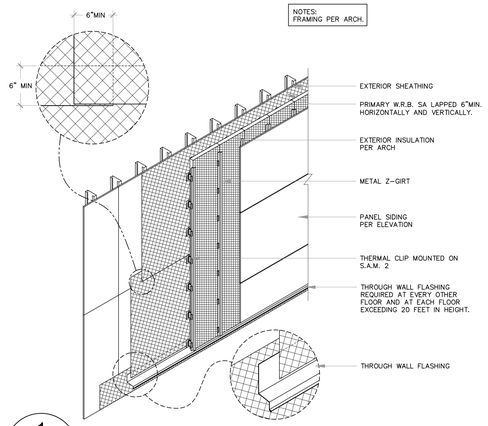
SHEET NAME:

BELOW GRADE DETAILS

SHEET NUMBER:

BE100




1 BE200 WALL ASSEMBLY: PANEL SIDING @ Z-GIRT W/ EXTERIOR INSULATION

SCALE: NTS

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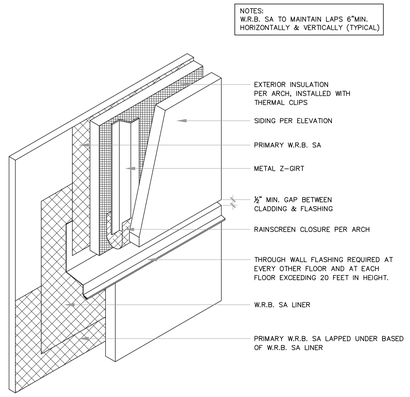


2 BE200 ASSEMBLY: THROUGH WALL FLASHING @ METAL HAT CHANNEL W/ EXTERIOR INSULATION

SCALE: NTS

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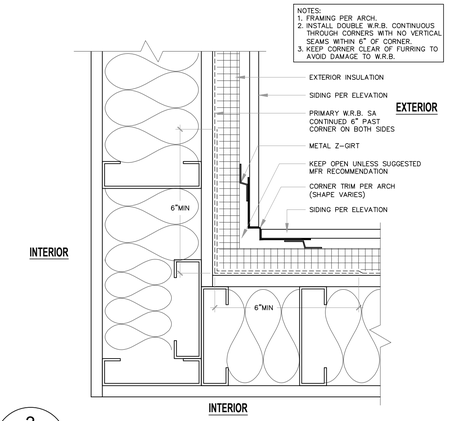


3 BE200 PLAN: INSIDE CORNER @ SIDING W/ EXTERIOR INSULATION

SCALE: NTS

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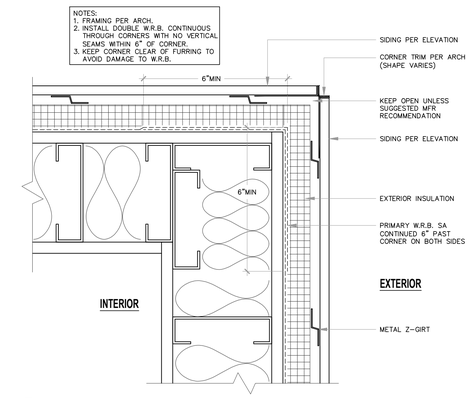


4 BE200 PLAN: OUTSIDE CORNER @ SIDING W/ EXTERIOR INSULATION

SCALE: NTS

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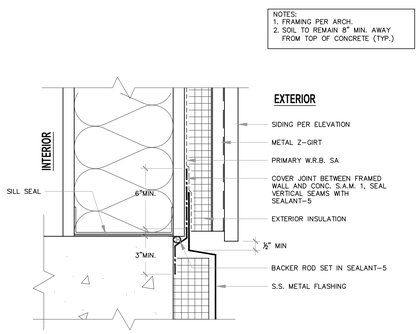


5 BE200 SECTION: BASE OF WALL @ SIDING W/ FLASHING AND EXTERIOR INSULATION

SCALE: NTS

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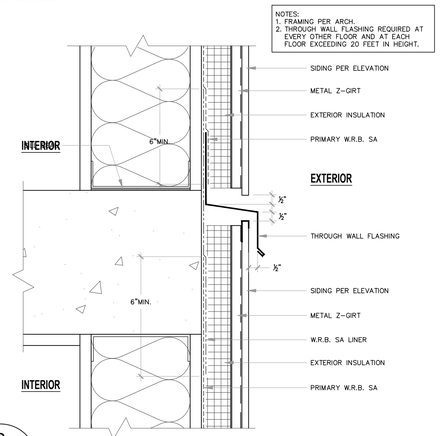


6 BE200 SECTION: THROUGH WALL FLASHING AT SIDING W/ EXTERIOR INSULATION @ CONCRETE SLAB

SCALE: NTS

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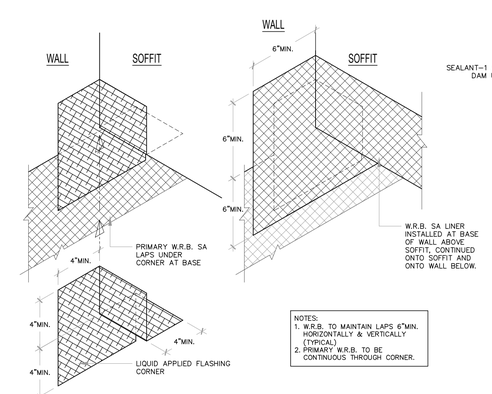


9 BE200 ASSEMBLY: SOFFIT CORNER TO WALL

SCALE: NTS

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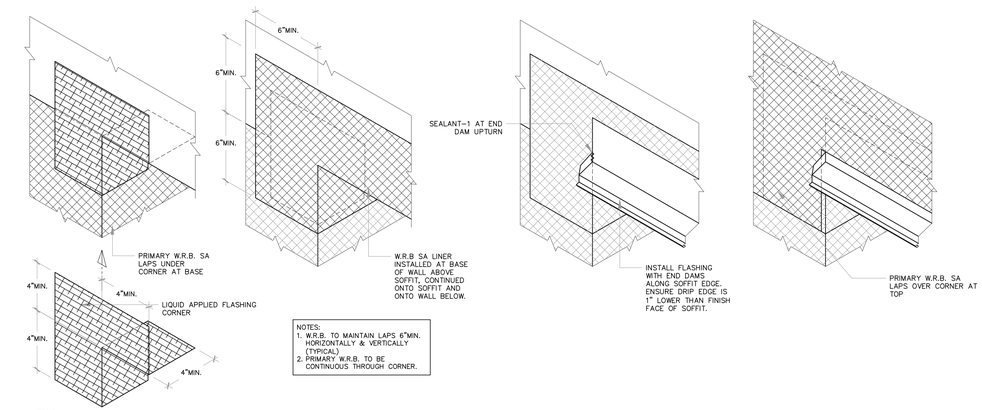


11 BE200 ASSEMBLY: SOFFIT CORNER TO FLAT WALL

SCALE: NTS

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PATRICK McMAHON — STATE OF WASHINGTON — 19029385 — REGISTERED PROFESSIONAL ENGINEER

# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
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| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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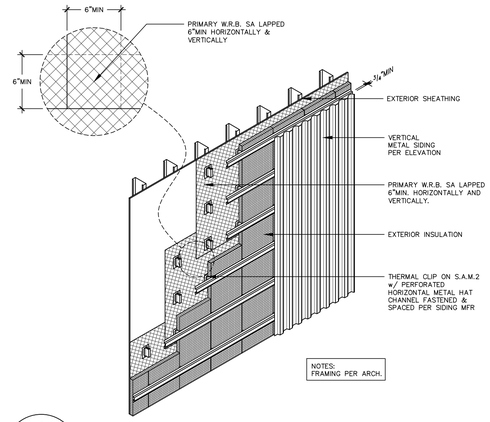
SHEET NAME:

WALL DETAILS

SHEET NUMBER:

BE200




1 BE201 WALL ASSEMBLY: VERTICAL METAL SIDING w/ EXTERIOR INSULATION

SCALE: NTS

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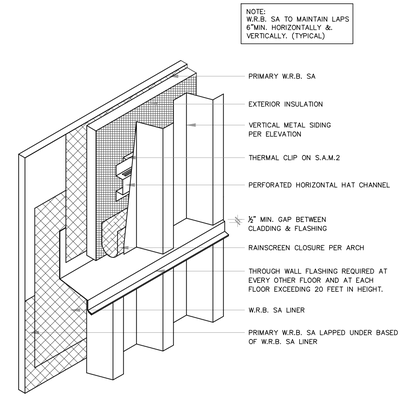


2 BE201 ASSEMBLY: THROUGH WALL FLASHING AT VERTICAL SIDING W/ EXTERIOR INSULATION

SCALE: NTS

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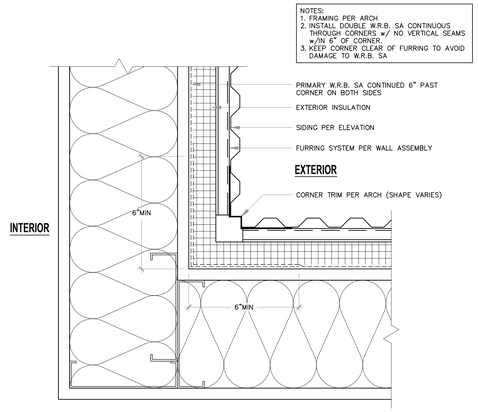


3 BE201 PLAN: INSIDE CORNER AT VERTICAL METAL SIDING w/ EXTERIOR INSULATION

SCALE: NTS

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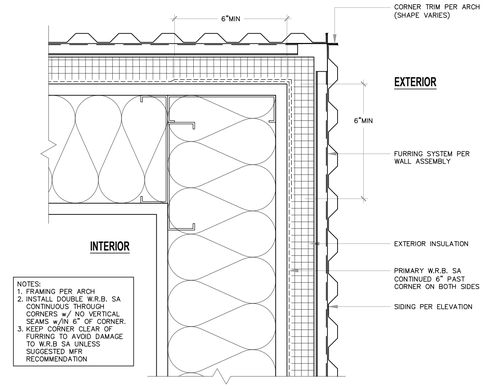


4 BE201 PLAN: OUTSIDE CORNER AT VERTICAL METAL SIDING w/ EXTERIOR INSULATION

SCALE: NTS

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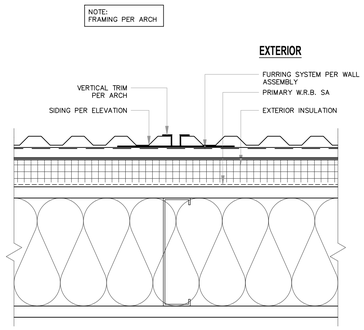


5 BE201 PLAN: VERTICAL TRIM AT VERTICAL METAL SIDING JOINT w/ EXTERIOR INSULATION

SCALE: NTS

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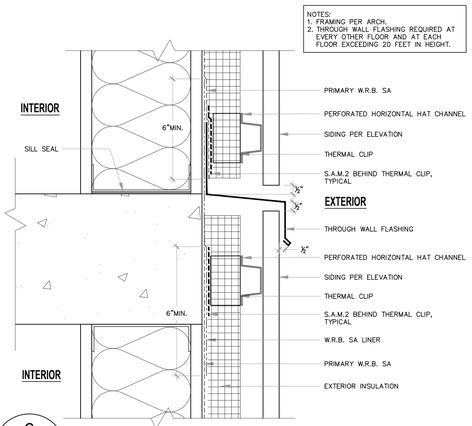


6 BE201 SECTION: THROUGH WALL FLASHING AT VERTICAL SIDING w/ EXTERIOR INSULATION @ CONCRETE

SCALE: NTS

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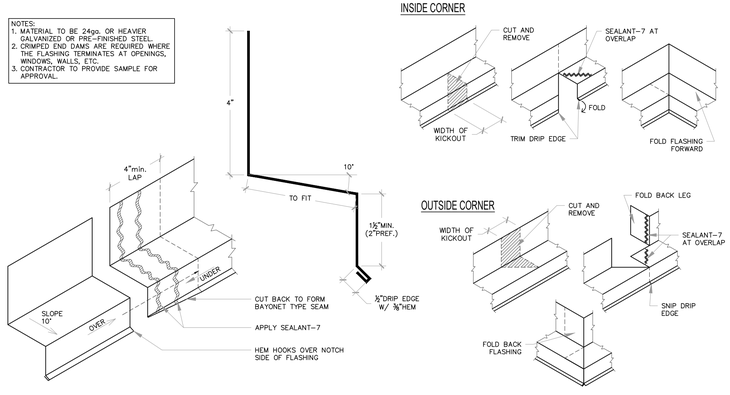


9 BE201 PROFILE: THROUGH WALL FLASHING

SCALE: NTS

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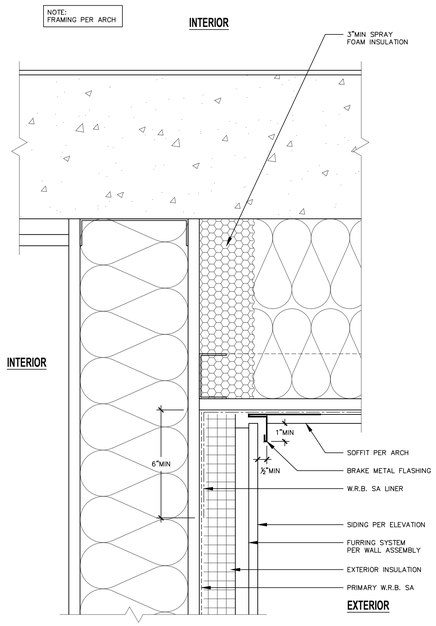


11 BE201 REF ARCH 5/A-505 SECTION: INNER SOFFIT AT SLAB w/ SIDING & EXTERIOR INSULATION

SCALE: NTS

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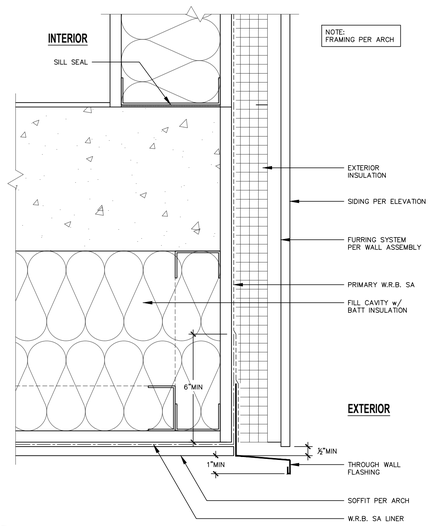


12 BE201 REF ARCH 5/A-505 SECTION: OUTER SOFFIT AT SLAB EDGE & SIDING w/ EXTERIOR INSULATION

SCALE: NTS

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PATRICK McMAHON
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# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

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|---|---|
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| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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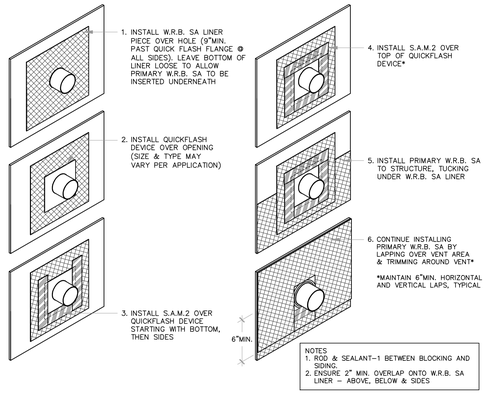
SHEET NAME:

WALL DETAILS

SHEET NUMBER:

BE201




1 BE300 ASSEMBLY: 3" TO 8" PIPE PENETRATION

SCALE: NTS

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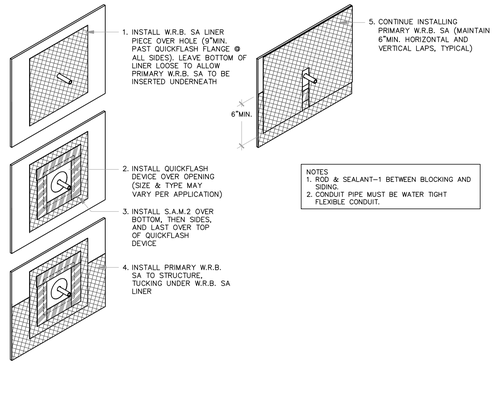


2 BE300 ASSEMBLY: CONDUIT PIPE PENETRATION

SCALE: NTS

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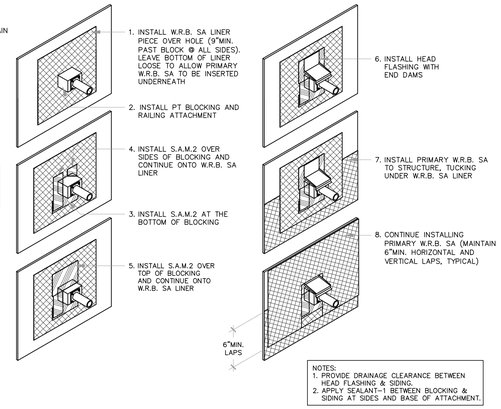


3 BE300 ASSEMBLY: RAILING ATTACHMENT

SCALE: NTS

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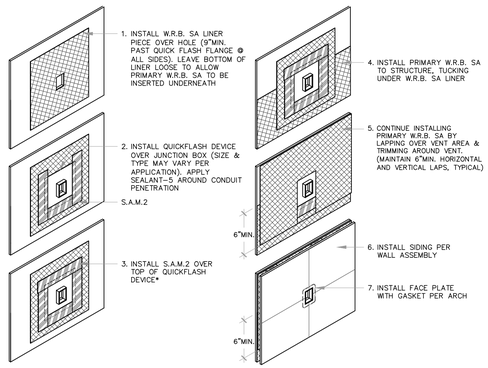


5 BE300 ASSEMBLY: ELECT. WALL OUTLETS (ALARM PULL SIMILAR)

SCALE: NTS

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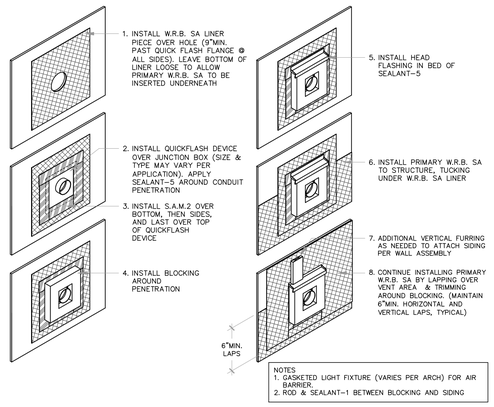


6 BE300 ASSEMBLY: ELECTRICAL WALL MOUNTED LIGHT

SCALE: NTS

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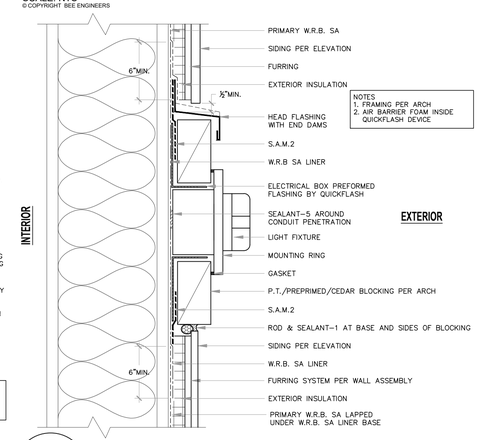


7 BE300 SECTION: ELECTRICAL WALL MOUNTED LIGHT

SCALE: NTS

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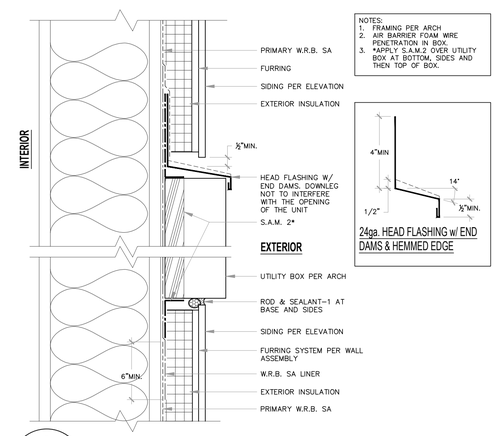


8 BE300 SECTION: UTILITY BOX

SCALE: NTS

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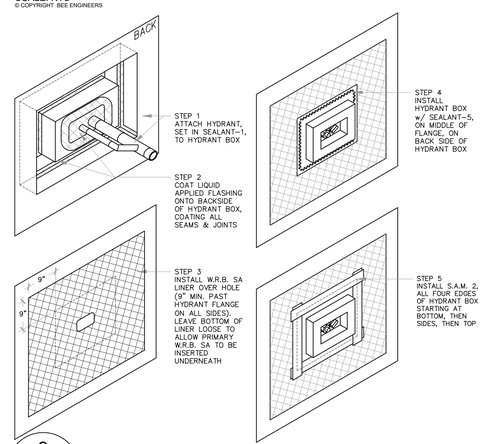


9 BE300 ASSEMBLY: HYDRANT

SCALE: NTS

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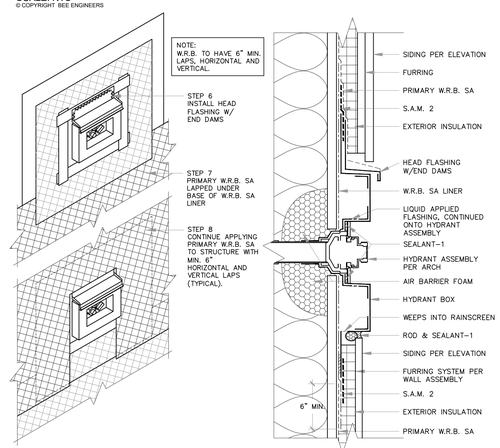


6 BE300 ASSEMBLY: ELECTRICAL WALL MOUNTED LIGHT

SCALE: NTS

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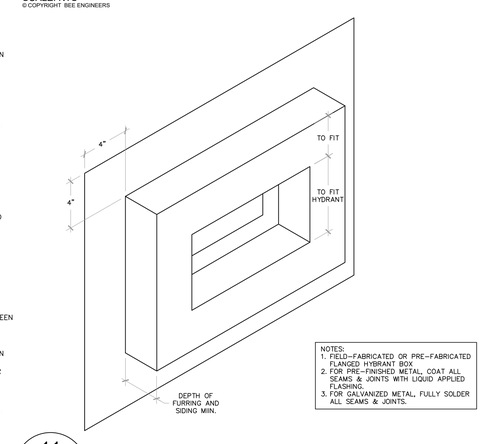


11 BE300 ISOMETRIC: FLANGED HYDRANT BOX

SCALE: NTS

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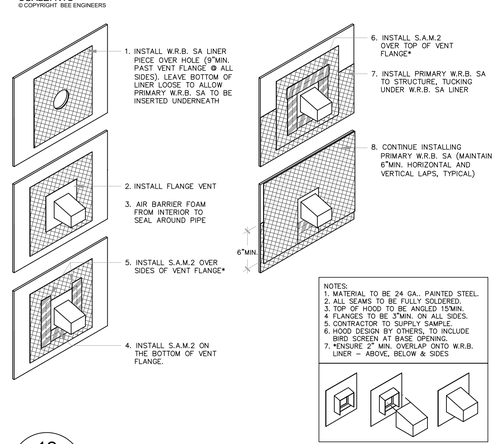


12 BE300 ASSEMBLY: METAL AIR VENT

SCALE: NTS

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PATRICK McMAHON
STATE OF WASHINGTON
19029
REGISTERED
PROFESSIONAL ENGINEER

# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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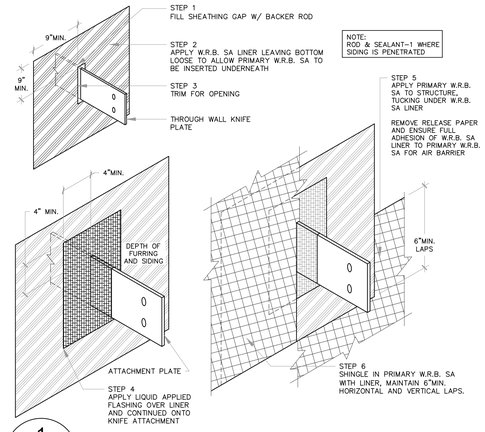
SHEET NAME:

PENETRATION DETAILS

SHEET NUMBER:

BE300




1
BE301
ASSEMBLY: THROUGH WALL KNIFE PLATE

SCALE: NTS
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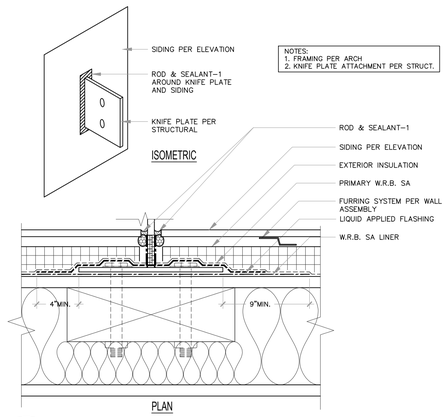


2
BE301
PLAN: FLANGED KNIFE PLATE

SCALE: NTS
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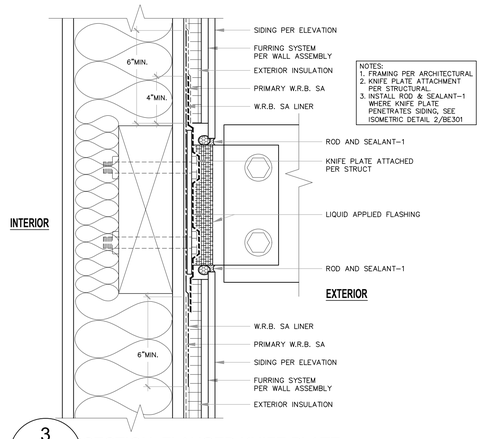


3
BE301
SECTION: FLANGED KNIFE PLATE

SCALE: NTS
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PATRICK McMAHON
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# BARNABIE POINT PROJECT
3700 E Mercer Way
Mercer Island, WA 98040

| DATE | DESCRIPTION |
|---|---|
| 01.02.2025 | DESIGN DEVELOPMENT |
| 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

P.E.: Patrick McMahon
P.M.: Patrick McMahon
ENERGY: Katya Bautista
DRAFTER: Shamil Khayrutdinov

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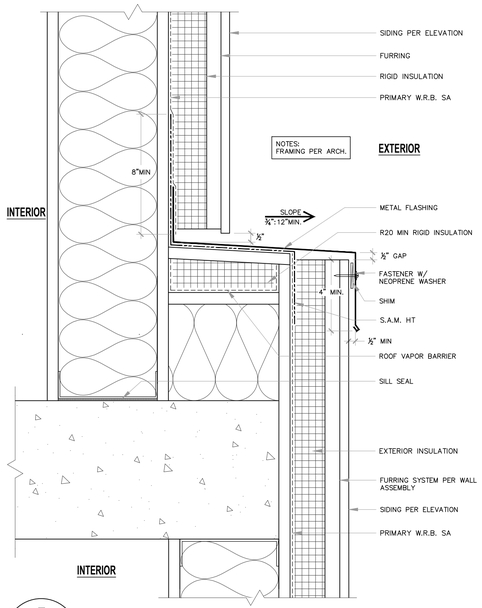
SHEET NAME:

PENETRATION DETAILS

SHEET NUMBER:

BE301




5
BE400
REF.ARCH
6/A-505

SECTION: OFFSET SLAB EDGE AT L03

SCALE: NTS

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34029365
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# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| DATE | DESCRIPTION |
|---|---|
| 01.02.2025 | DESIGN DEVELOPMENT |
| 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

P.E.: Patrick McMahon
P.M.: Patrick McMahon
ENERGY: Katya Bautista
DRAFTER: Shamil Khayrutdinov

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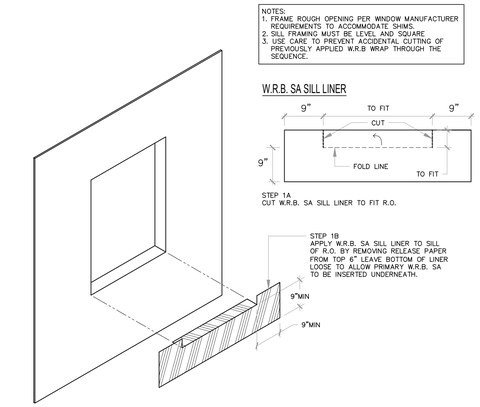
SHEET NAME:

DECK & ABOVE GRADE DETAILS

SHEET NUMBER:

BE400




1 BE500 ASSEMBLY: FLANGED WINDOW w/ LIQUID SILL PAN (STEP 1)

SCALE: NTS

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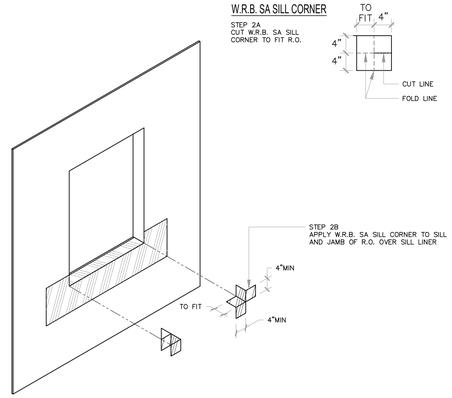


2 BE500 ASSEMBLY: FLANGED WINDOW w/ LIQUID SILL PAN (STEP 2)

SCALE: NTS

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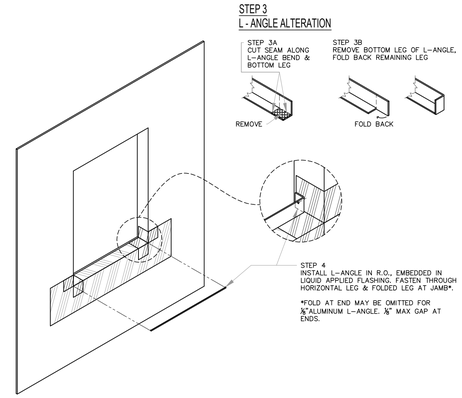


3 BE500 ASSEMBLY: FLANGED WINDOW w/ LIQUID SILL PAN (STEPS 3 & 4)

SCALE: NTS

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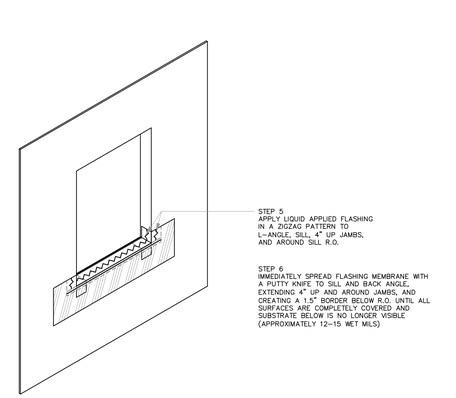


4 BE500 ASSEMBLY: FLANGED WINDOW w/ LIQUID SILL PAN (STEPS 5 & 6)

SCALE: NTS

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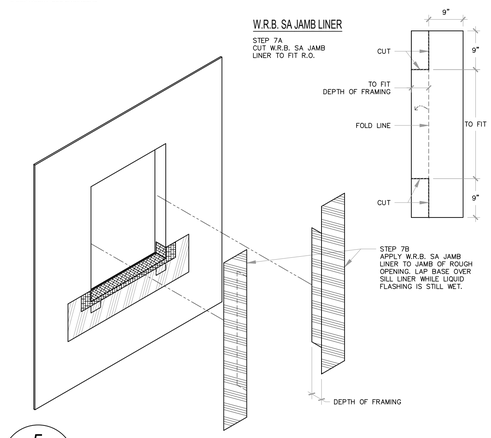


5 BE500 ASSEMBLY: FLANGED WINDOW w/ LIQUID SILL PAN (STEP 7)

SCALE: NTS

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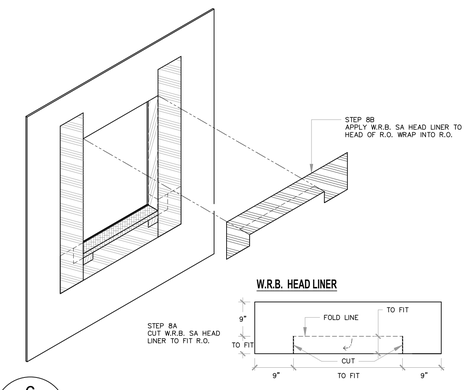


6 BE500 ASSEMBLY: FLANGED WINDOW w/ LIQUID SILL PAN (STEP 8)

SCALE: NTS

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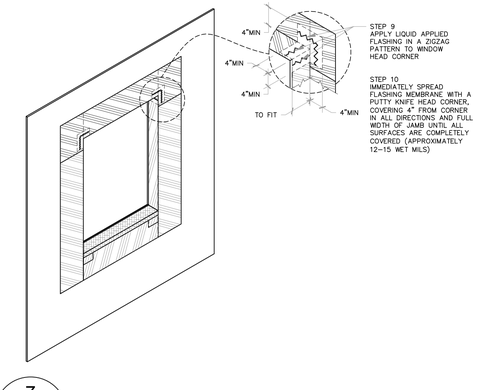


7 BE500 ASSEMBLY: FLANGED WINDOW w/ LIQUID SILL PAN (STEPS 9 & 10)

SCALE: NTS

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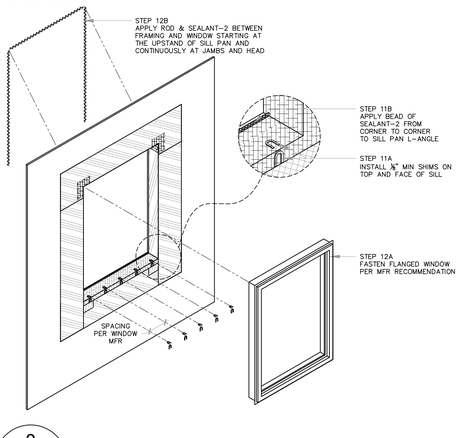


8 BE500 ASSEMBLY: FLANGED WINDOW w/ LIQUID SILL PAN (STEPS 11 & 12)

SCALE: NTS

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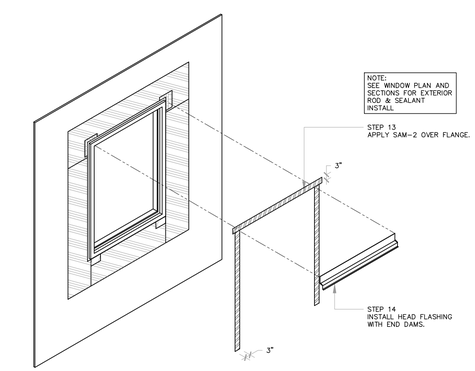


9 BE500 ASSEMBLY: FLANGED WINDOW w/ LIQUID SILL PAN (STEPS 13 & 14)

SCALE: NTS

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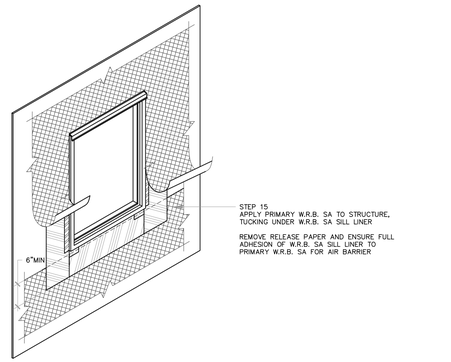


10 BE500 ASSEMBLY: FLANGED WINDOW w/ LIQUID SILL PAN (STEP 15)

SCALE: NTS

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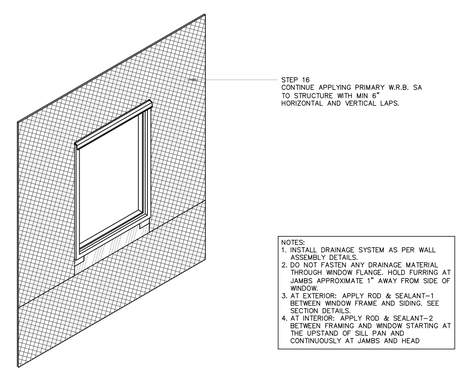


11 BE500 ASSEMBLY: FLANGED WINDOW w/ LIQUID SILL PAN (STEP 16)

SCALE: NTS

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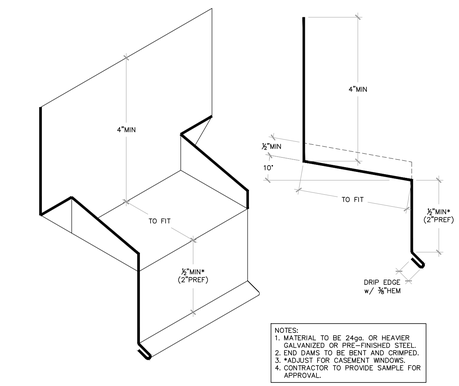


12 BE500 PROFILE: HEAD FLASHING w/ DOWNLEG

SCALE: NTS

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PATRICK McMAHON
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24029265
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# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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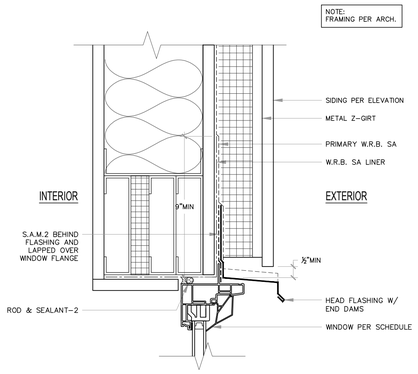
SHEET NAME:

WINDOW & DOOR DETAILS

SHEET NUMBER:

BE500




1 BE501 SECTION: FLANGED WINDOW HEAD AT SIDING W/ EXTERIOR INSULATION

SCALE: NTS

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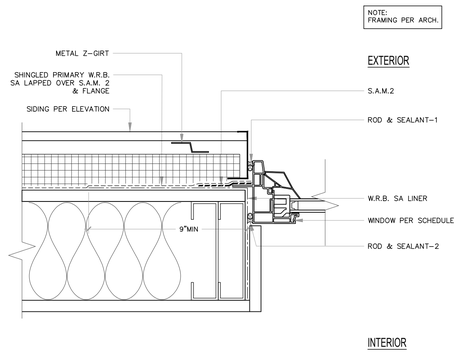


2 BE501 PLAN: FLANGED WINDOW JAMB AT SIDING W/ EXTERIOR INSULATION

SCALE: NTS

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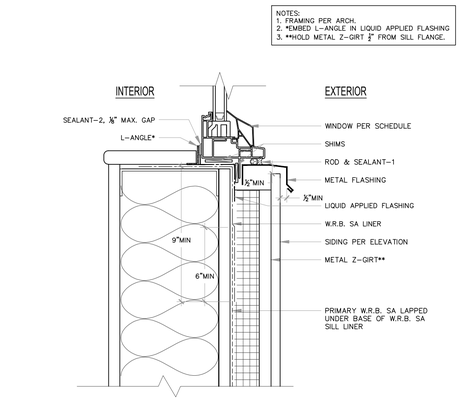


3 BE501 SECTION: FLANGED WINDOW SILL AT SIDING W/ EXTERIOR INSULATION

SCALE: NTS

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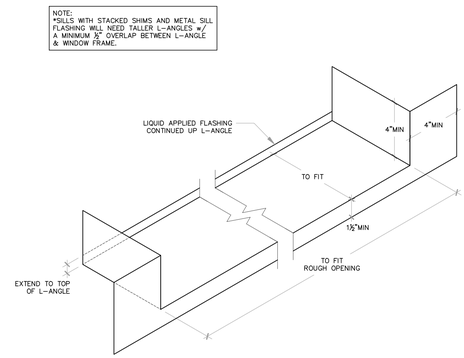


4 BE501 ISOMETRIC: LIQUID SILL PAN

SCALE: NTS

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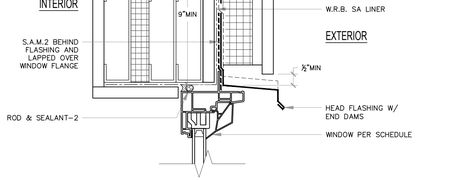


5 BE501 SECTION: FLANGED WINDOW HEAD AT VERTICAL METAL SIDING W/ EXTERIOR INSULATION

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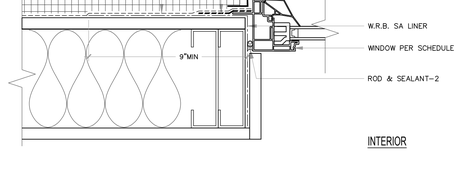


6 BE501 PLAN: FLANGED WINDOW JAMB AT VERTICAL METAL SIDING W/ EXTERIOR INSULATION

SCALE: NTS

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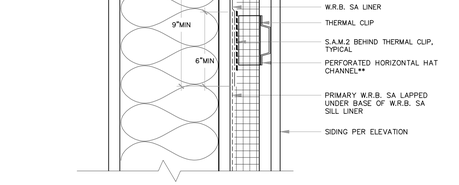


7 BE501 SECTION: FLANGED WINDOW SILL AT VERTICAL METAL SIDING W/ EXTERIOR INSULATION

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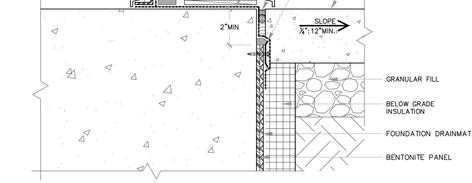


8 BE501 SECTION: SWING DOOR THRESHOLD

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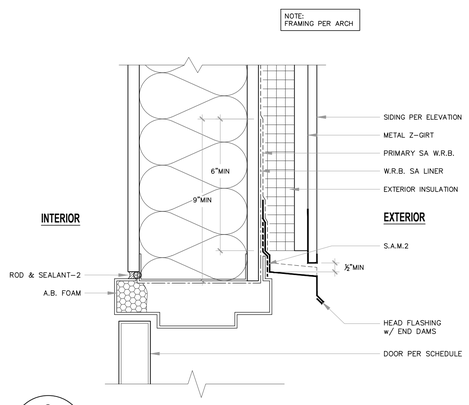


9 BE501 SECTION: HM DOOR HEAD AT SIDING

SCALE: NTS

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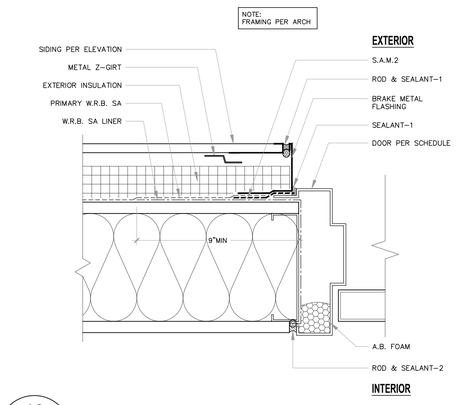


10 BE501 PLAN: HM DOOR JAMB AT SIDING

SCALE: NTS

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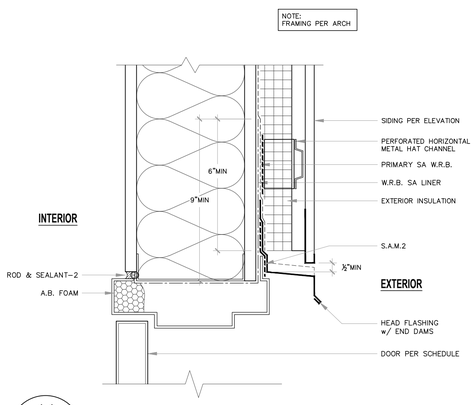


11 BE501 SECTION: HM DOOR HEAD AT VERTICAL METAL SIDING W/ EXTERIOR INSULATION

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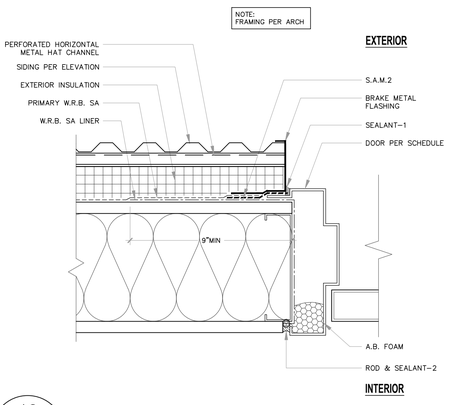


12 BE501 PLAN: HM DOOR JAMB AT VERTICAL METAL SIDING W/ EXTERIOR INSULATION

SCALE: NTS

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PATRICK McMAHON
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24020
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# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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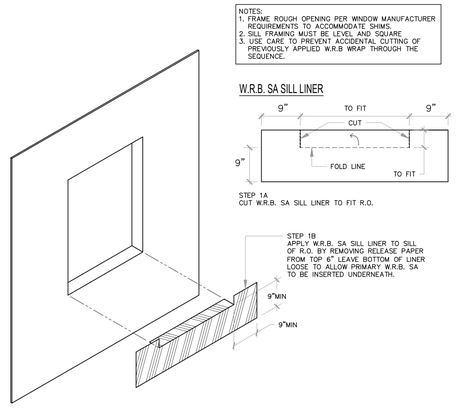
SHEET NAME:

WINDOW & DOOR DETAILS

SHEET NUMBER:

BE501




1 BE502 ASSEMBLY: STOREFRONT WINDOW W/ LIQUID SILL PAN (STEP 1)

SCALE: NTS

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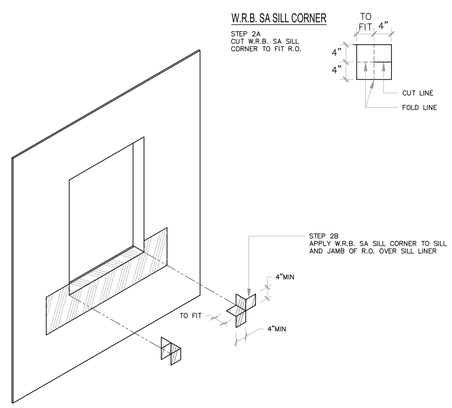


2 BE502 ASSEMBLY: STOREFRONT WINDOW W/ LIQUID SILL PAN (STEP 2)

SCALE: NTS

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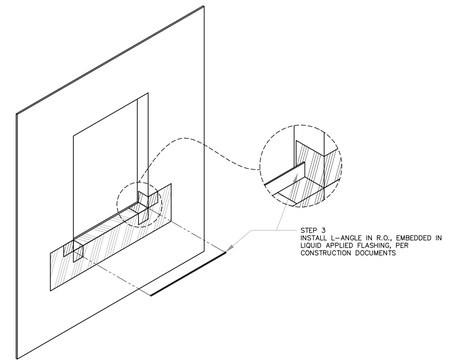


3 BE502 ASSEMBLY: STOREFRONT WINDOW W/ LIQUID SILL PAN (STEP 3)

SCALE: NTS

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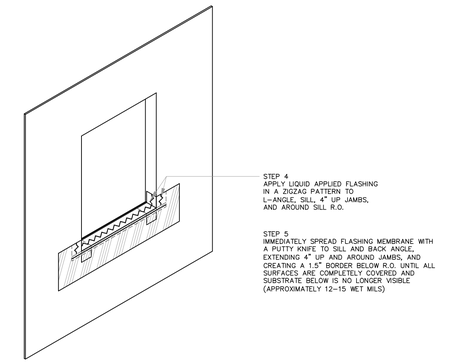


4 BE502 ASSEMBLY: STOREFRONT WINDOW W/ LIQUID SILL PAN (STEPS 4 & 5)

SCALE: NTS

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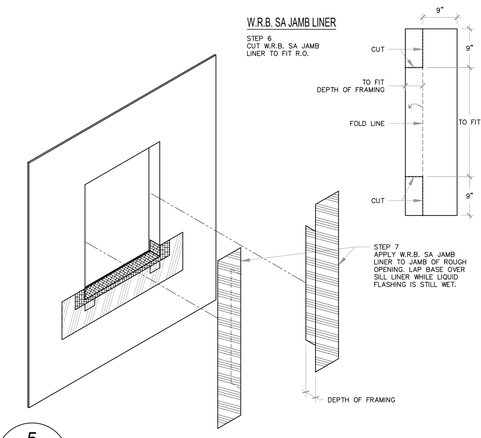


5 BE502 ASSEMBLY: STOREFRONT WINDOW W/ LIQUID SILL PAN (STEPS 6 & 7)

SCALE: NTS

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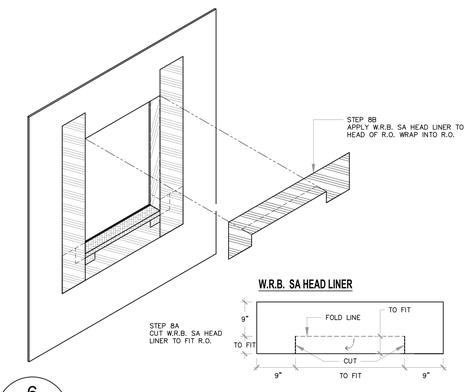


6 BE502 ASSEMBLY: STOREFRONT WINDOW W/ LIQUID SILL PAN (STEP 8)

SCALE: NTS

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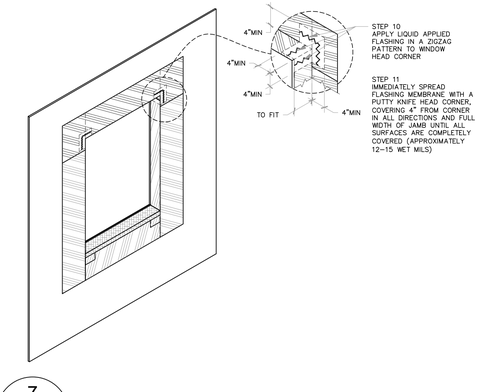


7 BE502 ASSEMBLY: STOREFRONT WINDOW W/ LIQUID SILL PAN (STEPS 9 & 10)

SCALE: NTS

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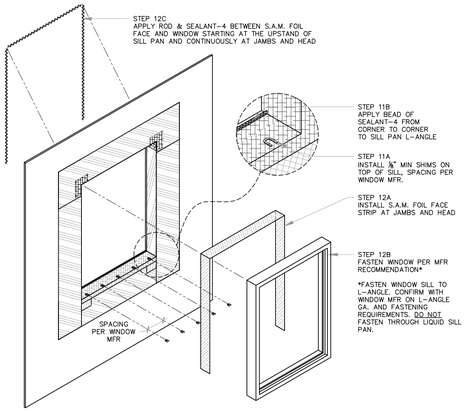


8 BE502 ASSEMBLY: STOREFRONT WINDOW W/ LIQUID SILL PAN (STEPS 11 & 12)

SCALE: NTS

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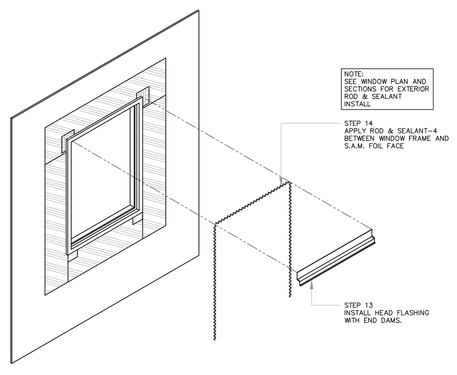


9 BE502 ASSEMBLY: STOREFRONT WINDOW W/ LIQUID SILL PAN (STEPS 13 & 14)

SCALE: NTS

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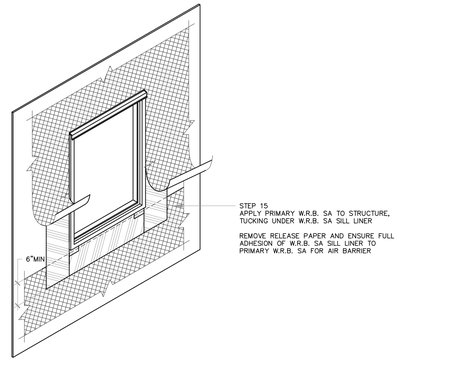


10 BE502 ASSEMBLY: STOREFRONT WINDOW W/ LIQUID SILL PAN (STEP 15)

SCALE: NTS

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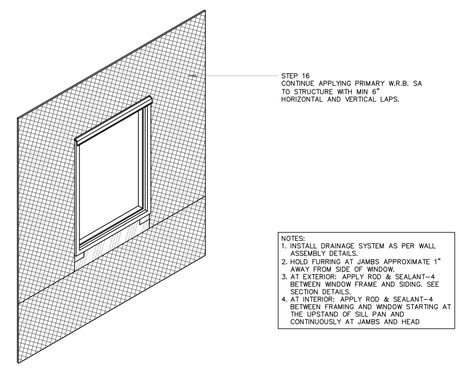


11 BE502 ASSEMBLY: STOREFRONT WINDOW W/ LIQUID SILL PAN (STEP 16)

SCALE: NTS

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PATRICK McMAHON
STATE OF WASHINGTON
24529265
REGISTERED
PROFESSIONAL ENGINEER

# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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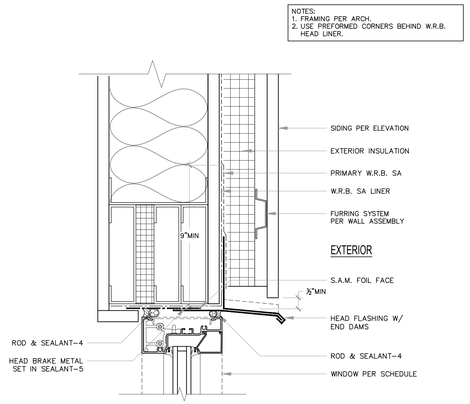
SHEET NAME:

WINDOW & DOOR DETAILS

SHEET NUMBER:

BE502




1 BE503 SECTION: STOREFRONT WINDOW HEAD INSET AT SIDING w/ EXTERIOR INSULATION

SCALE: NTS

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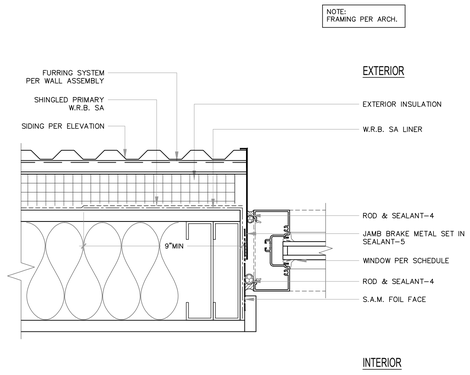


2 BE503 PLAN: STOREFRONT WINDOW JAMB INSET AT SIDING w/ EXTERIOR INSULATION

SCALE: NTS

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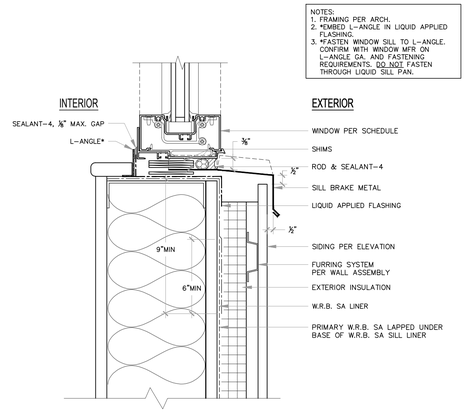


3 BE503 SECTION: STOREFRONT WINDOW SILL INSET AT PANEL SIDING w/ EXTERIOR INSULATION

SCALE: NTS

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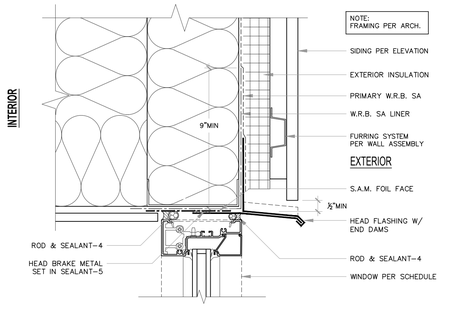


5 BE503 REF.ARCH 2/A-504 SECTION: STOREFRONT WINDOW HEAD AT SIDING w/ EXTERIOR INSULATION

SCALE: NTS

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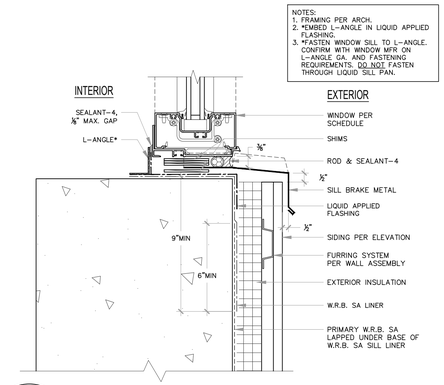


6 BE503 REF.ARCH 1/A-504 SECTION: STOREFRONT WINDOW SILL AT SIDING w/ EXTERIOR INSULATION

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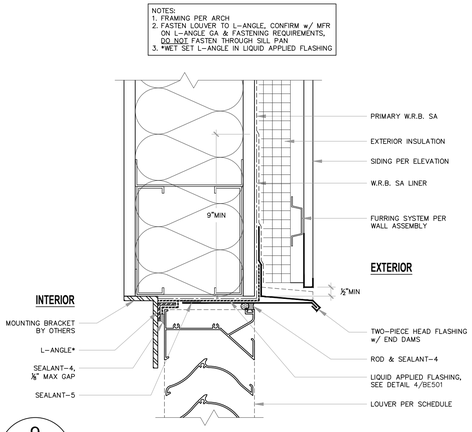


9 BE503 SECTION: LOUVER HEAD AT SIDING w/ EXTERIOR INSULATION

SCALE: NTS

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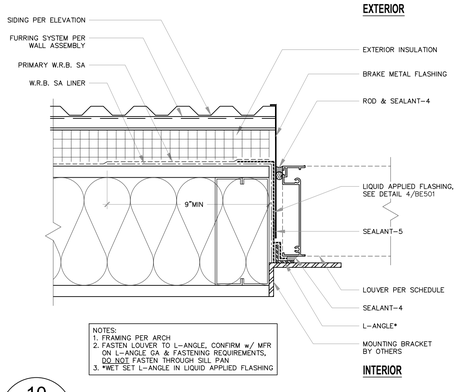


10 BE503 PLAN: LOUVER JAMB AT SIDING w/ EXTERIOR INSULATION

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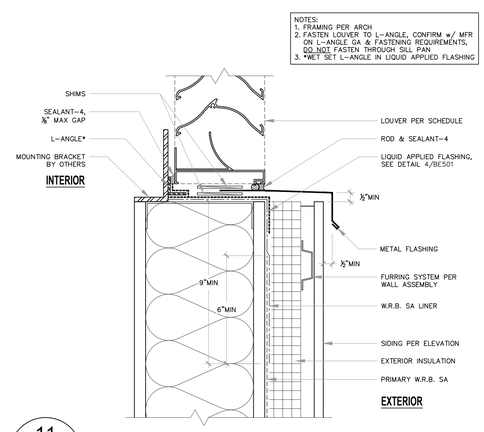


11 BE503 SECTION: LOUVER SILL AT SIDING w/ EXTERIOR INSULATION

SCALE: NTS

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FAX: 425 712-8608

PATRICK McMAHON
STATE OF WASHINGTON
24025265
REGISTERED
PROFESSIONAL ENGINEER

# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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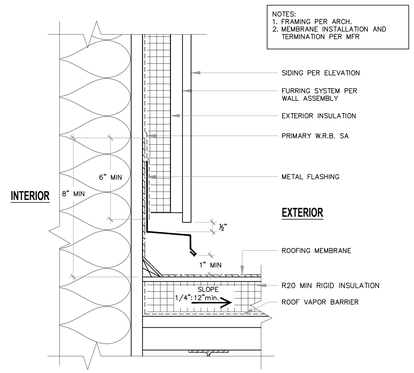
SHEET NAME:

WINDOW & DOOR DETAILS

SHEET NUMBER:

BE503




1 BE600 SECTION: BASE OF WALL AT ROOF

SCALE: NTS

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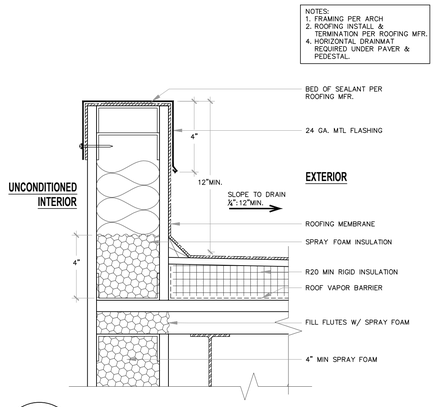


2 BE600 SECTION: MECHANICAL CURB AT ROOF

SCALE: NTS

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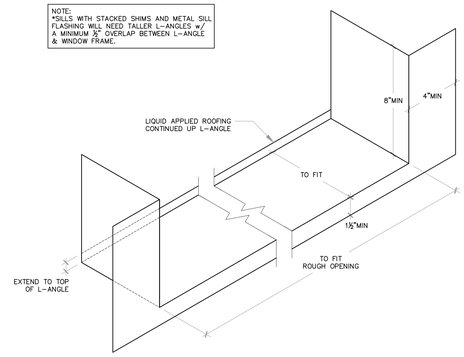


3 BE600 ISOMETRIC: LIQUID ROOFING MEMBRANE SILL PAN

SCALE: NTS

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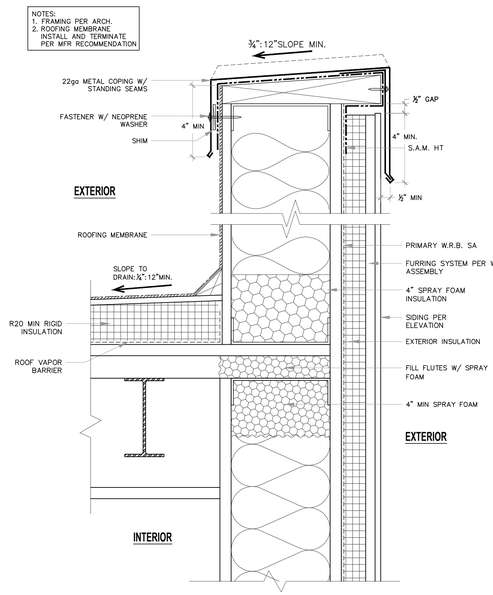


9 BE600 SECTION: PARAPET AT ROOF

SCALE: NTS

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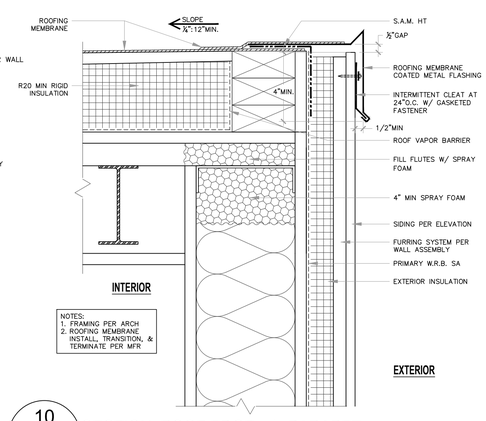


10 BE600 SECTION: ROOF EDGE w/o PARAPET

SCALE: NTS

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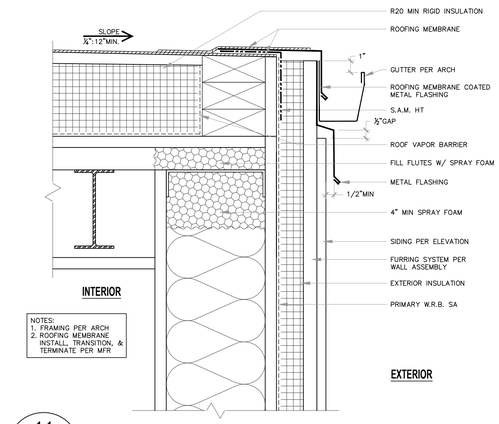


11 BE600 SECTION: ROOF EDGE @ GUTTER

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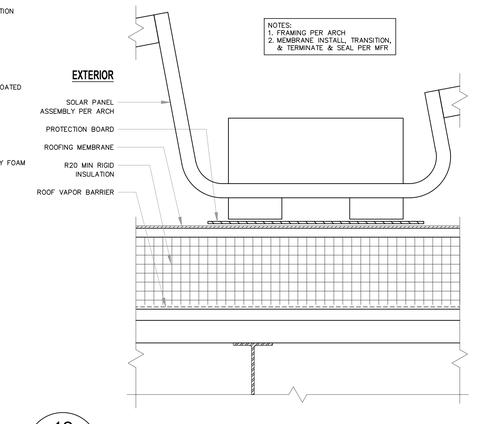


12 BE600 SECTION: SOLAR PANEL ASSEMBLY AT ROOF

SCALE: NTS

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PATRICK McMAHON
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24025265
REGISTERED PROFESSIONAL ENGINEER

# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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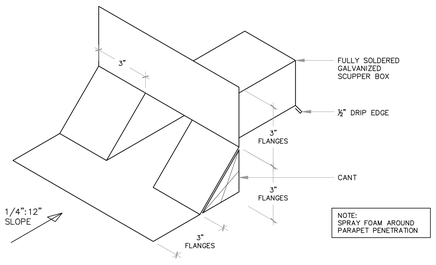
SHEET NAME:

ROOF DETAILS

SHEET NUMBER:

BE600




1 BE601 ASSEMBLY: SCUPPER BOX

SCALE: NTS

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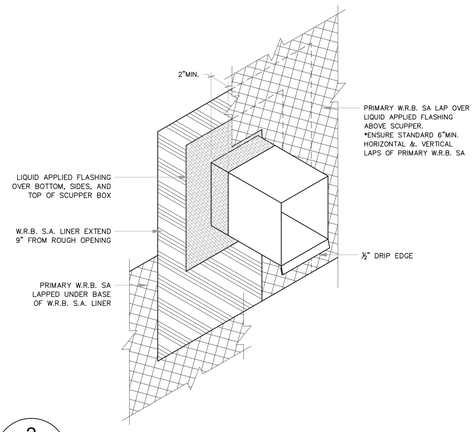


2 BE601 ASSEMBLY: SCUPPER BOX THROUGH WALL

SCALE: NTS

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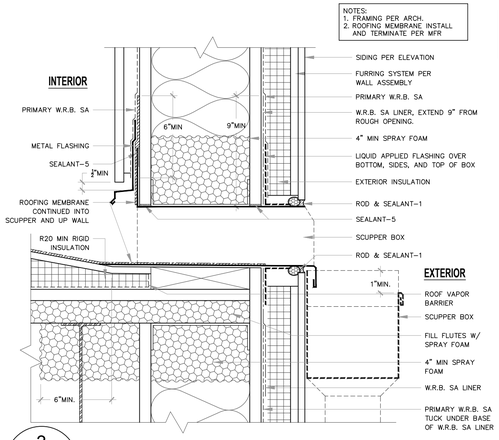


3 BE601 SECTION: SCUPPER BOX THROUGH WALL

SCALE: NTS

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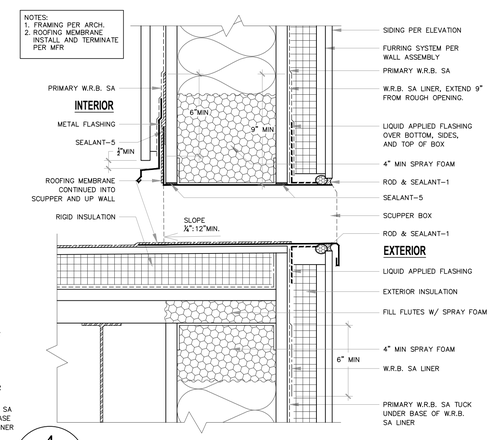


4 BE601 SECTION: SCUPPER BOX OVERFLOW THROUGH WALL

SCALE: NTS

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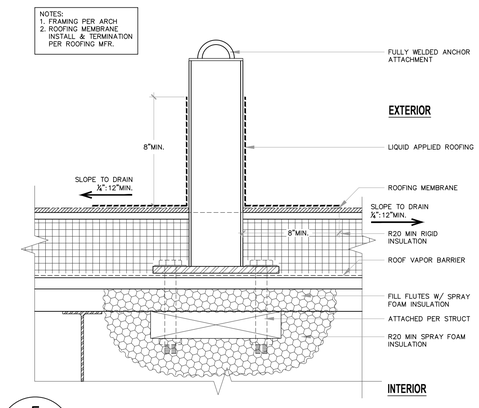


5 BE601 SECTION: ANCHOR ATTACHMENT AT ROOF

SCALE: NTS

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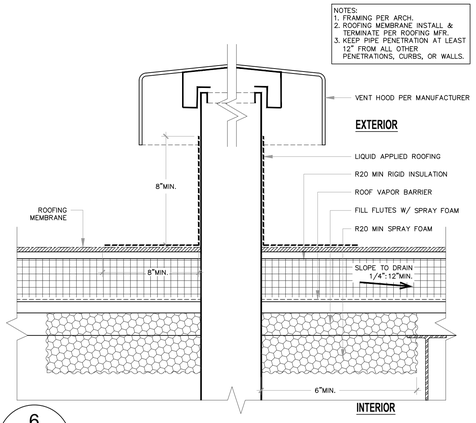


6 BE601 SECTION: VENT PENETRATION AT ROOF

SCALE: NTS

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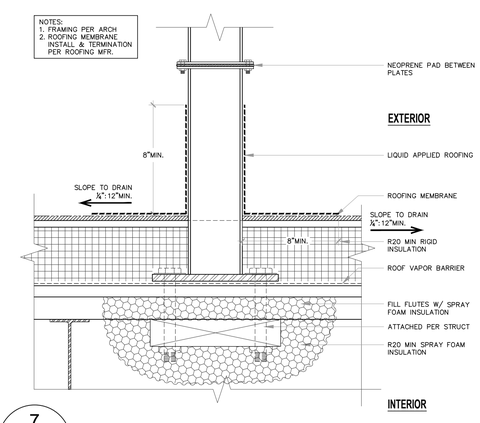


7 BE601 SECTION: POST ATTACHMENT AT ROOF

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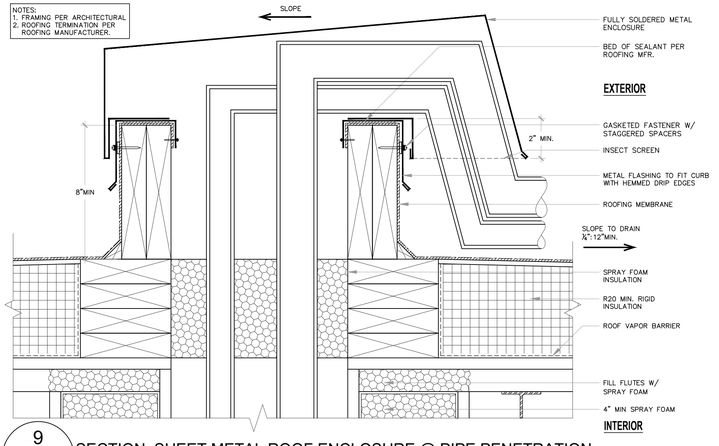


9 BE601 SECTION: SHEET METAL ROOF ENCLOSURE @ PIPE PENETRATION

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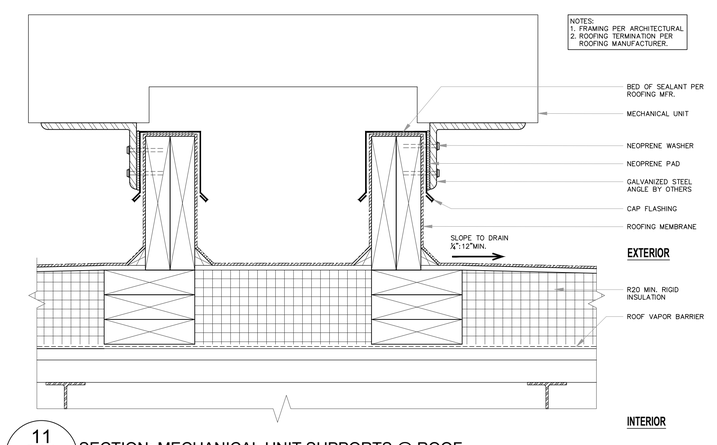


11 BE601 SECTION: MECHANICAL UNIT SUPPORTS @ ROOF

SCALE: NTS

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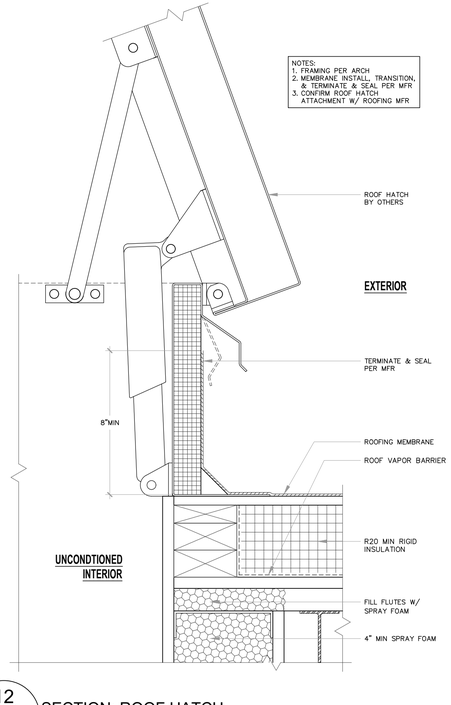


12 BE601 SECTION: ROOF HATCH

SCALE: NTS

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PATRICK McMAHON — STATE OF WASHINGTON — 24029586 — REGISTERED PROFESSIONAL ENGINEER

# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
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| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
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| DRAFTER: | Shamil Khayrutdinov |

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SHEET NAME:

ROOF DETAILS

SHEET NUMBER:

BE601

## 2021 Washington State Energy Code, Commercial Provision

**1. C103.2 Information on Construction Documents**

Construction documents shall be drawn to scale upon suitable material. Electronic media documents are permitted to be submitted when approved by the code official.

Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment as herein governed.

Details shall include, but are not limited to, as applicable:

1. Energy compliance path per Section C401 or C501.
2. Insulation materials and their R-values.
3. Fenestration U-factors and SHGCs.
4. Area-weighted U-factor and SHGC calculations.
5. Mechanical system design criteria.
6. Mechanical and service water heating system and equipment types, sizes and efficiencies.
7. Economizer description.
8. Equipment and systems controls.
9. Fan motor horsepower (hp) and controls.
10. Duct sealing, duct and pipe insulation and location.
11. Lighting fixture schedule with wattage and control narrative.
12. Location of daylight zones on floor plan.
13. Air barrier details including all air barrier boundaries and associated square foot calculations on all six sides of the air barrier as applicable.

**2. C402.5 Air Leakage - Thermal Envelope**

The thermal envelope of buildings shall comply with Sections C402.5.1.1 through C402.5.5.8.

**3. C402.5.1 Air Barriers**

A continuous air barrier shall be provided throughout the building thermal envelope. The continuous air barriers shall be located on the inside or outside of the building thermal envelope, located within the assemblies composing the building thermal envelope, or any combination thereof. The air barrier shall comply with Sections C402.5.1.1 and C402.5.1.2.

**4. C402.5.1.1 Air Barrier Construction**

The continuous air barrier shall be constructed to comply with the following:

1. The air barrier shall be continuous for all assemblies that are the thermal envelope of the building and across the joints and assemblies.
2. Air barrier joints and seams shall be sealed, including sealing transitions in places and changes in materials. The joints and seals shall be securely installed in or on the joint for its entire length so as not to dislodge, loosen or otherwise impair its ability to resist positive and negative pressure from wind, stack effect and mechanical ventilation.
3. Penetrations of the air barrier shall be caulked, gasketed or otherwise sealed in a manner compatible with the construction materials and location. Sealing shall allow for expansion, contraction and mechanical vibration. Joints and seams associated with penetrations shall be sealed in the same manner or taped. Sealing materials shall be securely installed around the penetrations so as not to dislodge, loosen or otherwise impair the penetrations' ability to resist positive and negative pressure from wind, stack effect, and mechanical ventilation. Sealing of concealed fire sprinklers, where required, shall be in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.
4. Recessed lighting fixtures shall comply with Section C402.5.8. Where similar objects are installed which penetrate the air barrier, provisions shall be made to maintain the integrity of the air barrier.
5. Construction documents shall contain a diagram showing the building's pressure boundary in plan(s) and section(s) and a calculation of the area of the pressure boundary to be considered in the test.

**5. C402.5.1.2 Air Barrier Compliance**

A continuous air barrier for the opaque building envelope shall comply with the following:

1. Group R dwelling units that are accessed directly from the outdoors shall meet the provisions of Section C402.5.2.
2. All other buildings or portions of buildings shall meet the provisions of Section C402.5.3.

**6. C402.5.3 Building Thermal Envelope Testing**

The building thermal envelope shall be tested in accordance with ASTM E779, ANSI/RESNET/ICC 380, ASTM E3158 or ASTM E1827 or an equivalent method approved by the code official. The measured air leakage shall not exceed 0.25 cfm/ft$^2$ (1.27 L/s x m$^2$) of the building thermal envelope area at a pressure differential of 0.3 inch water gauge (75 Pa). Alternatively, portions of the building shall be tested and the measured air leakages shall be area weighted by the surface areas of the building envelope in each portion. The weighted average test results shall not exceed the whole building leakage limit. In the alternative approach, the following portions of the building shall be tested:

1. The entire envelope area of all stories that have any spaces directly under a roof.
2. The entire envelope area of all stories that have a building entrance, exposed floor, or loading dock, or are below grade.
3. Representative above-grade sections of the building totaling at least 25 percent of the wall area enclosing the remaining conditioned space.
4. Test shall be accomplished using either: a) both pressurization and depressurization, or b) pressurization alone, but not depressurization alone. The test results shall be plotted against the correct P for pressurization in accordance with Section 9.4 of ASTM E779.

Where the measured air leakage rate exceeds 0.25 cfm/ft2 (2.0 L/s x m2) corrective action shall be taken to seal leaks in the air barrier. Post-corrective action testing and repeated corrective action measures will be taken until the required air leakage rating is achieved. Final passing of the air leakage test results shall be submitted to the code official.

**7. C402.5.5 Rooms Containing Fuel-Burning Appliances**

Where combustion air is supplied through openings in an exterior wall to a room or space containing a space conditioning fuel-burning appliance, one of the following shall apply:

1. The room or space containing the appliance shall be located outside of the building thermal envelope.
2. The room or space containing the appliance shall be enclosed and isolated from conditioned spaces inside the building thermal envelope. Such rooms shall comply with all of the following:
   - 2.1. The walls, floor and ceiling that separate the enclosed room or space from the conditioned spaces shall be insulated to be at least equivalent to the insulation requirement of below grade walls as specified in Table C402.1.3 or C402.1.4.
   - 2.2. The walls, floors and ceiling that separate the enclosed room or space from conditioned spaces be sealed in accordance with Section C402.5.1.1.
   - 2.3. The doors into the enclosed room or space shall be fully gasketed.
   - 2.4. Water lines and ducts in the enclosed room or space shall be insulated in accordance with Section C403.
   - 2.5. Where the air duct supplying combustion air to the enclosed room or space passes through conditioned space, the duct shall be insulated to an R-value of not less than R-16.

**Exceptions:**

Fireplaces and stoves complying with Sections 901 through 905 of the International Mechanical Code, and Section 2111.13 of the International Building Code.

**8. C402.5.6 Doors and Access Openings to Shafts, Chutes, Stairways, and Elevator Lobbies**

Doors and access openings from conditioned space to shafts, chutes, stairways and elevator lobbies shall be gasketed, weatherstripped or sealed.

**Exceptions:**

1. Door openings required to comply with Section 716 of the International Building Code.
2. Doors and door openings required to comply with UL 1784 by the International Building Code.

**9. C402.5.7 Air Intakes, Exhaust Openings, Stairways and Shafts**

Stairway enclosures, elevator shaft vents and other outdoor air intakes and exhaust openings integral to the building envelope shall be provided with dampers in accordance with Section C403.7.8.

**10. C402.5.8 Loading Dock Weatherseals**

Cargo door openings and loading dock door openings shall be equipped with weatherseals that restrict infiltration and provide direct contact along the top and sides of vehicles that are parked in the doorway.

**11. C402.5.9 Vestibules**

All building entrances shall be protected with an enclosed vestibule, with all doors opening into and out of the vestibule equipped with self-closing devices. Vestibules shall be designed so that in passing through the vestibule it is not necessary for the interior and exterior doors to open at the same time. The installation of one or more revolving doors in the building entrance shall not eliminate the requirement that a vestibule be provided on any doors adjacent to revolving doors. For the purposes of this section, "building entrances" shall include exit-only doors in buildings where separate doors for entering and exiting are provided.

Interior and exterior doors shall have a minimum distance between them of not less than 7 feet. The exterior envelope of conditioned vestibules shall comply with the requirements for a conditioned space. Either the interior or exterior envelope of unconditioned vestibules shall comply with the requirements for a conditioned space. The building lobby is not considered a vestibule.

**Exception:** Vestibules are not required for the following:

1. Doors not intended to be used as building entrances.
2. Unfinished ground-level space greater than 3,000 square feet (298 m$^2$) if a note is included on the permit documents at each exterior entrance to the space stating "Vestibule required at time of tenant build-out if entrance serves a space greater than 3,000 square feet in area".
3. Doors opening directly from a sleeping unit or dwelling unit.
4. Doors between a space smaller than 3,000 square feet (298 m$^2$) in area and the exterior of the building or the building entrance lobby, where those doors do not comprise one of the primary entrance paths to the remainder of the building. The space must be enclosed and separated without transfer air paths from the primary building entrance paths. If there are doors between the space and the primary entrance path then the doors shall be equipped with self-closing devices so the space acts as a vestibule for the primary building entrance.
5. Revolving doors.
6. Doors used primarily to facilitate vehicular movement or material handling and adjacent personnel doors.
7. In buildings less than three stories above grade or in spaces that do not directly connect with the building elevator lobby, doors that have an air curtain with a velocity of not less than 6.56 feet per second (2 m/s) at the floor that have been tested in accordance with ANSI/AMCA 220 and installed in accordance with the manufacturer's instructions. Manual or automatic controls shall be provided that will operate the air curtain with the opening and closing of the door. Air curtains and their controls shall comply with Section C408.2.3.
8. Building entrances in buildings that are less than four stories above grade and less than 10,000 square feet in area.
9. Elevator doors in parking garages provided that the elevators have an enclosed lobby at each level of the garage.
10. Entrances to semi-heated spaces.
11. Doors that are used only to access outdoor seating areas that are separated from adjacent walking areas by a fence or other barrier.

**12. C402.5.10 Recessed Lighting**

Recessed luminaires installed in the building thermal envelope shall be all of the following:

1. IC Rated.
2. Labeled as having an air leakage rate of not more than 2.0 cfm (0.944 L/s) when tested in accordance with ASTM E 283 at a 1.57 psf (75 Pa) pressure differential.
3. Sealed with a gasket or caulk between the housing and interior wall or ceiling covering.

**13. C402.5.11 Operable Openings Interlocking**

Where any operable openings to the outdoors are larger than 48 square feet (4.47 m$^2$) in area, such openings shall be interlocked with the heating and cooling system as required by Section C403.4.1.6.

**Exceptions:**

1. Separately zoned areas associated with the preparation of food that contain appliances that contribute to the HVAC loads of a restaurant or similar type of occupancy.
2. Warehouses that utilize overhead doors for the function of the occupancy, where approved by the code official.
3. The outer entrance doors where located in the exterior wall and are part of a vestibule system.
4. Alterations to existing buildings.

**14. C103.6.3 Compliance Documentation**

All energy code compliance forms and calculations shall be delivered in one document to the building owner as part of the project record documents or manuals, or as a standalone document. This document shall include the specific energy code year utilized for compliance determination for each system. NFRC certificates for the installed windows, list of total area for each NFRC certificate, the interior lighting power compliance path (building area, space-by-space) used to calculate the lighting power allowance.

For projects complying with Section C401.2 Item 1, the documentation shall include:

1. The envelope insulation compliance path (prescriptive or component performance).
2. All completed code compliance forms, and all compliance calculations including, but not limited to, those required by sections C402.1.5, C403.2.12.1, C405.4, and C405.5.

For projects complying with Section C401.2 Item 2, the documentation shall include:

1. A list of all proposed envelope component types, areas and U-values.
2. A list of all lighting area types with areas, lighting power allowance, and installed lighting power density.
3. A list of each HVAC system modeled with the assigned and proposed system type.
4. Electronic copies of the baseline and proposed model input and output file. The input files shall be in a format suitable for rerunning the model and shall not consist solely of formatted reports of the inputs.

**15. Preparation of the Building**

Contractor is responsible for sealing or otherwise effectively isolating all "intentional" holes in the test boundary.

Contractor will be liable for costs of removal of finishes and/or cladding required to provide corrections to the air barrier system.

**LEGEND**

-AIR BARRIER & BUILDING THERMAL ENVELOPE

-CONDITIONED AND SEMI-HEATED SPACES

| Air Barrier Design progress table | | | |
|---|---|---|---|
| **Phase Description** | **Update date** | **Architectural Set** | **Changes in Boundaries & Calculations** |
| Review set | | | |
| Building permit set | 05.26.2025 | 250520 BPP ARCH PDF SET | x |
| IFC set | | | |
| Testing | | | |

Whole Building

BUILDING ENVELOPE AIR LEAKAGE CALCULATIONS
Based on AutoCAD and PDF drawings provided by architect.

| | Floor Perimeter ft | Level Height ft | Floor Area ft² | Exterior Floor area ft² | Exterior Ceiling Area ft² | Exterior Wall Area ft² | Thermal Envelope Area ft² | Thermal Envelope Volume ft³ |
|---|---|---|---|---|---|---|---|---|
| Level B01 | 380 | 12.0 | 7,681 | 7,681 | 0 | 4,560 | 12,241 | 92,172 |
| Level 01 | 627 | 12.0 | 16,254 | 8,573 | 75 | 7,524 | 16,172 | 195,048 |
| Level 02 | 631 | 12.0 | 16,311 | 132 | 7,859 | 7,572 | 15,563 | 195,732 |
| Level 03 | 513 | 11.0 | 8,892 | 440 | 8,801 | 5,643 | 14,884 | 97,812 |
| Roof/Elevator | 38 | 9.2 | 91 | 0 | 91 | 350 | 441 | 837 |
| Total Building | 2,189 | 56 | 49,229 | 16,826 | 16,826 | 25,649 | 59,301 | 581,601 |
| **MAX ALLOWED AIR LEAKAGE OF BUILDING ENVELOPE** | | | | | | | | |
| per AREA of Building Thermal Envelope at 75 Pa | | | 0.25 cfm/ft² x | 59,301 ft² = | | | **14,825** | **CFM** |
| | | | | | | | | |
| AVE. GRADE | | | 101.2' | | | | | |
| T.O. ROOF DECK | | | 140.8' | | | | | |
| REDUCED AIR INFILTRATION IN ACCORDANCE WITH SECTION C406.2.13 CREDIT IS NOT APPLIED | | | | | | | | |

BASED ON : 250520 BPP ARCH PDF SET

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24025
REGISTERED
PROFESSIONAL ENGINEER

BARNABIE POINT PROJECT
3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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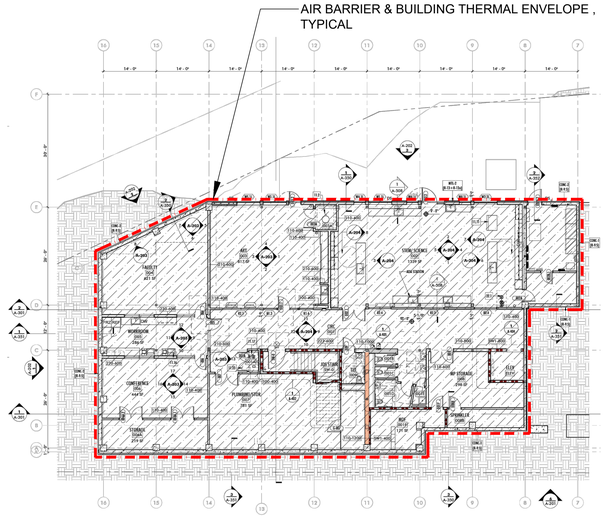
SHEET NAME:

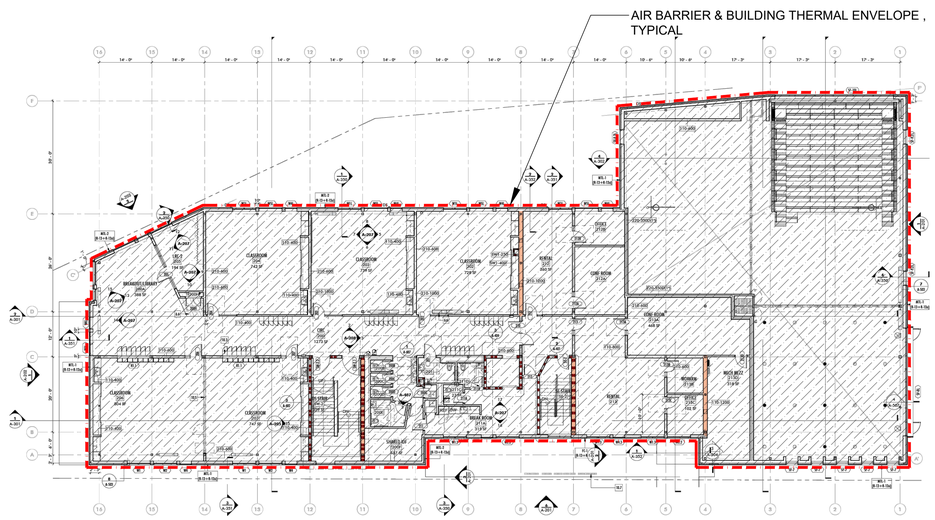
AIR BARRIER NOTES

SHEET NUMBER:

BE800



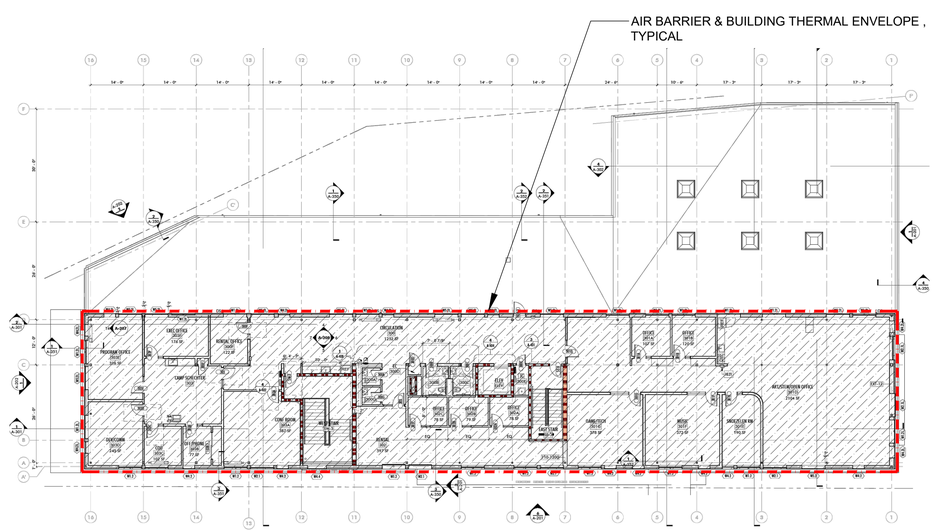

LEVEL B01 FLOOR PLAN
SCALE: NTS
REFERENCE ARCH: 1/A-100




LEVEL 02 FLOOR PLAN
SCALE: NTS
REFERENCE ARCH: 1/A-102




LEVEL 01 FLOOR PLAN
SCALE: NTS
REFERENCE ARCH: 1/A-101




LEVEL 03 FLOOR PLAN
SCALE: NTS
REFERENCE ARCH: 1/A-103

PLAN VIEWS WERE TAKEN FROM ARCHITECTURAL SET DATED 05.20.2025 , THEY ARE DIAGRAMMATIC AND SHOULD NOT BE USED FOR MATERIAL TAKE-OFFS. FINAL BUILDING PLANS SHOULD BE VERIFIED.

N

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3700 E Mercer Way
Mercer Island, WA 98040

| DATE | DESCRIPTION |
|---|---|
| 01.02.2025 | DESIGN DEVELOPMENT |
| 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

P.E.: Patrick McMahon
P.M.: Patrick McMahon
ENERGY: Katya Bautista
DRAFTER: Shamil Khayrutdinov

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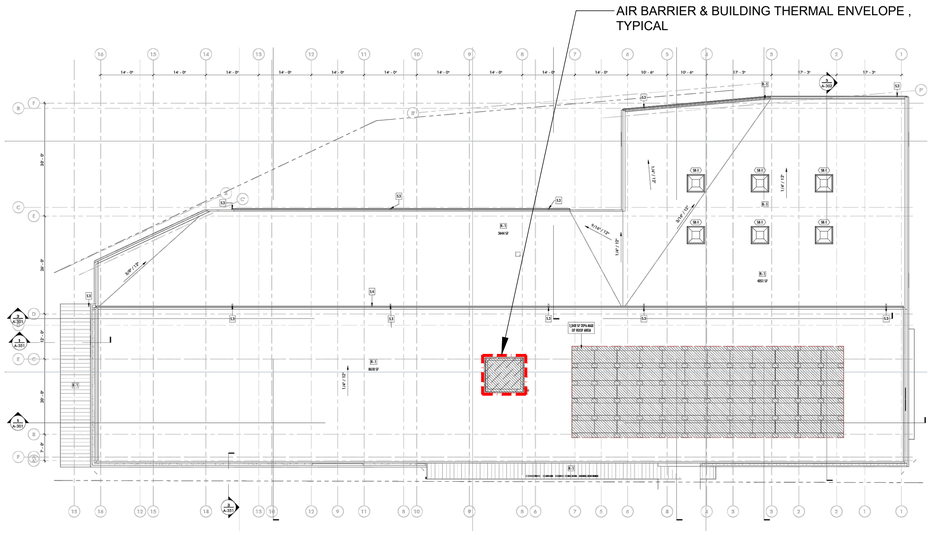
SHEET NAME:

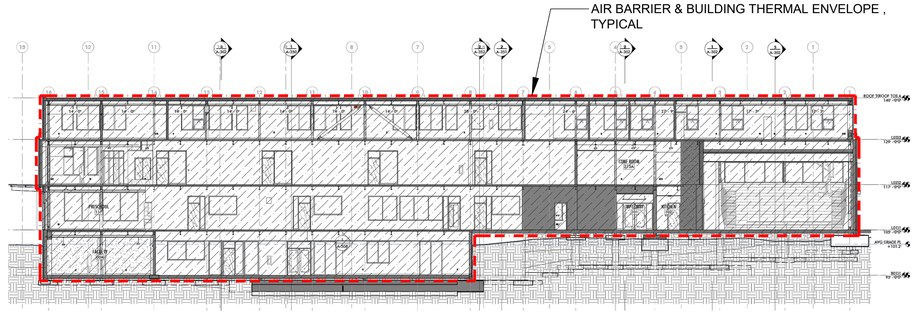
AIR BARRIER DIAGRAMS

SHEET NUMBER:

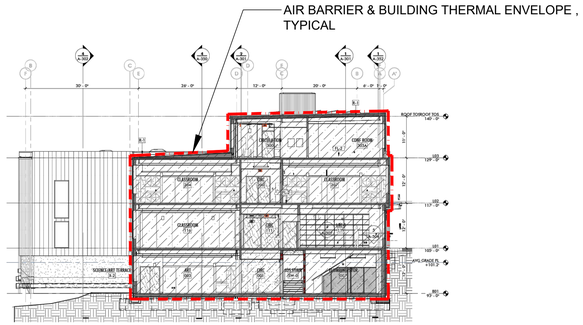
BE801




ROOF PLAN
SCALE: NTS
REFERENCE ARCH: 1/A-104




EAST-WEST SECTION THRU MULTIPURPOSE
SCALE: NTS
REFERENCE ARCH: 2/A-301




NORTH-SOUTH SECTION AT GRID 13
SCALE: NTS
REFERENCE ARCH: 3/A-302

PLAN VIEWS WERE TAKEN FROM ARCHITECTURAL SET DATED 05.20.2025 , THEY ARE DIAGRAMMATIC AND SHOULD NOT BE USED FOR MATERIAL TAKE-OFFS. FINAL BUILDING PLANS SHOULD BE VERIFIED.

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# BARNABIE POINT PROJECT
3700 E Mercer Way
Mercer Island, WA 98040

| DATE | DESCRIPTION |
|---|---|
| 01.02.2025 | DESIGN DEVELOPMENT |
| 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

P.E.: Patrick McMahon
P.M.: Patrick McMahon
ENERGY: Katya Bautista
DRAFTER: Shamil Khayrutdinov

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SHEET NAME:

AIR BARRIER DIAGRAMS

SHEET NUMBER:

BE802

## 2021 Washington State Energy Code, Commercial Provision.

1. **C401.2 Compliance path.**
The building will comply with the Total Building Performance path and requirements of Section C407. Energy forms are located on BE900-BE903 drawings and provided to show that the proposed Total UA of the proposed building is no more than 20 percent higher than the Allowed Total UA as defined in Section C402.1.5 and according to Section C407.3.1 Limits on non-mandatory measures.

2. **C301** Climate zone for energy compliance has been defined per Table C301.1.

3. **C303.1.1 Building thermal envelope insulation**.
An R-value identification mark shall be applied by the manufacturer to each piece of building thermal envelope insulation 12 inches (305 mm) or greater in width. Alternatively, the insulation installers shall provide a certification listing the type, manufacturer and R-value of insulation installed in each element of the building thermal envelope. For blown or sprayed insulation (fiberglass and cellulose), the initial installed thickness, settled thickness, settled R-value, installed density, coverage area and number of bags installed shall be listed on the certification. For sprayed polyurethane foam (SPF) insulation, the installed thickness of the areas covered and R-value of installed thickness shall be listed on the certification. For insulated siding, the R-value shall be labeled on the product's package and shall be listed on the certification. The insulation installer shall sign, date and post the certification in a conspicuous location on the job site.
   Exception: for roof insulation installed above the deck, the R-value shall be labeled as required by the material standards specified in table 1508.2 of the International Building Code.

4. **C303.1.2 Insulation mark installation.**
Insulating materials shall be installed such that the Manufacturer's R-value mark is readily observable upon inspection.

5. **C303.1.3 Fenestration product rating.**
U-factors of fenestration shall be determined as Follows:
   1) For windows, doors and skylights, U-factor ratings shall be determined in accordance with NFRC 100.
   2) Where required for garage doors and rolling doors, U-factor ratings shall be determined in Accordance with either NFRC 100 or ANSI/DASMA 105.

   U-factors shall be determined by an accredited, independent laboratory, and labeled and certified by the manufacturer.

   Products lacking such a labeled U-factor shall be assigned a default U-factor from table C303.1.3(1), C303.1.3(2) or C303.1.3(4). The solar heat gain coefficient (SHGC) and visible transmittance (VT) of glazed Fenestration products (windows, glazed doors and skylights) shall be determined in accordance with NFRC 200 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled SHGC or VT shall be assigned a default SHGC or VT from table C303.1.3(3).

6. **C403.4 HVAC system controls.**
HVAC systems shall be provided with controls in accordance with sections C403.4.1 through C403.4.12 and shall be capable of and configured to implement all required control functions in this code.

7. **C407.3 Performance-based compliance.**
Compliance with this section demonstrated in details in the Total Building Performance report which is a separate standalone document.

8. **C401.4 Thermal envelope certificate.**
A permanent thermal envelope certificate shall be completed by an approved party. Such certificate shall be posted on a wall in the space where the space conditioning equipment is located, a utility room or other approved location. If 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. A copy of the certificate shall also be included in the construction files for the project. The certificate shall include:

   1) R-values of insulation installed in or on ceilings, roofs, walls, foundations and slabs, crawlspace walls and floors, and ducts outside conditioned spaces.
   2) U-factors and solar heat gain coefficients (SHGC) of fenestration.
   3) Results from any building envelope air leakage testing per-formed on the building.Where there is more than one value for any component of the building envelope, the certificate shall indicate the area-weighted average value where available. If the area-weighted average is not available, the certificate shall list each value that applies to 10 percent or more of the total component area.

The following mandatory provisions indicated in the Table below should be met:

| MANDATORY COMPLIANCE MEASURES FOR TOTAL BUILDING PERFORMANCE METHOD | | |
|---|---|---|
| Section | Title | Comment |
| Envelope | | |
| C402.5 | Air Leakage | |
| Mechanical | | |
| C403.1.2 | Calculation of heating and cooling loads | |
| C403.1.3 | Data centers | N/A |
| C403.2 | System design | |
| C403.3.1 | Equipment and system sizing | |
| C403.3.2 | HVAC equipment performance requirements | |
| C403.3.3 | Hot gas bypass limitation | |
| C403.3.4.4 | Boiler turndown | |
| C403.4.1 | Thermostatic controls | |
| C403.4.2 | Off-hour controls | |
| C403.4.7 | Combustion heating equipment controls | |
| C403.4.9 | Group R-2 and R-3 dwelling units | |
| C403.4.11 | Direct digital control systems | |
| C403.5.5 | Economizer fault detection and diagnostics (FDD) | |
| C403.7 | Ventilation and exhaust systems | Except for C403.7.6.2 |
| C403.8 | Fan and fan controls | |
| C403.9.1.1 | Variable flow controls | |
| C403.10 | Construction of HVAC elements | |
| C403.11 | Mechanical systems located outside of the building thermal envelope | |
| Service Water Heating | | |
| C404 | Service Water Heating | Except for C404.2.1 |
| Lighting and Electrical | | |
| C405 | Electrical power and lighting systems neral | |
| Other Requirements | | |
| C407 | Total Building Performance | |
| C408 | System commissioning | |
| C409 | Energy metering | |
| C410 | Refrigeration requirements | |
| C411[b] | Renewable energy | |
| C412 | Compressed air systems | |

10. **C408 System commissioning (By Others).**
A building commissioning process led by a certified commissioning professional and functional testing requirements shall be completed for mechanical systems in section C403, service water heating systems in section C404, controlled receptacles and lighting systems in section C405, equipment, appliance and systems installed to comply with section C406 or C407; energy metering in section C409 and refrigeration in section C410.

11. **C409.2 Energy source metering.**
Buildings shall have a meter at each energy source. For each energy supply source listed in Section C409.2.1 through C409.2.4, meters shall collect data for the whole building or for each separately metered portion of the building where not exempted by the exception to Section C409.1.

12. **C411.1 On-site renewable energy.**
Each new building, or addition larger than 10,000 square feet of gross conditioned floor area, shall include a renewable energy generation system consisting of not less than 0.5 W/ft2 or 1.7 Btu/ft2 multiplied by the sum of the gross conditioned floor area

13. **C411.3 Solar readiness.**
A solar zone shall be provided on buildings that are 20 stories or less in height above grade plane. The solar zone shall be located on the roof of the building or on another structure elsewhere on the The solar zone shall be in accordance with this section and the International Fire Code.

14. **C412.1 Compressed air systems (Not Applicable).**
All new compressed air systems, and all additions or alterations of compressed air systems where the total combined horsepower (hp) of the compressor(s) is 25 hp or more, shall meet the requirements of this section. These requirements apply to the compressors, related piping systems, and related controls that provide compressed air and do not apply to any equipment or controls that use or process the compressed air.

### Thermal Envelope Certificate (per C401.4)

| | |
|---|---|
| **Name of Builder / Designer:** | |
| **Energy Code Version:** | |
| **Permit Date:** | |
| **Permit Number:** | |

| **Insulation Rating** | | | | |
|---|---|---|---|---|
| **Component** | | **R-Value** | **%** of component | **R-Value** (area-weighted average) |
| **Ceiling / Roof** | | | | |
| **Walls** | | | | |
| **Floors / Slabs** | | | | |

| **Fenestration Rating** | | | | |
|---|---|---|---|---|
| **Type** | **U-Factor** | **SHGC** | **U-Factor** (area-weighted average) | **SHGC** (area-weighted average) |
| **Fixed** | | | | |
| **Operable** | | | | |
| **Entrance doors** | | | | |
| **Opaque doors** | | | | N/A |
| **Skylights** | | | | N/A |

| **Air Leakage Test** | |
|---|---|
| **Result** | |

| **Additional notes** |
|---|
| |

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3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

P.E.: Patrick McMahon
P.M.: Patrick McMahon
ENERGY: Katya Bautista
DRAFTER: Shamil Khayrutdinov

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THESE DRAWINGS ARE FOR GENERAL ARRANGEMENT OF MATERIALS ON SITE CONDITIONS GOVERN. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS.

SHEET NAME:

ENERGY CODE NOTES

SHEET NUMBER:

BE900

## ENVELOPE COMPLIANCE SUMMARY

2021 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1 — Administered by: ©2025 NEEA, All rights reserved

| | | | |
|---|---|---|---|
| **Project & Applicant Information** | **Project Title** | BARNABIE POINT K-8 - 2021 WSEC | For Building Department Use: **Date: May 22, 2025** |
| | **Project Address** | 3700 E MERCER WAY<br>Mercer Island, WA 98040 | |
| | **Applicant Name** | Pavlo Serdechnyi | |
| | **Applicant Phone** | 425-678-1736 | |
| | **Applicant Email** | pavlo@bee-engineers.com | |

For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

| | | | | | |
|---|---|---|---|---|---|
| **General Occupancy** | All Commercial | **General Building Use Type(s)** | Education, Other | **Building Cond. Floor Area** | 43,302 |
| **Project Scope** | New Building | **Space Conditioning Categories** | Fully Conditioned | **Project Cond. Floor Area**<br>**Floors Above Grade**<br>**Compliance Method** | 43,302<br>3<br>General Prescriptive |
| **Envelope Project Description** | CONSTRUCTION OF A 3-STORY SCHOOL AND OFFICE BUILDING. | | | | |

| **Envelope Compliance Scope and Method** | **Scope** | **Space Conditioning Category** | **Compliance Method** | **WWR/SRR per Category** | **UA Calculation Adjustment** | **Fenestration Alternates** | **Compliance Verification** |
|---|---|---|---|---|---|---|---|
| | New Building | Fully Conditioned | Component performance | 27.39% / 0.61% | None selected | No alternates selected | **COMPLIES** |

| | | | |
|---|---|---|---|
| **Additional Energy Efficiency (AEC) Measures Included** | No envelope or miscellaneous additional energy efficiency measures included in project | **Load Management (LDM) Measures Included** | No envelope or miscellaneous load management measures included in project |
| **Air Barrier Testing** | Standard building thermal envelope test | **Air Barrier Comments** | |

| **Project Title** | **BARNABIE POINT K-8 - 2021 WSEC** | | | **Date** | **May 22, 2025** |
|---|---|---|---|---|---|
| **Scope & Space Conditioning** | **NEW BUILDING - FULLY CONDITIONED** | | **Compliance Verification** | | **COMPLIES** |
| **Window-to-wall Ratio** | 27.39% | **Skylight-to-roof-ratio** | 0.61% | **Vertical Fenestration Alternate** | No alternates selected |

**Opaque Envelope Assemblies**

| **Roof/Ceiling** | **Location in Documents** | **Assembly ID** | **Assembly Location** | **Insulation R-Values** Cavity | Continuous (% penetration) | 2nd Layer (MB Roof) | **U-Factor** | **Net Area (SF)** |
|---|---|---|---|---|---|---|---|---|
| Insulation entirely above deck | A-006 | R1 / Levels 2, 3, Roof | Exterior | | R-38 (< 0.04%) | | U-0.025 | 16,659 |
| | Sloped Roof & Tapered Insulation: Not sloped | | | U-Factor Source: WSEC Appendix A Default | | | | |
| | U-Factor Source Description: A102.1 | | | | | | | |
| Attic and other | Arch | Vestibule / Level 1 | Exterior | R-20 | R-30 (< 0.04%) | | U-0.020 | 75 |
| | U-Factor Source: WSEC Appendix A Default | | | U-Factor Source Description: Table A101.5 | | | | |
| | Roof Framing Type: Standard | | | Roof Framing Depth (Inches): 2x12 | | | | |
| | Roof Framing Spacing (OC): 16 o.c. | | | Roof Framing Material: Steel-framed | | | | |
| | Ceiling/Attic Venting: Unvented | | | | | | | |

| **Walls** | **Location in Documents** | **Assembly ID** | **Assembly Location** | **Cavity** | **Continuous (% penetration)** | **Insulated Wall Furring** | **U-Factor** | **Net Area (SF)** |
|---|---|---|---|---|---|---|---|---|
| Steel-framed - Commercial | A-006 | MTL-1, MTL-2, FC-1 / Levels B, 1-3, Roof | Exterior | R-21 | R-12.5 (< 0.04%) | | U-0.046 | 15,235 |
| | U-Factor Source: WSEC Appendix A Default | | | U-Factor Source Description: Table A103.3.6.1(1) | | | | |
| | Framing Depth: 2x6 | | | Other Framing Depth: | | | | |
| | Framing Spacing (OC): 16 o.c. | | | | | | | |
| Mass (precast concrete) - Commercial | A-006 | CONC-2 / Level B | Exterior & above grade | | R-10 (< 0.04%) | No | U-0.088 | 357 |
| | Does assembly include insulated wall furring?: No | | | Other Framing Depth: | | | | |
| | Framing Spacing (OC): | | | U-Factor Source: WSEC Appendix A Default | | | | |
| | U-Factor Source Description: Table A103.3.7.1(2) | | | | | | | |
| Mass (precast concrete) - Commercial | S/A-404 | Elevator Pit | Wall is below grade | | R-10 (< 0.04%) | No | U-0.080 | 154 |
| | Does assembly include insulated wall furring?: No | | | Other Framing Depth: | | | | |
| | Framing Spacing (OC): | | | U-Factor Source: WSEC Appendix A Default | | | | |
| | U-Factor Source Description: Table 101.5 | | | | | | | |
| Mass (precast concrete) - Commercial | A-006 | CONC-1 / Level B | Wall is below grade | | R-10 (< 0.04%) | No | U-0.080 | 3,050 |
| | Does assembly include insulated wall furring?: No | | | Other Framing Depth: | | | | |
| | Framing Spacing (OC): | | | U-Factor Source: WSEC Appendix A Default | | | | |
| | U-Factor Source Description: Table 101.5 | | | | | | | |

| **Floors and Edges** | **Location in Documents** | **Assembly ID** | **Assembly Location** | **Cavity** | **Continuous (% penetration)** | | **U-Factor** | **Net Area (SF)** |
|---|---|---|---|---|---|---|---|---|
| Steel-framing/joist | I/A-352 | SOF-1 / Levels 2, 3 | Exterior | R-38 | R-10 (< 0.04%) | | U-0.044 | 579 |
| | U-Factor Source: WSEC Appendix A Default | | | U-Factor Source Description: Table 101.5 | | | | |
| | Framing Depth: 2x12 | | | Other Framing Depth: | | | | |
| | Framing Spacing (OC): 16" o.c. | | | | | | | |
| Mass transfer deck slab | Arch | Transfer / Levels 2, 3 | Exterior | | () | | U-0.741 | 229 |
| | U-Factor Source: WSEC Table A103.3.7.2 | | | U-Factor Source Description: Table 103.3.7.2(1) | | | | |
| | Wall Thickness Above/Below Floor: 6-inch | | | | | | | |
| Intermediate mass floor edge - Commercial | Arch | Slab Edge / Levels 1-3 | Exterior & above grade | | R-10 (< 0.04%) | | U-0.088 | 373 |
| | U-Factor Source: WSEC Appendix A Default | | | U-Factor Source Description: Table 103.3.7.2(1) | | | | |
| | Wall Thickness Above/Below Floor: 6-inch | | | | | | | |

| **Slab-on-grade Floors** | **Location in Documents** | **Assembly ID** | **Assembly Location** | **Slab Edge** | **Under Slab** | | **F-Factor** | **Perimeter Length (SF)** |
|---|---|---|---|---|---|---|---|---|
| Unheated slab | Arch | FL-1 / Levels 1, B | At grade level | R-10 | R-0 | | F-0.54 | 421 |
| | Slab Insulation Method: 2 ft horizontal (no slab edge insulation) | | | F-Factor Source: WSEC Appendix A Default | | | | |
| | F-Factor Source Description: Table A106.1 | | | | | | | |

**Fenestration & Opaque Door Assemblies**

| **Opaque Doors** | **Location in Documents** | **Assembly ID** | **Assembly Location** | **Insulation R-Values** Door Insulation | | | **U-Factor** | **Rough Opening (SF)** |
|---|---|---|---|---|---|---|---|---|
| Swinging | A-606 | SI-1.1, SW-1.3, 002B.2, 103B.3 | Exterior | | | | U-0.37 | 99 |
| | What percentage of this opaque door is glazing?: 50% or less | | | U-Factor Source: WSEC Appendix A Default | | | | |
| | U-Factor Source Description: Table A107.1(1) | | | Is this a public entrance door?: No | | | | |

| **Vertical Fenestration** | **Location in Documents** | **Assembly ID** | **Assembly Location** | | **Shading (PF)** | **Fenestration SHGC** | **Fenestration U-Factor** | **Rough Opening (SF)** |
|---|---|---|---|---|---|---|---|---|
| Fixed - Class AW or site built | A-603 | Storefronts: SF1-SF15 | Exterior | | PF < 0.2 | SHGC-0.38 | U-0.34 | 1,729 |
| | U-Factor & SHGC Source: NFRC Rating | | | U-Factor Source Description: NFRC Certified | | | | |
| Fixed - All other types | A-602 | W4, W4.1, W4.2, W4.3, W4.4, W5, W5.1, W5.2, W5.3 | Exterior | | PF < 0.2 | SHGC-0.35 | U-0.26 | 1,644 |
| | U-Factor & SHGC Source: NFRC Rating | | | U-Factor Source Description: NFRC Certified | | | | |
| Operable - All other types | A-602 | W1, W1.1, W1.2, W1.3, W2, W2.1, W2.2, W3 | Exterior | | PF < 0.2 | SHGC-0.33 | U-0.28 | 2,413 |
| | U-Factor & SHGC Source: NFRC Rating | | | U-Factor Source Description: NFRC Certified | | | | |

| **Glazed Doors** | **Location in Documents** | **Assembly ID** | **Assembly Location** | | **Shading (PF)** | **Fenestration SHGC** | **Fenestration U-Factor** | **Rough Opening (SF)** |
|---|---|---|---|---|---|---|---|---|
| Swinging entrance door | A-602 | Metal entrance door: 002.2, 003.2, 100.1, 106, 110.1, 117.2, 118.3, 103A.2, 103A.3, 103B.2 | Exterior | | PF < 0.2 | SHGC-0.33 | U-0.60 | 275 |
| | U-Factor & SHGC Source: NFRC Rating | | | U-Factor Source Description: NFRC Certified | | | | |
| | Is this a public entrance door?: No | | | | | | | |

| **Skylights** | **Location in Documents** | **Assembly ID** | **Assembly Location** | | | **Fenestration SHGC** | **Fenestration U-Factor** | **Rough Opening (SF)** |
|---|---|---|---|---|---|---|---|---|
| All types | A-602 | Skylights: SK-1 | Exterior | | | SHGC-0.68 | U-0.50 | 102 |
| | U-Factor & SHGC Source: NFRC Rating | | | U-Factor Source Description: NFRC Rating | | | | |

| **Project Title** | BARNABIE POINT K-8 - 2021 WSEC | | | | | | **Date** | May 22, 2025 |
|---|---|---|---|---|---|---|---|---|
| **U x A Calculation** | **NEW BUILDING - FULLY CONDITIONED** | | | | | | **COMPLIES** | |
| **Opaque Envelope Assemblies** | | | **PROPOSED** | | | **TARGET** | | |
| **Roof/Ceiling** | **Assembly ID** | | **Roof/Ceiling Assembly U-Factor** | **Net Area (SF)** | **U x A** | **Roof/Ceiling Assembly U-Factor** | **Net Area (SF)** | **U x A** |
| Insulation entirely above deck | R1 / Levels 2, 3, Roof | | 0.025 | 16,659.0 | 416.5 | 0.027 | 16,659.0 (1) | 449.8 |
| Attic and other | Vestibule / Level 1 | | 0.020 | 75.0 | 1.5 | 0.021 | 75.0 (1) | 1.6 |
| **Walls** | **Assembly ID** | | **Wall Assembly U-factor** | **Net Area (SF)** | **U x A** | **Wall Assembly U-factor** | **Net Area (SF)** | **U x A** |
| Steel-framed - Commercial | MTL-1, MTL-2, FC-1 / Levels B, 1-3, Roof | | 0.046 | 15,235.0 | 700.8 | 0.055 | 15,235.0 (1) | 837.9 |
| Mass (precast concrete) - Commercial | CONC-2 / Level B | | 0.088 | 357.0 | 31.4 | 0.104 | 357.0 (1) | 37.1 |
| Mass (precast concrete) - Commercial | Elevator Pit | | 0.080 | 154.0 | 12.3 | 0.104 | 154.0 (1) | 16.0 |
| Mass (precast concrete) - Commercial | CONC-1 / Level B | | 0.080 | 3,050.0 | 244.0 | 0.104 | 3,050.0 (1) | 317.2 |
| **Floors and Edges** | **Assembly ID** | | **Floor Assembly U-Factor** | **Net Area (SF)** | **U x A** | **Floor Assembly U-Factor** | **Net Area (SF)** | **U x A** |
| Steel-framing/joist | SOF-1 / Levels 2, 3 | | 0.044 | 579.0 | 25.5 | 0.029 | 579.0 (1) | 16.8 |
| Mass transfer deck slab | Transfer / Levels 2, 3 | | 0.741 | 229.0 | 169.7 | 0.20 | 229.0 (1) | 45.8 |
| Intermediate mass floor edge - Commercial | Slab Edge / Levels 1-3 | | 0.088 | 373.0 | 32.8 | 0.104 | 373.0 (1) | 38.8 |
| **Slab on Grade Floors** | | | **PROPOSED** | | | **TARGET** | | |
| **Slab-on-grade Floors** | **Assembly ID** | | **F-Factor** | **Perimeter Length (LF)** | **U x A** | **F-Factor** | **Perimeter Length (LF)** | **U x A** |
| Unheated slab | FL-1 / Levels 1, B | | 0.54 | 421.0 | 227.3 | 0.54 | 421.0 (1) | 227.3 |
| **Fenestration Assemblies** | | | **PROPOSED** | | | **TARGET** | | |
| **Opaque Doors** | **Assembly ID** | | **Door Assembly U-Factor** | **Assembly Rough Opening (SF)** | **U x A** | **Door Assembly U-Factor** | **Assembly Rough Opening (SF)** | **U x A** |
| Swinging | SI-1.1, SW-1.3, 002B.2, 103B.3 | | 0.37 | 99.0 | 36.6 | 0.37 | 99.0 (1) | 36.6 |
| **Vertical Fenestration** | **Assembly ID** | | **Fenestration U-Factor** | **Assembly Rough Opening (SF)** | **U x A** | **Fenestration U-Factor** | **Assembly Rough Opening (SF)** | **U x A** |
| Fixed - Class AW or site built | Storefronts: SF1-SF15 | | 0.34 | 1,729.0 | 587.9 | 0.34 | 1,729.0 (1) | 587.9 |
| Fixed - All other types | W4, W4.1, W4.2, W4.3, W4.4, W5, W5.1, W5.2, W5.3 | | 0.26 | 1,644.0 | 427.4 | 0.26 | 1,644.0 (1) | 427.4 |
| Operable - All other types | W1, W1.1, W1.2, W1.3, W2, W2.1, W2.2, W3 | | 0.28 | 2,413.0 | 675.6 | 0.28 | 2,413.0 (1) | 675.6 |
| **Glazed Doors** | **Assembly ID** | | **Glazed Door U-Factor** | **Assembly Rough Opening (SF)** | **U x A** | **Glazed Door U-Factor** | **Assembly Rough Opening (SF)** | **U x A** |
| Swinging entrance door | Metal entrance door: 002.2, 003.2, 100.1, 106, 110.1, 117.2, 118.3, 103A.2, 103A.3, 103B.2 | | 0.60 | 275.0 | 165.0 | 0.60 | 275.0 (1) | 165.0 |
| **Skylights** | **Assembly ID** | | **Skylight U-Factor** | **Assembly Rough Opening (SF)** | **U x A** | **Skylight U-Factor** | **Assembly Rough Opening (SF)** | **U x A** |
| All types | Skylights: SK-1 | | 0.50 | 102.0 | 51.0 | 0.50 | 102.0 (1) | 51.0 |

| | **Proposed Area** | **Proposed UxA** | **Target Area** | **Target UxA** |
|---|---|---|---|---|
| **Project Totals** | **43,394** | **3,805** | **43,394** | **3,932** |

| **Project Title** | BARNABIE POINT K-8 - 2021 WSEC | | | | | | | | | **Date** | May 22, 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SHGC x A Calculation** | **NEW BUILDING - FULLY CONDITIONED** | | | | | | | | | **COMPLIES** | |
| **Fenestration Assemblies** | | | | | | **PROPOSED** | | | | **TARGET** | | |
| **Glazed Doors** | **Assembly ID** | | | **PF** | **Glazed Door SHGC** | **Assembly Rough Opening (SF)** | **SHGC x A** | | | **Glazed Door SHGC** | **Assembly Rough Opening (SF)** | **SHGC x A** |
| Swinging entrance door | Metal entrance door: 002.2, 003.2, 100.1, 106, 110.1, 117.2, 118.3, 103A.2, 103A.3, 103B.2 | | | PF < 0.2 | 0.33 | 275.0 | 90.8 | | | 0.33 | 275.0 (1) | 90.8 |
| **Horizontal** | **Assembly ID** | | | **PF** | **Skylight SHGC** | **Assembly Rough Opening (SF)** | **SHGC x A** | | | **Skylight SHGC** | **Assembly Rough Opening (SF)** | **SHGC x A** |
| Skylights | Skylights: SK-1 | | | | 0.68 | 102.0 | 69.4 | | | 0.35 | 102.0 (1) | 35.7 |
| **Vertical Fenestration** | **Assembly ID** | | | **PF** | **Fenestration SHGC** | **Assembly Rough Opening (SF)** | **SHGC x A** | | | **Fenestration SHGC** | **Assembly Rough Opening (SF)** | **SHGC x A** |
| Fixed - Class AW or site built | Storefronts: SF1-SF15 | | | PF < 0.2 | 0.38 | 1,729.0 | 657.0 | | | 0.38 | 1,729.0 (1) | 657.0 |
| Fixed - All other types | W4, W4.1, W4.2, W4.3, W4.4, W5, W5.1, W5.2, W5.3 | | | PF < 0.2 | 0.35 | 1,644.0 | 575.4 | | | 0.38 | 1,644.0 (1) | 624.7 |
| Operable - All other types | W1, W1.1, W1.2, W1.3, W2, W2.1, W2.2, W3 | | | PF < 0.2 | 0.33 | 2,413.0 | 796.3 | | | 0.33 | 2,413.0 (1) | 796.3 |

| | **Proposed Area** | **Proposed SHGC x A** | **Target Area** | **Target SHGC x A** |
|---|---|---|---|---|
| **Project Totals** | **6,163** | **2,189** | **6,163** | **2,204** |

| C411 ON-SITE RENEWABLE ENERGY SYSTEM SIZING. | |
|---|---|
| Barnabie Point K-8 | |
| **21651.00** | Watts rated peak photovoltaic energy production required |
| Conditioned area of the building. | |
| Total | 43302 square feet of conditioned space |
| Pavlo Serdechnyi, BEE Engineers<br>170 W. Dayton St., Suite 206, Edmonds, WA 98020<br>E: pavlo@bee-engineers.com | 5/22/2025 |

| | |
|---|---|
| Solar Resource Data: | The National Solar Radiation Database (NSRDB) |
| Module Type: | Standard |
| Cell Material: | Crystalline, Silicon |
| Nominal Efficiency (Approx.): | 15% |
| Module Cover: | Glass |
| Temperature Coefficient: | -0.47%/°C |
| Array Type: | Fixed |
| System Losses (Approx.): | 14% |
| DC System Size, kW: | 21.7 |

| | |
|---|---|
| Average Nominal Power of PV Panel, W: | 400 |
| Estimated PV panel area, sq. ft: | 22.2 |
| Estimated PV panels quantity: | 55 |
| Approximate PV panels total area, sq. ft*: | 1230 |

*Total area might vary depending on the nominal power of a particular PV panel.

## Building Envelope Requirements List, pg 1 of 13

2021 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2025 NEEA, All rights reserved
The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

Project:
BARNABIE POINT K-8 - 2021 WSEC
3700 E MERCER WAY
Mercer Island, WA 98040

Date: 2025-05-22

| Applies | Code Section | Component | Compliance Information Required In Permit Documentation | Location in Documents | Building Department Notes |
|---|---|---|---|---|---|
| **SCOPE** | | | | | |
| NA | C103 | Construction documents - General | For a tenant space (first build-out) project, indicate if there is no envelope scope included in the project. | | |
| NA | C103 | Construction documents - General | For an alteration project, indicate if there is no envelope scope included in the project. | | |
| NA | C402.1.1.1 | Low energy spaces | Identify low energy enclosed spaces on plans; include calculations if applicable that demonstrate eligibility for envelope provisions exemption. | | |
| NA | C402.1.1.2 | Semi-heated spaces | Identify semi-heated spaces on plans, include mechanical heating system type and capacity calculations that demonstrate eligibility for wall insulation exemption. | | |
| NA | C402.1.1.3 | Greenhouse spaces | Identify greenhouse spaces on plans; include vertical fenestration and glazed roof / skylight assembly information and mechanical heating system type if applicable, that demonstrates eligibility for envelope provisions exemption. | | |
| NA | C402.1.2 | Equipment buildings | Provide building sf area, average wall and roof U-factor, installed electric equipment power (W/sf); mechanical equipment type and capacity (btu/h*sf) and heating setpoint restriction (≤ 50$_F$/≥F) to demonstrate eligibility for envelope provisions exempt | | |
| NA | C402.1.2.1 | Standalone elevator hoistways | Identify elevator hoistway on plans and indicate it does not serve or open into conditioned or semi-heated space; indicate dedicated HVAC system includes heating and cooling setpoints restrictions (≤ 40$_F$/≥F and ≥ 95$_F$/≥F, respectively) to demonstrate | | |
| NA | C410.3 | Walk-in cooler and freezer spaces | Identify locations and floor area of each walk-in cooler and freezer space on plans; including site assembled, site constructed and prefabricated units. | | |
| NA | | | Identify locations and floor sf area of warehouse cooler and freezer spaces on plans. | | |
| NA | C101.4.1 | Mixed residential & commercial building | Identify spaces with different occupancy requirements on plans. | | |
| NA | C502.1 | Building additions | Indicate whether the building addition complies as a stand-alone project or if the addition and the existing building is combined into a single building to demonstrate compliance. | | |



## Building Envelope Requirements List, pg 2 of 13

2021 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2025 NEEA, All rights reserved
The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

| | | | | | |
|---|---|---|---|---|---|
| NA | C505.2 | Change in space conditioning alterations | Identify on plans existing unconditioned spaces changing to semi-heated or conditioned space, and existing semi-heated spaces changing to conditioned space; provide load calculations per Section C501.2.2 for new and existing to remain (if applicable) mech | | |
| NA | C505.1 | Change in space conditioning alterations | Indicate whether the area under-going a change in space conditioning complies as a stand-alone project or if the alteration area is combined with all existing equivalent space conditioning areas in the building to demonstrate compliance. | | |
| NA | C505.3 | Change in occupancy alterations | Identify on plans existing F, S and U-occupancy spaces undergoing a change in occupancy and final occupancy type. | | |
| NA | | | Identify on plans existing Group R spaces permitted prior to July 1, 2002 that are undergoing a change to a commercial occupancy. | | |
| NA | | | Identify on plans existing commercial (non-Group R) occupancy spaces undergoing a change to a Group R occupancy. | | |
| NA | C505.1 | Change in occupancy alterations | Indicate whether the area under-going a change in occupancy complies as a stand-alone project or if the alteration area is combined with all existing equivalent occupancy areas in the building (as defined per Section C505.3) to demonstrate compliance. | | |
| **ENVELOPE ASSEMBLIES** | | | | | |
| YES | C103.6.3 | Thermal envelope compliance path | Indicate envelope thermal performance compliance path taken (prescriptive or component performance) and provide corresponding WSEC envelope compliance reports in project documentation | BE900 | |
| NA | | | If complying prescriptively, demonstrate that each opaque envelope assembly complies via either the minimum prescriptive R-value per Table C402.1.3 or the maximum prescriptive U-factor/F-factor per Table C402.1.4; include U-factor/F-factor source in compl | | |
| NA | | | If complying via component performance, demonstrate that the Proposed Total UxA is equal to or less than the Allowable Total UxA; also demonstrate that the Proposed Total SHGCxA is equal to or less than the Allowable SHGCxA. | | |
| YES | | | If complying via total building performance, provide a list of all proposed envelope component types, areas and U-values in energy model documentation. | BE900 | |



BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
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FAX: 425 712-8608

PATRICK McMAHON — STATE OF WASHINGTON — 19525956 — REGISTERED PROFESSIONAL ENGINEER

BARNABIE POINT PROJECT
3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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SHEET NAME:

BUILDING ENVELOPE ENERGY FORMS

SHEET NUMBER:

BE901

## Building Envelope Requirements List, pg 3 of 13

2021 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2025 NEEA, All rights reserved
The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

| | | | | | |
|---|---|---|---|---|---|
| YES | C303.1.1 | General insulation installation | Indicate installation methods, thicknesses, densities and clearances to achieve the intended R-value of all insulation materials | A-006, BE901 | |
| NA | | | Where two or more layers of rigid insulation will be used, indicate that edge joints between layers are staggered, or exception taken. | | |
| YES | C303.1.1<br>C303.1.2 | Insulation identification | For insulation materials that are provided with a manufacturer's R-value identification mark, indicate that the insulation shall be installed such that the mark is readily observable during inspection. | A-006, BE901 | |
| YES | C303.1.1<br>C303.1.2 | Insulation identification | For insulation materials that are not installed with an R-value identification mark, indicate that an insulation certificate per Section C303.1.1 shall be provided immediately after installation in a conspicuous location in the building so it is readily a | A-006, BE901 | |
| YES | C303.1.3<br>C402.4.3 | Fenestration product rating | Indicate fenestration products shall be labeled with NFRC U-factor, SHGC, VT and leakage rating, if fenestration products do not have an NFRC rating, indicate applicable Chapter 3 default values. | A-602, A-603, BE901 | |
| YES | C103.2<br>C402.2.1 | Roof assembly insulation | Indicate R-value(s) of cavity and / or continuous insulation on roof sections and WSEC envelope compliance reports | A-006, BE901 | |
| NA | | | Where insulation thickness varies by greater than 1 inch, provide area weighted average U-factor calculation | | |
| YES | | | Indicate framing materials and framing depths on roof sections. | A-006, BE901 | |
| NA | | | For ceilings below vented attics and vaulted ceilings, indicate framing method (standard or advanced) per Section A102.2. | | |
| NA | | | For roof assemblies with insulation entirely above deck that is tapered, indicate effective U-factors of tapered insulation per Section A102.2.6; include roof configuration and slope, maximum R-value at peak and minimum R-value at low point for all roof s | | |
| NA | | | For metal building roofs, indicate R-values for thermal spacers and each insulation layer, and liner system (LS) method. | | |
| NA | C402.2.1.3 | Skylight curb insulation | Indicate skylight curb insulation R-value on roof section, if not included in skylight NFRC rating. | | |
| NA | C402.2.1.4 | Rooftop HVAC equipment curbs | Indicate rooftop HVAC equipment curb insulation R-value on roof section. | | |
| YES | C103.2<br>C402.2.2<br>C402.2.5 | Above/below grade wall assembly insulation | Indicate R-value(s) of cavity and / or continuous insulation on wall sections and WSEC envelope compliance reports | A-006, BE901 | |



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| | | | | | |
|---|---|---|---|---|---|
| YES | | | For mass walls, indicate material density category, wall thickness, weight and heat capacity. | A-006, BE901 | |
| NA | | | For integral insulated ASTM C90 concrete masonry walls eligible for wall insulation exception, indicate loose-fill core insulation material and percentage of cores filled including grouted cores, bond beams, vertical fills, headers and any other grouted c | | |
| NA | | | For wall assemblies that include wall furring, indicate the framing materials and framing depths on wall sections. | | |
| NA | | | For exposed exterior basement / crawlspace walls, indicate method of protection of insulation. | | |
| NA | | | For wood-framed wall assemblies, indicate on plans the framing depth and method (standard, intermediate or advanced) per Section A103.2. | | |
| YES | C103.2<br>C402.2.2<br>C402.2.5 | Above grade wall assembly insulation | For steel-framed and metal building wall assemblies, indicate framing depth on plans. | A-006, BE901 | |
| NA | C402.1.4.3 Table C402.1.4 Foot | Thermal resistance of mechanical equipment penetrations | Where mechanical systems include through-wall penetrations, indicate penetration locations on plans and provide calculation of the total percent sf area of mechanical penetrations | | |
| NA | C402.1.4.3 Table C402.1.4 Foot | Thermal resistance of mechanical equipment penetrations | If total sf area of through-wall penetrations exceeds 1% of the above grade wall area, the proposed wall assembly U-factor shall be calculated by area-weighting the proposed wall assembly type U-factor with a default U-factor of U-0.50 for the mechanical | | |
| NA | Table C402.1.3 Footnote h Tabl | Peripheral edges of intermediate concrete floors[1/2] | Indicate that the total sf area of the peripheral edges of intermediate concrete floors (slab thickness multiplied by perimeter length) is accounted for as a separate above grade mass wall assembly for prescriptive or component performance compliance: ref | | |
| YES | C103.2<br>C402.4.4 | Opaque doors | For solid opaque doors and doors with ≤ 50% integral glazed area, indicate rated U-factor for swinging (per NFRC-100) and non-swinging doors on wall sections or in door schedules, and WSEC envelope compliance reports. | A-602, BE901 | |
| NA | C103.2<br>C402.4.4 | Garage doors | Indicate rated U-factor for opaque sectional, roll-up, tilt-up, metal coiling and sliding garage doors on wall sections or in door schedules, and WSEC envelope compliance reports. | | |



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| | | | | | |
|---|---|---|---|---|---|
| NA | C103.2<br>C303.1.3<br>C402.4.4 Tabl | Garage doors | For garage doors with ≤ 50% integral glazed area, indicate glazing configuration (single or multiple row), percentage of glazed area and rated U-factor (per NFRC 100, ANSI/DASMA 105 or eligibilty for exception) on wall sections or in door schedules, an | | |
| YES | C103.2<br>C402.2.3 | Floor assembly (over outdoor or unconditioned space) insulation | Indicate R-value(s) of cavity and/or continuous insulation on floor sections and WSEC envelope compliance reports | A-006, BE901 | |
| YES | | | For floor joists, indicate framing material and framing depth on floor sections. | A-352 | |
| NA | | | For mass floors, indicate material density category, floor thickness, weight and heat capacity. | | |
| NA | C402.2.8 | Above-grade exterior concrete slabs | Indicate on plans the locations of all decks, balconies and other above-grade concrete slabs that penetrate the building thermal envelope; indicate the total sf area (slab thickness multiplied by the perimeter length) is accounted for as a separate above | | |
| NA | C402.2.8 | Above-grade exterior concrete slabs | For prescriptive compliance, indicate a minimum R-10 thermal break at all above-grade exterior concrete slab locations (or applicable exception); for component performance compliance, indicate code target U-factor for a mass wall and proposed U-factor as | | |
| YES | | | Indicate R-value of continuous insulation on wall section or foundation detail and WSEC envelope compliance reports | A-006, BE901 | |
| NA | | | Indicate method of protection of exposed exterior slab edge insulation | | |
| YES | | | For un-heated slab-on-grade floors, to comply prescriptively indicate insulation extends down vertically and / or horizontally the required distance from top of slab; for component performance provide effective F-factor. | A-301, A-302 | |
| NA | | | For heated slab-on-grade floors, to comply prescriptively indicate insulation extends down vertically from top of slab and then horizontally under the entire slab; for component performance provide effective F-factor for a heated slab. | | |
| YES | | | Indicate on plans the locations and configuration of all mass transfer deck slabs; indicate the total sf area (slab thickness multiplied by the length of the edge condition) is accounted for as a separate above grade wall assembly; indicate compliance is | Arch, BE901 | |



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| | | | | | |
|---|---|---|---|---|---|
| NA | C402.2.6 | Radiant heating system panels insulation | Indicate on plans the insulation R-value behind radiant panels, U-bend/headers and bottom surface of radiantly heated floors (other than heated slab-on-grade). | | |
| YES | C402.4<br>C303.1.3 | Vertical fenestration assembly performance factors | Indicate U-factors, SHGC and VT values in fenestration schedules and WSEC envelope compliance reports | A-602, A-603, BE901 | |
| YES | | | Indicate if an area-weighted U-factor is used for multiple fenestration types within the same fenestration category per Table C402.4; provide area-weighted U-factor calculation | A-602, A-603, BE901 | |
| YES | | | Indicate if U-factor, SHGC and VT values are NFRC or default; if default then specify frame type, glazing layers, gap width, low-e coatings, gas-fill. | A-602, A-603, BE901 | |
| NA | C402.4.3.3 | Dynamic glazing performance factors | Indicate U-factors, variable SHGCs and VT values for dynamic glazing products in fenestration schedules and WSEC envelope compliance reports; indicate automatic controls that modulate solar gain in multiple steps; dynamic glazing cannot be area-weighted w | | |
| NA | C402.4.3 | Permanent shading projection factor (PF) | For vertical fenestration shaded by building element overhangs or permanent external shading devices, provide projection factor calculations per Equation 4-6 for each fixed and operable vertical fenestration type with similar permanent shading geometry. | | |
| NA | C402.2.9 | Vertical fenestration intersection with opaque walls[1/2] | For vertical fenestration within wall assemblies with continuous insulation (CI), indicate in wall sections that the exterior glazing layer and thermal break are aligned laterally within 2-inches of the CI layer. | | |
| YES | C402.2.9 | Vertical fenestration intersection with opaque walls[1/2] | For vertical fenestration within wall assemblies without continuous insulation, indicate in wall sections that the exterior glazing layer and thermal break are aligned laterally within 2-inches of the exterior face of the outermost insulation layer. | Arch | |
| NA | C402.2.9 | Vertical fenestration intersection with opaque walls[1/2] | "For vertical fenestration that is inset from the exterior face of the opaque wall rough opening, indicate in wall sections that the exposed exterior portion of the rough opening is covered with a material with an R-value of at least R-3 (insulation, 1-1/ | | |
| YES | C402.4.1<br>C502.2.1 | Vertical fenestration maximum area | For window-to-wall ratio (WWR) calculation, provide total net sf area of all above grade wall assemblies and total rough opening sf area of all vertical fenestration assemblies in the building; each space conditioning category in the building shall be cal | BE901 | |



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| | | | | | |
|---|---|---|---|---|---|
| NA | C402.4.1<br>C502.2.1 | Vertical fenestration maximum area | If WWR exceeds the prescriptive maximum allowed, indicate alternate compliance method applied (component performance calculation with target area adjustment, vertical fenestration high performance prescriptive alternate, or both). | | |
| NA | C402.1.5 | Vertical fenestration maximum area | If component performance with target area adjustment (TAA) will be used to account for vertical fenestration area in excess of the prescriptive maximum allowed; include TAA calculation in WSEC envelope compliance reports. | | |
| NA | C402.4.1.1<br>C402.4.1.1.1<br>C502. | Vertical fenestration prescriptive alternate - Optimized daylighting | Provide calculations that demonstrate at least 50% of the total conditioned floor area is within a daylight zone; demonstrate compliance for each space conditioning category in the building separately | | |
| NA | | | Indicate in project plans that all lighting fixtures located within daylight zones shall be provided with daylight responsive controls per Section C405.2.4.1 | | |
| NA | | | Indicate that the visible transmittance (VT) of all vertical fenestration in the building is at least 1.1 times the required SHGC per Table C402.4 or no less than VT-0.50, whichever is greater. | | |
| NA | C402.4.1.1<br>C402.4.1.1.2<br>C502. | Vertical fenestration prescriptive alternate - High performance fenestration | Indicate high performance U-factors and SHGC values in fenestration schedules and WSEC envelope compliance reports | | |
| NA | | | Indicate if an area-weighted U-factor is used for multiple high performance fenestration elements within the same fenestration category per Table C402.4; provide area-weighted U-factor calculation. | | |
| YES | C402.4<br>C303.1.3 | Skylight (horizontal fenestration) assembly performance factors | Indicate U-factors, SHGC and VT values in fenestration schedules and WSEC envelope compliance reports; indicate if values are NFRC or default | A-603, BE901 | |
| NA | C402.4.3.4 | Skylight (horizontal fenestration) assembly performance factors | Indicate if an area-weighted U-factor is used for multiple skylight types; provide area-weighted U-factor calculation. | | |
| YES | C402.4.1<br>C502.2.2 | Skylight maximum area | For skylight-to-roof ratio (SRR) calculation, provide total net sf area of roof and total rough opening sf area of all skylight assemblies in the building; each space conditioning category in the building shall be calculated separately; include SRR in WSE | BE901 | |
| NA | C402.4.1<br>C402.1.5<br>C502.2.2 | Skylight maximum area | If SRR exceeds the prescriptive maximum allowed, indicate compliance method applied is component performance calculation with target area adjustment. | | |



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| | | | | | |
|---|---|---|---|---|---|
| NA | C402.1.5 | Wall / vertical fenestration and roof / skylight target area adjustment | If target area adjustment (TAA) will be used to account for vertical fenestration and/or skylight area in excess of the prescriptive maximum allowed, include TAA calculations in WSEC envelope compliance reports. | | |
| NA | C402.4.2 | Single story spaces requiring skylights | Provide list of enclosed, single story spaces located directly under a roof that exceed 2,500 sf floor area and have a ceiling height ≥ 15 ft for at least 75% of the ceiling area within the space; for each space identify the space use, floor area, floo | | |
| NA | | | For each space required to comply with the skylight provision, provide calculations for percentage of conditioned floor area located within a toplit daylight zone (minimum is 50%); if exception is taken for spaces where the total floor area minus the side | | |
| NA | | | Indicate compliance method applied to each space (minimum ratio of skylight area to toplit daylight zone area is ≥ 3%, OR minimum skylight effective aperture is ≥ 1% per Equation C4-5); provide compliance method calculations for each space | | |
| NA | | | Indicate haze factor of skylight glazing material or diffuser. | | |
| NA | C410.2 | Walk-in and warehouse cooler and freezer envelope | Indicate insulation R-values for cooler and freezer wall and ceiling assemblies in plans and WSEC envelope compliance reports | | |
| NA | | | Indicate cooler and freezer door insulation R-values in plans and WSEC envelope compliance reports; indicate method of minimizing air infiltration (strip doors, curtains, spring-hinged doors, etc); provide automatic door closure (or note exception taken) | | |
| NA | | | For transparent reach-in doors and fixed windows, indicate number of glass panes (double or triple pane); indicate whether the interstitial spaces between panes is filled with inert gas or if panes are heat-reflective treated glass. | | |
| **ENVELOPE ASSEMBLIES - ADDITIONAL ENERGY EFFICIENCY MEASURE** | | | | | |
| NA | C406.2.12 | Enhanced thermal envelope performance | To comply with this additional efficiency measure, indicate thermal envelope compliance is via component performance; provide WSEC envelope compliance reports that demonstrate Proposed Total UxA is 15% lower than the Allowable (Code Target) Total UxA. | | |
| **ENVELOPE ASSEMBLIES - LOAD MANAGEMENT MEASURES** | | | | | |



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PATRICK McMAHON
STATE OF WASHINGTON
24929
REGISTERED
PROFESSIONAL ENGINEER

# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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THESE DRAWINGS ARE FOR GENERAL ARRANGEMENT OF MATERIALS ON SITE CONDITIONS GOVERN. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS.

SHEET NAME:

BUILDING ENVELOPE ENERGY FORMS

SHEET NUMBER:

BE902

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| | | | | | |
|---|---|---|---|---|---|
| NA | C406.3.3 | Automated shading | To comply with this additional efficiency measure, provide calculations that demonstrate window-to-wall ratio (WWR) on south & west facing exposures exceed 20%: indicate method of shading (movable exterior shading or dynamic glazing) on plans for all sunl | | |
| NA | C406.3.3 | Automated shading | Indicate automatic controls are connected to a central DDC system having digital input capable of being activated by an external utility signal; where utility real-time demand or pricing program exists, indicate system configured to utilize this signal; o | | |
| NA | C406.3.7 | Building thermal mass | To comply with this additional efficiency measure, indicate building includes mass wall and floor assemblies with indoor facing mass surfaces that communicate directly with the conditioned indoor air (wall board and hard surface flooring are permitted wit | | |
| NA | C406.3.7 | Building thermal mass | Indicate HVAC systems serving areas with building thermal mass are configured with summer mode night flush sequence control of air economizers to pre-cool the building during unoccupied periods | | |
| NA | C406.3.7 | Building thermal mass | Indicate automatic controls are connected to a central DDC system having digital input capable of being activated by an external utility signal; where utility real-time demand or pricing program exists, indicate system configured to utilize this signal; o | | |
| **AIR BARRIER & AIR LEAKAGE TEST** | | | | | |
| YES | C402.5.1.1 | Air barrier construction and sealing | Identify location and provide diagram of continuous air barrier in plans and sections | A-007 | |
| YES | | | Provide details for all joints, transitions in materials, penetrations in air barrier and note method of sealing (caulked, gasketed, or other approved method) | A-007 | |
| NA | C402.5.5<br>C402.5.1.1 | Rooms containing fuel burning space conditioning appliances | For room(s) located within the conditioned space that contain non-direct vent fuel-burning appliances that require outdoor air for combustion, indicate method of isolation from the conditioned space; include sealing of walls, floor and ceiling of room, do | | |
| NA | | | Indicate walls, floor and ceiling of the room envelope are insulated to the same level required for an exterior envelope; indicate combustion air ductwork that passes through conditioned space is provided with at minimum R-16 insulation. | | |
| NA | C402.5.6 | Doors and access openings to shafts, chutes, stairways and elevator lobbies | Indicate locations of all doors and access openings to shafts, chutes, stairways and elevator lobbies on plans | | |



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| | | | | | |
|---|---|---|---|---|---|
| NA | | | Indicate method of sealing of these openings (gasketing, weatherstripping, other sealing method); or exception taken. | | |
| YES | C402.5.7 | Outdoor air intakes, exhaust and relief openings | Indicate locations of all stairway enclosure, elevator shaft and building pressurization relief openings, outside air intakes and exhaust openings on plans | Arch | |
| YES | | | Indicate in air barrier documentation and mechanical plans that all relief, outside air intake and exhaust openings shall be provided with dampers in accordance with Mechanical Section C403.7.8. | A-007 | |
| NA | C402.5.10 | Recessed lighting in building envelope | Indicate method of sealing between light fixture housing and wall or ceiling | | |
| NA | | | Indicate in air barrier documentation and lighting fixture schedules that all recessed lighting fixtures shall be IC rated and have an air leakage rating not greater than 2 cfm per ASTM E283 test. | | |
| NA | C402.5.8 | Loading dock seals | Indicate weather seal at cargo and loading dock doors. | | |
| YES | C402.5.9 | Vestibules | Indicate locations and dimensions of vestibules for building entrances; also indicate vestibule information for exit-only doors in buildings where separate doors for entering and exiting are provided | Arch | |
| NA | | | Indicate locations of all building entrances and exit-only doors provided with an air curtain in lieu of a vestibule; indicate air curtain performance complies with requirements per C402.5.9 Exception 7 | | |
| NA | | | Indicate exception and criteria utilized for all building entrances and exit-only doors that do not have a vestibule or air curtain | | |
| NA | | | For unconditioned vestibules, indicate which vestibule envelope assembly (interior or exterior) complies with the thermal envelope performance requirements for a conditioned space. | | |
| NA | C103.2<br>C402.5.1.2C<br>402.5.1.2.1 | Building enclosure air leakage test | Indicate in project documents that building enclosure air leakage testing is required for WSEC compliance | | |
| YES | | | Provide area calculations that account for all six sides of the air barrier boundaries | A-007 | |
| YES | | | For commercial buildings, indicate that building enclosure air leakage testing shall be performed per ASTM C779 (or equivalent method approved by the code official) and the target leakage rate is 0.25 cfm/ft2 (1.5 L/s*m2) at 0.3 in. wg (75 Pa) | A-007 | |



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| | | | | | |
|---|---|---|---|---|---|
| YES | | | For a commercial or Group R occupancy area weighted test, indicate that tested portions of the building shall include all spaces directly under the roof, all spaces that have a building entrance, exposed floor, loading dock or are below grade plane, and representative above-grade areas that total ≥ 25% of the building total above-grade wall area; indicate in project documents that the weighted average air leakage rate of the building thermal envelope shall not exceed 0.25 cfm/ft2 (1.27 L/s*m2) when measured at a pressure differential of 0.3 in. wg (75 Pa). | A-007 | |
| YES | | | For a Group R occupancy building where dwelling units, sleeping units or other condition spaces are accessed directly from the outdoors, indicate that each testing unit, or a representative sampling of units, shall be tested separately via an un-guarded blower door test; indicate in project documents that the weighted average air leakage rate of all testing units combined shall not exceed 0.25 cfm/ft2 (1.27 L/s*m2) when measured at a pressure differential of 0.2 in. wg (50 Pa). | A-007 | |
| NA | | | If the building is mixed residential / commercial and three stories or less above grade plane, indicate which building enclosure air leakage test procedure will be used for the Group R-2 / R-3 areas (Section R402.4.1.2 or C402.5.1.2); if per R402.4.1.2, i | | |
| YES | | | Include the following requirements in project documents: (1) Submit building enclosure air leakage test reports to jurisdiction and owner; (2) If initial test result exceeds 0.25 cfm/ft2 (1.5 L/s*m2), indicate that inspection and all practical corrective | A-007 | |
| **AIR LEAKAGE TEST - ADDITIONAL ENERGY EFFICIENCY MEASURES** | | | | | |
| NA | C406.9 | Reduced air infiltration | To comply with additional efficiency credit, indicate in project documents that the building enclosure air leakage test results shall not exceed 0.17 cfm/ft2 at 0.3 in. wg (75 Pa); all documentation requirements per C103.2 and C402.5.1.2 apply | | |
| NA | C406.2.13<br>C406.2.13.2 | Enhanced reduced air leakage | To comply with this additional efficiency measure, indicate in project documents that the measured air leakage rate of the building thermal envelope for the total conditioned floor area of the whole building or fully isolated building addition or tenant space, shall not exceed 0.0825 cfm/ft2 (0.419 L/s*m2) when measured at a pressure differential of 0.3 in. wg (75 Pa); all documentation requirements per C103.2 and C402.5.1.2 apply. | | |
| **ELEVATORS - ADDITIONAL ENERGY EFFICIENCY MEASURE** | | | | | |



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| | | | | | |
|---|---|---|---|---|---|
| NA | C406.2.18 | Efficient elevator equipment | For buildings ≥ 3 stories above grade, to comply with this additional efficiency measure identify on plans which floors are served by elevators that are rated ISO 25745-2 Energy Efficiency Class A; if not all floors are served by this elevator class, p | | |
| **KITCHEN & LAUNDRY - ADDITIONAL ENERGY EFFICIENCY MEASURES** | | | | | |
| NA | C406.2.14 | ENERGY STAR commercial kitchen equipment¿½ | Indicate building area that this additional efficiency measure is being applied to is Group A-2 or other occupancy where the primary business requires the use of commercial kitchen equipment; include kitchen equipment schedule on plans; indicate project i | | |
| NA | C406.2.15 | ENERGY STAR kitchen appliances serving Group R-1 & R-2 | For Group R-1 & R-2 occupancies, to comply with this additional efficiency measure indicate ≥ 90% of all residential dishwashers, refrigerators and freezers specified are ENERGY STAR Most Efficient qualified models; include kitchen equipment schedule o | | |
| NA | C406.2.16 | ENERGY STAR in-unit laundry appliances serving Group R-2 | For Group R-2 occupancies, to comply with this additional efficiency measure indicate ≥ 90% of all in-unit residential clothes washers and dryers specified are ENERGY STAR Most Efficient qualified models; include laundry equipment schedule on plans; if | | |
| NA | C406.2.17 | ENERGY STAR heat pump clothes dryers serving Group R-1 & R-2 | For Group R-1 & R-2 occupancies, to comply with this additional efficiency measure indicate ≥ 90% of all clothes dryers specified are ENERGY STAR qualified heat pump dryers; includes dryers located in-unit and within central multi-family use laundry ro | | |
| **ENVELOPE ALTERATIONS** | | | | | |
| NA | C503.1 | Roof alteration - insulation | For a roof alteration where existing ceiling cavities are exposed, indicate cavities are insulated to full depth at a minimum nominal value of R-3.0 per inch. | | |
| NA | | | For a roof covering replacement where insulation is installed entirely above the roof deck, or the existing roof contains no insulation, indicate insulation complies with requirements for new construction per Tables C402.1.3 or C402.1.4. | | |
| NA | C503.1 | Wall and floor alteration - insulation | For a wall or floor alteration (floor over outdoor or unconditioned space) where existing envelope cavities are exposed, indicate cavities are insulated to full depth at a minimum nominal value of R-3.0 per inch. | | |



## Building Envelope Requirements List, pg 13 of 13

2021 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2025 NEEA. All rights reserved
The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

| | | | | | |
|---|---|---|---|---|---|
| NA | C503.3.2 | Addition of vertical fenestration | Where the addition of new vertical fenestration results in a window-to-wall ratio (WWR) exceeding the prescriptive maximum allowed per C402.4.1, demonstrate method of compliance (prescriptive vertical fenestration alternate, component performance with tar | | |
| NA | C503.3.3 | Addition of skylights | Where the addition of new skylights results in a skylight-to-roof ratio (SRR) exceeding the prescriptive maximum allowed per C402.4.1, demonstrate method of compliance (component performance compliance with target area adjustment for the alteration area a | | |
| NA | C103.2<br>C103.6.3<br>C505.1<br>C505.4 | Change in space conditioning or occupancy envelope compliance path | For areas under-going a change in space conditioning or occupancy, indicate envelope thermal performance compliance path applied to the building alteration area (prescriptive compliance or component performance with 110% target UxA allowance); provide cor | | |
| NA | C103.2<br>C103.6.3<br>C505.1<br>C505.4 | Change in space conditioning or occupancy envelope compliance path | If complying via total building performance with 110% allowance, provide a list of all proposed envelope component types, areas and U-values in energy model documentation. | | |
| **PROJECT CLOSE OUT** | | | | | |
| YES | C103.6 | Documentation and submittal requirements | Indicate in plans that project close out documentation is required including envelope record construction documents, applicable calculations, WSEC envelope compliance reports, and fenestration NFRC rating certificates. | BE900 | |
| YES | C401.4 | Thermal envelope certificate | Indicate in plans that a thermal envelope certificate is required at project close out; indicate that information on this certificate shall include the rated R-values of all opaque assembly insulation, U-factors & SHGCs for all fenestration assemblies and | BE900 | |
| If "no" is selected for any question, provide explanation. | | | | | |



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PATRICK McMAHON
STATE OF WASHINGTON
24835
REGISTERED
PROFESSIONAL ENGINEER

# BARNABIE POINT PROJECT

3700 E Mercer Way
Mercer Island, WA 98040

| | DATE | DESCRIPTION |
|---|---|---|
| | 01.02.2025 | DESIGN DEVELOPMENT |
| | 06.04.2025 | BUILDING PERMIT |

PHASE:

BUILDING PERMIT
06.04.2025

BEE PROJECT #: 2403-1017

| | |
|---|---|
| P.E.: | Patrick McMahon |
| P.M.: | Patrick McMahon |
| ENERGY: | Katya Bautista |
| DRAFTER: | Shamil Khayrutdinov |

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THESE DRAWINGS ARE FOR GENERAL ARRANGEMENT OF MATERIALS ON SITE CONDITIONS GOVERN. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS.

SHEET NAME:

BUILDING ENVELOPE ENERGY FORMS

SHEET NUMBER:

BE903

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| Abbreviations Legend | |
|---|---|
| A | |
| @ | AT |
| A/C | AIR CONDITION(ING) (ED) |
| A/C UNIT | AIR CONDITIONING UNIT |
| AB | ANCHOR BOLT |
| ABBVR | ABBREVIATION |
| ACCU | AIR COOLED CONDENSING UNIT |
| AD | AREA DRAIN, ACCESS DOOR |
| ADA | AMERICANS WITH DISABILITIES ACT |
| ADDL | ADDITIONAL |
| ADDM | ADDENDUM |
| AE | ARCHITECT/ ENGINEER |
| AFC | AUTOMATIC FLOW CONTROL |
| AFF | ABOVE FINISHED FLOOR |
| AHR | AIR HOSE REEL |
| AHU | AIR HANDLING UNIT |
| ALT | ALTERNATE |
| AP | ACCESS PANEL |
| ARCH | ARCHITECT(URAL) |
| AS | AIR SEPARATOR |
| B | |
| B/B | BACK-TO-BACK |
| BD | BLOW DOWN |
| BLDG | BUILDING |
| BM | BENCHMARK, BEAM |
| BOT | BOTTOM |
| BRZ | BRONZE |
| BSMT | BASEMENT |
| BTU | BRITISH THERMAL UNIT |
| BTWN | BETWEEN |
| BV | BALANCING VALVE |
| BWV | BACKWATER VALVE |
| C | |
| CB | CATCH BASIN |
| CD | CONDENSATE DRAINAGE |
| CF/CI | CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED |
| CF/OI | CONTRACTOR FURNISHED/ OWNER INSTALLED |
| CI | CAST IRON |
| CL | CENTER LINE |
| CLG | CEILING |
| CLR | CLEAR |
| CMU | CONCRETE MASONRY UNIT |
| CO | CLEANOUT |
| COL | COLUMN |
| CONC | CONCENTRATE, CONCRETE |
| COND | CONDENSATE |
| CONN | CONNECT(ION), CONNECT |
| CONT | CONTINUOUS |
| CONV | HYDRONIC CONVECTOR |
| COORD | COORDINATE, COORDINATION |
| CTR | CENTER |
| CTRL | CONTROL |
| CUH | CABINET UNIT HEATER |
| CW | COLD WATER, CASEMENT WINDOW |
| D | |
| DB | DRY BULB |
| DBL | DOUBLE |
| DCW | DOMESTIC COLD WATER |
| DEG | DEGREE |
| DEMO | DEMOLITION |
| DET | DETAIL |
| DF | DRINKING FOUNTAIN |
| DFU | DRAINAGE FIXTURE UNIT |
| DHW | DOMESTIC HOT WATER |
| DHWC | DOMESTIC HOT WATER CIRC. |
| DIA or Ø | DIAMETER |
| DIFF | DIFFUSER |
| DIM | DIMENSION |
| DIST | DISTANCE |
| DN | DOWN |
| DOZ | DOZEN |
| DS | DOWNSPOUT |
| DW | DISH WASHER |
| DWG | DRAWING |
| DXC | DIRECT EXPANSION COOLING COIL |
| E | |
| E | EAST |
| EA | EACH, EXHAUST AIR |
| EL | ELEVATION |
| ENCL | ENCLOSURE |
| ENGR | ENGINEER |
| EPDM | ETHYLENE PROPYLENE DIENE MONOMER |
| EQ | EQUAL |
| EQUIP | EQUIPMENT |
| ETC | ET CETERA |
| EWC | ELECTRIC WATER COOLER |
| EWH | ELECTRIC WATER HEATER |
| EXC | EXCAVATE |
| EXH | EXHAUST |
| EXIST | EXISTING |
| EXP | EXPAND, EXPANSION |
| EXT | EXTERIOR |
| F | |
| F/F | FACE-TO-FACE |
| FACP | FIRE ALARM CONTROL PANEL |
| FCU | FAN COIL UNIT |

| Abbreviations Legend | |
|---|---|
| FD | FLOOR DRAIN |
| FDR | FOUNDATION DRAINAGE |
| FIN | FINISH |
| FIXT | FIXTURE |
| FLR | FLOOR |
| FNDN | FOUNDATION |
| FOR | FUEL OIL RETURN |
| FOS | FUEL OIL SUPPLY |
| FOV | GENERATOR VENT |
| FRP | FIBERGLASS REINFORCED PLASTIC |
| FT | FOOT, FEET |
| FTG | FOOTING |
| G | |
| GA | GAGE |
| GAL | GALLON |
| GALV | GALVANIZED |
| GALV STL | GALVANIZED STEEL |
| GC | GENERAL CONTRACTOR |
| GD | GARAGE DRAIN |
| GE | GENERATOR EXHAUST |
| GE | GENERATOR EXHAUST |
| GEN | GENERAL, GENERATOR |
| GL | GLASS, GROUND LEVEL |
| GYM | GYMNASIUM |
| H | |
| HB | HOSE BIBB |
| HC | HANDICAP, HOLLOW CORE |
| HCP | HANDICAPPED |
| HD | HEAVY DUTY |
| HR | HOUR |
| HT | HEIGHT |
| HVAC | HEATING, VENTILATING AND AIR CONDITIONING |
| HW | HOT WATER |
| I | |
| ID | INSIDE DIAMETER |
| IN | INCHES |
| INCL | INCLUDE |
| INFO | INFORMATION |
| INSUL | INSULATION |
| IRR | IRRIGATION WATER |
| J | |
| JAN | JANITOR |
| JAN CLO | JANITOR CLOSET |
| K | |
| KIP | 1000 POUNDS |
| KIT | KITCHEN |
| L | |
| L | LITER, ANGLE |
| LAB | LABORATORY |
| LAV | LAVATORY |
| LBL | LABEL |
| LBS | POUND |
| LF | LINEAR FEET |
| LIN | LINEAR |
| M | |
| MACH | MATCHLINE |
| MACH RM | MACHINE ROOM |
| MAINT | MAINTENANCE |
| MATL | MATERIAL |
| MAX | MAXIMUM |
| MC | MECHANICAL CONTRACTOR |
| MECH | MECHANICAL |
| MECH RM | MECHANICAL ROOM |
| MFR | MANUFACTURER |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| MM | MILIMETER |
| N | |
| N | NORTH |
| NA | NOT APPLICABLE |
| NG | NATURAL GAS |
| NGV | NATURAL GAS VENT |
| NIC | NOT IN CONTRACT |
| NO or # | NUMBER |
| NOM | NOMINAL |
| NTS | NOT TO SCALE |
| O | |
| O2 | OXYGEN |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER |
| OF/ OI | OWNER FURNISHED/ OWNER INSTALLED |
| OF/CI | OWNER FURNISEHD/ CONTRACTOR INSTALLED |
| OPNG | OPENING |
| OPP | OPPOSITE |
| OPT | OPTIONAL, OPTIMUM |
| ORD | OVERFLOW ROOF DRAIN |
| ORL | OVERFLOW RAIN LEADER |
| P | |
| PC | PLUMBING CONTRACTOR |
| PERF | PERFORATED |
| PGD | PUMPED GARAGE DRAIN |

| Abbreviations Legend | |
|---|---|
| PL | PLATE, PROPERTY LINE |
| PLBG | PLUMBING |
| PNL | PANEL |
| PRELIM | PRELIMINARY |
| PRKG | PARKING |
| PROJ | PROJECT |
| PS | PUMPED STORM |
| PSF | POUNDS PER SQUARE FOOT |
| PSI | POUNDS PER SQUARE INCH |
| PT | POST TENSIONED |
| PVC | POLYVINYL CHLORIDE (PLASTIC) |
| PW | PUMPED WASTE |
| PWR | POWER |
| Q | |
| QTR | QUARTER |
| QTY | QUANTITY |
| R | |
| R | RISER, RADIUS, HEAT RESISTANCE |
| RA | RETURN AIR |
| RAD | RADIATOR |
| RCP | REFLECTED CEILING PLAN |
| RD | ROOF DRAIN |
| REG | REGISTER, REGULATION |
| REINF | REINFORCE |
| REQD | REQUIRED |
| REV | REVISION |
| RFI | REQUEST FOR INFORMATION |
| RH | RIGHT HAND, ROOF HATCH |
| RL | RAIN LEADER |
| RM | ROOM |
| RO | REVERSE OSMOSIS, ROUGH OPENING |
| RTU | ROOF TOP UNIT |
| RV | ROOF VENT |
| S | |
| S | SOUTH |
| SAN | SANITARY |
| SCHED | SCHEDULE |
| SECT | SECTION |
| SF | SQUARE FOOT, SAFETY FACTOR |
| SHR | SHOWER |
| SHT | SHEET |
| SIM | SIMILAR |
| SOG | SLAB ON GRADE |
| SPEC | SPECIFICATION(S) |
| SQ | SQUARE |
| SS | STAINLESS STEEL |
| STD | STANDARD |
| STOR | STORAGE |
| STRUCT | STRUCTURAL |
| SUB | UBSTITUTE |
| SV | SAFETY VALVE, SHEET VINYL |
| SY | SQUARE YARD |
| SYM | SYMBOL |
| SYS | SYSTEM |
| T | |
| T | TREAD |
| T & B | TOP AND BOTTOM |
| TD | TRENCH DRAIN |
| TECH | TECHNICAL, TECHNOLOGY |
| TEMP | TEMPORARY, TEMPERATURE |
| THK | THICKNESS |
| THRU | THROUGH |
| TOC | TOP OF CONCRETE |
| TOF | TOP OF FOOTING, TOP OF FLOOR, TOP OF FRAME |
| TOS | TOP OF STEEL |
| TYP | TYPICAL |
| U | |
| U | HEAT TRANSFER COEFFICIENT |
| U/G | UNDERGROUND |
| UH | UNIT HEATER |
| UL | UNDERWRITERS LABORATORIES |
| UNO | UNLESS NOTED OTHERWISE |
| UTIL | UTILITY |
| UV | UNIT VENTILATOR |
| V | |
| V | SANITARY VENT, VOLT |
| VAR | VARIES, VARIATION |
| VENT | VENTILATION |
| VERT | VERTICAL |
| VOL | VOLUME |
| VUH | VERTICAL UNIT HEATER |
| W | |
| W | SAN WASTE, WATT, WEST |
| W/ | WITH |
| W/O | WITHOUT |
| WC | WALL COVERING, WATER CLOSET |
| WF | WIDE FLANGE |
| WH | WATER HEATER, WALL HUNG |
| WI | WROUGHT IRON |
| WT | WEIGHT |
| Y | |
| Y | YD |

## PIPING MATERIAL SPECIFICATIONS

| PIPING | LOCATION | MATERIAL | SIZE | JOINT | PIPING STANDARDS | DESIGN PRESSURE | NSF COMPLIANCE | | | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 14 | 61 | 372 | |
| COLD WATER | ALL | COPPER TYPE L | 2"& SMALLER | LEAD-FREE SOLDER | ASTM B42, ASTM B43, ASTM B75, ASTM B88 ASTM B135, ASTM B251, ASTM B302, ASTM B447 | 125 PSI | - | YES | YES | |
| | | | 4" & SMALLER | PROPRESS MECH JOINT | | 200 PSI | - | YES | YES | |
| | | | 2 1/2" & LARGER | MFR APPROVED | | 250 PSI | - | YES | YES | |
| | | STAINLESS STL | 2 1/2" & LARGER | WELD/ROLL GROOVE | ASTM A269, ASTM A312 | 300 PSI | - | YES | YES | |
| HOT WATER | ALL | COPPER TYPE L | 2" & SMALLER | LEAD-FREE SOLDER | ASTM AF876, ASTM F877, CSA B1375, AWWA C904 | 125 PSI | - | YES | YES | |
| | | | 4" & SMALLER | PROPRESS MECH JOINT | | 200 PSI | - | YES | YES | |
| | | | 2 1/2" & LARGER | ROLL GROOVE JOINT | | 250 PSI | - | YES | YES | |
| | | STAINLESS STL | 2 1/2" & LARGER | WELD/ROLL GROOVE | ASTM A269, ASTM A312 | 300 PSI | - | YES | YES | |
| WASTE | UNDERGROUND | PVC SCH 40 (SOLID WALL) | ALL SIZES | SOLVENT CEMENT | ASTM D2661, ASTM D2680, ASTM D1785, ASTM F794 | 5 PSI | - | - | - | |
| | ABOVEGROUND | CAST IRON | ALL SIZES | NO-HUB | ASTM A74, ASTM A888, CISPI 301 | 5 PSI | - | - | - | |
| VENT | ALL | PVC SCH 40 (SOLID WALL) | ALL SIZES | SOLVENT CEMENT | ASTM D2661, ASTM D2680, ASTM D1785, ASTM F794 | 5 PSI | - | - | - | |
| GREASE WASTE | ALL | PVC SCH 40 (SOLID WALL) | ALL SIZES | SOLVENT CEMENT | ASTM D2661, ASTM D2680, ASTM D1785, ASTM F794 | 5 PSI | - | - | - | |
| INDIRECT WASTE | ALL | PVC SCH 40 (SOLID WALL) | ALL SIZES | SOLVENT CEMENT | ASTM D2661, ASTM D2680, ASTM D1785, ASTM F794 | 5 PSI | - | - | - | |
| PUMPED WASTE | ALL | PVC SCH 40 (SOLID WALL) | ALL SIZES | SOLVENT CEMENT | ASTM D2661, ASTM D2680, ASTM D1785, ASTM F794 | 5 PSI | - | - | - | |
| RAINLEADER (STORM) | UNDERGROUND | PVC SCH 40 (SOLID WALL) | ALL SIZES | SOLVENT CEMENT | ASTM D2661, ASTM D2680, ASTM D1785, ASTM F794 | 5 PSI | - | - | - | |
| | ABOVEGROUND | CAST IRON | ALL SIZES | NO-HUB | ASTM A74, ASTM A888, CISPI 301 | 5 PSI | - | - | - | |
| PUMPED STORM | ALL | PVC SCH 40 (SOLID WALL) | ALL SIZES | SOLVENT CEMENT | ASTM D2661, ASTM D2680, ASTM D1785, ASTM F794 | 5 PSI | - | - | - | |

## NOTES:

1. THESE PLANS ARE SCHEMATIC AND DO NOT SHOW EXACT ROUTING OR EVERY OFFSET WHICH MAY BE REQUIRED.
2. MATERIALS, METHODS, AND INSTALLATION SHALL COMPLY WITH THE PROVISIONS FOR THE 2021 WA ENERGY CODE.
3. ALL PIPE SIZES NOTED ON DRAWINGS ARE MINIMUMS.
4. SLOPE ALL WASTE PIPING AT 2% UNLESS OTHERWISE NOTED ON DRAWINGS. OBTAIN APPROVAL FROM CODE AUTHORITY BEFORE INSTALLING WASTE PIPING AT LESS THAN 2% (EVEN IF LESSER SLOPE IS INDICATED ON DRAWINGS)
5. HANGERS AND SUPPORTS FOR PIPING SHALL BE IN ACCORDANCE WITH SECTION 313.6 AND 313.0 - TABLE 313.5 OF THE 2021 ENERGY CODE.
6. PIPING PENETRATIONS OF FIRE RATED WALLS OR FLOORS SHALL BE SLEEVED AND FIRE STOPPED WITH LISTED MATERIALS SO AS TO MAINTAIN THE INTEGRITY AND RATING OF THE FLOOR OR WALL.
7. FOR EXACT ROUGH-IN LOCATIONS AND ELEVATIONS OF PLUMBING FIXTURES REFER TO ARCHITECTURAL DRAWINGS.
8. PROVIDE STOPS OR ANGLE VALVES AT ALL FIXTURES.
9. PROVIDE TRAP PRIMERS FOR ALL SELDOM USED FLOOR DRAINS, TRENCH DRAINS AND STANDPIPES.
10. PROVIDE DIELECTRIC CONNECTIONS BETWEEN DISSIMILAR METALS.
11. CLEAN OUTS SHALL BE INSTALLED SO THEY ARE EASILY ACCESSIBLE.
12. PLUMBING EQUIPMENT, VALVES AND TRAP PRIMERS SHALL BE LOCATED IN EASILY ACCESSIBLE LOCATIONS, UNLESS SHOWN ON ARCHITECTURAL DRAWINGS, REQUIRED ACCESS PANELS SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR.
13. WATER HAMMER ARRESTERS: PROVIDE PDI RATED WATER HAMMER ARRESTERS AT ALL FIXTURE GROUPINGS.

## APPLICABLE PROJECT CODES

| YEAR | DESCRIPTION |
|---|---|
| 2021 | WASHINGTON STATE PLUMBING CODE AND AMENDMENTS |
| 2021 | WASHINGTON STATE CODE AND AMENDMENTS |
| 2021 | WASHINGTON STATE CODE AND AMENDMENTS |
| 2021 | WASHINGTON STATE CODE AND AMENDMENTS |

## PLUMBING SERVICES

| COLOR | SERVICE | SERVICE ID |
|---|---|---|
| | DOMESTIC COLD WATER | DCW |
| | DOMESTIC HOT WATER | DHW |
| | DOMESTIC HOT WATER RECIRC | DHWC |
| | SANITARY WASTE | W |
| | VENT | V |
| | PUMPED WASTE | PW |
| | GREASE WASTE | GW |
| | RAIN LEADER (STORM) | RL |
| | PUMPED STORM WATER | PS |
| | FOUNDATION DRAINAGE | FDR |

Sheet List

| Sheet Number | Sheet Name |
|---|---|
| P0.00 | PLUMBING SPECIFICATIONS |
| P0.01 | PLUMBING SPECIFICATIONS |
| P0.02 | PLUMBING SCHEDULES |
| P0.03 | PLUMBING SCHEDULES |
| P2.UG | PLUMBING UNDERGROUND |
| P2.B1.1 | PLUMBING LEVEL B1 WASTE & VENT |
| P2.B1.2 | PLUMBING LEVEL B1 DOMESTIC WATER |
| P2.01.1 | PLUMBING LEVEL 01 WASTE & VENT |
| P2.01.2 | PLUMBING LEVEL 01 DOMESTIC WATER |
| P2.02.1 | PLUMBING LEVEL 02 WASTE & VENT |
| P2.02.2 | PLUMBING LEVEL 02 DOMESTIC WATER |
| P2.03.1 | PLUMBING LEVEL 03 WASTE & VENT |
| P2.03.2 | PLUMBING LEVEL 03 DOMESTIC WATER |
| P2.RF | PLUMBING ROOF LEVEL |
| P3.01 | PLUMBING DETAILS |
| P3.02 | PLUMBING DETAILS |
| P4.01 | WASTE & VENT RISER DIAGRAM |
| P4.02 | DOMESTIC WATER RISER DIAGRAM |

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DAVID CLAYTON ATKINS
STATE OF WASHINGTON
52745
REGISTERED
PROFESSIONAL ENGINEER

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04 JUNE 2025 | BUILDING PERMIT |

PROJECT: 497

PLUMBING SPECIFICATIONS

# P0.00

FOR REFERENCE ONLY

6/2/2025 8:51:54 AM E:\Revit Temp\497-Barnabie Point School _ Plumbing (R2024)_bkrogja.rvt
© ANJALI GRANT DESIGN LLC ORIGINAL SHEET SIZE: 24" X 36"

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## PIPING INSULATION SCHEDULE

TABLE C403.10.3 MINIMUM PIPE INSULATION THICKNESS (thickness in inches)[a]

| FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F) | INSULATION CONDUCTIVITY | | NOMINAL PIPE OR TUBE SIZE (inches) | | | | |
|---|---|---|---|---|---|---|---|
| | CONDUCTIVITY BTU *in./(h * ft² * °F)[b] | MEAN RATING TEMPERATURE, °F | < 1 | 1 to < 1-1/2 | 1-1/2 to < 4 | 4 to < 8 | ≥ 8 |
| > 350 | 0.32 - 0.34 | 250 | 4.5 | 5.0 | 5.0 | 5.0 | 5.0 |
| 251 - 350 | 0.29 - 0.32 | 200 | 3.0 | 4.0 | 4.5 | 4.5 | 4.5 |
| 201 - 250 | 0.27 - 0.30 | 150 | 2.5 | 2.5 | 2.5 | 3.0 | 3.0 |
| 141 - 200 | 0.25 - 0.29 | 125 | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 |
| 105 - 140 | 0.21 - 0.28 | 100 | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 |
| 40 - 60 | 0.21 - 0.27 | 75 | 0.5 | 0.5 | 1.0 | 1.0 | 1.0 |
| < 40 | 0.20 - 0.26 | 75 | 0.5 | 1.0 | 1.0 | 1.0 | 1.5 |

NOTES:

a. For piping smaller than 1-1/2 inch (38 mm) and located in partitions within conditioned spaces, reduction of these thicknesses by 1 inch (25 mm) shall be permitted (before thickness adjustment required in footnote b) but not to a thickness less than 1 inch (25 mm).
b. For insulation outside the stated conductivity range, the minimum thickness (*T*) shall be determind as follows:
$T = r\{(1 + t/r)^{K/k} - 1\}$
where:
*T* = minimum insulation thickness
*r* = actual outside radius of pipe
*t* = insulation thickness listed in the table for applicable fluid temperature and pipe size
*K* = conductivity of alternate material at mean rating temperature indicated for the applicable fluid temperature (Btu x in/h x ft² x °F)
*k* = the upper value of the conductivity range listed in the table for the applicable fluid temperature
c. For direct-buried heating and hot water system piping, reduction of these thicknesses by 1-1/2 inches (38 mm) shall be permitted (before thickness adjustment required in footnote b but not to thicknesses less than 1 inch (25 mm).
d. Additional 1" of insulation for recirclation piping is needed in accordance with SEC 404.7.31
e. Insulation schedule to be in accordance with 2021 Washington Energy Code.

## WATER SUPPLY PRESSURE LOSS

| DESCRIPTION | | UNIT | COMMENTS |
|---|---|---|---|
| TOTAL COLD WATER FIXTURE UNITS | 153.5 | WSFU | |
| TOTAL WATER DEMAND | 80.0 | GPM | |
| METER SIZE | 6.0 | INCHES | |
| | | | |
| PRESSURE TO METER | 71 | PSI | EMAIL FROM SPU DSO 11/4/24 |
| METER PRESSURE LOSS | 1.0 | PSI | OCTAVE ULTRASONIC, 1 PSI MAX LOSS |
| BACKFLOW PRESSURE LOSS | 15.0 | PSI | |
| LENGTH OF PIPE FROM METER TO FARTHEST FIXTURE | 176.0 | FT | |
| UNIT PIPE PRESSURE LOSS BEFORE BOOSTER | 1.3 | PSI/100' | |
| PIPE PRESSURE LOSS BEFORE BOOSTER | 2.4 | PSI | |
| ELEVATION HEIGHT FROM METER TO FARTHEST FIXTURE | 37.00 | FT | |
| ELEVATION PRESSURE LOSS | 16.02 | PSI | |
| PRESSURE TO FIXTURE | 36.6 | PSI | |

## DFU LOAD MATRIX

| FIXTURE TYPE | QTY | DFU | DFU TOTAL |
|---|---|---|---|
| LAVATORY | 3 | 1.0 | **3** |
| LAVATORY DOUBLE FAUCET | 6 | 2.0 | **12** |
| WC FLUSH VALVE | 9 | 4.0 | **36** |
| SINK | 2 | 2.0 | **4** |
| DRINKING FOUNTAIN | 3 | 1.0 | **3** |
| ICE | 1 | 0.0 | **0** |
| COFFEE MACHINE | 1 | 0.0 | **0** |
| MOP SINK | 3 | 3.0 | **9** |
| FCO | 1 | 0.0 | **0** |
| 2" HD | 1 | 4.0 | **4** |
| ELEVATOR SUMP | 1 | 6.0 | **6** |
| OTHER (SUMPS) | 1 | 6.0 | **6** |
| **TOTAL DRAINAGE FIXTURE UNITS** | | | **83** |
| **MINIMUM UTILITY SIZE NEEDED** | | | **4"** |
| **UTILITY SIZE PROVIDED** | | | **6"** |

## WSFU MATRIX

| FIXTURE TYPE | QTY | WSFU | TOTAL WSFU |
|---|---|---|---|
| LAVATORY | 18 | 1.0 | 18.0 |
| WC FLUSH VALVE | 22 | 5.0 | 110.0 |
| UR FLUSH VALVE | 2 | 5.0 | 10.0 |
| SINK | 21 | 1.5 | 31.5 |
| KITCHEN SINK | 5 | 2.0 | 10.0 |
| DRINKING FOUNTAIN | 2 | 1.0 | 2.0 |
| MOP SINK | 4 | 3.0 | 12.0 |
| HOSE BIB | 3 | 2.5, 1.0 | 4.5 |
| WASHER BOX | 1 | 4.0 | 4.0 |
| MISC (ICE, COFFEE) | 0 | 1.0 | 0.0 |
| **TOTAL PLUMBING WSFU** | | | **202.0** |

### BUILDING TOTAL

| | |
|---|---|
| **TOTAL BUILDING WSFU** | **202** |
| **TOTAL BUILDING DOMESTIC WATER GPM** | **92** |
| **SIZE REQUIRED** | **2-1/2"** |
| **SIZE PROVIDED** | **3"** |

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PLUMBING SPECIFICATIONS

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# PLUMBING FIXTURE SCHEDULE

| SYM | TAG | DESCRIPTION | MAKE/MODEL | W | V | CW | HW | GPM / GPF | WSFU | DFU | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | WC-1 | WATER CLOSET, WALL MOUNT, FLUSH VALVE | KINGSTON ULTRA K-84325 W/ SLOAN REGAL 111 FLUSHOMETER | 4" | 2" | 1" | | | | | 1.28GPF |
| | WC-1A | WATER CLOSET, WALL MOUNT, FLUSH VALVE, ADA | KINGSTON ULTRA K-84325 W/ SLOAN REGAL 111 FLUSHOMETER | 4" | 2" | 1" | | | | | 1.28GPF |
| | WC-2 | WATER CLOSET, CHILD, FLUSH VALVE FLOOR MOUNTED | AMERICAN STANDARD BABY DEVORO 2282-001 W/ SLOAN REGAL 111 FLUSHOMETER | 4" | 2" | 1" | | | | | 1.28GPF |
| | WC-2A | WATER CLOSET, CHILD, FLUSH VALVE FLOOR MOUNTED, ADA | AMERICAN STANDARD BABY DEVORO 2282-001 W/ SLOAN REGAL 111 FLUSHOMETER | 4" | 2" | 1" | | | | | 1.28GPF |
| | UR-1A | URINAL, WALL MONT, FLUSH VALVE, ADA | KOHLER DEXTER W/ SLOAN REGAL FLUSHOMETER | 2" | 2" | 3/4" | | | | | 1.0GPF |
| | LAV-1 | LAVATORY COUNTER TOP | KOHLER KINGSTON 2005-0 W/ K-13463 FAUCET | 2" | 2" | 1/2" | 1/2" | | | | |
| | LAV-1A | LAVATORY, WALL MOUNT, ADA | KOHLER KINGSTON 2005-0 W/ K-13463 FAUCET | 2" | 2" | 1/2" | 1/2" | | | | |
| | SK-1 | BREAKROOM SINK, DROP IN | ELKAY LRAD312260 W/ DELTA 9113-AR-DST FAUCET | 2" | 2" | 1/2" | 1/2" | | | | |
| | SK-2 | ART ROOM SINK, DROP IN | ELKAY DRKAD221760 W/ ELKAY LK500GN08T4 FAUCET | 2" | 2" | 1/2" | 1/2" | | | | |
| | SK-3 | PRESCHOOL SINK, DROP IN | ELKAY DRKAD221760 W/ ELKAY LK500GN08T4 FAUCET | 2" | 2" | 1/2" | 1/2" | | | | |
| | SK-3S | PRESCHOOL SINK, DROP IN | ELKAY DRKAD221760 W/ ELKAY LK500GN08T4 FAUCET | 2" | 2" | 1/2" | 1/2" | | | | PROVIDE SAND INTERCEPTOR |
| | SK-4 | PRESCHOOL SINK, WALL MOUNT | ELKAY EWS31201 W/ CHICAGO 332-ABCP FAUCET | 2" | 2" | 1/2" | 1/2" | | | | |
| | SK-5 | SCIENCE ROOM SINK, DROP IN | ELKAY DLRSQ332210 W/ ELKAY LK535GN08T4 FAUCET | 2" | 2" | 1/2" | 1/2" | | | | |
| | SK-6 | CLASSROOM SINK, DROP IN | ELKAY CDKAD251765C W/ LKD208513LC FAUCET, LK35 DRAIN, & LK1141A BUBBLER | 2" | 2" | 1/2" | 1/2" | | | | |
| | KS-1 | KITCHEN SINGLE BOWL, HAND SINK | ELKAY ECTRU17179T W/ T&S B-0231 FAUCET | 2" | 2" | 1/2" | 1/2" | | | | |
| | KS-2 | KITCHEN SINGLE BOWL, PREP SINK | ELKAY ECTRU17179T W/ T&S B-0231 FAUCET | 2" | 2" | 1/2" | 1/2" | | | | |
| | KS-3 | KITCHEN 3-COMPARTMENT SINK | JOHN BOOS DT3B18244-2D18L W/ (2) T&S B-0133-12CRBJST FAUCETS | 2" | 2" | 1/2" | 1/2" | | | | |
| | DF-1A | DRINKING FOUNTAIN, BI-LEVEL, ADA | | 2" | 2" | 1/2" | 1/2" | | | | |
| | ES-1 | EMERGENCY WASH STATION, EYE/FACE/SHOWER | ACORN S1340-BF | | | 3/4" | 3/4" | | | | W/ ASSE 1071 MIXING VALVE; DRAINS INTO FD-2 |
| | MS-1 | MOP SINK 20" x 24" | MUSTEE 63M, MOEN 8124 | 3" | 2" | 3/4" | 3/4" | | 3.0 | 3 | PROVIDE CHECK VALVES IN VERTICAL PIPE TO FAUCET |
| | MS-2 | MOP SINK 24" x 24" | | 3" | 2" | 3/4" | 3/4" | | 3.0 | 3 | PROVIDE CHECK VALVES IN VERTICAL PIPE TO FAUCET |
| | FCO-1 | FLOOR CLEANOUT | | 2", 3", 4" | | | | | | | |
| | WCO-1 | WALL CLEANOUT | | 2", 3", 4" | | | | | | | |
| | FD-1 | FLOOR DRAIN | | 2", 3", 4" | 2" | | | | | | PROVIDE TRAP PRIMER |
| | FD-2 | FLOOR DRAIN | | | | | | | | | |
| | FS-1 | FLOOR SINK | | 2", 3", 4" | 2" | | | | | | PROVIDE TRAP PRIMER |
| | FS-2 | FLOOR SINK | | | | | | | | | |
| | HD-1 | HUB DRAIN | | 4" | 2" | | | | | | PROVIDE TRAP PRIMER; 4" P-TRAP w/ 6" HUB (FIRE PROTECTION) |
| | HB-1 | HOSE BIB, INTERIOR | | | | 3/4" | | | | | |
| | NFWH-1 | HOSE BIB, EXTERIOR | | | | 3/4" | | | | | |
| | TP-1 | TRAP PRIMER TAIL PIECE | | | | 1/2" | | | | | SERVES SINGLE DRAIN |
| | TP-2 | TRAP PRIMER AUTOMATIC | | | | 1/2" | | | | | SERVES SINGLE DRAIN NOT NEAR SINK/LAV |
| | TP-3 | TRAP PRIMER AUTOMATIC WITH DISTRIBUTION UNIT | | | | 1/2" | | | | | SERVES MULTIPLE DRAINS (UP TO FOUR) |
| | WB-1 | WALL BOX - WASHING MACHINE | | 2" | 2" | 1/2" | 1/2" | | | | |
| | WB-2 | WALL BOX - DISHWASHER | | 2" | 2" | | 1/2" | | | | |
| | | | | | | | | | | | |

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PLUMBING SCHEDULES

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## PLUMBING EQUIPMENT SCHEDULE

| TAG | DESCRIPTION | LOCATION | SERVICE | MAKE | MODEL | VOLT/PH | AMP | COMMENTS |
|---|---|---|---|---|---|---|---|---|
| SP-1,2 | SUMP PUMP | BASEMENT UG | BASEMENT DRAINAGE | LIBERTY | 290 SERIES | 115/1 | 10.4 | 50 GPM, SIMPLEX, INTEGRAL FLOAT CONTROLS |
| SP-3,4 | SUMP PUMP | BASEMENT UG | FOUNDATION DRAINAGE | LIBERTY | 290 SERIES | 115/1 | 10.4 | 50 GPM, SIMPLEX, INTEGRAL FLOAT CONTROLS |
| SOI-1 | SAND OIL INTERCEPTOR | BASEMENT UG | FOUNDATION DRAINAGE | | | | | |
| ESP-1 | ELEVATOR SUMP PUMP | ELEVATOR PITS | FIRE SERVICE ACCESS ELEVATORS | LIBERTY | 290 SERIES | 115/1 | 10.4 | 50 GPM, SIMPLEX, INTEGRAL FLOAT CONTROLS |
| RPBP-1 | REDUCED PRESSURE BACKFLOW PREVENTER | KITCHEN | COMMERCIAL DISHWASHER | | | | | |
| PRV-1 | PRESSURE REDUCING VALVE | KITCHEN | COMMERCIAL DISHWASHER | | | | | |
| HWCP-1 | HOT WATER CIRC PUMP | BASEMENT PLUM ROOM | HOT WATER | B&G | NBF 36 | 115/1 | 2.3 | |
| HWH-1 | HEATPUMP WATER HEATER | BASEMENT PLUM ROOM | HOT WATER | RHEEM | HPLD80-1RH | 208/1 | 21 | 80 GAL, 4.2 MBH HEAT PUMP W/ 4.5 KW ELECTRIC, SET AT 140F, OPERATING WEIGHT 970LBS |
| HWH-2 | HEATPUMP WATER HEATER | BASEMENT PLUM ROOM | HOT WATER | RHEEM | HPLD80-1RH | 208/1 | 21 | 80 GAL, 4.2 MBH HEAT PUMP W/ 4.5 KW ELECTRIC, SET AT 140F, OPERATING WEIGHT 970LBS |
| ET-1 | THERMAL EXPANSION TANK | BASEMENT PLUM ROOM | HOT WATER | AMTROL | ST-12 | N/A | N/A | |
| MV-1 | MASTER MIXING VALVE | BASEMENT PLUM ROOM | HOT WATER | SYMMONS | 7-200 | N/A | N/A | SET POINT 120F, 12 GPM @ 10PSI LOSS, ASSE 1017; MAIN BUILDING HW SUPPLY |
| MV-2 | MIXING VALVE | STEM / SCIENCE | HOT WATER | | | | | ES-1 EMERGENCY WASH STATION |
| GWI-1 | GREASE WASTE INTERCEPTOR | | | | | | | |
| BV-1 | BALANCING VALVE | | | | | | | SIZE 3/4", THROTTLING VALVE NORMALLY 20% OPEN |
| BV-2 | BALANCING VALVE | | | | | | | SIZE 1", THROTTLING VALVE NORMALLY 80% OPEN |
| AF-LB1-1 | AUTOMATIC FLOW LIMITING VALVE | BASEMENT | HOT WATER | GRISWOLD | K-VALVE 3801 | N/A | N/A | SIZE 3/4", FLOW 2.67 GPM |
| AF-LB1-2 | AUTOMATIC FLOW LIMITING VALVE | BASEMENT | HOT WATER | GRISWOLD | K-VALVE 3801 | N/A | N/A | SIZE 1", FLOW 1.00 GPM |
| AF-LB1-3 | AUTOMATIC FLOW LIMITING VALVE | BASEMENT | HOT WATER | GRISWOLD | K-VALVE 3801 | N/A | N/A | SIZE 1-1/4", FLOW 0.67 GPM |
| AF-L01-1 | AUTOMATIC FLOW LIMITING VALVE | LEVEL 01 | HOT WATER | GRISWOLD | K-VALVE 3801 | N/A | N/A | SIZE 3/4", FLOW 0.67 GPM |
| AF-L03-01 | AUTOMATIC FLOW LIMITING VALVE | LEVEL 03 | HOT WATER | GRISWOLD | K-VALVE 3801 | N/A | N/A | SIZE 3/4", FLOW 0.67 GPM |

## OWNER AND KITCHEN EQUIPMENT SCHEDULE

| SJI FIXT TAG | O&K ITEM TAG | LOCATION | ITEM | MAKE | MODEL | REQUIREMENTS |
|---|---|---|---|---|---|---|
| IM-1 | 2 | KITCHEN 102 | ICE MAKER | | | INDIRECT WASTE; CONNECT TO ITEM 3 |
| WF-1 | 3 | KITCHEN 102 | WATER FILTRATION | | | |
| KS-1 | 5 & 6 | KITCHEN 102 | HAND SINK | | | DIRECT WASTE |
| KS-2 | 5 & 6 | KITCHEN 102 | PREP SINK | | | INDIRECT WASTE |
| CM-1 | 8 | KITCHEN 102 | COFFEE MAKER | | | QTY - 2 |
| KS-3 | 20 & 22 | KITCHEN 102 | 3-COMP DISH WASHING SINK | | | DIRECT WASTE |
| DW-1 | 23 | KITCHEN 102 | DISHWASHER | | | INDIRECT WASTE |
| GWI-1 | 24 | KITCHEN 102 | GREASE WASTE INTERCEPTOR | | | SERVES ITEMS 2 (ICE MAKER), 5 (PREP SINK), 20 (3- COMP SINK), 23 (DISHWASHER) |

**NOTE: REFER TO KITCHEN DRAWINGS K-1 & K-2 FOR ADDITIONAL INFORMATION.**

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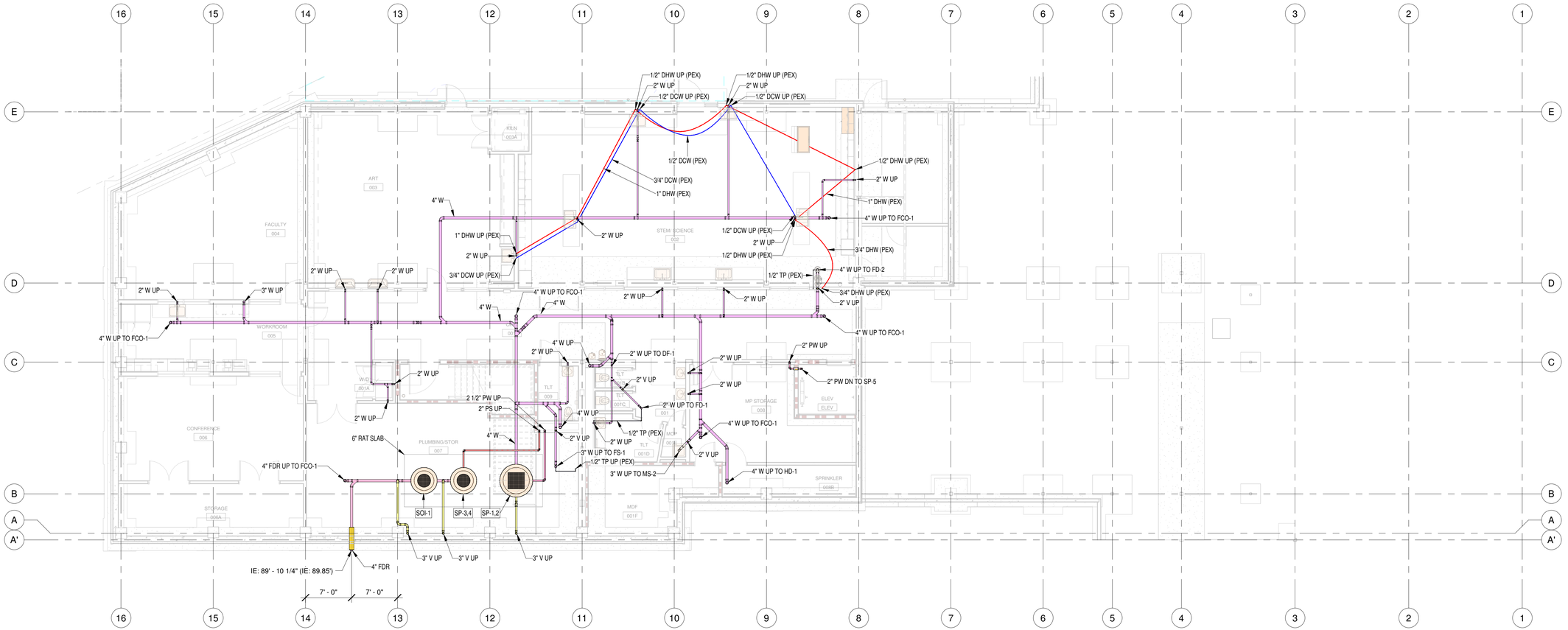


PLUMBING UNDERGROUND
1/8" = 1'-0"

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PLUMBING UNDERGROUND

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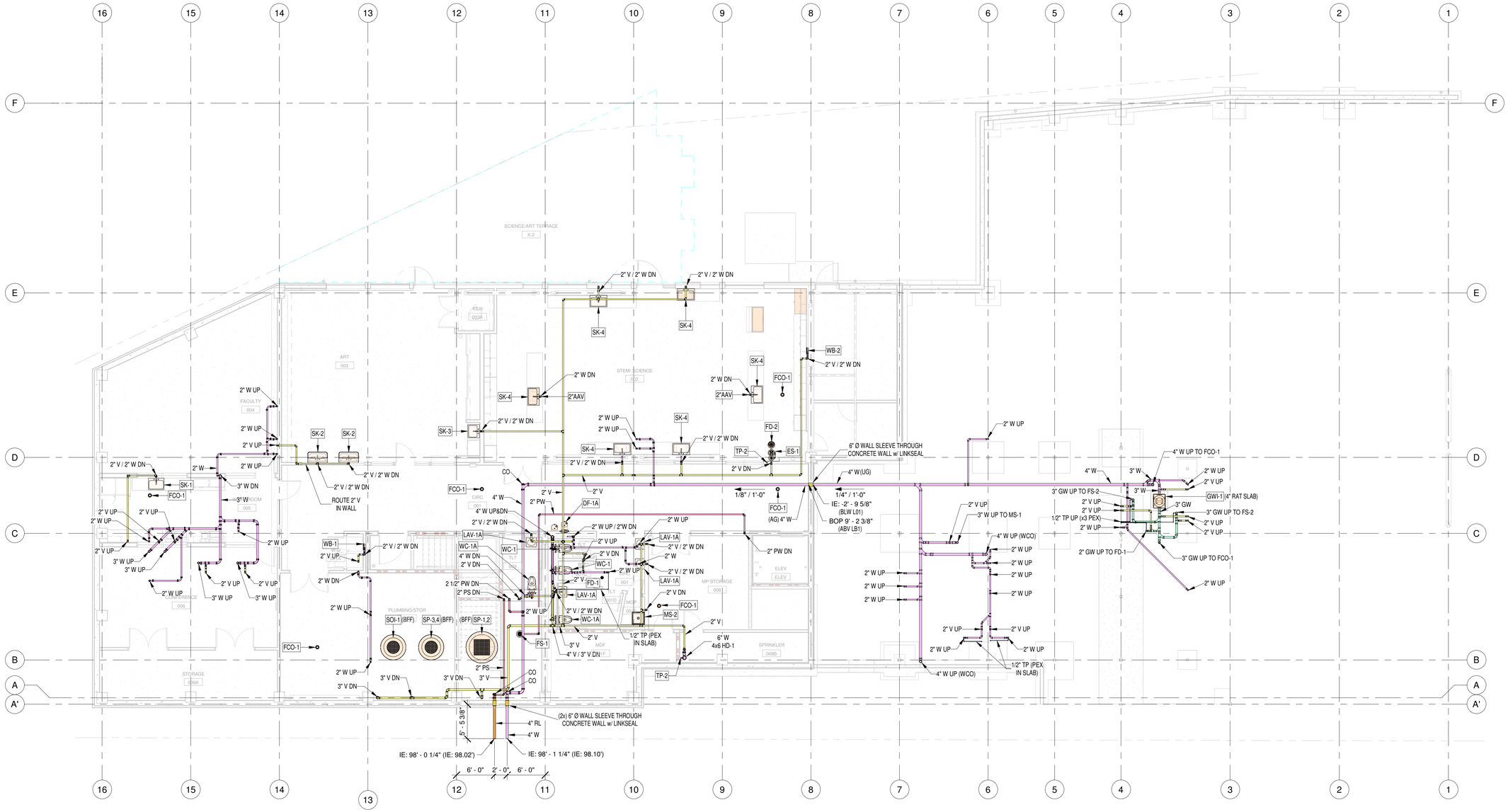


PLUMBING LEVEL B1 WASTE & VENT
1/8" = 1'-0"

**GENERAL NOTES:**

1) ALL WASTE (W) PIPING SHALL BE RUN AT 1/4" SLOPE U.N.O.
2) ALL VENT (V) PIPING SHALL HAVE THEIR INVERT TAKEN OFF ABOVE THE DRAINAGE CENTERLINE.
3) ALL RAINLEADER (RL) PIPING SHALL BE RUN AT 1/8" SLOPE U.N.O.

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PLUMBING LEVEL B1
WASTE & VENT

P2.B1.1

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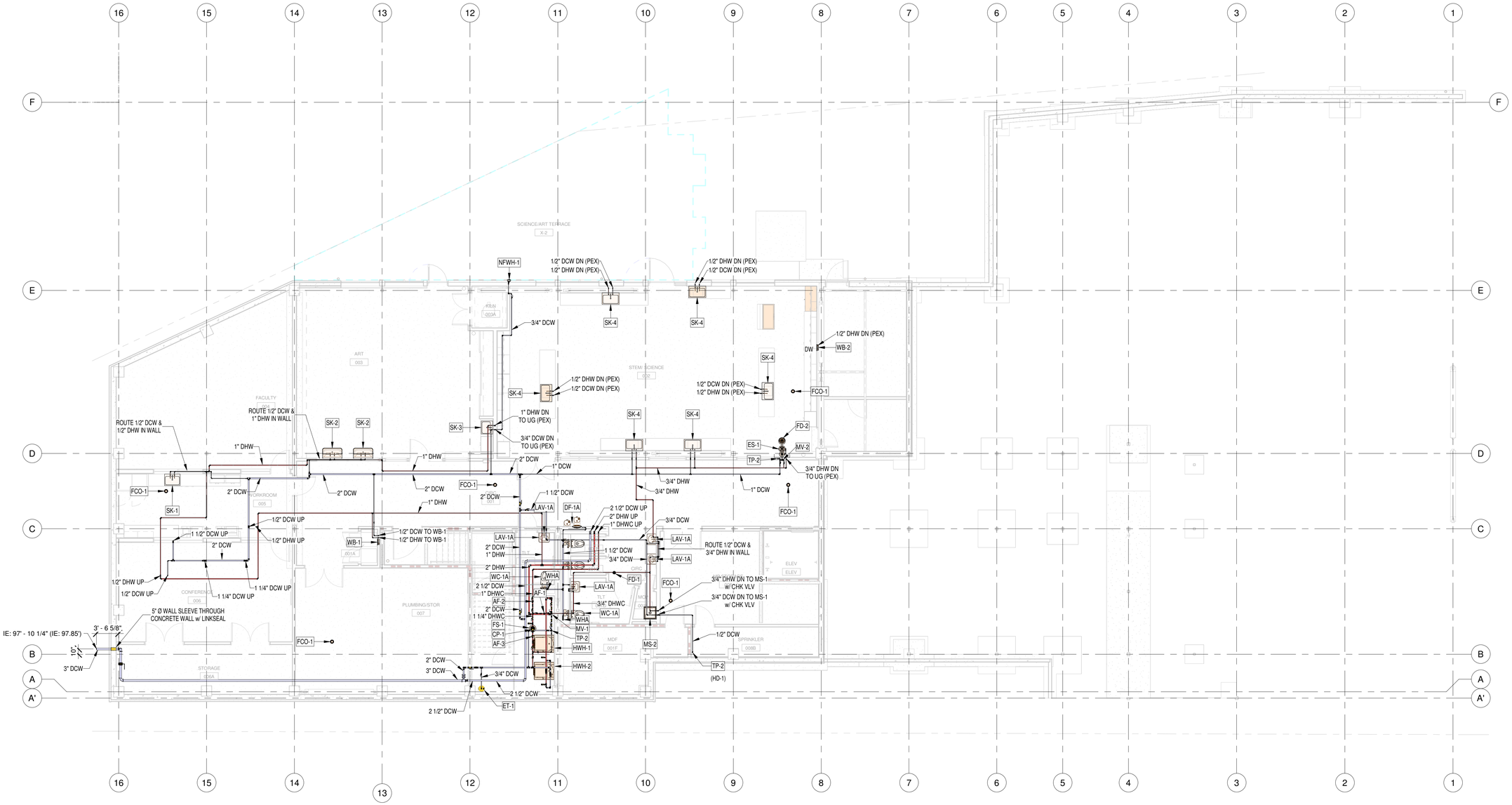


## PLUMBING LEVEL B1 DOMESTIC WATER
1/8" = 1'-0"

**GENERAL NOTES:**

1) DOMESTIC WATER CONNECTIONS TO SINKS & LAVS SHALL BE 1/2" U.N.O.

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PLUMBING LEVEL B1
DOMESTIC WATER

# P2.B1.2

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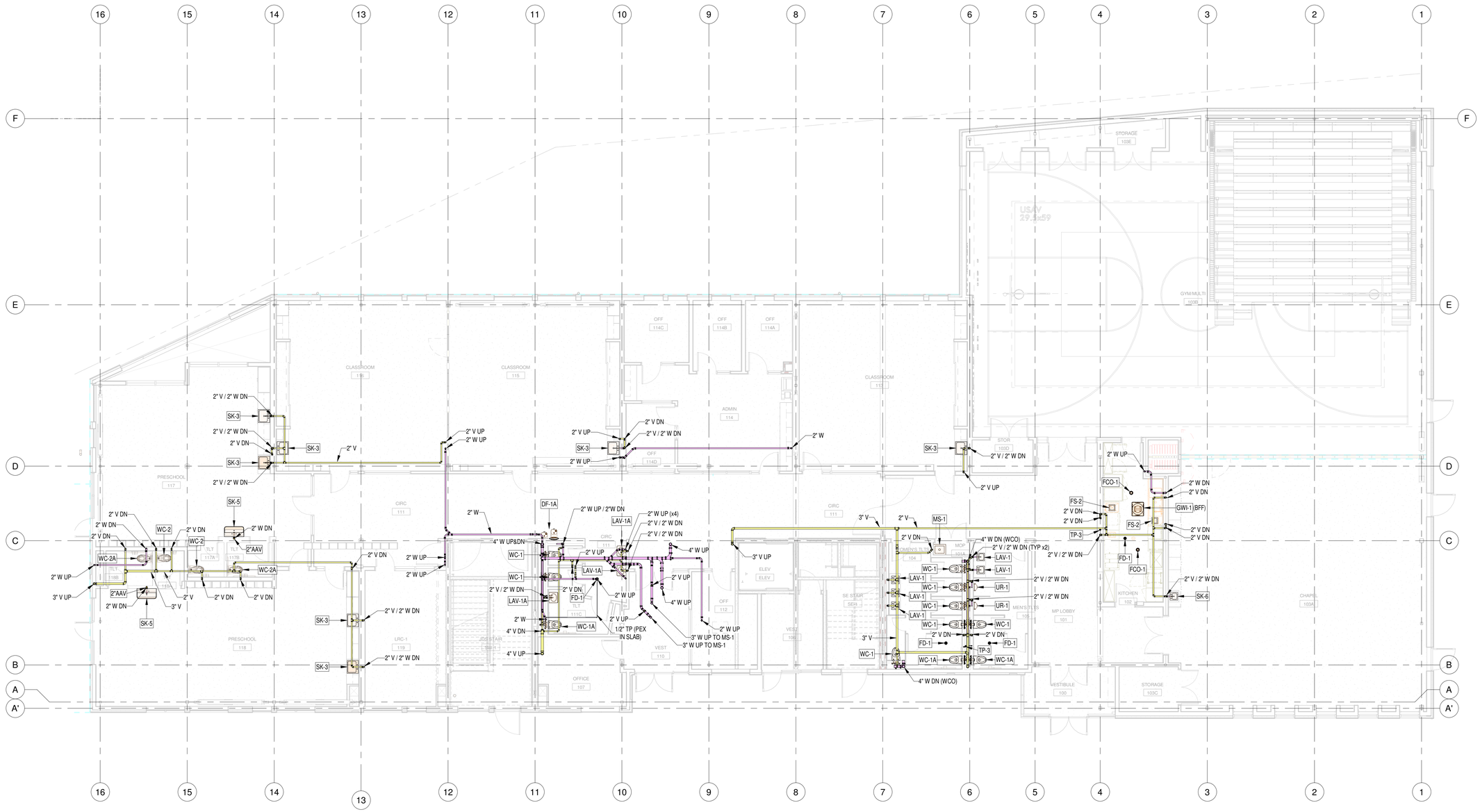


## PLUMBING LEVEL 01 WASTE & VENT
1/8" = 1'-0"

**GENERAL NOTES:**

1) ALL WASTE (W) PIPING SHALL BE RUN AT 1/4" SLOPE U.N.O.
2) ALL VENT (V) PIPING SHALL HAVE THEIR INVERT TAKEN OFF ABOVE THE DRAINAGE CENTERLINE.
3) ALL RAINLEADER (RL) PIPING SHALL BE RUN AT 1/8" SLOPE U.N.O.

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PLUMBING LEVEL 01 WASTE & VENT

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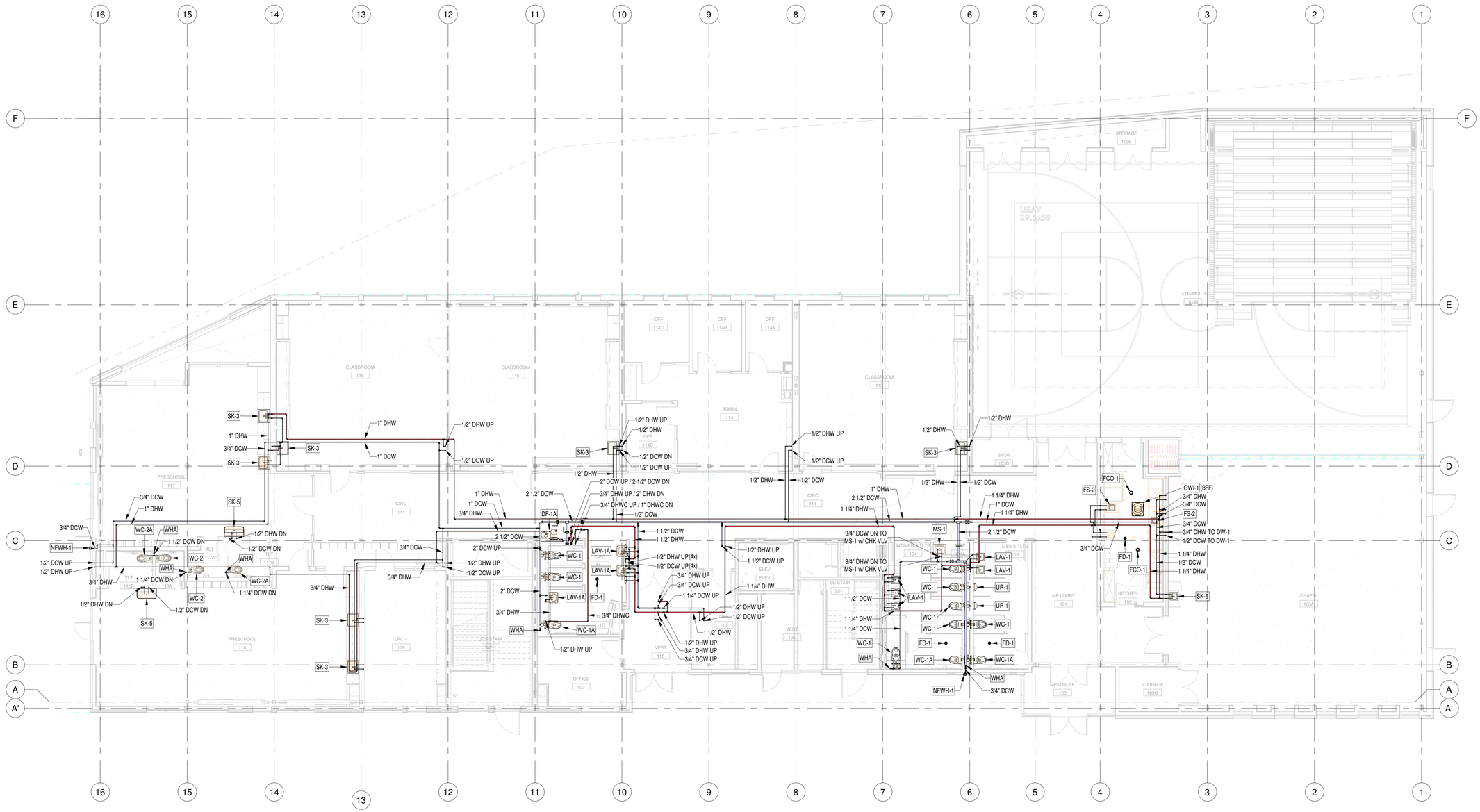
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CLASSROOM 116
CLASSROOM 115
OFF 114C
OFF 114B
OFF 114A
CLASSROOM 113
ADMIN 114
STORAGE 103E
GYM/MULTI 103B
STOR 103D
PRESCHOOL 117
PRESCHOOL 118
CIRC 111
LRC-1 119
OFFICE 107
VEST 110
VEST 109
SE STAIR SE-1
ELEV
WOMEN'S TLTS 104
MEN'S TLTS 105
MP LOBBY 101
KITCHEN 102
CHAPEL 103A
VESTIBULE 100
STORAGE 103G
SK-3
SK-5
SK-6
WC-2A
WHA
WC-2
NFWH-1
WC-1
WC-1A
LAV-1A
LAV-1
FD-1
DF-1
MS-1
UR-1
FCO-1
FS-2
GWI-1 (BFF)
SK-6
1" DHW
3/4" DCW
1" DCW
1/2" DHW UP
1/2" DCW UP
1/2" DHW
1/2" DCW
1/2" DHW DN
1/2" DCW DN
2 1/2" DCW
2" DCW UP
2" DCW
3/4" DHW
3/4" DCW
1 1/2" DCW DN
1 1/4" DCW DN
1/2" DHW DN
1/2" DCW DN
1/2" DCW UP
1/2" DHW UP
2" DCW UP / 2-1/2" DCW DN
3/4" DHW UP / 2" DHW DN
3/4" DHWC UP / 1" DHWC DN
1/2" DCW
1 1/2" DHW
1 1/2" DCW
1/2" DHW UP(4x)
1/2" DCW UP(4x)
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3/4" DCW UP
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1 1/2" DHW
3/4" DHWC
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1/2" DHW UP
1/2" DCW UP
1 1/4" DHW
3/4" DCW DN TO MS-1 w/ CHK VLV
3/4" DHW DN TO MS-1 w/ CHK VLV
1 1/2" DCW
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1 1/4" DCW
1/2" DHW
1/2" DCW
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1/2" DCW TO DW-1
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3/4" DCW
1/2" DHW
1/2" DCW
1/2" DHW UP
1/2" DCW UP

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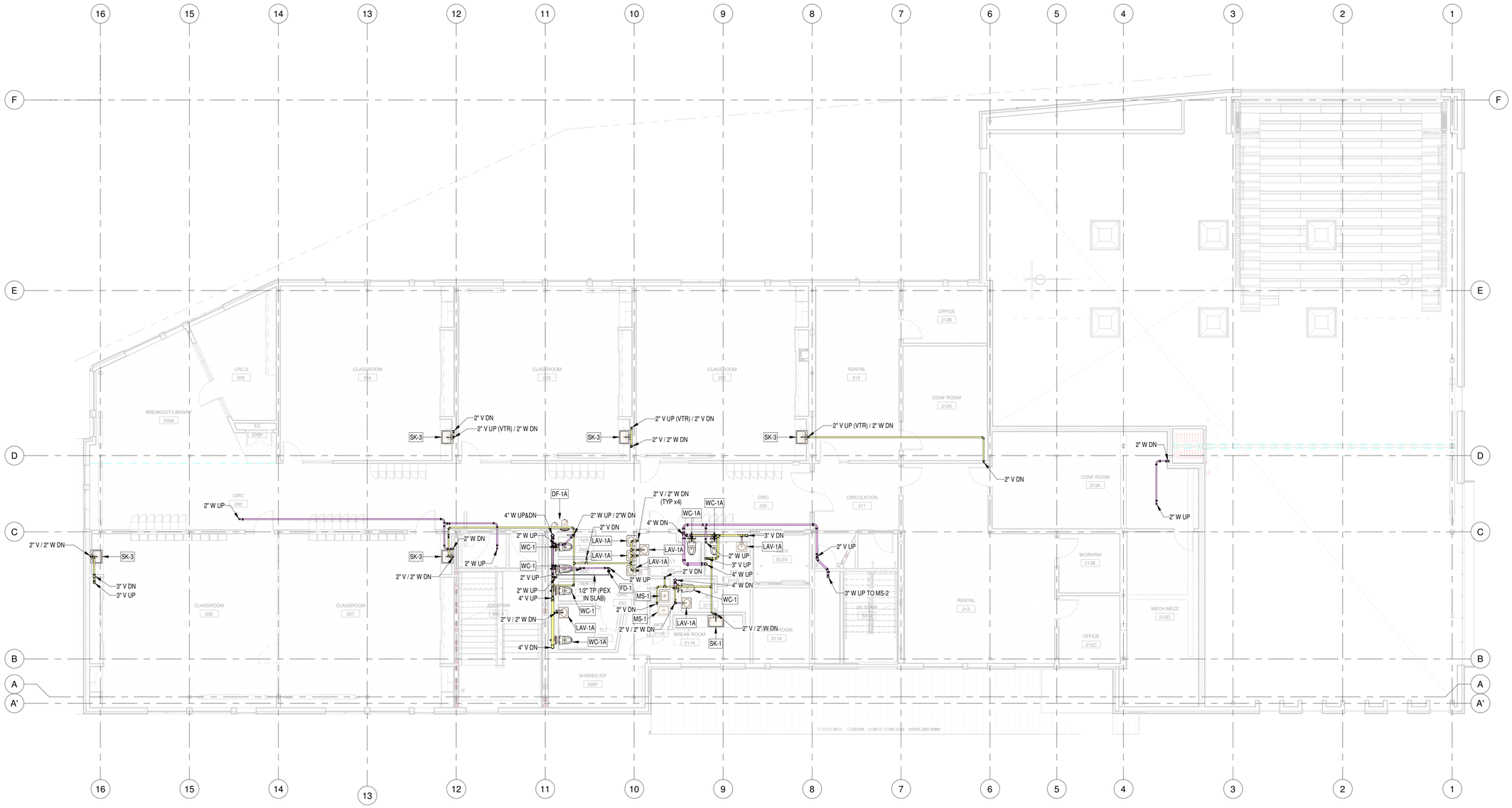
16
15
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3
2
1
F
E
D
C
B
A
A'
LRC-2
205
BREAKOUT/LIBRARY
200A
EC
200H
CLASSROOM
204
CLASSROOM
203
CLASSROOM
202
RENTAL
212
OFFICE
212B
CONF ROOM
212A
CIRC
200
CIRCULATION
211
CLASSROOM
206
CLASSROOM
207
CORRIDOR
200
JOIST/STAIR
SW-2
SHARED IDF
200F
BREAK ROOM
211A
CORRIDOR
211A
ELEV
SE STAIR
SES-2
RENTAL
213
CONF ROOM
213A
WORKRM
213B
OFFICE
213C
MECH MEZZ
213D
SK-3
SK-1
DF-1A
FD-1
MS-1
WC-1
WC-1A
LAV-1A
2" V DN
2" V UP (VTR) / 2" W DN
2" V UP (VTR) / 2" V DN
2" V / 2" W DN
2" V / 2" W DN (TYP x4)
2" W UP
2" W DN
2" W UP / 2"W DN
2" V UP
2" V DN
2" W UP&DN
4" W DN
4" W UP
3" V DN
3" V UP
3" W UP TO MS-2
1/2" TP (PEX IN SLAB)
2" V / 2" W DN
4" V DN
2" W UP
3" V UP
4" W UP
2" V DN
2" V UP
2" W DN
2" W UP
2" V / 2" W DN
2" V / 2" W DN
2" V / 2" W DN
2" V / 2" W DN
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2" W DN
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3" V DN
2" W UP
3" V UP
4" W UP
4" W DN
2" V DN
2" V / 2" W DN
3" V UP
3" V DN
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4" W UP
2" V UP
2" W UP
4" V UP
2" V DN
2" V / 2" W DN
2" V / 2" W DN
4" V DN
2" V / 2" W DN
2" V / 2" W DN
2" V / 2" W

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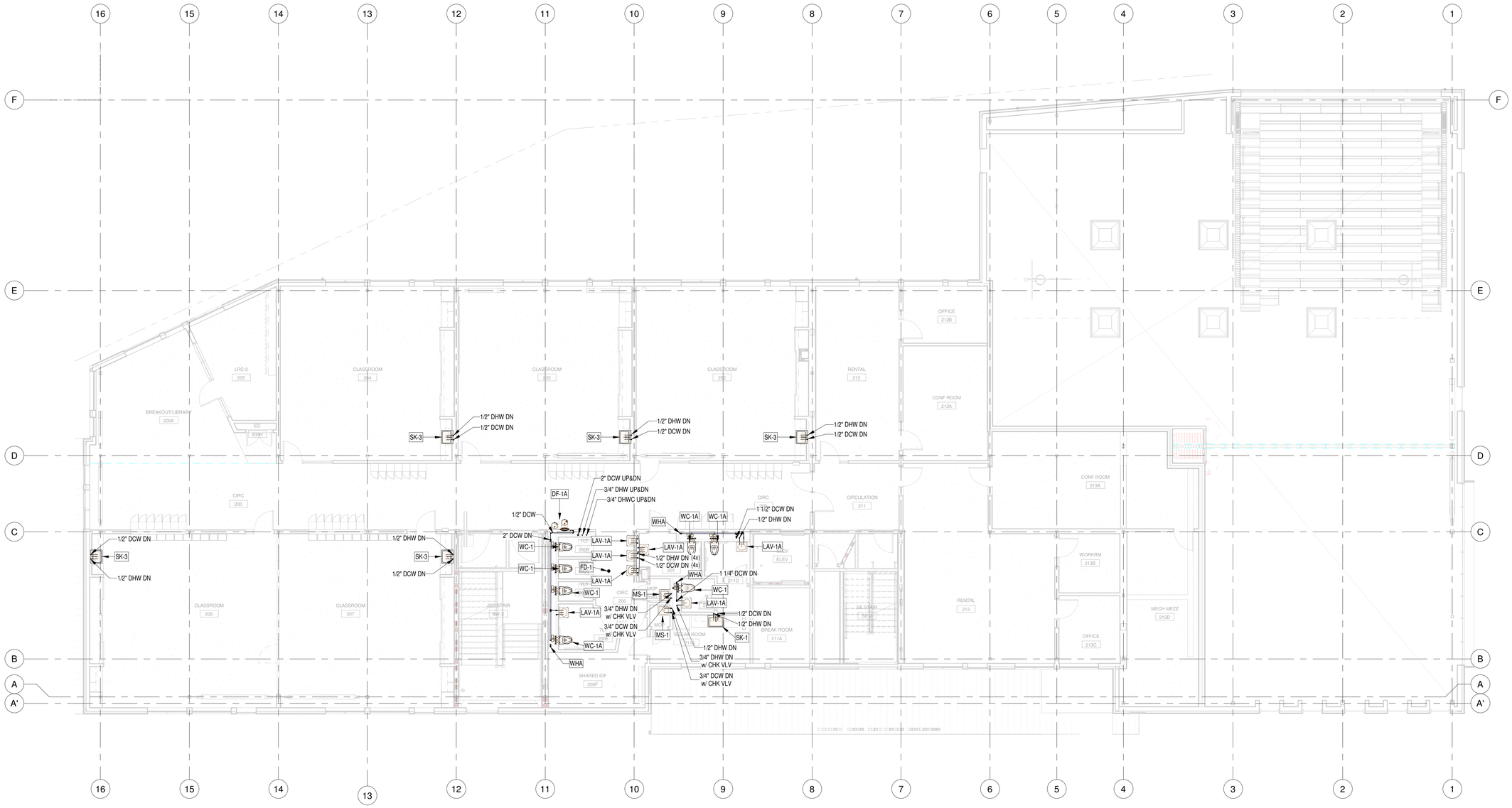


## PLUMBING LEVEL 02 DOMESTIC WATER
1/8" = 1'-0"

**GENERAL NOTES:**

1) DOMESTIC WATER CONNECTIONS TO SINKS & LAVS SHALL BE 1/2" U.N.O.

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52745
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PROFESSIONAL ENGINEER

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PLUMBING LEVEL 02 DOMESTIC WATER

P2.02.2

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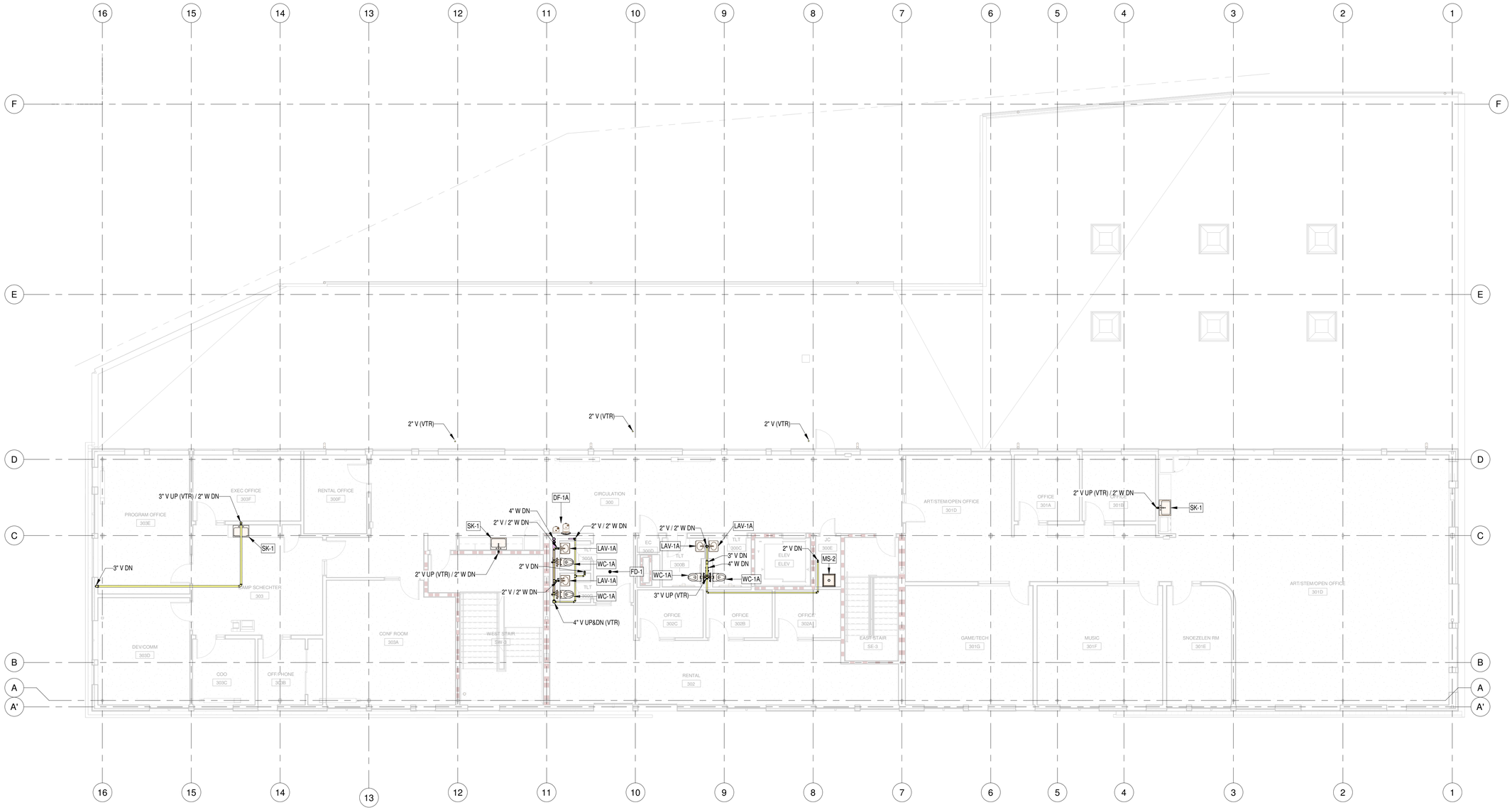


PLUMBING LEVEL 03 WASTE & VENT
1/8" = 1'-0"

**GENERAL NOTES:**

1) ALL WASTE (W) PIPING SHALL BE RUN AT 1/4" SLOPE U.N.O.
2) ALL VENT (V) PIPING SHALL HAVE THEIR INVERT TAKEN OFF ABOVE THE DRAINAGE CENTERLINE.
3) ALL RAINLEADER (RL) PIPING SHALL BE RUN AT 1/8" SLOPE U.N.O.

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PLUMBING LEVEL 03 WASTE & VENT

P2.03.1

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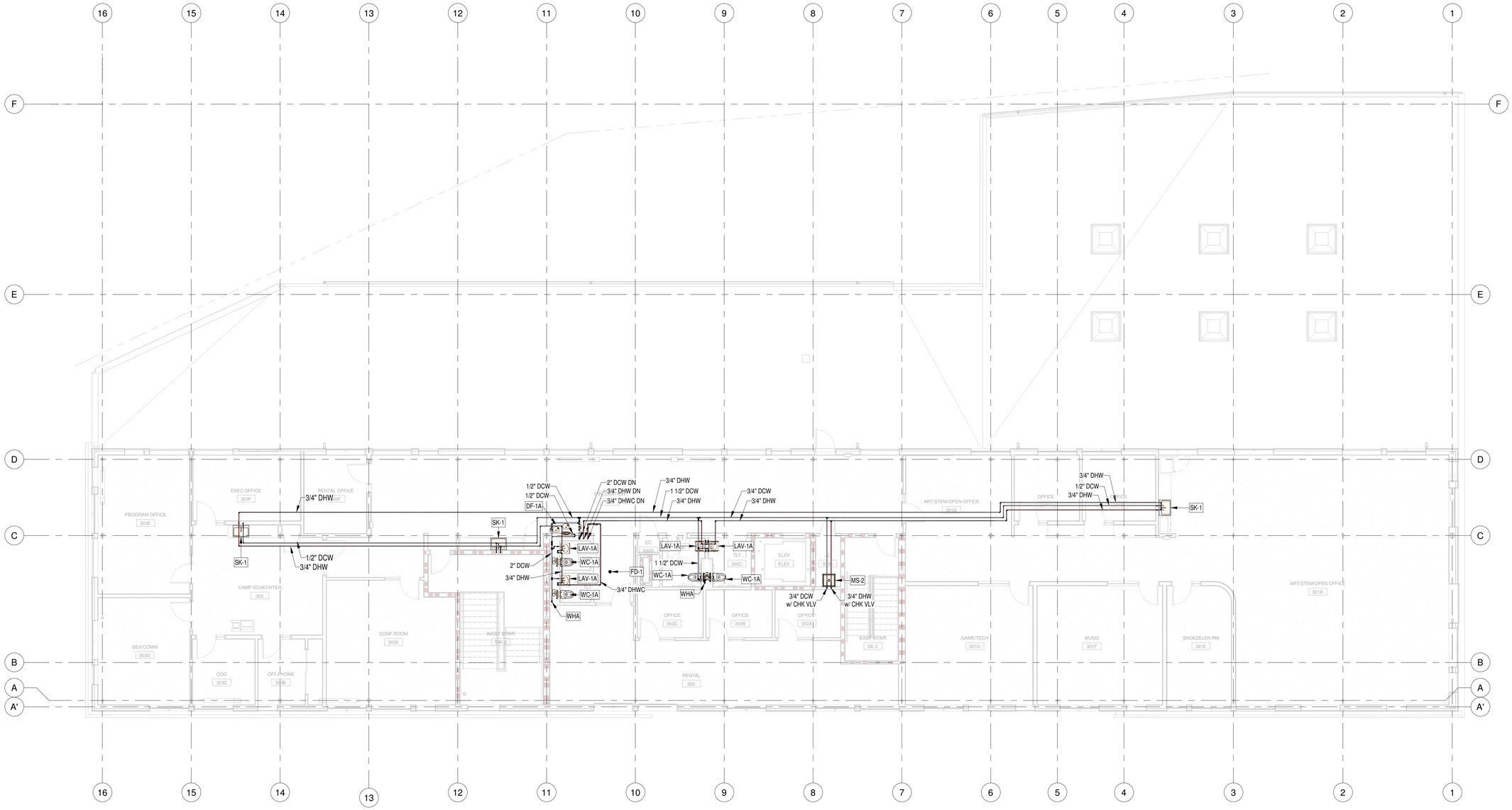


PLUMBING LEVEL 03 DOMESTIC WATER
1/8" = 1'-0"

**GENERAL NOTES:**

1) DOMESTIC WATER CONNECTIONS TO SINKS & LAVS SHALL BE 1/2" U.N.O.

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PLUMBING LEVEL 03
DOMESTIC WATER

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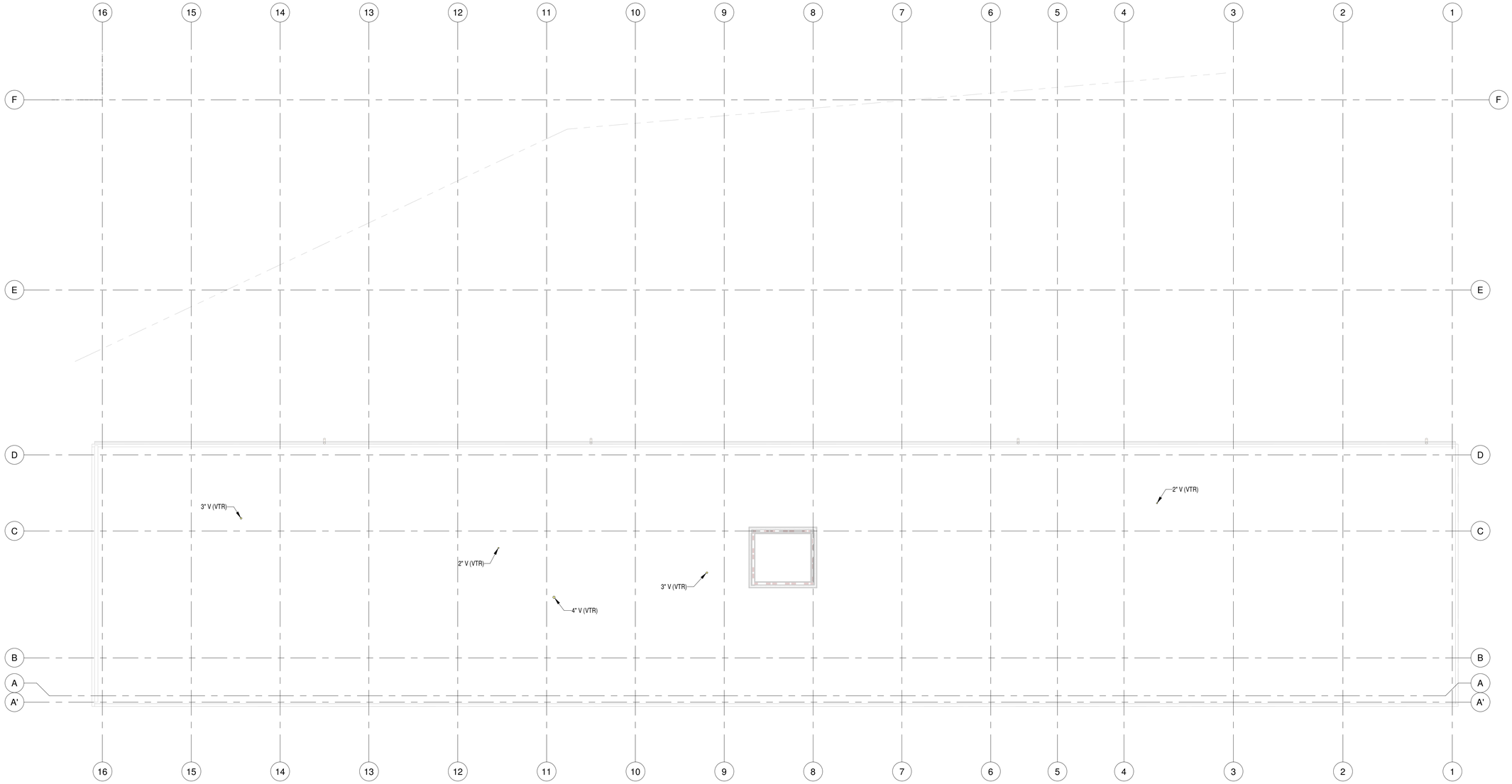


PLUMBING ROOF LEVEL
1/8" = 1'-0"

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PLUMBING ROOF LEVEL

P2.RF

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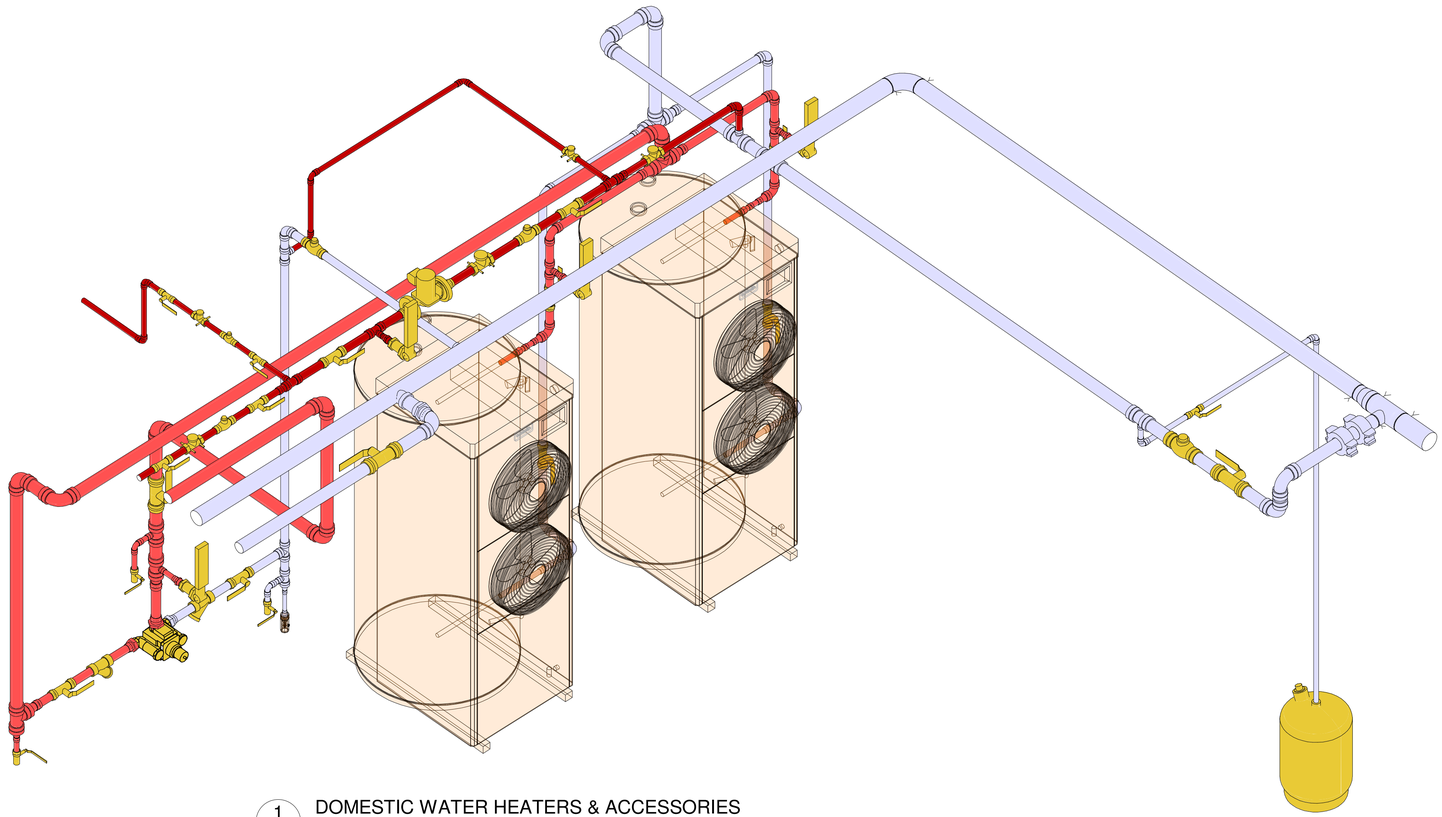
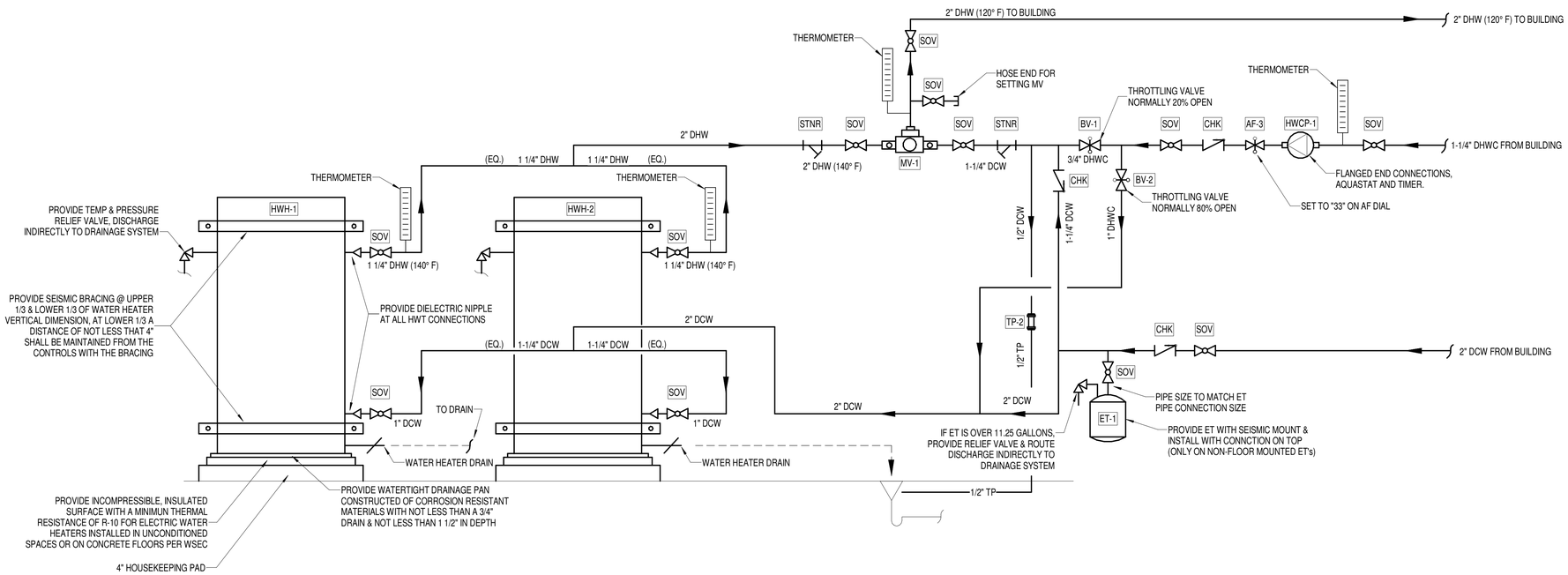


1 DOMESTIC WATER HEATERS & ACCESSORIES
N.T.S.




2 HOT WATER TANK DIAGRAM
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PLUMBING DETAILS

P3.01

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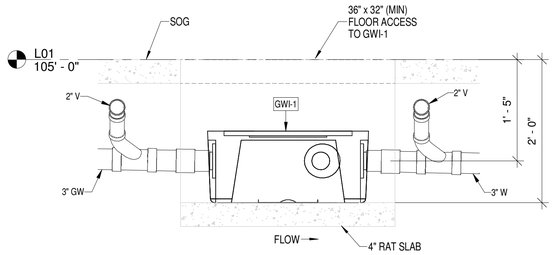
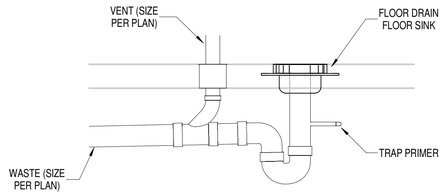
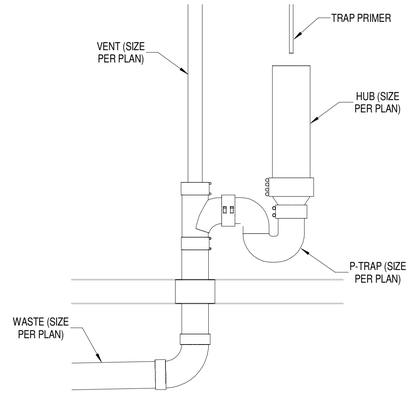


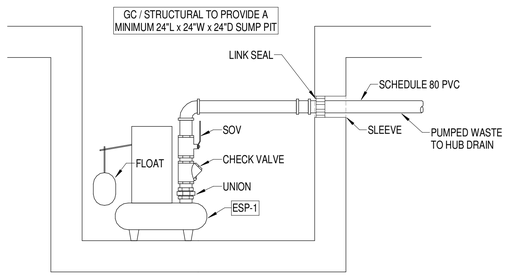

1 GREASE WASTE GWI-1 DETAIL
1" = 1'-0"



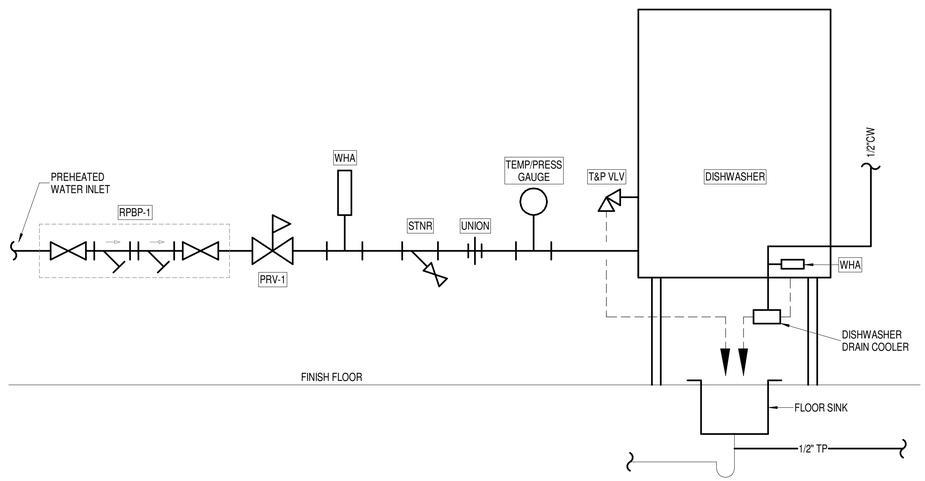

2 FLOOR DRAIN / FLOOR SINK DETAIL
1" = 1'-0"




3 HUB DRAIN DETAIL
1" = 1'-0"




4 ELEVATOR SUMP DETAIL
N.T.S.




5 COMMERCIAL DISHWASHER CONNECTION DETAIL
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PLUMBING DETAILS

P3.02

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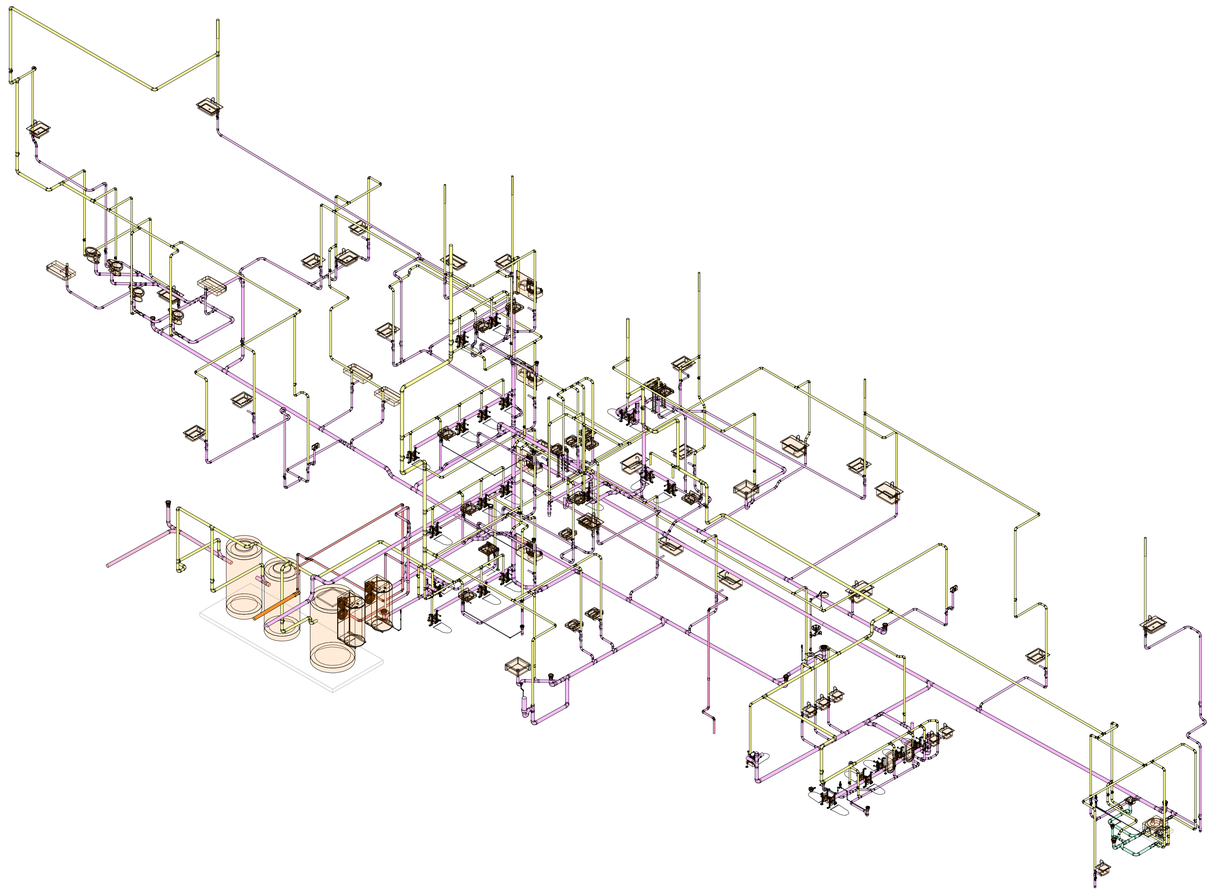

WASTE & VENT RISER DIAGRAM

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WASTE & VENT RISER DIAGRAM

P4.01

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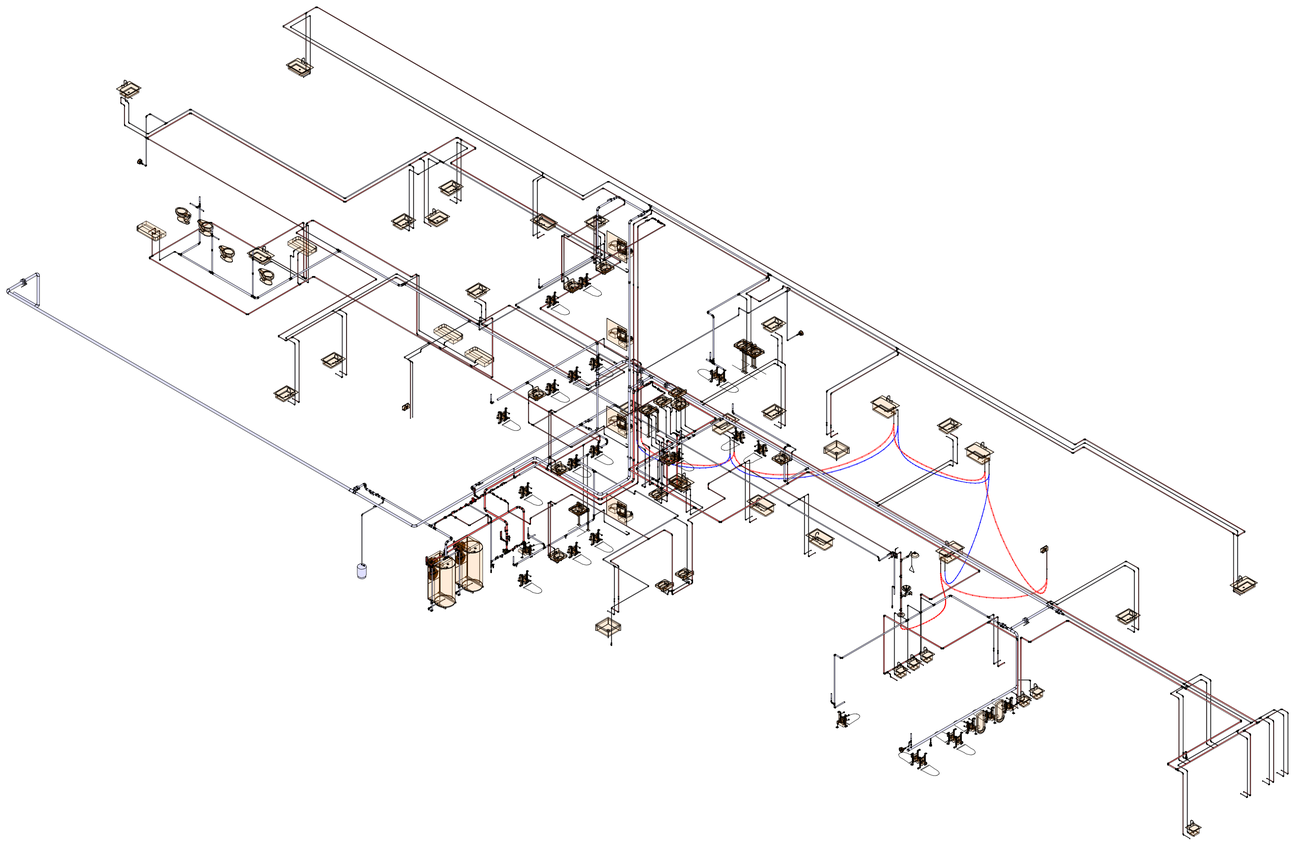

DOMESTIC WATER RISER DIAGRAM

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DOMESTIC WATER RISER DIAGRAM

P4.02

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## ABBREVIATIONS (MECHANICAL)

| | | | |
|---|---|---|---|
| /FW-X | WITH FIRE RATED WRAP (X=HR RATING) | HRWR | HEAT RECOVERY WATER RETURN |
| /FWG-X | WITH FIRE RATED WRAP GREASE (X=HR RATING) | HRWS | HEAT RECOVERY WATER SUPPLY |
| /R-X | WITH WRAP (X=R VALUE) | HVAC | HEATING VENTILATION AIR CONDITIONING |
| AAV | AUTOMATIC AIR VENT | HWC | HOT WATER COIL |
| ABV | ABOVE | HWR | HOT WATER RETURN |
| AC | AIR CONDITIONER | HWS | HOT WATER SUPPLY |
| ACC | AIR COOLED CONDENSER | HX | HEAT EXCHANGER |
| AD | ACCESS DOOR | ID | INSIDE DIAMETER/DIMENSION |
| AFF | ABOVE FINISHED FLOOR | IE | INVERT ELEVATION |
| AHU | AIR HANDLING UNIT | INS | INSULATION |
| AL | ALUMINUM | KE | KITCHEN EXHAUST |
| AP | ACCESS PANEL | KH | KITCHEN HOOD |
| B | BOILER | LAT | LEAVING AIR TEMPERATURE |
| BAS | BUILDING AUTOMATION SYSTEM | LBS | POUNDS |
| BDD | BACK DRAFT DAMPER | LPS | LOW PRESSURE STEAM |
| BEL | BELOW | LWT | LEAVING WATER TEMPERATURE |
| BFV | BUTTERFLY VALVE | M | METER |
| BHP | BRAKE HORSE POWER | M.C. | MECHANICAL CONTRACTOR |
| BOD | BOTTOM OF DUCT | MAV | MANUAL AIR VENT |
| BOI | BOTTOM OF INSULATION | MAX | MAXIMUM |
| BOP | BOTTOM OF PIPE | MBH | THOUSANDS BTU/HR |
| BOS | BOTTOM OF STEEL | MCA | MINIMUM CIRCUIT AMPACITY |
| BOU | BOTTOM OF UNIT | MD | MOTORIZED DAMPER |
| BP | BOOSTER PUMP | MER | MECHANICAL EQUIPMENT ROOM |
| BTU | BRITISH THERMAL UNITS | MIN | MINIMUM |
| BTUH | BRITISH THERMAL UNITS PER HOUR | MPG | MEDIUM PRESSURE GAS |
| BV | BALANCE VALVE, BALL VALVE | MUA | MAKE UP AIR |
| C.C. | CONTROLS CONTRACTOR | MV | MOTORIZED VALVE |
| CA | COMPRESSED AIR | MVD | MANUAL VOLUME DAMPER |
| CBDD | COUNTER-BALANCED BACK DRAFT DAMPER | NC | NORMALLY CLOSED |
| CC | COOLING COIL | NIC | NOT IN CONTRACT |
| CFF | CAPPED FOR FUTURE | NO | NORMALLY OPEN |
| CFM | CUBIC FEET PER MINUTE | NO2 | NITROGEN DIOXIDE |
| CHWR | CHILLED WATER RETURN | NTS | NOT TO SCALE |
| CHWS | CHILLED WATER SUPPLY | OA | OUTSIDE AIR |
| CI | CAST IRON | OBD | OPPOSED BLADE DAMPER |
| CO | CLEANOUT, CARBON MONOXIDE | OCWR | OPEN CONDENSER WATER RETURN |
| CO2 | CARBON DIOXIDE | OCWS | OPEN CONDENSER WATER SUPPLY |
| COND | CONDENSATE | OD | OUTSIDE DIAMETER/DIMENSION |
| CONN | CONNECTION | P | PUMP |
| CP | CIRCULATING PUMP | P.C. | PLUMBING CONTRACTOR |
| CS | CLEAN STEAM, CURRENT SWITCH | PC | PUMPED CONDENSATE |
| CT | COOLING TOWER | PCU | POLLUTION CONTROL UNIT |
| CU | CONDENSING UNIT | PCWR | PROCESS COOLING WATER RETURN |
| CV | CHECK VALVE | PCWS | PROCESS COOLING WATER SUPPLY |
| CWR | CONDENSER WATER RETURN | PHWR | PROCESS HEATING WATER RETURN |
| CWS | CONDENSER WATER SUPPLY | PHWS | PROCESS HEATING WATER SUPPLY |
| D | DROP (DOWN IN ELEVATION) | PI | PRESSURE INDICATOR |
| DB | DRY BULB, DUCTBOARD | POC | POINT OF CONNECTION |
| DBP | DOUBLE BOOSTER PUMP | PRIM | PRIMARY |
| DCVA | DOUBLE CHECK VALVE ASSEMBLY | PRV | PRESSURE REDUCING VALVE |
| DC | DUST COLLECTION | PS | PRESSURE SENSOR |
| DE | DRYER EXHAUST | PSI | POUNDS PER SQUARE INCH |
| DEMO | DEMOLITION | PT | PRESSURE TEMPERATURE TRAP (PETE'S PLUG) |
| DH | DUCT HEATER | RV | RELIEF VENT |
| DN | DOWN (THROUGH FLOOR BELOW) | R | RISE (UP IN ELEVATION) |
| DPT | DIFFERENTIAL PRESSURE TRANSMITTER | RA | RETURN AIR |
| DWG | DRAWING | RELF | RELIEF AIR |
| DXFC | DIRECT EXPANSION FAN COIL | RF | RELIEF FAN |
| E | EXISTING | RL | REFRIGERANT LIQUID |
| E.C. | ELECTRICAL CONTRACTOR | RODI | REVERSE OSMOSIS DEIONIZED WATER |
| EA | EACH | RPBA | REDUCED PRESSURE BACK FLOW ASSEMBLY |
| EAT | ENTERING AIR TEMPERATURE | RS | REFRIGERANT SUCTION |
| ECH | ELECTRIC CABINET HEATER | RTU | ROOF TOP UNIT |
| EF | EXHAUST FAN | S | SENSOR |
| EFF | EFFICIENCY | SA | SUPPLY AIR |
| ELEV | ELEVATION | SCLP | STEAM CONDENSATE LOW PRESSURE |
| EMR | ELEVATOR MACHINE ROOM | SCHP | STEAM CONDENSATE |
| EPF | ELEVATOR PRESSURIZATION FAN | SCMP | STEAM CONDENSATE |
| EQZR | EQUALIZING LINES | SCPU | STEAM CONDENSATE PUMPED |
| ESP | EXTERNAL STATIC PRESSURE | SCVT | STEAM CONDENSATE VENT |
| EUH | ELECTRIC UNIT HEATER | SD | SMOKE DAMPER, SMOKE DETECTOR |
| EWT | ENTERING WATER TEMPERATURE | SEF | SMOKE EXHAUST FAN |
| EXH | EXHAUST | SF | SUPPLY FAN |
| EXHP | EXHAUST PIPING | SL | SOUND LINING |
| FC | FLEXIBLE CONNECTION, FLUID COOLER | SM | SHEETMETAL |
| FCU | FAN COIL UNIT | SP | STATIC PRESSURE |
| FD | FIRE DAMPER, FLOOR DRAIN | SPF | STAIR PRESSURIZATION FAN |
| FE | FUME EXHAUST | SS | STAINLESS STEEL |
| FFD | FUNNEL FLOOR DRAIN | ST | SOLVENT TRANSFER, SOUND TRAP |
| FLA | FULL LOAD AMPS | T | THERMOSTAT |
| FM | FLOW METER | TA | TRANSFER AIR |
| FOB | FLAT ON BOTTOM | TBD | TO BE DETERMINED |
| FOR | FUEL OIL RETURN | TE | TOILET EXHAUST |
| FOS | FUEL OIL SUPPLY, FLAT ON SIDE | TI | TEMPERATURE INDICATOR, TENANT IMPROVEMENT |
| FOT | FLAT ON TOP | TOD | TOP OF DUCT |
| FSD | FIRE SMOKE DAMPER | TOP | TOP OF PIPE |
| FUT | FUTURE | TOS | TOP OF STEEL |
| FV | FLOAT VALVE | TOU | TOP OF UNIT |
| G | LOW PRESSURE GAS | TS | TEMPERATURE SENSOR |
| G.C. | GENERAL CONTRACTOR | TV'S | TURNING VANES |
| GPM | GALLONS PER MINUTE | TYP | TYPICAL |
| GRV | GAS REGULATOR VENT | UP | UP (THROUGH FLOOR ABOVE) |
| GV | GATE VALVE | VAV | VARIABLE AIR VOLUME |
| HC | HEATING COIL | VCU | VRF CONDENSING UNIT |
| HHP | HYDRONIC HEAT PUMP | VD | VOLUME DAMPER |
| HP | HEAT PUMP, HORSE POWER | VFC | VRF FAN COIL |
| HPG | HIGH PRESSURE GAS | VFD | VARIABLE FREQUENCY DRIVE |
| HPS | HIGH PRESSURE STEAM | W/ | WITH |
| HPWR | HEAT PUMP WATER RETURN | WF | WATER FILTER |
| HPWS | HEAT PUMP WATER SUPPLY | WFI | WATER FOR INJECTION |
| HRC | HEAT RECOVERY COIL | WM | WATT METER |

## GRILLES, REGISTERS, DIFFUSERS LEGEND

NOTE: THE "/FD" CALLOUT INDICATES A GRILLE WITH U.L. CLASSIFIED RADIATION DAMPER TO BE INSTALLED IN RATED FLOOR/CEILING OR ROOF/CEILING ASSEMBLIES. USE RUSKIN MODEL CFD. INCLUDE THERMAL INSULATION BLANKET FOR LAY-IN T-BAR CEILINGS.

NOTE: ALL SUPPLY DIFFUSERS ARE TO BE INSTALLED WITH A DIFFUSER CAN W/ PERF DIVIDER, GENSCO REGISTER BOX W/ FLEX COLLAR & DIFF, MODEL COLDC21 OR EQUIV.

NOTE: FOR EXPOSED DUCTWORK WITH SUPPLY EXHAUST GRILLES TAKEOFFS TO BE GRILLE SIZE PLUS 2" TO MATCH GRILLE FRAME.

| | |
|---|---|
| X"xX" CD<br>CFM | CEILING DIFFUSER (LAY-IN T-BAR CEILING)<br>4 CORE ADJUSTABLE, WITH FILLER FOR 24" x 24" LAY-IN MODULE<br>TITUS MCD BORDER TYPE 3 – SHOEMAKER 700 MA-0<br>(USE X"ø RUNOUT) |
| X"xX" CD/FD<br>CFM | CEILING DIFFUSER WITH RADIATION DAMPER (LAY-IN T-BAR CEILING)<br>SAME AS CD ABOVE WITH RADIATION DAMPER, HR RATING AS NOTED ON PLANS, RADIATION DAMPER TO MATCH DIFFUSER MANUFACTURER<br>(USE X"ø RUNOUT) |
| X"xX" CD/P<br>CFM | CEILING DIFFUSER (GYPSUM BOARD CEILING)<br>4 CORE ADJUSTABLE, "V" FRAME<br>TITUS MCD BORDER TYPE 6 – SHOEMAKER MODEL MA-DCF<br>(USE X"ø RUNOUT) |
| X"xX" CD/PF<br>CFM | CEILING DIFFUSER WITH PERFORATED FACE (LAY-IN T-BAR CEILING)<br>4 CORE ADJUSTABLE, WITH FILLER FOR 24" x 24" LAY-IN MODULE<br>TITUS PMC BORDER TYPE 3 – SHOEMAKER 825 MA SQUARE COLLAR<br>(USE X" RUNOUT) |
| X"xX" CSR<br>CFM | CEILING SUPPLY REGISTER<br>DOUBLE DEFLECTION, HORIZONTAL LONG FRONT BLADES, WITH O.B.D.<br>TITUS MODEL 272RL OBD OPTION – SHOEMAKER 933 OBD OPTION |
| X"ø VD/P<br>CFM | CEILING VENTILATION DIFFUSER<br>UNIFORM 360° DISCHARGE PATTERN, ADJUSTABLE VENTILATION<br>LIFE BREATH 99-EAG |
| X"xX" CLF<br>CFM | CEILING LAMINAR FLOW DIFFUSER WITH PERFORATED FACE<br>TITUS TLF-SS – SHOEMAKER 5375, SEE SUBMITTAL FOR OPTIONS |
| X"xX" ECG<br>CFM | EGGCRATE SUPPLY GRILLE (T-BAR CLG, GYP CLG, DUCT MTD)<br>ALUMINUM EGGCRATE WITH FRAME, 1" x 1" x 1" CORE<br>TITUS 50F – SHOEMAKER 600, SEE SUBMITTAL FOR OPTIONS |
| X"xX" ECR<br>CFM | EGGCRATE SUPPLY REGISTER (T-BAR CLG, GYP CLG, DUCT MTD)<br>ALUMINUM EGGCRATE WITH FRAME AND OBD, 1" x 1" x 1" CORE<br>TITUS 50F – SHOEMAKER 600 O, SEE SUBMITTAL FOR OPTIONS |
| #SLOT-INLET ø<br>CFM | SLOT DIFFUSER (LAY-IN T-BAR CEILING)<br>TITUS TBD 80 – SHOEMAKER LSD TYPE 1 FRAME<br>SEE SUBMITTAL FOR SLOT DIMENSION AND OPTIONS |
| #SLOT-INLET ø/FD<br>CFM | SLOT DIFFUSER WITH FIRE DAMPER (RATED LAY-IN T-BAR CEILING)<br>TITUS TBD FR, SEE SUBMITTAL FOR SLOT DIMENSION AND OPTIONS |
| #SLOT-INLET ø/P<br>CFM | SLOT DIFFUSER (GYPSUM BOARD CEILING)<br>SAME AS LAY-IN SLOT DIFFUSER ABOVE WITH GYPSUM BOARD CEILING FRAME OPTION, SEE SUBMITTAL FOR SLOT DIMENSION AND OPTIONS |
| #SLOT-IN ø/FD/P<br>CFM | SLOT DIFFUSER WITH RADIATION DAMPER (GYPSUM BOARD CEILING)<br>SAME AS ABOVE FOR GYPSUM BOARD CEILING WITH RADIATION DAMPER<br>SEE SUBMITTAL FOR SLOT DIMENSION AND OPTIONS |
| X"xX" SSR<br>CFM | SIDEWALL SUPPLY REGISTER<br>DOUBLE DEFLECTION, HORIZONTAL LONG FRONT BLADES, WITH O.B.D.<br>TITUS MODEL 272RL OBD OPTION – SHOEMAKER 933 OBD OPTION |
| X"xX" SSG<br>CFM | SIDEWALL SUPPLY GRILLE<br>DOUBLE DEFLECTION, HORIZONTAL LONG FRONT BLADES<br>TITUS MODEL 272RL – SHOEMAKER 933 |
| X"xX" RSG<br>CFM | RADIUS SPIRAL GRILLE (SUPPLY)<br>DOUBLE DEFLECTION, VERTICAL FRONT BLADES, FULL LENGTH EXTRACTOR<br>SHOEMAKER MODEL RS-34-FS (LIMITED TO 20" NOMINAL LENGTH) |
| X"xX" LNWSG<br>CFM | ALUMINUM LINEAR WALL SUPPLY GRILLE<br>FIXED ANGLED DEFLECTION BLADES, 1/2" SPACING, 1/8" BAR THICKNESS<br>TITUS CT 581 – SHOEMAKER LSW |
| X"ø SVD<br>CFM | SIDEWALL VENTILATION DIFFUSER<br>UNIFORM 360° DISCHARGE PATTERN, ADJUSTABLE VENTILATION<br>LIFE BREATH 99-EAG |
| X"xX" RAG | RETURN AIR GRILLE WITH FRAME (LAY-IN T-BAR CEILING)<br>ALUMINUM EGGCRATE WITH ½" x ½" x ½" CORE<br>TITUS 50F – SHOEMAKER 600T |
| X"xX" RAG/P | RETURN AIR GRILLE (GYPSUM BOARD CEILING)<br>SINGLE DEFLECTION, FIXED ANGLED BLADES, LONG FRONT BLADES<br>TITUS 350RL – SHOEMAKER 935 |
| X"xX" SRG | SIDEWALL RETURN GRILLE<br>SINGLE DEFLECTION, FIXED ANGLED BLADES, LONG FRONT BLADES<br>TITUS 350RL – SHOEMAKER 935 |
| X"xX" LNWRG | ALUMINUM LINEAR WALL RETURN GRILLE<br>FIXED ANGLED DEFLECTION BLADES, 1/2" SPACING, 1/8" BAR THICKNESS<br>TITUS CT 581 – SHOEMAKER LSW |
| X"xX" SER<br>CFM | SIDEWALL EXHAUST REGISTER<br>SINGLE DEFLECTION, FIXED ANGLED BLADES, LONG FRONT BLADES, O.B.D.<br>TITUS 350RL OBD OPTION – SHOEMAKER 935 OBD OPTION |
| X"xX" SEG<br>CFM | SIDEWALL EXHAUST GRILLE<br>SINGLE DEFLECTION, FIXED ANGLED BLADES, LONG FRONT BLADES<br>TITUS 350RL – SHOEMAKER 935 |
| X"xX" EG<br>CFM | EXHAUST GRILLE WITH FRAME (LAY-IN T-BAR CEILING)<br>ALUMINUM EGGCRATE WITH ½" x ½" x ½" CORE<br>TITUS 50F – SHOEMAKER 600T |
| X"xX" EG/P<br>CFM | RETURN AIR GRILLE (PLASTER CEILING)<br>SINGLE DEFLECTION, FIXED ANGLED BLADES, LONG FRONT BLADES<br>TITUS 350RL – SHOEMAKER 935 |
| X"xX" ER<br>CFM | EXHAUST REGISTER<br>SINGLE DEFLECTION, FIXED ANGLED BLADES, LONG FRONT BLADES, O.B.D.<br>TITUS 350RL OBD OPTION – SHOEMAKER 935 OBD OPTION |
| X"xX" TG | TRANSFER GRILLE WITH FRAME (LAY-IN T-BAR CEILING)<br>ALUMINUM EGGCRATE WITH ½" x ½" x ½" CORE<br>TITUS 50F – SHOEMAKER 600T |
| X"xX" TG/P | TRANSFER GRILLE (GYPSUM BOARD CEILING)<br>SINGLE DEFLECTION, FIXED ANGLED BLADES, LONG FRONT BLADES<br>TITUS 350RL OBD OPTION – SHOEMAKER 935 |
| X"xX" STG | SIDEWALL TRANSFER GRILLE<br>SINGLE DEFLECTION, FIXED ANGLED BLADES, LONG FRONT BLADES<br>TITUS 350RL – SHOEMAKER 935 |

## SYMBOLS LEGEND (HVAC)

| | |
|---|---|
| | DUCT UNDER POSITIVE PRESSURE |
| | DUCT UNDER NEGATIVE PRESSURE |
| | TURNING VANES |
| XXXX | VERTICAL DUCT RISER/ CONTINUATION TAG |
| XXXX | HORIZONTAL DUCT CONTINUATION TAG |
| 12'-6" BOD | ELEVATION FROM F.F.L. (INSULATION AND DUCT FLANGES EXTEND 1½" BELOW BOD CALLOUT) |
| XXXX OR XXXX / XXXX | EQUIPMENT IDENTIFICATION |
| T | THERMOSTAT |
| S | SENSOR |
| CO | CARBON MONOXIDE |
| CO2 | CARBON DIOXIDE |
| NO2 | NITROGEN DIOXIDE |
| | CEILING OR INLINE EXHAUST FAN |
| | 24" x 12" RETURN AIR GRILLE W/SOUNDLINED CAN |
| | SUPPLY AIR ARROW |
| | RETURN AIR ARROW |
| FC | FLEXIBLE CONNECTION |
| | DUCT HEATER |
| | MANUAL VOLUME DAMPER |
| | MOTORIZED DAMPER |
| | SMOKE DETECTOR |
| | VERTICAL FIRE DAMPER (1½ HOUR) |
| | HORIZONTAL FIRE DAMPER (1½ HOUR) |
| 3 HR | VERTICAL FIRE DAMPER (3 HOUR) |
| 3 HR | HORIZONTAL FIRE DAMPER (3 HOUR) |
| BDD-L/M/H | BACK DRAFT DAMPER LOW/MEDIUM/HIGH VELOCITY |
| CBDD-L/M/H | COUNTER-BALANCED BACK DRAFT DAMPER LOW/MEDIUM/HIGH VELOCITY |
| | SMOKE DAMPER |
| | HORIZONTAL COMBINATION SMOKE AND FIRE DAMPER |
| | VERTICAL COMBINATION SMOKE AND FIRE DAMPER |
| | SPIN-IN TAKE-OFF & VOLUME DAMPER |
| 12x12/SL | 14" x 14" O.D. SHEETMETAL WITH 1" SOUNDLINER (U.N.O.), 12" x 12" NET I.D. |
| 12x12 | UNLINED 12" x 12" S.M. DUCT |
| 12x12 | 12" x 12" I.D. DUCTBOARD |
| 12x12/R-X | UNLINED 12" x 12" S.M. DUCT WITH EXTERNAL INSULATION (X DENOTES MINIMUM R-VALUE FOR INSULATION) |
| 12x12/[FW-X,FWG-X] | UNLINED 12" x 12" S.M. DUCT WITH FIRE-RATED WRAP OR FIRE-RATED WRAP FOR GREASE EXHAUST DUCT (X INDICATES THE HOUR RATING OF THE FIRE WRAP) |
| R D | RISE OR DROP IN DIRECTION OF FLOW |
| | FLEXIBLE DUCT |
| 38x24ø | FLAT OVAL DUCT |
| | SPIN-IN TAKE-OFF & VOLUME DAMPER |
| | AIRFLOW DIRECTION THROUGH THE PARKING GARAGE TO THE GARAGE EXHAUST FANS. |
| | EXHAUST LOUVER |
| | INTAKE LOUVER |

## SHEET INDEX



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* INDICATES SHEETS NOT INCLUDED IN THIS ISSUE

## VICINITY MAP




## PROPERTY INFORMATION

PARCEL NUMBER: 151560-0010

LEGAL DESCRIPTION:

CHANNEL CREST ADD & AN UND 7/8 INT IN TR A SUBJ TO ESMT & SH LDS ADJ LOTS 1 & 2

## APPLICABLE CODES

1. 2021 INTERNATIONAL BUILDING CODE (2021 IBC) WITH WA STATE AMENDMENTS
2. 2021 INTERNATIONAL MECHANICAL CODE (2021 IMC) WITH WA STATE AMENDMENTS
3. 2021 WASHINGTON STATE ENERGY CODE (2021 WSEC)
4. 2021 INTERNATIONAL FIRE CODE (2021 IFC) WITH WA STATE AMENDMENTS
5. 2021 INTERNATIONAL FUEL GAS CODE (2021 IFGC) WITH WA STATE AMENDMENTS
6. 2021 UNIFORM PLUMBING CODE (2021 UPC) WITH WA STATE AMENDMENTS
7. 2023 NATIONAL ELECTRICAL CODE (NFPA 70 – 2023)

## SCOPE OF WORK

1. INSTALL THREE (3) VRF HEAT RECOVERY CONDENSERS, FOUR (4) VRF BRANCH CONTROLLERS, FIFTY-FOUR (54) VRF FAN COILS, ASSOCIATED DUCTWORKS, GRDS AND CONTROL THERMOSTATS.
2. INSTALL ONE (1) VRF HEAT PUMP CONDENSER, ONE (1) VRF HEAT PUMP FAN COIL, ASSOCIATED DUCTWORKS, GRDS AND CONTROL THERMOSTAT.
3. INSTALL TWO (2) ROOFTOP PACKAGED HEAT PUMP WITH ECONOMIZER, ASSOCIATED DUCTWORKS, GRDS AND CONTROL THERMOSTAT.
4. INSTALL ELEVEN (11) INDOOR HEAT RECOVERY VENTILATOR, ASSOCIATED DUCTWORKS, GRDS AND CONTROL.
5. INSTALL ONE (1) ROOFTOP HEAT RECOVERY VENTILATOR, ASSOCIATED DUCTWORKS, GRDS AND CONTROL.
6. INSTALL THREE (3) EXHAUST FANS FOR ELECTRICAL ROOM, KILN ROOM, AND FUME HOOD.
7. INSTALL ONE (1) FAN HEATER FOR SCIENCE LAB MAKEUP AIR.
8. INSTALL THREE (3) DUCTLESS SPLIT SYSTEM FOR ELEVATOR MACHINE ROOM, MDF & IDF ROOM.


**HOLADAY-PARKS, INC.**
*SMART Mechanical Solutions©*
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Building Controls • Service & Maintenance
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TUKWILA, WA 98168 • (206) 248-9700
HOLADAYPARKS.COM
WA LICENSE NUMBER: HOLADPI379N0


MAXWELL GREENSTREET — STATE OF WASHINGTON — 52096 — REGISTERED PROFESSIONAL ENGINEER

06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
**BARNABIE POINT**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

LEGENDS AND NOTES

**M0.01**

ORIGINAL SHEET SIZE: 24" X 36"

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# NON-RESIDENTIAL VENTILATION CALCULATIONS (CONSTANT VOLUME SINGLE ZONE)

| SYSTEM AND ZONE INFORMATION | | | | | 2021 IMC / SMC CRITERIA (NOTE 1) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SYSTEM TAG | FLOOR | ROOM DESCRIPTION | GROSS SQUARE FOOTAGE (SQFT) | OCCUPANCY CLASSIFICATION | CODE CRITERIA PEOPLE OUTDOOR AIRFLOW, Rp (CFM/PERSON) | CODE CRITERIA AREA OUTDOOR AIRFLOW, Ra (CFM/SF) | ACTUAL AREA OUTDOOR AIRFLOW USED (CFM/SF) | CODE CRITERIA OCCUPANT DENSITY (#1000 SF) | CODE CRITERIA NUMBER OF OCCUPANTS | ACTUAL NUMBER OF OCCUPANTS USED | ZONE AIR DISTRIBUTION EFFECTIVENESS (EZ) TABLE 403.3.1.1.1.2 | 2021 IMC CRITERIA DEFAULT CALCULATED OUTSIDE AIR (CFM) | CALCULATED OUTSIDE AIR (CFM) | ACTUAL DESIGN (CFM) |
| SINGLE ZONE EQUIPMENT WITH DUCTED VENTILATION | | | | | | | | | | | | | | |
| ERV-B-1 | B | CONFERENCE 006 | 450 | CONFERENCE | 5 | 0.06 | 0.06 | 20 | 9 | 14 | 0.8 | 90 | 121 | 125 |
| | B | WORKROOM 005 | 290 | OFFICE | 5 | 0.06 | 0.06 | 5 | 2 | 2 | 0.8 | 34 | 34 | 35 |
| | B | FACULTY 004 | 635 | OFFICE | 5 | 0.06 | 0.06 | 5 | 4 | 4 | 0.8 | 73 | 73 | 75 |
| | B | ART 003 | 826 | CLASSROOM | 10 | 0.12 | 0.12 | 35 | 29 | 15 | 1 | 389 | 580 | 580 |
| | B | CIRCULATION 001 | 900 | CORRIDOR | 5 | 0.06 | 0.06 | 0 | 0 | 5 | 0.8 | 68 | 99 | 100 |
| ERV-B-2 | B | STEM / SCIENCE 002 | 1200 | CLASSROOM | 10 | 0.18 | 0.18 | 25 | 30 | 25 | 0.8 | 645 | 1300 | 1300 |
| ERV-1-1 | 1 | LRC-1 119 | 290 | CLASSROOM | 10 | 0.12 | 0.12 | 35 | 11 | 7 | 1 | 145 | 105 | 105 |
| | 1 | PRESCHOOL 118 | 855 | CLASSROOM | 10 | 0.12 | 0.12 | 25 | 22 | 19 | 1 | 323 | 293 | 295 |
| | 1 | PRESCHOOL 117 | 848 | CLASSROOM | 10 | 0.12 | 0.12 | 25 | 22 | 19 | 1 | 322 | 292 | 295 |
| ERV-1-2 | 1 | CLASSRM 116 | 752 | CLASSROOM | 10 | 0.12 | 0.12 | 35 | 27 | 25 | 1 | 360 | 340 | 340 |
| | 1 | CLASSRM 115 | 752 | CLASSROOM | 10 | 0.12 | 0.12 | 35 | 27 | 25 | 1 | 360 | 340 | 340 |
| | 1 | OFFICE 107 | 146 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1 | 1 | 0.8 | 17 | 17 | 20 |
| | 1 | OFFICE 112 | 153 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1 | 1 | 0.8 | 18 | 18 | 20 |
| ERV-1-3 | 1 | OFFICE 112A | 85 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1 | 1 | 0.8 | 13 | 13 | 15 |
| | 1 | OFFICE 114D | 90 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1 | 1 | 0.8 | 13 | 13 | 15 |
| | 1 | OFFICE 114C | 90 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1 | 1 | 0.8 | 13 | 13 | 15 |
| | 1 | OFFICE 114B | 95 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1 | 1 | 0.8 | 13 | 13 | 15 |
| | 1 | CLASSRM 113 | 735 | CLASSROOM | 10 | 0.12 | 0.12 | 35 | 26 | 25 | 1 | 348 | 338 | 340 |
| | 1 | KITCHEN 102 | 229 | KITCHEN | 7.5 | 0.12 | 0.12 | 20 | 5 | 2 | 0.8 | 81 | 53 | 55 |
| | 1 | ADMIN 114 | 335 | OFFICE | 5 | 0.06 | 0.06 | 5 | 2 | 4 | 0.8 | 38 | 50 | 50 |
| | 1 | MP LOBBY 101 | 705 | CORRIDOR | 5 | 0.06 | 0.06 | 0 | 0 | 2 | 0.8 | 53 | 65 | 65 |
| | 1 | CIRCULATION 111 | 1191 | CORRIDOR | 5 | 0.06 | 0.06 | 0 | 0 | 2 | 0.8 | 89 | 102 | 105 |
| ERV-2-1 | 2 | CLASSRM 207 | 750 | CLASSROOM | 10 | 0.12 | 0.12 | 35 | 27 | 27 | 1 | 360 | 360 | 360 |
| ERV-2-2 | 2 | CLASSRM 206 | 750 | CLASSROOM | 10 | 0.12 | 0.12 | 35 | 27 | 27 | 1 | 360 | 360 | 360 |
| ERV-2-3 | 2 | BREAKOUT 200A | 405 | OFFICE | 5 | 0.06 | 0.06 | 5 | 3 | 10 | 0.8 | 49 | 93 | 95 |
| | 2 | LRC-2 205 | 181 | CLASSROOM | 5 | 0.06 | 0.06 | 5 | 1 | 2 | 0.8 | 20 | 26 | 30 |
| | 2 | CLASSRM 204 | 744 | CLASSROOM | 10 | 0.12 | 0.12 | 35 | 27 | 25 | 1 | 359 | 339 | 340 |
| ERV-2-4 | 2 | CLASSRM 203 | 743 | CLASSROOM | 10 | 0.12 | 0.12 | 35 | 27 | 25 | 1 | 359 | 339 | 340 |
| | 2 | CLASSRM 202 | 734 | CLASSROOM | 10 | 0.12 | 0.12 | 35 | 26 | 25 | 1 | 348 | 338 | 340 |
| ERV-2-5 | 2 | RENTAL 212 | 361 | OFFICE | 5 | 0.06 | 0.06 | 5 | 2 | 2 | 0.8 | 40 | 40 | 40 |
| | 2 | CONF RM 212A | 241 | CONFERENCE | 5 | 0.06 | 0.06 | 20 | 5.0 | 5 | 0.8 | 49 | 49 | 50 |
| | 2 | OFFICE 212B | 120 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1 | 1 | 0.8 | 15 | 15 | 15 |
| | 2 | CONF RM 213A | 468 | CONFERENCE | 5 | 0.06 | 0.06 | 20 | 10.0 | 10 | 0.8 | 98 | 98 | 100 |
| | 2 | WORKRM 213B | 88 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1 | 1 | 0.8 | 13 | 13 | 15 |
| | 2 | OFFICE 213C | 102 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1 | 1 | 0.8 | 14 | 14 | 15 |
| | 2 | RENTAL 213 | 630 | OFFICE | 5 | 0.06 | 0.06 | 5 | 4 | 5 | 0.8 | 72 | 79 | 80 |
| | 2 | CIRCULATION 200 | 1270 | CORRIDOR | 5 | 0.06 | 0.06 | 0 | 0 | 4 | 0.8 | 95 | 120 | 165 |
| | 2 | BREAK RM 211A | 328 | OFFICE | 5 | 0.06 | 0.12 | 35 | 12 | 8 | 1 | 80 | 79 | 80 |
| RTU-R-1 | 1 | GYM / MULTI 103B EAST | 2152 | AUDITORIUM | 5 | 0.06 | 0.06 | 100 | 216 | 140 | 1 | 1209 | 829 | 840 |
| RTU-R-2 | 1 | GYM / MULTI 103B WEST | 1550 | GYM | 20 | 0.18 | 0.18 | 7 | 11 | 15 | 1 | 499 | 579 | 600 |
| ERV-C-1 | 1 | CHAPEL 103A | 1450 | AUDITORIUM | 5 | 0.06 | 0.06 | 150 | 218 | 125 | 0.8 | 1471 | 890 | 900 |
| ERV-3-1 | 3 | OFF/PHONE 303C | 77 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1.0 | 1 | 0.8 | 12 | 12 | 15 |
| | 3 | COO 303B | 102 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1.0 | 2 | 0.8 | 14 | 20 | 20 |
| | 3 | DEV/COMM 303D | 245 | OFFICE | 5 | 0.06 | 0.06 | 5 | 2.0 | 4 | 0.8 | 31 | 43 | 45 |
| | 3 | PROGRAM OFFICE 303E | 316 | OFFICE | 5 | 0.06 | 0.06 | 5 | 2.0 | 5 | 0.8 | 36 | 55 | 55 |
| | 3 | EXEC OFFICE 303F | 176 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1.0 | 2 | 0.8 | 19 | 26 | 30 |
| | 3 | CAMP SCHECHTER 303 | 350 | OFFICE | 5 | 0.06 | 0.06 | 5 | 2.0 | 2 | 0.8 | 39 | 39 | 40 |
| | 3 | RENTAL OFFICE | 122 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1.0 | 2 | 0.8 | 15 | 22 | 25 |
| | 3 | CONF RM 303A | 387 | CONFERENCE | 5 | 0.06 | 0.06 | 20 | 8.0 | 10 | 0.8 | 79 | 92 | 95 |
| ERV-3-2 | 3 | CIRC 300 | 1253 | CORRIDOR | 5 | 0.06 | 0.06 | 0 | 0.0 | 8 | 0.8 | 94 | 144 | 145 |
| | 3 | RENTAL 302 | 598 | OFFICE | 5 | 0.06 | 0.06 | 5 | 3.0 | 5 | 0.8 | 64 | 76 | 80 |
| | 3 | OFFICE 302A | 78 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1.0 | 1 | 0.8 | 12 | 12 | 15 |
| | 3 | OFFICE 302B | 79 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1.0 | 1 | 0.8 | 12 | 12 | 15 |
| | 3 | OFFICE 302C | 78 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1.0 | 1 | 0.8 | 12 | 12 | 15 |
| ERV-3-3 | 3 | OFFICE 301A | 107 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1.0 | 1 | 0.8 | 14 | 14 | 15 |
| | 3 | OFFICE 301B | 120 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1.0 | 1 | 0.8 | 15 | 15 | 15 |
| | 3 | SNOEZELEN RM 301E | 168 | OFFICE | 5 | 0.06 | 0.06 | 5 | 1.0 | 1 | 0.8 | 19 | 19 | 20 |
| | 3 | OPEN OFFICE | 1300 | OFFICE | 5 | 0.06 | 0.06 | 5 | 7.0 | 10 | 0.8 | 141 | 160 | 160 |
| ERV-3-4 | 3 | GAME / TECH 301G | 377 | CLASSROOM | 10 | 0.12 | 0.12 | 35 | 14.0 | 24 | 0.8 | 232 | 357 | 360 |
| | 3 | MUSIC 301F | 388 | CLASSROOM | 10 | 0.12 | 0.12 | 35 | 14.0 | 16 | 0.8 | 233 | 258 | 260 |
| ERV-3-5 | 3 | ART / STEM 301D | 825 | LECTURE CLASSROOM | 7.5 | 0.06 | 0.06 | 35 | 29.0 | 56 | 0.8 | 334 | 587 | 590 |

1 VENTILATION CALCULATIONS PERFORMED PER 2018 SMC AND IMC, EQUATION 4-1 AND 4-2.
2 PER SECTION 403.3.1.1 EXCEPTION, IF THE OCCUPANCY DENSITY IS KNOWN AND DOCUMENTED IN THE PLANS, THE OUTSIDE AIR RATE MAY BE BASED ON THE DESIGN OCCUPANT DENSITY.
3 THE OCCUPANT QUANTITY USED SHALL NOT BE LESS THAN ONE-HALF THAT RESULTING FROM APPLICATION OF TABLE 403.3.1.1 ESTIMATED MAXIMUM OCCUPANCY RATE.

## MAXIMUM ALLOWABLE REFRIGERANT VOLUME

| | SPACE AND VOLUME DATA | | | | REFRIGERANT DATA (2) | | | CALCULATIONS | | |
|---|---|---|---|---|---|---|---|---|---|---|
| EQUIPMENT TAG | SPACE SERVED | TOTAL FLOOR AREA (SQFT) | TOTAL VOLUME OF SPACES (CUFT) | VOLUME OF SMALLEST SPACES SERVED (CUFT) | NAME | CLASSIFICATION | MAXIMUM CODE ALLOWED LBS PER 1000 CUFT | TOTAL INSTALLED REFRIGERANT QUANTITY (LBS) | MAXIMUM CODE ALLOWED QUANTITY (LBS) | DOES QUANTITY COMPLY WITH MAXIMUM (Y/N) |
| VRF-R-3 | LEVEL 3 VARIES | 7146 | 67887 | 67887 | R410A | A1 | 26 | 84.7 | 1765 | YES |
| VRF-R-2 | LEVEL 2 VARIES | 7915 | 75192.5 | 75192.5 | R410A | A1 | 26 | 80.1 | 1955 | YES |
| VRF-R-1 | LEVEL 1 & B VARIES | 11652 | 110694 | 110694 | R410A | A1 | 26 | 110.2 | 2878 | YES |
| VRF-R-4 | CHAPEL | 1663 | 29934 | 29934 | R410A | A1 | 26 | 46.0 | 778 | YES |
| CU-B-1 | MDF ROOM | 171 | 1881 | 1881 | R454B | A2 | 22 | 7.7 | 41 | YES |
| CU-R-1 | SHARED IDF RM | 157 | 1727 | 1727 | R454B | A2 | 22 | 7.7 | 38 | YES |

## ELECTRICAL COORDINATION NOTES

1. NE VOLTAGE (120 VOLT AND ABOVE) WIRING FOR MECHANICAL EQUIPMENT SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. LOW VOLTAGE (LESS THAN 120 VOLT) WIRING FOR MECHANICAL EQUIPMENT AND DDC SYSTEMS SHALL BE PROVIDED BY THE CONTROLS CONTRACTOR.
2. ALL ELECTRICAL INSTALLATIONS FOR MECHANICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE 2023 NATIONAL ELECTRICAL CODE (NEC) AND ALL STATE AND LOCAL CODES AND AMENDMENTS.
3. MECHANICAL EQUIPMENT MAY REQUIRE A SHORT-CIRCUIT CURRENT RATING (SCCR) GREATER THAN WHAT IS AVAILABLE FROM THE MECHANICAL EQUIPMENT MANUFACTURER. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ANY COMPONENTS, DEVICES, OR WIRING NECESSARY TO COMPLY WITH THE ELECTRICAL CODE AND TO MEET THE EQUIPMENT SCCR REQUIREMENTS.
4. WHERE INDICATED ON EQUIPMENT SCHEDULES, THE EQUIPMENT COMES COMPLETE FROM THE FACTORY WITH MOTOR STARTERS OR VARIABLE FREQUENCY DRIVES. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE AND DISCONNECTS AS REQUIRED BY STATE AND LOCAL CODES, AND INSTALL ALL POWER WIRING, INCLUDING CONNECTING TO EQUIPMENT.
5. WHERE INDICATED ON EQUIPMENT SCHEDULES, THE EQUIPMENT REQUIRES FIELD INSTALLED MOTOR STARTERS, DISCONNECTS, AND/OR VARIABLE SPEED DRIVES. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL MOTOR STARTERS (OR CONTACTORS WHERE INDICATED), PROVIDE SERVICE AND DISCONNECTS PER CODE, INSTALL VARIABLE SPEED DRIVES AND MOTOR OVERLOAD PROTECTION AS REQUIRED, AND INSTALL ALL POWER WIRING, INCLUDING CONNECTING TO EQUIPMENT. FOR AUTOMATIC MOTOR STARTERS, HOLDING COIL CIRCUIT SHALL BE POWERED BY ELECTRICAL CONTRACTOR AND SHALL BE 120 VOLT/1 PHASE UNLESS INDICATED OTHERWISE. ALL STARTERS SHALL BE PROVIDED WITH AN H-O-A SWITCH.
6. WHERE INDICATED ON FAN SCHEDULES, FANS MAY BE FURNISHED WITH A SPEED CONTROLLER AND/OR LINE VOLTAGE THERMOSTAT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ROUGH-IN AND INSTALL OF THE SPEED CONTROLLER ON FAN HOUSINGS AND THERMOSTATS AS INDICATED ON THE MECHANICAL PLANS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING AND DISCONNECTS AS REQUIRED BY THE NEC AND OTHER STATE AND LOCAL CODES AND CONNECTIONS TO THE FAN EQUIPMENT.
7. WHERE INDICATED ON MECHANICAL PLANS AND EQUIPMENT SCHEDULES, THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ELECTRIC UNIT HEATERS, BASEBOARD ELECTRIC HEAT, AND OR UNIT HEATERS. THERMOSTATS AND ALL POWER WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR.
8. A FIRE AND/OR SMOKE DETECTION AND ALARM SYSTEM, AS MAY BE REQUIRED BY THE OWNER, ARCHITECT, OR CODE AUTHORITY, IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR OR THE FIRE/LIFE/SAFETY CONTRACTOR. ALL ASPECTS OF THIS SYSTEM HAVE BEEN EXCLUDED BY THE MECHANICAL CONTRACTOR, EXCEPT THAT THE MECHANICAL CONTRACTOR MAY PROVIDE THE FANS, DAMPERS, AND OTHER MECHANICAL EQUIPMENT. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR OR FIRE/LIFE/SAFETY CONTRACTOR TO INTERLOCK THE MECHANICAL CONTRACTOR SUPPLIED EQUIPMENT WITH THE FIRE AND/OR SMOKE DETECTION AND ALARM SYSTEM.
9. WHERE INDICATED ON MECHANICAL PLANS AND EQUIPMENT SCHEDULES, DUCT SMOKE DETECTORS ARE TO BE INSTALLED PER THE 2021 INTERNATIONAL MECHANICAL CODE (IMC). WHERE INDICATED ON THE MECHANICAL PLANS, DUCT SMOKE DETECTORS SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR OR FIRE/LIFE/SAFETY CONTRACTOR, INSTALLED IN THE DUCT BY THE MECHANICAL CONTRACTOR, AND WIRED TO THE FIRE/LIFE/SAFETY SYSTEM AND TO THE MECHANICAL EQUIPMENT FOR EQUIPMENT SHUTDOWN BY THE ELECTRICAL CONTRACTOR OR THE FIRE/LIFE/SAFETY CONTRACTOR. WHERE INDICATED ON THE MECHANICAL EQUIPMENT SCHEDULES THAT THE EQUIPMENT IS PROVIDED WITH FACTORY INSTALLED DUCT SMOKE DETECTORS, THE DUCT SMOKE DETECTOR SHALL BE WIRED TO THE FIRE/LIFE/SAFETY SYSTEM AND TO THE MECHANICAL EQUIPMENT FOR EQUIPMENT SHUTDOWN.
10. WHERE INDICATED ON THE MECHANICAL PLANS, COMBINATION FIRE SMOKE DAMPERS ARE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. DUCT OR AREA SMOKE DETECTORS FOR THE COMBINATION FIRE SMOKE DAMPERS SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR OR FIRE/LIFE/SAFETY CONTRACTOR. DUCT MOUNTED SMOKE DETECTORS SHALL BE INSTALLED IN THE DUCT BY THE MECHANICAL CONTRACTOR. AREA SMOKE DETECTORS SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR OR THE FIRE/LIFE/SAFETY CONTRACTOR. WIRING OF THE DUCT OR AREA SMOKE DETECTOR TO THE COMBINATION FIRE SMOKE DAMPER ACTUATOR AND TO THE BUILDING FIRE ALARM SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR OR FIRE/LIFE/SAFETY CONTRACTOR.
11. A MINIMUM OF TWO, 120V, 50 AMP CONTROL CIRCUITS ARE REQUIRED PER FLOOR FOR THE BUILDING DDC SYSTEM. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE AND A DISCONNECT PER STATE AND LOCAL CODES, AND INSTALL ALL POWER WIRING, INCLUDING CONNECTING TO THE CONTROLS CONTRACTOR PROVIDED TRANSFORMERS AND EQUIPMENT.

## DUCT SEALING AND LEAKAGE TESTING NOTES

1. ALL DUCTS AND PLENUMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION C403.10.2 OF THE 2021 WASHINGTON STATE ENERGY CODE (WSEC) AND THE 2021 INTERNATIONAL MECHANICAL CODE. FOR LOW PRESSURE (2" W.C. OR LESS) DUCTS, MEDIUM PRESSURE (GREATER THAN 2" BUT LESS THAN 3" W.C.), AND HIGH PRESSURE (3" W.C. OR GREATER), ALL DUCTS SHALL BE SEALED PER SECTIONS C403.10.2 OF THE 2021 WSEC. WHERE REQUIRED BY THE 2021 WSEC, DUCTS SHALL BE LEAK TESTED (SEE NOTE 5 BELOW).
2. THE PRESSURE CLASSIFICATION OF ALL DUCTS SHALL BE INDICATED, EITHER ON THE SHEET METAL CONSTRUCTION NOTES, OR LISTED ON THE HVAC FLOOR PLANS. SEE THE SHEET METAL NOTES ON THESE PLANS FOR DESIGN DUCT CONSTRUCTION STANDARDS AND DESIGN PRESSURE CLASSIFICATION.
3. DUCT JOINTS, SEAMS, AND CONNECTIONS SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH SECTION C403.10.2 OF THE 2021 WSEC AND SECTION 603.9 OF THE 2021 INTERNATIONAL MECHANICAL CODE (IMC) AND CONSTRUCTED AS SPECIFIED IN SMACNA HVAC DUCT AND CONSTRUCTION STANDARDS – METAL AND FLEXIBLE. JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS, MASTIC-PLUS-EMBEDDED-FABRIC SYSTEMS, LIQUID SEALANTS, OR TAPES. TAPES AND MASTICS USED TO SEAL METALLIC AND FLEXIBLE AIR DUCTS AND FLEXIBLE AIR CONNECTORS SHALL COMPLY WITH UL 181B. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. MECHANICAL FASTENERS FOR USE WITH FLEXIBLE NON-METALLIC AIR DUCTS SHALL COMPLY WITH UL 181B. CLOSURE SYSTEMS USED TO SEAL ALL DUCTWORK SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS.
4. FOR LOW PRESSURE SUPPLY AND RETURN AIR DUCTS (2" W.C. OR LESS) ADDITIONAL CLOSURE SYSTEMS ARE NOT REQUIRED FOR CONTINUOUSLY WELDED JOINTS AND SEAMS AND LOCKING-TYPE JOINTS AND SEAMS.
5. HIGH PRESSURE DUCTS (GREATER THAN 3" W.C.) SHALL BE LEAK TESTED IN ACCORDANCE WITH THE SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL AND PROVEN TO HAVE A LEAKAGE RATE (CL) OF 4.0 OR LESS BASED ON THE EQUATION LISTED IN SECTION C403.10.2.3 OF THE 2021 WSEC. DOCUMENTATION OF THE LEAKAGE TESTING AND FINAL LEAKAGE RATE SHALL BE PROVIDED TO THE ENGINEER OF RECORD. AT LEAST 25 PRECENT OF ALL DUCT SURFACE AREA SHALL BE TESTED AND SHALL CONFORM TO THESE REQUIREMENTS. THE TEST PRESSURE USED FOR THE LEAKAGE TEST SHALL BE EITHER THE DESIGN DUCT CONSTRUCTION PRESSURE CLASS OR THE AVERAGE OPERATING PRESSURE. SEE THE SHEET METAL NOTES ON THESE PLANS FOR DESIGN DUCT CONSTRUCTION STANDARDS AND DESIGN PRESSURE CLASSIFICATION.

## PROJECT COMMISSIONING NOTES

COMMISSIONING OF MECHANICAL (HVAC) SYSTEMS, LIGHTING SYSTEMS, SERVICE WATER HEATING SYSTEMS, AND METERING SYSTEMS MAY BE PROVIDED BY A THIRD PARTY COMMISSIONING AGENT (NOT HOLADAY-PARKS). THE NOTES BELOW ARE PROVIDED FOR REFERENCE TO MECHANICAL SYSTEM COMMISSIONING REQUIREMENTS IN THE 2021 WASHINGTON STATE ENERGY CODE (WSEC) ONLY. THESE NOTES DO NOT CONSTITUTE THE PERFORMANCE OF THE REQUIRED COMMISSIONING BY HOLADAY-PARKS. REFER TO SECTION 408 OF THE 2021 WSEC FOR COMPLETE REQUIREMENTS.

1. PROJECTS WHERE THE BUILDING MECHANICAL SYSTEM HAVE A HEATING CAPACITY GREATER THAN 300 MBH OR A HAVE COOLING CAPACITY GREATER THAN 20 TONS (240 MBH) SHALL BE COMMISSIONED IN ACCORDANCE WITH SECTION 408.2 OF THE 2021 WSEC. ALL OTHER PROJECTS INSTALLING MECHANICALS SYSTEM THAT DO NOT MEET OR EXCEED THE HEATING OR COOLING LIMITS ABOVE ARE NOT REQUIRED TO PERFORM MECHANICAL SYSTEM COMMISSIONING.
2. WHERE REQUIRED BY THE 2021 WSEC (SEE 1 ABOVE), MECHANICAL SYSTEM COMMISSIONING SHALL INCLUDE THE FOLLOWING AS REQUIRED BY SECTION C408.1 OF THE 2021 WSEC:
   - A. COMMISSIONING PLAN.
   - B. SYSTEM ADJUSTING AND BALANCING INCLUDING AIR SYSTEMS AND HYDRONIC SYSTEM BALANCING.
   - C. HVAC EQUIPMENT AND HVAC CONTROLS AND ECONOMIZER FUNCTIONAL TESTING.
   - D. OPERATING AND MAINTENANCE DOCUMENTS (MANUALS) AND RECORD DOCUMENTS (DRAWINGS).
   - E. COMMISSIONING REPORT.
3. A COMMISSIONING PLAN SHALL BE DEVELOPED BY THE PROJECTS CERTIFIED COMMISSIONING PROFESSIONAL (CPE) IN ACCORDANCE WITH SECTION C408.1.2. THE COMMISSIONING PLAN SHALL INCLUDE ORGANIZATION, SCHEDULES, RESOURCES, AND DOCUMENTATION FOR THE COMMISSIONING PROCESS. THE CPE SHALL MEET THE REQUIREMENTS SPECIFIED IN SECTION C202 OF THE 2021 WSEC. THE CPE SHALL PROVIDE ITEMS 1 THROUGH 3, AS DESCRIBED IN SECTION C408.1.2, FOR THE COMMISSIONING PLAN. NOTE THAT HOLADAY-PARKS OR ITS EMPLOYEES ARE NOT DESIGNATED AS THE CERTIFIED COMMISSIONING PROFESSIONAL ON THE PROJECT.
4. A COMMISSIONING COMPLIANCE CHECKLIST SHALL BE SUBMITTED TO THE BUILDING OFFICIAL UPON SUBSTANTIAL COMPLETION OF THE BUILDING OR PROJECT. THE COMPLIANCE CHECKLIST SHALL BE PROVIDED TO THE BUILDING OWNER OR OWNER'S REPRESENTATIVE WITHIN 14 DAYS OF THE DATE OF SUBSTANTIAL COMPLETION BY THE COMMISSIONING AGENT. THE BUILDING OWNER OR OWNER'S AGENT IS RESPONSIBLE FOR PROVIDING A COMPLETED AND SIGNED COPY OF THE COMPLIANCE CHECKLIST TO THE BUILDING OFFICIAL. THE COMPLETED COMMISSIONING COMPLIANCE CHECKLIST PROVIDED TO THE BUILDING OFFICIAL IS DEEMED TO SATISFY THE REQUIREMENTS OF SECTION C408.1.4.1 OF THE 2021 WSEC.
5. A COMMISSIONING REPORT IS TO BE PROVIDED TO THE BUILDING OWNER, IN ACCORDANCE WITH SECTION C408.1.3. THE COMMISSIONING REPORT SHALL MEET THE REQUIREMENTS OF SECTION C408.1.3 AND SHALL INCLUDE RESULTS OF FUNCTIONAL TESTING, A LIST OF DEFICIENCIES INCLUDING CORRECTIVE ACTIONS, FUNCTIONAL PERFORMANCE TEST PROCEDURES INCLUDING MEASURED DATA, AND BALANCING REPORT. ANY TESTING THAT COULD NOT BE PERFORMED DUE TO CLIMATE CONDITIONS ARE NOT REQUIRED TO BE INCLUDED IN THE FINAL COMMISSIONING REPORT.

## DUCT INSULATION REQUIREMENTS

1. ALL DUCTS AND PLENUMS SHALL BE INSULATED IN ACCORDANCE WITH THE 2021 INTERNATIONAL MECHANICAL CODE (IMC), THE 2021 WASHINGTON STATE ENERGY CODE (WSEC), AS REQUIRED BY ANY LOCAL CODES, AND AS SPECIFIED IN THESE NOTES AND/OR ON THE HVAC PLANS.
2. ALL SHAFTS AND PLENUMS THAT CONVEY OUTSIDE AIR SHALL BE INSULATED AND SEALED TO THE SAME REQUIREMENT AS THE BUILDING ENVELOPE (WALLS). BASED ON THE 2021 WSEC WALL U-VALUE OF 0.052 FOR METAL FRAMED WALLS, THE INSULATION SHALL BE A MINIMUM OF R-19.2. THE BUILDING ENVELOPE LEVEL INSULATION SHALL BE CONTINUOUS FROM THE EXTERIOR OPENING TO A BUILDING ENVELOPE ISOLATION MOTORIZED CONTROL DAMPER (MCD) OR TO THE CONNECTION TO THE MECHANICAL EQUIPMENT INLET, INCLUDING THE RETURN AIR/OUTSIDE AIR MIXING PLENUM THAT MAY BE CONNECTED TO THE INLET OF THE HVAC EQUIPMENT.
3. ALL DUCTS THAT CONVEY OUTSIDE AIR SHALL BE INSULATED IN ACCORDANCE WITH SECTION C403.10.1.1 OF THE 2021 WSEC.
   - a. OUTSIDE AIR DUCTS INSIDE CONDITIONED SPACES UPSTREAM OF A BUILDING ENVELOPE ISOLATION MOTORIZED CONTROL DAMPER AND THAT DELIVERS GREATER THAN 2800 CFM OF OUTSIDE AIR SHALL BE INSULATED TO A MINIMUM OF R-16.
   - b. OUTSIDE AIR DUCTS INSIDE CONDITIONED SPACES DOWNSTREAM OF A BUILDING ENVELOPE ISOLATION MOTORIZED CONTROL DAMPER AND THAT DELIVERS GREATER THAN 2800 CFM OF OUTSIDE AIR SHALL BE INSULATED TO A MINIMUM OF R-8.
   - c. OUTSIDE AIR DUCTS THAT SERVE INDIVIDUAL MECHANICAL UNITS AND THAT DELIVER LESS THAN 2800 CFM OF SUPPLY AIR TO EACH UNIT SHALL BE INSULATED TO A MINIMUM OF R-7 AND DO NOT NEED TO COMPLY WITH THE REQUIREMENTS OF NOTE 2.a ABOVE. THE BUILDING ENVELOPE ISOLATION DAMPER SHALL BE LOCATED AT THE MECHANICAL EQUIPMENT UNIT INTAKE UNLESS SHOWN OTHERWISE ON THESE PLANS.
4. ALL SUPPLY, RETURN, AND EXHAUST AIR DUCTS AND PLENUMS SHALL BE INSULATED IN ACCORDANCE WITH SECTION C403.10.1.2 OF THE WSEC.
   - a. SUPPLY AND RETURN AIR DUCTS OUTSIDE THE BUILDING (ON THE ROOF, ABOVE INSULATED CEILINGS, WITHIN UNCONDITIONED PARKING GARAGES, AND WITHIN CRAWL SPACES) SHALL BE INSULATED TO A MINIMUM OF R-8.
   - b. SUPPLY AND RETURN AIR DUCTS LOCATED IN UNCONDITIONED SPACES INSIDE THE BUILDING SHALL BE INSULATED TO A MINIMUM OF R-6. UNCONDITIONED SPACES INSIDE THE BUILDING ARE THOSE SPACES THAT HAVE NEITHER HEATING OR COOLING AND ARE NOT INSULATED TO BUILDING ENVELOPE REQUIREMENTS. WHERE REQUIRED, THE INSULATION REQUIREMENT SHALL BE NOTED ON THESE HVAC PLANS ALONG WITH THE DUCT SIZE (E.G. 12x12/R-6).
   - c. SUPPLY AND RETURN AIR DUCTS LOCATED IN UNCONDITIONED SPACES WHERE THE DUCT CONVEYS AIR WITHIN 15°F OF THE AIR TEMPERATURE OF THE UNCONDITIONED SPACE SHALL BE INSULATED TO A MINIMUM OF R-3.3. WHERE REQUIRED, THE INSULATION REQUIREMENT SHALL BE NOTED AS "W" FOR WRAPPED INSULATION ON THESE HVAC PLANS ALONG WITH THE DUCT SIZE (E.G. 12x12/W).
   - d. ALL SUPPLY AND RETURN AIR DUCTS AND PLENUMS THAT ARE LOCATED INSIDE THE CONDITIONED SPACES AND THE AIR STREAM TEMPERATURE CAN OPERATE BELOW 55°F OR ABOVE 105°F SHALL BE INSULATED TO A MINIMUM OF R-3.3 UNLESS THE DUCTS AND PLENUMS ARE EXPOSED TO THE SPACE THAT IS BEING SERVED (E.G. OPEN TO STRUCTURE). WHERE REQUIRED, THE INSULATION REQUIREMENT SHALL BE NOTED AS "W" FOR WRAPPED INSULATION ON THESE HVAC PLANS ALONG WITH THE DUCT SIZE (E.G. 12x12/W).
   - e. EXHAUST DUCTS FROM AN ENERGY RECOVERY VENTILATOR SHALL BE INSULATED PER TABLE C403.10.1.2 TO A MINIMUM OF R-8 FROM THE EQUIPMENT CONNECTION UP TO THE BUILDING ENVELOPE ISOLATION DAMPER.
5. ALL INSULATION AND JACKETING INSTALLED IN A CEILING PLENUM SHALL MEET THE REQUIREMENTS OF ASTM E84 AND UL 723 AND SHALL BE LISTED AND LABELED FOR THE USE IN CEILING RETURN AIR PLENUMS.
6. WHERE SOUND LINED DUCT IS SPECIFIED ON THESE HVAC PLANS, THE SOUND LINER SHALL BE AS SPECIFIED IN THE SHEET METAL NOTES LOCATED ON THESE HVAC PLANS. DUCT LINER THICKNESS SHALL BE SPECIFIED ON THESE HVAC PLANS ALONG WITH THE DUCT SIZE (E.G. 12x12/2" SL). DUCT LINER SHALL NOT PROTRUDE IN THE DUCT CLOSER THAN 6 INCHES FROM A MOTORIZED DAMPER, FIRE DAMPER, OR COMBINATION FIRE SMOKE DAMPER AND SHALL NOT INTERRUPT THE OP

## SEQUENCE OF OPERATIONS

AIR COOLED HEAT RECOVERY VRF SYSTEMS

AIR-COOLED HEAT RECOVERY VRF OUTDOOR CONDENSERS, VRF-R-1, VRF-R-2 & VRF-R-3, PROVIDE HEATING & COOLING FOR LEVEL B THRU LEVEL 3. THE OUTDOOR CONDENSERS WILL BE CONTROLLED BY THE VRF SYSTEM CONTROLLERS. SEE VRF FAN COIL SEQUENCE OF OPERATION FOR ADDITIONAL REQUIREMENTS

HEAT RECOVERY VRF FAN COILS

ALL HEAT PUMP FAN COILS MUST BE MANUFACTURED BY THE SAME MANUFACTURER AS THE VRF SYSTEM AND SHALL BE PROVIDED WITH THE VRF MANUFACTURER'S CONTROLS SYSTEM.

THERMOSTATS SHALL BE PROVIDED BY THE VRF EQUIPMENT MANUFACTURER. THERMOSTAT SETPOINTS, INCLUDING OFF-HOUR CONTROLS AND SETBACK SHALL BE CONTROLLED VIA THE VRF EQUIPMENT MANUFACTURER'S BACNET INTERFACE THROUGH THE BUILDING DDC SYSTEM.

1. OCCUPIED OPERATION:
   WHEN THE FAN COILS ARE CONTROLLED TO THE OCCUPIED MODE, THE FAN COIL UNIT WILL CONTROL TO PROVIDE HEATING OR COOLING ACCORDING TO PRE-PROGRAMMED SETPOINT TEMPERATURE. FAN SHALL BE PROGRAMMED TO OFF DURING SYSTEM DEAD BAND.
2. UNOCCUPIED OPERATION:
   WHEN THE FAN COILS ARE CONTROLLED TO THE UNOCCUPIED MODE, THE FAN COIL SUPPLY FAN WILL RUN ONLY DURING HEATING OR COOLING TO MEET UNOCCUPIED TEMPERATURE SETPOINTS.

HEAT RECOVERY VENTILATION SYSTEMS

OPERATING MODES OF HEAT RECOVERY VENTILATION SYSTEMS ARE AS FOLLOWS:
SINGLE ZONE HEAT RECOVERY VENTILATOR: ERV-2-1 & ERV-2-2, & ERV-C-1
CONSTANT VOLUME HEAT RECOVERY VENTILATOR: ERV-B-1, ERV-B-2, ERV-1-3, ERV-2-4 & ERV-2-5
VARIABLE VOLUME HEAT RECOVERY VENTILATOR: ERV-1-1, ERV-1-2, ERV-2-3 & ERV-R-1

1. UNOCCUPIED MODE:
   BMS SHALL COMMAND THE MOTROIZED DAMPERS ON EACH SYSTEM INTO THE UNOCCUPIED MODE BASED UPON A SCHEDULE DETERMINED BY THE OWNER/TENANT. THE SUPPLY AND RETURN AIR DAMPERS SHALL BE CLOSED.
2. OCCUPIED OPERATION:
   WHEN BUILDING BMS CONTROLLED THE ERV UNIT TO THE OCCUPIED MODE AND ALL ERV UNIT FUNCTIONS ARE ENABLED.
   SUPPLY & RETURN AIR DAMPERS SHALL BE COMMANDED TO OPEN.

   SINGLE ZONE HEAT RECOVERY VENTILATOR:
   BMS SHALL MODULATE THE ERV FAN SPEED BASED ON CO2 SENSOR PROVIDED IN SPACE. BMS SHALL PROVIDE MINIMUM FAN SPEED TO PROVIDE 20% OF THE DESIGN OSA CFM AND MODULATE UP WHEN SPACE CO2 LEVEL GOES UP.

   CONSTANT VOLUME HEAT RECOVERY VENTILATOR:
   BMS SHALL ACTIVATE THE CONSTANT VOLUME VENTILATOR TO PROVIDE CONSTANT OSA TO SPACE FOR ONE OF THE TWO CONDITIONS. NO DEMAND CONTROL VENTILATION REQUIRED FOR THE SYSTEM OR FULL CONSTANT EXHAUST AIR VOLUME EQUAL TO SUPPLY AIR VOLUME.

   VARIABLE VOLUME HEAT RECOVERY VENTILATOR
   FOR ROOM WHICH DCV IS REQUIRED, A MOTORIZED DAMPER SHALL BE PROVIDED TO MODULATE OPEN / CLOSE BASED ON CO2 SENSOR IN SPACE.
   BMS SHALL MODULATE THE ERV SUPPLY FAN SPEED TO MAINTAIN MINIMUM DUCT STATIC PRESSURE OF +0.3% W.G. (ADJ).

   BMS SHALL MODULATE THE ERV RETURN FAN SPEED TO MAINTAIN DUCT STATIC PRESSURE OF -0.3% W.G. (ADJ).

   AUTOMATIC AIRFLOW REGULATOR SHALL BE PROVIDED FOR ANY EXHAUST GRILLE TO PROVIDE CONSTANT EXHAUST AIR VOLUME FOR THE ROOM, SUCH AS RESTROOM, JANITOR CLOSET, ETC.

   HEATING / COOLING:
   HEATING / COOLING IS PROVIDED AT THE ZONE LEVEL VIA LOCAL FAN COILS.

ELECTRIC ROOM EXHAUST FAN (EF-B-1)

EXHAUST FAN, EF-B-1, SHALL BE CONTROLLED BY A LOCAL THERMOSTAT TO MAINTAIN SPACE TEMPERATURE NOT TO EXCEED 85 DEG F.

KILN ROOM EXHAUST FAN (EF-B-2)

EXHAUST FAN, EF-B-1, SHALL BE CONTROLLED BY A LOCAL THERMOSTAT TO MAINTAIN SPACE TEMPERATURE NOT TO EXCEED 100 DEG F.

FUME HOOD EXHAUST FAN (EF-R-1)

ROOFTOP EXHAUST FAN, EF-R-1, SHALL BE CONTROLLED BY BMS DURING OCCUPY HOURS TO PROVIDE THE MINIMUM AIRFLOW OF 100 CFM. FAN SPEED SHALL MODULATE UP TO 550 CFM WHEN HOOD IS IN OPERATION.

SPLIT HEAT PUMP SYSTEM (CU-R-1/DXFC-2-1 & CU-B-2/DXFC-B-2)

SPLIT HEAT PUMP SYSTEM PROVIDED 24/7 COOLING & HEATING FOR THE ELEVATOR CONTROL ROOM ON LEVEL B & SHARED IDF ROOM ON LEVEL 2. FAN COILS SHALL BE PROGRAMMED TO PROVIDE A COOLING SETPOINT TO MAINTAIN THE ROOM TEMPERATURE OF 75°F (ADJ).

SPLIT AC SYSTEM (CU-B-1/DXFC-B-1)

SPLIT HEAT PUMP SYSTEM PROVIDED 24/7 COOLING FOR THE MDF ROOM ON LEVEL B. FAN COILS SHALL BE PROGRAMMED TO PROVIDE A COOLING SETPOINT TO MAINTAIN THE ROOM TEMPERATURE OF 75°F (ADJ).

ROOFTOP PACKAGED HEAT PUMP (RTU-R-1 & RTU-R-2)

ROOFTOP PACKAGED HEAT PUMP SYSTEMS SERVING GYM / MULTI-FUNCTION SHALL BE CONTROLLED BY BMS BASED ON THE TIME OF DAY SCHEDULE PROVIDED BY OWNER.

WHEN THE HEAT PUMP IS CONTROLLED TO THE UNOCCUPIED MODE, OSA DAMPER SHALL BE CLOSED UNLESS OUTSIDE AIR TEMPERATURES ARE SUCH THAT ECONOMIZER COOLING IS AVAILABLE. THE SUPPLY FAN WILL RUN ONLY DURING HEATING OR COOLING TO MEET UNOCCUPIED TEMPERATURE SETPOINTS.

WHEN THE HEAT PUMP IS CONTROLLED TO THE OCCUPIED MODE, ALL UNIT FUNCTION SHALL BE ENABLED. EACH PACKAGED HEAT PUMP SYSTEM PROVIDED WITH AIR-SIDE ECONOMIZER CONTROLLED BY ON-BOARD CONTROLLER.

DURING OCCUPIED OPERATION, OSA DAMPER SHALL BE COMMANDED TO OPEN TO THE PRESET OSA AIRFLOW VOLUME PER SCHEDULE. OSA DAMPER SHALL ALSO CONTROLLED BY A SPACE CO2 SENSOR TO MODULATE CLOSE. MINIMUM OSA AIRFLOW SHALL BE 10% OF FAN AIRFLOW CFM.

## SEISMIC RESTRAINT NOTES

1. ALL HVAC EQUIPMENT AND DUCT WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE 2021 INTERNATIONAL BUILDING CODE (IBC), THE 2021 INTERNATIONAL MECHANICAL CODE (IMC), AND OTHER APPLICABLE STATE AND LOCAL CODES. EQUIPMENT AND DUCT WORK SHALL BE SEISMICALLY RESTRAINED IN ACCORDANCE WITH THESE CODES AND THE LATEST EDITION OF THE SMACNA SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS.
2. FOR SOME EQUIPMENT, HOLADAY-PARKS, INC. WILL UTILIZE SEISMIC RESTRAINTS AND MATERIALS SPECIFIED BY A WASHINGTON STATE LICENSED STRUCTURAL ENGINEER. THE SEISMIC DESIGN AND CALCULATION PACKAGE PREPARED BY THE STRUCTURAL ENGINEER SHALL BE PROVIDED TO THE BUILDING OFFICIAL FOR REVIEW.
3. BASE-MOUNTED EQUIPMENT INSTALLED USING SPRING-ISOLATORS SHALL HAVE TOTALLY ENCLOSED, SEISMIC RATED, SPRING ISOLATORS (MASON MODEL SSLFH OR APPROVED EQUAL) OR OPEN SPRING ISOLATORS PLUS SEISMIC RATED "SNUBBERS" (MASON MODEL Z-1225 OR EQUAL). SPRING ISOLATORS AND SNUBBERS, WHERE REQUIRED, SHALL BE INSTALLED PER STRUCTURAL SEISMIC DESIGN CALCULATIONS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
4. EQUIPMENT SUSPENDED FROM THE STRUCTURE ABOVE SHALL BE INSTALLED USING SEISMIC RATED SPRING HANGERS OR AN ENGINEERED SUPPORT SYSTEM. SEISMIC RATED SPRING HANGERS SHALL BE DOUBLE DEFLECTION TYPE PRE-COMPRESSED HANGERS (MASON MODEL PC30NS OR APPROVED EQUAL). SPRING HANGERS SHALL BE INSTALLED PER THE STRUCTURAL SEISMIC DESIGN CALCULATIONS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SEE NOTE 5 BELOW FOR ADDITIONAL REQUIREMENTS FOR SUSPENDED EQUIPMENT. EQUIPMENT INSTALLED USING AN ENGINEERED SUPPORT SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE STRUCTURAL SEISMIC DESIGN CALCULATIONS FOR THE ENGINEERED SUPPORT SYSTEM.
5. SUSPENDED EQUIPMENT INSTALLED USING SPRING ISOLATORS SHALL HAVE SEISMIC CABLING INSTALLED IN ADDITION TO THE EQUIPMENT HANGERS. CABLING SHALL BE INSTALLED DIAGONALLY UP AND AWAY FROM EQUIPMENT CORNERS AND BE ATTACHED TO THE STRUCTURE ABOVE. CABLES SHALL BE LEFT PARTIALLY SLACK. SIZE AND INSTALL CABLES PER THE SMACNA SEISMIC RESTRAINT MANUAL AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
6. EQUIPMENT MOUNTED RIGIDLY TO THE BUILDING STRUCTURE SHALL NOT REQUIRE ADDITIONAL SEISMIC RESTRAINT. INSTALLATION OF EQUIPMENT TO THE BUILDING STRUCTURE SHALL BE PER THE STRUCTURAL SEISMIC DESIGN CALCULATIONS AND PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
7. ALL RECTANGULAR DUCTS HAVING A CROSS SECTIONAL AREA GREATER THAN 6 SQFT AND ALL ROUND DUCTS GREATER THAN 32" IN DIAMETER SHALL BE BRACED IN ACCORDANCE WITH THE SMACNA SEISMIC RESTRAINT MANUAL. BRACING SIZE AND SPACING SHALL BE PER THE SMACNA SEISMIC RESTRAINT MANUAL. CONNECTION OF BRACING TO STRUCTURAL MEMBERS SHALL BE IN ACCORDANCE WITH THE SMACNA SEISMIC RESTRAINT MANUAL.
8. ALL CEILING MOUNTED DIFFUSERS SHALL HAVE SAFETY WIRES (16 GA.) ATTACHED TO THE FLOOR SLAB OR STRUCTURE ABOVE. SAFETY WIRES SHALL BE LEFT PARTIALLY SLACK. ALTERNATE METHOD SHALL BE TO ATTACH DIFFUSERS TO T-BAR GRID WITH SCREWS, RIVETS, OR CEILING CLIPS FOR TERMINALS WEIGHING LESS THAN 20 POUNDS.
9. ALL HYDRONIC PIPING GREATER THAN 3" DIAMETER SHALL BE BRACED IN ACCORDANCE WITH THE SMACNA SEISMIC RESTRAINT MANUAL. ALL GAS, FUEL, AND COMPRESSED AIR PIPING SHALL BE BRACED PER THE STATE AND LOCAL CODES. ALL PLUMBING PIPING SHALL BE BRACED IN ACCORDANCE WITH STATE AND LOCAL CODES.
10. WHERE THE BUILDING IMPORTANCE FACTOR (Ip) IS GREATER THAN 1.0, NOTES 7, 8, AND 9 ABOVE WILL NOT APPLY. REFER TO THE SMACNA SEISMIC RESTRAINT MANUAL FOR ADDITIONAL BRACING AND SEISMIC RESTRAINT REQUIREMENTS AND CONTACT HP ENGINEERING FOR ADDITIONAL INFORMATION.

## COMMISSIONING NOTES

COMMISSIONING OF MECHANICAL (HVAC) SYSTEMS, LIGHTING SYSTEMS, SERVICE WATER HEATING SYSTEMS, AND METERING SYSTEMS MAY BE PROVIDED BY A THIRD PARTY COMMISSIONING AGENT (NOT HOLADAY-PARKS). THE NOTES BELOW ARE PROVIDED FOR REFERENCE TO MECHANICAL SYSTEM COMMISSIONING REQUIREMENTS IN THE 2021 WASHINGTON STATE ENERGY CODE (WSEC) ONLY. THESE NOTES DO NOT CONSTITUTE THE PERFORMANCE OF THE REQUIRED COMMISSIONING BY HOLADAY-PARKS. REFER TO SECTION 408 OF THE 2021 WSEC FOR COMPLETE REQUIREMENTS.

1. PROJECTS WHERE THE BUILDING MECHANICAL SYSTEM HAVE A HEATING CAPACITY GREATER THAN 300 MBH OR A HAVE COOLING CAPACITY GREATER THAN 20 TONS (240 MBH) SHALL BE COMMISSIONED IN ACCORDANCE WITH SECTION 408.2 OF THE 2021 WSEC. ALL OTHER PROJECTS INSTALLING MECHANICALS SYSTEM THAT DO NOT MEET OR EXCEED THE HEATING OR COOLING LIMITS ABOVE ARE NOT REQUIRED TO PERFORM MECHANICAL SYSTEM COMMISSIONING.
2. WHERE REQUIRED BY THE 2021 WSEC (SEE 1 ABOVE), MECHANICAL SYSTEM COMMISSIONING SHALL INCLUDE THE FOLLOWING AS REQUIRED BY SECTION C408.1 OF THE 2021 WSEC:
   A. COMMISSIONING PLAN.
   B. SYSTEM ADJUSTING AND BALANCING INCLUDING AIR SYSTEMS AND HYDRONIC SYSTEM BALANCING.
   C. HVAC EQUIPMENT AND HVAC CONTROLS AND ECONOMIZER FUNCTIONAL TESTING.
   D. OPERATING AND MAINTENANCE DOCUMENTS (MANUALS) AND RECORD DOCUMENTS (DRAWINGS).
   E. COMMISSIONING REPORT.
3. A COMMISSIONING PLAN SHALL BE DEVELOPED BY THE PROJECTS CERTIFIED COMMISSIONING PROFESSIONAL (CPE) IN ACCORDANCE WITH SECTION C408.1.2. THE COMMISSIONING PLAN SHALL INCLUDE ORGANIZATION, SCHEDULES, RESOURCES, AND DOCUMENTATION FOR THE COMMISSIONING PROCESS. THE CPE SHALL MEET THE REQUIREMENTS SPECIFIED IN SECTION C202 OF THE 2021 WSEC. THE CPE SHALL PROVIDE ITEMS 1 THROUGH 3, AS DESCRIBED IN SECTION C408.1.2, FOR THE COMMISSIONING PLAN. NOTE THAT HOLADAY-PARKS OR ITS EMPLOYEES ARE NOT DESIGNATED AS THE CERTIFIED COMMISSIONING PROFESSIONAL ON THE PROJECT.
4. A COMMISSIONING COMPLIANCE CHECKLIST SHALL BE SUBMITTED TO THE BUILDING OFFICIAL UPON SUBSTANTIAL COMPLETION OF THE BUILDING OR PROJECT. THE COMPLIANCE CHECKLIST SHALL BE PROVIDED TO THE BUILDING OWNER OR OWNER'S REPRESENTATIVE WITHIN 14 DAYS OF THE DATE OF SUBSTANTIAL COMPLETION BY THE COMMISSIONING AGENT. THE BUILDING OWNER OR OWNER'S AGENT IS RESPONSIBLE FOR PROVIDING A COMPLETED AND SIGNED COPY OF THE COMPLIANCE CHECKLIST TO THE BUILDING OFFICIAL. THE COMPLETED COMMISSIONING COMPLIANCE CHECKLIST PROVIDED TO THE BUILDING OFFICIAL IS DEEMED TO SATISFY THE REQUIREMENTS OF SECTION C408.1.4.1 OF THE 2021 WSEC.
5. A COMMISSIONING REPORT IS TO BE PROVIDED TO THE BUILDING OWNER, IN ACCORDANCE WITH SECTION C408.1.3. THE COMMISSIONING REPORT SHALL MEET THE REQUIREMENTS OF SECTION C408.1.3 AND SHALL INCLUDE RESULTS OF FUNCTIONAL TESTING, A LIST OF DEFICIENCIES INCLUDING CORRECTIVE ACTIONS, FUNCTIONAL PERFORMANCE TEST PROCEDURES INCLUDING MEASURED DATA, AND BALANCING REPORT. ANY TESTING THAT COULD NOT BE PERFORMED DUE TO CLIMATE CONDITIONS ARE NOT REQUIRED TO BE INCLUDED IN THE FINAL COMMISSIONING REPORT.

## SHEET METAL NOTES

1. ALL DUCT SHALL BE INSTALLED IN ACCORDANCE WITH THE 2021 INTERNATIONAL MECHANICAL CODE (IMC), OTHER STATE AND LOCAL CODES AND STANDARDS. ALL DUCTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SMACNA DUCT CONSTRUCTION STANDARDS AND WITH HOLADAY PARKS SHOP FABRICATION STANDARDS.
2. ALL DUCTS SHALL BE SEISMICALLY BRACED IN ACCORDANCE WITH SMACNA SEISMIC RESTRAINT MANUAL (SEE SEISMIC RESTRAINT NOTES ON THIS SHEET).
3. DUCT SIZES INDICATED ON PLANS ARE NET INSIDE DIMENSIONS. A CALL-OUT SUCH AS 12 X 12/SL MEANS A 14 X 14 SHEET METAL DUCT WITH 1" DUCT LINER, GIVING A NET INSIDE DIMENSION OF 12" X 12".
4. DUCT PENETRATIONS THROUGH FIRE AND OR SMOKE RATED WALLS, CEILINGS, AND FLOORS SHALL BE PROTECTED IN ACCORDANCE WITH THE 2021 IMC. SEE PLANS FOR THESE LOCATIONS. PROTECTION, WHERE REQUIRED, SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION REQUIREMENTS AND STATE AND LOCAL CODES.
5. DUCT SHALL BE CONSTRUCTED TO DIMENSIONS INDICATED ON PLANS. THE TOLERANCE OF THESE DIMENSIONS SHALL BE AS SPECIFIED IN HOLADAY-PARKS, INC. SHOP STANDARDS MANUAL. LENGTHS, AND CRITICAL DIMENSIONS BETWEEN DUCT AND OTHER BUILDING OR SYSTEM ELEMENTS ARE INDICATED WHERE A LOCATION OR DIMENSION SCALED FROM THE DRAWING WILL NOT BE ADEQUATE. THE TOLERANCE OF CRITICAL DIMENSIONS, IF NOT INDICATED, SHALL DEFAULT TO THAT OF THE INSTALLING MECHANIC'S MEASURING DEVICES. SCALED LOCATIONS OR DIMENSIONS ARE NOT SUBJECT TO TOLERANCE GUIDELINES.
6. THESE PLANS HAVE BEEN COORDINATED WITH THE ARCHITECTURAL, STRUCTURAL, SPRINKLER, AND ELECTRICAL DRAWINGS. ANY CHANGES IN THIS LAY-OUT MUST BE REVIEWED BY HOLADAY-PARKS' ENGINEERING DEPARTMENT.
7. DUCT ELBOWS SHALL BE RADIUS TYPE WITH FULL WIDTH THROAT RADIUS, UNLESS SHOWN OTHERWISE. TURNING VANE ELBOWS SHALL HAVE DOUBLE THICKNESS TURNING VANES INSTALLED IN EVERY RAIL TAB.
8. DUCT SHALL BE SEALED PER 2021 WASHINGTON STATE ENERGY CODE (WSEC) REQUIREMENTS (SEE DUCT SEALING AND LEAKAGE TEST NOTES ON THIS SHEET). DUCT SYSTEMS SHALL BE LEAK TESTED IN ACCORDANCE WITH THE 2021 WSEC REQUIREMENTS (SEE DUCT SEALING AND LEAKAGE TEST NOTES ON THIS SHEET).
9. DUCT SHALL BE INSULATED PER 2021 WSEC REQUIREMENTS. INSULATION IN ADDITION TO THAT REQUIRED BY THE ENERGY CODE SHALL BE AS INDICATED ON THE PLANS AND IN NOTES BELOW.
10. INDOOR FAN COIL OR HEAT PUMP SYSTEM DUCT CONSTRUCTION SHALL BE AS FOLLOWS:
    a. SUPPLY DUCT FROM FAN COILS AND HEAT PUMPS TO SUPPLY DIFFUSER RUNOUTS SHALL BE AS SHOWN ON THE PLANS. WHERE INDICATED ON PLANS WITH "W" (WRAP), SHEET METAL SUPPLY DUCT SHALL BE WRAPPED WITH 1-1/2" DUCT INSULATION (SEE NOTE 21.e BELOW). WHERE INDICATED WITH "SL", DUCTS SHALL HAVE 1" DUCT LINER (SEE NOTE 21.a BELOW). FABRICATE AND INSTALL SUPPLY DUCT TO 1/2" PRESSURE CLASSIFICATION PER SMACNA DUCT CONSTRUCTION STANDARDS.
    b. RUNOUTS FROM SUPPLY DUCT TO DIFFUSERS SHALL BE LOW PRESSURE (1/2" PRESSURE CLASS) DUCT AND LOW PRESSURE (1/2" PRESSURE CLASS) INSULATED FLEX DUCT. FLEX DUCT SHALL BE LIMITED TO 12 FEET AND TWO 45 DEGREE TURNS.
    c. WHERE RETURN AIR IS DUCTED, RETURN AIR DUCT SHALL BE SAME AS SUPPLY. RETURN AIR PLENUMS AT FAN COILS AND HEAT PUMPS SHALL BE GALVANIZED SHEET METAL WITH 1" DUCT LINER (SEE NOTE 21.a BELOW). FIBERGLASS RETURN AIR PLENUMS ARE NOT ACCEPTABLE. FABRICATE AND INSTALL RETURN AIR DUCTS AND PLENUMS TO 1/2" PRESSURE CLASSIFICATION PER SMACNA DUCT CONSTRUCTION STANDARDS.
    d. OUTSIDE AIR DUCT, WHERE INDICATED ON DRAWINGS, SHALL BE AS FOLLOWS:
       1. DUCT FROM BUILDING EXTERIOR TO OUTSIDE AIR DAMPER SHALL BE SHEET METAL WITH DUCT INSULATION. R-VALUE OF INSULATION SHALL BE EQUIVALENT THE BUILDING ENVELOPE (MINIMUM R-19).
       2. DUCT FROM OUTSIDE AIR DAMPER UP TO FAN COIL OR HEAT PUMP SHALL BE RECTANGULAR GALVANIZED SHEET METAL WITH 2" DUCT LINER (SEE NOTE 21.b BELOW) OR DUCT INSULATION WITH R-VALUE NOTED ON PLANS. DUCT FROM OUTSIDE AIR DAMPER UP TO INLINE DUCT HEATER OR FAN/DUCT HEATER COMBINATION, SHALL BE THE SAME AS NOTED ABOVE.
       3. DUCT AFTER INLINE DUCT HEATER OR FAN/DUCT HEATER COMBINATION SHALL BE RECTANGULAR GALVANIZED SHEET METAL OR GALVANIZED SPIRAL DUCT. DUCT INDICATED WITH "W" (WRAP) ON THE PLANS SHALL BE INSULATED TO THE R-VALUE NOTED. MAKE CONNECTION TO FAN COIL OR HEAT PUMP RETURN PLENUM WITH SHORT PIECE OF INSULATED FLEXIBLE DUCT (SEE NOTE 21.c BELOW) OR FLEXIBLE CONNECTOR.
       4. DUCT SHALL BE FABRICATED AND INSTALLED TO SMACNA 1/2" PRESSURE CLASSIFICATION.
11. ROOFTOP PACKAGED AC OR HEAT PUMP SYSTEMS DUCT CONSTRUCTION SHALL BE AS FOLLOWS:
    a. VERTICAL DROPS FROM ROOFTOP A/C UNITS SHALL BE RECTANGULAR GALVANIZED SHEET METAL WITH 1" DUCT LINER. FABRICATE AND INSTALL PER SMACNA 1/2" PRESSURE CLASSIFICATION.
    b. SUPPLY DUCT FROM VERTICAL DROPS TO SUPPLY DIFFUSER RUNOUTS SHALL BE AS SHOWN ON THE PLANS. SHEET METAL SUPPLY DUCT INDICATED WITH "W" (WRAP) ON THE PLANS SHALL BE INSULATED TO THE R-VALUE NOTED. LINED SHEET METAL SHALL HAVE 1" DUCT LINER (SEE NOTE 21.a BELOW). FABRICATE AND INSTALL SUPPLY DUCT TO SMACNA 1/2" PRESSURE CLASSIFICATION.
    c. RUNOUTS FROM SUPPLY DUCT TO DIFFUSERS SHALL BE LOW PRESSURE (1/2" PRESSURE CLASS) DUCT AND LOW PRESSURE (1/2" PRESSURE CLASS) INSULATED FLEX DUCT. FLEX DUCT SHALL BE LIMITED TO 14 FEET AND TWO 45 DEGREE TURNS.
    d. WHERE RETURN AIR IS DUCTED, RETURN AIR DUCT SHALL BE THE SAME AS FOR SUPPLY (SEE NOTE 11.b AND 11.c ABOVE).
12. GENERAL EXHAUST DUCTS SHALL BE UNLINED GALVANIZED SHEET METAL (UNLESS OTHERWISE INDICATED), WITH UN-INSULATED FURNACE PIPE RUNOUTS AND UN-INSULATED VAPOR PROOF FLEX CONNECTIONS (SEE 21.e BELOW) TO REGISTER AND/OR GRILLE CANS. FLEX AIR DUCT CONNECTIONS SHALL BE LIMITED TO A MAXIMUM OF 4 FEET FROM GRILLE OR REGISTER TO EXHAUST DUCT. FABRICATE AND INSTALL PER SMACNA 1" PRESSURE CLASSIFICATION.
13. DRYER EXHAUST DUCTS SHALL NOT BE CONNECTED OR INSTALLED WITH SHEET METAL SCREWS OR FASTENERS THAT PROTRUDE INTO THE EXHAUST AIRSTREAM. DRYER EXHAUST DUCT TERMINATIONS SHALL NOT HAVE SCREENS.
14. FIRE DAMPERS, SMOKE DAMPERS, AND COMBINATION FIRE/SMOKE DAMPERS SHALL BE INSTALLED IN ACCORDANCE WITH THE 2021 IMC. SEE FLOOR PLANS FOR LOCATIONS AND EQUIPMENT SCHEDULES IN THESE PLANS FOR ADDITIONAL INFORMATION.
15. SUPPLY AND RETURN AIR DUCTS INSTALLED ON EXTERIOR OF BUILDING SHALL HAVE MINIMUM R-7 (IF LESS THAN 2800 CFM) OR R-8 (IF GREATER THAN 2800 CFM) DUCT LINER (SEE NOTE 21.a BELOW) OR DUCT INSULATION WITH WATERPROOF JACKET MEETING THE SAME INSULATION REQUIREMENTS. REFER TO NOTE 21 BELOW FOR MATERIALS.
16. FLUE VENT CONSTRUCTION SHALL BE OF CLASS 'B', DOUBLE WALL VENT PIPE, (METALBESTOS RV OR APPROVED EQUAL) UNLESS NOTED OTHERWISE ON THE PLANS. VENT PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION REQUIREMENTS, APPLIANCE MANUFACTURER'S RECOMMENDATIONS, AND THE 2021 INTERNATIONAL FUEL GAS CODE (IFGC).
17. PROCESS EXHAUST DUCTS SHALL BE {RECTANGULAR} {ROUND} {SPIRAL} {GALVANIZED SHEET METAL} {STAINLESS STEEL} DUCT {AS SHOWN ON PLANS} WITH SHOP OR FIELD INSTALLED TAKE-OFFS AND FITTINGS. PROCESS EXHAUST DUCT RISERS SHALL BE UNLINED {RECTANGULAR} {ROUND} {SPIRAL} {GALVANIZED SHEET METAL} {STAINLESS STEEL} DUCT {AS SHOWN ON THE PLANS}. FABRICATE AND INSTALL TO SMACNA ({1"}) PRESSURE CLASSIFICATION UNLESS NOTED OTHERWISE.
18. DUCT OPENINGS AND DUCTED WALL OPENINGS, WHERE NOTED ON THESE DRAWINGS, SHALL BE COVERED USING 1/2 INCH X 1/2 INCH GALVANIZED, WELDED, #19 GAUGE WIRE MESH. THE WIRE MESH SHALL BE FURNISHED WITH A GALVANIZED SHEET METAL 22 GAUGE FRAME ON ALL SIDES OF THE SCREEN AND ATTACHED TO THE DUCT OR WALL OPENING USING SHEET METAL SCREWS.

## SHEET METAL NOTES (CONT'D.)

19. MATERIALS:
    a. DUCT LINER INDOORS (SL): 1-1/2 PCF DENSITY FIBERGLASS DUCT LINER WITH BLACK MAT FACING, MEETS UL 723 AND E 84, JOHNS MANVILLE "LINACOUSTIC RC", OWENS CORNING "QUIET R", OR CERTAINTEED "TOUGHGARD R", MINIMUM INSTALLED R-VALUE = 3.3/PER INCH, SEE HVAC PLANS FOR THICKNESS REQUIREMENTS.
    b. DUCT LINER OUTDOORS (2" SL): 2" THICK, 1-1/2 PCF DENSITY FIBERGLASS DUCT LINER WITH BLACK MAT FACING, JOHNS MANVILLE "LINACOUSTIC RC", OWENS CORNING "QUIET R", OR CERTAINTEED "TOUGHGARD R", MINIMUM INSTALLED R-VALUE = 7 OR 8 DEPENDING ON APPLICATION, SEE HVAC PLANS FOR INSULATION VALUE REQUIREMENT.
    c. INSULATED FLEX DUCT (LOW AND HIGH PRESSURE): UL 181 CLASS 1 AIR DUCT: THERMAFLEX MK-E OR APPROVED EQUAL.
    d. UN-INSULATED FLEX DUCT (LOW AND HIGH PRESSURE): UL 181 CLASS 1 AIR DUCT: THERMAFLEX S-TL.
    e. DUCT INSULATION (INDOORS): 1-1/2" THICK, 3/4 LB. DENSITY FIBERGLASS WITH F.S.K. VAPOR BARRIER JACKET. (MINIMUM INSTALLED R-VALUE = 3.3)
    f. DUCT INSULATION (OUTDOORS): 3" FIBERGLASS, MINIMUM 3/4 LB. DENSITY OR 2" FIBERGLASS 1.5 LB. DENSITY, WITH VAPOR BARRIER AND WEATHERPROOF JACKET (MINIMUM INSTALLED R-VALUE = 7 OR 8, SEE HVAC PLANS FOR INSULATION VALUE).
    g. PERFORATED METAL: 20" GAUGE COLD ROLLED STEEL WITH 3/16" DIAMETER HOLES ON 1/4" STAGGERED CENTER GIVING 51% OPEN AREA.

## GENERAL NOTES

1. THESE DOCUMENTS ARE BASED ON HOLADAY PARKS ENGINEERING AND SHOP FABRICATION STANDARDS, SMACNA DUCT CONSTRUCTION STANDARDS, AND APPLICABLE LOCAL AND STATE CODES WHICH ARE NOT SHOWN IN DETAIL ON THESE DRAWINGS. VARIATION FROM THESE PLANS REQUIRES NOTIFICATION OF HOLADAY-PARKS ENGINEERING DEPARTMENT
2. ALL TRADES SHALL LEAVE A MINIMUM OF 36" CLEARANCE IN FRONT OF MECHANICAL EQUIPMENT ACCESS PANELS FOR SERVICING. ACCESS PANELS THAT CONTAIN LINE VOLTAGE POWER (120 VOLT AND GREATER) SHALL HAVE A MINIMUM OF 42" CLEARANCE IN FRONT OF THE ACCESS PANEL AND A MINIMUM OF THE ACCESS PANEL WIDTH CLEAR FROM OBSTRUCTIONS AS REQUIRED BY STATE AND LOCAL ELECTRICAL CODES.
3. CUTTING, FRAMING, PATCHING AND PAINTING OF WALL, CEILING AND FLOOR OPENINGS, AS REQUIRED BY THESE MECHANICAL PLANS, SHALL BE BY THE GENERAL CONTRACTOR.
4. ROOF CURBS, FLASHINGS, SLEEPERS, PITCH POCKETS, CUTTING AND PATCHING OF ROOF OPENINGS, ROOFING, AND ROOF INSULATION SHALL BE BY THE GENERAL CONTRACTOR, ((EXCEPT FOR ROOFTOP A/C UNITS NO._____ (SEE NOTE #5 BELOW) OR AS NOTED ON PLANS.))
5. ROOF CURBS, SLEEPERS, CANT STRIPS, ROOFING, AND ROOF INSULATION SHALL BE PROVIDED AND INSTALLED BY THE GENERAL CONTRACTOR. CURBS ARE TO BE CONSTRUCTED ACCORDING TO THE SIZES PROVIDED BY HOLADAY-PARKS' FIELD FOREMEN AND/OR AS SHOWN ON THE MECHANICAL PLANS. THE ROOF CURBS SHALL BE SHIMMED AS REQUIRED TO MAKE ROOF CURBS AND/OR SLEEPERS LEVEL. TOP OF CURBS MUST BE TRUE (FLAT) TO PROVIDE AN ACCEPTABLE SEALING SURFACE. THE MAXIMUM ALLOWABLE DEVIATION FROM LEVEL OR FLAT SHALL BE 1/4" IN 10'. ROOF CURBS AND SLEEPERS MUST BE SECURELY FASTENED TO STRUCTURAL SUPPORT MEMBERS BY THE GENERAL CONTRACTOR.
6. ROOFTOP AIR CONDITIONERS NO. _____ ARE FURNISHED WITH FACTORY CURB REQUIRING INSULATION AND CANT STRIP BY THE GENERAL CONTRACTOR. CURB SHALL BE ASSEMBLED AND SET IN PLACE BY THE MECHANICAL CONTRACTOR. LEVELING, TRUING, AND FASTENING OF CURBS TO ROOF STRUCTURE SHALL BE BY THE GENERAL CONTRACTOR. TOP OF THE CURB MUST BE TRUE (FLAT) TO PROVIDE AN ACCEPTABLE SEALING SURFACE. THE MAXIMUM ALLOWABLE DEVIATION FROM LEVEL OR FLAT SHALL BE 1/4" IN 10'. THE ROOF CURB MUST BE SECURELY FASTENED TO STRUCTURAL SUPPORT MEMBERS.
7. PAINTING OF GRILLES, REGISTERS, AND DIFFUSERS, AS MAY BE REQUIRED BY ARCHITECT OR OWNER, SHALL BE DONE BY THE GENERAL CONTRACTOR.
8. ALL LOUVERS, BOTH DUCTED AND NON-DUCTED, ARE TO BE FURNISHED AND INSTALLED BY THE GENERAL CONTRACTOR. LOUVERS ARE SHOWN AND SCHEDULED ON THESE PLANS BOTH FOR COORDINATION, AND TO INDICATE THE REQUIRED LEVEL OF PERFORMANCE. LOUVERS OF ALTERNATE MAKE AND/OR TYPE MAY BE SUBSTITUTED ONLY IF THEY HAVE BOTH PRESSURE DROP AND WATER CARRY-OVER PERFORMANCE EQUAL TO OR BETTER THAN THE LOUVERS SPECIFIED IN THESE MECHANICAL PLANS.
9. DUCTED LOUVERS SHALL BE FURNISHED AND INSTALLED BY MECH

## Air System Sizing Summary for Chapel

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **Chapel**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **1760.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **7.3** Tons
Total coil load: **87.9** MBH
Sensible coil load: **73.3** MBH
Coil airflow: **3432** CFM
Sensible heat ratio: **0.835**
Area per unit load: **240.4** sqft/Ton
Load per unit area: **49.9** BTU/(hr-sqft)
Load occurs at: **Jun 1000**
OA DB / WB: **73.8/63.7** F
Entering DB / WB: **75.2/62.9** F
Leaving DB / WB: **55.1/53.9** F
Coil ADP: **52.8** F
Bypass Factor: **0.100**
Resulting RH: **50** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **32.4** MBH
Coil airflow: **3432** CFM
Load per unit area: **18.4** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **65.9/74.8** F

**Supply Fan Sizing Data**
Actual max airflow: **3432** CFM
Standard airflow: **3377** CFM
Actual max airflow per unit area: **1.95** CFM/sqft
Fan motor BHP: **0.75** BHP
Fan motor kW: **0.56** kW
Fan static: **0.75** in wg

**Outdoor Ventilation Air Data**
Design airflow: **303** CFM
Airflow per unit floor area: **0.17** CFM/sqft
Airflow per person: **3.03** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Chapel | 72.9 | 3432 | Jul 1000 | 19.1 | 1760.0 | 1.95 |

## Air System Sizing Summary for Gym East

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **Gym East**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **2152.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **7.3** Tons
Total coil load: **87.5** MBH
Sensible coil load: **70.3** MBH
Coil airflow: **2894** CFM
Sensible heat ratio: **0.804**
Area per unit load: **295.3** sqft/Ton
Load per unit area: **40.6** BTU/(hr-sqft)
Load occurs at: **Jun 1400**
OA DB / WB: **83.5/66.8** F
Entering DB / WB: **78.0/64.3** F
Leaving DB / WB: **55.1/53.9** F
Coil ADP: **52.6** F
Bypass Factor: **0.100**
Resulting RH: **51** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **54.8** MBH
Coil airflow: **2894** CFM
Load per unit area: **25.5** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **55.1/72.9** F

**Supply Fan Sizing Data**
Actual max airflow: **2894** CFM
Standard airflow: **2847** CFM
Actual max airflow per unit area: **1.34** CFM/sqft
Fan motor BHP: **0.63** BHP
Fan motor kW: **0.47** kW
Fan static: **0.75** in wg

**Outdoor Ventilation Air Data**
Design airflow: **900** CFM
Airflow per unit floor area: **0.42** CFM/sqft
Airflow per person: **8.57** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Gym East | 61.5 | 2894 | Jun 1400 | 14.0 | 2152.0 | 1.34 |

## Air System Sizing Summary for Gym West

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **Gym West**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **1550.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **4.1** Tons
Total coil load: **48.8** MBH
Sensible coil load: **34.7** MBH
Coil airflow: **1322** CFM
Sensible heat ratio: **0.711**
Area per unit load: **381.2** sqft/Ton
Load per unit area: **31.5** BTU/(hr-sqft)
Load occurs at: **Jul 1500**
OA DB / WB: **85.0/67.0** F
Entering DB / WB: **79.8/66.4** F
Leaving DB / WB: **55.1/53.9** F
Coil ADP: **52.3** F
Bypass Factor: **0.100**
Resulting RH: **61** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **34.3** MBH
Coil airflow: **1322** CFM
Load per unit area: **22.1** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **48.6/73.0** F

**Supply Fan Sizing Data**
Actual max airflow: **1322** CFM
Standard airflow: **1301** CFM
Actual max airflow per unit area: **0.85** CFM/sqft
Fan motor BHP: **0.29** BHP
Fan motor kW: **0.22** kW
Fan static: **0.75** in wg

**Outdoor Ventilation Air Data**
Design airflow: **600** CFM
Airflow per unit floor area: **0.39** CFM/sqft
Airflow per person: **40.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Gym West | 28.1 | 1322 | Jun 1600 | 5.8 | 1550.0 | 0.85 |

## Air System Sizing Summary for VFC-1-01

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-1-01**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **290.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **0.7** Tons
Total coil load: **8.8** MBH
Sensible coil load: **8.0** MBH
Coil airflow: **367** CFM
Sensible heat ratio: **0.912**
Area per unit load: **395.7** sqft/Ton
Load per unit area: **30.3** BTU/(hr-sqft)
Load occurs at: **Oct 1300**
OA DB / WB: **77.6/63.3** F
Entering DB / WB: **75.4/62.1** F
Leaving DB / WB: **54.8/53.5** F
Coil ADP: **52.5** F
Bypass Factor: **0.100**
Resulting RH: **48** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **2.8** MBH
Coil airflow: **367** CFM
Load per unit area: **9.6** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **66.4/73.6** F

**Supply Fan Sizing Data**
Actual max airflow: **367** CFM
Standard airflow: **361** CFM
Actual max airflow per unit area: **1.26** CFM/sqft
Fan motor BHP: **0.03** BHP
Fan motor kW: **0.02** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **30** CFM
Airflow per unit floor area: **0.10** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Classroom LRC-1 119 | 7.8 | 367 | Oct 1300 | 1.4 | 290.0 | 1.26 |

## Air System Sizing Summary for VFC-1-02

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-1-02**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **861.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **2.3** Tons
Total coil load: **27.3** MBH
Sensible coil load: **24.0** MBH
Coil airflow: **1091** CFM
Sensible heat ratio: **0.878**
Area per unit load: **378.2** sqft/Ton
Load per unit area: **31.7** BTU/(hr-sqft)
Load occurs at: **Sep 1400**
OA DB / WB: **82.5/65.8** F
Entering DB / WB: **76.3/63.1** F
Leaving DB / WB: **55.6/54.4** F
Coil ADP: **53.3** F
Bypass Factor: **0.100**
Resulting RH: **49** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **11.8** MBH
Coil airflow: **1091** CFM
Load per unit area: **13.7** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **64.8/75.0** F

**Supply Fan Sizing Data**
Actual max airflow: **1091** CFM
Standard airflow: **1074** CFM
Actual max airflow per unit area: **1.27** CFM/sqft
Fan motor BHP: **0.10** BHP
Fan motor kW: **0.07** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **125** CFM
Airflow per unit floor area: **0.15** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Preschool 118 | 23.2 | 1091 | Oct 1400 | 5.7 | 861.0 | 1.27 |

## Air System Sizing Summary for VFC-1-03

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-1-03**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **852.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **2.1** Tons
Total coil load: **24.7** MBH
Sensible coil load: **21.2** MBH
Coil airflow: **949** CFM
Sensible heat ratio: **0.859**
Area per unit load: **413.8** sqft/Ton
Load per unit area: **29.0** BTU/(hr-sqft)
Load occurs at: **Jul 1700**
OA DB / WB: **83.2/66.4** F
Entering DB / WB: **76.4/63.2** F
Leaving DB / WB: **55.4/54.1** F
Coil ADP: **53.0** F
Bypass Factor: **0.100**
Resulting RH: **50** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **11.7** MBH
Coil airflow: **949** CFM
Load per unit area: **13.7** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **63.6/75.2** F

**Supply Fan Sizing Data**
Actual max airflow: **949** CFM
Standard airflow: **934** CFM
Actual max airflow per unit area: **1.11** CFM/sqft
Fan motor BHP: **0.08** BHP
Fan motor kW: **0.06** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **125** CFM
Airflow per unit floor area: **0.15** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Preschool 117 | 20.2 | 949 | Jun 1700 | 6.0 | 852.0 | 1.11 |

## Air System Sizing Summary for VFC-1-04

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-1-04**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **752.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **1.5** Tons
Total coil load: **17.5** MBH
Sensible coil load: **13.8** MBH
Coil airflow: **575** CFM
Sensible heat ratio: **0.789**
Area per unit load: **516.4** sqft/Ton
Load per unit area: **23.2** BTU/(hr-sqft)
Load occurs at: **Jul 1500**
OA DB / WB: **85.0/67.0** F
Entering DB / WB: **77.9/64.6** F
Leaving DB / WB: **55.4/54.2** F
Coil ADP: **52.9** F
Bypass Factor: **0.100**
Resulting RH: **53** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **9.9** MBH
Coil airflow: **575** CFM
Load per unit area: **13.2** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **57.8/74.1** F

**Supply Fan Sizing Data**
Actual max airflow: **575** CFM
Standard airflow: **566** CFM
Actual max airflow per unit area: **0.76** CFM/sqft
Fan motor BHP: **0.05** BHP
Fan motor kW: **0.04** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **150** CFM
Airflow per unit floor area: **0.20** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Classroom 116 | 12.2 | 575 | Jun 1400 | 2.5 | 752.0 | 0.76 |

## Air System Sizing Summary for VFC-1-05

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-1-05**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **752.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **1.5** Tons
Total coil load: **17.8** MBH
Sensible coil load: **13.9** MBH
Coil airflow: **585** CFM
Sensible heat ratio: **0.782**
Area per unit load: **508.0** sqft/Ton
Load per unit area: **23.6** BTU/(hr-sqft)
Load occurs at: **Jun 1500**
OA DB / WB: **84.0/67.0** F
Entering DB / WB: **77.6/64.6** F
Leaving DB / WB: **55.3/54.1** F
Coil ADP: **52.8** F
Bypass Factor: **0.100**
Resulting RH: **53** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **10.1** MBH
Coil airflow: **585** CFM
Load per unit area: **13.4** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **57.9/74.1** F

**Supply Fan Sizing Data**
Actual max airflow: **585** CFM
Standard airflow: **576** CFM
Actual max airflow per unit area: **0.78** CFM/sqft
Fan motor BHP: **0.05** BHP
Fan motor kW: **0.04** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **150** CFM
Airflow per unit floor area: **0.20** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Classroom 115 | 12.4 | 585 | Jun 1400 | 2.7 | 752.0 | 0.78 |

## Air System Sizing Summary for VFC-1-06

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-1-06**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **290.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **0.3** Tons
Total coil load: **3.8** MBH
Sensible coil load: **3.4** MBH
Coil airflow: **155** CFM
Sensible heat ratio: **0.885**
Area per unit load: **907.8** sqft/Ton
Load per unit area: **13.2** BTU/(hr-sqft)
Load occurs at: **Jun 1500**
OA DB / WB: **84.0/67.0** F
Entering DB / WB: **76.2/63.0** F
Leaving DB / WB: **55.5/54.3** F
Coil ADP: **53.3** F
Bypass Factor: **0.100**
Resulting RH: **49** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **2.6** MBH
Coil airflow: **155** CFM
Load per unit area: **9.1** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **65.4/81.5** F

**Supply Fan Sizing Data**
Actual max airflow: **155** CFM
Standard airflow: **152** CFM
Actual max airflow per unit area: **0.53** CFM/sqft
Fan motor BHP: **0.01** BHP
Fan motor kW: **0.01** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **15** CFM
Airflow per unit floor area: **0.05** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Office 114C | 1.1 | 54 | Jun 1800 | 0.7 | 95.0 | 0.57 |
| Office 114B | 1.1 | 50 | Jun 1800 | 0.6 | 100.0 | 0.50 |
| Office 114D | 1.1 | 50 | Jun 1800 | 0.7 | 95.0 | 0.53 |
| **Zone** | **3.3** | **155** | **Jun 1800** | **1.9** | **290.0** | **0.53** |

Note: Table contains data for all spaces controlled by a single thermostat:
Space sizing basis: **Peak space load**
Zone sizing basis: **Peak zone load**


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Building Controls • Service & Maintenance
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MAXWELL GREENSTREET — STATE OF WASHINGTON — 52266 — REGISTERED PROFESSIONAL ENGINEER
06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

LOAD CALCULATIONS

M0.04

ORIGINAL SHEET SIZE: 24" X 36"


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## Air System Sizing Summary for VFC-1-07

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-1-07 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 735.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 1.4 Tons | Load occurs at: | Jul 1400 |
| Total coil load: | 17.4 MBH | OA DB / WB: | 84.5/66.8 F |
| Sensible coil load: | 13.7 MBH | Entering DB / WB: | 77.8/64.6 F |
| Coil airflow: | 571 CFM | Leaving DB / WB: | 55.3/54.1 F |
| Sensible heat ratio: | 0.787 | Coil ADP: | 52.8 F |
| Area per unit load: | 507.8 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 23.6 BTU/(hr-sqft) | Resulting RH: | 53 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 9.9 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 571 CFM | Ent DB / Lvg DB: | 57.7/74.1 F |
| Load per unit area: | 13.5 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 571 CFM | Fan motor BHP: | 0.05 BHP |
| Standard airflow: | 562 CFM | Fan motor kW: | 0.04 kW |
| Actual max airflow per unit area: | 0.78 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 150 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.20 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Classroom 113 | 12.1 | 571 | Jun 1400 | 2.5 | 735.0 | 0.78 |

## Air System Sizing Summary for VFC-1-08

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-1-08 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 178.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.3 Tons | Load occurs at: | Jun 1500 |
| Total coil load: | 3.9 MBH | OA DB / WB: | 84.0/67.0 F |
| Sensible coil load: | 3.4 MBH | Entering DB / WB: | 76.3/63.3 F |
| Coil airflow: | 152 CFM | Leaving DB / WB: | 55.5/54.3 F |
| Sensible heat ratio: | 0.852 | Coil ADP: | 53.2 F |
| Area per unit load: | 542.7 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 22.1 BTU/(hr-sqft) | Resulting RH: | 50 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 0.5 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 152 CFM | Ent DB / Lvg DB: | 66.9/69.8 F |
| Load per unit area: | 2.6 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 152 CFM | Fan motor BHP: | 0.01 BHP |
| Standard airflow: | 150 CFM | Fan motor kW: | 0.01 kW |
| Actual max airflow per unit area: | 0.85 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 10 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.06 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Kitchen 102 | 3.2 | 152 | Jan 000 | 0.0 | 178.0 | 0.85 |

## Air System Sizing Summary for VFC-1-09

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-1-09 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 85.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.3 Tons | Load occurs at: | Oct 1300 |
| Total coil load: | 3.8 MBH | OA DB / WB: | 77.6/63.3 F |
| Sensible coil load: | 3.6 MBH | Entering DB / WB: | 75.2/61.9 F |
| Coil airflow: | 168 CFM | Leaving DB / WB: | 55.1/53.8 F |
| Sensible heat ratio: | 0.937 | Coil ADP: | 52.8 F |
| Area per unit load: | 265.6 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 45.2 BTU/(hr-sqft) | Resulting RH: | 47 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 0.9 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 168 CFM | Ent DB / Lvg DB: | 70.1/75.2 F |
| Load per unit area: | 10.8 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 168 CFM | Fan motor BHP: | 0.01 BHP |
| Standard airflow: | 165 CFM | Fan motor kW: | 0.01 kW |
| Actual max airflow per unit area: | 1.98 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 0 CFM | Airflow per person: | 0.00 CFM/person |
| Airflow per unit floor area: | 0.00 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Office 112A | 3.6 | 168 | Oct 1300 | 0.9 | 85.0 | 1.98 |

## Air System Sizing Summary for VFC-1-10

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-1-10 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 1242.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.5 Tons | Load occurs at: | Jul 1600 |
| Total coil load: | 6.1 MBH | OA DB / WB: | 84.5/66.8 F |
| Sensible coil load: | 5.4 MBH | Entering DB / WB: | 76.4/62.7 F |
| Coil airflow: | 234 CFM | Leaving DB / WB: | 54.8/53.5 F |
| Sensible heat ratio: | 0.880 | Coil ADP: | 52.4 F |
| Area per unit load: | 2445.1 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 4.9 BTU/(hr-sqft) | Resulting RH: | 48 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 1.2 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 234 CFM | Ent DB / Lvg DB: | 65.0/69.8 F |
| Load per unit area: | 1.0 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 234 CFM | Fan motor BHP: | 0.02 BHP |
| Standard airflow: | 230 CFM | Fan motor kW: | 0.02 kW |
| Actual max airflow per unit area: | 0.19 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 25 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.02 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Circulation Corridor 111 | 5.0 | 234 | Jan 000 | 0.0 | 1242.0 | 0.19 |

## Air System Sizing Summary for VFC-1-11

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-1-11 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 430.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.5 Tons | Load occurs at: | Jun 1500 |
| Total coil load: | 5.8 MBH | OA DB / WB: | 84.0/67.0 F |
| Sensible coil load: | 4.9 MBH | Entering DB / WB: | 76.7/63.4 F |
| Coil airflow: | 217 CFM | Leaving DB / WB: | 55.3/54.1 F |
| Sensible heat ratio: | 0.851 | Coil ADP: | 52.9 F |
| Area per unit load: | 891.7 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 13.5 BTU/(hr-sqft) | Resulting RH: | 50 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 1.5 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 217 CFM | Ent DB / Lvg DB: | 63.5/69.8 F |
| Load per unit area: | 3.4 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 217 CFM | Fan motor BHP: | 0.02 BHP |
| Standard airflow: | 213 CFM | Fan motor kW: | 0.01 kW |
| Actual max airflow per unit area: | 0.50 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 30 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.07 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Admin 114 | 4.0 | 186 | Jan 000 | 0.0 | 343.0 | 0.54 |
| Office 114A | 0.6 | 30 | Jan 000 | 0.0 | 87.0 | 0.35 |
| **Zone** | **4.6** | **217** | **Jan 000** | **0.0** | **430.0** | **0.50** |

Note: Table contains data for all spaces controlled by a single thermostat:
Space sizing basis: **Peak space load**
Zone sizing basis: **Peak zone load**

## Air System Sizing Summary for VFC-1-12

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-1-12 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 120.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.3 Tons | Load occurs at: | Oct 1300 |
| Total coil load: | 4.0 MBH | OA DB / WB: | 77.6/63.3 F |
| Sensible coil load: | 3.7 MBH | Entering DB / WB: | 75.5/62.3 F |
| Coil airflow: | 177 CFM | Leaving DB / WB: | 55.7/54.4 F |
| Sensible heat ratio: | 0.939 | Coil ADP: | 53.5 F |
| Area per unit load: | 363.0 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 33.1 BTU/(hr-sqft) | Resulting RH: | 48 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 0.9 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 177 CFM | Ent DB / Lvg DB: | 70.0/75.0 F |
| Load per unit area: | 7.8 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 177 CFM | Fan motor BHP: | 0.02 BHP |
| Standard airflow: | 174 CFM | Fan motor kW: | 0.01 kW |
| Actual max airflow per unit area: | 1.47 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 0 CFM | Airflow per person: | 0.00 CFM/person |
| Airflow per unit floor area: | 0.00 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Office 107 | 3.8 | 177 | Oct 1300 | 1.0 | 120.0 | 1.47 |

## Air System Sizing Summary for VFC-2-01

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-2-01 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 750.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 1.9 Tons | Load occurs at: | Sep 1300 |
| Total coil load: | 23.1 MBH | OA DB / WB: | 81.0/65.3 F |
| Sensible coil load: | 17.9 MBH | Entering DB / WB: | 76.4/64.4 F |
| Coil airflow: | 819 CFM | Leaving DB / WB: | 55.9/54.8 F |
| Sensible heat ratio: | 0.773 | Coil ADP: | 53.6 F |
| Area per unit load: | 389.9 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 30.8 BTU/(hr-sqft) | Resulting RH: | 55 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 9.2 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 819 CFM | Ent DB / Lvg DB: | 62.3/72.9 F |
| Load per unit area: | 12.3 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 819 CFM | Fan motor BHP: | 0.07 BHP |
| Standard airflow: | 806 CFM | Fan motor kW: | 0.05 kW |
| Actual max airflow per unit area: | 1.09 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 135 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.18 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Classroom 207 | 17.4 | 819 | Oct 1300 | 2.5 | 750.0 | 1.09 |

## Air System Sizing Summary for VFC-2-02

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-2-02 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 806.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 2.1 Tons | Load occurs at: | Sep 1400 |
| Total coil load: | 24.7 MBH | OA DB / WB: | 82.5/65.8 F |
| Sensible coil load: | 19.0 MBH | Entering DB / WB: | 76.5/64.4 F |
| Coil airflow: | 849 CFM | Leaving DB / WB: | 55.5/54.4 F |
| Sensible heat ratio: | 0.770 | Coil ADP: | 53.1 F |
| Area per unit load: | 392.0 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 30.6 BTU/(hr-sqft) | Resulting RH: | 55 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 10.1 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 849 CFM | Ent DB / Lvg DB: | 62.0/73.2 F |
| Load per unit area: | 12.6 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 849 CFM | Fan motor BHP: | 0.07 BHP |
| Standard airflow: | 835 CFM | Fan motor kW: | 0.06 kW |
| Actual max airflow per unit area: | 1.05 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 145 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.18 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Classroom 206 | 18.0 | 849 | Oct 1300 | 3.1 | 806.0 | 1.05 |

## Air System Sizing Summary for VFC-2-03

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-2-03 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 712.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 1.7 Tons | Load occurs at: | Jul 1700 |
| Total coil load: | 20.7 MBH | OA DB / WB: | 83.2/66.4 F |
| Sensible coil load: | 17.4 MBH | Entering DB / WB: | 76.2/63.4 F |
| Coil airflow: | 798 CFM | Leaving DB / WB: | 55.6/54.5 F |
| Sensible heat ratio: | 0.842 | Coil ADP: | 53.4 F |
| Area per unit load: | 413.5 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 29.0 BTU/(hr-sqft) | Resulting RH: | 51 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 7.5 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 798 CFM | Ent DB / Lvg DB: | 65.4/74.2 F |
| Load per unit area: | 10.5 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 798 CFM | Fan motor BHP: | 0.07 BHP |
| Standard airflow: | 785 CFM | Fan motor kW: | 0.05 kW |
| Actual max airflow per unit area: | 1.12 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 75 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.11 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Breakout 200A | 17.0 | 798 | Jun 1700 | 4.1 | 712.0 | 1.12 |


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MAXWELL GREENSTREET — STATE OF WASHINGTON — 52096 — REGISTERED PROFESSIONAL ENGINEER
06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

LOAD CALCULATIONS

M0.05

ORIGINAL SHEET SIZE: 24" X 36"


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# Air System Sizing Summary for VFC-2-04

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: VFC-2-04
Air System Type: Single Zone CAV
Number of zones: 1
Floor Area: 181.0 sqft
Location: Seattle IAP, Washington

**Sizing Calculation Information**
Calculation Months: Jan to Dec
Calculation method: Radiant Time Series

**Central Cooling Coil Sizing Data**
Total coil load: 0.3 Tons
Total coil load: 4.1 MBH
Sensible coil load: 3.5 MBH
Coil airflow: 160 CFM
Sensible heat ratio: 0.837
Area per unit load: 524.0 sqft/Ton
Load per unit area: 22.9 BTU/(hr-sqft)
Load occurs at: Jun 1800
OA DB / WB: 80.2/65.8 F
Entering DB / WB: 75.9/63.3 F
Leaving DB / WB: 55.4/54.2 F
Coil ADP: 53.1 F
Bypass Factor: 0.100
Resulting RH: 51 %
Design supply temp: 55.0 F

**Central Heating Coil Sizing Data**
Max coil load: 1.7 MBH
Coil airflow: 160 CFM
Load per unit area: 9.5 BTU/(hr-sqft)
Load occurs at: Des Htg
Ent DB / Lvg DB: 65.4/75.5 F

**Supply Fan Sizing Data**
Actual max airflow: 160 CFM
Standard airflow: 157 CFM
Actual max airflow per unit area: 0.88 CFM/sqft
Fan motor BHP: 0.01 BHP
Fan motor kW: 0.01 kW
Fan static: 0.30 in wg

**Outdoor Ventilation Air Data**
Design airflow: 15 CFM
Airflow per unit floor area: 0.08 CFM/sqft
Airflow per person: 5.00 CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| LRC-2 | 3.4 | 160 | Jun 1800 | 1.0 | 181.0 | 0.88 |

# Air System Sizing Summary for VFC-2-05

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: VFC-2-05
Air System Type: Single Zone CAV
Number of zones: 1
Floor Area: 744.0 sqft
Location: Seattle IAP, Washington

**Sizing Calculation Information**
Calculation Months: Jan to Dec
Calculation method: Radiant Time Series

**Central Cooling Coil Sizing Data**
Total coil load: 1.4 Tons
Total coil load: 16.3 MBH
Sensible coil load: 11.9 MBH
Coil airflow: 502 CFM
Sensible heat ratio: 0.729
Area per unit load: 547.5 sqft/Ton
Load per unit area: 21.9 BTU/(hr-sqft)
Load occurs at: Jun 1500
OA DB / WB: 84.0/67.0 F
Entering DB / WB: 77.2/65.0 F
Leaving DB / WB: 55.0/53.9 F
Coil ADP: 52.5 F
Bypass Factor: 0.100
Resulting RH: 56 %
Design supply temp: 55.0 F

**Central Heating Coil Sizing Data**
Max coil load: 7.9 MBH
Coil airflow: 502 CFM
Load per unit area: 10.7 BTU/(hr-sqft)
Load occurs at: Des Htg
Ent DB / Lvg DB: 59.8/74.6 F

**Supply Fan Sizing Data**
Actual max airflow: 502 CFM
Standard airflow: 494 CFM
Actual max airflow per unit area: 0.68 CFM/sqft
Fan motor BHP: 0.04 BHP
Fan motor kW: 0.03 kW
Fan static: 0.30 in wg

**Outdoor Ventilation Air Data**
Design airflow: 110 CFM
Airflow per unit floor area: 0.15 CFM/sqft
Airflow per person: 5.00 CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Classroom 204 | 10.7 | 502 | Jun 1400 | 2.5 | 744.0 | 0.68 |

# Air System Sizing Summary for VFC-2-06

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: VFC-2-06
Air System Type: Single Zone CAV
Number of zones: 1
Floor Area: 743.0 sqft
Location: Seattle IAP, Washington

**Sizing Calculation Information**
Calculation Months: Jan to Dec
Calculation method: Radiant Time Series

**Central Cooling Coil Sizing Data**
Total coil load: 1.4 Tons
Total coil load: 16.3 MBH
Sensible coil load: 11.9 MBH
Coil airflow: 502 CFM
Sensible heat ratio: 0.729
Area per unit load: 546.3 sqft/Ton
Load per unit area: 22.0 BTU/(hr-sqft)
Load occurs at: Jun 1500
OA DB / WB: 84.0/67.0 F
Entering DB / WB: 77.2/65.0 F
Leaving DB / WB: 55.0/53.9 F
Coil ADP: 52.5 F
Bypass Factor: 0.100
Resulting RH: 56 %
Design supply temp: 55.0 F

**Central Heating Coil Sizing Data**
Max coil load: 7.7 MBH
Coil airflow: 502 CFM
Load per unit area: 10.4 BTU/(hr-sqft)
Load occurs at: Des Htg
Ent DB / Lvg DB: 59.7/74.1 F

**Supply Fan Sizing Data**
Actual max airflow: 502 CFM
Standard airflow: 494 CFM
Actual max airflow per unit area: 0.68 CFM/sqft
Fan motor BHP: 0.04 BHP
Fan motor kW: 0.03 kW
Fan static: 0.30 in wg

**Outdoor Ventilation Air Data**
Design airflow: 110 CFM
Airflow per unit floor area: 0.15 CFM/sqft
Airflow per person: 5.00 CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Classroom 203 | 10.7 | 502 | Jun 1400 | 2.5 | 743.0 | 0.68 |

# Air System Sizing Summary for VFC-2-07

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: VFC-2-07
Air System Type: Single Zone CAV
Number of zones: 1
Floor Area: 734.0 sqft
Location: Seattle IAP, Washington

**Sizing Calculation Information**
Calculation Months: Jan to Dec
Calculation method: Radiant Time Series

**Central Cooling Coil Sizing Data**
Total coil load: 1.4 Tons
Total coil load: 16.4 MBH
Sensible coil load: 11.9 MBH
Coil airflow: 500 CFM
Sensible heat ratio: 0.728
Area per unit load: 538.1 sqft/Ton
Load per unit area: 22.3 BTU/(hr-sqft)
Load occurs at: Jun 1500
OA DB / WB: 84.0/67.0 F
Entering DB / WB: 77.2/64.9 F
Leaving DB / WB: 54.8/53.7 F
Coil ADP: 52.3 F
Bypass Factor: 0.100
Resulting RH: 56 %
Design supply temp: 55.0 F

**Central Heating Coil Sizing Data**
Max coil load: 7.7 MBH
Coil airflow: 500 CFM
Load per unit area: 10.6 BTU/(hr-sqft)
Load occurs at: Des Htg
Ent DB / Lvg DB: 59.6/74.2 F

**Supply Fan Sizing Data**
Actual max airflow: 500 CFM
Standard airflow: 492 CFM
Actual max airflow per unit area: 0.68 CFM/sqft
Fan motor BHP: 0.04 BHP
Fan motor kW: 0.03 kW
Fan static: 0.30 in wg

**Outdoor Ventilation Air Data**
Design airflow: 110 CFM
Airflow per unit floor area: 0.15 CFM/sqft
Airflow per person: 5.00 CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Classroom 202 | 10.6 | 500 | Jun 1400 | 2.5 | 734.0 | 0.68 |

# Air System Sizing Summary for VFC-2-08

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: VFC-2-08
Air System Type: Single Zone CAV
Number of zones: 1
Floor Area: 328.0 sqft
Location: Seattle IAP, Washington

**Sizing Calculation Information**
Calculation Months: Jan to Dec
Calculation method: Radiant Time Series

**Central Cooling Coil Sizing Data**
Total coil load: 1.3 Tons
Total coil load: 15.6 MBH
Sensible coil load: 14.0 MBH
Coil airflow: 652 CFM
Sensible heat ratio: 0.895
Area per unit load: 252.3 sqft/Ton
Load per unit area: 47.6 BTU/(hr-sqft)
Load occurs at: Oct 1300
OA DB / WB: 77.6/63.3 F
Entering DB / WB: 75.7/62.7 F
Leaving DB / WB: 55.5/54.3 F
Coil ADP: 53.3 F
Bypass Factor: 0.100
Resulting RH: 49 %
Design supply temp: 55.0 F

**Central Heating Coil Sizing Data**
Max coil load: 4.6 MBH
Coil airflow: 652 CFM
Load per unit area: 14.1 BTU/(hr-sqft)
Load occurs at: Des Htg
Ent DB / Lvg DB: 67.1/73.8 F

**Supply Fan Sizing Data**
Actual max airflow: 652 CFM
Standard airflow: 642 CFM
Actual max airflow per unit area: 1.99 CFM/sqft
Fan motor BHP: 0.06 BHP
Fan motor kW: 0.04 kW
Fan static: 0.30 in wg

**Outdoor Ventilation Air Data**
Design airflow: 40 CFM
Airflow per unit floor area: 0.12 CFM/sqft
Airflow per person: 5.00 CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Breakroom 211 / Kitchen | 13.9 | 652 | Oct 1300 | 2.8 | 328.0 | 1.99 |

# Air System Sizing Summary for VFC-2-09

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: VFC-2-09
Air System Type: Single Zone CAV
Number of zones: 1
Floor Area: 1282.0 sqft
Location: Seattle IAP, Washington

**Sizing Calculation Information**
Calculation Months: Jan to Dec
Calculation method: Radiant Time Series

**Central Cooling Coil Sizing Data**
Total coil load: 0.8 Tons
Total coil load: 9.0 MBH
Sensible coil load: 7.0 MBH
Coil airflow: 301 CFM
Sensible heat ratio: 0.773
Area per unit load: 1708.4 sqft/Ton
Load per unit area: 7.0 BTU/(hr-sqft)
Load occurs at: Jul 1500
OA DB / WB: 85.0/67.0 F
Entering DB / WB: 77.1/64.5 F
Leaving DB / WB: 55.3/54.2 F
Coil ADP: 52.9 F
Bypass Factor: 0.100
Resulting RH: 54 %
Design supply temp: 55.0 F

**Central Heating Coil Sizing Data**
Max coil load: 2.4 MBH
Coil airflow: 301 CFM
Load per unit area: 1.9 BTU/(hr-sqft)
Load occurs at: Des Htg
Ent DB / Lvg DB: 62.2/69.8 F

**Supply Fan Sizing Data**
Actual max airflow: 301 CFM
Standard airflow: 296 CFM
Actual max airflow per unit area: 0.23 CFM/sqft
Fan motor BHP: 0.03 BHP
Fan motor kW: 0.02 kW
Fan static: 0.30 in wg

**Outdoor Ventilation Air Data**
Design airflow: 50 CFM
Airflow per unit floor area: 0.04 CFM/sqft
Airflow per person: 5.00 CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Circ. 200 | 6.4 | 301 | Jan 000 | 0.0 | 1282.0 | 0.23 |

# Air System Sizing Summary for VFC-2-10

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: VFC-2-10
Air System Type: Single Zone CAV
Number of zones: 1
Floor Area: 627.0 sqft
Location: Seattle IAP, Washington

**Sizing Calculation Information**
Calculation Months: Jan to Dec
Calculation method: Radiant Time Series

**Central Cooling Coil Sizing Data**
Total coil load: 1.3 Tons
Total coil load: 15.1 MBH
Sensible coil load: 13.8 MBH
Coil airflow: 648 CFM
Sensible heat ratio: 0.912
Area per unit load: 498.2 sqft/Ton
Load per unit area: 24.1 BTU/(hr-sqft)
Load occurs at: Sep 1400
OA DB / WB: 82.5/65.8 F
Entering DB / WB: 75.6/62.5 F
Leaving DB / WB: 55.6/54.3 F
Coil ADP: 53.3 F
Bypass Factor: 0.100
Resulting RH: 49 %
Design supply temp: 55.0 F

**Central Heating Coil Sizing Data**
Max coil load: 3.6 MBH
Coil airflow: 648 CFM
Load per unit area: 5.7 BTU/(hr-sqft)
Load occurs at: Des Htg
Ent DB / Lvg DB: 67.6/72.7 F

**Supply Fan Sizing Data**
Actual max airflow: 648 CFM
Standard airflow: 638 CFM
Actual max airflow per unit area: 1.03 CFM/sqft
Fan motor BHP: 0.06 BHP
Fan motor kW: 0.04 kW
Fan static: 0.30 in wg

**Outdoor Ventilation Air Data**
Design airflow: 30 CFM
Airflow per unit floor area: 0.05 CFM/sqft
Airflow per person: 5.00 CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Rental 213 | 13.8 | 648 | Oct 1300 | 2.4 | 627.0 | 1.03 |

# Air System Sizing Summary for VFC-2-11

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: VFC-2-11
Air System Type: Single Zone CAV
Number of zones: 1
Floor Area: 361.0 sqft
Location: Seattle IAP, Washington

**Sizing Calculation Information**
Calculation Months: Jan to Dec
Calculation method: Radiant Time Series

**Central Cooling Coil Sizing Data**
Total coil load: 0.5 Tons
Total coil load: 5.7 MBH
Sensible coil load: 4.8 MBH
Coil airflow: 217 CFM
Sensible heat ratio: 0.846
Area per unit load: 756.8 sqft/Ton
Load per unit area: 15.9 BTU/(hr-sqft)
Load occurs at: Jul 1400
OA DB / WB: 84.5/66.8 F
Entering DB / WB: 76.3/63.3 F
Leaving DB / WB: 55.3/54.1 F
Coil ADP: 53.0 F
Bypass Factor: 0.100
Resulting RH: 50 %
Design supply temp: 55.0 F

**Central Heating Coil Sizing Data**
Max coil load: 2.0 MBH
Coil airflow: 217 CFM
Load per unit area: 5.6 BTU/(hr-sqft)
Load occurs at: Des Htg
Ent DB / Lvg DB: 65.8/74.6 F

**Supply Fan Sizing Data**
Actual max airflow: 217 CFM
Standard airflow: 214 CFM
Actual max airflow per unit area: 0.60 CFM/sqft
Fan motor BHP: 0.02 BHP
Fan motor kW: 0.01 kW
Fan static: 0.30 in wg

**Outdoor Ventilation Air Data**
Design airflow: 20 CFM
Airflow per unit floor area: 0.06 CFM/sqft
Airflow per person: 5.00 CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Rental 212 | 4.6 | 217 | Jun 1800 | 1.0 | 361.0 | 0.60 |

# Air System Sizing Summary for VFC-2-12

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: VFC-2-12
Air System Type: Single Zone CAV
Number of zones: 1
Floor Area: 120.0 sqft
Location: Seattle IAP, Washington

**Sizing Calculation Information**
Calculation Months: Jan to Dec
Calculation method: Radiant Time Series

**Central Cooling Coil Sizing Data**
Total coil load: 0.2 Tons
Total coil load: 2.5 MBH
Sensible coil load: 2.2 MBH
Coil airflow: 103 CFM
Sensible heat ratio: 0.905
Area per unit load: 579.0 sqft/Ton
Load per unit area: 20.7 BTU/(hr-sqft)
Load occurs at: Jun 1500
OA DB / WB: 84.0/67.0 F
Entering DB / WB: 75.7/62.4 F
Leaving DB / WB: 55.1/53.9 F
Coil ADP: 52.9 F
Bypass Factor: 0.100
Resulting RH: 48 %
Design supply temp: 55.0 F

**Central Heating Coil Sizing Data**
Max coil load: 1.5 MBH
Coil airflow: 103 CFM
Load per unit area: 12.8 BTU/(hr-sqft)
Load occurs at: Des Htg
Ent DB / Lvg DB: 67.7/81.8 F

**Supply Fan Sizing Data**
Actual max airflow: 103 CFM
Standard airflow: 101 CFM
Actual max airflow per unit area: 0.86 CFM/sqft
Fan motor BHP: 0.01 BHP
Fan motor kW: 0.01 kW
Fan static: 0.30 in wg

**Outdoor Ventilation Air Data**
Design airflow: 5 CFM
Airflow per unit floor area: 0.04 CFM/sqft
Airflow per person: 5.00 CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Office 212B | 2.2 | 103 | Jun 1400 | 1.3 | 120.0 | 0.86 |


**HOLADAY-PARKS, INC.**
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Building Controls • Service & Maintenance
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HOLADAYPARKS.com
WA LICENSE NUMBER: HOLADPI379N0


MAXWELL GREENWOOD — STATE OF WASHINGTON — 52266 — REGISTERED PROFESSIONAL ENGINEER
06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

LOAD CALCULATIONS

M0.06

ORIGINAL SHEET SIZE: 24" X 36"


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## Air System Sizing Summary for VFC-2-13

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-2-13 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 240.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.4 Tons | Load occurs at: | Jul 1500 |
| Total coil load: | 5.0 MBH | OA DB / WB: | 85.0/67.0 F |
| Sensible coil load: | 3.8 MBH | Entering DB / WB: | 77.3/64.8 F |
| Coil airflow: | 162 CFM | Leaving DB / WB: | 55.3/54.2 F |
| Sensible heat ratio: | 0.758 | Coil ADP: | 52.9 F |
| Area per unit load: | 578.9 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 20.7 BTU/(hr-sqft) | Resulting RH: | 55 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 1.5 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 162 CFM | Ent DB / Lvg DB: | 61.3/69.8 F |
| Load per unit area: | 6.1 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 162 CFM | Fan motor BHP: | 0.01 BHP |
| Standard airflow: | 159 CFM | Fan motor kW: | 0.01 kW |
| Actual max airflow per unit area: | 0.67 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 30 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.13 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Conf. 212A | 3.4 | 162 | Jan 000 | 0.0 | 240.0 | 0.67 |

## Air System Sizing Summary for VFC-2-14

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-2-14 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 468.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.7 Tons | Load occurs at: | Jul 1500 |
| Total coil load: | 8.9 MBH | OA DB / WB: | 85.0/67.0 F |
| Sensible coil load: | 6.9 MBH | Entering DB / WB: | 77.1/64.5 F |
| Coil airflow: | 296 CFM | Leaving DB / WB: | 55.3/54.2 F |
| Sensible heat ratio: | 0.771 | Coil ADP: | 52.9 F |
| Area per unit load: | 631.7 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 19.0 BTU/(hr-sqft) | Resulting RH: | 54 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 2.4 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 296 CFM | Ent DB / Lvg DB: | 62.1/69.8 F |
| Load per unit area: | 5.2 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 296 CFM | Fan motor BHP: | 0.03 BHP |
| Standard airflow: | 291 CFM | Fan motor kW: | 0.02 kW |
| Actual max airflow per unit area: | 0.63 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 50 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.11 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Conf. 213A | 6.3 | 296 | Jan 000 | 0.0 | 468.0 | 0.63 |

## Air System Sizing Summary for VFC-2-15

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-2-15 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 90.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.1 Tons | Load occurs at: | Jun 1500 |
| Total coil load: | 1.3 MBH | OA DB / WB: | 84.0/67.0 F |
| Sensible coil load: | 1.0 MBH | Entering DB / WB: | 76.4/63.6 F |
| Coil airflow: | 46 CFM | Leaving DB / WB: | 55.3/54.1 F |
| Sensible heat ratio: | 0.823 | Coil ADP: | 53.0 F |
| Area per unit load: | 857.1 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 14.0 BTU/(hr-sqft) | Resulting RH: | 51 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 0.2 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 46 CFM | Ent DB / Lvg DB: | 64.9/69.8 F |
| Load per unit area: | 2.7 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 46 CFM | Fan motor BHP: | 0.00 BHP |
| Standard airflow: | 45 CFM | Fan motor kW: | 0.00 kW |
| Actual max airflow per unit area: | 0.51 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 5 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.06 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Workrn 213B | 1.0 | 46 | Jan 000 | 0.0 | 90.0 | 0.51 |

## Air System Sizing Summary for VFC-2-16

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-2-16 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 102.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.3 Tons | Load occurs at: | Oct 1400 |
| Total coil load: | 4.0 MBH | OA DB / WB: | 79.1/63.8 F |
| Sensible coil load: | 3.8 MBH | Entering DB / WB: | 75.4/62.1 F |
| Coil airflow: | 178 CFM | Leaving DB / WB: | 55.4/54.1 F |
| Sensible heat ratio: | 0.945 | Coil ADP: | 53.2 F |
| Area per unit load: | 306.2 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 39.2 BTU/(hr-sqft) | Resulting RH: | 48 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 1.2 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 178 CFM | Ent DB / Lvg DB: | 69.0/75.3 F |
| Load per unit area: | 11.6 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 178 CFM | Fan motor BHP: | 0.02 BHP |
| Standard airflow: | 175 CFM | Fan motor kW: | 0.01 kW |
| Actual max airflow per unit area: | 1.75 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 5 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.05 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Office 213C | 3.8 | 178 | Oct 1300 | 0.9 | 102.0 | 1.75 |

## Air System Sizing Summary for VFC-3-01

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-3-01 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 179.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.5 Tons | Load occurs at: | Sep 1400 |
| Total coil load: | 5.9 MBH | OA DB / WB: | 82.5/65.8 F |
| Sensible coil load: | 5.6 MBH | Entering DB / WB: | 75.5/62.1 F |
| Coil airflow: | 262 CFM | Leaving DB / WB: | 55.5/54.2 F |
| Sensible heat ratio: | 0.951 | Coil ADP: | 53.3 F |
| Area per unit load: | 365.9 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 32.8 BTU/(hr-sqft) | Resulting RH: | 47 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 1.8 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 262 CFM | Ent DB / Lvg DB: | 67.9/74.5 F |
| Load per unit area: | 10.2 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 262 CFM | Fan motor BHP: | 0.02 BHP |
| Standard airflow: | 258 CFM | Fan motor kW: | 0.02 kW |
| Actual max airflow per unit area: | 1.47 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 10 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.06 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| COO 303C | 3.5 | 164 | Oct 1300 | 0.9 | 102.0 | 1.61 |
| Office 303B | 2.1 | 98 | Oct 1300 | 0.6 | 77.0 | 1.28 |
| **Zone** | **5.6** | **262** | **Oct 1300** | **1.5** | **179.0** | **1.47** |

Note: Table contains data for all spaces controlled by a single thermostat:
Space sizing basis: **Peak space load**
Zone sizing basis: **Peak zone load**

## Air System Sizing Summary for VFC-3-02

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-3-02 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 245.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.9 Tons | Load occurs at: | Sep 1500 |
| Total coil load: | 10.6 MBH | OA DB / WB: | 83.0/66.0 F |
| Sensible coil load: | 9.7 MBH | Entering DB / WB: | 75.8/62.4 F |
| Coil airflow: | 450 CFM | Leaving DB / WB: | 55.4/54.1 F |
| Sensible heat ratio: | 0.915 | Coil ADP: | 53.1 F |
| Area per unit load: | 276.5 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 43.4 BTU/(hr-sqft) | Resulting RH: | 48 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 3.9 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 450 CFM | Ent DB / Lvg DB: | 68.0/76.2 F |
| Load per unit area: | 16.1 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 450 CFM | Fan motor BHP: | 0.04 BHP |
| Standard airflow: | 442 CFM | Fan motor kW: | 0.03 kW |
| Actual max airflow per unit area: | 1.83 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 20 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.08 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| DEV/COMM | 9.6 | 450 | Sep 1500 | 3.0 | 245.0 | 1.83 |

## Air System Sizing Summary for VFC-3-03

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-3-03 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 316.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 1.0 Tons | Load occurs at: | Jul 1700 |
| Total coil load: | 12.1 MBH | OA DB / WB: | 83.2/66.4 F |
| Sensible coil load: | 11.0 MBH | Entering DB / WB: | 75.7/62.5 F |
| Coil airflow: | 506 CFM | Leaving DB / WB: | 55.3/54.1 F |
| Sensible heat ratio: | 0.905 | Coil ADP: | 53.0 F |
| Area per unit load: | 312.6 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 38.4 BTU/(hr-sqft) | Resulting RH: | 48 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 5.0 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 506 CFM | Ent DB / Lvg DB: | 67.7/77.0 F |
| Load per unit area: | 15.8 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 506 CFM | Fan motor BHP: | 0.04 BHP |
| Standard airflow: | 498 CFM | Fan motor kW: | 0.03 kW |
| Actual max airflow per unit area: | 1.60 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 25 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.08 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Program Office 303E | 10.8 | 506 | Jun 1700 | 3.8 | 316.0 | 1.60 |

## Air System Sizing Summary for VFC-3-04

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-3-04 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 176.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.4 Tons | Load occurs at: | Jul 1400 |
| Total coil load: | 4.5 MBH | OA DB / WB: | 84.5/66.8 F |
| Sensible coil load: | 3.8 MBH | Entering DB / WB: | 76.2/63.2 F |
| Coil airflow: | 173 CFM | Leaving DB / WB: | 55.4/54.1 F |
| Sensible heat ratio: | 0.852 | Coil ADP: | 53.0 F |
| Area per unit load: | 469.3 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 25.6 BTU/(hr-sqft) | Resulting RH: | 50 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 2.5 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 173 CFM | Ent DB / Lvg DB: | 65.7/79.4 F |
| Load per unit area: | 14.4 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 173 CFM | Fan motor BHP: | 0.02 BHP |
| Standard airflow: | 171 CFM | Fan motor kW: | 0.01 kW |
| Actual max airflow per unit area: | 0.98 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 15 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.09 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Exec Office 303F | 3.7 | 173 | Jun 1400 | 1.9 | 176.0 | 0.98 |

## Air System Sizing Summary for VFC-3-05

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**

| | | | |
|---|---|---|---|
| Air System Name: | VFC-3-05 | Number of zones: | 1 |
| Air System Type: | Single Zone CAV | Floor Area: | 350.0 sqft |
| | | Location: | Seattle IAP, Washington |

**Sizing Calculation Information**

| | | | |
|---|---|---|---|
| Calculation Months: | Jan to Dec | Calculation method: | Radiant Time Series |

**Central Cooling Coil Sizing Data**

| | | | |
|---|---|---|---|
| Total coil load: | 0.4 Tons | Load occurs at: | Jul 1600 |
| Total coil load: | 5.0 MBH | OA DB / WB: | 84.5/66.8 F |
| Sensible coil load: | 4.4 MBH | Entering DB / WB: | 76.1/63.0 F |
| Coil airflow: | 198 CFM | Leaving DB / WB: | 55.3/54.1 F |
| Sensible heat ratio: | 0.866 | Coil ADP: | 53.0 F |
| Area per unit load: | 832.8 sqft/Ton | Bypass Factor: | 0.100 |
| Load per unit area: | 14.4 BTU/(hr-sqft) | Resulting RH: | 50 % |
| | | Design supply temp: | 55.0 F |

**Central Heating Coil Sizing Data**

| | | | |
|---|---|---|---|
| Max coil load: | 1.2 MBH | Load occurs at: | Des Htg |
| Coil airflow: | 198 CFM | Ent DB / Lvg DB: | 66.5/72.2 F |
| Load per unit area: | 3.5 BTU/(hr-sqft) | | |

**Supply Fan Sizing Data**

| | | | |
|---|---|---|---|
| Actual max airflow: | 198 CFM | Fan motor BHP: | 0.02 BHP |
| Standard airflow: | 195 CFM | Fan motor kW: | 0.01 kW |
| Actual max airflow per unit area: | 0.57 CFM/sqft | Fan static: | 0.30 in wg |

**Outdoor Ventilation Air Data**

| | | | |
|---|---|---|---|
| Design airflow: | 15 CFM | Airflow per person: | 5.00 CFM/person |
| Airflow per unit floor area: | 0.04 CFM/sqft | | |

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Camp Schechter 303 | 4.2 | 198 | Jun 1500 | 0.4 | 350.0 | 0.57 |


**HOLADAY-PARKS, INC.**
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WA LICENSE NUMBER: HOLADPI379N0


MAXWELL GREENBERG — STATE OF WASHINGTON — 52096 — REGISTERED PROFESSIONAL ENGINEER
06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

LOAD CALCULATIONS

M0.07

ORIGINAL SHEET SIZE: 24" X 36"


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## Air System Sizing Summary for VFC-3-06

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-3-06**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **122.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **0.2** Tons
Total coil load: **2.3** MBH
Sensible coil load: **2.1** MBH
Coil airflow: **95** CFM
Sensible heat ratio: **0.898**
Area per unit load: **634.8** sqft/Ton
Load per unit area: **18.9** BTU/(hr-sqft)
Load occurs at: **Jun 1500**
OA DB / WB: **84.0/67.0** F
Entering DB / WB: **75.9/62.6** F
Leaving DB / WB: **55.4/54.1** F
Coil ADP: **53.1** F
Bypass Factor: **0.100**
Resulting RH: **48** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **1.2** MBH
Coil airflow: **95** CFM
Load per unit area: **10.1** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **67.5/79.7** F

**Supply Fan Sizing Data**
Actual max airflow: **95** CFM
Standard airflow: **94** CFM
Actual max airflow per unit area: **0.78** CFM/sqft
Fan motor BHP: **0.01** BHP
Fan motor kW: **0.01** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **5** CFM
Airflow per unit floor area: **0.04** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Rental Office 302 | 2.0 | 95 | Jun 1400 | 1.0 | 122.0 | 0.78 |

## Air System Sizing Summary for VFC-3-07

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-3-07**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **598.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **1.7** Tons
Total coil load: **20.5** MBH
Sensible coil load: **19.2** MBH
Coil airflow: **890** CFM
Sensible heat ratio: **0.937**
Area per unit load: **350.5** sqft/Ton
Load per unit area: **34.2** BTU/(hr-sqft)
Load occurs at: **Oct 1300**
OA DB / WB: **77.6/63.3** F
Entering DB / WB: **75.3/61.9** F
Leaving DB / WB: **55.0/53.7** F
Coil ADP: **52.8** F
Bypass Factor: **0.100**
Resulting RH: **47** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **6.2** MBH
Coil airflow: **890** CFM
Load per unit area: **10.4** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **68.3/74.9** F

**Supply Fan Sizing Data**
Actual max airflow: **890** CFM
Standard airflow: **876** CFM
Actual max airflow per unit area: **1.49** CFM/sqft
Fan motor BHP: **0.08** BHP
Fan motor kW: **0.06** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **30** CFM
Airflow per unit floor area: **0.05** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Rental 302 | 18.9 | 890 | Oct 1300 | 5.0 | 598.0 | 1.49 |

## Air System Sizing Summary for VFC-3-08

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-3-08**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **240.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **0.4** Tons
Total coil load: **4.4** MBH
Sensible coil load: **3.6** MBH
Coil airflow: **158** CFM
Sensible heat ratio: **0.808**
Area per unit load: **648.3** sqft/Ton
Load per unit area: **18.5** BTU/(hr-sqft)
Load occurs at: **Jul 1500**
OA DB / WB: **85.0/67.0** F
Entering DB / WB: **76.7/63.8** F
Leaving DB / WB: **55.3/54.1** F
Coil ADP: **52.9** F
Bypass Factor: **0.100**
Resulting RH: **52** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **1.3** MBH
Coil airflow: **158** CFM
Load per unit area: **5.2** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **64.1/71.6** F

**Supply Fan Sizing Data**
Actual max airflow: **158** CFM
Standard airflow: **156** CFM
Actual max airflow per unit area: **0.66** CFM/sqft
Fan motor BHP: **0.01** BHP
Fan motor kW: **0.01** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **20** CFM
Airflow per unit floor area: **0.08** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Office 302A/B/C | 3.4 | 158 | Jun 1500 | 0.3 | 240.0 | 0.66 |

## Air System Sizing Summary for VFC-3-09

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-3-09**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **376.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **1.6** Tons
Total coil load: **18.6** MBH
Sensible coil load: **14.0** MBH
Coil airflow: **616** CFM
Sensible heat ratio: **0.753**
Area per unit load: **242.5** sqft/Ton
Load per unit area: **49.5** BTU/(hr-sqft)
Load occurs at: **Sep 1400**
OA DB / WB: **82.5/65.8** F
Entering DB / WB: **76.8/64.7** F
Leaving DB / WB: **55.4/54.3** F
Coil ADP: **53.0** F
Bypass Factor: **0.100**
Resulting RH: **55** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **7.8** MBH
Coil airflow: **616** CFM
Load per unit area: **20.9** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **60.9/72.9** F

**Supply Fan Sizing Data**
Actual max airflow: **616** CFM
Standard airflow: **606** CFM
Actual max airflow per unit area: **1.64** CFM/sqft
Fan motor BHP: **0.05** BHP
Fan motor kW: **0.04** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **120** CFM
Airflow per unit floor area: **0.32** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Game/Tech 301G | 13.1 | 616 | Oct 1300 | 1.9 | 376.0 | 1.64 |

## Air System Sizing Summary for VFC-3-10

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-3-10**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **388.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **1.1** Tons
Total coil load: **13.5** MBH
Sensible coil load: **10.4** MBH
Coil airflow: **467** CFM
Sensible heat ratio: **0.770**
Area per unit load: **343.7** sqft/Ton
Load per unit area: **34.9** BTU/(hr-sqft)
Load occurs at: **Sep 1400**
OA DB / WB: **82.5/65.8** F
Entering DB / WB: **76.7/64.5** F
Leaving DB / WB: **55.7/54.5** F
Coil ADP: **53.3** F
Bypass Factor: **0.100**
Resulting RH: **55** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **6.1** MBH
Coil airflow: **467** CFM
Load per unit area: **15.6** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **62.1/74.3** F

**Supply Fan Sizing Data**
Actual max airflow: **467** CFM
Standard airflow: **459** CFM
Actual max airflow per unit area: **1.20** CFM/sqft
Fan motor BHP: **0.04** BHP
Fan motor kW: **0.03** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **80** CFM
Airflow per unit floor area: **0.21** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Music 301F | 9.9 | 467 | Oct 1300 | 1.9 | 388.0 | 1.20 |

## Air System Sizing Summary for VFC-3-11

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-3-11**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **912.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **3.6** Tons
Total coil load: **42.9** MBH
Sensible coil load: **32.5** MBH
Coil airflow: **1333** CFM
Sensible heat ratio: **0.758**
Area per unit load: **255.0** sqft/Ton
Load per unit area: **47.1** BTU/(hr-sqft)
Load occurs at: **Aug 1500**
OA DB / WB: **85.0/67.0** F
Entering DB / WB: **78.4/65.2** F
Leaving DB / WB: **55.4/54.2** F
Coil ADP: **52.9** F
Bypass Factor: **0.100**
Resulting RH: **56** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **26.6** MBH
Coil airflow: **1333** CFM
Load per unit area: **29.2** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **54.6/73.4** F

**Supply Fan Sizing Data**
Actual max airflow: **1333** CFM
Standard airflow: **1311** CFM
Actual max airflow per unit area: **1.46** CFM/sqft
Fan motor BHP: **0.12** BHP
Fan motor kW: **0.09** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **432** CFM
Airflow per unit floor area: **0.47** CFM/sqft
Airflow per person: **8.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Art/Stem/Open Office | 28.3 | 1333 | Sep 1300 | 5.6 | 912.0 | 1.46 |

## Air System Sizing Summary for VFC-3-12

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-3-12**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **168.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **0.5** Tons
Total coil load: **5.7** MBH
Sensible coil load: **5.2** MBH
Coil airflow: **243** CFM
Sensible heat ratio: **0.920**
Area per unit load: **355.2** sqft/Ton
Load per unit area: **33.8** BTU/(hr-sqft)
Load occurs at: **Sep 1300**
OA DB / WB: **81.0/65.3** F
Entering DB / WB: **75.5/62.3** F
Leaving DB / WB: **55.3/54.1** F
Coil ADP: **53.1** F
Bypass Factor: **0.100**
Resulting RH: **48** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **1.9** MBH
Coil airflow: **243** CFM
Load per unit area: **11.1** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **68.2/75.4** F

**Supply Fan Sizing Data**
Actual max airflow: **243** CFM
Standard airflow: **239** CFM
Actual max airflow per unit area: **1.45** CFM/sqft
Fan motor BHP: **0.02** BHP
Fan motor kW: **0.02** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **10** CFM
Airflow per unit floor area: **0.06** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Snoezelen 301E | 5.2 | 243 | Oct 1300 | 1.4 | 168.0 | 1.45 |

## Air System Sizing Summary for VFC-3-13

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-3-13**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **1159.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **1.6** Tons
Total coil load: **19.7** MBH
Sensible coil load: **17.9** MBH
Coil airflow: **823** CFM
Sensible heat ratio: **0.905**
Area per unit load: **704.4** sqft/Ton
Load per unit area: **17.0** BTU/(hr-sqft)
Load occurs at: **Jun 1500**
OA DB / WB: **84.0/67.0** F
Entering DB / WB: **75.8/62.6** F
Leaving DB / WB: **55.4/54.2** F
Coil ADP: **53.1** F
Bypass Factor: **0.100**
Resulting RH: **48** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **9.3** MBH
Coil airflow: **823** CFM
Load per unit area: **8.0** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **67.7/78.3** F

**Supply Fan Sizing Data**
Actual max airflow: **823** CFM
Standard airflow: **809** CFM
Actual max airflow per unit area: **0.71** CFM/sqft
Fan motor BHP: **0.07** BHP
Fan motor kW: **0.05** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **40** CFM
Airflow per unit floor area: **0.03** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Office 301A | 2.0 | 93 | Jun 1400 | 1.0 | 119.0 | 0.79 |
| Office 301B | 2.0 | 93 | Jun 1400 | 1.0 | 119.0 | 0.79 |
| Office Left | 5.2 | 245 | Jun 1400 | 1.2 | 345.0 | 0.71 |
| Office Right | 8.3 | 391 | Jun 1400 | 4.2 | 576.0 | 0.68 |
| **Zone** | **17.5** | **823** | **Jun 1400** | **7.3** | **1159.0** | **0.71** |

Note: Table contains data for all spaces controlled by a single thermostat:
Space sizing basis: **Peak space load**
Zone sizing basis: **Peak zone load**

## Air System Sizing Summary for VFC-3-14

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-3-14**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **1008.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **1.3** Tons
Total coil load: **15.9** MBH
Sensible coil load: **13.6** MBH
Coil airflow: **619** CFM
Sensible heat ratio: **0.856**
Area per unit load: **762.9** sqft/Ton
Load per unit area: **15.7** BTU/(hr-sqft)
Load occurs at: **Jun 1400**
OA DB / WB: **83.5/66.8** F
Entering DB / WB: **76.1/63.1** F
Leaving DB / WB: **55.4/54.2** F
Coil ADP: **53.1** F
Bypass Factor: **0.100**
Resulting RH: **50** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **9.7** MBH
Coil airflow: **619** CFM
Load per unit area: **9.6** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **66.1/80.8** F

**Supply Fan Sizing Data**
Actual max airflow: **619** CFM
Standard airflow: **609** CFM
Actual max airflow per unit area: **0.61** CFM/sqft
Fan motor BHP: **0.05** BHP
Fan motor kW: **0.04** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **50** CFM
Airflow per unit floor area: **0.05** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Circ 300 | 13.1 | 619 | Jun 1400 | 7.4 | 1008.0 | 0.61 |


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MAXWELL GREENSTREET — STATE OF WASHINGTON — 52096 — REGISTERED PROFESSIONAL ENGINEER
06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

LOAD CALCULATIONS

M0.08

ORIGINAL SHEET SIZE: 24" X 36"


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## Air System Sizing Summary for VFC-3-15

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-3-15**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **387.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **1.1** Tons
Total coil load: **13.2** MBH
Sensible coil load: **11.0** MBH
Coil airflow: **507** CFM
Sensible heat ratio: **0.839**
Area per unit load: **353.1** sqft/Ton
Load per unit area: **34.0** BTU/(hr-sqft)
Load occurs at: **Sep 1300**
OA DB / WB: **81.0/65.3** F
Entering DB / WB: **75.8/63.2** F
Leaving DB / WB: **55.4/54.2** F
Coil ADP: **53.1** F
Bypass Factor: **0.100**
Resulting RH: **51** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **5.1** MBH
Coil airflow: **507** CFM
Load per unit area: **13.1** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **65.6/75.0** F

**Supply Fan Sizing Data**
Actual max airflow: **507** CFM
Standard airflow: **499** CFM
Actual max airflow per unit area: **1.31** CFM/sqft
Fan motor BHP: **0.04** BHP
Fan motor kW: **0.03** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **50** CFM
Airflow per unit floor area: **0.13** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Conf 303A | 10.8 | 507 | Oct 1300 | 2.6 | 387.0 | 1.31 |

## Air System Sizing Summary for VFC-B-1

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-B-1**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **450.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **0.8** Tons
Total coil load: **9.5** MBH
Sensible coil load: **7.7** MBH
Coil airflow: **325** CFM
Sensible heat ratio: **0.810**
Area per unit load: **569.5** sqft/Ton
Load per unit area: **21.1** BTU/(hr-sqft)
Load occurs at: **Jul 1500**
OA DB / WB: **85.0/67.0** F
Entering DB / WB: **77.6/64.2** F
Leaving DB / WB: **55.3/54.1** F
Coil ADP: **52.9** F
Bypass Factor: **0.100**
Resulting RH: **52** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **3.4** MBH
Coil airflow: **325** CFM
Load per unit area: **7.6** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **59.9/69.8** F

**Supply Fan Sizing Data**
Actual max airflow: **325** CFM
Standard airflow: **320** CFM
Actual max airflow per unit area: **0.72** CFM/sqft
Fan motor BHP: **0.03** BHP
Fan motor kW: **0.02** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **70** CFM
Airflow per unit floor area: **0.16** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Conference 006 | 6.9 | 325 | Jan 000 | 0.0 | 450.0 | 0.72 |

## Air System Sizing Summary for VFC-B-2

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-B-2**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **290.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **0.8** Tons
Total coil load: **9.1** MBH
Sensible coil load: **7.4** MBH
Coil airflow: **310** CFM
Sensible heat ratio: **0.805**
Area per unit load: **381.2** sqft/Ton
Load per unit area: **31.5** BTU/(hr-sqft)
Load occurs at: **Jul 1500**
OA DB / WB: **85.0/67.0** F
Entering DB / WB: **77.7/64.3** F
Leaving DB / WB: **55.4/54.2** F
Coil ADP: **52.9** F
Bypass Factor: **0.100**
Resulting RH: **52** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **3.4** MBH
Coil airflow: **310** CFM
Load per unit area: **11.8** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **59.4/69.8** F

**Supply Fan Sizing Data**
Actual max airflow: **310** CFM
Standard airflow: **305** CFM
Actual max airflow per unit area: **1.07** CFM/sqft
Fan motor BHP: **0.03** BHP
Fan motor kW: **0.02** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **70** CFM
Airflow per unit floor area: **0.24** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Workroom 005 | 6.6 | 310 | Jan 000 | 0.0 | 290.0 | 1.07 |

## Air System Sizing Summary for VFC-B-3

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-B-3**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **635.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **0.6** Tons
Total coil load: **7.0** MBH
Sensible coil load: **6.4** MBH
Coil airflow: **288** CFM
Sensible heat ratio: **0.912**
Area per unit load: **1092.3** sqft/Ton
Load per unit area: **11.0** BTU/(hr-sqft)
Load occurs at: **Jun 1500**
OA DB / WB: **84.0/67.0** F
Entering DB / WB: **76.1/62.5** F
Leaving DB / WB: **55.3/54.0** F
Coil ADP: **53.0** F
Bypass Factor: **0.100**
Resulting RH: **48** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **0.9** MBH
Coil airflow: **288** CFM
Load per unit area: **1.5** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **66.7/69.8** F

**Supply Fan Sizing Data**
Actual max airflow: **288** CFM
Standard airflow: **283** CFM
Actual max airflow per unit area: **0.45** CFM/sqft
Fan motor BHP: **0.03** BHP
Fan motor kW: **0.02** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **20** CFM
Airflow per unit floor area: **0.03** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Faculty 003 | 6.1 | 288 | Jan 000 | 0.0 | 635.0 | 0.45 |

## Air System Sizing Summary for VFC-B-4

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-B-4**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **826.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **1.3** Tons
Total coil load: **15.2** MBH
Sensible coil load: **13.0** MBH
Coil airflow: **566** CFM
Sensible heat ratio: **0.854**
Area per unit load: **650.1** sqft/Ton
Load per unit area: **18.5** BTU/(hr-sqft)
Load occurs at: **Jun 1500**
OA DB / WB: **84.0/67.0** F
Entering DB / WB: **76.5/63.0** F
Leaving DB / WB: **54.8/53.5** F
Coil ADP: **52.4** F
Bypass Factor: **0.100**
Resulting RH: **49** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **6.2** MBH
Coil airflow: **566** CFM
Load per unit area: **7.5** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **63.7/74.0** F

**Supply Fan Sizing Data**
Actual max airflow: **566** CFM
Standard airflow: **556** CFM
Actual max airflow per unit area: **0.68** CFM/sqft
Fan motor BHP: **0.05** BHP
Fan motor kW: **0.04** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **75** CFM
Airflow per unit floor area: **0.09** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Art 003 | 12.0 | 566 | Jun 1800 | 2.6 | 826.0 | 0.68 |

## Air System Sizing Summary for VFC-B-5

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-B-5**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **1386.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **2.1** Tons
Total coil load: **25.1** MBH
Sensible coil load: **21.5** MBH
Coil airflow: **933** CFM
Sensible heat ratio: **0.858**
Area per unit load: **663.7** sqft/Ton
Load per unit area: **18.1** BTU/(hr-sqft)
Load occurs at: **Jul 1400**
OA DB / WB: **84.5/66.8** F
Entering DB / WB: **76.5/63.0** F
Leaving DB / WB: **54.9/53.6** F
Coil ADP: **52.5** F
Bypass Factor: **0.100**
Resulting RH: **49** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **10.1** MBH
Coil airflow: **933** CFM
Load per unit area: **7.3** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **63.7/73.9** F

**Supply Fan Sizing Data**
Actual max airflow: **933** CFM
Standard airflow: **918** CFM
Actual max airflow per unit area: **0.67** CFM/sqft
Fan motor BHP: **0.08** BHP
Fan motor kW: **0.06** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **125** CFM
Airflow per unit floor area: **0.09** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Stem/Science | 19.8 | 933 | Jun 1800 | 4.0 | 1386.0 | 0.67 |

## Air System Sizing Summary for VFC-B-6

Project Name: Barnbie Point
Prepared by: Holaday-Parks
05/28/2025
02:01PM

**Air System Information**
Air System Name: **VFC-B-6**
Air System Type: **Single Zone CAV**
Number of zones: **1**
Floor Area: **1038.0** sqft
Location: **Seattle IAP, Washington**

**Sizing Calculation Information**
Calculation Months: **Jan to Dec**
Calculation method: **Radiant Time Series**

**Central Cooling Coil Sizing Data**
Total coil load: **0.6** Tons
Total coil load: **6.7** MBH
Sensible coil load: **6.1** MBH
Coil airflow: **277** CFM
Sensible heat ratio: **0.909**
Area per unit load: **1850.9** sqft/Ton
Load per unit area: **6.5** BTU/(hr-sqft)
Load occurs at: **Jun 1500**
OA DB / WB: **84.0/67.0** F
Entering DB / WB: **76.1/62.6** F
Leaving DB / WB: **55.3/54.0** F
Coil ADP: **53.0** F
Bypass Factor: **0.100**
Resulting RH: **48** %
Design supply temp: **55.0** F

**Central Heating Coil Sizing Data**
Max coil load: **0.9** MBH
Coil airflow: **277** CFM
Load per unit area: **0.9** BTU/(hr-sqft)
Load occurs at: **Des Htg**
Ent DB / Lvg DB: **66.6/69.8** F

**Supply Fan Sizing Data**
Actual max airflow: **277** CFM
Standard airflow: **272** CFM
Actual max airflow per unit area: **0.27** CFM/sqft
Fan motor BHP: **0.02** BHP
Fan motor kW: **0.02** kW
Fan static: **0.30** in wg

**Outdoor Ventilation Air Data**
Design airflow: **20** CFM
Airflow per unit floor area: **0.02** CFM/sqft
Airflow per person: **5.00** CFM/person

**Space Sizing Data**

| Space Name | Maximum Cooling Sensible MBH | Design Airflow CFM | Time of Peak Load | Maximum Heating Load MBH | Space Floor Area sqft | Space CFM/sqft |
|---|---|---|---|---|---|---|
| Circ 001 | 5.9 | 277 | Jan 000 | 0.0 | 1038.0 | 0.27 |

ORIGINAL SHEET SIZE: 24" X 36"

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Building Controls • Service & Maintenance
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TUKWILA, WA 98168 • (206) 248-9700
HOLADAYPARKS.com
WA LICENSE NUMBER: HOLADPI379N0

MAXWELL GREENWOOD — STATE OF WASHINGTON — 52266 — REGISTERED PROFESSIONAL ENGINEER
06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
BARNABIE POINT

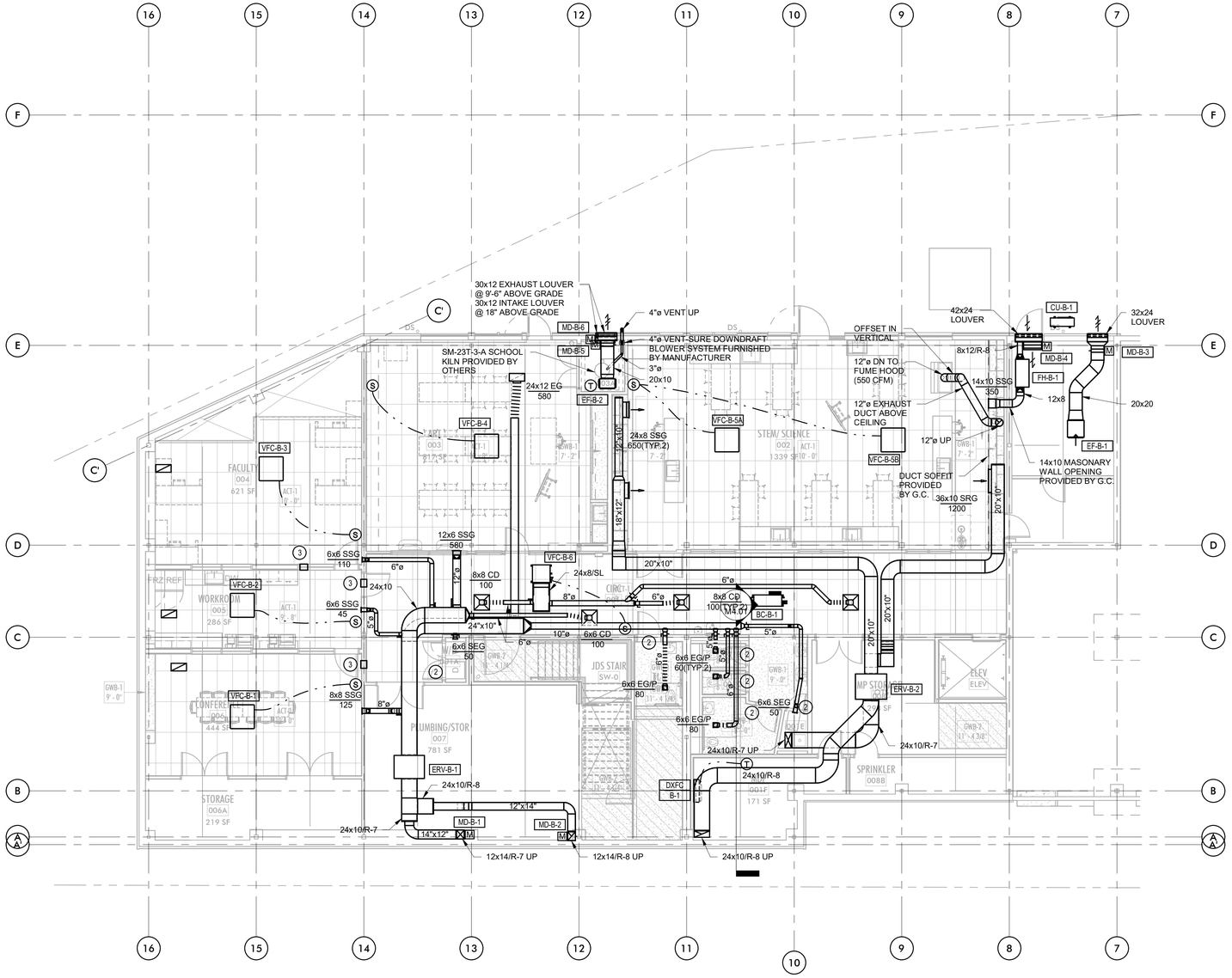
| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

LOAD CALCULATIONS

M0.09




## LEVEL B01 HVAC PLAN
Scale: 1/8" = 1'-0"

## KEYED NOTES

1. PROVIDE CAR-II CONSTANT AIRFLOW REGULATOR
2. PROVIDE 1" UNDERCUT DOOR BY G.C.
3. PROVIDE 1 SQ. FT. TRANSFER OPENING (ABOVE CEILING) BY G.C.
4. PROVIDE 1.5 SQ. FT. TRANSFER OPENING (ABOVE CEILING) BY G.C.

## SHEET NOTES

1. (CO2)(S) INDICATES A COMBINED CO2 AND TEMPERATURE LOCATED IN HIGH OCCUPANCY SPACES EXCEEDING 500 SQFT FLOOR AREA. SENSOR INSTALLED AT AN ELEVATION OF 48" A.F.F.
2. (S) INDICATE TEMPERATURE SENSOR INSTALLED AT AN ELEVATION OF 48" A.F.F.
3. ALL SENSORS INSTALLED ON THE INSIDE FACE OF AN EXTERIOR WALL SHALL BE PROVIDED WITH AN INSULATED BASE PLATE THAT PROVIDES A THERMAL BREAK FROM THE WALL FRAMING. FIELD TO VERIFY THERMAL BREAK IS INSTALLED PRIOR TO CLOSURE OF WALL.

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ORIGINAL SHEET SIZE: 24" X 36"

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4600 S. 134TH PLACE
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HOLADAYPARKS.com
WA LICENSE NUMBER: HOLADPI379N0

MAXWELL GREENWALD
STATE OF WASHINGTON
52266
REGISTERED
PROFESSIONAL ENGINEER
06/04/2025

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3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

LEVEL B01
HVAC PLAN

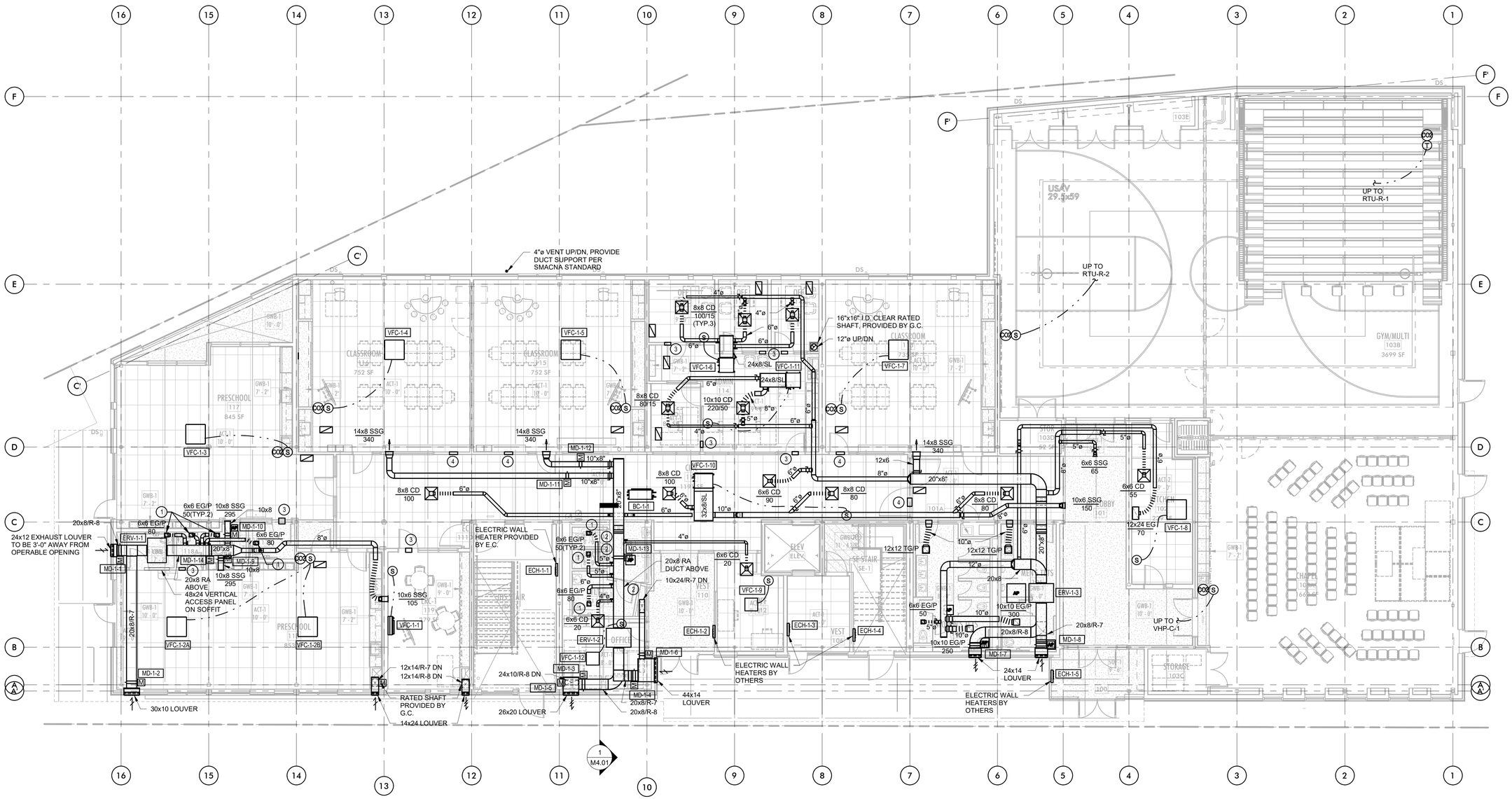
M2.00

## KEYED NOTES

1. PROVIDE CAR-II CONSTANT AIRFLOW REGULATOR
2. PROVIDE 1" UNDERCUT DOOR BY G.C.
3. PROVIDE 1 SQ. FT. TRANSFER OPENING (ABOVE CEILING) BY G.C.
4. PROVIDE 1.5 SQ. FT. TRANSFER OPENING (ABOVE CEILING) BY G.C.

## SHEET NOTES

1. (CO2)(S) INDICATES A COMBINED CO2 AND TEMPERATURE LOCATED IN HIGH OCCUPANCY SPACES EXCEEDING 500 SQFT FLOOR AREA. SENSOR INSTALLED AT AN ELEVATION OF 48" A.F.F.
2. (S) INDICATE TEMPERATURE SENSOR INSTALLED AT AN ELEVATION OF 48" A.F.F.
3. ALL SENSORS INSTALLED ON THE INSIDE FACE OF AN EXTERIOR WALL SHALL BE PROVIDED WITH AN INSULATED BASE PLATE THAT PROVIDES A THERMAL BREAK FROM THE WALL FRAMING. FIELD TO VERIFY THERMAL BREAK IS INSTALLED PRIOR TO CLOSURE OF WALL.




## LEVEL 01 HVAC PLAN
Scale: 1/8" = 1'-0"

ORIGINAL SHEET SIZE: 24" X 36"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TUKWILA, WA 98168 • (206) 248-9700
HOLADAYPARKS.com
WA LICENSE NUMBER: HOLADPI379N0


MAXWELL L. GREENBERG — STATE OF WASHINGTON — 52266 — REGISTERED PROFESSIONAL ENGINEER
06/04/2025

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3700 E MERCER WAY
**BARNABIE POINT PROJECT**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

LEVEL 01
HVAC PLAN

# M2.01


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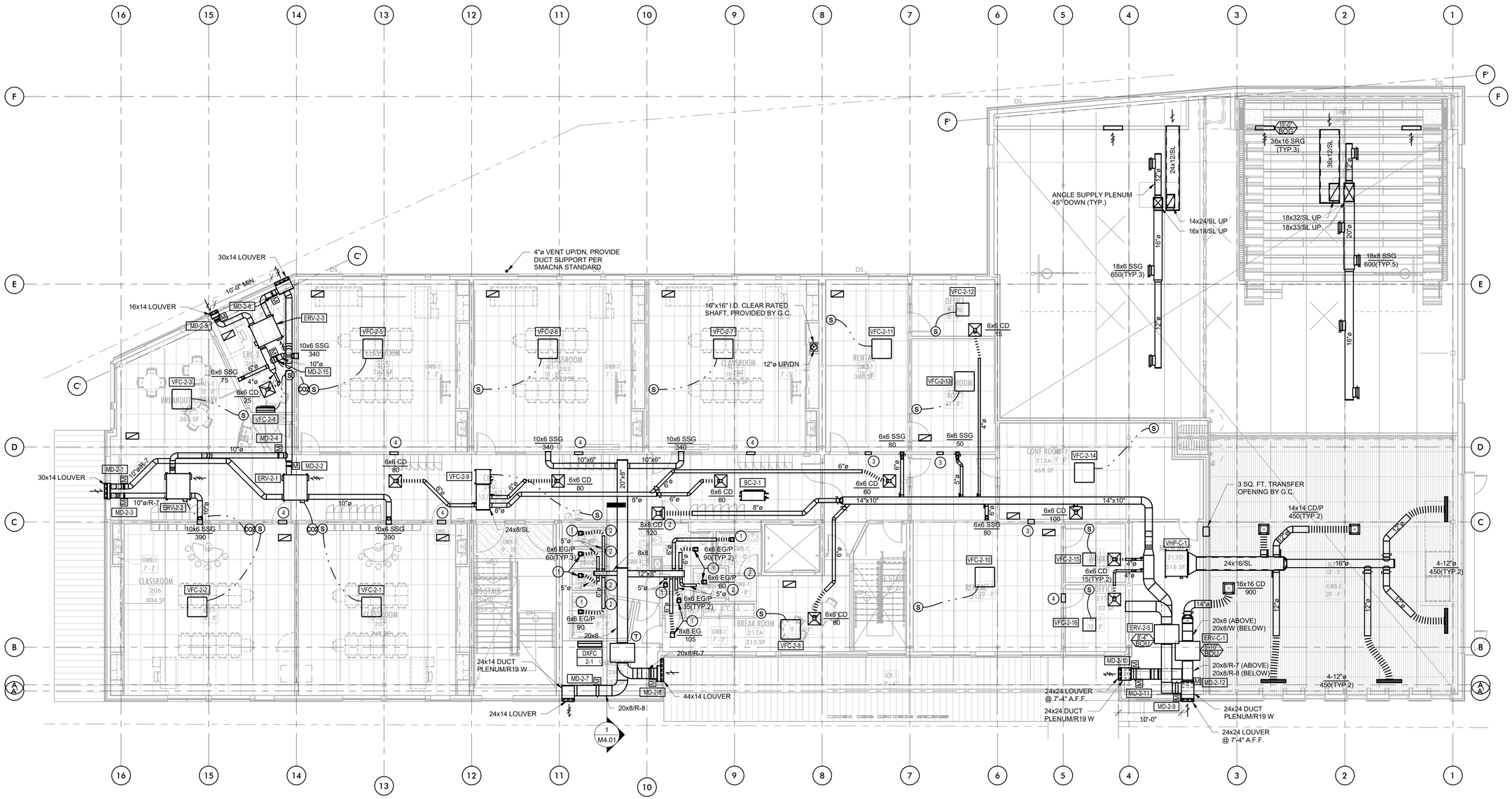
## KEYED NOTES

1. PROVIDE CAR-II CONSTANT AIRFLOW REGULATOR
2. PROVIDE 1" UNDERCUT DOOR BY G.C.
3. PROVIDE 1 SQ. FT. TRANSFER OPENING (ABOVE CEILING) BY G.C.
4. PROVIDE 1.5 SQ. FT. TRANSFER OPENING (ABOVE CEILING) BY G.C.

## SHEET NOTES

1. CO2 S INDICATES A COMBINED CO2 AND TEMPERATURE LOCATED IN HIGH OCCUPANCY SPACES EXCEEDING 500 SQFT FLOOR AREA. SENSOR INSTALLED AT AN ELEVATION OF 48" A.F.F.
2. S INDICATE TEMPERATURE SENSOR INSTALLED AT AN ELEVATION OF 48" A.F.F.
3. ALL SENSORS INSTALLED ON THE INSIDE FACE OF AN EXTERIOR WALL SHALL BE PROVIDED WITH AN INSULATED BASE PLATE THAT PROVIDES A THERMAL BREAK FROM THE WALL FRAMING. FIELD TO VERIFY THERMAL BREAK IS INSTALLED PRIOR TO CLOSURE OF WALL.




LEVEL 02 HVAC PLAN
Scale: 1/8" = 1'-0"


**HOLADAY-PARKS, INC.**
*SMART Mechanical Solutions ®*
Mechanical Solutions • Energy Services
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4600 S. 134TH PLACE
TUKWILA, WA 98168 • (206) 248-9700
HOLADAYPARKS.com
WA LICENSE NUMBER: HOLADPI379N0


MAXWELL GREENHECK
STATE OF WASHINGTON
52266
REGISTERED PROFESSIONAL ENGINEER
06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

LEVEL 02
HVAC PLAN

M2.02

ORIGINAL SHEET SIZE: 24" X 36"

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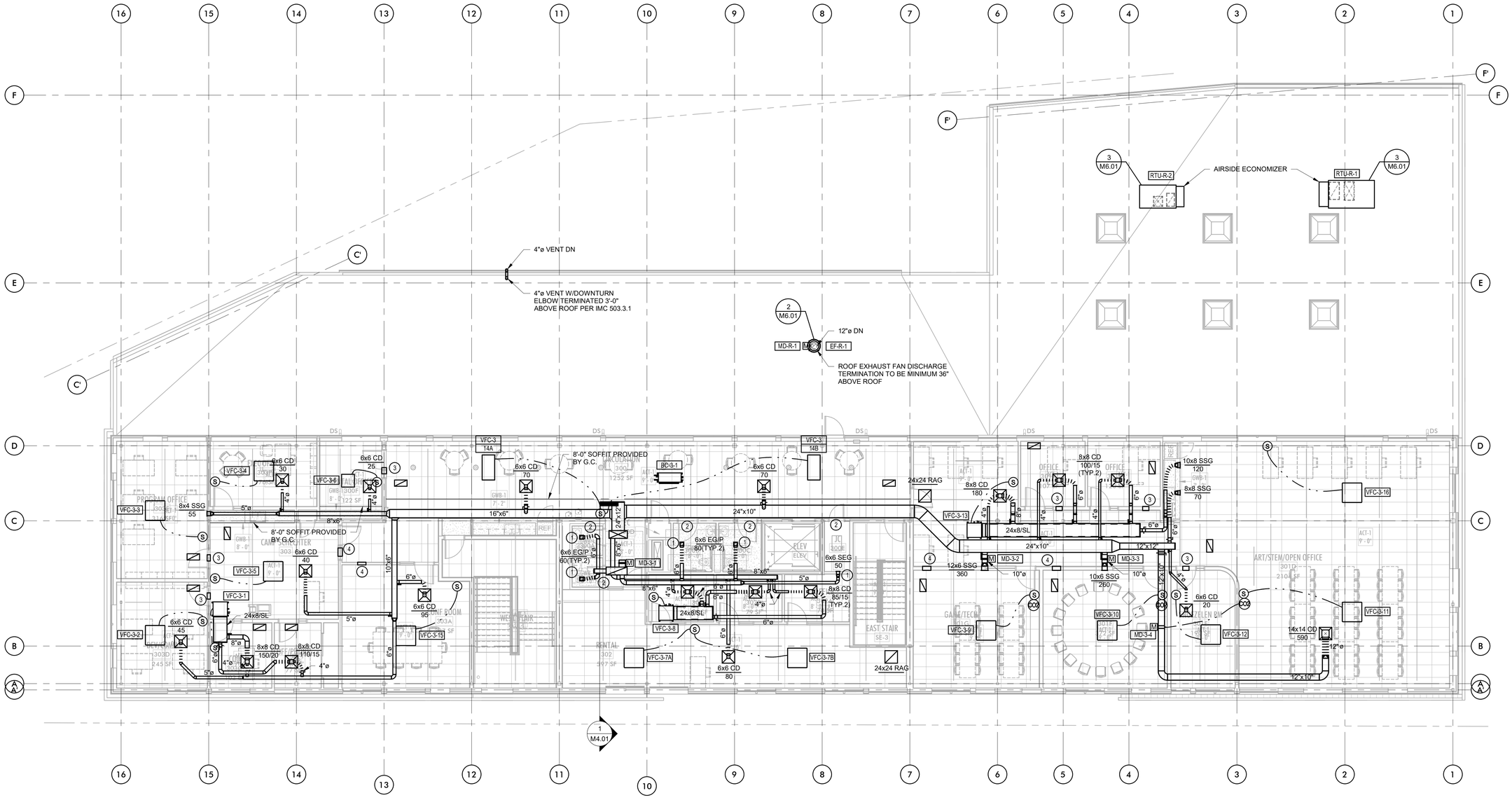
## KEYED NOTES

1. PROVIDE CAR-II CONSTANT AIRFLOW REGULATOR
2. PROVIDE 1" UNDERCUT DOOR BY G.C.
3. PROVIDE 1 SQ. FT. TRANSFER OPENING (ABOVE CEILING) BY G.C.
4. PROVIDE 1.5 SQ. FT. TRANSFER OPENING (ABOVE CEILING) BY G.C.

## SHEET NOTES

1. (CO2)(S) INDICATES A COMBINED CO2 AND TEMPERATURE LOCATED IN HIGH OCCUPANCY SPACES EXCEEDING 500 SQFT FLOOR AREA. SENSOR INSTALLED AT AN ELEVATION OF 48" A.F.F.
2. (S) INDICATE TEMPERATURE SENSOR INSTALLED AT AN ELEVATION OF 48" A.F.F.
3. ALL SENSORS INSTALLED ON THE INSIDE FACE OF AN EXTERIOR WALL SHALL BE PROVIDED WITH AN INSULATED BASE PLATE THAT PROVIDES A THERMAL BREAK FROM THE WALL FRAMING. FIELD TO VERIFY THERMAL BREAK IS INSTALLED PRIOR TO CLOSURE OF WALL.




1 / M4.01

## LEVEL 03 HVAC PLAN
Scale: 1/8" = 1'-0"

ORIGINAL SHEET SIZE: 24" X 36"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HOLADAYPARKS.com

WA LICENSE NUMBER: HOLADPI379N0


MAXWELL GREENWALD — STATE OF WASHINGTON — 52266 — REGISTERED PROFESSIONAL ENGINEER

06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
**BARNABIE POINT PROJECT**

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

LEVEL 03
HVAC PLAN

# M2.03


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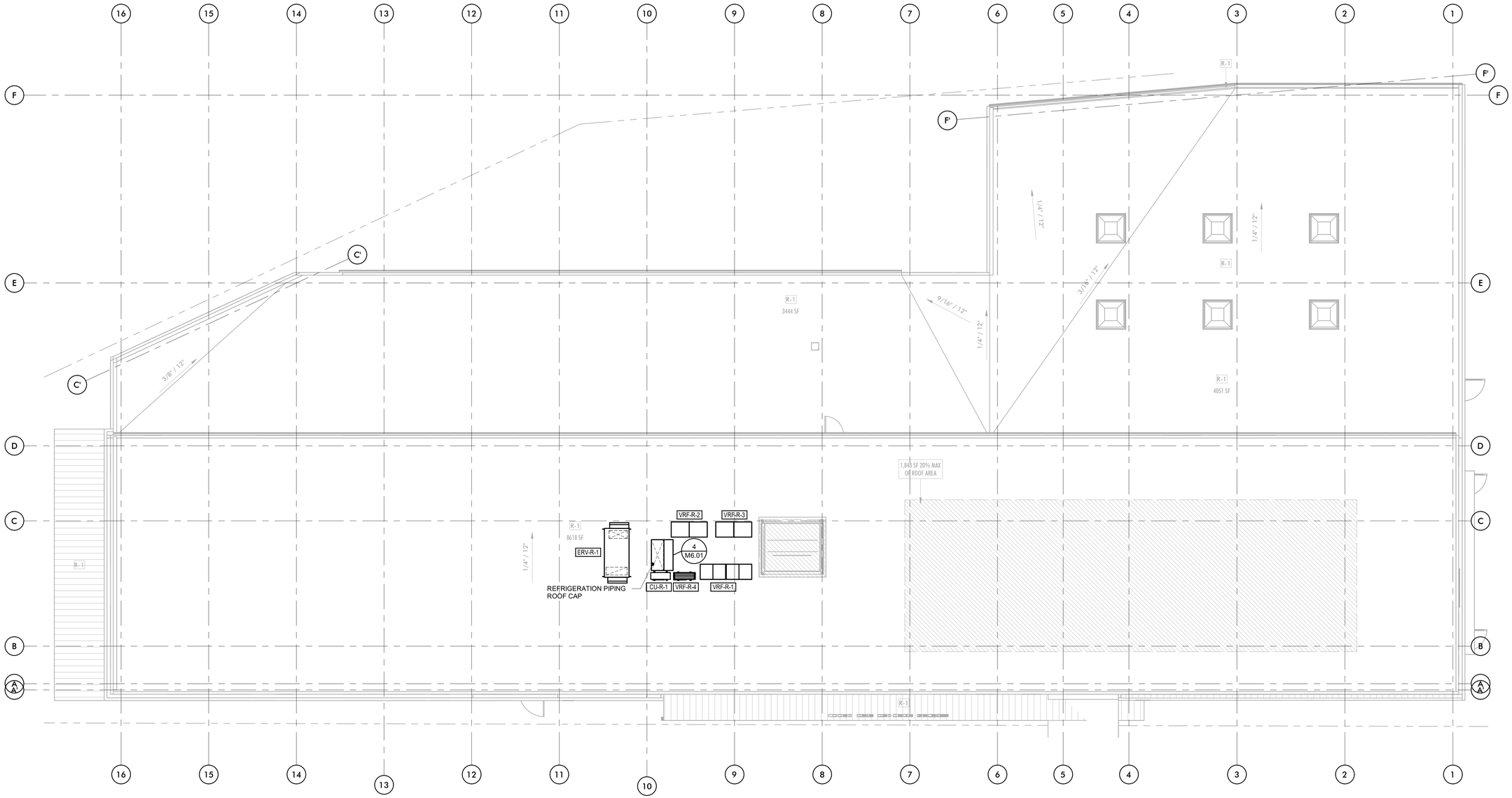


## ROOF HVAC PLAN
Scale: 1/8" = 1'-0"

ORIGINAL SHEET SIZE: 24" X 36"


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ROOF
HVAC PLAN

# M2.RF

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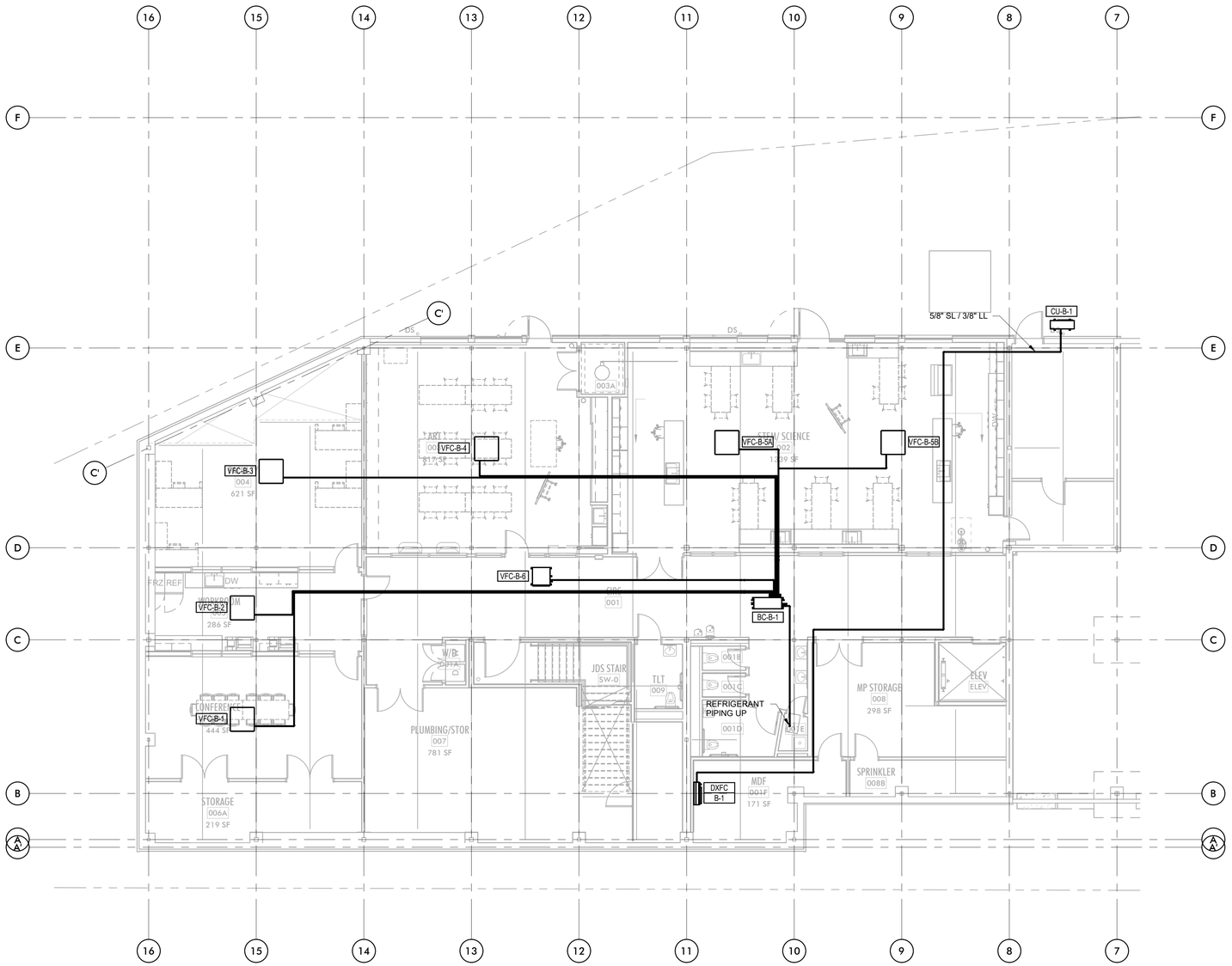


## LEVEL B01 HVAC PIPING PLAN
Scale: 1/8" = 1'-0"

## KEYED NOTES

1. SEE M5.01 - M5.03 FOR VRF SYSTEM PIPE SIZES

ORIGINAL SHEET SIZE: 24" X 36"


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LEVEL B01
HVAC PIPING PLAN

# MP2.00

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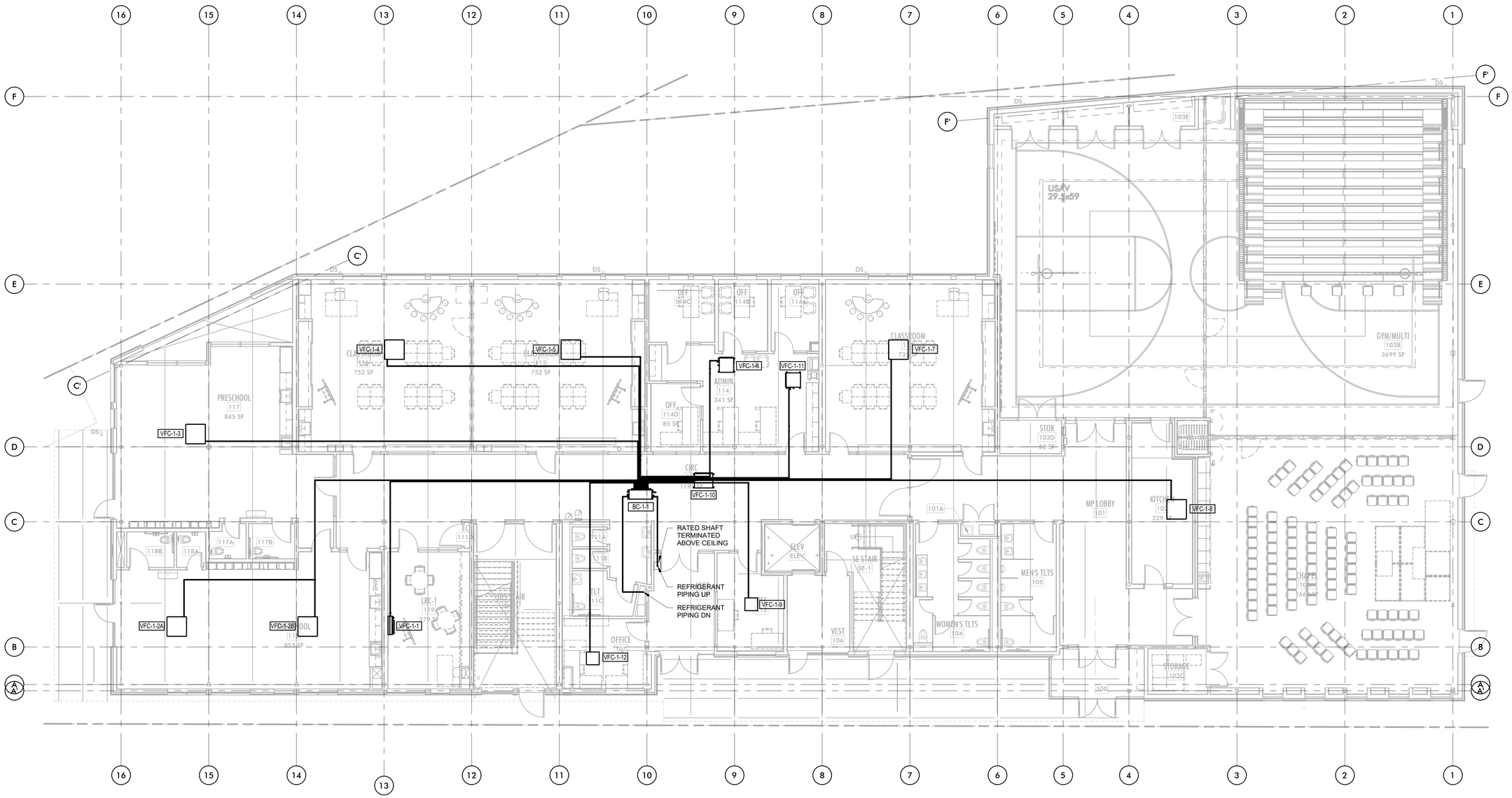


## LEVEL 01 HVAC PIPING PLAN
Scale: 1/8" = 1'-0"

## KEYED NOTES

1. SEE M5.01 - M5.03 FOR VRF SYSTEM PIPE SIZES

ORIGINAL SHEET SIZE: 24" X 36"


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PROJECT: 64605

LEVEL 01
HVAC PIPING PLAN
HVAC PLAN

# MP2.01

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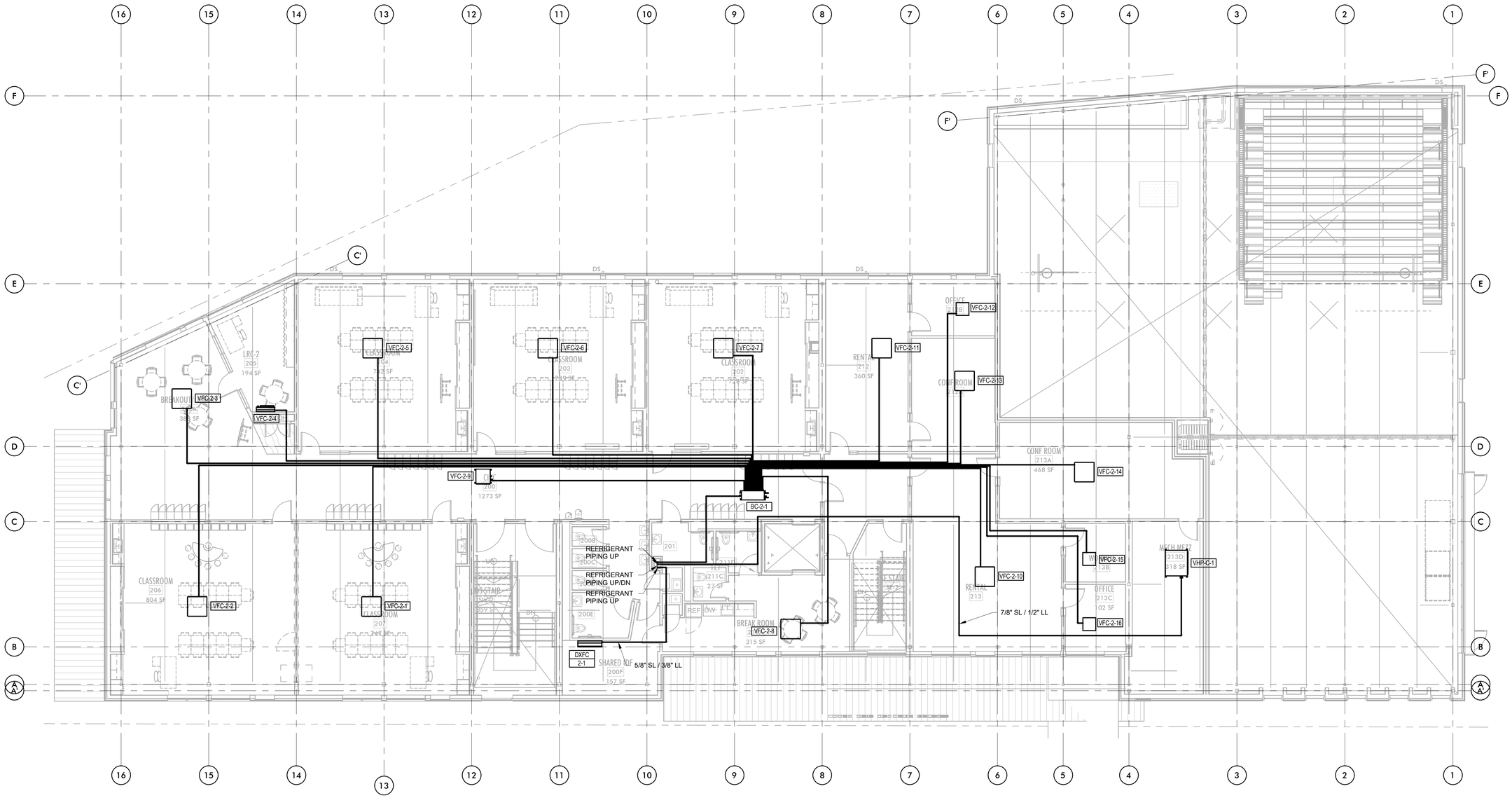


## LEVEL 02 HVAC PIPING PLAN
Scale: 1/8" = 1'-0"

### KEYED NOTES

1. SEE M5.01 - M5.03 FOR VRF SYSTEM PIPE SIZES


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BUILDING PERMIT

PROJECT: 64605

LEVEL 02
HVAC PIPING PLAN
HVAC PLAN

# MP2.02

ORIGINAL SHEET SIZE: 24" X 36"

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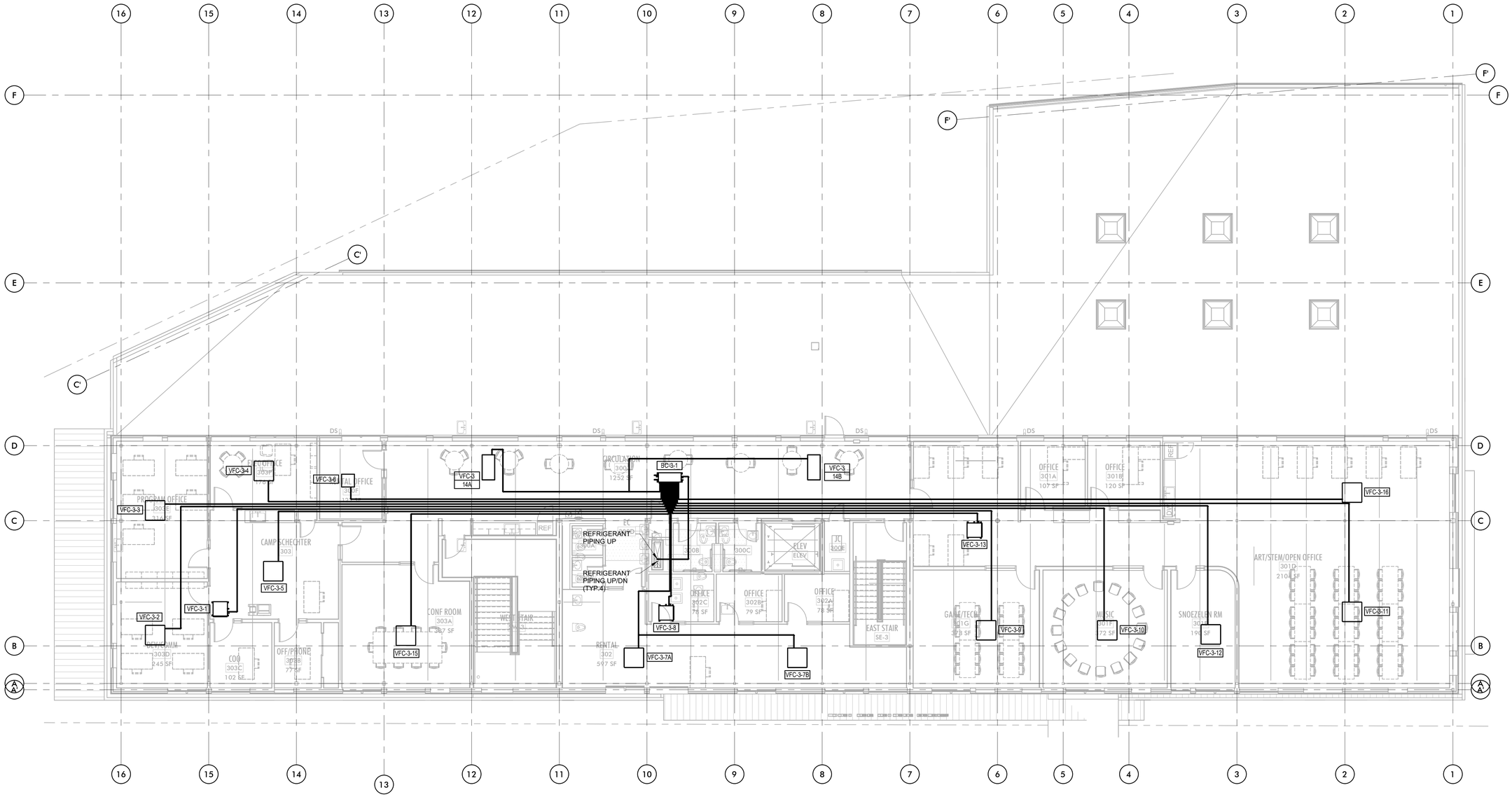


## LEVEL 03 HVAC PIPING PLAN
Scale: 1/8" = 1'-0"

### KEYED NOTES

1. SEE M5.01 - M5.03 FOR VRF SYSTEM PIPE SIZES

ORIGINAL SHEET SIZE: 24" X 36"


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**BARNABIE POINT PROJECT**

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LEVEL 03
HVAC PIPING PLAN
HVAC PLAN

# MP2.03

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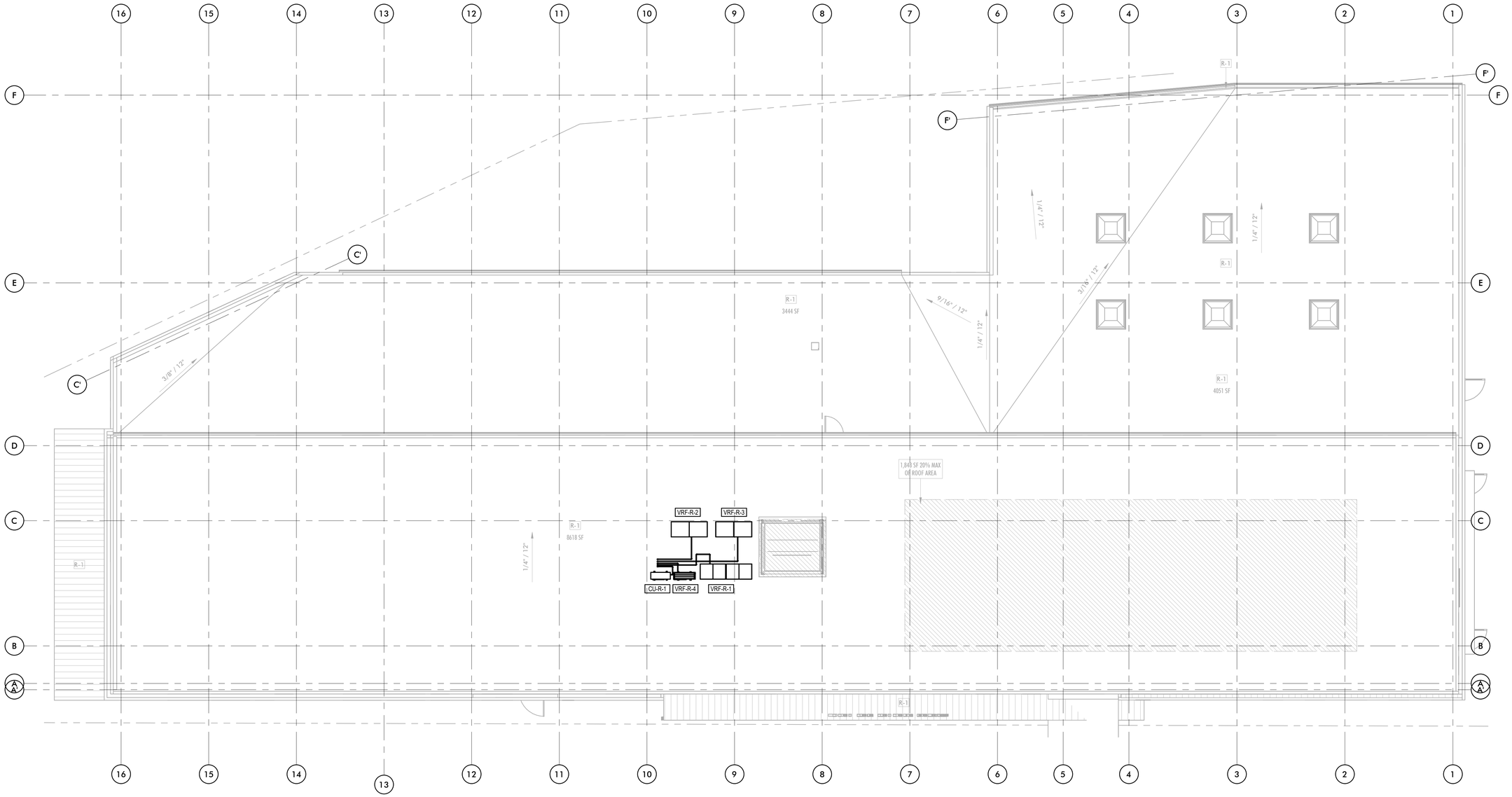


## ROOF HVAC PIPING PLAN
Scale: 1/8" = 1'-0"

ORIGINAL SHEET SIZE: 24" X 36"


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ROOF HVAC
PIPING PLAN

# MP2.RF

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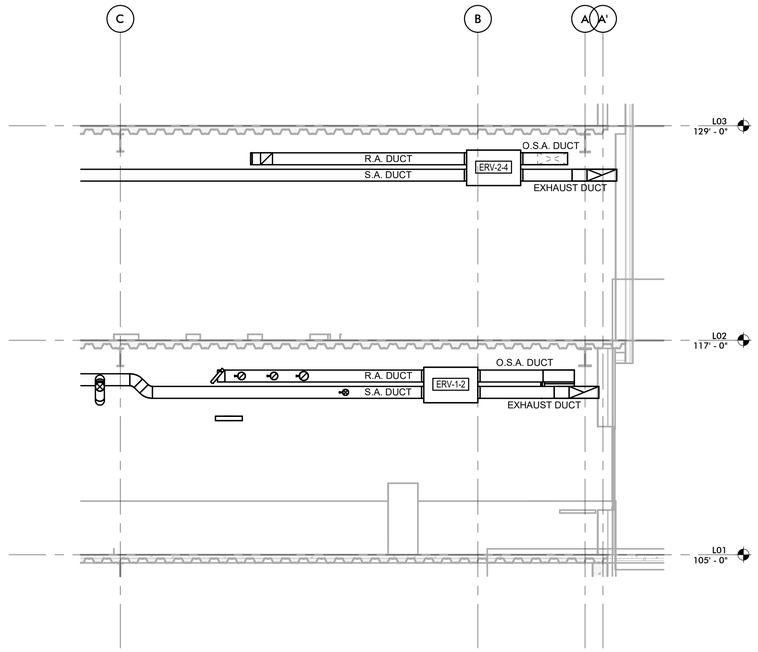


1 SECTION - ERV
Scale: 1/4" = 1'-0"

ORIGINAL SHEET SIZE: 24" X 36"

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**BARNABIE POINT**

| NO. | DATE | DESCRIPTION |
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SECTIONS

# M4.01

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## Quick Results

**Connection Summary**

| | |
|---|---|
| Indoor Units: | 20 / 2 to 50 |
| Capacity: | 312 / 144 to 432 (108.3%) |
| * Connectable capacity is not actual capacity. | |
| Total Pipe Length: | 1287.8/3066.8 feet |
| Furthest Actual: | 178.0/541.0 feet |
| Furthest Equiv.: | 203.3/623.0 feet |
| Furthest IU from BC Actual: | 98.0/197.0 feet |
| Furthest IU from BC Equiv.: | 107.2/197.0 feet |
| Furthest IU from BC Thru Sub BC Actual: | 126.0/295.0 feet |
| Furthest IU from BC Thru Sub BC Equiv.: | 132.9/295.0 feet |

**Refrigerant**

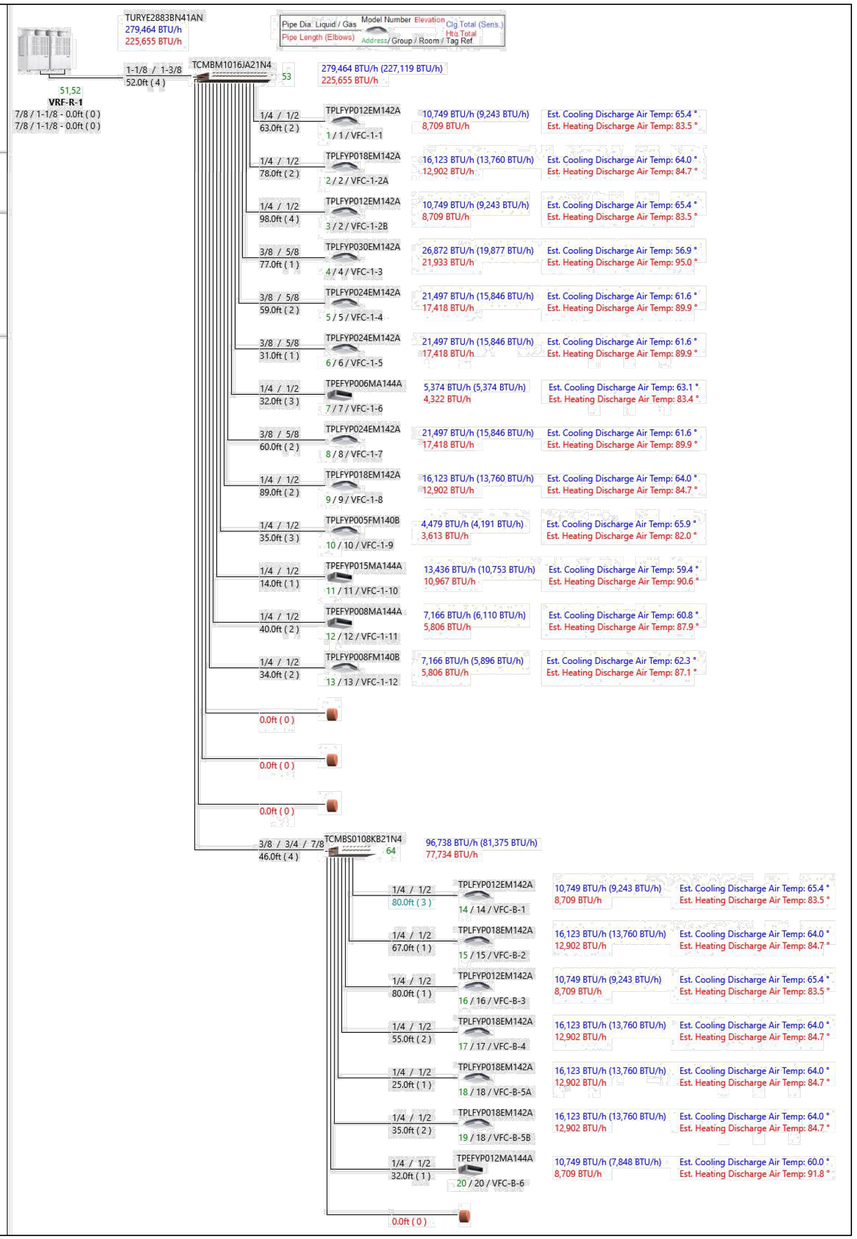
| | |
|---|---|
| System Refrigerant: | R410A |
| Additional Field-Charge: | 62.54 lb |
| Total System Charge: | 110.16 lb |

**Correction Factors**

| | Cooling | Heating |
|---|---|---|
| Outdoor Unit Capacity: | 1.02 | 1.00 |
| Outdoor Temperature: | 1.05 | 0.77 |
| Piping Length: | 0.91 | 0.96 |
| Defrosting: | - - | 0.95 |
| User Derate: | 1.00 | 1.00 |
| Outdoor Altitude: | 1.00 | 1.00 |
| | 0.97 | 0.71 |

**Conditions**

| Cooling | | Heating | |
|---|---|---|---|
| Indoor Dry Bulb | 80.0 °F | Indoor Dry Bulb | 70.0 °F |
| Indoor Wet Bulb | 67.0 °F | | |
| Indoor Humidity | 51.8 % | Outdoor Dry Bulb | 22.0 °F |
| | | Outdoor Wet Bulb | 20.2 °F |
| Outdoor Dry Bulb | 85.0 °F | Outdoor Humidity | 72.8 % |





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MAXWELL GRIGSBY STATE OF WASHINGTON 52096 REGISTERED PROFESSIONAL ENGINEER

06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

RISER DIAGRAM

M5.01

ORIGINAL SHEET SIZE: 24" X 36"


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**Quick Results**

**Connection Summary**

| | | |
|---|---|---|
| Indoor Units: | 16 / 2 to 50 | |
| Capacity: | 227 / 108 to 324 (105.1%) | |
| * Connectable capacity is not actual capacity. | | |
| Total Pipe Length: | 1168.3/2454.1 | feet |
| Furthest Actual: | 147.0/541.0 | feet |
| Furthest Equiv.: | 160.8/623.0 | feet |
| Furthest IU from BC Actual: | 111.0/197.0 | feet |
| Furthest IU from BC Equiv.: | 115.6/197.0 | feet |
| Furthest IU from BC Thru Sub BC Actual: | 0.0/0.0 | feet |
| Furthest IU from BC Thru Sub BC Equiv.: | 0.0/0.0 | feet |

**Refrigerant**

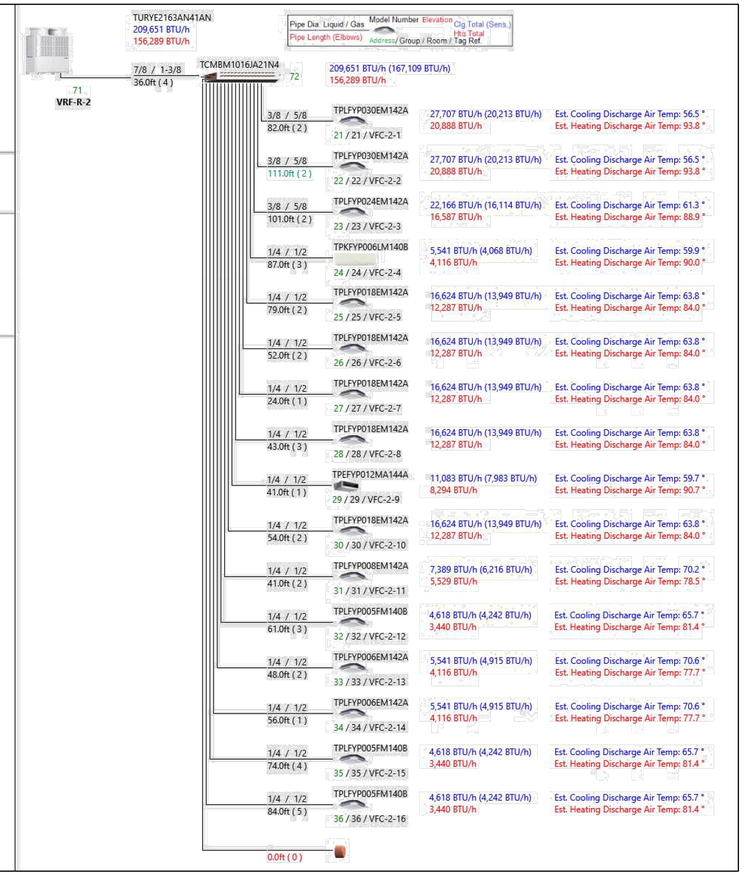
| | |
|---|---|
| System Refrigerant: | **R410A** |
| Additional Field-Charge: | **54.05 lb** |
| Total System Charge: | **80.06 lb** |

**Correction Factors**

| | Cooling | Heating |
|---|---|---|
| Outdoor Unit Capacity: | 1.00 | 1.00 |
| Outdoor Temperature: | 1.05 | 0.72 |
| Piping Length: | 0.93 | 0.97 |
| Defrosting: | -- | 0.91 |
| User Derate: | 1.00 | 1.00 |
| Outdoor Altitude: | 1.00 | 1.00 |
| | **0.97** | **0.64** |

**Conditions**

| Cooling | | Heating | |
|---|---|---|---|
| Indoor Dry Bulb | 80.0 °F | Indoor Dry Bulb | 70.0 °F |
| Indoor Wet Bulb | 67.0 °F | | |
| Indoor Humidity | 51.8 % | Outdoor Dry Bulb | 22.0 °F |
| | | Outdoor Wet Bulb | 20.2 °F |
| Outdoor Dry Bulb | 85.0 °F | Outdoor Humidity | 72.8 % |





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3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

RISER DIAGRAM

M5.02

ORIGINAL SHEET SIZE: 24" X 36"


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**Quick Results**

**Connection Summary**

| | | |
|---|---|---|
| Indoor Units: | 18 / 2 to 50 | |
| Capacity: | 239 / 108 to 324 (110.6%) | |
| * Connectable capacity is not actual capacity. | | |
| Total Pipe Length: | 1367.7/2459.0 | feet |
| Furthest Actual: | 159.0/541.0 | feet |
| Furthest Equiv.: | 170.5/623.0 | feet |
| Furthest IU from BC Actual: | 126.0/197.0 | feet |
| Furthest IU from BC Equiv.: | 130.6/197.0 | feet |
| Furthest IU from BC Thru Sub BC Actual: | 0.0/0.0 | feet |
| Furthest IU from BC Thru Sub BC Equiv.: | 0.0/0.0 | feet |

**Refrigerant**

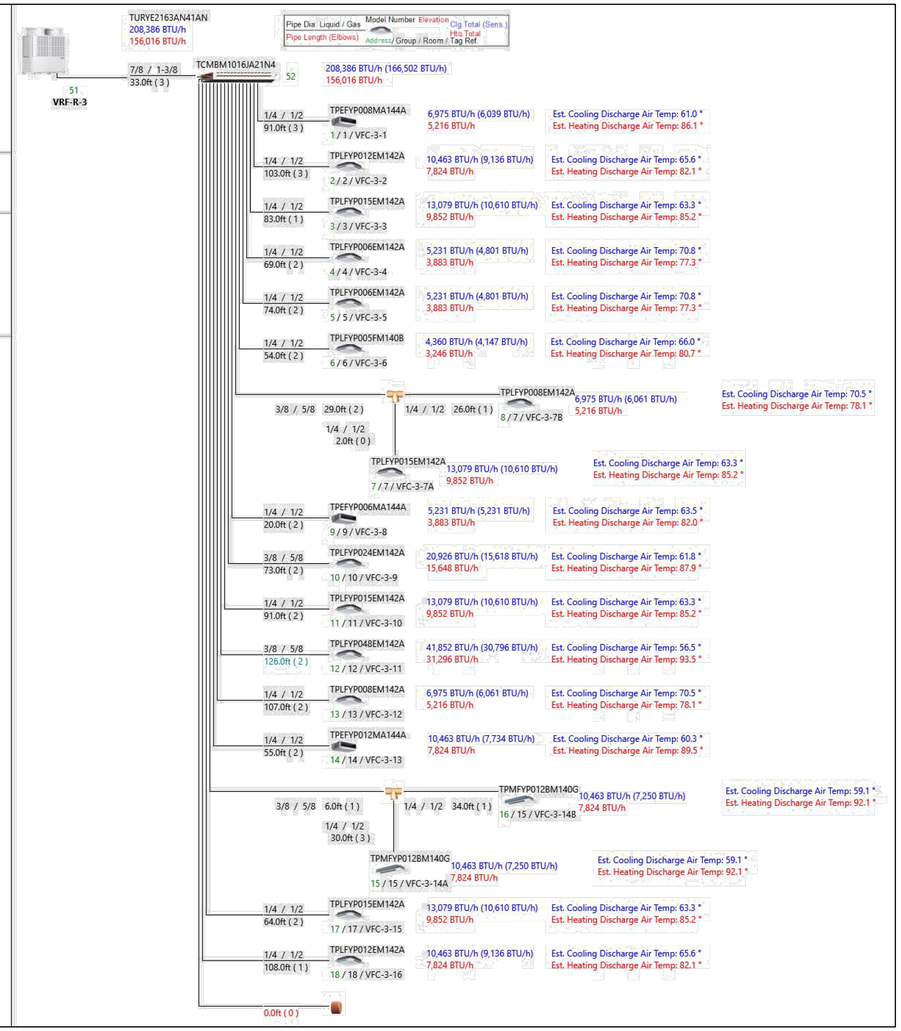
| | |
|---|---|
| System Refrigerant: | **R410A** |
| Additional Field-Charge: | **58.69 lb** |
| Total System Charge: | **84.70 lb** |

**Correction Factors**

| | Cooling | Heating |
|---|---|---|
| Outdoor Unit Capacity: | 1.00 | 1.00 |
| Outdoor Temperature: | 1.05 | 0.72 |
| Piping Length: | 0.92 | 0.97 |
| Defrosting: | -- | 0.91 |
| User Derate: | 1.00 | 1.00 |
| Outdoor Altitude: | 1.00 | 1.00 |
| | **0.96** | **0.64** |

**Conditions**

| Cooling | | Heating | |
|---|---|---|---|
| Indoor Dry Bulb | 80.0 °F | Indoor Dry Bulb | 70.0 °F |
| Indoor Wet Bulb | 67.0 °F | | |
| Indoor Humidity | 51.8 % | Outdoor Dry Bulb | 22.0 °F |
| | | Outdoor Wet Bulb | 20.2 °F |
| Outdoor Dry Bulb | 85.0 °F | Outdoor Humidity | 72.8 % |





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06/04/2025

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3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

RISER DIAGRAM

M5.03

ORIGINAL SHEET SIZE: 24" X 36"


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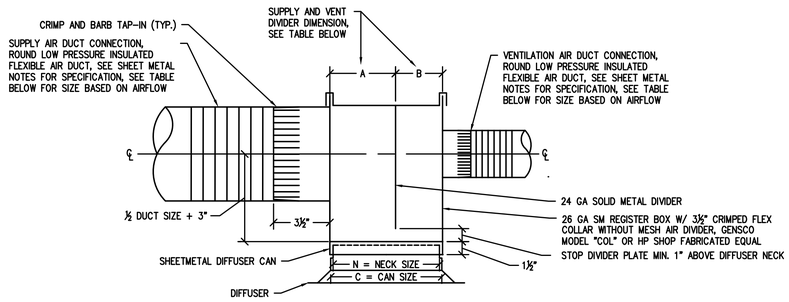
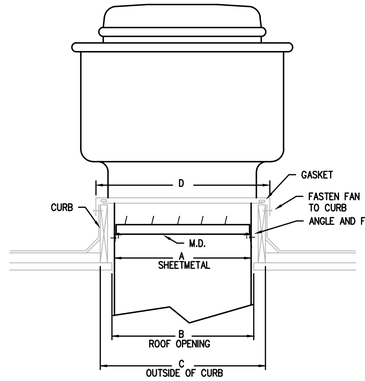



SUPPLY AIR PLUS VENTILATION DIFFUSER TABLE

| NOMINAL DIFFUSER SIZE (INxIN) | NECK SIZE DIM "N" (INxIN) | AIRFLOW RANGE | | DIFFUSER CONFIGURATION | | | | DIVIDER DIMENSIONS | |
|---|---|---|---|---|---|---|---|---|---|
| | | MINIMUM DIFFUSER AIRFLOW (CFM) | MAXIMUM DIFFUSER AIRFLOW (CFM) | SUPPLY INLET DIA. (IN) | VENT INLET DIA. (IN) | MAXIMUM SUPPLY AIRFLOW (CFM) | MAXIMUM VENT AIRFLOW (CFM) | A (IN) | B (IN) |
| 6 x 6 | 5.75 x 5.75 | 0 | 95 | 6 | 4 | 60 | 35 | 3 | 3 |
| 6 x 6 | 5.75 x 5.75 | 0 | 95 | 6 | 5 | 40 | 55 | 3 | 3 |
| 8 x 8 | 7.75 x 7.75 | 95 | 225 | 8 | 4 | 190 | 35 | 5 | 3 |
| 8 x 8 | 7.75 x 7.75 | 95 | 225 | 8 | 5 | 170 | 55 | 5 | 3 |
| 8 x 8 | 7.75 x 7.75 | 95 | 225 | 8 | 6 | 150 | 75 | 5 | 3 |
| 10 x 10 | 9.75 x 9. 75 | 225 | 325 | 10 | 4 | 290 | 35 | 7 | 3 |
| 10 x 10 | 9.75 x 9. 75 | 225 | 325 | 10 | 5 | 270 | 55 | 7 | 3 |
| 10 x 10 | 9.75 x 9. 75 | 225 | 325 | 10 | 6 | 250 | 75 | 7 | 3 |
| 10 x 10 | 9.75 x 9. 75 | 225 | 325 | 10 | 8 | 230 | 95 | 7 | 3 |
| 12 x 12 | 11.75 x 11.75 | 325 | 450 | 12 | 4 | 415 | 35 | 9 | 3 |
| 12 x 12 | 11.75 x 11.75 | 325 | 450 | 12 | 5 | 395 | 55 | 9 | 3 |
| 12 x 12 | 11.75 x 11.75 | 325 | 450 | 12 | 6 | 375 | 75 | 9 | 3 |
| 12 x 12 | 11.75 x 11.75 | 325 | 450 | 12 | 8 | 355 | 95 | 9 | 3 |

1 DETAIL – SUPPLY & VENTILATION DIFFUSER CAN & TAP-IN
SCALE: NTS

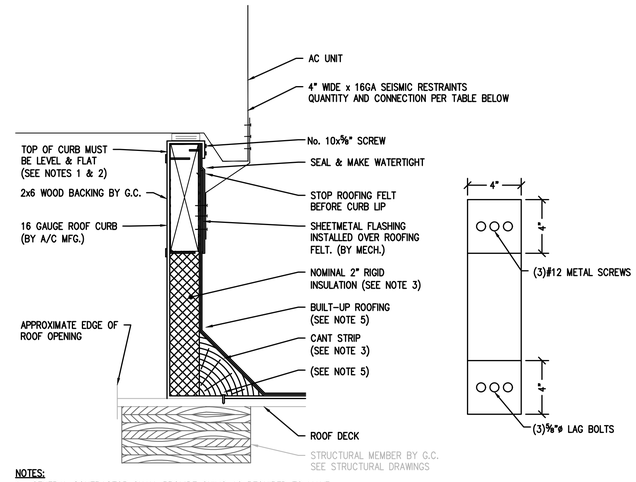



| REF# | A | B | C | D | MD | LINER |
|---|---|---|---|---|---|---|
| EF-R-1 | 12"x12" | 14"x14" | 17.5"x17.5" | 19"x19" | YES | – |
| | | | | | | |
| | | | | | | |
| | | | | | | |

NOTE: ROOF OPENING, CURB, CANT STRIP, & ROOFING BY G.C.

'A' = DUCT SIZE, 'B' = 'A' + 2" (OR 'A' + 1" MIN), C = D – 1.5", D=FAN BASE O.D., 'B' MUST BE 3" SMALLER THAN 'C'

2 DETAIL – ROOF EXHAUST FAN – UPBLAST
SCALE: NTS



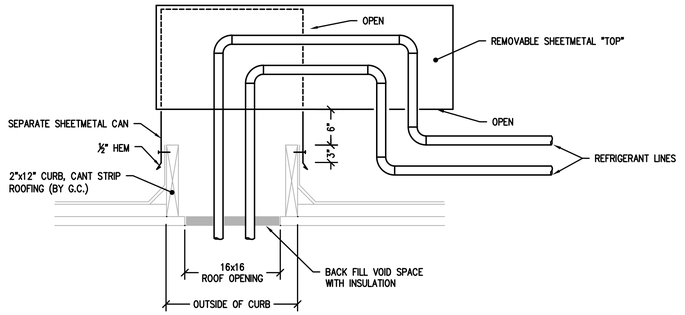

NOTES:
1. GENERAL CONTRACTOR SHALL PROVIDE SHIMS AS REQUIRED TO MAKE CURB LEVEL. MAXIMUM ALLOWABLE SLOPE IS ¼" PER 10'.
2. TOP OF CURB MUST BE TRUE (FLAT) TO PROVIDE AN ACCEPTABLE SEALING SURFACE.
3. ROOF STRUCTURE, ROOF DECK, INSULATION, CANT STRIP & BUILT-UP ROOFING BY GENERAL CONTRACTOR.
4. STRUCTURAL MEMBERS MUST NOT INTERFERE WITH ROOF OPENINGS.
5. FASTEN ROOF CURB SECURELY TO STRUCTURAL MEMBERS.

FASTENER SCHEDULE

| EQUIP. SYM. | UNIT DIMENSIONS L | W | H | WEIGHT LBS. | # OF 16GA STRAPS | # OF FAST. PER STRAP ① | INSIDE OF CURB DIMENSIONS L | W | H | WEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|
| RTU-R-1 | 88.5" | 53.25" | 51" | 1130 | 12 | 6(3 ON TOP) | 81" | 46.5" | 14" | 100 |
| RTU-R-2 | 70" | 44.25" | 47" | 885 | 10 | 6(3 ON TOP) | 62" | 41" | 14" | 100 |

① SEE STRAP DETAIL FOR FASTENER TYPE AND SIZE

3 DETAIL – CURB WITH SEISMIC RESTRAINT
SCALE: NTS




4 DETAIL – ROOF CAP PIPING PENETRATION
SCALE: NTS

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HOLADAYPARKS.COM
WA LICENSE NUMBER: HOLADPI379N0

MAXWELL GREENBECK STATE OF WASHINGTON 52096 REGISTERED PROFESSIONAL ENGINEER
06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

DETAILS

M6.01

ORIGINAL SHEET SIZE: 24" X 36"

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# Structural Calculations

Barnabie Point Mechanical

3700 E Mercer Way

Mercer Island, WA 98040

DCI Job Number 25011-0215

May 29, 2025

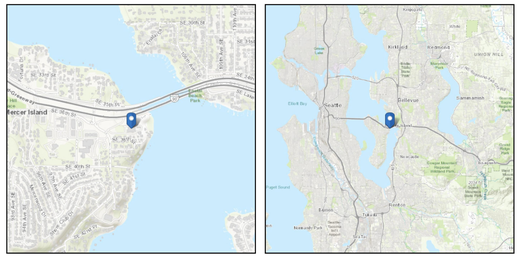
**LOCAL EXPERTISE, NATIONAL EXPERIENCE.** LEARN MORE AT DCI-ENGINEERS.COM

## ASCE Hazards Report

**Address:**
3700 E Mercer Way
Mercer Island, Washington
98040

**Standard:** ASCE/SEI 7-16
**Risk Category:** II
**Soil Class:** D - Default (see Section 11.4.3)

**Latitude:** 47.576943
**Longitude:** -122.203807
**Elevation:** 89.191010344426971 ft (NAVD 88)






### Wind

**Results:**

| | |
|---|---|
| Wind Speed | 98 Vmph |
| 10-year MRI | 67 Vmph |
| 25-year MRI | 74 Vmph |
| 50-year MRI | 78 Vmph |
| 100-year MRI | 83 Vmph |

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Fri May 23 2025

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.



## Seismic

**Site Soil Class:** D - Default (see Section 11.4.3)
**Results:**

| | | | |
|---|---|---|---|
| $S_S$ : | 1.396 | $S_{D1}$ : | N/A |
| $S_1$ : | 0.485 | $T_L$ : | 6 |
| $F_a$ : | 1.2 | PGA : | 0.597 |
| $F_v$ : | N/A | $PGA_M$ : | 0.717 |
| $S_{MS}$ : | 1.675 | $F_{PGA}$ : | 1.2 |
| $S_{M1}$ : | N/A | $I_e$ : | 1 |
| $S_{DS}$ : | 1.116 | $C_v$ : | 1.379 |

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.
**Data Accessed:** Fri May 23 2025
**Date Source:** USGS Seismic Design Maps



**Design Criteria:**

**Codes** 2018 IBC
ASCE 7-16

Design: ASD

ADD UNIT

DELETE UNIT

**Equipment Summary, Loads & Anchorage**

| Equipment | Unit Height (ft) | Long Length (ft) | Short Length (ft) | Architectual Comonent Description (Data tab) | Total Wgt. (kgs) | Curb Ht. (ft) | Seismic Coefficients | | Attachments Supporting Weight | Attachments Resisting OT | Resist Shear | Omega [1] | Uplift | Shear |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Location | z (unit height (ft)) | | | | | | |
| **VRF** | 6.00 | 4.10 | 2.44 | Spring-isolated components and systems and vibration-isolated floors closely restrained using built-in or separate elastomeric snubbing devices or resilient perimeter stops | 1.36 | 0.00 | Outdoor | 35.00 | 4.00 | 2.00 | 4.00 | No | **-829 lb** | **398 lb** |
| **RTU** | 4.25 | 7.33 | 4.20 | Air-side HVACR, fans, air handles, air conditioning units, cabinet heaters, air distribution boxes, and other mechanical components constructed of sheet metal framing | 1.23 | 1.17 | Outdoor | 35.00 | 4.00 | 2.00 | 4.00 | No | **-65 lb** | **131 lb** |
| **ERV** | 4.65 | 6.00 | 5.83 | Air-side HVACR, fans, air handles, air conditioning units, cabinet heaters, air distribution boxes, and other mechanical components constructed of sheet metal framing | 2.20 | 0.00 | Outdoor | 35.00 | 4.00 | 2.00 | 4.00 | No | **73 lb** | **215 lb** |
| **VRF-R-4** | 5.50 | 3.45 | 1.67 | Spring-isolated components and systems and vibration-isolated floors closely restrained using built-in or separate elastomeric snubbing devices or resilient perimeter stops | 0.44 | 0.00 | Outdoor | 35.00 | 4.00 | 2.00 | 4.00 | No | **-376 lb** | **129 lb** |
| **HANGING ERV (W ISOLATOR)** | 2.00 | 3.40 | 3.30 | Components and systems isolated using neoprene elements and neoprene isolated floors with built-in or separate elastomeric snubbing devices or resilient perimeter stops | 0.25 | 4.00 | Indoor | 35.00 | 4.00 | 2.00 | 4.00 | Yes | **-327 lb** | **117 lb** |
| **HANGING ERV (WO ISOLATOR)** | 2.00 | 3.40 | 3.30 | Air coolers (fin fans), air-cooled heat exchangers, condensing units, dry coolers, remote radiators and other mechanical components elevated on integral structural steel or sheet metal supports | 0.25 | 4.00 | Indoor | 35.00 | 4.00 | 2.00 | 4.00 | Yes | **-194 lb** | **73 lb** |
| **EF-B-1** | 2.20 | 2.20 | 2.20 | Components and systems isolated using neoprene elements and neoprene isolated floors with built-in or separate elastomeric snubbing devices or resilient perimeter stops | 0.11 | 4.00 | Indoor | 35.00 | 4.00 | 2.00 | 4.00 | Yes | **-227 lb** | **52 lb** |
| **VHP-C-1** | 1.50 | 4.50 | 3.67 | Air-side HVACR, fans, air handles, air conditioning units, cabinet heaters, air distribution boxes, and other mechanical components constructed of sheet metal framing | 0.23 | 4.00 | Indoor | 35.00 | 4.00 | 2.00 | 4.00 | Yes | **-91 lb** | **45 lb** |

**Wind**

| | | | |
|---|---|---|---|
| 98 | MPH | | |
| $k_z$ | 0.73 | | Velocity pressure exposure coeff Table 26.10-1 |
| $k_{zt}$ | 0.8 | | Topographic factor 26.8-1 |
| $k_d$ | 0.85 | | Wind directionality factor Table 26.6 |
| $k_e$ | 1.00 | | Ground Elevation Factor, Table 26.9-1 |
| $q_z$ | 11.6 | psf | Velocity Pressure, ASCE 7 EQ 26.10-1 |
| $GC_{pi}$ | | 0.85 | Internal Pressure 26.13-1 |
| $P_{internal}$ | | 5 | Internal Pressure 26.13-1 |

[ASCE 7: 29.4.1]

**Wind (Horizontal Resultant Lateral Force)**

| | | |
|---|---|---|
| $F_h$ | $q_z(GC_f)A_f$ | Eq. 29.4-2 |
| $q_z$ | 11.6 | psf |
| $GC_f$ 1 | 1.9 | |
| **$F_h$, 1** | **22.0** | **psf** |

**Wind Parameters**

| | |
|---|---|
| Exposure Class | B |
| Height of building (ft) | 35 |

**Wind (Vertical)**

| | | |
|---|---|---|
| $F_v$ | $q_h(GC_r)A_f$ | Eq. 29.4-3 |
| $q_h$ | 11.6 | psf |
| $GC_r$ | 1.5 | |
| **$F_v$** | **17.4** | **psf** |

**Seismic Parameters**

| | |
|---|---|
| SDC | D |
| $S_{DS}$ | 1.116 |
| $I_e$ | 1 |

FOOTNOTE:
NOTE [1] Omega (Overstrength) applies when unit is being attached to concrete or CMU. Omega need not apply if unit is attiched to wood or steel.

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**Seismic Design Requirements for Nonstructural Components - ASCE 7-16 Chapter 13**

Design: ASD
**Equipment: VRF**

**Cabinet Geometry:**

| | | | |
|---|---|---|---|
| $H_{eq}$ = | 6.0 ft | Overall height | |
| $h_cs$ = | 3.0 ft | Seis. Centroid = From Submittal | |
| h_w = | 3.0 ft | Wind Centroid = 1/2(H_tot) | |
| D = | 2.44 ft | Dist between attachment | |
| N = | 4 | Attachments supporting weight | |
| $N_{OT}$ = | 2 | Attachments resisting OT | |
| $N_v$= | 4 | | |

**Weight**
Wp (VRF) 1.36 kip

Wind Load
Wind Pressure= 22.0 psf
Wind Width= 4.1 ft
Wind Load= 0.54 kip
Center of Wind 3.000
Wind Suction 0.17 kip

**Seismic Coefficients**

| | | | |
|---|---|---|---|
| SDC = | D | Seismic Design Category | |
| $S_{DS}$ = | 1.12 | Design spectral acceleration | |
| $a_p$ = | 2.50 | ASCE 7-16 - Table 13.5-1 or 13.6-1 | |
| $R_p$ = | 2.00 | ASCE 7-16 - Table 13.5-1 or 13.6-2 | |
| $I_e$ = | 1.00 | Component Importance | |
| $\Omega_p$ | 1.00 | | |
| z = | 35.0 ft | Height of Unit | |
| h = | 35.0 ft | Height of building | |

Seismic Calculations

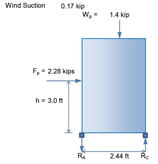
$$F_{p,calc} = \frac{0.4 * a_p * S_{DS} * W_p}{R_p / I_p}\left(1 + 2\frac{z}{h}\right) \qquad F_{p,calc} = \text{2.28 kips} \quad \text{Equation 13.3-1}$$

$$F_{p,max} = 1.6 * S_{DS} * I_p * W_p \qquad F_{p,max} = \text{2.43 kips} \quad \text{Equation 13.3-2}$$

$$F_{p,min} = 0.3 * S_{DS} * I_p * W_p \qquad F_{p,min} = \text{0.46 kips} \quad \text{Equation 13.3-3}$$

$F_{p,temp}$ 1.67 $W_p$

| | |
|---|---|
| Fp Seismic | **$F_p$ = 2.28 kips** |
| Fp Wind | **$F_p$ = 0.54 kips** |




**Reactions**

| | | |
|---|---|---|
| N = | ( 4 ) | Attachments supporting weight |
| $N_{OT}$ = | ( 2 ) | Attachments resisting OT |
| $N_v$= | ( 4 ) | Attachments resisting shear |

Lateral Load in the X-direction
(+ value equal compression)

| | Point A | Point C | |
|---|---|---|---|
| Dead | + 0.34 kip | + 0.34 kip | $R_v$ = $W_p$ / N |
| Wind | - 0.33 kip | + 0.33 kip | $R_v$ = (-Wind Load) * h / D / $N_{OT}$ |
| Seismic | - 1.40 kip | + 1.40 kip | $R_v$ =(-$F_p$)* h / D / $N_{OT}$ |
| Seismic w/ Ω | - 1.40 kip | + 1.40 kip | $R_v$ =(2*(-$F_p$)* h / D / $N_{OT}$ |
| Int. Pressure | + 0.12 kip | - 0.12 kip | $R_v$ = 5psf * ($H_{eq}$)* (wind width) / 1000 |

Wind Uplift at anchor -0.04 kips

Ev = 0.2(Sds)(D)

| | | | | |
|---|---|---|---|---|
| ASD | Max EQ | -0.59 kips | 1.37 kips | 1.0D+0.7Ev+0.7Eh |
| | Min EQ | -0.83 kips | 1.13 kips | 0.6D-0.7Ev+0.7Eh |
| | Max Wind | 0.11 kips | 0.54 kips | D+0.6W |
| | Min Wind | -0.02 kips | 0.40 kips | 0.6D+0.6W |
| | Int. Pressure | 0.12 kips | -0.12 kips | 1.0 * Int.P |
| LRFD | Max EQ | -0.92 kips | 1.88 kips | 1.2D+Ev+Eh |
| | Min EQ | -1.17 kips | 1.63 kips | 0.9D-Ev+Eh |
| | Max Wind | 0.03 kips | 0.74 kips | 1.2D+1.0W |
| | Min Wind | -0.07 kips | 0.64 kips | 0.9D+1.0W |
| | Int. Pressure | 0.20 kips | -0.20 kips | 1.6 * Int.P |

| | Tension | Compression | Shear | |
|---|---|---|---|---|
| **Max Loads** | **-0.83 kips** | **1.37 kips** | **0.40 kips** | **ASD** |

## SHEET NOTES

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MAXWELL GREENSTREET
STATE OF WASHINGTON
52096
REGISTERED
PROFESSIONAL ENGINEER
06/04/2025

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FOR CONSTRUCTION
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3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
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04 JUNE 2025

BUILDING PERMIT

PROJECT: 64605

STRUCTURAL CALCULATIONS

M6.02

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ORIGINAL SHEET SIZE: 24" X 36"

Project # : 24011-0016 Page # :
Proj. Name : Sunbreak Mechanical Anchorage
Engineer : MSS Date : 5/29/2025
Subject : RTU

## Seismic Design Requirements for Nonstructural Components - ASCE 7-16 Chapter 13

Design ASD
**Equipment: RTU**

**Cabinet Geometry:**

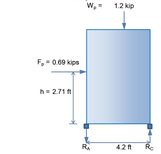
| | | |
|---|---|---|
| $H_{ot}$ = | 5.4 ft | Overall height |
| $h_{_}s$ = | 3.3 ft | Seis. Centroid = From Submittal |
| $h_{_}w$ = | 2.7 ft | Wind Centroid = 1/2(H_tot) |
| D = | 4.2 ft | Dist between attachment |
| N = | 4 | Attachments supporting weight |
| $N_{OT}$ = | 2 | Attachments resisting OT |
| $N_a$= | 4 | |

**Weight**

Wp (VRF) 1.23 kip

Wind Load

| | |
|---|---|
| Wind Pressure= | 22.0 psf |
| Wind Width= | 7.33 ft |
| Wind Load= | 0.87 kip |
| Center of Wind | 2.709 |
| Wind Suction | 0.54 kip |




**Seismic Coefficients**

| | | |
|---|---|---|
| SDC = | D | Seismic Design Category |
| $S_{DS}$ = | 1.12 | Design spectral acceleration |
| $a_p$ = | 2.50 | ASCE 7-16 - Table 13.5-1 or 13.6-1 |
| $R_p$ = | 6.00 | ASCE 7-16 - Table 13.5-1 or 13.6-2 |
| $I_p$ = | 1.00 | Component Importance |
| $\Omega_p$ | 1.00 | |
| z = | 35.0 ft | Height of Unit |
| h = | 35.0 ft | Height of building |

Seismic Calculations

$$F_{p,calc} = \frac{0.4 * a_p * S_{DS} * W_p}{R_p / I_p}\left(1 + 2\frac{z}{h}\right)$$ $F_{p,calc}$ = 0.69 kips — Equation 13.3-1

$$F_{p,max} = 1.6 * S_{DS} * I_p * W_p$$ $F_{p,max}$ = 2.20 kips — Equation 13.3-2

$$F_{p,min} = 0.3 * S_{DS} * I_p * W_p$$ $F_{p,min}$ = 0.41 kips — Equation 13.3-3

$F_{p,design}$ 0.56 $W_p$

| | |
|---|---|
| Fp Seismic | **$F_p$ = 0.69 kips** |
| Fp Wind | **$F_p$ = 0.87 kips** |

**Reactions**

N = ( 4 ) Attachments supporting weight
$N_{OT}$ = ( 2 ) Attachments resisting OT
$N_a$= ( 4 ) Attachments resisting shear

Lateral Load in the X-direction
(+ value equal compression)

| | Point A | Point C | |
|---|---|---|---|
| Dead | + 0.31 kip | + 0.31 kip | $R_x$ = $W_p$ / N |
| Wind | - 0.28 kip | + 0.28 kip | $R_x$ = (-Wind Load) * h / D / $N_{OT}$ |
| Seismic | - 0.22 kip | + 0.22 kip | $R_x$ =(-$F_p$)* h / D / $N_{OT}$ |
| Seismic w/ Ω | - 0.22 kip | + 0.22 kip | $R_x$ =Ω*(-$F_p$)* h / D / $N_{OT}$ |
| Int. Pressure | + 0.20 kip | - 0.20 kip | $R_x$ = Spsf * ($H_{tot}$)* (wind width) / 1000 |

Wind Uplift at anchor: -0.13 kips — Ev = 0.2(Sds)(D)

**ASD**

| | | | |
|---|---|---|---|
| Max EQ | 0.20 kips | 0.51 kips | 1.0D+0.7Ev+0.7Eh |
| Min EQ | -0.02 kips | 0.29 kips | 0.6D-0.7Ev+0.7Eh |
| Max Wind | 0.06 kips | 0.48 kips | D+0.6W |
| Min Wind | -0.07 kips | 0.35 kips | 0.6D+0.6W |
| Int. Pressure | 0.20 kips | -0.20 kips | 1.0 * Int.P |

**LRFD**

| | | | |
|---|---|---|---|
| Max EQ | 0.22 kips | 0.66 kips | 1.2D+Ev+Eh |
| Min EQ | -0.01 kips | 0.43 kips | 0.9D-Ev+Eh |
| Max Wind | -0.05 kips | 0.65 kips | 1.2D+1.0W |
| Min Wind | -0.14 kips | 0.56 kips | 0.9D+1.0W |
| Int. Pressure | 0.32 kips | -0.32 kips | 1.6 * Int.P |

| Max Loads | Tension | Compression | Shear | ASD |
|---|---|---|---|---|
| | -0.07 kips | 0.51 kips | 0.13 kips | |

Project # : 24011-0016 Page # :
Proj. Name : Sunbreak Mechanical Anchorage
Engineer : MSS Date : 5/29/2025
Subject : ERV

## Seismic Design Requirements for Nonstructural Components - ASCE 7-16 Chapter 13

Design ASD
**Equipment: ERV**

**Cabinet Geometry:**

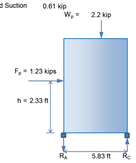
| | | |
|---|---|---|
| $H_{ot}$ = | 4.7 ft | Overall height |
| $h_{_}s$ = | 2.3 ft | Seis. Centroid = From Submittal |
| $h_{_}w$ = | 2.3 ft | Wind Centroid = 1/2(H_tot) |
| D = | 5.83 ft | Dist between attachment |
| N = | 4 | Attachments supporting weight |
| $N_{OT}$ = | 2 | Attachments resisting OT |
| $N_a$= | 4 | |

**Weight**

Wp (VRF) 2.20 kip

Wind Load

| | |
|---|---|
| Wind Pressure= | 22.0 psf |
| Wind Width= | 6.0 ft |
| Wind Load= | 0.61 kip |
| Center of Wind | 2.325 |
| Wind Suction | 0.61 kip |




**Seismic Coefficients**

| | | |
|---|---|---|
| SDC = | D | Seismic Design Category |
| $S_{DS}$ = | 1.12 | Design spectral acceleration |
| $a_p$ = | 2.50 | ASCE 7-16 - Table 13.5-1 or 13.6-1 |
| $R_p$ = | 6.00 | ASCE 7-16 - Table 13.5-1 or 13.6-2 |
| $I_p$ = | 1.00 | Component Importance |
| $\Omega_p$ | 1.00 | |
| z = | 35.0 ft | Height of Unit |
| h = | 35.0 ft | Height of building |

Seismic Calculations

$$F_{p,calc} = \frac{0.4 * a_p * S_{DS} * W_p}{R_p / I_p}\left(1 + 2\frac{z}{h}\right)$$ $F_{p,calc}$ = 1.23 kips — Equation 13.3-1

$$F_{p,max} = 1.6 * S_{DS} * I_p * W_p$$ $F_{p,max}$ = 3.93 kips — Equation 13.3-2

$$F_{p,min} = 0.3 * S_{DS} * I_p * W_p$$ $F_{p,min}$ = 0.74 kips — Equation 13.3-3

$F_{p,design}$ 0.56 $W_p$

| | |
|---|---|
| Fp Seismic | **$F_p$ = 1.23 kips** |
| Fp Wind | **$F_p$ = 0.61 kips** |

**Reactions**

N = ( 4 ) Attachments supporting weight
$N_{OT}$ = ( 2 ) Attachments resisting OT
$N_a$= ( 4 ) Attachments resisting shear

Lateral Load in the X-direction
(+ value equal compression)

| | Point A | Point C | |
|---|---|---|---|
| Dead | + 0.55 kip | + 0.55 kip | $R_x$ = $W_p$ / N |
| Wind | - 0.12 kip | + 0.12 kip | $R_x$ = (-Wind Load) * h / D / $N_{OT}$ |
| Seismic | - 0.24 kip | + 0.24 kip | $R_x$ =(-$F_p$)* h / D / $N_{OT}$ |
| Seismic w/ Ω | - 0.24 kip | + 0.24 kip | $R_x$ =Ω*(-$F_p$)* h / D / $N_{OT}$ |
| Int. Pressure | + 0.14 kip | - 0.14 kip | $R_x$ = Spsf * ($H_{tot}$)* (wind width) / 1000 |

Wind Uplift at anchor: -0.15 kips — Ev = 0.2(Sds)(D)

**ASD**

| | | | |
|---|---|---|---|
| Max EQ | 0.46 kips | 0.81 kips | 1.0D+0.7Ev+0.7Eh |
| Min EQ | 0.07 kips | 0.42 kips | 0.6D-0.7Ev+0.7Eh |
| Max Wind | 0.39 kips | 0.62 kips | D+0.6W |
| Min Wind | 0.17 kips | 0.40 kips | 0.6D+0.6W |
| Int. Pressure | 0.14 kips | -0.14 kips | 1.0 * Int.P |

**LRFD**

| | | | |
|---|---|---|---|
| Max EQ | 0.54 kips | 1.03 kips | 1.2D+Ev+Eh |
| Min EQ | 0.13 kips | 0.62 kips | 0.9D-Ev+Eh |
| Max Wind | 0.39 kips | 0.78 kips | 1.2D+1.0W |
| Min Wind | 0.22 kips | 0.62 kips | 0.9D+1.0W |
| Int. Pressure | 0.22 kips | -0.22 kips | 1.6 * Int.P |

| Max Loads | Tension | Compression | Shear | ASD |
|---|---|---|---|---|
| | 0.07 kips | 0.81 kips | 0.21 kips | |

Project # : 24011-0016 Page # :
Proj. Name : Sunbreak Mechanical Anchorage
Engineer : MSS Date : 5/29/2025
Subject : VRF-R-4

## Seismic Design Requirements for Nonstructural Components - ASCE 7-16 Chapter 13

Design ASD
**Equipment: VRF-R-4**

**Cabinet Geometry:**

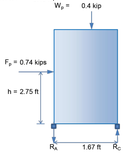
| | | |
|---|---|---|
| $H_{ot}$ = | 5.5 ft | Overall height |
| $h_{_}s$ = | 2.8 ft | Seis. Centroid = From Submittal |
| $h_{_}w$ = | 2.8 ft | Wind Centroid = 1/2(H_tot) |
| D = | 1.67 ft | Dist between attachment |
| N = | 4 | Attachments supporting weight |
| $N_{OT}$ = | 2 | Attachments resisting OT |
| $N_a$= | 4 | |

**Weight**

Wp (VRF) 0.44 kip

Wind Load

| | |
|---|---|
| Wind Pressure= | 22.0 psf |
| Wind Width= | 3.45 ft |
| Wind Load= | 0.42 kip |
| Center of Wind | 2.750 |
| Wind Suction | 0.10 kip |




**Seismic Coefficients**

| | | |
|---|---|---|
| SDC = | D | Seismic Design Category |
| $S_{DS}$ = | 1.12 | Design spectral acceleration |
| $a_p$ = | 2.50 | ASCE 7-16 - Table 13.5-1 or 13.6-1 |
| $R_p$ = | 2.00 | ASCE 7-16 - Table 13.5-1 or 13.6-2 |
| $I_p$ = | 1.00 | Component Importance |
| $\Omega_p$ | 1.00 | |
| z = | 35.0 ft | Height of Unit |
| h = | 35.0 ft | Height of building |

Seismic Calculations

$$F_{p,calc} = \frac{0.4 * a_p * S_{DS} * W_p}{R_p / I_p}\left(1 + 2\frac{z}{h}\right)$$ $F_{p,calc}$ = 0.74 kips — Equation 13.3-1

$$F_{p,max} = 1.6 * S_{DS} * I_p * W_p$$ $F_{p,max}$ = 0.79 kips — Equation 13.3-2

$$F_{p,min} = 0.3 * S_{DS} * I_p * W_p$$ $F_{p,min}$ = 0.15 kips — Equation 13.3-3

$F_{p,design}$ 1.67 $W_p$

| | |
|---|---|
| Fp Seismic | **$F_p$ = 0.74 kips** |
| Fp Wind | **$F_p$ = 0.42 kips** |

**Reactions**

N = ( 4 ) Attachments supporting weight
$N_{OT}$ = ( 2 ) Attachments resisting OT
$N_a$= ( 4 ) Attachments resisting shear

Lateral Load in the X-direction
(+ value equal compression)

| | Point A | Point C | |
|---|---|---|---|
| Dead | + 0.11 kip | + 0.11 kip | $R_x$ = $W_p$ / N |
| Wind | - 0.34 kip | + 0.34 kip | $R_x$ = (-Wind Load) * h / D / $N_{OT}$ |
| Seismic | - 0.61 kip | + 0.61 kip | $R_x$ =(-$F_p$)* h / D / $N_{OT}$ |
| Seismic w/ Ω | - 0.61 kip | + 0.61 kip | $R_x$ =Ω*(-$F_p$)* h / D / $N_{OT}$ |
| Int. Pressure | + 0.09 kip | - 0.09 kip | $R_x$ = Spsf * ($H_{tot}$)* (wind width) / 1000 |

Wind Uplift at anchor: -0.03 kips — Ev = 0.2(Sds)(D)

**ASD**

| | | | |
|---|---|---|---|
| Max EQ | -0.30 kips | 0.55 kips | 1.0D+0.7Ev+0.7Eh |
| Min EQ | -0.38 kips | 0.47 kips | 0.6D-0.7Ev+0.7Eh |
| Max Wind | -0.11 kips | 0.32 kips | D+0.6W |
| Min Wind | -0.16 kips | 0.27 kips | 0.6D+0.6W |
| Int. Pressure | 0.09 kips | -0.09 kips | 1.0 * Int.P |

**LRFD**

| | | | |
|---|---|---|---|
| Max EQ | -0.45 kips | 0.76 kips | 1.2D+Ev+Eh |
| Min EQ | -0.53 kips | 0.68 kips | 0.9D-Ev+Eh |
| Max Wind | -0.24 kips | 0.48 kips | 1.2D+1.0W |
| Min Wind | -0.27 kips | 0.44 kips | 0.9D+1.0W |
| Int. Pressure | 0.15 kips | -0.15 kips | 1.6 * Int.P |

| Max Loads | Tension | Compression | Shear | ASD |
|---|---|---|---|---|
| | -0.38 kips | 0.55 kips | 0.13 kips | |

Project # : 24011-0016 Page # :
Proj. Name : Sunbreak Mechanical Anchorage
Engineer : MSS Date : 5/29/2025
Subject : HANGING ERV (W ISOLATOR)

## Seismic Design Requirements for Nonstructural Components - ASCE 7-16 Chapter 13

Design ASD
**Equipment: HANGING ERV (W ISOLATOR)**

**Cabinet Geometry:**

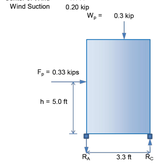
| | | |
|---|---|---|
| $H_{ot}$ = | 6.0 ft | Overall height |
| $h_{_}s$ = | 5.0 ft | Seis. Centroid = From Submittal |
| $h_{_}w$ = | 3.0 ft | Wind Centroid = 1/2(H_tot) |
| D = | 3.3 ft | Dist between attachment |
| N = | 4 | Attachments supporting weight |
| $N_{OT}$ = | 2 | Attachments resisting OT |
| $N_a$= | 4 | |

**Weight**

Wp (VRF) 0.25 kip

Wind Load

| | |
|---|---|
| Wind Pressure= | 5.0 psf |
| Wind Width= | 3.4 ft |
| Wind Load= | 0.10 kip |
| Center of Wind | 3.000 |
| Wind Suction | 0.20 kip |




**Seismic Coefficients**

| | | |
|---|---|---|
| SDC = | D | Seismic Design Category |
| $S_{DS}$ = | 1.12 | Design spectral acceleration |
| $a_p$ = | 2.50 | ASCE 7-16 - Table 13.5-1 or 13.6-1 |
| $R_p$ = | 2.50 | ASCE 7-16 - Table 13.5-1 or 13.6-2 |
| $I_p$ = | 1.00 | Component Importance |
| $\Omega_p$ | 2.00 | |
| z = | 35.0 ft | Height of Unit |
| h = | 35.0 ft | Height of building |

Seismic Calculations

$$F_{p,calc} = \frac{0.4 * a_p * S_{DS} * W_p}{R_p / I_p}\left(1 + 2\frac{z}{h}\right)$$ $F_{p,calc}$ = 0.33 kips — Equation 13.3-1

$$F_{p,max} = 1.6 * S_{DS} * I_p * W_p$$ $F_{p,max}$ = 0.45 kips — Equation 13.3-2

$$F_{p,min} = 0.3 * S_{DS} * I_p * W_p$$ $F_{p,min}$ = 0.08 kips — Equation 13.3-3

$F_{p,design}$ 1.34 $W_p$

| | |
|---|---|
| Fp Seismic | **$F_p$ = 0.33 kips** |
| Fp Wind | **$F_p$ = 0.10 kips** |

**Reactions**

N = ( 4 ) Attachments supporting weight
$N_{OT}$ = ( 2 ) Attachments resisting OT
$N_a$= ( 4 ) Attachments resisting shear

Lateral Load in the X-direction
(+ value equal compression)

| | Point A | Point C | |
|---|---|---|---|
| Dead | + 0.06 kip | + 0.06 kip | $R_x$ = $W_p$ / N |
| Wind | - 0.08 kip | + 0.08 kip | $R_x$ = (-Wind Load) * h / D / $N_{OT}$ |
| Seismic | - 0.25 kip | + 0.25 kip | $R_x$ =(-$F_p$)* h / D / $N_{OT}$ |
| Seismic w/ Ω | - 0.51 kip | + 0.51 kip | $R_x$ =Ω*(-$F_p$)* h / D / $N_{OT}$ |
| Int. Pressure | + 0.10 kip | - 0.10 kip | $R_x$ = Spsf * ($H_{tot}$)* (wind width) / 1000 |

Wind Uplift at anchor: -0.05 kips — Ev = 0.2(Sds)(D)

**ASD**

| | | | |
|---|---|---|---|
| Max EQ | -0.11 kips | 0.25 kips | 1.0D+0.7Ev+0.7Eh |
| Min EQ | -0.15 kips | 0.21 kips | 0.6D-0.7Ev+0.7Eh |
| Max Wind | -0.01 kips | 0.11 kips | D+0.6W |
| Min Wind | -0.04 kips | 0.08 kips | 0.6D+0.6W |
| Int. Pressure | 0.10 kips | -0.10 kips | 1.0 * Int.P |
| Max EQ w/ Ω | -0.28 kips | 0.43 kips | 1.0D+0.7Ev+0.7Eh |
| Min EQ w/ Ω | -0.33 kips | 0.38 | 0.6D-0.7Ev+0.7Eh |

**LRFD**

| | | | |
|---|---|---|---|
| Max EQ | -0.16 kips | 0.34 kips | 1.2D+Ev+Eh |
| Min EQ | -0.21 kips | 0.30 kips | 0.9D-Ev+Eh |
| Max Wind | -0.05 kips | 0.15 kips | 1.2D+1.0W |
| Min Wind | -0.07 kips | 0.13 kips | 0.9D+1.0W |
| Int. Pressure | 0.16 kips | -0.16 kips | 1.6 * Int.P |
| Max EQ w/ Ω | -0.42 kips | 0.60 kips | 1.2D+Ev+Eh |
| Min EQ w/ Ω | -0.46 kips | 0.55 kips | 0.9D-Ev+Eh |

| Max Loads | Tension | Compression | Shear | ASD |
|---|---|---|---|---|
| | -0.15 kips | 0.25 kips | 0.06 kips | |
| $\Omega_o$ Loads | -0.33 kips | 0.43 kips | 0.12 kips | |

Project # : 24011-0016 Page # :
Proj. Name : Sunbreak Mechanical Anchorage
Engineer : MSS Date : 5/29/2025
Subject : HANGING ERV (WO ISOLATOR)

## Seismic Design Requirements for Nonstructural Components - ASCE 7-16 Chapter 13

Design ASD
**Equipment: HANGING ERV (WO ISOLATOR)**

**Cabinet Geometry:**

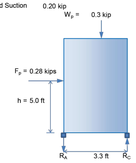
| | | |
|---|---|---|
| $H_{ot}$ = | 6.0 ft | Overall height |
| $h_{_}s$ = | 5.0 ft | Seis. Centroid = From Submittal |
| $h_{_}w$ = | 3.0 ft | Wind Centroid = 1/2(H_tot) |
| D = | 3.3 ft | Dist between attachment |
| N = | 4 | Attachments supporting weight |
| $N_{OT}$ = | 2 | Attachments resisting OT |
| $N_a$= | 4 | |

**Weight**

Wp (VRF) 0.25 kip

Wind Load

| | |
|---|---|
| Wind Pressure= | 5.0 psf |
| Wind Width= | 3.4 ft |
| Wind Load= | 0.10 kip |
| Center of Wind | 3.000 |
| Wind Suction | 0.20 kip |




**Seismic Coefficients**

| | | |
|---|---|---|
| SDC = | D | Seismic Design Category |
| $S_{DS}$ = | 1.12 | Design spectral acceleration |
| $a_p$ = | 2.50 | ASCE 7-16 - Table 13.5-1 or 13.6-1 |
| $R_p$ = | 3.00 | ASCE 7-16 - Table 13.5-1 or 13.6-2 |
| $I_p$ = | 1.00 | Component Importance |
| $\Omega_p$ | 1.50 | |
| z = | 35.0 ft | Height of Unit |
| h = | 35.0 ft | Height of building |

Seismic Calculations

$$F_{p,calc} = \frac{0.4 * a_p * S_{DS} * W_p}{R_p / I_p}\left(1 + 2\frac{z}{h}\right)$$ $F_{p,calc}$ = 0.28 kips — Equation 13.3-1

$$F_{p,max} = 1.6 * S_{DS} * I_p * W_p$$ $F_{p,max}$ = 0.45 kips — Equation 13.3-2

$$F_{p,min} = 0.3 * S_{DS} * I_p * W_p$$ $F_{p,min}$ = 0.08 kips — Equation 13.3-3

$F_{p,design}$ 1.12 $W_p$

| | |
|---|---|
| Fp Seismic | **$F_p$ = 0.28 kips** |
| Fp Wind | **$F_p$ = 0.10 kips** |

**Reactions**

N = ( 4 ) Attachments supporting weight
$N_{OT}$ = ( 2 ) Attachments resisting OT
$N_a$= ( 4 ) Attachments resisting shear

Lateral Load in the X-direction
(+ value equal compression)

| | Point A | Point C | |
|---|---|---|---|
| Dead | + 0.06 kip | + 0.06 kip | $R_x$ = $W_p$ / N |
| Wind | - 0.08 kip | + 0.08 kip | $R_x$ = (-Wind Load) * h / D / $N_{OT}$ |
| Seismic | - 0.21 kip | + 0.21 kip | $R_x$ =(-$F_p$)* h / D / $N_{OT}$ |
| Seismic w/ Ω | - 0.32 kip | + 0.32 kip | $R_x$ =Ω*(-$F_p$)* h / D / $N_{OT}$ |
| Int. Pressure | + 0.10 kip | - 0.10 kip | $R_x$ = Spsf * ($H_{tot}$)* (wind width) / 1000 |

Wind Uplift at anchor: -0.05 kips — Ev = 0.2(Sds)(D)

**ASD**

| | | | |
|---|---|---|---|
| Max EQ | -0.08 kips | 0.22 kips | 1.0D+0.7Ev+0.7Eh |
| Min EQ | -0.12 kips | 0.18 kips | 0.6D-0.7Ev+0.7Eh |
| Max Wind | -0.01 kips | 0.11 kips | D+0.6W |
| Min Wind | -0.04 kips | 0.08 kips | 0.6D+0.6W |
| Int. Pressure | 0.10 kips | -0.10 kips | 1.0 * Int.P |
| Max EQ w/ Ω | -0.15 kips | 0.29 kips | 1.0D+0.7Ev+0.7Eh |
| Min EQ w/ Ω | -0.19 kips | 0.25 | 0.6D-0.7Ev+0.7Eh |

**LRFD**

| | | | |
|---|---|---|---|
| Max EQ | -0.12 kips | 0.30 kips | 1.2D+Ev+Eh |
| Min EQ | -0.17 kips | 0.25 kips | 0.9D-Ev+Eh |
| Max Wind | -0.05 kips | 0.15 kips | 1.2D+1.0W |
| Min Wind | -0.07 kips | 0.13 kips | 0.9D+1.0W |
| Int. Pressure | 0.16 kips | -0.16 kips | 1.6 * Int.P |
| Max EQ w/ Ω | -0.23 kips | 0.41 kips | 1.2D+Ev+Eh |
| Min EQ w/ Ω | -0.27 kips | 0.36 kips | 0.9D-Ev+Eh |

| Max Loads | Tension | Compression | Shear | ASD |
|---|---|---|---|---|
| | -0.12 kips | 0.22 kips | 0.05 kips | |
| $\Omega_o$ Loads | -0.19 kips | 0.29 kips | 0.07 kips | |

Project # : 24011-0016 Page # :
Proj. Name : Sunbreak Mechanical Anchorage
Engineer : MSS Date : 5/29/2025
Subject : EF-B-1

## Seismic Design Requirements for Nonstructural Components - ASCE 7-16 Chapter 13

Design ASD
**Equipment: EF-B-1**

**Cabinet Geometry:**

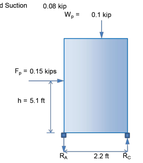
| | | |
|---|---|---|
| $H_{ot}$ = | 6.2 ft | Overall height |
| $h_{_}s$ = | 5.1 ft | Seis. Centroid = From Submittal |
| $h_{_}w$ = | 3.1 ft | Wind Centroid = 1/2(H_tot) |
| D = | 2.2 ft | Dist between attachment |
| N = | 4 | Attachments supporting weight |
| $N_{OT}$ = | 2 | Attachments resisting OT |
| $N_a$= | 4 | |

**Weight**

Wp (VRF) 0.11 kip

Wind Load

| | |
|---|---|
| Wind Pressure= | 5.0 psf |
| Wind Width= | 2.2 ft |
| Wind Load= | 0.07 kip |
| Center of Wind | 3.100 |
| Wind Suction | 0.08 kip |




**Seismic Coefficients**

| | | |
|---|---|---|
| SDC = | D | Seismic Design Category |
| $S_{DS}$ = | 1.12 | Design spectral acceleration |
| $a_p$ = | 2.50 | ASCE 7-16 - Table 13.5-1 or 13.6-1 |
| $R_p$ = | 2.50 | ASCE 7-16 - Table 13.5-1 or 13.6-2 |
| $I_p$ = | 1.00 | Component Importance |
| $\Omega_p$ | 2.00 | |
| z = | 35.0 ft | Height of Unit |
| h = | 35.0 ft | Height of building |

Seismic Calculations

$$F_{p,calc} = \frac{0.4 * a_p * S_{DS} * W_p}{R_p / I_p}\left(1 + 2\frac{z}{h}\right)$$ $F_{p,calc}$ = 0.15 kips — Equation 13.3-1

$$F_{p,max} = 1.6 * S_{DS} * I_p * W_p$$ $F_{p,max}$ = 0.20 kips — Equation 13.3-2

$$F_{p,min} = 0.3 * S_{DS} * I_p * W_p$$ $F_{p,min}$ = 0.04 kips — Equation 13.3-3

$F_{p,design}$ 1.34 $W_p$

| | |
|---|---|
| Fp Seismic | **$F_p$ = 0.15 kips** |
| Fp Wind | **$F_p$ = 0.07 kips** |

**Reactions**

N = ( 4 ) Attachments supporting weight
$N_{OT}$ = ( 2 ) Attachments resisting OT
$N_a$= ( 4 ) Attachments resisting shear

Lateral Load in the X-direction
(+ value equal compression)

| | Point A | Point C | |
|---|---|---|---|
| Dead | + 0.03 kip | + 0.03 kip | $R_x$ = $W_p$ / N |
| Wind | - 0.08 kip | + 0.08 kip | $R_x$ = (-Wind Load) * h / D / $N_{OT}$ |
| Seismic | - 0.17 kip | + 0.17 kip | $R_x$ =(-$F_p$)* h / D / $N_{OT}$ |
| Seismic w/ Ω | - 0.34 kip | + 0.34 kip | $R_x$ =Ω*(-$F_p$)* h / D / $N_{OT}$ |
| Int. Pressure | + 0.07 kip | - 0.07 kip | $R_x$ = Spsf * ($H_{tot}$)* (wind width) / 1000 |

Wind Uplift at anchor: -0.02 kips — Ev = 0.2(Sds)(D)

**ASD**

| | | | |
|---|---|---|---|
| Max EQ | -0.09 kips | 0.15 kips | 1.0D+0.7Ev+0.7Eh |
| Min EQ | -0.11 kips | 0.13 kips | 0.6D-0.7Ev+0.7Eh |
| Max Wind | -0.03 kips | 0.07 kips | D+0.6W |
| Min Wind | -0.04 kips | 0.06 kips | 0.6D+0.6W |
| Int. Pressure | 0.07 kips | -0.07 kips | 1.0 * Int.P |
| Max EQ w/ Ω | -0.21 kips | 0.27 kips | 1.0D+0.7Ev+0.7Eh |
| Min EQ w/ Ω | -0.23 kips | 0.25 | 0.6D-0.7Ev+0.7Eh |

**LRFD**

| | | | |
|---|---|---|---|
| Max EQ | -0.13 kips | 0.21 kips | 1.2D+Ev+Eh |
| Min EQ | -0.15 kips | 0.19 kips | 0.9D-Ev+Eh |
| Max Wind | -0.07 kips | 0.11 kips | 1.2D+1.0W |
| Min Wind | -0.08 kips | 0.10 kips | 0.9D+1.0W |
| Int. Pressure | 0.11 kips | -0.11 kips | 1.6 * Int.P |
| Max EQ w/ Ω | -0.30 kips | 0.38 kips | 1.2D+Ev+Eh |
| Min EQ w/ Ω | -0.32 kips | 0.36 kips | 0.9D-Ev+Eh |

| Max Loads | Tension | Compression | Shear | ASD |
|---|---|---|---|---|
| | -0.11 kips | 0.15 kips | 0.03 kips | |
| $\Omega_o$ Loads | -0.23 kips | 0.27 kips | 0.05 kips | |

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06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

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04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

STRUCTURAL CALCULATIONS

M6.03

ORIGINAL SHEET SIZE: 24" X 36"


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DCI ENGINEERS

Project # : 24011-0016 Page # :
Proj. Name : Sunbreak Mechanical Anchorage
Engineer : MSS Date : 5/29/2025
Subject : VHP-C-1

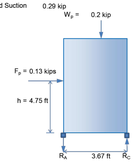
**Seismic Design Requirements for Nonstructural Components - ASCE 7-16 Chapter 13**

Design ASD
**Equipment: VHP-C-1**
**Cabinet Geometry:**

| | | |
|---|---|---|
| $H_{eq}$ = | 5.5 ft | Overall height |
| $h_{c}g$ = | 4.8 ft | Seis. Centroid = From Submittal |
| $h_{c}w$ = | 2.8 ft | Wind Centroid = 1/2(H_tot) |
| D = | 3.67 ft | Dist between attachment |
| N = | 4 | Attachments supporting weight |
| $N_{OT}$ = | 2 | Attachments resisting OT |
| $N_v$ = | 4 | |

**Weight**
Wp (VRF) 0.23 kip

Wind Load
Wind Pressure= 5.0 psf
Wind Width= 4.5 ft
Wind Load= 0.12 kip
Center of Wind 2.750
Wind Suction 0.29 kip




Wind Uplift at anchor -0.07 kips

**Seismic Coefficients**

| | | |
|---|---|---|
| SDC = | D | Seismic Design Category |
| $S_{DS}$ = | 1.12 | Design spectral acceleration |
| $a_p$ = | 2.50 | ASCE 7-16 - Table 13.5-1 or 13.6-1 |
| $R_p$ = | 6.00 | ASCE 7-16 - Table 13.5-1 or 13.6-2 |
| $I_p$ = | 1.00 | Component Importance |
| $\Omega_p$ | 2.00 | |
| z = | 35.0 ft | Height of Unit |
| h = | 35.0 ft | Height of building |

Seismic Calculations

$$F_{p,calc} = \frac{0.4 * a_p * S_{DS} * W_p}{R_p / I_p}\left(1 + 2\frac{z}{h}\right)$$ $F_{p,calc}$ = 0.13 kips Equation 13.3-1

$$F_{p,max} = 1.6 * S_{DS} * I_p * W_p$$ $F_{p,max}$ = 0.41 kips Equation 13.3-2

$$F_{p,min} = 0.3 * S_{DS} * I_p * W_p$$ $F_{p,min}$ = 0.08 kips Equation 13.3-3

$F_{p,design}$ 0.56 $W_p$

Fp Seismic **$F_p$ = 0.13 kips**
Fp Wind **$F_p$ = 0.12 kips**

**Reactions**

| | | |
|---|---|---|
| N = | ( 4 ) | Attachments supporting weight |
| $N_{OT}$ = | ( 2 ) | Attachments resisting OT |
| $N_v$= | ( 4 ) | Attachments resisting shear |

Lateral Load in the X-direction
(+ value equal compression)

| | Point A | Point C | |
|---|---|---|---|
| Dead | + 0.06 kip | + 0.06 kip | $R_x$ = $W_p$ / N |
| Wind | - 0.08 kip | + 0.08 kip | $R_x$ = (-Wind Load) * h / D / $N_{OT}$ |
| Seismic | - 0.08 kip | + 0.08 kip | $R_x$ =(-$F_p$)* h / D / $N_{OT}$ |
| Seismic w/ Ω | - 0.17 kip | + 0.17 kip | $R_x$ =0.2*(-$F_p$)* h / D / $N_{OT}$ |
| Int. Pressure | + 0.12 kip | -0.12 kip | $R_x$ = Spsf * ($H_{eq}$)* (wind width) / 1000 |

Ev = 0.2(Sds)(D)

**ASD**

| | | | | |
|---|---|---|---|---|
| Max EQ | 0.01 kips | 0.12 kips | 1.0D+0.7Ev+0.7Eh | |
| Min EQ | -0.03 kips | 0.08 kips | 0.6D-0.7Ev+0.7Eh | |
| Max Wind | -0.03 kips | 0.11 kips | D+0.6W | |
| Min Wind | -0.06 kips | 0.08 kips | 0.6D+0.6W | |
| Int. Pressure | 0.12 kips | -0.12 kips | 1.0 * Int.P | |
| Max EQ w/ Ω | -0.05 kips | 0.18 kips | 1.0D+0.7Ev+0.7Eh | |
| Min EQ w/ Ω | -0.09 kips | 0.14 | 0.6D-0.7Ev+0.7Eh | |

**LRFD**

| | | | |
|---|---|---|---|
| Max EQ | 0.00 kips | 0.16 kips | 1.2D+Ev+Eh |
| Min EQ | -0.04 kips | 0.12 kips | 0.9D-Ev+Eh |
| Max Wind | -0.08 kips | 0.15 kips | 1.2D+1.0W |
| Min Wind | -0.10 kips | 0.13 kips | 0.9D+1.0W |
| Int. Pressure | 0.20 kips | -0.20 kips | 1.6 * Int.P |
| Max EQ w/ Ω | -0.08 kips | 0.25 kips | 1.2D+Ev+Eh |
| Min EQ w/ Ω | -0.13 kips | 0.21 kips | 0.9D-Ev+Eh |

| | Tension | Compression | Shear | |
|---|---|---|---|---|
| **Max Loads** | **-0.03 kips** | **0.12 kips** | **0.02 kips** | **ASD** |
| **$\Omega_v$ Loads** | **-0.09 kips** | **0.18 kips** | **0.04 kips** | |

DCI ENGINEERS

| | | | |
|---|---|---|---|
| Project | BARNABIE POINT MECHANICAL | Project No. | 25011-0215 |
| Subject | MECHANICAL UNIT ANCHORAGE | Sheet No. | |
| | | Date | 05-30-2025 |
| | | By | MSS |

RTU STRAP

Load at each attachment:
Pullout: 65 lbs
Shear: 131 lbs

Unit to Strap:
Shear allowable: 188(4) = 752 lbs > 131

USE #12 SMS SCREWS

HANGING UNIT ANCHORAGE:

PULLOUT = 327 lbs
SHEAR = Fp = 330 lbs

F allowable = Fy*Ag/1.67
F allowable = 2381 lbs

USE 3/8"DIA THRD ROD

T = Fp/cos(45) = 467#

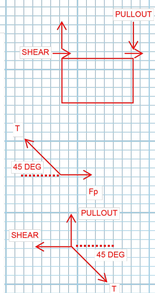
467 lbs < 595 lbs

USE 3/16" GALV WIRE ROPE

ANCHOR
WORST CASE:
SHEAR = 330 lbs
PULLOUT = 330 lbs

FORCES ABOVE HAVE BEEN MULTIPLIED BY OVERSTRENGTH

USE 1/4"DIAx 3" DEWALT SCREW-BOLT+




DEWALT DESIGN ASSIST 1.7.5.0 Page 1

DEWALT Anchor Design

5/29/2025

**1.Project Information**

**Company:**
**Project Engineer:**
**Address:**
**Phone:** M: P:
**Email:** mstraume@dci-engineers.com
**Project Name:** Untitled
**Project Address:** Untitled
**Notes:**

**2.Selected Anchor Information**

**Selected Anchor :** Screw-Bolt+
**Brand:** DEWALT
**Material:** 1/2" Ø Low Carbon Steel
**Embedment:** $h_{ef}$ 2.17 in $h_{nom}$ 3 in
**Approval:** ICC-ES ESR-3889
**Issued/Revision:** Nov,2024 -
**Drill method:** Hammer Drilled

**3.Design Principles**

**Design Method:** ACI 318-14
**Load Combinations:** Section 5.3 User Defined Loads
**Seismic Loading:** Tension 17.2.3.4.3(d) Shear 17.2.3.5.3(c)

**4.Base Material Information**

**Concrete:**
Type: Cracked Normal Weight Concrete Over Steel Deck Soffit Lower Flute
Strength 3000 psi
**Reinforcement:**
Spacing Tension No (Condition B) Shear No (Condition B)
**Tension**
Type: W 3-7/8" X 3"

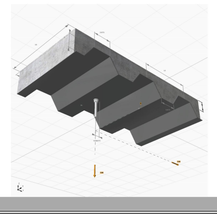
Input data and results must be checked for agreement with the existing conditions, the standards and guidelines and must be checked for plausibility

DEWALT DESIGN ASSIST 1.7.5.0 Page 2

DEWALT Anchor Design

5/29/2025

**5.Geometric Conditions**



**6.Summary Results**

***Tension Loading***

| Design Proof | Demand(lb) | Capacity(lb) | Utilization | Status | Critical |
|---|---|---|---|---|---|
| Steel Strength | 330.000 | 13309.000 | 0.025 | OK | |
| Pullout Strength | 330.000 | 1136.000 | 0.291 | OK | Controls |

***Shear Loading***

| Design Proof | Demand(lb) | Capacity(lb) | Utilization | Status | Critical |
|---|---|---|---|---|---|
| Steel Strength | 330.000 | 1257.000 | 0.263 | OK | Controls |

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DEWALT DESIGN ASSIST 1.7.5.0 Page 3

DEWALT Anchor Design

5/29/2025

**7.Warnings and Remarks**

ANCHOR DESIGN CRITERIA IS SATISFIED

- The results of the calculations carried out by means of the DDA Software are based essentially on the data you put in. Therefore, you bear the sole responsibility for the absence of errors, the completeness and the relevance of the data to be put in by you. Moreover, you bear sole responsibility for having the results of the calculation checked and cleared by an design professional/engineer, particularly with regard to compliance with applicable standards, norms and permits, prior to using them for your specific project. The DDA Software serves only as an aid to interpret standards, norms and permits without any guarantee as to the absence of errors, the correctness and the relevance of the results or suitability for a specific application.
- Calculations including seismic design requirements in accordance with ACI 318 are required for anchors in structures assigned to seismic design categories C, D, E and F.
- Under these seismic conditions, the direction of shear may not be predictable. In accordance with ACI 318 the full shear force should be assumed also in reverse direction for a safe design. Load reversal may influence the direction of the controlling concrete breakout strength.
- Base Material Strength: You have selected one or more inputs that are outside the input / boundary conditions for the selected anchors. Please see and review all program Validations and report Warnings and Remarks. Proceed with caution!

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DEWALT DESIGN ASSIST 1.7.5.0 Page 4

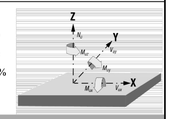
DEWALT Anchor Design

5/29/2025

**8.Load Condition**

**Design Loads / Actions**

$N_u$ 330 lb $V_{ux}$ 0 lb $V_{uy}$ 330 lb
$M_{uz}$ 0 in-lb $M_{ux}$ 0 in-lb $M_{uy}$ 0 in-lb
Consider Load Reversal X Direction 100% Y Direction 100%




**9.Load Distribution**

Resulting anchor forces / Load distribution

| Anchor | Tension Load | Shear Load | Component Shear Load Shear X | Shear y |
|---|---|---|---|---|
| 1 | 330.00 | 330.0 | 0.0 | 330.0 |

Input data and results must be checked for agreement with the existing conditions, the standards and guidelines and must be checked for plausibility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HOLADAYPARKS.COM
WA LICENSE NUMBER: HOLADPI379N0


MAXWELL L. GREENBECK
STATE OF WASHINGTON
52266
REGISTERED
PROFESSIONAL ENGINEER
06/04/2025

APPROVED
FOR CONSTRUCTION
PENDING CITY APPROVAL

3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

STRUCTURAL CALCULATIONS

M6.04

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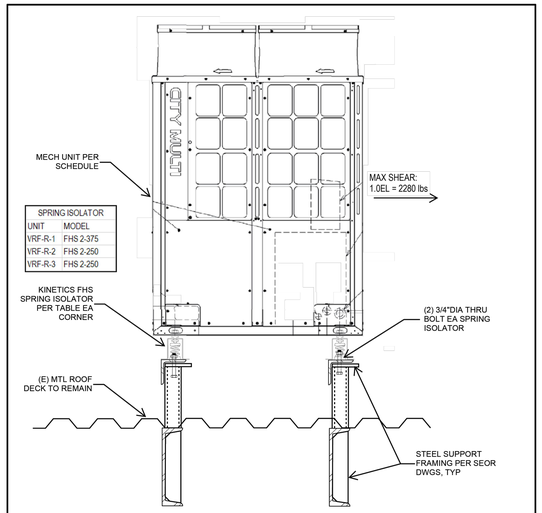


**1** VRF ANCHORAGE TO STEEL FRAME
NOT TO SCALE

MECHANICAL UNIT SCHEDULE

| UNIT | HEIGHT (IN) | LENGTH (IN) | WIDTH (IN) | WEIGHT (LBS |
|---|---|---|---|---|
| VRF-R-1 | 71 | 49 | 29 | 1360 |
| VRF-R-2 | 71 | 69 | 29 | 895 |
| VRF-R-3 | 71 | 69 | 29 | 895 |

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CIVIL / STRUCTURAL

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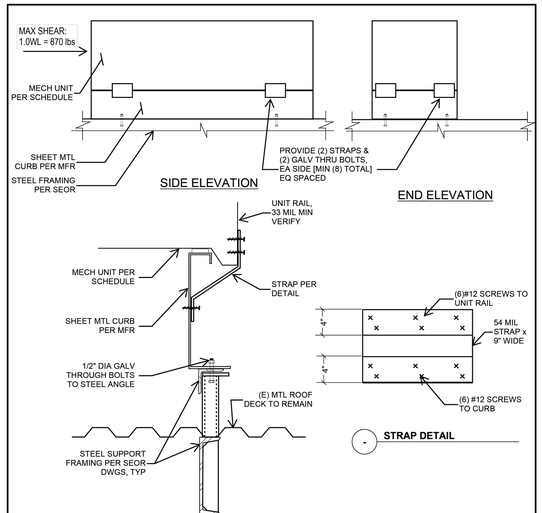
3700 E MERCER WAY MERCER ISLAND, WA 98040
DESCRIPTION: VRF anchorage to steel frame.

PROJECT NO: 25011-0215
DATE: 05.29.2025
BY: MSS
SHEET NO: SSK-01




**2** RTU-R ANCHORAGE TO STEEL FRAME
NOT TO SCALE

**-** STRAP DETAIL

MECHANICAL UNIT SCHEDULE

| UNIT | HEIGHT (IN) | LENGTH (IN) | WIDTH (IN) | WEIGHT (LBS) |
|---|---|---|---|---|
| RTU-R-1 | 51 | 88 | 54 | 1130 |
| RTU-R-2 | 47 | 70 | 45 | 885 |

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DATE: 05.29.2025
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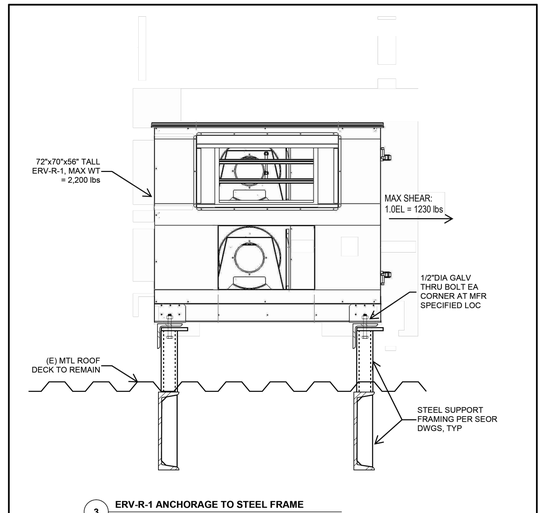
SHEET NO: SSK-02




**3** ERV-R-1 ANCHORAGE TO STEEL FRAME
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DESCRIPTION: ERV-R-1 anchorage to steel frame.

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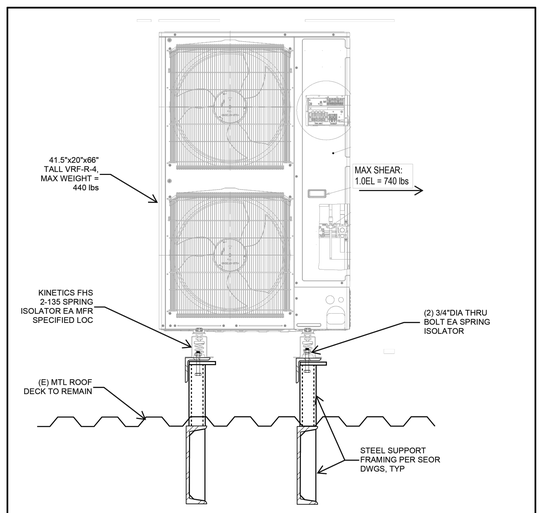


**4** VRF-R-4 ANCHORAGE TO STEEL FRAME
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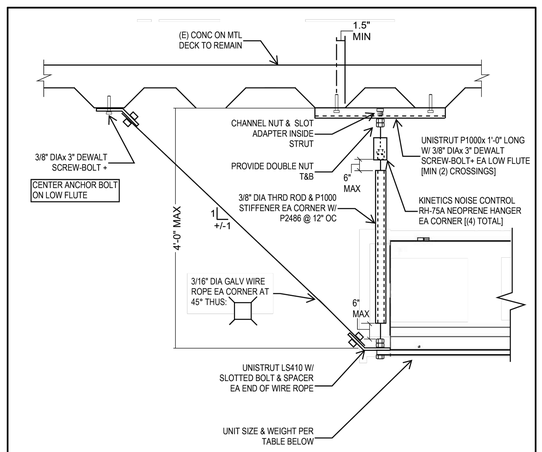


**5** ERV W/ NEOPRENE HANGER ANCHORAGE
NOT TO SCALE

ERV SCHEDULE

| UNIT | WEIGHT (LBS) |
|---|---|
| ERV-1-1 | 204 |
| ERV-1-2 | 204 |
| ERV-1-3 | 204 |
| ERV-2-1 | 123 |
| ERV-2-2 | 123 |
| ERV-2-3 | 123 |
| ERV-2-4 | 204 |
| ERV-2-5 | 204 |

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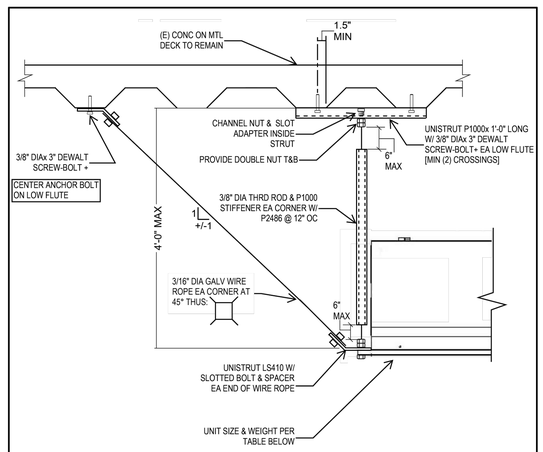
3700 E MERCER WAY MERCER ISLAND, WA 98040
DESCRIPTION: ERV unit with neoprene hanger anchorage to concrete on metal deck.

PROJECT NO: 25011-0215
DATE: 05.29.2025
BY: MSS
SHEET NO: SSK-05




**6** ERV W/O NEOPRENE HANGER ANCHORAGE
NOT TO SCALE

ERV SCHEDULE

| UNIT | WEIGHT (LBS) |
|---|---|
| ERV-B-1 | 245 |
| ERV-B-2 | 245 |
| ERV-C-1 | 245 |

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CIVIL / STRUCTURAL

PROJECT NAME: BARNABIE POINT MECHANICAL
3700 E MERCER WAY MERCER ISLAND, WA 98040
DESCRIPTION: ERV unit without neoprene hanger anchorage to concrete on metal deck.

PROJECT NO: 25011-0215
DATE: 05.29.2025
BY: MSS
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BARNABIE POINT

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PROJECT: 64605

STRUCTURAL CALCULATIONS

M6.05

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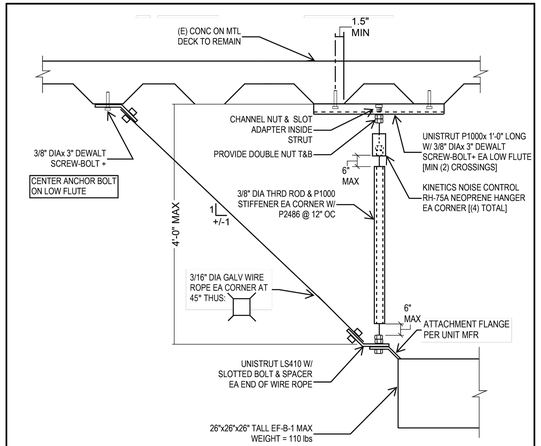


7 **EF-B-1 ANCHORAGE**
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| PROJECT NO: | 25011-0215 |
| DATE: | 05.29.2025 |
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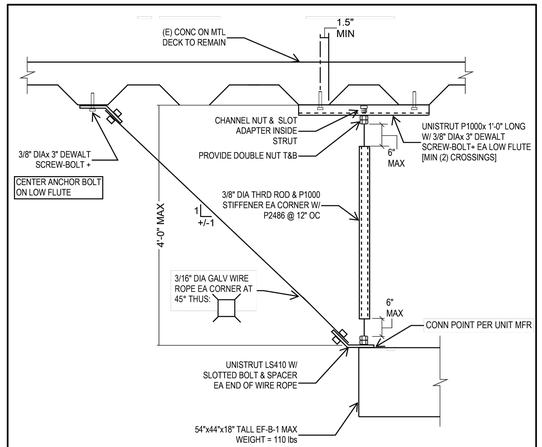


8 **EF-B-1 ANCHORAGE**
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| DESCRIPTION: | EF-B-1 anchorage to concrete on metal deck. |
| PROJECT NO: | 25011-0215 |
| DATE: | 05.29.2025 |
| BY: | MSS |
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06/04/2025

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STRUCTURAL CALCULATIONS

M6.06

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ORIGINAL SHEET SIZE: 24" X 36"

# VRF FAN COIL SCHEDULE

| (VFC) TAG | AREA SERVED | MANUFACTURER | MODEL | CONFIGURATION (HORIZONTAL/ VERTICAL/ CEILING/WALL) | HEATING TYPE (HEAT PUMP/ HEAT RECOVERY) | CONNECTED VRF CONDENSER | CONNECTED HRB/BC/BS (2) | NOMINAL CAPACITY (3) | | | DESIGN CAPACITY (4) | | | OUTSIDE AIR DATA | | | SUPPLY FAN AND MOTOR DATA | | | | | | ELECTRICAL DATA | | | | | | FILTER EFFICIENCY (MERV) | WEIGHT (LBS) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | COOLING TOTAL (MBH) | COOLING SENSIBLE (MBH) | HEATING (MBH) | COOLING TOTAL (MBH) | COOLING SENSIBLE (MBH) | HEATING (MBH) | ECONOMIZER (Y/N) | ECONOMIZER EXCEPTION (5) | AIRFLOW (CFM) | FAN QTY | MOTOR TYPE | E.S.P. (IN WC) | FAN ONLY MODE (6) AIRFLOW (CFM) | FAN ONLY MODE (6) POWER (W) | FAN ONLY MODE (6) WATTS/ CFM | POWER TYPE (8) | VOLTAGE/ PHASE | FLA (AMPS) | MCA (AMPS) | MFS (AMPS) | | | |
| VFC-B-1 | CONFERENCE 006 | TRANE MITSUBISHI | TPLFYP012EM140B | CEILING | HEAT RECOVERY | VRF-R-1 | BC-B-1 | 12.0 | – | 13.5 | 10.8 | 9.2 | 8.7 | N | C407 | 0 | 1 | DC | – | 565 | 50 | 0.09 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-B-2 | WORKROOM 005 | TRANE MITSUBISHI | TPLFYP018EM140B | CEILING | HEAT RECOVERY | VRF-R-1 | BC-B-1 | 18.0 | – | 20.0 | 16.1 | 13.8 | 12.9 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-B-3 | FACULTY 004 | TRANE MITSUBISHI | TPLFYP012EM140B | CEILING | HEAT RECOVERY | VRF-R-1 | BC-B-1 | 12.0 | – | 13.5 | 10.8 | 9.2 | 8.7 | N | C407 | 0 | 1 | DC | – | 565 | 50 | 0.09 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-B-4 | ART 003 | TRANE MITSUBISHI | TPLFYP018EM140B | CEILING | HEAT RECOVERY | VRF-R-1 | BC-B-1 | 18.0 | – | 20.0 | 16.1 | 13.7 | 12.9 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-B-5A | STEM / SCIENCE 002 | TRANE MITSUBISHI | TPLFYP018EM140B | CEILING | HEAT RECOVERY | VRF-R-1 | BC-B-1 | 18.0 | – | 20.0 | 16.1 | 13.7 | 12.9 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-B-5B | STEM / SCIENCE 002 | TRANE MITSUBISHI | TPLFYP018EM140B | CEILING | HEAT RECOVERY | | | 18.0 | – | 20.0 | 16.1 | 13.7 | 12.9 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-B-6 | CIRC 001 | TRANE MITSUBISHI | TPEFY012MA144A | HORIZONTAL | HEAT RECOVERY | VRF-R-1 | BC-B-1 | 12.0 | – | 13.5 | 10.7 | 7.8 | 8.7 | N | C407 | 0 | 1 | DC | 0.28 | 318 | 85 | 0.27 | N | 208/230/1 | 1.7 | 2.13 | 15 | 8 | 47 | 1, 9, 10, 12, 13, 14, 15, 17, 18, 19, |
| VFC-1-1 | LRC-1 119 | TRANE MITSUBISHI | TPKFYP012LM140B | WALL MOUNT | HEAT RECOVERY | VRF-R-1 | BC-1-1 | 12.0 | – | 13.5 | 10.8 | 9.2 | 8.7 | N | C407 | 0 | 1 | DC | – | 297 | 30 | 0.10 | N | 208/230/1 | 0.2 | 0.24 | 15 | 4 | 24.5 | 1, 9, 10, 12, 16, 17, 18, 19, 20 |
| VFC-1-2A | PRESCHOOL 118 | TRANE MITSUBISHI | TPLFYP018EM140B | CEILING | HEAT RECOVERY | VRF-R-1 | BC-1-1 | 18.0 | – | 20.0 | 16.1 | 13.7 | 12.9 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-1-2B | PRESCHOOL 118 | TRANE MITSUBISHI | TPLFYP012EM140B | CEILING | HEAT RECOVERY | | | 12.0 | – | 13.5 | 10.8 | 9.2 | 8.7 | N | C407 | 0 | 1 | DC | – | 565 | 50 | 0.09 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-1-3 | PRESCHOOL 117 | TRANE MITSUBISHI | TPLFYP030EM140B | CEILING | HEAT RECOVERY | VRF-R-1 | BC-1-1 | 30.0 | – | 34.0 | 26.9 | 19.9 | 21.9 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.45 | 0.57 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-1-4 | CLASSROOM 116 | TRANE MITSUBISHI | TPLFYP024EM140B | CEILING | HEAT RECOVERY | VRF-R-1 | BC-1-1 | 24.0 | – | 27.0 | 21.5 | 15.9 | 17.4 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-1-5 | CLASSROOM 115 | TRANE MITSUBISHI | TPLFYP024EM140B | CEILING | HEAT RECOVERY | VRF-R-1 | BC-1-1 | 24.0 | – | 27.0 | 21.5 | 15.9 | 17.4 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-1-6 | OFFICES 114B/C/D | TRANE MITSUBISHI | TPEFY006MA144A | HORIZONTAL | HEAT RECOVERY | VRF-R-1 | BC-1-1 | 6.0 | – | 6.7 | 5.4 | 5.4 | 4.3 | N | C407 | 0 | 1 | DC | 0.28 | 265 | 85 | 0.32 | N | 208/230/1 | 1.4 | 1.75 | 15 | 8 | 47 | 1, 9, 10, 12, 13, 14, 15, 17, 18, 19, |
| VFC-1-7 | CLASSROOM 113 | TRANE MITSUBISHI | TPLFYP024EM140B | CEILING | HEAT RECOVERY | VRF-R-1 | BC-1-1 | 24.0 | – | 27.0 | 21.5 | 15.9 | 17.4 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-1-8 | KITCHEN 102 | TRANE MITSUBISHI | TPLFYP018EM140B | CEILING | HEAT RECOVERY | VRF-R-1 | BC-1-1 | 18.0 | – | 20.0 | 16.1 | 13.7 | 12.9 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-1-9 | OFFICE 112 | TRANE MITSUBISHI | TPLFYP005FM140A | 2x2 CEILING | HEAT RECOVERY | VRF-R-1 | BC-1-1 | 5.0 | – | 5.6 | 4.5 | 4.2 | 3.6 | N | C407 | 0 | 1 | DC | – | 280 | 50 | 0.18 | N | 208/230/1 | 0.19 | 0.24 | 15 | 4 | 28.9 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-1-10 | CIRC 111 | TRANE MITSUBISHI | TPEFY015MA144A | HORIZONTAL | HEAT RECOVERY | VRF-R-1 | BC-1-1 | 15.0 | – | 17.0 | 13.4 | 10.8 | 11.0 | N | C407 | 0 | 2 | DC | 0.28 | 424 | 121 | 0.29 | N | 208/230/1 | 2.3 | 2.88 | 15 | 8 | 58 | 1, 9, 10, 12, 13, 14, 15, 17, 18, 19, |
| VFC-1-11 | ADMIN 114 / OFFICE 114A | TRANE MITSUBISHI | TPEFY008MA144A | HORIZONTAL | HEAT RECOVERY | VRF-R-1 | BC-1-1 | 8.0 | – | 9.0 | 7.2 | 6.1 | 5.8 | N | C407 | 0 | 1 | DC | 0.28 | 265 | 85 | 0.32 | N | 208/230/1 | 1.4 | 1.75 | 15 | 8 | 47 | 1, 9, 10, 12, 13, 14, 15, 17, 18, 19, |
| VFC-1-12 | OFFICE 112 | TRANE MITSUBISHI | TPLFYP008FM140A | 2x2 CEILING | HEAT RECOVERY | VRF-R-1 | BC-1-1 | 8.0 | – | 9.0 | 7.2 | 5.9 | 5.8 | N | C407 | 0 | 1 | DC | – | 600 | 50 | 0.08 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-1 | CLASSROOM 207 | TRANE MITSUBISHI | TPLFYP030EM140B | CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 30.0 | – | 34.0 | 27.7 | 20.2 | 20.9 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.45 | 0.57 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-2 | CLASSROOM 206 | TRANE MITSUBISHI | TPLFYP030EM140B | CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 30.0 | – | 34.0 | 27.7 | 20.2 | 20.9 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.45 | 0.57 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-3 | BREAKOUT 200A | TRANE MITSUBISHI | TPLFYP024EM140B | CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 24.0 | – | 27.0 | 22.2 | 16.1 | 16.6 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-4 | LRC-2 205 | TRANE MITSUBISHI | TPKFYP006LM140B | WALL MOUNT | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 6.0 | – | 6.7 | 5.5 | 4.0 | 4.1 | N | C407 | 0 | 1 | DC | – | 173 | 30 | 0.17 | N | 208/230/1 | 0.2 | 0.24 | 15 | 4 | 24.5 | 1, 9, 10, 12, 16, 17, 18, 19, 20 |
| VFC-2-5 | CLASSROOM 204 | TRANE MITSUBISHI | TPLFYP018EM140B | CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 18.0 | – | 20.0 | 16.6 | 14.0 | 12.3 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-6 | CLASSROOM 203 | TRANE MITSUBISHI | TPLFYP018EM140B | CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 18.0 | – | 20.0 | 16.6 | 14.0 | 12.3 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-7 | CLASSROOM 202 | TRANE MITSUBISHI | TPLFYP018EM140B | CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 18.0 | – | 20.0 | 16.6 | 14.0 | 12.3 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-8 | BREAK ROOM 211A | TRANE MITSUBISHI | TPLFYP018EM140B | CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 18.0 | – | 20.0 | 16.6 | 14.0 | 12.3 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-9 | CIRC 200 | TRANE MITSUBISHI | TPEFY012MA144A | HORIZONTAL | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 12.0 | – | 13.5 | 11.1 | 8.0 | 8.3 | N | C407 | 0 | 1 | DC | 0.28 | 318 | 85 | 0.27 | N | 208/230/1 | 1.7 | 2.13 | 15 | 8 | 47 | 1, 9, 10, 12, 13, 14, 15, 17, 18, 19, |
| VFC-2-10 | RENTAL 213 | TRANE MITSUBISHI | TPLFYP018EM140B | CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 18.0 | – | 20.0 | 16.6 | 14.0 | 12.3 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-11 | RENTAL 212 | TRANE MITSUBISHI | TPLFYP008EM140B | CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 8.0 | – | 9.0 | 7.4 | 6.2 | 5.5 | N | C407 | 0 | 1 | DC | – | 600 | 50 | 0.08 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-12 | OFFICE 212B | TRANE MITSUBISHI | TPLFYP005FM140A | 2x2 CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 5.0 | – | 5.6 | 4.6 | 4.2 | 3.4 | N | C407 | 0 | 1 | DC | – | 280 | 50 | 0.18 | N | 208/230/1 | 0.19 | 0.24 | 15 | 4 | 28.9 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-13 | CONFERENCE RM 212A | TRANE MITSUBISHI | TPLFYP006EM140B | CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 6.0 | – | 6.7 | 5.5 | 4.9 | 4.1 | N | C407 | 0 | 1 | DC | – | 494 | 50 | 0.10 | N | 208/230/1 | 0.19 | 0.24 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-14 | CONFERENCE RM 213A | TRANE MITSUBISHI | TPLFYP012EM140B | CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 12.0 | – | 13.5 | 5.5 | 4.9 | 4.1 | N | C407 | 0 | 1 | DC | – | 565 | 50 | 0.09 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-15 | WORK ROOM 213B | TRANE MITSUBISHI | TPLFYP005FM140A | 2x2 CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 5.0 | – | 5.6 | 4.6 | 4.2 | 3.4 | N | C407 | 0 | 1 | DC | – | 280 | 50 | 0.18 | N | 208/230/1 | 0.19 | 0.24 | 15 | 4 | 28.9 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-2-16 | OFFICE 213C | TRANE MITSUBISHI | TPLFYP005FM140A | 2x2 CEILING | HEAT RECOVERY | VRF-R-2 | BC-2-1 | 5.0 | – | 5.6 | 4.6 | 4.2 | 3.4 | N | C407 | 0 | 1 | DC | – | 280 | 50 | 0.18 | N | 208/230/1 | 0.19 | 0.24 | 15 | 4 | 28.9 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-1 | COO / OFFICE | TRANE MITSUBISHI | TPEFY008MA144A | HORIZONTAL | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 8.0 | – | 9.0 | 7.0 | 6.0 | 5.2 | N | C407 | 0 | 1 | DC | 0.28 | 318 | 85 | 0.27 | N | 208/230/1 | 1.7 | 2.13 | 15 | 8 | 47 | 1, 9, 10, 12, 13, 14, 15, 17, 18, 19, |
| VFC-3-2 | DEV / COMM 303D | TRANE MITSUBISHI | TPLFYP012EM140B | CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 12.0 | – | 13.5 | 10.5 | 9.1 | 7.8 | N | C407 | 0 | 1 | DC | – | 565 | 50 | 0.09 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-3 | PROGRAM OFFICE | TRANE MITSUBISHI | TPLFYP015EM140B | CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 15.0 | – | 17.0 | 13.0 | 10.6 | 9.8 | N | C407 | 0 | 1 | DC | – | 600 | 50 | 0.08 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-4 | EXEC OFFICE 303F | TRANE MITSUBISHI | TPLFYP006EM140B | CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 6.0 | – | 6.7 | 5.2 | 4.8 | 3.8 | N | C407 | 0 | 1 | DC | – | 494 | 50 | 0.10 | N | 208/230/1 | 0.19 | 0.24 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-5 | CAMP SCHECHTER 303 | TRANE MITSUBISHI | TPLFYP006EM140B | CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 6.0 | – | 6.7 | 5.2 | 4.8 | 3.8 | N | C407 | 0 | 1 | DC | – | 494 | 50 | 0.10 | N | 208/230/1 | 0.19 | 0.24 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-6 | RENTAL OFFICE 300F | TRANE MITSUBISHI | TPLFYP005FM140A | 2x2 CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 5.0 | – | 5.6 | 4.4 | 4.2 | 3.3 | N | C407 | 0 | 1 | DC | – | 280 | 50 | 0.18 | N | 208/230/1 | 0.19 | 0.24 | 15 | 4 | 28.9 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-7A | RENTAL 302 | TRANE MITSUBISHI | TPLFYP015EM140B | CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 15.0 | – | 17.0 | 13.0 | 10.6 | 9.8 | N | C407 | 0 | 1 | DC | – | 600 | 50 | 0.08 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-7B | RENTAL 302 | TRANE MITSUBISHI | TPLFYP008EM140B | CEILING | HEAT RECOVERY | | | 8.0 | – | 9.0 | 7.0 | 6.0 | 5.2 | N | C407 | 0 | 1 | DC | – | 600 | 50 | 0.08 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-8 | OFFICE 302B / C | TRANE MITSUBISHI | TPEFY006MA144A | HORIZONTAL | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 6.0 | – | 6.7 | 5.2 | 5.2 | 3.9 | N | C407 | 0 | 1 | DC | 0.28 | 265 | 85 | 0.32 | N | 208/230/1 | 1.4 | 1.75 | 15 | 8 | 47 | 1, 9, 10, 12, 13, 14, 15, 17, 18, 19, |
| VFC-3-9 | GAME / TECH 301G | TRANE MITSUBISHI | TPLFYP024EM140B | CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 24.0 | – | 27.0 | 20.9 | 15.6 | 15.6 | N | C407 | 0 | 1 | DC | – | 812 | 120 | 0.15 | N | 208/230/1 | 0.43 | 0.54 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-10 | MUSIC 301F | TRANE MITSUBISHI | TPLFYP015EM140B | CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 15.0 | – | 17.0 | 13.1 | 10.6 | 9.8 | N | C407 | 0 | 1 | DC | – | 600 | 50 | 0.08 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-11 | ART/STEM/OPEN OFFICE | TRANE MITSUBISHI | TPLFYP048EM140B | CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 48.0 | – | 54.0 | 41.9 | 30.8 | 31.3 | N | C407 | 0 | 1 | DC | – | 1236 | 120 | 0.10 | N | 208/230/1 | 1.01 | 1.27 | 15 | 4 | 55 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-12 | SNOEZELEN ROOM 301E | TRANE MITSUBISHI | TPLFYP008EM140B | CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 8.0 | – | 9.0 | 7.0 | 6.0 | 5.2 | N | C407 | 0 | 1 | DC | – | 600 | 50 | 0.08 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-13 | OFFICES | TRANE MITSUBISHI | TPEFY012MA144A | HORIZONTAL | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 12.0 | – | 13.5 | 10.5 | 7.8 | 7.8 | N | C407 | 0 | 1 | DC | 0.28 | 318 | 85 | 0.27 | N | 208/230/1 | 1.7 | 2.13 | 15 | 8 | 47 | 1, 9, 10, 12, 13, 14, 15, 17, 18, 19, |
| VFC-3-14A | CIRC 300 | TRANE MITSUBISHI | TPMFYP012BM140 | CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 12.0 | – | 13.5 | 10.5 | 7.3 | 7.8 | N | C407 | 0 | 1 | DC | – | 328 | 40 | 0.12 | N | 208/230/1 | 0.21 | 0.26 | 15 | 4 | 31 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-14B | CIRC 300 | TRANE MITSUBISHI | TPMFYP012BM140 | CEILING | HEAT RECOVERY | | | 12.0 | – | 13.5 | 10.5 | 7.3 | 7.8 | N | C407 | 0 | 1 | DC | – | 328 | 40 | 0.12 | N | 208/230/1 | 0.21 | 0.26 | 15 | 4 | 31 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-15 | CONFERENCE 303A | TRANE MITSUBISHI | TPLFYP015EM140B | CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 15.0 | – | 17.0 | 13.0 | 10.6 | 9.8 | N | C407 | 0 | 1 | DC | – | 600 | 50 | 0.08 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VFC-3-16 | OPEN OFFICE | TRANE MITSUBISHI | TPLFYP012EM140B | CEILING | HEAT RECOVERY | VRF-R-3 | BC-3-1 | 12.0 | – | 13.5 | 10.5 | 9.1 | 7.8 | N | C407 | 0 | 1 | DC | – | 565 | 50 | 0.09 | N | 208/230/1 | 0.31 | 0.39 | 15 | 4 | 46 | 1, 9, 10, 12, 16, 17, 18, 19, |
| VHP-C-1 | CHAPEL | TRANE MITSUBISHI | TPEFYP096MH140A | HORIZONTAL | HEAT PUMP | CU-R-1 | – | 96.0 | – | 108.0 | 96.0 | – | 108.0 | N | C407 | 0 | 2 | DC | 0.6 | 2966 | 820 | 0.28 | N | 208/230/1 | – | 8.2 | 15 | 8 | 221 | 1, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 21 |

1. POWER, WIRING, AND DISCONNECT FURNISHED AND INSTALLED BY E.C.
2. SEE HRB/BC/BS SCHEDULE FOR ADDITIONAL INFORMATION. IF NO HRB/BC/BS IS NOTED, UNIT IS SERVING A VRF MULTI-ZONE SPLIT SYSTEM HEAT PUMP WITH NO HEAT RECOVERY.
3. NOMINAL COOLING AND HEATING CAPACITY IS BASED ON EQUIPMENT MANUFACTURER'S RATED CAPACITY AT AHRI RATING CONDITIONS.
4. DESIGN COOLING AND HEATING CAPACITY LISTED ARE THE RATED CAPACITY OF THE EQUIPMENT AT THE DESIGN COOLING AND HEATING CONDITIONS FOR THE PROJECT.
5. AIR ECONOMIZER EXCEPTION IS BASED ON THE 2021 WASHINGTON STATE OR THE 2021 SEATTLE ENERGY CODE, SECTION C403.3 EXCEPTIONS.
6. "FAN ONLY MODE" REPRESENTS THE FAN AIRFLOW, FAN POWER, AND WATTS PER CFM FOR THE EQUIPMENT WHEN THE FAN IS OPERATING AND NO HEATING OR COOLING IS OCCURRING (DEAD BAND OPERATION).
7. "HEATING/COOLING" MODE REPRESENTS THE FAN AIRFLOW, FAN POWER, AND WATTS/CFM FOR THE EQUIPMENT WHEN THE FAN IS OPERATING IN EITHER HEATING OR COOLING IS OCCURRING.
8. POWER TYPE: E – EMERGENCY, S – LEGALLY REQUIRED, O – OPTIONAL, N – NORMAL.
9. NETWORK CABLING BETWEEN FAN COIL, HEAT RECOVERY UNIT, AND OUTDOOR CONDENSING UNIT PROVIDED AND INSTALLED BY THE CONTROLS CONTRACTOR.
10. WALL-MOUNTED THERMOSTAT FURNISHED WITH EQUIPMENT, INSTALLED BY CONTROLS CONTRACTOR. THERMOSTAT SHALL MEET THE WSEC OR SEATTLE ENERGY CODE REQUIREMENTS INCLUDING PROGRAMMABLE SCHEDULES AND DEADBAND CONTROL.
11. UNIT AIRFLOW EXCEEDS 2000 CFM AND REQUIRES A DUCT MOUNTED SMOKE DETECTOR. DUCT SMOKE DETECTOR FURNISHED BY THE E.C., INSTALLED IN DUCT WORK BY M.C., WIRED TO SHUTDOWN UNIT AND TO FIRE ALARM SYSTEM BY F/L/S CONTRACTOR.
12. CONDENSATE TRAP AND CONDENSATE FURNISHED AND INSTALLED PIPING BY PLUMBING CONTRACTOR. ROUTE CONDENSATE TO INDIRECT CONNECTION AT NEAREST WASTE RECEPTOR.
13. INTEGRAL CONDENSATE PUMP PROVIDED WITH FAN COIL UNIT. CONDENSATE PUMP IS POWERED FROM THE UNIT. NO SEPARATE POWER CONNECTION REQUIRED.
    CONDENSATE PUMP IS PROVIDED WITH A FACTORY INSTALLED SAFETY SWITCH THAT SHUTS OFF THE UNIT IF CONDENSATE OVERFLOW OCCURS WITHIN THE DRAIN PAN.
14. UNIT IS PROVIDED WITH A CONDENSATE DRAIN PAN LEVEL SENSOR. DRAIN PAN LEVEL SENSOR SHALL DISABLE COOLING WHEN ACTIVE PER OPTION 4 OF SECTION 307.2.3 OF THE 2021 IMC/SMC.
15. UNIT IS PROVIDED WITH INTERNAL DRAIN PAN WATER LEVEL MONITORING DEVICE FOR CONDENSATE OVERFLOW IN ACCORDANCE WITH SECTION 307.2.3.1 OF THE 2021 IMC/SMC.
16. UNIT IS EXEMPT FROM SECONDARY DRAIN REQUIREMENTS FOR UNDUCTED FAN COILS IN ACCORDANCE WITH THE EXCEPTION TO SECTION 307.2.3.1 OF THE 2021 SMC
17. UNIT IS PROVIDED WITH SUPPLY FAN CONTROL SUCH THAT THE SUPPLY FAN SHALL BE OFF WHEN THE CORRESPONDING SPACE TEMPERATURE IS BETWEEN 70F AND 75F (DEADBAND).
18. VENTILATION (OUTSIDE AIR) FOR THE SPACES SERVED BY THE UNIT IS PROVIDED BY A DEDICATED OUTSIDE AIR SYSTEM (DOAS) WITH INTEGRAL HEAT RECOVERY. SEE THE HEAT RECOVERY VENTILATOR (DOAS) SCHEDULE.
19. UNIT IS NOT PROVIDED WITH 100% OUTSIDE AIRSIDE ECONOMIZER PER THE EXCEPTION NOTED ABOVE. UNIT IS EXEMPT FROM ECONOMIZER PER EXCEPTION NOTED ABOVE.
20. UNIT IS WALL-MOUNTED. SUPPORTED FRAMING FOR INSTALLATION OF UNIT SHALL BE FURNISHED AND INSTALLED BY THE GENERAL CONTRACTOR.
21. UNIT SHALL BE SUPPORTED WITH MINIMUM 1" DEFLECTION SEISMIC RATED SPRING AND NEOPRENE HANGERS.

# VRF CONDENSING UNIT SCHEDULE (AIR-COOLED - MULTI-SPLIT SYSTEM)

| (VCU) TAG | AREA SERVED | INSTALLED LOCATION | MANUFACTURER | MODEL | HEATING TYPE (HEAT PUMP HEAT RECOVERY) | MODULES PER UNIT | NOMINAL CAPACITY (3) | | | EQUIPMENT EFFICIENCY (6) | | | | | | | | ECONOMIZER EXCEPTION (7) | C407 (Y/N) (8) | ELECTRICAL DATA (2) | | | | | | WEIGHT (LBS) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | COOLING (TONS) | COOLING (MBH) | HEATING (MBH) | IEER | EER | COP AT 47 °F | COP AT 17 °F | IEER | EER | COP AT 47 °F | COP AT 17 °F | | | EMERG POWER (9) | VOLTAGE/ PHASE | MCA (AMPS) | MOCP (AMPS) | MFS (AMPS) | | | |
| VRF-R-1 | LEVEL B & 1 | ROOF | TRANE MITSUBISHI | TURYE2883BN41AN | HEAT RECOVERY | 2 | 24 | 276 | 304 | 12.5 | 9.3 | 3.2 | 2.05 | 23.1 | 10.9 | 3.26 | 2.05 | NA | Y | N | 208/230/3 | 60 / 60 | 100 / 100 | 60 / 60 | 1360 | 1, 10, 11 |
| VRF-R-2 | LEVEL 2 | ROOF | TRANE MITSUBISHI | TURYE2163AN41AN | HEAT RECOVERY | 1 | 18 | 206 | 232 | 13.7 | 10.4 | 3.2 | 2.05 | 20.5 | 11.0 | 3.30 | 2.12 | NA | Y | N | 208/230/3 | 88 | 150 | 90 | 887 | 1, 10, 11 |
| VRF-R-3 | LEVEL 2 | ROOF | TRANE MITSUBISHI | TURYE2163AN41AN | HEAT RECOVERY | 1 | 18 | 206 | 232 | 13.7 | 10.4 | 3.2 | 2.05 | 20.5 | 11.0 | 3.30 | 2.12 | NA | Y | N | 208/230/3 | 88 | 150 | 90 | 887 | 1, 10, 11 |
| VRF-R-4 | CHAPEL | ROOF | TRANE MITSUBISHI | NTXMSM96A1123AA | HEAT PUMP | 1 | 8 | 92 | 103 | 14.6 | 11.0 | 3.3 | 2.25 | 21.2 | 11.8 | 3.8 | 2.47 | NA | Y | N | 208/230/3 | 32 | 58 | 40 | 433 | 1, 10, 11 |

1. POWER, WIRING, AND DISCONNECT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
2. UNIT REQUIRES SEPARATE POWER CONNECTIONS FOR EACH MODULE. SEE EQUIPMENT SUBMITTALS FOR POWER REQUIREMENTS FOR INDIVIDUAL MODULES.
3. NOMINAL COOLING AND HEATING CAPACITY FOR EQUIPMENT BASED ON MANUFACTURER'S DATA.
4. CORRECTED COOLING AND HEATING CAPACITY BASED ON DESIGN CONDITIONS AND FROM MANUFACTURER'S SELECTION DATA.
5. CODE MINIMUM ENERGY EFFICIENCIES ARE BASED ON THE 2021 WASHINGTON STATE ENERGY CODE.
6. THE EQUIPMENT EFFICIENCIES ARE BASED ON THE AHRI STANDARD 1230-2014 RATED EFFICIENCIES AS PROVIDED BY THE EQUIPMENT MANUFACTURER.
7. SYSTEM SERVED BY THIS EQUIPMENT IS EXEMPT FROM THE ECONOMIZER REQUIREMENTS OF THE APPLICABLE ENERGY CODE PER THE EXCEPTION NOTED IN TABLE.
   EQUIPMENT EFFICIENCY EXCEEDS CODE MINIMUM, WHERE REQUIRED, BY AT LEAST THE PRESCRIPTIVE REQUIREMENT.
8. SYSTEM SERVED BY THIS EQUIPMENT IS BEING SUBMITTED AS PART OF A TOTAL BUILDING PERFORMANCE ANALYSIS PER THE APPLICABLE ENERGY CODE

## BRANCH CONTROLLER SCHEDULE (VRF)

| (BC/HRB/BS) TAG | INSTALLED LOCATION | MANUFACTURER | MODEL | CONTROLLER TYPE (MAIN/SUB/SINGLE) | CAPACITY DATA MAXIMUM (MBH) | CAPACITY DATA PORT (MBH) | NUMBER OF PORTS | CONNECTING INDOOR UNIT TAG BY PORT NUMBER (2) 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | CONNECTING CONDENSING UNIT (3) | ELECTRICAL DATA EMERG POWER | VOLTAGE/ PHASE | MCA (AMPS) | MOCP (AMPS) | WEIGHT (LBS) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BC-3-1 | LEVEL 3 | TRANE MITSUBISHI | TCMBM1016KA11N4 | MAIN | 432 | 54 | 16 | VFC-3-1 | VFC-3-2 | VFC-3-3 | VFC-3-4 | VFC-3-5 | VFC-3-6 | VFC-3-7A/7B | VFC-3-8 | VFC-3-9 | VFC-3-10 | VFC-3-11 | VFC-3-12 | VFC-3-13 | VFC-3-14A/14B | VFC-3-15 | VFC-3-16 | VRF-R-3 | NO | 208/1 | 2 | – | 150 | |
| BC-2-1 | LEVEL 2 | TRANE MITSUBISHI | TCMBM1016KA11N4 | MAIN | 432 | 54 | 16 | VFC-2-1 | VFC-2-2 | VFC-2-3 | VFC-2-4 | VFC-2-5 | VFC-2-6 | VFC-2-7 | VFC-2-8 | VFC-2-9 | VFC-2-10 | VFC-2-11 | VFC-2-12 | VFC-2-13 | VFC-2-14 | VFC-2-15 | VFC-2-16 | VRF-R-2 | NO | 208/1 | 2 | – | 150 | |
| BC-1-1 | LEVEL 1 | TRANE MITSUBISHI | TCMBM1016KA11N4 | MAIN | 432 | 54 | 16 | VFC-1-1 | VFC-1-2A/2B | VFC-1-3 | VFC-1-4 | VFC-1-5 | VFC-1-6 | VFC-1-7 | VFC-1-8 | VFC-1-9 | VFC-1-10 | VFC-1-11 | VFC-1-12 | NC | NC | NC | NC | VRF-R-1 | NO | 208/1 | 2 | – | 150 | |
| BC-B-1 | LEVEL B | TRANE MITSUBISHI | TCMBS0108KB21N4 | SUB | 432 | 54 | 8 | VFC-B-1 | VFC-B-2 | VFC-B-3 | VFC-B-4 | VFC-B-5A/5B | VFC-B-6 | NC | NC | NA | NA | NA | NA | NA | NA | NA | NA | VRF-R-1 | NO | 208/1 | 1.6 | 20 | 150 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

1. POWER, WIRING, AND DISCONNECT FURNISHED AND INSTALLED BY E.C. TO SINGLE POINT POWER CONNECTION.
2. SEE VRF/VRV FAN COIL SCHEDULE FOR INDOOR UNIT INFORMATION. NC = NOT CONNECTED, NA = NOT AVAILABLE BASED ON MAXIMUM NUMBER PF PORTS.
3. SEE VRF/VRV CONDENSING UNIT SCHEDULED FOR OUTDOOR CONDENSING UNIT INFORMATION.
4. POWER TYPE: E – EMERGENCY, S – LEGALLY REQUIRED, O – OPTIONAL, N – NORMAL.
5. SERVICE ACCESS REQUIRED FOR UNIT MAINTENANCE. SEE MECHANICAL PLANS AND EQUIPMENT SUBMITTAL FOR MINIMUM CLEARANCES.
6. COMMUNICATION AND CONTROL WIRING BETWEEN VRF/VRV COMPONENTS FURNISHED AND INSTALLED BY THE CONTROLS CONTRACTOR.
7. UNIT IS SUPPORTED FROM STRUCTURE ABOVE USING THREADED HANGER ROD AND NEOPRENE ISOLATORS, MASON TYPE HD OR APPROVED EQUAL.
8. SEE EQUIPMENT SUBMITTAL AND PIPING DIAGRAM FOR CONNECTING VRF/VRV FAN COIL AND CONNECTING REFRIGERANT PIPE SIZES.
9. UNIT REQUIRES A CONDENSATE DRAIN. CONDENSATE DRAIN TO BE ROUTED TO AN INDIRECT CONNECTION AT NEAREST WASTE RECEPTOR IN ACCORDANCE WITH THE 2015 UPC. CONDENSATE DRAIN PIPE FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR.
10. ALL CONNECTIONS TO THE BRANCH CONTROLLER SHALL HAVE A FIELD INSTALLED MANUAL ISOLATION BALL VALVE RATED FOR REFRIGERANT USE. BALL VALVES SHALL HAVE SOLDERED CONNECTIONS. VALVE FURNISHED AND INSTALLED BY PIPING CONTRACTOR.
11. ALL CONNECTIONS TO THE BRANCH CONTROLLER SHALL HAVE FACTORY INSTALLED MANUAL ISOLATION BALL VALVE RATED FOR REFRIGERANT USE. SEE EQUIPMENT SUBMITTAL FOR CONNECTION TYPE.

## ENERGY RECOVERY VENTILATOR SCHEDULE

| TAG | AREA SERVED | MAKE | MODEL | LOCATION | SUPPLY FAN DATA AIRFLOW (CFM) | ESP (IN WC) | MAX BHP | MHP (HP) | EXHAUST FAN DATA AIRFLOW (CFM) | ESP (IN WC) | MAX BHP | MHP (HP) | RECOVERY TYPE (HX/WHEEL) | WINTER PERFORMANCE (3) OSA T (DB/WB) | RA T (DB/WB) | SAT (DB/WB) | EAT (DB/WB) | SUMMER PERFORMANCE (4) OSA T (DB/WB) | RA T (DB/WB) | SA T (DB/WB) | EA T (DB/WB) | WINTER RECOVERY (5) TOTAL (%) | SENSIBLE (%) | SUMMER RECOVERY (6) TOTAL (%) | SENSIBLE (%) | ELECTRICAL DATA POWER TYPE (7) | VOLTAGE/ PHASE | FLA (AMPS) | MCA (AMPS) | MOCP (AMPS) | FILTER DATA OSA (MERV) | RA (MERV) | WEIGHT (LBS.) (8) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ERV-B-1 | BASEMENT | AMERICAN ALDES | E1800L-FI-EC-N | BASEMENT LEVEL | 915 | 0.5 | 0.32 | 2.5 | 915 | 0.5 | 0.32 | 2.5 | HX | 24/23 | 70/62 | 58.5/46.1 | 35.6/32.4 | 85/67 | 74/62 | 77.5/64.2 | 82.5/65.9 | 72.8 | 74.9 | 70.7 | 74.9 | N | 230/1 | 9.1 | – | – | 8 | 8 | 245 | |
| ERV-B-2 | BASEMENT | AMERICAN ALDES | E1800L-FI-EC-N | BASEMENT LEVEL | 1300 | 0.5 | 0.48 | 2.5 | 1200 | 0.5 | 0.48 | 2.5 | HX | 24/23 | 70/62 | 55.9/44.6 | 38.2/34.3 | 85/67 | 74/62 | 78.1/64.4 | 81.9/65.6 | 67.1 | 69.4 | 65 | 69.4 | N | 230/1 | 9.1 | – | – | 8 | 8 | 245 | |
| ERV-C-1 | CHAPEL 103A | AMERICAN ALDES | E1100L-FI-EC-N | LEVEL 2 MECH MEZZ | 900 | 0.4 | 0.45 | 2.5 | 900 | 0.5 | 0.45 | 2.5 | HX | 24/23 | 70/62 | 53.0/42.3 | 41.1/36.9 | 85/67 | 74/62 | 78.7/64.8 | 81.3/65.3 | 59.1 | 63.0 | 57.2 | 63.0 | N | 230/1 | 9.1 | – | – | 8 | 8 | 245 | |
| ERV-1-1 | LEVEL 1 | AMERICAN ALDES | E1100L-FI-EC-N | LEVEL 1 | 695 | 0.5 | 0.24 | 2.5 | 695 | 0.5 | 0.24 | 2.5 | HX | 24/23 | 70/62 | 55.4/43.8 | 38.7/35.2 | 85/67 | 74/62 | 78.2/64.5 | 81.8/65.5 | 64.2 | 68.3 | 62.3 | 68.3 | N | 230/1 | 5.6 | – | – | 8 | 8 | 204 | |
| ERV-1-2 | LEVEL 1 | AMERICAN ALDES | E1100L-FI-EC-N | LEVEL 1 | 720 | 0.5 | 0.25 | 2.5 | 720 | 0.5 | 0.25 | 2.5 | HX | 24/23 | 70/62 | 55.1/43.6 | 39.0/35.4 | 85/67 | 74/62 | 78.2/64.6 | 81.8/65.5 | 63.6 | 67.7 | 61.7 | 67.7 | N | 230/1 | 5.6 | – | – | 8 | 8 | 204 | |
| ERV-1-3 | LEVEL 1 | AMERICAN ALDES | E1100L-FI-EC-N | LEVEL 1 | 670 | 0.5 | 0.23 | 2.5 | 670 | 0.5 | 0.23 | 2.5 | HX | 24/23 | 70/62 | 55.7/44.0 | 38.4/35.0 | 85/67 | 74/62 | 78.1/64.5 | 81.9/65.6 | 64.8 | 69.0 | 62.9 | 69.0 | N | 230/1 | 5.6 | – | – | 8 | 8 | 204 | |
| ERV-2-1 | LEVEL 2 | TRANE-MITSUBISHI | TLGHF0600RVX02A | LEVEL 2 | 360 | 0.35 | – | 120W | 360 | 0.35 | – | 120W | HX | 24/19 | 70/62 | 57.6 | 35.7 | 85/65 | 74/62 | 77.9/63.0 | 81.1/63.9 | 74.5 | – | 64.5 | – | N | 208/230/1 | 6.1 | 5.2 | 15 | 7 | 7 | 123 | |
| ERV-2-2 | LEVEL 2 | TRANE-MITSUBISHI | TLGHF0600RVX02A | LEVEL 2 | 360 | 0.35 | – | 120W | 360 | 0.35 | – | 120W | HX | 24/19 | 70/62 | 57.6 | 35.7 | 85/65 | 74/62 | 77.9/63.0 | 81.1/63.9 | 74.5 | – | 64.5 | – | N | 208/230/1 | 6.1 | 5.2 | 15 | 7 | 7 | 123 | |
| ERV-2-3 | LEVEL 2 | TRANE-MITSUBISHI | TLGHF0600RVX02A | LEVEL 2 | 465 | 0.35 | – | 120W | 465 | 0.35 | – | 120W | HX | 24/19 | 70/62 | 57.6 | 35.7 | 85/65 | 74/62 | 77.9/63.0 | 81.1/63.9 | 74.5 | – | 64.5 | – | N | 208/230/1 | 6.1 | 5.2 | 15 | 7 | 7 | 123 | |
| ERV-2-4 | LEVEL 2 | AMERICAN ALDES | E1100L-FI-EC-N | LEVEL 2 | 680 | 0.5 | 0.24 | 2.5 | 680 | 0.5 | 0.24 | 2.5 | HX | 24/23 | 70/62 | 55.6/43.9 | 38.5/35.1 | 85/67 | 74/62 | 78.1/64.5 | 81.9/65.6 | 64.6 | 68.7 | 62.7 | 68.7 | N | 230/1 | 5.6 | – | – | 8 | 8 | 204 | |
| ERV-2-5 | LEVEL 2 | AMERICAN ALDES | E1100L-FI-EC-N | LEVEL 2 | 560 | 0.5 | 0.21 | 2.5 | 560 | 0.5 | 0.21 | 2.5 | HX | 24/23 | 70/62 | 57.1/44.8 | 37.0/34.1 | 85/67 | 74/62 | 77.8/64.4 | 82.2/65.7 | 67.8 | 71.9 | 65.9 | 71.9 | N | 230/1 | 5.6 | – | – | 8 | 8 | 204 | |
| ERV-R-1 | LEVEL 3 | AMERICAN ALDES | PE30 | ROOF | 2050 | 0.5 | 0.86 | 1.5 | 2050 | 0.5 | 0.86 | 1.5 | HX | 24/23 | 70/62 | 55.6/44.7 | 38.4/34.2 | 85/67 | 74/62 | 78.1/64.4 | 81.9/65.6 | 67.4 | 68.8 | 65.2 | 68.8 | N | 230/1 | 5.8 | 6.5 | 9.0 | 8 | 8 | 2200 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

1. POWER WIRING AND DISCONNECT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, SINGLE POINT OF CONNECTION. SEE EQUIPMENT SUBMITTAL FOR ALL POWER AND WIRING REQUIREMENTS.
2. UNIT IS REQUIRED TO BE RATED FOR INDOOR USE. UNIT SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE.
3. WINTER PERFORMANCE IS BASED ON SYSTEM DESIGN REQUIREMENTS AT WINTER PEAK OUTDOOR AIR TEMPERATURES AND DESIGN INDOOR AIR CONDITIONS.
4. SUMMER PERFORMANCE IS BASED ON SYSTEM DESIGN REQUIREMENTS AT SUMMER PEAK OUTDOOR AIR TEMPERATURES AND DESIGN INDOOR AIR CONDITIONS.
5. WINTER SENSIBLE AND TOTAL ENERGY RECOVERY EFFECTIVENESS ARE BASED ON THE DESIGN WINTER OUTSIDE AIR CONDITION OF 24F AND ITS COINCIDENT WETBULB TEMPERATURE AND A DESIGN WINTER INDOOR TEMPERATURE OF 70F AT 30% RELATIVE HUMIDITY.
6. SUMMER SENSIBLE AND TOTAL ENERGY RECOVERY EFFECTIVENESS ARE BASED ON THE DESIGN SUMMER OUTSIDE AIR CONDITION AND THE DESIGN SUMMER INDOOR RETURN AIR TEMPERATURE AS NOTED IN THE SUMMER PERFORMANCE DATA.
7. POWER TYPE: E = EMERGENCY POWER, S = LEGALLY REQUIRED STANDBY POWER, N = NORMAL
8. UNIT EQUIPMENT WEIGHT INCLUDES ALL ACCESSORIES.
9. UNIT SHALL BE SUPPORTED WITH MINIMUM 1" DEFLECTION SEISMIC RATED NEOPRENE HANGERS.
10. OUTSIDE AIR, RELIEF AIR, OR EXHAUST AIR DAMPERS LOCATED AT THE BUILDING ENVELOPE AND ASSOCIATED WITH THE UNIT SHALL BE INTERLOCKED TO BE CLOSED WHEN THE UNIT IS OFF. SEE MOTORIZED DAMPER SCHEDULE AND SEE SEQUENCE OF OPERATION.

## DUCTLESS SPLIT SYSTEM SCHEDULE (COOLING ONLY OR HEAT PUMP)

| (DXFC-X-Y) TAG | AREA SERVED | TYPE (AC/HP) (2) | NOMINAL COOLING CAPACITY | MANUFACTURER | INDOOR UNIT MODEL | AIRFLOW (CFM) | COOLING DATA (3) DB/WB (°F) | TOTAL | SENSIBLE | HEATING DATA (3) DB (°F) | @47°F | @17°F | ELECTRICAL DATA VOLTS/PH | FLA | MCA | WEIGHT (LBS) | OUTDOOR TAG | OUTDOOR UNIT MODEL | ELECTRICAL DATA VOLTS/PH | MCA | MFS | MOCP | WEIGHT (LBS) | POWER TYPE (4) | ECONOMIZER EXCEPTION (5) | SEER2 (6) | EER (7) | HSPF (8) | COP @47°F (9) | COP @17°F (9) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DXFC-B-1 | MDF 001F | AC | 2 | TRANE MITSUBISHI | TPKA-A24KA7 | 705 | 80/67 | 24000 | – | NA | NA | NA | 208/230/1 | – | 1 | 53.0 | CU-B-1 | TPUY-A24NHA7 | 208/230/1 | 19 | 25 | 26 | 151 | N | 11 | 21.3 | – | – | – | – | – |
| DXFC-2-1 | L2 SHARED IDF RM | HP | 2 | TRANE MITSUBISHI | TPKA-A24KA7 | 705 | 80/67 | 24000 | – | 70 | 28000 | 15700 | 208/230/1 | – | 1 | 53.0 | CU-R-1 | TPUZ-A24NHA7 | 208/230/1 | 19 | 25 | 26 | 153 | N | 11 | 21.3 | – | 11.0 | 4.35 | 2.95 | – |

1. POWER WIRING AND DISCONNECT FURNISHED AND INSTALL ED BY E.C.
2. TYPE: AC = COOLING, HP = HEAT PUMP (HEATING AND COOLING).
3. COOLING AND HEATING DATA IS BASED IN MANUFACTURER'S RATING AT THE ASSOCIATED EQUIPMENT TYPE AHRI CONDITIONS.
4. POWER TYPE: E=EMERGENCY, S=LEGALLY REQUIRED, O=OPTIONAL, N=NORMAL.
5. UNIT IS EXEMPT FROM REQUIRING 100% OUTSIDE AIR ECONOMIZER PER THE EXCEPTION NOTED IN SECTION C403.5 OF THE JURISDICTIONS ENERGY CODE (WSEC OR SEC).
6. SEER IS BASED ON MANUFACTURERS RATING PER AHRI 210 /240 (EQUIPMENT LESS THAN 65 MBH COOLING CAPACITY).
7. EER IS BASED ON MANUFACTURERS RATING PER AHRI 340/360 (EQUIPMENT 65 MBH OR GREATER COOLING CAPACITY).
8. HSPF IS BASED ON MANUFACTURER'S RATING PER AHRI 210/240 (EQUIPMENT LESS THAN 65 MBH HEATING CAPACITY).
9. COP IS BASED ON MANUFACTURER'S RATING PER AHRI 340/360 (EQUIPMENT 65 MBH OR GREATER HEATING CAPACITY).

## ROOFTOP CONSTANT VOLUME HEAT PUMP SCHEDULE

| TAG | AREA SERVED | INSTALLED LOCATION | MAKE | MODEL | NOMINAL COOLING (TONS) | FACTORY CURB (Y/N) (2) | OSA ECONOMIZER (Y/N) (3) (4) | ECONOMIZER EXCEPTION (5) | COOLING CAPACITY (5) TOTAL (MBH) | SENSIBLE (MBH) | HEATING CAPACITY (5) ELECTRIC HEAT (Y/N) | TOTAL KW | OUTPUT (MBH) | MINIMUM OSA FLOW (CFM) | SUPPLY FAN DATA AIRFLOW (CFM) | ESP (IN W.C.) | FAN BHP | MOTOR HP | ELECTRICAL DATA VOLTAGE/ PHASE | SSCR (KAIC) | MCA (AMPS) | MFS (AMPS) | ENERGY EFFICIENCY (6) SEER2 | IEER | HSPF | COP @ 17 | COP @ 47 | FILTER EFF. (MERV) | WEIGHT (LBS) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTU-R-1 | GYM (EAST) | ROOF | TRANE | WSK090 | 7.5 | Y | Y | NA | 89.6 | 71.3 | Y | 18 | 81 | 840 | 3000 | 0.75 | 1.14 | 3.0 | 208/230/3 | 5 | 97 | 90 | – | 14.1 | – | 2.25 | 3.4 | 8 | 1229 | 1, 9 |
| RTU-R-2 | GYM (WEST) | ROOF | TRANE | WSK060 | 5.0 | Y | Y | NA | 60.4 | 48.1 | Y | 12 | 53.5 | 600 | 2000 | 0.75 | 0.87 | 1.0 | 208/230/3 | 5 | 66 | 70 | 13.4 | – | 8.0 | – | – | 8 | 1045 | 1, 9 |

1. POWER WIRING AND DISCONNECTS BY E.C.. SINGLE POINT POWER CONNECTION PROVIDED WITH EQUIPMENT.
2. EQUIPMENT IS INSTALLED ON A ROOF CURB. CURB PROVIDED WITH EQUIPMENT AND FIELD INSTALLED BY M.C.
3. IF NOTED, UNIT IS PROVIDED WITH 100% OUTSIDE AIR ECONOMIZER MEETING THE REQUIREMENTS OF THE CURRENT WSEC OR SEC.
4. IF NOTED, EQUIPMENT IS NOT PROVIDED WITH 100% OUTSIDE AIR ECONOMIZER. SEE ADDITIONAL NOTE FOR THE NON-ECONOMIZER EXEMPTION REQUIREMENT.
5. EQUIPMENT COOLING AND HEATING CAPACITY LISTED ARE AT THE RATING CONDITIONS BASED ON THE EQUIPMENT TYPE AND THE CATEGORY OF THE EQUIPMENT.
6. ENERGY EFFICIENCY NOTED IS BASED ON AHRI DATA PROVIDED BY THE EQUIPMENT MANUFACTURER.
   ENERGY EFFICIENCY LISTED ARE BASED ON THE AHRI RATED CONDITIONS IN ACCORDANCE WITH THE APPLICABLE AHRI STANDARD LISTED IN THE CURRENT WASHINGTON STATE OR SEATTLE ENERGY CODE, AS APPLICABLE.
7. ADDITIONAL EQUIPMENT OPTIONS INCLUDED: FACTORY CURB, PROGRAMMABLE CONTROLLER, POWER RETURN AIR EXHAUST.
8. EQUIPMENT AIRFLOW DOES NOT EXCEED 2000 CFM. RETURN AIR DUCT SMOKE DETECTION IS NOT REQUIRED.
9. EQUIPMENT AIRFLOW EXCEEDS 2000 CFM. RETURN DUCT SMOKE DETECTION IS REQUIRED.

## FAN SCHEDULE

| TAG | FUNCTION | AREA SERVED SERVED | LOCATION INSTALLED | MAKE | MODEL | TYPE | NORMAL FAN PERFORMANCE DATA AIRFLOW (CFM) | E.S.P. (IN WC) | T.S.P (IN WC) | FAN RPM | BRAKE HP | EFF. (%) | MOTOR POWER (HP) | EC MOTOR (Y/N) | VFD (Y/N) | VOLTAGE/ PHASE | POWER TYPE (4) | WEIGHT (LBS) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-B-1 | EXHAUST | ELECTRICAL RM 002B | ELECTRICAL RM 002B | GREENHECK | SQ-160-VG | INLINE | 2400 | 0.65 | – | 1103 | 0.51 | – | 3/4 | Y | N | 208/1 | N | 106 | 1, 5 |
| EF-B-2 | EXHAUST | KILN ROOM | KILN ROOM | GREENHECK | CSP-A1050-VG | CEILING | 1000 | 0.35 | – | 1186 | 0.32 | – | 1/3 | Y | N | 115/1 | N | 50 | 1, 7 |
| EF-R-1 | EXHAUST | STEM/SCIENCE 002 | ROOF | GREENHECK | CUE-099-VG | CENT. UPBLAST | 550 | 0.75 | – | 1425 | 0.13 | – | 1/4 | Y | N | 115/1 | N | 40 | 1, 6 |
| | | | | | | | | | | | | | | | | | | | |

1. POWER WIRING AND DISCONNECT PROVIDED BY ELECTRICAL CONTRACTOR.
2. POWER TYPE: E = EMERGENCY POWER, S = LEGALLY REQUIRED STANDBY POWER, N = NORMAL
3. MANUAL STARTER W/OVERLOAD PROTECTION SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
4. AUTOMATIC MOTOR STARTER WITH HOA SWITCH SHALL BE FURNISHED AND INSTALLED BY E.C., COIL CIRCUIT POWERED BY E.C., COIL VOLTAGE TO BE 120V.
5. LINE VOLTAGE (120V) T-STAT WITH TEMPERATURE RANGE BETWEEN 60 AND 100 DEG. F SHALL BE PROVIDED BY M.C. AND INSTALLED BY E.C.
6. FAN SUPPLIED WITH BACKDRAFT DAMPER AND FACTORY CURB.
7. LINE VOLTAGE T-STAT SHALL BE PROVIDED BY C.C. AND INSTALLED BY E.C.

## FAN HEATER SCHEDULE

| TAG | LOCATION | AREA SERVED | MAKE | MODEL | ELECTRICAL KW | ELECTRICAL VOLTS/PH | # OF STGS | CFM | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| FH-B-1 | LEVEL 1 | SCIENCE LAB | THERMOLEC | FER-12-6-208/3 | 6 | 208/3 | SCR | 350 | 1, 2 |

1: UNIT PROVIDED BY M.C. WIRING AND DISCONNECT BY E.C.
2: PRESET UNIT TO DELIVER MIN. 68 DEG. SUPPLY AIR.


**HOLADAY-PARKS, INC.**
*SMART Mechanical Solutions©*
Mechanical Solutions • Energy Services
Building Controls • Service & Maintenance
4600 S. 134TH PLACE
TUKWILA, WA 98168 • (206) 248-9700
HOLADAYPARKS.com
WA LICENSE NUMBER: HOLADPI379N0


MAXWELL GREENHECK — STATE OF WASHINGTON — 52096 — REGISTERED PROFESSIONAL ENGINEER

06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

SCHEDULES

M7.02

ORIGINAL SHEET SIZE: 24" X 36"

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## MOTORIZED CONTROL DAMPER SCHEDULE

| TAG | AREA SERVED | LOCATION INSTALLED | ASSOCIATED UNIT | MAKE | MODEL | AMCA 500D LEAKAGE CLASS (4) | FUNCTION | DAMPER SIZE WIDTH (IN) | DAMPER SIZE HEIGHT (IN) | DUCT SIZE (5) WIDTH (IN) | DUCT SIZE (5) HEIGHT (IN) | BLADE CONFIGURATION (PARALLEL/OPPOSED) | ACTUATOR DATA SPRING CLOSED (Y/N) | SPRING OPEN (Y/N) | END SWITCH (Y/N) | MODULATING (Y/N) | 2-POSITION (Y/N) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD-B-1 | LEVEL B01 | LEVEL B01 | ERV-B-1 | – | – | I | ERV OSA | 14 | 12 | 14 | 12 | PARALLEL | Y | N | N | N | Y | – |
| MD-B-2 | LEVEL B01 | LEVEL B01 | ERV-B-1 | – | – | I | ERV EXHAUST | 14 | 12 | 14 | 12 | PARALLEL | Y | N | N | N | Y | – |
| MD-B-3 | ELEC. RM | ELEC. RM | EF-B-1 | – | – | I | EF-B-1 EXH | 20 | 20 | 20 | 20 | PARALLEL | Y | N | N | N | Y | – |
| MD-B-4 | ELEC. RM | ELEC. RM | – | – | – | I | MUA | 36 | 24 | – | – | PARALLEL | Y | N | N | N | Y | – |
| MD-B-5 | KILN RM | KILN RM | EF-B-2 | – | – | I | EF-B-1 EXH | 20 | 10 | 20 | 10 | PARALLEL | Y | N | N | N | Y | – |
| MD-B-6 | KILN RM | KILN RM | – | – | – | I | MUA | 30 | 12 | – | – | PARALLEL | Y | N | N | N | Y | – |
| MD-1-1 | LEVEL 1 | LEVEL 1 | ERV-1-1 | – | – | I | ERV EXHAUST | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | N | Y | – |
| MD-1-2 | LEVEL 1 | LEVEL 1 | ERV-1-1 | – | – | I | ERV OSA | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | N | Y | – |
| MD-1-3 | LEVEL 1 | LEVEL 1 | ERV-1-2 | – | – | I | ERV OSA | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | N | Y | – |
| MD-1-4 | LEVEL 1 | LEVEL 1 | ERV-1-2 | – | – | I | ERV EXHAUST | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | N | Y | – |
| MD-1-5 | LEVEL B01 | LEVEL B01 | ERV-B-2 | – | – | I | ERV OSA | 24 | 10 | 24 | 10 | PARALLEL | Y | N | N | N | Y | – |
| MD-1-6 | LEVEL B01 | LEVEL B01 | ERV-B-2 | – | – | I | ERV EXHAUST | 24 | 10 | 24 | 10 | PARALLEL | Y | N | N | N | Y | – |
| MD-1-7 | LEVEL 1 | LEVEL 1 | ERV-1-3 | – | – | I | ERV OSA | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | N | Y | – |
| MD-1-8 | LEVEL 1 | LEVEL 1 | ERV-1-3 | – | – | I | ERV EXHAUST | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | N | Y | – |
| MD-1-9 | PRESCHOOL 118 | LEVEL 1 | ERV-1-1 | – | – | I | DCV | 10 | 8 | 10 | 8 | PARALLEL | Y | N | N | Y | N | – |
| MD-1-10 | PRESCHOOL 117 | LEVEL 1 | ERV-1-1 | – | – | I | DCV | 10 | 8 | 10 | 8 | PARALLEL | Y | N | N | Y | N | – |
| MD-1-11 | CLASSRM 116 | LEVEL 1 | ERV-1-2 | – | – | I | DCV | 10 | 8 | 10 | 8 | PARALLEL | Y | N | N | Y | N | – |
| MD-1-12 | CLASSRM 115 | LEVEL 1 | ERV-1-2 | – | – | I | DCV | 10 | 8 | 10 | 8 | PARALLEL | Y | N | N | Y | N | – |
| MD-1-13 | ERV-1-2 | LEVEL 1 | ERV-1-2 | – | – | I | RETURN AIR | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | Y | N | – |
| MD-1-14 | ERV-1-2 | LEVEL 1 | ERV-1-2 | – | – | I | RETURN AIR | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | Y | N | – |
| MD-2-1 | CLASSRM 207 | LEVEL 2 | ERV-2-1 | – | – | I | ERV OSA | 10R | – | 10R | – | PARALLEL | Y | N | N | N | Y | – |
| MD-2-2 | CLASSRM 207 | LEVEL 2 | ERV-2-1 | – | – | I | ERV EXHAUST | 10R | – | 10R | – | PARALLEL | Y | N | N | N | Y | – |
| MD-2-3 | CLASSRM 206 | LEVEL 2 | ERV-2-2 | – | – | I | ERV OSA | 10R | – | 10R | – | PARALLEL | Y | N | N | N | Y | – |
| MD-2-4 | CLASSRM 206 | LEVEL 2 | ERV-2-2 | – | – | I | ERV EXHAUST | 10R | – | 10R | – | PARALLEL | Y | N | N | N | Y | – |
| MD-2-5 | ERV-2-3 | LEVEL 2 | ERV-2-3 | – | – | I | ERV OSA | 10R | – | 10R | – | PARALLEL | Y | N | N | N | Y | – |
| MD-2-6 | ERV-2-3 | LEVEL 2 | ERV-2-3 | – | – | I | ERV EXHAUST | 10R | – | 10R | – | PARALLEL | Y | N | N | N | Y | – |
| MD-2-7 | ERV-2-4 | LEVEL 2 | ERV-2-4 | – | – | I | ERV OSA | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | N | Y | – |
| MD-2-8 | ERV-2-4 | LEVEL 2 | ERV-2-4 | – | – | I | ERV EXHAUST | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | N | Y | – |
| MD-2-9 | ERV-2-5 | LEVEL 2 | ERV-2-5 | – | – | I | ERV OSA | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | N | Y | – |
| MD-2-10 | ERV-2-5 | LEVEL 2 | ERV-2-5 | – | – | I | ERV EXHAUST | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | N | Y | – |
| MD-2-11 | ERV-C-1 | LEVEL 2 | ERV-C-1 | – | – | I | ERV OSA | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | N | Y | – |
| MD-2-12 | ERV-C-1 | LEVEL 2 | ERV-C-1 | – | – | I | ERV EXHAUST | 20 | 8 | 20 | 8 | PARALLEL | Y | N | N | N | Y | – |
| MD-3-1 | ERV-R-1 | LEVEL 3 | ERV-R-1 | – | – | I | R.A. | 20 | 14 | 20 | 14 | PARALLEL | Y | N | N | Y | N | – |
| MD-3-2 | GAME/TECH 301G | LEVEL 3 | ERV-R-1 | – | – | I | DCV | 10R | – | 10R | – | PARALLEL | Y | N | N | Y | N | – |
| MD-3-3 | MUSIC 031F | LEVEL 3 | ERV-R-1 | – | – | I | DCV | 10R | – | 10R | – | PARALLEL | Y | N | N | Y | N | – |
| MD-3-4 | ART/STEM/OFFICE | LEVEL 3 | ERV-R-1 | – | – | I | DCV | 12R | – | 12R | – | PARALLEL | Y | N | N | Y | N | – |

1. E.C TO FURNISH AND INSTALL POWER WIRING AND DISCONNECT FOR DAMPER ACTUATOR POWER. C.C. SHALL COORDINATE WITH E.C. FOR POWER REQUIREMENTS.
2. DAMPER PROVIDED AND INSTALLED BY M.C.
3. DAMPER PROVIDED WITH ASSOCIATED EQUIPMENT AND FIELD INSTALLED BY M.C.
4. DAMPER PROVIDED WITH ASSOCIATED EQUIPMENT AND FACTORY INSTALLED.
5. DAMPER LEAKAGE CLASS BASED ON AMCA 500D. DAMPERS USED FOR BUILDING ENVELOPE ISOLATION SHALL BE LEAKAGE CLASS 1. ALL OTHER DAMPERS SHALL BE LEAKAGE CLASS II.
6. TRANSITIONS REQUIRED TO CONNECT DAMPER TO ASSOCIATED DUCT SHALL BE PROVIDED AND INSTALLED BY M.C.
7. DAMPER ACTUATOR SHALL BE FURNISHED AND INSTALLED BY THE CONTROLS CONTRACTOR. ALL POWER AND DISCONNECTS SHALL BE PROVIDED BY THE E.C.. LOW VOLTAGE POWER TO ACTUATOR SHALL BE INSTALLED BY THE CONTROLS CONTRACTOR.
8. DAMPER ACTUATOR IS PROVIDED WITH THE ASSOCIATED DAMPER. ALL POWER AND DISCONNECTS SHALL BE PROVIDED BY THE E.C..
9. ALL CONTROLS WIRING OF ACTUATOR AND MONITORING OF DAMPER POSITION, IF SPECIFIED, SHALL BE PROVIDED BY THE CONTROLS CONTRACTOR.

## ELECTRIC CABINET HEATER SCHEDULE (PROVIDED BY E.C.)

| TAG | LOCATION | MAKE | MODEL | K.W. | FAN CFM | FAN H.P. | ELECTRICAL VOLTAGE | ELECTRICAL F.L.A. | 2021 WSEC C403.1.4 EXCEPTION | CONT. VOLT. | WEIGHT LBS | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ECH-1-1 | JDS STAIR | KING | PAW2022 | 2.25 | 75 | – | 208/1 | 10.8 | 8 | – | 9.5 | 1, 2, 3 |
| ECH-1-2 | VEST 110 | KING | PAW1215 | 1.0 | 75 | – | 120/1 | 12.5 | 8 | – | 9.5 | 1, 2, 3 |
| ECH-1-3 | VEST 106 | KING | PAW1215 | 1.0 | 75 | – | 120/1 | 12.5 | 8 | – | 9.5 | 1, 2, 3 |
| ECH-1-4 | SE STAIR | KING | PAW1215 | 1.0 | 75 | – | 120/1 | 12.5 | 8 | – | 9.5 | 1, 2, 3 |
| ECH-1-5 | VEST 100 | KING | PAW2720 | 2.25 | 75 | – | 208/1 | 10.8 | 8 | – | 9.5 | 1, 2, 3 |

1. UNIT PROVIDED AND INSTALLED BY E.C.. POWER WIRING AND DISCONNECT FURNISHED AND INSTALLED BY E.C.
2. PROVIDED WITH UNIT MOUNTED T-STAT CONTROL.
3. SET HEATER TO 65 DEG. F.


**HOLADAY-PARKS, INC.**
*SMART Mechanical Solutions©*
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Building Controls • Service & Maintenance
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TUKWILA, WA 98168 • (206) 248-9700
HOLADAYPARKS.com
WA LICENSE NUMBER: HOLADPI379N0


MAXWELL GREENSTICK — STATE OF WASHINGTON — 52096 — REGISTERED PROFESSIONAL ENGINEER
06/04/2025

APPROVED FOR CONSTRUCTION PENDING CITY APPROVAL

3700 E MERCER WAY
BARNABIE POINT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 06/04/25 | BUILDING PERMIT |

04 JUNE 2025
BUILDING PERMIT

PROJECT: 64605

SCHEDULES

M7.03

ORIGINAL SHEET SIZE: 24" X 36"

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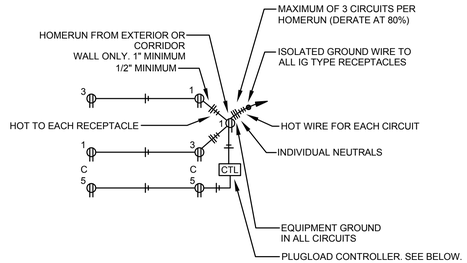
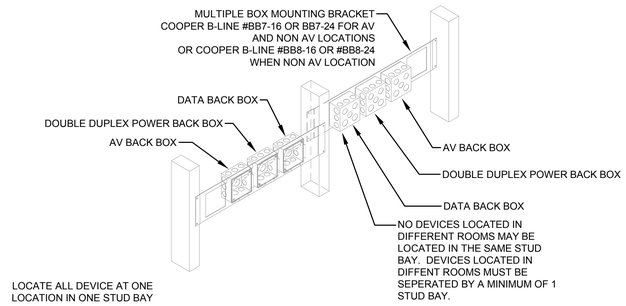


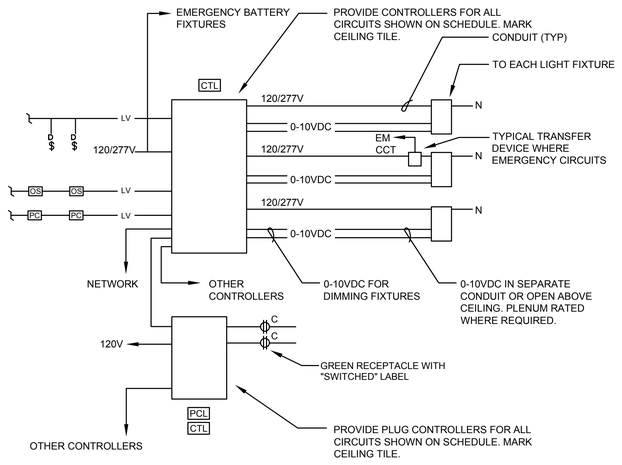

# TYPICAL RECEPTACLE CIRCUITING DETAIL

SCALE: NONE




# POWER, DATA AND AV ROUGH IN DETAIL

SCALE: NONE




# TYPICAL LIGHTING CONTROL DETAIL

SCALE: NONE

# LEGEND

- CONDUIT CONCEALED IN CEILING OR WALLS
- CONDUIT CONCEALED UNDERGROUND, UNDER FLOOR, OR IN WALL
- 3/4" CONDUIT. TICK MARKS INDICATE NUMBER OF #12 WIRES. NO TICK MARKS EQUALS 2#12. GROUND WIRE NOT SHOWN. PROVIDE GROUND WIRE IN ALL 120V AND ABOVE CIRCUITS.
- 3/4" CONDUIT. TICK MARKS INDICATE NUMBER OF #12 WIRES. NO TICK MARKS EQUALS 2#12. PROVIDE GROUND WIRE IN ALL 120V AND ABOVE CIRCUITS. DOT INDICATES ISOLATED GROUND WIRE.
- EXPOSED CONDUIT
- UNDER FLOOR DUCT WITH FLUSH ACTIVATIONS SHOWN
- EXISTING CONDUIT WITH NEW WIRES INDICATED BY TICK MARKS
- EXISTING CONDUIT
- HOME RUN TO DESTINATION INDICATED. 1" MINIMUM UNLESS NOTED OTHERWISE.
- RECESSED LIGHT FIXTURE, LETTERS DENOTE SWITCHING, PROVIDE BALLASTS ACCORDINGLY.
- SURFACE OR PENDANT MOUNTED FIXTURE
- FIXTURE WITH INTERNAL BATTERY BACKUP.
- RECESSED LIGHT FIXTURE
- WALL MOUNTED FIXTURE
- STEP LIGHT
- D — LED DRIVER
- DIRECTIONAL LIGHT
- VANITY LIGHT, WALL MOUNT
- WALL SCONCE FIXTURE
- POLE TOP LIGHT FIXTURE LIGHT FIXTURE
- POLE LIGHT
- EXIT SIGN LIGHT FIXTURE TYPE X, EXCEPT AS NOTED
- $a — WALL SWITCH, 1-POLE (SWITCH LEG INDICATED WHERE REQUIRED)
- $2 — WALL SWITCH, 2-POLE
- $3 — WALL SWITCH, 3-WAY
- $4 — WALL SWITCH, 4 WAY
- $D — DIGITAL SWITCH
- $DK — DIGITAL SWITCH KEY SWITCH
- $K — WALL SWITCH, KEYED OPERATED, TYPE AS INDICATED
- $K3 — WALL SWITCH, 3-WAY, KEYED OPERATED, TYPE AS INDICATED
- $M — MANUAL MOTOR STARTING SWITCH
- $P — WALL SWITCH WITH PILOT LIGHT
- $R — REMOTE SWITCH
- $OS — WALL SWITCH WITH INTEGRAL OCCUPANCY SENSOR
- OS — OCCUPANCY SENSOR
- OSWM — OCCUPANCY SENSOR WALL MOUNT
- PC — PHOTO CELL
- PCWM — PHOTO CELL WALL MOUNT
- CTL PCL — PLUG LOAD CONTROLLER
- CTL — LIGHTING CONTROLLER
- XXX XXXX — LIGHTING FIXTURE TYPE DESIGNATOR, SEE LIGHT FIXTURE SCHEDULE
- DUPLEX RECEPTACLE, TAMPERPROOF
- C — DUPLEX RECEPTACLE, TOP OUTLET CONTROLLED BOTTOM OUTLET UNCONTROLLED, TAMPERPROOF
- M — DUPLEX RECEPTACLE AT MONITOR
- DUPLEX RECEPTACLE TAMPERPROOF ABOVE COUNTER
- C — DOUBLE DUPLEX TAMPERPROOF RECEPTACLE ONE DUPLEX CONTROLLED, OTHER DUPLEX UNCONTROLLED MOUNTED ABOVE COUNTER
- C — DOUBLE DUPLEX TAMPERPROOF RECEPTACLE ONE DUPLEX CONTROLLED, OTHER DUPLEX UNCONTROLLED
- DOUBLE DUPLEX RECEPTACLE, TAMPERPROOF
- IG — RECEPTACLE ISOLATED GROUND TYPE, TAMPERPROOF
- GFI — DUPLEX TAMPERPROOF RECEPTACLE GFI TYPE
- WP — WEATHERPROOF DUPLEX RECEPTACLE (GFI TYPE), TAMPERPROOF
- SPLIT WIRED TAMPERPROOF RECEPTACLE
- 1Ø SPECIAL RECEPTACLE AS NOTED
- 3Ø SPECIAL RECEPTACLE AS NOTED
- PUSHBUTTON SWITCH
- A — ADA DOOR ACTUATOR
- EQUIPMENT CONNECTION
- MOTOR CONNECTION
- DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- MANUAL MOTOR STARTER
- MAGNETIC MOTOR STARTER
- COMBINATION STARTER
- VFD — VARIABLE FREQUENCY DRIVE
- ECM — ECM CONTROLLER
- FC — FAN CONTROLLER
- THERMOSTAT
- J — JUNCTION BOX
- B — BLIND CONNECTION
- CF — CEILING FAN CONNECTION

# LEGEND

- V — VOLUME CONTROL
- AV1 AV2 AVM — AV SYSTEM OUTLETS
- S — CEILING INTERCOM SPEAKER
- SH — WALL MOUNTED INTERCOM SPEAKER
- SS SS2 S — AV SYSTEM SPEAKER
- S SH SS2H — WALL MOUNTED AV SYSTEM SPEAKER
- DIGITAL CLOCK
- DIGITAL CLOCK/SPEAKER COMBINATION BAFFLE
- SB — SCOREBOARD
- CS — INTERCOM SYSTEM CALL SWITCH
- C — FUTURE COMPUTER OUTLET WITH 1" CONDUIT TO ABOVE ACCESSIBLE CEILING
- DATA OUTLET (NUMBER = NUMBER OF RJ45 JACKS, NO NUMBER = 1) WITH 1.25" CONDUIT TO ABOVE CEILING
- WAP — WIRELESS ACCESS POINT
- V — VIDEO SURVEILLANCE OUTLET AT CAMERA
- A — ACCESS CONTROL OUTLET - 1 DATA CABLE AND 4#18 POWER CABLE TO MDF/IDF
- I — INTERCOM DATA OUTLET
- AMP — VOICE ENHANCEMENT SYSTEM AMP
- WM — WIRELESS MIC ANTENNA
- AL — ASSISTED LISTENING ANTENNA
- REX — REQUEST TO EXIT
- CR — CARD READER
- CRJ — CARD READER, JAMB MOUNTED.
- DS — DOOR SWITCH
- MS — MOTION SENSOR
- MSH — MOTION SENSOR WALL MOUNT
- REQUEST TO EXIT IN DOOR HARDWARE
- K — SECURITY KEYPAD
- EL — ELECTRIC LOCK
- FIRE ALARM SPEAKER/STROBE
- F — FIRE ALARM PULL STATION
- FIRE ALARM ADA STROBE WALL MOUNTED
- FIRE ALARM ADA STROBE
- S — SMOKE DETECTOR/SENSOR
- SD — DUCT SMOKE DETECTOR
- HEAT DETECTOR, FIXED TEMPERATURE
- HEAT DETECTOR/SENSOR (THERMAL DETECTION)
- D — DOOR HOLDER-PROVIDED BY HARDWARE SUPPLIER. CONNECTION BY ELEC.
- SD — SMOKE DAMPER CONNECTION
- SD — FIRE ALARM SMOKE DAMPER RELAY, SEE
- SPRINKLER CONNECTION
- EXIST DEVICE/FIXTURE AS INDICATED
- EXISTING PANCAKE MOLD WITH INTEGRAL DEVICES AS INDICATED.
- EXIST DEVICE/FIXTURE AS INDICATED TO BE REMOVED
- CIRCUIT BREAKER
- SWITCH
- FUSED SWITCH
- FUSE
- TRANSFORMER
- GROUNDING PER CODES
- BUS TAP
- 208V OR 240V PANEL
- LVR
- 480V PANEL
- T — TRANSFORMER
- FOIC — FURNISHED BY OWNER INSTALLED BY CONTRACTOR
- FOIO — FURNISHED BY OWNER INSTALLED BY OWNER
- GFI — GROUND FAULT CIRCUIT INTERRUPTER
- IG — ISOLATED GROUND
- WP — WEATHERPROOF

# LEGEND

- A — ACCESS CONTROL CIRCUIT AS REQUIRED. PROVIDE IN RACEWAY IN WALLS AND ABOVE NON ACCESSIBLE CEILINGS.
- AV — AV SYSTEM CIRCUITRY. SEE AV DIAGRAMS.
- CT — CABLE TRAY
- FA — FIRE ALARM SYSTEM CIRCUITRY AS REQUIRED BY MANUFACTURER IN METALLIC RACEWAY
- I — INTERCOM SYSTEM CIRCUITRY. PROVIDE IN RACEWAY IN WALLS AND ABOVE NON-ACCESSIBLE CEILINGS
- LV — LOW VOLTAGE CIRCUITRY AS REQUIRED BY MANUFACTURER IN RACEWAY WHERE IN WALLS, ABOVE NON-ACCESSIBLE CEILINGS OR EXPOSED.
- S — SECURITY SYSTEM CIRCUITRY AS REQUIRED BY MANUFACTURER. ROUTE IN RACEWAYS WHERE IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS.
- T — DATA AND VOICE CABLES. QUANTITY AND TYPE AS INDICATED BY OUTLET
- A / B — DETAIL INDICATOR WITH SHEET WHERE DRAWN INDICATED
- SECTION INDICATOR
- XXXX — AVAILABLE FAULT CURRENT AS INDICATED
- 1 — FLAG NOTE

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anjali grant design LLC

KEVIN E. WARTELLE — STATE OF WASHINGTON — 44109 — REGISTERED PROFESSIONAL ENGINEER

3700 E MERCER WAY
BARNABIE POINT PROJECT

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | | 6 JUNE 2025 BUILDING PERMIT |

PROJECT: 23-101

LEGEND

E-100

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## FLAG NOTES:

1. INSTALLED DOUBLE EV EV SHARED LOAD MANAGEMENT CHARGING STATION
2. FUTURE DOUBLE EV CHARGING STATION. LOCATION SHALL BE EV READY WITH CONDUIT AND WIRE INSTALLED.
3. FUTURE DOUBLE EV CHARGING STATION. LOCATION SHALL BE EV CAPABLE WITH CONDUIT INSTALLED
4. PROVIDE 1.25" CONDUIT TO EXISTING POWER POLES FOR OWNER PROVIDED POE CAMERAS.


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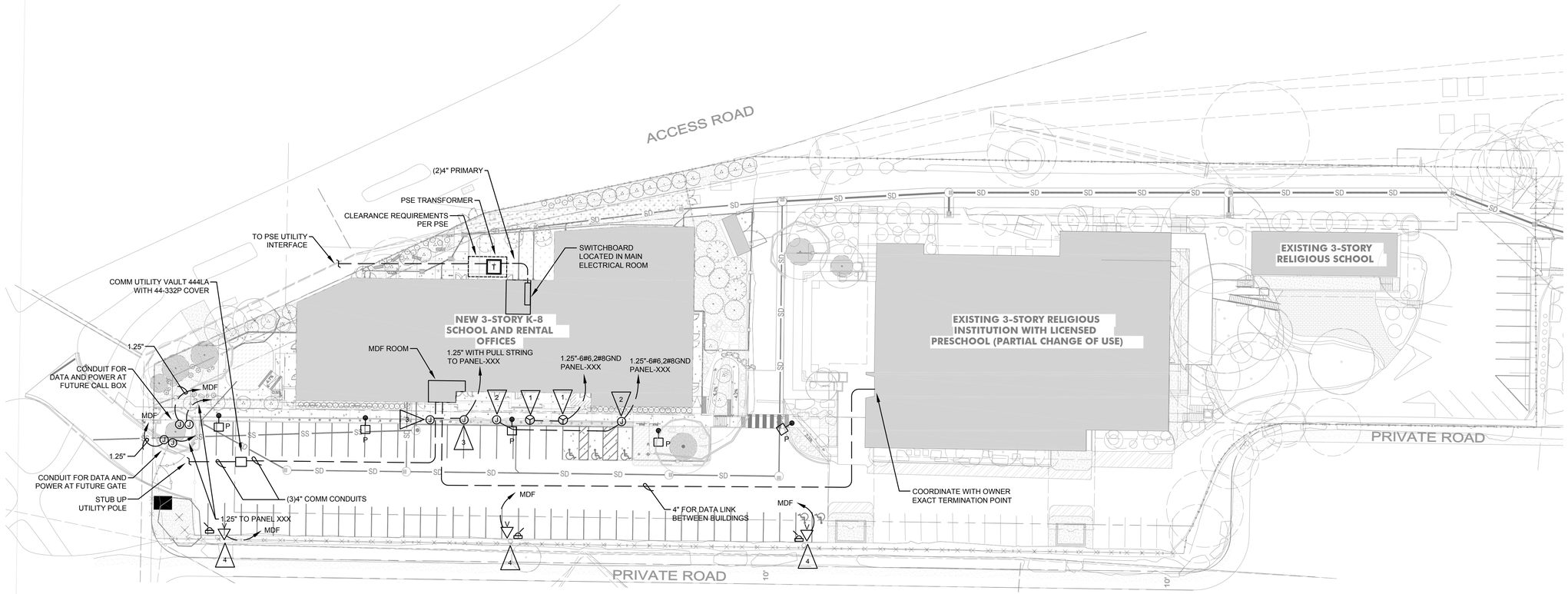


1 SITE PLAN - ELECTRICAL
SCALE: 1" = 30'-0"

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SITE PLAN - ELECTRICAL

E-101

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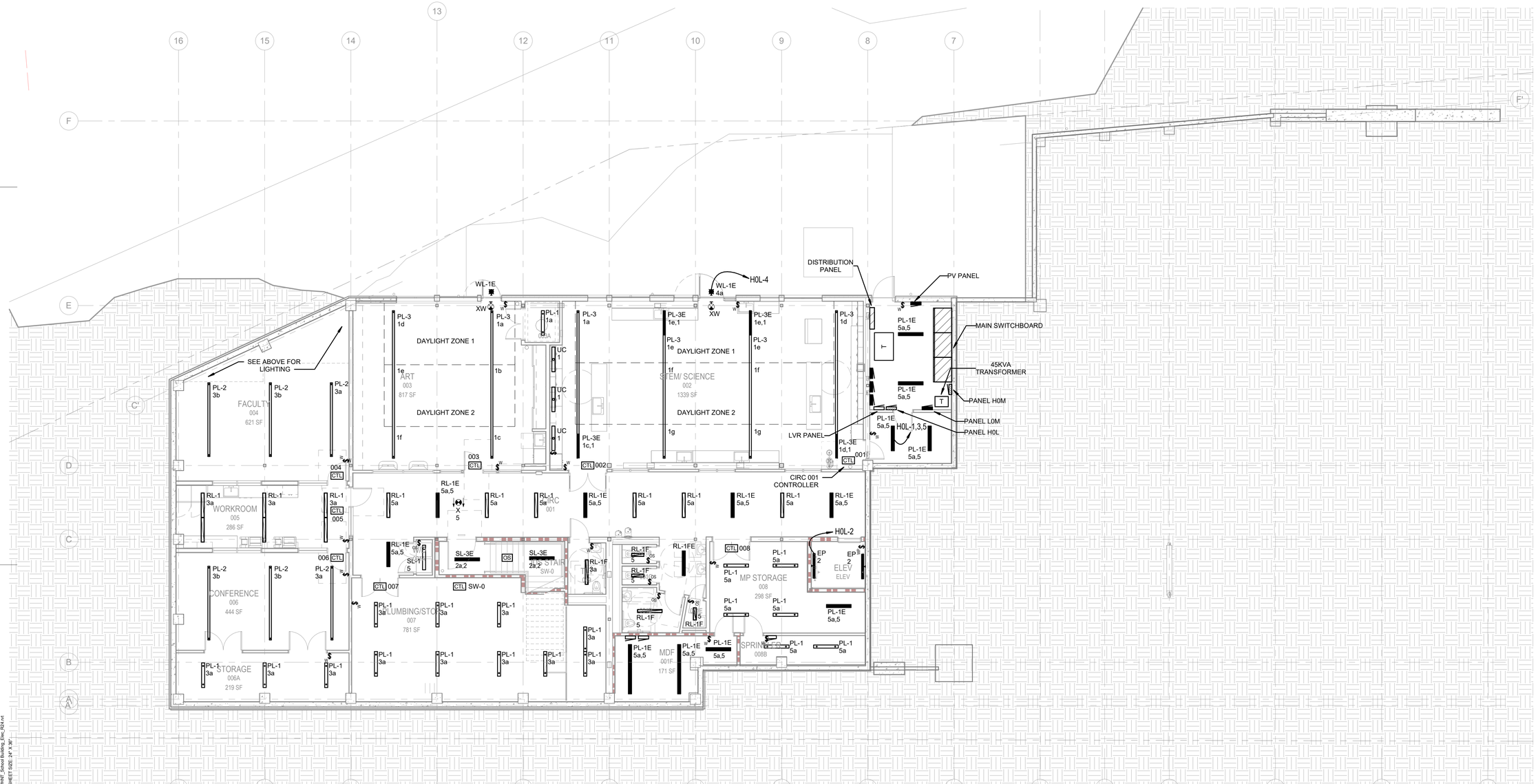


1 LEVEL B01 FLOOR PLAN - LIGHTING
1/8" = 1'-0"

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B01 FLOOR PLAN - LIGHTING

E-200

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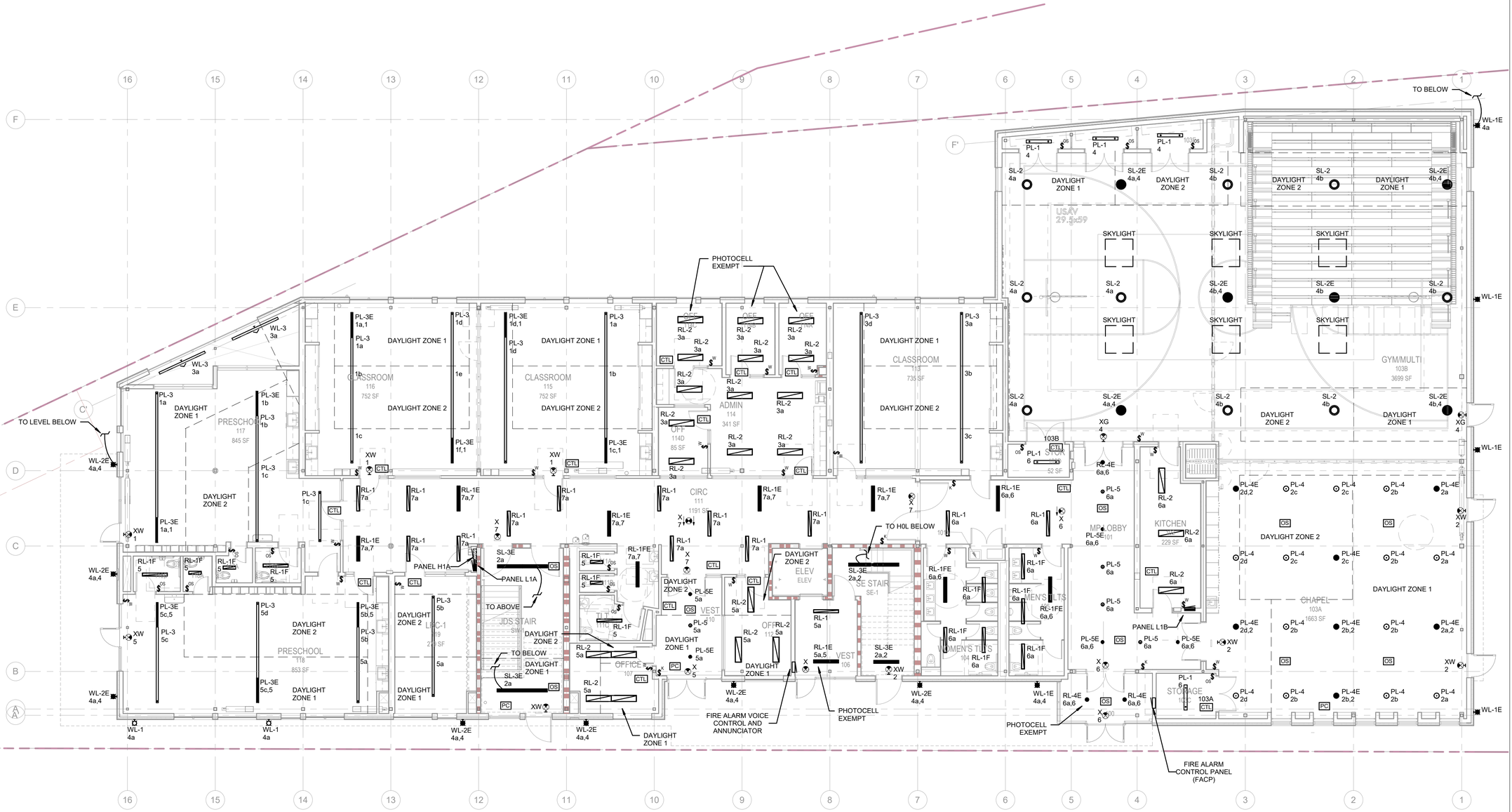


1 LEVEL 01 FLOOR PLAN - LIGHTING
1/8" = 1'-0"

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LEVEL 01 FLOOR PLAN - LIGHTING

E-201

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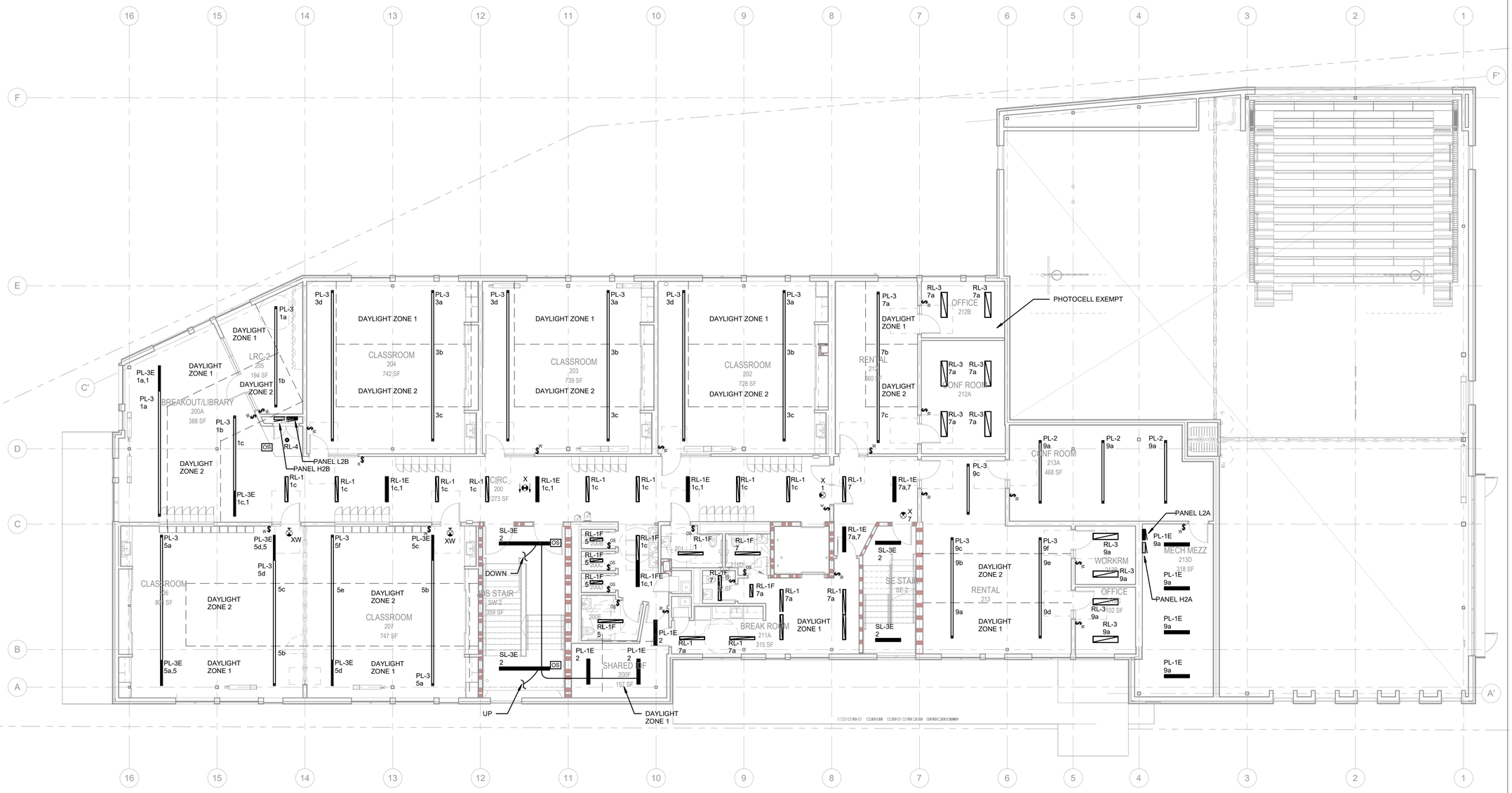


1 LEVEL 02 FLOOR PLAN - LIGHTING
1/8" = 1'-0"

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LEVEL 02 FLOOR PLAN - LIGHTING

E-202

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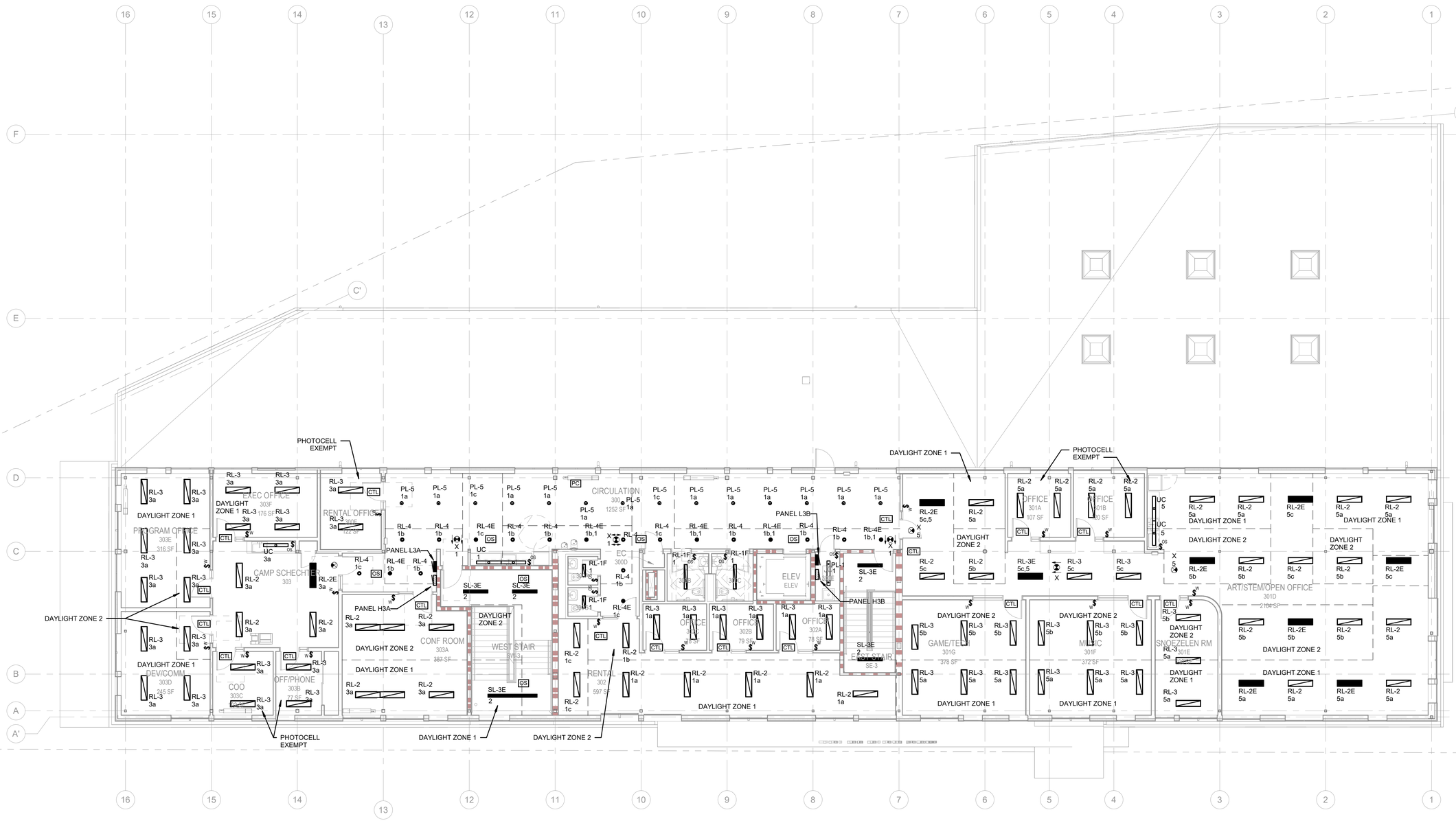
PROJECT: 23-101

LEVEL 03 FLOOR PLAN - LIGHTING

E-203




1 LEVEL 03 FLOOR PLAN - LIGHTING
1/8" = 1'-0"

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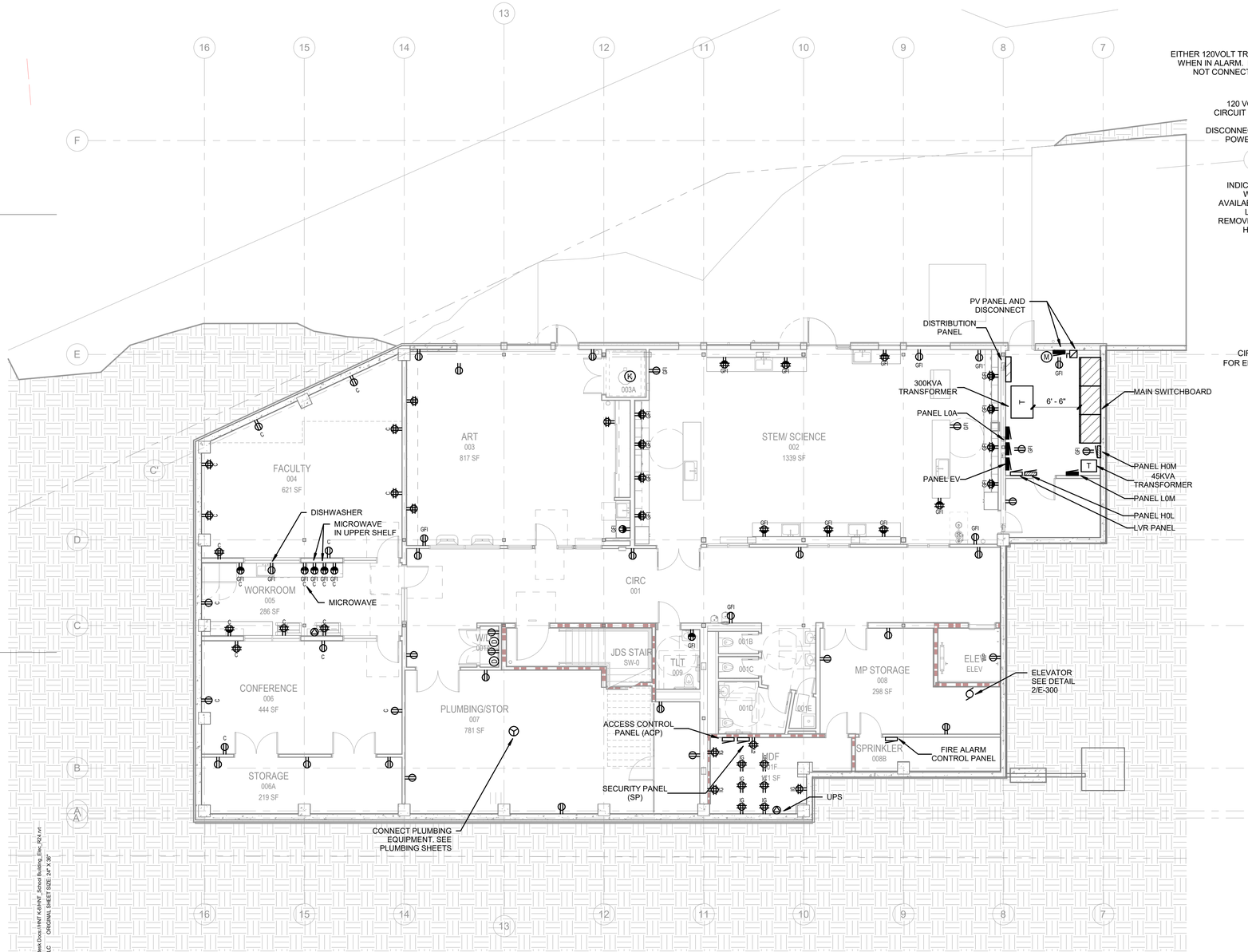
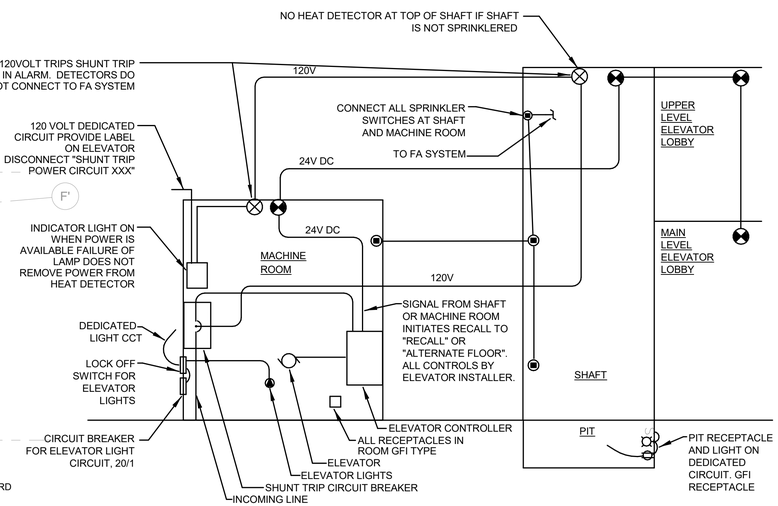



## 1 LEVEL B01 FLOOR PLAN - POWER
1/8" = 1'-0"




## 2 ELEVATOR DETAIL
1/8" = 1'-0"

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B01 FLOOR PLAN - POWER

E-300

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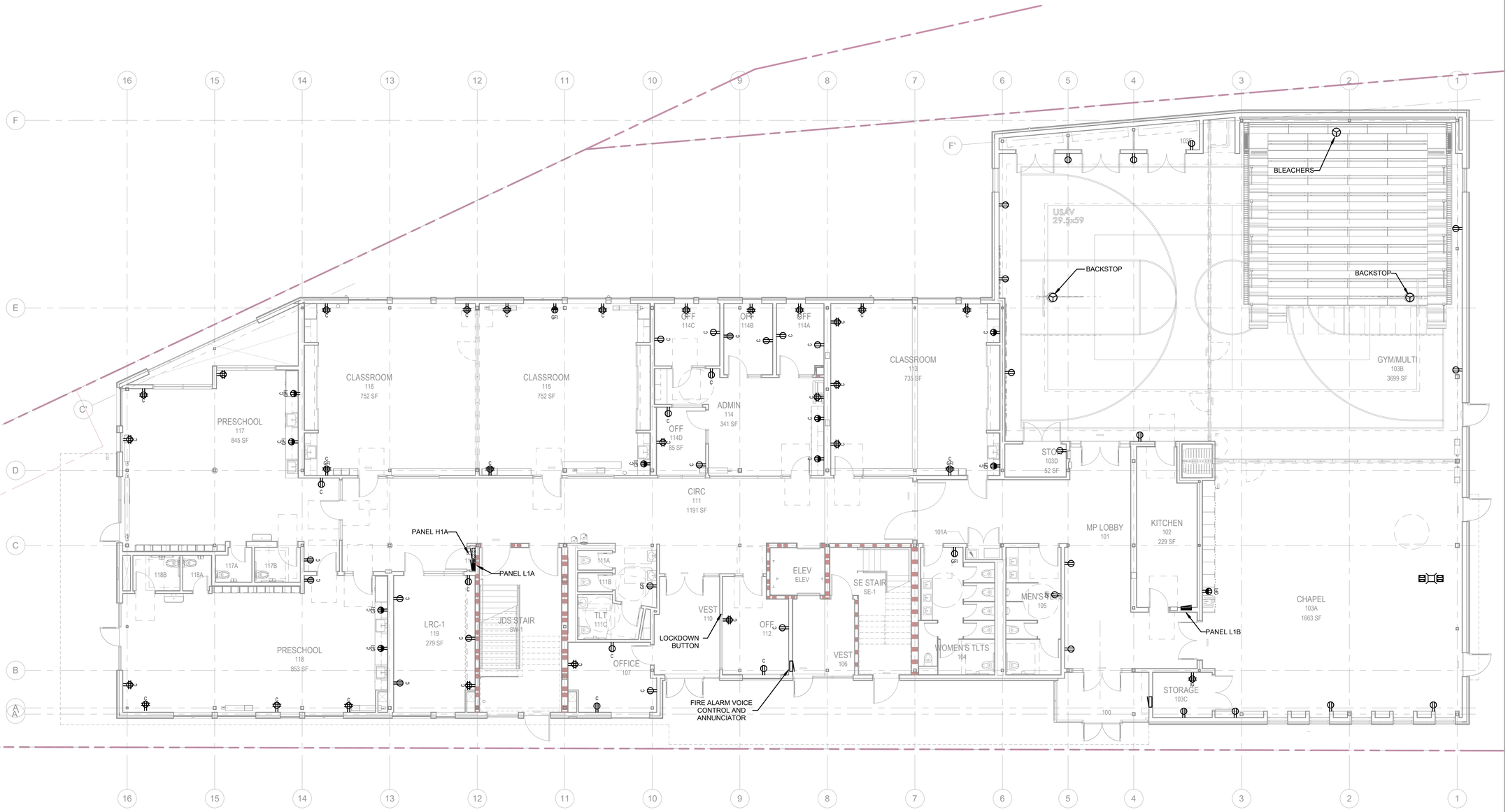


1 LEVEL 01 FLOOR PLAN - POWER
1/8" = 1'-0"

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PROJECT: 23-101

LEVEL 01 FLOOR PLAN - POWER

E-301

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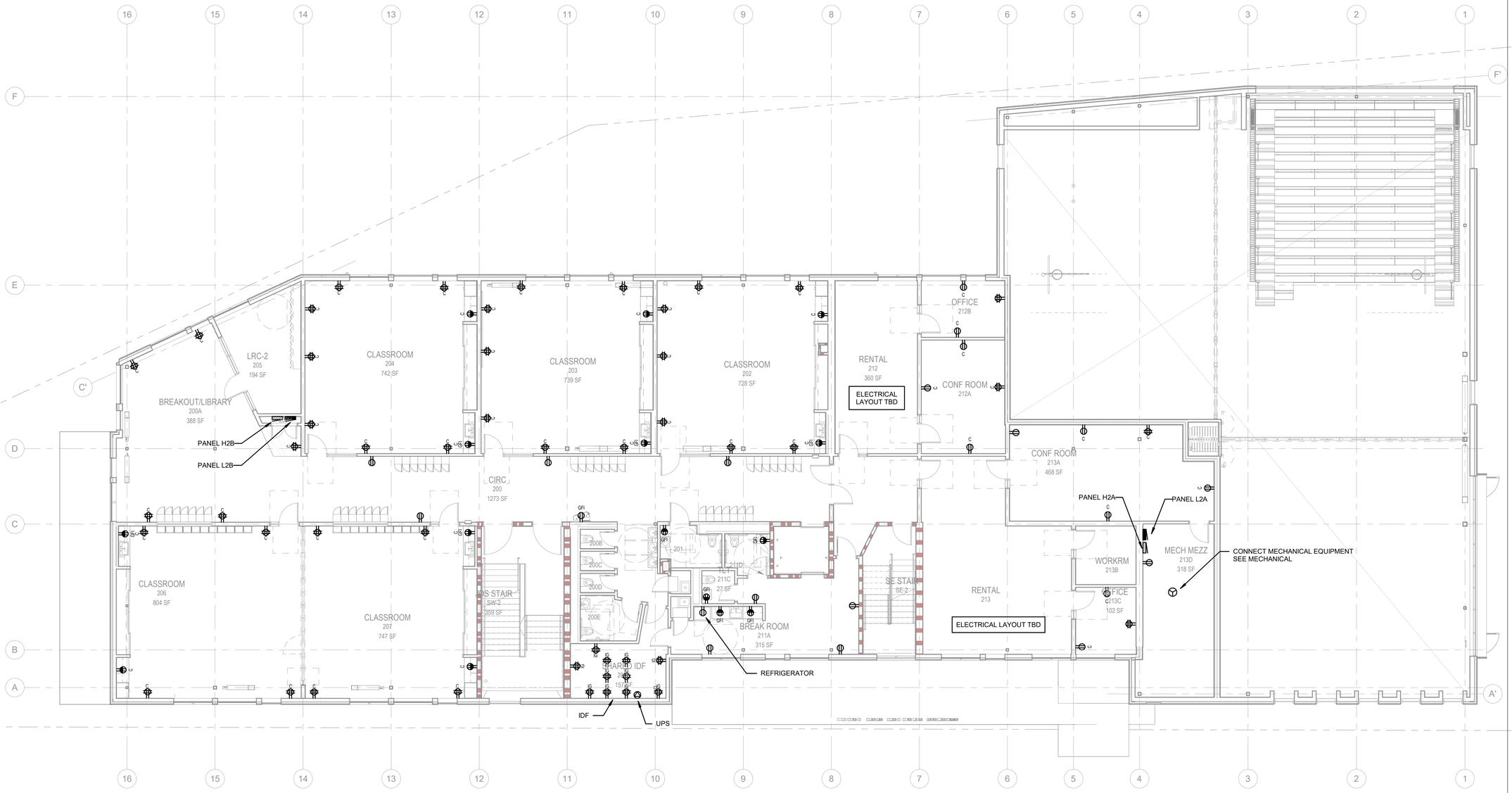


1 LEVEL 02 FLOOR PLAN - POWER
1/8" = 1'-0"

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BARNABIE POINT PROJECT

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LEVEL 02 FLOOR PLAN - POWER

E-302

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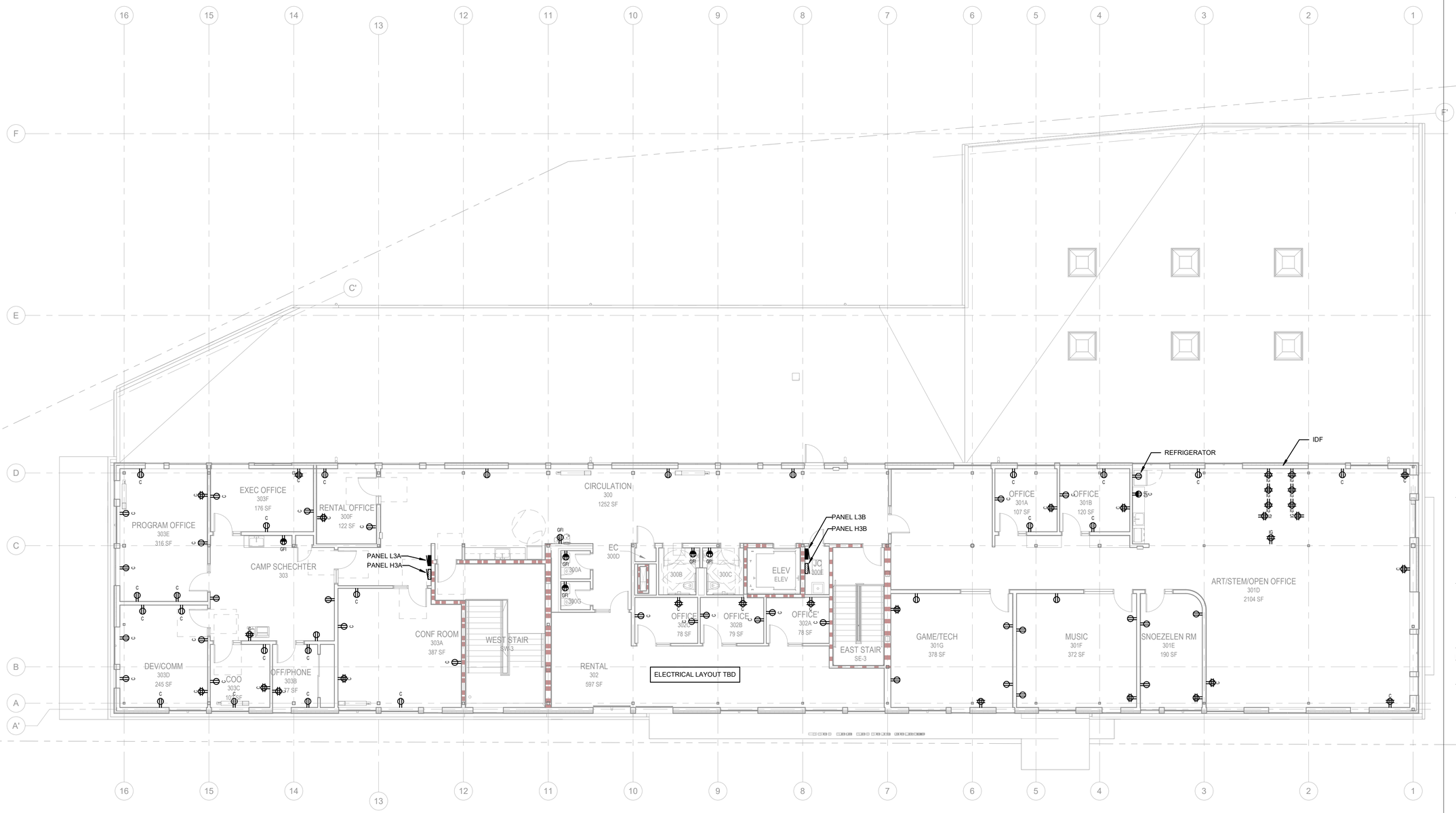


1 LEVEL 03 FLOOR PLAN - POWER
1/8" = 1'-0"

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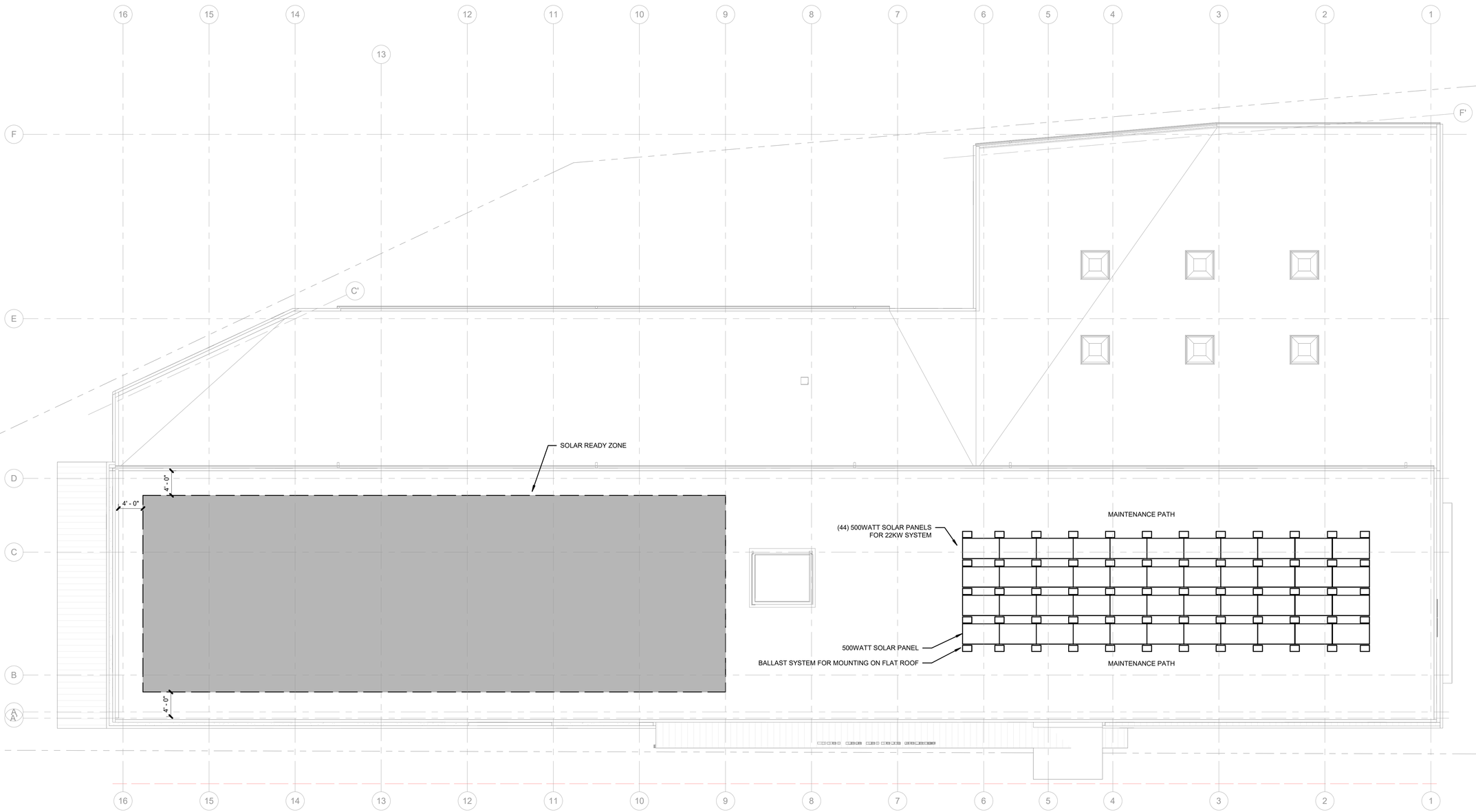
PROJECT: 23-101

LEVEL 03 FLOOR PLAN - POWER

E-303

## SHEET NOTE:

PROVIDE FULLY IN STALLED SOLAR SYSTEM SIZED BASED ON BUILDING SQUARE FOOTAGE. 43,302SQFT X 0.5 = 21,651 WATT SOLAR SYSTEM MINIMUM. PROVIDE SOLAR READY ZONE ON 40% OF ROOF AREA. MAINTAIN SPACE FOR 4' PERIMETER PATHWAYS AROUND EDGES OF ROOF. SEE ROOF PLAN FOR PROPOSED AREAS.




1 ROOF PLAN - ELECTRICAL
1/8" = 1'-0"

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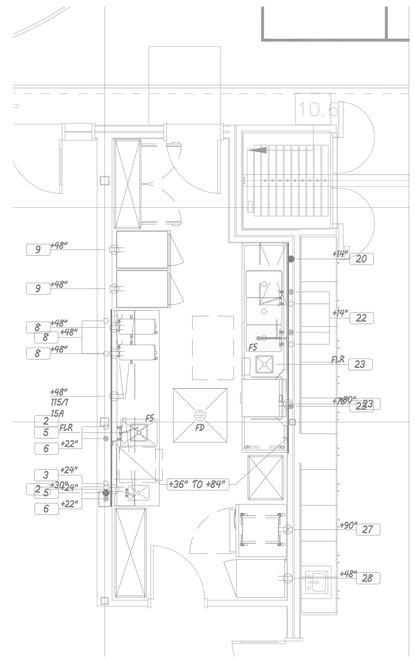
ROOF PLAN - POWER

E-304

| Item No | PROVIDED BY | | | Quantity | Description | Manufacturer / Model # | ELECTRICAL | | | | | PLUMBING | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | KEC | GC | OWNER | | | | KW | Amps | HP | Voltage | Phase | Connection | Hot | Cold | Waste | |
| 1 | X | | | 1 | DRY STORAGE SHELVING | OLYMPIC CHROME WIRE | | | | | | | | | | |
| 2 | X | | | 1 | ICE MACHINE | HOSHIZAKI KM-116BAJ | | 5.5 | | 115 | 1 | DCO | | | 1 1/2" | INDIRECT WASTE, CONNECT TO ITEM #3 |
| 3 | X | | | 1 | WATER FILTRATION SYSTEM | HOSHIZAKI H9320-51 | | | | | | | | 3/4" | | |
| 4 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 5 | X | | | 1 | STAINLESS STEEL TABLE WITH PREP / HAND SINK | CUSTOM STAINLESS STEEL | | | | | | | | | 1 1/2" | INDIRECT WASTE / DIRECT WASTE |
| 6 | X | | | 2 | FAUCET | T&S B-231 / B-0314 | | | | | | | 1/2" | 1/2" | | |
| 7 | X | | | 2 | STAINLES STEEL WALL SHELF | CUSTOM STAINLESS STEEL | | | | | | | | | | |
| 8 | | | X | 2 | COFFEE BREWER | OWNER | | X | | 115 | 1 | DCO | | 1/2" | | VERIFY REQUIREMENTS WITH OWNER |
| 9 | X | | | 2 | MOBILE HEATED CABINET | CRES COR CO-151-F-1818D | | 39.0 | | 208 | 1 | SCO | | | | NEMA 6-50P |
| 10 | X | | | 1 | WIRE SHELVING UNIT | OLYMPIC CHROME WIRE | | | | | | | | | | |
| 11 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 12 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 13 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 14 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 15 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 16 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 17 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 18 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 19 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 20 | X | | | 1 | SOILED DISH TABLE WITH THREE COMPARTMENT SINK | JOHN BOOS DT3B18244-2D18L | | | | | | | | | 2" | DIRECT WASTE |
| 21 | X | | | 1 | SLANT RACK SHELF | JOHN BOOS PB-SRW-42 | | | | | | | | | | |
| 22 | X | | | 2 | PRE-RINSE FAUCET | T&S B-0133-12CRBJST | | | | | | | 1/2" | 1/2" | | |
| 23 | X | | | 1 | DISHWASHER | JACKSON CONSERVER XL-HH | | 10.0 | | 120 | 1 | DCO | | | 2" | INDIRECT WASTE, VERIFY REQUIREMENTS WITH OWNER |
| 24 | | X | | 1 | GREASE INTERCEPTOR | GENERAL CONTRACTOR | | | | | | | | | | |
| 25 | X | | | 1 | CLEAN DISH TABLE | JOHN BOOS JDTC-20-24R | | | | | | | | | | |
| 26 | X | | | 1 | CLEAN DISH STORAGE SHELVING | OLYMPIC CHROME GREEN | | | | | | | | | | |
| 27 | X | | | 1 | REACH-IN REFRIGERATOR | DELFIELD 6025XL-S | | 4.2 | | 115 | 1 | DCO | | | | NEMA 5-15P |
| 28 | X | | | 1 | ROLL IN REFRIGERATOR | DELFIELD GARRI1P-S | | 6.0 | | 115 | 1 | DCO | | | | NEMA 5-15P |




1 KITCHEN PLAN - ELECTRICAL
SCALE: 1/4" = 1'-0"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KITCHEN PLAN - ELECTRICAL

E-305


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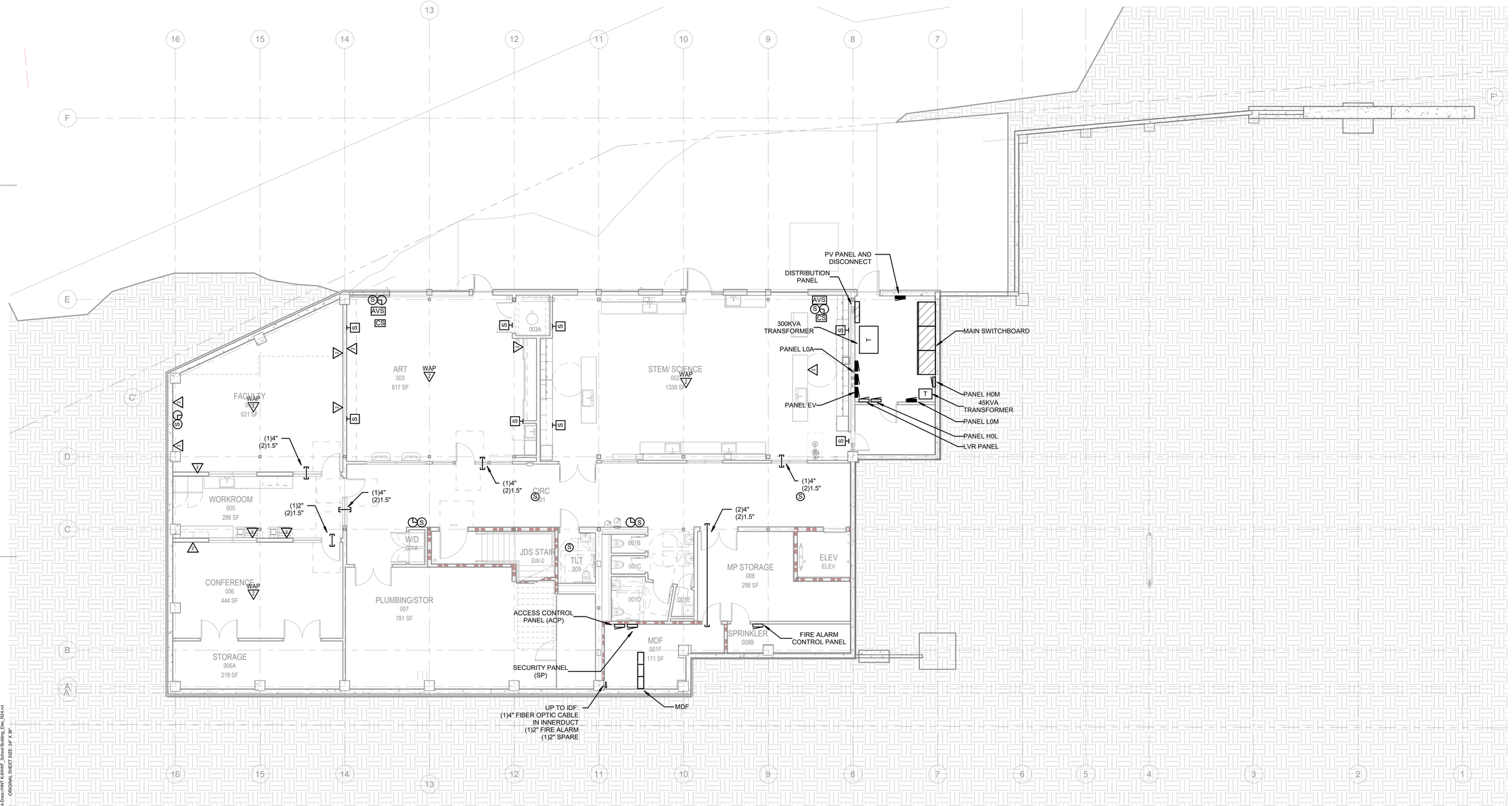


1 LEVEL B01 FLOOR PLAN - COMM
1/8" = 1'-0"

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LEVEL 01 FLOOR PLAN - COMM

E-400

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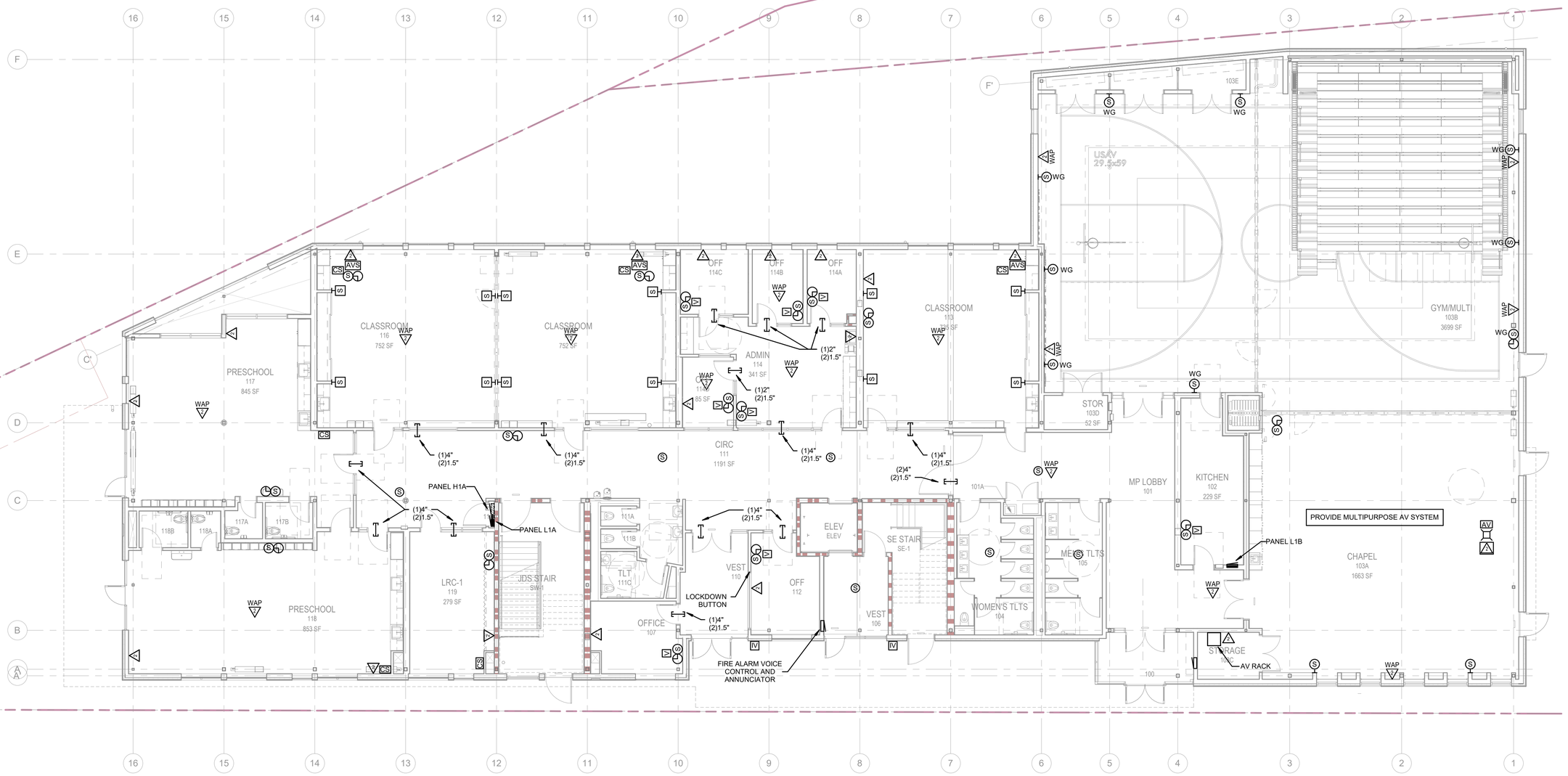


1 LEVEL 01 FLOOR PLAN - COMM
1/8" = 1'-0"

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B01 FLOOR PLAN - COMM

E-401

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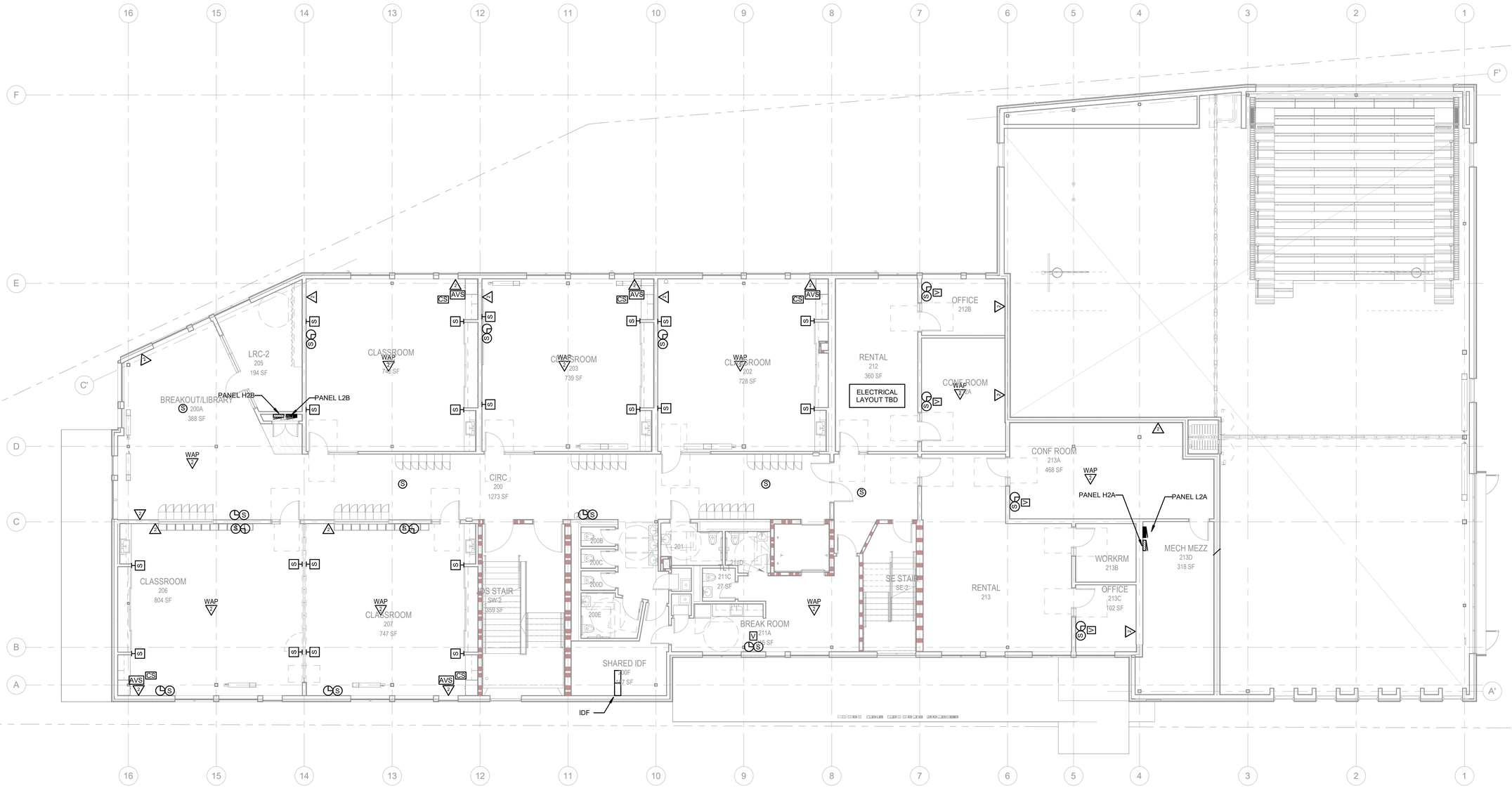


1 LEVEL 02 FLOOR PLAN - COMM
1/8" = 1'-0"

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| | 6 JUNE 2025 | BUILDING PERMIT |

PROJECT: 23-101

LEVEL 02 FLOOR PLAN - COMM

E-402

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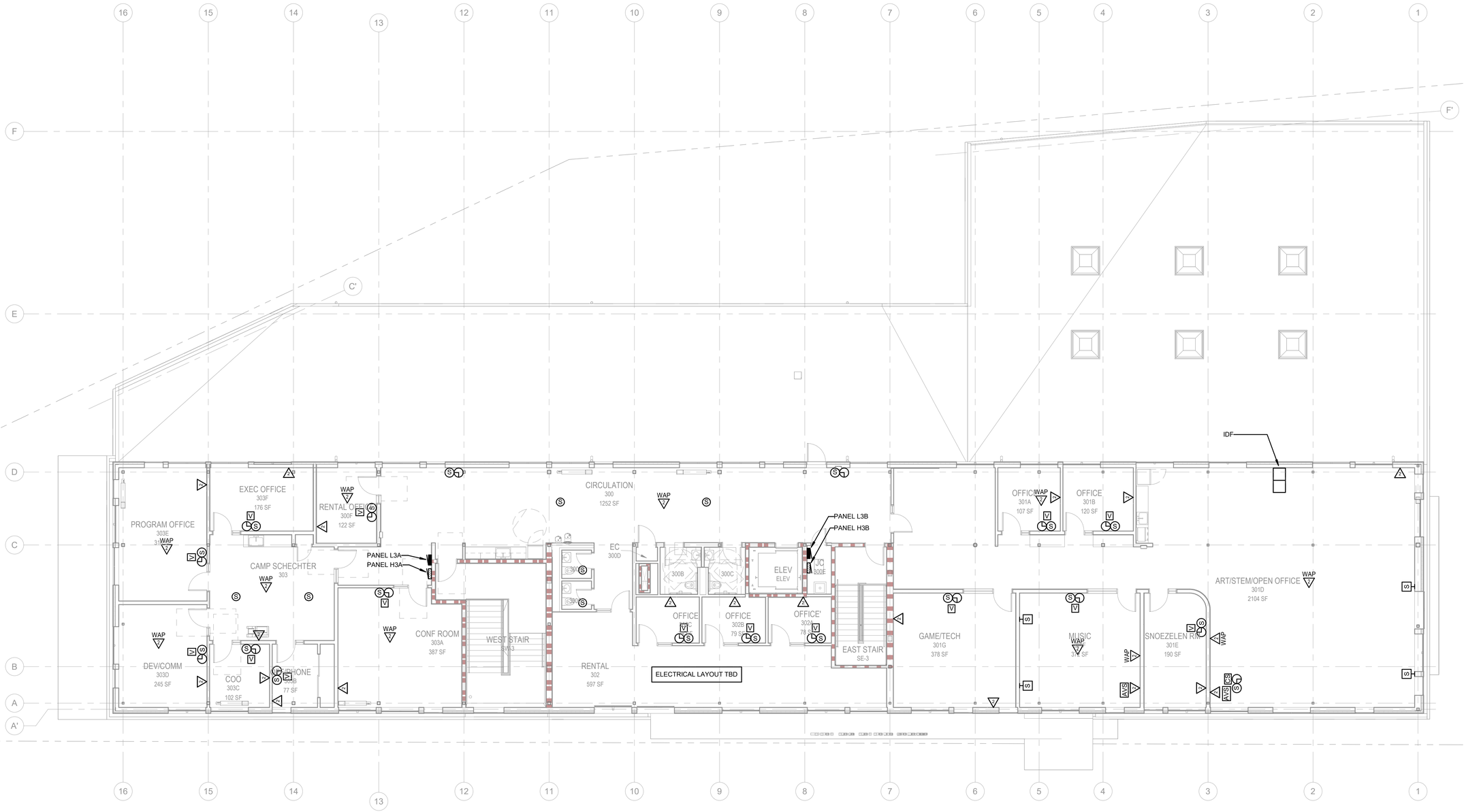


1 LEVEL 03 FLOOR PLAN - COMM
1/8" = 1'-0"

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PROJECT: 23-101

LEVEL 03 FLOOR PLAN - COMM

E-403

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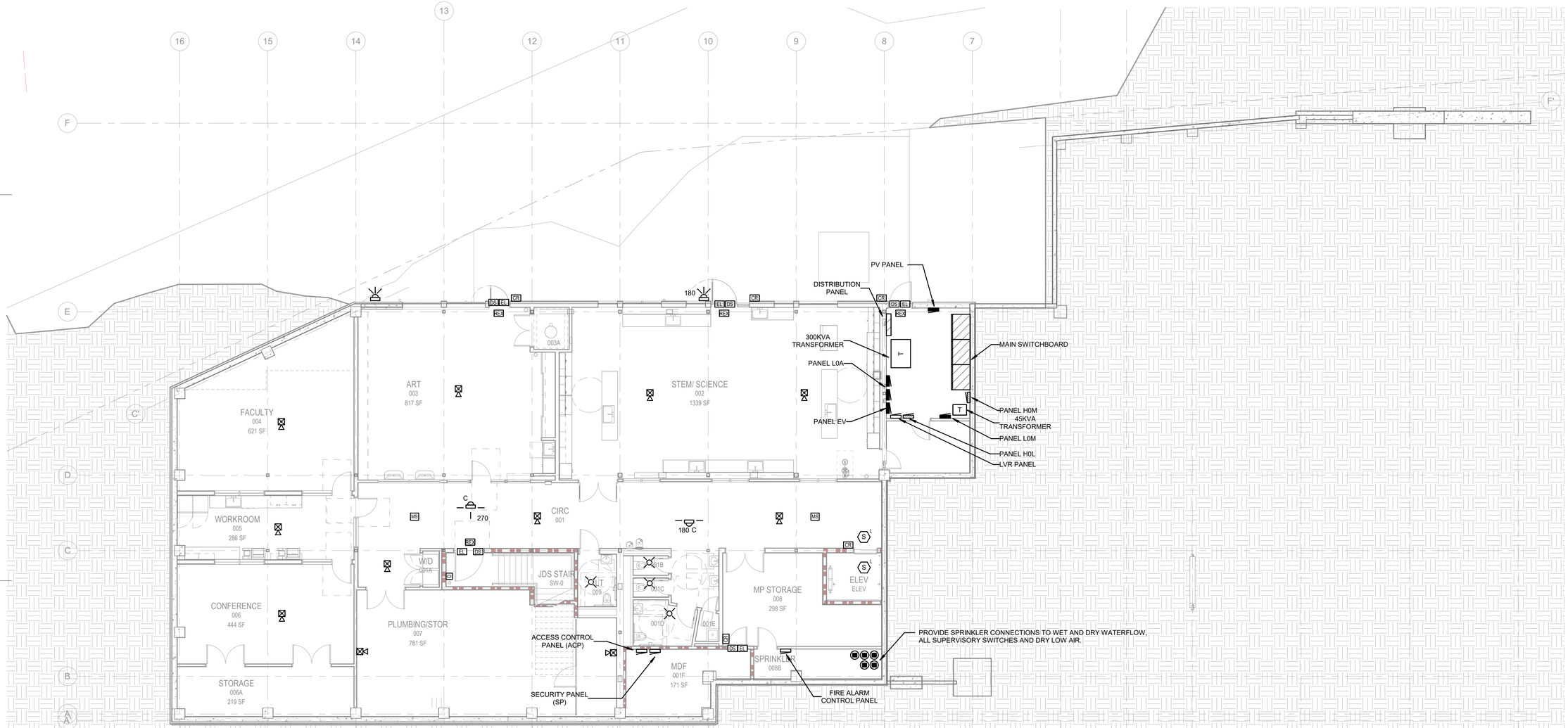


1 LEVEL B01 FLOOR PLAN - ESS
1/8" = 1'-0"

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PROJECT: 23-101

B01 FLOOR PLAN - ESS

E-500

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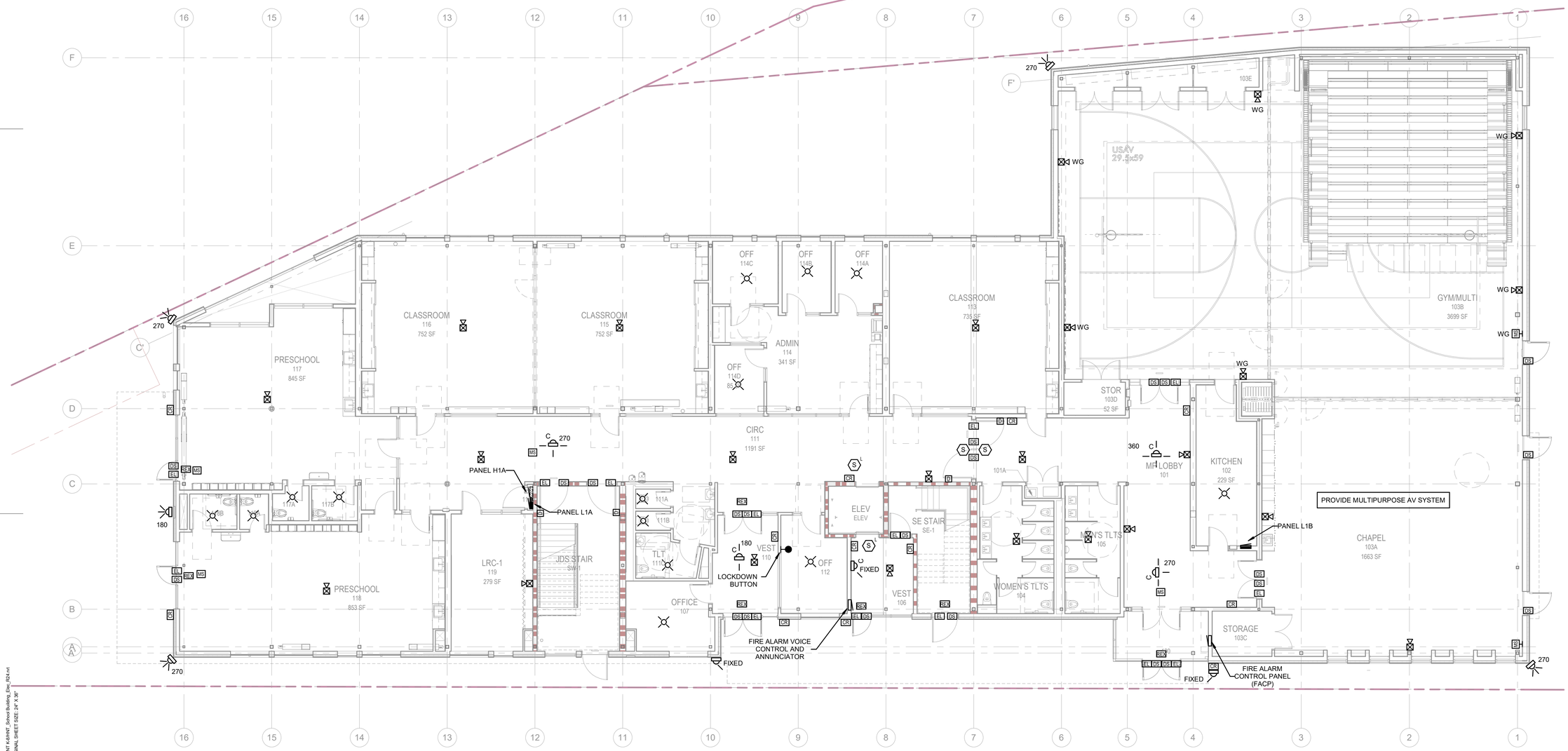


1 LEVEL 01 FLOOR PLAN - ESS
1/8" = 1'-0"

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LEVEL 01 FLOOR PLAN - ESS

E-501

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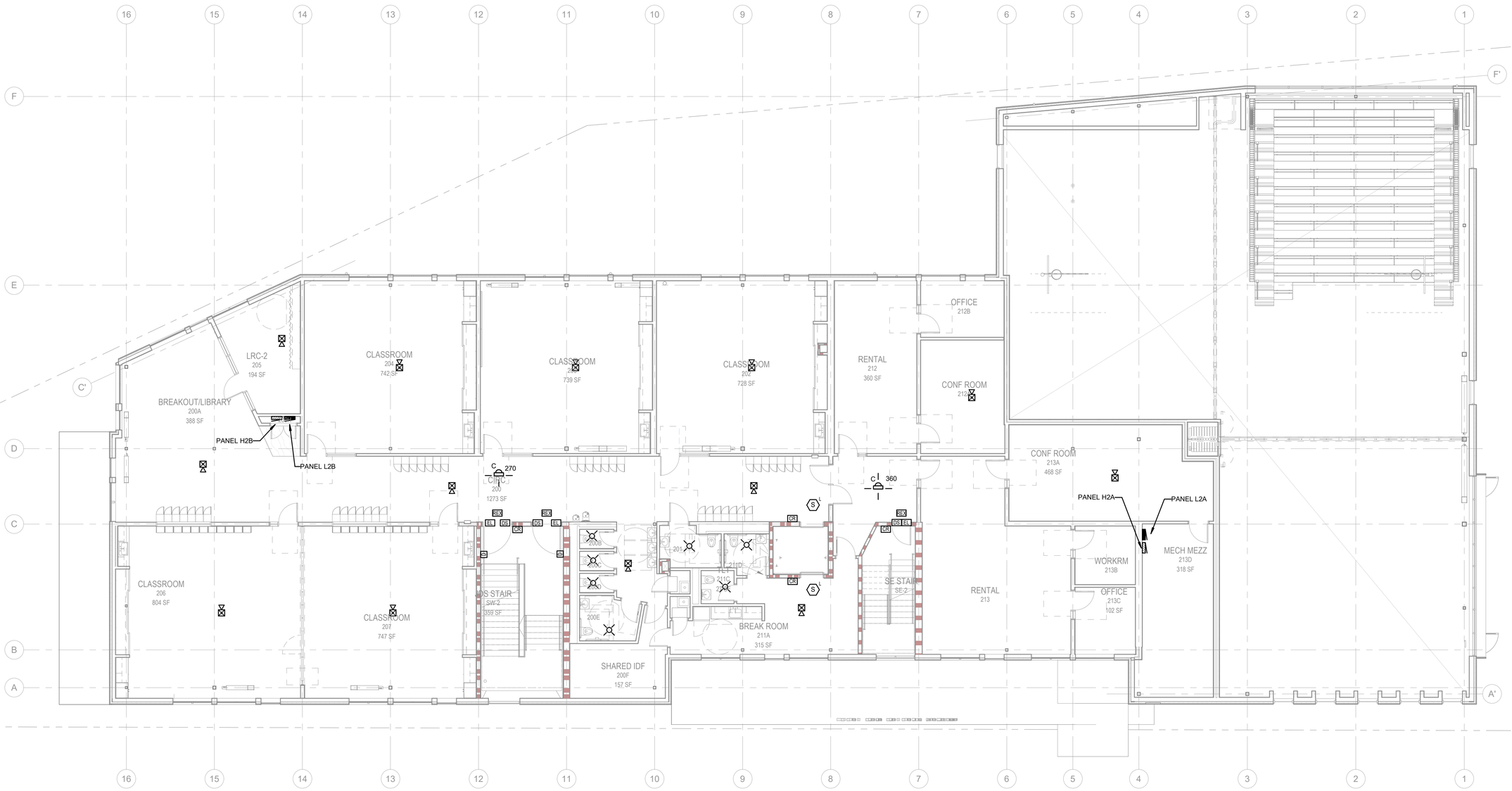


1 LEVEL 02 FLOOR PLAN - ESS
1/8" = 1'-0"

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LEVEL 02 FLOOR PLAN - ESS

E-502

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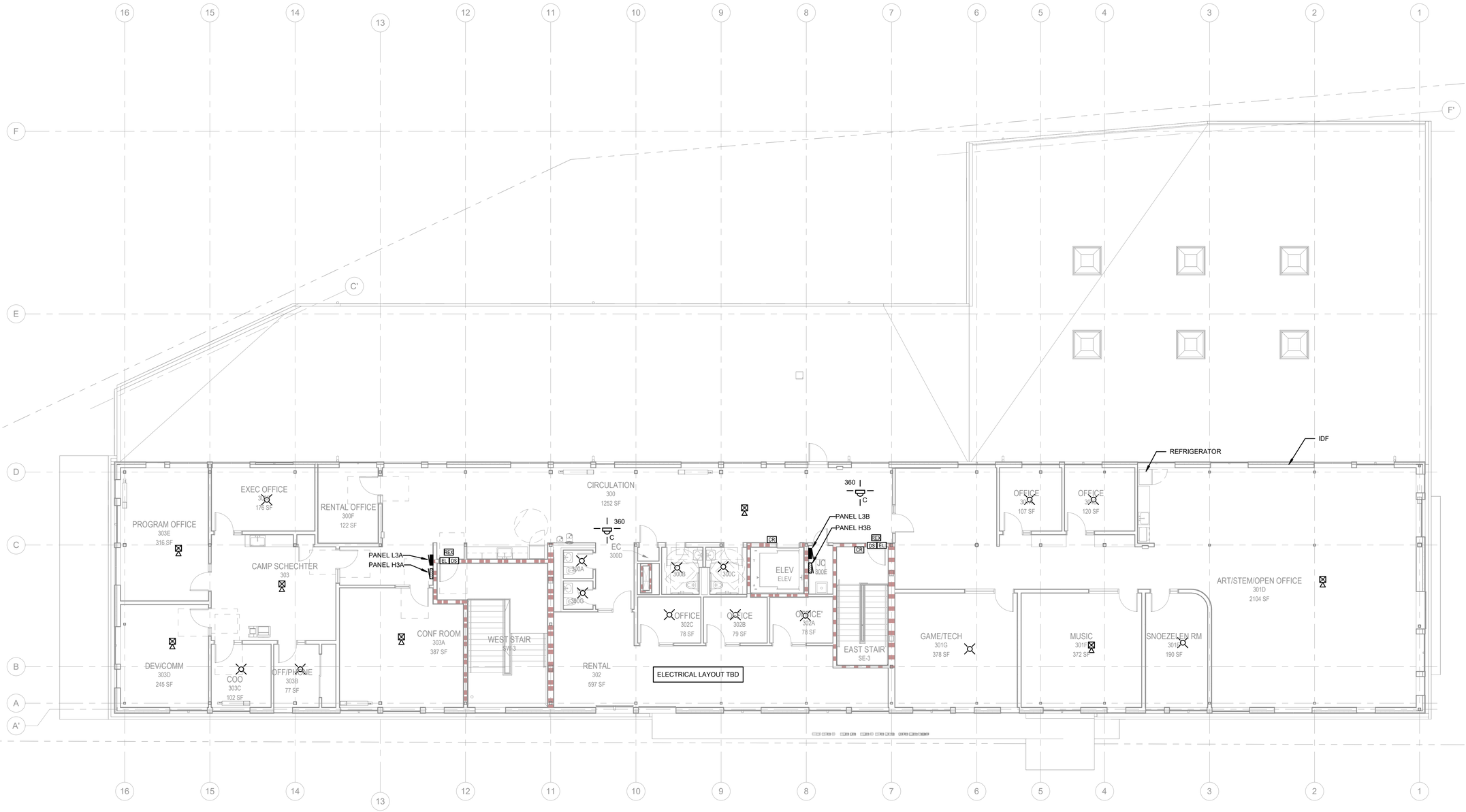


1 LEVEL 03 FLOOR PLAN - ESS
1/8" = 1'-0"

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| | 6 JUNE 2025 | BUILDING PERMIT |

PROJECT: 23-101

LEVEL 03 FLOOR PLAN - ESS

E-503

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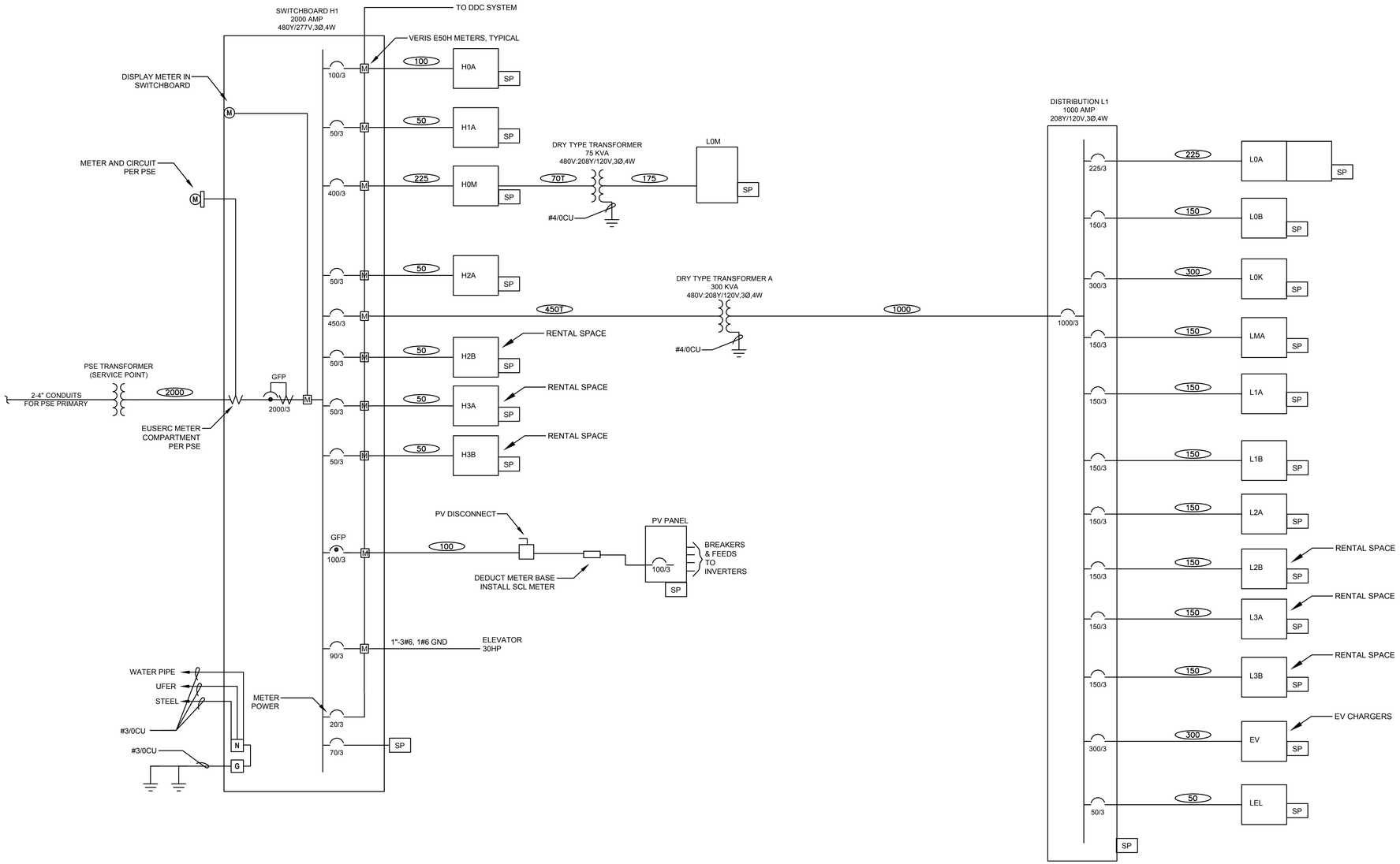


**1 ONE LINE DIAGRAM**
NTS


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ONE LINE DIAGRAM

E-600


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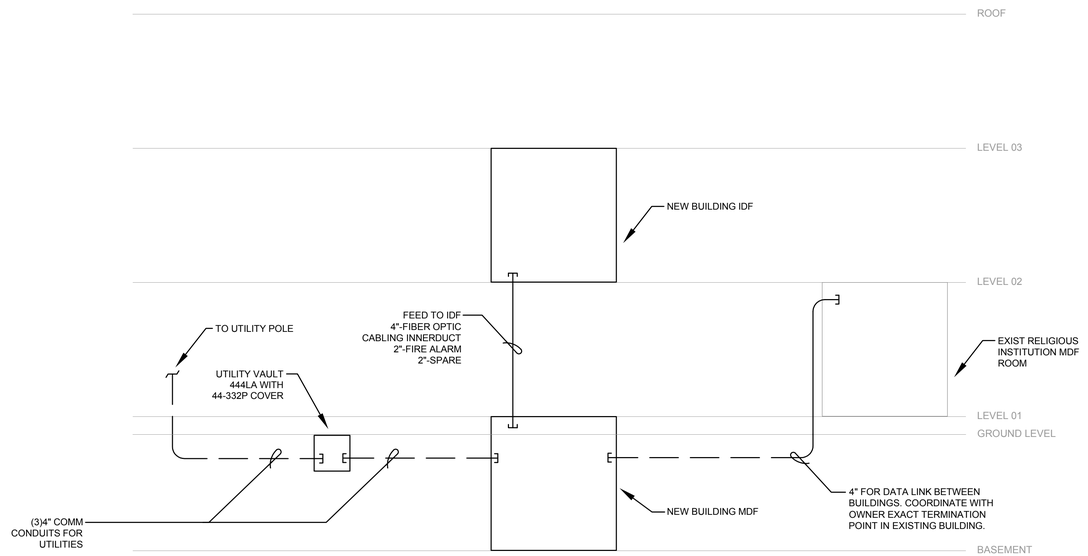


1 **COMM RISER DIAGRAM**
NTS

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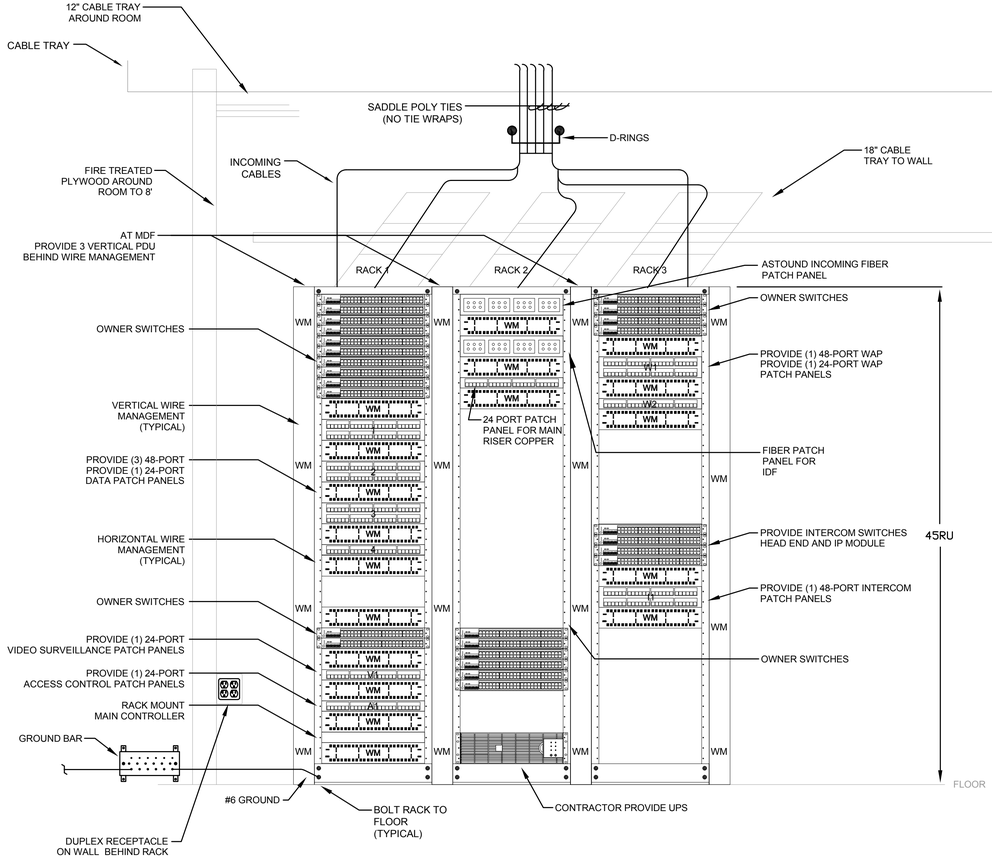
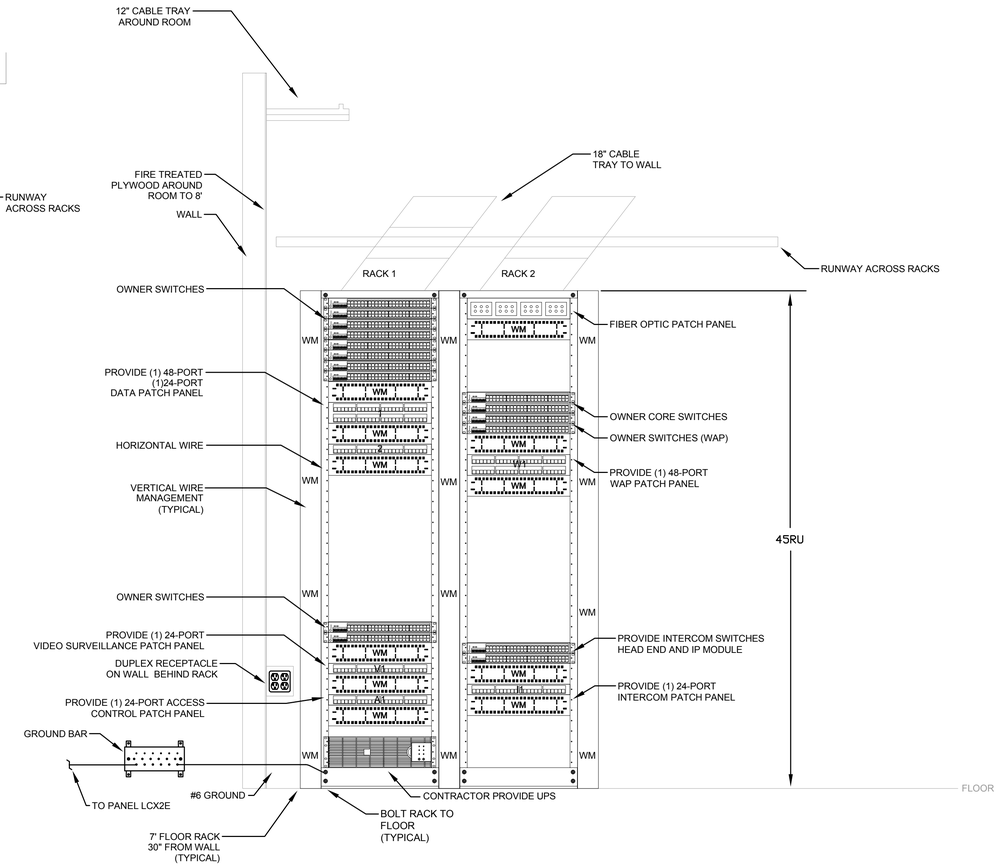
PROJECT: 23-101

COMM RISER DIAGRAM

E-601




1 **MDF RACK DETAILS**
NTS




2 **IDF RACK DETAILS**
NTS

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KEVIN E. WARTELLE — STATE OF WASHINGTON — 44109 — REGISTERED PROFESSIONAL ENGINEER

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RACK DETAILS

E-602

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## LIGHTING FIXTURE SCHEDULE - BARNABIE POINT K-8

| TYPE | LAMP | LUMEN OUTPUT | CCT | VOLTAGE | EMBEDDED WIRELESS CONTROLS | CONTROL | MANUFACTURER | DESCRIPTION | LOCATION |
|---|---|---|---|---|---|---|---|---|---|
| EP, EM | LED<br>48 W | 5,000 LUMENS | 3000K | 120 V | NO | SWITCH | COLUMBIA:<br>LXEM-ML40-RA<br>LDPI:<br>LE202-77<br>ILP:<br>WTZ-54WLED<br>CERTOLUX:<br>CRV-48-840K<br>LITHONIA<br>DMW2<br>HE WILLIAMS<br>96 SERIES | ELEVATOR MACHINE ROOM FIXTURE. NEMA 4 LISTING REQUIRED. PROVIDE EMERGENCY BATTERY BALLAST BODINE B50ST. PROVIDE INTEGRAL OCCUPANCY/DAYLIGHT SENSOR WITH NETWORKED WIRELESS CONTROLS. | ELEVATOR MACHINE ROOM AND PIT |
| P | LED<br>96W | 3,253 LUMENS | 3000K | 277 V | YES - MOTION AND DAYLIGHT | TIME CLOCK | GARDCO: PUREFORM COMFORT P26-196L-650-WW-G2-AR-3-277-LLC-IMR13-RPA | ARM-MOUNTED LED POLE FIXTURE WITH MOTION RESPONSE OCCUPANCY SENSOR, INTEGRAL WIRELESS MODULE, TYPE 3 OPTIC, AND FULL CUTOFF PERFORMANCE. PROVIDE HIGHLY DIFFUSE, UNIFORMLY ILLUMINATED LENS. UL WET LABEL AND LOW TEMP DRIVER. MOUNT ON 14′ FOOT TALL , 4″ ROUND, 0.188" ALUMINUM POLE WITH HANDHOLE TO UTILITY VAULT 24R-8-LB POLE BASE. PROVIDE BASE COVER. IN PARKING AND ROAD EXPOSE 2′ OF BASE. IN LANDSCAPE AREAS FLUSH WITH GRADE. MOTION SENSOR TO REDUCE TO 30% WHEN NO MOTION. FIXTURE OPTICS ARE ONLY DIRECTED DOWNWARD. BUG RATING B1-U0-G1. | PARKING |
| PL-1 | LED<br>40 W | 4,500 LUMENS | 3000K | 277 V | YES - MOTION AND DAYLIGHT | 0-10V DIM | COLUMBIA<br>MPS-4-35-MLHE-C-W-ED-U-NXSW-CM-24SCF3-KIT<br>LITHONIA<br>METALUX<br>DAYBRITE | PENDANT MOUNTED LENSED LED STRIPLIGHT. PROVIDE ADJUSTABLE CABLE MOUNTING. PROVIDE INTEGRAL OCCUPANCY/DAYLIGHT SENSOR WITH NETWORKED WIRELESS CONTROLS. | BACK OF HOUSE |
| PL-1E | | | | | | | | SAME AS PL-1 BUT WITH INTEGRAL EMERGENCY BATTERY PACK | |
| PL-2 | LED<br>6.3 + 7.7 = 14 W/FT | 912 + 1230 LUMENS = 2,142 LUMENS/FT | 3000K | 277 V | YES - MOTION AND DAYLIGHT | 0-10V DIM | ALW: LIGHTPLANE+ 2<br>LPX-2-B-SP-F-O-SXX-07-30-90-WS-V01-12-30-90-BW-V01-XX-W16-1C-UNV-N-OS/PH/INT/XX-N | 2" APERTURE DIRECT/INDIRECT LINEAR LED PENDANT WITH BATWING INDIRECT AND WIDESPREAD DIRECT DISTRIBUTION. SEE PLANS FOR CONTINUOUS LENGTHS. | CLASSROOMS |
| PL-2E | | | | | | | | SAME AS PL-2 BUT WITH INTEGRAL EMERGENCY BATTERY PACK | |
| PL-3 | LED<br>9 + 7.7 = 16.7 W/FT | 1203 + 1230 LUMENS = 2433 LUMENS/FT | 3000K | 277 V | YES - MOTION AND DAYLIGHT | 0-10V DIM | ALW: LIGHTPLANE+ 2<br>LPX-2-B-SP-F-O-SXX-10-30-90-WS-V01-12-30-90-BW-V01-XX-W16-1C-UNV-N-OS/PH/INT/XX-N | SAME AS PL-2 BUT HIGHER OUTPUT | LAB/STEM/ART ROOMS |
| PL-3E | | | | | | | | SAME AS PL-3 BUT WITH INTEGRAL EMERGENCY BATTERY PACK | |
| PL-4 | LED<br>78W | 7,644 LUMENS | 3000K | 277 V | YES-MOTION AND PHOTO | 0-10V DIM | SPI LIGHTING: PAVO 8" L78W-277-3000K-90-DF_DIM1-NO DL-DF_MA01-DF_PSA | 8" DIAMETER X 6 FT HIGH ILLUMINATED LED CYLINDER FIXTURE. | MULTIPURPOSE |
| PL-4E | | | | | | | | SAME AS PL-4 BUT WITH INTEGRAL EMERGENCY BATTERY PACK | |
| PL-5 | LED<br>10W | 899 LUMENS | 3000K | 277V | YES-MOTION AND PHOTO | 0-10V DIM | SPI LIGHTING: VALLEJO LC 4" SIP13123-L10W-120-277V-3000K-DF_80-XX- | 4" DIAMETER X 6" MEDIUM DISTIBUTION CYLINDER FIXTURE. | |
| PL-5E | | | | | | | | SAME AS PL-5 BUT WITH INTEGRAL EMERGENCY BATTERY PACK | |

## LIGHTING FIXTURE SCHEDULE - BARNABIE POINT K-8

| TYPE | LAMP | LUMEN OUTPUT | CCT | VOLTAGE | EMBEDDED WIRELESS CONTROLS | CONTROL | MANUFACTURER | DESCRIPTION | LOCATION |
|---|---|---|---|---|---|---|---|---|---|
| RL-1 | LED<br>6.5 W | 735 LUMENS/FT | 3000K | 277 V | YES-MOTION AND PHOTO | 0-10V DIM | ALW: SUPERPLANE 2.5R SP2.5R-XX-SXX-MED-90-3000K-V01-CR/BAT-XX-UNV-XX | RECESSED 2.5" APERTURE LINEAR LED SLOT FIXTURE WITH INTEGRAL DRIVER AND LOW GLARE OPTICS. SEE PLANS FOR CONTINUOUS RUN LENGHTS. | HALLWAY |
| RL-1E | | | | | | | | SAME AS RL-1 BUT WITH INTEGRAL EMERGENCY BATTERY PACK | |
| RL-1F | | | | | | | | SAME AS RL-1 BUT WITH FLANGE KIT FOR MOUNTING IN GWB CEILING | |
| RL-1FE | | | | | | | | SAME AS RL-1F BUT WITH INTEGRAL EMERGENCY BATTERY PACK | |
| RL-2 | LED<br>45W | 4,000 LUMENS | 3000K | 277 V | YES-MOTION AND PHOTO | 0-10V DIM | FOCAL POINT: EQUATION FEQ-14-AC-4000LH-30K-1C-277-LD1 | 1X4 RECESSED ARCHITECTURAL TROFFER | OFFICE |
| RL-3 | LED<br>40W | 3,500 LUMENS | 3000K | 277V | YES-MOTION AND PHOTO | 0-10V DIM | FOCAL POINT: EQUATION FEQ-14-AC-3500LH-30K-1C-277-LD1 | 1X4 RECESSED ARCHITECTURAL TROFFER | OFFICE |
| RL-4 | LED<br>22 W | 2,000 LUMENS | 3000K | 277 V | NO | 0-10V DIM | GOTHAM:EVO4 EV04-30/07-AR-MD-LD-277<br>PRESCOLITE: LF4 LF4SL4LFSL-20L-35K<br>EATON: PORTFOLIO LD4B LD4B-20-D010-EU4B-1020-80-35-4LB-W-0-H<br>PHILIPS LIGHTOLIER: CALCULITE C4RDL C4R-N-C4L-C4L-20-8-35-W-Z10-U-C4-R-DL-CD | RECESSED 4" LED DOWNLIGHT WITH SEMI DIFFUSE REFLECTOR AND WIDE DISTRIBUTION. | HALLWAY |
| SL-1 | | | | | | | | SAME AS PL-1 BUT SURFACE MOUNT | BACK OF HOUSE |
| SL1N | | | | | | | | SAME AS SL-1 BUT NO WIRELESS. CONNECTED TO OCCUPANCY SENSOR SWITCH | |
| SL-2 | LED<br>150 + 33 = 183 W | 17,129 + 5096 = 22,225 LUMENS | 3000K | 277 V | YES - MOTION AND DAYLIGHT | 0-10V DIM | CHANGE TO:<br>COOPER TOP TIER OR LITHONIA VCPG (SURFACE MOUNT) | 30" ROUND SURFACE MOUNT LED FIXTURE, IK-10 RATED. (LOCATE BETWEEN BEAMS) | GYM |
| SL-2E | | | | | | | | SAME AS PL-4 BUT WITH INTEGRAL EMERGENCY BATTERY PACK | |
| SL-3E | | LED<br>36W | 4000K | | YES - MOTION AND DAYLIGHT | SWITCH | TRULYGREEN SL4-4-30-C-SK | SURFACE 4" LIGHT PANEL CONNECTED TO OCC SENSOR. PROVIDE EMERGENCY BATTERY PACK. | |
| UC | LED<br>6W/FT | 180 LUMENS/FT | 3000K | 277V | YES - MOTION | SWITCH | QTRAN: VERS-FLUSH (02) VERS-02-SW-5-35-DRY-DF-P2-CON6-WH-CL2-CC-ST-XX<br>LUMINII: KENDO<br>KELVIX | LOW VOLTAGE UNDERCABINET LED LIGHT WITH COEXTRUDED ACRYLIC DIFFUSE LENS. PROVIDE WALL SWITCH AND INTEGRATED OCCUPANCY SENSOR. SEE FLOOR PLANS FOR LENGTHS. PROVIDE POWER SUPPLY AND ALL OTHER ACCESSORIES REQUIRED FOR A FULLY FUNCTIONAL SYSTEM. | UNDERCABINET |
| WL-1 | LED<br>17 W | 2,511 LUMENS | 3000K | 277V | NO | TIME CLOCK | GARDCO: LED WALL SCONCE GCM-A02-830-T3M-277 | CYLINDRICAL LED WALL SCONCE WITH FULL CUTOFF PERFORMANCE AND TYPE 3 LIGHTING DISTRIBUTION. PROVIDE DIFFUSE OPTICS. UL LISTED FOR WET LOCATION. FIXTURE OPTICS ARE ONLY DIRECTED DOWNWARD. BUG RATING B1-U0-G1. | EXTERIOR WALL |
| WL-2 | LED<br>17 W + 30 W | 2,511 LUMENS DOWN + 2,200 LUMENS UP | 3000K | 277V | NO | TIME CLOCK | GARDCO: LED WALL SCONCE GCM-A02-830-T3M-B03-830-WAW-277 | CYLINDRICAL LED WALL SCONCE WITH DIRECT/INDIRECT DISTRIBUTION. DOWNLIGHT SHALL HAVE TYPE 3 DISTRIBUTION AND UPLIGHT SHALL HAVE WALL WASH DISTRIBUTION. PROVIDE DIFFUSE OPTICS. UL LISTED FOR WET LOCATION. BUG RATING B1-U0-G1. | EXTERIOR WALL |

3700 E MERCER WAY
BARNABIE POINT PROJECT

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6 JUNE 2025
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PROJECT: 23-101

LIGHT FIXTURE SCHEDULE

E-700

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anjali grant design LLC

## LIGHTING FIXTURE SCHEDULE - BARNABIE POINT K-8

| TYPE | LAMP | LUMEN OUTPUT | CCT | VOLTAGE | EMBEDDED WIRELESS CONTROLS | CONTROL | MANUFACTURER | DESCRIPTION | LOCATION |
|---|---|---|---|---|---|---|---|---|---|
| X | LED<br>2.1 W | | | 277 V | | | DUAL LITE:<br>SE-G-I<br><br>MCPHILBEN:<br>ER55L<br><br>CHLORIDE:<br>CE-11300-55L3G<br><br>SURE-LITES:<br>CAX-7<br><br>BEGHELLI:<br>FME | CEILING DIE CAST LED EXIT SIGN WITH BATTERIES WITH SELF DIAGNOSTICS, BATTERY BACKUP AND ALL MOUNTING ACCESSORIES. PROVIDE ARROWS AND FACES AS SHOWN ON DRAWINGS. PROVIDE WHITE BODY WITH GREEN LETTERS AND UNIFORM LENS OVER LED. | SEE PLANS |
| XE | LED | | | 277 V | | | BEGHELLI:<br>FRM-C | CEILING/WALL DIE CAST LED EXIT SIGN WITH EMERGENCY HEAD UNITS. PROVIDE BATTERIES, SELF DIAGNOSTICS AND ALL MOUNTING ACCESSORIES. PROVIDE ARROWS AND FACES AS SHOWN ON DRAWINGS. PROVIDE WHITE BODY WITH GREEN LETTERS AND UNIFORM LENS OVER LED. | |
| X-1 | | | | 277 V | | | BEGHELLI:<br>XMR<br><br>DUAL-LITE:<br>LZ15-I<br><br>CHLORIDE:<br>CA<br><br>EVENLITE:<br>TEBL2W-SD | LOW PROFILE BATTERY HEAD UNIT WITH SELF DIAGNOSTICS. | SEE PLANS |
| XW | | | | | | | SAME AS X EXCEPT WALL MOUNT | | SEE PLANS |

ALL COLORS, FINISHES, ETC ARE BY ARCHITECT.
MOUNTING HEIGHTS PER ARCHITECTURAL ELEVATIONS.
ALL FIXTURES WITH "E" DESIGNATION SHALL HAVE AN INTEGRAL EMERGENCY BATTERY PACK.

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44199
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PROJECT: 23-101

LIGHT FIXTURE SCHEDULE

E-701

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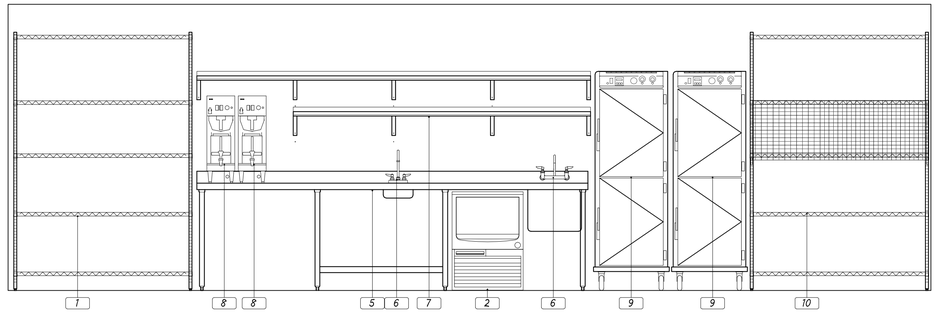
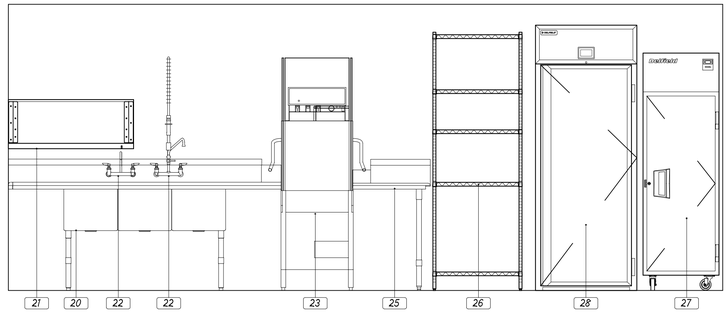



## A ELEVATION

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




## B ELEVATION

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

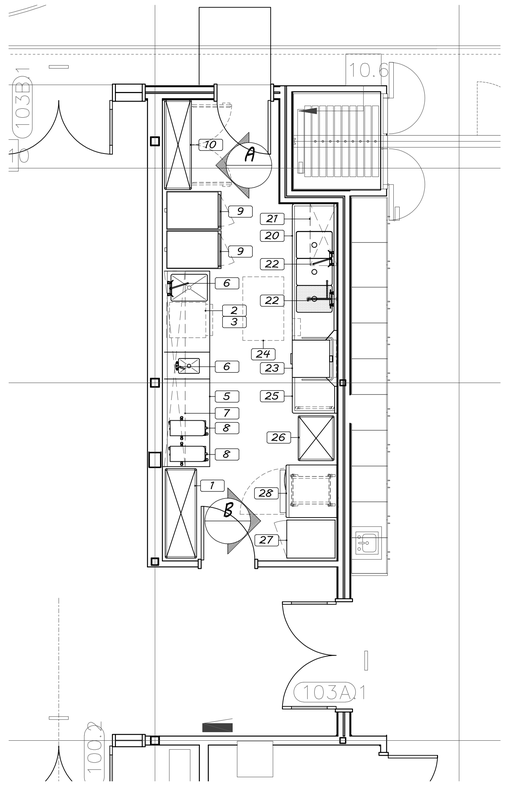
| Item No | PROVIDED BY: KEC | GC | OWNER | Quantity | Description | Manufacturer / Model # | ELECTRICAL: KW | Amps | HP | Voltage | Phase | Connection | PLUMBING: Hot | Cold | Waste | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | X | | | 1 | DRY STORAGE SHELVING | OLYMPIC CHROME WIRE | | | | | | | | | | |
| 2 | X | | | 1 | ICE MACHINE | HOSHIZAKI KM-116BAJ | | 5.5 | | 115 | 1 | DCO | | | 1 1/2" | INDIRECT WASTE, CONNECT TO ITEM #3 |
| 3 | X | | | 1 | WATER FILTRATION SYSTEM | HOSHIZAKI H9320-51 | | | | | | | | 3/4" | | |
| 4 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 5 | X | | | 1 | STAINLESS STEEL TABLE WITH PREP / HAND SINK | CUSTOM STAINLESS STEEL | | | | | | | | | 1 1/2" | INDIRECT WASTE / DIRECT WASTE |
| 6 | X | | | 2 | FAUCET | T&S B-231 / B-0314 | | | | | | | 1/2" | 1/2" | | |
| 7 | X | | | 2 | STAINLES STEEL WALL SHELF | CUSTOM STAINLESS STEEL | | | | | | | | | | |
| 8 | | | X | 2 | COFFEE BREWER | OWNER | | X | | 115 | 1 | DCO | | 1/2" | | VERIFY REQUIREMENTS WITH OWNER |
| 9 | X | | | 2 | MOBILE HEATED CABINET | CRES COR CO-151-F-1818D | | 39.0 | | 208 | 1 | SCO | | | | NEMA 6-50P |
| 10 | X | | | 1 | WIRE SHELVING UNIT | OLYMPIC CHROME WIRE | | | | | | | | | | |
| 11 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 12 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 13 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 14 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 15 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 16 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 17 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 18 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 19 | | | | | SPARE NUMBER | | | | | | | | | | | |
| 20 | X | | | 1 | SOILED DISH TABLE WITH THREE COMPARTMENT SINK | JOHN BOOS DT3B18244-2D18L | | | | | | | | | 2" | DIRECT WASTE |
| 21 | X | | | 1 | SLANT RACK SHELF | JOHN BOOS PB-SRW-42 | | | | | | | | | | |
| 22 | X | | | 2 | PRE-RINSE FAUCET | T&S B-0133-12CRBJST | | | | | | | 1/2" | 1/2" | | |
| 23 | X | | | 1 | DISHWASHER | JACKSON CONSERVER XL-HH | | 10.0 | | 120 | 1 | DCO | | | 2" | INDIRECT WASTE, VERIFY REQUIREMENTS WITH OWNER |
| 24 | | X | | 1 | GREASE INTERCEPTOR | GENERAL CONTRACTOR | | | | | | | | | | |
| 25 | X | | | 1 | CLEAN DISH TABLE | JOHN BOOS JDTC-20-24R | | | | | | | | | | |
| 26 | X | | | 1 | CLEAN DISH STORAGE SHELVING | OLYMPIC CHROME GREEN | | | | | | | | | | |
| 27 | X | | | 1 | REACH-IN REFRIGERATOR | DELFIELD 6025XL-S | | 4.2 | | 115 | 1 | DCO | | | | NEMA 5-15P |
| 28 | X | | | 1 | ROLL IN REFRIGERATOR | DELFIELD GARR1P-S | | 6.0 | | 115 | 1 | DCO | | | | NEMA 5-15P |
| | | | | | | | | | | | | | | | | |

## General Notes

1. THE ELECTRICAL CONTRACTOR SHALL SUPPY AND INSTALL SEAL-TITE FLEX CONDUIT TO ALL FOOOD SERVICE EQUIPMENT IN DAMP AREAS, I.E. SCULLERY, BAR, ROOF, ETC. FLEX CONNECTIONS AT ALL FANS ON THE ROOF SHALL BE OF EXTRA LENGTH TO ALLOW FULL FAN REMOVAL FOR THE EASE OF CLEANING.
2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FUSED DISCONNECTS FOR EQUIPMENT HOOK-UPS AS REQUIRED BY CODE AND LABELING.
3. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A 48" MINIMUM CORD AND PLUG FOR EACH PIECE OF EQUIPMENT SO NOTED. USE 90 DEGREE ELBOW OUT OF UNIT.
4. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FOR HOOK-UP OF A THERMOSTAT, SOLENOID, BLOWER COIL AND COMPRESSOR FOR EACH REFRIGERATED UNIT. MAGNETIC STARTERS AND/OR THERMAL PROTECTORS SHALL BE INCLUDED AS NECESSARY.
5. THE ELECTRICAL CONTRACTOR SHALL PROVIDE 1" CONDUIT AND JUNCTION BOXES AT EACH CASH REGISTER TERMINAL SO AS TO INTERCONNECT ALL UNITS TO EACH OTHER AND TO THE CENTRAL PROCESSING TERMINAL. CONSULT WITH THE OWNER'S REPRESENTATIVE FOR EXACT LOCATIONS OF ALL TIE-IN UNITS.
6. IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING AND ELECTRICAL CONTRACTORS TO MAKE ALL REQUIRED WATER, GAS, DRAIN AND ELECTRICAL CONNECTIONS FOR ALL MAKE-UP AIR SYSTEM UNITS.
7. THE GENERAL CONTRACTOR SHALL PHOTOGRAPH ALL WALLS CONTAINING BACKING PRIOR TO SHEETROCK / FRP INSTALLATION.
8. THE PLUMBING CONTRACTOR SHALL SUPPLY AND INSTALL WATER LINE BACK CHECK VALVES AS REQUIRED PER CODE.
9. COMMUNICATION CABLES ARE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.
10. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO INSTALL ALL OWNER SUPPLIED COMPUTER / COMMUNICATION CABLES AS PER OWNERS DIRECTION.

## General Notes

- IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS TO VERIFY THE ACTUAL SPACE AND MECHANICALREQUIREMENTS OF ALL ITEMS SHOW AS FUTURE, N.I.C., SUPPLIED BY "OTHERS", ETC. WITH THE OWNER PRIOR TO ROUGH-IN AND CONNECTION
- THE GENERAL CONTRACTOR SHALL IMMEDIATELY INFORM CMA RESTAURANT SUPPLY & DESIGN PROJECT MANAGER AND THE OWNER OF ANY RED LINES, CORRECTIONS, ETC. ON THE PERMIT PLANS AND OF ANY INSPECTION CORRECTIONS REQUESTED CONCERNING THESE DRAWINGS OR EQUIPMENT AS LISTED FOR THIS PROJECT.
- THE GENERAL CONTRACTOR SHALL PROPERLY SEAL ALL WALL AND FLOOR PENETRATIONS AFTER THE INSTALLATION OF RELATED EQUIPMENT AND FURNISHING.
- IT SHALL BE NOTED BY THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS THAT THIS SET OF PLANS AND THE INFORMATION CONTAINED WITH-IN IN NOW WAY RELIEVES SAID PARTIES OF THEIR RESPONSIBILITIY TO INVESTIGATE AND COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES, AND TO PERFORM ALL WORK TO THE HIGHEST STANDARDS.
- SUITABLE WALL BACKING AS SHOWN ON THESE PLANS AND AS REQUIRED BY THE OWNER SHALL BE PROVIDED AND INSTALLED BY THE GENERAL CONTRACTOR.
- THESE PLANS SHALL BE READ IN CONJUNCTION WITH THE EQUIPMENT CUT SHEET BOOK SUPPLIED BY CMA RESTAURANT SUPPLY & DESIGN, INC. AND BY THIS REFERENCE IS MADE A PART HEROF.




VERIFY EQUIPMENT REQUIREMENTS WITH FINAL EQUIPMENT SELECTIONS

PROGRESS SET - 5-5-2025

UNPUBLISHED WORK
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# Herzl-Ner Tamid

3700 E Mercer Way
Mercer Island, WA 98040

CMA
RESTAURANT SUPPLY AND DESIGN, INC.
12811 NE 126th Place, Kirkland, Washington 98034
EMAIL: jeffw@cmarestaurantsupply.com
cell 206 356 8935
office 425 747 7223

KITCHEN EQUIPMENT PLAN

Date: 2-18-2025

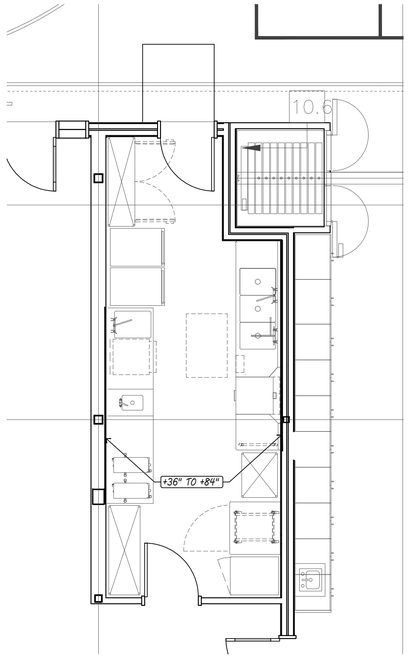
JG WINTER

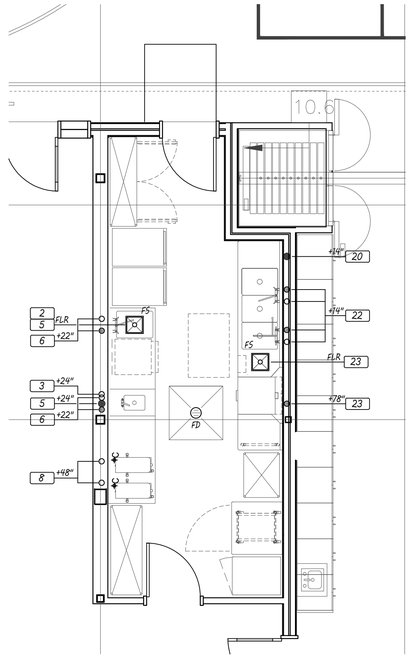
Scale: 1/4"=1'-0"

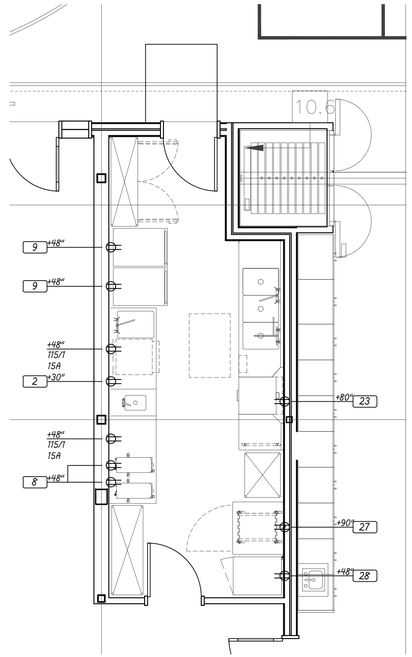
Project #: 1773

K-1

2:23 PM 5/05/25 K-1.DWG JANITOR/LAUNDRY FOOTPLAN 3.dwg

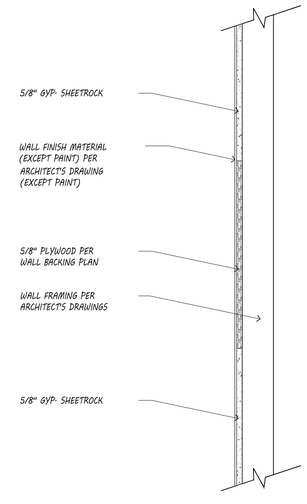



## WALL BACKING NOTES:

1. GENERAL CONTRACTOR SHALL CONSULT WITH OWNER AND CMA RESTAURANT SUPPLY AT THE TIME OF LAYOUT FOR WALL BACKING CONFIRMATION OF ALL DIMENSIONS OF ALL AND UP-DATE REQUIREMENTS.
2. WALL BACKING TO BE USED FOR WALL MOUNTED EQUIPMENT AND SHELVES.
3. WALL BACKING TO BE 5/8" PLYWOOD.
4. WALL WALL BACKING TO BE BUILT INTO WALL SO THAT FINISH WALL IS FLUSH SURFACE.




## PLYWOOD BACKING DETAIL

SCALE: NONE

## PLUMBING NOTES .

1. IT IS THE PLUMBING CONTRACTORS RESPONSIBILITY TO SIZE, SUPPLY AND INSTALL A GREASE INTERCEPTOR / TRAP IF ONE IS REQUIRED.
2. THE PLUMBING CONNECTIONS, SPECIFICATIONS AND DIMENSIONS SHOWN ON THESE PLANS ARE FOR THE FOOD SERVICE EQUIPMENT ONLY. SEE ARCHITECT'S PLAN SET FOR ALL OTHER PLUMBING REQUIREMENTS FOR THIS PROJECT.
3. ALL PLUMBING ROUGH-IN WORK AND FINAL CONNECTIONS FOR ALL ITEMS SHOWN AND SPECIFIED ON THESE PLANS BY CMA RESTAURANT SUPPLY & DESIGN SHALL BE PERFORMED BY THE PLUMBING CONTRACTOR.
4. THE PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL INSULATION MATERIAL ON ALL DRAIN LINES FROM ICE BINS, ICE PANS, ETC. SO AS TO ELIMINATE CONDENSATION FORMATION.
5. UNLESS OTHERWISE SPECIFIED IN THESE PLANS OR OTHER WRITTEN CONTRACTS, IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO PROVIDE ALL PLUMBING-TYPE MATERIALS INCLUDING VALVES, TRAPS, LINE STRAINERS, FLOOR SINK COVERS, PRESSURE REGULATORS, SIPHON BREAKERS, ETC.
6. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THAT THE LOCATIONS FOR ALL MECHANICAL REQUIREMENTS WHICH REQUIRE FLOOR PENETRATIONS DO NOT CONFLICT WITH STRUCTURAL MEMBERS IN THE FLOOR.
7. THE GENERAL CONTRACTOR SHALL SUPERVISE THE LOCATION OF ALL FLOOR DRAINS ON THE PROJECT SO AS TO ENSURE THE BEST SLOPE POSSIBLE OF THE SURROUNDING FLOOR TO THESE DRAINS.
8. ALL DRAIN LINES FROM EQUIPMENT REQUIRING CONDENSATION REMOVAL SHALL BE RUN IN COPPER.
9. PLUMBING CONTRACTOR TO SUPPLY WATER PRESSURE REDUCING VALVE SET AT 20 PSI FOR EACH DISH WASHER AND GLASS WASHER.

## PLUMBING LEGEND

| | |
|---|---|
| ○ | CW–COLD WATER |
| ○F | CW–COLD WATER – FILTERED |
| ⊙ | HW–HOT WATER |
| ● | CLOSED DRAIN – DIRECT WASTE |
| FS | 12" X 12" FLOOR SINK – INDIRECT WASTE |
| ⊕ | NATURAL GAS |
| FD | FLOOR DRAIN |

## ELECTRICAL NOTES .

1. THE CONTRACTOR SHALL PROVIDE AND INSTALL STAINLESS STEEL OUTLET AND RECEPTACLE COVERS IN ALL KITCHEN EQUIPMENT AREAS.
2. THE ELECTRICAL CONTRACTOR SHALL CONNECT ALL REMOTE COMPRESSORS AND PROVIDE DISCONNECTS, MAGNETIC STARTERS, AND THERMAL OVERLOAD PROTECTION AS REQUIRED.
3. THE ELECTRICAL CONNECTIONS, SPECIFICATIONS AND DIMENSIONS SHOWN ON THESE PLANS ARE FOR FOOD SERVICE EQUIPMENT ONLY. SEE THE ARCHITECT'S PLAN SET FOR ALL OTHER ELECTRICAL REQUIREMENTS FOR THIS PROJECT.
4. ALL ELECTRICAL ROUGH-IN WORK AND FINAL CONNECTIONS FOR ALL ITEMS SHOWN AND SPECIFIED ON THESE PLANS BY CMA RESTAURANT SUPPLY & DESIGN SHALL BE PERFORMED BY THE ELECTRICAL CONTRACTOR.
5. UNLESS OTHERWISE SPECIFIED IN THESE PLANS OR OTHER WRITTEN CONTRACTS, IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE ALL ELECTRICAL TYPE MATERIALS, INCLUDING WIRING, SWITCHES, DISCONNECTS, FLEX, CONDUIT, CONTACTORS, TRANSFORMERS, THERMAL OVERLOAD PROTECTORS, MAGNETIC STARTERS, ELECTRICAL PANELS, CORDS, PLUGS, COVERS, ETC.
6. ALL DIMENSIONS SHOWN ARE FROM GRID LINES, FINISHED WALLS OR FINISHED FLOORS TO CENTER LINE OF ELECTRICAL BOXES. HEIGHTS ARE NOT TO BE TAKEN FROM CURBS OR PLATFORMS.
7. THE SYMBOLS SHOWN ON THIS PLAN ARE FOR INDICATION OF ROUGH-IN LOCATION AND TYPE OF CONNECTION ONLY. THE ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUITS AND CONDUIT RUNS AS PER GOOD PRACTICE AND CODE.
8. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FUSED DISCONNECTS FOR EQUIPMENT HOOK-UPS AS REQUIRED BY CODE AND LABELING

## ELECTRICAL LEGEND

| | |
|---|---|
| | 115 VOLT DUPLEX OUTLET |
| DI | 115 VOLT DCO, DEDICATED/ISOLATED |
| | 208V SPECIALTY OUTLET |
| J | JUNCTION BOX |
| ◆ | COMMUNICATIONS CABLE – VERIFY SPEC'S AND REQUIREMENTS WITH OWNER |
| $ | ON/OFF SWITCH |
| | LIGHT FIXTURE BY K.E.C. AND INSTALLED BY ELECTRICAL CONTRACTOR |

VERIFY EQUIPMENT REQUIREMENTS WITH FINAL EQUIPMENT SELECTIONS

GFCI RECEPTACLES SHALL BE PASS & SEYMOUR NO. 2097W
SEE ARCHITECTURAL DRAWINGS FOR OUTLET COLORS AT SPECIFIC LOCATIONS ON INTERIOR ELEVATIONS

PROGRESS SET - 5-5-2025

UNPUBLISHED WORK
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12811 NE 126th Place, Kirkland, Washington 98034
EMAIL: jeffw@cmarestaurantsupply.com
cell 206 356 8935
office 425 747 7223

KITCHEN ELECTRICAL ROUGH-IN PLAN
KITCHEN PLUMBING ROUGH-IN PLAN
KITCHEN WALL BACKING PLAN

Date: 4-8-2025
JG WINTER
Scale: 1/4"=1'-0"
Project #: 1773

K-2

2:24 PM 5/05/25 G:\JEFF WINTER\BRIGHAM FOUNTAIN 2.DWG