THE LITTLE SCHOOL ON PERRY STREET

DAYCARE FACILITY

203 PERRY STREET • CASTLE ROCK, CO 80104

REMODEL / EXPANSION TO THE ORIGINAL LANDMARK BLDG AND GARAGE BLDG

ISSUED FOR PERMIT - 03.12.2024

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RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 03.12.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: **23.024**

ARCHITECTURAL
TITLE SHEET

ATS

ISSUED FOR PERMIT - 03.12.2024

D:\BDG Projects\23.024 - Little School on Perry - Castle Rock, CO\CAD\23.024 - - ATS - Architectural Title Sheet.dwg

ABBREVIATIONS

&	AND
∠	ANGLE
@	AT
℄	CENTER LINE
[	CHANNEL
Ø	DIAMETER OR ROUND
#	POUND OR NUMBER
℘	PLATE
A, AMP.	AMPERE
A.B.	ANCHOR BOLT
ABV.	ABOVE
A/C	AIR CONDITIONING
A.C.T.	ACOUSTICAL CEILING TILE
ACOUST.	ACOUSTICAL
ADA	AMERICANS WITH DISABILITIES ACT
ADAAG	ADA ACCESSIBILITY GUIDELINES
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
A.F.G.	ABOVE FINISH GRADE
AHJ	AGENCY HAVING JURISDICTION
ALUM. / AL.	ALUMINUM
ALT.	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APLD.	APPLIED
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASPH.	ASPHALT
AUTO.	AUTOMATIC
B & B	BOARD & BATTEN
B.F.S.	BELOW FINISHED SLAB
BH.	BULKHEAD
BITUM.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BLVD.	BOULEVARD
BM.	BEAM
B.O.C.	BASE OF CURB
B.O.F.	BOTTOM OF FRAMING
BOT.	BOTTOM
BRD.	BOARD
BRG.	BEARING
B.S.	BUILDING SECTION
BS.	BOTH SIDES
BSMT.	BASEMENT
BTWN.	BETWEEN
B.U.	BUILT-UP
BULKHD.	BULKHEAD
(C)	CAULK
C.	CONDUIT OR CELSIUS
CAB.	CABINET
C.B.	CATCH BASIN
C.C.	CENTER TO CENTER
CEM.	CEMENT
CER.	CERAMIC
CFM.	CUBIC FEET PER MINUTE
CFL.	COUNTER FLASHING
C.H.	CONDUCTOR HEAD
CHT.	CEILING HEIGHT
CI	CAST IRON
C.I.P.	CAST IN PLACE
C.J.	CONTROL JOINT
C.L.	CENTER LINE
CLG.	CEILING
CLOS.	CLOSET
CLR.	CLEAR
CLSRM.	CLASSROOM
CMU.	CONCRETE MASONRY UNIT
CNTR.	COUNTER
C.O.	CLEAN-OUT
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CORR.	CORRIDOR
CPT.	CARPET
C.T.	CERAMIC TILE
CTR.	CENTER
CW	COLD WATER

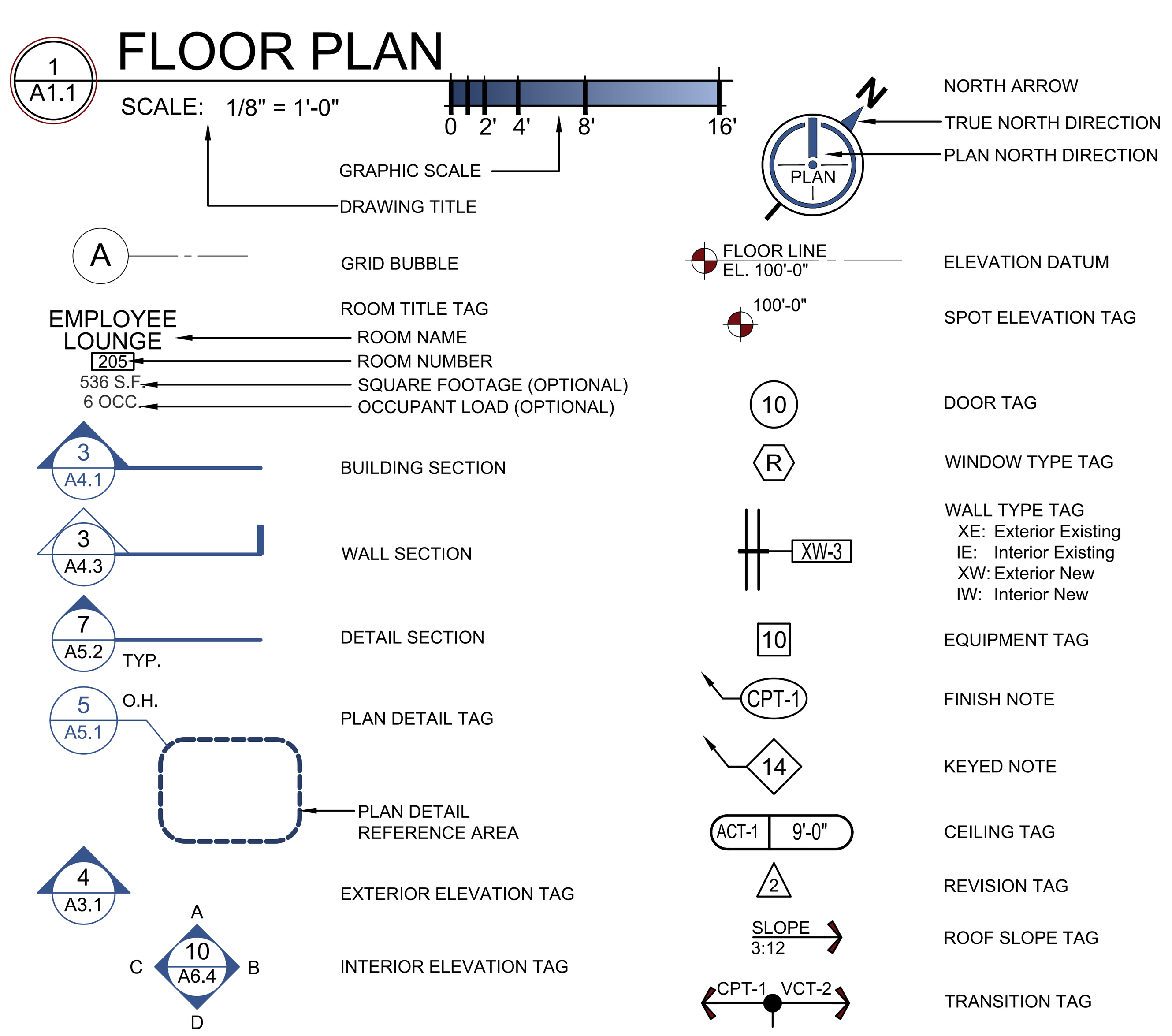
D.A.	DOUBLE ACTING
DBL.	DOUBLE
DEPT.	DEPARTMENT
DET.	DETAIL
D.F.	DRINKING FOUNTAIN
DIA.	DIAMETER
DIM.	DIMENSION
DIP	DUCTILE IRON PIPE
DN.	DOWN
DR.	DOOR
D.S.	DOWNSPOUT
DWG.	DRAWING
(E)	EXISTING
E.	EAST
EA.	EACH
E.B.	EXPANSION BOLT
E.F.	EXHAUST FAN
E.I.F.S.	EXT. INSULATION FINISH SYSTEM
E.J.	EXPANSION JOINT
EL. OR ELEV.	ELEVATION
ELEC.	ELECTRIC
ELECT.	ELECTRICAL
ELVR.	ELEVATOR
E.O.S.	EDGE OF SLAB
E.P.	ELECTRICAL PANELBOARD
EQ.	EQUAL
EQP. OR EQUIP.	EQUIPMENT
EST.	ESTIMATE
E.W.	EACH WAY
E.W.C.	ELECTRIC WATER COOLER
EXH.	EXHAUST
EXIST.	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
F.A.	FIRE ALARM
F.B.O.	FURNISHED BY OWNER
F.B.T.	FURNISHED BY TENANT
F.D.	FLOOR DRAIN
F.D.C.	FIRE DEPARTMENT CONNECTION
FDN.	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.F.	FACTORY FINISH
F.F.E.	FINISH FLOOR ELEVATION
F.F.L.	FINISH FLOOR LINE
FG	FINISHED GRADE
F.H.	FIRE HYDRANT
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH (ED)
F.I.O.	FURNISHED & INSTALLED BY OWNER
F.I.T.	FURNISHED & INSTALLED BY TENANT
FL	FLOW LINE
FLG.	FLASHING
FLR.	FLOOR (ING)
FLSHG.	FLASHING
FLUOR.	FLUORESCENT
F.O.	FACE OF
F.O.C.	FACE OF CURB/CONCRETE
F.O.F.	FACE OF FINISH
F.O.I.C.	FURNISHED BY OWNER, INSTALLED BY CONTRACTOR
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUDS
FRP.	FIBER REINFORCED PANEL
FRTW.	FIRE-RETARDANT TREATED WOOD
F.S.E.	FOOD SERVICE EQUIPMENT
F.S., F.	FIRE SERVICE
FT.	FOOT OR FEET
FTG.	FOOTING
FURR.	FURRING
FUT.	FUTURE
F.V.	FIELD VERIFY
G.	GROUND & NATURAL GAS
GA.	GAUGE
GAL.	GALLON
GALV.	GALVANIZED
G.B.	GRAB BAR
G.C.	GENERAL CONTRACTOR
G.C.O.	GREASE CLEAN OUT
G.F.I.	GROUND FAULT CIRCUIT INTERRUPTER
G.I.	GALVANIZED IRON (STEEL)
GL.	GLASS

G.L.B.	GLU-LAM BEAM
GND.	GROUND
GR.	GRADE
G.S.	GALVANIZED STEEL
G.S.F.	GROSS SQUARE FOOTAGE
GYP.	GYPSUM
GYP. BRD.	GYPSUM BOARD
H.B.	HOSE BIBB
H.C.	HANDICAPPED
HD.	HEAD
HDBD.	HARDBOARD
HDWD.	HARDWOOD
HDWR./HW.	HARDWARE
HDR.	HEADER
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
H.P.	HIGH POINT AND HORSEPOWER
H.R.	HANDRAIL
HR.	HOUR
HT.	HEIGHT
HTR.	HEATER
H. & S.	HARDEN & SEAL
HVAC	HEATING VENTILATING AND AIR CONDITIONING
HYD.	HYDRANT
HW	HOT WATER
HWR	HOT WATER RECLAIM
HWV	HOT WATER VENT
INCAN.	INCANDESCENT
I.D.	INSIDE DIAMETER (DIM.)
IE.	INVERT ELEVATION
I.F.O.	INSIDE FACE OF
I.G.	ISOLATED GROUND
IN.	INCH
INSUL.	INSULATION
INT.	INTERIOR & INTERCOM
INV.	INVERT
JAN.	JANITOR
JM.	JAMB
JST.	JOIST
JT.	JOINT
KIT.	KITCHEN
K.O.	KNOCKOUT
KS	KNEE SPACE
LAB.	LABORATORY
LAM.	LAMINATE(D)
LAV.	LAVATORY
LBS.	POUNDS
L.F.	LINEAR FEET
L.L.H.	LONG LEG HORIZONTAL
L.L.V.	LONG LEG VERTICAL
L.P.	LOW POINT or LIGHT POLE
LT.	LIGHT
L.W.C.	LIGHT WEIGHT CONCRETE
LVL.	LEVEL
MAS.	MASONRY
MATL.	MATERIAL (S)
MAX.	MAXIMUM
MECH.	MECHANICAL
MEMB.	MEMBRANE
MEZZ.	MEZZANINE
MFR.	MANUFACTURER
M.H.	MANHOLE
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
M.R.	MOISTURE RESISTANT
MTD.	MOUNTED
MTG.	MEETING
MTL.	METAL
MUL.	MULLION
MWK.	MILLWORK
(N)	NEW
N.	NORTH AND NEUTRAL
NE.	NORTHEAST
N.I.C.	NOT IN CONTRACT
NO. OR #	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
NW.	NORTHWEST
O.A.	OVERALL

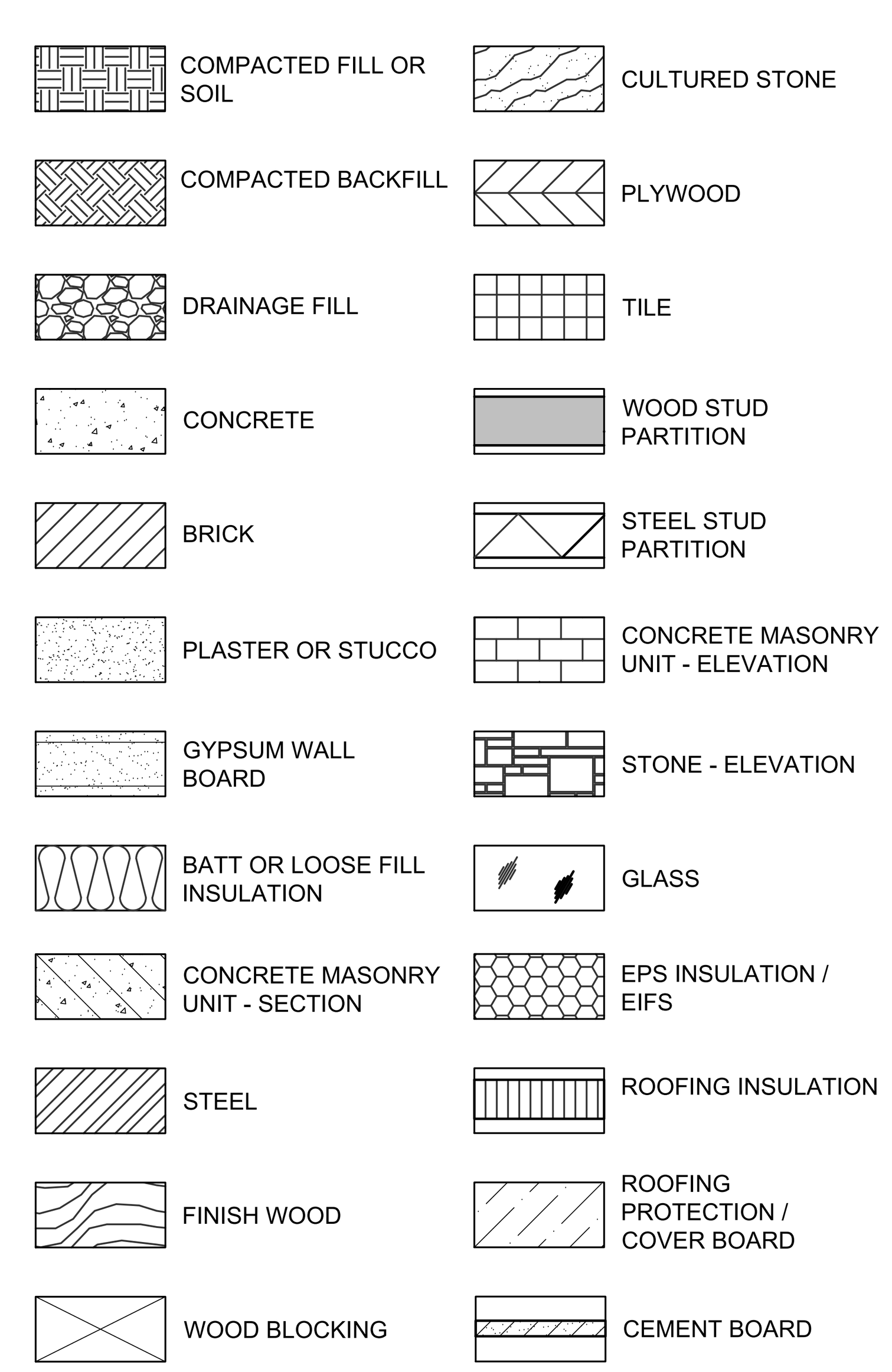
O.C.	ON CENTER (S) & OVER COUNTER
O.C.O.	OUTSIDE CORNER OF
O.D.	OUTSIDE DIAMETER (DIM.)
O.F.	OVERFLOW
OFF.	OFFICE
O.F.O.	OUTSIDE FACE OF
O/H	OVERHEAD
O.H. OR OPP. HAND	OPPOSITE HAND
OPG.	OPENING
OPP.	OPPOSITE
O.S.A.	OUTSIDE AIR
O.S.B.	ORIENTED STRAND BOARD
O.T.B.	OUT TO BID
P.	POLE
(P), P, P'TD	PAINTED
P.C.	PRECAST CONCRETE
PERF.	PERFORATED
P.F.	PREFINISHED
PH.	PHASE AND PHARMACY
P.I.P.	POURED IN PLACE
(PL).	POLE MOUNT
P/L.	PROPERTY LINE
PL.	PLATE
P.LAM.	PLASTIC LAMINATE
PLUMB.	PLUMBING
PLYWD.	PLYWOOD
PNL.	PANEL
PR.	PAIR
PRESERV.	PRESERVATIVE
PROP.	PROPOSED
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
PT.	POINT
P.T.	PRESSURE TREATED
PTBD.	PARTICLE BOARD
P.T.D.	PAPER TOWEL DISPENSER
PTFR	PRESSURE TREATED FIRE RESISTIVE
PTN.	PARTITION
PVC.	POLYVINYL CHLORIDE
PVMT.	PAVEMENT
Q.T.	QUARRY TILE
(R)	REMOVE
R., RI.	RISER
RA.	RETURN AIR
RAD	RADIUS
R.B.	RUBBER BASE
R.D.	ROOF DRAIN
RD.	ROAD & ROUND
RE:	REFERENCE, REFER TO
REF.	REFRIGERATOR
REFL.	REFLECTED
REFR.	REFRIGERATION
REINF.	REINFORCING
REL.	RELOCATED
REQ'D.	REQUIRED
RESIL.	RESILIENT
RFH.	ROOF HATCH
RM.	ROOM
R.O.	ROUGH OPENING
R.O.W.	RIGHT OF WAY
R.P.C.	REFRIGERATION PROBE CABLE
RT.	RUBBER TILE
RTU	ROOF-TOP UNIT
R.W.L.	RAIN WATER LEADER
(S)	SEALANT
S.	SOUTH AND SLOPE
S.A.	SUPPLY AIR
SAN.	SANITARY
S.C.	SOLID CORE
S.C.D.	SEAT COVER DISPENSER
SCHED.	SCHEDULE
S.D.	SMOKE DETECTOR, SOAP DISPENSER AND STORM DRAIN
SEAL.	SEALANT
SE.	SOUTHEAST
SECT.	SECTION
S.F.	SQUARE FOOT/FEET
SHWR.	SHOWER
SHT.	SHEET
SHTG.	SHEETING
SIM.	SIMILAR

SMACNA	SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOC.
S.N.D.	SANITARY NAPKIN DISPENSER
S.N.R.	SANITARY NAPKIN RECEPTACLE
SP.	SPACES
SPECS.	SPECIFICATIONS
SQ.	SQUARE
S.S.	STAINLESS STEEL / SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
ST.	STREET
STA.	STATION
STD.	STANDARD
STL.	STEEL
STM.	STORM OR STORM LINE
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED
S.V.	SHEET VINYL
SW.	SOUTHWEST
SYM.	SYMMETRICAL
T.	TRANSFORMER
T., TR.	TREAD
T.&B.	TOP & BOTTOM
T.B.	TOWEL BAR
T.C.	TOP OF CURB
T.D.	TOP OF DRAIN
TELE.	TELEPHONE
T & G	TONGUE & GROOVE
THK.	THICKNESS
THRES.	THRESHOLD
T.J.	TOOL JOINT
T.L.	TRUE LENGTH
T.O.	TOP OF
T.O.B.	TOP OF BEAM
T.O.C.	TOP OF CURB/CONCRETE
T.O.D.	TOP OF DECK
T.O.F.	TOP OF FOOTING
T.O.J.	TOP OF JOIST
T.O.M.	TOP OF MASONRY
T.O.P.	TOP OF PAVEMENT/PARAPET
T.O.S.	TOP OF SLAB
T.O.W.	TOP OF WALL
TOPO.	TOPOGRAPHY
T.P.D.	TOILET PAPER DISPENSER
T.S.	TUBE STEEL & TEMPERATURE SENSOR
T.T.B.	TELEPHONE TERMINAL BOARD
T.V.	TELEVISION
TYP.	TYPICAL
UE	UNDERGROUND ELECTRIC
U.N.O.	UNLESS NOTED OTHERWISE
UTIL.	UTILITY
V.	VOLTS AND VENT
VAR.	VARIES
V.C.T.	VINYL COMPOSITION TILE
VENT.	VENTILATION
VERT.	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
V.P.	VENT PIPE
VR.	VENT RISER
V.T.	VINYL TILE
VTR.	VENT THRU ROOF
V.W.C.	VINYL WALL COVERING
W.	WEST, WATTS AND WATER
W/	WITH
WC.	WALLCOVERING
W.C.	WATER CLOSET
WD.	WOOD
W.GL.	WIRE GLASS
W.H.	WATER HEATER
W/O	WITHOUT
WP.	WATERPROOF
W.P.	WORK POINT
WP/H.	WEEP HOLE
W.R.	WATER RESISTANT
WSCT.	WAINSCOT
WT.	WEIGHT
W.V.	WATER VALVE
W.W.F.	WELDED WIRE FABRIC

GRAPHIC SYMBOLS



MATERIAL LEGEND



GENERAL NOTES

1. DUE TO CONDITIONS AND/OR INSTALLATIONS OF OWNER EQUIPMENT, ACCESSORIES, FURNITURE, ETC., ALL EXISTING INFORMATION MAY NOT BE INDICATED ON THE DRAWINGS. LOCATIONS ARE FROM FIELD NOTES AND/OR EXISTING DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PERTAINING TO THIS WORK PRIOR TO BID. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OR ENGINEER OF ANY DISCREPANCIES IMMEDIATELY BEFORE PROCEEDING WITH THE CONSTRUCTION.
2. THE CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION SITE AND THE BUILDING FREE OF DEBRIS THAT WOULD BE HAZARDOUS AND DISRUPTIVE TO THE USAGE OF THE BUILDING BY THE OWNER WHILE CONSTRUCTION IS IN PROGRESS.
3. PROTECT AND COVER ALL FURNISHINGS AND EQUIPMENT TO REMAIN WHILE CONSTRUCTION ACTIVITIES ARE OCCURRING.
4. THE CONTRACTOR SHALL COORDINATE ALL ITEMS PROVIDED AND/OR INSTALLED BY THE OWNER DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES TO ACCOMMODATE INSTALLATION OF EQUIPMENT AND DEVICES.
6. DIMENSIONS ARE TO FACE OF EXISTING WALL FINISH, NEW STUD FRAMING OR MASONRY UNLESS OTHERWISE NOTED.
7. PROVIDE WOOD BLOCKING AS REQUIRED FOR MOUNTING ALL ACCESSORIES. COORDINATE WITH ALL TRADES.
8. CONTRACTOR IS RESPONSIBLE FOR PATCHING AND/OR REPLACING ANY MATERIALS, SURFACES, FINISHES, ETC. DAMAGED DUE TO CONSTRUCTION.
9. GENERAL CONTRACTOR SHALL MAINTAIN BUILDING SECURE AND FULLY WEATHER TIGHT DURING ALL PHASES OF CONSTRUCTION.
10. PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE SEALED WITH CAULK/SEALANTS BEARING THE SAME RATING DESIGNATION.
11. EXISTING BUILDING STRUCTURAL ELEMENTS SHALL REMAIN INTACT THROUGHOUT THE BUILDING.

SCOPE OF WORK

THE SCOPE OF WORK ASSOCIATED WITH THIS PROJECT IS THE REDEVELOPMENT OF THE LOCALLY **LANDMARK SAUNDERS HOUSE** LOCATED AT **203 N. PERRY STREET** FOR THE PURPOSES OF A CHILDCARE FACILITY TO BE CALLED **THE LITTLE SCHOOL ON PERRY STREET.** THE PROJECT REQUIRES THE REMOVAL OF A SHED ON THE PROPERTY, AND INCLUDES A 1,314-SQUARE-FOOT ADDITION THAT WILL CONNECT THE EXISTING SAUNDERS HOUSE AND EXISTING GARAGE, AS WELL AS THE RESTORATION OF THE EXISTING STRUCTURES.

THE PROPOSED PROJECT INCLUDES IMPROVEMENTS OF THE LANDMARK STRUCTURE TO BRING IT BACK CLOSER TO ITS ORIGINAL DESIGN, CONSTRUCTING A NEW BUILDING ADDITION TO CONNECT THE EXISTING TWO BUILDINGS AND ASSOCIATED SITE IMPROVEMENTS. THE PROPOSED LICENSED DAYCARE FACILITY WOULD OPERATE ON THIS SITE AND INCLUDE A MAXIMUM CAPACITY OF 42 CHILDREN BASED ON THE STATE OF COLORADO CHILDCARE LICENSING REQUIREMENTS AND WOULD OPERATE DAYTIME SERVICES 5 DAYS A WEEK, BETWEEN 7:30 AM TO 5 PM DAILY. THE OWNER IS ALSO PLANNING TO PROVIDE OCCASIONAL EVENING DAYCARE SERVICES AND DAYCARE SERVICES DURING SPECIAL EVENTS TO SUPPORT THE LOCAL COMMUNITY DURING THOSE TIMES. THE FACILITY SHALL PROVIDE SERVICES FOR CHILDREN 6 MONTHS TO 6 YEARS OLD.

THE PROPOSED 1,314-SQUARE-FOOT ADDITION WOULD CONNECT THE GARAGE AND THE MAIN STRUCTURE. THE ADDITION WOULD ATTACH TO THE MAIN STRUCTURE ON THE NORTH AND WEST SIDES AND ATTACH TO THE EAST WALL OF THE GARAGE. THE ADDITION WOULD INCLUDE (2) TWO TODDLER CARE ROOMS, RESTROOMS, MAIN ENTRY AND AN OFFICE. THE ADDITION ALSO ACCOMMODATES THE 42" ELEVATION GRADE DIFFERENCE BETWEEN THE BUILDINGS.

THE EXTERIOR IMPROVEMENTS INCLUDE REMOVAL OF THE RED VINYL SIDING ON THE SAUNDERS HOUSE, MAKE NECESSARY REPAIRS TO THE WEATHER BARRIER, AND INSTALL 5-INCH WIDE FIBER-CEMENT SIDING TO REPLICATE THE ORIGINAL LAP SIDING IN A PORCELAIN COLOR. THE RED WOOD SIDING ON THE EXISTING GARAGE WILL BE REMOVED AND REPLACED WITH A 10-INCH FIBER-CEMENT SIDING IN A WARM GRAY COLOR. THE ADDITION WILL ALSO BE CLADDED IN THE 10-INCH FIBER-CEMENT SIDING TO MATCH THE EXISTING GARAGE BUILDING. THE COLOR CHOICES COMPLEMENT EACH OTHER WHILE CREATING A DISTINCTION BETWEEN THE EXISTING LANDMARKED STRUCTURE AND THE NON-ORIGINAL GARAGE / ADDITION.

THE ROOFLINE OF THE LANDMARKED STRUCTURE VARIES, AS DOES THAT OF THE ADDITION. THE MAIN STRUCTURE IS APPROXIMATELY 19 FEET, 5 INCHES AT THE HIGHEST ROOF RIDGE. THE TALLEST PART OF THE ADDITION MEASURES 18 FEET, 6 INCHES. THE PROPERTY SLOPES DOWN TO THE WEST TOWARD THE ALLEY MAKING THE ADDITION APPEAR LOWER THAN THE EXISTING STRUCTURE. THE ADDITION'S DESIGN, COLOR AND LOCATION, RELATIVE TO THE MAIN STRUCTURE TAKE FULL ADVANTAGE OF THE LOT'S SLOPE TOWARDS THE ALLEY.

TWO OUTDOOR PLAY AREAS ARE PROPOSED; ONE ON THE SOUTH SIDE OF THE PROPERTY, AND THE OTHER ON THE NORTH SIDE. METAL ORNAMENTAL FENCING SHALL ENCLOSE BOTH OF THE OUTDOOR PLAY AREAS. THE EXISTING DRIVEWAY AREA SHALL BE UPDATED AND REPAVED TO PROVIDE (3) THREE NEW PARKING SPACES, INCLUDING SPACE FOR VAN ACCESSIBILITY.

THE SUMMARY OF THE SCOPE OF WORK IS AS FOLLOWS:

EXTERIOR / SITE IMPROVEMENTS:

SITE IMPROVEMENTS:
- DEMOLITION OF EXISTING SHED BUILDING, RETAINING WALLS, LANDSCAPE, SIDEWALKS, ETC AS REQUIRED FOR NEW ADDITION AND SITE IMPROVEMENTS
- NEW PAVED PARKING AREA
- NEW ACCESSIBLE SIDEWALKS
- NEW RETAINING WALLS
- NEW PLAYGROUND AREAS W/ SYNTHETIC TURF
- RELOCATED GAS SERVICE
- REPLACE DOMESTIC WATER SERVICE
- NEW SANITARY SEWER AND GREASE INTERCEPTOR

DEMOLITION:
- REMOVE EXTERIOR FACADE OF BOTH EXISTING BUILDINGS. INCLUDING SIDING AND SURFACE INSULATION. ALL EXISTING SHEATHING TO BE INSPECTED AND REPAIRED PRIOR TO NEW FACADE INSTALLATION.
- REMOVE EXISTING ASPHALT SHINGLE ROOFING AND FELTS. ALL EXISTING SHEATHING TO BE INSPECTED AND REPAIRED PRIOR TO NEW ROOFING INSTALLATION.
- REMOVE PORTION OF NORTHWEST CORNER OF EXISTING BUILDING TO CONNECT TO NEW ADDITION.
- REMOVAL OF EXISTING BACK PORCH AND CHIMNEY.
- REMOVAL / REPLACEMENT OF FLOOR STRUCTURE IN FRONT PORTION OF ORIGINAL HOUSE BUILDING
- RECONFIGURE INSIDE OF ORIGINAL HOUSE BUILDING FOR STAFF AND BUSINESS OPERATIONS.
- UNDERPINNING OF THE EXISTING FOUNDATIONS OF WEST PORTION OF ORIGINAL HOUSE

LANDMARK / HISTORIC EXTERIOR BUILDING / STRUCTURE:
- NEW FIBER-CEMENT SIDING AND REPAIR / UPDATES TO EXISTING WEATHER BARRIER
- HISTORIC WINDOWS TO BE RESTORED OR RELOCATED
- REPLACE FRONT NON-ORIGINAL WINDOWS
- NEW DIMENSIONAL ASPHALT SHINGLE ROOF
- REPAINTING BUILDING TO ORIGINAL COLOR

GARAGE EXTERIOR BUILDING / STRUCTURE:
- NEW FIBER-CEMENT SIDING EXTERIOR FINISH
- REMOVAL OF EXISTING WINDOWS AND GARAGE DOORS
- NEW WINDOW AND OVERHEAD DOOR ON WEST AND SOUTH ELEVATIONS
- NEW DIMENSIONAL ASPHALT SHINGLE ROOF
- REPAINT ENTIRE BUILDING

NEW ADDITION BUILDING / STRUCTURE:
- NEW REINFORCED CONCRETE FOUNDATION AND SLAB ON GRADE
- WOOD FRAMED CONSTRUCTION, INCLUDING PREFABRICATED WOOD TRUSSES
- NEW 2X6 EXTERIOR WALL FRAMING WITH R-21 BATT INSULATION
- NEW 2X4 INTERIOR WALL PARTITIONS WITH DRYWALL FINISH THROUGHOU
- NEW FIBER-CEMENT SIDING EXTERIOR FINISH
- NEW DIMENSIONAL ASPHALT SHINGLE ROOF
- NEW FIBERGLASS DOORS & VINYL / COMPOSITE WINDOWS.
- ONE-HOUR FIRE RATED CONSTRUCTION ALONG NORTH WALL

INTERIOR DESIGN & FINISHES:
- EXISTING WOOD FLOORS TO BE REBURBISHED AND REFINISHED
- ALL EXISTING WALLS TO REMAIN SHALL BE REPAINTED.
- NEW FLOORING TO INCLUDE LVT TILE FLOORING IN CLASSROOMS AND COMMON AREAS AND SHEET VINYL IN TOILET ROOMS.
- ALL NEW GYP. BD. WALLS AND CEILINGS TO BE PAINTED
- ALL INTERIOR DOORS TO BE WOOD DOORS W/ STAINED FINISH.
- ALL WOOD TRIM, FRAMES AND BASE TO BE PAINTED.

BUILDING SYSTEMS:
- REUSE THE EXISTING FURNACE UNIT AND DUCTWORK IN THE LANDMARK BUILDING. RELOCATE DIFFUSERS AS REQUIRED.
- PROVIDE (2) TWO NEW FURNACE UNITS LOCATED IN THE ATTIC WITH NEW DUCTWORK THROUGHOUT ADDITION AND GARAGE BUILDING.
- ALL NEW PLUMBING FIXTURES AND ACCESSORIES
- NEW HOT WATER TANK SYSTEM
- REUSE EXISTING 200-AMP ELECTRICAL SERVICE.
- ALL NEW ELECTRICAL SYSTEM & LED LIGHTING. A NEW ELECTRICAL PANEL TO BE LOCATED IN THE NEW OFFICE

DRAWING INDEX

DEFERRED SUBMITTALS

THE FOLLOWING ARE THE DEFERRED SUBMITTALS TO BE COMPLETED SEPARATELY BY THE CONTRACTOR:

- PRE-ENGINEERED WOOD TRUSS SHOP DRAWINGS AND CALCULATIONS

- FOUNDATION UNDERPINNING DESIGN AND CALCULATIONS

- FIRE ALARM SYSTEM SHOP DRAWINGS

STATE OF COLORADO
SCOTT A. BODUCH
400217
03.14.2024
LICENSED ARCHITECT

BODUCH DESIGN GROUP
4969 South Alkire Street
Morrison, CO 80465
Phone: 303.901.0720
www.BDGArch.com
A VISION ENLIGHTENED

RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE:	03.12.2024
DRAWN:	BDG
CHECKED:	SAB
BDG ARCH NO.:	**23.024**

PROJECT INFORMATION

G1.0

ISSUED FOR PERMIT - 03.12.2024

D:\BDG Projects\23.024 - Little School on Perry - Castle Rock, CO\CAD\23.024 - ~G1.0 - Project Information.dwg

CODE ANALYSIS

Project Name: The Little School on Perry Street

Location: 203 Perry Street, Castle Rock CO 80104

Owner: Taylor Lewison

Jurisdiction: Town of Castle Rock, Colorado - Douglas County

Architect: BDG | Boduch Design Group, Inc.
Scott A. Boduch, AIA
Architect of Record

Applicable Codes: 2018 International Building Code (IBC) w/ Town Amendments
2018 International Existing Building Code (IEBC)
2018 International Mechanical Code (IMC)
2018 International Fuel Gas Code (IFGC)
2018 International Fire Code (IFC)
2018 International Plumbing Code (IPC)
2018 International Energy Conservation Code (IECC)
2023 National Electrical Code (NEC)
2009 International Code Council (ICC-ANSI A117.1)

Proposed Building Area:

Existing Garage Building =	657 GSF
Existing Landmark Building =	1,206 GSF
Building Expansion =	1,314 GSF
TOTAL=	**3,177 GSF**

Chapter 3 - Use and Occupancy Classification (IBC)

Section 305 - Classification

305.2 Educational / Day Care Facility — Group E

Section 305.2 - Educational Group E, day care facilities

This group includes buildings and structures or portions thereof occupied by more than five children older than 2 ½ years of age who receive educational, supervision or personal care services for fewer than 24 hours per day.

Section 308.5.1 - Classification as Group E

A child day care facility that provides care for more than five but not more than 100 children 2 ½ years or less of age, where the rooms in which the children are cared for are located on a level of exit discharge serving such rooms and each of these childcare rooms has an exit door directly to the exterior, shall be classified as Group E.

Chapter 5 - General Building Heights and Areas (IBC)

Construction Type V-B — Refer to Chapter 6

Proposed Building Area:
Single Floor Level on Grade
Group E - Educational

Existing Garage Building =	657 GSF
Existing Landmark Building =	1,206 GSF
Building Expansion =	1,314 GSF
TOTAL=	**3,177 GSF**

Proposed Building Height: +/- 22'-0", 1 Story

Table 504.3 - Allowable Building Height Above Grade Plane
Group E, Non-Sprinklered — 40'-0"

Table 504.4 - Allowable Number of Stories Above Grade Plane
Group E, Non-Sprinklered — 1 Stories

Table 506.2 - Allowable Area Factor
Group E, Non-Sprinklered — 9,500 GSF

Chapter 6 - Types of Construction (IBC)

Section 602 - Construction Classification
602.5 - Type V-B

Table 601 - Fire-Resistance Rating Requirements for Building Elements (Hours)

Building Elements	Construction Type V-B
Primary Structural Frame	0 hrs
Bearing Walls	
Exterior	0 hrs
Interior	0 hrs
Non-bearing Walls and Partitions	
Exterior (Table 602)	0 hrs
Interior	0 hrs
Floor Construction	0 hrs
Roof Construction	0 hrs

Table 602 - Fire-Resistance Rating Req. for Ext. Walls Based on Fire Separation Distance

X < 5'	Const. Type V-B	Occ. Group E	1 hrs
5' ≤ X < 10'	Const. Type V-B	Occ. Group E	1 hrs
10' ≤ X < 30'	Const. Type V-B	Occ. Group E	0 hrs

Chapter 7 - Fire and Smoke Protection Features (IBC)

Table 705.2 - Minimum Distance of Projections

2 to less than 3 feet	24 inches
3 to less than 3 feet	24 inches plus 8 inches for every foot of FSD beyond 3 feet

Table 705.8 - Maximum Area of Exterior Wall Openings

0 to less than 3 feet	Protected	Not Permitted
3 to less than 5 feet	Protected	15% (12.5% Proposed)

Table 716.1(2) - Door Opening Fire Protection Assemblies / Ratings

Door Openings located in a 1-Hour Fire Rated Exterior Wall Assembly:

Door Assembly = ¾ Hour

Door Vision Panel = ¾ Hour

Table 716.1(3) - Window Opening Fire Protection Assemblies / Ratings

Window Openings located in a 1-Hour Fire Rated Exterior Wall Assembly:

Window Assembly = ¾ Hour

Table 722.2.1.4(2) - Time Assigned to Finish Material on Fire-Exposed Side of Wall

Type 'X' Gypsum Wallboard — 5/8" Thickness — 40 Minutes

Chapter 8 - Interior Finishes (IBC)

Table 803.13 - Interior Wall and Ceiling Finish Requirements by Occupancy

Non-Sprinklered

Group	Exit Passageways	Corridors	Rooms
E	A	B	C

Chapter 9 - Fire Protection Systems (IBC)

Section 903 - Automatic Sprinkler Systems

903.2.6 - Group E — Not Required

Item #1: Less than 12,000 square feet
Item #2: Located on the level of discharge
Item #3: Less than 300 Occupants

Section 906 - Portable Fire Extinguishers

906.1 - Where Required under International Fire Code — Group E

Section 907 - Fire Alarm and Detection Systems

907.2 - New buildings and structures — Required

907.2.3 - Group E - Manual Fire Alarm System — Required (Over 50 Occs.)

Exception #2: Emergency voice / alarm communication systems - Not required as less than 100 Occupants.

Section 915 - Carbon Monoxide Detection

915.2.3 - Group E - Carbon Monoxide Detectors — Required in Classrooms

Chapter 10 - Means of Egress (IBC)

Section 1003 - General Means of Egress — In Compliance

Section 1004 - Occupant Load

Occupant Load
Egress Diagram & Calculations — **See Sheet G2.1**

Section 1005 - Means of Egress Sizing

1005.3 - Required Capacity Based On Occupant Load
1005.3.1 - Stairways — 0.3" / occupant
1005.3.2 - Other Egress Components — 0.2" / occupant

Section 1006 - Number of Exits and Exit Access Doorways

Table 1006.2.1 - Space with One Exit Or Exit Access Doorway

Occupancy	Max. Occ Load	Max Common Path of Egress
E	49	(NS) 75'

Section 1009 - Accessible Means of Egress

1009.1 - Accessible Means of Egress — In Compliance

Section 1017 - Exit Access Travel Distance

Table 1017.2 - Exit Access Travel Distance
E - Occupancy — (NS) 200'-0"

Section 1020 - Corridors

Section 1020.1 - Construction

Exception #1: Fire Rating is not required in Group E Occupancy where each room that is used for instruction has not less than one door opening directly to the exterior.

Table 1020.1 - Corridor Fire-Resistance Rating

Occupancy	Occupant Load in Corridor	(NS) Required Rating
E	Greater Than 30	0 hr

Table 1020.2 - Minimum Corridor Width — 44" minimum (Less than 100 Occs.)

Section 1024 - Exit Passageways

1024.2 - Width — < 50 Occ., 36" min.

Chapter 11 - Accessibility (IBC - ICC·ANSI A117.1)

Section 1103 - Scoping Requirements

1103.2 - General Exceptions
1003.2.3 - Employee work areas — Limits per 907.9.1.2, 1009, and 1004.3.1

Section 1104 - Accessible Route — In Compliance

Section 1105 - Accessible Entrances — In Compliance

Section 1106 - Parking and Passenger Loading Facilities

Table 1106.1 - Accessible Parking Spaces

Total Parking Spaces Provided	3
Required Min. Accessible Spaces	1

Chapter 29 - Plumbing Systems (IBC)

Table 2902.1 - Minimum Number of Required Plumbing Fixtures

Group I-4 - 63 Occupants Total
32 Male
32 Female

Required Fixtures

Use Group	Water Closets	Lavatories	Shower	DFs	SS
E	1/50	1/50	0	1/100	1
	M 1, F 1	M 1, F 1		1	

Provided Fixtures

Use Group	Water Closets	Lavatories	Shower	DFs	SS
E	UNISEX - 4	UNISEX - 4	1	2	1

INTERNATIONAL EXISTING BUILDING

Chapter 6 - Classification of Work

Section 605 - Change of Occupancy

605.2 - Follow Provisions of Chapter 10

- Portions of Historic / Landmark Structure Changing from Daycare / E Occupancy from the current Business Use. The remaining sections of the building shall remain as business support uses.

Section 607 - Historic Buildings

605.2 - Follow Provisions of Chapter 12

Chapter 10 - Change of Use

Table 1011.4 - Means of Egress Hazard Categories

Original Use (Business) - B-Business / M-Mercantile - Hazard Level 4

Proposed Use (Daycare / Business Support) - Hazard Level 3

Chapter 12 - Historic Buildings

Table 1204.5 - Roofing Coverings
Minimum Class C Rating

Table 1204.9 - Finishes
Minimum Class C Rating

END OF CODE ANALYSIS

COMcheck Software Version 4.1.5.5

Envelope Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	THE LITTLE SCHOOL ON PERRY STREET
Location:	Castle Rock, Colorado
Climate Zone:	5b
Project Type:	New Construction
Vertical Glazing / Wall Area:	14%

Construction Site:
203 PERRY STREET
Castle Rock, CO 80104

Owner/Agent:
TAYLOR LEWISON
CASTLE ROCK, CO
949.355.5355
taylor.lewison@gmail.com

Designer/Contractor:
Scott Boduch
Boduch Design Group
4969 South Alkire Street
Morrison, CO 80465
303.901.0720
sboduch@bdgarch.com

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Enhanced Interior Lighting Controls, 1.0 credit

Building Area	Floor Area
1-Daycare (School/University) : Nonresidential	2143

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Floor 1: Slab-On-Grade:Unheated, Vertical 2 ft., [Bldg. Use 1 - Daycare] (d)	247	---	10.0	0.540	0.540
Roof - Pitched: Attic Roof with Wood Joists, [Bldg. Use 1 - Daycare]	2143	38.0	0.0	0.027	0.027
Roof -- Flat: Attic Roof with Wood Joists, [Bldg. Use 1 - Daycare]	133	38.0	6.5	0.023	0.027
NORTH					
Exterior Wall - North: Wood-Framed, 16" o.c., [Bldg. Use 1 - Daycare]	792	21.0	0.0	0.062	0.064
Window 1 Toddler I: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID FyreTex of Equivalent, SHGC 0.55, PF 0.34, [Bldg. Use 1 - Daycare] (c)	7	---	---	0.450	0.380
Window 2 Toddler I: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID FyreTex or Equivalent, SHGC 0.55, PF 0.34, [Bldg. Use 1 - Daycare] (c)	7	---	---	0.450	0.380
Window 3 Toddler II: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID FyreTex or Equivalent, SHGC 0.55, PF 0.34, [Bldg. Use 1 - Daycare] (c)	7	---	---	0.450	0.380
Door 1 Toddlers II: Insulated Metal, Swinging, [Bldg. Use 1 - Daycare]	20	---	---	0.550	0.370
EAST					
Exterior Wall - East @ Toddler I: Wood-Framed, 16" o.c., [Bldg. Use 1 - Daycare]	276	21.0	0.0	0.062	0.064
Window 1 Toddler I: Vinyl/Fiberglass Frame:Fixed, Perf. Specs.: Product ID ANDERSON OR EQUIVALENT, SHGC 0.30, PF 0.34, [Bldg. Use 1 - Daycare] (c)	33	---	---	0.300	0.380
Door 1 Toddler I: Other Door, Swinging, [Bldg. Use 1 - Daycare]	23	---	---	0.400	0.370
SOUTH					
Exterior Wall 1 - (N) South Wall @ Toddler I: Wood-Framed, 16" o.c., [Bldg. Use 1 - Daycare]	135	21.0	0.0	0.062	0.064
(E) Dbl Hung Window Toddler I: Vinyl/Fiberglass Frame:Fixed, Perf. Specs.: Product ID ANDERSON OR EQUIVALENT, SHGC 0.30, PF 0.34, [Bldg. Use 1 - Daycare] (c)	16	---	---	0.300	0.380
Door 1 Toddler I: Other Door, Swinging, [Bldg. Use 1 - Daycare]	20	---	---	0.350	0.370
Exterior Wall 2 - (N) South Wall @ Hallway: Wood-Framed, 16" o.c., [Bldg. Use 1 - Daycare]	225	21.0	0.0	0.062	0.064
Window 1 Hallway: Vinyl/Fiberglass Frame:Fixed, Perf. Specs.: Product ID ANDERSON OR EQUIVALENT, SHGC 0.30, PF 0.34, [Bldg. Use 1 - Daycare] (c)	16	---	---	0.300	0.380
Window 2 Hallway: Vinyl/Fiberglass Frame:Fixed, Perf. Specs.: Product ID ANDERSON OR EQUIVALENT, SHGC 0.30, PF 0.34, [Bldg. Use 1 - Daycare] (c)	16	---	---	0.300	0.380
Door 1 Hallway: Other Door, Swinging, [Bldg. Use 1 - Daycare]	23	---	---	0.400	0.370
Exterior Wall 3 - (E) South Wall @ Preschool: Wood-Framed, 16" o.c., [Bldg. Use 1 - Daycare]	245	13.0	0.0	0.089	0.064
Storefront 1 Preschool: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID Kawneer 451T, SHGC 0.40, PF 0.34, [Bldg. Use 1 - Daycare] (c)	18	---	---	0.400	0.380
Storefront 2 Preschool: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID Kawneer 451T, SHGC 0.40, PF 0.34, [Bldg. Use 1 - Daycare] (c)	41	---	---	0.400	0.380
Garage Door PreSchool: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Specs.: Product ID Overhead Glass Door 521S, SHGC 0.38, [Bldg. Use 1 - Daycare] (c)	64	---	---	0.770	0.770
Storefront Door 1 PreSchool: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Specs.: Product ID Kawneer 350T, SHGC 0.38, [Bldg. Use 1 - Daycare] (c)	23	---	---	0.560	0.770
WEST					
Exterior Wall - (N) West Wall @ Office and Reception: Wood-Framed, 16" o.c., [Bldg. Use 1 - Daycare]	237	21.0	0.0	0.062	0.064
Window 1 - Office: Vinyl/Fiberglass Frame:Fixed, Perf. Specs.: Product ID ANDERSON OR EQUIVALENT, SHGC 0.30, PF 0.34, [Bldg. Use 1 - Daycare] (c)	16	---	---	0.300	0.380
Window 2 - Office: Vinyl/Fiberglass Frame:Fixed, Perf. Specs.: Product ID ANDERSON OR EQUIVALENT, SHGC 0.30, PF 0.34, [Bldg. Use 1 - Daycare] (c)	16	---	---	0.300	0.380
Window 4 - Clerestory: Vinyl/Fiberglass Frame:Fixed, Perf. Specs.: Product ID ANDERSON OR EQUIVALENT, SHGC 0.30, PF 0.34, [Bldg. Use 1 - Daycare] (c)	6	---	---	0.300	0.380
Window 5 - Clerestory: Vinyl/Fiberglass Frame:Fixed, Perf. Specs.: Product ID ANDERSON OR EQUIVALENT, SHGC 0.30, PF 0.34, [Bldg. Use 1 - Daycare] (c)	6	---	---	0.300	0.380
Door 1 - Reception: Other Door, Swinging, [Bldg. Use 1 - Daycare]	21	---	---	0.400	0.370
Exterior Wall - (E) West Wall @ Preschool: Wood-Framed, 16" o.c., [Bldg. Use 1 - Daycare]	248	13.0	0.0	0.089	0.064
Window 1 - Preschool: Vinyl/Fiberglass Frame:Fixed, Perf. Specs.: Product ID ANDERSON OR EQUIVALENT, SHGC 0.30, PF 0.34, [Bldg. Use 1 - Daycare] (c)	9	---	---	0.300	0.380
Window 1 - Preschool: Vinyl/Fiberglass Frame:Fixed, Perf. Specs.: Product ID ANDERSON OR EQUIVALENT, SHGC 0.35, PF 0.34, [Bldg. Use 1 - Daycare] (c)	9	---	---	0.350	0.380

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) 'Other' components require supporting documentation for proposed U-factors.
(c) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(d) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 1% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Scott A. Boduch, AIA - President — Name - Title
Signature
03.11.2024 — Date

STATE OF COLORADO
SCOTT A. BODUCH
400217
03.14.2024
LICENSED ARCHITECT

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04.16.2023	UPDATED CONCEPT DESIGN	
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DATE: 03.12.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: **23.024**

CODE ANALYSIS & ENERGY REPORT

G2.0

ISSUED FOR PERMIT - 03.12.2024

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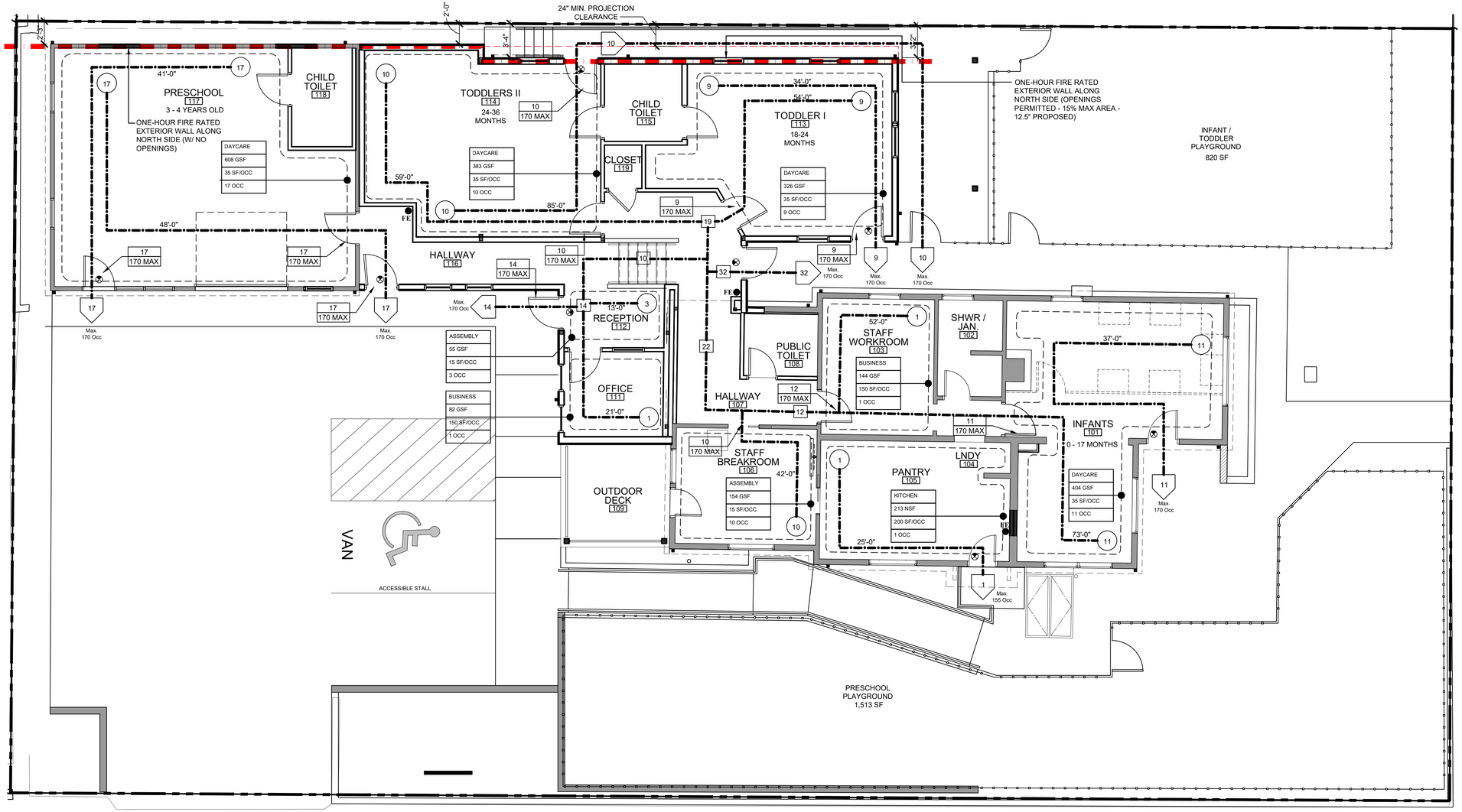


1 G2.1

EGRESS DIAGRAM

SCALE: 3/16" = 1'-0"

OCCUPANT LOAD SUMMARY

Section 1004 - Occupant Load

Table 1004.1.2 - Maximum floor area allowances per occupant

Daycare	35 gsf / 1 occ
Business / Office	150 gsf / 1 occ
Assembly	15 gsf / 1 occ
Kitchen	200 gsf / 1 occ

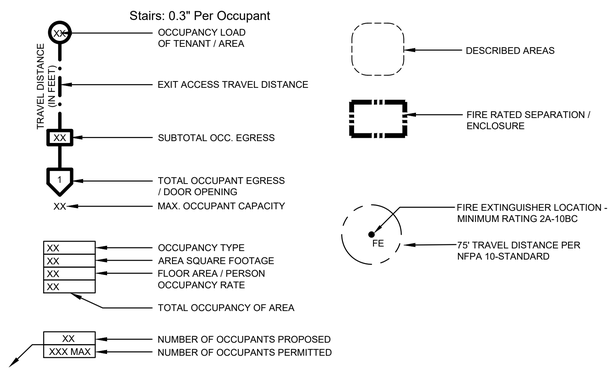
Function of Space	Floor Area	Total Occupants
Daycare	1,721 gsf	47
Business / Office	226 gsf	2
Kitchen	213 gsf	1
Assembly	209 gsf	13
Total Building Occupant Load		63

Section 1004 - Means of Egress Sizing

Capacity Factor:

Other Components: 0.2" Per Occupant

EGRESS LEGEND



STATE OF COLORADO
SCOTT A. BODUCH
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A VISION ENLIGHTENED

RETROFIT & ADDITION FOR:

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CHECKED: SAB
BDG ARCH NO.: **23.024**

EGRESS DIAGRAM

G2.1

ISSUED FOR PERMIT - 03.12.2024

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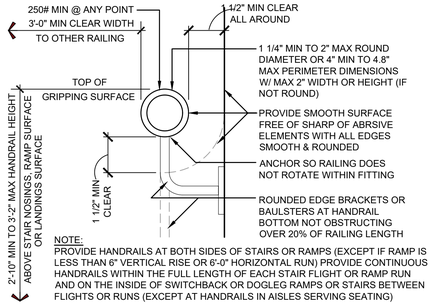
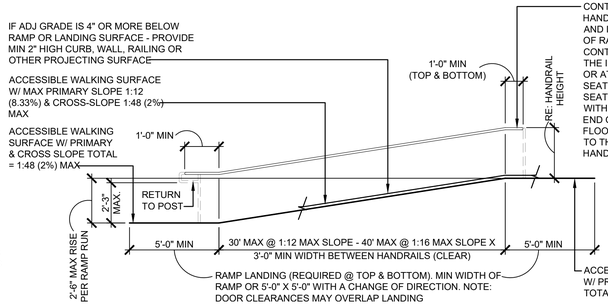
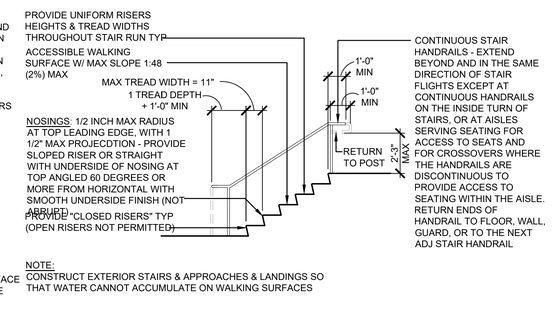


NOTE:
PROVIDE HANDRAILS AT BOTH SIDES OF STAIRS OR RAMPS (EXCEPT IF RAMP IS LESS THAN 6" VERTICAL RISE OR 6'-0" HORIZONTAL RUN) PROVIDE CONTINUOUS HANDRAILS WITHIN THE FULL LENGTH OF EACH STAIR FLIGHT OR RAMP RUN AND ON THE INSIDE OF SWITCHBACK OR DOGLEG RAMPS OR STAIRS BETWEEN FLIGHTS OR RUNS (EXCEPT AT HANDRAILS IN AISLES SERVING SEATING)

RAMP & STAIR HANDRAILS (INTERIOR OR EXTERIOR)



ACCESSIBLE RAMPS (INTERIOR OR EXTERIOR)

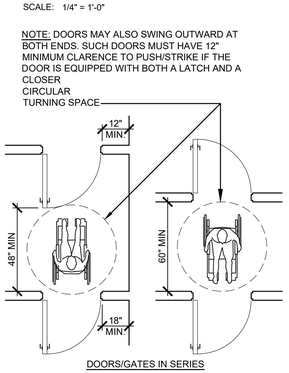


NOTE:
CONSTRUCT EXTERIOR STAIRS & APPROACHES & LANDINGS SO THAT WATER CANNOT ACCUMULATE ON WALKING SURFACES

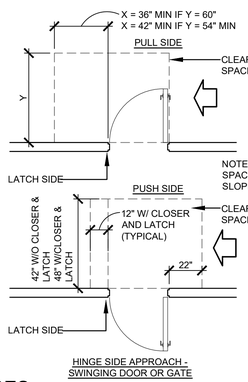
ACCESSIBLE STAIRS (INTERIOR OR EXTERIOR)

ACCESSIBLE STAIRS / RAMPS & HANDRAIL DETAILS

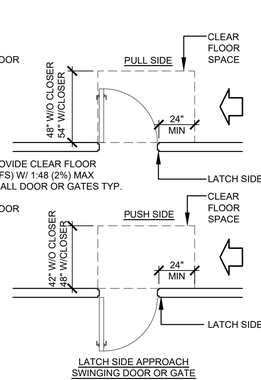
SCALE: 1/4" = 1'-0"



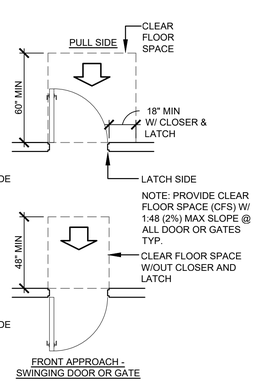
DOORS/GATES IN SERIES



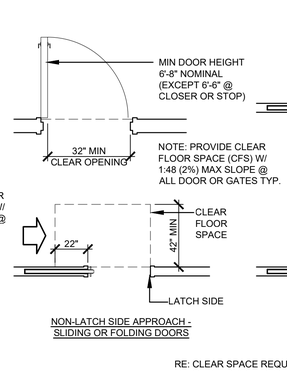
HINGE SIDE APPROACH - SWINGING DOOR OR GATE



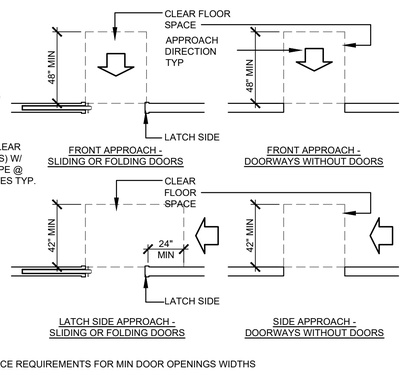
LATCH SIDE APPROACH SWINGING DOOR OR GATE



FRONT APPROACH - SWINGING DOOR OR GATE



NON-LATCH SIDE APPROACH - SLIDING OR FOLDING DOORS

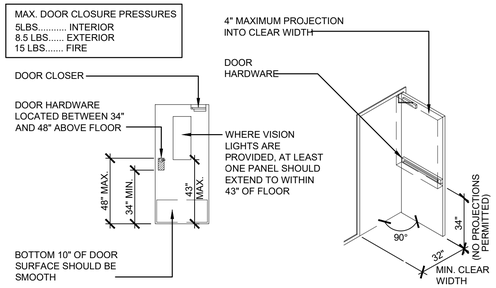


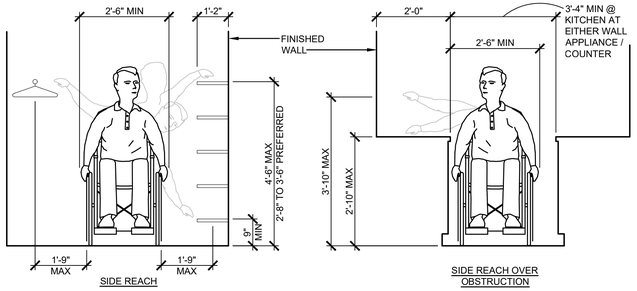
RE: CLEAR SPACE REQUIREMENTS FOR MIN DOOR OPENINGS WIDTHS
RE: CLEAR SPACE REQUIREMENTS FOR INTERIOR SIGNAGE

DOOR AND GATE CLEARANCES

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

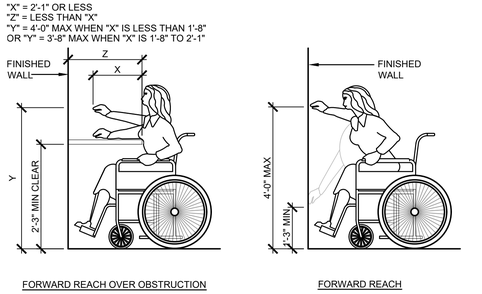
MAX. DOOR CLOSURE PRESSURES
SLBS.......... INTERIOR
8.5 LBS..... EXTERIOR
15 LBS..... FIRE





SIDE REACH

SIDE REACH OVER OBSTRUCTION

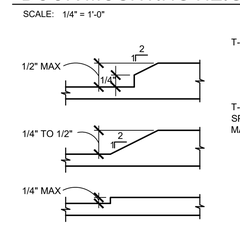


FORWARD REACH OVER OBSTRUCTION

FORWARD REACH

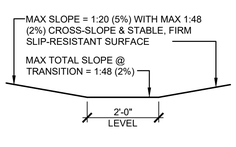
DOOR MOUNTING HEIGHTS

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

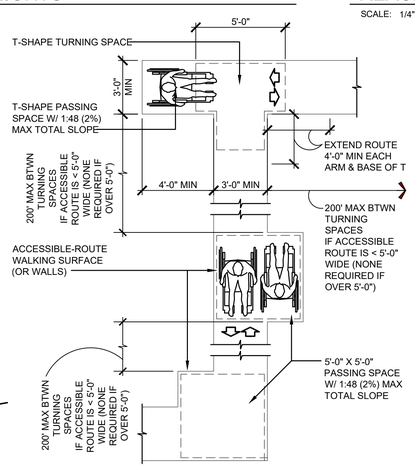


NOTE: PROVIDE RAMP IF
CHANGE IS OVER 1/2" IN HEIGHT

ALLOWABLE CHANGE IN LEVEL



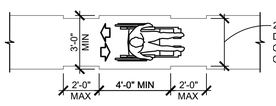
MAX SLOPE OF WALKING SURFACE @ ACCESSIBLE ROUTE



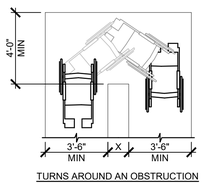
PASSING SPACES @ ACCESSIBLE-ROUTE

REACH RANGES

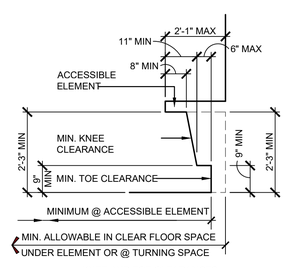
SCALE: 1/4" = 1'-0"



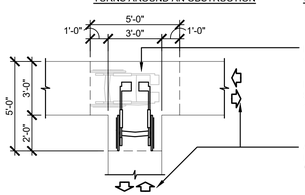
MINIMUM CLEAR WIDTH FOR SINGLE WHEELCHAIR



TURNS AROUND AN OBSTRUCTION

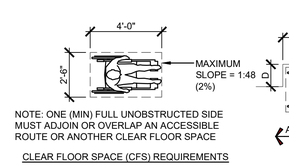


KNEE AND TOE CLEARANCES



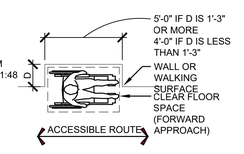
KNEE & TOE CLEARANCE BELOW AN OBSTRUCTION PERMITTED AT EITHER AN "ARM" OR AT THE "BASE" (BUT NOT AT BOTH)

T-SHAPED TURNING SPACE

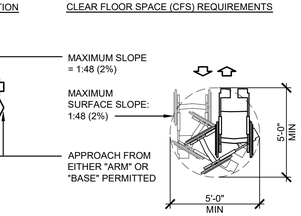


NOTE: ONE (MIN) FULL UNOBSTRUCTED SIDE MUST ADJOIN OR OVERLAP AN ACCESSIBLE ROUTE OR ANOTHER CLEAR FLOOR SPACE

CLEAR FLOOR SPACE (CFS) REQUIREMENTS

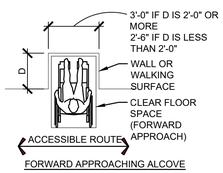


SIDE APPROACH IN ALCOVE



NOTE: KNEE & TOE CLEARANCES BELOW AN OBSTRUCTION ARE PERMITTED

CIRCULAR TURNING SPACE



FORWARD APPROACHING ALCOVE

ACCESSIBLE ROUTE REQUIREMENTS

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

CLEAR SPACE REQUIREMENTS

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

ACCESSIBILITY NOTES

THE INFORMATION ON THESE ACCESSIBILITY DRAWINGS IS PROVIDED AS A GUIDE TO THE CONTRACTOR & TO ANY OTHER ENTITIES INSTALLING BUILDING EQUIPMENT OR FIXTURES. THESE DRAWINGS ARE ABBREVIATED & DO NOT INDICATE ALL CONDITIONS THAT MAY BE ENCOUNTERED & THEY DO NOT INCLUDE ALL REQUIREMENTS OF EITHER THE ADA OR THE 2009 ANSI A117.I ACCESSIBILITY STANDARDS IN THEIR ENTIRETY.

THE AMERICANS W/ DISABILITIES ACT (ADA) IS A CIVIL-RIGHTS LAW (NOT A BUILDING CODE) & IS THEREFORE NOT NECESSARILY ENFORCEABLE BY AUTHORITIES HAVING JURISDICTION. THE ACCESSIBILITY REQUIREMENTS OF THE **2009 ANSI A117.I ACCESSIBILITY STANDARDS** ARE TYPICALLY REQUIRED THROUGH THE BUILDING CODE.

COMPLY W/ REQUIREMENTS OF THE AMERICANS W/ DISABILITIES ACT (ADA) EVEN IF NOT REQUIRED BY BUILDING CODES, REGULATIONS OR ORDINANCES (ADA IS A FEDERAL LAW), & AS INDICATED ON THESE DRAWINGS:

ACCESSIBLE ROUTE:
PROVIDE AN ACCESSIBLE ROUTE CONNECTING ALL ACCESSIBLE SPACES & ELEMENTS, INCLUDING WALKING SURFACES, RAMPS & CURB-RAMPS (EXCLUDING THE FLARED SIDES), DOORS & DOORWAYS, AND/OR ELEVATORS & PLATFORM LIFTS. AN ACCESSIBLE ROUTE MAY BE LOCATED AT EXTERIOR WALKS, AISLES, HALLS, CORRIDORS, SKYWALKS OR TUNNELS

ACCESSIBLE WALKING SURFACES: PROVIDE STABLE, FIRM, & SLIP-RESISTANT SURFACE FINISHES W/ SURFACE OPENINGS (GRATINGS) NOT TO PERMIT PASSAGE OF A 1/2" DIAMETER SPHERE - W/ LONGEST DIMENSION PERPENDICULAR TO DIRECTION OF TRAVEL

MINIMUM WHEELCHAIR TURNING SPACE CAN INCLUDE ALLOWABLE FIXTURE KNEE & TOE CLEARANCES UNO. DOOR SWINGS ARE PERMITTED TO OVERLAP TURNING SPACE UNO.

ACCESSIBLE BUILDING ENTRANCES:
PROVIDE 60% (MIN) OF ALL PUBLIC BUILDING ENTRANCES (EXCLUDING THOSE FOR LOADING OR SERVICE USE) ACCESSIBLE FROM: ACCESSIBLE PARKING, A PUBLIC TRANSPORTATION STOP, OR FROM A PASSENGER LOADING ZONE (AS APPLICABLE) W/OUT STEPS OR ABRUPT CHANGES IN LEVEL.

PROVIDE ONE (1 - MIN) ACCESSIBLE BUILDING ENTRANCE AT THE GROUND FLOOR LEVEL & ONE (1 - MIN) ACCESSIBLE ENTRANCE TO EACH PROPOSED TENANT SPACE IN A MULTIPLE-TENANT BUILDING.

PROVIDE ACCESSIBLE ENTRANCE AT SERVICE OR LOADING ENTRIES (NOT INTENDED FOR ENTRANCE BY THE PUBLIC) IF THAT IS THE ONLY ENTRANCE TO A SPACE OR BUILDING.

MULTI-LEVEL BUILDINGS: PROVIDE ONE (1 - MIN) ACCESSIBLE ROUTE (INCLUDING AN ELEVATOR TO CONNECT EACH BUILDING LEVEL ABOVE OR BELOW ACCESSIBLE LEVELS INCLUDING MEZZANINES) UNLESS THE FLOOR-AREA IS LESS THAN 3,000 SF & DOES NOT INCLUDE FIVE (5) OR MORE MULTIPLE MERCANTILE (GROUP M) TENANTS, OR THE OFFICES OF HEALTH CARE PROVIDERS.

OPERABLE PARTS:
ACCESSIBLE OPERABLE PARTS INCLUDE CONTROLS & OPERATING MECHANISMS (DOOR HARDWARE, WINDOW OPERATORS, DISPENSERS, LIGHT SWITCHES, CONVENIENCE OUTLETS, THERMOSTATS, ALARM CONTROLS, & SIMILAR ELEMENTS).

PROVIDE AN ACCESSIBLE CLEAR-FLOOR SPACE AT ALL OPERATIONAL PARTS

OPERATION: BY USE OF ONE (1) HAND W/ A SINGLE EFFORT W/OUT TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST - W/ FIVE (5.0) POUNDS MAXIMUM OPERATIONAL FORCE. COMPLY W/ ALLOWABLE REACH RANGES FOR HEIGHT OF OPERABLE PARTS.

ACCESSIBLE DOOR & GATE REQUIREMENTS:
REVOLVING DOORS OR GATES ARE NOT ACCESSIBLE.

SECURITY & MAINTENANCE DOORS (INCLUDING SERVICE-ACCESS DOORS) DO NOT NEED TO COMPLY W/ ACCESSIBILITY REQUIREMENTS.

DOUBLE-LEAF DOORS OR GATES: ONLY ONE LEAF (MIN) MUST COMPLY W/ ACCESSIBILITY REQUIREMENTS

RECESSED DOORS: PROVIDE FORWARD APPROACH CLEARANCE W/ ANY OBSTRUCTION W/IN 18 INCH OF LATCH SIDE OF DOORWAY PROJECTING MORE THAN 8 INCHES BEYOND THE FACE OF DOOR MEASURED PERPENDICULAR TO FACE OF DOOR

DOOR SURFACES: PROVIDE SMOOTH SURFACE W/IN TEN (10) INCH AFF ON PUSH-SIDE EXTENDING FULL WIDTH W/ MAX 1/16 INCH BETWEEN SURFACE PLANE & ANY PARTS (KICKPLATE). CAP CAVITIES FORMED BY KICKPLATES EXCEPT AT SLIDING DOORS, TEMPERED GLASS DOORS W/OUT SIDE STILES W/ A BOTTOM RAIL W/ ITS TOP EDGE SLOPED 60 DEGREES FROM HORIZONTAL OR MORE, OR AT DOORS NOT EXTENDING TO 10 INCHES AFF

SIDELITES OR VISION LITES: AT DOORS & SIDELITES ADJACENT TO DOORS W/ ONE OR MORE GLAZING PANELS PERMITTING VIEWING, PROVIDE BOTTOM EDGE OF AT LEAST ONE PANEL ON EITHER THE DOOR OR THE ADJACENT SIDELITE AT 43 INCHES MAXIMUM AFF, EXCEPT AT VISION LITES (ONLY) W/ THE LOWEST PART MORE THAN 66 INCHES AFF.

ACCESSIBLE DOOR & GATE HARDWARE:
PROVIDE ACCESSIBLE HARDWARE W/ AN EASY-TO-GRASP SHAPE COMPLYING W/ OPERABLE PARTS REQUIREMENTS (LEVERS PUSH/PULLS, OR PANIC DEVICES ARE ACCEPTABLE), MOUNTED BETWEEN 2'-10" & 4'-0" AFF, W/ MAX PROJECTION (INTO REQUIRED MIN CLEARANCES) OF 4 INCH BTWN 34 - 80 INCH AFF

SLIDING DOOR/GATE HARDWARE: OPERABLE PARTS MUST BE EXPOSED & USABLE FROM BOTH SIDES WHEN DOOR IS FULLY OPEN

DOOR/GATE CLOSERS: ADJUST UNITS TO PROVIDE FIVE (5) SECOND (MIN) TIME TO MOVE DOOR/GATE FROM 90-DEGREE OPEN-POSITION TO 12-DEGREE OPEN-POSITION.

DOOR/GATE SPRING-HINGES: ADJUST TO PROVIDE 1-1/2 SECOND MINIMUM TIME TO MOVE DOOR/GATE FROM 70-DEGREE OPEN-POSITION TO CLOSED-POSITION

OPENING-FORCE OF CLOSERS OR SPRING-HINGES: 5.0 LBS MAX @ INTERIOR HINGED, SLIDING OR FOLDING DOORS OR GATES (NOT APPLICABLE TO LATCH-BOLT RETRACTION FORCE & NOT APPLICABLE TO OPENING FORCE AT FIRE-DOORS - TO BE AS REQD BY AJH)

AUTOMATIC DOORS OR GATES:
REFERENCED STANDARDS: COMPLY W/ ANSI/BHMA A156.10. & FOR POWER-ASSIST & LOW-ENERGY DOORS, COMPLY W/ ANSI/BHMA A156.19 (UNLESS DOORS OR GATES ARE DESIGNED TO BE OPERATED ONLY BY SECURITY PERSONNEL)

COMPLY W/ ACCESSIBLE CLEAR-FLOOR SPACE, THRESHOLD / FLOOR-SURFACE, & DOORS-IN- SERIES REQUIREMENTS.

MANUAL CONTROLS: COMPLY W/ "OPERABLE PARTS" REQMTS W/ THE CLEAR FLOOR SPACE ADJACENT TO THE CONTROL SWITCH LOCATED BEYOND THE DOOR/GATE SWING.

ACCESSIBLE WINDOWS:
PROVIDE OPERATIONAL PARTS LOCATED PER "OPERABLE PARTS" REQMTS W/ MIN ACCESSIBLE CLEAR-FLOOR SPACE ADJACENT TO THE WINDOW.

SPECIAL ACCESS (PLATFORM) LIFTS (INTERIOR OR EXTERIOR):
COMPLY W/ ASME A17.1 SAFETY CODE FOR ELEVATORS & ESCALATORS, SECTION XX (W/ ACCESSIBLE KEY-CONTROLS IF LIFT TRAVEL AREA IS NOT ENCLOSED) & AS FOLLOWS:
- MAXIMUM TRAVEL HEIGHT: 60 INCHES
- MINIMUM CAPACITY: 400 POUNDS
- MINIMUM PLATFORM SIZE: 30 X 48 INCH
- MAXIMUM SPEED: 20 FPM

BODUCH DESIGN GROUP
4969 South Alkire Street
Morrison, CO 80465
Phone: 303.901.0720
www.BDGArch.com
A VISION ENLIGHTENED

RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 03.12.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: **23.024**

STANDARD ACCESSIBILITY CODE REQUIREMENTS

G3.0

ISSUED FOR PERMIT - 03.12.2024

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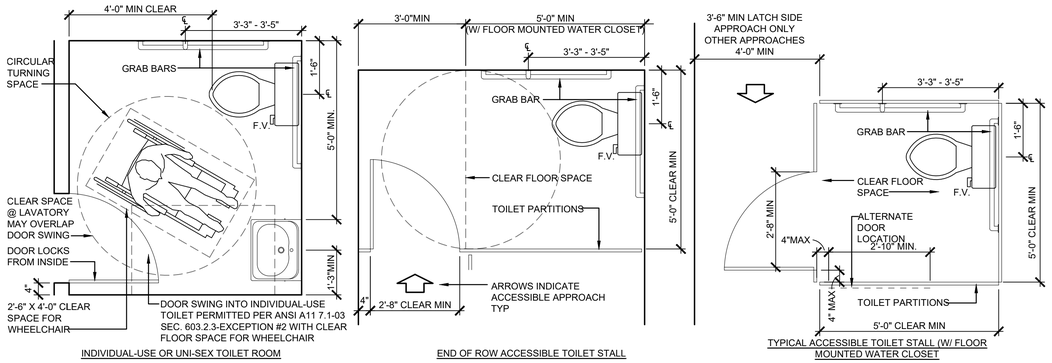


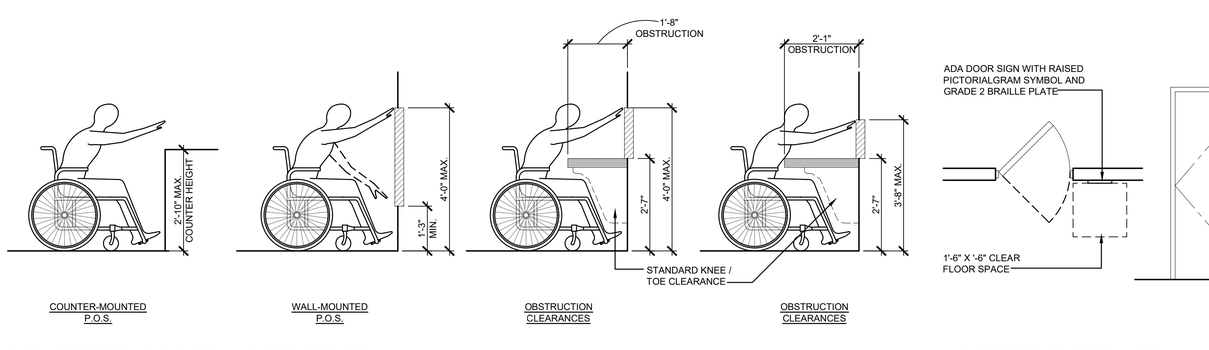
INDIVIDUAL-USE OR UNI-SEX TOILET ROOM | END OF ROW ACCESSIBLE TOILET STALL | TYPICAL ACCESSIBLE TOILET STALL (W/ FLOOR MOUNTED WATER CLOSET) | LIMIT OF PROTRUDING OBJECT | CANE DETECTION @ OVERHEAD HAZARDS | POST MOUNTED PROTRUDING OBJECTS

TOILET PARTITIONS IN PUBLIC RESTROOMS

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

PROTRUDING OBJECTS

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



GRAB BAR DETAIL TYP | GRAB BAR @ BACK WALL OF WATER CLOSET | ACCESSORIES @ SIDE WALL OF WATER CLOSET | URINAL - FRONT VIEW | URINAL - CLEAR FLOOR SPACE PLAN VIEW | SIDE VIEW | PLAN VIEW

GRAB BAR REQUIREMENTS

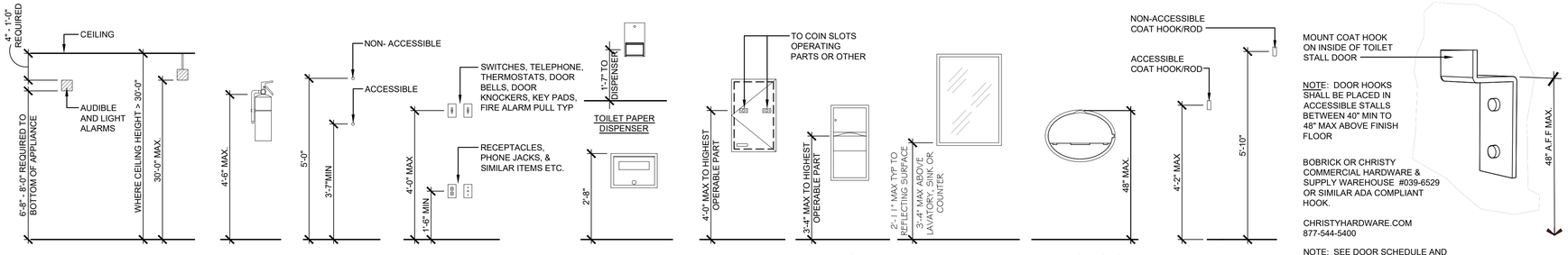
SCALE: 1/2" = 1'-0"

URINAL & URINAL SCREEN

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

ACCESSIBLE LAVATORY OR SINK CLEARANCES

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



LOCATION OF CEILING/WALL MOUNTED APPLIANCES | FIRE EXTINGUISHER | DOOR VIEWERS (PROVIDE 1 OF EACH WHERE REQUIRED) | SWITCHES | RECESSED TOILET SEAT COVER DISPENSER | SANITARY NAPKIN DISPENSER | PAPER TOWEL DISPENSER/DISPOSAL | ACCESSIBLE MIRROR | BABY CHANGING STATION | COAT HOOK OR ROD

FIXTURE MOUNTING HEIGHTS

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

COAT HOOK

SCALE: NO SCALE

COUNTER-MOUNTED P.O.S. | WALL-MOUNTED P.O.S. | OBSTRUCTION CLEARANCES | OBSTRUCTION CLEARANCES | RESTROOM ACCESSIBLE SIGNAGE | EXTERIOR DOOR (@ ACCESSIBLE ENTRANCE)

POINT OF SALE REACH ACCESSIBILITY

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

ACCESSIBLE SIGNAGE

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

ACCESSIBILITY NOTES

ACCESSIBLE ROUTE WITHIN BUILDING:
SPACES WITHIN BUILDINGS: PROVIDE AN ACCESSIBLE ROUTE TO EACH SPACE OR PORTION WITHIN A BUILDING, TO ACCESSIBLE BUILDING ENTRANCES - NOT PASSING THROUGH KITCHENS, STORAGE ROOMS, RESTROOMS CLOSETS OR SIMILAR SPACES (IF ONLY ONE ACCESSIBLE-ROUTE IS PROVIDED).

CONSTRUCT WORK AREAS USED ONLY BY EMPLOYEES SO THAT INDIVIDUALS WITH DISABILITIES CAN APPROACH, ENTER, AND EXIT THE AREA (EXCEPT AT WORK-AREAS LESS THAN 150 SF AND ELEVATED SEVEN (7) INCHES OR MORE ABOVE GROUND OR FINISH FLOOR - WHEN THE RAISED ELEVATION IS ESSENTIAL TO THE FUNCTION OF THE WORK-AREA - PER IBC).

PROVIDE ACCESSIBLE ROUTES AT ALL COMMON-USE CIRCULATION PATHS WITHIN EMPLOYEE WORK AREAS UNLESS WORK AREA IS LESS THAN 300 SF AND DEFINED BY PERMANENTLY INSTALLED PARTITIONS, COUNTERS, CASEWORK OR FURNISHINGS

ACCESSIBILITY IS NOT REQUIRED TO NON-OCCUPIED SPACES ACCESSED ONLY BY LADDERS, CATWALKS, CRAWL SPACES OR FREIGHT (NON-PASSENGER) ELEVATORS THAT ARE FREQUENTED ONLY BY SERVICE PERSONNEL FOR MAINTENANCE PURPOSES, INCLUDING BUT NO LIMITED TO ELEVATOR PITS, ELEVATOR PENTHOUSES, AND PIPING OR EQUIPMENT CATWALKS.

ACCESSIBLE-ROUTE WITHIN BUILDING:
ACCESSIBLE-ROUTES MAY CONSIST OF ONE OR MORE OF THESE COMPONENTS:
WALKING SURFACES
RAMPS
DOORS AND DOORWAYS
ELEVATORS AND PLATFORM LIFTS

MINIMUM CORRIDOR WIDTH: 3'-8"

MINIMUM WIDTH OF ACCESS AISLES: 3'-0"

CARPETED WALKING SURFACES: BROADLOOM OR CARPET-TILE WITH FIRM CUSHION/PAD (OR WITHOUT CUSHION & PAD) WITH LEVEL LOOP, TEXTURED LOOP, LEVEL CUT, OR LEVEL CUT/UNCUT PILE TEXTURE WITH 1/2 INCH MAX PILE-HEIGHT. SECURELY ATTACH TO SUBSTRATE AND PROVIDE BEVELED EDGE-TRIM ALONG ENTIRE LENGTH OF EXPOSED EDGE PER ABOVE.

AREA-OF-RESCUE ASSISTANCE

PROVIDE AN "AREA-OF-RESCUE-ASSISTANCE" AT NON-ACCESSIBLE EXIT-DISCHARGE DOORS - EXCEPT IN BUILDINGS WITH A SUPERVISED AUTOMATIC FIRE-SUPPRESSION SYSTEM.

MINIMUM SIZE: PROVIDE MINIMUM OF TWO (2) EA 2'-6" X 4'-0" AREAS OR ONE (1) EACH PER 200 OCCUPANTS PER STORY SERVED NOT ENCROACHING ON ANY REQUIRED EXIT WIDTH

TOILET ROOMS OR COMPARTMENTS:
UNI-SEX TOILET ROOM: PROVIDE AN ACCESSIBLE FACILITY WITH A SINGLE WATER-CLOSET AND LAVATORY IN ANY MERCANTILE OR ASSEMBLY OCCUPANCIES WHERE A TOTAL OF SIX (6) OR MORE MALE AND FEMALE WATER-CLOSETS ARE REQUIRED (PER IBC)

PROVIDE UNI-SEX AND SINGLE-USE TOILET ROOMS WITH DOOR LOCKING FROM INSIDE

WATER-CLOSET COMPARTMENTS: PROVIDE A MINIMUM OF ONE (1) WHEELCHAIR-ACCESSIBLE COMPARTMENT AND WHEN OVER SIX (6) WATER-CLOSETS + URINALS ARE PROVIDED IN A TOILET ROOM, PROVIDE ONE (1) TO BE AMBULATORY-ACCESSIBLE IN ADDITION TO THE WHEELCHAIR-ACCESSIBLE UNIT.

SINKS: PROVIDE NO LESS THAN ONE (1) ACCESSIBLE SINK (OR 5% OF TOTAL) WHERE PROVIDED (MOP OR SERVICE-SINKS ARE NOT REQUIRED TO BE ACCESSIBLE)

DRINKING FOUNTAINS:
IF ONLY ONE DRINKING FOUNTAIN IS PROVIDED IN A SPACE OR BUILDING, PROVIDE A "DUAL HI-LOW" TYPE UNIT ACCESSIBLE TO BOTH WHEELCHAIR USERS AND TO PERSONS WITH DIFFICULTY BENDING OR STOOPING (STANDARD HEIGHT UNIT) OR OTHER MEANS TO ACHIEVE EQUIVALENT ACCESSIBILITY FOR BOTH (PROVIDING AN ACCESSIBLE WATER COOLER, FOR EXAMPLE).
PROVIDE DRINKING FOUNTAINS IN ALCOVE OUT OF COMMON PATH OF TRAVEL
SPACING BETWEEN DRINKING FOUNTAINS: 2'-3" (27") MINIMUM

ACCESSIBLE SEATING:
WHEN PROVIDED AT FIXED OR BUILT-IN TABLES, COUNTERS OR WORK SURFACES, PROVIDE 5% MINIMUM BUT NOT LESS THAN ONE (1) ACCESSIBLE SEATING, DISTRIBUTED THROUGHOUT.

POINT-OF-SALE (POS) OR SERVICE COUNTERS: PROVIDE NOT LESS THAN ONE (1) UNIT TO BE ACCESSIBLE DISPERSED THROUGHOUT IF COUNTERS ARE DISPERSED.

SIGNAGE:
REQUIRED ACCESSIBLE SIGNS (MINIMUM) EXCEPT AT BUILDING DIRECTORIES, MENU BOARDS, OR TEMPORARY SIGNS PROVIDE ACCESSIBLE SIGNS AS FOLLOWS:

ACCESSIBLE ENTRANCES: PROVIDE A 4 X 4" ACCESSIBILITY DECAL AT ALL ACCESSIBLE PUBLIC ENTRANCE DOORS CENTERED AT 60" AFF.

NON-ACCESSIBLE PUBLIC ENTRANCES: PROVIDE DIRECTIONAL SIGNS INDICATING LOCATION OF NEAREST ACCESSIBLE ENTRANCE.

NON-ACCESSIBLE TOILET ROOMS: PROVIDE DIRECTIONAL SIGNS INDICATING LOCATION OF NEAREST ACCESSIBLE UNITS.

ROOM (OR SPACE) SIGNS (INCLUDING TOILET ROOMS): PROVIDE RAISED PICTOGRAMS, TACTILE CHARACTERS AND BRAILLE TEXT.

ACCEPTABLE CHARACTERS: UPPER-CASE, LOWER-CASE, OR A COMBINATION OF BOTH IN A SANS-SERIF CONVENTIONAL STYLE - NO ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE OR OTHER UNUSUAL FORMS

FINISH & CONTRAST: NON-GLARE WITH EITHER LIGHT CHARACTERS ON DARK BACKGROUND OR DARK CHARACTERS ON LIGHT BACKGROUND

ILLUMINATION LEVEL AT ACCESSIBLE SIGNS: MINIMUM 10 FOOTCANDLES

PROVIDE CLEAR FLOOR AREA OF 18 X 18 INCHES CENTERED ON TACTILE CHARACTER SIGNS BEYOND ARC OF DOOR SWING FROM CLOSED TO 45 DEGREE OPEN POSITION

BRAILLE: CONTRACTED (GRADE 2) WITH INDICATION OF AN UPPERCASE LETTER ONLY BEFORE THE FIRST WORD OF SENTENCES, PROPER NOUNS, AND NAMES, INDIVIDUAL LETTERS OF THE ALPHABET, INITIALS, OR ACRONYM.

ALARMS:
IF EMERGENCY WARNING SYSTEMS ARE PROVIDED, PROVIDE BOTH AUDIBLE AND VISUAL ALARMS IN ANY COMMON-USE AREAS, (INCLUDING BUT NOT LIMITED TO RESTROOMS, MEETING ROOMS, HALLWAYS, AND LOBBIES). PERMANENTLY CONNECT ALARM SYSTEMS TO THE BUILDING ELECTRICAL POWER AND LIGHTING SYSTEM AS APPROPRIATE.

IF AUDIBLE ALARMS ARE PROVIDED, THEY MUST PRODUCE SOUND EXCEEDING THE PREVAILING EQUIVALENT SOUND LEVEL OF A SPACE BY AT LEAST 15 dbA OR EXCEED ANY MAXIMUM SOUND LEVEL WITH A DURATION OF 60 SECONDS BY 5 dbA, WHICHEVER IS LOUDER (NOT EXCEEDING 120dbA).

IF VISUAL ALARMS ARE PROVIDED, PROVIDE UNFILTERED OR CLEAR-FILTERED WHITE XENON-STROBE TYPE LAMPS OR EQUIVALENT, WITH 0.2 SECOND MAXIMUM PULSE DURATION AND MAXIMUM DUTY CYCLE OF 40 PERCENT, PROVIDING A MINIMUM BRIGHTNESS INTENSITY OF 75 CANDELA WITH A FLASH RATE BETWEEN 1 AND 3 Hz. LOCATE UNITS NO MORE THAN 6'-10" (80") AFF OR 6" BELOW CEILING (WHICHEVER IS LOWER). LOCATE 50 FEET MAXIMUM FROM ANY POINT WITHIN A SPACE OR COMMON CORRIDOR, OR IN LARGE SPACES OVER 100 FEET ACROSS (SUCH AS AUDITORIUMS) WITHOUT OBSTRUCTIONS 6 FT AFF, LOCATE AROUND ROOM PERIMETER AT MAXIMUM 100 FT CENTERS. ALL STROBES IN ROOM MUST BE SYNCHRONIZED.

STATE OF COLORADO
SCOTT A. BODUCH
402217
03.14.2024
LICENSED ARCHITECT

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THE LITTLE SCHOOL ON PERRY STREET

DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK, CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 03.12.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: **23.024**

STANDARD ACCESSIBILITY CODE REQUIREMENTS

G3.1

ISSUED FOR PERMIT - 03.12.2024

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PROJECT SPECIFICATIONS

UNLESS NOTED OTHERWISE BY SEPARATE AND SPECIFIC REFERENCE ON THE DRAWINGS, THIS PROJECT SHALL CONFORM TO THE FOLLOWING CONSTRUCTION STANDARDS

DIVISION 01: GENERAL REQUIREMENTS

All Work shall conform to the adopted codes and amendments of the **TOWN OF CASTLE ROCK, COLORADO** and the **CASTLE ROCK** Fire Department.

SECTION 01.26.00 - MODIFICATION PROCEDURES

1. Contractors shall promptly notify the Architect of any ambiguity, inconsistency, or error which they may discover upon examination of the bidding documents. Site and local conditions shall be reviewed on site.
2. Any interpretation, correction, or change of the contract will be made by written addendum. Interpretations, corrections, or changes of the documents in any other manner will not be binding, and contractor shall not rely upon such.
3. Where alternative construction to design is installed, certification shall be provided to the Building Official. This certification is to be performed by the architect or other approved testing agency and shall be at the expense of the contractor unless otherwise agreed to in writing.
4. Construction variations from these documents by the owner or contractor shall be the responsibility of the persons making such changes.

SECTION 01.26.05 - REGULATORY REQUIREMENTS

1. Refer to the **Code Analysis on Sheet G2.0** for a list of Regulatory Building Codes.
2. Wherever drawings state to be "Certified", test reports conducted by an approved testing agency shall be provided to the architect at the expense of the contractor.

SECTION 01.26.10 - SPECIAL PROJECT PROCEDURES

1. Work shall comply with the applicable Regulatory Building Codes, regulations, ordinances, utility companies and governmental agencies having jurisdiction.
2. No contractor / subcontractor shall commence work under this contract until he/she has provided proof of insurance of such character and in such amounts as will provide adequate protection for the owner, the architect, the members thereof, and their successors, all agents, officers and servants of the owner, and the contractor and subcontractor against all claims, liabilities, damages and accidents. Such insurance shall remain in force throughout the life of this contract.

SECTION 01.26.13 - REQUESTS FOR INFORMATION (RFI's)

1. Submit REQUEST FOR INTERPRETATION (RFI's) after review of the Contract Documents and the field conditions immediately on discovery of the need for a clarification. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents. Submit requests on CSI Form 13.2A - "Request for Interpretation" or equivalent form approved for use in advance by the Owner's Representative. Submit RFI's only from the Contractor - RFI's from subcontractors or suppliers must be forwarded to, reviewed by, approved by, and submitted directly from the Contractor.
2. Submit RFI'S only after a thorough review of ALL applicable Contract Documents and the field-conditions, and ONLY if the Contractor is still not able to resolve the problem or clarify the issue based on the information contained therein.
3. Responsibility for Additional Costs: If the information requested by the Contractor is apparent from field observations, or is in fact contained within the Contract Documents, or is reasonably inferable from either, the Contractor will be responsible to the Owner for all reasonable costs expended by the Owner, including the hourly costs of Owner's Construction Representative and/or the professional fees and expenses of Architect/Engineer, for the Additional Services required to provide such information.
4. Response to RFI'S is not authorization to proceed with additional or extra Work.

SECTION 01.26.20 - PROTECTION OF PREMISES

1. Contractor shall devise methods and procedures to ensure safe, orderly execution of the work, and to allow free safe passage of owner and others around building.
2. Protect all floors with suitable coverings as required.
3. Remove all protection at completion of work or as quickly as possible.
4. All damage to adjacent areas to be repaired/replaced promptly, at no cost to the owner.

SECTION 01.33.16 - DELEGATED DESIGN

1. Delegated Design: Portions of the Work for which professional design service or professional certification are required of the Contractor in the Specifications.
2. Deferred Submittal: Permitting process and permit submittal for Delegated Design component. Some Delegated Design components may not require Deferred Submittal by the AHJ.
3. Contractor is responsible for the following Delegated Design portions of the Work:
   - 3.1. Temporary shoring and supports for excavation, concrete, walls and other construction.
   - 3.2. Underpinning of existing foundations.
   - 3.3. Thru Penetration Firestop Systems.
   - 3.4. Aluminum storefront, glazing, and entrance doors.
   - 3.5. Glass strength.
   - 3.6. Fire Alarm Systems
4. Refer to the Structural, Mechanical, Electrical and Plumbing Drawings for additional Requirements.
5. Contractor shall coordinate and assume full responsibility for design, engineering, submittals, fabrication, transportation, and installation of this work.
6. Schedule design process and submittals required for Delegated Design portions to fit within Construction Schedule.
7. Allow adequate time for AHJ review and Architect's review. Contact AHJ for time estimate and coordination of schedule.

DIVISION 01: GENERAL REQUIREMENTS - CONTINUED

SECTION 01.33.00 - SUBMITTAL PROCEDURES

1. Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Construction Manager and additional time for handling and reviewing submittals required by those corrections.
2. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
3. Submit concurrently with startup construction schedule. Include submittals required during the first **30 days** of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for fabrication.
4. Format: Arrange the following information in a tabular format:
   - a. Scheduled date for first submittal.
   - b. Specification Section number and title.
   - c. Submittal category: Action; informational.
   - d. Name of subcontractor.
   - e. Description of the Work covered.
   - f. Scheduled date for Architect's and Owners's final release or approval.
   - g. Scheduled date of fabrication.
5. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
   - a. Assemble complete submittal package into a single indexed file incorporating submittal requirements PER single Specification Section and transmittal form with links enabling navigation to each item.
   - b. Name file with submittal number, including revision identifier.
   - c. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by the Architect and Owner.
   - d. Transmittal Form for Electronic Submittals: Use acceptable to Owner, containing the following information:
     - d.a. Project name.
     - d.b. Date.
     - d.c. Name and address of Architect.
     - d.d. Name of Construction Manager.
     - d.e. Name of Contractor.
     - d.f. Name of firm or entity that prepared submittal.
     - d.g. Names of subcontractor, manufacturer, and supplier.
     - d.h. Category and type of submittal.
     - d.i. Submittal purpose and description.
     - d.j. Specification Section number and title.
     - d.k. Specification paragraph number or drawing designation and generic name for each of multiple items.
     - d.l. Drawing number and detail references, as appropriate.
     - d.m. Location(s) where product is to be installed, as appropriate.
     - d.n. Related physical samples submitted directly.
     - d.o. Indication of full or partial submittal.
     - d.p. Transmittal number
     - d.q. Submittal and transmittal distribution record.

SECTION 01.40.00 - QUALITY REQUIREMENTS

1. Labor, materials, and workmanship shall be in accordance with the highest standards of the industry.
2. All work performed as a part of this contract is to be guaranteed by the contractor and/or subcontractor and to be free from defects on material and workmanship for a period of one (1) year from the date of substantial completion of the work; the contractor and/or subcontractor agrees to return to the job and make repairs and/or replacement to such defects at no cost to the owner.
3. Details and dimensions, shown in any section, apply to all similar sections unless otherwise noted.
4. These drawings were prepared with the intent that the Work shall be performed by a qualified General Contractor and Sub Contractors.
5. All Work shall be in conformance with all Codes and regulations of any Federal, State, County or Municipal agency having jurisdiction over such Work.
6. All Work is to be performed by qualified mechanics and technicians, and shall be of the highest levels of craftsmanship.
7. Any discrepancies between the drawings and site conditions, and any in congruencies present within these drawings are to be brought to the attention of the Architect as soon as they are noticed and prior to continuation of the work.
8. Contractor shall maintain Workman's Compensation, and shall maintain for the duration of the project, Public Liability Insurance, Contractor's Property Damage Insurance and Vehicle Liability Insurance and shall provide proof of such coverage to the Owner prior to commencement of the Work.
9. During the course of the Work, conditions may be found that require Architectural or Engineering intervention. It is the responsibility of the Contractor to bring such conditions to the attention of the Architect and the Owner immediately following discovery, and prior to commencement of Work.
10. Do not scale construction documents. Use written dimensions only.

DIVISION 02: EXISTING CONDITIONS

SELECTIVE DEMOLITION

1. Cover and protect furniture, equipment and fixtures to remain from soiling or damage when demolition work is performed in rooms or areas from which such items have not been removed. Use a 2-mil. thick fire retarded polyethylene and seal to furniture and equipment with duct tape.
2. Erect and maintain dust-proof partitions and closures as required to prevent spread of dust or fumes to occupied portions of the building.
3. Locate, identify, stub off and disconnect utility services that are not indicated to remain. Maintain existing utilities indicated to remain in service and protect them against damage during demolition operations.
4. Perform selective demolition work in a systematic manner.
5. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to the Architect and Owner in written, accurate detail.
6. Pending receipt of directive from the Owner, rearrange selective demolition schedule as necessary to continue overall job progress without delay.
7. Coordinate with the Owner on the salvaging of materials removed. Dispose of accordingly per local jurisdictional requirements.
8. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations.
9. Employ a certified, licensed exterminator to treat building and to control rodents and vermin before and during demolition operations.
10. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
11. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around demolition area.
12. Provide and maintain (where applicable) interior and exterior shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of buildings to be demolished and adjacent buildings to remain.

DIVISION 03: CONCRETE

SECTION 03.30.00 - CAST-IN-PLACE CONCRETE

1. See Structural Drawings for additional Specification Information.
2. See Civil Drawings for additional Specification Information.
3. All site concrete to be 4,000 PSI Minimum Strength.

DIVISION 04: MASONRY

SECTION 04.01.05 MASONRY RESTORATION AND CLEANING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings, photos and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK

A. Extent of masonry restoration work is indicated on the drawings.

1.3 QUALITY ASSURANCE

A. Restoration Specialist: Work must be performed by a firm having not less than 5 years successful experience in comparable masonry restoration projects and employing personnel skilled in the restoration processes and operations indicated.

B. Repointing: Prepare sample area of approximately 2 feet high by 2 feet wide for each type of repointing required to demonstrate methods and quality of workmanship expected in pointing mortar joints and new brick installation. The intent of the new pointing work is to match cleaned existing mortar. Newly pointed areas shall be consistent with existing adjacent mortar joints for color and texture.

1.4 PROJECT CONDITIONS

A. Do not repoint mortar joints or repair masonry unless air temperatures are between 40 deg.F (4 deg.C) and 80 deg.F (27 deg.C) and will remain so for at least 48 hours after completion of work.

B. Prevent grout or mortar used in repointing and repair work from staining face of surrounding masonry and other surfaces. Remove immediately grout and mortar in contact with exposed masonry and other surfaces.

C. Protect sills, ledges and projections from mortar droppings.

1.5 SEQUENCING/SCHEDULING

A. Perform masonry restoration work in the following sequence:

1. Replace / Repair Brick
2. Clean Brick
3. Rake-out existing mortar from joints indicated to be repointed.
4. Repoint existing mortar joints of masonry indicated to be restored at spray tip, and for volume.

DIVISION 05: METALS

SECTION 05.55.00 MISCELLANEOUS METAL FABRICATIONS

1. See STRUCTURAL DRAWINGS for additional Specifications for Structural Steel and Cold-Formed Metal Stud Framing.
2. Provide miscellaneous metal materials and fabrications as shown or as necessary to complete the work.
3. METAL FABRICATIONS: Provide metal fabrications, where shown on the drawings and as specified herein, including miscellaneous rough hardware and fasteners throughout the project, and the following metal fabricated items:
4. ROUGH HARDWARE: Furnish bent or otherwise custom fabricated bolts, plates, anchors, hangers, dowels and other miscellaneous steel and iron shapes as required for framing, supporting or anchoring.
5. FERROUS METALS
   - 5.1. Steel Plates, Shapes, and Bars: ASTM A 36
   - 5.2. Steel Tubing: Cold-formed steel tubing complying with ASTM A 500.
   - 5.3. Steel Pipe: ASTM A 53, standard weight (Schedule 40), unless another weight is indicated or required by structural loads.
   - 5.4. Uncoated, Cold-Rolled Steel Sheet: Commercial quality, complying with ASTM A 366; or structural quality, complying with ASTM A 611, Grade A, unless another grade is required by design loads.
   - 5.5. Uncoated, Hot-Rolled Steel Sheet: Commercial quality, complying with ASTM A 569; or structural quality, complying with ASTM A 570, Grade 30, unless another grade is required by design loads.
6. GALVANIZED STEEL: Ferrous metal with ASTM A 653, G90 coating, either commercial quality or structural quality, Grade 33, unless otherwise indicated.
7. SHOP PRIMER FOR FERROUS METAL: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with performance requirements in FS TT-P-664; selected for good resistance to normal atmospheric corrosion, compatibility with finish paint systems indicated, and capability to provide a sound foundation for field-applied topcoats despite prolonged exposure.
8. FASTENERS shall be zinc-coated fasteners for exterior use or when built into exterior walls as follows:
   - 8.1. Bolts and Nuts: Regular hexagon head type, ASTM A-307, Grade A.
   - 8.2. Lag Bolts: Square Heat type, FS FF-B-561.
   - 8.3. Machine Screws: Cadmium plated steel, FS FF-S-92.
   - 8.4. Plain Washers: Round Carbon Steel FS FF-W-92.
   - 8.5. Toggle Bolts: Tumble wing type, FS FF-B-588, Type, class and style as required.
   - 8.6. Lock Washers: Helical spring type carbon Steel, FS FF--W-84.
   - 8.7. Drilled-In Expansion Anchors: Expansion anchors complying with FS FF-S-325, Group VIII (anchors, expansion, Type I (internally threaded tubular expansion anchor); and machine bolts complying with FS FF-B-575, Grade 5.
9. CONCRETE FILL: Comply with requirements in Division 3 Section for normal-weight, air-entrained, ready-mix concrete with a minimum 28-day compressive strength of 3000 psi unless otherwise indicated.

DIVISION 06: WOODS AND PLASTICS

SECTION 06.10.00 - ROUGH CARPENTRY

1. See STRUCTURAL DRAWINGS for additional structural specification information.
2. Provide wood framing, nailers, blocking, backing, and plywood required for completion of the Work, which is generally not exposed; where noted on the Drawings, and as specified herein.
3. Provide BLOCKING and bracing in walls or partitions to adequately support and secure all wall mounted equipment and as indicated in the drawings.
4. PLYWOOD BACKING PANELS for Electrical, Telephone and other Equipment as indicated: APA C-D PLUGGED INT with exterior glue, thickness as indicated.
5. FASTENERS AND ANCHORAGE: Of size, type, material and finish suited to application shown and complying with applicable standards including FS FF-N-105 and FF-W-92 and ANSI B18.6.1. Provide metal hangers and framing anchors of size and type recommended for intended use by manufacturer. Hot-dip galvanize fasteners and anchorages for work exposed to weather, in ground contact and high relative humidity to comply with ASTM A153.
6. PRESERVATIVE TREATMENT:
   - 6.1. TREAT BY PRESSURE PROCESS per AWPA C2 (lumber) and AWPA C9 (plywood), except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX). Use preservative chemicals acceptable to authorities having jurisdiction and containing no arsenic or chromium.
   - 6.2. KILN-DRY MATERIAL AFTER TREATMENT to a maximum moisture content of 19 percent for lumber and 15 percent for plywood. Do not use material that is warped or does not comply with requirements for untreated material. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
   - 6.3. TREAT ITEMS INDICATED ON DRAWINGS, and the following: wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.. Treat wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
7. FIRE RETARDANT TREATED WOOD: AWPA C-20 for flame spread less than 25 complying with UL 723. (Use only where required by the building code for miscellaneous blocking or framing).

SECTION 06.16.00 - EXTERIOR GYPSUM SHEATHING

1. Fiberglass Matt Faced Gypsum Wall Sheathing: ASTM D 3273 & ASTM E 330 gypsum sheathing; with water-resistant-treated core.
   - 1.1. Type and Thickness: Type X, size and thickness as indicated in the drawings.
2. Comply with GA-253 and with manufacturer's written instructions.
   - 2.1. Fasten gypsum sheathing to wood stud framing with screws.
3. Seal sheathing joints according to sheathing manufacturer's written instructions.
4. Paper-Surfaced Gypsum Sheathing: Protect sheathing by covering exposed exterior surface of sheathing with weather-resistant sheathing paper securely fastened to framing. Apply covering immediately after sheathing is installed.

STATE OF COLORADO
SCOTT A. BODUCH
400217
LICENSED ARCHITECT
03.14.2024

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A VISION ENLIGHTENED

RETROFIT & ADDITION FOR:
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PROJECT SPECIFICATIONS

G4.0

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PROJECT SPECIFICATIONS

SECTION 06.41.16 - PREFABRICATED ARCHITECTURAL CABINETS

1. General Contractor to Coordinate with Owner for selection, approval, procurement and installation of equipment located within or adjacent to cabinets.
2. STANDARDS: Comply with applicable requirements of AWI's "Architectural Woodwork Quality Standards".
   - 2.1. Standing and Running Trim: AWI Section 300
   - 2.2. Wood Shelving: AWI Section 600
   - 2.3. Miscellaneous Work: AWI Section 700
   - 2.4. Casework, Countertops: AWI Section 400
   - 2.5. GRADE: Premium / Economy
     - a. Type of Construction: Frameless
     - b. Cabinet, Door, and Drawer Front Interface Style: Flush inset
     - c. Wood Veneer: All Exposed Surfaces: Clear Maple or Owner Selected Species, Plain, Hard Select, AWI Grade One.
     - d. High-Pressure Decorative Laminate: NEMA LD 3, grades required by woodwork quality standard.
     - e. Drawer Construction: Fabricate with exposed fronts fastened to subfront with mounting screws from interior of body.
     - f. Colors and Finishes as selected by the Owner from wood veneer and laminate manufacturer's full range:
       - f.a. Provide one color for the cabinetry and a second color for the counters as per the Finish Schedule.
4. PROVIDE CABINET HARDWARE and accessory materials, including shelving standards to comply with requirements indicated for design, material, finish, manufacturer (when indicated) and as follows:
   - 4.1. Semi-concealed Hinges: 2-3/4-inch, 5-knuckle steel hinges made from 0.095-inch- thick metal meeting BHMA A156.9, B01521 (for overlay construction).
   - 4.2. Wire Pulls: Back mounted, 3-1/2 inches long, x 5/16 inches diameter meeting BHMA A156.9, B02011.
   - 4.3. Adjustable Shelf Hardware, #255 KV recessed standards with #256 clips
   - 4.4. Finish: All pulls and hinges to have brushed nickel finish

SECTION 06.64.00 - FIBERGLASS REINFORCED PANELS (FRP)

1. WALL PANELS: ¾" Decorative wall panels. Pre-Finished Wall Panels as specified on the Drawings.
2. MANUFACTURERS: Marlite FRP, Kemlite - Glasbord or Accepted Equivalent.
3. FINISH / COLOR: Embossed "White" Panel
4. FLAME SPREAD - Class A - Less than or equal to 200
5. SMOKE DEVELOPED - Class A - Less than or equal to 450
6. ACCESSORIES: All molding and trim shall be pre-finished at the factory to meet site conditions per manufacturer's standard detailing.
7. ADHESIVES to meet ASTM C557.
8. WALL BRACKETS to be utilized per manufacturer's standard details for installation intended.
9. SEALANT to be Silicone Sealant as required.

SECTION 06.40.13 - EXTERIOR ARCHITECTURAL WOODWORK

1. SUMMARY: Provide exterior architectural woodwork:
   a. Standing and running trim and rails
   b. Structural - Custom Turned Spindle Posts
   c. Decorative Corbels
2. AWI Standards: Architectural Woodwork Institute (AWI) "Architectural Woodwork Quality Standards"
3. WIC Standards: Woodwork Institute of California (WIC) "Manual of Millwork"
4. Preservative Treatment: nonpressure method, exterior type, NWWDA I.S. 4
5. Fire-Retardant Treatment: AWPA C20 for lumber and AWPA C27 for plywood; noncorrosive exterior type
6. Exterior Standing and Running Trim and Rails:
   a. Species for opaque finish: White pine or sugar pine
   b. Species for stained finish: Natural Cedar
   c. Grade: Premium
   d. Texture: Smooth surface all sides
   e. Finish: Paint or stained as scheduled.
7. Exterior Ornamental Items:
   a. Species for opaque finish: white pine or sugar pine
   b. Species for stained finish: Natural Cedar
   c. Grade: Premium
   d. Finish: Paint or stained as scheduled.
8. Auxiliary materials:
   a. Nails: stainless steel, aluminum, or hot-dip galvanized siding nails
   b. Screws and Anchors: noncorrosive, type required for secure anchorage

DIVISION 07: THERMAL AND MOISTURE PROTECTION

SECTION 07.14.13 - FOUNDATION WATERPROOFING

1. MANUFACTURER: W.R. Grace & Co. or Accepted Equivalent.
2. PRODUCT: Procor - Fluid Applied, two-component, self-curing, rubber-based waterproofing system.
3. PROTECTION BOARD: Provide protection board, utilizing ¼" Asphalt Hardboard or R-10 XPS Polystyrene Insulation Board.

SECTION 07.13.26 - WATER AND ICE SHIELD UNDERLAYMENT

1. MANUFACTURER: W.R. Grace & Co. or Accepted Equivalent.
2. PRODUCT: Ice & Water Shield Fully-Adhered Rubberized Roof Underlayment, 2'-0" wide at roof eaves, edges and ridges as indicated in the drawings. Overlap seams and seal per manufacturer's installation instructions.

SECTION 07.21.00 - BUILDING INSULATION

1. FOUNDATION INSULATION BOARD:
   - 1.1. Manufacturer: Dow Chemical or Accepted Equivalent.
   - 1.2. Product: XPS / Polystyrene Rigid Insulation Board, 2" Thickness, R-Value = 10, Square EdgeClosed-cell, extruded, polystyrene insulation board with integral high-density skin; complying with ASTM C 578, Type IV Type IV - minimum 20 PSI compressive strength, with k-value of 0.20; 0.3% maximum water absorption; 1.1 perm-inch maximum water-vapor transmission; in manufacturer's standard lengths and widths. Provide on inside faces of exterior foundations typically, extending 24" minimum below the floor slab or as detailed.
2. THERMAL BATT INSULATION:
   - 2.1. Manufacturer: Owens Corning or Accepted Equivalent.
   - 2.2. Product: KRAFT-FACED BATT INSULATION: ASTM C-665, 1.0 lb. minimum density, Type II, Class C (kraft-faced).
   - 2.3. Unfaced batts may be used provided a separate vapor barrier (with a flame spread index of not more than 25 and a smoke-developed index of not more than 450) is applied over the insulation.
   - 2.4. R-Values:
     - 2.1.1. Kraft-Faced, R-Value = 38 at roof locations.
     - 2.1.2. Un-Faced, R-Value = 30 at floor locations.
     - 2.1.3. Un-Faced, R-Value = 21 at exterior wall locations.
3. INTERIOR ACOUSTICAL INSULATION: Owens Corning or Accepted Equivalent.
4. ACOUSTICAL SOUND ATTENUATION BATT INSULATION: 3½" thickness in wall locations, 5½" thickness in floor / ceiling locations.
5. THERMAL CONDUCTIVITY: Thicknesses indicated are for thermal conductivity (k-value at 75 degrees F or 24 degrees C) specified for each material. Provide adjusted thickness as directed for equivalent use of material having a different thermal conductivity. Where insulation is identified by "R" value, provide thickness required to achieve indicated value.
6. FIRE AND INSURANCE RATINGS: Comply with fire-resistance, flammability and insurance ratings indicated, and comply with regulations as interpreted by governing authorities. All insulating materials shall have a flame spread rating of 25 or less and a smoke developed rating of 450 or less when tested in accordance with ASTM E84 unless more stringent requirements are listed for a specific product.
7. MISCELLANEOUS INSULATION ANCHORS: Provide mechanical or adhesively attached, spindle-type anchors (angle-shaped when required), insulation-retaining washers and insulation standoffs with suitable anchor adhesive with demonstrated capability to bond insulation anchors securely to substrates indicated where insulation is required in areas where framing or other insulation retention system is not indicated.

SECTION 07.25.00 - WEATHER RESISTIVE BARRIER

1. MANUFACTURER: Dupont Tyvek Commercial Wrap or Accepted Equivalent
2. AIR & MOISTURE BARRIER: Provide manufacture's substrate air and moisture barrier system designed to seal. substrates from moisture penetration, including the following components:
3. BUILDING PAPER: ASTM D 226, Type 1 (No. 15 asphalt- saturated organic felt), unperforated. Water-vapor-permeable, asphalt-saturated kraft building paper. Water vapor transmission not less than 35 g/sq. m x 24 hr per ASTM D 779. Water resistance not less than 20 minutes per ASTM F 1249.
4. BUILDING WRAP: ASTM E 1677, Type I air barrier; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E 84; UV stabilized; and acceptable to authorities having jurisdiction. Water-Vapor Permeance: Not less than 500 g through 1 sq. m of surface in 24 hours per ASTM E 96/E 96M, Desiccant Method (Procedure A). Air Permeance: Not more than 0.004 cfm/sq. ft. at 0.3-inch wg (0.02 L/s x sq. m at 75 Pa) when tested according to ASTM E 2178. Allowable UV Exposure Time: Not less than three months.
5. BUILDING-WRAP TAPE: Pressure-sensitive plastic tape recommended by building-wrap manufacturer for sealing joints and penetrations in building wrap.
6. JOINT FILLER: or equal ready-mixed, acrylic based material flexible joint compound.
7. "Sto Gold Fill" or Accepted Equivalent.
8. Fasten to substrate per manufacturer's standard instructions.

SECTION 07.26.00 - VAPOR BARRIER

1. MANUFACTURER: Stego Industries, LLC - Stego Wrap or Accepted Equivalent
2. POLYETHYLENE UNDERSLAB BARRER: 15 Mil. Thickness. Water Vapor Barrier: ASTM E-1745 - Meets or exceeds Class A. Permeance Rating: Less than 0.01 Perms (grains/ft2 ·hr · inHg) after mandatory conditioning (ASTM E 1745 Section 7.1 and sub-paragraphs 7.1.1 - 7.1.5)
3. POLYETHYLENE VAPOR BARRIER - WALL LOCATIONS: 6-mil polyethylene film, with laboratory-tested vapor transmission rating of 0.2 perms, natural color.
   - 3.1. Provide wherever sealed kraft-faced insulation is not installed.
4. Provide seam tape and joint adhesives per manufacturer's standard.

SECTION 07.31.13 - ASPHALT SHINGLE ROOFING SYSTEM

1. SUMMARY: Provide dimensional asphalt shingles for roofing applications
2. Products: Tamko High Definition 30-Year Architectural dimensional shingles - Heritage Series or Approved Equivalent.
   a. Shingle color: Refer to drawing A5.0 and A5.1.
   b. Square tab, fiberglass strip shingles
   c. Square tab, organic-felt strip shingles
   d. Heavyweight, laminated, organic felt strip shingles
   e. Staggered-butt-edge, fiberglass strip shingles with tabs
   f. Staggered edge, fiberglass shingles
   g. Accessories: hip and ridge shingles; felt, ASTM D 226; rubberized asphalt perimeter underlayment; metal flashing and drip edge
   h. Accessories: hip and ridge tiles; felt, ASTM D 226; rubberized asphalt perimeter underlayment; metal flashing and drip edge
3. Fasteners: Noncorrosive and non-staining
4. Accessories: Snow guards

DIVISION 07: THERMAL AND MOISTURE PROTECTION (Continued)

SECTION 07.46.46 - FIBER CEMENT SIDING AND SOFFIT SYSTEM

1. MANUFACTURER: James Hardie or Accepted Equivalent.
2. SHINGLE SIDING: "James Hardie" (1-800-9-HARDIE) "HardiShingle" fiber-cement board siding panels, 1/4" nominal thickness x 4 ft wide panels. Provide factory primed units, in following types where indicated on the Drawings:
   - 2.1. Straight Edge Panel - 16 inch height, for 7 inch exposure
   - 2.2. Staggered Edge Panel - 16 inch height, for 6 inch exposure
   - 2.3. Half-Round Panel - 19 inch height, for 7 inch exposure
3. SOFFIT SYSTEM: HardieSoffit Panel System, 6" wide panels. Ready for paint.
   - 3.1. Provide perforated vented panel where indicated.
4. SIDING TRIM MEMBERS:
   - 4.1. "Harditrim MD" Trim units, 7/16" thick x 4", 6", 8",or 12" (Nominal - 3.5", 5.5", 7.5", 11.5" Actual) in either "Select Cedarmill" textured finish or "Smooth Planks" smooth finish as noted in the finish schedule.
   - 4.2. "Harditrim XLD" Trim units, 1" thick x 4", 6", 8", or 12" (Nominal - 3.5", 5.5", 7.25", 11.25" Actual) in "Smooth Planks" smooth finish.
   - 4.3. "Harditrim HLD" Trim units, 3/4" thick x 4",6", 8",or 12" (Nominal - 3.5", 5.5", 7.25", 11.25" Actual) in "Smooth Planks" smooth finish.
5. FELT UNDERLAYMENT: ASTM D 226, 15-lb type.
6. FASTENERS: 0.083" shank x 0.187" head x 1-1/2" long corrosion-resistant siding nails.
7. INSTALLATION: Comply with manufacturers' instructions and recommendations for installation, as applicable to project conditions and supporting substrates. Anchor panels and other components of the work securely in place, with provisions for thermal and structural movement.

SECTION 07.54.00 - THERMOPLASTIC POLYOLEFIN MEMBRANE ROOFING SYSTEM (TPO)

1. SUMMARY:
   - 1.1. Manufacturer: Johns Manville or Accepted Equivalent
   - 1.2. Basis of Design: 60 Mil., JM Singly-Ply Thermoplastic Polyolefin Membrane Roofing System, Mechanically Fastened. Color: White
2. Warranty: Must provide 20 yr. warranty. Submit product data & warranty
3. JM TPO System (or approved equivalent)
4. Membrane roofing: 60 Mil. TPO roofing system
5. Tapered insulation: ASTM C 1289, provide factory-tapered insulation boards fabricated to slope of 1/2" PER 12".
6. Flexible walkway pads: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads sourced from membrane roofing system manufacturer.
7. Fasteners and accessories: Manufacturer's standard fasteners and accessories for proposed insulation depth and roof slope.

SECTION 07.62.00 - FLASHING AND SHEET METAL

1. Coordinate with MECHANICAL & ELECTRICAL disciplines to identify roofing penetrations.
2. PROVIDE non-corrosive flashing across top and sides of exterior window and door openings, and at other locations where needed.
3. FLASHING shall be installed: At wall and roof intersections; at parapet coping, roof terminations; and wherever there is a change in roof slope of direction; and around all roof openings.
4. COMPLY WITH all pertinent recommendations contained in "Architectural Sheet Metal Manual," current edition, of the Sheet Metal and Air Conditioning Contractors National Association (SMACNA).
5. PRE-FINISHED GALVANIZED SHEET (to match metal roofing color/finish): Zinc-coated "Galvalume" structural quality steel sheet with coating consisting of 55% aluminum, 1.6% silicon and the balance zinc, as described in ASTM specification A792. Provide "Galvalume Plus" finish with a clear acrylic coating or strippable film.
6. SHEET METAL ROOFING ACCESSORIES: Provide non-corrosive galvanized steel sheet metal components required for a complete metal roofing assembly including trim, copings, fascia, corner units, ridge closures, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match color and finish of sheet metal roofing, unless otherwise indicated.
7. MISCELLANEOUS MATERIALS: Provide materials and types of fasteners, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.
8. FASTENERS: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads. At exposed fasteners, provide heads matching color of sheet metal by means of plastic caps or factory-applied coating. At flashing and trim, provide blind fasteners of high-strength aluminum or stainless-steel, or self-drilling screws, gasketed, with hex washer head.
9. FINISHES:
   - 9.1. Roof Flashing: Non-corrosive galvanized steel.
   - 9.2. Window Flashing: Anodized aluminum to match window system.
   - 9.3. Door Flashing: Non-corrosive, painted to match door frame.
   - 9.4. Coping / Parapet Flashing Cap: Prefinished - Color per Sheet A5.0.
10. COORDINATE INSTALLATION of sheet metal flashing and trim with interfacing and adjoining construction to provide a leakproof, secure, and non-corrosive installation.

DIVISION 07: THERMAL AND MOISTURE PROTECTION (Continued)

SECTION 07.72.00 - ROOF ACCESSORIES

SUMMARY

1. Provide roof curbs and equipment supports
2. Provide ridge vents

ROOF CURBS AND EQUIPMENT SUPPORTS

1. Fabricate from 0.0747 inch (1.9) galvanized structural steel; factory primed and prepared for painting with welded or sealed mechanical corner joints 0.063 inch (1.6 mm) thick, sheet aluminum with welded corner joints.
2. Provide units with cant strips and base profile coordinated with roof insulation thickness and roof deck slope
3. Provide preservative-treated wood nailers at tops of curbs
4. Provide manufacturer's standard rigid or semi-rigid insulation

RIDGE AND EAVE VENTS

1. MANUFACTURER: Owens Corning or Approved Equivalent.
2. Ridge Vent: VentSure Rigid Roll Ridge Vent
3. Eave Vent: VentSure Inflow Eave Vent

SECTION 07.84.13 - FIRESTOPPING

1. DRAFTSTOPPING and FIRESTOPPING to be in accordance with **2018 International Fire Code.**
2. All fire rated penetrations shall be firestopped with sealants / putties to meet or exceed the fire rating of assembly.
3. Applicator to submit products with appropriate U.L. Details for review & approval prior to installation.

SECTION 07.92.00 - JOINT SEALANTS

1. PROVIDE sealants complying with requirements included herein, in order to establish and maintain airtight, vermin proof, and waterproof continuous seals on a permanent basis. Failures of installed sealants to comply with this requirement will be recognized as failures of materials and workmanship. Provide sealants where noted on the drawings.
2. SEALANT SCHEDULE: The following schedule indicates the locations where sealants are to be installed in exterior building wall joints and interior joints. Refer to the drawings for additional locations.
3. TWO-COMPONENT POLYURETHANE SEALANT:
   - 3.1. PRODUCT: FS TT-S-00227, Class A, Type 1 (self-leveling), except Type 2 where joints are not horizontal. Provide "Pecora Dyna-Tred" in "light grey" color, or "Tremco 900/901" in "grey" color or Accepted Equivalent.
   - 3.2. LOCATIONS USED:
     - 3.2.1. Horizontal joints in exterior pavements and tile floors.
4. MULTICOMPONENT URETHANE SEALANT:
   - 4.1. PRODUCT: ASTM C 920, Type M (multicomponent), Grade: NS (nonsag), Class: 25, with additional movement capability of 40% in extension and 25 percent in compression for a total of 65 percent overall. Available products include Tremco "Dymeric 240" or "240FC" (fast-curre).
   - 4.2. LOCATIONS USED:
     - 4.2.1. Typical Exterior building joints
     - 4.2.2. Masonry or stone veneer perimeter joints or control joints
     - 4.2.3. Joints in Exterior Finish System
     - 4.2.4. Flashing joints and reglets
5. MILDEW-RESISTANT SILICONE RUBBER SEALANT (Interior Use Only):
   - 5.1. PRODUCT: One-part nonacid-curing silicone rubber-based based elastomeric sealant, complying with FS TT-S-0021543, Class A; compounded specifically for mildew resistance and recommended by manufacturer for interior joints in wet areas; passing ANSI A136.1 test for mold growth, and complying with ASTM C920; Type S, Grade NS, Class 25, for uses indicated.
   - 5.2. LOCATIONS USED:
     - 5.2.1. Lavatory countertops (as required) - Color to match countertops
     - 5.2.2. Joints at plumbing fixtures, sinks, lavs., etc.: white color typical
     - 5.2.3. At top of wood base, top of chair-rails, door casings and window casings.
     - 5.2.4. Hollow metal to drywall and masonry - typical.
6. SILICON (F) FOR FOOD SERVICE USE (CLEAR):
   - 6.1. PRODUCT: Single-component one-part silicone-rubber based air-curing non-sag elastomeric sealant complying with FDA requirements for direct contact with food products. DO NOT provide sealant with mold and mildew-resistant materials, when materials will be in food-preparation areas of the project. Available products include: "999-A" by Dow, "Sanitary SDS 1700" by GE, "860 Silicone" by Pecora, and "Tremsil 200" by Tremco.
   - 6.2. LOCATIONS USED:
     - 6.2.1. Prefinished wall panels (FRP) and wall base intersections in Kitchen area. (clear)
     - 6.2.2. Window and door frame perimeters in Kitchen area
     - 6.2.3. Hollow metal to drywall and masonry in Kitchen area.
     - 6.2.4. At perimeter ceiling grid at FRP in Kitchen area. (clear)
7. BUTYL RUBBER SEALANT:
   - 7.1. PRODUCT: Polymerized butyl rubber and inert fillers, solvent-based with minimum 75% solids, non-sag consistency, tack-free time of 24 hours or less, paintable, non-staining; complying with FS TT-S-001657.
   - 7.2. LOCATIONS USED:
     - 7.2.1. Door thresholds
8. MISCELLANEOUS FILLERS AND JOINT MATERIALS: Manufacturers recommended joint primer/sealer, bond breaker tape and sealant backed rod.

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SCOTT A. BODUCH
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THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 03.12.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: **23.024**

PROJECT SPECIFICATIONS

G4.1

ISSUED FOR PERMIT - 03.12.2024

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PROJECT SPECIFICATIONS

DIVISION 8: OPENINGS

SECTION 08.11.13 - HOLLOW METAL DOORS AND FRAMES

1. DOORS: Provide metal doors per door schedule.
   a. Hollow Metal Double Doors by Curries / Assa Abloy
   b. Gauge: 16 (Exterior)
   c. Material: Cold Rolled Steel (Galvanized at Exterior Locations)
   d. Edge: Seam wire weld and fill
   e. Core: Vertical steel stiffeners
   f. Finish: Painted
   g. Hollow Metal Doors to be insulated to meet values as indicated in the Energy Code Analysis.
2. FRAMES:
   a. Gauge: 14 (Exterior)
   b. Construction:
   b.a. Welded Frames (Exterior)
   c. Material: Cold Rolled Steel (Galvanized at Exterior Locations)
   d. Welded EWA
3. FIRE-RATED ASSEMBLIES: Provide units that display appropriate UL or FM labels for fire-rating indicated.
4. ANCHORS AND ACCESSORIES: Manufacturer's standard units. Use galvanized item for units built into exterior walls, complying with ASTM A153. Provide rubber silencers in all door frames.

SECTION 08.14.16 - FLUSH WOOD DOORS

1. DOOR CONSTRUCITON with Transparent Finish.
   a. Grade: Custom (Grade A Faces)
   b. Species and Cut: Natural Birch, plain sliced. (Or as selected by the Owner)
   c. Match between Veneer Leaves: Slip match.
   d. Stiles: Applied wood-veneer edges of same species as faces and covering edges of faces.
   e. Edges: Applied wood-veneer edges as same species as faces.

2. SOLID CORE DOORS:
   a. Particleboard: ANSI A208.1, Grade LD-2.
   b. Blocking: Provide wood blocking in particleboard-core doors as follows:
   c. 5-inch top-rail blocking, in doors indicated to have closers.
   d. 5-inch bottom-rail blocking, in doors indicated to have kick, mop, or armor plates.
   e. 5-inch midrail blocking, in doors indicated to have exit devices.

3. INTERIOR WOOD VENEERED-FACED DOORS:
   a. Core: Either glued block or structural composite lumber.
   b. Construction: Five plies with stiles and rails bonded to core, then entire unit abrasive planed before veneering.

SECTION 08.16.13 - CUSTOM PANELED FIBERGLASS DOORS

1. MANUFACTURER: Jeld-Wen, Therma-Tru or Approved Equivalent
2. Door Profile: Custom Paneled door with vision panel to match closely to the original landmark building wood doors.
3. Color: Painted finish as specified in the Drawings.

SECTION 08.31.00 - ACCESS DOORS & PANELS

1. PROVIDE access doors for access to valves, controls, signage, and other concealed items requiring maintenance.
2. ACCESS DOORS AND FRAMES: 0.032 inch (20 gage) flush face panel door with 0.053 inch (16 gage) concealed flange frame for flush drywall installation, baked enamel finish inside and prime finished outside for field painting. Provide 10 x 10 inch minimum size unless otherwise indicated, as manufactured by Milcor, JL Industries or approved equivalent. Provide concealed spring-type hinge opening to 175 degrees minimum, with flush screwdriver operated lock with metal cam.
3. Provide 24" x 36" Metal attic access door with flush face panel. Best Access Doors - Model #BA-AHD-24-36 or approved equivalent.

SECTION 08.36.13 - OVERHEAD ALUMINUM GLASS DOORS

1. Overhead Aluminum / Glass Doors to meet U-Values & SHGC as indicated in the Energy Code Analysis.
2. Manufacturer: Overhead, Raynor, Clopay or Accepted Equivalent
3. System: Thermally Broken - Aluminum / Glass Overhead - Overhead Aluminum Door System / Model 521.
4. Glass: Insulated, Gray Tinted, Tempered, Low E - Energy Efficient Glass Panels.
5. Door Finish: Clear Anodized Aluminum
6. Track System: Low Headroom 2" Steel Track System / Springs to the Front.
7. Electric Operator: Overhead Door Company - RMZ Series Operator - Medium Duty , Side / Wall mount unit with remote.

SECTION 08.41.13 - ALUMINUM ENTRANCES AND STOREFRONTS

1. Aluminum / Glazed doors
   a. Kawneer 350-T Doors - Standard Medium Stile or Accepted Equivalent.
   b. Finish: Clear Anodized
   c. Glass: Insulated, Tinted Low 'E' , Tempered.

2. Aluminium Storefront & Window Systems
   a. Exterior: Kawneer TriFab 451-T, Thermally-Broken System or Accepted Equivalent.
   b. Interior: Kawneer TriFab 400 System
   c. Finish: Clear Anodized
   c. Glass: Insulated, Tinted Low 'E' , Tempered.

DIVISION 8: OPENINGS

SECTION 08.51.23 - METAL FIRE RATED WINDOWS

1. Summary: Provide fire rated metal windows.
2. Submit product data, samples, shop drawings, mockup, test reports, warranty, and maintenance data.
3. Products: System Design **FyreTec:** 950 Series - Fixed Lite - 3/4 Hour
4. Manufacturers: FyreTec or approved equivalent.
5. Window Type: Metal Framed
6. Operation: Fixed
7. Size: Refer to drawing A7.0
8. Glazing: Low 'E', tempered, Insulating glass
9. Glazing Color: Clear glass
10. Anchors, Clips, and Window Accessories: Non-magnetic stainless steel, or galvanized steel
11. Install per Manufacturers Standard requirements.

SECTION 08.53.13 - VINYL WINDOWS

1. Summary: Provide vinyl / fiberglass composite windows.
2. Submit product data, samples, shop drawings, mockup, test reports, warranty, and maintenance data.
3. Products: System Design **ANDERSEN WINDOWS:** 100 SERIES
4. Manufacturers: Andersen, Pella, Marvin or approved equivalent.
5. Window Type: Vinyl / Fiberglass Composite
6. Operation: Fixed / Single-Hung
7. Size: Refer to drawing A7.0
8. Glazing: Low 'E', tempered, Insulating glass
9. Glazing Color: Clear glass
10. Anchors, Clips, and Window Accessories: Aluminum, non-magnetic stainless steel, or galvanized steel
11. Install per Manufacturers Standard requirements.

SECTION 08.91.19 - FIXED LOUVERS AND VENTS

1. WORK INCLUDED: Provide louvers and vents where indicated on the Drawings, as specified herein, and as necessary for complete installation.
2. ALUMINUM LOUVER:
   a. Finish: Clear Anodized, AA-M12C22A42/A44 (Mechanical Finish: as fabricated, nonspecular; Chemical Finish: etched, medium matte; Anodic Coating: Class I Architectural, film thicker than 0.7 mil with integral color or electrolytically deposited color) complying with AAMA 606.1 or AAMA 608.1.
   b. Sizes: As required per Mechanical Drawings.
3. MATERIALS:
   3.1. Aluminum Extrusions: ASTM B 221, alloy 6063-T5 or T-52.
   3.2. Aluminum Sheet: ASTM B 209, alloy 3003 or 5005 with temper as required for forming, or as otherwise recommended by metal producer for required finish.
   3.3. Aluminum Castings: ASTM B 26 alloy 319.
   3.4. Fasteners: Of same basic metal and alloy as fastened metal or 300 Series stainless steel, unless otherwise indicated. Do not use metals that are incompatible with joined materials.
   3.5. Use types and sizes to suit unit installation conditions.
   3.6. Use Phillips pan-head screws for exposed fasteners, unless otherwise indicated.
   3.7. Post installed Fasteners for Concrete and Masonry: Torque-controlled expansion anchors, made from stainless-steel components, with capability to sustain, without failure, a load equal to 4 times the loads imposed, for concrete, or 6 times the load imposed, for masonry, as determined by testing per ASTM E 488, conducted by a qualified independent testing agency

DIVISION 8: OPENINGS

SECTION 08.71.00 - DOOR HARDWARE

1. WORK INCLUDED: Provide finish hardware throughout the Work, as shown on the drawings, as specified herein and as required for a complete installation. Provide panic hardware in accordance with local code requirements.

2. FIRE-RATED OPENINGS: Comply with NFPA Standard No. 80 and local codes for installation of hardware in fire-rated assemblies. Provide only hardware which has been tested and listed by UL in compliance with requirements of door and door frame labels.
3. FASTENERS: Provide necessary screws, bolts and other fasteners of suitable size and type to anchor hardware in position for long life under hard use. Provide concealed fasteners for hardware units which are exposed when door is closed.
4. APPROVED MANUFACTURERS:
   4.1. Coordinate with HARDWARE SCHEDULE included in the drawings for specific hardware required for the project and basis of design requirements.
   4.2. HINGES: Stanley, McKinney, Hager, PBB or Accepted Equivalent.
   4.3. LOCKS & CYLINDERS: PDQ, Schlage D Series, Best 93K Series or approved equivalent. (all to have 6 pin inter-changeable core, small format) in functions indicated or required.
   4.4. OVERHEAD CLOSERS: LCN or Accepted Equivalent.
   4.5. STOPS, HOLDERS, & VIEWERS: Ives, Hager, Glynn-Johnson, Rockwood or Accepted Equivalent.
   4.6. PUSH/PULL/KICK/FLUSH BOLTS: Rockwood, Trimco, Hager or approved equivalent.PLASTIC FLATGOODS: Rockwood, Trimco or Accepted Equivalent.
   4.7. THRESHOLDS: Zero, National Guard, Hager, American Safety Tread, Pemko, Wooster or Accepted Equivalent.
   4.8. EXIT DEVICES: Von Duprin or approved equivalent. (OR Kawneer at Storefront door locations.)
   4.9. WEATHERSTRIPPING: Zero, National Guard, Hager, Pemko or Accepted Equivalent.
5. SIZE AND MOUNT UNITS to comply with manufacturer's recommendations for the exposure condition. Reinforce the substrate as recommended.
6. INSTALL hardware items at heights as recommended by the Door and Hardware Institute, except as specifically required to comply with local codes. Install hardware in compliance with the manufacturer's instructions and recommendations. Set units level, plumb and true.
7. SET THRESHOLDS FOR EXTERIOR DOORS in full bed of butyl-rubber or polyisobutylene mastic sealant. Remove excess sealant and clean adjacent surfaces.
8. ADJUST and check operation of every unit. Replace units which cannot be adjusted to operate freely and smoothly.
9. HARDWARE SCHEDULE: See Door Hardware Schedule included in the Drawings.
10. TYPICAL FINISHES: BHMA #626(10B) - Rubbed Oil Bronze or as otherwise indicated.
11. EMERGENCY KEY BOX: Install unit as approved by the Local Fire Department and at height noted on the Drawings, and as approved by Authorities Having Jurisdiction. Coordinate keying of cylinders with AHJ

DIVISION 09: FINISHES

SECTION 09.29.00 - GYPSUM BOARD

1. REFERENCED STANDARD: Gypsum Association Specification GA-216, ASTM C 840, and manufacturer's instructions.
2. PROVIDE GYPSUM BOARD in thickness indicated in maximum lengths available to minimize end-to-end joints.
3. PROVIDE MOISTURE RESISTANT (Green Board) at wet wall and tile locations or as indicated in the Construction Documents.
4. Provide MOISTURE and MOLD RESISTANT (Purple Board) at shower locations or as indicated in the Construction Documents.
5. FIRE-RESISTANCE RATINGS: Provide gypsum drywall work with ratings indicated and conforming to assemblies tested and listed by recognized authorities.
6. JOINT TREATMENT AT TILE BACKER: "Dow Corning" 795, "Pecora" 895, "GE" Silicone Silpruf Sealant, or "Tremco" Dymonic joint sealer with 2" wide 10 x 10 glass mesh quick tape or approved equivalent, and finish with "G-P" Gypsum setting-type joint compound.
7. GYPSUM BOARD FASTENERS: Type recommended by gypsum board mfr., except as otherwise indicated.
8. CONTROL JOINTS: Provide 2 - standard L-type edge trim beads, in lieu of manufacturer's standard one-piece control joint beads.
9. Provide and install CORNER BEADS at all outside Corners.
10. ALL JOINT TREATMENTS to be from a single source and to comply with ASTM C 475, ASTM C 840, and both gypsum board and joint treatment manufacturers' recommendations.
11. ALL JOINT COMPOUNDS to be applied in three coats and sanded. Comply with ASTM C475.
12. JOINT TAPE to comply with ASTM C475, perforated type.
13. Partitions to be gypsum board of thickness specified in construction documents, taped, spackled, sanded and painted.
14. METAL TRIM AND ACCESSORIES: Standard types of galvanized steel, of sizes required to suit conditions of installation, similar and equal to those by United States Gypsum. Casing beads and edge trim shall be spackle L, USG 801B series, and corner beads shall be Durabead Reinforcement, or accepted equivalent.
15. GYPSUM BOARD TO BE FINISHED with a Level 4 Finish (or Medium Orange Peel Texture or Light Knockdown Texture) unless otherwise noted or Approved by the Owner.

SECTION 09.65.13 - RESILIENT BASE AND ACCESSORIES

1. MANUFACTURER: Armstrong, Roppe or Accepted Equivalent.
2. HEIGHT: 4" High Rubber Cove Base.
2. Adhesives: Water-resistant type recommended by manufacturer to suit products and substrate conditions
3. Trowelable Leveling and Patching Compounds: Latex-modified Portland cement or blended hydraulic cement-based formulation provided or approved by flooring manufacturer for applications indicated.
4. COLOR: As Selected by the Owner.

SECTION 09.65.16 - SHEET VINYL FLOORING

1. MANUFACTURER: Armstrong, Mannington or Accepted Equivalent
2. COLOR / PATTERN: As Selected by the Owner.
3. Trowelable Leveling and Patching Compounds: Latex-modified Portland cement or blended hydraulic cement-based formulation provided or approved by flooring manufacturer for applications indicated.
4. Heat-Welding Bead: Solid-strand product of floor covering manufacturer
5. Provide resilient flat transition strip to cover joint between sheet vinyl and wood flooring.

SECTION 09.65.19 - LUXURY TILE FLOORING

1. MANUFACTURER: Armstrong, Mannington or Accepted Equivalent
2. COLOR / PATTERN: As Selected by the Owner.
3. Adhesives: Water-resistant type recommended by manufacturer to suit products and substrate conditions.
4. Trowelable Leveling and Patching Compounds: Latex-modified Portland cement or blended hydraulic cement-based formulation provided or approved by flooring manufacturer for applications indicated.
5. Prepare concrete substrates according to ASTM F 710. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
6. Lay tiles with grain running in one direction (monolithic) in patterns indicated.

DIVISION 09: FINISHES (Continued)

SECTION 09.91.00 - PAINTING

1. WORK INCLUDES surface preparation and painting or finishing of interior and exterior exposed items and surfaces throughout the Project, and in accordance with requirements herein. Except where a natural finish or a material is specifically noted as a surface not to be painted, paint all exposed surfaces whether or not painting is designated in the drawings. Where items or surfaces are not specifically mentioned, paint the same as similar adjacent materials or areas.
2. WORK INCLUDES all coating systems materials, including primers, emulsions, enamels, stains, sealers, and fillers, and other applied materials whether used as prime, intermediate or finish coats.
3. ALL PARTITIONS to be primed and painted. Store, ship and apply as per manufacturers' recommendations.
4. APPROVED MANUFACTURERS: Provide paint products per the Finish Schedule indicated in the drawings or other Accepted Equivalent.
5. PAINT SCHEDULE: Coordinate with Finish Schedule.
   5.1. EXTERIOR PAINT SYSTEMS: Provide the following paint systems for the various substrates as indicated.

   5.1.1. Exterior galvanized metal:
   5.1.1.1. 1st coat: Primer. (6 mils wet, 2 mils dry)
   5.1.1.2. 2nd coat: Exterior Latex - High Gloss (4 mils wet, 1.4 mils dry)
   5.1.1.3. 3rd coat: Exterior Latex - High Gloss (4 mils wet, 1.4 mils dry)
   Total dry film thickness to be 4.8 mils.

   5.1.2. Exterior Hollow Metal doors & Frames, Trash gates, and other exterior miscellaneous metals:
   5.1.2.1. 1st coat: Primer/Finish (8 mils wet, 3 mils dry)
   5.1.2.2. 2nd coat: Exterior Latex - Semi-Gloss (4 mils wet, 1.4 mils dry)
   5.1.2.3. 3rd coat: Exterior Latex - Semi-Gloss (4 mils wet, 1.4 mils dry)
   Total dry film thickness to be 4.8 mils.

   5.1.3. Exterior Wood Trim:
   5.1.3.1. 1st coat: Exterior Alkyd Wood Primer (4 mils wet, 2.2 mils dry)
   5.1.3.2. 2nd coat: Exterior Latex - Satin (4 mils wet, 1.4 mils dry)
   5.1.3.3. 3rd coat: Exterior Latex - Satin (4 mils wet, 1.4 mils dry)
   Total dry film thickness to be 5 mils.

   5.1.4. Exterior CMU / Block:
   5.1.4.1. 1st coat: Heavy Duty Block Filler (15 mils wet, 8 mils dry)
   5.1.4.2. 2nd coat: Exterior Latex - High Gloss (4 mils wet, 1.4 mils dry)
   5.1.4.3. 3rd coat: Exterior Latex - High Gloss (4 mils wet, 1.4 mils dry)
   Total dry film thickness to be 10.8 mils.

   5.2. INTERIOR PAINT SYSTEMS: Provide the following finish coating systems for the various substrates specified.

   5.2.1. Interior Gypsum Board:
   5.2.1.1. 1st coat: Latex Wall Primer (4 mils wet, 1.1 mils dry)
   5.2.1.2. 2nd coat: Latex Interior - Eggshell (4 mils wet, 1.5 mils dry)
   5.2.1.2. 3rd coat: Latex Interior - Eggshell (4 mils wet, 1.5 mils dry)
   Total dry film thickness to be 4.1 mils.

   5.2.2. Interior Hollow Metal Doors & Frames and Miscellaneous Metals:
   5.2.2.1. 1st coat: Primer (5-10 mils wet, 2-4 mils dry)
   5.2.2.2. 2nd coat: Interior Semi-Gloss (4 mils wet, 1.7 mils dry)
   5.2.2.3. 3rd coat: Interior Semi-Gloss (4 mils wet, 1.7 mils dry)
   Total dry film thickness to be 5.4 mils.

   5.2.3. Interior Wood Stain: (Polyurethane Finish)
   5.2.3.1. Paste Wood Filler: - Tint to shade of the stain (omit on close-grained wood)
   5.2.3.2. Stain Coat: Penetrating Stain - match Owner's approved sample
   5.2.3.3. 1st Finish Coat: Clear Finish - Clear polyurethane finish - gloss sheen
   5.2.3.4. On close-grained or unfilled open-grained wood, apply thinned with 1 quart mineral spirits per gallon. Sand between coats
   5.2.3.5. 2nd & 3rd Finish Coat: Clear - Satin polyurethane finish - apply full strength as packaged

6. COLORS: As indicated in the Finish Schedule or as selected by the Owner.

7. PREPARATION of surfaces shall be in accordance with Coating Manufacturer's latest printed instructions. Use drop cloths to protect finished surfaces.

STATE OF COLORADO
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A VISION ENLIGHTENED

RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 03.12.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: **23.024**

PROJECT SPECIFICATIONS

G4.2

ISSUED FOR PERMIT - 03.12.2024

DIVISION 10: SPECIALTIES

SECTION 10.21.13 - METAL TOILET COMPARTMENTS

1. METAL TOILET COMPARTMENTS: Floor mounted overhead braced.
2. Wall & Door Panels: 1" wall and door panels, constructed of 22 ga. galvanized steel.
3. Vertical Supports: 1" vertical panel supports, constructed of 20 ga. galvanized steel.
4. Hardware & Trim: Stainless Steel hardware and trim.
5. Finish: Powdered Coated, Colors as Selected by the Owner from Manufacturer's standards colors.

SECTION 10.28.00 - TOILET AND SHOWER ROOM ACCESSORIES

1. WORK INCLUDED: Provide toilet accessories throughout the project, as specified herein, and as required for a complete and proper installation. Provide units as indicated on the Drawings.
2. MANUFACTURER: Provide toilet accessories as manufactured by one of the following:
   - 2.1. Bobrick Washroom Equip., Inc.
   - 2.2. ASI, Inc.,
   - 2.3. Bradley
   - 2.4. Or Accepted Equivalent
3. INSTALL IN ACCORDANCE with manufacturer's recommendations.
4. TOILET ROOM ACCESSORIES SCHEDULE: Refer to Schedule indicated in the Drawings.
5. ALL ACCESSORIES to be approved by Owner prior to installation.
6. The use of lead solder is prohibited on installation of potable water systems.
7. POTABLE WATER SYSTEMS are to be protected from contamination by the use of back flow valves and air gaps as conditions require.

SECTION 10.44.00 - FIRE PROTECTION SPECIALTIES

1. WORK INCLUDED: Provide fire extinguishers throughout the project, as specified herein, and as required for a complete and proper installation.
2. UL-LISTED PRODUCTS: Fire extinguishers UL-listed and bear UL "Listing Mark" for type, rating, and classification of extinguisher.
3. APPROVED MANUFACTURERS: Subject to compliance with requirements, provide products by one of the following:
   - 3.1. J.L Industries or Accepted Equivalent
4. FIRE EXTINGUISHERS: Provide fire extinguisher of types indicated in the drawings and per the Schedule below. Locations to be determined by local Fire Marshall at time of final inspection for Certificate of Occupancy and coordinated with Owner's Representative.
5. FIRE EXTINGUISHER SCHEDULE:
   - 5.1. Multi-Purpose Dry Chemical Type (FE): UL-rated 2A-10BC, 5-lb. nominal capacity, in enameled steel container, complete with mounting bracket.
   - 5.2. Multi-Purpose Dry Chemical Type with Cabinet (FEC): UL-rated 2A-10BC, 5-lb. nominal capacity, in enameled steel container, complete with Manufacturers standard Semi-Recessed (Recessed) Cabinet
   - 5.3. Kitchen Fire Extinguishers (KFE): Class 'K' type: UL-rated 'K', 15 lb nominal capacity, in full stainless steel container, complete with mounting bracket. (Kitchen Only)
6. INSTALLATION: In accordance with manufacturer's directions for type of mounting required at height and locations indicated, or if not indicated, to comply with applicable regulations of governing authorities.

SECTION 11.68.00 - PLAYGROUND SURFACING

1. WORK INCLUDED: Synthetic Turf Surfacing in the playground areas.
2. Product: Synthetic Turf Surfacing
   a. Synthetic Turf Resources, STR RG01, 8641 TURF GREEN or approved equivalent.
   b. Yarn Polymer: Nylon
   c. Provide with 1" padding for full turf area.
3. Ensure proper drainage for playground area. Playground to slope a minimum of 1/8" to 1/4" per foot. Refer to Civil Drawings.

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PROJECT SPECIFICATIONS

G4.3

ISSUED FOR PERMIT - 03.12.2024

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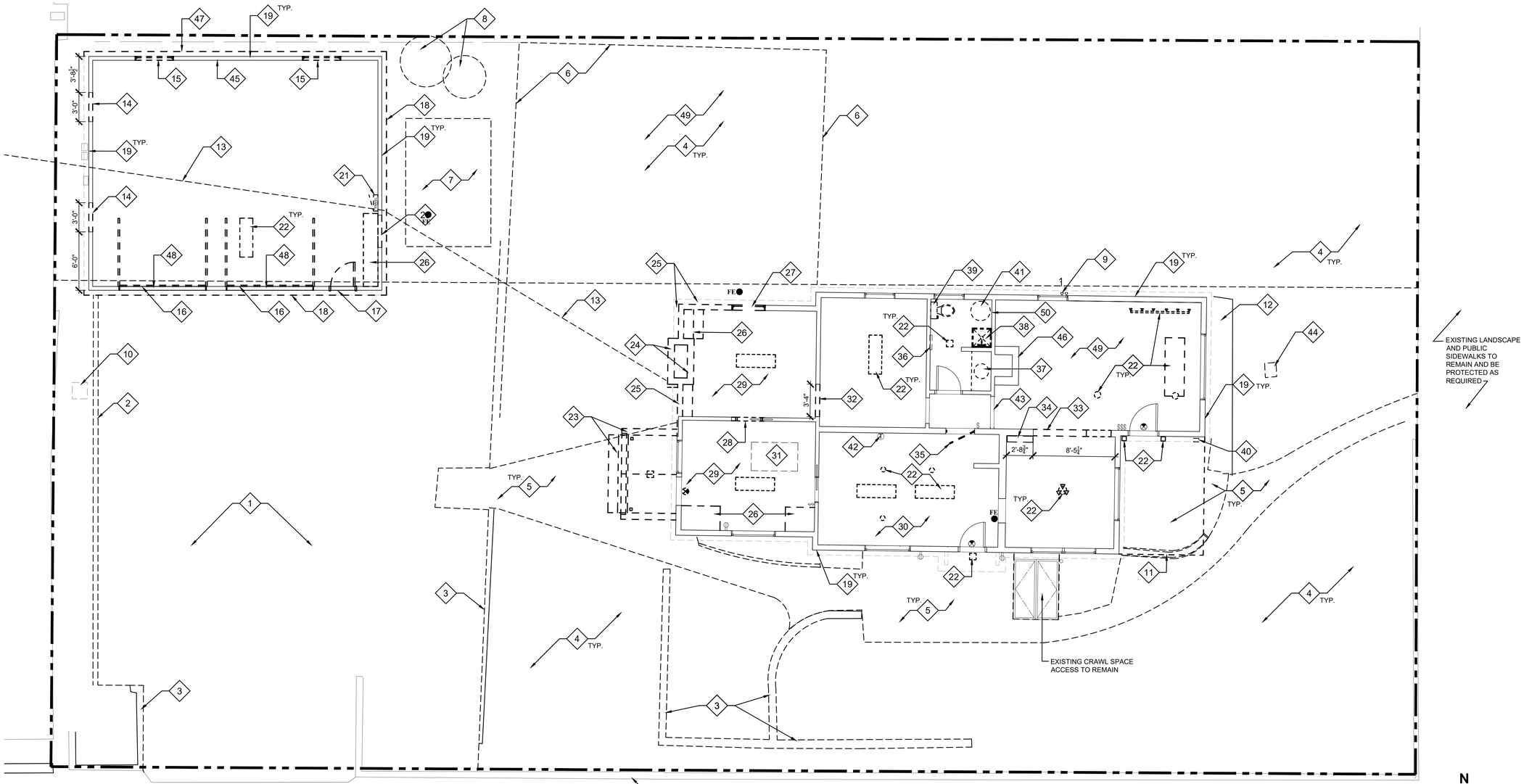

1 AD1.0 ARCHITECTURAL DEMOLITION PLAN

SCALE: 3/16" = 1'-0"

GENERAL DEMOLITION NOTES

1. DASHED GRAPHICS INDICATE EXISTING ITEMS TO BE REMOVED OR RELOCATED; CONTINOUS GRAPHICS INDICATE EXISTING ITEMS TO REMAIN.
2. ALL DAMAGE TO (E) AREAS TO REMAIN SHALL BE REPAIRED AND/OR PATCHED TO PROVIDE A SEAMLESS, LIKE NEW APPEARANCE IN SURFACE FINISH.
3. REPLACED & REMOVED ITEMS: ANY ITEMS NOT TO BE REUSED ARE TO BE STORED OR DISPOSED OF AS DIRECTED BY THE OWNER.
4. ALL OPENINGS CUT INTO EXISTING PARTITIONS SHALL BE CUT ALONG THE LINE OF DEMOLITION. PROVIDE SHORING AS REQUIRED, DESIGNED & STAMPED BY A LICENSED STRUCTURAL ENGINEER. COORDINATE WITH STRUCTURAL DRAWINGS.
5. COVER AND PROTECT EQUIPMENT AND FIXTURES TO REMAIN FROM SOILING OR DAMAGE WHEN DEMOLITION WORK IS PERFORMED IN ROOMS OR AREAS FROM WHICH SUCH ITEMS HAVE NOT BEEN REMOVED. USE A 2-MIL. THICK FIRE RETARDED POLYETHYLENE AND SEAL EQUIPMENT WITH DUCT TAPE.
6. LOCATE, IDENTIFY, STUB OFF AND DISCONNECT UTILITY SERVICES THAT ARE NOT INDICATED TO REMAIN. MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING DEMOLITION OPERATIONS.
7. PERFORM SELECTIVE DEMOLITION WORK IN A SYSTEMATIC MANNER.
8. IF UNANTICIPATED MECHANICAL, ELECTRICAL OR STRUCTURAL ELEMENTS WHICH CONFLICT WITH INTENDED FUNCTION OR DESIGN ARE ENCOUNTERED, INVESTIGATE AND MEASURE BOTH NATURE AND EXTENT OF THE CONFLICT. SUBMIT REPORT TO THE ARCHITECT AND OWNER IN WRITTEN, ACCURATE DETAIL.
9. PENDING RECEIPT OF DIRECTIVE FROM THE OWNER, REARRANGE SELECTIVE DEMOLITION SCHEDULE AS NECESSARY TO CONTINUE OVERALL JOB PROGRESS WITHOUT DELAY.

DEMOLITION FLOOR PLAN KEYNOTES

1. REMOVE EXISTING ASPHALT PAVING - SEE CIVIL DWGS.
2. REMOVE EXISTING CONC. CURB - SEE CIVIL DWGS.
3. REMOVE EXISTING CONC. / ROCK RETAINING WALLS - SEE CIVIL DWGS.
4. REMOVE EXISTING LANDSCAPE AS REQUIRED FOR NEW SITE IMPROVEMENTS AND UTILITIES
5. REMOVE EXISTING CONCRETE PAVING - SEE CIVIL DWGS.
6. REMOVE EXISTING FENCING
7. REMOVE EXISTING SHED BUILDING IN ITS ENTIRETY
8. EXISTING TREES & SHRUBBERY TO BE REMOVED AT LOCATION OF NEW ADDITION
9. EXISTING IRRIGATION CONTROL / CONNECTION TO BE RECONFIGURED AS REQUIRED FOR NEW GRADING / PAVING
10. REMOVE EXISTING GAS METER LOCATION - COORDINATE WITH GAS COMPANY.
11. REMOVE EXISTING BRICK WALL / CURB. SALVAGE BRICK AND REUSE AT EXISTING FRONT PLANTER REPAIR.
12. EXISTING BRICK / STUCCO PLANTER TO REMAIN, REPAIR & REPOINT EXISTING BRICK AS REQUIRED. REPAINT / FINISH STUCCO AS REQUIRED.
13. REMOVE EXISTING PRIVATE POWER LINES ABOVE FROM EXISTING PANELS BACK TO THE EXISTING ELECTRICAL SERVICE / METER.
14. REMOVE A PORTION OF THE EXISTING WALL FOR NEW WINDOW OPENING. SEE STRUCT. DWGS. FOR NEW STRUCTURAL HEADER FRAMING.
15. REMOVE EXISTING WINDOWS AND PREPARE FOR NEW WALL INFILL
16. REMOVE EXISTING OVERHEAD GARAGE DOORS & TRACK SYSTEM
17. REMOVE EXISTING DOOR & FRAME. PREPARE FOR NEW WINDOW SYSTEM.
18. REMOVE EXISTING ROOF EAVE / OVERHANG AND PREPARE FOR NEW ADDITION / ROOF STRUCTURE.
19. REMOVE EXISTING EXTERIOR SIDING. REFER TO THE DEMOLITION ELEVATIONS FOR MORE INFORMATION.
20. REMOVE A PORTION OF THE EXISTING WALL FOR NEW DOOR OPENING. SEE STRUCT. DWGS. FOR NEW STRUCTURAL HEADER FRAMING.
21. REMOVE EXISTING ELECTRICAL PANEL - SEE ELEC. DWGS.
22. REMOVE EXISTING INTERIOR AND EXTERIOR LIGHTING. REMOVE ALL WIRE AND CONDUITS AT ALL INTERIOR LOCATIONS. SEE ELEC. DWGS.
23. REMOVE EXISTING PORCH ROOF AND CONCRETE STAIR / LANDING IN ITS ENTIRETY
24. REMOVE EXISTING CMU CHIMNEY / FIRE PLACE IN ITS ENTIRETY. PROVIDE TEMPORARY SUPPORT / SHORING AS REQUIRED TO SUPPORT ADJACENT FRAMING AS REQUIRED UNTIL NEW STRUCTURE IS IN PLACE.
25. REMOVE A PORTION OF THE EXISTING EXTERIOR WALL FOR NEW CONNECTION TO ADDITION. PROVIDE TEMPORARY SUPPORT & SHORING UNTIL NEW STRUCTUAL FRAMING IS IN PLACE.
26. REMOVE EXISTING MILLWORK / CABNETRY / COUNTERTOP
27. EXISTING WINDOW UNIT TO BE CAREFULLY REMOVED AND REFURNISHED TO BE INSTALLED INTO THE NEW ADDITION. - SEE WINDOW TYPES.
28. EXISTING DOOR OPENING TO BE REMOVED, INCLUDING ADJACENT WALL FRAMING TO ACCOMODATE A NEW POCKET DOOR.
29. REMOVE EXISTING COMPOSITE TILE FLOORING, REPAIR SUBFLOOR AS REQUIRED.
30. REMOVE EXISTING LINOLEUM SHEET FLOORING. REPAIR SUBFLOOR AS REQUIRED FOR FLOORING FINISH.
31. REMOVE EXISTING ATTIC ACCESS DOOR AND PREPARE FOR ACCESS DOOR
32. REMOVE A PORTION OF THE EXISTING WALL FOR NEW DOOR OPENING. REMOVE EXISTING WALL VENT / DUCTWORK AS REQUIRED.
33. REMOVE A PORTION OF THE EXISTING WALL FOR NEW OPENING BETWEEN SPACES. PROVIDE NEW STRUCTURAL HEADER. SEE STRUCT. DWGS.
34. CUT OUT A PORTION OF THE EXISTING FLOOR AS NEEDED FOR NEW HOT WATER SYSTEM. - SEE PLUMBING DWGS.
35. REMOVE EXISTING GATE
36. REMOVE EXISTING CABINET HEATER. PATCH / REPAIR EXISTING WALL. - SEE MECH. DWGS.
37. REMOVE EXISTING VANITY / SINK. CAP PLUMBING BACK INTO EXISTING WALL.
38. REMOVE EXISTING MOP SINK AND PREPARE PLUMBING FOR NEW SHOWER.
39. REMOVE EXISTING TOILET AND CAP LINES BELOW FLOOR. PATCH / REPAIR EXISTING SUBFLOOR.
40. REMOVE EXISTING HISTORICAL WALL PLACARD AND STORE UNTIL REINSTALLATION
41. REMOVE EXISTING HOT WATER TANK SYSTEM - SEE PLUMBING DWGS.
42. RELOCATE EXISTING THERMOSTAT TO NEW OFFICE.
43. REMOVE EXISTING CASED OPENING AS REQUIRED FOR NEW DOOR AND FRAME
44. EXISTING HISTORIC PLACARD TO BE REMOVED AND STORED UNTIL REINSTALLATION
45. REMOVE EXISTING GYPSUM WALL BOARD ALONG NORTH WALL.
46. REMOVE EXISTING FIREPLACE INSERT. PREPARE OPENING FOR NEW COVER / ACCESS PANEL.
47. REMOVE EXISTING FASCIA AND CUT BACK EXISTING TRUSS TAILS FLUSH WITH FACE OF THE WALL
48. EXISTING DOOR HEADER TO BE REPLACED. SEE STRUCTURAL DWGS.
49. EXISTING HARDWOOD FLOORING TO BE REMOVED DUE TO STRUCTURAL REPAIRS / JOIST FRAMING OF EXISTIGN AREA. REFER TO STRUCT. DWGS. INSTALL NEW HARDWOOD FLOORING TO MATCH EXISTING SPECIES AND BOARD WIDTH.
50. REMOVED EXISTING GYP BD. FINISH AND WALL FRAMING AS REQUIRED TO FIT NEW SHOWER UNIT.

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ARCHITECTURAL DEMOLITION PLAN

AD1.0

ISSUED FOR PERMIT - 03.12.2024

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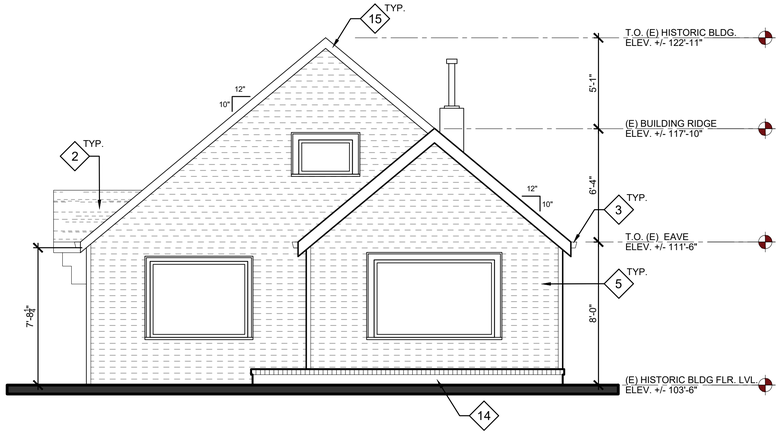
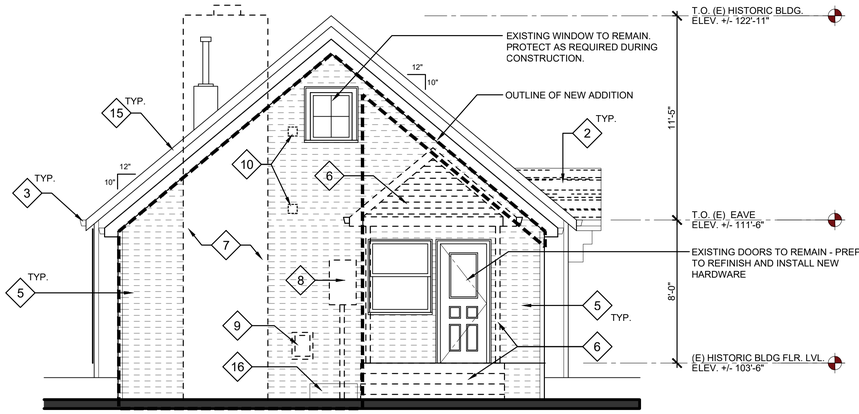


1 AD2.0 EAST DEMOLITION ELEVATION - HISTORICAL

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

0 1' 2' 4' 8'



2 AD2.0 WEST DEMOLITION ELEVATION - HISTORICAL

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

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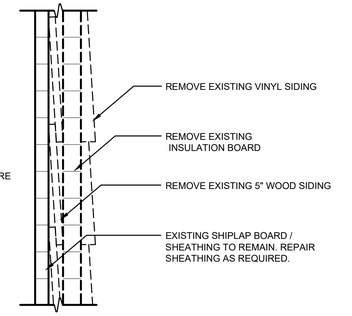


5 AD2.0 EXISTING SIDING PROFILE HISTORIC

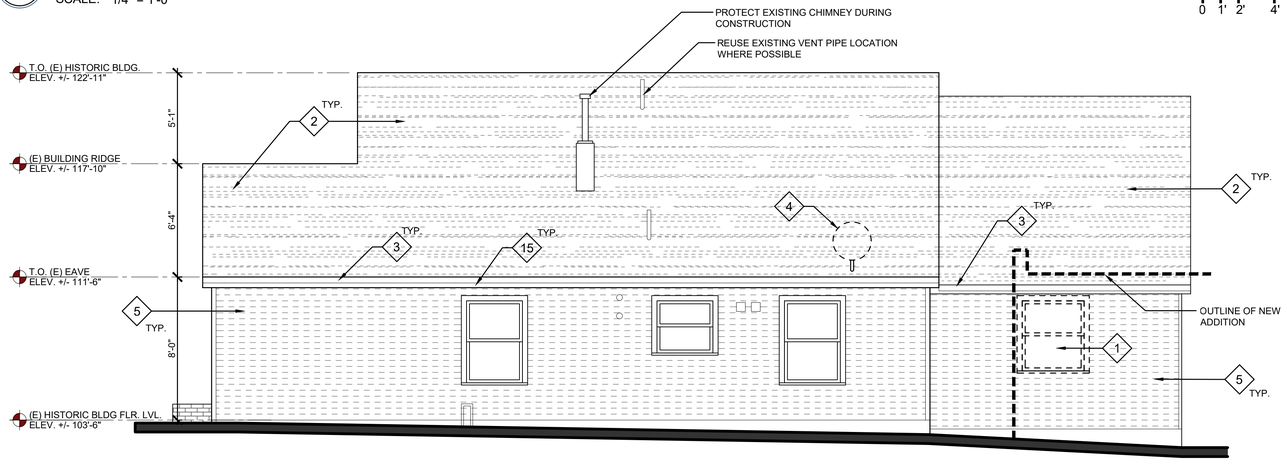
SCALE: 3" = 1'-0"

0 3" 6" 1'

3 AD2.0 SOUTH DEMOLITION ELEVATION - HISTORICAL

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

0 1' 2' 4' 8'



4 AD2.0 NORTH DEMOLITION ELEVATION - HISTORICAL

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

0 1' 2' 4' 8'

GENERAL DEMOLITION NOTES

1. DASHED GRAPHICS INDICATE EXISTING ITEMS TO BE REMOVED OR RELOCATED; CONTINOUS GRAPHICS INDICATE EXISTING ITEMS TO REMAIN.
2. ALL DAMAGE TO (E) AREAS TO REMAIN SHALL BE REPAIRED AND/OR PATCHED TO PROVIDE A SEAMLESS, LIKE NEW APPEARANCE IN SURFACE FINISH.
3. REPLACED & REMOVED ITEMS: ANY ITEMS NOT TO BE REUSED ARE TO BE STORED OR DISPOSED OF AS DIRECTED BY THE OWNER.
4. ALL OPENINGS CUT INTO EXISTING PARTITIONS SHALL BE CUT ALONG THE LINE OF DEMOLITION. PROVIDE SHORING AS REQUIRED, DESIGNED & STAMPED BY A LICENSED STRUCTURAL ENGINEER. COORDINATE WITH STRUCTURAL DRAWINGS.
5. COVER AND PROTECT EQUIPMENT AND FIXTURES TO REMAIN FROM SOILING OR DAMAGE WHEN DEMOLITION WORK IS PERFORMED IN ROOMS OR AREAS FROM WHICH SUCH ITEMS HAVE NOT BEEN REMOVED. USE A 2-MIL. THICK FIRE RETARDED POLYETHYLENE AND SEAL EQUIPMENT WITH DUCT TAPE.
6. LOCATE, IDENTIFY, STUB OFF AND DISCONNECT UTILITY SERVICES THAT ARE NOT INDICATED TO REMAIN. MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING DEMOLITION OPERATIONS.
7. PERFORM SELECTIVE DEMOLITION WORK IN A SYSTEMATIC MANNER.
8. IF UNANTICIPATED MECHANICAL, ELECTRICAL OR STRUCTURAL ELEMENTS WHICH CONFLICT WITH INTENDED FUNCTION OR DESIGN ARE ENCOUNTERED, INVESTIGATE AND MEASURE BOTH NATURE AND EXTENT OF THE CONFLICT. SUBMIT REPORT TO THE ARCHITECT AND OWNER IN WRITTEN, ACCURATE DETAIL.
9. PENDING RECEIPT OF DIRECTIVE FROM THE OWNER, REARRANGE SELECTIVE DEMOLITION SCHEDULE AS NECESSARY TO CONTINUE OVERALL JOB PROGRESS WITHOUT DELAY.

DEMOLITION HISTORIC KEYNOTES == == INDICATES ITEMS TO BE REMOVED

1. EXISTING WINDOW UNIT TO BE CAREFULLY REMOVED AND REFURNISHED TO BE INSTALLED INTO THE NEW ADDITION. - SEE WINDOW TYPES.
2. EXISTING ASPHALT SHINGLE ROOF TO BE REMOVED. INSPECT EXISTING SHEATHING TO DETERMINE CONDITION AND REPLACE DAMAGED LOCATIONS.
3. REMOVE EXISTING GUTTERS AND DOWNSPOUTS AS REQUIRED FOR NEW FASCIA BOARD TRIM AND FLASHING. SALVAGE AND PROTECT FOR REINSTALLATION.
4. REMOVE EXISTING SATELLITE DISH.
5. REMOVE EXISTING EXTERIOR VINYL SIDING, CONTINUOUS INSULATION BOARD AND ORIGINAL WOOD SIDING. INSPECT CONDITION OF THE EXISTING SHEATHING / SHIPLAP BOARDS AND DETERMINE AREAS THAT REQUIRE REPAIR PRIOR TO NEW EXTERIOR FINISH. - SEE DETAIL 5/AD2.0.
6. REMOVE EXISTING PORCH ROOF AND CONCRETE STAIR / LANDING IN ITS ENTIRETY
7. REMOVE EXISTING CMU CHIMNEY / FIRE PLACE IN ITS ENTIRETY. PROVIDE TEMPORARY SUPPORT / SHORING AS REQUIRED TO SUPPORT ADJACENT FRAMING AS REQUIRED UNTIL NEW STRUCTURE IS IN PLACE.
8. REMOVE EXISTING ELECTRICAL PANEL - SEE ELEC. DWGS.
9. REMOVE EXISTING DOGGY DOOR. PREPARE TO INFILL WALL AS REQUIRED
10. REMOVE EXISTING EXHAUST DUCT / VENT. EXTEND THRU NEW ADDITION AS REQUIRED. SEE MECH. DWGS.
11. REMOVE EXISTING HISTORICAL WALL PLACARD AND STORE UNTIL REINSTALLATION
12. REMOVE EXISTING MAILBOX AND STORE UNTIL REINSTALLATION.
13. REMOVE EXISTING EXTERIOR LIGHTING. PREPARE FOR NEW LIGHTING FIXTURES. SEE ELEC. DWGS.
14. EXISTING BRICK / STUCCO PLANTER TO REMAIN, REPAIR & REPOINT EXISTING BRICK AS REQUIRED. REPAINT / FINISH STUCCO AS REQUIRED.
15. REMOVE EXISTING FASCIA BOARD AND EDGE FLASHING
16. INFILL EXISTING CRAWL SPACE ACCESS

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DEMOLITION ELEVATIONS - HISTORIC BLDG.

AD2.0

ISSUED FOR PERMIT - 03.12.2024

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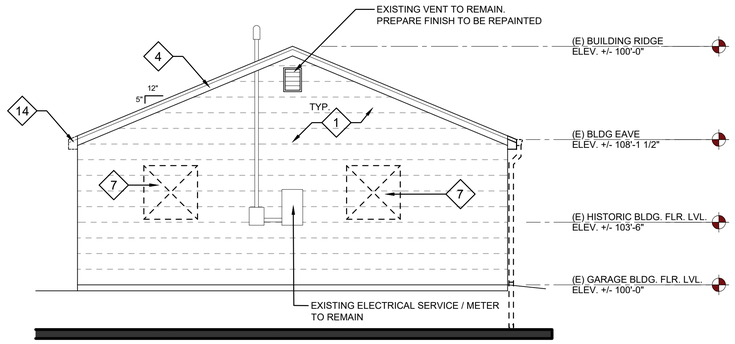
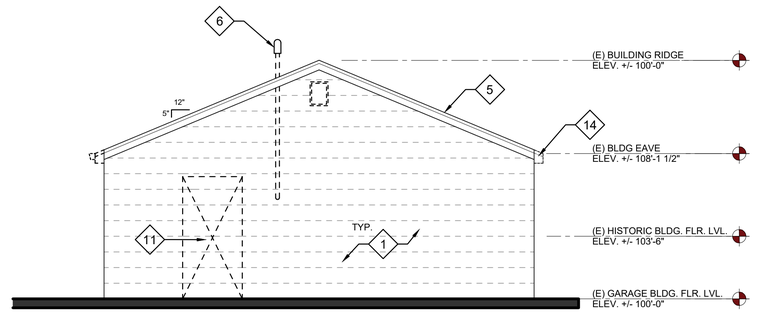


1 AD2.1 EAST DEMOLITION ELEVATION - GARAGE

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

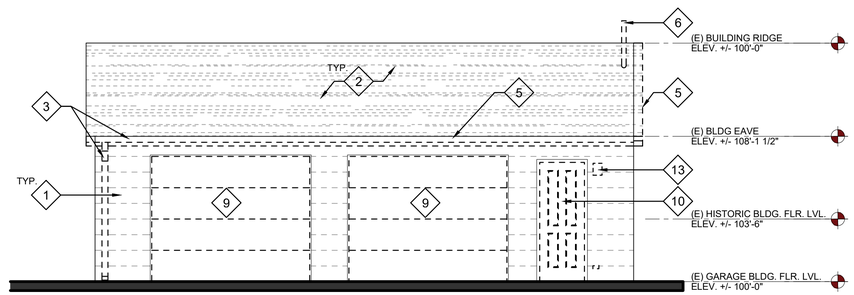
0 1' 2' 4' 8'



2 AD2.1 WEST DEMOLITION ELEVATION - GARAGE

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

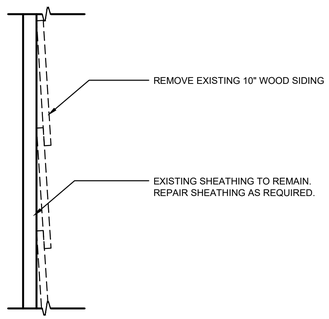
0 1' 2' 4' 8'



3 AD2.1 SOUTH DEMOLITION ELEVATION - GARAGE

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

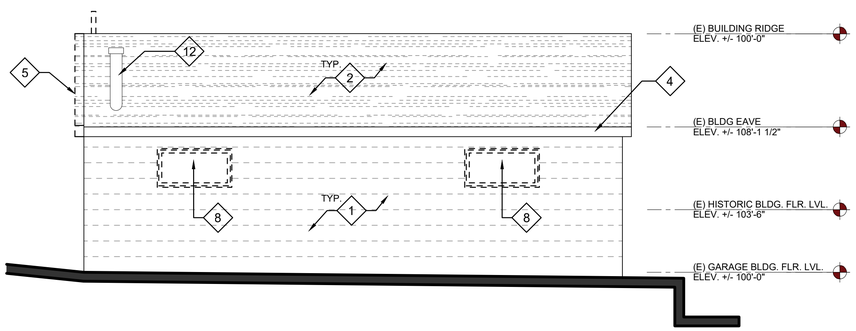
0 1' 2' 4' 8'



5 AD2.1 EXISTING SIDING PROFILE HISTORIC

SCALE: 3" = 1'-0"

0 3" 6" 1'



4 AD2.1 NORTH DEMOLITION ELEVATION - GARAGE

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

0 1' 2' 4' 8'

GENERAL DEMOLITION NOTES

1. DASHED GRAPHICS INDICATE EXISTING ITEMS TO BE REMOVED OR RELOCATED; CONTINOUS GRAPHICS INDICATE EXISTING ITEMS TO REMAIN.
2. ALL DAMAGE TO (E) AREAS TO REMAIN SHALL BE REPAIRED AND/OR PATCHED TO PROVIDE A SEAMLESS, LIKE NEW APPEARANCE IN SURFACE FINISH.
3. REPLACED & REMOVED ITEMS: ANY ITEMS NOT TO BE REUSED ARE TO BE STORED OR DISPOSED OF AS DIRECTED BY THE OWNER.
4. ALL OPENINGS CUT INTO EXISTING PARTITIONS SHALL BE CUT ALONG THE LINE OF DEMOLITION. PROVIDE SHORING AS REQUIRED, DESIGNED & STAMPED BY A LICENSED STRUCTURAL ENGINEER. COORDINATE WITH STRUCTURAL DRAWINGS.
5. COVER AND PROTECT EQUIPMENT AND FIXTURES TO REMAIN FROM SOILING OR DAMAGE WHEN DEMOLITION WORK IS PERFORMED IN ROOMS OR AREAS FROM WHICH SUCH ITEMS HAVE NOT BEEN REMOVED. USE A 2-MIL. THICK FIRE RETARDED POLYETHYLENE AND SEAL EQUIPMENT WITH DUCT TAPE.
6. LOCATE, IDENTIFY, STUB OFF AND DISCONNECT UTILITY SERVICES THAT ARE NOT INDICATED TO REMAIN. MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING DEMOLITION OPERATIONS.
7. PERFORM SELECTIVE DEMOLITION WORK IN A SYSTEMATIC MANNER.
8. IF UNANTICIPATED MECHANICAL, ELECTRICAL OR STRUCTURAL ELEMENTS WHICH CONFLICT WITH INTENDED FUNCTION OR DESIGN ARE ENCOUNTERED, INVESTIGATE AND MEASURE BOTH NATURE AND EXTENT OF THE CONFLICT. SUBMIT REPORT TO THE ARCHITECT AND OWNER IN WRITTEN, ACCURATE DETAIL.
9. PENDING RECEIPT OF DIRECTIVE FROM THE OWNER, REARRANGE SELECTIVE DEMOLITION SCHEDULE AS NECESSARY TO CONTINUE OVERALL JOB PROGRESS WITHOUT DELAY.

DEMOLITION GARAGE KEYNOTES

INDICATES ITEMS TO BE REMOVED

1. REMOVE EXISTING EXTERIOR WOOD SIDING. INSPECT CONDITION OF THE EXISTING SHEATHING AND DETERMINE AREAS THAT REQUIRE REPAIR PRIOR TO NEW EXTERIOR FINISH. - SEE DETAIL 5/AD2.1.
2. EXISTING ASPHALT SHINGLE ROOF TO BE REMOVED. INSPECT EXISTING SHEATHING TO DETERMINE CONDITION AND REPLACE DAMAGED LOCATIONS.
3. REMOVE EXISTING GUTTERS AND DOWNSPOUTS AS REQUIRED FOR NEW FASCIA BOARD TRIM AND FLASHING. SALVAGE AND PROTECT FOR REINSTALLATION.
4. REMOVE EXISTING FASCIA BOARD AND EDGE FLASHING
5. REMOVE EXISTING ROOF EAVE / OVERHANG AND PREPARE FOR NEW ADDITION / ROOF STRUCTURE.
6. REMOVE EXISTING PRIVATE POWER LINES ABOVE FROM EXISTING PANELS BACK TO THE EXISTING ELECTRICAL SERVICE / METER.
7. REMOVE A PORTION OF THE EXISTING WALL FOR NEW WINDOW OPENING. SEE STRUCT. DWGS. FOR NEW STRUCTURAL HEADER FRAMING.
8. REMOVE EXISTING WINDOWS AND PREPARE FOR NEW WALL INFILL
9. REMOVE EXISTING OVERHEAD GARAGE DOORS & TRACK SYSTEM
10. REMOVE EXISTING DOOR & FRAME. PREPARE FOR NEW WINDOW SYSTEM.
11. REMOVE A PORTION OF THE EXISTING WALL FOR NEW DOOR OPENING. SEE STRUCT. DWGS. FOR NEW STRUCTURAL HEADER FRAMING.
12. REMOVE EXISTING EXHAUST FAN VENT. INSTALL NEW EXHUST FAN AT EXISTING PENETRATION
13. REMOVE EXISTING EXTERIOR LIGHTING. PREPARE FOR NEW LIGHTING FIXTURES. SEE ELEC. DWGS.
14. REMOVE EXISTING FASCIA AND CUT BACK EXISTING TRUSS TAILS FLUSH WITH FACE OF THE WALL

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BDG ARCH NO.: **23.024**

DEMOLITION ELEVATIONS - GARAGE BLDG.

AD2.1

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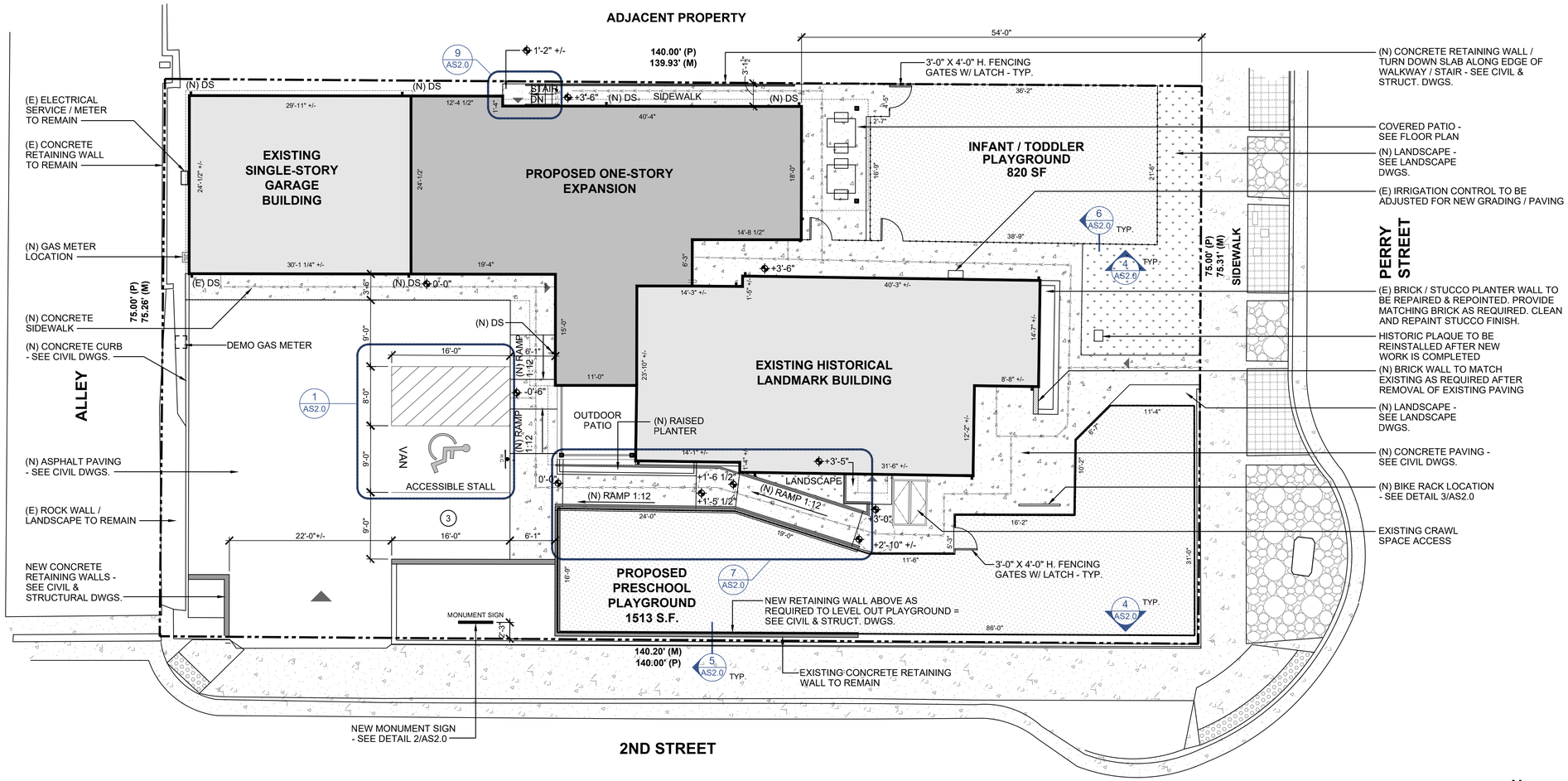


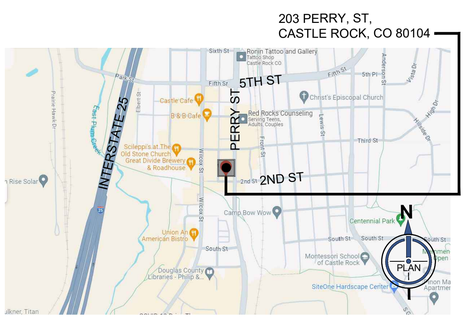
1 AS1.0 ARCHITECTURAL SITE PLAN - REFERENCE ONLY

SCALE: 1/16" = 1'-0"

0 4' 8' 16' 32'

N

VICINITY MAP



SITE PLAN LEGEND

- NEW BUILDING FOOTPRINT
- EXISTING BUILDING FOOTPRINT
- NEW CONCRETE PAVING
- NEW LANDSCAPE AREA
- NEW AISLEWAY STRIPING
- SYNTHETIC TURF
- PROPERTY LINE
- HANDICAP ACCESSIBLE ROUTE
- H.C. POLE MOUNTED HANDICAP PARKING SIGN
- PAINTED HANDICAP SYMBOL

SITE INFORMATION

PARCEL NUMBER:	2505-112-13-007
LEGAL DESCRIPTION:	LOT 6 & S 1/2 OF LOT 5, BLOCK 22
TOTAL SITE AREA:	10,544 S.F. / 0.245 ACRES
ZONED:	B / BUSINESS / COMMERCIAL W/ DOWNTOWN OVERLAY
EXISTING BUILDING FOOTPRINT:	1,314 S.F.
PROPOSED BUILDING FOOTPRINT:	3,177 S.F.
PROPOSED BUILDING HEIGHT:	20'-8" @ EXISTING
PROPOSED PARKING:	3 SPACES / INCLUDING ONE ACCESSIBLE
BICYCLE PARKING:	1 SPACE

GENERAL SITE PLAN NOTES

A. THIS ARCHITECTURAL SITE PLAN IS FOR REFERENCE ONLY. REFER TO THE CIVIL DRAWINGS FOR ADDITIONAL SITE DIMENSIONS, GRADING / EROSION CONTROL AND UTILITY INFORMATION & FOR THE EXTENT OF OFF-SITE WORK IN PUBLIC RIGHT-OF-WAY.

B. PRIOR TO PROCEEDING W/ ROUGH GRADING, THE CONTRACTOR TO COORDINATE CIVIL GRADES W/ THE ARCHITECTURAL GRADES IN BUILDING DISCIPLINE. COMPARE TOP OF FINISH GRADES AT PERIMETER OF BUILDINGS, FLAT WORK & ADJOINING SITE AREAS, IMMEDIATELY REPORT ANY DISCREPANCIES TO THE ARCHITECT.

C. BUILDING PADS TO BE ROUGH GRADED & RECOMPACTED PER THE SOILS REPORT AS PART OF THE SITE WORK.

D. ALL GRADING & CONCRETE PAVING SHALL SLOPE AWAY FROM THE BUILDING. CONTACT THE ARCHITECT OR CIVIL ENGINEER FOR ANY AREAS THAT CANNOT SLOPE AWAY DUE TO EXISTING CONDITIONS.

E. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ADEQUATE DRAINAGE THROUGHOUT THE SITE DURING THE PROCESS OF EXCAVATION & GRADING. THE GRADES SHALL BE MAINTAINED IN SUCH CONDITION THAT IT IS WELL DRAINED AT ALL TIMES.

F. VERIFY ALL DIMENSIONS TO BOUNDARY & SETBACK INFORMATION W/ PARCEL MAP ALTA SURVEY OF RECORD & NOTIFY ARCHITECT/ CIVIL ENGINEER IMMEDIATELY IF DISCREPANCIES ARE FOUND.

G. ALL SITE UTILITIES STUBBED TO 5'-0" MINIMUM FROM BUILDING LIMIT LINE, TYPICAL, U.N.O.

H. VERIFY LOCATIONS OF EXISTING UTILITIES BEFORE PROCEEDING W/ EXCAVATIONS.

I. ALL MATERIALS & WORKMANSHIP FOR PUBLIC FACILITIES TO CONFORM TO THE LOCAL JURISDICTION STANDARD CONSTRUCTION SPECIFICATIONS.

J. THE CONTRACTOR SHALL COMPLY W/ ALL ORDINANCES AFFECTING THE PROJECT INCLUDING BUT NOT LIMITED TO HOURS OF WORK, SAFETY, DUST MITIGATION, ETC.

K. THE CONTRACTOR SHALL COORDINATE W/ THE COUNTY ON ALL WORK IN PUBLIC RIGHT-OF-WAY AREAS.

L. VEHICULAR ACCESS DRIVES MUST BE PROVIDED & MAINTAINED SERVICEABLE THROUGHOUT CONSTRUCTION.

M. THE CONTRACTOR SHALL COORDINATE & IMPLEMENT ALL SAFETY MEASURES REQUESTED & REQUIRED BY THE LOCAL FIRE MARSHAL, HEALTH DEPARTMENT, BUILDING OFFICIALS & OTHER GOVERNING AGENCIES.

N. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS TO REMAIN FROM DAMAGE. DAMAGED ITEMS SHALL BE REPLACED, REPAIRED OR RESTORED BY THE CONTRACTOR. IF, IN THE OPINION OF THE CONTRACTOR, EXISTING IMPROVEMENTS TO REMAIN WILL BE DAMAGED OR REQUIRE REMOVAL, THE GENERAL CONTRACTOR SHALL IDENTIFY THESE TO THE OWNER PRIOR TO PROCEEDING W/ REMOVAL.

STATE OF COLORADO
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400217
03.14.2024
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ARCHITECTURAL SITE PLAN

AS1.0

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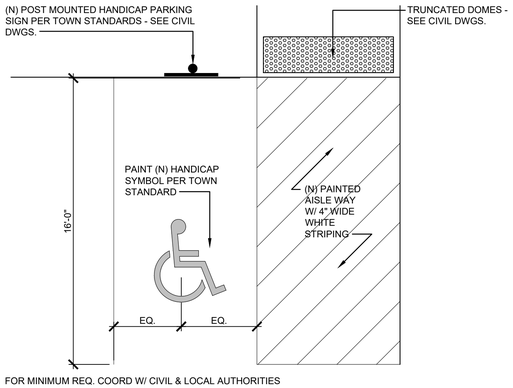
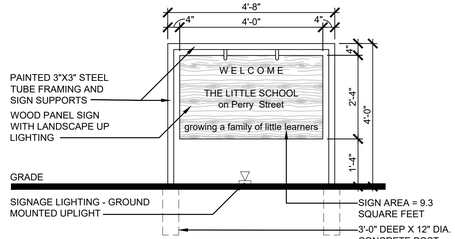


FOR MINIMUM REQ. COORD W/ CIVIL & LOCAL AUTHORITIES

1 AS2.0 ACCESSIBLE PARKING STALL

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

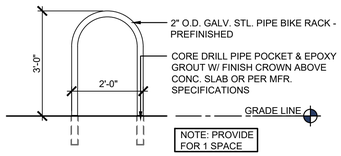
0 1' 2' 4' 8'



2 AS2.0 MONUMENT SIGN DETAIL

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

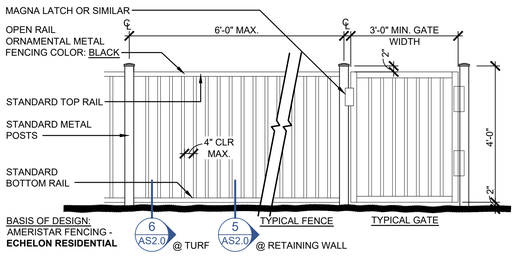
0 1' 2' 4'



3 AS2.0 BIKE RACK DETAIL

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

0 1' 2' 4'



4 AS2.0 TYPICAL FENCE DETAIL

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

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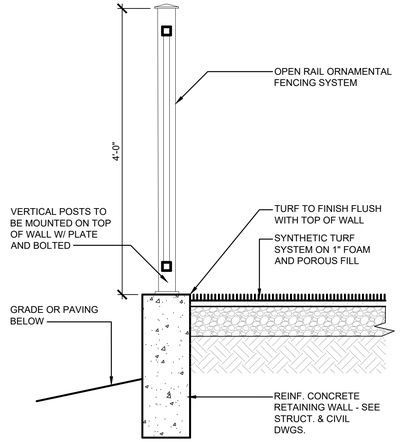
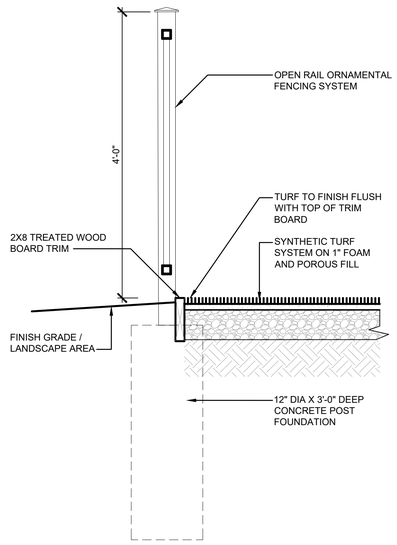


5 AS2.0 FENCE SECTION @ WALL

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

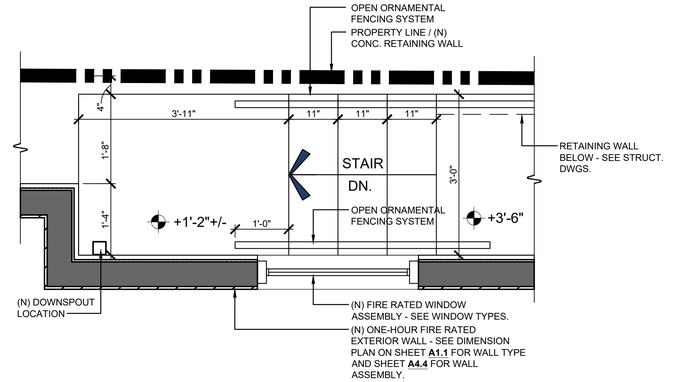
0 3" 6" 1' 2'



6 AS2.0 FENCE SECTION @ TURF

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

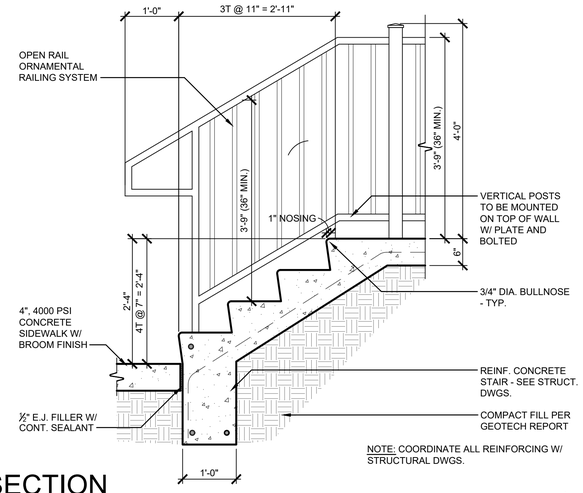
0 3" 6" 1' 2'



9 AS2.0 ENLARGED STAIR PLAN

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

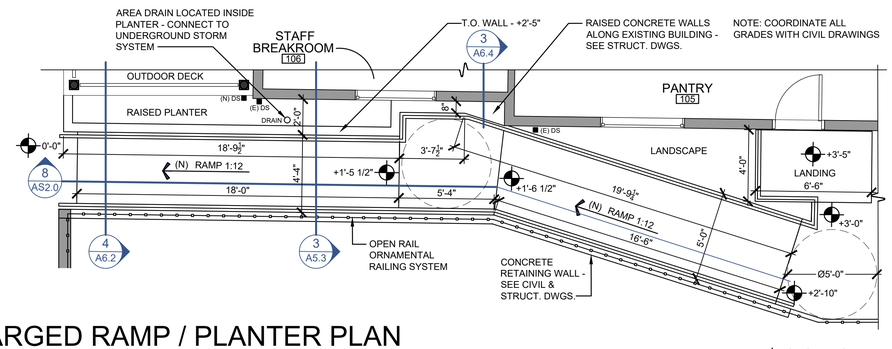
0 6" 1' 2'



10 AS2.0 STAIR SECTION

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

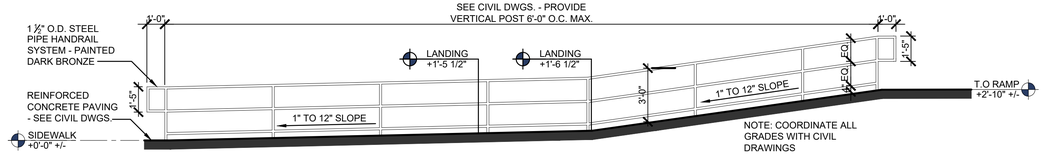
0 6" 1' 2'



7 AS2.0 ENLARGED RAMP / PLANTER PLAN

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

0 1' 2' 4' 8'



8 AS2.0 RAMP HANDRAIL DETAIL

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

0 1' 2' 4' 8'

STATE OF COLORADO
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03.14.2024
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SITE DETAILS

AS2.0

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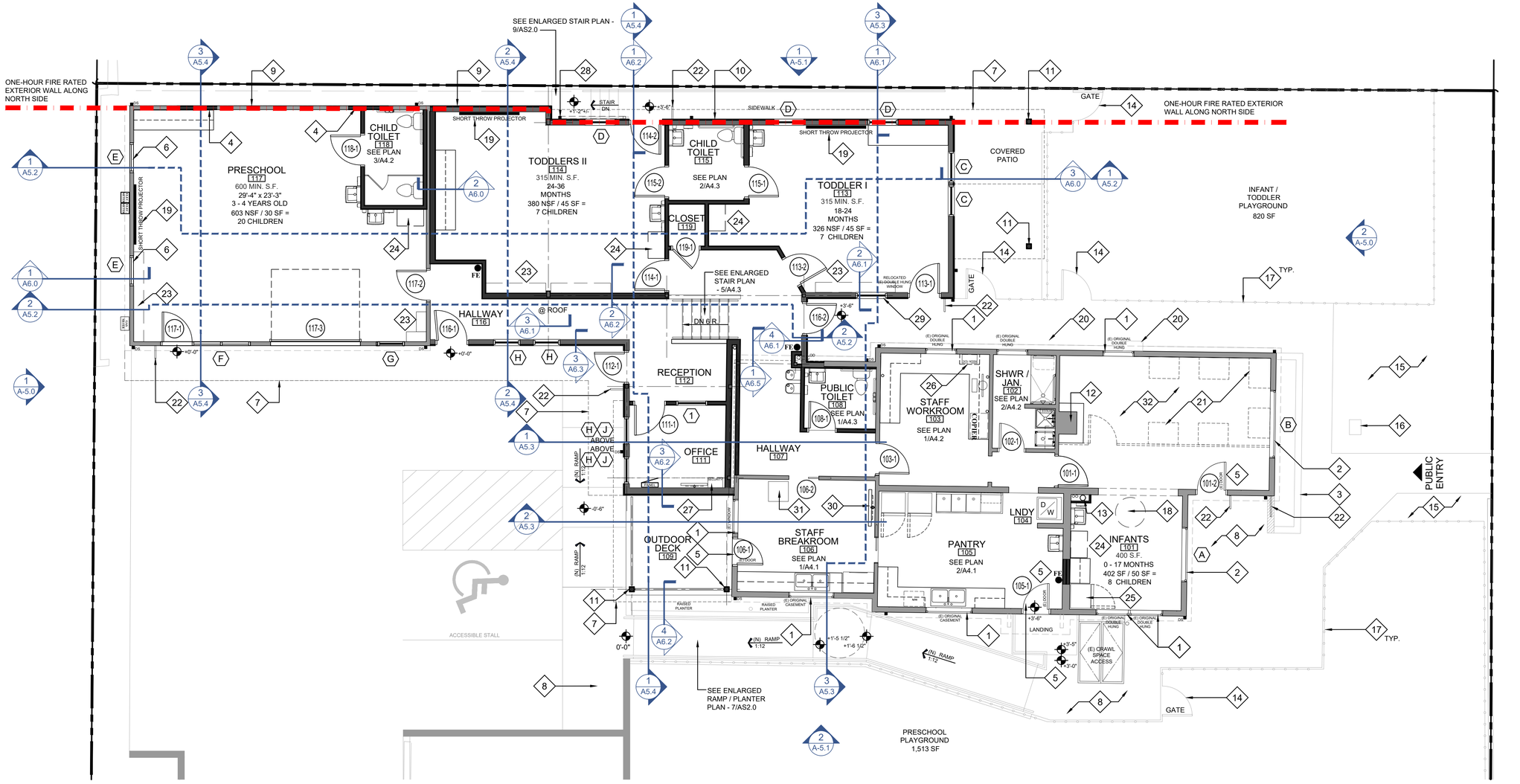

FLOOR PLAN

SCALE: 3/16" = 1'-0"

FLOOR PLAN KEYNOTES

1. (E) ORIGINAL WOOD WINDOW RESTORATION TO BE UNDER SEPARATE PRICE #1. REFER TO SHEET A7.0 FOR ADDITIONAL INFORMATION.
2. REPLACE EXISTING WINDOWS WITH NEW HISTORIC SERIES WOOD WINDOWS TO MATCH EXISTING PROFILE AND COLORS.
3. EXISTING BRICK / STUCCO PLANTER TO REMAIN, REPAIR & REPOINT EXISTING BRICK AS REQUIRED. REPAINT / FINISH STUCCO AS REQUIRED.
4. (E) WINDOW OPENING TO BE INFILLED TO MATCH ADJACENT WALL ASSEMBLY. FILL CAVITY WITH R-13 THERMAL INSULATION.
5. (E) ORIGINAL WOOD PANELED DOOR TO REMAIN - REFURBISH AND REPAINT AND PROVIDE NEW HARDWARE
6. NEW WINDOW CUT INTO EXISTING WALL. SEE WINDOW TYPES. PROVIDE NEW HEADER PER STRUCTURAL DWGS.
7. DASHED LINE OF NEW OVERHANG ABOVE. - SEE ROOF PLAN
8. CONCRETE PAVING / SIDEWALKS. SEE CIVIL DWGS. ALL SITE CONCRETE TO BE 4,000 PSI
9. ONE-HOUR FIRE RATED EXTERIOR WALL ASSEMBLY WITH NO OPENINGS PERMITTED. SEE WALL TYPES
10. ONE-HOUR FIRE RATED EXTERIOR WALL ASSEMBLY WITH OPENINGS PERMITTED. ALL OPENINGS TO BE PROTECTED. SEE WALL TYPES
11. DECORATIVE EXTERIOR COLUMNS. SEE SPECS AND REQUIREMENTS IN THE STRUCTURAL DWGS.
12. PROVIDE INFILL ACCESS PANEL AT EXISTING FIREPLACE OPENING AFTER REMOVAL OF THE EXISTING FIREPLACE INSERT.
13. NEW CHASE FOR HOT WATER TANK FLUE AND PIPING FROM CRAWL SPACE BELOW.
14. (N) 3'-0" WIDE X 4'-0" ORNAMENTAL METAL HIGH GATE - SEE DETAIL 4/AS2.0
15. (N) LANDSCAPE AREA. RECONFIGURE EXISTING IRRIGATION AS REQUIRED. SEE LANDSCAPE PLANS.
16. RELOCATED HISTORIC PLAQUE TO BE INSTALLED AFTER COMPLETION OF NEW LANDSCAPE.
17. NEW 4'-0" HIGH ORNAMENTAL METAL FENCING. SEE DETAIL 4/AS2.0
18. NEW HOT WATER TANK LOCATED BELOW IN CRAWL SPACE. SEE PLUMBING DWGS.
19. SHORT THROW PROJECTOR LOCATION BY THE OWNER. COORDINATE EXACT LOCATION WITH THE OWNER TO DETERMINE BLOCKING AND OUTLET LOCATIONS.
20. EXISTING IRRIGATION CONTROL BOX & BACKFLOW PREVENTER LOCATION TO REMAIN / RECONFIGURED PER NEW PAVING
21. CRIB UNITS AND CRIB BARRIER BY THE OWNER
22. BUILDING MOUNTED DECORATIVE SIGNAGE TO BE REVIEWED / APPROVED UNDER SEPARATE PERMIT
23. FLOOR MOUNTED CUBBY UNITS BY THE OWNER
24. DIAPER STATION LOCATION BY THE OWNER
25. REFRIGERATOR / FREEZER UNIT BY THE OWNER
26. DATA / MODEM HUB LOCATION ON SHELF. COORD. WITH OWNER ON EXACT LOCATION.
27. SECURITY HUB LOCATION ON SHELF. WITH SECURITY MONITOR. COORD. WITH OWNER ON THE EXACT LOCATION.
28. DOWNSPOUT TO EXTEND OVER ABOVE THE STAIR AND DROP DOWN
29. EXISTING HISTORIC WINDOW TO BE RELOCATED TO THIS LOCATION. COORDINATE WITH OWNER ON REQUIREMENTS FOR REBURBISHING OF THE WINDOW UNIT
30. NEW WALL MOUNTED TV CENTERED APPROX. +60 AFF. COORD. BLOCKING LOCATION AND POWER / DATA LOCATIONS WITH THE OWNER.
31. (N) 24" X 24" CRAWL SPACE ACCESS PANEL. - COORD. LOCATION AND SIZE WITH EXISTING FRAMING. LOCATE FLUSH WITH FLOOR.
32. (N) HARDWOOD FLOORING ON NEW JOIST FRAMING IN THIS AREA. REFER TO STRUCT. DWGS.

FLOOR PLAN GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR ALL STRUCTURAL INFORMATION.
2. ALL ANGLED WALLS, IF SHOWN ON FLOOR PLAN, SHALL BE 45° UNLESS NOTED OTHERWISE.
3. FOR WALL TYPES DESIGNATIONS REFER TO DRAWING A4.4 FOR PARTITION TYPE DETAILS.
4. REFER TO DRAWING A4.1, A4.2 AND A4.3 FOR ENLARGED PLANS AND MILLWORK ELEVATIONS
5. REFER TO SHEET A4.5 FOR ALL CLASSROOM MILLWORK ELEVATIONS AND DETAILS.
6. ALL MILLWORK DETAILS - SEE DRAWING A4.5
7. REFER TO SPECIFICATIONS DRAWINGS FOR INSTALLATION INFORMATION.
8. DRYWALL CONTROL JOINTS TO BE FAS-093X BY CLARK DIETRICH (OR APPROVED EQUAL) AND SHALL BE ALIGNED WITH DOOR OR WINDOW JAMB (LEFT OR RIGHT) AT MAXIMUM INTERVALS OF 30'-0".

AREA CALCULATIONS

EXISTING:

HOUSE :	1,206 GROSS S.F.
GARAGE:	657 GROSS S.F.
TOTAL:	1,863 GROSS S.F.

PROPOSED:

ONE STORY EXPANSION: 1,311 GROSS S.F.

TOTAL BUILDING:

(E) BUILDING:	1,863 GROSS S.F.
(N) PROPOSED BUILDING:	1,311 GROSS S.F.
TOTAL:	3,174 GROSS S.F.

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FLOOR PLAN & NOTES

A1.0

ISSUED FOR PERMIT - 03.12.2024

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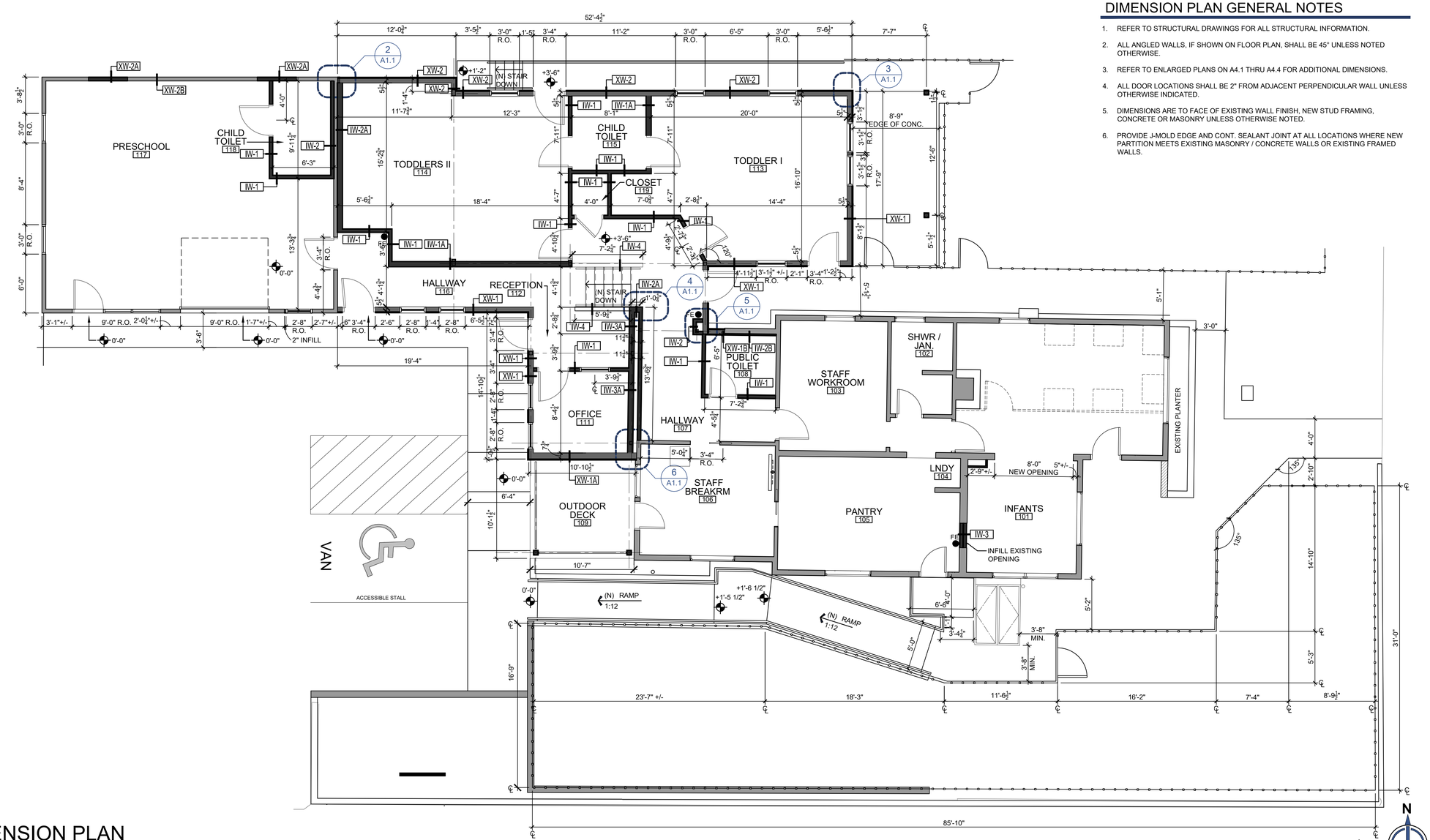
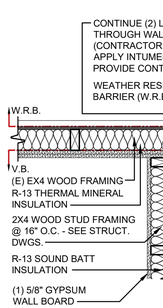
DIMENSION PLAN GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR ALL STRUCTURAL INFORMATION.
2. ALL ANGLED WALLS, IF SHOWN ON FLOOR PLAN, SHALL BE 45° UNLESS NOTED OTHERWISE.
3. REFER TO ENLARGED PLANS ON A4.1 THRU A4.4 FOR ADDITIONAL DIMENSIONS.
4. ALL DOOR LOCATIONS SHALL BE 2" FROM ADJACENT PERPENDICULAR WALL UNLESS OTHERWISE INDICATED.
5. DIMENSIONS ARE TO FACE OF EXISTING WALL FINISH, NEW STUD FRAMING, CONCRETE OR MASONRY UNLESS OTHERWISE NOTED.
6. PROVIDE J-MOLD EDGE AND CONT. SEALANT JOINT AT ALL LOCATIONS WHERE NEW PARTITION MEETS EXISTING MASONRY / CONCRETE WALLS OR EXISTING FRAMED WALLS.



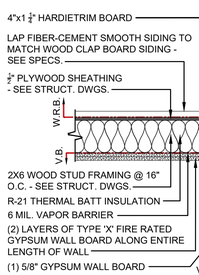
1 A1.1 DIMENSION PLAN

SCALE: 3/16" = 1'-0"



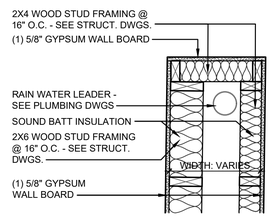
2 A1.1 PLAN DETAIL

SCALE: 1" = 1'-0"



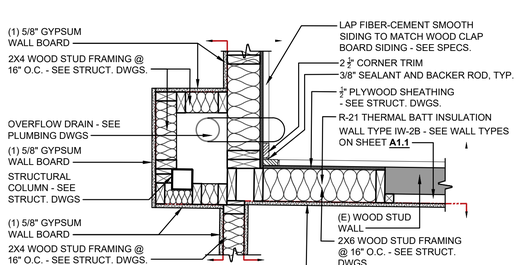
3 A1.1 PLAN DETAIL

SCALE: 1" = 1'-0"



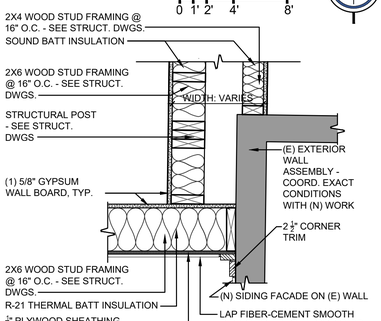
4 A1.1 PLAN DETAIL

SCALE: 1" = 1'-0"



5 A1.1 PLAN DETAIL

SCALE: 1" = 1'-0"



6 A1.1 PLAN DETAIL

SCALE: 1" = 1'-0"

STATE OF COLORADO
SCOTT A. BODUCH
400217
03.14.2024
LICENSED ARCHITECT

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RETROFIT & ADDITION FOR:

THE LITTLE SCHOOL ON PERRY STREET

DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
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DATE: 03.12.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: **23.024**

DIMENSION PLAN AND DETAILS

A1.1

ISSUED FOR PERMIT - 03.12.2024

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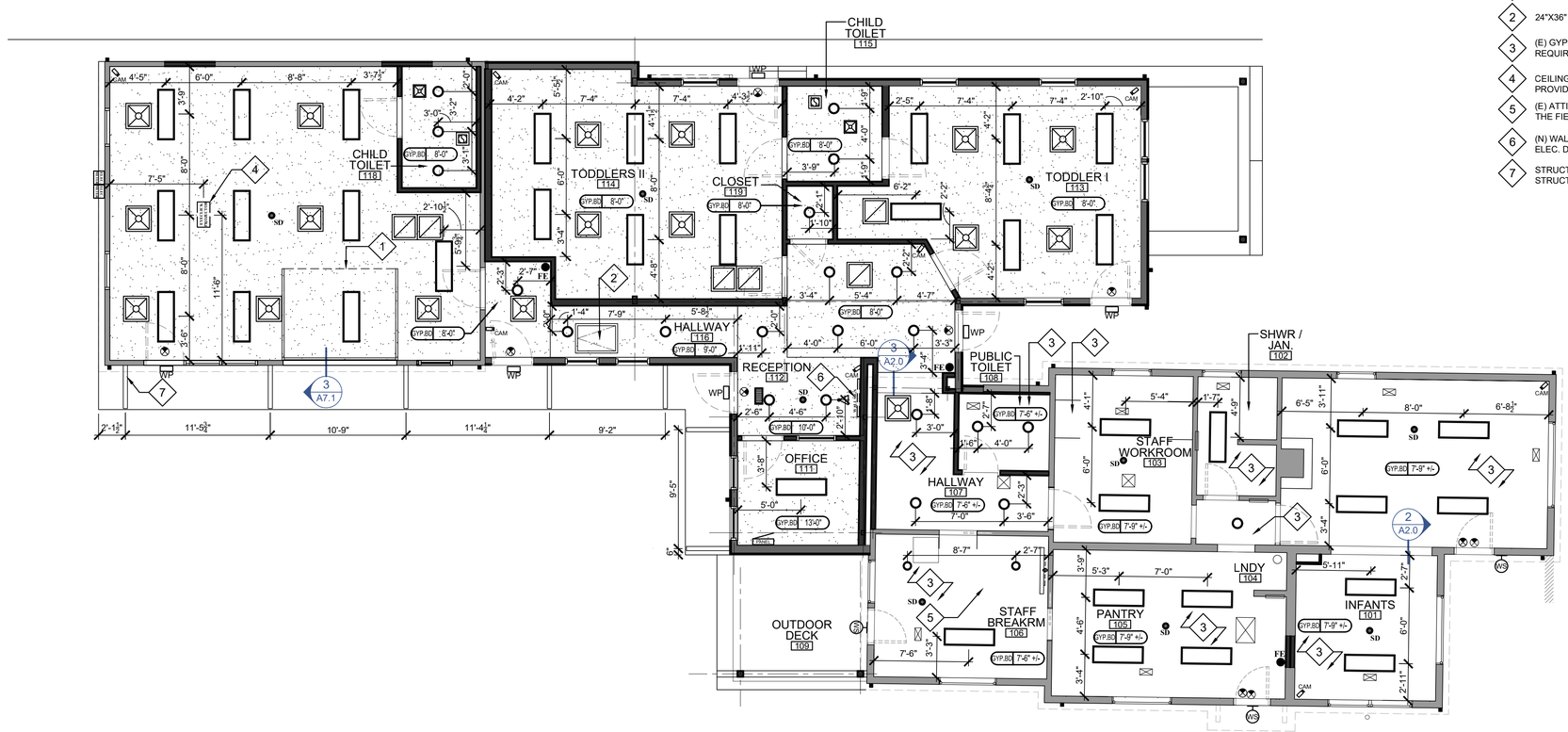


REFLECTED CEILING - KEY NOTES:

1. DASHED LINE OF OVERHEAD DOOR AND TRACK SYSTEM ABOVE
2. 24"X36" ATTIC ACCESS PANEL - SEE DETAIL 4/A2.0
3. (E) GYPSUM BOARD CEILING TO BE REPAIRED AND FINISHED AS REQUIRED.
4. CEILING MOUNTED OBIE EYE CLICK PROJECTOR BY OWNER - PROVIDE POWER / OUTLET IN CEILING
5. (E) ATTIC ACCESS TO BE REPLACED. VERIFY EXACT OPENING SIZE IN THE FIELD.
6. (N) WALL MOUNTED SIGNAGE - PROVIDE ACCENT LIGHTING PER ELEC. DWGS.
7. STRUCTURAL OVERHANG WOOD BRACKETS - SEE ELEVATIONS AND STRUCTURAL DWGS - SEE DETAIL - 4/A3.2.

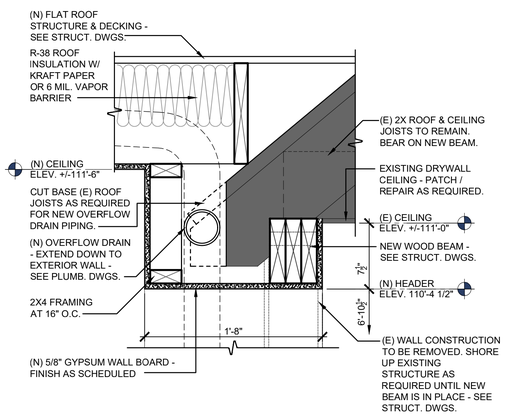
1 A2.0 REFLECTED CEILING PLAN

SCALE: 3/16" = 1'-0"

0 1' 2' 4' 8'

REFLECTED CEILING - GENERAL NOTES:

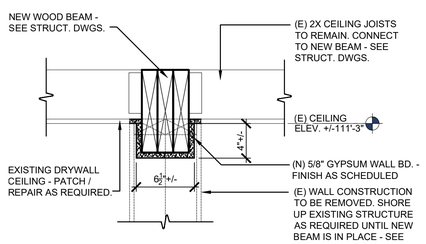
1. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK ABOVE CEILING AND SHALL NOTIFY ARCHITECT OF ANY CONFLICTS PRIOR TO INSTALLATION OF CEILING GRID, GYPSUM BOARD CEILINGS AND SOFFITS.
2. REFER TO ENGINEERING DRAWINGS FOR MECHANICAL, ELECTRICAL, PLUMBING AND STRUCTURAL LAYOUTS, DETAILS AND SCHEDULES
3. REFER TO SPECIFICATIONS FOR ALL SWITCHES, LIGHTING FIXTURES AND EXIT SIGNS



2 A2.0 CEILING DETAIL

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

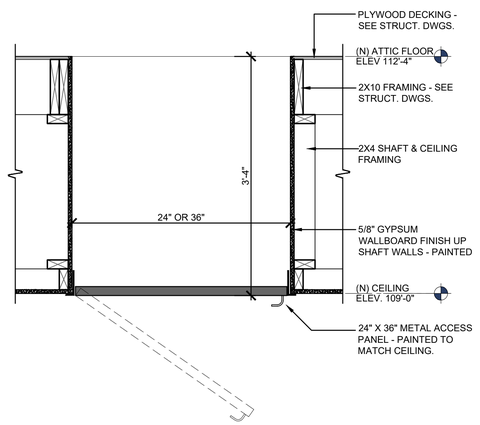
0 3" 6" 1'



3 A2.0 CEILING DETAIL

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

0 3" 6" 1'



4 A2.0 ATTIC ACCESS DETAIL

SCALE: 3" = 1'-0"

0 3" 6" 1'

CEILING LEGEND

- GYPSUM BOARD CEILING
- NEW 1'-4" X 4'-0" LED LIGHT FIXTURE - SEE ELECT. DWGS.
- NEW RECESSED CAN LIGHT FIXTURE SEE ELECT. DWGS.
- WP — EXTERIOR RATED DECORATIVE WALL PAK LIGHT FIXTURE
- WS — EXTERIOR DECORATIVE WALL SCONCE LIGHT FIXTURE
- SMOKE DETECTOR
- CAM — CAMERA LOCATION - COORD.OWNER'S SECURITY VENDOR
- BACKLIT EXIT SIGNAGE - SEE ELECT. DWGS.
- SUPPLY DIFFUSER SEE MECH. DWGS.
- RETURN AIR DIFFUSER SEE MECH. DWGS.
- EXHAUST FAN SEE MECH. DWGS.
- TYP. 0'-0" — CEILING HEIGHT FROM FINISH / FINISH TYPE

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REFLECTED CEILING PLAN & DETAILS

A2.0

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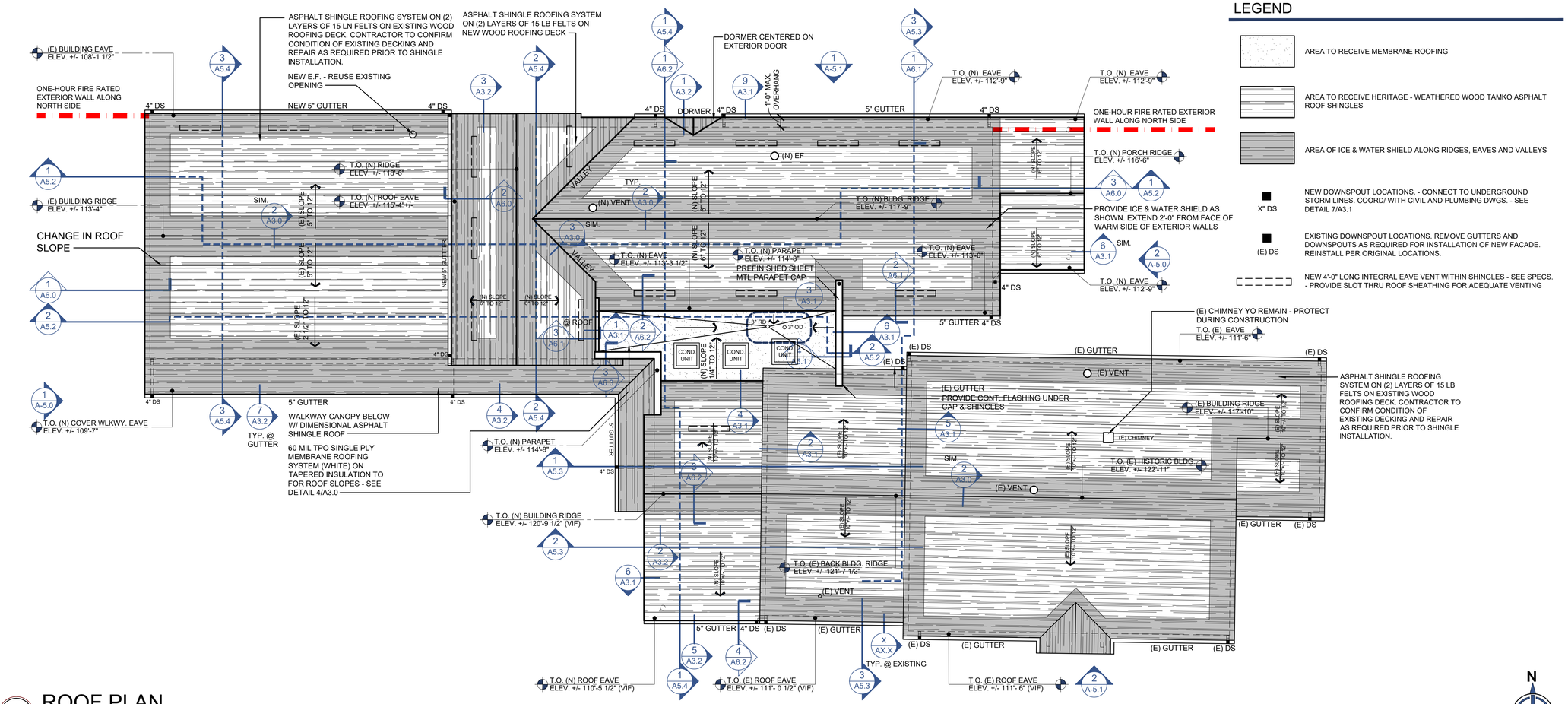


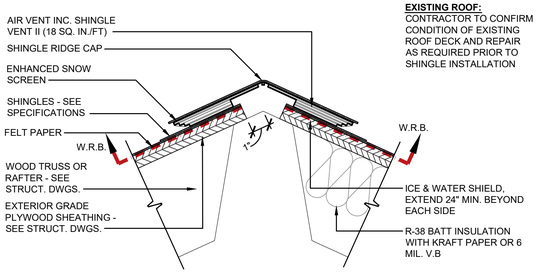
1 A3.0 ROOF PLAN

SCALE: 3/16" = 1'-0"

0 1' 2' 4' 8'

ROOF PLAN NOTES

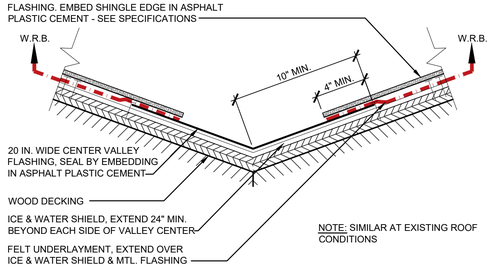
1. VERIFY & COORDINATE DUCT CURB AND ROOF PENETRATION LOCATIONS; SEE MECHANICAL / ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS AND COORDINATION.
2. VERIFY LOCATIONS OF NEW CONDENSERS UNITS - ELECTRICAL, GAS AND CONDENSATE DRAIN PENETRATIONS WITH UNITS' MANUFACTURER.
3. LOCATION OF ALL ROOFTOP EQUIPMENT IS APPROXIMATE, COORDINATE WITH STRUCTURE IN THE FIELD.
4. PLUMBING VENTS OR EXHAUST UNITS ARE NOT ALLOWED WITHIN 10'-0" OF AIR INTAKES OR 5'-0" OF EXTERIOR WALLS.
5. ALL ROOF PENETRATIONS SHALL BE LOCATED 3'-0" OR MORE FROM DRAINAGE FLOW LINES.
6. COORDINATE WITH STRUCTURAL DRAWINGS FOR ROOF STRUCTURE BEARING HEIGHTS. ROOF SLOPES SHALL NOT BE LESS THAN 1/4" PER FOOT.
7. ALL SHEET METAL FLASHING TO COMPLY WITH THE "ARCHITECTURAL SHEET METAL MANUAL", LATEST EDITION AS PUBLISHED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA).
8. ROOFING CONTRACTOR SHALL FURNISH & INSTALL ALL REGLETS.
9. ALL SHEET METAL FLASHING AND CAPS EXPOSED TO THE PUBLIC SHALL BE PAINTED OR PREFINISHED TO MATCH ADJACENT FINISH COLOR. SEE BUILDING ELEVATION FOR COLOR SPECIFICATIONS. ALL OTHER FLASHING TO BE GALVANIZED.
10. TYPICAL ROOFING SYSTEM DETAILS BASED ON JOHNS MANVILLE - 60 MIL. TPO SINGLE-PLY MEMBRANE ROOFING SYSTEM (WHITE). REFER TO SPECIFICATIONS.
11. PROVIDE SPLASH BLOCKS @ ALL CONDENSATION DRAINS, TYPICAL.



2 A3.0 TYPICAL RIDGE DETAIL

SCALE: 3" = 1'-0"

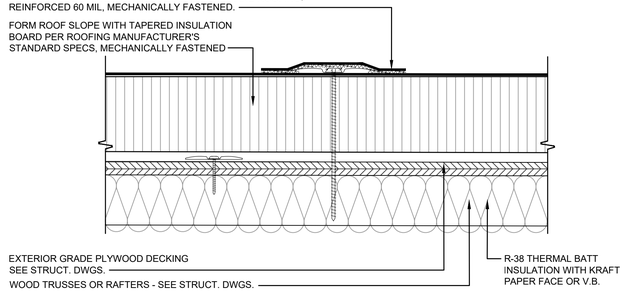
0 3" 6" 1'



3 A3.0 ROOF VALLEY DETAIL

SCALE: 3" = 1'-0"

0 3" 6" 1'



4 A3.0 TYPICAL ROOFING SYSTEM DETAIL

SCALE: 3" = 1'-0"

0 3" 6" 1'

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ROOF PLAN & ROOF DETAILS

A3.0

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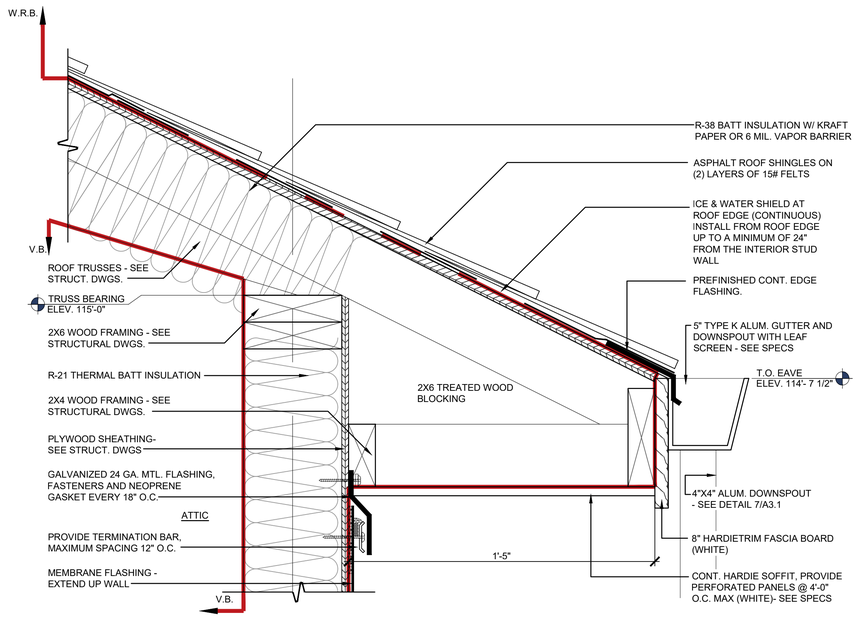
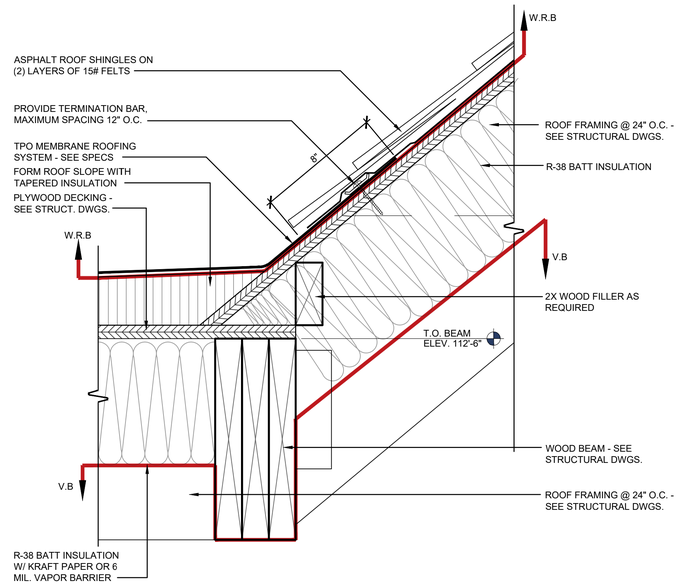


1 A3.1 EAVE DETAIL @ ATTIC (EAST SIDE)

SCALE: 3" = 1'-0"

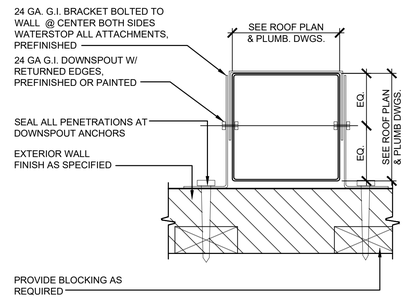
0 3" 6" 1'



4 A3.1 ROOF TRANSITION DETAIL

SCALE: 3" = 1'-0"

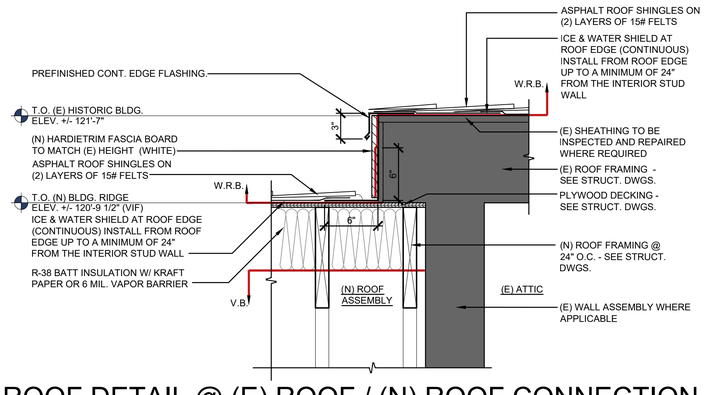
0 3" 6" 1'



7 A3.1 TYP. DOWNSPOUT DETAIL

SCALE: 3" = 1'-0"

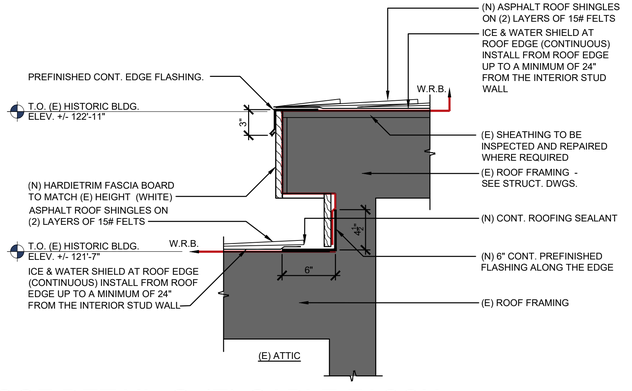
0 3" 6" 1'



2 A3.1 ROOF DETAIL @ (E) ROOF / (N) ROOF CONNECTION

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

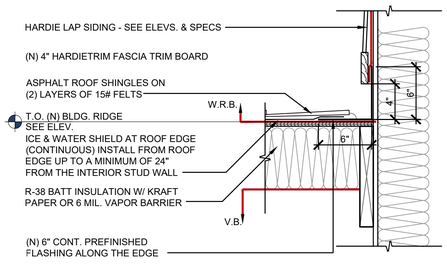
0 3" 6" 1'



5 A3.1 ROOF DETAIL @ (E) GABLE FASCIA

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

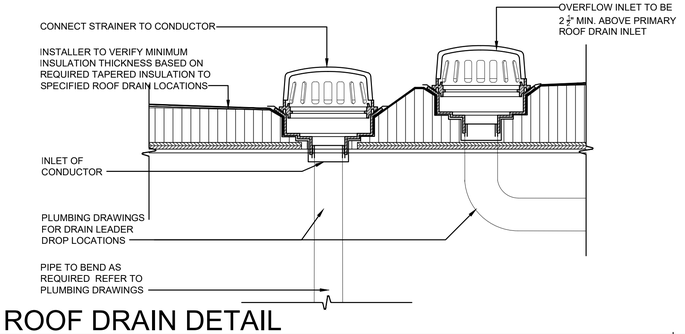
0 3" 6" 1'



8 A3.1 ROOF DETAIL @ BASE FLASHING

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

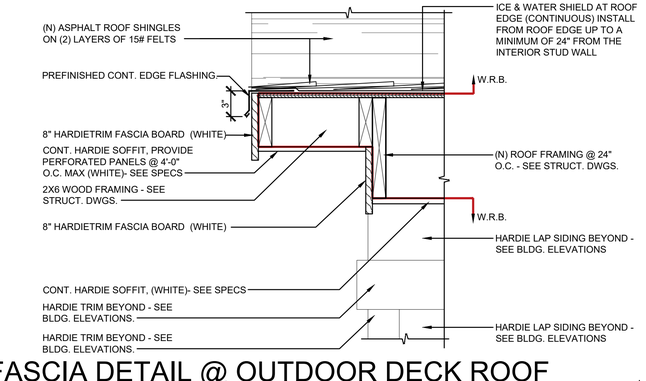
0 3" 6" 1'



3 A3.1 ROOF DRAIN DETAIL

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

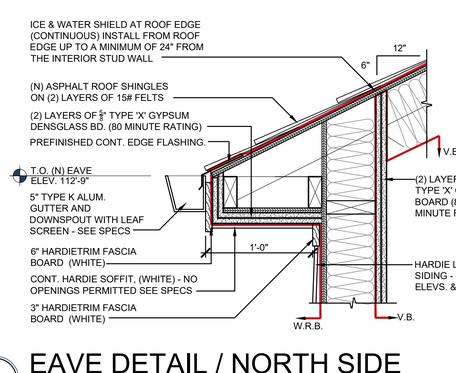
0 3" 6" 1'



6 A3.1 FASCIA DETAIL @ OUTDOOR DECK ROOF

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

0 3" 6" 1'



9 A3.1 EAVE DETAIL / NORTH SIDE

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

0 3" 6" 1'

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ROOF DETAILS

A3.1

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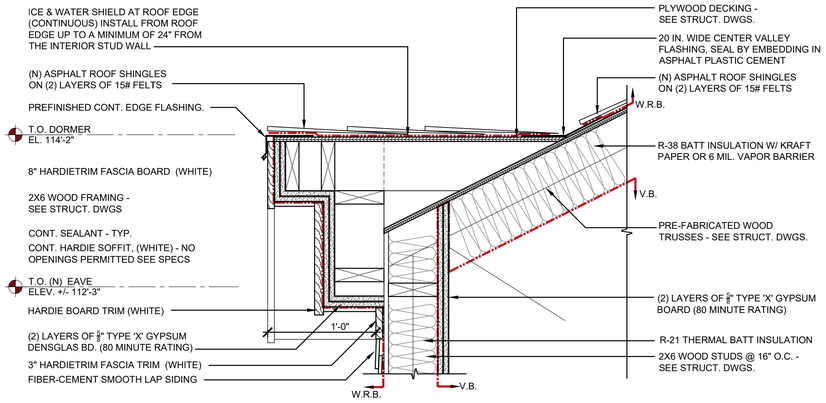
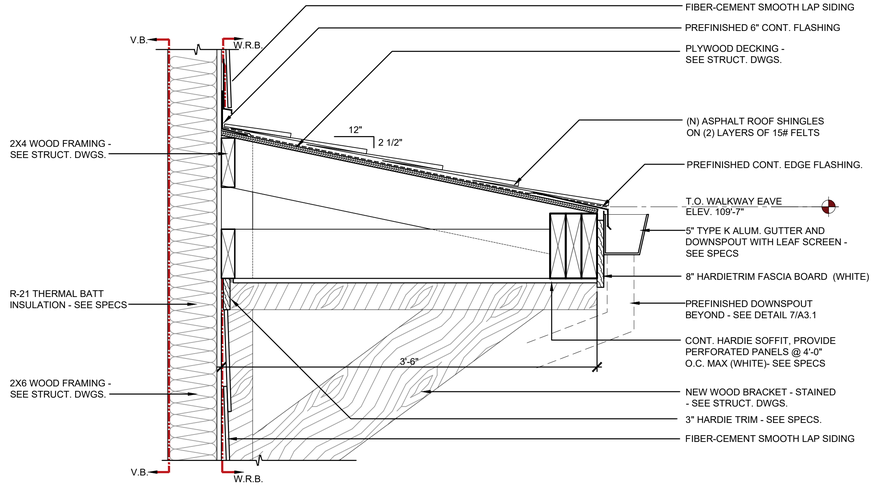
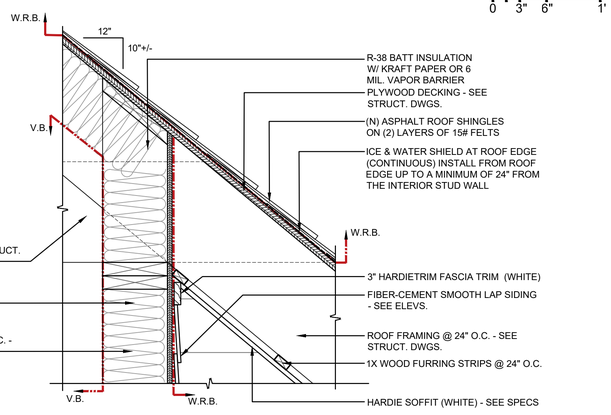




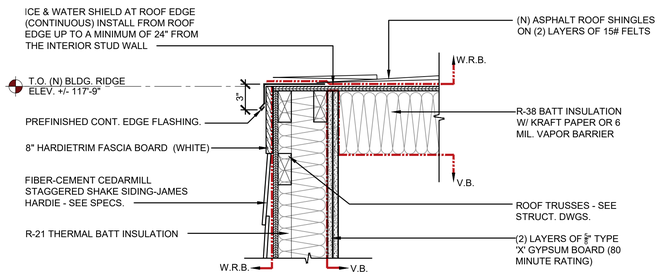
1 A3.2 DORMER DETAIL AT NORTH WALL

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



2 A3.2 ROOF DETAIL @ OUTDOOR DECK

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

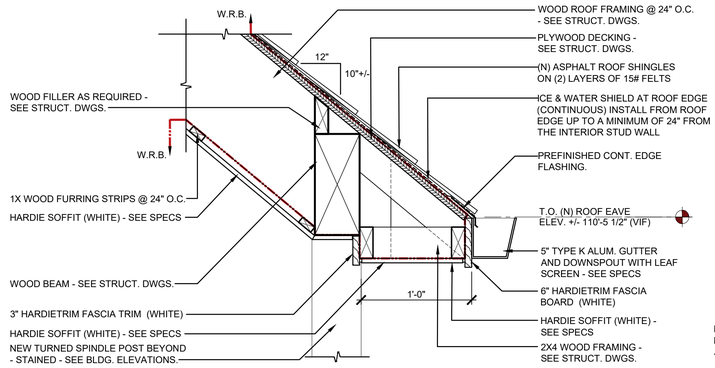


3 A3.2 FASCIA AT GABLE / ON NORTH WALL

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

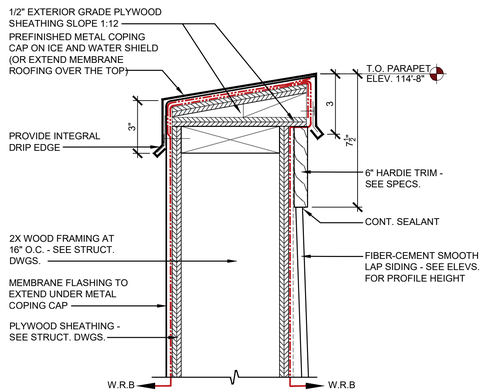
4 A3.2 OVERHANG DETAIL AT WALKWAY

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



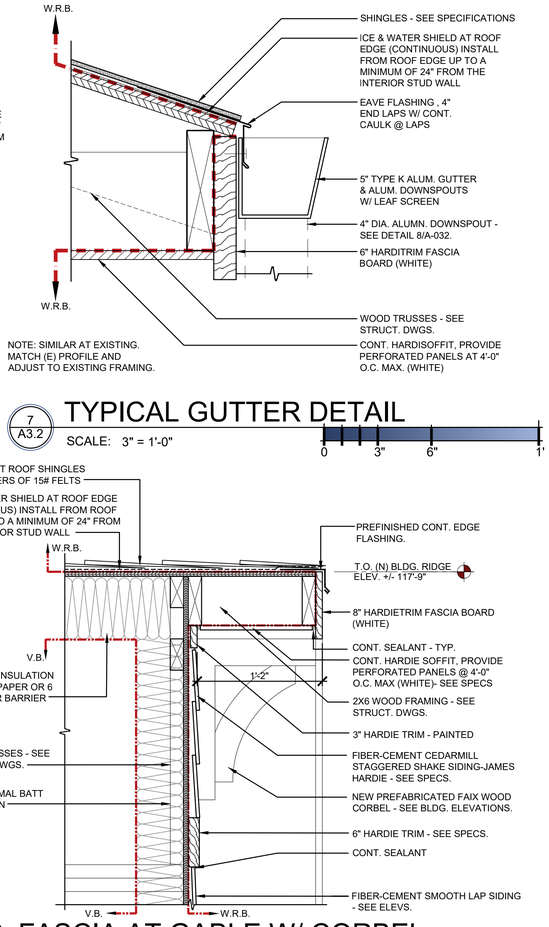
5 A3.2 EAVE DETAIL @ OUTDOOR DECK

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



6 A3.2 PARAPET DETAIL @ FLAT ROOF

SCALE: 3" = 1'-0"



7 A3.2 TYPICAL GUTTER DETAIL

SCALE: 3" = 1'-0"

3 A3.2 TYP. FASCIA AT GABLE W/ CORBEL

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

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ROOF DETAILS

A3.2

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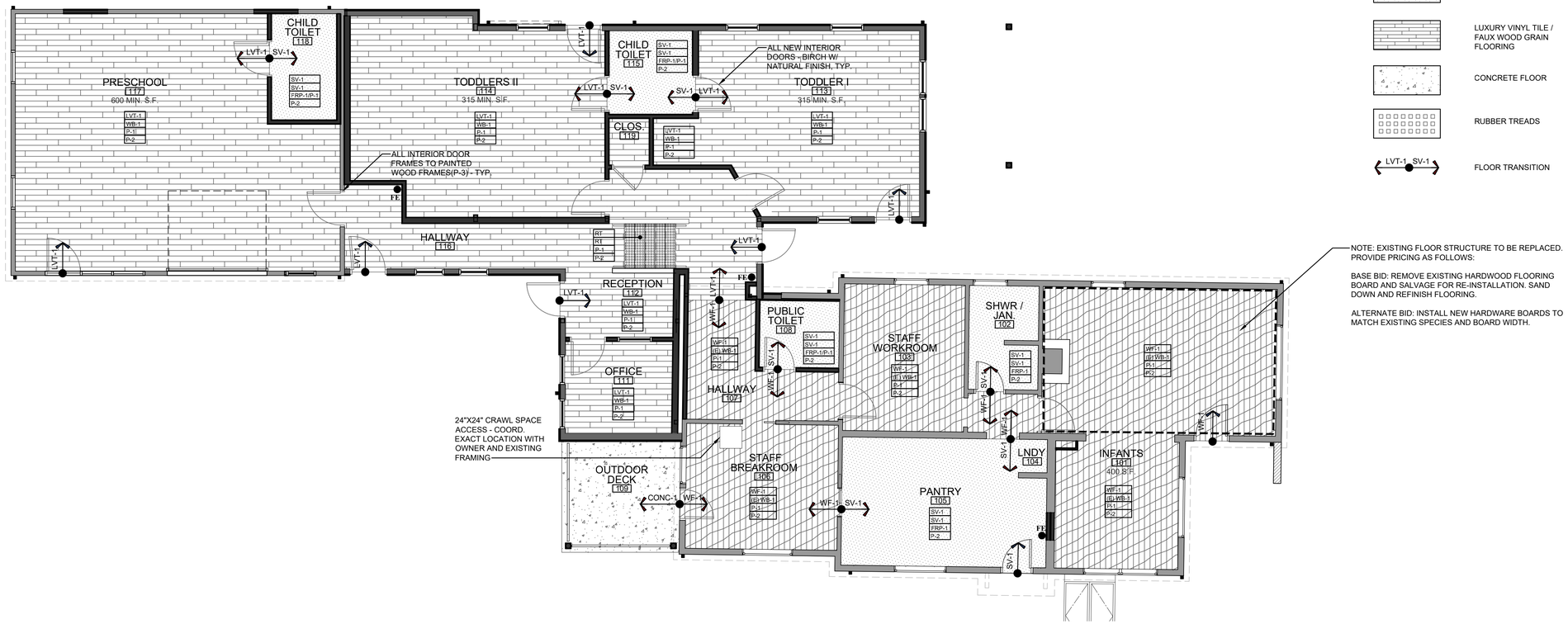

LEGEND

- WOOD FINISH
- SHEET VINYL
- LUXURY VINYL TILE / FAUX WOOD GRAIN FLOORING
- CONCRETE FLOOR
- RUBBER TREADS
- LVT-1 SV-1 — FLOOR TRANSITION

FINISH PLAN

1 / A4.0

SCALE: 3/16" = 1'-0"

0 1' 2' 4' 8'

N

FINISH SCHEDULE

FLOORS:

- SV-1 — SHEET VINYL FLOORING W/ 6" ROLL UP SHEET VINYL BASE. MFR: ARMSTRONG COLOR: AS SELECTED BY THE OWNER
- LVT-1 — LUXURY VINYL TILE/FAUX WOOD GRAIN FLOORING MFR: ARMSTRONG COLOR: AS SELECTED BY THE OWNER
- WF-1 — (E) WOOD FLOOR / REPAIRED & REFINISHED REFINISHED STAIN MFR: AS SELECTED BY OWNER COLOR: AS SELECTED BY OWNER
- RT — RUBBER TREAD MFR: ARMSTRONG COLOR: AS SELECTED BY THE OWNER

BASE:

- SV-1 — SHEET VINYL FLOORING MFR: ARMSTRONG COLOR: AS SELECTED BY THE OWNER HEIGHT: 6" INTEGRAL BASE
- WB-1 — 6" HIGH WOOD BASE PROFILE: MATCH EXISTING FINISH: PAINTED COLOR: T.B.D.

WALLS:

- P-1 — PAINT COLOR #1 (WALLS - FIELD - EGG SHELL) MFR: SHERWIN WILLIAMS COLOR: AS SELECTED BY OWNER
- P-2 — PAINT COLOR #2 (CEILING - FLAT) MFR: SHERWIN WILLIAMS COLOR: AS SELECTED BY OWNER
- P-3 — PAINT COLOR #3 (DOORS FRAMES - SEMI GLOSS) MFR: SHERWIN WILLIAMS COLOR: AS SELECTED BY OWNER
- P-4 — PAINT COLOR #4 (WALLS - ACCENT - EGGSHELL) MFR: SHERWIN WILLIAMS COLOR: AS SELECTED BY OWNER
- FRP-1 — FIBERGLASS REINF. PANELS MFR: MARLITE OR EQUAL COLOR: WHITE FINISH: EMBOSSED CLASS'A'

CEILINGS:

REFER TO SHEET A2.0

MILLWORK:

- PL-1 — PLASTIC LAMINATE - COUNTERTOPS MFR: TBD BY OWNER COLOR: TBD BY OWNER
- WV-1 — WOOD VENEER - CABINETS MFR: TBD BY OWNER COLOR: TBD BY OWNER

FINISH IDENTIFICATION

FLOOR	FLOOR FINISH
BASE	BASE FINISH
WALL	WALL FINISH
CEILING	CEILING FINISH

FINISH IDENTIFICATION

FLOOR	FLOOR FINISH
BASE	BASE FINISH
WALL	WALL FINISH
CEILING	CEILING FINISH

FINISH NOTES

1. GENERALCONTRACTOR (GC) SHALL FIELD VERIFY CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES.
2. ALL (E) CONCRETE OR WOOD FLOORS SHALL BE PROPERLY PREPARED AND SKIM COATED AS NECESSARY TO ACHIEVE CLEAN SURFACE SO THAT BLEMISHES DO NOT TELEGRAPH THROUGH FINISH MATERIAL.
3. GC SHALL SUBMIT SAMPLES OF ANY ALTERNATE FINISHES TO ARCHITECT FOR APPROVAL PRIOR TO ORDERING MATERIALS. SEE SPECIFICATIONS DRAWINGS FOR SUBMITTAL PROCEDURE.
4. ALL FLOOR FINISH CHANGES AT DOORWAYS SHALL BE CENTERED UNDER DOOR.
5. ALL FLOOR FINISH TRANSITION LOCATIONS SHALL BE A MAXIMUM 1 TO 2 SLOPE PER A.D.A. REQUIREMENTS.
6. ALL GYPSUM BOARD TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. GYPSUM BOARD SHALL BE TAPED & BEDDED AND PROVIDED WITH A LEVEL 4 FINISH THROUGHOUT. PROVIDE FIRE TAPE AT FIRE RATED PARTITIONS. SEE SPECIFICATIONS FOR FINISH REQUIREMENTS.
7. WALL SURFACES MUST BE CLEANED & DUST FREE PRIOR TO CAULKING.
8. PROVIDE VINYL "T" SHAPED TRANSITION STRIP AT ALL WOOD TO LVT / SV-1 LOCATIONS. COLOR TO MATCH RUBBER BASE AS SELECTED BY THE OWNER.

STATE OF COLORADO
SCOTT A. BODUCH
400217
03.14.2024
LICENSED ARCHITECT

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Phone: 303.901.0720
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A VISION ENLIGHTENED

RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK, CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
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DATE: 03.12.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: 23.024

FINISH PLAN & FINISH SCHEDULE

A4.0

ISSUED FOR PERMIT - 03.12.2024

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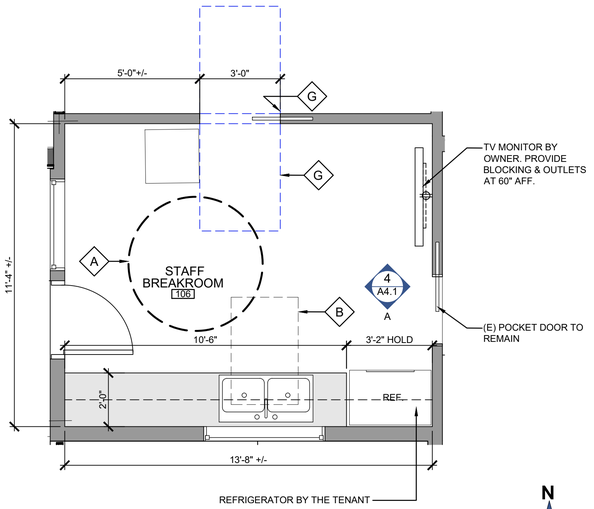
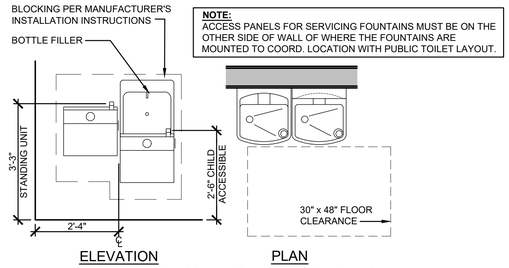


1 A4.1 **STAFF BREAKROOM PLAN**

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

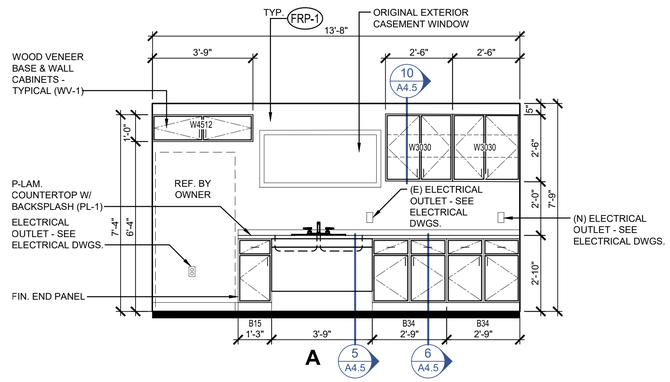
0 1' 2' 4'



3 A4.1 **DRINKING FOUNTAIN DETAIL**

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

0 1' 2' 4'



4 A4.1 **STAFF BREAKROOM ELEVATION**

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

0 1' 2' 4'

FINISH KEYNOTES

SV-1	SHEET VINYL FLOORING W/ 6" ROLL UP SHEET VINYL BASE. MFR: ARMSTRONG COLOR: AS SELECTED BY THE OWNER
LVT-1	LUXURY VINYL TILE/FAUX WOOD GRAIN FLOORING MFR: ARMSTRONG COLOR: AS SELECTED BY THE OWNER
WF-1	(E) WOOD FLOOR / REPAIRED & REFINISHED REFINISHED STAIN MFR: AS SELECTED BY OWNER COLOR: AS SELECTED BY OWNER
RT	RUBBER TREAD MFR: ARMSTRONG COLOR: AS SELECTED BY THE OWNER
SV-1	SHEET VINYL FLOORING MFR: ARMSTRONG COLOR: AS SELECTED BY THE OWNER HEIGHT: 6" INTEGRAL BASE
WB-1	6" HIGH WOOD BASE PROFILE: MATCH EXISTING FINISH: PAINTED COLOR: T.B.D.
P-1	PAINT COLOR #1 (WALLS - FIELD - EGG SHELL) MFR: SHERWIN WILLIAMS COLOR: AS SELECTED BY OWNER
P-2	PAINT COLOR #2 (CEILING - FLAT) MFR: SHERWIN WILLIAMS COLOR: AS SELECTED BY OWNER
P-3	PAINT COLOR #3 (DOORS FRAMES - SEMI GLOSS) MFR: SHERWIN WILLIAMS COLOR: AS SELECTED BY OWNER
P-4	PAINT COLOR #4 (WALLS - ACCENT - EGGSHELL) MFR: SHERWIN WILLIAMS COLOR: AS SELECTED BY OWNER
FRP-1	FIBERGLASS REINF. PANELS MFR: MARLITE OR EQUAL COLOR: WHITE FINISH: EMBOSSED CLASS'A'
PL-1	PLASTIC LAMINATE - COUNTERTOPS MFR: TBD BY OWNER COLOR: TBD BY OWNER
WV-1	WOOD VENEER - CABINETS MFR: TBD BY OWNER COLOR: TBD BY OWNER

CLEARANCE KEYNOTES

A	60" DIAMETER CIRCULAR CLEAR FLOOR SPACE
B	30" x 48" LAVATORY / SINK CLEAR FLOOR SPACE
C	56" x 60" TOILET CLEAR FLOOR SPACE
D	60" x 48" FRONT APPROACH PULL SIDE CLEAR FLOOR SPACE (DO NOT PROVIDE CLOSERS)
E	48" x 48" FRONT APPROACH PUSH SIDE CLEAR FLOOR SPACE (DO NOT PROVIDE CLOSERS)
F	30" x 48" CLEARANCE (OUTSIDE DOOR SWING)
G	48" X 48" FRONT APPROACH CLEARANCE (SLIDING DOOR)

NOTES:

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2. DIMENSIONS ARE FROM/TO O.F.O. FINISH U.N.O.
3. SEE SHEETS G3.0 & G3.1 FOR ADDITIONAL INFORMATION.

RESTROOM ACCESSORIES

TAG	ITEM DESCRIPTION	REMARKS
1	SOAP DISPENSER	BOBRICK B-2112 STANDARD
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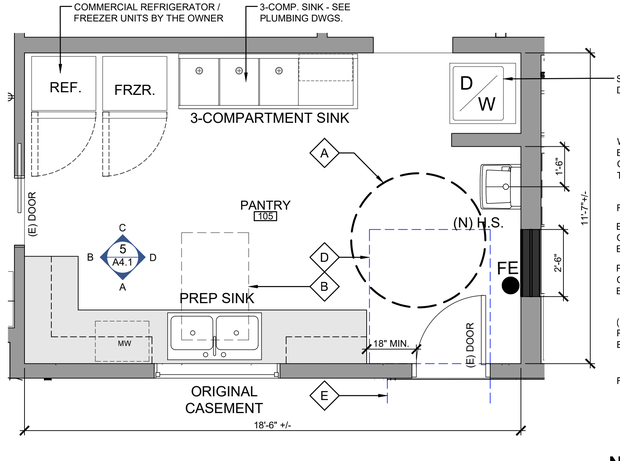
4	PAPER TOWEL DISPENSER	SURFACE MOUNTED BOBRICK B-262
5	GRAB BAR 1-1/2" DIA x 36"	SURFACE MOUNTED BOBRICK B6806 x 36
6	GRAB BAR 1-1/2" DIA x 42"	SURFACE MOUNTED BOBRICK B6806 x 42
7	GRAB BAR 1-1/2" DIA x 18"	SURFACE MOUNTED BOBRICK B6806 x 18
8	PIPING WRAP (WHITE)	BROCAR PLUMBING WRAP OR EQUAL
9	GRAB BAR 1-1/2" DIA SHOWER ASSEMBLY	SURFACE MOUNTED BOBRICK COORD. W/ PLUMB. DWGS.



2 A4.1 **PANTRY PLAN**

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

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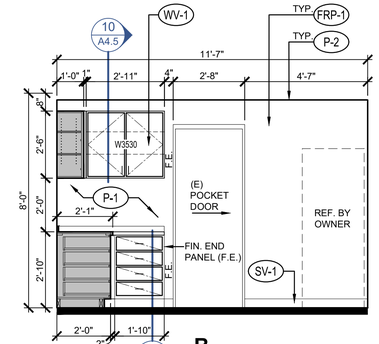

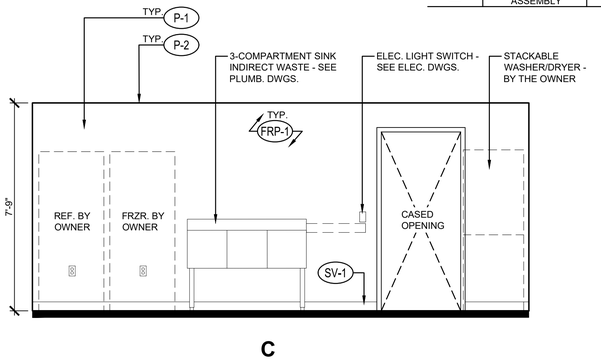

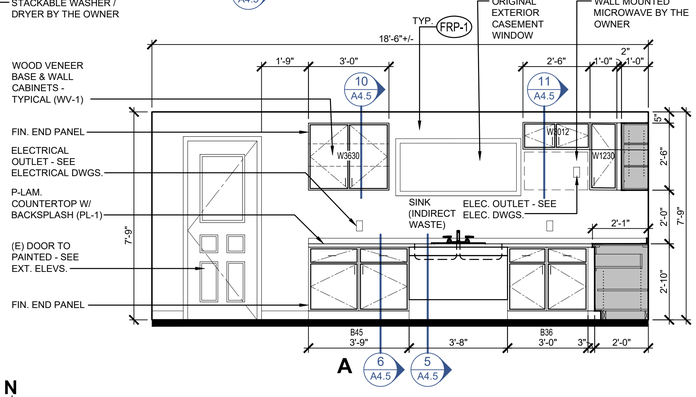

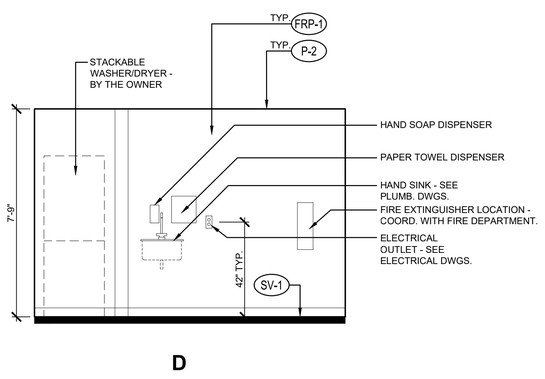

5 A4.1 **PANTRY ELEVATIONS**

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

0 1' 2' 4'

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CHECKED: SAB
BDG ARCH NO.: **23.024**

ENLARGED PLANS & INTERIOR ELEVATIONS

A4.1

ISSUED FOR PERMIT - 03.12.2024

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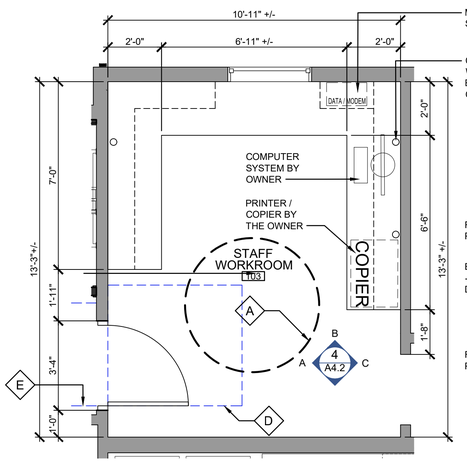
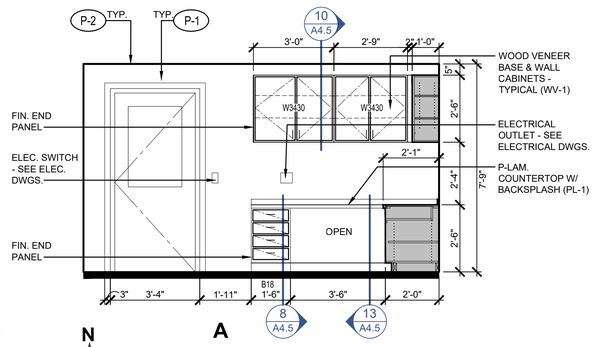
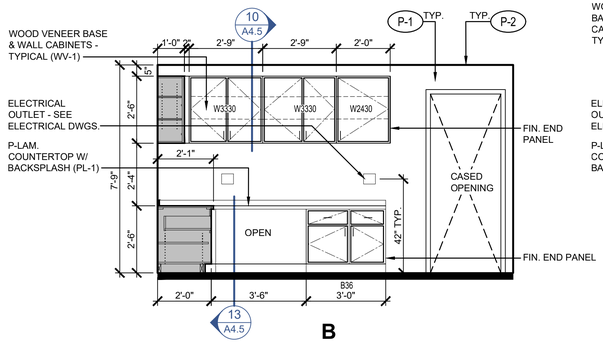
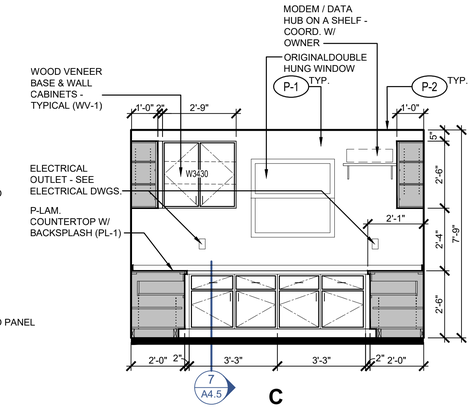


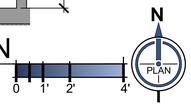






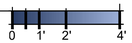
1 A4.2 STAFF WORKROOM PLAN

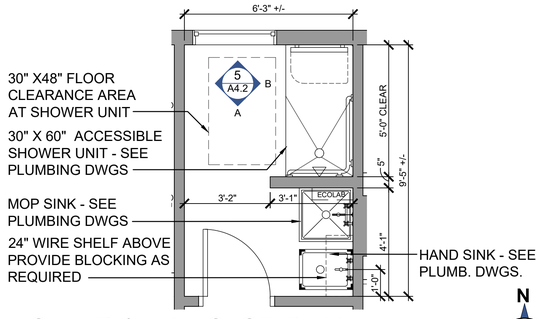
SCALE: 3/8" = 1'-0"



4 A4.2 STAFF WORKROOM ELEVATION

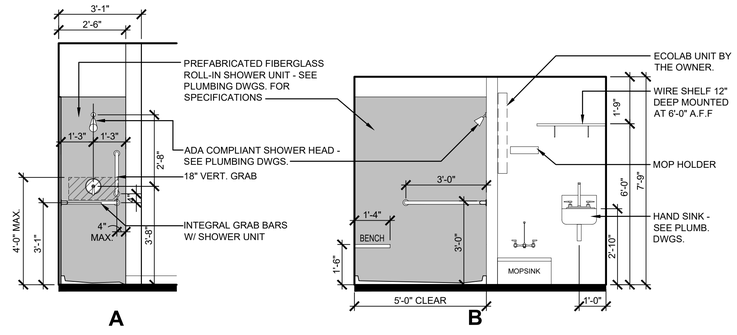
SCALE: 3/8" = 1'-0"





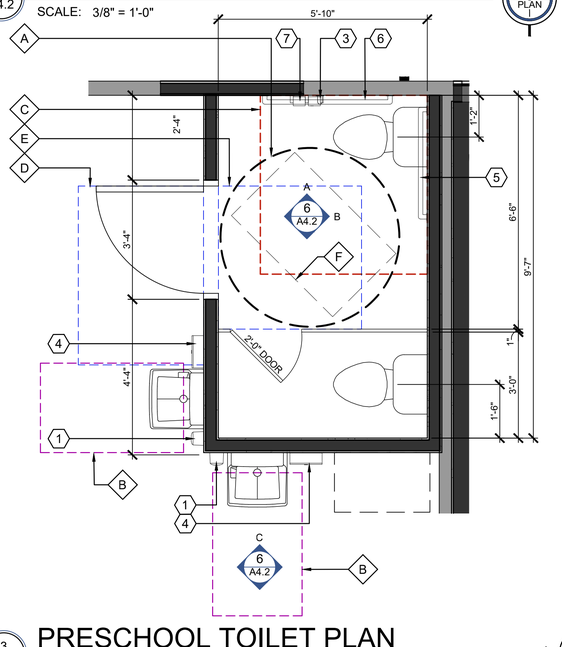
2 A4.2 SHWR / JAN. CLST PLAN

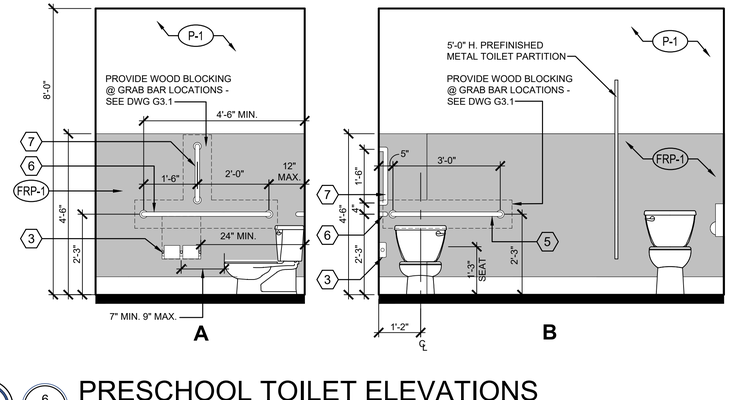
SCALE: 3/8" = 1'-0"



5 A4.2 SHWR / JAN. CLOSET ELEVATIONS

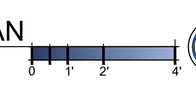
SCALE: 3/8" = 1'-0"





3 A4.2 PRESCHOOL TOILET PLAN

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



6 A4.2 PRESCHOOL TOILET ELEVATIONS

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ENLARGED PLANS & INTERIOR ELEVATIONS

A4.2

ISSUED FOR PERMIT - 03.12.2024

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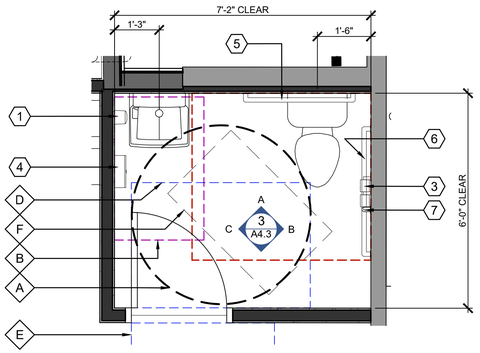

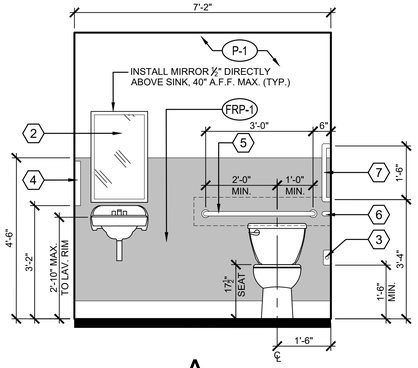

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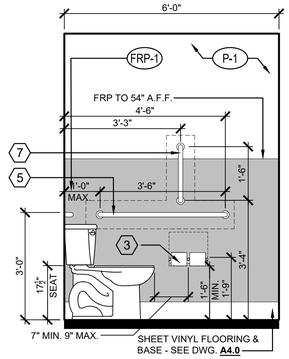

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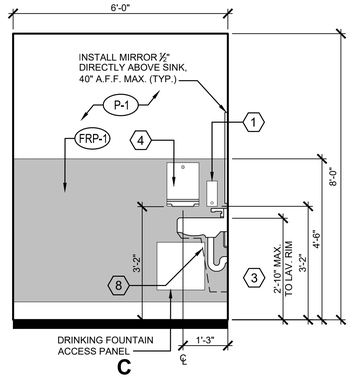


C

PUBLIC TOILET PLAN

1 / A4.3

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

0 1' 2' 4'

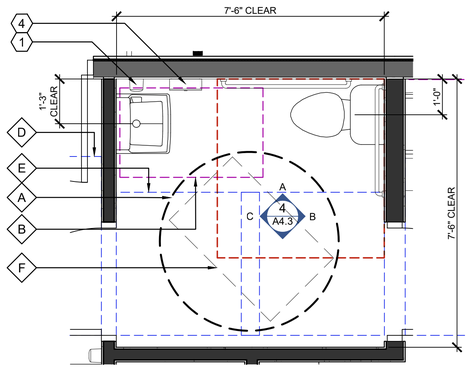
N PLAN

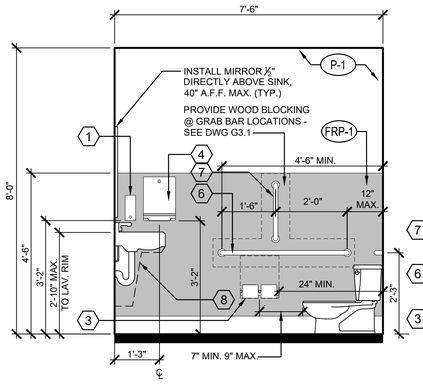
ELEVATIONS @ PUBLIC TOILET

3 / A4.3

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

0 1' 2' 4'





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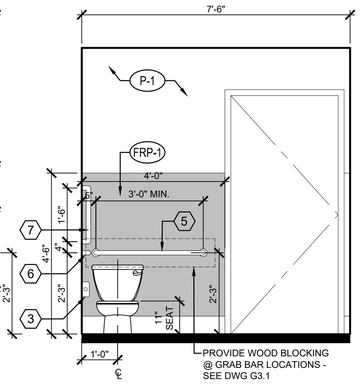

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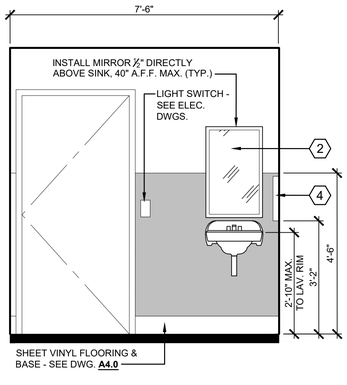


C

TODDLER TOILET PLAN

2 / A4.3

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

0 1' 2' 4'

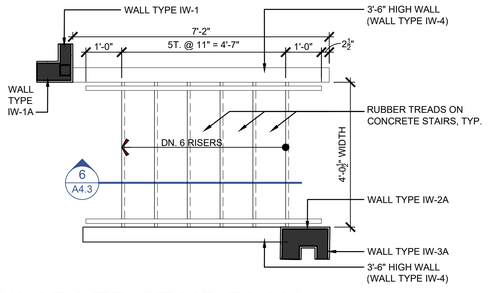
N PLAN

ELEVATIONS @ TODDLER TOILET

4 / A4.3

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

0 1' 2' 4'

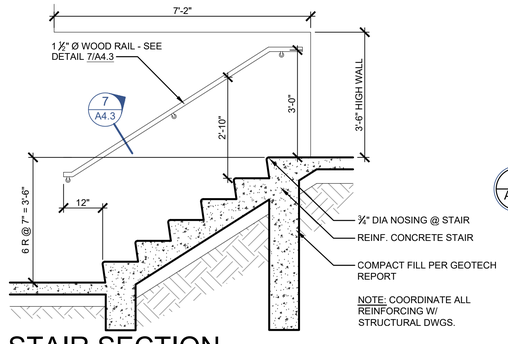


ENLARGED STAIR PLAN

5 / A4.3

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

0 1' 2' 4'

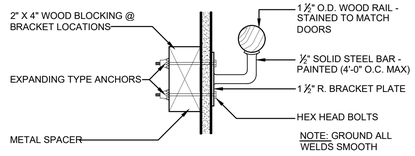


STAIR SECTION

6 / A4.3

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

0 1' 2' 4'

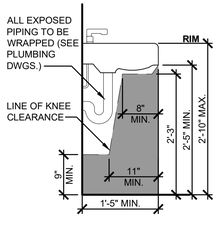


HANDRAIL DETAIL

7 / A4.3

SCALE: 3" = 1'-0"

0 3" 6" 1'



ADA LAVATORY SINK

8 / A4.3

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

0 6" 1' 2'

FINISH KEYNOTES

SV-1	SHEET VINYL FLOORING W/ 6" ROLL UP SHEET VINYL BASE. MFR: ARMSTRONG COLOR: AS SELECTED BY THE OWNER
LVT-1	LUXURY VINYL TILE/FAUX WOOD GRAIN FLOORING MFR: ARMSTRONG COLOR: AS SELECTED BY THE OWNER
WF-1	(E) WOOD FLOOR / REPAIRED & REFINISHED REFINISHED STAIN MFR: AS SELECTED BY OWNER COLOR: AS SELECTED BY OWNER
RT	RUBBER TREAD MFR: ARMSTRONG COLOR: AS SELECTED BY THE OWNER
SV-1	SHEET VINYL FLOORING MFR: ARMSTRONG COLOR: AS SELECTED BY THE OWNER HEIGHT: 6" INTEGRAL BASE
WB-1	6" HIGH WOOD BASE PROFILE: MATCH EXISTING FINISH: PAINTED COLOR: T.B.D.
P-1	PAINT COLOR #1 (WALLS - FIELD - EGG SHELL) MFR: SHERWIN WILLIAMS COLOR: AS SELECTED BY OWNER
P-2	PAINT COLOR #2 (CEILING - FLAT) MFR: SHERWIN WILLIAMS COLOR: AS SELECTED BY OWNER
P-3	PAINT COLOR #3 (DOORS FRAMES - SEMI GLOSS) MFR: SHERWIN WILLIAMS COLOR: AS SELECTED BY OWNER
P-4	PAINT COLOR #4 (WALLS - ACCENT - EGGSHELL) MFR: SHERWIN WILLIAMS COLOR: AS SELECTED BY OWNER
FRP-1	FIBERGLASS REINF. PANELS MFR: MARLITE OR EQUAL COLOR: WHITE FINISH: EMBOSSED CLASS'A'
PL-1	PLASTIC LAMINATE - COUNTERTOPS MFR: TBD BY OWNER COLOR: TBD BY OWNER
WV-1	WOOD VENEER - CABINETS MFR: TBD BY OWNER COLOR: TBD BY OWNER

CLEARANCE KEYNOTES

A	60" DIAMETER CIRCULAR CLEAR FLOOR SPACE
B	30" x 48" LAVATORY / SINK CLEAR FLOOR SPACE
C	56" x 60" TOILET CLEAR FLOOR SPACE
D	60" x 48" FRONT APPROACH PULL SIDE CLEAR FLOOR SPACE (DO NOT PROVIDE CLOSERS)
E	48" x 48" FRONT APPROACH PUSH SIDE CLEAR FLOOR SPACE (DO NOT PROVIDE CLOSERS)
F	30" x 48" CLEARANCE (OUTSIDE DOOR SWING)
G	48" X 48" FRONT APPROACH CLEARANCE (SLIDING DOOR)

NOTES:

1. PUBLIC AND SHOP RESTROOMS SHALL CONFORM TO ALL ACCESSIBILITY REQUIREMENTS OF THE 2009 ANSI A117.1.
2. DIMENSIONS ARE FROM/TO O.F.O. FINISH U.N.O.
3. SEE SHEETS G3.0 & G3.1 FOR ADDITIONAL INFORMATION.

RESTROOM ACCESSORIES

TAG	ITEM DESCRIPTION	REMARKS
1	SOAP DISPENSER	BOBRICK B-2112 STANDARD
2	MIRROR 24"x36"	SURFACE MOUNTED BOBRICK B-165T 2436 (TEMPERED)
3	TOILET PAPER DISPENSER	SURFACE MOUNTED BOBRICK B-2888
4	PAPER TOWEL DISPENSER	SURFACE MOUNTED BOBRICK B-262
5	GRAB BAR 1-1/2" DIA x 36"	SURFACE MOUNTED BOBRICK B6806 x 36
6	GRAB BAR 1-1/2" DIA x 42"	SURFACE MOUNTED BOBRICK B6806 x 42
7	GRAB BAR 1-1/2" DIA x 18"	SURFACE MOUNTED BOBRICK B6806 x 18
8	PIPING WRAP (WHITE)	BROCAR PLUMBING WRAP OR EQUAL
9	GRAB BAR 1-1/2" DIA SHOWER ASSEMBLY	SURFACE MOUNTED BOBRICK COORD. W/ PLUMB. DWGS.

STATE OF COLORADO
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03.14.2024
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RETROFIT & ADDITION FOR:

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BDG ARCH NO.: **23.024**

ENLARGED PLANS & INTERIOR ELEVATIONS

A4.3

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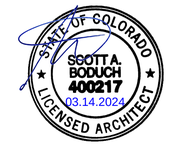

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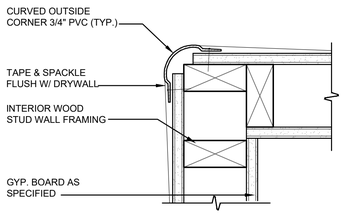
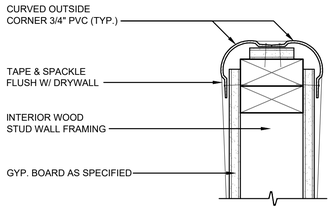


OUTSIDE CORNER CONDITION

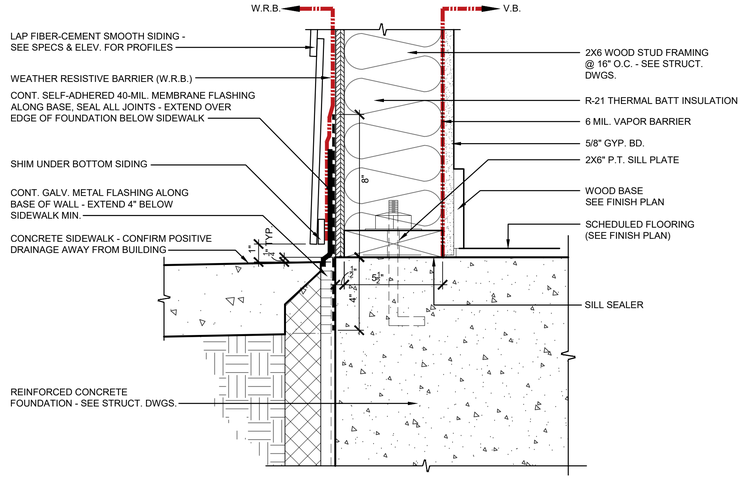


END WALL CONDITION

2 A4.4 INTERIOR CORNER DETAILS

SCALE: 3" = 1'-0"

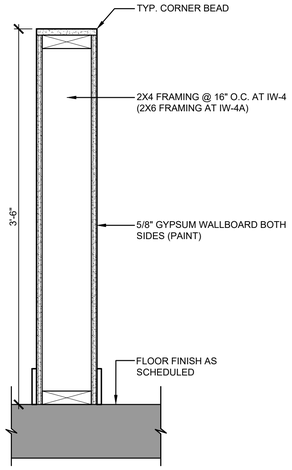
0 3" 6" 1'



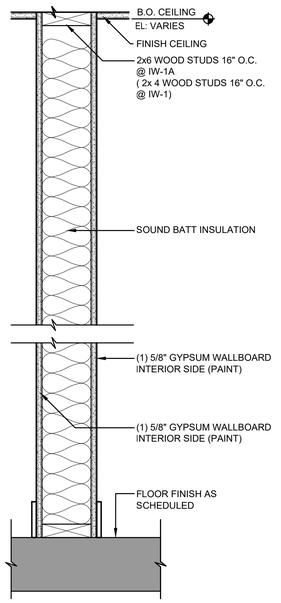
3 A4.4 TYP. EXT. BASE FLASHING DETAIL

SCALE: 3" = 1'-0"

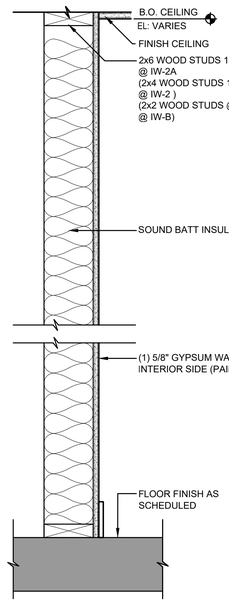
0 3" 6" 1'



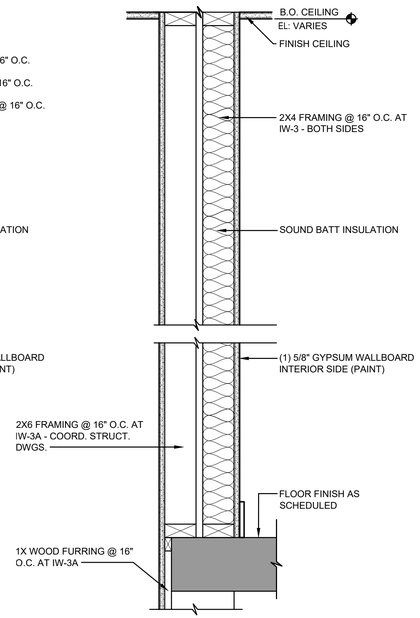
IW-4	ASSEMBLY WIDTH 4 3/4"
IW-4A	ASSEMBLY WIDTH 6 3/4"



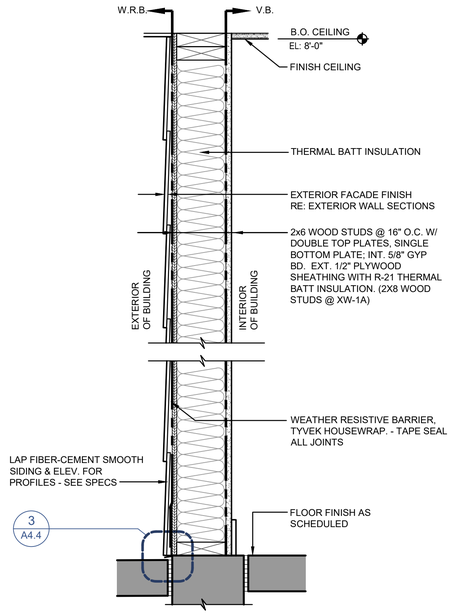
IW-1	ASSEMBLY WIDTH 4 3/4"
IW-1A	ASSEMBLY WIDTH 6 3/4"



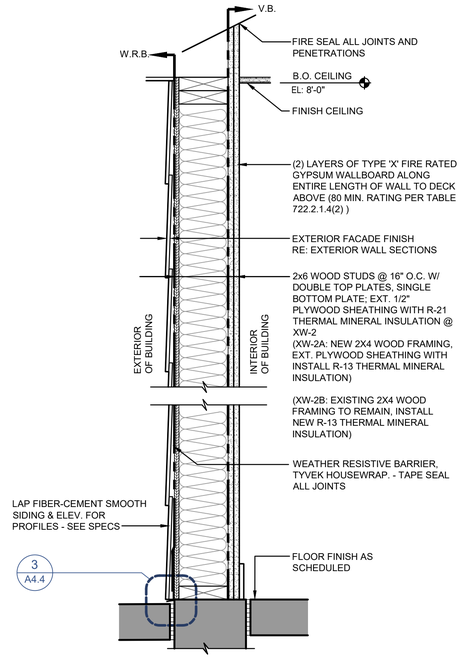
IW-2	ASSEMBLY WIDTH 4 1/8"
IW-2A	ASSEMBLY WIDTH 6 1/8"
IW-2B	ASSEMBLY WIDTH 2 1/8"



IW-3	ASSEMBLY WIDTH 9" +/-
IW-3A	ASSEMBLY WIDTH VARIES



XW-1	ASSEMBLY WIDTH 7 5/8"
XW-1A	ASSEMBLY WIDTH 9 3/8"
XW-1B	ASSEMBLY WIDTH TO MATCH (E)



XW-2	ASSEMBLY WIDTH XX"
XW-2A	ASSEMBLY WIDTH MATCH (E)
XW-2B	ASSEMBLY WIDTH XX"

ONE-HOUR FIRE RATED ASSEMBLY - BASED ON IBC TABLE 722.2.1.4 - MATERIAL RATING ASSIGNMENT - (2) LAYERS OF 5/8" TYPE 'X' GYPSUM WALLBOARD = 80 MINUTE RATING.

1 A4.4 WALL TYPES

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

0 3" 6" 1'

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WALL TYPES
& DETAILS

A4.4

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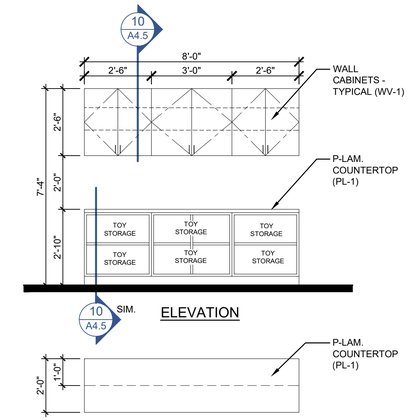
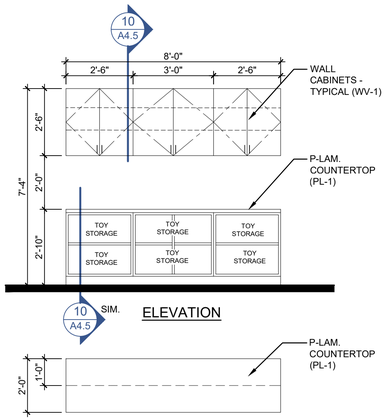


1 A4.5 PRESCHOOL MILLWORK

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

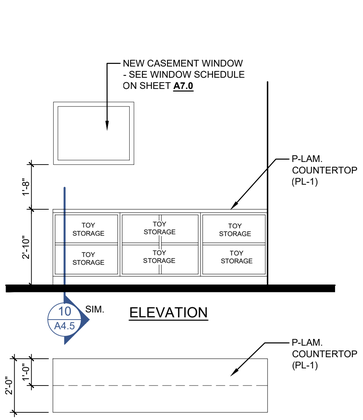
0 1' 2' 4'



2 A4.5 TODDLER II MILLWORK

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

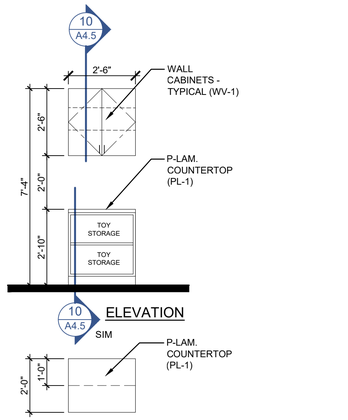
0 1' 2' 4'



3 A4.5 TODDLER I MILLWORK

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

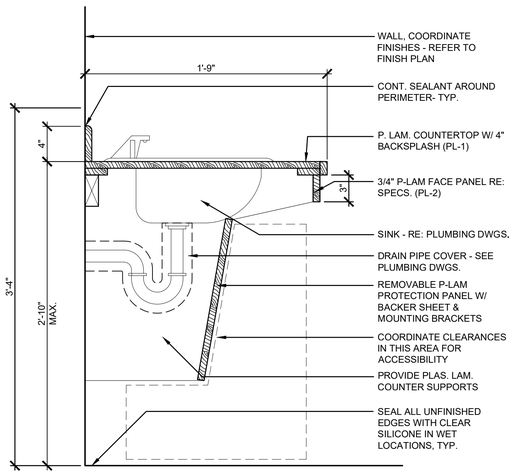
0 1' 2' 4'



4 A4.5 INFANT MILLWORK

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

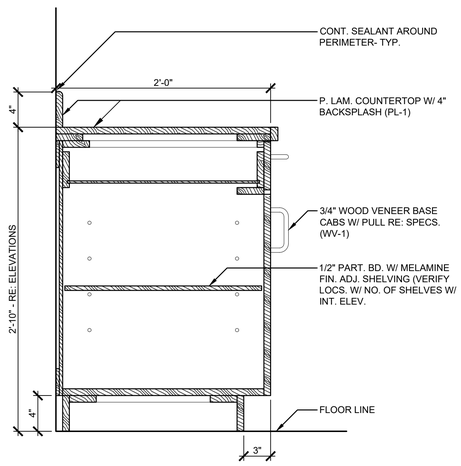
0 1' 2' 4'



5 A4.5 COUNTER DETAIL AT SINK

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

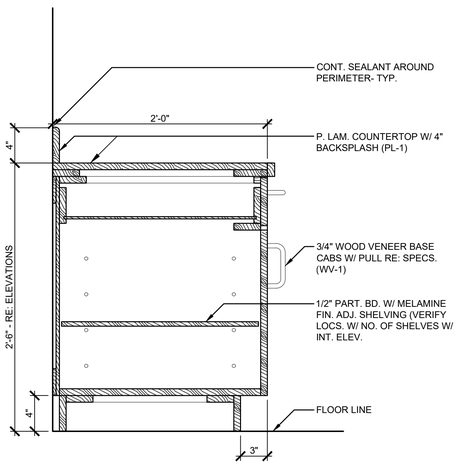
0 3" 6" 1'



6 A4.5 BASE CABINET DETAIL

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

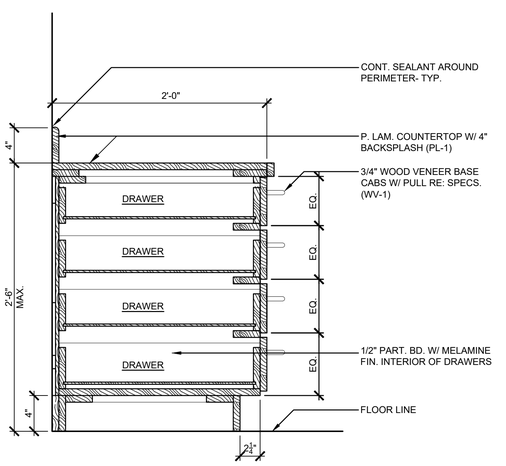
0 3" 6" 1'



7 A4.5 BASE CABINET DETAIL

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

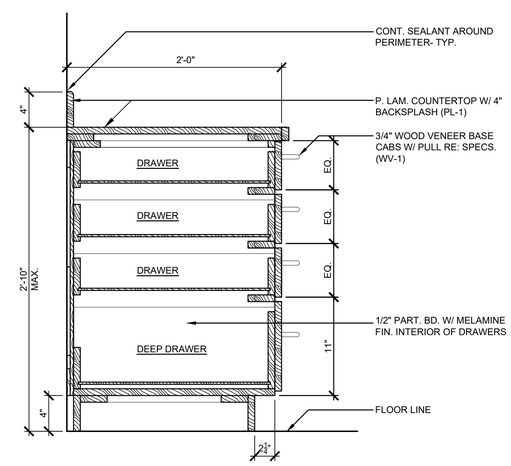
0 3" 6" 1'



8 A4.5 BASE CABINET DETAIL

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

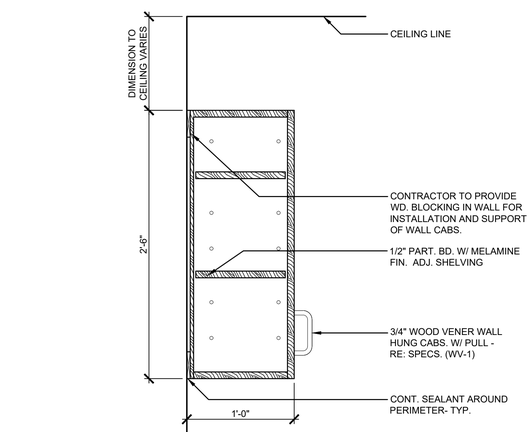
0 3" 6" 1'



9 A4.5 BASE CABINET DETAIL

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

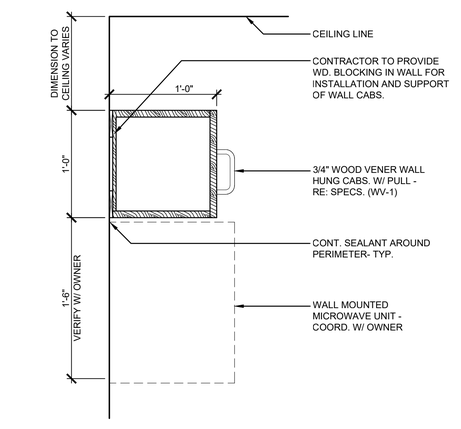
0 3" 6" 1'



10 A4.5 WALL CABINET DETAIL

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

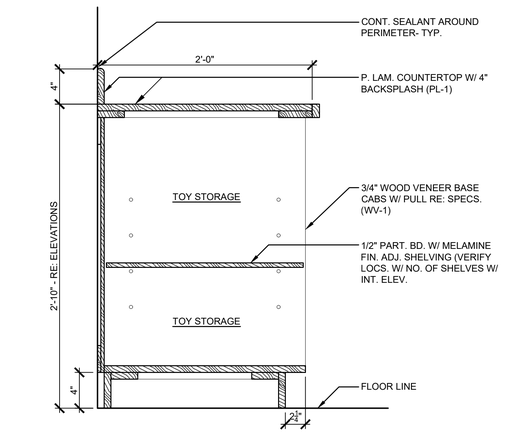
0 3" 6" 1'



11 A4.5 WALL CABINET DETAIL

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

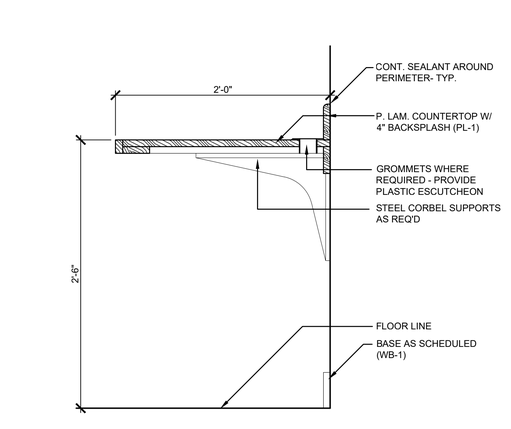
0 3" 6" 1'



12 A4.5 TOY STORAGE CABINET

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

0 3" 6" 1'



13 A4.5 COUNTER DETAIL

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

0 3" 6" 1'

STATE OF COLORADO
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BDG ARCH NO.: **23.024**

MILLWORK ELEVATIONS & DETAILS

A4.5

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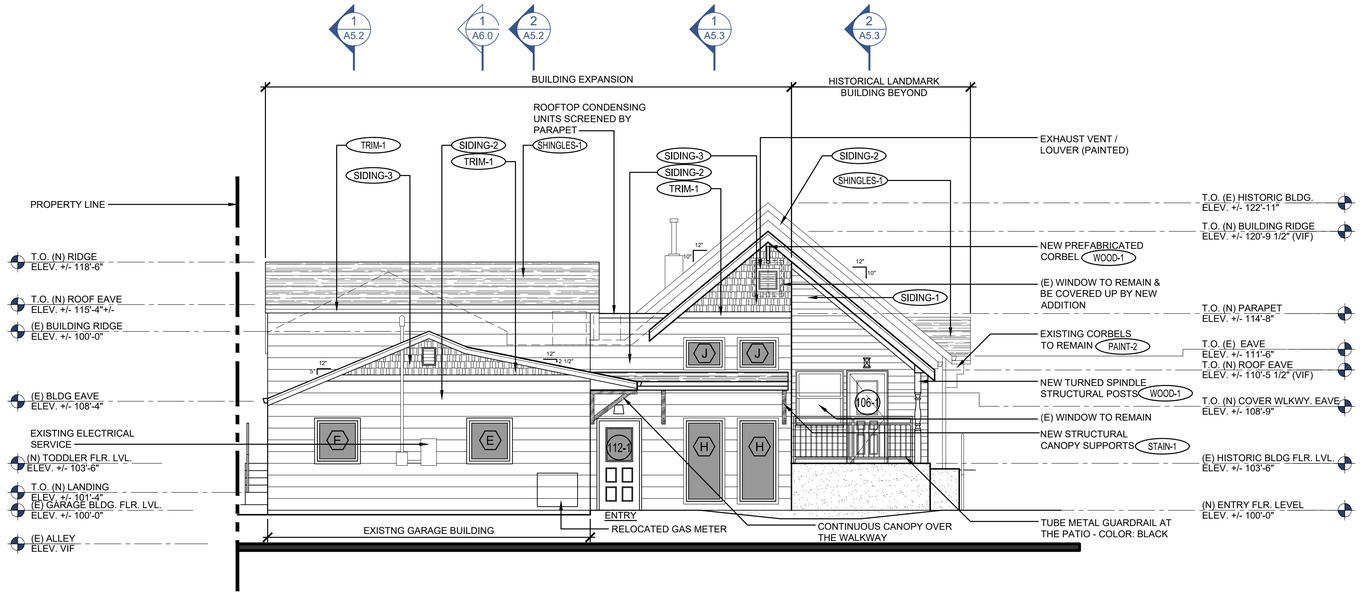
MATERIAL LEGEND

SIDING-1	SIDING -1:	5" HIGH LAP FIBER-CEMENT SMOOTH SIDING TO MATCH ORIGINAL WOOD CLAP BOARD SIDING
	COLOR:	PAINTED SW #0053 - PORCELAIN (SHERWIN WILLIAMS HISTORIC SERIES)
	MFR:	JAMES HARDIE SIDING
SIDING-2	SIDING -2:	10" HIGH LAP FIBER-CEMENT SMOOTH SIDING TO MATCH ORIGINAL WOOD CLAP BOARD SIDING
	COLOR:	PAINTED SW #0037 - MORRIS ROOM GRAY (SHERWIN WILLIAMS HISTORIC SERIES)
	MFR:	JAMES HARDIE SIDING
SIDING-3	SIDING -3:	FIBER-CEMENT CEDARMILL STAGGERED SHAKE SIDING
	COLOR:	AGED PEWTER (STANDARD JAMES HARDIE COLOR)
	MFR:	JAMES HARDIE SIDING
TRIM-1	TRIM -1:	5" FIBER-CEMENT SMOOTH TRIM TO MATCH ORIGINAL WOOD
	COLOR:	SW #7005 - PURE WHITE (SHERWIN WILLIAMS HISTORIC SERIES)
	MFR:	JAMES HARDIE TRIM
SHINGLES-1	SHINGLES -1:	
	COLOR:	HERITAGE - WEATHERED WOOD
	MFR:	TAMKO ROOF SHINGLES
PAINT-1	PAINT -1:	PAINTED FINISH
	COLOR:	SW #7005 - PURE WHITE - PORCELAIN (SHERWIN WILLIAMS HISTORIC SERIES)
PAINT-2	PAINT-2:	PAINTED FINISH
	COLOR:	SW #0037 - MORRIS ROOM GRAY (SHERWIN WILLIAMS HISTORIC SERIES)
WOOD-1	WOOD -1:	FAUX WOOD GRAIN FINISH
	COLOR:	TBD
	MFR:	TBD
STAIN-1	STAIN-1:	CLEAR WOOD STAIN
	COLOR:	TBD
	MFR:	TBD

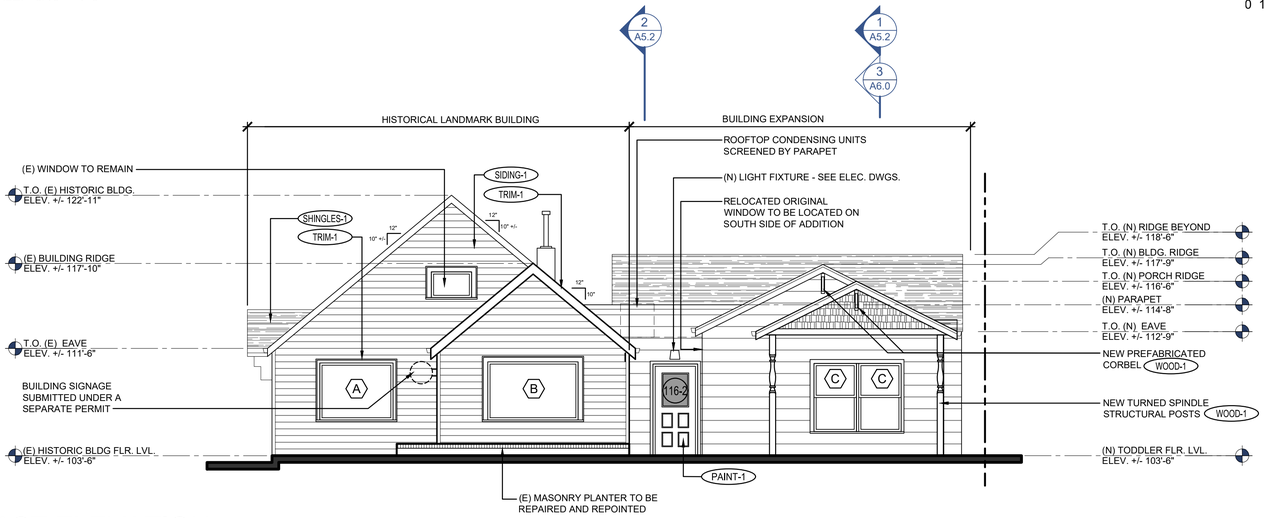
ELEVATION NOTE #1: EXISTING ORIGINAL WOOD WINDOW RESTORATION TO BE INCLUDED UNDER SEPARATE PRICE #1. REFER TO SHEET A7.0 FOR ADDITIONAL INFORMATION



1 A5.0 **WEST ELEVATION**

SCALE: 3/16" = 1'-0"

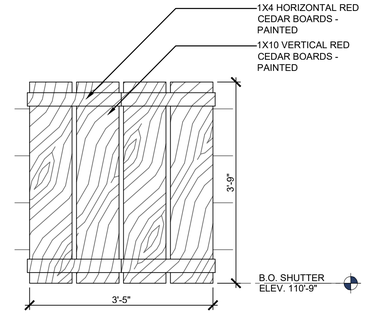
0 1' 2' 4' 8'



2 A5.0 **EAST ELEVATION**

SCALE: 3/16" = 1'-0"

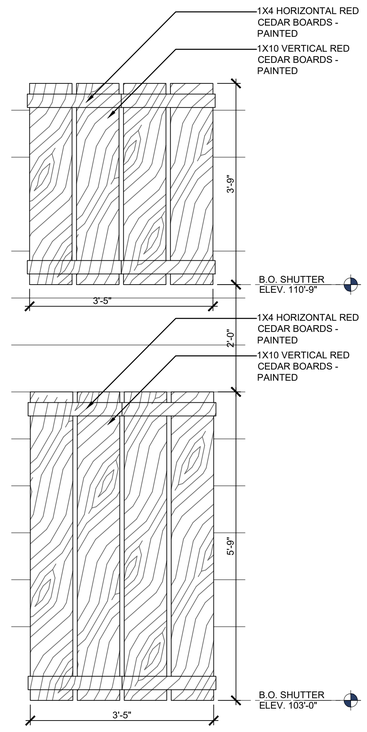
0 1' 2' 4' 8'



4 A5.0 **SOUTH FAUX SHUTTER ELEVATION**

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

0 6" 1' 2'



3 A5.0 **NORTH FAUX SHUTTER ELEVATION**

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

0 6" 1' 2'

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BDG ARCH NO.: **23.024**

EXTERIOR ELEVATIONS

A5.0

ISSUED FOR PERMIT - 03.12.2024

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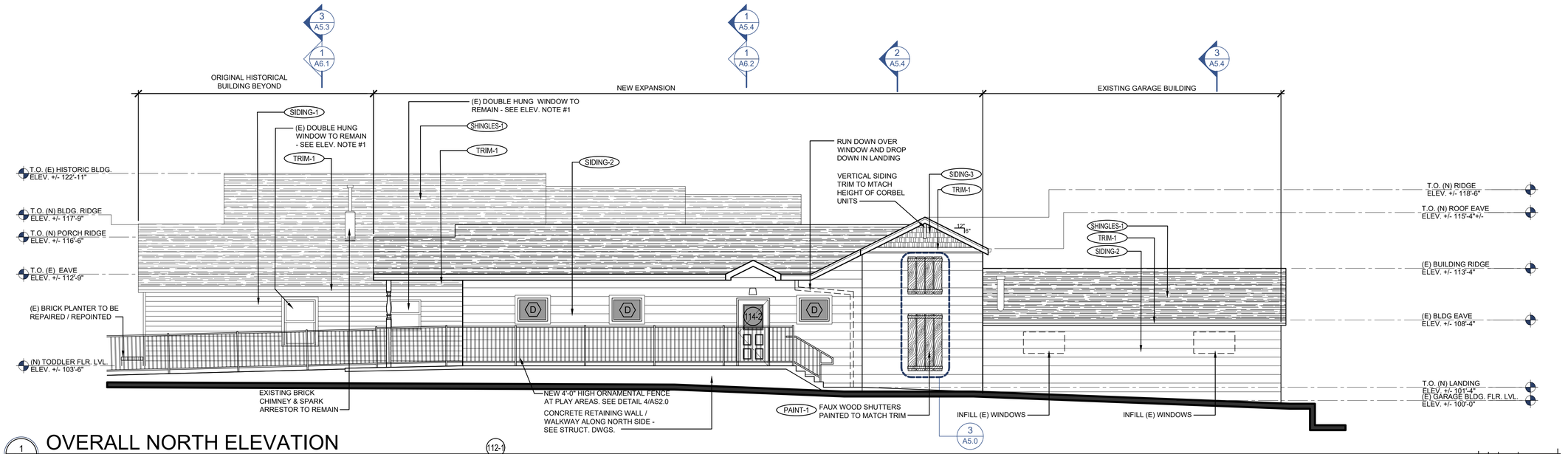
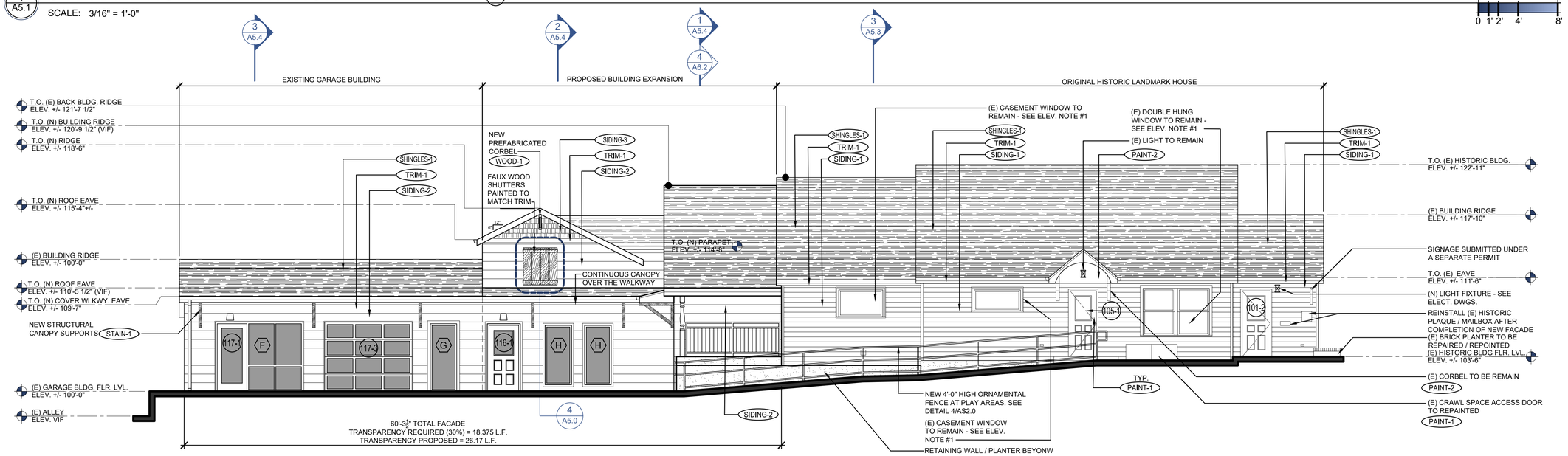


1 A5.1 OVERALL NORTH ELEVATION

SCALE: 3/16" = 1'-0"



2 A5.1 OVERALL SOUTH ELEVATION

SCALE: 3/16" = 1'-0"

MATERIAL LEGEND

SIDING-1	SIDING -1:	5" HIGH LAP FIBER-CEMENT SMOOTH SIDING TO MATCH ORIGINAL WOOD CLAP BOARD SIDING
	COLOR:	PAINTED SW #0053 - PORCELAIN (SHERWIN WILLIAMS HISTORIC SERIES)
	MFR:	JAMES HARDIE SIDING
SIDING-2	SIDING -2:	10" HIGH LAP FIBER-CEMENT SMOOTH SIDING TO MATCH ORIGINAL WOOD CLAP BOARD SIDING
	COLOR:	PAINTED SW #0037 - MORRIS ROOM GRAY (SHERWIN WILLIAMS HISTORIC SERIES)
	MFR:	JAMES HARDIE SIDING
SIDING-3	SIDING -3:	FIBER-CEMENT CEDARMILL STAGGERED SHAKE SIDING
	COLOR:	AGED PEWTER (STANDARD JAMES HARDIE COLOR)
	MFR:	JAMES HARDIE SIDING
TRIM-1	TRIM -1:	5" FIBER-CEMENT SMOOTH TRIM TO MATCH ORIGINAL WOOD
	COLOR:	SW #7005 - PURE WHITE (SHERWIN WILLIAMS HISTORIC SERIES)
	MFR:	JAMES HARDIE TRIM
SHINGLES-1	SHINGLES -1:	
	COLOR:	HERITAGE - WEATHERED WOOD
	MFR:	TAMKO ROOF SHINGLES
PAINT-1	PAINT -1:	PAINTED FINISH
	COLOR:	SW #7005 - PURE WHITE - PORCELAIN (SHERWIN WILLIAMS HISTORIC SERIES)
PAINT-2	PAINT-2:	PAINTED FINISH
	COLOR:	SW #0037 - MORRIS ROOM GRAY (SHERWIN WILLIAMS HISTORIC SERIES)
WOOD-1	WOOD -1:	FAUX WOOD GRAIN FINISH
	COLOR:	TBD
	MFR:	TBD
STAIN-1	STAIN-1:	CLEAR WOOD STAIN
	COLOR:	TBD
	MFR:	TBD

ELEVATION NOTE #1: EXISTING ORIGINAL WOOD WINDOW RESTORATION TO BE INCLUDED UNDER SEPARATE PRICE #1. REFER TO SHEET A7.0 FOR ADDITIONAL INFORMATION

STATE OF COLORADO
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400217
03.14.2024
LICENSED ARCHITECT

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Phone: 303.901.0720
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A VISION ENLIGHTENED

RETROFIT & ADDITION FOR:
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DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
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03.01.2024	90% REVIEW SET	
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DATE: 03.12.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: **23.024**

EXTERIOR ELEVATIONS

A5.1

ISSUED FOR PERMIT - 03.12.2024

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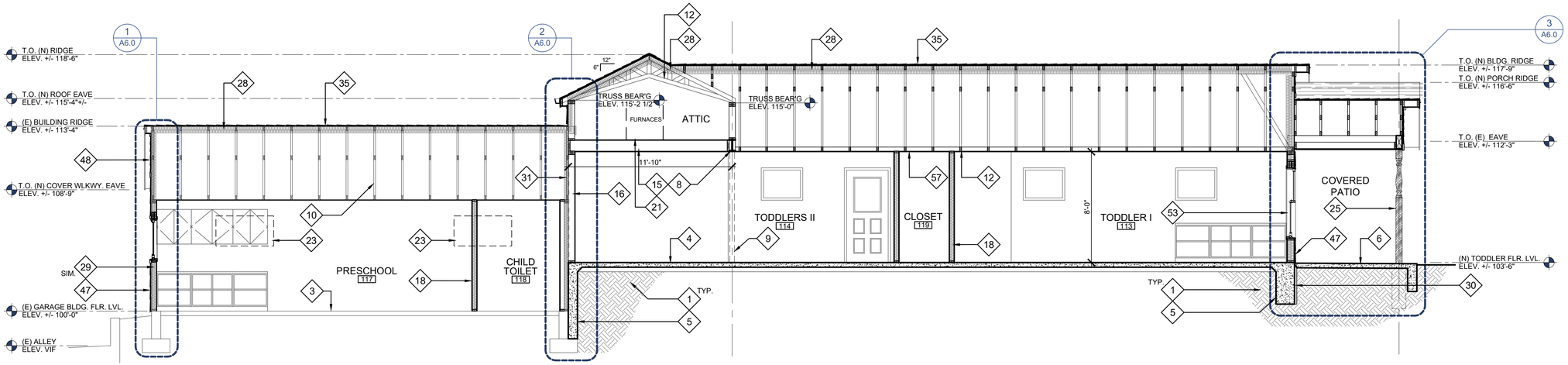


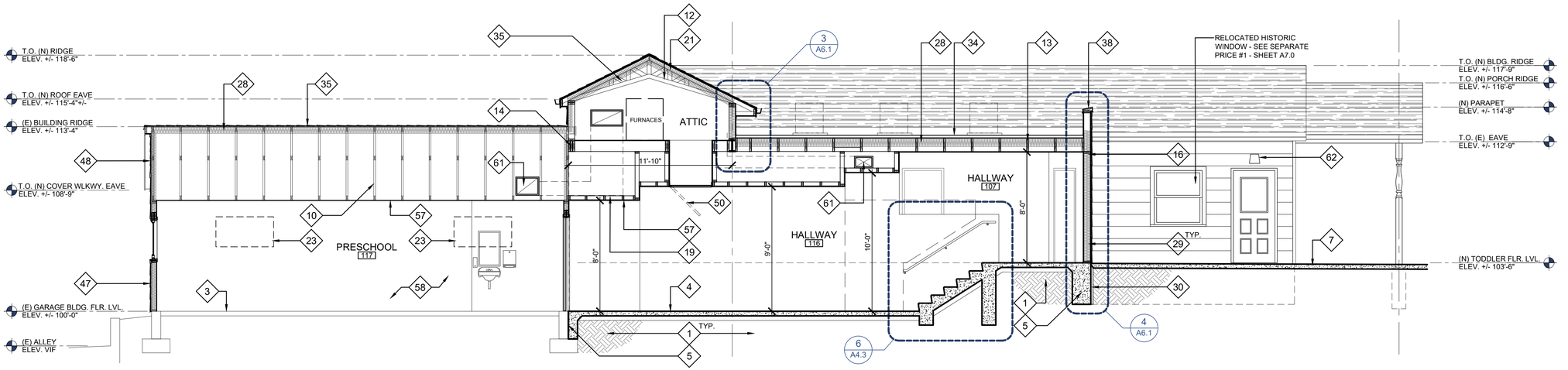
BUILDING SECTION A-A

1 / A5.2

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

REFERENCE ELEVATION 100'-0" = ACTUAL 6212.3'

0 1' 2' 4' 8'



BUILDING SECTION B-B

2 / A5.2

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

REFERENCE ELEVATION 100'-0" = ACTUAL 6212.3'

0 1' 2' 4' 8'

SECTION KEYNOTES

1. REFER TO GEOTECH REPORT FOR SOIL PREPARATION UNDER FOOTINGS, SLABS AND SIDEWALKS
2. ROOF DRAIN SYSTEM - SEE CIVIL AND PLUMBING DWGS.
3. (E) CONCRETE SLAB TO BE GROUND DOWN AND LEVELED OUT AS REQUIRED FOR A SMOOTH / LEVEL FINISH. PREPARE FOR NEW FLOOR FINISHES.
4. NEW REINF. CONCRETE SLAB ON POROUS FILL. SEE STRUCT. DWGS. AND GEOTECH REPORT
5. REINF. CONCRETE FOUNDATION WALL & RETAINING WALLS - SEE STRUCT. DWGS.
6. NEW CONCRETE PATIO, 4000 PSI CONCRETE. SLOPE AWAY BUILDING 1/4" PER 12".
7. NEW CONCRETE SIDEWALK, 4000 PSI CONCRETE. SLOPE AWAY BUILDING 1/4" PER 12".
8. NEW STEEL BEAM - SEE STRUCTURAL DWGS.
9. STEEL COLUMN BEYOND - SEE STRUCT. DWGS.
10. (E) WOOD ROOF TRUSSES TO REMAIN.
11. (E) WOOD ROOF FRAMING TO REMAIN.
12. (N) WOOD ROOF TRUSSES - SEE STRUCTURAL DWGS.
13. (N) WOOD ROOF FRAMING MEMBERS - SEE STRUCT. DWGS.
14. (N) WOOD ROOF BEAM - SEE STRUCT. DWGS.
15. (N) WOOD ROOF ATTIC FLOOR FRAMING - SEE STRUCT. DWGS.
16. 2X6 EXTERIOR WALL FRAMING @ 16" O.C. - SEE STRUCT. DWGS.
17. 2X8 EXTERIOR WALL FRAMING @ 16" O.C. - SEE STRUCT. DWGS.
18. 2X WOOD INTERIOR WALL PARTITIONS - SEE WALL TYPES
19. 2X WOOD CEILING JOIST FRAMING AT 24" O.C.
20. 2X TREATED WOOD BLOCKING - SEE SPECS
21. EXTERIOR GRADE PLYWOOD SHEATHING - SEE STRUCT. DWGS.
22. FURROUT EXTERIOR WALLS WITH 1X STUD FRAMING AND RIGID INSULATION. - SEE WALL TYPES.
23. EXISTING WINDOWS TO BE INFILLED TO MATCH ADJACENT WALL ASSEMBLY. FILL CAVITY WITH R-13 INSULATION. FINISH EXTERIOR AND INTERIOR SIDES TO MATCH ADJACENT FINISHES.
24. (E) WOOD WALL FRAMING AND CEILING JOISTS TO REMAIN
25. DECORATIVE TURNED SPINDLE STRUCTURAL COLUMN - SEE SPECS AND STRUCTURAL DWGS. (STAINED)
26. DECORATIVE WOOD CORBEL AT EAVE PEAK - SEE SPECS (STAINED)
27. DECORATIVE / STRUCTURAL WOOD BRACKETS - SEE STRUCTURAL DWGS. (STAINED)
28. R-38 ROOF BATT INSULATION W/ PAPER FACE OR V.B.
29. R-21 THERMAL BATT INSULATION W/ 6 MIL. VAPOR BARRIER ON THE WARM SIDE (R-13 @ (E) GARAGE BLDG.)
30. R-10 PERIMETER RIGID FOUNDATION INSULATION - TYPICAL
31. SOUND BATT INSULATION - TYPICAL
32. 1/2" CONT. SEALANT WITH BACKER ROD
33. MEMBRANE ROOFING FLASHING - EXTEND UP BACK SIDE OF PARAPET - SEE ROOF PLAN
34. NEW 60 MIL. TPO ROOFING SYSTEM WITH TAPERED INSULATION FOR FORM ROOF SLOPES - SEE ROOF PLAN
35. ASPHALT SHINGLE ROOFING SYSTEM ON (2) LAYERS OF 15 L. FELTS - SEE ROOF PLAN
36. ICE & WATER SHIELD AT ALL EAVE, VALLEY AND RIDGE LOCATIONS. EXTEND IN 24" FROM WARM SIDE OF THE EXTERIOR WALL
37. (N) 5" GUTTER SYSTEM WITH 4"X4" DOWNSPOUTS - PREFINISHED
38. PREFINISHED METAL CAP ON (N) PARAPETS. SEAL ALL JOINTS.
39. EXISTING GUTTER & DOWNSPOUTS TO BE REMOVED AND REINSTALLED AFTER INSTALLATION OF FASCIA TRIM.
40. PREFINISHED 24 GA. METAL FLASHING - PREFINISHED
41. CONT. BASE FLASHING - SEE DETAIL 3/A4.4
42. 8" HIGH FIBER CEMENT FASCIA BOARD (PAINTED)
43. 6" HIGH FIBER CEMENT FASCIA BOARD (PAINTED)
44. FIBER CEMENT SOFFIT PANELS WITH PERFORATED PANELS AT 4'-0" O.C. (PAINTED) NOTE: NO VENTS AT FIRE RATED SOFFITS
45. 4" HIGH FIBER CEMENT TRIM BOARDS (PAINTED)
46. 5" HIGH LAP FIBER-CEMENT SMOOTH EXTERIOR SIDING TO MATCH ORIGINAL WOOD CLAP BOARD SIDING PROFILE (PAINTED) - SEE EXTERIOR ELEVATIONS.
47. 10" HIGH LAP FIBER-CEMENT SMOOTH EXTERIOR SIDING AT NEW BUILDING LOCATIONS (PAINTED) - SEE EXTERIOR ELEVATIONS.
48. FIBER-CEMENT CEDARMILL STAGGERED SHAKE SIDING (PAINTED) - SEE EXTERIOR ELEVATIONS.
49. TYVEK WEATHER RESISTANT BARRIER. SEAL ALL JOINTS. - SEE SPECS.
50. 24" X 36" ATTIC ACCESS DOOR - SEE SPECS.
51. NEW INSULATED ALUMINUM OVERHEAD DOOR AND TRACK SYSTEM - SEE DOOR SCHEDULE
52. NEW INSULATED ALUMINUM STOREFRONT SYSTEM - SEE DOOR SCHEDULE
53. NEW WINDOW UNIT - SEE WINDOW SCHEDULE
54. NEW DOOR ASSEMBLY - SEE DOOR SCHEDULE
55. FLOOR BASE AS SCHEDULED
56. FLOOR FINISH AS SCHEDULED
57. 5/8" GYPSUM WALLBOARD - FINISH AS SCHEDULED
58. (2) LAYERS OF 5/8" TYPE 'X' FIRE RATED GYPSUM WALLBOARD - FINISH AS SCHEDULED
59. ORNAMENTAL METAL FENCING / RAILING SYSTEM - SEE DETAIL 4/AS2.0
60. STEEL PIPE HANDRAIL SYSTEM AT RAMP - SEE DETAIL 8/AS2.0
61. MECHANICAL DUCTWORK - SEE MECHANICAL DRAWINGS
62. LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS

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BUILDING SECTIONS

A5.2

ISSUED FOR PERMIT - 03.12.2024

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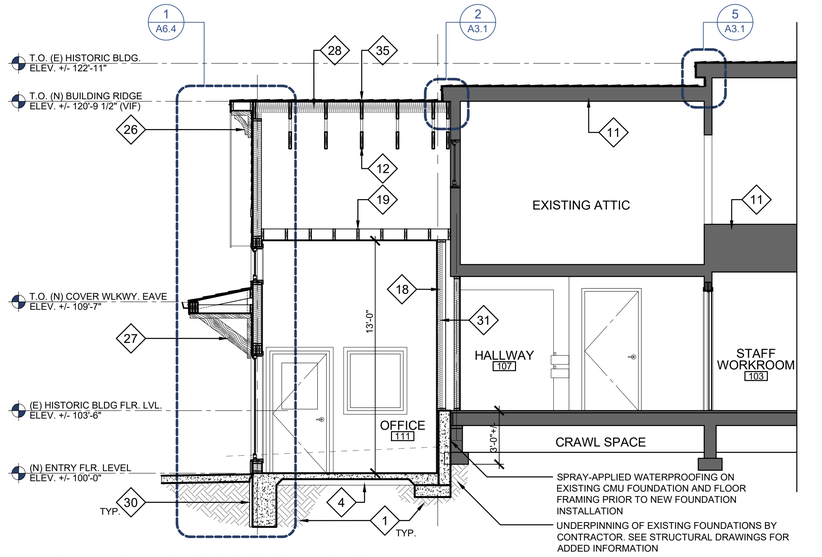
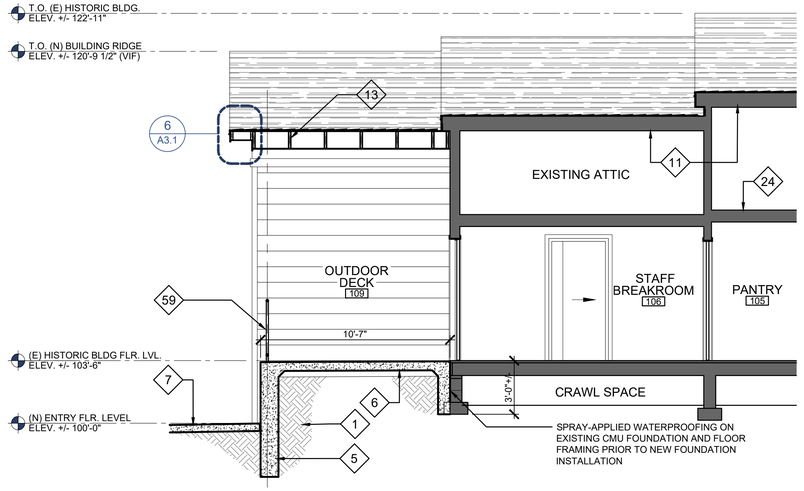


1 A5.3 BUILDING SECTION C-C

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

REFERENCE ELEVATION 100'-0" = ACTUAL 6208.80'

0 1' 2' 4' 8'

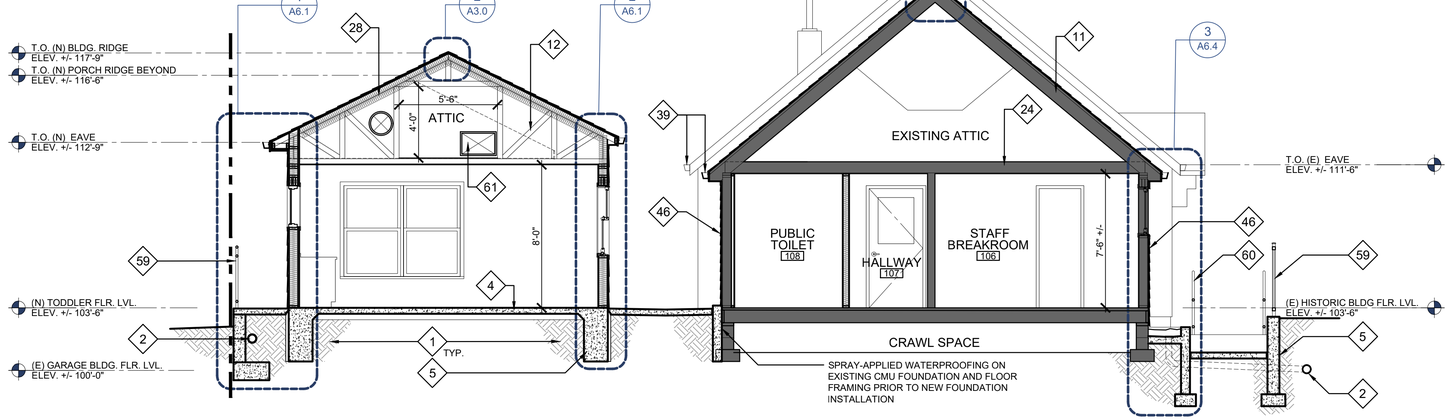


2 A5.3 BUILDING SECTION D-D

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

REFERENCE ELEVATION 100'-0" = ACTUAL 6208.80'

0 1' 2' 4' 8'



3 A5.3 BUILDING SECTION E-E

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

REFERENCE ELEVATION 100'-0" = ACTUAL 6208.80'

0 1' 2' 4' 8'

SECTION KEYNOTES

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9. STEEL COLUMN BEYOND - SEE STRUCT. DWGS.
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11. (E) WOOD ROOF FRAMING TO REMAIN.
12. (N) WOOD ROOF TRUSSES - SEE STRUCTURAL DWGS.
13. (N) WOOD ROOF FRAMING MEMBERS - SEE STRUCT. DWGS.
14. (N) WOOD ROOF BEAM - SEE STRUCT. DWGS.
15. (N) WOOD ROOF ATTIC FLOOR FRAMING - SEE STRUCT. DWGS.
16. 2X6 EXTERIOR WALL FRAMING @ 16" O.C. - SEE STRUCT. DWGS.
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18. 2X WOOD INTERIOR WALL PARTITIONS - SEE WALL TYPES
19. 2X WOOD CEILING JOIST FRAMING AT 24" O.C.
20. 2X TREATED WOOD BLOCKING - SEE SPECS
21. EXTERIOR GRADE PLYWOOD SHEATHING - SEE STRUCT. DWGS.
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34. NEW 60 MIL. TPO ROOFING SYSTEM WITH TAPERED INSULATION FOR FORM ROOF SLOPES - SEE ROOF PLAN
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41. CONT. BASE FLASHING - SEE DETAIL 3/A4.4
42. 8" HIGH FIBER CEMENT FASCIA BOARD (PAINTED)
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47. 10" HIGH LAP FIBER-CEMENT SMOOTH EXTERIOR SIDING AT NEW BUILDING LOCATIONS (PAINTED) - SEE EXTERIOR ELEVATIONS.
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52. NEW INSULATED ALUMINUM STOREFRONT SYSTEM - SEE DOOR SCHEDULE
53. NEW WINDOW UNIT - SEE WINDOW SCHEDULE
54. NEW DOOR ASSEMBLY - SEE DOOR SCHEDULE
55. FLOOR BASE AS SCHEDULED
56. FLOOR FINISH AS SCHEDULED
57. 5/8" GYPSUM WALLBOARD - FINISH AS SCHEDULED
58. (2) LAYERS OF 5/8" TYPE 'X' FIRE RATED GYPSUM WALLBOARD - FINISH AS SCHEDULED
59. ORNAMENTAL METAL FENCING / RAILING SYSTEM - SEE DETAIL 4/AS2.0
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BUILDING SECTIONS

A5.3

ISSUED FOR PERMIT - 03.12.2024

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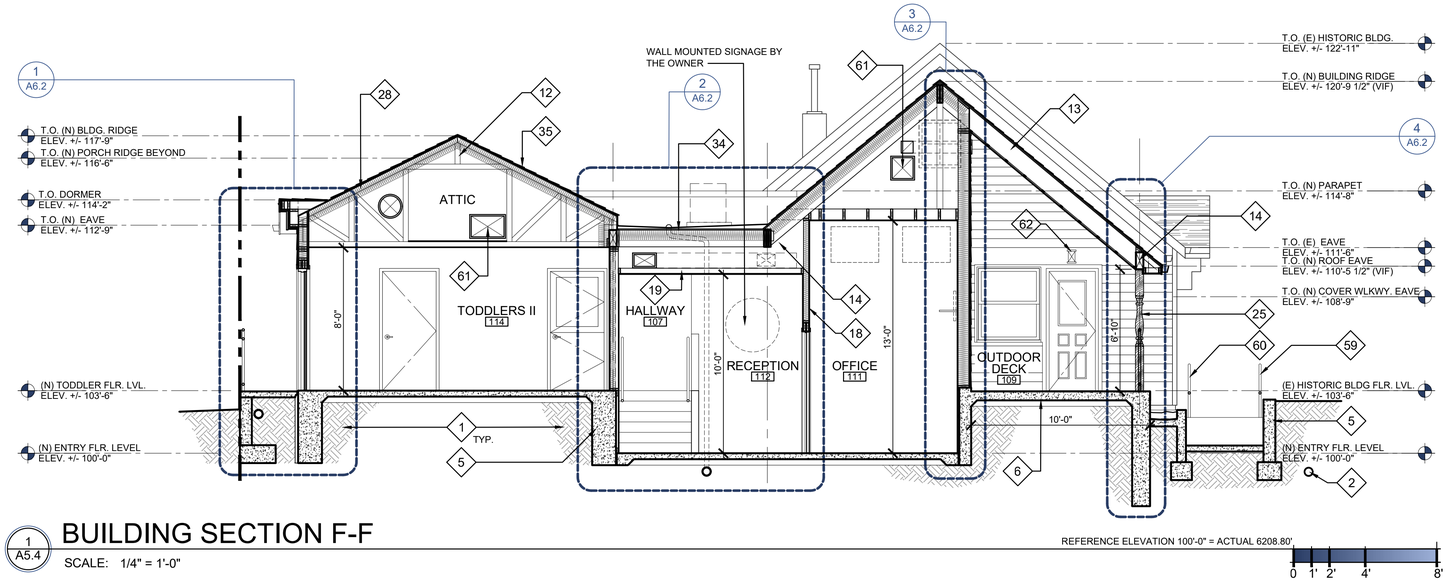
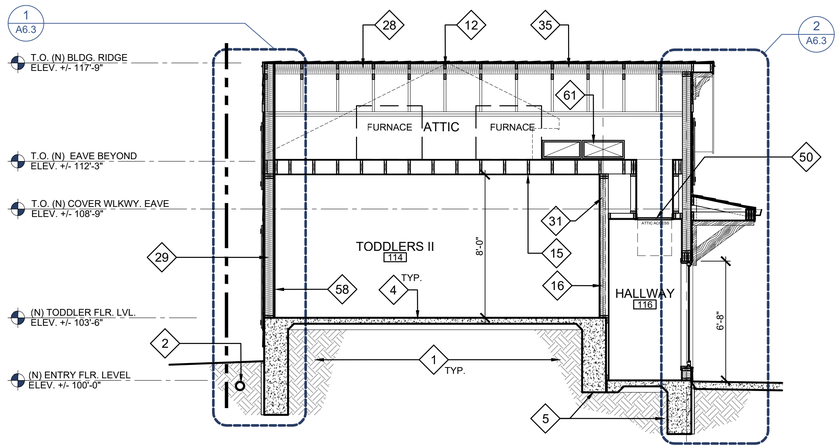


BUILDING SECTION F-F

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

REFERENCE ELEVATION 100'-0" = ACTUAL 6208.80'

0 1' 2' 4' 8'

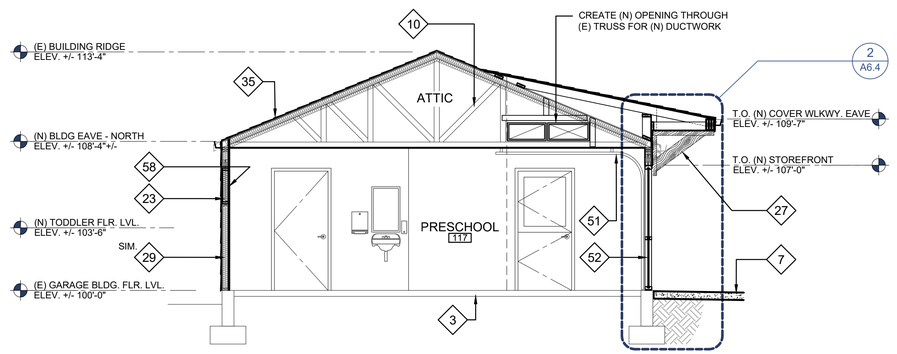


BUILDING SECTION G-G

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

REFERENCE ELEVATION 100'-0" = ACTUAL 6208.80'

0 1' 2' 4' 8'



BUILDING SECTION H-H

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

REFERENCE ELEVATION 100'-0" = ACTUAL 6208.80'

0 1' 2' 4' 8'

SECTION KEYNOTES

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11. (E) WOOD ROOF FRAMING TO REMAIN.
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62. LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS

STATE OF COLORADO
SCOTT A. BODUCH
400217
03.14.2024
LICENSED ARCHITECT

BODUCH DESIGN GROUP
4969 South Alkire Street
Morrison, CO 80465
Phone: 303.901.0720
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A VISION ENLIGHTENED

RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK, CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 03.12.2024
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CHECKED: SAB
BDG ARCH NO.: **23.024**

BUILDING SECTIONS

A5.4

ISSUED FOR PERMIT - 03.12.2024

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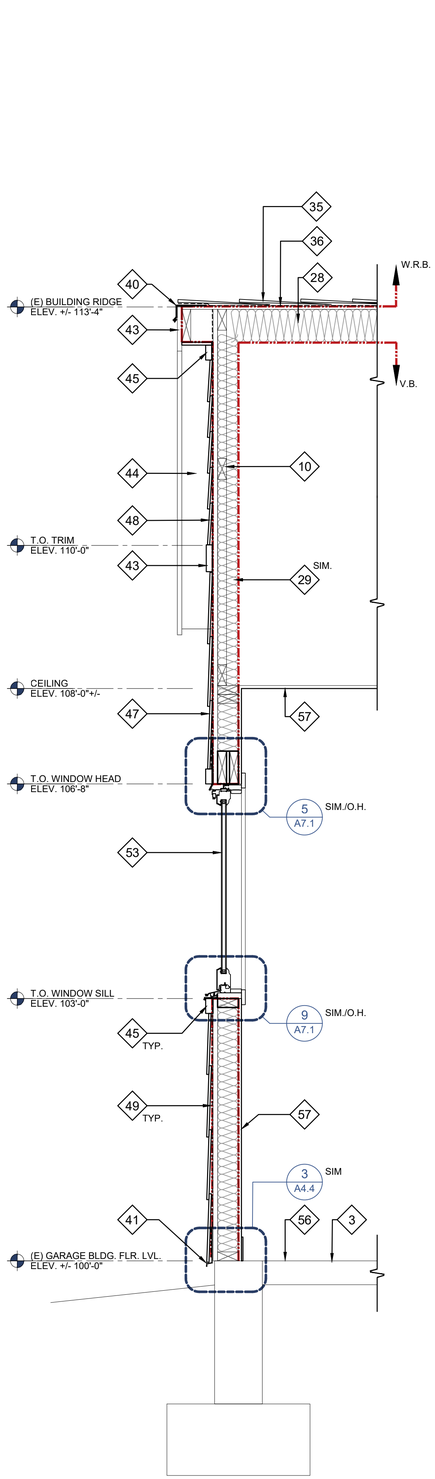

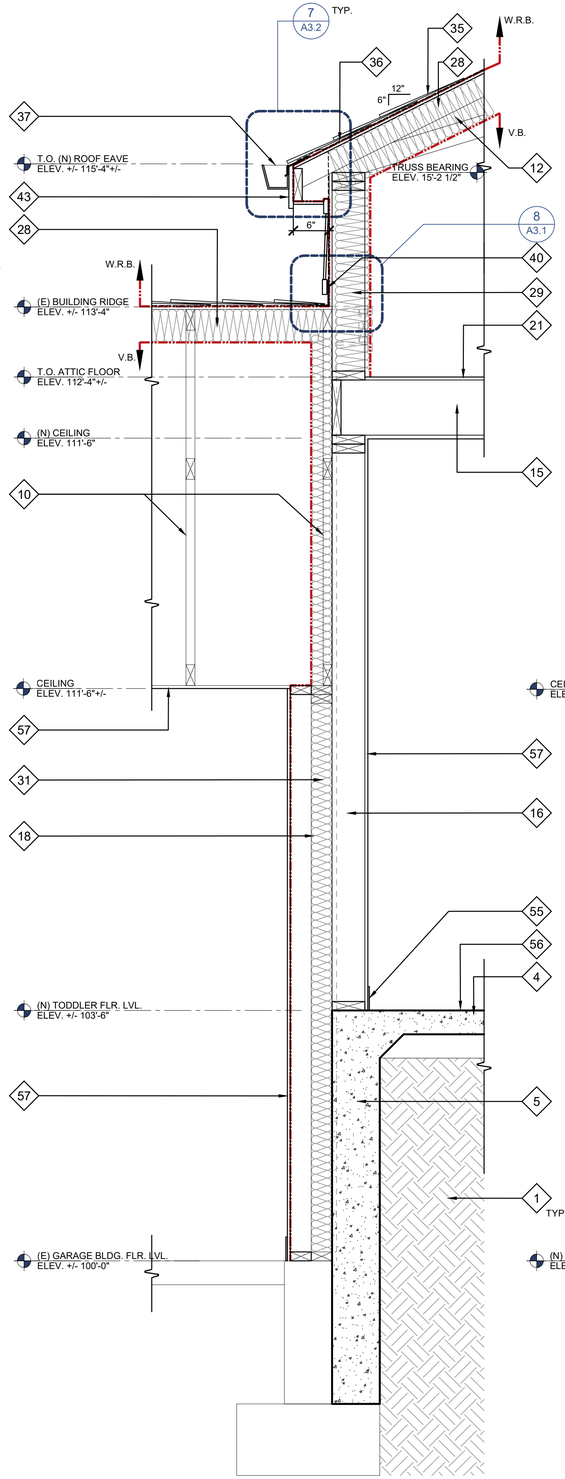

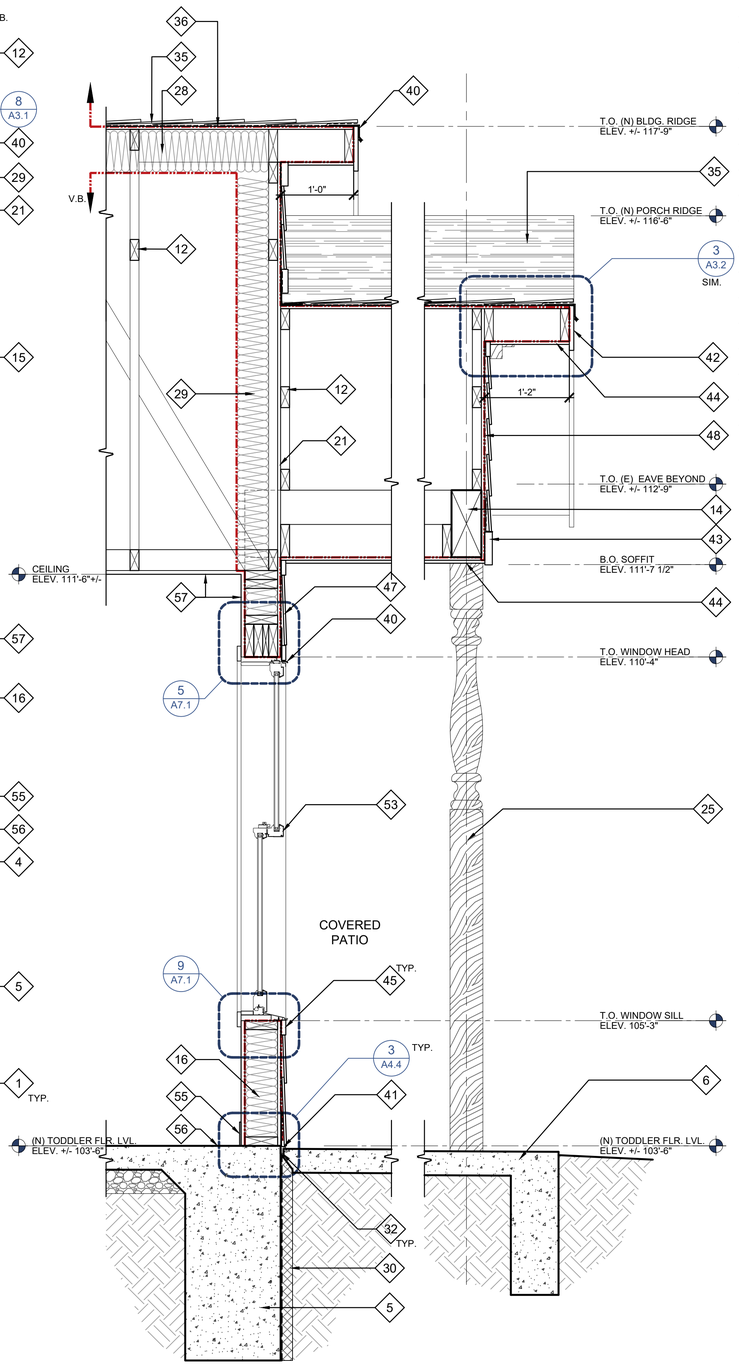

SECTION @ GARAGE (WEST)

1 / A6.0

SCALE: 1" = 1'-0"

0 3" 6" 1' 2'

SECTION AT GARAGE (EAST)

2 / A6.0

SCALE: 1" = 1'-0"

0 3" 6" 1' 2'

SECTION AT NORTH PORCH WALL

3 / A6.0

SCALE: 1" = 1'-0"

0 3" 6" 1' 2'

SECTION KEYNOTES

1. REFER TO GEOTECH REPORT FOR SOIL PREPARATION UNDER FOOTINGS, SLABS AND SIDEWALKS
2. ROOF DRAIN SYSTEM - SEE CIVIL AND PLUMBING DWGS.
3. (E) CONCRETE SLAB TO BE GROUND DOWN AND LEVELED OUT AS REQUIRED FOR A SMOOTH / LEVEL FINISH. PREPARE FOR NEW FLOOR FINISHES.
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5. REINF. CONCRETE FOUNDATION WALL & RETAINING WALLS - SEE STRUCT. DWGS.
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7. NEW CONCRETE SIDEWALK, 4000 PSI CONCRETE. SLOPE AWAY BUILDING 1/4" PER 12".
8. NEW STEEL BEAM - SEE STRUCTURAL DWGS.
9. STEEL COLUMN BEYOND - SEE STRUCT. DWGS.
10. (E) WOOD ROOF TRUSSES TO REMAIN.
11. (E) WOOD ROOF FRAMING TO REMAIN.
12. (N) WOOD ROOF TRUSSES - SEE STRUCTURAL DWGS.
13. (N) WOOD ROOF FRAMING MEMBERS - SEE STRUCT. DWGS.
14. (N) WOOD ROOF BEAM - SEE STRUCT. DWGS.
15. (N) WOOD ROOF ATTIC FLOOR FRAMING - SEE STRUCT. DWGS.
16. 2X6 EXTERIOR WALL FRAMING @ 16" O.C. - SEE STRUCT. DWGS.
17. 2X8 EXTERIOR WALL FRAMING @ 16" O.C. - SEE STRUCT. DWGS.
18. 2X WOOD INTERIOR WALL PARTITIONS - SEE WALL TYPES
19. 2X WOOD CEILING JOIST FRAMING AT 24" O.C.
20. 2X TREATED WOOD BLOCKING - SEE SPECS
21. EXTERIOR GRADE PLYWOOD SHEATHING - SEE STRUCT. DWGS.
22. FURROUT EXTERIOR WALLS WITH 1X STUD FRAMING AND RIGID INSULATION. - SEE WALL TYPES.
23. EXISTING WINDOWS TO BE INFILLED TO MATCH ADJACENT WALL ASSEMBLY. FILL CAVITY WITH R-13 INSULATION. FINISH EXTERIOR AND INTERIOR SIDES TO MATCH ADJACENT FINISHES.
24. (E) WOOD WALL FRAMING AND CEILING JOISTS TO REMAIN
25. DECORATIVE TURNED SPINDLE STRUCTURAL COLUMN - SEE SPECS AND STRUCTURAL DWGS. (STAINED)
26. DECORATIVE WOOD CORBEL AT EAVE PEAK - SEE SPECS (STAINED)
27. DECORATIVE / STRUCTURAL WOOD BRACKETS - SEE STRUCTURAL DWGS. (STAINED)
28. R-38 ROOF BATT INSULATION W/ PAPER FACE OR V.B.
29. R-21 THERMAL BATT INSULATION W/ 6 MIL. VAPOR BARRIER ON THE WARM SIDE (R-13 @ (E) GARAGE BLDG.)
30. R-10 PERIMETER RIGID FOUNDATION INSULATION - TYPICAL
31. SOUND BATT INSULATION - TYPICAL
32. 1/2" CONT. SEALANT WITH BACKER ROD
33. MEMBRANE ROOFING FLASHING - EXTEND UP BACK SIDE OF PARAPET - SEE ROOF PLAN
34. NEW 60 MIL. TPO ROOFING SYSTEM WITH TAPERED INSULATION FOR FORM ROOF SLOPES - SEE ROOF PLAN
35. ASPHALT SHINGLE ROOFING SYSTEM ON (2) LAYERS OF 15 L. FELTS - SEE ROOF PLAN
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37. (N) 5" GUTTER SYSTEM WITH 4"X4" DOWNSPOUTS - PREFINISHED
38. PREFINISHED METAL CAP ON (N) PARAPETS. SEAL ALL JOINTS.
39. EXISTING GUTTER & DOWNSPOUTS TO BE REMOVED AND REINSTALLED AFTER INSTALLATION OF FASCIA TRIM.
40. PREFINISHED 24 GA. METAL FLASHING - PREFINISHED
41. CONT. BASE FLASHING - SEE DETAIL 3/A4.4
42. 8" HIGH FIBER CEMENT FASCIA BOARD (PAINTED)
43. 6" HIGH FIBER CEMENT FASCIA BOARD (PAINTED)
44. FIBER CEMENT SOFFIT PANELS WITH PERFORATED PANELS AT 4'-0" O.C. (PAINTED) (NOTE: NO VENTS AT FIRE RATED SOFFITS)
45. 4" H. FIBER CEMENT TRIM BOARDS (PAINTED)
46. 5" HIGH LAP FIBER-CEMENT SMOOTH EXTERIOR SIDING TO MATCH ORIGINAL WOOD CLAP BOARD SIDING PROFILE (PAINTED) - SEE EXTERIOR ELEVATIONS.
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52. NEW INSULATED ALUMINUM STOREFRONT SYSTEM - SEE DOOR SCHEDULE
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54. NEW DOOR ASSEMBLY - SEE DOOR SCHEDULE
55. FLOOR BASE AS SCHEDULED
56. FLOOR FINISH AS SCHEDULED
57. 5/8" GYPSUM WALLBOARD - FINISH AS SCHEDULED
58. (2) LAYERS OF 5/8" TYPE 'X' FIRE RATED GYPSUM WALLBOARD - FINISH AS SCHED.
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WALL SECTIONS & DETAILS

A6.0

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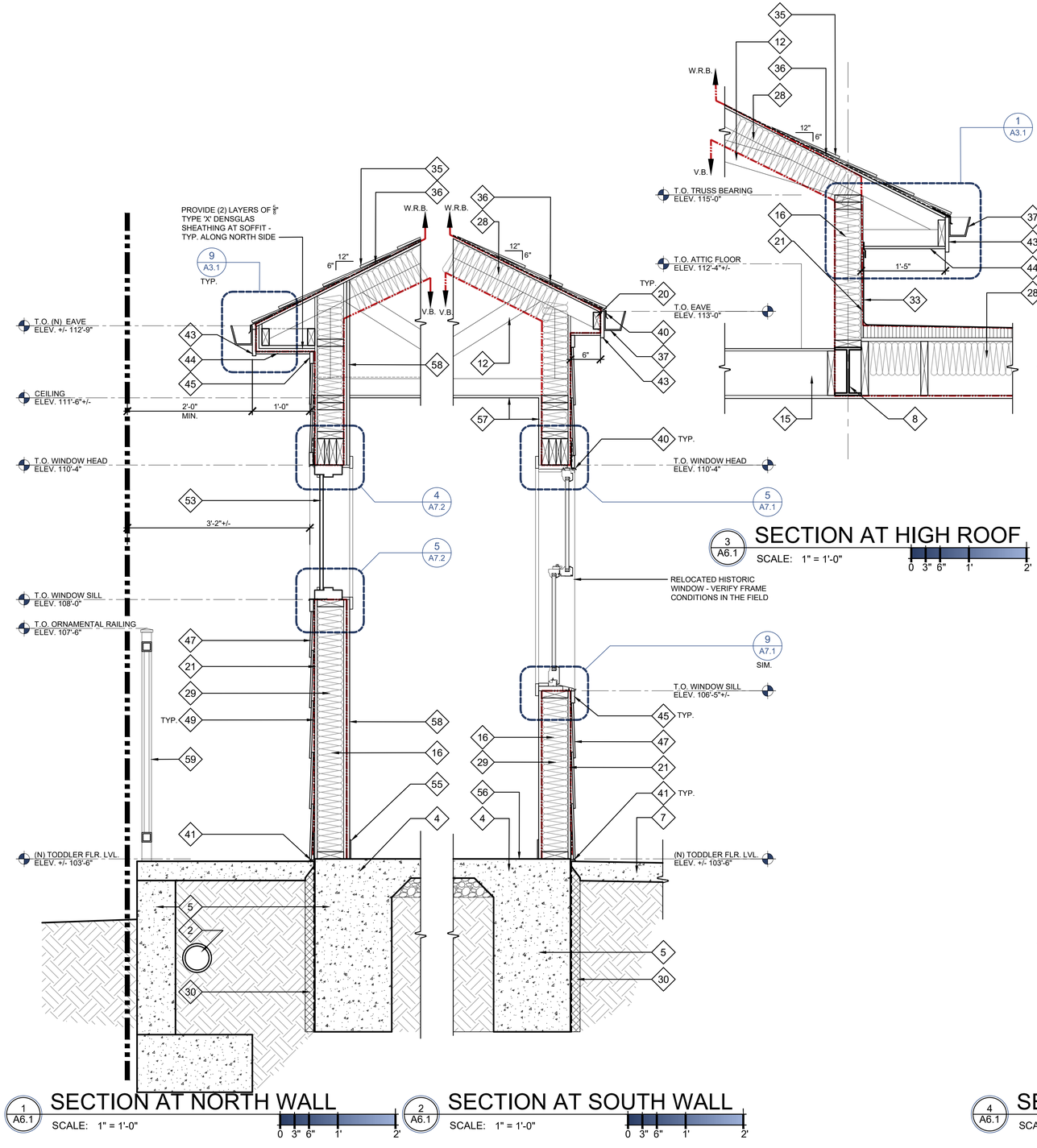

SECTION AT NORTH WALL

1 A6.1 SCALE: 1" = 1'-0"

0 3" 6" 1' 2'

SECTION AT SOUTH WALL

2 A6.1 SCALE: 1" = 1'-0"

0 3" 6" 1' 2'

SECTION AT HIGH ROOF

3 A6.1 SCALE: 1" = 1'-0"

0 3" 6" 1' 2'

SECTION AT EAST WALL

4 A6.1 SCALE: 1" = 1'-0"

0 3" 6" 1' 2'

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WALL SECTIONS & DETAILS

A6.1

ISSUED FOR PERMIT - 03.12.2024

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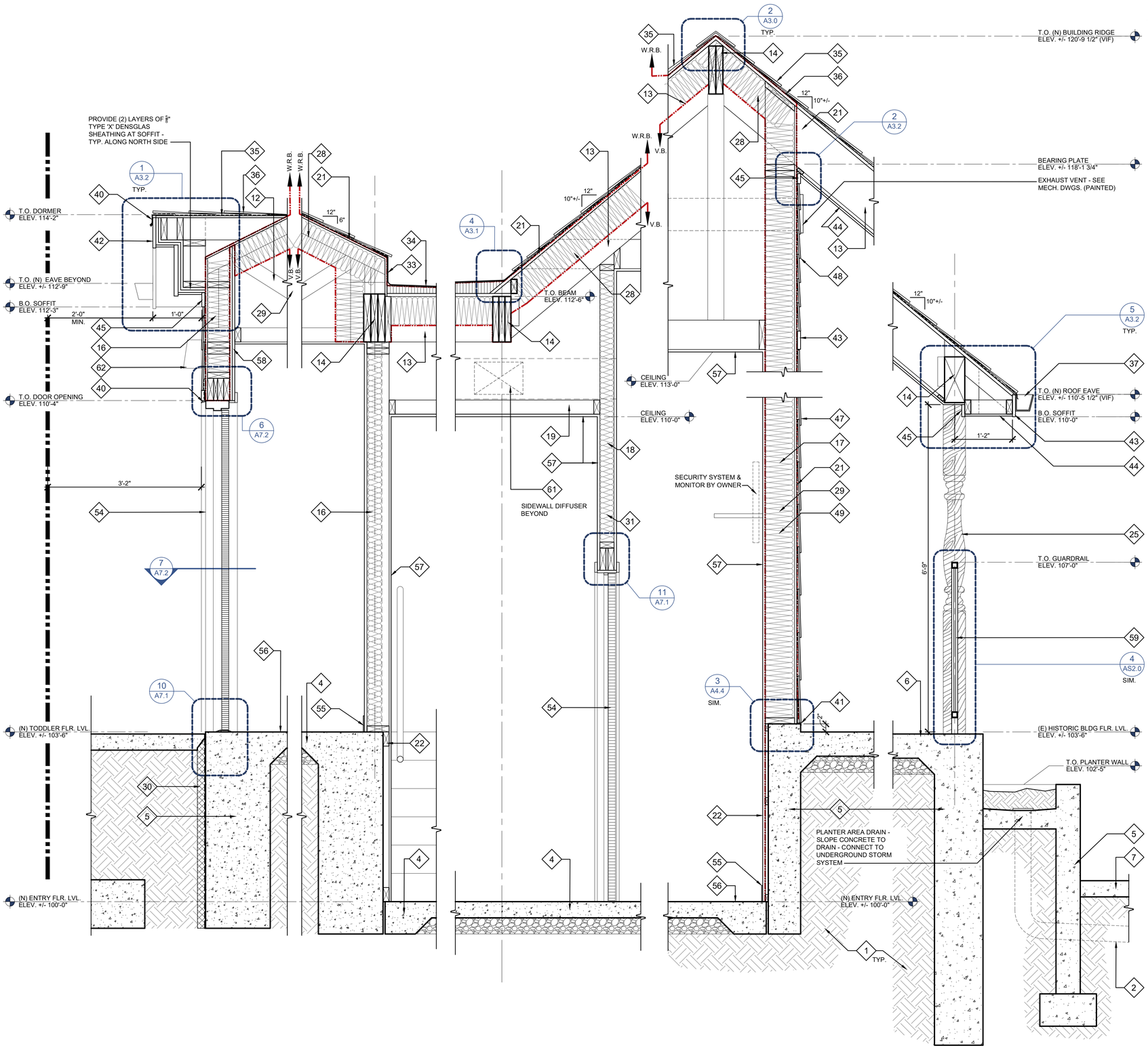

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1 A6.2 SECTION AT NORTH WALL
SCALE: 1" = 1'-0"

2 A6.2 SECTION AT HALLWAY
SCALE: 1" = 1'-0"

3 A6.2 SECTION AT RECEP.
SCALE: 1" = 1'-0"

4 A6.2 SECTION AT DECK / PLANTER
SCALE: 1" = 1'-0"

0 3" 6" 1' 2'

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WALL SECTIONS & DETAILS

A6.2

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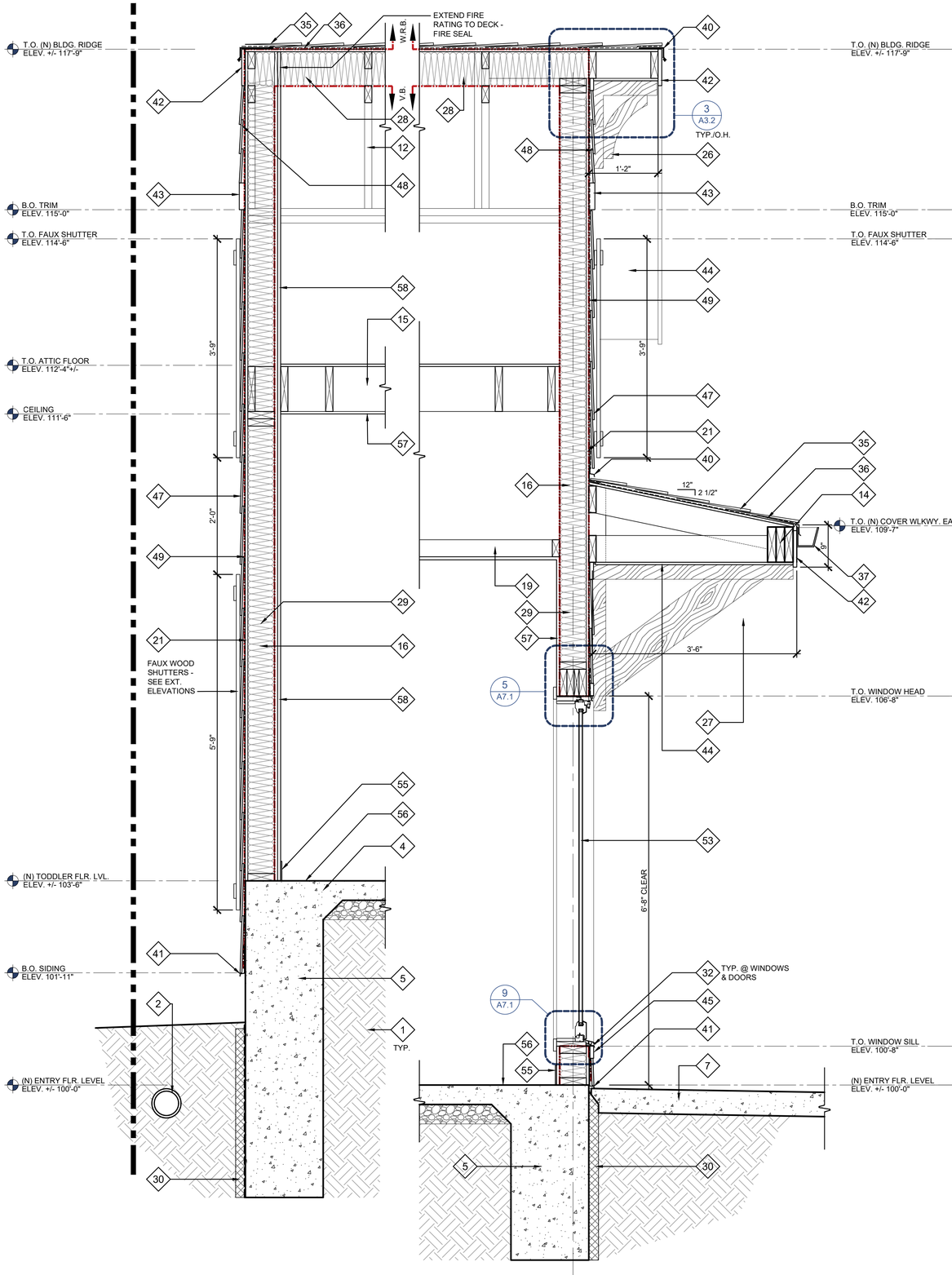


1 A6.3 SECTION AT NORTH WALL

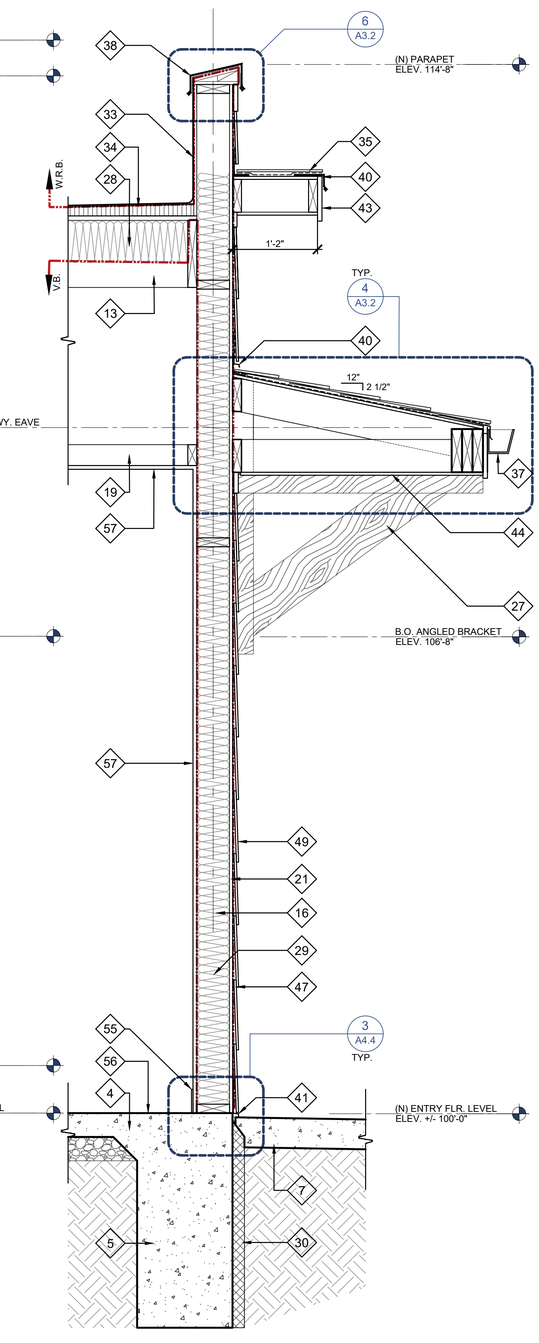
SCALE: 1" = 1'-0"

0 3" 6" 1' 2'

2 A6.3 SECTION AT SOUTH WALL

SCALE: 1" = 1'-0"

0 3" 6" 1' 2'



3 A6.3 SECTION AT SOUTH WALL

SCALE: 1" = 1'-0"

0 3" 6" 1' 2'

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9. STEEL COLUMN BEYOND - SEE STRUCT. DWGS.
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11. (E) WOOD ROOF FRAMING TO REMAIN.
12. (N) WOOD ROOF TRUSSES - SEE STRUCTURAL DWGS.
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14. (N) WOOD ROOF BEAM - SEE STRUCT. DWGS.
15. (N) WOOD ROOF ATTIC FLOOR FRAMING - SEE STRUCT. DWGS.
16. 2X6 EXTERIOR WALL FRAMING @ 16" O.C. - SEE STRUCT. DWGS.
17. 2X8 EXTERIOR WALL FRAMING @ 16" O.C. - SEE STRUCT. DWGS.
18. 2X WOOD INTERIOR WALL PARTITIONS - SEE WALL TYPES
19. 2X WOOD CEILING JOIST FRAMING AT 24" O.C.
20. 2X TREATED WOOD BLOCKING - SEE SPECS
21. EXTERIOR GRADE PLYWOOD SHEATHING - SEE STRUCT. DWGS.
22. FURROUT EXTERIOR WALLS WITH 1X STUD FRAMING AND RIGID INSULATION. - SEE WALL TYPES.
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26. DECORATIVE WOOD CORBEL AT EAVE PEAK - SEE SPECS (STAINED)
27. DECORATIVE / STRUCTURAL WOOD BRACKETS - SEE STRUCTURAL DWGS. (STAINED)
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31. SOUND BATT INSULATION - TYPICAL
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34. NEW 60 MIL. TPO ROOFING SYSTEM WITH TAPERED INSULATION FOR FORM ROOF SLOPES - SEE ROOF PLAN
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51. NEW INSULATED ALUMINUM OVERHEAD DOOR AND TRACK SYSTEM - SEE DOOR SCHEDULE
52. NEW INSULATED ALUMINUM STOREFRONT SYSTEM - SEE DOOR SCHEDULE
53. NEW WINDOW UNIT - SEE WINDOW SCHEDULE
54. NEW DOOR ASSEMBLY - SEE DOOR SCHEDULE
55. FLOOR BASE AS SCHEDULED
56. FLOOR FINISH AS SCHEDULED
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58. (2) LAYERS OF 5/8" TYPE 'X' FIRE RATED GYPSUM WALLBOARD - FINISH AS SCHED.
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03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 03.12.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: **23.024**

WALL SECTIONS & DETAILS

A6.3

ISSUED FOR PERMIT - 03.12.2024

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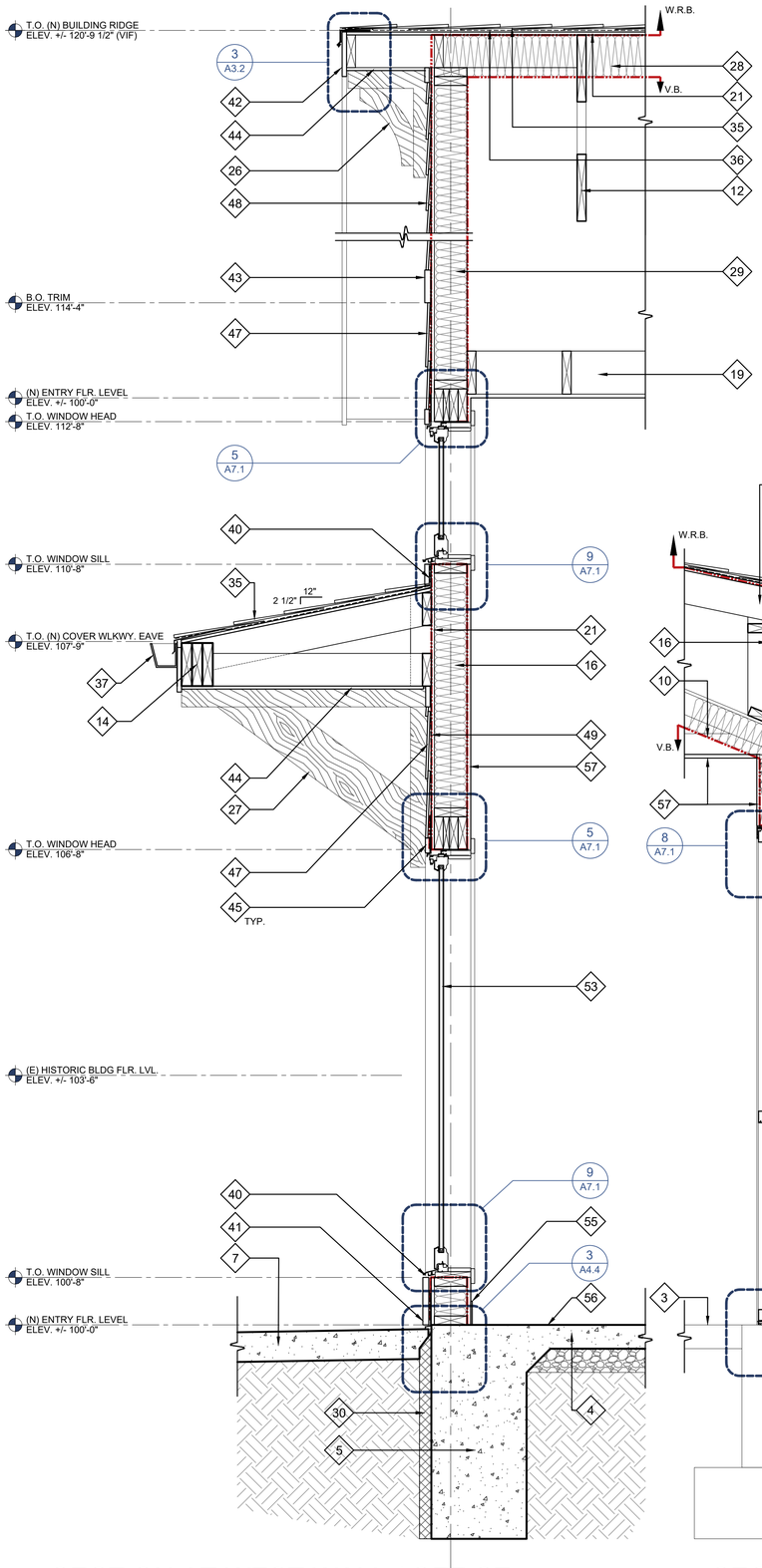
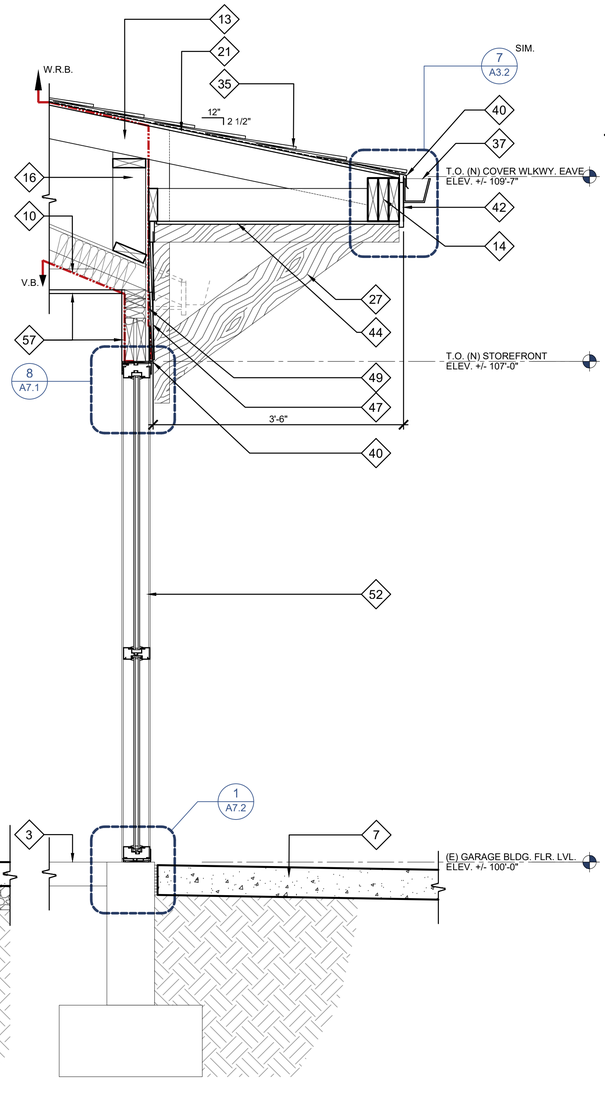


1 A6.4 SECTION AT WEST WALL / OFFICE

SCALE: 1" = 1'-0"

0 3" 6" 1' 2'



2 A6.4 SECTION AT GARAGE (SOUTH)

SCALE: 1" = 1'-0"

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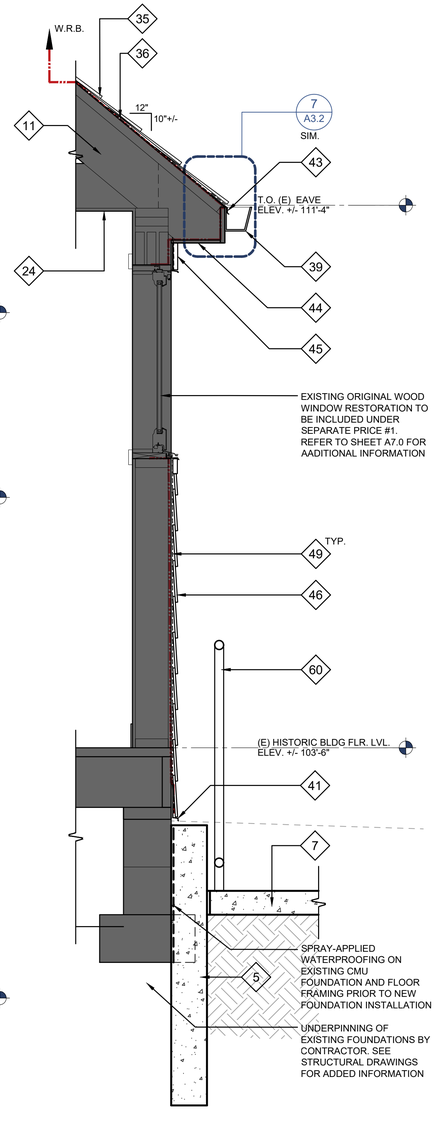

3 A6.4 SECTION AT (E) BLDG.

SCALE: 1" = 1'-0"

0 3" 6" 1' 2'

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WALL SECTIONS & DETAILS

A6.4

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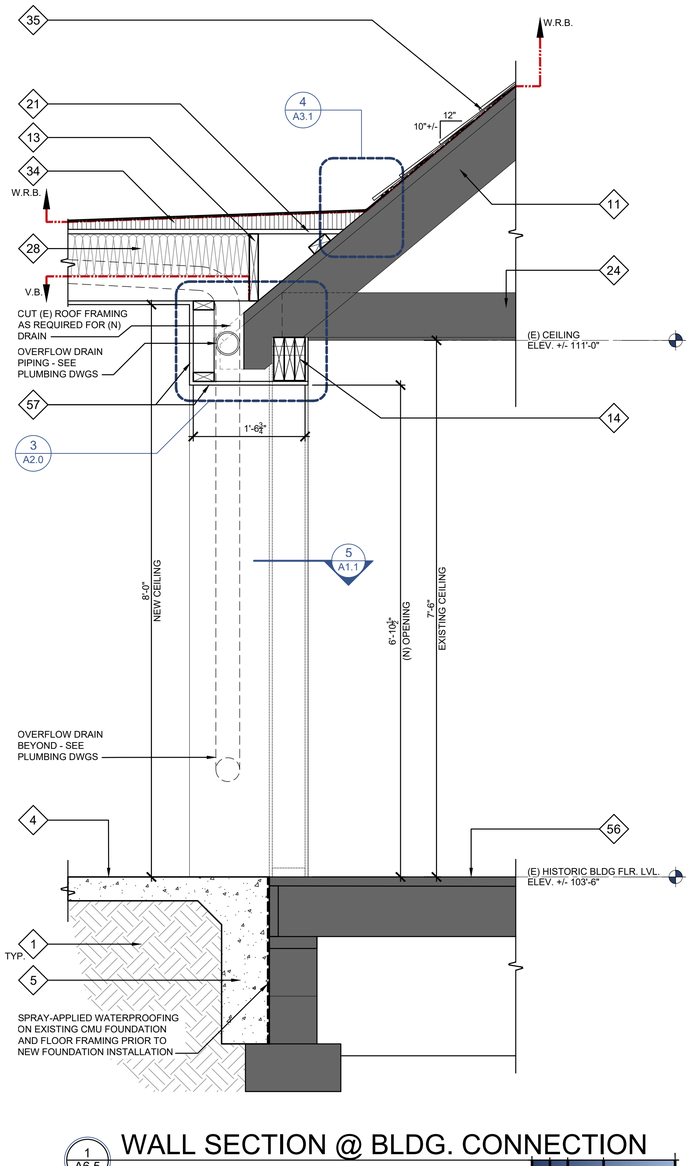

1 A6.5 WALL SECTION @ BLDG. CONNECTION

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WALL SECTIONS & DETAILS

A6.5

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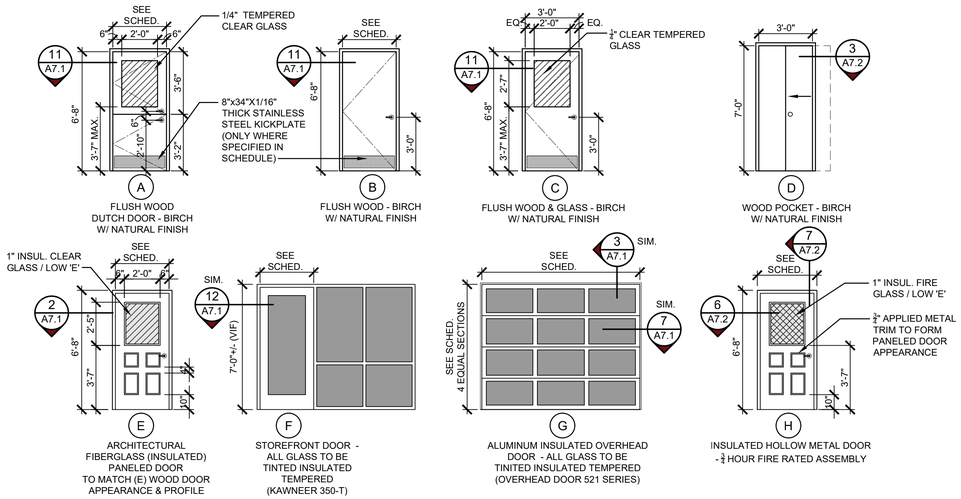
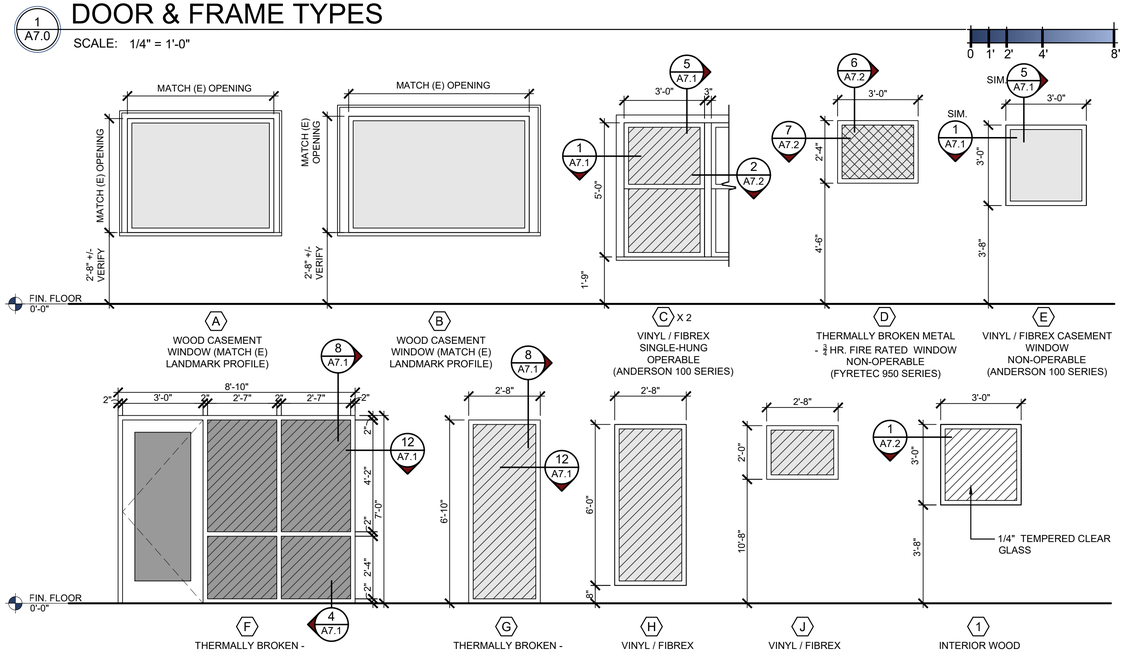


1 A7.0 DOOR & FRAME TYPES

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



2 A7.0 WINDOW TYPES

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

NEW WINDOW NOTES

1. ALL WINDOW FRAMES TO MATCH EXISTING PROFILE AS CLOSE AS POSSIBLE. ALL EXTERIOR FRAMES TO BE PAINTED PER EXTERIOR ELEVATIONS. INTERIOR TO BE THE MANUFACTURER'S STANDARD WHITE.
2. WINDOW MANUFACTURER TO BE ANDERSEN, PELLA OR MARVIN WINDOWS OR APPROVED EQUIVALENT. PROVIDE ANDERSEN HISTORIC REPLACEMENT WINDOWS OR EQUIVALENT AT HISTORIC / LANDMARK BUILDING.
3. ALL WINDOW HARDWARE TO MATCH EXISTING.
4. WINDOW PROFILES TO MATCH AS CLOSE AS POSSIBLE TO THE EXISTING LANDMARK WINDOWS.

DOOR SCHEDULE LEGEND

WD	WOOD
HM	HOLLOW METAL
GL	GLASS
MTL.	METAL
AL.	ALUMINUM
(E)	EXISTING
FG	FIBERGLASS

GLASS TYPES

- 1/4" CLEAR
- 1/4" CLEAR/TEMPERED
- 1" CLEAR/INSULATED / LOW 'E'
- 1" CLEAR/INSULATED/ TEMPERED/LOW 'E'
- 1" TINTED /INSULATED/ TEMPERED/LOW 'E'
- 1" CLEAR/INSULATED/ LOW 'E' / FIRE GLASS

DOOR NOTES

1. ALL WOOD DOORS TO BE NATURAL STAINED BIRCH UNLESS OTHERWISE INDICATED
2. ALL HOLLOW METAL FRAMES WHERE NOTE TO BE WELDED UNLESS OTHERWISE INDICATED.

ENERGY VALUES

1. REFER TO ENERGY CALCULATIONS ON SHEET G2.0 FOR ADDITIONAL INFORMATION.

WINDOWS:

VINYL / FIBREX:	0.30 U-VALUE / 0.30 SHGC (MAX.)
METAL FIRE WINDOWS:	0.40 U-VALUE / 0.55 SHGC (MAX.)
STOREFRONT WINDOWS:	0.40 U-VALUE / 0.38 SHGC (MAX.)

DOORS:

FIBERGLASS DOORS:	0.40 U-VALUE (MAX.)
HOLLOW METAL DOORS:	0.55 U-VALUE (MAX.)
STOREFRONT DOORS:	0.56 U-VALUE / 0.38 SHGC (MAX.)
STOREFRONT GARAGE:	0.77 U-VALUE / 0.38 SHGC (MAX.)

DOOR AND FRAME SCHEDULE

ID	LOCATION	DOOR SIZE WD	HGT	THK	TYPE	MATL	HDW	FRAME MATL	DETAILS SILL	JAMB	HEAD	REMARKS
101-1	INFANT	(E)	(E)	(E)	-	WD	1	WD	10/A7.1	-	-	EXISTING DOOR / NEW HARDWARE
101-2	INFANT	2'-10"	6'-8"	1 3/4"	A	WD	5	WD	-	11/A7.1	11/A7.1	(E) CASED OPENING / DUTCH DOOR
102-1	JAN. CLOSET	(E)	(E)	(E)	-	WD	7	WD	-	-	-	EXISTING DOOR / NEW HARDWARE
103-1	STAFF WORKRM.	3'-0"	6'-8"	1 3/4"	C	WD	6	WD	-	11/A7.1	11/A7.1	---
105-1	PANTRY	(E)	(E)	(E)	-	WD	2	WD	10/A7.1	-	-	EXISTING DOOR / NEW HARDWARE
106-1	BREAK ROOM	(E)	(E)	(E)	-	WD	2	WD	10/A7.1	-	-	EXISTING DOOR / NEW HARDWARE
106-2	BREAK ROOM	3'-0"	6'-8"	1 3/4"	D	WD	11	WD	-	3/A7.2	3/A7.2	RETROFIT TO EXISTING OPENING
108-1	PUBLIC TOILET	3'-0"	6'-8"	1 3/4"	B	WD	7	WD	-	11/A7.1	11/A7.1	---
111-1	OFFICE	3'-0"	6'-8"	1 3/4"	C	WD	6	WD	-	11/A7.1	11/A7.1	---
112-1	RECEPTION	3'-0"	6'-8"	1 3/4"	E	FG	3	WD	10/A7.1	2/A7.1	6/A7.1	PROVIDED WITH ACCESS CONTROL
113-1	TODDLER I	3'-0"	6'-8"	1 3/4"	E	FG	3	WD	10/A7.1	2/A7.1	6/A7.1	PROVIDED WITH ACCESS CONTROL
113-2	TODDLER I	3'-0"	6'-8"	1 3/4"	A	WD	5	WD	-	11/A7.1	11/A7.1	DUTCH DOOR
114-1	TODDLER II	3'-0"	6'-8"	1 3/4"	A	WD	5	WD	-	11/A7.1	11/A7.1	DUTCH DOOR
114-2	TODDLER II	3'-0"	6'-8"	1 3/4"	H	HM	10	HM	10/A7.1	6/A7.2	7/A7.2	3/4 HOUR FIRE RATED DOOR ASSEMBLY
115-1	CHILD TOILET	3'-0"	6'-8"	1 3/4"	B	WD	8	WD	-	11/A7.1	11/A7.1	---
115-2	CHILD TOILET	3'-0"	6'-8"	1 3/4"	B	WD	8	WD	-	11/A7.1	11/A7.1	---
116-1	HALLWAY	3'-0"	6'-8"	1 3/4"	E	FG	4	WD	10/A7.1	2/A7.1	6/A7.1	---
116-2	HALLWAY	3'-0"	6'-8"	1 3/4"	E	FG	4	WD	10/A7.1	2/A7.1	6/A7.1	---
117-1	PRESCHOOL	3'-0"	6'-10"+/-	1 3/4"	F	ALUM.	12	AL-1	10/A7.1	12/A7.1	8/A7.1	---
117-2	PRESCHOOL	3'-0"	6'-8"	1 3/4"	A	WD	5	WD	-	11/A7.1	11/A7.1	DUTCH DOOR
117-3	PRESCHOOL	9'-0"	7'-0"+/-	1 3/4"	G	ALUM.	13	AL-1	-	7/A7.1	3/A7.1	OVERHEAD GLASS DOOR W/ SIDE MTD. MOTOR
118-1	CHILD TOILET	3'-0"	6'-8"	1 3/4"	B	WD	8	WD	-	11/A7.1	11/A7.1	---
119-1	CLOSET	2'-8"	6'-8"	1 3/4"	B	WD	9	WD	-	11/A7.1	11/A7.1	---

HARDWARE SCHEDULE AND NOTES

HARDWARE SET HW-1: EXISTING EXTERIOR DOORS (ACCESS CONTROL)

3 EACH	HINGE	BB1279 X 4½ X 4½ X US10B	HAGER
1 EACH	STOREROOM LEVER	BEST 7-PIN	BEST
1 EACH	ELECTRIC LATCH	HES 9600	ASSA ABLOY
1 EACH	ELECTRONIC SWIPE	(INGRESS SIDE)	
1 EACH	POWER SUPPLY	BPS-12/24-1	SECURITRON OR ADAMS RITE
1 EACH	DOOR SHOE	215APK	PEMKO
1 EACH	DOOR SWEEP		
1 EACH	THRESHOLD	2001, T - 36"	PEMKO
1 SET	WEATHERSTRIPPING	319_R	PEMKO

NOTE: CONFIRM EXISTING DOOR CONDITIONS TO DETERMINE FEASIBILITYOF IMPLEMENTING HARDWARE AS SPECIFIED ABOVE.

HARDWARE SET HW-2: EXISTING EXTERIOR DOOR

3 EACH	HINGE	BB1279 X 4½ X 4½ X US10B	HAGER
1 EACH	STOREROOM LEVER	BEST 7-PIN	BEST
1 EACH	DOOR SHOE	215APK	PEMKO
1 EACH	DOOR SWEEP		
1 EACH	THRESHOLD	2001, T - 36"	PEMKO
1 SET	WEATHERSTRIPPING	319_R	PEMKO

NOTE: CONFIRM EXISTING DOOR CONDITIONS TO DETERMINE FEASIBILITYOF IMPLEMENTING HARDWARE AS SPECIFIED ABOVE.

HARDWARE SET HW-3: EXTERIOR ENTRY / CLASSROOM DOORS (ACCESS CONTROL)

3 EACH	HINGE	BB1279 X 4½ X 4½ X US10B	HAGER
1 EACH	STOREROOM LEVER	BEST 7-PIN	BEST
1 EACH	ELECTRIC LATCH	HES 9600	ASSA ABLOY
1 EACH	ELECTRONIC SWIPE	(INGRESS SIDE)	
1 EACH	POWER SUPPLY	BPS-12/24-1	SECURITRON OR ADAMS RITE
1 EACH	DOOR SHOE	215APK	PEMKO
1 EACH	DOOR SWEEP		
1 EACH	THRESHOLD	2001, T - 36"	PEMKO
1 SET	WEATHERSTRIPPING	319_R	PEMKO

HARDWARE SET HW-4: EXTERIOR DOORS / HALLWAY

3 EACH	HINGE	BB1279 X 4½ X 4½ X US10B	HAGER
1 EACH	STOREROOM LEVER	BEST 7-PIN	BEST
1 EACH	DOOR SHOE	215APK	PEMKO
1 EACH	DOOR SWEEP		
1 EACH	THRESHOLD	2001, T - 36"	PEMKO
1 SET	WEATHERSTRIPPING	319_R	PEMKO
1 EACH	KICK PLATE	8"X34" (ONLY WHERE SPECIFIED IN SCHEDULE)	

HARDWARE SET HW-5: CLASSROOM INTERIOR DUTCH DOOR

4 EACH	HINGE	BB1279 X 4½ X 4½ X US10B	HAGER
1 EACH	PASSAGE LEVER	BEST 7-PIN	BEST
4 EACH	SILENCERS	307D GREY	HAGER
2 EACH	WALL STOP	409 X US10B	ROCKWOOD
1 EACH	KICK PLATE	8"X34" X US10B	
1 EACH	DUTCH DOOR HARDWARE W/ SLIDE BOLT LATCH		
1 EACH	VISION PANEL	24" X 31" - WOOD TRIM	

HARDWARE SET HW-6: OFFICE

3 EACH	HINGE	BB1279 X 4½ X 4½ X US10B	HAGER
1 EACH	OFFICE LEVER LOCKSET	BEST 7-PIN, IC	BEST
3 EACH	SILENCERS	307D GREY	HAGER
1 EACH	WALL STOP	409 X US10B	ROCKWOOD
1 EACH	KICK PLATE	8"X34" X US10B	
1 EACH	VISION PANEL	24" X 31" - WOOD TRIM	

HARDWARE SET HW-7: STAFF TOILET / JANITORS CLOSET

3 EACH	HINGE	BB1279 X 4½ X 4½ X US10B	HAGER
1 EACH	PRIVACY LEVER	BEST 7-PIN	BEST
3 EACH	SILENCERS	307D GREY	HAGER
1 EACH	WALL STOP	409 X US10B	ROCKWOOD
1 EACH	KICK PLATE	8"X34" X US10B	

HARDWARE SET HW-8: CHILD TOILET ROOMS

3 EACH	HINGE	BB1279 X 4½ X 4½ X US10B	HAGER
1 EACH	PASSAGE LEVER	BEST 7-PIN	BEST
3 EACH	SILENCERS	307D GREY	HAGER
1 EACH	WALL STOP	409 X US10B	ROCKWOOD
1 EACH	KICK PLATE	8"X34" X US10B	

HARDWARE SET HW-9: CLOSET / STAFF WORKROOM

3 EACH	HINGE	BB1279 X 4½ X 4½ X US10B	HAGER
1 EACH	STOREROOM LEVER	BEST 7-PIN	BEST
3 EACH	SILENCERS	307D GREY	HAGER
1 EACH	WALL STOP	409 X US10B	ROCKWOOD
1 EACH	KICK PLATE	8"X34" X US10B	

HARDWARE SET HW-10: STAFF BREAKROOM / POCKET DOOR

1 EACH	200 TRACK LENGTH	JOHNSON HARDWARE
1 EACH	PASSAGE END JAMB BRACKET	511588	JOHNSON HARDWARE
1 EACH	POCKET END JAMB BRACKET	512086	JOHNSON HARDWARE
2 EACH	BALL BEARING DOOR HANGERS	2020	JOHNSON HARDWARE
4 EACH	SPLIT STUD LENGTHS		JOHNSON HARDWARE
2 EACH	SPLIT STUD FLOOR BRACKETS	512085	JOHNSON HARDWARE
1 EACH	HIDDEN DOOR GUIDE	2041PLBG	JOHNSON HARDWARE
1 EACH	STANDARD POCKET DOOR GUIDE	1550	JOHNSON HARDWARE
1 EACH	DOOR BUMPER	1513	JOHNSON HARDWARE

HARDWARE SET HW-11: EXTERIOR CLASSROOM DOOR / FIRE RATED ASSEMBLY (ACCESS CONTROL)

3 EACH	HINGE	BB1279 X 4½ X 4½ X US10B	HAGER
1 EACH	STOREROOM LEVER	BEST 7-PIN	BEST
1 EACH	CLOSER	1601 SERIES	NORTON
1 EACH	ELECTRIC LATCH	HES 9600	ASSA ABLOY
1 EACH	ELECTRONIC SWIPE	(INGRESS SIDE)	
1 EACH	POWER SUPPLY	BPS-12/24-1	SECURITRON OR ADAMS RITE
1 EACH	DOOR SHOE	215APK	PEMKO
1 EACH	DOOR SWEEP		
1 EACH	THRESHOLD	2001, T - 36"	PEMKO
1 SET	WEATHERSTRIPPING/SMOKE SEALS	319_R	PEMKO
1 EACH	VISION PANEL - FIRE RATED	24" X 30" / FIRE GLASS	-

HARDWARE SET HW-12: EXTERIOR ENTRY / STOREFRONT (ACCESS CONTROL)

3 EACH	HINGE	BY STOREFRONT MFR.	
1 EACH	CYLINDER LOCK	BY STOREFRONT MFR.	
1 EACH	ELECTRIC LATCH	HES 9600	ASSA ABLOY
1 EACH	ELECTRONIC SWIPE	(INGRESS SIDE)	
1 EACH	POWER SUPPLY	BPS-12/24-1	SECURITRON OR ADAMS RITE
1 EACH	DOOR SWEEP	BY STOREFRONT MFR.	
1 EACH	THRESHOLD	BY STOREFRONT MFR.	
1 SET	WEATHERSTRIPPING	BY STOREFRONT MFR.	

HARDWARE SET HW-13: OVERHEAD DOOR

1 EACH	WEATHERSTRIPPING	BY DOOR MFR.
1 EACH	WALL MOUNTED / SIDE MOTOR	BY DOOR MFR.
1 EACH	CONTROLS	BY DOOR MFR.
1 EACH	PRESSURE	BY DOOR MFR.
1 EACH	SENSORS	BY DOOR MFR.
1 EACH	REMOTE	BY DOOR MFR.

KEY ALL LOCKS ON DAY OF TURNOVER. THE DOORS SHOULD BE KEYED AS FOLLOWS:
ONE GRAND MASTER (ALL OF THE LOCKS CAN BE OPENED WITH THIS KEY). ONE KEY FOR ALL INTERIOR DOORS AND ONE KEY FOR FRONT DOOR.

COPIES OF EACH KEY
GRAND MASTER (2)
INTERIOR DOOR KEY (6)
FRONT DOOR KEY (6)

KNOX BOX: CONTRACTOR SHALL COORDINATE WITH LOCAL FIRE DEPARTMENT HAVING JURISDICTION ON EXACT LOCATION AND SPECIFICATION OF KNOX BOX PRIOR TO ORDERING.

GENERAL HARDWARE NOTES:
1. ALL HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL HAVE A SHAPE (I.E. LEVER HANDLE) THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE AS OUTLINED PER LOCAL CODE REQUIREMENTS.

2. THE MAXIMUM PRESSURE FOR ALL INTERIOR AND EXTERIOR ACCESSIBLE DOORS SHALL BE 5-POUNDS OF PRESSURE FOR BOTH PUSH OR PULL FUNCTIONS. ALL FIRE ACCESS DOORS SHALL BE PERMITTED TO OPERATE AT 15-POUNDS MAXIMUM PRESSURE FOR BOTH PUSH AND PULL FUNCTIONS.

3. THE BOTTOM 10" OF ANY ACCESSIBLE DOOR SHALL BE A SMOOTH, UNINTERRUPTED SURFACE THAT ALLOWS THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.

4. DOOR CLOSERS ON ALL ACCESSIBLE DOORS SHALL BE SET SO THAT IT TAKES AT LEAST 3-SECONDS TO CLOSE FROM AN OPEN POSITION OF 70-DEGREES TO WITHIN 3" OF THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.

5. ALL HARDWARE SHALL BE RUBBED OIL BRONZE (US10B) FINISH UNLESS NOTED OTHERWISE.

LANDMARK BUILDING - WINDOW RESTORATION - SEPARATE PRICING #1

1. THE FOLLOWING IS A SUMMARY ON THE ANTICIPATED SCOPE OF WORK REQUIRED FOR THE ORIGINAL WINDOWS LOCATED IN THE HISTORIC / LANDMARK BUILDING. THE GENERAL CONTRACTOR SHALL ENGAGE WITH THE OWNER'S SUGGESTED WINDOW RESTORATION COMPANY OR ANOTHER COMPANY SPECIALIZING IN THE WORK TO PROVIDE A SEPARATE / BREAK OUT PRICE FOR THIS WORK.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFY EXISTING CONDITIONS OF THE WINDOWS TO CONFIRM THE LEVEL OF WORK THAT IS REQUIRED.
3. ALL PAINT AND GLAZING COMPOUNDS ON EXISTING WINDOW FRAMES SHALL BE TESTED TO CONFIRM PRESENCE OF ANY HAZARDOUS MATERIALS. IF HAZARDOUS MATERIALS EXIST, THEN HAZARDOUS MATERIALS SHALL BE REMOVED BASED ON THE REQUIREMENTS OF THE STATE OF COLORADO AND PROPER PERMITS SHALL BE OBTAINED PRIOR TO PERFORMING THE WORK.

THE FOLLOWING IS A SUMMARY OF WINDOWS TO BE RESTORED:

NORTH ELEVATION:	3 WINDOW UNITS
EAST ELEVATION:	1 WINDOW UNIT
SOUTH ELEVATION:	4 WINDOW UNITS
WEST ELEVATION:	1 WINDOW UNIT
RELOCATED:	1 WINDOW UNIT RELOCATED TO THE NEW ADDITION (FROM NORTH ELEVATION)

LEVEL OF REPAIR

THE ANTICIPATED LEVEL OF REPAIR FOR EACH WINDOW WOULD BE A **CLASS I OR CLASS II RESTORATION** AS OUTLINED BELOW. THE LEVEL OF REPAIR NEEDED SHALL BE VERIFIED IN THE FIELD, IDENTIFIED AND INCLUDED WITH THE SEPARATE PRICE BREAKDOWN:

CLASS I: SMALL REPAIRS - THIS WOULD INCLUDE PAINT REMOVAL, RE-GLAZING, WEATHER-STRIPPING, CAULKING, AND REPAINTING.

CLASS II: REPAIR IN PLACE - SMALL DEGREE OF PHYSICAL DETERIORATION REPAIRED IN PLACE BY PATCHING, WATERPROOFING, CONSOLIDATING, OR RE-GLUING EXISTING MATERIAL.

CLASS III: SHOP RESTORATION. LOCALIZED DETERIORATION IN SPECIFIC AREAS THAT CAN BE REMOVED AND REPLACED WITHOUT REQUIRING A FULL FEATURE REPLACEMENT. NOT ANTICIPATED.

CLASS IV: COMPLETE REPLACEMENT OF WINDOW UNIT.

WINDOW SASH RESTORATION PROCESS - CLASS I AND II REPAIRS

REPAIRS WOULD BE PERFORMED ON SITE WITH THE WINDOWS REMAINING IN PLACE. THE MOST COMMON ITEMS THAT ARE TACKLED ARE SELECTIVE REMOVAL OF COMPROMISED AREAS OF GLAZING COMPOUND, AND SELECTIVE RE-GLAZING OF THESE AREAS, THROUGH THIS PROCESS, ONLY CERTAIN AREAS RECEIVE NEW GLAZING COMPOUND. SASHES ARE SELECTIVELY SCRAPED AND/OR SANDED TO REMOVE LOOSE AND FLAKING PAINT AND RE-PAINTED. ANY DAMAGED ROPES WOULD BE REPLACED AS PART OF THE RESTORATION AND MISSING HARDWARE REPLACED.

STATE OF COLORADO
SCOTT A. BODUCH
400217
03.14.2024
LICENSED ARCHITECT

BODUCH DESIGN GROUP
4969 South Alkire Street
Morrison, CO 80465
Phone: 303.901.0720
www.BDGArch.com
A VISION ENLIGHTENED

RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK, CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

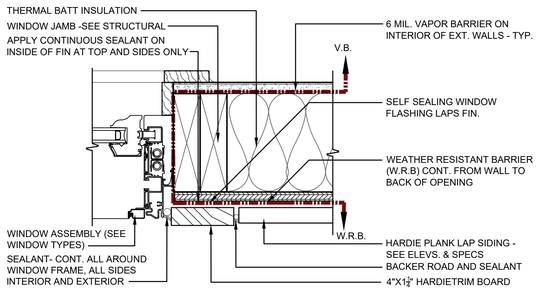
DATE: 03.12.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: **23.024**

DOOR SCHEDULE & WINDOW TYPES

A7.0

ISSUED FOR PERMIT - 03.12.2024

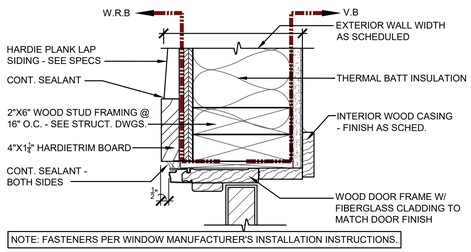
D:\BDG Projects\23.024 - Little School\CAD\23.024 - A7.0 - Door Schedule & Window Types.dwg



NOTE: FASTENERS PER WINDOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

1 / A7.1 EXT. WINDOW JAMB DTL @ NEW CONST.

SCALE: 3" = 1'-0"



NOTE: FASTENERS PER WINDOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

2 / A7.1 EXT. DOOR JAMB DTL @ NEW CONST.

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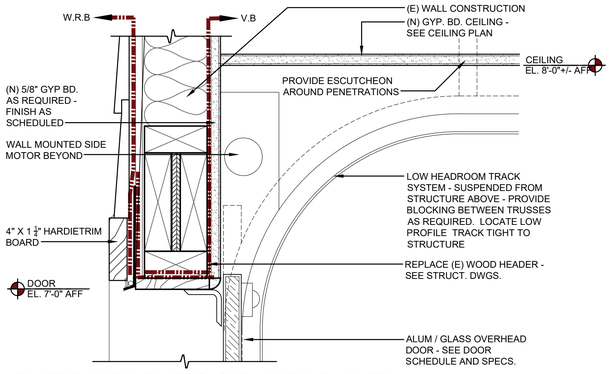
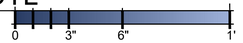
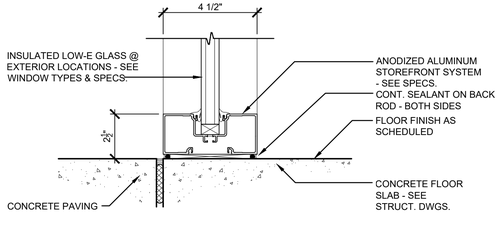


3 / A7.1 OVERHEAD DOOR HEAD DTL

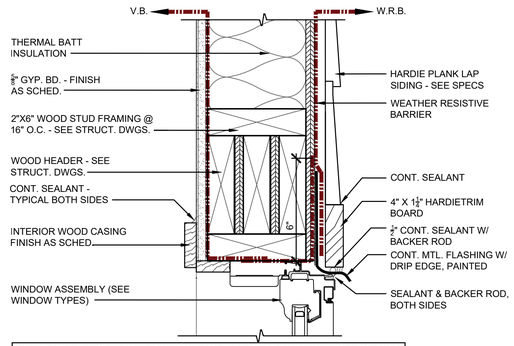
SCALE: 3" = 1'-0"





4 / A7.1 STOREFRONT WINDOW SILL DETAIL

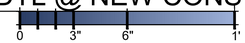
SCALE: 3" = 1'-0"

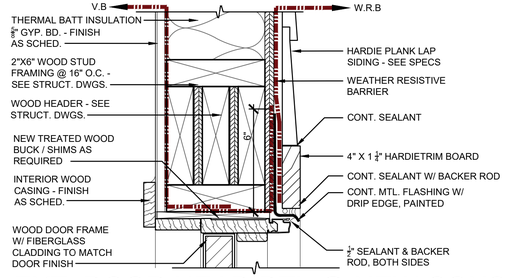


NOTE: FASTENERS PER WINDOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

5 / A7.1 EXT. WINDOW HEAD DTL @ NEW CONST.

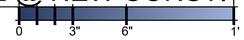
SCALE: 3" = 1'-0"

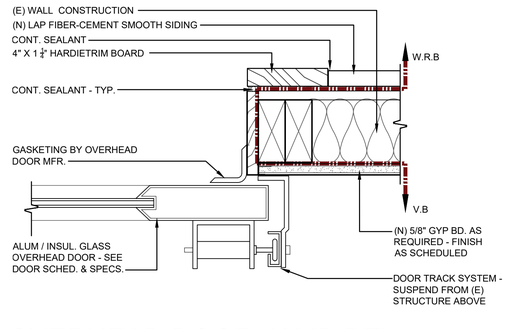




6 / A7.1 EXT. DOOR HEAD DTL @ NEW CONST.

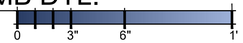
SCALE: 3" = 1'-0"

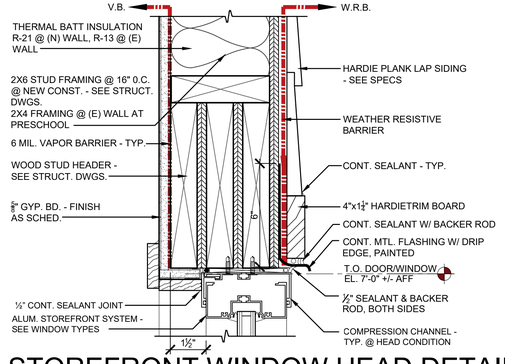




7 / A7.1 OVERHEAD DOOR JAMB DTL.

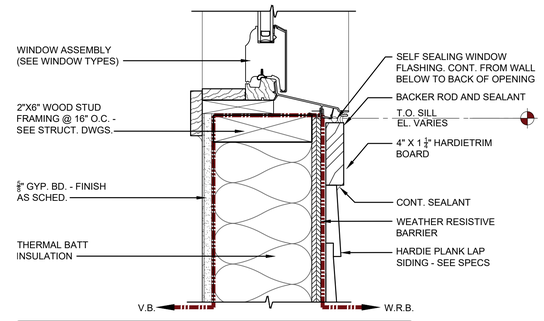
SCALE: 3" = 1'-0"





8 / A7.1 STOREFRONT WINDOW HEAD DETAIL

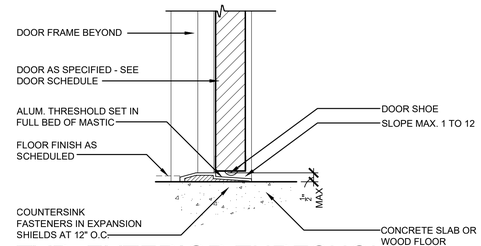
SCALE: 3" = 1'-0"



NOTE: FASTENERS PER WINDOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

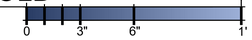
9 / A7.1 EXT. WINDOW SILL DTL @ NEW CONST.

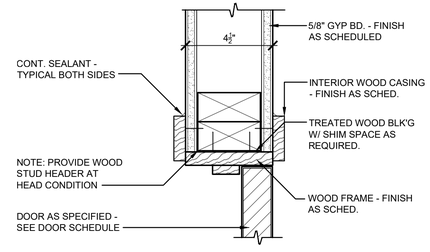
SCALE: 3" = 1'-0"



10 / A7.1 TYP. EXTERIOR THRESHOLD

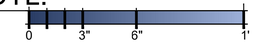
SCALE: 3" = 1'-0"

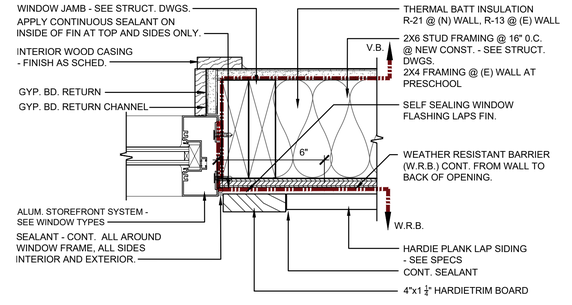




11 / A7.1 TYP. INT. DOOR FRAME DTL.

SCALE: 3" = 1'-0"





12 / A7.1 STOREFRONT WINDOW JAMB DETAIL

SCALE: 3" = 1'-0"

STATE OF COLORADO
SCOTT A. BODUCH
400217
03.14.2024
LICENSED ARCHITECT

BODUCH DESIGN GROUP
4969 South Alkire Street
Morrison, CO 80465
Phone: 303.901.0720
www.BDGArch.com
A VISION ENLIGHTENED

RETROFIT & ADDITION FOR:

THE LITTLE SCHOOL ON PERRY STREET

DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK, CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 03.12.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: **23.024**

DOOR & WINDOW DETAILS

A7.1

ISSUED FOR PERMIT - 03.12.2024

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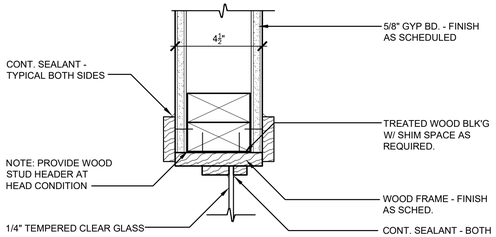
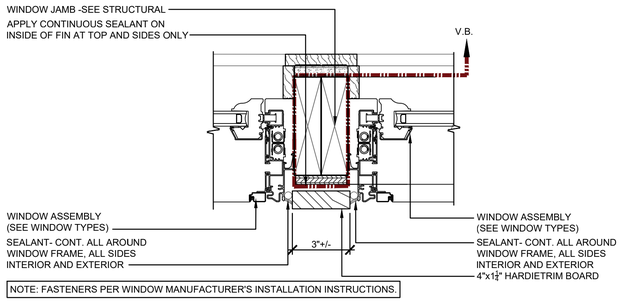


1 A7.2 INTERIOR WINDOW DETAIL

SCALE: 3" = 1'-0"

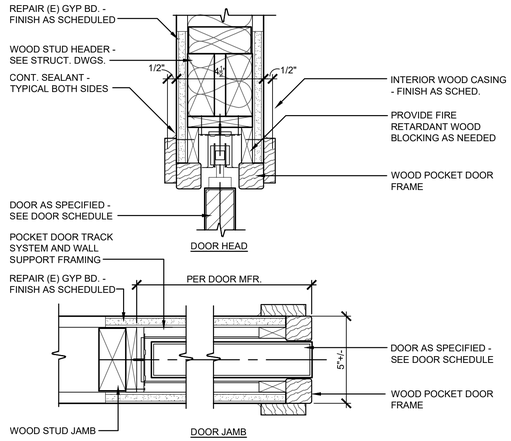
0 3" 6" 1'



2 A7.2 WINDOW JAMB DETAIL @ TODDLER I

SCALE: 3" = 1'-0"

0 3" 6" 1'



3 A7.2 POCKET DOOR DETAIL

SCALE: 3" = 1'-0"

0 3" 6" 1'

4 A7.2 H.M. WINDOW HEAD DETAIL

SCALE: 3" = 1'-0"

0 3" 6" 1'

5 A7.2 H.M. WINDOW SILL / JAMB DETAIL

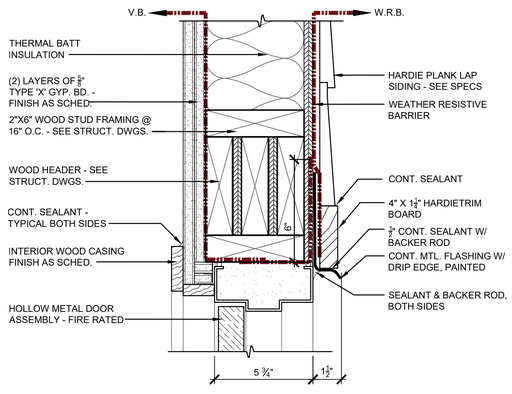
SCALE: 3" = 1'-0"

0 3" 6" 1'

6 A7.2 H.M. DOOR JAMB DETAIL

SCALE: 3" = 1'-0"

0 3" 6" 1'



7 A7.2 H.M. DOOR JAMB DETAIL

SCALE: 3" = 1'-0"

0 3" 6" 1'

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DOOR & WINDOW DETAILS

A7.2

ISSUED FOR PERMIT - 03.12.2024

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STRUCTURAL GENERAL NOTES

GENERAL CRITERIA

1. THESE GENERAL NOTES SHALL APPLY UNLESS SPECIFICALLY NOTED ON THE PLANS AND DETAILS.
2. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE, AND SHALL BE RESPONSIBLE FOR CONDITIONS OF ALL WORK AND MATERIALS, INCLUDING THOSE FURNISHED BY SUBCONTRACTORS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH THE ARCHITECTURAL, CIVIL, MEP CONTRACT DOCUMENTS, AS WELL AS ANY OTHER APPLICABLE TRADES
3. DISCREPANCIES AND/OR VARIATIONS SHALL IMMEDIATELY BE REPORTED TO THE ARCHITECT AND ENGINEER.
4. PERFORM ALL CONSTRUCTION IN CONFORMANCE WITH THE BUILDING CODE AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT CODES REFER TO THE BUILDING CODES AND DESIGN STANDARDS REFERENCED IN "DESIGN CRITERIA" GENERAL NOTES.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION OF THE STRUCTURE REACHES ITS FINAL CONDITION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND REMOVAL OF TEMPORARY BRACING AND CONSTRUCTION SUPPORTS, FOR NEW AND EXISTING STRUCTURES, AS NECESSARY TO COMPLETE THE PROJECT. NO PORTION OF THE PROJECT WHILE UNDER CONSTRUCTION IS INTENDED TO BE STABLE IN THE ABSENCE OF THE CONTRACTOR'S TEMPORARY SUPPORTS AND BRACES.
6. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
7. THE DRAWINGS SHOW ONLY REPRESENTATIVE AND TYPICAL DETAILS TO ASSIST THE CONTRACTOR. THE DRAWINGS DO NOT ILLUSTRATE EVERY CONDITION. ALL ATTACHMENTS, CONNECTIONS, FASTENINGS, ETC., SHALL BE PROPERLY SECURED IN CONFORMANCE WITH THE BEST PRACTICE, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING THEM.
8. ASSUME EQUAL SPACING BETWEEN ESTABLISHED DIMENSIONS, IF NOT INDICATED ON DRAWINGS. CENTERLINES OF COLUMNS AND FOUNDATIONS COINCIDE WITH GRID LINE INTERSECTIONS, U.N.O. CENTERLINES OF GRADE BEAMS AND WALLS COINCIDE WITH CENTERLINES OF FOUNDATIONS, U.N.O. CENTERLINES OF FRAMING MEMBERS COINCIDE WITH COLUMN CENTERLINES, U.N.O. THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITIES FROM DAMAGE.
9. THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTION LOADS DO NOT EXCEED THE CAPACITY OF THE STRUCTURE AT THE TIME THE LOAD IS APPLIED.
10. THE CONTRACTOR SHALL COORDINATE THE BOTTOM OF BASE PLATE ELEVATIONS WITH THE AS-BUILT TOP OF SUPPORT ELEVATIONS.
11. THE CONTRACT STRUCTURAL DRAWINGS SHALL NOT BE USED IN WHOLE OR IN PART FOR SHOP DRAWING SUBMITTALS.
12. CONTRACTOR SHALL NOTE THAT THE STRUCTURAL ENGINEER OF RECORD (SER) REQUIRES A MINIMUM OF TWO WEEKS TO REVIEW ALL SHOP DRAWING SUBMITTALS.
13. THE GEOTECHNICAL REPORT IS A SEPARATE DOCUMENT (NOT PART OF THE CONTRACT DOCUMENTS) FURNISHED BY THE PROJECT OWNER. THE CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR REFERENCE AS IT DESCRIBES SUB-SURFACE CONDITIONS THAT MAY BE ENCOUNTERED DURING INSTALLATION OF FOUNDATIONS AND CONTAINS OTHER INFORMATION PERTINENT TO CONSTRUCTION DRAWINGS.
14. THE GEOTECHNICAL ENGINEER SHALL BE RETAINED TO REVIEW THE FINAL DESIGN PLANS AND SPECIFICATIONS SO COMMENTS CAN BE MADE REGARDING INTERPRETATION AND IMPLEMENTATION OF THE GEOTECHNICAL RECOMMENDATIONS IN THE DESIGN AND SPECIFICATIONS.
15. THE GEOTECHNICAL ENGINEER SHALL BE RETAINED TO PROVIDE TESTING AND OBSERVATIONS DURING EXCAVATION, GRADING, FOUNDATION INSTALLATION, AND OTHER CONSTRUCTION PHASES OF THE PROJECT.

DESIGN CRITERIA

1. PROJECT CODE:
   - A. BUILDING CODE.......2018 INTERNATIONAL BUILDING CODE
   - B. STRUCTURAL CONCRETE.......ACI 318*
   - C. CONCRETE MASONRY.......ACI 530*
   - D. STRUCTURAL STEEL.......AISC-360*
   - E. WOOD.......NDS*

   *CODE EDITION AS REFERENCED IN BUILDING CODE
2. GRAVITY LOADS
   - A. DEAD LOADS
     - a. ROOF.......20 PSF
     - b. FLOOR
       - WOOD FLOOR.......20 PSF
     - c. WALLS
       - TYPICAL WALL.......25 PSF
   - B. LIVE LOADS
     - a. ROOF.......20 PSF
     - b. 1ST FLOOR CORRIDOR/STAIRS.......100 PSF (SLAB ON GROUND)
     - c. EXISTING BUILDING - RETROFIT FLOOR STRUCTURE.......50 PSF
     - d. ATTIC STORAGE.......40 PSF
   - C. SNOW LOADS
     - a. GROUND SNOW LOAD, Pg.......35 PSF
     - b. IMPORTANCE FACTOR, I.......1.0
     - c. SNOW EXPOSURE FACTOR, Ce.......1.0
     - d. THERMAL FACTOR, Ct.......1.0
3. WIND LOADS
   - A. Vult.......115 MPH
   - B. Vasd.......89 MPH
   - C. RISK CATEGORY.......II
   - D. EXPOSURE.......C
   - E. INTERNAL PRESSURE COEFFICIENT.......+/- 0.18
   - F. IMPORTANCE FACTOR.......1.0
   - G. DESIGN WIND PRESSURE - COMPONENTS AND CLADDING REFER TO WIND PRESSURE DIAGRAMS
4. SEISMIC LOADS
   - A. SEISMIC DESIGN CATEGORY.......B
   - B. SITE CLASS.......D
   - C. SEISMIC IMPORTANCE FACTOR, Ie.......1.0
   - D. RISK CATEGORY.......II
   - E. Ss.......0.212
   - F. S1.......0.059
   - G. Sds.......0.229
   - H. Sd1.......0.094
   - I. BASIC SEISMIC FORCE RESISTING SYSTEM.......LIGHT FRAMED (WOOD WALLS WITH WOOD STRUCTURAL PANELS)
   - J. Cs.......0.0353
   - K. R.......6.5
   - L. ANALYSIS PROCEDURE.......EQUIVALENT LATERAL FORCE PROCEDURE
   - M. SEISMIC BASE SHEAR, V (ULT.).......0.0353W
5. FOUNDATION DESIGN
   - A. FOUNDATION TYPE.......SHALLOW SPREAD FOOTINGS
   - B. ALLOWABLE BEARING PRESSURE.......2,000 PSF
   - C. MIN. BEARING DEPTH BELOW GRADE.......3'-0"
   - D. LATERAL SOIL PRESSURES:
     1. ACTIVE LATERAL PRESSURE.......45 PSF
     2. RESTAINED LATERAL PRESSURE.......60 PSF
     3. PASSIVE PRESSURE.......245 PSF
     4. COEFFICIENT OF FRICTION.......0.3
   - E. GEOTECHNICAL REPORT
     - TRIAX ENGINEERING, LLC
     - PROJECT NO. D23G132 DATED SEPT. 22 2023

EXISTING CONDITIONS

1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION. CONTACT ENGINEER IF CONDITIONS ARE DIFFERENT THAN SHOWN.
2. PROVIDE SHORING, BRACING, ETC. OF REMAINING STRUCTURE AS REQ'D. FOR SAFETY AND STRUCTURAL INTEGRITY.
3. PROVIDE WEATHER PROTECTION FOR THE DURATION OF THE DEMOLITION WORK.
4. REF. ARCH'L. DRAWINGS FOR ALL OPENING DIMENSIONS AND LOCATIONS TO LOCATE NEW FRAMING AND FOOTING LOCATIONS.
5. REPLACE ANY DAMAGED FRAMING WITH MEMBERS OF SAME SIZE AND SPACING. NOTIFY ENGINEER OF ANY STRUCTURAL DEFICIENCIES FOUND IN EXISTING FRAMING THAT NEED TO BE ADDRESSED (I.E. SPLIT, CUT, OR MEMBERS SHOWING EXCESSIVE DEFLECTIONS).

FOUNDATION SUBGRADE PREPARATION NOTES

1. FOOTING SIZES AND REINFORCING IS BASED ON AN ALLOWABLE SOIL BEARING PRESSURE PER THE DESIGN CRITERIA. ALL FOOTINGS SHALL BEAR ON PREPARED SUBGRADE PER GEOTECHNICAL REPORT.
2. THE SUBGRADE NOTES PROVIDED BELOW ARE INTENDED ONLY AS A SUMMARY OF THE GEOTECHNICAL ENGINEERS RECOMMENDATION. THE CONTRACTOR SHALL VERIFY FOUNDATION INSTALLATION AND CONSTRUCTION IS IN CONFORMANCE WITH THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT.
3. FOR A DISTANCE OF 5'-0" OUTSIDE THE BUILDING LINE, REMOVE VEGETATION (TREE STUMPS AND MAJOR ROOT SYSTEMS SHALL BE COMPLETELY REMOVED), DEBRIS, TOPSOILS, FILL SOILS, UNDERGROUND FEATURES, AND ANY OTHER DELETERIOUS MATERIAL FROM THE BUILDING AREA.
4. IN FOOTING AREAS, REMOVE EXISTING SOILS A MINIMUM OF DEPTH OF 3'-0" BELOW THE BOTTOM OF FOOTING. THE WIDTH OF EXCAVATION AT FOOTINGS SHOULD EXTEND A MINIMUM OF 3'-0" BEYOND THE EDGE OF FOUNDATION (IN PLAN) OR 5'-0" BEYOND BUILDING PERIMETER. ADDITIONALLY, ANY LOOSE SOILS AT THE BOTTOM OF THE FOOTINGS EXCAVATIONS SHOULD BE REPLACED WITH COMPACTED ENGINEERED FILL MATERIAL. THE GEOTECHNICAL ENGINEER SHOULD BE RETAINED TO OBSERVE PROCEDURE.
5. PROVIDE A MINIMUM OF 3'-0" OF SELECT FILL OR RE-CONDITONED AND COMPACTED ON-SITE SOILS MEETING GEOTECH REMCOMMENDATIONS UNDER FOUNDATIONS AND SLAB ON GROUND. THE GEOTECHNICAL ENGINEER SHOULD CONFIRM ALL FILL PRIOR TO PLACEMENT.
6. PRIOR TO PLACEMENT OF FILL, THE EXPOSED SUBGRADE SHOULD BE SCARIFIED AND MOISTENED OR DRY AS REQUIRED. COMPACT ALL SUBGRADE SOILS PER GEOTECH REPORT. THE SUBGRADE PREPARATION SHOULD BE ACCOMPLISHED IN A MANNER WHICH WILL RESULT IN UNIFORM WATER CONTENTS AND DENSITIES AFTER COMPACTION. REFILL THE EXCAVATION WITH PROPERLY COMPACTED, LOW EXPANSIVE ON-SITE OR IMPORTED ENGINEERED FILL MEETING THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEERING REPORT.
7. FILL BACK TO REQUIRED GRADE WITH MATERIAL SELECTED AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. FILL SHALL EXTEND AT LEAST 5'-0" BEYOND THE FOUNDATION PERIMETER.
8. ANY STANDING WATER ON THE SURFACE OF THE VAPOR BARRIER SHALL BE REMOVED OR DRIED PRIOR TO CONCRETE PLACEMENT.
9. LABORATORY MOISTURE-DENSITY CURVE OR CURVES AS REQUIRED AND RESULTS OF AT LEAST 2 FIELD DENSITY CHECKS PER LIFT ARE TO BE SUBMITTED TO THE ARCHITECT OR ENGINEER.
10. ALL FOUNDATION EXCAVATIONS SHALL BE EXTENDED TO FINAL GRADE AND THE FOOTINGS CONSTRUCTED AND POURED AS SOON AS POSSIBLE TO MINIMIZE POTENTIAL DAMAGE (DUE TO WETTING AND/OR DRYING) TO BEARING SOILS. FOUNDATION CONCRETE SHALL NOT BE PLACED ON SOILS THAT HAVE BEEN DISTURBED BY RAINFALL OR SEEPAGE.
11. EXTEND ALL FOOTINGS A MINIMUM OF 3'-0" BELOW FINAL GRADE.
12. PROVIDE 10 MIL. VAPOR RETARDER UNDER ALL CONCRETE SLABS. VAPOR RETARDERS SHALL CONFORM TO ASTM E 1745 CLASS A REQUIREMENTS. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ASTM E 1643-98.

CONTROLLED BACKFILL BEHIND RETAINING WALLS

1. BACKFILL MATERIAL SHALL MEET THE REQUIREMENTS OF GEOTECHNICAL REPORT AND CDOT CLASS 1 STRUCTURAL BACKFILL (PROPERLY COMPACTED). MAX ACTIVE DESIGN PRESSURE: 45 psf/ft MAX AT-REST DESIGN PRESSURE: 60 psf/ft
2. HEAVY EQUIPMENT SHALL NOT BE USED ABOVE RETAINED SOILS. USE HAND EQUIPMENT ONLY FOR SOILS COMPACTION.
3. BACKFILL MATERIAL SHALL BE PLACED IN HORIZONTAL LOOSE LIFTS NOT TO EXCEED 8" IN THICKNESS.
4. EACH LIFT SHOULD BE COMPACTED AS REQUIRED BY GEOTECHNICAL REPORT.
5. THE MOISTURE CONTENT SHOULD BE WITHIN 3 PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT AT THE TIME OF COMPACTION.
6. BACKFILL MATERIAL SHALL NOT BE PLACED AGAINST WALLS UNTIL ALL SUPPORTING SLABS, BEAMS, STRUTS, ETC., HAVE ATTAINED THEIR 28 DAY DESIGN STRENGTH UNLESS PROPER BRACING IS INSTALLED.
7. WHERE BACKFILL IS REQUIRED ON BOTH SIDES OF A STRUCTURE OR BUILDING ELEMENT, BACKFILL SHALL BE PLACED SIMULTANEOUSLY ALONG BOTH SIDES SO THAT THE BACKFILL HEIGHT ON ONE SIDE DOES NOT EXCEED THE HEIGHT ON THE OPPOSITE SIDE BY MORE THAN 4'-0".
8. COMPACTION AND MOISTURE CONTENT OF SUBGRADE AND EACH LIFT OF STRUCTURAL FILL SHALL BE INSPECTED AND APPROVED BY A QUALIFIED ENGINEERING TECHNICIAN, SUPERVISED BY A GEOTECHNICAL ENGINEER
9. GEOTECHNICAL ENGINEER SHALL BE RETAINED TO VERIFY BACKFILL MATERIAL PRIOR TO PLACEMENT.

PLYWOOD DECKING AND SHEATHING NOTES

1. ALL PLYWOOD SHEATHING AT WALLS SHALL BE:
   - A. 15/32" PERFORMANCE CATEGORY APA RATED SHEATHING (OR OSB), 32/16, EXPOSURE 1 (C-D).
   - B. ATTACHMENT TO SUPPORTING MEMBERS UNLESS NOTED OTHERWISE AT SHEARWALL SCHEDULES OR PLAN NOTES. 2 SPAN MINIMUM:
     - EDGE/BOUNDARY: 10d NAILS SPACED AT 6" O.C.
     - INTERMEDIATE: 10d NAILS SPACED AT 12" O.C.
2. PROVIDE SOLID 2" BLOCKING AT ALL JOINTS IN PLYWOOD SHEAR WALLS.
3. ALL PLYWOOD DECKING AT ROOFS SHALL BE:
   - A. 19/32" PERFORMANCE CATEGORY APA RATED SHEATHING (OR OSB), 32/16, EXPOSURE 1 (C-D) (5/8" OSB ALTERNATE)
   - B. ATTACHMENT TO SUPPORTING MEMBERS UNLESS NOTED OTHERWISE ON PLAN NOTES. 2 SPAN MINIMUM:
     - EDGE/BOUNDARY : 10d NAILS SPACED AT 6" O.C.
     - INTERMEDIATE: 10d NAILS SPACED AT 12" O.C.
4. ALL JOINTS IN PLYWOOD DECKING SHALL BE STAGGERED WITH 1/8" GAP BETWEEN SHEETS.
5. ALL INTERIOR GYPSUM BOARD SHEAR WALLS SHALL BE 5/8" THICK WITH SOLID 2" BLOCKING AT ALL PANEL EDGES. PANELS SHALL BE NAILED TO SUPPORTING MEMBERS ALONG THE EDGES WITH 6d COOLER NAILS SPACED AT 7" O.C. AND AT INTERMEDIATE SUPPORTS WITH 6d COOLER NAILS SPACED AT 12" O.C. UNLESS NOTED OTHERWISE AT SHEARWALL SCHEDULES OR PLAN NOTES.
6. ALL PLYWOOD DECKING AT FLOORS SHALL BE:
   - A. 3/4" PERFORMANCE CATEGORY APA RATED WOOD STRUCTURAL PANEL, SINGLE FLOOR GRADE, STRUCTURAL II WITH TOUNGE AND GROOVE JOINTS.
   - B. FLOOR DECKING SHALL BE GLUED AND SCREWED TO SUPPORTING MEMBERS ALONG THE EDGES WITH
   - C. BOUNDARY/EDGE : 10d NAILS SPACED AT 6" O.C.
   - D. INTERMEDIATE : 10d NAILSSPACED AT 12" O.C.
7. ALL JOINTS IN PLYWOOD DECKING SHALL BE STAGGERED. GLUE AND SCREW ALL FLOOR DECKING TO WOOD FRAMING MEMBERS.

MASONRY NOTES

1. MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF "SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 601/ACI 530.1/ASCE 6 - CURRENT EDITION)," PUBLISHED BY THE MASONRY SOCIETY, BOULDER, COLORADO; THE AMERICAN CONCRETE INSTITUTE, FARMINGTON HILLS, MICHIGAN; AND THE AMERICAN SOCIETY OF CIVIL ENGINEERS, RESTON, VIRGINIA, EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THESE CONTRACT DOCUMENTS.
2. HOLLOW LOAD BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C 90. CONCRETE MASONRY BELOW FINISHED FLOOR SHALL BE NORMAL WEIGHT UNITS AND SHALL HAVE ALL CELLS FULLY GROUTED. CONCRETE MASONRY ABOVE FINISHED FLOOR SHALL BE LIGHT WEIGHT OR NORMAL WEIGHT AND SHALL BE GROUTED ONLY AT REINFORCED CELLS AND BOND BEAMS, U.N.O.
3. MORTAR FOR MASONRY SHALL BE IN ACCORDANCE WITH ASTM C 270 TYPE "S" AND ARTICLES 2.1 AND 2.6A OF TMS 602/ACI 530.1/ASCE 6 BY PROPORTION. UNUSED MORTAR SHALL BE DISCARDED WITHIN 2 1/2 HOURS AFTER INITIAL MIXING.
4. ALL GROUT SHALL MEET THE REQUIREMENTS OF ARTICLE 2.2 OF TMS 602/ACI 530.1/ASCE 6 AND ASTM C476. GROUT SHALL MEET THE PROPORTION REQUIREMENTS SPECIFIED. USE COARSE GROUT WITH A SLUMP IN THE RANGE OF 10 TO 11 INCHES. MAXIMUM GROUT POUR HEIGHT IS 12'-8" WHEN MORTAR HAS CURED FOR A MINIMUM OF 4 HOURS AND NO INTERMEDIATE BOND BEAMS ARE PLACED. OTHERWISE MAXIMUM POUR HEIGHT IS 5'-4".
5. THE SPECIFIED DESIGN COMPRESSIVE STRENGTH OF THE CONCRETE MASONRY (F'm) SHALL BE 2,000 PSI AND THE NET AREA COMPRESSIVE STRENGTH OF THE CONCRETE MASONRY UNITS SHALL BE 1,900 PSI AS PER TABLE 2 OF TMS 602/ACI 530.1/ASCE 6.
6. CONCRETE MASONRY SHALL BE LAID IN RUNNING (COMMON) BOND.
7. ALL HEAD AND BEAD JOINTS SHALL BE COMPLETELY FILLED WITH MORTAR. ALL REINFORCEMENT SHALL BE COMPLETELY SURROUNDED BY MORTAR OR GROUT AND SHALL HAVE A MINIMUM MORTAR COVERING OF 5/8" FROM EXTERIOR FACE.
8. ALL VERTICAL CELLS, BOND BEAMS, AND LINTELS CONTAINING REINFORCING BARS SHALL BE COMPLETELY FILLED WITH GROUT. MASONRY WALLS SHALL HAVE CURED TO A SUFFICIENT STRENGTH OR SHALL BE ADEQUATELY BRACED AND SHORED TO RESIST THE LATERAL PRESSURE OF THE GROUT DURING PLACEMENT.
9. ALL HORIZONTAL JOINT REINFORCEMENT SHALL BE HOT-DIPPED GALVANIZED 9 GAGE WIRE REINFORCEMENT (LADDER TYPE) EMBEDDED IN MORTAR JOINTS AT 16" O.C. JOINT REINFORCEMENT SHALL COMPLY WITH ASTM A 951 AND SHALL BE LAPPED 6" WITH AT LEAST ONE CROSS WIRE WITHIN LAP.
10. DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A 615, GRADE 60.
11. PROVIDE TEMPORARY BRACING AND SHORING FOR ALL MASONRY WALLS TO RESIST ALL LATERAL LOADS DURING CONSTRUCTION UNTIL THE MASONRY HAS BEEN PROPERLY ANCHORED TO THE BUILDING STRUCTURE.

STEEL NOTES

1. ALL STRUCTURAL STEEL SHALL BE DESIGNED, DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE LATEST AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATIONS.
2. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS UNLESS OTHERIWSE NOTEED ON THE CONTRACT DOCUMENTS:
   - A. WIDE-FLANGE.......ASTM A-992 (Fy=50 KSI)
   - B. HSS (SQUARE, RECTANGULAR).......ASTM A-500, GRADE B (Fy=46 KSI)
   - C. HSS (ROUND).......ASTM A-500, GRADE B (Fy=42 KSI)
   - D. PIPE.......ASTM A-53, GRADE B (Fy=35 KSI)
   - E. ALL OTHER STEEL.......ASTM A-36 (Fy= 36 KSI).
3. CONNECTION MATERIAL SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIRMENTS OR AS NEEDED FOR CONNECTION DESIGN:
   - A. ANGLES.......ASTM A36
   - B. WTS.......ASTM A992
   - C. PLATES.......ASTM A36
   - D. BOLTS.......ASTM A325
   - E. NUTS.......ASTM A563
   - F. WASHERS.......ASTM F436
   - G. ANCHOR RODS.......ASTM F1554 GR 55 WITH WELDABILITY SUPPLEMENT S1
   - H. HEADED STUD.......ASTM A108, GRADE 1010 THROUGH 1020 HEADED STUD TYPE, COLD-FINISHED CARBON STEEL, AWS D1.1., TYPE B.
   - I. WELD ELECTRODES.......E70XX
4. ALL BEAMS AND COLUMNS SHALL BE FULL LENGTH WITHOUT SPLICES UNLESS OTHERWISE INDICATED ON PLANS.
5. REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR VERIFICATION OF ALL BOLTS, BLOCKING ANCHORS, ETC., FOR THE ANCHORAGE OF THEIR RESPECTIVE ITEMS.
6. ALL SHOP AND FIELD WELDS SHALL BE MADE BY WELDERS WHO HAVE BEEN QUALIFIED AND CERTIFIED TO MAKE THE REQUIRED WELDS IN ACCORDANCE WITH THE LATEST AMERICAN WELDING SOCIETY SPECIFICATIONS A.W.S. D1.1.
7. ALL FILLET WELDS SHALL BE 3/16" UNLESS OTHERWISE NOTED.
8. DESIGN OF ALL CONNECTIONS NOT SHOWN SHALL BE PERFORMED BY THE FABRICATOR UNDER THE SUPERVISION OF A REGISTERED ENGINEER. CONNECTIONS SHALL CONFORM TO AISC SPECIFICATIONS, AND SHALL BE CAPABLE OF SUPPORTING 55% OF THE MAXIMUM LOAD OF THE MEMBER FOR THE SPAN SHOWN AND THE MATERIAL SPECIFIED IN THE AISC HANDBOOK, LATEST EDITION.
9. SHOP DRAWINGS SHALL BE PREPARED FOR ALL MISCELLANEOUS STEEL ITEMS INCLUDING STAIRS AND HANDRAILS FOR REVIEW BY THE ARCHITECT AND ENGINEER. CALCULATIONS SHALL BE SUBMITTED WITH THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT STATE.
10. ALL STRUCTURAL STEEL, EXCEPT EMBEDDED ITEMS, SHALL BE PAINTED WITH ONE SHOP COAT OF RUST INHIBITIVE PAINT.
11. ALL BOLTS SHALL BE TIGHTENED BY THE AISC "SNUG TIGHT" METHOD UNLESS NOTED OTHERWISE.
12. ALL STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED G-90 COATING. ANY DAMAGE TO THE GALVANIC MATERIAL DURING WELDING SHALL BE TOUCHED UP WITH GALVANIZING REPAIR PAINT: HIGH-ZINC-DUST-CONTENT PAINT FOR REGALVANIZING WELDS AND REPAIR PAINTING GALVANIZED STEEL, WITH DRY FILM CONTAINING NOT LESS THAN 93 PERCENT ZINC DUST BY WEIGHT, AND COMPLYING WITH DOD-P-21035A OR SSPC-PAINT 20.
13. PROVIDE (1/4) TON OF FABRICATED STEEL (INCLUDING ERECTION) IN FORM OF STEEL SHAPES, ANGLES, PLATES, ETC. AS DIRECTED BY ARCHITECT OR STRUCTURAL ENGINEER OF RECORD. ANY UNUSED PORTION OF THIS QUANTITY SHALL BE CREDITED TO THE OWNER PER BID UNIT RATE.

TIMBER NOTES

1. WOOD FRAMING SHALL COMPLY WITH THE SOUTHERN PINE INSPECTION BUREAU (SPIB) OR SHALL CONFORM TO SPECIFICATIONS AS PUBLISHED BY THE WESTERN WOODS PRODUCTS ASSOCIATION.
2. ALL LUMBER SHALL BE STAMPED WITH GRADE, SPECIES, AND GRADING AGENCY FOR EACH APPLICATION AS FOLLOWS:

APPLICATION	GRADE AND SPECIES
STUDS AND BUILT UP COLUMNS	NO. 2 - DFL(Fb=850 PSI)
TIMBER BEAMS/ COLUMNS	NO. 1 - DFL (F'_C = 925 PSF)
TOP AND BOTTOM PLATES	NO. 2 - DFL(Fb=850 PSI)
HEADERS	NO. 2 - DFL(Fb=850 PSI
BEAMS AND JOISTS	NO. 2 - DFL(Fb=850 PSI
EXPOSED MEMBERS	SELECT. STRUCTURAL
NON-STRUCTURAL	UTILITY - DFL

3. VISUALLY GRADED LUMBER SHALL CONSIST OF SOUTHERN YELLOW PINE (SYP) AND/OR DOUGLAS FIR LARCH (DFL), KILN DRIED WITH A MOISTURE CONTENT OF 19% MAXIMUM AT THE TIME OF INSTALLATION, UNLESS NOTED OTHERWISE.
4. ENGINEER LUMBER INCLUDING GLULAMS, LAMINATED VENEER LUMBER (LVL), AND PARALLEL STRAND LUMBER (PSL) SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN VALUES:

DESIGN PROPERTY	GLULAM	LVL	LSL
A. MODULUS OF ELASTICITY, E (ksi):	1,800	2,000	1,500
B. FLEXURAL STRESS, Fb (psi):	2,400	2,400	2,250
C. COMPRESSION, Fc-PERP. (psi):	650	750	750
D. COMPRESSION, Fc-PARALLEL (psi):	1,050	3,000	2,900
E. TENSION PARALLEL TO GRAIN, Ft (psi):	1,150	2,150	2,150
F. HORIZONTAL SHEAR, Fv (psi):	240	285	400

5. SOLID 2" BLOCKING SHALL BE PROVIDED AT THE ENDS AND POINTS OF SUPPORT OF ALL JOISTS, RAFTERS, AND PURLINS, AND SHALL BE PLACED BETWEEN SUPPORTS IN ROWS NOT EXCEEDING 8'-0" APART. ALL WALLS SHALL HAVE SOLID 2" BLOCKING AT 8'-0" O.C. MAX. VERTICALLY. END-NAIL WITH (2)-16d NAILS OR SIDE TOE-NAIL WITH (2)-12d NAILS. ALL BLOCKING SHALL BE SAME DEPTH AS MEMBERS BEING BLOCKED.
6. ALL CONNECTIONS FOR WOOD FRAMING MEMBERS SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE FASTENING SCHEDULE (TABLE 2304.9.1).
7. ALL WOOD STUD WALLS SHALL BE FULL HEIGHT WITHOUT INTERMEDIATE PLATE LINE UNLESS DETAILED OTHERWISE.
8. PROVIDE A SINGLE PLATE (PRESSURE TREATED) AT THE BOTTOM AND A DOUBLE PLATE AT THE TOP OF ALL STUD WALLS.
9. SILL PLATES SHALL BE CONNECTED WITH GALVANIZED ANCHOR BOLTS
   - A. 1/2" Ø MINIMUM, EMBEDDED 7" MINIMUM INTO FOUNDATION AND SPACED 4'-0" O.C. MAX.
   - B. PROVIDE A MINIMUM OF 2 BOLTS PER PIECE OF PLATE AND ONE BOLT LOCATED WITHIN 4" TO 12" FROM EACH END.
10. ALL PLATES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE-TREATED (USE CATEGORY 2 (UC2) AS SPECIFIED BY AWPA) FOR MOISTURE PROTECTION. ALL WOOD EXPOSED TO WEATHER BUT NOT BEARING ON GROUND SHALL BE PRESERVATIVE-TREATED (USE CATEGORY UC3 AS SPECIFIED BY AWPA). ALL STRUCTURAL TIMBER EXPOSED TO WEATHER AND IN CONTACT WITH GROUND SHALL BE SHALL BE PRESERVATIVE-TREATED (USE CATEGORY UC4A AS SPECIFIED BY AWPA).
11. UNLESS OTHERWISE INDICATED, USE WOOD CONNECTORS AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY OR APPROVED EQUIVALENT. CONNECTOR TYPE SHALL BE AS RECOMMENDED BY THE MANUFACTURER FOR THE PARTICULAR APPLICATION AND INSTALLED WITH MANUFACTURER RECOMMENDED FASTENERS TO DEVELOP THE FULL CAPACITY OF THE CONNECTOR. CONNECTORS EXPOSED TO MOISTURE AND OTHER CORROSIVE ELEMENTS SHALL BE HOT DIPPED GALVANIZED OR Z-MAX WITH HOT DIPPED GALVANIZED FASTENERS.
12. INCLUDE AN ALLOWANCE FOR 200 BOARD FEET OF LUMBER TO BE USED AS DIRECTED IN THE FIELD FOR SPECIAL CONDITIONS NOT COVERED BY NOTE OR DRAWING (LABOR FOR ERECTING SAME TO BE INCLUDED). UPON COMPLETION OF PROJECT, REBATE TO OWNER ANY AMOUNT REMAINING.
13. ALKALINE COPPER QUATERNARY (ACQ) PRESERVATIVE-TREATED LUMBER PRODUCTS ARE HIGHLY CORROSIVE TO METAL CONNECTORS AND FASTENERS. ALL FASTENERS AND METAL CONNECTORS USED IN CONJUNCTION WITH THE ACQ PRESERVATIVE-TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED (MIN. G185 COATING) OR TYPE 304 OR 316 STAINLESS STEEL. THESE LOCATIONS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
   - ANCHOR BOLTS AT SOLE PLATE TO FOUNDATION
   - MUD SILL ANCHORS AT SOLE PLATE TO FOUNDATION
   - NAILS FROM SOLE PLATE TO WALL STUDS
   - NAILS AT EXTERIOR PLYWOOD SHEATHING TO SOLE PLATE
   - BOLTS AT LEDGER TO CONCRETE
   - JOIST TO TREATED LEDGER CONNECTIONS
   - ALL HANGERS ON TREATED JOISTS
   - PLYWOOD DECKING TO TREATED JOISTS
   - WOOD POSTS TO CONCRETE
   - NAILS AT FLOOR JOISTS AND RIM JOISTS TO SOLE PLATE
   - DECK BOARDS TO TREATED JOISTS

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
F_ (-x'-x") — FOOTING MARK; T.O. FOOTING ELEVATION	SPREAD FOOTING, REF SCHEDULE ON S101
	SLAB OR DECK SPAN DIRECTION
	DROP IN SLAB OR DECK
	DROP AND SLOPE IN SLAB OR DECK
	SLOPE IN SLAB OR DECK
SW#	INDICATES SHEAR WALL REF. SHT. S101 FOR SHEARWALL PLANS AND SCHEDULES
(1) →	KEYNOTE - REFER TO SHEET KEYNOTES
6x6	SELECT STR. WOOD COLUMN
CX.X ← COL. MARK	STEEL COLUMN, REF. S101

NOTE(S):
1. ITEMS IN LEGEND MAY NOT APPEAR ON ALL PLANS

COLORADO LICENSED PROFESSIONAL ENGINEER
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03/12/24

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23.124

RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 03.12.2024
DRAWN: DE
CHECKED: NHR
BDG ARCH NO.: **23.124**

GENERAL NOTES

S001

ISSUED FOR PERMIT - 03.12.2024

CONCRETE NOTES

1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST AMERICAN CONCRETE INSTITUTE BUILDING CODE (ACI 318 -CODE ADOPTED EDITION). ALL CONCRETE FLOOR AND SLAB CONSTRUCTION SHALL CONFORM TO ACI 302.1R. ALL CONCRETE WORK SHALL ALSO CONFORM TO "SPECIFICATIONS FOR STRUCTURAL CONCRETE", ACI 301.

2. PROVIDE NORMAL WEIGHT CONCRETE WITH CURED DENSITY OF 145 +/- 5 PCF, AND AGGREGATE CONFORMING TO ASTM C33, U.N.O. WHERE INDICATED, PROVIDE LIGHTWEIGHT CONCRETE WITH CURED DENSITY OF 112+/-3 PCF AND AGGREGATE CONFORMING TO ASTM C330

3. CONCRETE STRENGTH SHALL MEET THE FOLLOWING DESIGN SPECIFICATIONS:

CONCRETE USAGE	EXPOSURE CATEGORY	MAXIMUM AGGREGATE	f'c (28 DAY)	MAX WATER/ CEMENT RATIO	MAX AIR CONTENT
STRUCTURAL SLAB ON GRADE	F0, S0, W0, C0	3/4"	3,500	N/A	3.0 +/- 1.5
STRUCTURAL FOUNDATION WALLS AND GRADE BEAMS	F2, S0, W0, C0	3/4"	4,500	0.45	6.0 +/- 1.5
FOOTINGS	F2, S0, W0, C0	1"	4,500	0.45	6.0 +/- 1.5
LEAN CONCRETE	F0, S0, W0, C0	N/A	1,500	0.65	N/A

4. FLY ASH CAN BE SUBSTITUTED FOR CEMENT UP TO 25% BY WEIGHT. CALCIUM CHLORIDE IS NOT ACCEPTABLE FOR USE IN MIX..

5. FURNISH MIX DESIGNS FOR ALL CLASSES OF CONCRETE. RETAIN A QUALIFIED TESTING LABORATORY TO MAKE CONCRETE CYLINDERS AND PERFORM COMPRESSIVE TESTS.

6. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150 AND ACI 318 TYPE II CEMENT FOR STRENGTH DESIGN METHOD. AGGREGATE SHALL CONFORM TO ASTM C-33.

7. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED IN PLACE BY EXPERIENCED WORKMEN IN ORDER TO CONSOLIDATE THE IN-PLACE CONCRETE. THE CONTRACTOR SHALL AVOID OVERVIBRATION LEADING TO SEGREGATION OF THE CONCRETE COMPONENTS

8. NO ADMIXUTRES SHALL BE USED WITOUT PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER. ADMIXTURES USING ANY FORM OF CHLORIDES SHALL NOT BE USED.

9. PROVIDE CONTROL JOINTS IN ALL SLABS AT A SPACING NOT TO EXCEED 15'-0" O.C. EACH WAY. JOINT DEPTH SHALL BE A MINIMUM OF 1/4 THE SLAB THICKNESS. IF JOINTS ARE SAW-CUT, THE CUTTING SHALL TAKE PLACE IMMEDIATELY AFTER FINISHING THE SLAB. JOINTS SHALL NOT BE LOCATED IN LINE WITH AND ABOVE GRADE BEAMS IF APPLICABLE. COORDINATE LOCATION OF JOINTS WITH ARCHITECT.

10. SEE ARCHITECTURAL AND MECHANICAL PLANS FOR VERIFICATION OF ALL DEPRESSIONS, OPENINGS, CAST-IN-PLACE ACCESSORIES, ETC.

11. ALL FLOOR SLABS SHALL BE CONSTRUCTED TO HAVE A MINIMUM FLATNESS OF Ff=35 AND A MINIMUM LEVELNESS OF Fl=25 IN ACCORDANCE WITH ASTM E 1155.

12. CURE CONCRETE SURFACE EITHER BY WATER CURING, WET COVERING, OR APPLYING A LIQUID MEMBRANE-FORMING CURING COMPOUND THAT MEETS OR EXCEEDS THE REQUIREMENTS OF ASTM C 309.

13. WHEN WATER CURING OR WET COVERING IS USED PROVIDE 7 DAYS OF UNINTERRUPTED CURING.

14. IF A CURING COMPOUND IS USED, PROVIDE A LETTER OF COMPATIBILITY FROM THE MFR. INSURING THAT THE CURING COMPOUND WILL NOT INTERFERE WITH SUBSEQUENT FLOOR FINISHES.

15. EMBEDDED CONDUITS AND PIPES, AND SLEEVES SHALL MEET THE REQUIREMENTS OF ACI 318-14, INCLUDING THE FOLLOWING REQUIREMENTS:
    - CONDUITS AND PIPES EMBEDDED WITHIN A SLAB, WALL, OR BEAM (OTHER THAN THOSE PASSING THROUGH) SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, WALL, OR BEAM IN WHICH THEY ARE EMBEDDED.
    - CONDUITS, PIPES, AND SLEEVES SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS OR WIDTHS ON CENTER.
    - CONDUITS, PIPES, AND SLEEVES SHALL BE OF UN-COATED OR GALVANIZED IRON OR STEEL NOT THINNER THAN STANDARD SCHEDULE 40 PIPE.

CONCRETE REINFORCING NOTES

1. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, MUST FOLLOW THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", ACI 315 LATEST EDITION.

2. ALL REINFORCING BARS SHALL SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES, UNO:
   DEFORMED BARS.....ASTM A615 (GR 60)
   WELDED WIRE REINFORCEMENT.....ASTM A1064
   WELDABLE DEFORMED BARS.....ASTMA70

3. STANDARD PROTECTIVE COVER OF REINFORCING BARS UNLESS OTHERWISE NOTED SHALL BE:

CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	SPECIFIED COVER
CAST AGAINST PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3 IN
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	NO 6. THRU NO. 18	2 IN
		NO. 5, W31, OR D31 WIRE OR SMALLER	1 1/2 IN
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS, & WALLS	PRIMARY REINFORCEMENT	1 1/2 IN
	BEAMS, COLS. AND TENSION TIES	STIRRUPS, TIES, SPIRALS, AND HOOPS	1 1/2 IN

4. CORNER REINFORCING BARS SHALL BE USED AT ALL CORNERS AND INTERSECTIONS. SEE TYPICAL DETAIL.

5. LAP REINFORCING AT SPLICES PER LAP SPLICE SCHEDULE UNLESS NOTED OR DETAILED OTHERWISE.

6. WELDING OR HEAT BENDING OF REINFORCING BARS SHALL NOT BE PERMITTED, UNLESS APPROVED BY THE ENGINEER.

7. PROVIDE (2) #4 X 4'-6' LONG DIAGONAL BARS AT ALL RE-ENTRANT CORNERS.

8. U.N.O. IN SHEARWALL SCHEDULE: PROVIDE 1/2" DIAMETER X 10" LONG HOT DIPPED GALVANIZED ANCHOR BOLTS AT 4'-0" O.C. IN THE FOUNDATION AT THE LOCATIONS OF ALL EXTERIOR WOOD FRAMED WALLS. REFER TO SHEAR WALL SCHEDULE AT SHEAR WALLS.

9. AT CORNERS AND "T" INTERSECTIONS OF ALL BEAMS EXTEND 4 CORNER BARS EQUAL TO THE SCHEDULED STEEL IN THE ADJACENT BEAMS 2'-0" EACH WAY, 2 BARS TOP AND 2 BARS BOTTOM. PROVIDE CORNER BARS AT ALL INTERMEDIATE REINFORCING BARS IN WALLS AND DEEP BEAMS

10. PROVIDE ACCESSORIES FOR SUPPORT OF ALL REINFORCING.

11. WHERE A 90-DEG, 135-DEG, OR 180-DEG HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STARDARD HOOKS UNO

12. WELDED WIRE REINFORCMENT (WWR) SHALL BE SUPPLIED IN FLAT SHEETS - ROLLED STOCK IS NOT ALLOWED.

13. WWR SHALL BE LAPPED SO THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS SIX INCHES

PRE-FABRICATED WOOD TRUSSES/TJI JOISTS

1. TRUSS FABRICATION AND INSTALLATION SHALL COMPLY WITH THE FOLLOWING STANDARD:
   A. ANSI/TPI 1 "NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION"
   B. TPI HIB "COMMENTARY AND RECOMMENDATIONS FOR HANDLING, INSTALLING, AND BRACING METAL PLATE CONNECTED WOOD TRUSSES"
   C. TPI DSB "RECOMMENDED DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD TRUSSES"

2. DESIGN ROOF TRUSSES FOR THE FOLLOWING LOADING:
   A. TOP CHORD
      a. DEAD LOAD.....10 PSF
      b. LIVE LOAD.....20 PSF
      c. SNOW LOAD....35 PSF
   B. BOTTOM CHORD
      a. DEAD LOAD.....10 PSF
      b. LIVE LOAD.....20 PSF (NON-CONCURRENT)

3. DESIGN TRUSSES FOR DEAD/LIVE LOADS PER DESIGN CRITERIA. DESIGN FOR WIND LOADING PER WIND LOADING DIAGRAMS. NET UPLIFT SHALL BE DETERMINED BY USING 0.6 * MIN. DEAD LOAD PER DESIGN CRITERIA

4. REFER TO PLANS FOR ADDITIONAL MECHANICAL LOADING, CONFIRM LOCATION/WEIGHT WITH MECHANICAL CONTRACTOR PRIOR TO FABRICATION

5. REFER TO PLANS AND/OR LOADING PLANS FOR ADDITIONAL LOADING AND DESCRIPTION.

6. FOR SIZE AND LOCATION OF MECHANICAL UNITS AND / OR OPENINGS REQUIRED IN TRUSS WEBS FOR DUCTS OR MECHANICAL UNITS, SEE MECHANICAL DRAWINGS.

7. UPLIFT CONNECTORS SHALL BE DESIGNED AND SUPPLIED BY TRUSS MANUFACTURER FOR CALCULATED UPLIFT. ALL UPLIFT CONNECTORS SHOWN IN CONTRACT DRAWINGS SHALL BE VERIFIED WITH TRUSS CALCULATIONS. G.C. SHALL CONFIRM UPLIFT CONNECTOR SIZE PRIOR TO INSTALLATION.

8. ALL TRUSS-TO-TRUSS CONNECTORS SHALL BE SPECIFIED BY THE TRUSS MANUFACTURER.

9. FRAMING TO TRUSS CONNECTORS TO BE DESIGNED BY ENGINEER OF RECORD. TRUSS MANUFACTURER TO DESIGN TRUSS FOR LOCAL FORCE LOADING PER CONTRACT DOCUMENTS.

10. TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS, AND CALCULATIONS, WITH
    A. SEAL OF REGISTERED ENGINEER IN THE PROJECT STATE FOR REVIEW
    B. DESIGN AND FABRICATION DATA
    C. METAL CONNECTORS: SIZE AND LOCATIONS
    D. LUMBER SPECIFICATIONS : PITCH, SPAN, AND TRUSS SPACING, WOOD SPECIES AND STRESS GRADES
    E. FORCE ANALYSIS OF EACH MEMBER NOTING TENSION AND COMPRESSION
    F. TRUSS BEARING SUPPORTS
    G. JOINT DEFLECTIONS
    H. REQUIRED UPLIFT AT EACH TRUSS AND LOCATIONS
    I. SIZE AND LOCATION OF ALL REQUIRED BRACING MEMBERS (TEMPORARY AND PERMANENT) AND
    J. DETAILS OF ALL TRUSS-TO-TRUSS CONNECTIONS (EXAMPLE: HIP JACK TRUSS TO GIRDER TRUSS AND COMMON JACK TRUSSES TO GIRDER TRUSS).

11. TRUSS MANUFACTURER SHALL PROVIDE A COPY OF BCSI GUIDE FOR HANDLING, INSTALLING, AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES TO TRUSS ERECTOR.

12. MAXIMUM LIVE LOAD DEFLECTION SHALL BE SPAN LENGTH / 360 FOR ROOF, FLOOR, BALCONY, AND CORRIDOR TRUSSES. MAXIMUM TOTAL LOAD DEFLECTION SHALL BE SPAN LENGTH /300 FOR ROOF, FLOOR, BALCONY, AND CORRIDOR TRUSSES. THE MAXIMUM DEFLECTION SHALL NOT EXCEED 1 INCH.

POST INSTALLED ANCHORS

1. EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI, INC. CONTACT HILTI AT (800) 879-8000 FOR PRODUCT RELATED QUESTIONS.

   A. **ANCHORAGE TO CONCRETE**

      1. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         a. HILTI HIT-HY 200 SAFE SET SYSTEM WITH THE HILTI HIT-Z ROD PER ICC ESR-3187
         b. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM SYSTEM WITH HAS-E THREADED ROD PER ICC ESR-3187
         c. HILTI HIT-RE 500v3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM WITH HAS-E THREADED ROD PER ICC ESR-3814
         d. HILTI HIT-RE 500v3 SAFE SET SYSTEM WITH HILTI ROUGHENING TOOL (HIT RT) WITH HAS-E THREADED ROD PER ICC ESR-3814 FOR DIAMOND CORED HOLES
      2. MEDIUM DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         a. HILTI KWIK HUS EZ AND KWIK HUS EZ-I SCREW ANCHORS SAFE SET SYSTEM WITH HOLLOW DRILL BIT AND VACUUM SYSTEM PER ICC ESR-3027
         b. HILTI KWIK BOLT-TZ EXPANSION ANCHORS SAFE SET SYSTEM WITH HOLLOW DRILL BIT AND VACUUM SYSTEM AND SI-AT-A22 WITH ADAPTIVE TORQUE PER ICC ESR-1917
         c. HILTI KWIK BOLT 3 EXPANSION ANCHOR SAFE SET SYSTEM WITH HOLLOW DRILL BIT AND VACUUM SYSTEM AND SI-AT-A22 WITH ADAPTIVE TORQUE (UNCRACKED CONCRETE ONLY) PER ICC ESR-2302
      3. HEAVY DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         a. HILTI HDA UNDERCUT ANCHORS PER ICC ESR 1546
         b. HILTI HSL-3 EXPANSION ANCHORS PER ICC ESR 1545

   B. **REBAR DOWELING INTO CONCRETE**

      1. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         a. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM SYSTEM WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3187
         b. HILTI HIT-HY 500v3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM SYSTEM WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3814
         c. HILTI HIT-RE 500v3 SAFE SET SYSTEM WITH HILTI ROUGHENING TOOL (HIT RT) WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3814 IN DIAMOND CORED HOLESCC

   C. **ANCHORAGE TO SOLID GROUTED MASONRY**

      1. ADHESIVE ANCHORS USE:
         a. HILTI HIT-HY 270 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM SYSTEM PER ICC ESR-4143
         b. STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
      2. MECHANICAL ANCHORS USE:
         a. HILTI KWIK BOLT-3 EXPANSION ANCHORS WITH SI-AT-A22 WITH ADAPTIVE TORQUE PER ICC ESR 1385

   D. **ANCHORAGE TO HOLLOW / MULTI-WYTHE MASONRY (NOT ALLOWED UNLESS SPECIFICALLY DETAILS IN STRUCTURAL DRAWINGS)**

      1. ADHESIVE ANCHORS USE:
         a. HILTI HIT-HY 270 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT AND VACUUM SYSTEM PER ICC ESR-4143.
         b. STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
         c. THE APPROPRIATE SIZE SCREEN TUBE SHALL BE USED PER ADHESIVE MANUFACTURER'S RECOMMENDATION

2. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.

3. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.

4. OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING THE HILTI PROFI SYSTEM.

5. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

6. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

7. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS, BY HILTI FERROSCAN, GPR, X-RAY, CHIPPING OR OTHER MEANS.

SUBMITTALS

SUBMITTAL REVIEW

1. TEN WORKING DAYS PRIOR TO SUBMITTING SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT FOR STRUCTURAL ENGINEER' S REVIEW A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SHOP DRAWINGS AND THE DATE THE SHOP DRAWINGS WILL BE RECEIVED BY THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER SHALL HAVE THE OPPORTUNITY TO REVIEW THE PROPOSED SCHEDULE AND SUBMIT COMMENTS TO THE CONTRACTOR. THE FINAL SHOP DRAWING SCHEDULE SHALL BE DEVELOPED AND SUBMITTED TO THE STRUCTURAL ENGINEER. IN ACCORDANCE WITH THE SHOP DRAWING SCHEDULE, THE STRUCTURAL ENGINEER WILL RETURN THE SHOP DRAWING ITEMS WITHIN TEN WORKING DAYS AFTER HAVING RECEIVED THE REPRODUCIBLE SHOP DRAWING.

2. THE CONTRACTOR IS TO REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO ARCHITECT AND STRUCTURAL ENGINEER. THE CONTRACTOR IS TO STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:
   A. THE SHOP DRAWING IS REQUESTED.
   B. THE SHOP DRAWING IS BASED ON THE LATEST DESIGN.
   C. THE ARCHITECT' S AND STRUCTURAL ENGINEER' S COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
   D. THE WORK IS COORDINATED AMONG ALL CONSTRUCTION TRADES.
   E. REVISIONS FROM PREVIOUS SUBMITTALS ARE CLEARLY MARKED BY CIRCLING OR CLOUDS.
   F. SUBMITTAL IS COMPLETE.
   G. SUBMITTAL DOES NOT INCLUDE SUBSTITUTION REQUEST
   H. SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, SPECIFICATION SECTION NUMBER.

3. THE STRUCTURAL ENGINEER SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS. THE STRUCTURAL ENGINEER' S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT. NO WORK SHALL BE STARTED WITHOUT SUCH REVIEW.

4. FOR COMPONENTS THAT REQUIRE ENGINEERING BY THE CONTRACTOR, PROVIDE A NOTE ON EACH SHOP DRAWING, WRITTEN AND SIGNED BY THE SUPPLIER' S ENGINEER, INDICATING THAT THE SHOP DRAWING IS IN CONFORMANCE WITH THE CALCULATIONS OF THE CONTRACTOR' S ENGINEER.

REQUIRED SUBMITTALS

1. THE FOLLOWING ITEMS REQUIRE SUBMITTALS FOR STRUCTURAL REVIEW AS OUTLINED IN THE SPECIFICATIONS:

   1. 03100 - CONCRETE FORMWORK .....CALC
   2. 03200 - CONCRETE REINFORCING LAYOUT
   3. 03300 - CONCRETE MIX DESIGNS
   4. 03300 - CONCRETE CONSTRUCTION JOINT LAYOUT
   5. 05100 - STRUCTURAL STEEL
   6. 06170 - WOOD TRUSSES.....CALC - S/S

   CALC = CALCULATIONS TO BE PROVIDED TO ENGINEER OF RECORD
   S/S=SIGNED AND SEALED BY ENGINEER IN PROJECT STATE

DELEGATED DESIGNS

1. THE ITEMS IN THIS SECTION REFER TO LOADS IMPOSED BY CONTRACTOR DESIGNED SYSTEMS, SPECIFICALLY:
   A. PRE-ENGINEERED WOOD TRUSSES
   B. FOUNDATION UNDERPINNING

2. WHERE CONTRACTOR LOADS IMPOSED DO NOT EXCEED AND/OR CONNECTION CONDITIONS DO NOT DIFFER FROM WHAT IS INDICATED IN THE STRUCTURAL DRAWINGS, SUBMIT FOR RECORD A LETTER SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED STATING THE FOLLOWING:

   A. "THE CONTRACTOR DESIGNED SYSTEM HAS BEEN DESIGNED TO IMPOSE LOADS ON THE BASE BUILDING STRUCTURE THAT ARE WITHIN THE LOAD LIMITS AND AT THE LOCATIONS INDICATED ON THE STRUCTURAL DRAWINGS."

3. WHERE CONTRACTOR LOADS IMPOSED FOR THE FOLLOWING ITEMS EXCEED AND/OR CONNECTION CONDITIONS DIFFER FROM WHAT IS SHOWN IN THE STRUCTURAL DRAWINGS, SUBMIT FOR APPROVAL TO SER LOADS IMPOSED ON THE PRIMARY STRUCTURAL FRAME DUE TO THE DEAD, LIVE, AND WIND/SEISMIC LOADS INDICATED ON THE CONTRACT DOCUMENTS.

4. SUBMITTAL SHALL LIST THE DESIGN LOADS USED AND BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED. SUBMITTAL SHALL INCLUDE LOCATION, MAGNITUDE AND DIRECTION OF UNFACTORED IMPOSED LOADS, GRAPHICALLY REPRESENTED IN THEIR APPROPRIATE LOCATIONS ON A COPY OF THE CONTRACT DOCUMENT STRUCTURAL FRAMING PLANS OR ELEVATIONS AS APPROPRIATE. DETAIL REFERENCES IN THE CONNECTIONS APPLICABLE AT EACH LOCATION SHALL BE NOTED ON THE SUBMITTAL DRAWINGS.

5. FOR EXERIOR WALL ASSEMBLIES, THE LOADS IMPOSED SUBMITTAL SHALL BE COMPREHENSIVE INDICATING THE LOAD IMPOSED ON THE BASE BUILDING STRUCTURE AND SHALL BE THE REACTION BASED ON THE ACTUAL LOADS OF THE ENTIRE ASSEMBLY, INCLUDING BUT NOT LIMITED TO GLAZING, CLADDING, METAL STUD BACKUP, AND MULLIONS.

6. A SUBSTITUTION REQUEST MAY BE REQUIRED WHERE CONTRACTOR LOADS IMPOSED EXCEED AND/OR CONNECTION CONDITIONS DIFFER FROM THE BASIS OF DESIGN.

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DAYCARE FACILITY
203 PERRY STREET
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GENERAL NOTES

S002

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REQUIRED SPECIAL INSPECTIONS	
IN ADDITION TO THE REGULAR INSPECTIONS REQUIRED BY SECTION 110 OF THE INTERNATIONAL BUILDING CODE, THE FOLLOWING ITEMS ALSO REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH SECTION 1705	
ITEM	SECTION
STRUCTURAL STEEL	IBC 1705.2 / AISC 360 SECTION N5
FIELD WELDING	IBC 1705.5
STRUCTURAL CONCRETE	IBC 1705.3 / ACI 318 17.8, 26.13
WOOD CONSTRUCTION	IBC 1705.2.2.1
ANCHOR BOLTS, POST-INSTALLED ANCHORS IN CONCRETE	ACI 318 17.8
SOILS COMPLIANCE PRIOR TO FOUNDATION INSPECTION	IBC 1705.6 / PER GEOTECH REQUIREMENTS

1. THE ARCHITECT IS THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE (RDPIRC) FOR THIS PROJECT. SUBMIT ALL INSPECTION REPORTS DIRECTLY TO THE RDPIRC FOR REVIEW. INDIVIDUAL INSPECTION REPORTS SHALL INDICATE IF WORK WAS COMPLETED IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE GC FOR CORRECTION. IF NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND RDPIRC PRIOR TO COMPLETION OF THAT PHASE OF WORK.
2. IN ORDER TO COMPLY WITH THE BUILDING CODE REQUIREMENTS, THE SPECIAL INSPECTORS AND TESTING TECHNICIANS MAY NOT BE EMPLOYED BY THE GENERAL CONTRACTOR (GC), SUBCONTRACTORS OR MATERIAL SUPPLIERS. IN THE CASE OF AN OWNER / CONTRACTOR, THE BUILDING OFFICIAL SHALL BE CONSULTED.
3. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS IDENTIFIED IN SECTION 110 OF THE IBC. CONSTRUCTION SHALL REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSES UNTIL APPROVED
4. SPECIAL INSPECTIONS REPORT REQUIREMENTS 1704.2.4: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF WORK. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON PRIOR TO THE START OF WORK BY THE APPLICANT AND THE BUILDING OFFICIAL.

1. THE OWNER SHALL EMPLOY THE SERVICES OF ONE OR MORE SPECIAL INSPECTORS TO PROVIDE SPECIAL
INSPECTIONS DURING CONSTRUCTION FOR THE FOLLOWING:
   A. SHALLOW FOUNDATIONS:
      1. INSPECT SOILS BELOW FOOTINGS FOR ADEQUATE BEARING CAPACITY AND CONSISTENCY WITH GEOTECHNICAL REPORT.
      2. INSPECT REMOVAL OF UNSUITABLE MATERIAL AND PREPARATION OF SUBGRADE PRIOR TO PLACEMENT OF CONTROLLED FILL.
   B. CONTROLLED STRUCTURAL FILL:
      1. PERFORM SIEVE TESTS (ASTM D422 & D1140) AND MODIFIED PROCTOR TESTS (ASTM D1557) ON EACH SOURCE OF FILL MATERIAL.
      2. INSPECT PLACEMENT, LIFT THICKNESS & COMPACTION OF CONTROLLED FILL.
      3. TEST DENSITY OF EACH LIFT OF FILL BY NUCLEAR METHODS (ASTM D2922).
      4. VERIFY EXTENT AND SLOPE OF FILL PLACEMENT.
   C. STRUCTURAL STEEL:
      1. REVIEW SHOP FABRICATION AND QUALITY CONTROL PROCEDURES.
      2. REVIEW CERTIFIED MILL TEST REPORTS & IDENTIFICATION MARKINGS ON HSS SHAPES.
      3. INSPECT INSTALLATION AND TIGHTENING OF HIGH-STRENGTH BOLTS. VERIFY THAT SPLINES HAVE SEPARATED FROM TENSION CONTROL BOLTS. VERIFY PROPER TIGHTENING SEQUENCE.
      4. INSPECT STEEL FRAME FOR COMPLIANCE WITH STRUCTURAL DRAWINGS, INCLUDING BRACING, MEMBER CONFIGURATIONS AND CONNECTION DETAILS.
      5. INSPECT WELDS IN ACCORDANCE WITH AWS D1.1.
   D. POST-INSTALLED ANCHOR BOLTS:
      1. PERIODIC OR CONTINUOUS INSPECTIONS PER THE REQUIREMENTS OF THE ICC-ES REPORT FOR THE PRODUCT USED.
2. THE INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
3. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
   A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE INSPECTOR MAY NOT ALTER, MODIFY, ENLARGE OR WAIVE ANY OF THE REQUIREMENTS OF THE DOCUMENTS.
   B. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE PROFESSIONAL OF RECORD, AND THE CONTRACTOR. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, SUBMIT A COMPLETE LIST OF ALL OUTSTANDING DISCREPANCIES ON A WEEKLY BASIS TO THE OWNER, THE BUILDING OFFICIAL, AND THE PROFESSIONAL OF RECORD UNTIL ALL CORRECTIONS HAVE BEEN COMPLETED.
   C. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
4. STRUCTURAL OBSERVATION BY THE SEOR IS NOT REQUIRED.
5. WHERE INSPECTION REQUIREMENTS DUPLICATE THE REQUIREMENTS OF SPECIFIED QUALITY ASSURANCE TESTING, DUPLICATE INSPECTIONS SHALL NOT BE REQUIRED.

5
S003

SPECIAL INSPECTIONS

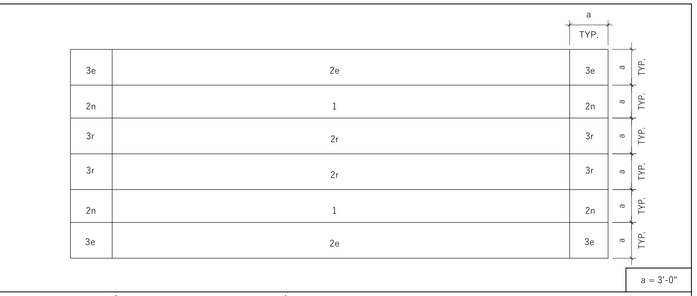
3/4" = 1'-0"

COMPONENT & CLADDING DESIGN WIND PRESSURES (PSF)			
ROOF			
ZONE	10 SF	50 SF	>100 SF
1, 2e (+)	16	16	16
2n, 2r, 3e, 3r (+)	16	16	16
1 (-)	-22.0	-18.9	-16.6
2e (-)	-22.0	-18.9	-16.6
2n (-)	-35.1	-25.0	-20.6
2r (-)	-35.1	-25.0	-20.6
3e (-)	-35.1	-25.0	-20.6
3r (-)	-41.0	-25.9	-25.9
WALLS			
	10 SF	50 SF	>100 SF
4 (+)	16	16	16
4 (-)	-16.8	-16	-16
5 (+)	16	16	16
5 (-)	-20.7	-17.5	-16.1

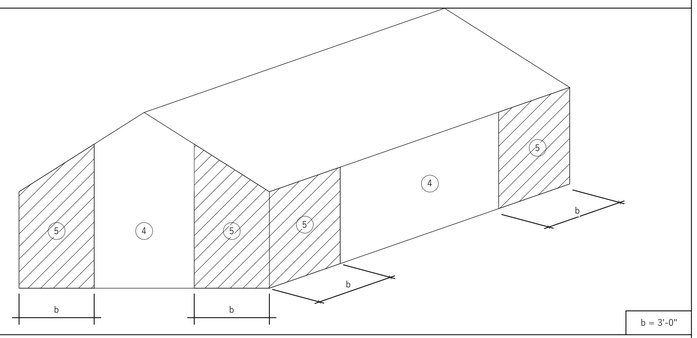
THE FINAL NET DESIGN WIND PRESSURE, INCLUDING ALL PERMITTED REDUCTIONS, USED IN THE DESIGN SHALL NOT BE LESS THAN 16 PSF ACTING IN EITHER DIRECTION

NOTES:

1. TABLE PRESSURES ARE FOR THE SQUARE FOOT (SF) TRIBUTARY AREA SHOWN. FOR OTHER TRIBUTARY AREAS, LINEARLY INTERPOLATE BETWEEN VALUES SHOWN ABOVE.
2. POSITIVE PRESSURES ACT TOWRAD THE BUILDING. NEGATIVE PRESSURES ACT AWAY FROM THE BUILDING.
3. SEE DIAGRAMS FOR ZONE LOCATIONS.
4. ALL PRESSURES SHOWN ARE GROSS ULTIMATE PRESSURES.



ROOF PLAN (GENERIC BUILDING SHOWN)



WALLS (GENERIC BUILDING SHOWN)

1
S003

WIND PRESSURE DIAGRAMS

1" = 1'-0"

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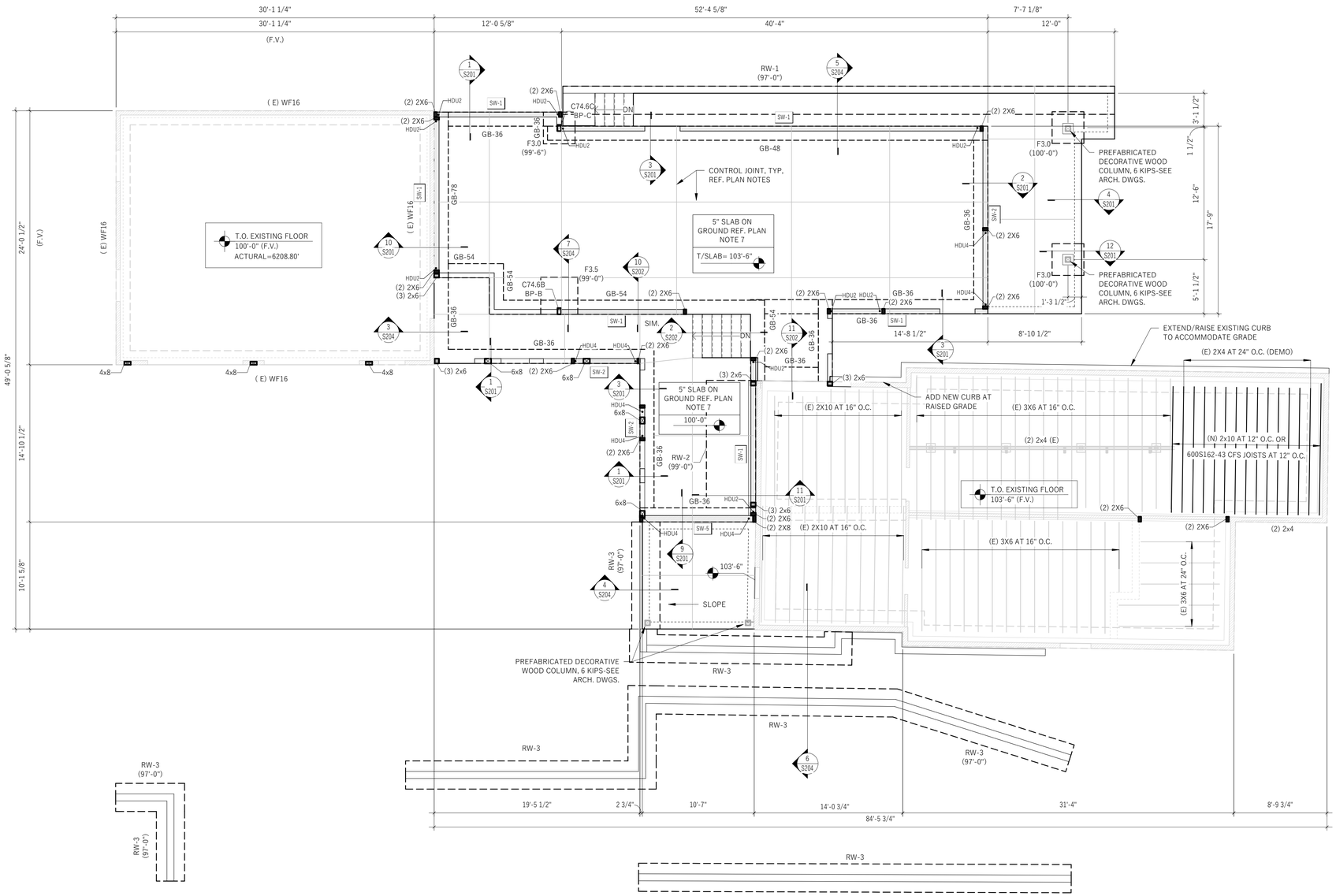

2 S101 FOUNDATION PLAN

3/16" = 1'-0"

GRADE BEAM SCHEDULE

MARK	DEPTH	WIDTH	BOTTOM BARS	TOP BARS	TIES
GB-36	<varies>	1'-4"	(2) #5 BARS CONT.	(2) #5 BARS CONT.	#3 TIES AT 18" O.C.
GB-48	4'-0"	1'-4"	(2) #5 BARS CONT.	(2) #5 BARS CONT.	#3 TIES AT 18" O.C.
GB-54	4'-6"	1'-4"	(2) #5 BARS CONT.	(2) #5 BARS CONT.	#3 TIES AT 18" O.C.
GB-78	6'-6"	1'-4"	(2) #5 BARS CONT.	(2) #5 BARS CONT.	#3 TIES AT 18" O.C.

SHEARWALL SCHEDULE - LEVEL 1

SHEARWALL MARK	SHEARWALL COMPONENTS				HOLDOWNS		TENSION/DRAG TIE CONNECTOR
	SHEATHING	PANEL EDGE ATTACHMENT	TOP PLATE SHEAR CONNECTOR	ANCHOR BOLTS	END POST	HOLDOWN	
1	15/32" PLYWOOD	10d NAILS AT 6" O.C.	LTP4 AT 48" O.C.	1/2" ANCHOR BOLTS AT 48" O.C.	(2) 2x6	HDU2	
2	15/32" PLYWOOD	10d NAILS AT 6" O.C.	LTP4 AT 24" O.C.	1/2" ANCHOR BOLTS AT 48" O.C.	(2) 2x6	HDU4	
5	15/32" PLYWOOD	10d NAILS AT 6" O.C.	LTP4 AT 4" O.C.	1/2" ANCHOR BOLTS AT 48" O.C.	(2) 2x8	HDU4	

SPREAD FOOTING SCHEDULE

MARK	FOOTING DIMENSIONS			REINFORCING				COMMENTS
	WIDTH	LENGTH	THICKNESS	BOTTOM BARS - LONG	BOTTOM BARS - SHORT	TOP BARS - LONG	TOP BARS - SHORT	
F3.0	3'-0"	3'-0"	1'-0"	(3) #5 BARS AT 10" O.C.	(3) #5 BARS AT 10" O.C.	(3) #5 BARS AT 10" O.C.	(3) #5 BARS AT 10" O.C.	
F3.5	3'-6"	3'-6"	1'-0"	(3) #5 BARS AT 12" O.C.	(3) #5 BARS AT 12" O.C.	(3) #5 BARS AT 12" O.C.	(3) #5 BARS AT 12" O.C.	

COLUMN AND BASE PLATE SCHEDULE

MARK	COLUMN SIZE	BASE PLATE						
		BASE PLATE TYPE	BASE PLATE DIMENSIONS					ANCHOR BOLTS
			L	D	A	B	t	
C74.6B	HSS7x4x3/8	BP-B	10"	1'-1"	3 1/2"	5"	3/4"	(4) 3/4" DIA. HEX HEADED ANCHOR RODS x 8" EMBED
C74.6C	HSS7x4x3/8	BP-C	1'-0"	1'-4"	4"	5"	3/4"	(4) 3/4" DIA. HEX HEADED ANCHOR RODS x 8" EMBED

FOUNDATION SHEET NOTES

	REF. DETAIL 14/S302 AT ALL SLAB DEPRESSION LOCATIONS.
1	REF. S0 SERIES FOR GENERAL NOTES, DESIGN CRITERIA.
2	REF. S3 SERIES FOR FOUNDATION TYPICAL DETAILS.
3	DO NOT SCALE WALL LENGTH ON PLAN. REF. ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
4	REFERENCE ELEVATION - TOP OF CONCRETE SLAB ELEVATION = EL. 100'-0" = 6208.8', REF. CIVIL FOR N.A.V.D.
5	TYP. WALL CONSTRUCTION: - PROVIDE 2x6 DFL No. 2 STUDS AT 16" O.C.(MAX HEIGHT=15'-0") - PROVIDE (2) 2x6 DFL No. 2 STUDS AT 16" O.C.(MAX HEIGHT=20'-0"')
6	SLAB-ON-GRADE SHALL BE 5" CONCRETE SLAB REINFORCED WITH #4 BARS AT 18" ON CENTER LOCATED 2" FROM TOP OF SLAB. PLACE 10 MIL VAPOR BARRIER IMMEDIATELY BELOW THE SLAB, OVER A 4 INCH (MIN) THICK BASE COURSE LAYER (REF GEOTECH) OVER THE PREPARED FILL AND SUBGRADE. REF. SHEET S001, AND THE GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION AND SLAB-ON-GRADE NOTES.
7	REF. ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL SLOPED SLABS AND SLAB DEPRESSIONS.
8	SEE APPROVED FINAL GRADING PLAN FOR GRADING INFORMATION. CONTRACTOR SHALL VERIFY THAT BOTTOM OF FOOTING ELEVATIONS MEET THE MINIMUM BEARING REQUIREMENTS GIVEN IN THE SOILS REPORT.
9	REFERENCE ARCHITECTURAL AND PLUMBING DRAWINGS FOR ALL CONCRETE SLAB LEAVE OUTS, FLOOR DRAIN, AND SLAB PENETRATION LOCATIONS. REFER TO 6/S202 & 3/S203
10	SLOPE SLAB AS REQUIRED WHILE MAINTAINING UNIFORM SLAB THICKNESS. SEE ARCH FOR SLAB SLOPES.
11	VERIFY ALL OPENING DIMENSIONS AND LOCATIONS WITH ARCHITECTURAL DRAWINGS.
12	REFERENCE CIVIL DRAWINGS FOR ALL EXTERIOR SIDEWALKS, RAMPS, AND DOOR STOOPS.

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FOUNDATION PLAN

S101

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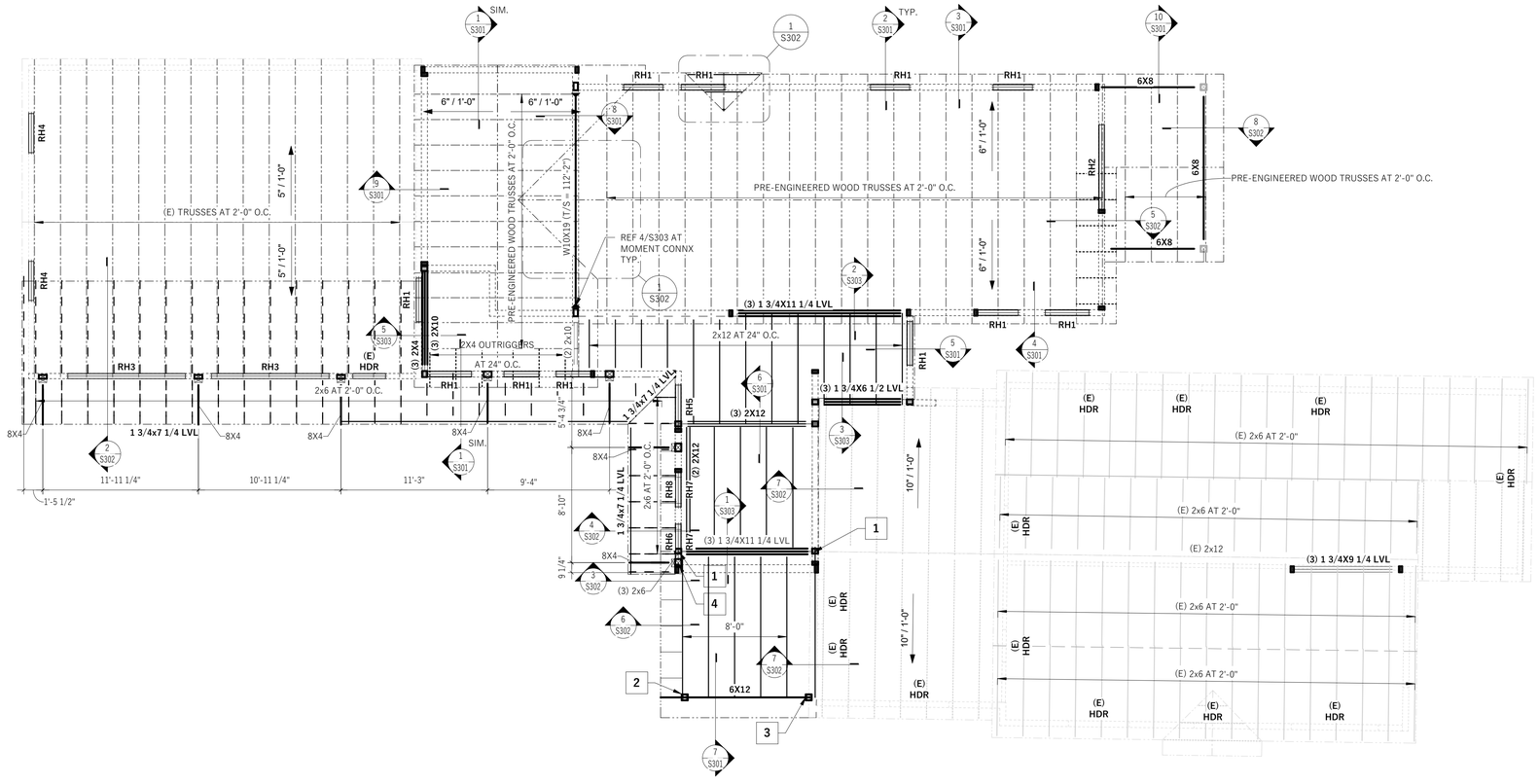
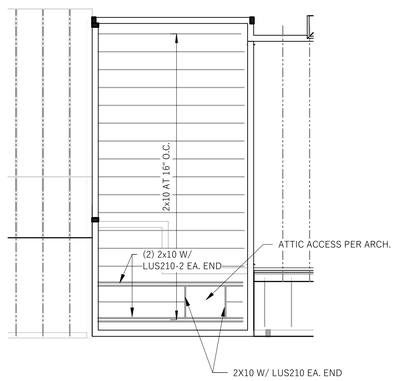


1 S103 ROOF FRAMING PLAN

3/16" = 1'-0"



2 S103 ATTIC FRAMING PLAN

3/16" = 1'-0"

ROOF FRAMING PLAN KEY NOTES

#	KEY NOTE
1	PROVIDE SIMPSON ECCQ5X-SDS2.5 LVL TO POST
2	PROVIDE SIMPSON CC66ROT POST CAP
3	PROVIDE SIMPSON ECC66ROT POST CAP
4	PROVIDE SIMPSON HUC26-3 HANGER FOR HEADER RH7 INTO 6x8 POST. PROVIDE SIMPSON HUC4.75/9 HANGER FOR HEADER RH8 INTO 4X6 POST. USE 4x6 POST I.L.O. KING AND JAMB

HEADER SCHEDULE - ROOF

MARK	HEADER	JAMB STUDS	KING STUD
RH1	(3)2X6	(1) 2x6	(1) 2x6
RH2	(3)2X6	(1) 2x6	(1) 2x6
RH3	(2) 1 3/4x9 1/4" LVL	(2) 2x4	(2) 2x4
RH4	(2)2X6	(1) 2x4	(1) 2x4
RH5	(3) 2X6	(1) 2x6	(3) 2x6
RH6	(3)2X10	(1) 2x6	(4) 1 3/4"x5 1/2" LVL
RH7	(3)2X6	REF RH6 OR RH8	REF RH6 OR RH8
RH8	(3) 2X6	(1) 2x6	(4) 1 3/4"x5 1/2" LVL

WOOD FRAMING SHEET NOTES

1. REF S001 FOR GENERAL NOTES, AND DESIGN CRITERIA.
2. TYP. ROOF CONSTRUCTION: PLYWOOD DECK OVER PRE-ENGINEERED ROOF TRUSSES/WOOD JOISTS
3. DO NOT SCALE WALL LENGTH ON PLAN. REF ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
4. DO NOT CUT, NOTCH, DRILL, BORE, SHAVE, TAPER OR FOR ANY REASON MODIFY PRE- ENGINEERED/ MANUFACTURED STRUCTURAL ELEMENTS SUCH AS GLUE-LAMINATED MEMBERS, PARALAMS, MICROLAMS, WOOD JOISTS, OR SIMILAR MEMBERS UNLESS WRITTEN PARAMETERS ARE SET FORTH BY THE MANUFACTURER OF THAT PRODUCT, THE MANUFACTURER'S ENGINEER, OR THE ENGINEER OF RECORD FOR THE PROJECT.
5. TRUSS/TJI MANUFACTURER TO COORDINATE THE LOCATIONS OF ALL CHASE AND FLOOR OPENINGS WITH ARCH/MECH DRAWINGS. PROVIDE HEADERS AND/OR TRUSS GIRDERS AT OPENINGS AS REQUIRED.

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ROOF FRAMING PLAN

S103

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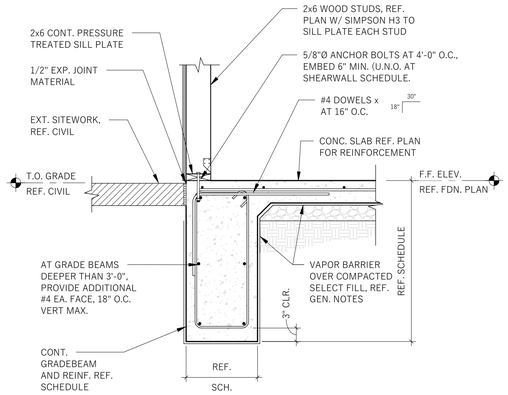
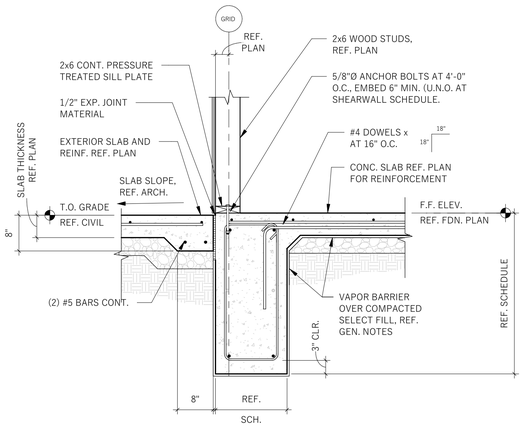


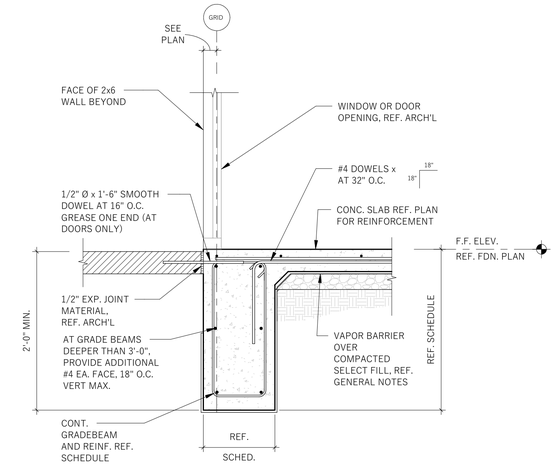
1 S201 EXTERIOR GRADE BEAM

3/4" = 1'-0"



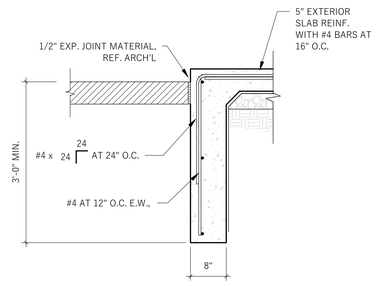
2 S201 WOOD AT EXT GRADE BEAM AT EXT. SLAB

3/4" = 1'-0"



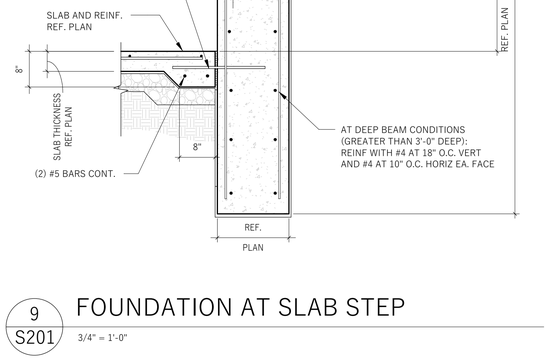
3 S201 EXT. BEAM AT OPENING

3/4" = 1'-0"



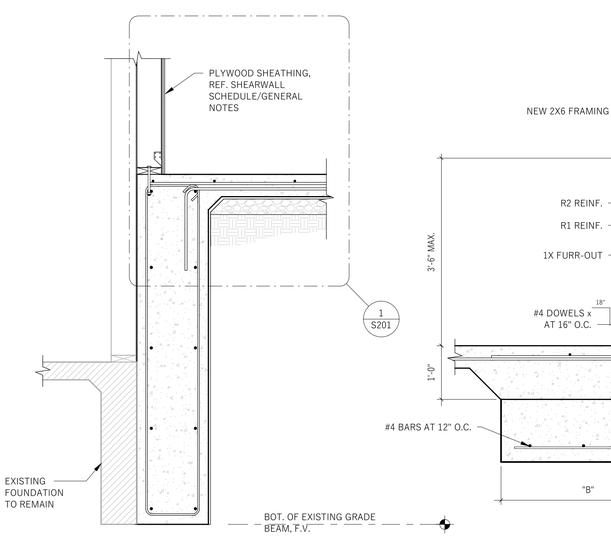
4 S201 EXTERIOR SLAB TURN DOWN

3/4" = 1'-0"



5 S201 SECTION AT HOLDOWN

3/4" = 1'-0"



6 S201 SECTION AT EXTERIOR COLUMN

3/4" = 1'-0"

7 S201 INTERIOR GRADEBEAM

3/4" = 1'-0"

8 S201 EXTERIOR GRADE BEAM AT EXTERIOR WALL

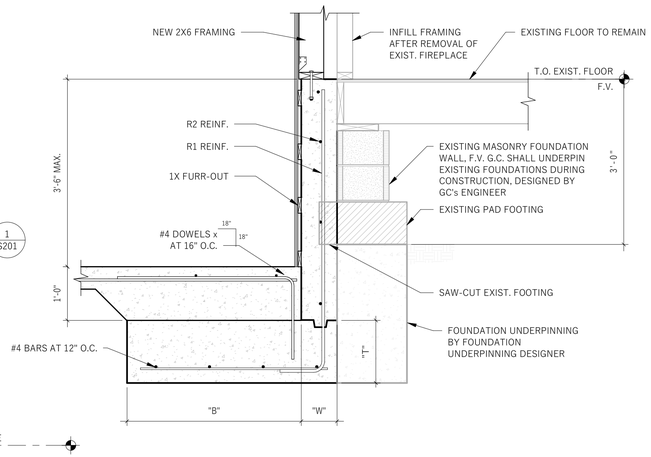
3/4" = 1'-0"

9 S201 FOUNDATION AT SLAB STEP

3/4" = 1'-0"

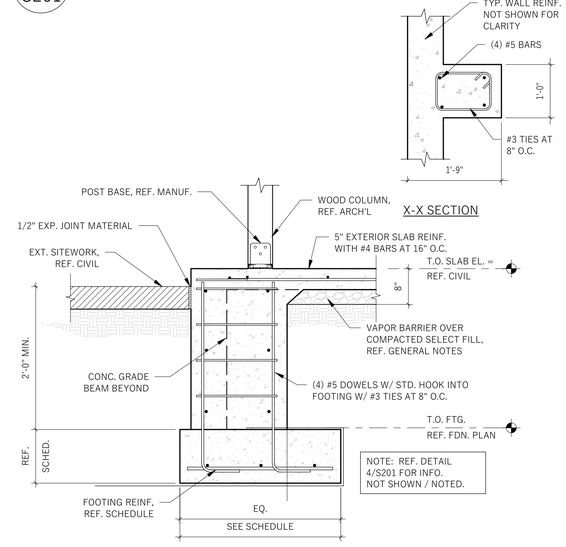
10 S201 SECTION AT GARAGE

3/4" = 1'-0"



11 S201 SECTION AT EXIST. FLOOR RET. WALL

3/4" = 1'-0"



12 S201 EXT. SLAB W/ PILASTER AND FTG.

3/4" = 1'-0"

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23.124

RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
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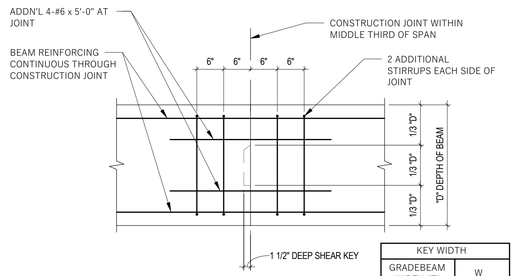
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 03.12.2024
DRAWN: DE
CHECKED: NHR
BDG ARCH NO.: 23.124

FOUNDATION SECTIONS

S201

ISSUED FOR PERMIT - 03.12.2024



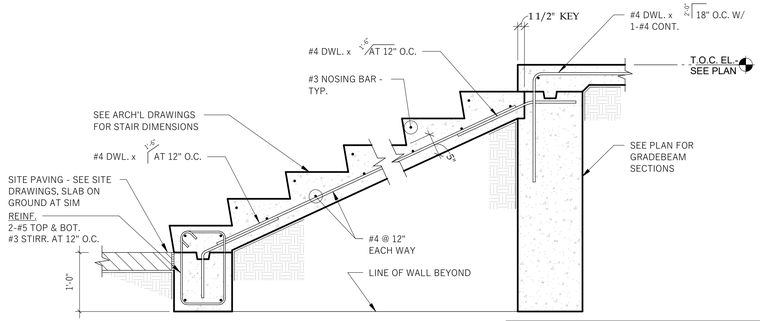
NOTES:
1. THIS DETAIL APPLIES TO BEAMS < 4'-0" DEPTH.

ELEVATION

KEY WIDTH	
GRADEBEAM WIDTH "T"	W
≤ 12"	3 1/2"
12" TO 16"	5 1/2"
16" TO 20"	7 1/4"
20" TO 24"	9 1/4"
24" TO 30"	11 1/4"

1 S202 TYP. GRADE BEAM CONSTRUCTION JOINT DETAIL

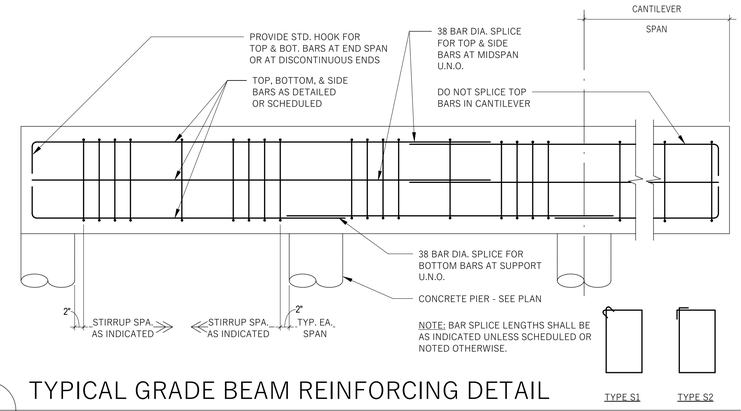
3/4" = 1'-0"



NOTES:
1. COORDINATE DETAIL W/ ARCH'L REQUIREMENTS - MODIFY AS REQ'D
2. ADJUST SOIL RETAINER TYPE TO MATCH PROJECT

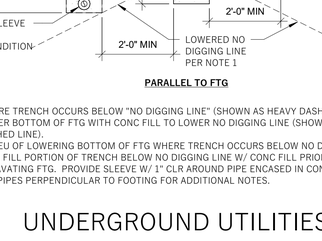
2 S202 CAST IN PLACE CONCRETE STAIRS

3/4" = 1'-0"



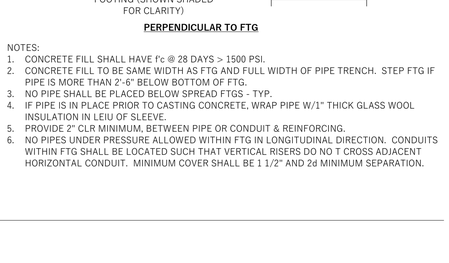
3 S202 TYPICAL GRADE BEAM REINFORCING DETAIL

3/4" = 1'-0"



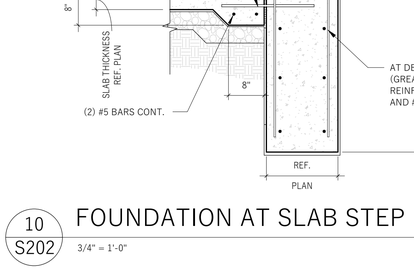
4 S202 FLATWORK AT EXTERIOR DOORS AND ENTRIES DETAIL

1 1/2" = 1'-0"



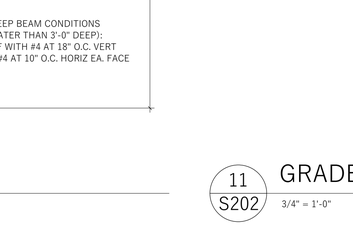
5 S202 TRENCH DRAIN

3/4" = 1'-0"



6 S202 TYPICAL RE-ENTRANT CORNER REINF. DETAIL

3/4" = 1'-0"



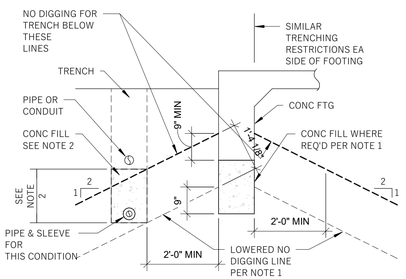
PLAN

7 S202 REINFORCING AT BLOCKOUT

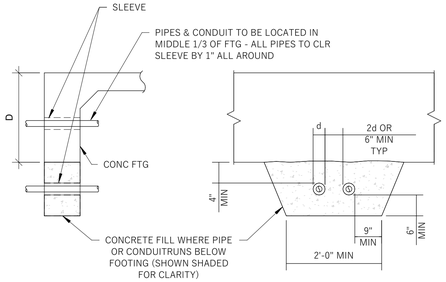
3/4" = 1'-0"

9 S202 TYPICAL NEW WOOD POST FOOTING

3/4" = 1'-0"



PARALLEL TO FTG



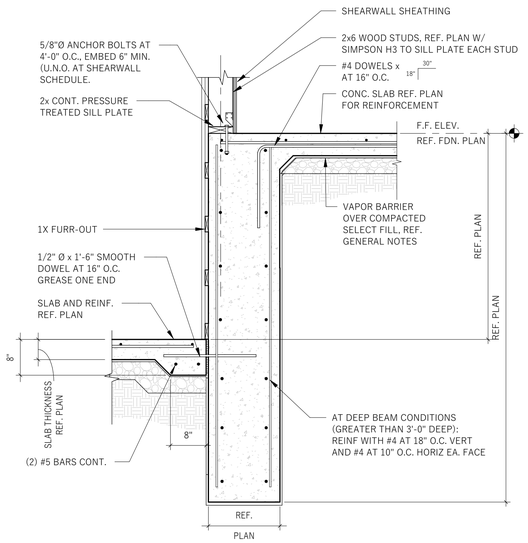
PERPENDICULAR TO FTG

NOTES:
1. WHERE TRENCH OCCURS BELOW "NO DIGGING LINE" (SHOWN AS HEAVY DASHED LINE), LOWER BOTTOM OF FTG WITH CONC FILL TO LOWER NO DIGGING LINE (SHOWN AS LT DASHED LINE).
2. IN LIEU OF LOWERING BOTTOM OF FTG WHERE TRENCH OCCURS BELOW NO DIGGING LINE, FILL PORTION OF TRENCH BELOW NO DIGGING LINE W/ CONC FILL PRIOR TO EXCAVATING FTG. PROVIDE SLEEVE W/ 1" CLR AROUND PIPE ENCASED IN CONC.
3. SEE PIPES PERPENDICULAR TO FOOTING FOR ADDITIONAL NOTES.

NOTES:
1. CONCRETE FILL SHALL HAVE f'c @ 28 DAYS > 1500 PSI.
2. CONCRETE FILL TO BE SAME WIDTH AS FTG AND FULL WIDTH OF PIPE TRENCH. STEP FTG IF PIPE IS MORE THAN 2'-6" BELOW BOTTOM OF FTG.
3. NO PIPE SHALL BE PLACED BELOW SPREAD FTGS - TYP.
4. IF PIPE IS IN PLACE PRIOR TO CASTING CONCRETE, WRAP PIPE W/1" THICK GLASS WOOL INSULATION IN LEIU OF SLEEVE.
5. PROVIDE 2" CLR MINIMUM, BETWEEN PIPE OR CONDUIT & REINFORCING.
6. NO PIPES UNDER PRESSURE ALLOWED WITHIN FTG IN LONGITUDINAL DIRECTION. CONDUITS WITHIN FTG SHALL BE LOCATED SUCH THAT VERTICAL RISERS DO NO T CROSS ADJACENT HORIZONTAL CONDUIT. MINIMUM COVER SHALL BE 1 1/2" AND 2d MINIMUM SEPARATION.

8 S202 UNDERGROUND UTILITIES AT FOUNDATIONS

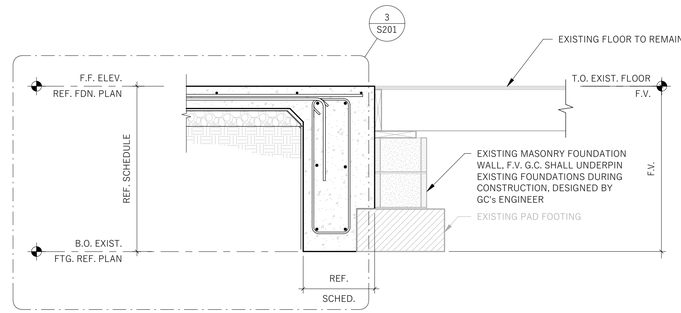
1/2" = 1'-0"



PLAN

10 S202 FOUNDATION AT SLAB STEP

3/4" = 1'-0"



11 S202 GRADE BEAM AT EXIST. FND

3/4" = 1'-0"

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FOUNDATION DETAILS

S202

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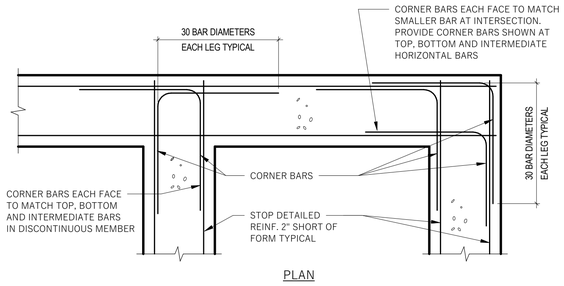


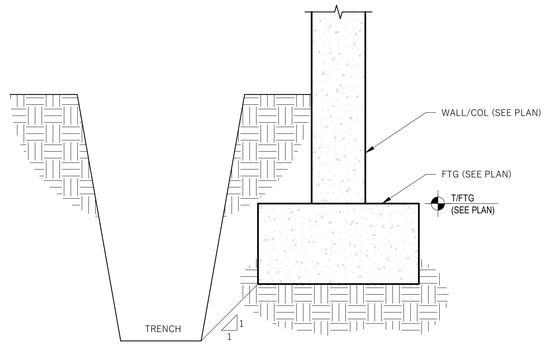
PLAN

NOTES:

1. MATCH SIZE, LOCATION AND NUMBER OF HORIZONTAL BEAM AND WALL BARS, EXCEPT THAT WHERE THERE ARE MORE THAN 2 TOP OR BOTTOM BARS, ONLY THE INSIDE AND OUTSIDE BARS MUST BE MATCHED.
2. WHERE 90 DEGREE HOOKS ARE PROVIDED FOR TOP BARS CORNER BARS MAY BE OMITTED AT TOP. WHERE 90 DEGREE HOOKS ARE PROVIDED FOR BOTTOM BARS, CORNER BARS MAY BE OMITTED AT BOTTOM.

1 S203 TYPICAL CORNER BARS AT WALL OR GRADE BEAM INTERSECTION DETAIL

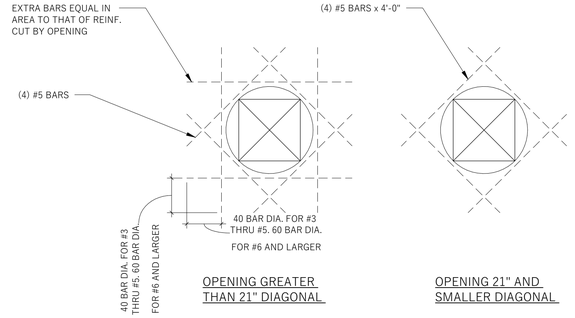
3/4" = 1'-0"



TYP FTG ADJACENT TO TRENCH

2 S203 TYP FOOTING ADJACENT TO TRENCH

3/4" = 1'-0"

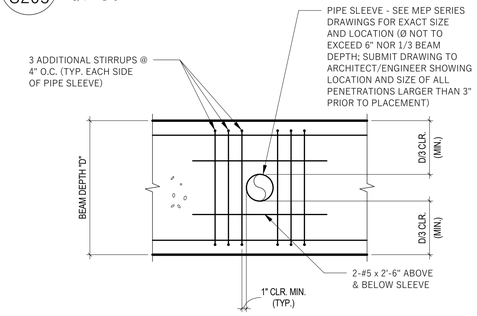


OPENING GREATER THAN 21" DIAGONAL

OPENING 21" AND SMALLER DIAGONAL

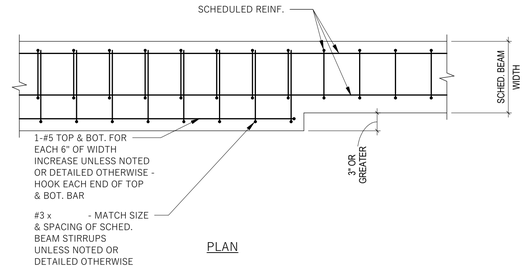
3 S203 TYP. REINFORCING AT CONCRETE OPENINGS

3/4" = 1'-0"



4 S203 PENETRATION THROUGH GRADE BEAM

3/4" = 1'-0"



PLAN

5 S203 TYPICAL BEAM WITH VARYING WIDTH REINFORCING DETAIL

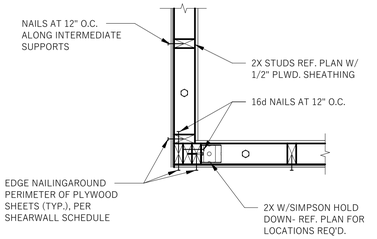
3/4" = 1'-0"

STEEL REINF. LAP SCHEDULE

BAR SIZE	CONCRETE LAP SPLICE (INCHES)						CMU LAP SPLICE (INCHES)
	f'c = 3,000psi		f'c = 3,500psi		f'c = 4,000psi		
	TOP	OTHER	TOP	OTHER	TOP	OTHER	
3	22	17	20	16	20	15	18
4	29	22	27	21	25	19	24
5	36	28	33	26	32	24	30
6	43	33	40	31	38	29	36
7	63	48	58	45	55	42	42
8	72	55	66	51	63	48	48

6 S203 STEEL REINF. LAP SCHEDULE

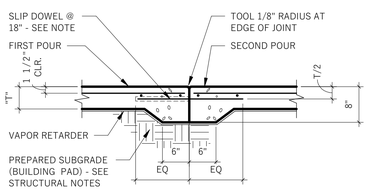
3/4" = 1'-0"



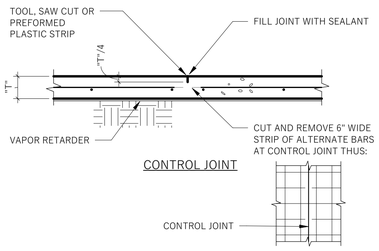
7 S203 PLAN AT HOLDOWN

1" = 1'-0"

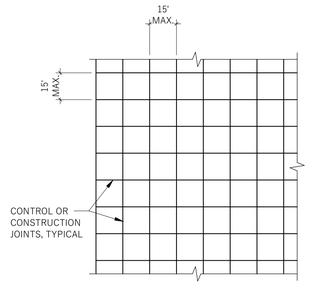
NOTE:
PROVIDE ONE OF THE FOLLOWING SLIP DOWELS:
- PNA CONSTRUCTION TECHNOLOGIES 1/4" x 4 1/2" x 4 1/2" "DIAMOND DOWEL" PLATE DOWEL SYSTEM.
- GREENSTREAK 5/8" DIA. SMOOTH x 24" "SPEED DOWEL" SYSTEM.
- 1/2" DIA. x 2'-0" A36 SMOOTH ROD.



CONSTRUCTION JOINT



CONTROL JOINT

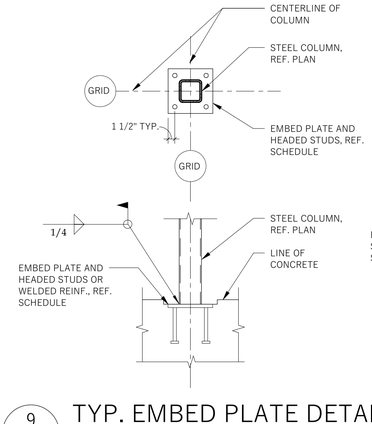


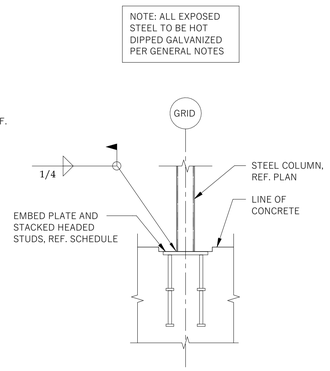
SLAB-ON-GRADE NOTES:

1. SEE PLAN FOR THICKNESS OF SLAB (T) AND REINFORCING.
2. SAWCUT JOINTS WITH IN THE TIME FRAME NOTED BELOW:
   a. 12 HOURS FOR SLABS COVERED BY FINISHES OR NON-PUBLIC SPACES.
   b. 4 HOUR FOR SLABS EXPOSED TO PUBLIC VIEW OR WHERE NOTED "SOFF-CUT" BRAND SAW SHALL BE USED.
3. IF METAL FORMS ARE USED, REMOVE THEM BEFORE PLACING ADJACENT SLAB.
4. FOR SLABS WITH THICKNESS (T) GREATER THAN 6", THICKENED EDGES ARE NOT REQUIRED AT JOINTS.
5. PROVIDE A CONSTRUCTION OR A CONTROL JOINT ON THE CENTERLINES OF COLUMNS.
6. LAP REINFORCING 38 BAR DIAMETER MINIMUM.

8 S203 TYPICAL SLAB-ON-GRADE DETAIL

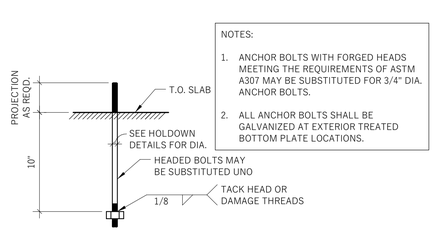
3/4" = 1'-0"





9 S203 TYP. EMBED PLATE DETAIL

3/4" = 1'-0"



NOTES:

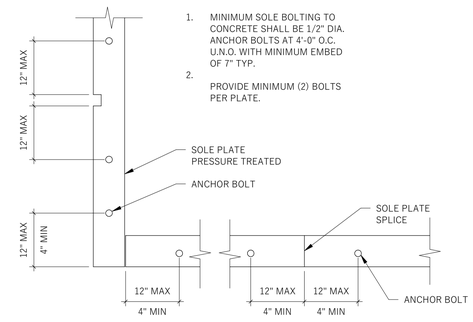
1. ANCHOR BOLTS WITH FORGED HEADS MEETING THE REQUIREMENTS OF ASTM A307 MAY BE SUBSTITUTED FOR 3/4" DIA. ANCHOR BOLTS.
2. ALL ANCHOR BOLTS SHALL BE GALVANIZED AT EXTERIOR TREATED BOTTOM PLATE LOCATIONS.

10 S203 HOLDOWN ANCHOR BOLT

1" = 1'-0"

NOTES:

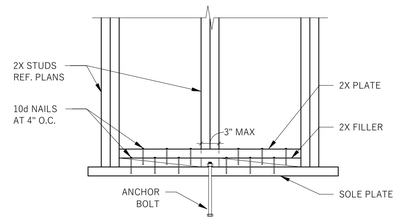
1. MINIMUM SOLE BOLTING TO CONCRETE SHALL BE 1/2" DIA. ANCHOR BOLTS AT 4'-0" O.C. U.N.O. WITH MINIMUM EMBED OF 7" TYP.
2. PROVIDE MINIMUM (2) BOLTS PER PLATE.



PLAN VIEW

11 S203 TYP. SILL PLATE BOLTING

1" = 1'-0"



12 S203 TYP. SILL PLATE AT DBL. STUD

1" = 1'-0"

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FOUNDATION DETAILS

S203

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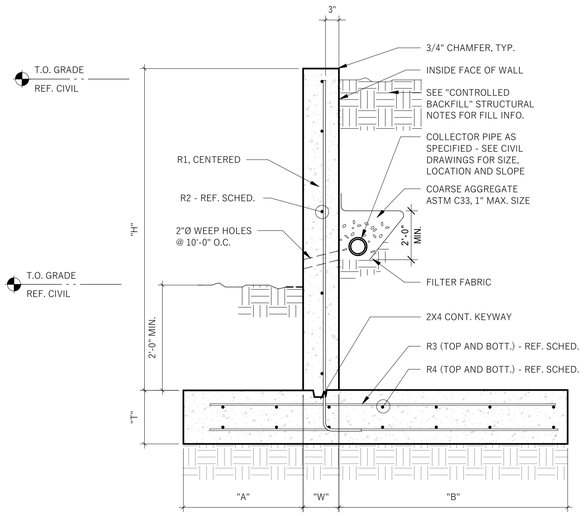
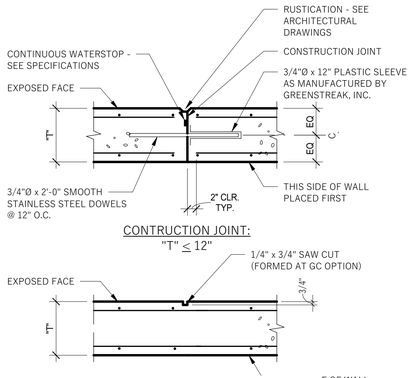
RETAINING WALL SCHEDULE									
DIMENSIONS						REINFORCING			
MARK	"H" MAX.	"A"	"B"	"T"	"W"	R1	R2	R3	R4
RW-1	2'-6"	0'-0"	1'-6"	1'-0"	8"	#5 @ 16" x	#4 @ 12"	#5 @ 10" x ____	#5 @ 10" x ____
RW-2	3'-6"	0'-0"	4'-0"	1'-2"	8"	#5 @ 12" x	#4 @ 12"	#5 @ 12" x ____	N/A
RW-2	3'-0"	1'-0"	1'-0"	1'-3"	8"	#4 @ 16" x	#4 @ 12"	#5 @ 10" x ____	#5 @ 10" x ____



NOTES:

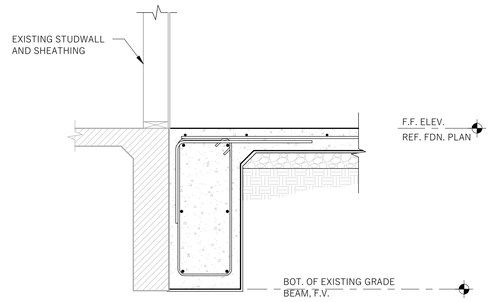
1. REFER TO CIVIL DRAWINGS FOR EXACT LOCATIONS.
2. REFERENCE STRUCTURAL NOTES FOR MIN. CONCRETE STRENGTH REQUIREMENTS.
3. REFERENCE DETAIL 3/S204 FOR TYPICAL CONTROL JOINT DETAIL.
4. PROVIDE CONTRACTION JOINTS AT 30'-0" O.C.
5. PROVIDE CONSTRUCTION JOINTS AT 90'-0" O.C.

1 S204 TYPICAL RETAINING WALL DETAIL
3/4" = 1'-0"

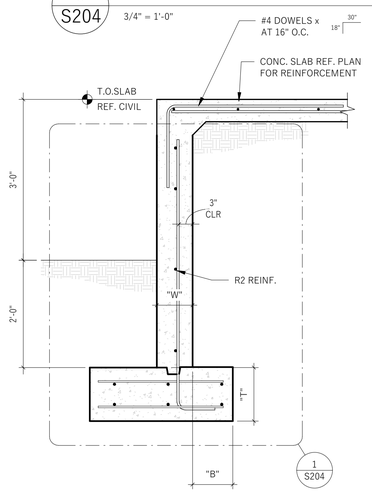


TYPICAL RETAINING WALL CONTROL/CONTRACTION JOINT DETAIL

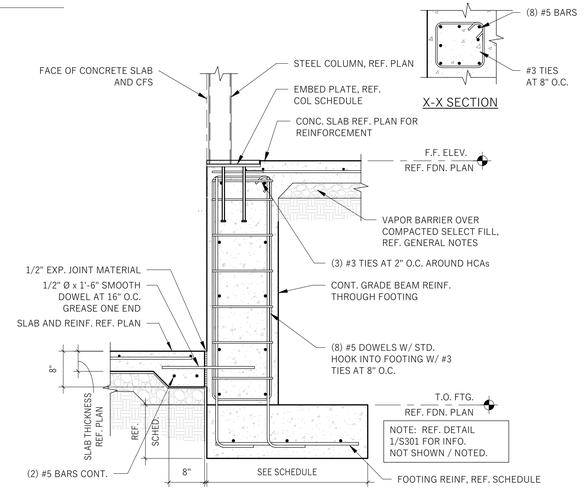
2 S204
3/4" = 1'-0"



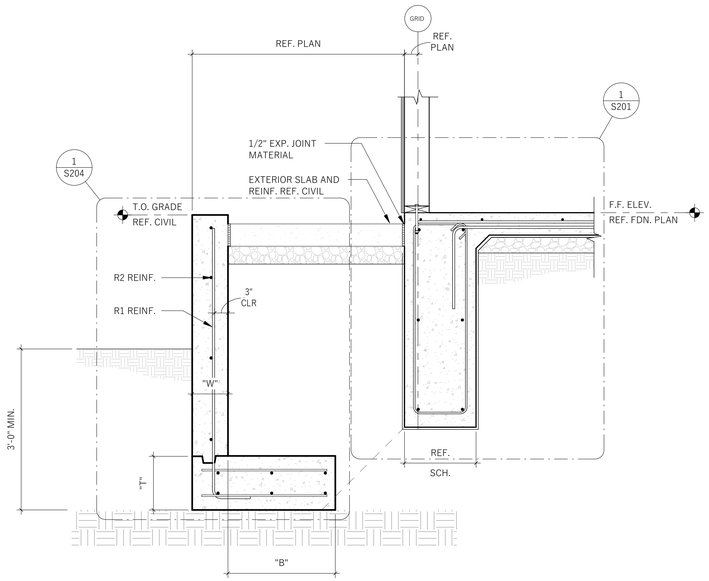
3 S204 LOW SLAB AT EXISTING GARAGE
3/4" = 1'-0"



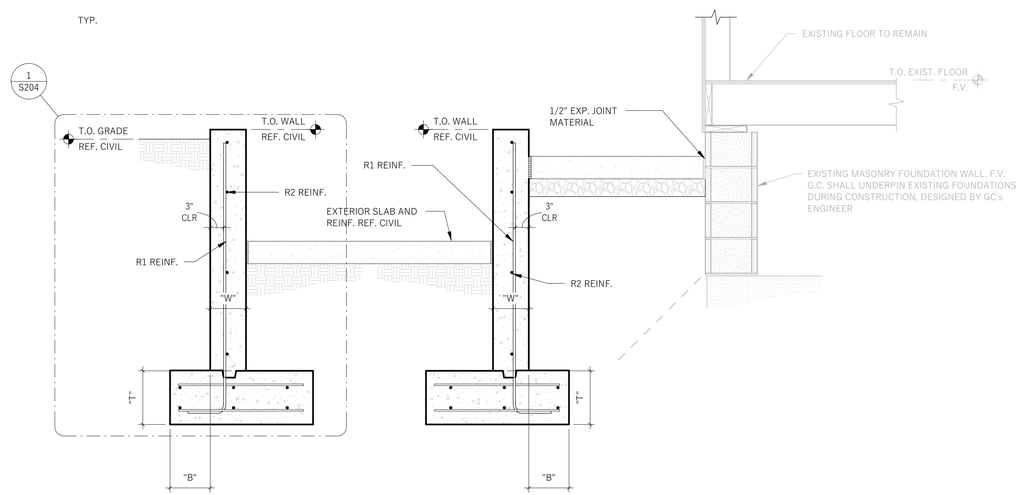
4 S204 SECTION AT PATIO RETAINING WALL
3/4" = 1'-0"



7 S204 FNDN. AT INTERIOR STEEL COLUMN
3/4" = 1'-0"



5 S204 SECTION AT PROPERTY RETAINING WALL
3/4" = 1'-0"



6 S204 SECTION AT PLANTER
3/4" = 1'-0"

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RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
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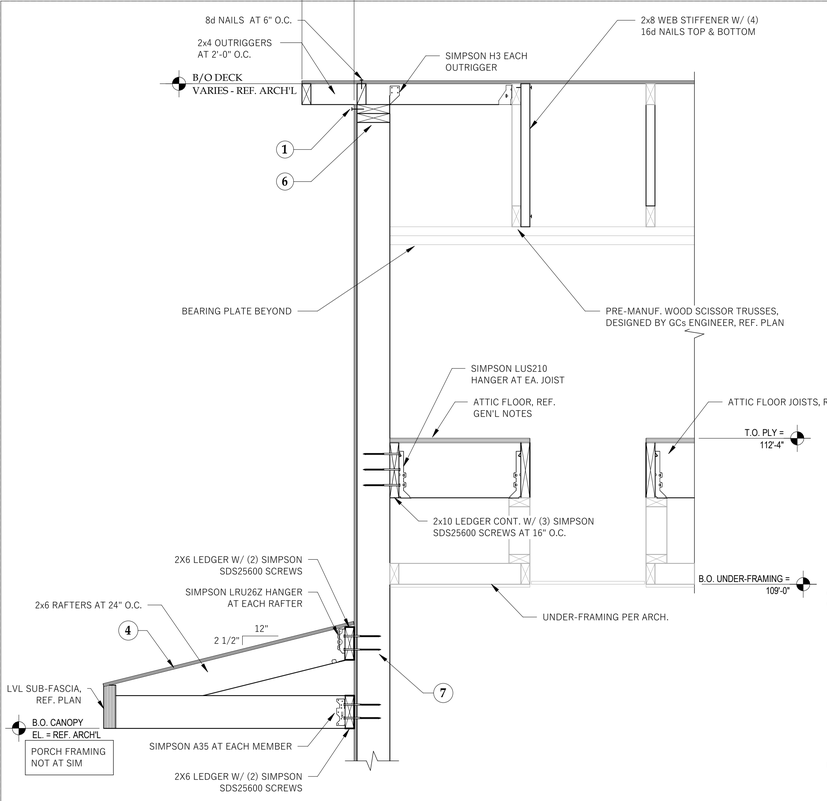
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 03.12.2024
DRAWN: DE
CHECKED: NHR
BDG ARCH NO.: **23.124**

FOUNDATION AND RETAINING SECTIONS

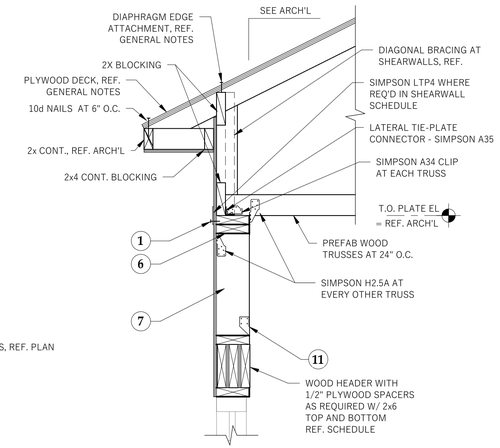
S204

ISSUED FOR PERMIT - 03.12.2024



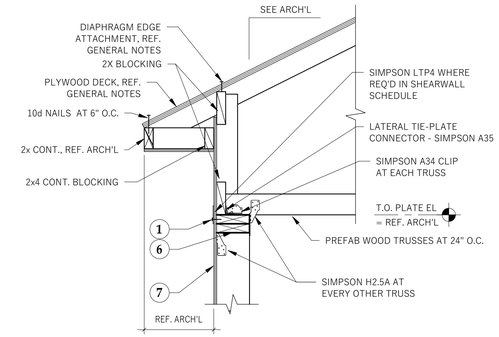
1 S301 SECTION AT GABLE ROOF

1" = 1'-0"



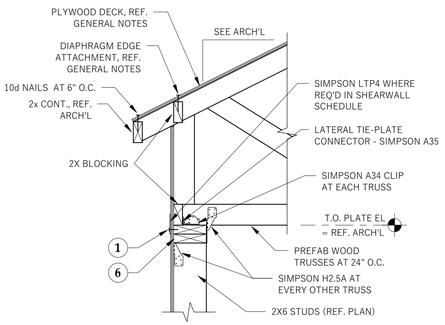
2 S301 TYP. TRUSS BEARING AT HEADER

1" = 1'-0"



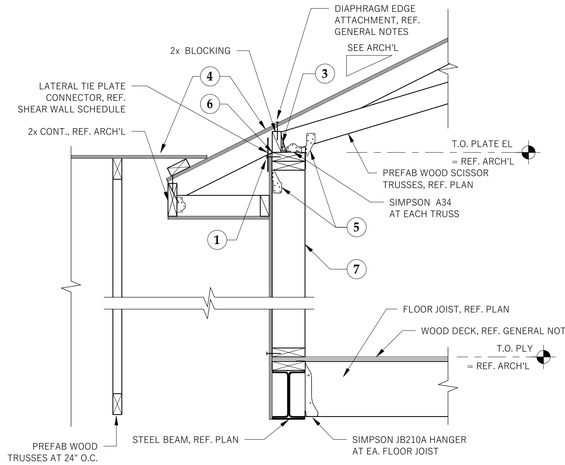
3 S301 TYPICAL TRUSS BEARING

1" = 1'-0"



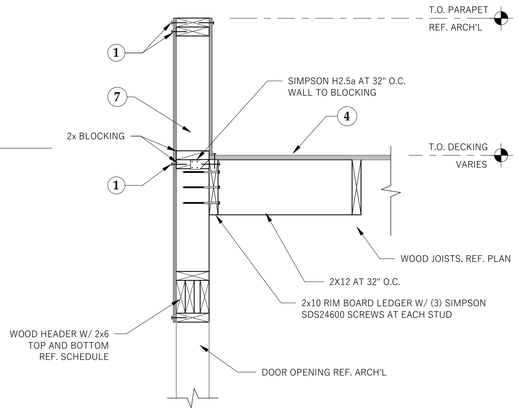
4 S301 TYPICAL ROOF TRUSS BEARING

1" = 1'-0"



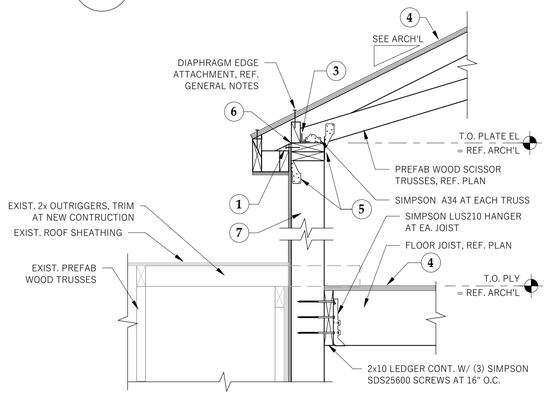
8 S301 UPPER ROOF AND ATTIC FLOOR FRAMING

1" = 1'-0"



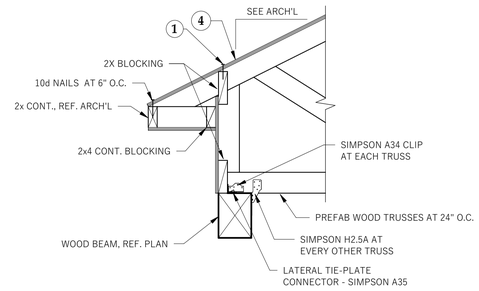
5 S301 ROOF FRAMING AT PARAPET

1" = 1'-0"



6 S301 FRAMING AT FLAT-GABLE ROOF TRANSITION

1" = 1'-0"



7 S301 ROOF FRAMING AT WEST DECK

1" = 1'-0"

9 S301 TYP. SCISSOR TRUSS BEARING

1" = 1'-0"

10 S301 PATIO ROOF FRAMING

1" = 1'-0"

FRAMING DETAIL KEY NOTES	
1	SHEARWALL EDGE NAILING AT SHEARWALLS, 10d NAILS AT 6" O.C. CONT. MIN.
3	SIMPSON A35 AT 48" O.C. TO CONT. PLATE, UNLESS NOTED OTHERWISE IN SHEARWALL SCHEDULE
4	PLYWOOD DECK, REF. GENERAL NOTES
5	SIMPSON H2.5A TO CONT. PLATE
6	CONT. DOUBLE 2X TOP PLATES (MATCH WALL STUD SIZE) - SEE TOP PLATE DETAIL
7	2X6 STUDS (REF. PLAN FOR SPACING) WITH EXTERIOR GRADE PLYWOOD, REF. GENERAL NOTES
11	SIMPSON H3 CONNECTOR STUD TO CONT. SILL PLATE, TYP.

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ROOF FRAMING SECTIONS

S301

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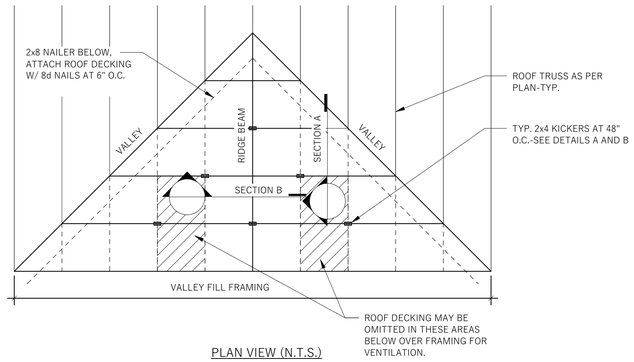
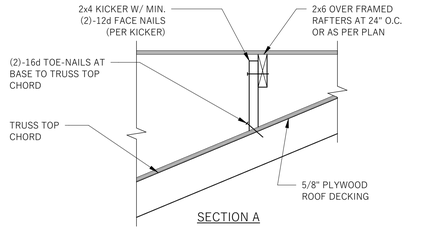
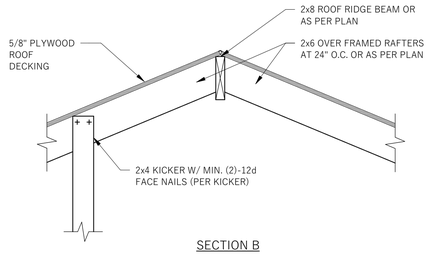


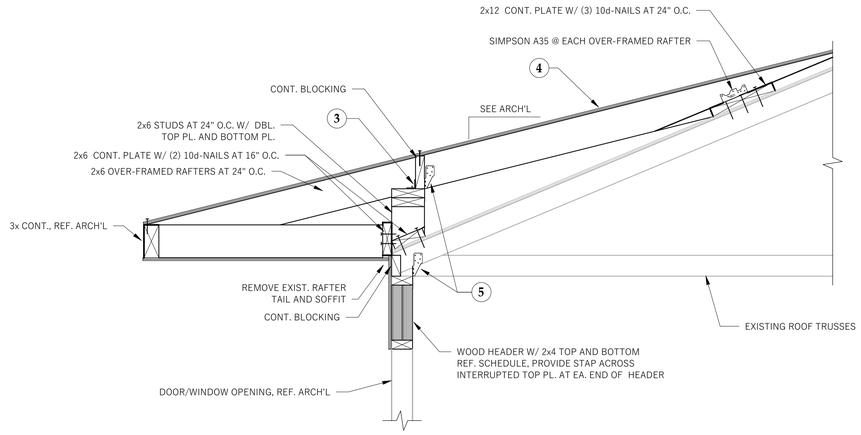
PLAN VIEW (N.T.S.)



SECTION A



SECTION B

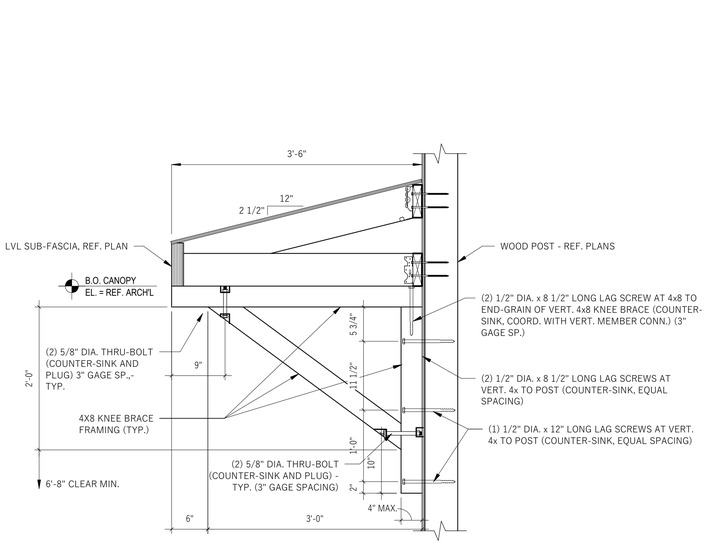


1 S302 TYP. OVER-FRAMING DETAIL

1" = 1'-0"

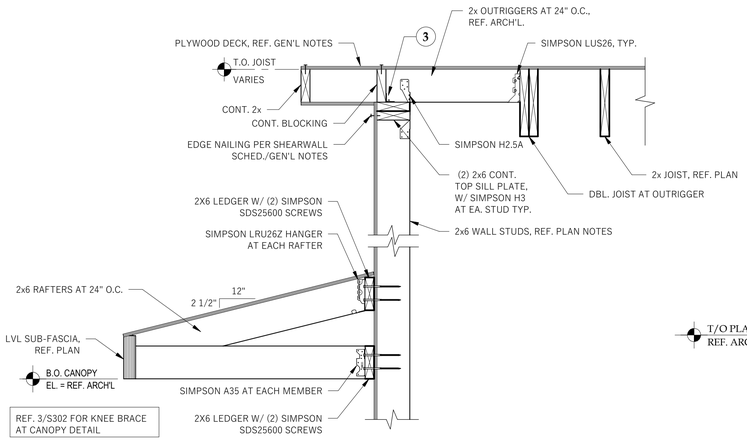
2 S302 OVER-FRAMING AT EXIST. ROOF

1" = 1'-0"



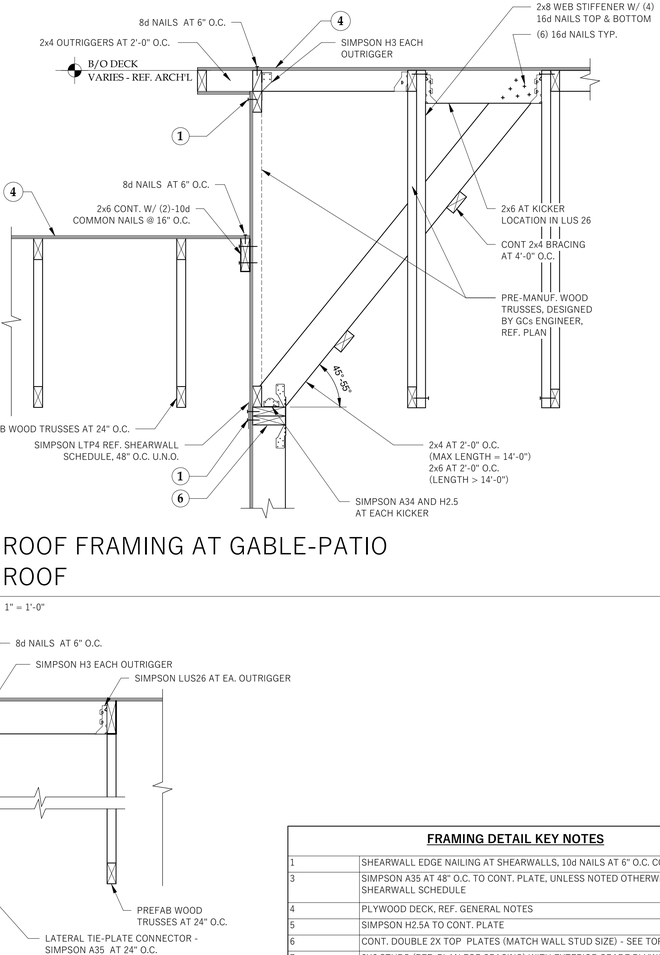
3 S302 KNEE BRACE AT CANOPY ROOF

1" = 1'-0"



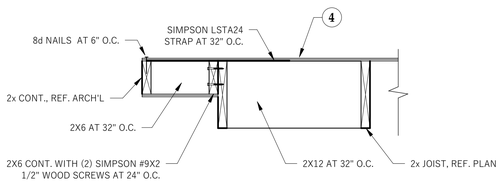
4 S302 ROOF FRAMING AT OFFICE

1" = 1'-0"



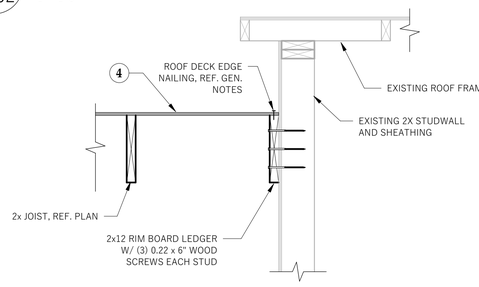
5 S302 ROOF FRAMING AT GABLE-PATIO ROOF

1" = 1'-0"



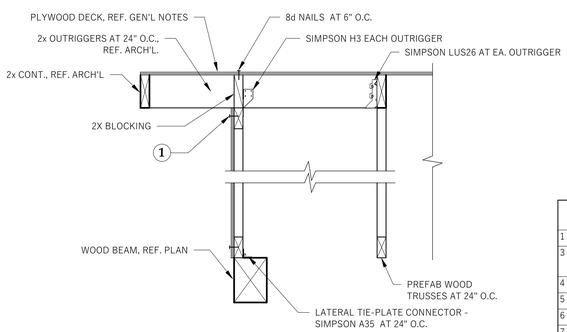
6 S302 ROOF FRAMING AT OUTDOOR DECK

1" = 1'-0"



7 S302 NEW/EXISTING ROOF FRAMING

1" = 1'-0"



8 S302 ROOF FRAMING AT PATIO

1" = 1'-0"

FRAMING DETAIL KEY NOTES	
1	SHEARWALL EDGE NAILING AT SHEARWALLS, 10d NAILS AT 6" O.C. CONT. MIN.
3	SIMPSON A35 AT 48" O.C. TO CONT. PLATE, UNLESS NOTED OTHERWISE IN SHEARWALL SCHEDULE
4	PLYWOOD DECK, REF. GENERAL NOTES
5	SIMPSON H2.5A TO CONT. PLATE
6	CONT. DOUBLE 2X TOP PLATES (MATCH WALL STUD SIZE) - SEE TOP PLATE DETAIL
7	2X6 STUDS (REF. PLAN FOR SPACING) WITH EXTERIOR GRADE PLYWOOD, REF. GENERAL NOTES
11	SIMPSON H3 CONNECTOR STUD TO CONT. SILL PLATE, TYP.

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ROOF FRAMING SECTIONS

S302

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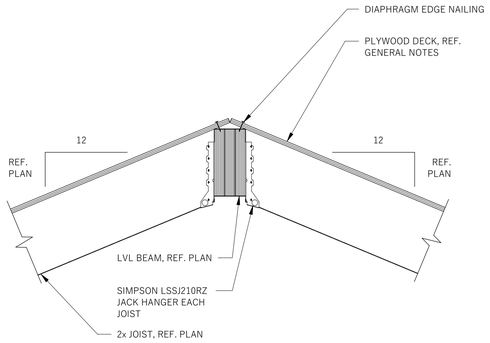
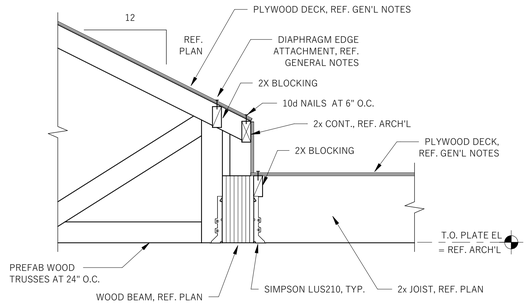


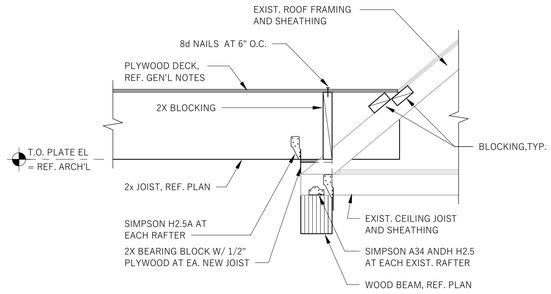
1 S303 ROOF FRAMING AT RIDGE

1" = 1'-0"



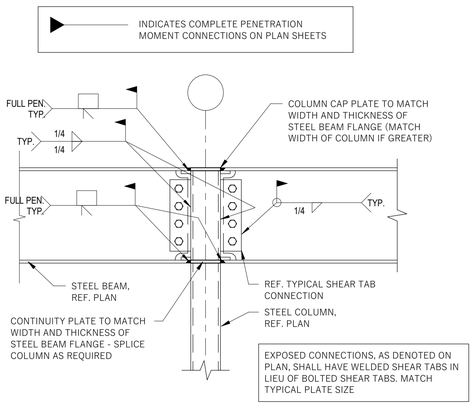
2 S303 GABLE-FLAT ROOF FRAMING AT FLUSH BEAM

1" = 1'-0"



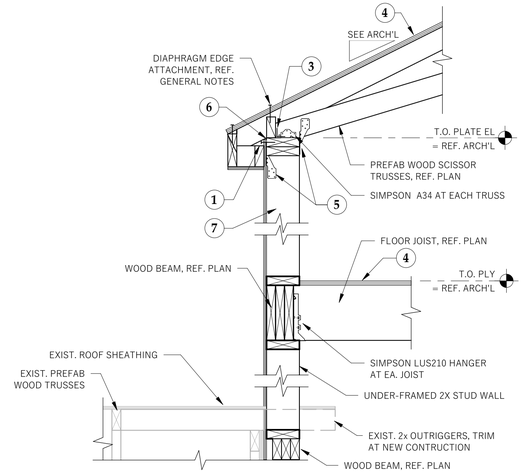
3 S303 FLAT-EXIST. GABLE ROOF FRAMING

1" = 1'-0"



4 S303 TYP. WIDE FLANGE MOMENT CONN. AT HSS COL.

1" = 1'-0"



5 S303 ROOF AND ATTIC FLOOR FRAMING

1" = 1'-0"

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ROOF FRAMING SECTIONS

S303

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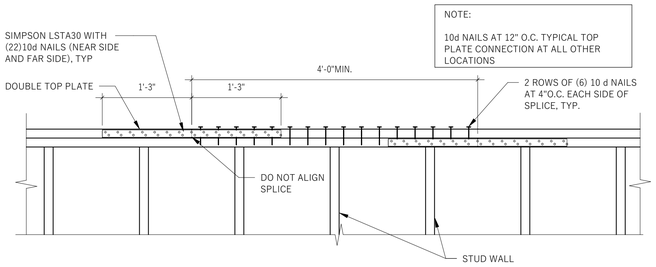
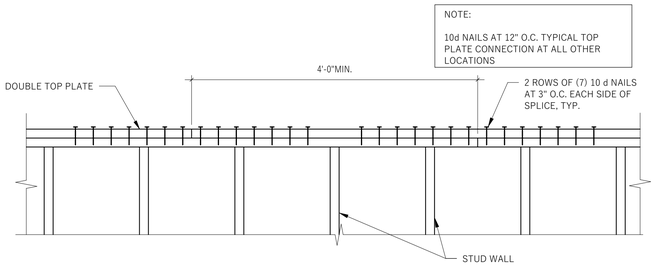


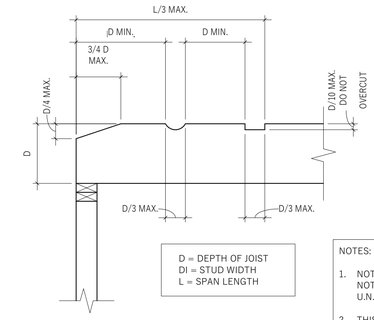
1 S501 TYP. TOP PLATE STRAP SPLICE

1" = 1'-0"



2 S501 TYP. TOP PLATE SPLICE

1" = 1'-0"

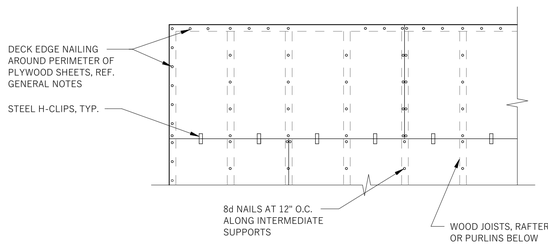


NOTES:

1. NOTCH CUTS ALLOWED IN TOP OF JOISTS ONLY - NOTIFY ENGINEER PRIOR TO CUTTING BEAMS TYP. U.N.O.
2. THIS DETAIL DOES NOT APPLY TO ENGINEERED WOOD "I" JOISTS.

3 S501 TYP. NOTCHES IN WOOD

1" = 1'-0"

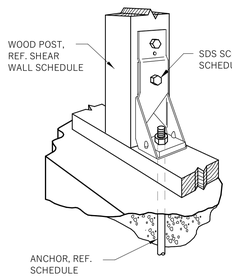


PLYWOOD DIAPHRAGM NOTES

1. COMMON OR BOX NAILS SHALL BE USED FOR ALL DIAPHRAGM NAILING.
2. PROVIDE 1/8" GAP BETWEEN ALL SHEETS.
3. ALL PLYWOOD DECKING TO BE GRADE C-D WITH EXTERIOR GLUE. REF. GENERAL NOTES AND DETAILS FOR THICKNESS.
4. STAGGER ALL JOINTS IN PLYWOOD DECKING

4 S501 TYPICAL ROOF DECK NAILING PATTERN

1" = 1'-0"



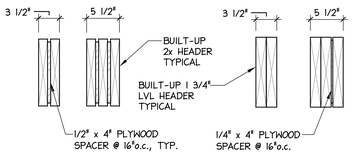
SCHEDULE				
HOLDOWN	FASTENERS		ANCHOR DIA.	EMBEDMENT DEPTH
	QUANTITY - TYPE	SIZE		
HDU2-SDS2.5	6 - SDS SCREWS	1/4"x 2 1/2"	5/8"	6.25"
HDU4-SDS2.5	10 - SDS SCREWS	1/4"x 2 1/2"	5/8"	12.5"
HDU5-SDS2.5	14 - SDS SCREWS	1/4"x 2 1/2"	5/8"	18"
HDU8-SDS2.5	20 - SDS SCREWS	1/4"x 2 1/2"	7/8"	18"
HDU11-SDS2.5	30 - SDS SCREWS	1/4"x 2 1/2"	1"	18"
HDU14-SDS2.5	36 - SDS SCREWS	1/4"x 2 1/2"	1"	24"

NOTES:

1. REF. MFR. FOR ITEMS SHOWN BUT NOT NOTED.
2. INSTALL PER MFR. RECOMMENDATIONS.

6 S501 SIMPSON "HD" SHEAR WALL HOLDOWN

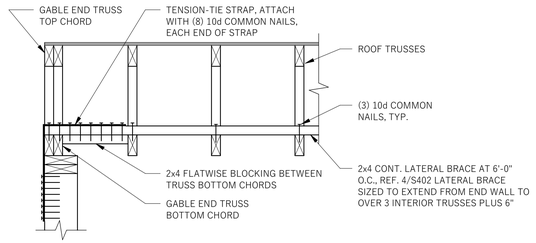
1" = 1'-0"



ALL TOP FLOOR NON LOAD BEARING HEADERS SHALL BE (1) 2x4 FLAT.

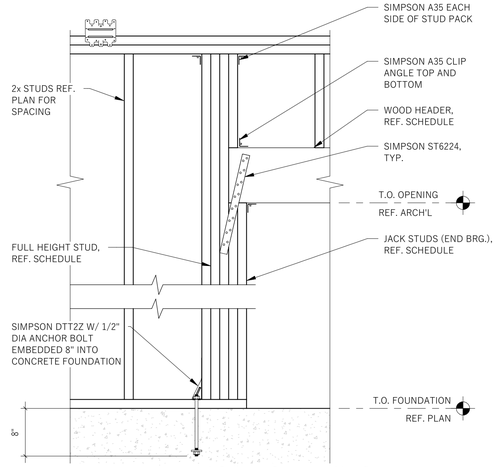
5 S501 WOOD HEADER DETAIL

12" = 1'-0"



8 S501 GABLE END BRIDGING FRAMING

1" = 1'-0"



7 S501 FR-61-611 - TYPICAL OPENING DETAIL

1" = 1'-0"

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TYP. WOOD FRAMING DETAILS

S501

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CASTLE ROCK , CO 80104

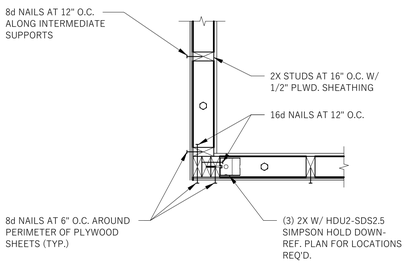
DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 03.12.2024
DRAWN: DE
CHECKED: NHR
BDG ARCH NO.: **23.124**

TYP. SHEARWALL ELEVATIONS

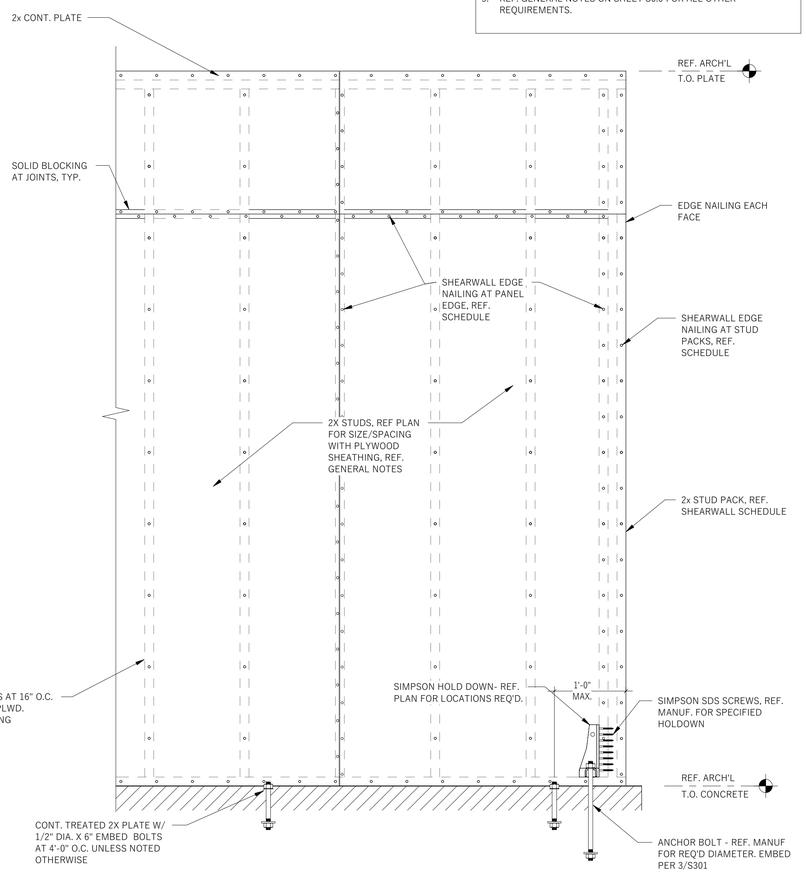
S601

ISSUED FOR PERMIT - 03.12.2024



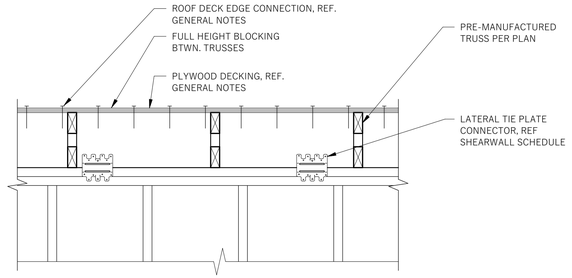
SHEAR WALL NOTES:

1. COMMON OR BOX NAILS SHALL BE USED FOR ALL SHEAR WALL NAILING.
2. PROVIDE 1/8" GAP BETWEEN ALL SHEETS.
3. MINIMUM 3"x3"x1/4" PLATE WASHERS SHALL BE USED WITH ALL ANCHOR BOLTS.
4. WHEN PANELS ARE APPLIED ON BOTH FACES OF A SHEAR WALL AND NAIL SPACING IS LESS THAN 6" ON CENTER ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. ALTERNATIVELY, THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS SHALL BE 3" NOMINAL OR GREATER AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED.
5. REF. GENERAL NOTES ON SHEET S0.0 FOR ALL OTHER REQUIREMENTS.



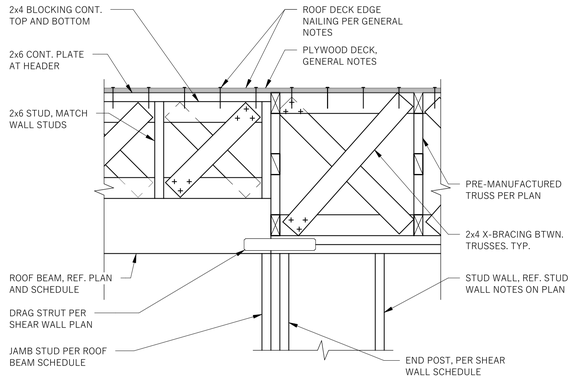
4 S601 TYP. EXTERIOR SHEARWALL NAILING PATTERN

1" = 1'-0"



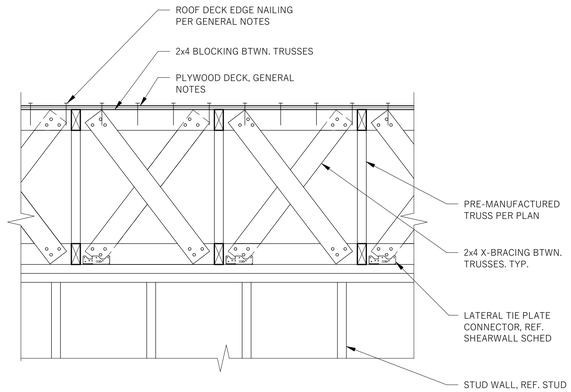
1 S601 TRUSS BLOCKING AT SHEARWALLS

1" = 1'-0"



3 S601 ELEVATION AT ROOF DRAG STRUT

1" = 1'-0"



2 S601 TRUSS X-BRACING AT SHEARWALL

1" = 1'-0"

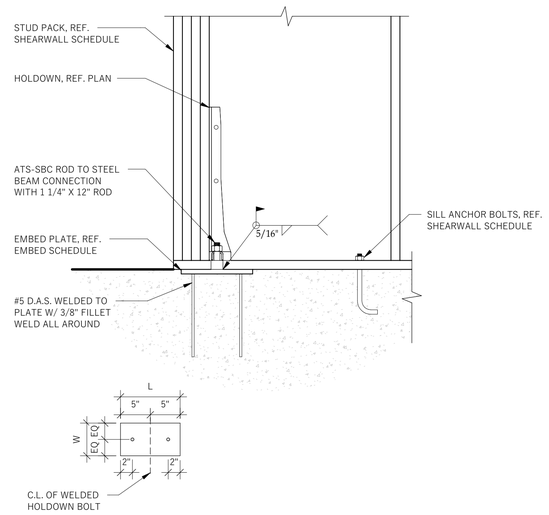


PLATE TYPE	PLATE THICKNESS	WIDTH (W)	LENGTH (L)	NUMBER OF BARS X EMBED DEPTH
				ARS X 30" EMBED

5 S601 EMBED PLATES AT SHEARWALL HOLDOWNS

1" = 1'-0"

MECHANICAL GENERAL NOTES

1. DO NOT SCALE DRAWINGS.

2. CONTRACTOR SHALL COORDINATE WORK INDICATED HEREON W/ PLUMBING, ELECTRICAL & FIRE PROTECTION SECTIONS. SUBMIT ¼" SCALE SHOP DRAWINGS FOR DUCT SYSTEMS, DIMENSIONED TO INCORPORATE THE WORK OF OTHER TRADES. INDICATE SPACES RESERVED FOR FIRE SPRINKLER, PIPING & ELECTRICAL CONDUIT MAINS.

3. UNLESS NOTED OTHERWISE, BRANCH DUCTS TO INDIVIDUAL TERMINALS, DIFFUSERS AND GRILLES SHALL BE SAME SIZE AS NECK INLET.

4. PROVIDE EQUIPMENT SCHEDULED OR INDICATED ON THE DRAWINGS BUT NOT INCLUDED WITHIN THE SPECIFICATIONS. INSTALLATION SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE CODES. PROVIDE SUBMITTALS.

5. ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT SHALL BE VERIFIED WITH ELECTRICAL DRAWINGS PRIOR TO EQUIPMENT ORDER RELEASE. ADDITIONAL ELECTRICAL WORK RESULTING FROM EQUIPMENT SUBSTITUTION IS THE RESPONSIBILITY OF THIS CONTRACTOR.

6. LENGTH OF FLEXIBLE DUCTWORK SHALL BE LIMITED TO 5'-0" MAX. HORIZONTAL RUN WITH ONLY ONE 90 DEG. ELBOW PERMITTED. SECURE FLEXIBLE DUCTWORK WITH SCREWS & DRAW BANDS.

7. DUCT SIZES INDICATED ARE NET INSIDE CLEAR DIMENSIONS.

8. PROVIDE CEILING OPERATIONS FOR INACCESSIBLE M.V.D.'S WHERE INDICATED, EQUAL TO YOUNG REGULATOR, REMOTE FEAR OPERATED, WITH CEILING ESCUTCHEON.

9. ITEM DESIGNATIONS INDICATED HEREON ARE FOR PURPOSES OF THESE DOCUMENTS ONLY. CONTRACTOR SHALL VERIFY W/ OWNERS REPRESENTATIVE ACTUAL "TAGGING" INFORMATION TO BE PROVIDED FOR EACH ITEM OF MECHANICAL EQUIP. PRIOR TO NAMEPLATE ORDER RELEASE.

10. CEILING DIFFUSERS SHALL BE 36" MIN. FORM CEILING MOUNTED SMOKE DETECTORS. COORD. W/ ELECTRICAL DIVISION.

11. SECURE DIFFUSERS & GRILLES TO T-BAR CEILINGS, WHERE APPLICABLE. SUBMIT SHOP DWG. FOR APPROVAL PRIOR TO BEGIN. WORK.

12. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ACTUAL LOCATION OF GRILLES & DIFFUSERS IN CEILING, AS WELL AS ACCESS DOORS.

13. COORDINATE EQUIP. DIMENSIONS AND LAYOUT W/ PLUMBING SECTION WHERE FLOOR SINKS ARE INDICATED.

14. PIPES PASSING THRU FIRE RATED WALLS & FLOORS SHALL BE SEALED WITH U.L. LISTED MATERIAL EQUAL TO 3M FIRE BARRIER, CAULK OR PUTTY. SEALANT'S RATING SHALL MATCH THE RATING OF THE ASSEMBLY.

15. PROVIDE VALVE TAGS AND PIPE IDENTIFICATION BANDS. TAGS SHALL BE BRASS W/ CHAIN. IDENTIFICATION BANDS SHALL BE LOCATED EVERY 25 FEET AND ON EITHER SIDE OF INTERMEDIATE BARRIER.

16. PROVIDE 18" X 18" MIN. ACCESSIBLE CEILINGS AND WALLS FOR EQUIP. REQUIRING ACCESS OR ADJUSTMENT. COORDINATE LOCATIONS AND SUBMIT TO ARCHITECT FOR APPROVAL PRIOR TO BEGINNING WORK.

17. TURNING VANE RUNNERS SHALL HAVE A VANE IN EVERY SLOT IN STRICT CONFORMANCE WITH MFR.'S INSTRUCTIONS AND SMACNA DUCT CONSTRUCTION STANDARDS.

18. VERIFY FIT DUCTWORK AND PIPING PRIOR TO FABRICATION.

19. INSULATED PIPING EXPOSED TO VIEW (THROUGHOUT THE FACILITY), SHALL BE COVERED FINISHED W/ PVC JACKET EQUAL TO MANVILLE PVC/ PERMA-WELD PIPE JACKETING SYSTEM USING 30 MIL THICK JACKET. FITTINGS, FLANGES VALVES & ACCESSORIES SHALL BE JACKETED. INSTALL PER MFRS. INSTRUCTIONS W/ SEAM ON TOP OF PIPE SO AS NOT TO BE VISIBLE FROM OCCUPIED SPACE.

20. DUCTWORK LOCATED BEL. 7'-6" IN MECHANICAL ROOMS SHALL BE EQUIPPED W/ PADDING MATERIAL ON ALL CORNERS, EDGES & OTHER SURFACES WHICH MAY BE HAZARDOUS.

21. COORDINATE & VERIFY ACTUAL APPROVED EQUIP. DIMENSIONS PRIOR TO POURING EQUIP. PADS

22. DUCT MOUNTED SMOKE DETECTORS SHALL BE ZERO VELOCITY TYPE WHERE INDICATED ON DRAWINGS

23. DRAIN PIPING FROM A/C EQUIPMENT SHALL BE ROUTE SO AS NOT TO CREATE A TRIPPING HAZARD. COORDINATE ACTUAL DRAIN CONNECTIONS WITH PLUMBING SECTIONS. COORDINATE FLOOR SINK LOCATIONS ACCORDINGLY.

24. CONDENSATE DRAIN TRAPS SHALL BE 3" DEEP, MINIMUM.

25. COORDINATE ALL CHASE, SLEEVE AND SLAB BLOCK OUT REQUIREMENTS BEFORE CONCRETE IS POURED OR BLOCK IS SET.

26. PROVIDE ACCESS DOOR IN DUCTWORK UPSTREAM OF EACH REHEAT COIL. DUCTMATE METU ROUND DUCT ACCESS DOOR.

27. DUCTWORK VISIBLE BEHIND DIFFUSERS, RESISTERS, OR GRILLES SHALL BE PAINTED FLAT BLACK.

28. REFER TO EQUIPMENT DRAWINGS, SPECS, & SHOP DRAWINGS FOR CONNECTIONS TO EQUIPMENT.

29. MANUAL VOLUME DAMPERS AND VALES ON INSULATED DUCTWORK AND PIPING SHALL HAVE EXTENDED STEMS TO ALLOW FOR THE INSULATION THICKNESS. PROVIDE MIN. 12" LONG RED RIBBON QUADRANT LOCATOR ON VOLUME DAMPER HANDLES.

30. CONTRACTOR TO NOTIFY ENGINEER OF ANY INCORRECT ASSUMPTIONS PRIOR TO STARTING ANY WORK.

31. HVAC EQUIPMENT SHALL BE SEALED OFF, KEPT FREE FROM DEBRIS, AND SHALL REMAIN UNOPERATIONAL DURING CONSTRUCTION FOR ANY REASON. CONTRACTOR SHALL PROVIDE TEMPORARY HEAT AS REQUIRED.

MECHANICAL SYMBOLS

EXHAUST DIFFUSER, GRILLE OR REGISTER

RETURN DIFFUSER, GIRLLE OR REGISTER

SUPPLY DIFFUSER, GRILLE OR REGISTER. SEE GRILLE, REGISTER AND DIFFUSER SCHEDULE FOR THROW DIRECTION(S).

FIRE OR FIRE/SMOKE DAMPER. SEE DRAWINGS FOR ADDITIONAL INFORMATION.

MANUAL BALANCING DAMPER

MITERED DUCT ELBOW

RADIUSED DUCT ELBOW

MITERED ELBOW WITH SINGLE THICKNESS TURNING VANES

MITEREED ELBOW WITH DOUBLE THICKENSS TURNIGN VANES

12"x12" RECTANGULAR DUCT ANNOTATION

12"/12" FLAT OVAL DUCT ANNOTATION

12"Ø ROUND DUCT ANNOTATION

VAV-1 MECHANICAL EQUIPMENT TAG

A1 (XXX) / 8"Ø, TYP. (3) — MARK, AIR FLOW, NECK SIZE, TYPICAL COUNT — GRILLE, REGISTER, OR DIFFUSER TAG

TS TEMPERATURE SENSOR

T THERMOSTAT

CO CARBON MONOXIDE SENSOR

CO2 CARBON DIOXIDE SENSOR

OC OCCUPANCY SENSOR

S OTHER SENSOR - SEE PLANS FOR DESCIPTION

CONTROL WIRE/CONNECTION

HWS HEATING WATER SUPPLY

HWR HEATING WATER RETURN

CHWS CHILLED WATER SUPPLY

CHWR CHILLED WATER RETURN

CWS CONDENSER WATER SUPPLY

CWR CONDENSER WTER RETURN

PIPE UP

PIPE DOWN

PIPE TEE DOWN

PIPE CAP

PIPE ELBOW

PIPE REDUCER

PIPE TEE

THREE-WAY VALVE

BUTTERFLY VALVE

BALL VALVE

PLUG VALVE

BALANCING VALVE

MOTORIZED CONTROL VALVE

Y-STRAINER

PRESURE GAGE

THERMOMETER

CODES & DESIGN CRITERIA

JURISDICTION:	TOWN OF CASTLE ROCK
MECHANICAL CODE:	2018 IMC
ENERGY CODE:	2018 IECC
LOCAL AMMENDMENTS:	AS AMMENDED
CLIMATE ZONE:	5B
PROJECT ELEVATION:	6224'
WINTER DESIGN DB:	0.6 DEG. F
SUMMER DESIGN DB/WB:	92.2/59.3 DEG. F
DB DESIGN FOR AIR COOLED EQUIPMENT:	95 DEG. F
INDOOR HEATING SET POINT(S):	70 DEG. F (OCC), 55 DEG. F (UNOCC)
INDOOR COOLING SET POINT(S):	76 DEG. F (OCC), 90 DEG. F (UNOCC)

MECHANICAL SHEET INDEX

GENERAL SYMBOLS

Room name
101
150 SF
ROOM NAME / ROOM NUMBER — ROOM TAG

1 / A101 SIM — VIEW NUMBER / SHEET NAME — ENLARGED VIEW TAG

1 / A101 SIM — VIEW NUMBER / SHEET NUMBER — SECTION VIEW TAG

1 / A101 — VIEW NUMBER/SHEET NUMBER — VIEW REFERENCE

— SHEET NOTE

POINT OF CONNECTION TO EXISTING

ABBREVIATION DESCRIPTION

AD	ACCESS DOOR
AF	AIR FOIL
AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
BAS	BUILDING AUTOMATION SYSTEM
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CV	CONSTANT VOLUME
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
(D)	DEMO'D
DDC	DIRECT DIGITAL CONTROL
DIFF	DIFFUSER
(E)	EXISTING
EA	EXHAUST AIR
EMS	ENERGY MANAGEMENT SYSTEM
ESP	EXTERNAL STATIC PRESSURE
FC	FORWARD CURVED
FD	FLOOR DRAIN
FS	FLOOR SINK
GR	GRILLE
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
MA	MIXED AIR
(N)	NEW
NG	NATURAL GAS
OBD	ON-BOARD DAMPER
OSA	OUTSIDE AIR
OST	OVERFLOW STORM
(R)	RELOCATED
RA	RETURN AIR
SA	SUPPLY AIR
SP	STATIC PRESSURE
ST	STORM
T-STAT	THERMOSTAT
TDH	TOTAL DYNAMIC HEAD
TSP	TOTAL STATIC PRESSURE
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
WC	WATER COLUMN
WP	WORKING PRESSURE
WPD	WATER PRESSURE DROP

COLORADO LICENSED
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JCAA
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Wheat Ridge, CO 80033
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#23.124

RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 02.XX.2024
DRAWN: KGR
CHECKED: JCAA
BDG ARCH NO.: **23.024**

MECHANICAL COVERSHEET

M001

ISSUED FOR PERMIT - 03.12.2024

GENERAL SPECIFICATIONS

1. SCOPE:

PROVIDE ALL MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO INSTALL AND MAKE READY FOR OWNER'S USE COMPLETE SYSTEMS OF HEATING, VENTILATION, AIR CONDITIONING (HVAC), PLUMBING, FOR THE PROPOSED WORK AND BUILDING RENOVATIONS AS SHOWN ON THE DRAWINGS AND CALLED FOR IN THESE SPECIFICATIONS.

VISIT THE SITE TO OBTAIN DIMENSIONS, EXISTING LAYOUTS AND LOCATIONS AND EXISTING CONSTRUCTION DETAILS NOT SHOWN ON THESE DRAWINGS.

THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION WITH OTHER DIVISIONS OF WORK FOR THE FULL EXTENT OF THE SCOPE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL ASPECTS, COMPONENTS, SYSTEMS, ETC. AND ACCOMMODATE THE PERFORMANCE INTENT OF THE CONSTRUCTION DOCUMENTS THROUGHOUT THE PROJECT SCOPE.

2. BIDDERS RESPONSIBILITY:

EXAMINE THE DRAWINGS AND SPECIFICATIONS AND VISIT THE WORK SITE. BECOME FAMILIAR WITH THE CHARACTER OF THE WORK, THE COORDINATION WITH OTHER TRADES REQUIRED, AND ANY OTHER CONDITIONS THAT AFFECT THE COMPLETION OF THIS WORK.

3. PERMITS, CODES AND LAWS:

APPLY FOR ALL PERMITS AND PAY ALL FEES.

ALL WORK SHALL BE IN ACCORDANCE WITH LATEST EDITIONS OF THE FOLLOWING RULES AND REGULATIONS, HEREIN REFERRED TO AS "CODES":

THE LATEST OR ADOPTED EDITION OF THE APPLICABLE LOCAL, STATE, AND FEDERAL BUILDING, MECHANICAL, SANITATION, PLUMBING, ETC. CODES.
UNDERWRITER'S LABORATORIES, INC. (U.L.)
NATIONAL FIRE PROTECTION ASSOCIATION (N.F.P.A.)
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A)

WHERE ANY OF THESE CODES ARE AT VARIANCE WITH THE DRAWINGS AND SPECIFICATIONS, THEIR REQUIREMENTS SHALL TAKE PRECEDENCE, UNLESS THE DRAWINGS AND SPECIFICATIONS REQUIREMENTS EXCEED THESE CODES. INCLUDE ANY COST NECESSARY TO MEET THESE CODES IN THE BID PRICE.

4. MECHANICAL PLANS:

THE MECHANICAL PLANS ARE DIAGRAMMATIC AND BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT. VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO BE USED.

INSTALLATION SHALL BE WITHIN THE LIMITATIONS IMPOSED BY THE ARCHITECTURAL, STRUCTURAL, HVAC, ELECTRICAL, AND PLUMBING REQUIREMENTS WITH ADEQUATE SPACE FOR MAINTENANCE.

5. QUESTIONS AND CLARIFICATIONS OF BID DOCUMENTS:

BIDDERS SHALL NOT RELY ON ANY ORAL CLARIFICATION OF THE DRAWINGS OR SPECIFICATIONS. ANY QUESTIONS OR CLARIFICATIONS SHALL BE REFERRED IN WRITING TO THE ARCHITECT.

6. GUARANTEES:

ALL EQUIPMENT, MATERIALS, AND WORKMANSHIP SHALL BE GUARANTEED IN WRITING FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. WARRANTIES SHALL BE IN WRITING AND SHALL INCLUDE FACTORY WARRANTIES FOR EACH PIECE OF EQUIPMENT. PROVIDE A CERTIFICATE FOR EACH PIECE OF EQUIPMENT. CLEARLY INDICATE ON EACH WARRANTY CERTIFICATE THE MODEL NO., SERIAL NO., LOCATION, AND OWNER'S NAME.

EXTENDED WARRANTIES ARE REQUIRED FOR THE FOLLOWING EQUIPMENT:

D/X COOLING EQUIPMENT, CONDENSING UNIT AND COIL: 5 YEARS PARTS AND LABOR
AIR HANDLING UNITS: 5 YEARS PARTS AND LABOR.
ELECTRIC WATER HEATER: 2 YEARS, PARTS AND LABOR

ALL WARRANTIES SHALL BE FULLY TRANSFERABLE TO ANY AND ALL SUBSEQUENT BUILDING AND/OR CONDOMINIUM OWNERS, AND THEIR AGENTS, FOR THE LIFE OF EACH WARRANTY.

BIND THE ORIGINAL COPIES OF WARRANTIES FOR EACH PIECE OF EQUIPMENT IN A RING BINDERS, FOR THE BUILDING AND CONDOMINIUM UNIT, AND TURN OVER TO THE BUILDING OWNER AT FINAL ACCEPTANCE OF THE PROJECT, FOR DISTRIBUTION TO THE CONDOMINIUM OWNERS. ORGANIZE THE WARRANTIES WITHIN THE BINDER USING INDEX AND TABS, AS TO LOCATION WITHIN THE BUILDING.

INCLUDE COPIES OF THESE WARRANTIES IN THE MAINTENANCE MANUALS, SEE OPERATION AND MAINTENANCE MANUAL SPECIFICATION SECTION.

7. COMPLETE SYSTEM:

ALL PRODUCTS, MATERIALS AND ACCESSORIES SHALL BE FURNISHED AND INSTALLED AS REQUIRED FOR A COMPLETE SYSTEM READY FOR OWNER'S BENEFICIAL USE.

8. WORKMANSHIP:

ALL WORK SHALL BE PERFORMED BY COMPETENT MECHANICS USING PROPER TOOLS AND EQUIPMENT TO PRODUCE FIRST QUALITY WORK. ALL WORK SHALL BE NEATLY INSTALLED, ACCESSIBLE FOR MAINTENANCE, AND COMPLETE WITH ALL ACCESSORIES REQUIRED.

9. ACCESSIBILITY:

INSTALL ALL EQUIPMENT AND THEIR APPURTENANCES SUCH AS, BUT NOT LIMITED TO, VALVES, COILS, DRAIN PANS, DRAINS, DAMPERS, CONTROLS, MOTORS, CONTROLLERS, ETC., SO THAT THEY CAN BE SERVICED, RESET, REPLACED OR RECALIBRATED, ETC. INSTALL ALL NECESSARY ACCESS PANELS AND BUILDING ACCESS DOORS, AS BELOW, WHERE REQUIRED TO ACCOMPLISH THIS. IF ANY EQUIPMENT OR COMPONENTS DO NOT FIT WHERE INTENDED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING, REQUESTING FURTHER GUIDANCE.

PROVIDE BUILDING ACCESS DOORS FOR ALL MECHANICAL EQUIPMENT REQUIRING SERVICE, INCLUDING BUT NOT LIMITED TO, AHU'S, FANS, DAMPERS, DUCT ACCESS PANELS, CONTROLS, PIPING, VALVES, REGULATORS, TRAPS, ETC., INSTALLED ABOVE HARD CEILINGS, BEHIND WALLS, AND BELOW FLOORS, FOR INSTALLATION BY OTHER DIVISIONS OF THE WORK. BUILDING ACCESS DOORS ARE NOT REQUIRED WHERE THE MECHANICAL EQUIPMENT IS INSTALLED ABOVE LAY-IN AND ACCESSIBLE SPLINE CEILINGS. OTHER TYPES OF SPLINE CEILINGS REQUIRE BUILDING ACCESS DOORS.

SIZE THE BUILDING ACCESS DOORS FOR THE USE INTENDED, BUT NOT LESS THAN 12 INCHES BY 12 INCHES. WHERE HUMAN ACCESS IS REQUIRED, PROVIDE 24 INCHES BY 24 INCHES, OR LARGER.

WHERE BUILDING ACCESS DOORS CANNOT BE INSTALLED FOR STRUCTURAL OR ARCHITECTURAL REASONS, NOTIFY THE ARCHITECT.

PRIME COAT BUILDING ACCESS DOORS IN PAINTED AREAS WITH FINISH PAINTING AS SPECIFIED IN OTHER DIVISIONS.

IN WET AREAS, TOILET ROOMS, OR AREAS WITH CERAMIC TILE FLOORS OR WALLS, PROVIDE STAINLESS STEEL BUILDING ACCESS DOORS.

PROVIDE BUILDING ACCESS DOORS WITH A CONCEALED KEY OPERATED LOCK AND CONCEALED HINGES. ALL LOCKS SHALL BE KEYED ALIKE.

PROVIDE BUILDING ACCESS DOORS AS SPECIFIED IN OTHER DIVISIONS OF THE WORK OR PROVIDE MILCOR DOORS, OR EQUIVALENT, SUITABLE FOR THE INSTALLATION INTENDED. PROVIDE FIRE RATED DOORS FOR ALL FIRE RATED WALLS, PARTITIONS, AND CEILINGS.

10. WORK BY OTHER TRADES:

FURNISH ALL SLEEVE FRAMES, BUILDING ACCESS DOORS, PREFABRICATED EQUIPMENT CURBS, ROOF CURBS, ETC. FOR INSTALLATION BY OTHER TRADES.

INSTALL ALL MOTORS AND FURNISH THE STARTING EQUIPMENT AND DISCONNECTS TO THE ELECTRICAL SUBCONTRACTOR FOR INSTALLATION. CONTROL WIRING, INCLUDING SWITCHES, THERMOSTATS, INTERLOCKS, ETC. SHALL BE FURNISHED BY MECHANICAL SUBCONTRACTOR. ENSURE THAT THE ELECTRICAL EQUIPMENT MOUNTED NEAR THE MECHANICAL EQUIPMENT DOES NOT BLOCK ACCESS TO SERVICE AREAS OF THE MECHANICAL EQUIPMENT. DO NOT ALLOW ANY EQUIPMENT TO BE INSTALLED ON THE HVAC EQUIPMENT ENCLOSURES.

11. FIRE STOPPING

ALL PENETRATIONS OF FLOORS AND OTHER FIRE-RATED ASSEMBLIES SHALL BE FIRE AND SMOKE-STOPPED IN STRICT ACCORDANCE WITH THE APPLICABLE CODES.

12. FOUNDATIONS AND SPECIAL SUPPORTS:

FURNISH AND INSTALL ALL SPECIAL FOUNDATIONS AND SUPPORTS REQUIRED FOR EQUIPMENT INSTALLED UNDER THIS SECTION, UNLESS THEY ARE A PART OF THE BUILDING STRUCTURE AND ARE SHOWN IN OTHER SECTIONS.

13. CLEANING AND PAINTING:

THOROUGHLY CLEAN ALL EQUIPMENT AND REMOVE ALL TRASH, CARTONS, ETC. MAKE ANY NECESSARY CORRECTIONS OR REPAIR/REPLACE ANY DAMAGED MATERIALS OR EQUIPMENT. LEAVE THE ENTIRE SYSTEM IN A THOROUGHLY CLEAN AND ORDERLY MANNER.

ANY FINISHED SURFACES THAT HAVE BEEN SCRATCHED OR DISCOLORED SHALL BE TOUCHED-UP OR REPAINTED BREAK TO BREAK WITH PAINT TO MATCH THE ORIGINAL COLOR. TOUCH UP PAINTED SURFACES OR REPAINT THE ENTIRE PAINTED SURFACE IF TOUCH UP IS UNACCEPTABLE. SEE ARCHITECTURAL PAINTING SPECIFICATIONS.

ALL METAL ITEMS SUBJECT TO RUSTING, INSIDE OR EXPOSED TO WEATHER SHALL BE GIVEN ONE COAT OF PROPER TYPE RUST PREVENTATIVE PRIMER AS SOON AS INSTALLED. APPLY TWO FINISH COATS WITH COLOR TO BE SELECTED BY THE ARCHITECT.

FOR ALL INTERIOR OR EXTERIOR STRUCTURAL GALVANIZED STEEL, COLD GALVANIZE ALL EXPOSED METAL CUT ENDS, HOLES, WELDS, SCRATCHES, ETC., OR HOT DIP GALVANIZE THE ENTIRE STRUCTURE OR FRAME AFTER FABRICATION AND MOUNTING HOLES ARE CUT.

UPON COMPLETION OF THE INSTALLATION, BUT NOT BEFORE, AND BEFORE ACCEPTANCE., THOROUGHLY CLEAN ALL EXPOSED EQUIPMENT, PIPING, DUCTWORK, INSULATION JACKETS, ETC., REMOVING ALL STICKERS, LABELS, MARKING, WRITING, FABRICATION MARKINGS, IDENTIFICATION, ADHESIVE, SEALER, GLUE, RUST, CORROSION, ETC., FROM THEIR EXTERIOR SURFACES.

THE CLEANLINESS AND PAINTING ACCEPTABILITY IS AT THE SOLE DISCRETION OF THE ARCHITECT AND MAY REQUIRE ADDITIONAL CLEANING AND COATS OF PAINT BEFORE ANY SURFACE IS ACCEPTED.

14. SUBMITTALS:

SUBMITTAL AND SHOP DRAWINGS:

SUBMIT MANUFACTURER'S CERTIFIED DATA RELATIVE TO ALL EQUIPMENT, PIPING, DUCTWORK, CONTROLS, ETC. REQUIRED FOR THE INSTALLATION OF THE HVAC, PLUMBING AND FIRE PROTECTION SYSTEMS. SUBMIT FOR REVIEW ALL NECESSARY ENGINEERING, PRODUCT AND INSTALLATION DATA, SHOP DRAWINGS, SAMPLES ETC. FOR ALL EQUIPMENT, MATERIAL, AND SYSTEMS TO ASCERTAIN COMPLIANCE WITH THE TECHNICAL REQUIREMENTS OF THE CONTRACT DOCUMENTS.

SUBMIT SIX (6) COPIES OF ALL NECESSARY DATA, CUTS, MANUFACTURER'S SELECTIONS, CATALOGS, BULLETINS, INSTALLATION INSTRUCTIONS, DRAWINGS, DIAGRAMS, CURVES, ETC. CLEARLY INDICATE ON THE SUBMITTED DATA, THE MANUFACTURER'S NAME, PRODUCT NUMBER(S), OPTIONS, EQUIPMENT CAPACITY, DIMENSIONAL DATA, WEIGHTS, AND OTHER APPLICABLE TECHNICAL DATA FOR THE PROJECT.

TRADE NAMES, MANUFACTURERS, AND CATALOGUE NUMBERS ARE MENTIONED HEREIN AND ON THE DRAWINGS SOLELY IN ORDER TO ESTABLISH A STANDARD FOR THE TYPE, GENERAL DESIGN, AND QUALITY OF PRODUCT REQUIRED. OTHER PRODUCTS SIMILAR IN DESIGN OF EQUIVALENT QUALITY CAPABLE OF FITTING WITHIN THE SPACES ALLOCATED AND COMPLYING WITH THE DRAWINGS AND SPECIFICATIONS WILL BE CONSIDERED AFTER THE CONTRACT IS LET UNLESS "PRIOR APPROVAL" REQUIREMENTS ARE SET FORTH IN THESE DOCUMENTS.

WHERE TWO OR MORE MANUFACTURERS OR MATERIALS ARE NAMED, THE CONTRACTOR MAY SUBMIT ANY OF THOSE NAMES, PROVIDED THEY CONFORM TO THE SPECIFICATIONS AND DESIGN INTENT. CONTRACTOR SHALL INCLUDE WITH THE SUBMITTAL A LIST OF ALL COMPARATIVE FEATURES INDICATING COMPLIANCE WITH THE SPECIFICATIONS.

THE ARCHITECT AND/OR ENGINEER MAY REQUIRE THE SUBMISSION OF SAMPLES, PARTICULARLY WHEREVER EQUIPMENT OR APPLIANCES ARE VISIBLE IN FINISHED AREAS, SUCH AS CEILINGS, INTERIOR AND EXTERIOR WALLS. THE CONTRACTOR AND SUPPLIER SHALL ARRANGE FOR DEMONSTRATIONS OF THE INSTALLATION OF ANY OF THESE PRODUCT'S AND THEIR ABILITY TO PERFORM AS SPECIFIED, IF REQUIRED.

REVIEW OF SUBMITTALS AND SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR FITTING THE EQUIPMENT IN THE SPACE ALLOTTED WITH SPACE FOR ALL CONNECTIONS AND SERVICING AND FOR THE COORDINATION OF THE WORK WITH WORK OF OTHER TRADES.

THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS AND SHOP DRAWINGS AND INDICATE BY STAMP OR LETTER THAT HE HAS REVIEWED THEM, BEFORE FORWARDING THEM TO THE ARCHITECT AND/OR ENGINEER. SUBMITTALS AND DRAWINGS WILL BE RETURNED AFTER REVIEW INDICATING WHETHER EXCEPTIONS ARE TAKEN. THE SUBMITTAL RETURNED WITH CORRECTIONS, OR IS COMPLETELY REJECTED. RESUBMISSION OF REVISED SUBMITTALS AND SHOP DRAWINGS, IF REQUIRED, SHALL BE DONE BEFORE INSTALLATION AND CONSTRUCTION IS BEGUN.

CORRECTIONS OR COMMENTS MADE ON THE SUBMITTALS AND DRAWINGS DURING THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THIS REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FABRICATION PROCESSES, TECHNIQUES OF CONSTRUCTION, COORDINATING THE WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING WORK IN A SAFE AND SATISFACTORY MANNER. REVIEW OF THE SUBMITTALS SHALL NOT PERMIT ANY DEVIATION FROM PLANS AND SPECIFICATIONS.

SUBMITTALS FOR A SPECIFIC CLASS OF PRODUCTS, SYSTEMS, INSTALLATION PROCEDURES, SHOP DRAWINGS, ETC. WILL BE REVIEWED BY THE ENGINEER ONE TIME AND ITS RESUBMITTAL ONE TIME, IF NECESSARY, AS ABOVE, AT NO COST TO THE CONTRACTOR. THE CONTRACTOR WILL BEAR THE FULL COST FOR ALL SUBSEQUENT RESUBMITTAL REVIEWS AT THE ENGINEER'S STANDARD HOURLY RATES. PAYMENT WILL BE REQUIRED AT COMPLETION OF RESPECTIVE REVIEW.

REQUIRED SHOP DRAWINGS:

SUBMIT THE FOLLOWING SHOP DRAWINGS BEFORE ANY MECHANICAL DUCTWORK, PIPING, EQUIPMENT, ETC. IS FABRICATED AND INSTALLED. SUBMIT THESE SHOP DRAWINGS IN 1/4 INCH PER FOOT MINIMUM SCALE WITH NECESSARY PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ISOMETRICS. SUBMIT SIX (6) PAPER COPIES AND ONE (1) CD-ROM WITH ALL THESE DRAWINGS IN AUTOCAD DRAWING DWG FILES, LATEST AUTOCAD FORMAT.

SOON AFTER AWARD OF THE CONTRACT, DETERMINE WHERE THERE MAY BE INSTALLATION, SPACE CONCERNS, AND/OR WHERE OTHER CONFLICTS MAY OCCUR. SUBMIT COORDINATION DRAWINGS, RELATING TO THESE CONFLICTS WITH THE MECHANICAL EQUIPMENT, DUCT, PIPING, ELECTRICAL, STRUCTURAL AND ARCHITECTURAL SYSTEMS ETC., SHOWING CLEARANCES AND RELATIONSHIP TO STRUCTURAL MEMBERS, PIPING, LIGHTS, CONDUITS, ELECTRICAL EQUIPMENT, AND BUILDING COMPONENTS. IN PREPARING THESE SHOP DRAWINGS, ESTABLISH LINES AND LEVELS FOR ALL DIVISIONS OF THE WORK IN THE AFFECTED AREA. IMMEDIATELY CALL TO THE ATTENTION OF THE ARCHITECT ANY INTERFERENCE OR CONFLICT FOR CLARIFICATION IN WRITING.

SUBMIT SHOP DRAWINGS FOR ALL DUCTWORK.

SUBMIT LAYOUT DRAWINGS OF EACH MECHANICAL SYSTEM SHOWING THE LOCATION, ARRANGEMENT, ETC. OF ALL EQUIPMENT, ALL TRADES, ETC. TO BE INSTALLED RELATED TO THE RESPECTIVE SYSTEM.

MAINTAIN DAILY UPDATED DRAWINGS SHOWING DEVIATIONS FROM CONSTRUCTION DOCUMENTS. AT THE END OF THE PROJECT, PROFESSIONALLY PREPARE AS-BUILT DRAWINGS AND SUBMIT THREE COPIES, ONE REPRODUCIBLE.

15. AS-BUILT DRAWINGS:

MAINTAIN DAILY UPDATED DRAWINGS SHOWING DEVIATIONS FROM CONSTRUCTION DOCUMENTS. AT THE END OF THE PROJECT, PROFESSIONALLY PREPARE AS-BUILT DRAWINGS AND SUBMIT THREE COPIES, ONE REPRODUCIBLE.

16. OPERATION AND MAINTENANCE MANUALS:

UPON COMPLETION OF THE PROJECT, SUBMIT THREE COPIES OF ALL OPERATION AND MAINTENANCE MANUALS, WARRANTIES, SPARE PARTS LIST, AS-BUILT DRAWINGS, TEST AND BALANCE REPORTS, AND LETTER OF GUARANTEE ALL BOUND IN THREE RING BINDERS, CLEARLY SHOWING WHICH EQUIPMENT WAS SUPPLIED TO THE JOB.

17. PROJECT COMPLETION:

BEFORE STARTING AND TESTING ANY SYSTEM, HVAC, OR PLUMBING, TO PREVENT INADVERTENT OPERATION OF THE MECHANICAL EQUIPMENT BEFORE THE MANUFACTURER'S INSPECTION AND TESTING, THE CONTRACTOR SHALL:

VERIFY THAT ALL ELECTRICAL POWER IS OFF TO ALL MECHANICAL EQUIPMENT, INCLUDING THE AHU'S, ACCU'S, BOOSTER PUMPS, FIRE PUMPS, ETC.

LOCK OUT EACH SYSTEM USING SETON MODEL NUMBER 70329; "DO NOT OPERATE" LOCK ON LOCKOUT TAGS, OR EQUIVALENT. INSTALL LOCKOUT TAGS AT EACH PIECE OF EQUIPMENT, ELECTRICAL DISCONNECTS, STARTERS, SWITCHES, ETC.

REMOVE THESE TAGS ONLY WHEN THE MANUFACTURER APPROVES OF THE EQUIPMENT INSTALLATION IN WRITING.

EACH MANUFACTURER OR THEIR REPRESENTATIVE SHALL INSPECT THEIR EQUIPMENT FOR COMPLIANCE TO THEIR INSTALLATION REQUIREMENTS AND RECOMMENDATIONS.

IN ADDITION, THE COMPRESSOR MANUFACTURER SHALL INSPECT EACH REFRIGERANT PIPING INSTALLATION FOR ADHERENCE TO THE APPROVED REFRIGERANT PIPING DIAGRAMS, ROUTING.

EACH MANUFACTURER SHALL PREPARE A PUNCH LIST OF ALL DEFICIENCIES, IN WRITING WITH COPIES TO THE ARCHITECT AND CONTRACTOR.

EACH MANUFACTURER SHALL REINSPECT THE EQUIPMENT AFTER THE CONTRACTOR HAS CORRECTED ALL DEFICIENCIES.

WHEN THE MANUFACTURER HAS GIVEN THEIR WRITTEN APPROVAL WITH COPIES TO THE ARCHITECT AND CONTRACTOR, THE CONTRACTOR MAY REMOVE THE LOCKOUT TAGS, SAFELY START, AND TEST THE EQUIPMENT, AS REQUIRED HEREIN.

CONTRACTOR SHALL PROVIDE FOR ALL NECESSARY DRILLING OF WALL STUDS, CEILING JOISTS, PLATES, FINISHES, ETC. TO ACCOMMODATE ROUTING AND INSTALLATION OF ALL PIPING, DUCT, ETC.

18. VALUE ENGINEERING

IF THE OWNER, ARCHITECT, OR CONTRACTOR RETAINS THE SERVICES OF A VALUE ENGINEER (VE) TO REVIEW THESE PLANS PREPARED BY THE CONSULTANT, THESE SERVICES SHALL BE AT THEIR SOLE EXPENSE AND SHALL BE PERFORMED IN A TIMELY MANNER SO AS NOT TO DELAY THE ORDERLY PROGRESS OF THE CONSULTANT'S SERVICES. THE CONSULTANT SHALL BE NOTIFIED IN WRITING OF THE VE AND THE VE SCOPE OF SERVICES. ALL RECOMMENDATIONS OF THE VE SHALL BE GIVEN TO THE CONSULTANT FOR REVIEW, AND ADEQUATE TIME WILL BE PROVIDED FOR THE CONSULTANT TO RESPOND TO THESE RECOMMENDATIONS.

IF THE CONSULTANT OBJECTS TO ANY RECOMMENDATIONS MADE BY THE VE, IS SHALL SO STATE IN WRITING, ALONG WITH THE REASONS FOR OBJECTING. IF, IN SPITE OF THE CONSULTANT'S OBJECTIONS, CHANGES IN THE CONSTRUCTION DOCUMENTS ARE ORDERED BY THE OWNER, ARCHITECT, OR CONTRACTOR, THEY AGREE, TO THE FULLEST EXTENT PERMITTED BY LAW, TO WAIVE ALL CLAIMS AGAINST THE CONSULTANT AND TO INDEMNIFY AND HOLD HARMLESS THE CONSULTANT FROM ANY DAMAGES, LIABILITIES OR INCORPORATION OF SUCH DESIGN CHANGES ORDERED.

IN ADDITION, THE CONSULTANT SHALL BE COMPENSATED FOR SERVICES NECESSARY TO INCORPORATE RECOMMENDED VALUE ENGINEERING CHANGES INTO REPORTS, DRAWINGS, SPECIFICATIONS, BIDDING OR OTHER DOCUMENTS. THE CONSULTANT SHALL BE COMPENSATED AS ADDITIONAL SERVICE FOR ALL TIME SPENT TO PREPARE FOR, REVIEW AND RESPOND TO THE RECOMMENDATIONS OF THE VE. THE CONSULTANTS TIME PERFORMANCE OF ITS SERVICES SHALL BE EQUITABLY ADJUSTED.

DIVISION 23 SPECIFICATIONS:

HVAC EQUIPMENT, METHODS AND MATERIALS

19. DUCTWORK GENERAL:

DUCT SIZES SHOWN ON THE DRAWINGS ARE INSIDE DIMENSIONS AND DO NOT TAKE INTO ACCOUNT LINING THICKNESS. DUCTWORK SHALL BE GALVANIZED SHEET METAL WITH GAUGES, CONSTRUCTION DETAILS AND INSTALLATION ACCORDING TO N.F.P.A. STANDARD 90A, ASHRAE, AND SMACNA DUCT CONSTRUCTION MANUALS AND REQUIREMENTS.

PROVIDE FLEXIBLE CONNECTIONS AT AIR HANDLING UNITS AND FANS.

PROVIDE SINGLE THICKNESS TURNING VANES IN ELBOWS.

ALL DUCTS 18" AND OVER SHALL BE CROSSBROKEN.

PAINT DUCTS, SLEEVES, PLENUMS, ETC., INTERIORS VISIBLE THROUGH AIR DEVICES WITH A MINIMUM OF ONE COAT OF PROPER TYPE RUST PREVENTATIVE PRIMER, SUITABLE FOR GALVANIZED STEEL, AND TWO FINISH COATS OF FLAT BLACK PAINT.

20. DUCT CONSTRUCTION MATERIALS:

RECTANGULAR SUPPLY, RETURN, OUTSIDE AIR, AND EXHAUST: LINED GALVANIZED SHEET METAL.
ROUND DUCT AND RUN-OUTS: EXTERNALLY INSULATED GALVANIZED SHEET METAL DUCTS WITH SPIRAL LOCK SEAMS.
FLEXIBLE DUCT: PRE-INSULATED FLEXIBLE DUCT. NO FLEXIBLE DUCT RUNS LONGER THAN 5 FEET.

PROVIDE DRYER VENT PIPING INSTALLED AS REQUIRED BY THE MANUFACTURER AND PER CODE USING 4 INCH ROUND GALVANIZED STEEL, SEALED AND SUPPORTED. THE USE OF FLEXIBLE DRYER VENT PIPE IS PROHIBITED.

21. FABRICATION, ERECTION, AND SUPPORT:

ALL DUCTWORK SHALL BE FABRICATED, ERECTED, BRACED, AND SUPPORTED IN STRICT ACCORDANCE WITH THE LATEST EDITIONS OF SMACNA AND ASHRAE REQUIREMENTS.

22. ACOUSTIC LINED DUCTWORK:

ACOUSTICALLY AND THERMALLY LINE 10' OF RECTANGULAR SUPPLY, RETURN, OUTSIDE AIR, AND EXHAUST DUCT AND PLENUMS WITH 1\" THICK, 1\ PCF FIBERGLASS DUCT LINER (R-6 MIN.), APPLIED PER THE MANUFACTURER'S AND NAIMA REQUIREMENTS. DUCT LINER SHALL MEET OR EXCEED ASHRAE'S I.A.Q. STANDARD 62 AND IEEC. USE WELDED STICK CLIPS, IN LIEU OF ADHESIVE TYPE FASTENERS AND FULL COVERAGE ADHESIVE. PROVIDE EDGE NOSINGS WERE REQUIRED. COAT ALL EXPOSED FIBERGLASS WITH HARDCAST "LAG-GRIP 671".

23. JOINT SEALING:

SEAL ALL DUCT JOINTS AND SEAMS (LONGITUDINAL AND TRANSVERSE) WITH HIGH PRESSURE DUCT SEALER, HARDCAST "IRON-GRIP 601" OR APPROVED EQUIVALENT. REINFORCED FOIL BACKED TAPES, CLOTH OR PLASTIC BACKED TAPES (DUCT TAPE) ARE NOT ACCEPTABLE.

24. FLEXIBLE AIR DUCT:

DUCT SHALL BE UL LISTED UL-181, CLASS I AIR DUCT MATERIAL AND SHALL COMPLY WITH N.F.P.A 90A AND 90B AND ALL LOCAL REQUIREMENTS DUCT SHALL HAVE AN OPERATING AIR PRESSURE OF 6 INCHES WG POSITIVE AND 4 INCHES WG NEGATIVE, ACOUSTICAL DOUBLE LAMINATED INNER FABRIC BONDED TO A STEEL HELIX WIRE. OUTER JACKET FIRE RETARDANT REINFORCED ALUMINUM MYLAR WITH FIBER GLASS INSULATION. FLEXMASTER TYPE "8M" ACOUSTICAL INSULATED OR EQUIVALENT.

MAKE ALL FLEXIBLE DUCT CONNECTIONS TO HARD DUCT USING STAINLESS STEEL SCREW CLAMPING BANDS AND SEALED AIR TIGHT WITH HIGH PRESSURE DUCT SEALER. PLASTIC BANDS ARE NOT ACCEPTABLE.

SEAL FLEXIBLE DUCT VAPOR BARRIER TO HARD DUCT AND/OR ADJACENT INSULATION. NO EXPOSED FIBERGLASS SHALL BE VISIBLE.

25. AIR DISTRIBUTION DEVICES:

COORDINATE THE EXACT LOCATIONS OF ALL AIR DEVICE NEEDS WITH THE ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION. COORDINATE THE EXACT LOCATION OF EACH OUTLET WITH THE ARCHITECT WITH REGARD TO CEILING AND WALL SPACING, CENTERING ALONG SOFFITS, WALLS, ETC.

FURNISH AND INSTALL WHERE SHOWN ON THE DRAWINGS ALL DIFFUSERS, GRILLES, AND REGISTERS OF THE SIZE, TYPE, AND CAPACITY AS INDICATED IN THE AIR DEVICE SCHEDULE.

ELBOWS:

26. TURNING VANES AND SMOOTH RADIUS ELBOW (WITHOUT VANES):

AT ALL DUCT TURNS OF 45 DEGREES OR MORE, PROVIDE SINGLE THICKNESS TURNING VANES PER SMACNA REQUIREMENTS. ALTERNATIVELY, USE SMOOTH RADIUS ELBOW (R/W = 1.5).

27. BRANCH TAKEOFF FITTINGS:

AT ALL MAIN TO BRANCH DUCT TAPS, TAKEOFFS, OR RUN-OUTS PROVIDE 45 DEGREE ENTRANCE TAPS, AS DETAILED BY SMACNA STANDARDS.

28. DUCT MOUNTED ACCESS PANELS:

INSTALL ACCESS PANELS AS FOLLOWS:

AT INLET OF EACH DUCT MOUNTED FIRE AND MOTORIZED DAMPER.

FOR DUCT MOUNTED CONTROLS.

AS REQUIRED AND DIRECTED BY THE TEST AND BALANCE CONTRACTOR.

WHERE REQUIRED FOR DUCT INSPECTION, MAINTENANCE, AND CLEANING.

ACCESS PANELS SHALL BE 18 INCHES X 18 INCHES OR LARGEST DUCT WILL ALLOW. NORMALLY CENTER THE ACCESS PANEL IN THE BOTTOM OF THE DUCT AS CLOSE AS POSSIBLE TO THE DUCT MOUNTED DEVICE. ACCESS PANELS MAY BE INSTALLED ON THE SIDE OF THE DUCT, WHERE NECESSARY.

ACCESS PANELS SHALL BE DOUBLE WALL INSULATED HINGED WITH NEOPRENE GASKETS AND CAM LOCKS ON EACH UNHINGED SIDE. WHERE REQUIRED BECAUSE OF PANEL OPENING CLEARANCE, SUBSTITUTE UNHINGED ACCESS PANELS WITH CAM LOCKS ON EACH SIDE AND CAPTIVE CHAIN. ACCESS PANELS SHALL BE FLEXMASTER "TBSM-TAB DOOR" GREENHECK MODEL "HAD-10", OR EQUIVALENT.

REFRIGERANT PIPING

29. GENERAL

REFRIGERANT PIPING SHALL CONFORM TO THE REQUIREMENTS OF THE SAFETY CODES FOR MECHANICAL REFRIGERATION AND REFRIGERANT PIPING AND THE MANUFACTURER REQUIREMENTS.

RUN ALL PIPING SQUARE TO BUILDING LINES WHEREVER POSSIBLE. FIELD ROUTE PIPING IN ORDER TO PROVIDE FOR EASE OF ACCESS TO VALVES AND OTHER APPURTENANCES.

SUPPORT INTERIOR PIPING FROM THE BUILDING STRUCTURE USING COPPER OR PVC COATED HANGERS. SUPPORT REFRIGERANT PIPING 4 FOOT ON CENTER AND AT EACH CHANGE OF DIRECTION. PROVIDE 4" WIDE INSULATION SADDLES.

SUBMIT REFRIGERANT PIPING LAYOUT SHOP DRAWINGS FOR EACH UNIQUE SYSTEM, REVIEWED AND APPROVED BY THE MANUFACTURER, IN WRITING. SHOW ALL FILTERS, DRIERS, SIGHT-GLASSES, VALVES, ETC. AS REQUIRED BY THE MANUFACTURER.

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RETROFIT & ADDITION FOR:
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DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 02.XX.2024
DRAWN: KGR
CHECKED: JCAA
BDG ARCH NO.: **23.024**

MECHANICAL SPECIFICATIONS

M002

ISSUED FOR PERMIT - 03.12.2024

30. MATERIAL AND INSTALLATION

USE REFRIGERANT GRADE, TYPE "K" HARD DRAWN COPPER PIPE WITH LONG RADIUS ELBOWS. NO CAST FITTINGS ARE ACCEPTABLE.

INSTALL FILTER DRIER EQUIVALENT TO SPORLAN CATCH-ALL.

INSTALL SIGHT GLASSES WITH MOISTURE INDICATORS COVERED BY A PROTECTIVE CAP. LOCATE THE SIGHT GLASSES INSIDE THE BUILDINGS, CLOSE TO THE FAN COIL IN THEIR RESPECTIVE MECHANICAL CLOSETS.

PROVIDE EXTERNAL FRONT SEATED BRASS SERVICE VALVES WITH SWEAT CONNECTIONS, WITH SERVICE PORTS FOR CHECKING OPERATING REFRIGERANT PRESSURES.

COPPER SHALL BE CLEANED AND SHINED BEFORE BRAZING. BRAZE USING J.W. HARRIS "DYNAFLOW" 6% SILVER BRAZING ALLOY.

31. PURGING

PIPING SHALL BE PURGED WITH DRY NITROGEN WHILE BRAZING TO PREVENT OXIDATION. UPON COMPLETION OF A WELD, THE WELD SHALL BE WIPED WITH A DAMP RAG TO REMOVE FLUX WHILE STILL HOT.

32. TESTING

ALL PIPING SHALL BE TESTED FOR 24 HOURS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND PROVEN TIGHT:

DISCHARGE AND LIQUID REFRIGERANT PIPING--300 PSIG, NITROGEN.

SUCTION REFRIGERANT PIPING--150 PSIG NITROGEN.

REFRIGERANT PIPING, AFTER PROVEN TIGHT, SHALL BE EVACUATED BY MEANS OF AN APPROVED VACUUM PUMP TO A VACUUM OF 2.5 MM HG ABSOLUTE. SYSTEMS SHALL STAND UNDER VACUUM WITH VACUUM PUMP OFF FOR A MINIMUM OF 12 HOURS. SYSTEMS MAY BE CHARGED WITH PROPER REFRIGERANT AFTER ARCHITECT'S APPROVAL OF VACUUM TEST. A DEHYDRATOR SHALL BE USED IN CHARGING HOSE DURING CHARGING OF SYSTEMS WITH REFRIGERANT.

INSULATION:

33. GENERAL

THIS SECTION APPLIES TO ALL MECHANICAL WORK.

ALL INSULATION SHALL BE IN STRICT ACCORDANCE WITH ASHRAE STANDARDS AND ALL LOCAL AND STATE ENERGY CODES.

THE INSULATION WORK SHALL BE PERFORMED BY A FIRM REGULARLY ENGAGED IN THIS TYPE WORK USING MECHANICS SKILLED IN THE TRADE.

INSTALL ALL MATERIALS AS RECOMMENDED BY THE MANUFACTURER FOR THE SERVICE INTENDED. ALL INSULATION MATERIAL, INCLUDING SEALER MATERIAL, ADHESIVES, COVERING MATERIAL, FINISH, ETC. SHALL HAVE A U. L. LISTED FLAME SPREAD RATING NOT OVER 24 WITHOUT EVIDENCE OF CONTINUED PROGRESSIVE COMBUSTION AND WITH A SMOKE DEVELOPED RATING NOT HIGHER THAN 50. ALL COATINGS AND COVERINGS FOR HOT SERVICE SHALL BE BREATHER TYPE AND VAPOR BARRIER TYPE FOR COLD SERVICE.

34. HVAC PIPING

INSULATE REFRIGERANT SUCTION LINES AND ALL CONDENSATE DRAIN LINES WITH (CODE REQUIRED THICKNESS) CLOSE CELLED ELASTOMERIC INSULATION INSTALLED PER THE MANUFACTURERS REQUIREMENTS. PAINT EXTERIOR INSULATION WITH TWO COATS PAINT AS REQUIRED BY THE INSULATION MANUFACTURER.

35. EXTERNALLY INSULATED DUCTS:

EXTERNALLY INSULATE ALL SUPPLY AND RETURN DUCTWORK WITH 1\" THICK (R-6 MIN.) DUCT WRAP FOR DUCTS LOCATED IN UNCONDITIONED SPACES AND A 2" THICK (R-8 MIN.) DUCT WRAP FOR DUCTS LOCATED OUTSIDE THE BUILDING, EXCEPT PRE-INSULATED FLEXIBLE DUCT. EXTERNALLY INSULATE ALL OUTSIDE AIR DUCTWORK WITH 2" THICK (R-8) DUCT WRAP WITH ALUMINUM ALL SERVICE JACKET, VAPOR BARRIER. ALL DUCT WRAPS SHALL MEET OR EXCEED ASHRAE'S I.A.Q. STANDARD 62 AND IEEC.

36. CHILLED WATER PIPING

INSULATE INDOOR CHILLED WATER PIPING WITH 1\" THINK HEAVY DENSITY FIBERGLASS PIPE INSULATION WITH FLAME SAFE, ALL-PURPOSE BARRIER JACKET. INSULATE EXTERIOR CHILLED WATER PIPING AS SPECIFIED ABOVE, BUT DOUBLE THICKNESS WITH ALUMINUM JACKET BANDED IN PLACE. INSULATE INDOOR, SMALL RUN OUT, CHILLED WATER PIPING WITH [" THICK FIRE RETARDANT INSULATION.

37. EQUIPMENT:

CAPACITY, PERFORMANCE AND CHARACTERISTICS OF EQUIPMENT SHALL BE AS INDICATED ON THE DRAWINGS AND AS SPECIFIED OR IMPLIED HEREIN. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY INCREASED COST TO HIMSELF OR OTHERS FOR EQUIPMENT WHICH DEVIATES FROM THAT SCHEDULED OR IMPLIED HEREIN. REGARDLESS OF COST AFFECT, THE ARCHITECT MUST APPROVE ANY DEVIATION FROM THE DRAWINGS AND THE SPECIFICATION.

38. MOTORS AND STARTERS:

ALL ELECTRIC MOTORS SHALL BE HIGH EFFICIENCY TYPE WITH MAXIMUM OF 1750 RPM WITH OPEN DRIP PROOF OR TEFC ENCLOSURES, UNLESS OTHERWISE NOTED. MOTORS LOCATED ON AIR HANDLING UNITS SHALL BE MOUNTED IN RUBBER SUPPORTS OR THE FAN SHALL BE INDEPENDENTLY SUPPORTED ON SPRING ISOLATORS. MOTORS LOCATED IN THE CONDITIONED SPACE SHALL BE SELECTED FOR QUIET OPERATION AND SHALL NOT PRODUCE AN OBJECTIONABLE "MOTOR NOISE" IN THE SPACE.

ELECTRICAL CHARACTERISTIC SHALL BE VERIFIED FROM THE ELECTRICAL DRAWINGS, PRIOR TO BIDDING, AND VERIFIED ON THE JOB WITH THE ELECTRICAL SUB-CONTRACTOR. IF A CONFLICT ARISES, THE ELECTRICAL DRAWINGS SHALL BE THE AUTHORITY.

PROVIDE MOTOR STARTERS AND PROPER HEATER ELEMENTS SIZED IN ACCORDANCE WITH NFPA 70. STARTERS SHALL BE SQUARE-D OR EQUIVALENT WITH OVERLOAD TRIP ELEMENT IN EACH PHASE. LARGER MOTORS AND THEIR STARTERS SHALL MEET THE REQUIREMENTS OF THE UTILITY COMPANY AS TO INRUSH ALLOWABLE AND THE TYPE OF STARTING PERMITTED.

SHOULD ANY MECHANICAL EQUIPMENT REQUIRE EXTRA WORK BY OTHER TRADES, FOR PROPER INSTALLATION, THIS CONTRACTOR SHALL BEAR ALL COSTS, SUCH AS INCREASED ELECTRICAL, STRUCTURAL, ROOFING, ETC.

SYSTEMS TEST AND BALANCE:

39. GENERAL REQUIREMENTS:

THE REQUIRED TEST & BALANCE OF THE HVAC SYSTEM SHALL BE PERFORMED BY AN APPROVED INDEPENDENT TESTING AGENCY AS SPECIFIED BELOW.

40. AGENCY QUALIFICATIONS:

TEST & BALANCE AGENCY (TBA) SHALL BE PERFORMED BY AN INDEPENDENT AGENCY ENGAGED SOLELY IN TEST AND BALANCE WORK. AGENCY SHALL BE MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR NATIONAL ENVIRONMENTAL BALANCING BUREAU, (NEBB).

SUBMIT A WRITTEN REPORT WITHIN 30 DAYS OF COMMENCING WORK, WITH ANY RECOMMENDED CHANGES TO INSURE BALANCING CAPABILITY.

SUBMIT A DETAILED TEST PLAN TO THE ARCHITECT ILLUSTRATING ALL FORMATS, DRAWINGS, AND TEST PROCEDURE TO BE USED FOR TESTING THE COMPLETED SYSTEM. THE APPROVED PLAN WILL BE USED FOR TESTING THE SYSTEMS. PROCEDURES SHALL INCLUDE REQUIREMENTS LISTED IN AABC / NEBB STANDARDS, LATEST EDITION AND ANY SPECIAL REQUIREMENTS FOR THIS PROJECT.

MAKE PROJECT VISITS AS REQUIRED DURING CONSTRUCTION PERIOD INSPECTING FOR PROPER INSTALLATION OF THE SYSTEM AND RELATED BALANCING DEVICES. PROJECT VISIT REPORTS SHALL BE MADE TO THE ARCHITECT IN WRITING.

41. CONTRACTORS REQUIREMENTS PRIOR TO TEST & BALANCE:

THE CONTRACTOR SHALL PERFORM ALL REQUIRED PRELIMINARY TESTS AND OTHER PREPARATORY WORK, INCLUDING BUT NOT LIMITED TO:

MAKE SURE ALL FANS ARE OPERATING, CHECK ROTATION, RPM, AND AMPS.
CHECK ALL DAMPERS FOR OPERATION.
PUT ALL HVAC EQUIPMENT IN FULL OPERATION INCLUDING AIR UNITS, ACCU'S AND FANS.
MAKE SURE ALL HVAC CONTROLS ARE INSTALLED AND FULLY OPERATIONAL.
CLEAN/REPLACE FILTERS JUST PRIOR TO TESTING.
PROVIDE ALL BALANCING DEVICES AND DRIVE CHANGES THAT ARE DEEMED NECESSARY BY T & B AGENCY FOR BALANCE AT NO ADDITIONAL COST TO THE OWNER.

42. TEST AND BALANCE:

TEST & BALANCE AGENCY SHALL BALANCE ALL AIR SYSTEMS FOR OPERATION WITHIN DESIGN CRITERIA. PRIME MOVERS SHALL BE WITHIN 5% OF DESIGN AND TERMINALS WITHIN 10% OF DESIGN.

AIR SYSTEMS SHALL BE BALANCED AS DESCRIBED HEREIN.

43. TEST REPORT:

THE TBA SHALL PREPARE FIVE (5) COPIES OF A FINAL COMPREHENSIVE TEST REPORT IN THE FOLLOWING FORMAT.

REPORT SHALL BE BOUND 8-1/2 X 11" WITH SUBSTANTIAL COVERS USING APPROVED FORMS, TYPED OR COMPUTER GENERATED REPORTS ARE ACCEPTABLE.

REPORT SHALL BE INDEXED.

TABLE OF CONTENTS SHALL LIST ALL REPORTS.

ALL AIR OUTLETS SHALL BE LOCATED ON CODED DRAWINGS PREPARED BY THE T&B AGENCY. AIR OUTLETS FORMS SHALL BE PREPARED AND CORRELATED TO THE CODED DRAWINGS.

TEST SUMMARY SHALL DESCRIBE FINAL TEST PROCEDURES AND SPECIAL CONDITIONS DURING TESTS (SUCH AS THERMOSTAT OUTSIDE/RETURN AIR RELATIONSHIP, AND DUCT STATIC PRESSURE.

DESCRIBE OTHER DATA THAT MAY ASSIST OPERATING PERSONNEL IN THE CONTINUING OPERATION OF THE SYSTEM.

T&B CONTRACTOR SHALL TAKE AND RECORD ALL NECESSARY READINGS AT THE FINAL BALANCE POINTS, SUCH AS BUT NOT LIMITED TO: AIR QUANTITIES, PRESSURES, SETPOINTS, ENTERING AND LEAVING COIL TEMPERATURES, SPACE INDOOR AND OUTSIDE WET AND DRY BULB TEMPERATURES, OUTDOOR WEATHER CONDITIONS, ELECTRICAL READINGS OF ALL NEW AND EXISTING MOTORS, COMPRESSORS, ETC.

TEST REPORT SHALL CONTAIN TBA CERTIFICATION OF TEST DATA AND SYSTEM CONDITIONS.

SUBMIT THE TEST REPORTS, FOR REVIEW, BEFORE SUBSTANTIAL COMPLETION.

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THE LITTLE SCHOOL ON PERRY STREET

DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

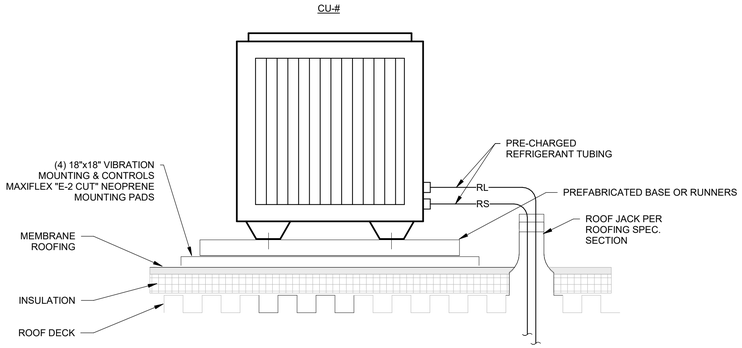
DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 02.XX.2024
DRAWN: Author
CHECKED: Checker
BDG ARCH NO.: **23.024**

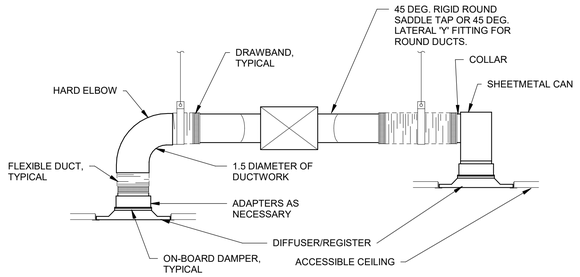
MECHANICAL SPECIFICATIONS

M003

ISSUED FOR PERMIT - 03.12.2024



6 Roof Mounted Condensing Unit Detail
NOT TO SCALE



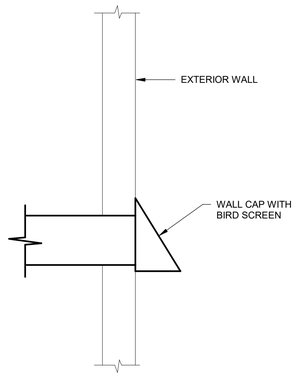
NOTE:

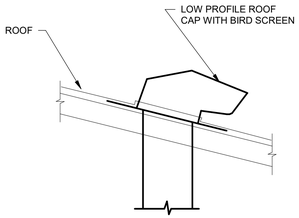
1. FLEXIBLE DUCT SHALL BE INSTALLED ONLY WHERE SPECIFICALLY INDICATED ON FLOOR PLANS.

2. LENGTH OF FLEXIBLE DUCTWORK SHALL BE LIMITED TO 5'-0" MAXIMUM HORIZONTAL RUN WITH ONLY ONE 90 DEG. ELBOW AS SHOWN ABOVE. SECURE FLEIBLE DUCTWORK WITH SCREWS AND DRAWBANDS PER SMACNA STANDARDS.

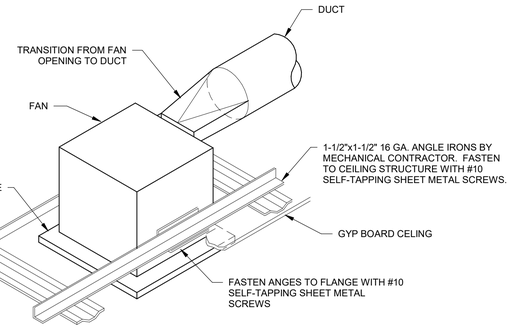
3. ALL RUNNOUTS SHALL BE FURNISHED WITH BALANCING DAMPER. ANY DAMPER UNABLE TO BE ACCESS SHALL BE FURNISHED WITH REMOTE OPERABLE DAMPER WITH MANUAL PULL CORD EQUAL TO ROTO-TWIST 250 - MAT REMOTE DAMPER ACTUATOR. OR FACE OPERABLE DAMPER.

3 Ceiling Diffuser/Register Mounting Detail
NOT TO SCALE

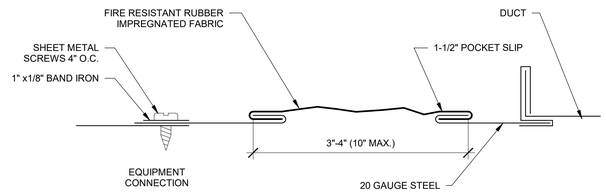




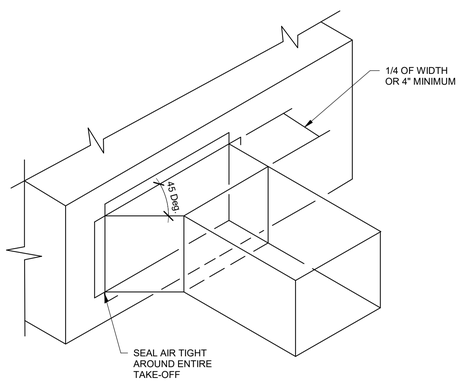
2 Wall Cap/Roof Cap Detail
NOT TO SCALE



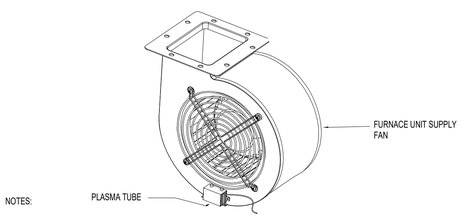
5 Ceiling Exhaust Fan Detail
NOT TO SCALE



4 Flexible Duct Connector Detail
NOT TO SCALE



7 45° Take-off Detail
NOT TO SCALE



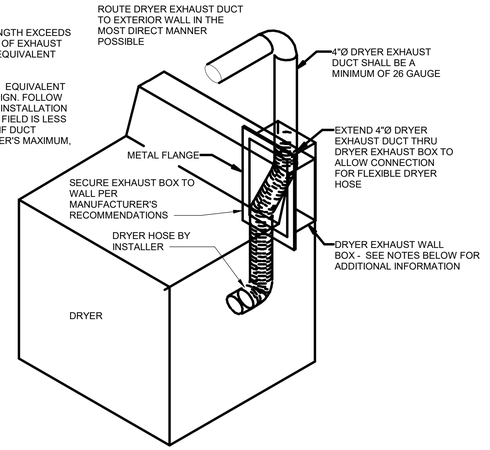
NOTES:

1. MOUNT GPS-FC TO FAN INLET.
2. USE TWO SELF-TAPPING SCREWS TO SECURE GPS-FC TO FAN INLET, ENSURING SCREWS DO NOT CONTACT FAN SCROLL.
3. WIRE GPS-FC-3-BAS TO 24VAC CONTROLLER POWER
4. "DRY" ARLAM CONTACTS ARE PROVIDED WITH EACH GPS-FC-3-BAS, RATED FOR 24VAC/300mA MAX.

8 GPS-FC-48-AC MOUNTING DIAGRAM
N.T.S.

NOTE: WHERE DRYER DUCT EQUIVALENT LENGTH EXCEEDS 35', INSTALL PERMANENT PLACARD WITHIN 6' OF EXHAUST DUCT CONNECTION WITH FIELD MEASURED EQUIVALENT LENGTH OF DUCT PRINTED ON PLACARD.

ENSURE DRYER IS LONG VENT (MINIMUM 100' EQUIVALENT LENGTH OF DRYER DUCT) PER BASIS OF DESIGN. FOLLOW MANUFACTURERS INSTRUCTIONS FOR VENT INSTALLATION AND CONFIRM DUCT EQUIVALENT LENGTH IN FIELD IS LESS THAN MANUFACTURER'S MAXIMUM LENGTH. IF DUCT EQUIVALENT LENGTH EXCEEDS MANUFACTUER'S MAXIMUM, INSTALL POWER VENTILATOR.



NOTES:

1. DRYER EXHAUST BOX MODEL 425 AS MANUFACTURED BY IN-O-VATE TECHNOLOGIES; LISTED FOR 1-HR (F AND T RATINGS) WALL INSTALLATION; UL THROUGH-PENETRATION FIRESTOP SYSTEM NO. W-L-7129. USE FOR UPWARD EXHAUST DIRECTION AND DOWNWARD EXHAUST DIRECTION ONLY FOR PEDESTAL AND STACKING DRYERS.
2. FOR DOWNWARD EXHAUST DIRECTION USE THE MODEL 4D (EXCEPT FOR PEDESTAL AND STACKABLE DRYERS).
3. INSTALLATION REQUIRES THE SPACES BETWEEN THE SIDES OF THE BOX AND THE STUDS AND THE SPACE IMMEDIATELY ABOVE THE BOX TO BE TIGHTLY PACKED WITH GLASS FIBER BATT OR MINERAL WOOL BATT INSULATION. REFER TO UL INSTALLATION DETAILS FOR ADDITIONAL INFORMATION.
4. INSTALL 16 GA STEEL SHIELD PLATES AT THE FINISHED FACE OF FRAMING MEMBERS WHERE THERE IS LESS THAN 1/4" BETWEEN THE DUCT AND THE FINISHED FACE OF THE FRAMING. SHIELD PLATES SHALL EXTEND 2" ABOVE SOLE PLATES AND 2" BELOW TOP PLATES.

1 RESIDENTIAL DRYER EXHAUST DETAIL
NOT TO SCALE

BODUCH DESIGN GROUP
4969 South Alkire Street
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JCA
4100 Wadsworth Blvd.
Wheat Ridge, CO 80033
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#23.124

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MECHANICAL DETAILS

M004

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AIR HANDLER SCHEDULE (NATURAL GAS HEATING - DX COOLING)

TAG	MANUFACTURER/ MODEL	COIL	CONDENSER	COOLING CAPACITY						HEATING CAPACITY				SUPPLY FAN			MCA	MOCP	VOLT/PH/HZ	WEIGHT (LBS)	NOTES
				TOTAL MBH	SENSIBLE MBH	EAT (DB/WB)	LAT (DB/WB)	CONDENSER AMB. AIR TEMP (DEG. F)	EFFICIENCY (SEER2)	INPUT (MBH @ S.L.)	OUTPUT (MBH @ S.L.)	EAT (DB)	LAT (DB)	TOTAL CFM	OUTDOOR AIR CFM	SUPPLY ESP (IN W.C.)					
(E)AHU-1	CARRIER/ -	CARRIER/ CNPVP3617	(E)CU-1	36	-	80/62	-	95	-	60	58	50.4	92.7	1200	150	0.3	-	-	-	-	1
(N)AHU-2	CARRIER/ 59MN7B	CARRIER/ CVPVA4824	(N)CU-2	48.0	42.7	80/62	55.9/52.6	95	15	120	117	57.0	108.3	1600	250	0.75	14.1	20	115/1/60	300	2
(N)AHU-3	CARRIER/ 59MN7B	CARRIER/ CVPVA4824	(N)CU-3	48.0	42.7	80/62	55.9/52.6	95	15	120	117	43.8	95.0	1600	250	0.75	14.1	20	115/1/60	300	2

OR EQUIVALENT BY OTHERS

NOTES:

1. EXISTING UNIT INFORMATION COULD NOT BE VERIFIED, CONTRACTOR TO VERIFY LOCATION AND OPERATION AND NOTIFY JCAA IMMEDIATLEY OF ANY DISCREPANCY.

2. PROVIDE WITH THE FOLLOWING ACCESSORIES:
   - 24/7 PROGRAMMABLE THERMOSTAT
   - CO2 CONTROL KIT
   - MOTORIZED OA DAMPER PER IECC - INTERLOCK TO AHU
   - STAINLESS STEEL HEAT EXCHANGER
   - MODULATING GAS VALVE
   - TWO SPEED FAN CONTROL
   - MERV-13 FILTERS
   - ETL OR UL LISTED NON-FUSED DISCONNECT - MOUNT TO UNIT - ENSURE - 36" CLEAR IN-FRONT PER NEC.
   - 120V GFCI CONVENIENCE OUTLET.
3. SEE GPS CALC SHEET FOR REDUCE OA JUSTIFICATION.

CONDENSING UNIT SCHEDULE

TAG	MANUFACTURER/ MODEL	LOCATION/ SERVICE	COOLING CAP. (MBH)	REFRIGERANT	EAT DB (DEG. F)	MCA	MAX FUSE	VOLT/ PHASE	WEIGHT (LBS)	MINIMUM EFF. (SEER2)	NOTES
(R)CU-1	CARRIER/ 24NVA936	(E)AHU-1	36	R-410A	95	24.2	40	208-230/60/1	-	-	-
(N)CU-2	CARRIER/ 24VNA948	(N)AHU-2	48	R-410A	95	40	60	208-230/60/1	300	19.0	1
(N)CU-3	CARRIER/ 24VNA948	(N)AHU-3	48	R-410A	95	40	60	208-230/60/1	300	19.0	1

OR EQUIVILENT BY OTHERS

NOTES:

PROVIDE WITH
1. NEOPRENE - HOUSEKEEPING PAD OR 4X4 RUNNERS.
2. HAIL GUARDS.
3. NON-FUSED DISCONNECT MOUNTED TO UNIT - ENSURE 36" CLEAR IN FRONT OF DICSCONNECT PER NEC.
4. VIBRATION ISOLATION.

EXHAUST FAN SCHEDULE

TAG	MANUFACTURER/ MODEL	LOCATION/ SERVICE	CFM	ESP (IN. WC)	POWER	VOLT/HZ/ PHASE	WEIGHT (LBS)	RPM	SONES	METHOD OF CONTROL	NOTES
(N)EF-2,3	CARNES/ VCDD015CA	RESTROOMS	70	0.4	102 W	115/60/1	15	710	3.1	LIGHT SWITCH	1

OR EQUIVILENT BY OTHERS

NOTES:

1. PROVIDE WITH BACKDRAFT DAMPER, RAIN CAP AND BIRDSCREEN.

ELECTRIC UNIT HEATER SCHEDULE

TAG	MANUFACTURER/ MODEL	LOCATION/ SERVICE	HEATING CAP. (KW)	BTUH	CFM	THROW FT.	MIN. MOUNTING HEIGHT (FT.)	MCA	V/P/HZ	WEIGHT (LBS.)	NOTES
UH-1	QMARK/ MWUH5004	CRAWL SPACE	1.87	6396	270	16	6	11.3	208/1/60	24	1, 2

OR EQUIVILENT BY OTHERS

NOTES:

1. HEATER TO BE WALL MOUNTED. PROVIDE DISCONNECT SWITCH. BUILT IN THERMOSTAT SET AT 65°F (ADJ.)

GRILLE, DIFFUSER, AND REGISTER SCHEDULE

TAG	USE	PATTERN	ACCESSORIES	FINISH	MAKE & MODEL	REMARKS
SD-1	CEILING DIFFUSER	4-WAY	O.B.D.	BY ARCH	TITUS TMS	24"x24" FACE NECK SIZE VARIES, SEE DRAWINGS
SD-2	CEILING DIFFUSER	4-WAY	O.B.D.	BY ARCH	TITUS TMS	12"x12" FACE NECK SIZE VARIES, SEE DRAWINGS
SD-3	CEILING/SIDEWALL DIFFUSER	4-WAY	O.B.D	BY ARCH	TITUS 250	14"x6" FACE 14"x6" NECK
RG-1	CEILING - FILTERED RETURN GRILLE	EGG CRATE	FILTER FRAME 2"	BY ARCH	PRICE 80FF	24"x24" FACE NECK SIZE VARIES, SEE DRAWINGS
L-1	LOUVER	STATIONARY	O.B.D.	BY ARCH	RUSKIN ELF6375DFL	SIZE VARIES, SEE DRAWINGS

OR EQUIVILENT BY PRICE, KRUEGER, METAL-AIRE, OR NAILOR

NOTES:

1. UNLESS SPECIFICALLY INDICATED ON PLANS, GRILLE, REGISTER AND DIFFUSER RUN-OUT SIZES ARE AS FOLLOWS:

RUN-OUT	CFM
4"Ø	<60
6"Ø	61-125
8"Ø	126-275
10"Ø	276-500
12"Ø	501-775
14"Ø	776-1,000

GLOBAL PLASMA AIR DUCT TUBE SCHEDULE

TAG	MANUFACTURER	MODEL	SERVING	ELEC. VOLTAGE	WEIGHT	QUANTITY PER UNIT
GP-1	GLOBAL PLASMA SOLUTIONS	FC48- AC	ONE FOR EACH RTU	24 VOLTS	4 LBS	1

ALL TUBES SHALL BE MOUNTED INSIDE CORRESPONDING FURNACE

COLORADO LICENSED
PATRICK LEONHARD
55536
PROFESSIONAL ENGINEER

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MECHANICAL SCHEDULES

M005

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COLORADO LICENSED
PATRICK LEONARD
55536
PROFESSIONAL ENGINEER
10/3/2024

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MECHANICAL VENTILATION CALCS

M006

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Global Plasma Solutions

10 Mall Terrace, Building C
Savannah, GA 31406
Phone: (912) 356-0115 Fax: (912) 356-0114
Email: info@globalplasmasolutions.com Web: www.globalplasmasolutions.com

VERSION 1.7 running ASHRAE 62.1-2013

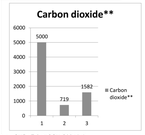
Zone Tag	Facility Type	Zone Use	Zone Floor Area (square ft) Az	Zone Max Occupancy Pz	Table 6.1 OA per Occupant Rp	Table 6.1 cfm/ft2 Ra	Pz * Rp Pz * Ra	Az * Ra Az * Ra	Table 6.2 Ventilation Effectiveness Ez	Outdoor Air to Zone (CFM) with Ez correction (Vbz/Ez)
AHU-1	Educational Facilities	Daycare (through Age 4)	1,146.0	16.0	10.0	0.18	160	206	0.8	458
										OA required per VRP

Zone Height (feet)	9.0
Desired Outside Air (Vo) IAQP	150
Supply Air (Vs)	1,200
Return Air (Vr)	1050
Recirc. Flow Factor (R)	0.88
Ventilation Effectiveness (Ez)	0.8
Level of Physical Activity	**Standing (desk work)**
Filter Location	B
HVAC Flow Type	Constant
Outdoor Air Flow Type	Constant

Air Changes Per Hour	7.0	VRP OA CFM per person	28.6
Outside Air Per VRP	458 CFM	IAQ OA CFM per person	9.4
Outside Air Per IAQ	150 CFM		
Outside Air Savings	308 CFM	Winter Heating Savings	
OA Summer Drybulb	98.8	DA Winter Design DB (F)	-10
OA Summer Wetbulb	68.0	Supply Air DB Setpoint (F)	85
Coil Leaving Air Drybulb (F	55.0	MBH Saved Winter	31.7
Coil Leaving Air Wetbulb (F	55.0	KW Saved Winter	9.3
OA MBH Saved Summer*	12.4		
OA Tons Saved Summer*	1.0		

*OA = Outside Air
***OSHA, NIOSH & WHO most conservative values us
http://www.cdc.gov/niosh/npg/npgsyn-a.html

Indoor Contaminants Generated By People & From Outdoors	Maximum Threshold Value (PPM)	Steady State Using the VRP* (Prescribed OA) Plasma Off	Steady State Using the IAQ Method (Reduced OA) Plasma On	Is Steady State Level Acceptable at Reduced OA Levels?	Contaminant Generation Rate (PPM)	Filtration Effectiveness	Cognizant Authority***
Acetaldehyde	100.0	0.01111	0.00125	Yes	0.00048	50%	OSHA
Acetone	250.0	0.00155	0.00033	Yes	0.00654	50%	NIOSH
Ammonia	25.00	0.01110	0.00655	Yes	0.21460	50%	NIOSH
Benzene	1.0000	0.00251	0.00028	Yes	0.00022	50%	OSHA
2- Butanone (MEK)	200.0	0.00016	0.00005	Yes	0.00133	50%	NIOSH
Carbon dioxide**	5000	719	1582	Yes	441	0%	NIOSH
Chloroform	2.0000	0.00011	0.00001	Yes	0.00004	50%	NIOSH
Dioxane	100.0	0.00000	0.00000	Yes	0.00000	50%	OSHA
Hydrogen Sulfide	10.0	0.00000	0.00000	Yes	0.00000	50%	NIOSH
Methane	NA	1.68094	1.68094	Yes	0.00000	0%	NA
Methanol	200.0	0.00000	0.00000	Yes	0.00000	0%	NIOSH
Methylene Chloride	25.0	0.00074	0.00011	Yes	0.00121	50%	OSHA
Propane	1000.0	0.00998	0.00998	Yes	0.00000	0%	NIOSH
Tetrachloroethane	5.0000	0.00000	0.00000	Yes	0.00000	50%	OSHA
Tetrachloroethylene	100.0000	0.00037	0.00005	Yes	0.00001	50%	OSHA
Toluene	100.0000	0.00533	0.00073	Yes	0.00032	50%	NIOSH
1,1,1 - Trichloroethane	350.0000	0.00077	0.00012	Yes	0.00058	50%	NIOSH
Xylene	100.0000	0.00230	0.00031	Yes	0.00000	50%	OSHA



**Carbon dioxide has been provided for reference only for gathering demand control ventilation (DCV) setpoints. The National Research Council was commissioned by the US Navy to prove CO2 is not a contaminant of concern when using air purificator to control the other contaminants of concern, as found on submarines.

1 = ASHRAE & NIOSH CO2 Limit
2 = CO2 Level at Ventilation Rate OA Flow Rate
3 = CO2 Level at IAQ Procedure OA Flow Rate

Building materials and furnishings assumed to have no VOCs and off-gassing is complete
All yellow shaded boxes require user input or review

Is IAQ acceptable at reduced outside air levels?	Yes

Date	3/13/2024
Job Name	Perry Street
Representative	JCAA Consulting Engineers
Engineer	Patrick Leonard
Contractor	-

IMC 2006 & later allows for ASHRAE 62 IAQP through the engineered exception found in Section 403.2
Exhaust flow rates may differ from Table 6.5 based on ASHRAE 62 IAQP via Section 6.5.2

Global Plasma Solutions

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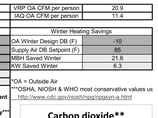
Zone Tag	Facility Type	Zone Use	Zone Floor Area (square ft) Az	Zone Max Occupancy Pz	Table 6.1 OA per Occupant Rp	Table 6.1 cfm/ft2 Ra	Pz * Rp Pz * Ra	Az * Ra Az * Ra	Table 6.2 Ventilation Effectiveness Ez	Outdoor Air to Zone (CFM) with Ez correction (Vbz/Ez)
AHU-2	Educational Facilities	Daycare (through Age 4)	822.0	22.0	10.0	0.18	220	148	0.8	460
										OA required per VRP

Zone Height (feet)	9.0
Desired Outside Air (Vo) IAQP	250
Supply Air (Vs)	1,600
Return Air (Vr)	1350
Recirc. Flow Factor (R)	0.84
Ventilation Effectiveness (Ez)	0.8
Level of Physical Activity	**Standing (desk work)**
Filter Location	B
HVAC Flow Type	Constant
Outdoor Air Flow Type	Constant

Air Changes Per Hour	13.0	VRP OA CFM per person	20.9
Outside Air Per VRP	460 CFM	IAQ OA CFM per person	11.4
Outside Air Per IAQ	250 CFM		
Outside Air Savings	210 CFM	Winter Heating Savings	
OA Summer Drybulb	98.8	DA Winter Design DB (F)	-10
OA Summer Wetbulb	68.0	Supply Air DB Setpoint (F)	85
Coil Leaving Air Drybulb (F	55.0	MBH Saved Winter	21.6
Coil Leaving Air Wetbulb (F	55.0	KW Saved Winter	6.3
OA MBH Saved Summer*	8.5		
OA Tons Saved Summer*	0.7		

*OA = Outside Air
***OSHA, NIOSH & WHO most conservative values us
http://www.cdc.gov/niosh/npg/npgsyn-a.html

Indoor Contaminants Generated By People & From Outdoors	Maximum Threshold Value (PPM)	Steady State Using the VRP* (Prescribed OA) Plasma Off	Steady State Using the IAQ Method (Reduced OA) Plasma On	Is Steady State Level Acceptable at Reduced OA Levels?	Contaminant Generation Rate (PPM)	Filtration Effectiveness	Cognizant Authority***
Acetaldehyde	100.0	0.01112	0.00151	Yes	0.00048	50%	OSHA
Acetone	250.0	0.00165	0.00037	Yes	0.00654	50%	NIOSH
Ammonia	25.00	0.01456	0.00661	Yes	0.21460	50%	NIOSH
Benzene	1.0000	0.00252	0.00034	Yes	0.00022	50%	OSHA
2- Butanone (MEK)	200.0	0.00018	0.00005	Yes	0.00133	50%	NIOSH
Carbon dioxide**	5000	874	1358	Yes	441	0%	NIOSH
Chloroform	2.0000	0.00011	0.00002	Yes	0.00004	50%	NIOSH
Dioxane	100.0	0.00000	0.00000	Yes	0.00000	50%	OSHA
Hydrogen Sulfide	10.0	0.00000	0.00000	Yes	0.00000	50%	NIOSH
Methane	NA	1.68094	1.68094	Yes	0.00000	0%	NA
Methanol	200.0	0.00000	0.00000	Yes	0.00000	0%	NIOSH
Methylene Chloride	25.0	0.00076	0.00013	Yes	0.00121	50%	OSHA
Propane	1000.0	0.00998	0.00998	Yes	0.00000	0%	NIOSH
Tetrachloroethane	5.0000	0.00000	0.00000	Yes	0.00000	50%	OSHA
Tetrachloroethylene	100.0000	0.00037	0.00005	Yes	0.00001	50%	OSHA
Toluene	100.0000	0.00533	0.00073	Yes	0.00032	50%	NIOSH
1,1,1 - Trichloroethane	350.0000	0.00077	0.00012	Yes	0.00058	50%	NIOSH
Xylene	100.0000	0.00230	0.00031	Yes	0.00000	50%	OSHA



**Carbon dioxide has been provided for reference only for gathering demand control ventilation (DCV) setpoints. The National Research Council was commissioned by the US Navy to prove CO2 is not a contaminant of concern when using air purificator to control the other contaminants of concern, as found on submarines.

1 = ASHRAE & NIOSH CO2 Limit
2 = CO2 Level at Ventilation Rate OA Flow Rate
3 = CO2 Level at IAQ Procedure OA Flow Rate

Building materials and furnishings assumed to have no VOCs and off-gassing is complete
All yellow shaded boxes require user input or review

Is IAQ acceptable at reduced outside air levels?	Yes

Date	3/13/2024
Job Name	Perry Street
Representative	JCAA Consulting Engineers
Engineer	Patrick Leonard
Contractor	-

IMC 2006 & later allows for ASHRAE 62 IAQP through the engineered exception found in Section 403.2
Exhaust flow rates may differ from Table 6.5 based on ASHRAE 62 IAQP via Section 6.5.2

AHU-1 : OUTDOOR AIR VENTILATION SCHEDULE CONSTANT VOLUME SYSTEM (IMC 2018)

ROOM #	ROOM NAME	OCCUPANCY DESCRIPTION	Rp CFM/PERSON	Az SQ FT	OCCUPANT DENSITY (#/1000 SQ.FT)	Ra AREA CFM	Pz # People	Ez ZONE AIR DISTANCE EFFECTIVENESS	CODE: TOTAL EXHAUST (CFM)	EXHAUST SPECIFIED ON DRAWINGS	Voz=(Rp*Pz+Ra*Az)/Ez Minimum Outside Air Required
101	INFANT	Day Care (through age 4)	10	404	25	0.18	11	0.8	0	0	208.4
102	STAFF TOILET	Toilet Rooms - Public	0	59	0	0	0	0.8	59	75	0.0
103	STAFF WORK ROOM	Office Spaces	5	170	5	0.06	1	0.8	0	0	19.0
105	PANTRY	Storage Rooms	0	214	0	0.12	0	0.8	0	0	32.1
106	STAFF BREAK ROOM	Lounges	5	120	5	0.06	0	0.8			0.0
108	PUBLIC TOILET	Toilet Rooms - Public	0	45	0	0	0	0.8			0.0
107.1	HALL WAY	Corridors	0	100	0	0.06	0	0.8			7.5
	AHU-1			1146.6	55	0.48	16			Total CFM Outside Air Required:	323.6
	Percent Outside Air For AHU-1			30.00%						Total Outside Air Specified:	*250

AHU-3 : OUTDOOR AIR VENTILATION SCHEDULE CONSTANT VOLUME SYSTEM (IMC 2018)

ROOM #	ROOM NAME	OCCUPANCY DESCRIPTION	Rp CFM/PERSON	Az SQ FT	OCCUPANT DENSITY (#/1000 SQ.FT)	Ra AREA CFM	Pz # People	Ez ZONE AIR DISTANCE EFFECTIVENESS	CODE: TOTAL EXHAUST (CFM)	EXHAUST SPECIFIED ON DRAWINGS	Voz=(Rp*Pz+Ra*Az)/Ez Minimum Outside Air Required
101.2	HALL WAY	Corridors	0	99	0	0.06	0	0.8	0	0	7.4
111	OFFICE	Office Spaces	5	68	5	0.06	1	0.8	0	0	12.9
112	RECEPTION	Reception Areas	5	58	30	0.06	2	0.8	0	0	16.9
113	TODDLER I	Day Care (through age 4)	10	353	25	0.18	9	0.8	0	0	187.4
114	CHILD TOILET	Toilet Rooms - Public	0	56	0	0	0	0.8	50	75	0.0
115	TODDLER II	Day Care (through age 4)	10	386	25	0.18	10	0.8			197.9
119	CLOSET	Unoccupied Spaces	0	18	0	0	0	0.8			0.0
	AHU-3			1035	85	1	22			Total CFM Outside Air Required:	436.4
	Percent Outside Air For AHU-3			27.50%						Total Outside Air Specified:	*250

AHU-2 : OUTDOOR AIR VENTILATION SCHEDULE CONSTANT VOLUME SYSTEM (IMC 2018)

ROOM #	ROOM NAME	OCCUPANCY DESCRIPTION	Rp CFM/PERSON	Az SQ FT	OCCUPANT DENSITY (#/1000 SQ.FT)	Ra AREA CFM	Pz # People	Ez ZONE AIR DISTANCE EFFECTIVENESS	CODE: TOTAL EXHAUST (CFM)	EXHAUST SPECIFIED ON DRAWINGS	Voz=(Rp*Pz+Ra*Az)/Ez Minimum Outside Air Required
116	HALL WAY	Corridors	0	147	0	0.06	0	0.8	0	0	11.0
117	PRESCHOOL	Day Care (through age 4)	10	619	25	0.18	22	0.8	0	0	414.2
118	CHILD TOILET	Toilet Rooms - Public	0	56	0	0	0	0.8	100	0	0.0
	AHU-2			822	25	0	22	2		Total CFM Outside Air Required:	425.2
	Percent Outside Air For AHU-2			24.25%						Total Outside Air Specified:	*250

* Note that GPS - ionization device has been utilized to reduce OA required - RE calculations for OA and CO2 calcs

Global Plasma Solutions

10 Mall Terrace, Building C
Savannah, GA 31406
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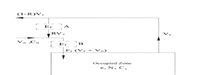
Email: info@globalplasmasolutions.com Web: www.globalplasmasolutions.com

VERSION 1.7 running ASHRAE 62.1-2013

Zone Tag	Facility Type	Zone Use	Zone Floor Area (square ft) Az	Zone Max Occupancy Pz	Table 6.1 OA per Occupant Rp	Table 6.1 cfm/ft2 Ra	Pz * Rp Pz * Ra	Az * Ra Az * Ra	Table 6.2 Ventilation Effectiveness Ez	Outdoor Air to Zone (CFM) with Ez correction (Vbz/Ez)
AHU-3	Educational Facilities	Daycare (through Age 4)	1,035.0	16.0	10.0	0.18	160	186	0.8	433
										OA required per VRP

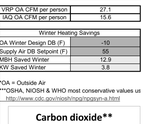
Zone Height (feet)	9.0
Desired Outside Air (Vo) IAQP	250
Supply Air (Vs)	1,600
Return Air (Vr)	1350
Recirc. Flow Factor (R)	0.84
Ventilation Effectiveness (Ez)	0.8
Level of Physical Activity	**Standing (desk work)**
Filter Location	B
HVAC Flow Type	Constant
Outdoor Air Flow Type	Constant



Air Changes Per Hour	10.3	VRP OA CFM per person	27.1
Outside Air Per VRP	433 CFM	IAQ OA CFM per person	15.6
Outside Air Per IAQ	250 CFM		
Outside Air Savings	183 CFM	Winter Heating Savings	
OA Summer Drybulb	98.8	DA Winter Design DB (F)	-10
OA Summer Wetbulb	68.0	Supply Air DB Setpoint (F)	55
Coil Leaving Air Drybulb (F	55.0	MBH Saved Winter	12.9
Coil Leaving Air Wetbulb (F	55.0	KW Saved Winter	3.8
OA MBH Saved Summer*	7.4		
OA Tons Saved Summer*	0.6		

*OA = Outside Air
***OSHA, NIOSH & WHO most conservative values us
http://www.cdc.gov/niosh/npg/npgsyn-a.html

Indoor Contaminants Generated By People & From Outdoors	Maximum Threshold Value (PPM)	Steady State Using the VRP* (Prescribed OA) Plasma Off	Steady State Using the IAQ Method (Reduced OA) Plasma On	Is Steady State Level Acceptable at Reduced OA Levels?	Contaminant Generation Rate (PPM)	Filtration Effectiveness	Cognizant Authority***
Acetaldehyde	100.0	0.01111	0.00151	Yes	0.00048	50%	OSHA
Acetone	250.0	0.00156	0.00031	Yes	0.00654	50%	NIOSH
Ammonia	25.00	0.01184	0.00487	Yes	0.21460	50%	NIOSH
Benzene	1.0000	0.00251	0.00034	Yes	0.00022	50%	OSHA
2- Butanone (MEK)	200.0	0.00016	0.00004	Yes	0.00133	50%	NIOSH
Carbon dioxide**	5000	744	1070	Yes	441	0%	NIOSH
Chloroform	2.0000	0.00011	0.00002	Yes	0.00004	50%	NIOSH
Dioxane	100.0	0.00000	0.00000	Yes	0.00000	50%	OSHA
Hydrogen Sulfide	10.0	0.00000	0.00000	Yes	0.00000	50%	NIOSH
Methane	NA	1.68094	1.68094	Yes	0.00000	0%	NA
Methanol	200.0	0.00000	0.00000	Yes	0.00000	0%	NIOSH
Methylene Chloride	25.0	0.00075	0.00012	Yes	0.00121	50%	OSHA
Propane	1000.0	0.00998	0.00998	Yes	0.00000	0%	NIOSH
Tetrachloroethane	5.0000	0.00000	0.00000	Yes	0.00000	50%	OSHA
Tetrachloroethylene	100.0000	0.00037	0.00005	Yes	0.00001	50%	OSHA
Toluene	100.0000	0.00532	0.00072	Yes	0.00032	50%	NIOSH
1,1,1 - Trichloroethane	350.0000	0.00076	0.00011	Yes	0.00058	50%	NIOSH
Xylene	100.0000	0.00230	0.00031	Yes	0.00000	50%	OSHA



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All yellow shaded boxes require user input or review

Is IAQ acceptable at reduced outside air levels?	Yes

Date	3/13/2024
Job Name	Perry Street
Representative	JCAA Consulting Engineers
Engineer	Patrick Leonard
Contractor	-

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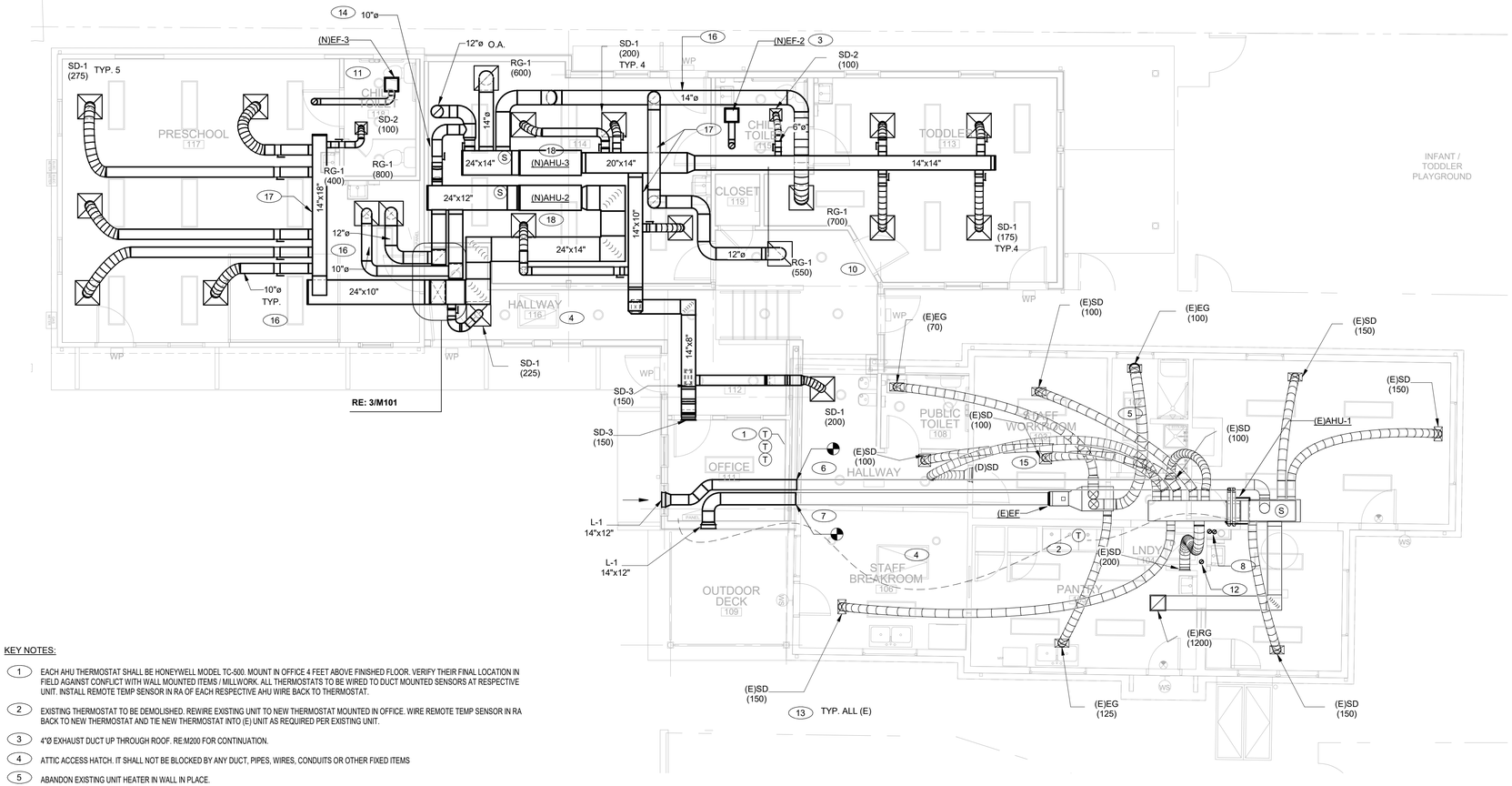
Exhaust flow rates may differ from Table 6.5 based on ASHRAE 62 IAQP via Section 6.5.2



KEY NOTES:

1. EACH AHU THERMOSTAT SHALL BE HONEYWELL MODEL TC-500. MOUNT IN OFFICE 4 FEET ABOVE FINISHED FLOOR. VERIFY THEIR FINAL LOCATION IN FIELD AGAINST CONFLICT WITH WALL MOUNTED ITEMS / MILLWORK. ALL THERMOSTATS TO BE WIRED TO DUCT MOUNTED SENSORS AT RESPECTIVE UNIT. INSTALL REMOTE TEMP SENSOR IN RA OF EACH RESPECTIVE AHU WIRE BACK TO THERMOSTAT.
2. EXISTING THERMOSTAT TO BE DEMOLISHED. REWIRE EXISTING UNIT TO NEW THERMOSTAT MOUNTED IN OFFICE. WIRE REMOTE TEMP SENSOR IN RA BACK TO NEW THERMOSTAT AND TIE NEW THERMOSTAT INTO (E) UNIT AS REQUIRED PER EXISTING UNIT.
3. 4"Ø EXHAUST DUCT UP THROUGH ROOF. RE:M200 FOR CONTINUATION.
4. ATTIC ACCESS HATCH. IT SHALL NOT BE BLOCKED BY ANY DUCT, PIPES, WIRES, CONDUITS OR OTHER FIXED ITEMS
5. ABANDON EXISTING UNIT HEATER IN WALL IN PLACE.
6. OUTSIDE AIR DUCT TO BE EXTENDED TO NEW EXTERIOR WALL AND TERMINATED WITH LOUVER. REUSE EXISTING LOUVER IF ABLE.
7. EXHAUST AIR DUCT TO CONNECT TO EXISTING AT SPECIFIED POINT. MATCH EXISTING SIZING AND MATERIAL. TERMINATE SIDEWALL ABOVE DECK WITH LOUVER - REUSE EXISTING LOUVER IF ABLE - IF NOT TERMINATE WITH RAIN CAP AND BIRD SCREEN. CONTRACTOR TO VERIFY TERMINATION IS 10' FROM ALL MECHANICAL AIR INTAKES AND OPERABLE OPENINGS.
8. SIZE AND INSTALL WATER HEATER FLUES PER MANUFACTURER. FLUES TO BE RAN IN WALL FROM CRAWL SPACE UP THROUGH ROOF. RE: M200 FOR CONTINUATION.
9. AHU-2 DUCTWORK TO DROP IN SPACE ABOVE HALLWAY AND RAN TIGHT TO STRUCTURE ABOVE PRESCHOOL ROOM 117. VERIFY ELEVATIONS WITH STRUCTURAL AND ARCHITECTURAL PLANS.
10. AHU-1 SUPPLY AIR DUCTWORK TO DROP AND BE RAN TIGHT TO STRUCTURE WITH CHANGE IN CEILING HEIGHT AS NECESSARY. VERIFY ELEVATIONS WITH STRUCTURAL AND ARCHITECTURAL PLANS.
11. 4"Ø EXHAUST DUCT UP THROUGH ROOF. RE-USE EXISTING PENETRATION THROUGH ROOF.
12. EXISTING DRYER VENT - CONFIRM CONDITION AND CLEAN AS REQUIRED
13. REBALANCE EXISTING DIFFUSER TO CFM SHOWN ON PLAN. TYPICAL FOR ALL EXISTING.
14. INSTALL MOTORIZED DAMPER ON OUTSIDE AIR DUCT. INTERLOCK WITH AIR HANDLER OPERATION.
15. DEMOLISH EXISTING WALL DIFFUSER AND ASSOCIATED DUCTWORK. REBALANCE EXISTING TO REAMAIN DIFFUSERS AS SHOWN.
16. THROUGH TRUSSES.
17. BETWEEN TRUSSES
18. PROVIDE AHUs WITH GPS PER SCHEDULE AND DETAIL.

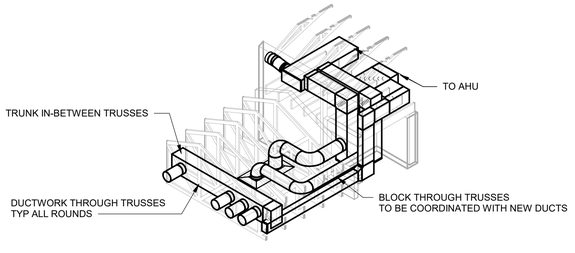
SHEET NOTES:

1. ALL SUPPLY AND RETURN DUCTWORK SHALL HAVE EXTERIOR DUCT WRAP INSULATION, MINIMUM R-6. SEE HVAC SPECIFICATIONS IN DWG M-101 FOR ACCEPTABLE MATERIAL.
2. PROVIDE 1" ACOUSTICAL LINER FOR THE FIRST 15' FEET OF RUN OF SUPPLY AND RETURN DUCT FROM EACH OUTLET.
3. INSTALL BALANCING VOLUME DAMPER ON EACH INDIVIDUAL SUPPLY/RETURN/EXHAUST TAKEOFF.
4. FOR DETAILED INFORMATION OF SPACE ALLOCATION SEE ARCH DRAWINGS.
5. ALL DUCTWORK TO BE RAN THROUGH STRUCTURE AS NECESSARY AND ABLE TO COORDINATE WITH DIFFERENT ELEVATIONS. RE: STRUCTURAL PLANS
6. MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS, AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK. VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.
7. CONTRACTOR SHALL COORDINATE WORK INDICATED WITH PLUMBING, ELECTRICAL, FIRE PROTECTION, STRUCTURAL, AND ARCHITECTURAL DIVISIONS. SUBMIT 1/4" SCALE SHOP DRAWINGS FOR MECHANICAL SYSTEMS, DIMENSIONED TO INCORPORATE THE WORK OF OTHER TRADES. INDICATE SPACES RESERVED FOR PLUMBING PIPING, MECHANICAL PIPING, MECHANICAL DUCTWORK, & ELECTRICAL CONDUIT MAINS. VERIFY FIT OF MECHANICAL SYSTEMS PRIOR TO FABRICATION. COORDINATE ALL CHASE, SLEEVE, AND SLAB BLOCKOUT REQUIREMENTS BEFORE CONCRETE IS POURED OR BLOCK IS SET.
8. EXISTING EQUIPMENT AND ASSOCIATED DUCTWORK TO REMAIN. VERIFY LOCATIONS AND ROUTING IN FIELD AND NOTIFY JCAA IMMEDIATLEY OF ANY DISCREPANCY.

1 MECHANICAL CEILING PLAN

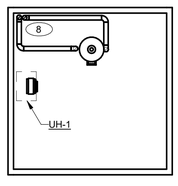
SCALE : 3/16" = 1'-0"

NORTH



3 DUCTWORK TO PRESCHOOL

SCALE :



2 MECHANICAL CRAWL SPACE PLAN

SCALE : 3/16" = 1'-0"

COLORADO LICENSED
PATRICK LEONARD
55536
PROFESSIONAL ENGINEER

BODUCH DESIGN GROUP
4969 South Alkire Street
Morrison, CO 80465
Phone: 303.901.0720
www.BDG Arch.com

A VISION ENLIGHTENED

JCAA
4100 Wadsworth Blvd.
Wheat Ridge, CO 80033
p 303.985.3260
#23.124

RETROFIT & ADDITION FOR:

THE LITTLE SCHOOL ON PERRY STREET

DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 02.XX.2024
DRAWN: Author
CHECKED: Checker
BDG ARCH NO.: 23.024

MECHANICAL FLOOR PLAN

M100

ISSUED FOR PERMIT - 03.12.2024

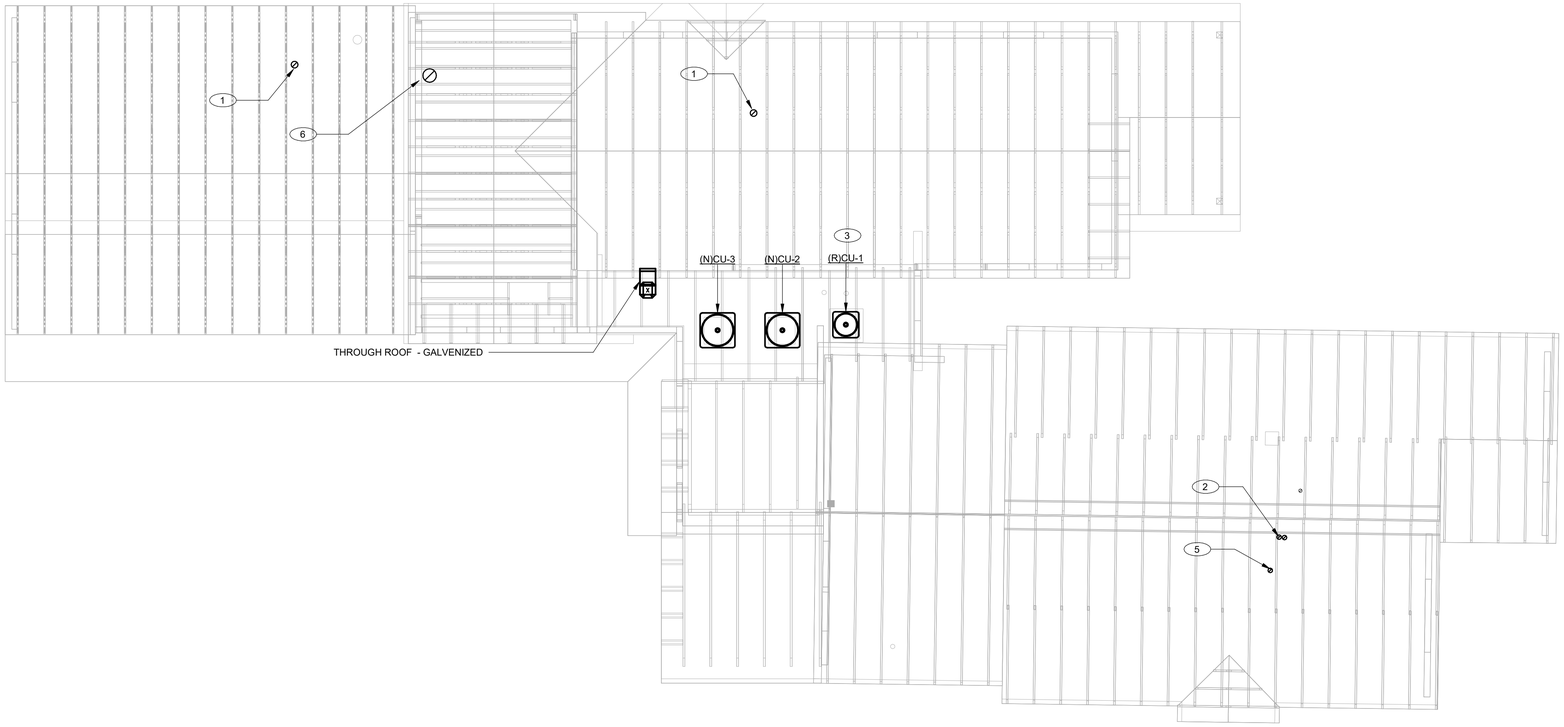
KEY NOTES:

1. EXHAUST DUCT FROM EXHAUST FAN TO BE TERMINATED WITH RAIN CAP AND BIRD SCREEN.
2. WATER HEATER FLUES TO BE SIZED AND INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTION. TERMINATE WITH CONCENTRIC VENT KIT.
3. EXISTING CONDENSING UNIT RELOCATED TO ROOF. RE: ARCH PLANS.
4. ROOF HATCH.
5. EXISTING DRYER VENT - CONFIRM CONDITION AND CLEAN AS REQUIRED. VERIFY EXISTING IS TERMINATED WITH GOOSENECK MIN. 3' ABOVE ROOF LINE.
6. 12" ROUND UP THROUGH ROOF WITH RAIN CAP AND BIRD SCREEN.

GENERAL NOTES:

1. FOR GAS PIPE LAYOUT REFER TO PLUMBING DRAWINGS
2. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ALL EQUIPMENT ON ROOF WITH BUILDING SHELL DWGS. ALL SERVICEABLE EQUIPMENT MUST BE LOCATED A MINIMUM OF 10 FEET FROM ROOF EDGE OR OPENINGS. CONTRACTOR TO COORDINATE AND PROVIDE SAFETY RAILS IF UNITS ARE WITHIN 10 FEET OF ROOF EDGE OR OPENINGS.
3. MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT, DRAWINGS, AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK. VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.
4. CONTRACTOR SHALL COORDINATE WORK INDICATED WITH PLUMBING, ELECTRICAL, FIRE PROTECTION, STRUCTURAL, AND ARCHITECTURAL DIVISIONS. SUBMIT 1/4" SCALE SHOP DRAWINGS FOR MECHANICAL SYSTEMS, DIMENSIONED TO INCORPORATE THE WORK OF OTHER TRADES, INDICATE SPACES RESERVED FOR PLUMBING PIPING, MECHANICAL PIPING, MECHANICAL DUCTWORK, & ELECTRICAL CONDUIT MAINS. VERIFY FIT OF MECHANICAL SYSTEMS PRIOR TO FABRICATION. COORDINATE ALL CHASE, SLEEVE, AND SLAB BLOCKOUT REQUIREMENTS BEFORE CONCRETE IS POURED OR BLOCK IS SET.

ROOF EXHAUST SYSTEM NOTES
ALL EXHAUST DISCHARGE AND VENTS TO BE LOCATED AT A MINIMUM DISTANCE OF 10 FT. FROM ANY O/A INTAKES ALL MECHANICAL UNITS AND EXHAUST FANS TO BE LOCATED AT A MINIMUM DISTANCE OF 10 FT. FROM ROOF EDGE AND ROOF OPENINGS. CONTRACTOR TO VERIFY IN FIELD AND NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES TO DETERMINE NEED FOR FALL PROTECTION



1 MECHANICAL ROOF PLAN

SCALE : 3/16" = 1'-0"

NORTH

COLORADO LICENSED
PATRICK LEONARD
55536
3/03/2024
PROFESSIONAL ENGINEER

BODUCH DESIGN GROUP
4969 South Alkire Street
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RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
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DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 02.XX.2024
DRAWN: KGR
CHECKED: JCAA
BDG ARCH NO.: **23.024**

MECHANICAL ROOF PLAN

M200

ISSUED FOR PERMIT - 03.12.2024

COMcheck Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	Perry Street
Location:	Castle Rock, Colorado
Climate Zone:	5b
Project Type:	Addition

Construction Site:
203 Perry Street
Castle Rock, Colorado 80104

Owner/Agent:
Mission Capital Properties Bayside
203 Perry Street
Castal Rock, Colorado 80104

Designer/Contractor:
JCAA Consulting Engineers
4100 Wadsworth Blvd
Wheat Ridge, Colorado 80033
303-985-3260

Mechanical Systems List

Quantity **System Type & Description**

1 AHU-2 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 120 kBtu/h
Proposed Efficiency = 96.50% Et, Required Efficiency: 80.00 % Et or 80% AFUE
Cooling: 1 each - Single Package DX Unit, Capacity = 48 kBtu/h, Air-Cooled Condenser, Unknown Economizer
Proposed Efficiency = 15.00 SEER, Required Efficiency = 14.00 SEER
Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00
Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 1 Supply, Constant Volume, 1600 CFM, 0.8 motor nameplate hp, 67.0 fan efficiency grade, 67.0 total fan efficiency, 67.0 design fan efficiency , fan exception: Single fan <= 5HP

1 AHU-3 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 120 kBtu/h
Proposed Efficiency = 96.50% Et, Required Efficiency: 80.00 % Et or 80% AFUE
Cooling: 1 each - Single Package DX Unit, Capacity = 48 kBtu/h, Air-Cooled Condenser, Unknown Economizer
Proposed Efficiency = 15.00 SEER, Required Efficiency = 14.00 SEER
Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00
Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 1 Supply, Constant Volume, 1600 CFM, 0.8 motor nameplate hp, 67.0 fan efficiency grade, 67.0 total fan efficiency, 67.0 design fan efficiency , fan exception: Single fan <= 5HP

1 Water Heater:
Gas Storage Water Heater, Capacity: 34 gallons, Input Rating: 100 kBtu/h w/ Circulation Pump
Proposed Efficiency: 96.00 % Et, Required Efficiency: 80.00 % Et

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____

COMcheck Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2018 IECC

Requirements: 100.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR2][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C103.2 [PR3][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.12.2 C403.12.3 [FO9][3]	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature. future connection to controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.1, C404.6.2 [PL3][1]	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.3 [PL7][3]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.7 [PL8][3]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41][3]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.8.4 [ME142][2]	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.8.5 [ME143][2]	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.12.1 [ME71][2]	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.2.2 [ME59][1]	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.7.1 [ME59][1]	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Spaces where the supply airflow rate minus makeup air and minus outgoing transfer air is less than 1200 cfm.
C403.7.2 [ME115][3]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.6 [ME141][3]	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.4 [ME57][1]	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.5 [ME116][3]	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.11.1 , C403.11.2 [ME60][2]	HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2, verification may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.4.1.4 [ME63][2]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.2.1 [ME111][2]	Gas-fired water-heating equipment installed in new buildings: where a singular piece of water-heating equipment >= 1,000 kBtu/h serves the entire building, thermal efficiency >= 90 Et. Where multiple pieces of water-heating equipment serve the building with combined rating >= 1,000 kBtu/h, the combined input-capacity-weighted-average thermal efficiency >= 90 Et. Exclude input rating of equipment in individual dwelling units and equipment <= 100 kBtu/h.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.2.1 [ME53][3]	Air outlets and zone terminal devices have means for air balancing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5, C403.5.1, C403.5.2 [ME123][3]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2..	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 02.XX.2024
DRAWN: KGR
CHECKED: JCAA
BDG ARCH NO.: **23.024**

COMPLIANCE REPORT HVAC ENERGY
M300

ISSUED FOR PERMIT - 03.12.2024

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.6 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.7 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.8.2, C405.8.2.1 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.9 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.3 [FI8][3]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.2 [FI27][3]	HVAC systems and equipment capacity does not exceed calculated loads.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.2 [FI38][3]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1.3 [FI20][3]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2 [FI39][3]	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.1, C403.2.4.2.2 [FI40][3]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.3 [FI41][3]	Systems include optimum start controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.3 [FI11][3]	Heat traps installed on supply and discharge piping of non-circulating systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.4 [FI25][3]	All piping insulated in accordance with section details and Table C403.11.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.6.1 [FI12][3]	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.1 [FI28][1]	Commissioning plan developed by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.1 [FI31][1]	HVAC equipment has been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Unitary or packaged HVAC eqiupment without supply air economizers.
C408.2.3.2 [FI10][1]	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.4 [FI29][1]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** FURNSIHED AS SUB TO CONTRACTOR
C408.2.5.1 [FI7][1]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.3 [FI43][1]	An air and/or hydronic system balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** T&B SUB BY CONTRACTOR
C408.2.5.4 [FI30][1]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** FURNSIHED AS SUB TO CONTRACTOR

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

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COMPLIANCE REPORT HVAC ENERGY

M301

ISSUED FOR PERMIT - 03.12.2024

GENERAL ELECTRICAL NOTES

1. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.

2. FINAL CONNECTIONS & ROUGH-IN REQUIREMENTS TO EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.

3. CONTRACTOR SHALL REVIEW ARCHITECTURAL, STRUCTURAL, MECHANICAL AND OTHER DRAWINGS PRIOR TO BID.

4. CONTRACTOR SHALL VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN HIS BID ALL COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.

5. PROPOSED SUBSTITUTIONS OF ELECTRICAL EQUIPMENT OR REQUEST FOR "OR EQUAL" OR "APPROVED EQUAL" LISTING SHALL BE SUBMITTED TO ARCHITECT NOT LESS THAN TEN (10) WORKING DAYS PRIOR TO BID.

6. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.

7. WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES.

8. PROVIDE PERMITS AND INSPECTIONS REQUIRED.

9. PROVIDE RECORD DRAWINGS TO ARCHITECT. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERATIONS, RE-ROUTINGS, ETC.

10. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.

11. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.

12. WIRE SHALL BE COPPER, 75°C RATED FOR GENERAL USE. FOR HID FIXTURES AND WIRING WITHIN 3 INCHES OF FLUORESCENT BALLASTS WIRE SHALL BE COPPER, MINIMUM 90°C RATED. SIZES INDICATED ARE FOR INSTALLATION IN A MAXIMUM 30°C AMBIENT. CONDUCTOR AMPACITY SHALL BE DERATED FOR HIGHER AMBIENT INSTALLATIONS.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.

14. CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS OR EQUIPMENT.

15. SYSTEMS SHALL BE COMPLETE, OPERABLE AND READY FOR CONTINUOUS OPERATION. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC., SHALL BE CONNECTED AND OPERABLE.

16. VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION, SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULLBOXES, TRANSFORMER PADS, SAWCUTTING AND PATCHING, CONCRETE/PAVING, ETC., REQUIRED. BACKFILL TRENCHES TO 90% COMPACTION AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS.

17. PROVIDE MAINTENANCE RECEPTACLE WITHIN 25'-0" OF ALL MECHANICAL OR MOTORIZED EQUIPMENT.

18. SEE MECHANICAL DRAWINGS FOR LOCATION OF MECHANICAL EQUIPMENT. PROVIDE SERVICE TO AND CONNECT EQUIPMENT AS REQUIRED. PROVIDE FUSES OR HACR-TYPE CIRCUIT BREAKERS FOR ALL AIR CONDITIONING EQUIPMENT SIZED IN ACCORDANCE WITH MANUFACTURER'S NAMEPLATE.

19. PROVIDE ENGRAVED NAMEPLATES ON, PANELBOARDS, DISCONNECT SWITCHES, ETC. INDICATING EQUIPMENT DESIGNATION (OR DESIGNATION OF EQUIPMENT SERVED) AND VOLTAGE. NAMEPLATES TO BE MECHANICALLY FASTENED.

20. PANEL DIRECTORIES SHALL BE TYPED AND INSTALLED UNDER CLEAR PLASTIC COVERS.

21. ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. RACEWAYS IN SLAB-ON-GRADE OR BELOW GRADE SHALL BE SCHEDULE 40 PVC. TRANSITIONS FROM BELOW TO ABOVE GRADE SHALL BE WITH RIGID STEEL ELBOWS WITH P.V.C. JACKET OR APPROVED EQUAL PROTECTION.

22. EMT, NON-METALLIC AND FLEXIBLE METAL CONDUITS SHALL HAVE A CODE SIZED COPPER GROUNDING CONDUCTOR. INCREASE CONDUIT SIZE AS REQUIRED.

23. FIRE ALARM, SOUND, TELEPHONE, COMPUTER, AND SIMILAR SYSTEMS CONDUITS LARGER THAN 1" SHALL HAVE LONG RADIUS SWEEPS (12 TIMES THE DIAMETER).

24. ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L.

25. WIRE TERMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, AND ALL OTHER ELECTRICAL APPARATUS SHALL BE LISTED AS SUITABLE FOR 75°C.

26. RECEPTACLES INSTALLED OUTSIDE, ON THE BUILDING EXTERIOR OR ROOF, WITHIN 6' OF A SINK OR WATER COOLER CONNECTION, VENDING MACHINES, AND KITCHEN AREAS SHALL BE GFCI TYPE OR PROTECTED BY GFCI CIRCUIT BREAKER PER NEC 210.8.

27. ALL NEW EQUIPMENT SUCH AS SWITCHBOARDS, DISTRIBUTION BOARDS, DISCONNECT SWITCHES, TRANSFORMERS AND PANELBOARDS SHALL BE BY THE SAME MANUFACTURER.

28. ELECTRICAL CONTRACTOR SHALL SUBMIT 5 COPIES OF ALL ELECTRICAL EQUIPMENT AND LIGHT FIXTURES TO ENGINEER VIA GENERAL CONTRACTOR FOR APPROVAL PRIOR TO ORDERING.

29. ELECTRICAL CONTRACTOR TO PROVIDE FINAL CONNECTION OF OWNER FURNISHED EQUIPMENT. VERIFY EXACT REQUIREMENTS PRIOR TO ROUGH IN.

30.ELECTRICAL CONTRACTOR SHALL PROVIDE DESIGN BUILD ENGINEERED FIRE ALARM SYSTEM TO BE INSTALLED. PROVIDE DEVICES, CONDUIT, WIRES, CABLE, PROGRAMMING AND TESTING AS DIRECTED BY EQUIPMENT MANUFACTURER AND LOCAL FIRE DEPARTMENT FOR A CODE COMPLIANT FIRE ALARM/DETECTION SYSTEM. MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL MEET PREVAILING CODES. THE SYSTEM SHALL BE COMPLETE AND OPERABLE. SUBMIT ONE LINE DIAGRAM OF SYSTEM WITH SHOP DRAWINGS. ONE LINE SHALL SHOW DEVICES, CONDUIT, WIRE, CABLE SIZES AND BATTERY CALCULATIONS. EQUIPMENT TO BE NEW AND SHALL BE STAMPED, SIGNED, CALIBRATION AND TESTED BY FACTORY CERTIFIED TECHNICIAN.

31.HANDLE TIES SHALL BE PROVIDED FOR ALL MULTI-WIRED BRANCH CIRCUITS UNLESS INDIVIDUAL NEUTRAL CONDUCTORS ARE PROVIDED PER NEC 210.4(B)

32. FURNISH ALL MECHANICAL AND ELEVATOR EQUIPMENT WITH FUSIBLE DISCONNECTS. THESE DISCONNECTS SHALL BE EQUIPPED WITH CLASS "R" FUSES.

33. ELECTRICAL CONTRACTOR TO VERIFY WITH LOCAL JURISDICTION IF AN 'EMERGENCY RESPONDER RADIO COVERAGE SYSTEM' IS REQUIRED PRIOR TO BID.

34. PROVIDE ARC-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR BRANCH CIRCUIT SERVING RECEPTACLES AS PER NEC 210.12.

FEEDER UPSIZING REQUIRED

20 AMP BRANCH CIRCUIT WITH A LOAD OF 15 AMPS
> 300 FEET SHALL HAVE #6 CONDUCTORS ROUTED TO THE FIRST DEVICE
> 175 FEET SHALL HAVE #8 CONDUCTORS ROUTED TO THE FIRST DEVICE.
> 113 FEET SHALL HAVE #10 CONDUCTORS ROUTED TO THE FIRST DEVICE

20 AMP BRANCH CIRCUIT WITH A LOAD OF 10 AMPS
> 450 FEET SHALL HAVE #6 CONDUCTORS ROUTED TO THE FIRST DEVICE
> 288 FEET SHALL HAVE #8 CONDUCTORS ROUTED TO THE FIRST DEVICE
>175 FEET SHALL HAVE #10 CONDUCTORS ROUTED TO THE FIRST DEVICE

ELECTRIC SYMBOL LIST

FIRE ALARM

- MAGNETIC HOLD-OPEN
- M — FIRE ALARM MANUAL PULL STATION
- F — HORN STROBE
- FIRE ALARM STROBE
- S_I — SMOKE DETECTOR IONIZATION
- FACP — FIRE ALARM CONTROL PANEL
- FAAP — FIRE ALARM ANNUCIATOR PANEL
- R — ^{135} FIRE ALARM HEAT DETECTOR 135° RATE OF RISE
- SD — SMOKE FIRE DAMPER

POWER

- DUPLEX RECEPTACLE
- AC — GFI DUPLEX RECEPTACLE/GFI ABOVE COUNTER
- QUAD RECEPTACLE/QUAD GFI RECEPTACLE
- HALF SWITCHED RECEPTACLE
- WP — WEATHER PROOF RECEPTACLE
- FLUSH FLOOR MOUNTED RECEPTACLE
- J — JUNCTION BOX

LIGHTING

- FLUORESCENT STRIP
- 2x4 TROFFER
- 2x2 TROFFER
- 2x4 TROFFER - EMERGENCY (EM)
- 2x2 TROFFER - EMERGENCY (EM)
- RECESSED DOWNLIGHT
- EM — RECESSED DOWNLIGHT (EM)
- WALL PACK/WALL SCONCE
- FLUSH/SEMI-FLUSH MOUNT CEILING FIXTURE
- SINGLE/DOUBLE FACING EXIT LIGHT
- EM DUAL HEAD
- OS — SURFACE MOUNTED OCCUPANCY SENSOR
- S — SINGLE POLE SWITCH
- S_3 — 3-WAY SWITCH
- S_D — DIMMER SWITCH
- S_{OS} S_{DOS} — OCCUPANCY SENSOR SWITCH/DIMMING OS SWITCH

TELECOMMUNICATION/AUDIO VISUAL/LOW-VOLTAGE SYSTEMS

- TELE/DATA OUTLET
- COAX OUTLET (T.V.)
- TELEPHONE OUTLET
- WAP — WIRELESS ACCESS POINT (WAP)
- SP — SPEAKER
- N — NURSE CALL DOME LIGHT
- N — NURSE CALL CORD STATION/PUSH BUTTON
- TELEPHONE BOARD/DMARC

* WAP/POE = POWER OVER ETHERNET
* WAP/NC = NURSE CALL W/ RECEPTACLE IN CEILING

OTHER

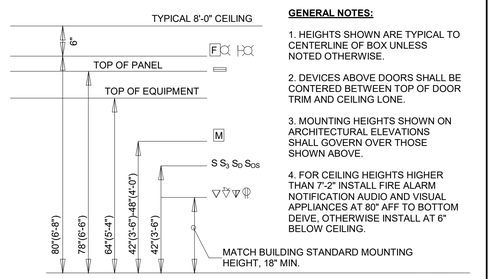
- XX-XX — MECHANICAL EQUIPMENT DESIGNATION
- DISCONNECT SWITCH
- SURFACE MOUNTED PANEL BOARD
- HOME RUN
- S_M — THERMAL RATED MOTOR SWITCH

MOUNTING HEIGHTS

A.F.F. = ABOVE FINISH FLOOR
A.F.G. = ABOVE FINISH GRADE
B.F.C. = BELOW FINISHED CEILING
U.O.N. = UNLESS OTHERWISE NOTED ON THE DRAWINGS
T.B.D. = TO BE DETERMINED LATER
C.L.L. = TO CENTER LINE OF LUMINAIRE
T.B.L. TO BOTTOM OF LUMINAIRE
T.T.L. = TO TOP OF LUMINAIRE

ELECTRICAL SHEET LIST

TYPICAL MOUNTING HEIGHT TABLE



GENERAL NOTES:

1. HEIGHTS SHOWN ARE TYPICAL TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE.

2. DEVICES ABOVE DOORS SHALL BE CONTERED BETWEEN TOP OF DOOR TRIM AND CEILING LONE.

3. MOUNTING HEIGHTS SHOWN ON ARCHITECTURAL ELEVATIONS SHALL GOVERN OVER THOSE SHOWN ABOVE.

4. FOR CEILING HEIGHTS HIGHER THAN 7'-2" INSTALL FIRE ALARM NOTIFICATION AUDIO AND VISUAL APPLIANCES AT 80" AFF TO BOTTOM DEIVE, OTHERWISE INSTALL AT 6" BELOW CEILING.

CODES AND DESIGN CRITERIA

JURISDICTION:	CASTLE ROCK, CO
ELECTRICAL CODE:	2023 NATIONAL ELECTRICAL CODE
IECC:	2018 INTERNATIONAL ENERGY CONSERVATION CODE

COLORADO REGISTERED JERRY W. BOYD 19221 PROFESSIONAL ENGINEER

3.13.2024

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04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVEIW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 02.XX.2024
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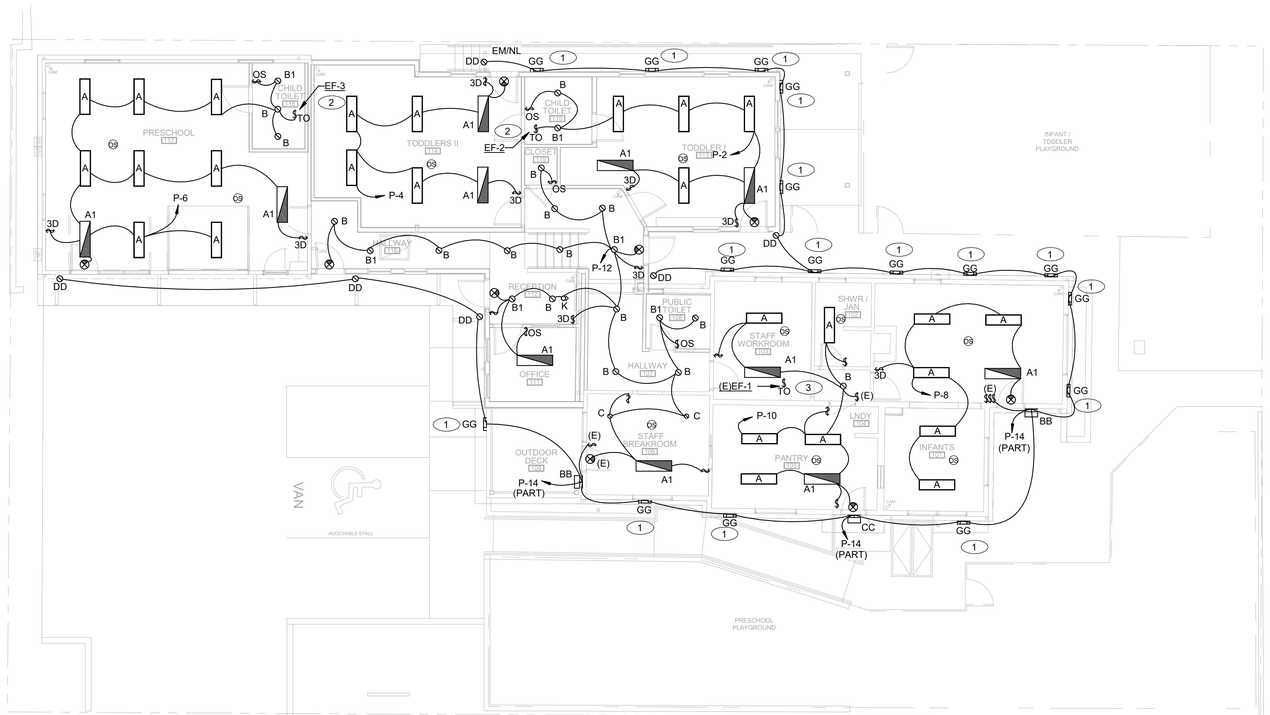
BDG ARCH NO.: **23.024**

COVER SHEET

E000

ISSUED FOR PERMIT - 03.12.2024



1 LIGHTING PLAN

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

NORTH

LIGHTING GENERAL NOTES:

1. CONTRACTOR TO CONNECT ALL EXIT SIGNS AND DUAL HEAD EM FIXTURES TO NON-SWITCHED 120V POWER.
2. ATTIC ACCESS/MAINTAIN DOOR SHALL NOT BE BLOCKED BY ANY DUCT, PIPES, WIRES, CONDUIT OR OTHER FIXTURE ITEMS.
3. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR EXACT LOCATION OF MECHANICAL FIXTURE.
4. ALL LIGHT FIXTURE SHALL BE CONTROL BY TIME CLOCK.

KEY NOTES: (#)

1. PROVIDE NIGHT LIGHT/ EMERGENCY LIGHTS FIXTURE FOR EXTERIOR WALL PACK .EXTERIOR WALL PACK SHALL HAVE 90 MINUTE BATTERY BACKUP AND BE ABLE TO TURN ON AND OFF PER OWNERSHIP DESIRE HOURS PER REQUIREMENTS OF LOCAL CODE.
2. APPROXIMATE LOCATION OF THE NEW EXHAUST FAN INSTALL. EC TO COORDINATE WITH MECHANICAL PLAN FOR EXACT LOCATION AND CONTROL DETAILS.
3. APPROXIMATE LOCATION OF THE EXISTING EXHAUST FAN LOCATION. EC TO COORDINATE WITH MECHANICAL PLAN FOR EXACT LOCATION AND CONTROL DETAILS.

COLORADO REGISTERED JERRY W. JCA 19221 PROFESSIONAL ENGINEER

3.13.2024

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Morrison, CO 80465
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A VISION ENLIGHTENED

JCA
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p 303.985.3260
#23.124

DAYCARE CENTER
TAYLOR AND AMY LEWISON

THE LITTLE SCHOOL ON PERRY STREET

203 PERRY STREET
CASTLE ROCK , CO
80104

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LIGHTING PLAN

E100

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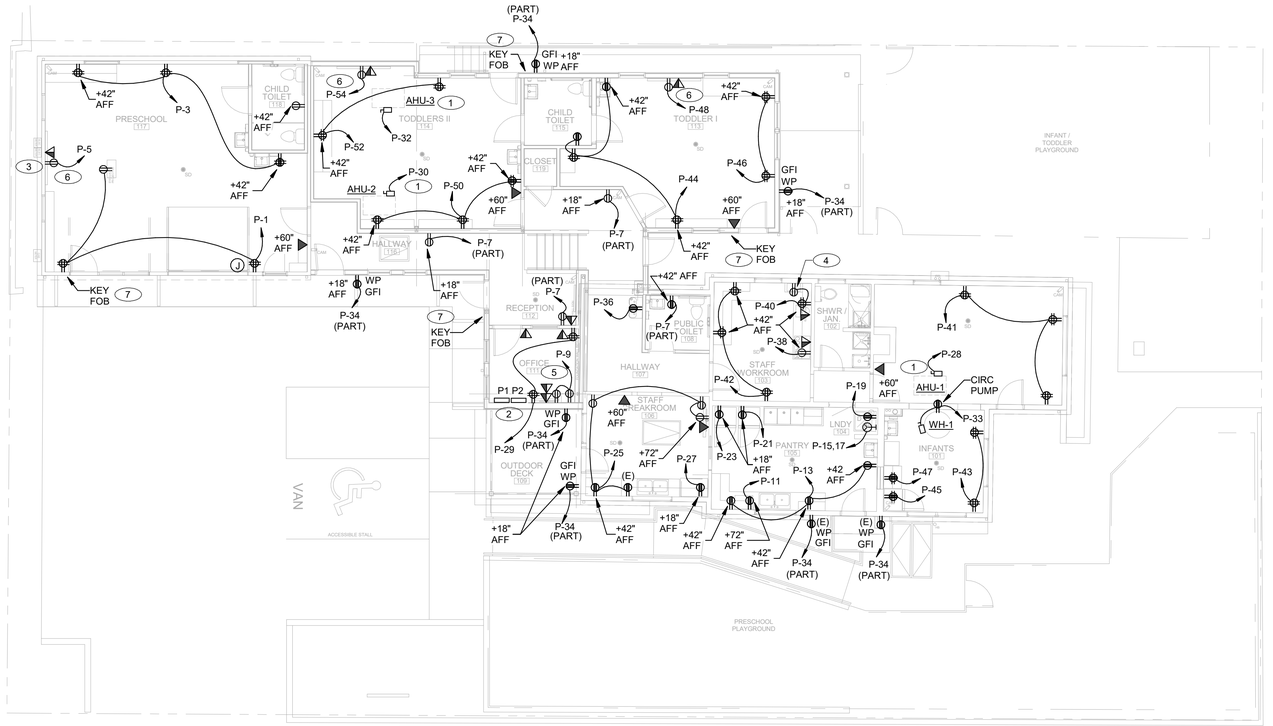

1 POWER PLAN

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

NORTH

GENERAL NOTES:

1. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS OF ALL RECEPTACLES MOUNTED ABOVE 18-INCHES.

2. COORDINATE REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.

3. ALL CONDUIT SHALL BE INSTALLED CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED.

4. EACH MULTIWIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A SEPARATE NEUTRAL FOR EACH BRANCH CIRCUIT.

5. ALL EXTERIOR ELECTRICAL EQUIPMENT/ENCLOSURES TO BE NEMA 3R.

6. SPECIAL PROTECTIVE COVERS FOR ELECTRICAL TAMER RESISTANT UL RECEPTACLES SHALL BE INSTALLED IN ALL AREAS OCCUPIED BY CHILDREN.

7. PROVIDE GFI RECEPTACLES WHERE SHOWN AND AS REQUIRE BY CODE. ALL RECEPTACLES SHALL BE UL TAMPER RESISTANT. IF DISTANCE FROM THE SINK IS WITHIN 6' PROVIDE GFI RECEPTACLES AS PER NEC REQUIREMENTS.

8. SECURITY CAMERA SHOULD BE MOUNTED 6" BELOW AWNING LINE AND AT THE EXTREMITIES OF THE BUILDING SO THAT CAMERAS ON THE PLAYGROUND HAVE AN UNOBSTRUCTED VIEW. GENERAL CONTRACTOR TO COORDINATE WITH THE SECURITY VENDORS TO ENSURE VIEW IS UNOBSTRUCTED.

KEY NOTES: (#)

1. APPROXIMATE LOCATION OF THE AIR HANDLER UNIT. EC TO COORDINATE WITH MECHANICAL PLAN FOR MORE DETAILS.

2. POWER PANEL INSTALL LOCATION. EC TO COORDINATE WITH ARCHITECT/ OWNERSHIP FOR EXACT LOCATION TO ROUGH-IN.

3. METER AND MAIN DISCONNECT LOCATION. VERIFY REQUIREMENTS WITH UTILITY COMPANY.

4. DATA/MODEM SERVICE LOCATION ON SHELF ABOVE - +84" A.F.F. EC TO COORDINATE WITH OWNERSHIP TO ROUGH-IN.

5. POWER FOR SECURITY SYSTEM AND TV MONITOR ABOVE -+96" AFF. EC TO COORDINATE WITH OWNERSHIP TO ROUGH-IN.

6. EC SHALL COORDINATE WITH OWNER TO CONFIRM LOCATION / HEIGHT OF OUTLETS FOR SHORT THROW PROJECTOR.

7. PROVIDE POWER AND JUNCTION BOX FOR OWNER PROVIDED ACCESS CONTROL KEY FOB & POWERED DOOR SYSTEM. COORDINATE WITH THE OWNER ON ACCESS CONTROL SYSTEM TO BE PROVIDED. TIE INTO SECURITY SYSTEM FOR DOOR RELEASES UPON ALARM ACTIVATION. VERIFY LOCATIONS AND ELECTRICAL REQUIREMENTS PRIOR TO PURCHASING AND INSTALLATION IN THE FIELD.

COLORADO REGISTERED JERRY W. BODUCH 19221 PROFESSIONAL ENGINEER

3.13.2024

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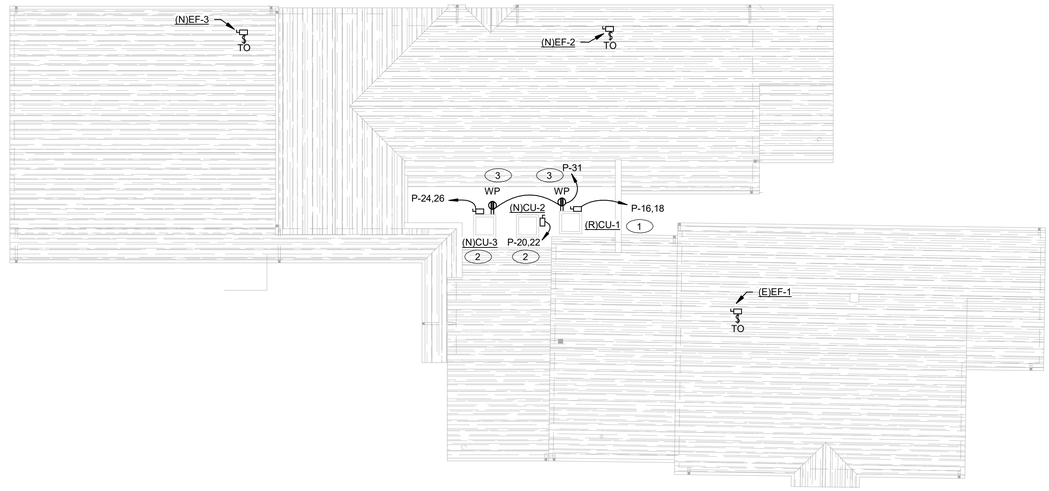
POWER PLAN

E200

ISSUED FOR PERMIT - 03.12.2024



1 ROOF PLAN

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

NORTH

GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR EXACT LOCATION OF MECHANICAL FIXTURE.

2. CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH AND OR THERMAL CUT OFF SWITCH AS PER NATIONAL ELECTRICAL CODE FOR ALL EXHAUST FAN, UNIT HEATERS, SPACE HEATER, HOT WATER HEATERS, ETC.

POWER GENERAL NOTES: (#)

1. EXISTING CONDENSER UNIT RELOCATE TO NEW LOCATION. EC TO VERIFY IN FIELD.

2. NEW CONDENSER UNIT INSTALL TO PLACE. REFER TO MECHANICAL PLAN FOR MORE DETAILS.

3. PROVIDE WEATHERPROOF RECEPTACLES INSTALL IN THE ROOF TOP. EC TO COORDINATE WITH OWNERSHIP TO ROUGH-IN.

COLORADO REGISTERED JEREMY W. BODUCH 19221 PROFESSIONAL ENGINEER

3.13.2024

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ROOF PLAN

E201

ISSUED FOR PERMIT - 03.12.2024

MECHANICAL EQUIPMENT SCHEDULE

DESIGNATION	DESCRIPTION	LOAD				VOLTAGE	PHASE	DISCONNECT SIZE	FUSE SIZE	FEEDER SIZE	REMARKS
		HP	KVA	FLA	MCA						
(E)CU-1	EXISTING CONDENSING UNIT				-	208	1	40A3P	30.0A FRN-R	(2#10,1#10G,3/4"C)	1
CU-2	CONDENSING UNIT				40	208	1	60A2P	50.0A FRN-R	(2#8,1#10G,1"C)	3
CU-3	CONDENSING UNIT				40	208	1	60A2P	50.0A FRN-R	(2#8,1#10G,1"C)	3
(E)AHU-1	EXISTING AIR HANDLE UNIT				-	120	1	SMTO	---	(2#12,1#12G,3/4"C)	1
AHU-2	AIR HANDLE UNIT				14.1	120	1	SMTO	---	(2#12,1#12G,3/4"C)	3
AHU-3	AIR HANDEL UNIT				14.1	120	1	SMTO	---	(2#12,1#12G,3/4"C)	3
(E)EF-1	EXISTING EXHAUST FAN		--			120	1	SMTO	---	(2#12,1#12G,3/4"C)	2
EF-2	EXHAUST FAN		102 W			120	1	SMTO	---	(2#12,1#12G,3/4"C)	2
EF-3	EXHAUST FAN		102 W			120	1	SMTO	---	(2#12,1#12G,3/4"C)	2
WH-1/HCP-1	ELECTRIC WATER HEATER , CIRCUIT-PUMP		100 W			115	1	SMTO	---	(2#12,1#12G,3/4"C)	2

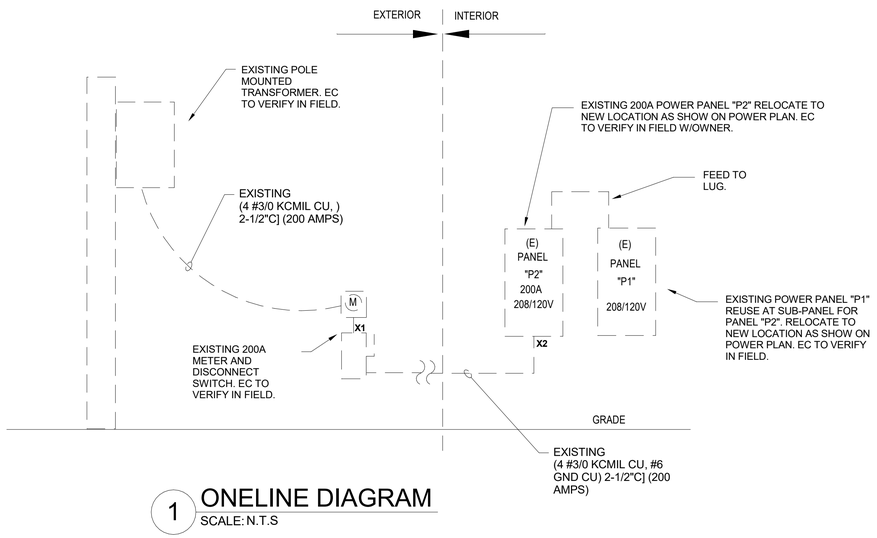
REMARKS:
1: EXISTING UNIT SHOW IN THE SCHEDULE FORE REFERENCE ONLY. REFER TO MECHANICAL PLAN FOR MORE DETAILS.
2: REFER TO MECHANICAL PLAN FOR CONTROL SYSTEM.
3: UNIT FURNISHED WITH INTEGRAL FUSED DISCONNECT

EXTERIOR LUMINAIRE SCHEDULE

FIXT. TYPE	MANUFACTURER		FINISH	LAMP DATA / INITIAL LUMEN RATING	LAMP WATTS	LIGHT LOSS FACTOR (LLF)	MOUNTING METHOD	QUANTITY	MTG HEIGHT	DESCRIPTION WITH DISTRIBUTION TYPE	VOLTS	CUTTOFF
	NAME	CATALOG NUMBER										
AA	LSI INDUSTRIES	MRS-LED-9L-SIL-3-UNV-30-70CRI-BLK-IL	BLACK	LED / 6016	63	1.0	POLE	1	15'-0"	SITE LIGHTING SINGLE HEAD TYPE III WITH HOUSE SIDE SHIELD, 3000K 70CRI	UNV	FULL CUTOFF
BB	TRANSGLOBE	40455-BK	BLACK	LED / 806	9	1.0	SURFACE	2	6'-0"	8" WALL LANTERN, 1 E26 60W LED EQUIVALENT BULB, 3000K, VERIFY MOUNTING HEIGHT PRIOR TO INSTALLATION	120	NON-FULL CUTOFF
CC	TRANSGLOBE	51390-BK	BLACK	LED / 806	9	1.0	SURFACE	1	-	1LT WALL LANTERN, 1 E26 60W LED EQUIVALENT BULB, 3000K, VERIFY MOUNTING HEIGHT PRIOR TO INSTALLATION	120	NON-FULL CUTOFF
DD	WAC LIGHTING	DS-WS0517-N-30-S-BK	BLACK	LED / 2300	17	1.0	SURFACE	6	8'-0"	LED DOWNLIGHT, 3000K, VERIFY MOUNTING HEIGHT PRIOR TO INSTALLATION	120	FULL CUTOFF
FF	KIM	EL218-F-3-8L-3K-UV-BK, LED LAMP	BLACK	LED / 889	16	1.0	GROUND	1	-	WATERPROOF SPOT LIGHTIN FOR MONUMENT SIGN. PROVIDE WITH LOUVERS (NARROW FLOOD), 3000K	UNV	NON-FULL CUTOFF
GG	REBELLE	1645-15L-30-120-LV-EM-BT	BLACK	LED / 1580	11.2	1.0	SURFACE	17	3'-0"	WALKWAY AREA LIGHT WITH INTEGRATED BATTERY BACKUP AND INTEGRATED LOUVER, 3000K	120	FULL CUTOFF

TOTAL NON-FULL CUTOFF LUMENS: 3,307 LUMENS	TOTAL FULL CUTOFF LUMENS: 46,676 LUMENS	TOTAL SITE LUMENS: 23,123 LUMENS

GENERAL LIGHTING PLAN STANDARD NOTES:
1. ALL BUILDING MOUNTED FIXTURES FOR SAFETY AND EGRESS. ALL POLE MOUNTED FIXTURES ARE FOR PARKING AREA AND DRIVING ACCESS PATHWAY.
2. ALL FIXTURES TO BE CONTROLLED VIA TIMECLOCK. TIMER TO BE SET TO GO OFF AFTER 30MIN CLOSE OF BUSINESS. FIXTURES TO TURN ON 30MIN PRIOR TO OPENING OF BUSINESS. BUILDING HOURS OF OPERATION TO BE FROM 6:30AM-7:00PM.
3. PROVIDE HOUSE SIDE SHIELD TO POLE MOUNTED FIXTURES ALONG ADJACENT PROPERTIES.
4. THE FOLLOWING LIGHT TYPES ARE PROHIBITED: FORWARD THROW (TYPE IV) DISTRIBUTION, POLE-MOUNTED LIGHTS AIMED AT A BUILDING'S FACADE, AND UNSHIELDED WALL PACKS.



1 ONELINE DIAGRAM
SCALE: N.T.S

INTERIOR LUMINAIRE SCHEDULE

FIXT. TYPE	MANUFACTURER		FINISH	LAMP DATA	LAMP WATTS	MOUNTING METHOD	MTG HEIGHT	DESCRIPTION	VOLTS
	NAME	CATALOG NUMBER							
A	SIGNIFY	1SBP3040L8CS-4-UNV-DIM-FSF14 OR EQUAL		LED	31	SURFACE		1X4 3200 LUMEN LED TROFFER.	UNV
A1	SIGNIFY	1SBP3040L8CS-4-UNV-DIM-FSF14-BSL310RM OR EQUAL		LED	31	SURFACE		1X4 3200 LUMEN LED TROFFER (WITH EMERGENCY BATTERY PACK)	UNV
B	WILLIAMS	6DR-TL-L25-8-35-DIM-UNV-O-W-OF-WH-N-F1 OR EQUAL		LED	38	RECESSED		6" ROUND RECESSED DOWN-LIGHT.	UNV
B1	WILLIAMS	6DR-TL-L25-8-35-DIM-UNV-O-W-OF-WH-N-F1-EM/10W OR EQUAL		LED	38	RECESSED		6" ROUND RECESSED DOWN-LIGHT, (WITH EMERGENCY BATTERY PACK)	UNV
C	WILLIAMS	4DR-TL-L25-8-35-DIM-UNV-O-W-OF-WH-N-F1 OR EQUAL		LED	33	RECESSED		FULL CUTOFF, LED, WALL MOUNT, WET LISTED	UNV
K	WAC LIGHTING	WAC965984		LED	8	SURFACE		SOLO 120V MONO-POINT SPOT LIGHT	120
EM	SURE-LITES	LPX7SD OR EQUAL		LED	FURNISHED WITH UNIT	SURFACE		BATTERY PACK EXIT LIGHT WITH RED LETTERS	UNV
X	SURE-LITES	XR3 OR EQUAL		LED	FURNISHED WITH UNIT	SURFACE		TWIN HEAD BATTERY PACK EGRESS LIGHT	UNV

Branch Panel: P
Location
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

Mains: 200 A
A.I.C. Rating: 10K AIC
MCB Rating: 200 A

Circuit #	Description	Rating	Poles	A	B	C	A	B	C	Poles	Rating	Description	Circuit #
1	PRESCHOOL - RECEPTS /...	20 A	1	900 VA			374 VA			1	20 A	LTS - TODDER I	2
3	PRECSHOOL - RECEPTS	20 A	1		900 VA			352 VA		1	20 A	LTS - TODDLER II	4
5	PRESCHOOL - PROJECTOR	20 A	1			900 VA			545 VA	1	20 A	LTS - PRESCHOOL	6
7	REC. RECPTION/HALLWAY	20 A	1	1440 VA			296 VA			1	20 A	LTS - INFANTS	8
9	OFFICE - SECURITY/MONITOR	20 A	1		500 VA			403 VA		1	20 A	LTS - PANTRY/STA/SHWR/JAN	10
11	PANTRY - MICROWAVE	20 A	1			900 VA			403 VA	1	20 A	LTS -...	12
13	PANTRY RECEPS	20 A	1	540 VA			598 VA			1	20 A	LTS - EXTERIOR LIGHT	14
15	PANTRY - DRYER	20 A	2		2500 VA			2517 VA		2	40 A	(E)CU-1	16
17	--	--	--			2500...			2517 VA	--	--	--	18
19	PANTRY - WASHER	20 A	1	1500 VA			4160...			2	50 A	CU-2	20
21	PANTRY - FREEZER	20 A	1		1000 VA			4160 VA		--	--	--	22
23	PANTRY - REFIGERATOR	20 A	1			1000...			4160 VA	2	50 A	CU-3	24
25	REC. S.BREAKROOM / MONITOR	20 A	1	1020 VA			4160...			--	--	--	26
27	REC. . REFIGE	20 A	1		1000 VA			1200 VA		1	20 A	(E)AHU-1	28
29	REC. OFFICE	20 A	1			1000...			1692 VA	1	20 A	AHU-2	30
31	REC. ROOF AREA	20 A	1	360 VA			1692...			1	20 A	AHU-3	32
33	WATER HEATER	20 A	1		100 VA			1260 VA		1	20 A	REC. EXTERIOR RECEPTS	34
35	(E)EF-1	20 A	1			100 VA			1000 VA	1	20 A	REC. DRINK FOUNTAIN	36
37	(N)EF-2	20 A	1	110 VA			900 VA			1	20 A	S.WORKROOM - COPIER	38
39	(N)EF-3	20 A	1		110 VA			700 VA		1	20 A	S.WORKROOM - ...	40
41	INFANT - RECEPTS	20 A	1			1080...			1080 VA	1	20 A	S.WORKROOM - RECEPTS	42
43	INFANT - RECEPTS	20 A	1	720 VA			1080...			1	20 A	TODDLER I - RECEPTS	44
45	INFANT - REFIGERATOR	20 A	1		1000 VA			720 VA		1	20 A	TODDLER I - RECEPTS	46
47	INFANT - MICROWAVE	20 A	1			1000...			900 VA	1	20 A	TODDLER I - PROJECTOR	48
49	Spare	20 A	1	0 VA			900 VA			1	20 A	TODDLER II - RECEPTS	50
51	Spare	20 A	1		0 VA			720 VA		1	20 A	TODDLERS II - RECEPTS	52
53	Spare	20 A	1			0 VA			900 VA	1	20 A	TODDLER II - PROJECTOR	54
		Total Load:		20717...	19106...	21632...							
		Total Amps:		175 A	159 A	182 A							

Load Classification	Connected Loads	Demand Factor	Estimated Demand		Panel Totals
Lighting:	1902 VA	125.00%	2377 VA		
Receptacle:	31920 VA	65.66%	20960 VA	Total Conn. Load:	61454 VA
Motor:	26478 VA	107.86%	28558 VA	Total Est. Demand:	53291 VA
Electric Heating Equipment				Total Est. Current:	148 A
Kitchen Equipment:					
Other:	100 VA	100 VA	100 VA		

Notes:

FAULT CURRENT CALCULATIONS

X1

$$F = \frac{1.73 \times 70 \times 26000}{1 \times 12844 \times 208} = 1.18$$

$$M = \frac{1}{1 + 1.18} = 0.46 \qquad ISC = 26000 \times 0.46 = \mathbf{11934}$$

X2

$$F = \frac{1.73 \times 40 \times 11934}{1 \times 12844 \times 208} = 0.31$$

$$M = \frac{1}{1 + 0.31} = 0.76 \qquad ISC = 11934 \times 0.76 = \mathbf{9116}$$

COLORADO REGISTERED JERRY W. BEAN 19421 PROFESSIONAL ENGINEER
3.13.2024

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ONE-LINE DIAGRAM

E300

ISSUED FOR PERMIT - 03.12.2024

COMcheck Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Perry Street
Project Type: Addition

Construction Site:
203 Perry Street
Castle Rock, Colorado 80104

Owner/Agent:
Mission Capital Properties Bayside
203 Perry Street
Castal Rock, Colorado 80104

Designer/Contractor:
JCAA Consulting Engineers
4100 Wadsworth Blvd
Wheat Ridge, Colorado 80033
303-985-3260

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-School/University	3687	0.81	2986
		Total Allowed Watts =	2986

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-School/University				
LED 1: A/A1: Other:	1	38	30	1140
LED 2: B/B1: Other:	1	23	38	874
LED 3: C: Other:	1	2	33	66
LED 4: K: Other:	1	1	11	11
			Total Proposed Watts =	2091

Interior Lighting PASSES: Design 30% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Khai Nguyen — Name - Title
Khai Nguyen — Signature
03/01/2024 — Date

COMcheck Software Version COMcheckWeb

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Perry Street
Project Type: Addition
Exterior Lighting Zone: 2 (Neighborhood business district (LZ2))

Construction Site:
203 Perry Street
Castle Rock, Colorado 80104

Owner/Agent:
Mission Capital Properties Bayside
203 Perry Street
Castal Rock, Colorado 80104

Designer/Contractor:
JCAA Consulting Engineers
4100 Wadsworth Blvd
Wheat Ridge, Colorado 80033
303-985-3260

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
Walkway >= 10 feet wide	2008 ft2	0.1	Yes	201
Pedestrian and vehicular entrances and exits	28 ft of	14	Yes	392
			Total Tradable Watts (a) =	593
			Total Allowed Watts =	593
			Total Allowed Supplemental Watts (b) =	400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Walkway >= 10 feet wide (2008 ft2): Tradable Wattage				
LED 1: CC: Other:	1	1	9	9
LED 2: DD: Other:	1	5	17	85
LED 3: GG: Other:	1	16	11	179
Pedestrian and vehicular entrances and exits (28 ft of door width): Tradable Wattage				
LED 5: BB: Other:	1	2	9	18
LED 6: DD: Other:	1	1	17	17
			Total Tradable Proposed Watts =	308

Exterior Lighting PASSES: Design 69% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Khai Nguyen — Name - Title
Khai Nguyen — Signature
03/01/2024 — Date

COMcheck Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2018 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C103.2 [PR8][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2.2 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2, C405.2.2.1, C405.2.2.2 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3, C405.2.3.1, C405.2.3.2 [EL23][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL26][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.5 [EL28][1][2]	Manual controls required by the energy code are in a location with ready access to occupants and located where the controlled lights are visible, or identify the area served and their status.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.6 [EL30][1][2]	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.3 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.6 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.7 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8.2, C405.8.2.1 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][1]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.4.1 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C405.5.1 [FI19][2]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.5.1 [FI16][1]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

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3.13.2024

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DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVEIW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 02.XX.2024
DRAWN: BDG
CHECKED: SAB
BDG ARCH NO.: **23.024**

COM-CHECK

E400

ISSUED FOR PERMIT - 03.12.2024

PLUMBING GENERAL NOTES

NOTE: PLUMBER SHALL READ AND ACKNOWLDGE ALL NOTES & DIRECTION AS DESCRIBED BELOW

1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STATE CODES, LOCAL CODES, AND OWNER'S STANDARDS INDICATED BY THE CONSTRUCTION DOCUMENTS. REFER TO CODE SECTION BELOW FOR CURRENT ADOPTED CODES BY AHJ. PLUMBER SHALL REVEIW AND UNDERSTANDS ALL APPLICIABLE CODES SHALL GOVERN INSTALL, INCLUDING BUT NOT LIMITED TO ALL ENERGY CODES AND FUEL GAS CODES AS WELL AS CURRENT PLUMBING CODE.
2. PLUMBING DRAWINGS ARE DIAGRAMMATIC DESIGN (*LOD-350*) AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.
3. PLUMBING CONTRACTOR SHALL COORDINATE WORK INDICATED WITH MECHANICAL, ELECTRICAL, FIRE PROTECTION, STRUCTURAL, CIVIL, AND ARCHITECTURAL DIVISIONS. CONTRACTOR SHALL VERIFY SIZE & LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCING WORK, COORDINATE WITH OTHER TRADES AND MAKE FINAL CONNECTION. PLUMBER AGRESS TO SUBMIT 1/4" SCALE SHOP DRAWINGS FOR ALL PLUMBING SYSTEMS, DIMENSIONED TO INCORPORATE THE WORK OF OTHER TRADES. INDICATE SPACES RESERVED FOR FIRE SPRINKLER, PLUMBING PIPING, MECHANICAL PIPING, MECHANICAL DUCTWORK, & ELECTRICAL CONDUIT MAINS. VERIFY FIT OF PLUMBING SYSTEMS PRIOR TO FABRICATION. COORDINATE ALL CHASE, SLEEVE, AND SLAB BLOCKOUT REQUIREMENTS BEFORE CONCRETE IS POURED OR BLOCK IS SET.
4. PROVIDE ALL EQUIPMENT SCHEDULED OR INDICATED ON THE DRAWINGS BUT NOT INCLUDED WITHIN THE SPECIFICATIONS INCLUDING ANY REQUIRED BUT NOT LISTED MISC ITEMS REQUIRED TO PROVIDE COMPLETE OPERATIONAL SYSTEMS AS INDICATED WHETHER SPECIFICALLY CALLED FOR OR NOT. INSTALLATION SHALL CONFORM TO MANUFACTURERS RECOMMENDATIONS AND APPLICABLE CODES. PROVIDE SUBMITTALS FOR ALL PROPOSED FIXTURES, EQUIPMENT AND MATERIALS TO BE UTILIZED. PROVIDE OPERATION AND MAINTENANCE MANUAL FOR ALL SYSTEMS AND EQUIPMENT AT END OF PROJECT.
5. ELECTRICAL CHARACTERISTICS OF PLUMBING EQUIPMENT SHALL BE VERIFIED WITH ELECTRICAL DRAWINGS AND ELECTRICAL CONTRACTOR PRIOR TO EQUIPMENT ORDER RELEASE. ADDITIONAL ELECTRICAL WORK RESULTING FROM EQUIPMENT SUBSTITUTION IS THE RESPONSIBILITY OF THIS CONTRACTOR. ADDITIONALLY, PLUMBING EQUIPMENT MANUFACTURES ARE LIABLE TO REVISE ELECTRICAL REQUIREMENTS OF ALL PLUMBING EQUIPMENT WITH CHANGES IN MODEL/EQUIPMENT UPGRADES DUE TO ENERGY REQUIREMENTS AND THEREFORE PLUMBER SHALL SEND ALL SUBMITALLS TO ELECTRICIAN IN CONJUNCTION WITH ENGINEER REVIEW.
6. DRAIN PIPING FROM EQUIPMENT SHALL BE ROUTED SO AS NOT TO CREATE A TRIPPING HAZARD. THIS SHALL INCLUDE ALL CONDENSATE PIPING FROM MECHANICAL EQUIPMENT. NOTE THAT CONDENSATE PIPING IS TYPICALLY DELGATED TO PLUMBER. PLUMBER SHALL BE RESPONSIBLE TO ROUTE ALL CONDENSATE FROM MECHANICAL EQUIPMENT WHETHER SHOWN OR NOT - RE: MECHANICAL PLANS.
7. ITEM DESIGNATIONS INDICATED HEREON ARE FOR PURPOSES OF THESE DOCUMENTS ONLY. CONTRACTOR SHALL VERIFY WITH OWNERS REPRESENTATIVE ACTUAL "TAGGING" INFORMATION TO BE PROVIDED FOR EACH ITEM OF MECHANICAL EQUIPMENT PRIOR TO NAMEPLATE ORDER RELEASE. PLUMBER SHALL PROVIDE ENGRAVED OR PHYSCIAL TAG FOR ALL EQUIPMENT AND ADHERE TO WALL IN GENERAL VACINITY AND OR TO THE EQUIPMENT ITSLEF AS IDENTIFIED BY OWNER, AND IF NO DIRECTION FROM OWNER - TAG AS SHOWN IN THESE DOCUMENTS.
8. PROVIDE VALVE TAGS AND PIPE IDENTIFICATION BANDS. TAGS SHALL BE BRASS WITH CHAIN, OR ADHERED LABELS ON INSULATION. IDENTIFICATION BANDS SHALL BE LOCATED EVERY 25 FEET AND ON EITHER SIDE OF INTERMEDIATE BARRIER.
9. PROVIDE 18" X 18" MINIMUM ACCESS DOOR IN INACCESSIBLE CEILINGS AND WALLS FOR EQUIPMENT AND VALVES REQUIRING ACCESS OR ADJUSTMENT. COORDINATE LOCATIONS AND SUBMIT TO ARCHITECT FOR APPROVAL PRIOR TO BEGINNING WORK. NOTE, NOT ALL ACCESS PANELS ARE SHOWN ON PLAN TO ALLOW FOR PLUMBER TO PROVIDE AS NEEDED FOR EQUIPMENT ACCES - L/R CONFIGS AND OTHER WORKING CLEARANCES AS THEY VARY FROM MANF TO MANF.
10. VALVES SHALL BE LOCATED WITHIN EASY REACH OF CEILING WHERE CEILINGS OCCUR & DROPPED TO WITHIN A MAXIMUM 10'-0" ABOVE FINISHED FLOOR WHERE NO CEILING OCCURS. CONTRACTOR SHALL BE RESPONSIBLE FOR WALKING JOB AND IDENTIFYING / EDUCATING VALVE LOCATIONS AND PURPOSE TO OWNER AT THE END OF JOB AND PRIOR TO FINAL SIGN OFF BY OWNER.
11. PROVIDE CLEANOUTS WHERE INDICATED ON DRAWINGS OR AS REQUIRED BY JURISDICTIONAL PLUMBING CODE.
12. VTR'S SHALL BE 10'-0" MINIMUM FROM BUILDING AIR INTAKES AND OPENINGS INTO BULDING. COORDINATE WITH MECHANICAL DRAWINGS AND CONTRACTOR. IN ADDITION - ALL PENETRATIONS THROUGH ROOF SHALL BE COORDINATED AND DONE IN A TIMELY FASHION TO ALLOW FOR MINIMAL RE-ROOFING/PATCHING OR OTHER UPDATES TO ROOF MEMBRANE. ALL PENETRATIONS THROUGH ROOF FOR TENANT SPACES SHALL BE COORDINATED WITH LL ROOFER - NO EXCEPTION.
13. ALL WORK UNDER THIS CONTRACT IS TO FIVE (5) FEET OUTSIDE THE BUILDING.
14. CLEAN, TEST, AND SANITIZE ALL PLUMBING IN ACCORDANCE WITH REQUIREMENTS OF JURISDICTIONAL PLUMBING AND HEALTH CODES.
    A. NEW POTABLE WATER SYSTEMS SHALL BE PURGED OF DELETERIOUS MATTER AND DISINFECTED PRIOR TO UTILIZATION. THE METHOD TO BE FOLLOWED SHALL BE THAT PERSCRIBED BY THE HEALTH AUTHORITY OR WATER PURVEYOR HAVING JURISDICTION OR, IN THE ABSENCE OF A PERSCRIBED METHOD, THE PROCEDURE DESCRIBED IN EITHER AWWA C651 OR AWWA C652, OR AS PERCRIBED BELOW.
        a. THE PIPE SYSTEM SHALL BE FLUSHHED WITH CLEAN, POTABLE WATER UNTIL DIIRTY WATER DOES NOT APPEAR AT THE POINTS OF OUTLET.
        b. THE SYSYTEM OR PART THEREOF SHALL BE FILLED WITH A WATER/CHLORINE SOLUTION CONTAINING NOT LESS THAN 50 PPM (*PARTS PER MILLION*) (50 mg/L) OF CHLORINE, AND THE SYSTEM SHALL BE VALFOD OFF AND ALLOWED TO STAND FOR 24 HOURS; OR THE SYSTEM SHALL BE FILLED WITH A WATER WATER/CHLORINE SOLUTION CONTAINING NOT LESS THAN 200 PPM (*PARTS PER MILLION*) (200 mg/L) OF CHLORINE AND ALLOWED TO STAND FOR 3 HOURS.
        c. FOLLOWING THE REQUIRED STANDBY TIME, THE SYSTEM SHALL BE FLUSHED WITH CLEAN POTABLE WATER UNTIL THE CHLORINE IS PURGED FROM THE SYSTEM.
        d. THE PROCEDURE SHALL BE REPEATED WHERE SHOWN BY A BACTERIOLOGICAL EXAMINATION THAT CONTAMINATION REMAINS PRESENT IN THE SYSTEM.
15. WHERE PIPES PASS THROUGH FIRE-RATED FLOOR OR WALLS, SEAL WITH MATERIALS EQUAL TO 3M FIRE BARRIER, MEETING TESTING PER ASTM-E-814 (UL 1479). USE CAULK OR PUTTY TYPE. ALL EXTERIOR WALL AND ROOF PENETRATIONS SHALL BE SEALED WATERPROOF.
16. AT THE COMPLETION OF THE WORK AND PRIOR TO FINAL ACCEPTANCE, ALL PARTS OF THE WORK INSTALLED UNDER THIS SPECIFICATION SHALL BE THOROUGHLY CLEANED.
17. ALL EQUIPMENT, MATERIALS, AND INSTALLATION IS TO BE WARRANTEED FOR ONE YEAR TO BE FREE FROM DEFECT. PROVIDE WRITTEN WARRANTY TO OWNER.
18. PRIOR TO FINAL ACCEPTANCE, PLUMBER SHALL FURNISH ALL PLUMBING EQUIPMENT AND FIXTURE IOM's (*INSTALLATION AND OPERATION MANUALS*) TO OWNER IN BINDER, DUPLICATES MAY BE OMITTED.
19. THE OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM HIS WORK.
20. UPON COMMERCIAL KITCHEN BEING UTILIZED IN PORJECT,
    A. PLMUBER SHALL REFER TO FOOD SERVICE EQUIPMENT DRAWINGS & SCHEDULES FOR PLUMBING REQUIREMENTS AND DETAILS. PLUMBING CONTRACTOR IS TO INSTALL ALL VALVES, FILTERS, ETC. PROVIDED WITH KITCHEN EQUIPMENT AND PROVIDE ALL PIPING, VALVES, FIXTURES, INDIRECT WASTE, DRAIN, BEVERAGE SYSTEM CONDUIT RACEWAYS, PRV'S, AND ETC. NOT PROVIDED BY KITCHEN EQUIPMENT CONTRACTOR BUT REQUIRED TO MAKE A COMPLETE AND OPERABLE SYSTEM. PROVIDE ACCESSIBLE SHUT-OFF VALVES FOR ALL EQUIPMENT REQUIRING WATER SERVICE. ALL EXPOSED PIPING SHALL BE CHROME PLATED WITH CHROME PLATED ESCUTEONS PROVIDED AT ALL WALL PENETRATIONS. ALL HOT WATER, COLD WATER, AND GAS CONNECTIONS TO MOVEABLE FIXTURES SUCH AS OVENS RANGES, AND PROOF BOXES ARE TO BE MADE WITH FLEXIBLE CONNECTIONS.
21. THIS CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND SIZES OF ALL EXISTING EQUIPMENT, DUCTWORK, PIPING, ELECTRICAL CONDUIT, STRUCTURAL MEMBERS, ETC., PRIOR TO STARTING OF CONSTRUCTION. COORDINATE CONFLICTS WITH THE GENERAL CONTRACTOR.
22. THIS CONTRACTOR SHALL COORDINATE ALL REQUIRED EXISTING BUILDING SERVICE SYSTEM OUTAGES WITH BUILDING MANAGEMENT.
23. ALL PLUMBING SYSTEMS ARE REQUIRED TO BE INSTALLED PER BASE BUILDING REQUIREMENTS, LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
21. WHILE NOT NESSICARLY SHOWN GRAPHICALLY THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAWCUT/CORE DRILL EXISTING FLOOR AS REQUIRED FOR INSTALLATION OR CAPPING OF WASTE AND VENT PIPING. PATCH AND REPAIR TO MATCH EXISTING AND OR AS PERSCRIBED BY THE ARCHITECTURAL DRAWINGS.
22. DO NOT SCALE DRAWINGS.
23. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT PLUMBING FIXTURE LOCATIONS AND MOUNTING HEIGHTS. OBTAIN EXACT F.D. AND F.S. LOCATIONS FROM MECHANICAL AND FOOD SERVICE DRAWINGS. ROUGH-IN KITCHENS, BARS, ETC. FROM APPROVED FOOD SERVICE SHOP DRAWINGS.
24. VERIFY LOCATION OF HANDICAPPED FIXTURES WITH ARCHITECTURAL DRAWINGS.
25. PROVIDE CHROME PLATED ESCUTCHEONS AT PIPE SLEEVES FOR EXPOSED BARE PIPE AT ALL PENETRATIONS.
26. PROVIDE A.D.'s IN GYP. BOARD CEILINGS AND INACCESSIBLE WALLS FOR VALVES AND C.O.'S.
27. PLUMBING FIXTURES SHALL BE SUBMITTED TO DESIGN TEAM AND OWNER FOR REVIEW AND APPROVAL PRIOR TO ORDER RELEASE. CONTRACTOR SHALL VERIFY PLUMBING FIXTURES W/ OWNER PRIOR TO OR IN BID. IF CONTRACTOR DOES NOT VERIFY ANY SUBSTITUTIOINS WITH OWNER PRIOR TO BID THEN PLUMBER SHALL FURNISH ITEM SCHEDULED ON PLAN AT NO COST TO OWNER REGARDLESS OF DIFFERENCE IN PRICE.
28. AT HANDICAP LAVATORIES & SINKS, COVER OFFSET WASTE, P-TRAP, HOT & COLD WATER ANGLE STOPS & SUPPLIES WITH WHITE SKAL GARD MODEL SG-102, 103 & 104. (EQUAL BY PROWRAP).
29. ARRANGE W.H.'S TO PROVIDE EASE OF DISASSEMBLY & MAINTENANCE. ALL WH'S SHALL BE INSTALLED TO ENSURE THAT EVERY WH CAN BE REMOVED AND REPLACED WITHOTU DEMOLITION OF ANY OTHER PIECE OF EQUIPMENT.
30. EQUIPMENT START-UP SHALL BE BY MFR'S. AUTHORIZED REPRESENTATIVES. PLUMBER SHALL INCLUDE IN BID - START UP BY MANUFACTURER REPRESENTATIVE.
31. PROVIDED SHOWERS ARE UTILIZED ON THE PROJECT THEN SHOWER HEAD ESCUTCHEONS SHALL BE RIGIDLY ATTACHED TO THE WALL USING "POLYSEAM SEAL" CAULKING MATERIAL.
32. ALL FLOOR SINKS / FLOOR DRAINS SHALL BE LOCATED SO AS NOT TO CREATE TRIPPING HAZARD WHEN ROUTING DRAIN LINES @ FLOOR LEVEL. VERIFY EXACT DRAIN LINE ROUTING PRIOR TO FLOOR SINK ROUGH-IN.
33. PLUMBING RISER ISOLATION & DRAIN VALVES, AS WELL AS HWR THROTTLING VALVES SHALL BE LOCATED WITHIN EASY REACH OF CEILING, WHERE CEILINGS OCCUR BELOW & DROPPED TO WITHIN A MAX. 10'-0" OF FIN. FLOOR WHERE NO CEILING OCCURS.
34. PROVIDED BUILDING IS IN A SESMIC CLASS III TYPE C OCCUPANCY - PIPING SHALL BE SEISMICALLY BRACED IN ACCORDANCE W/ SMACNA GUIDELINES FOR SEISMIC RESTRAINT. PROVIDED DETAILS ARE NOT FURNISHED - PLUMBER SHALL INQUIRE FOR DETAILS FROM DESIGN TEAM AS THESE ARE READILY AVAILABLE. SESMIC CATEGORY SHALL BE VERFIED IN ARCH AND STRUCTURAL PLANS.
35. WHERE HANDICAPPED (*ADA*) WATER CLOSET INDICATED (VERIFY W/ ARCH. DWGS.), LOCATE FLUSH VALVE ON WIDE SIDE OF STALL PER A.D.A. STANDARDS.
36. INSULATED PIPING EXPOSED TO VIEW THROUGHOUT THE FACILITY SHALL BE COVERED AND FINISHED W/ PVC JACKET EQUAL TO MANVILLE PVC / PERMAPIPE JACKETING SYSTEM USING 30 MIL THICK JACKET. INSTALL PER MFR.'S INSTRUCTIONS W/ SEAM ON TOP OF PIPE SO AS TO NOT BE VISIBLE FROM OCCUPIED SPACE.
37. PROVIDE WALL CLEANOUTS AT SINKS AND URINALS IN ACCORDANCE W/ APPLICABLE SECTIONS OF THE APPLICABLE PLUMBING CODE.
38. TRAP PRIMER EQUAL TO PRECISION PRODUCTS CO. "PRIME-RITE" SHALL BE INSTALLED AT FLOOR SINKS & FLOOR DRAINS IN MECHANICAL ROOMS, AND TOILET ROOMS, UNLESS SPECIFICALLY NOTED OTHERWISE ON THESE PLANS. PIPE PER MFR.'S. INSTALLATION INSTRUCTIONS AND COORDINATE ALL BELOW SLAB LINES WITH FDs PRIOR TO SLAB POUR. PROVIDE 1/2" S.O.V. AHEAD OF EACH TRAP PRIMER.
39. PROVIDE S.M. DRAIN PAN UNDER ANY AND ALL PIPING WHERE PIPING OCCURS ABOVE ELECTRICAL CONDUITS THATT ARE MORE THAN 6' ABOVE OR ALL SOIL & WASTE PIPING IN KITCHENS WHERE FOOD HANDILING / DISHWASHING / OR FOOD PREPING OCCURS. PIPE 3/4" D. FROM DRAIN PAN TO OVER NEAREST F.S.
40. PROVIDE A 6 MIL. POLYETHYLENE SLEEVE SYSTEM EQUAL TO IPS WATER-TITE FOR COPPER DOMESTIC WATER PIPE BELOW SLAB.
41. HOT & COLD WATER S.O.V.'S & HOT WATER RETURN T.V.'S SHALL BE LOCATED TO BE EASILY ACCESSED.
42. REFER TO FOOD SERVICE DRAWINGS & SCHEDULES FOR KITCHEN & BAR LAYOUTS, PLUMBING REQUIREMENTS AND DETAILS. PROVIDE PIPING, VALVES, FIXTURES, INDIRECT WASTE, P.R.V.'S ETC. (NOT PROVIDED BY KITCHEN EQUIPMENT CONTRACTOR) AS REQUIRED TO MAKE A COMPLETE AND OPERABLE SYSTEM (INCLUDING HOOD DRAIN PIPING, VENTILATOR CONTROL PANEL PIPING, REFRIGERANT PIPING, BEER AND SYRUP LINE RACEWAYS, DRAIN PIPING FROM REFRIGERATION FAN COILS, ETC.). EXPOSED PIPING ABOVE COUNTER HEIGHT SHALL BE CHROME PLATED. PROVIDE R.P. TYPE BACKFLOW PREVENTER AT CARBONATORS. VACUUM BREAKER AND P.R.V.'S FOR HOOD HOT & COLD WATER IS FURNISHED BY KITCHEN EQUIPMENT CONTRACTOR & INSTALLED BY DIVISION 15 (PLUMBING). COORDINATE W/ KITCHEN EQUIPMENT CONTRACTOR ACCORDINGLY.
43. REFER TO KITCHEN PLANS FOR HOT AND COLD WATER HOSE BIBB LOCATIONS UNDER HAND SINKS IN KITCHEN AREAS. ALL WATER LINES SERVING CHEMICAL WASH STATIONS AND OR "ECOLAB" WASH FEEDERS SHALL BE PROTECTED VIA REDUCED PRESSURE BACKFLOW PREVENTOR. RPBFP SHALL BE ACCESSIBLE AND SHALL BE INSTALLED ABVOE 18" A.F.F AND BELOW 50" A.F.F. ON WALL.
44. MINIMUM DISTANCE FOR CONNECTIONS AT THE BASE OF SOVENT STACKS ARE 50" FOR 5" STACK, 40" FOR 4" STACK AND 30" FOR 3" STACK. THIS DISTANCE SHALL APPLY TO EACH CONNECTION INCLUDING FIXTURE BRANCHES TO AVOID HYDRAULIC JUMPING AS PERSCRIBED BY CODE.
45. UPON GPRs (GAS PRESSURE REGULATORS) BEING INSTALLED INDOORS - PLUMBER SHALL PIPE GAS REGULATOR VENTS UP THRU ROOF. VENT LIMITORS ON GPRs SHALL ONLY BE PERMITTED ON A CASE BY CASES BASIS OR AS APPROVED BY ENGINEER / OWNER.
46. PROVIDED THATT A GREASE INTERCEPTOR IS REQUIRED, GREASE INTERCEPTOR (GI) INSTALLATION SHALL CONFORM WITH ALL LOCAL AUTHORITY HAVING JURISDICTIONS REQUIRMENTS. IN ADDITION ALL GIs SHALL BE PROVIDED WITH A SAMPLE WELL BASIN DOWNSTREAM OF GI, CLEANOUTS TO ALLOW FOR UPSTREAM AND DOWNSTREAM SNAKING AND (2) VENTS - BELOW GRADE BACK TO BUILDING AND UP THROUGH ROOF.
47. PROVIDE SELF-REGULATING HOT WATER TEMPERATURE MAINTENANCE SYSTEM FOR EACH TEMPERED WATER SYSTEM, FROM TEMPERING STATION, TO THE POINT OF USE. SYSTEM SHALL BE EQUAL TO RAYCHEM HWAT-B FOR 105°F DESIGN TEMP., STRAIGHT LACED AND INSTALLED UNDER PIPE INSULATION. PROVIDE POWER CONN. KIT, TEE CONN. KITS AS REQ'D., END SEAL KIT AND SPLICE KIT AND SPLICE KITS AS REQ'D. INSTALLATION AND TESTING SHALL COMPLY IN ALL RESPECTS W/ MFR.'S INSTALLATION AND TESTING PROCEDURES. SUBMIT TEST REPORT TO ARCHITECT FOR REVIEW. SYSTEM SHALL BE FOR 208V/1Ø SERVICE. PROVIDE RAYCHEM HWAT-R FOR 140°F DESIGN TEMP. W/ INSULATION, ETC., AS DESCRIBED ABOVE FOR GREASE WASTE PIPING WHERE INDICATED ON PLANS.
48. CONTRACTOR SHALL VERIFY SIZE & LOCATION OF UNDERGROUND UTILITIES. COORDINATE WITH OTHER TRADES AND MAKE FINAL CONNECTION. NOTE THAT ALL EXISTING SANITARY CONDITIONS CANNOT BE VERIFIED AND THEREFORE IS SHOWN GRAPHICALLY AS ESTIMATED BY DESIGN TEAM. DESIGN TEAM ALLWAYS RECCOMMENDS SCOPE AND MEASUREMENT OF SANITARY LINES / INVERT PRIOR TO CONSTRCUTION COMMENCEMENT.
49. PROVIDE WATER HAMMER ARRESTORS EQUAL TO WATTS REGULATOR NO. 15 SERIES. PROVIDE ON HOT & COLD WATER PIPING SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. DEVICES SHALL BE PDI CERTIFIED AND ANSI APPROVED.
50. PLUMBER SHALL MAKE FINAL CONNECTIONS TO ALL PLUMBING FIXTURES, INCLUDING LAB FAUCETS AND TURRETS. (NOTE: FAUCETS, GAS AND AIR FITTINGS IN WOOD CASEWORK ARE NOT IN DIVISION 15).
51. WATER PIPING SHALL BE ROUTED "AROUND" ELECTRICAL ROOMS.
52. COORDINATE SEQUENCE OF DEMOLITION W/ GENERAL CONTRACTOR TO PREVENT WATER DAMAGE TO EXISTING AREAS TO REMAIN.
53. CONTRACTOR TO NOTIFY ENGINEER OF ANY INCORRECT ASSUMPTIONS PRIOR TO STARTING ANY WORK.

PLUMBING SHEET INDEX

MAX HW PIPE LENGTH FROM LOOP

NOMINAL PIPE SIZE (INCHES)	VOLUME (LIQUID OUNCES PER FOOT LENGTH)	MAXIMUM PIPE LENGTH FROM LOOP TO FIX (FEET)	
		PUBLIC LAVATORY FAUCETS	ALL OTHER FIXTURES
1/4"	0.33	6'	50'
5/16"	0.50	4'	50'
3/8"	0.75	3'	50'
1/2"	1.50	2'	43'
5/8"	2.00	1'	32'
3/4"	3.00	0.5'	21'
7/8"	4.00	0.5'	16'
1"	5.00	0.5'	13'
1-1/4"	8.0	0.5'	8'
1-1/2"	11.00	0.5'	6'
2" OR LARGER	18.00	0.5'	4'

NOTE:
FROM TABLE ABOVE & PER ENERGY CODE - ALL PUBLIC LAVATORIES SHALL BE PROVIDED WITH HOT WATER LOOP TO WITHIN 24" OF ANGLE STOP OF HOT WATER CONNECTION.

PLUMBER SHALL ENSURE THAT ALL HOT WATER LAVATORIES ARE INSTALLED PER CODE & HOT WATER LOOP IS ROUTED DOWN IN WALL TO FIXTURE OR RECIRC LINE IS PULLED FROM LAVATORY & ROUTED BACK TO HWRC LOOP WITH BV'S AS NEEDED/SHOWN ON PLAN.

PLUMBING SYMBOLS

L-1	PLUMBING FIXTURE TAG
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT CIRCULATION
W	WASTE/SANITARY SEWER
GW	GREASE WASTE
V	VENT
G	NATRUAL GAS
ST	STORM
OST	OVERFLOW STORM
BALL VALVE	PIPE UP
PLUG VALVE	PIPE DOWN
BALANCING VALVE	PIPE TEE DOWN
MOTORIZED CONTROL VALVE	PIPE CAP
Y-STRAINER	PIPE ELBOW
PRESURE GAGE	PIPE REDUCER
THERMOMETER	PIPE TEE
GAS PRESSURE REDUCING VALVE	THREE-WAY VALVE
DOUBLE CHECK BACKFLOW PREVENTER	BUTTERFLY VALVE

GENERAL SYMBOLS

Room name 101 150 SF	ROOM NAME ROOM NUMBER — ROOM TAG
1 / A101	VIEW NUMBER SHEET NAME — ENLARGED VIEW TAG
1 / A101	VIEW NUMBER SHEET NUMBER — SECTION VIEW TAG
1 / A101	VIEW NUMBER/SHEET # — VIEW REFERENCE
#	SHEET NOTE
	POINT OF CONNECTION TO EXISTING

ABBREVIATION DESCRIPTION

AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BAS	BUILDING AUTOMATION SYSTEM
(D)	DEMO'D
DDC	DIRECT DIGITAL CONTROL
(E)	EXISTING
EMS	ENERGY MANAGEMENT SYSTEM
FD	FLOOR DRAIN
FS	FLOOR SINK
(N)	NEW
NG	NATURAL GAS
OST	OVERFLOW STORM
PSI	POUNDS PER SQUARE INCH
(R)	RELOCATED
ST	STORM
TDH	TOTAL DYNAMIC HEAD
TP	TRAP PRIMER
WC	WATER COLUMN
WP	WORKING PRESSURE
WPD	WATER PRESSURE DROP

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RETROFIT & ADDITION FOR:

THE LITTLE SCHOOL ON PERRY STREET

DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
04.16.2023	UPDATED CONCEPT DESIGN	
03.01.2024	90% REVIEW SET	
03.12.2024	ISSUED FOR PERMIT	

DATE: 02.XX.2024
DRAWN: DJG
CHECKED: JCAA
BDG ARCH NO.: 23.024

PLUMBING GENERAL NOTES

P001

ISSUED FOR PERMIT - 03.12.2024

TYPE OF FIXTURE	NUMBER OF EXISTING FIXTURES	NUMBER OF NEW FIXTURES		WATER FIXTURE UNIT VALUE*		TOTAL FIXTURE UNITS
Clothes Washer		1	X	1.4	=	1.4
Dishwasher			X	1.4	=	0
Drinking Fountain		1	X	0.25	=	0.25
Hose Bibb		2	X	2.5	=	5
Kitchen Sink		7	X	1.4	=	9.8
Lavatory		3	X	2	=	6
Service or Mop Basin		2	X	3	=	6
Service Sink			X	3	=	0
Shower		1	X	1.4	=	1.4
Urinal			X	5	=	0
Water Closet (Flush Valve)			X	10	=	0
Water Closet (Flush Tank)		4	X	5	=	20
Other (Specify)			X		=	0
Other (Specify)			X		=	0
Other (Specify)			X		=	0
TOTAL WATER SUPPLY FIXTURE UNITS						49.85

Project Name:	Perry Street School	**Storm**	
Project Number:	23.124	Total GPM:	93.5
Engineer:	DJG	Storm Line Size	4 in
Date:	2/14/2024	Storm Line Main Slope	*1/8 per foot
Project Info		**Water**	
Address:	203 PERRY STREET	Total WFUs: 51.3	Size Type: Tank; GPM-UPC: 29.6; GPM-AWWA: 24.1
County:	CASTLE ROCK	Tap & Meter	1"
City:	CASTLE ROCK	Total TDL =	200
Jurisdiction:	CASTLE ROCK	Water Pressure:	60 PSI
100 Yr Rain Rate:	2.5	**Waste**	
Climate Zone:	5B	Total DFUs	52.5
Elevation:	6,224.00	Grease Waste Required:	YES
Altitude Factor:	0.75104	Waste Line Size	4 in
Building Height	60	Waste Main Slope	*1/8 per foot
Roof Area (FT2)	3,600	Grease Int Size	125 GAL
Codes	**Water heater**	**Gas**	
2018 **IPC**	Fuel: GAS	Pressure At Meter:	7 in W.C.
2018 **IECC**	BTU-output: 100,000	Total Load:	533 CFH
2018 **IFGC**	Tank Size: 34 GAL	Total Developed Length:	180 FT

IFGC PIPE SIZING CALCULATOR FOR PRESSURES LESS THAN 1.5 PSI	
Meter Discharge Pressure ("W.C.)=	**7**
Allowable Pressure Drop ("W.C.)=	**0.5**
Total Equivalent Length of Pipe (feet)=	**180**
Delivery Design Pressure("W.C.)=	**6.5**
Schd. 40 Steel Pipe size (inches)	**(CFH)**
0.5	36
0.75	75
1	142
1.25	291
1.5	437
2	841
2.5	1340
3	2369
4	4832
5	8743
6	14156

*Pipe capacity is calculated using formula for low gas (1.5 psi and less) located in IFGC Appendix A
Q = 2313*D^2.623*((ΔH)/(Cr*L))^.541

Q = Capacity (cfh)
D = Inside Pipe Diameter
ΔH = Allowable Pressure Drop ("W.C.)
Cr = Factor For Viscosity, Density, and Temp. =
L = Length of Pipe (feet)

CONNECTED GAS LOAD CHART

MARK	MBTU	CFH	#	TOTAL CFH
(E) AHU-1	60	79.8892203	1	79.8892203
(N)AHU-2	120	159.778441	1	159.778441
(N)AHU-3	120	159.778441	1	159.778441
WH-1	100	133.1487	1	133.1487
TOTAL	400	532.594802		532.594802

NOTES:
1. Typ. all gas connections with union, gas cock & dirtleg. All cooking appliances with quick connect.

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER & MODEL	ROUGH-IN CONNECTION (IN) HW	CW	V	TRAP	W	NOTES

S-1	ADA COMPLIANT SINGLE BOWL DROP-IN SINK. 19-1/2"x19"x5-1/2". TWO HANDLE BAR FAUCET, 4" CENTERS, STAINLESS STEEL.	SINK = ELKAY #PSRADQ 1919-55 L/R
		FAUCET = MOEN #4093
			1/2	1/2	2	1-1/2	2	FIXUTRE TO BE INSTALLED ON MOTAR BED.

S-2	TWO-COMPARTMENT SINK. 14-3/16" x 15-11/16" x 9" COMPARTMENTS. SINGLE FAUCET HOLE, SOUND ABSORPTION, 18-GAUGE STAINLESS STEEL.	SINK = KOHLER K-5267-1 FAUCET = MOEN #8799	1/2	1/2	2	1-1/2	2	INDIRECT WASTE FOR PANTRY PREP SINK ONLY.
S-3	THREE-COMPARTMENT SINK. 21" x 18" x 14" COMPARTMENTS. 16 GAUGE TYPE 430 STAINLESS STEEL, GALVANIZED TUBULAR LEGS, 1" ADJUSTABLE PLASTIC BULLET FEET.	SINK = ADVANCE TABCO 400 SERIES # 4-3-54 FAUCET = ADVANCE TABCO #K-11 14"	1/2	1/2	2	1-1/2	2	PROVIDE DRAINBOARDS W? STAINLESS STEEL FEET. PROVIDE INDIRECT WASTE AT EACH BASIN. PROVIDE (2) COUNTERTOP DRAIN BOARDS (ADVANCE TABCO N-5-30). PROVIDE INDIVIDUAL DRAIN LEVERS.

S-4	FLOOR MOUNTED MOP SERVICE BASIN. 24" x 24" x 10" BASIN WITH 1" WIDE SHOULDERS. MOLDED STONE CONSTRUCTION WITH 3" STAINLESS STEEL STRAINER.	SINK = FIAT #MSB2424
		FAUCET = FIAT #830-AA
			1/2	1/2	2	3	3	PROVIDE HOSE AND HOSE BRACKET 832-AA PROVIDE MOP HANGER 889-CC

S-5	WALL HUNG GAUAGE HAND SINK WITH FAUCET. 14" x 16-1/2" x 11". TWO HANDLE GOOSENECK FAUCET, 18 GAUGE 304 STAINLESS STEEL, WITH STRAINER.	SINK + FAUCET= ELKAY #EHS-14X	1/2	1/2	2	1-1/2	2	
WC-1	ADA COMPLIANT FLOOR MOUNTED, ELONGATED BOWL, PRESSURE-ASSISTED, FLUSH TANK TOILET. 1.1 GPF, VITREOUS CHINA, METAL CHROME TRIP LEVER, FULLY GLAZED TRAPWAY, 16 1/2" RIM HEIGHT.	WATER CLOSET = AMERICAN STANDARD CADET #2467100.02	-	3/4	2	4	4	
WC-2	ADA COMPLIANT FLOOR MOUNTED, ELONGATED BOWL, LOW CONSUMPTION, FLUSH TANK TOILET. 1.28 GPF, VITREOUS CHINA, METAL CHROME TRIP LEVER, FULLY GLAZED TRAPWAY, 10 1/4" RIM HEIGHT.	WATER CLOSET = AMERICAN STANDARD BABY DEVORO #2315.228	-	3/4	2	4	4	
WC-3	FLOOR MOUNTED, ELONGATED BOWL, LOW CONSUMPTION, FLUSH TANK TOILET. 1.28 GPF, VITREOUS CHINA, METAL CHROME TRIP LEVER, FULLY GLAZED TRAPWAY, 14" RIM HEIGHT. PROVIDE WITH TOILET TANK.	WATER CLOSET = AMERICAN STANDARD MADERA YOUTH #2599001.020 TANK = AMERICAN STANDARD #4142.100.020	-	3/4	2	4	4	
L-1	WALL HUNG LAVATORY. 21-1/4" x 18-1/4" x 6-1/2" BOWL. SELF-DRAINING DECK AREA, FAUCET LEDGE.	LAVATORY = AMERICAN STANDARD LUCERNE #0355.012 FAUCET = MOEN 8938 (4")	1/2	1/2	2	1-1/2	4	
DF-1	EXH2O BOTTLE FILLING STATION & VERSATILE BI-LEVEL ADA COOLER, FILTERED NON-REFRIGERATED, LIGHT GRAY	DRINKING FOUNTAIN = ELKAY #LZSTLDDWSLK	-	1/2	2	1-1/2	2	
W-1	WALL MOUNTED WASHER BOX	WASHER BOX = GUY GRAY #T-200	3/4	3/4	2	2	2	
RD-1	ROOF DRAIN	ROOF DRAIN = J.R. SMITH #1010	-	-	-	-	3	INSTALL WITH 2" WATER DAM FOR OD-1.
SH-1	ADA COMPLIANT ROLL-IN SHOWER. 62" x 32", 79" HEIGHT, ACRYLIC WITH TILE PATTERN, SLIDE BAR WITH HANDHELD SHOWER, DRAIN ON RIGHT SIDE.	SHOWER UNIT = FREEDOM SHOWERS #APF6232BF5PLR	1/2	1/2	-	-	3	
FD-1	FLOOR DRAIN WITH POLISHED NICKEL BRONZE STRAINER, GALVANIZED CAST IRON, 1/2" TRAP PRIMER CONNECTION.	FLOOR DRAIN = ZURN #Z415B OR EQUAL BY JOSAM, J.R. SMITH, WADE	-	-	2	3	3	PROVIDE CONNECTION TO GREY WATER TRAP PRIMER. REFER TO DETAILS.
FS-1	CORROSION RESISTENT FLOOR SINK WITH TYPE 304 STAINLESS STEEL BODY, 1/2" TRAP PRIMER CONNECTION.	FLOOR SINK = ZURN #Z1751 OR EQUAL BY JOSAM, J.R. SMITH, WADE	-	-	2	3	3	PROVIDE CONNECTION TO GREY WATER TRAP PRIMER. REFER TO DETAILS.

OR EQUIVILENT BY OTHERS

NOTES:

1. PROVIDE WITH BACKDRAFT DAMPER AND BIRDSCREEN.
2.

GREASE INTERCEPTOR SIZING

FIXTURE	DFU	GPM	GREASE RETENTION LBS
FS-1	5	2.5	
FS-1	5	2.5	
FD-1	3	1.5	
TOTAL		6.5	14

SIZED PER CHAPTER 10 OF IPC

PLUMBING EQUIPMENT SCHEDULE

TAG	DESCRIPTION
WH-1	GAS FIRED COMMERCIAL-GRADE WATER HEATER AO SMITH MODEL #GSP-100. 34 GALLON CAPACITY, 100 MBH, 170 GALLON FIRST HOUR RATING.
HCP-1	RECIRC PUMP BELL & GOSSETT MODEL NRF-9F/LW. SINGLE PHASE 115 V, 0.40 AMPS, 41 WATTS FOR A CALCULATED 2 GPM @ 4' HEAD.
ET-1	DIAPHRAGM EXPANSION TANK AMTROL T-5C ASME RATED.
GI-1	HYDROMECHANICAL GREASE INTERCEPTOR SCHIER MODEL GB-75. 125 GALLON CAPACITY, 75 GPM; 861 LBS RATING.
SP-1	CRAWL SPACE SUMP PUMP LIBERTY PUMPS MODEL CSP-457. 1/2 HP, 115V, 60 HZ. 32 GPM @ 20' HEAD.

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RETROFIT & ADDITION FOR:

THE LITTLE SCHOOL ON PERRY STREET

DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

DATE	ISSUE	REV
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PLUMBING SCHEDULES

P002

ISSUED FOR PERMIT - 03.12.2024

DIVISION 22 SPECIFICATIONS:

PLUMBING EQUIPMENT, METHODS AND MATERIALS

PRODUCTS

1. GENERAL

ALL PRODUCTS USED SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE PLUMBING CODE IN EFFECT IN THE BUILDING LOCATION. WHERE BIDDER IS NOT SURE, HE IS ADVISED TO DETERMINE WHAT LIMITATIONS, IF ANY, ARE IMPOSED AT THE SITE.

2. WATER DISTRIBUTION PIPE

PIPE 4" AND SMALLER SHALL BE TYPE "L" COPPER WITH WROUGHT COPPER FITTINGS FOR PIPE NOT IN OR UNDER FLOOR SLABS.

DIELECTRIC UNIONS SHALL BE INSTALLED WHEREVER ANY DISSIMILAR METALS ARE USED.

3. SANITARY SOIL, WASTE AND VENT SYSTEMS

SOIL AND WASTE PIPE SHALL BE CAST IRON AS APPROVED BY CODE FOR THIS DUTY. NO VENT STACK SHALL BE LESS THAN 2" IN DIAMETER.

4. SLEEVES AND ESCUTCHEONS

PROVIDE GALVANIZED SHEET METAL SLEEVES FOR ALL PIPES AT FLOORS, CEILINGS AND PARTITIONS. PROVIDE PIPE SLEEVES TWO PIPE SIZES LARGER THAN PIPE OR INSULATION AT PENETRATIONS. CAULK AND INSTALL ESCUTCHEONS AS SPECIFIED.

PROVIDE NICKEL PLATED BRASS ESCUTCHEONS WITH SPRING LOCKS OR SET SCREWS AT CEILINGS, FLOORS, AND WALLS FOR ALL PIPES. DO NOT USE CHROME PLATED FERROUS METAL ESCUTCHEONS.

5. VALVES

VALVES SHALL BE SOLID BRONZE THROUGH 2" SIZE AND BRONZE FITTED FOR LARGER SIZES.

PROVIDE FULL PORT BALL VALVES WITH SOLDER CONNECTIONS.

VALVES SHALL BE RATED AT 125 PSI SWP/200 PSI WOG EQUIVALENT TO NIBCO, STOCKHAM, CRANE OR APPROVED EQUIVALENT.

6. CLEANOUTS AND COVERS

PROVIDE CLEANOUTS AT THE BASE OF EACH STACK AND AS SHOWN ON THE DRAWINGS. SPACING SHALL NOT BE GREATER THAN 50 FEET APART. PROVIDE CLEANOUT AT EACH CHANGE OF DIRECTION OF THE WASTE LINE GREATER THAN 45 DEGREES AND AS REQUIRED TO PROPERLY ROD THE SYSTEM.

CLEANOUT COVER SHALL BE THE PROPER TYPE FOR THE LOCATION AS ACCEPTED BY THE TRADE AS GOOD PRACTICE, THAT IS, FLUSH SCORED TOP FOR TILE AREAS, RECESSED TOP FOR VINYL FLOOR AREAS, DEEP CUT FOR TERRAZZO AREAS, FLUSH MOUNTED ON FLOOR UNDER CARPET WITH SCREW MARKER, CHROME PLATED COVER PLATE FOR FINISHED WALLS, ETC.

7. ROOF FLASHING FOR ROOF DRAINS AND VENT STACKS

FLASHING SHALL BE LEAD OF NOT LESS THAN FOUR POUNDS PER SQUARE FEET AND SHALL BE TALL ENOUGH TO TURN INTO THE TOP OF THE VENT PIPE 12" ABOVE THE ROOF AND EXTEND OUT FROM THE ROOF DRAINS AND STACKS AT LEAST 12" ON EACH SIDE. OR AS DIRECTED BY THE ARCHITECT.

8. PIPE HANGERS AND SUPPORTS

HANGERS FOR HORIZONTAL PIPES IN BUILDING SHALL BE ADJUSTABLE TYPE SUPPORTED BY THREADED RODS EQUIVALENT TO FEE AND MASON #239 OR #400. HANGERS ON BARE COPPER LINES SHALL BE COPPER PLATED. INSULATED LINES SHALL BE PROVIDED WITH A 20 GAUGE MINIMUM SADDLE 12" LONG FOR PIPES 2" AND SMALLER AND 18" FOR LARGER PIPES.

SUPPORT ALL PIPING BELOW THE BUILDING, SIDEWALKS, ETC. WITH 1/4 INCH STAINLESS STEEL RODS 4 FOOT ON CENTER AND AT EACH SIDE OF EACH FITTING. FOR NEW CONCRETE, EMBED IN THE CONCRETE ABOVE AND WIRE TO THE STEEL REINFORCING. FOR EXISTING CONCRETE SLABS, USE THREADED STAINLESS STEEL RODS AND 1/4 INCH CONCRETE DRILL AND SET ANCHORS. DRILL ANCHORS ONLY INTO BEAMS AND WEBS. TWIST THE RODS AROUND THE PIPING WITH THREE COMPLETE TURNS AROUND THE VERTICAL ROD. PROVIDE 1 FOOT LONG SCHEDULE 40 PVC SADDLES FOR ALL COPPER AND PVC PIPING. THE SADDLES SHALL BE THE SAME DIAMETER AS THE PIPE. WHERE REPAIRS ARE BEING MADE, THE CONTRACTOR SHALL INSTALL THESE SUPPORT RODS ON BOTH SIDES OF THE REPAIR FOR A DISTANCE OF 4 FEET OF THE EXISTING PIPE.

9. UNIONS

UNIONS 2" AND SMALLER SHALL BE GROUND JOINT TYPE WITH FLANGES BEING USED IN PIPES LARGER THAN 2".

10. FIXTURES AND EQUIPMENT GENERAL

FURNISH ALL PLUMBING FIXTURES, DRAINS AND EQUIPMENT AS SHOWN ON THE DRAWINGS. IF THE ARCHITECTURAL DRAWINGS DIFFER FROM THE PLUMBING DRAWINGS, THE ARCHITECT SHALL BE NOTIFIED PRIOR TO BIDDING. FURNISH FIXTURES AND OTHER EQUIPMENT COMPLETE WITH ALL REQUIRED AND NECESSARY TRIM, FITTINGS, AND OTHER DEVICES FOR A COMPLETE FINISHED PROJECT AND AS DIRECTED BY THE ARCHITECT.

FIXTURES AND EQUIPMENT SHALL HAVE THE MANUFACTURER'S NAME OR TRADE MARK IMPRINTED ON OR ATTACHED BY METALLIC NAME PLATE. ALL FIXTURES AND ALL TRIM SHALL BE BY THE SAME MANUFACTURER UNLESS NOTED OTHERWISE. TRIM MAY BE OF DIFFERENT MANUFACTURER THAN FIXTURES, BUT EQUIVALENT TO THAT SPECIFIED.

ALL EXPOSED TRIM SHALL BE CHROME PLATED. TOPS OF ALL FLOOR DRAINS SHALL BE CHROME OR NICKEL BRONZE UNLESS OTHERWISE NOTED.

FURNISH BOLT CAPS FOR ALL TOILETS AND URINALS.

11. PLUMBING FIXTURES

GENERAL: THE CONTRACTOR SHALL FURNISH AND INSTALL ALL PLUMBING FIXTURES, WITH ALL ASSOCIATED VALVES, TRIM, CONNECTORS, ETC., SHOWN ON THE ACCOMPANYING DRAWINGS. ALL FIXTURES MUST BE DELIVERED TO THE BUILDING PROPERLY CRATED. ESCUTCHEONS SHALL BE CHROME PLATED BRASS OR STAINLESS STEEL. TRAPS SHALL BE 17-GAUGE AND SHALL HAVE COUNTER SUNK CLEANOUT PLUG.

EXECUTION

12. GENERAL

ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL GOVERNING CODES AND THE BEST PRACTICES AND ALL PRODUCTS INSTALLED AS DIRECTED BY THE MANUFACTURER THROUGH THEIR WRITTEN INSTRUCTIONS.

13. DISINFECTION

DISINFECT NEW WATER PIPING (AND EXISTING WATER PIPING AFFECTED BY THE CONTRACTOR'S OPERATION) IN ACCORDANCE WITH AWWA C601. FILL PIPING SYSTEMS WITH SOLUTION CONTAINING A MINIMUM OF 50 PARTS PER MILLION OF AVAILABLE CHLORINE AND ALLOW SOLUTION TO STAND FOR A MINIMUM OF 24 HOURS. FLUSH SOLUTION FROM SYSTEMS WITH CLEAN WATER UNTIL MAXIMUM RESIDUAL CHLORINE CONTENT IS NOT GREATER THAN 0.2 PARTS PER MILLION.

14. EXCAVATION AND BACKFILLING

DO ALL EXCAVATION AND BACKFILLING REQUIRED. TRENCHES SHALL BE WIDE ENOUGH FOR PROPER INSTALLATION OF THE PIPE. GRADE THE DITCH BOTTOM FOR PROPER SLOPE AND PROVIDE BELL HOLES TO ALLOW THE FULL BEARING OF THE PIPE BARREL. COMPLY WITH ALL HEALTH AND SAFETY REGULATIONS RELATING TO DITCHING.

DEWATER TO EXTENT NECESSARY TO GIVE PROPER COMPACTION UNDER ALL PIPES. CONTINUE DEWATERING OPERATION UNTIL SYSTEM HAS BEEN TESTED, APPROVED, BACKFILLED AND COMPACTED.

EXCAVATE 6" BELOW THE PIPE AND FILL WITH COMPACTED OR WETTED SAND TO PIPE GRADE.

NO EXCAVATION SHALL BE UNDER OR NEAR FOOTINGS WITHOUT APPROVAL OF THE ARCHITECT.

BACKFILL WITH CLEAN DIRT OR SAND, NO ROCKS, CLODS OR TRASH. TAKE CARE NOT TO DISTURB THE PIPE GRADE OR ALIGNMENT. COMPACT AROUND AND UNDER THE PIPE CAREFULLY. FINISH BACKFILL WITH APPROVED MATERIAL AND LEAVE SLIGHTLY MOUNDED. CLEAN UP AROUND THE DITCH AREA TO REMOVE TRASH AND ANY EXCESS DIRT.

WHERE DITCH IS UNDER FUTURE PAVEMENT, FINISH SURFACES, OR FOOTINGS, THE FILL SHALL BE COMPACTED IN 6" LAYERS WITH A POWER TAMPER.

15. CONTRACTOR'S RESPONSIBILITIES

THE CONTRACTOR'S RESPONSIBILITIES INCLUDE BUT ARE NOT LIMITED TO:

SETTING FLOOR AND WALL SLEEVES IN PROPER LOCATIONS.

INFORMING OTHER TRADES OF LOCATION OF AND SIZE OF CHASES, STACKS, CLEANOUTS, ETC. THAT WILL LATER RELATE TO THEIR WORK.

PROVIDING ACCESS TO ALL ITEMS REQUIRING ROUTINE SERVICE.

SETTING THE ELEVATION OF FLOOR DRAIN TOPS TO PROVIDE FOR A SLOPE OF 1/16" PER FOOT TOWARD THE DRAIN. THIS REQUIRES COORDINATION WITH THE CONCRETE SUBCONTRACTOR AND RECHECKING AT THE TIME THE POUR IS BEING MADE.

INSULATION:

16. GENERAL

THIS SECTION APPLIES TO ALL PLUMBING WORK.

ALL INSULATION SHALL BE IN STRICT ACCORDANCE ALL LOCAL AND STATE ENERGY CODES.

THE INSULATION WORK SHALL BE PERFORMED BY A FIRM REGULARLY ENGAGED IN THIS TYPE WORK USING MECHANICS SKILLED IN THE TRADE.

INSTALL ALL MATERIALS AS RECOMMENDED BY THE MANUFACTURER FOR THE SERVICE INTENDED. ALL INSULATION MATERIAL, INCLUDING SEALER MATERIAL, ADHESIVES, COVERING MATERIAL, FINISH, ETC. SHALL HAVE A U. L. LISTED FLAME SPREAD RATING NOT OVER 24 WITHOUT EVIDENCE OF CONTINUED PROGRESSIVE COMBUSTION AND WITH A SMOKE DEVELOPED RATING NOT HIGHER THAN 50. ALL COATINGS AND COVERINGS FOR HOT SERVICE SHALL BE BREATHER TYPE AND VAPOR BARRIER TYPE FOR COLD SERVICE.

ISSUE, AND WITH THE SIGNING OF A DISCLAIMER FOR THE USE OF THE FILE.

17. DOMESTIC HOT AND COLD WATER

DOMESTIC HOT AND COLD WATER PIPE ABOVE GRADE AND IN CONCEALED SPACES SHALL BE INSULATED USING ALL SERVICE JACKET WITH SELF-SEALING LAPS. THICKNESS FOR ALL SIZES OF PIPE SHALL BE \ INCH THICK FIBERGLASS FOR NON HOTWATER RECIRCULATING SYSTEMS AND 1" THICK FOR PIPING SYSTEM WITH HOTWATER RECIRCULATION. INSULATION SHALL MEET OR EXCEED IEEC. FITTINGS SHALL BE COVERED WITH FORMED SECTIONS OF MATERIAL.

18. COLD DRAIN LINES

INSULATE ALL HORIZONTAL DRAIN LINES WHICH CAN RECEIVE COLD CONDENSATE WITH 1" THICK (3/4 LBS/CU. FT. DENSITY) DUCT WRAP WITH ALUMINUM ALL SERVICE JACKET, VAPOR BARRIER.

19. WATER DISTRIBUTION PIPING

EXTEND FROM THE WATER ENTRANCE TO EVERY FIXTURE, WATER HEATER, OR OUTLET REQUIRING HOT OR COLD WATER. PROVIDE STOP VALVE AND A DRAIN FOR THE SYSTEM. EVERY LOW POINT SHALL BE DRAINED WITH A CAP OR PLUG AND DRAIN VALVE.

PIPE SIZES SHOWN ON THE DRAWINGS ARE INTERNAL DIAMETER.

EVERY FIXTURE CONNECTION SHALL BE PROVIDED WITH A STOP VALVE AND AN 3/4" X 15" HIGH AIR CHAMBER VERTICALLY AT THE FIXTURE CONNECTION.

AT CONTRACTOR'S OPTION, EXISTING BRANCH (NOT MAIN) DOMESTIC WATER PIPING MAY BE REUSED WITHIN UNIT IF TESTED AND PROVEN TO BE IN PROPER CONDITION WITH APPROVAL OF ARCHITECT.

20. BUILDING DRAIN, WASTE AND VENT SYSTEM

THE WASTE AND VENT SYSTEM SHALL BE GENERALLY AS SHOWN ON THE DRAWINGS WITH CHANGES ON THE JOB AS REQUIRED TO MEET JOB CONDITIONS. ANY MAJOR CHANGE FROM THAT SHOWN ON THE DRAWINGS SHALL BE SUBMITTED FOR APPROVAL BY THE ARCHITECT.

A FIXTURE SHALL WASH THE BOTTOM OF ALL STACKS WHETHER REQUIRED BY LOCAL CODE OR NOT.

EXTEND VENT STACKS 12" ABOVE THE ROOF AND FLASH WITH FLASHING. TURN THE TOP OF FLASHING INTO THE STACK.

THERE SHALL BE NO HORIZONTAL OFFSET IN VENTS LESS THAN 6" ABOVE THE FLOOD RIM OF THE HIGHEST FIXTURE IN THE GROUP.

21. TESTING

NOTIFY ARCHITECT THREE WORKING DAYS BEFORE ANY TESTS ARE MADE. NO JOINTS OR FITTINGS SHALL BE CONCEALED UNTIL TESTED AND APPROVED. REPEAT TEST AS NECESSARY UNTIL PROVEN SATISFACTORY.

THE FOLLOWING TEST AS DESCRIBED IN THE INTERNATIONAL PLUMBING CODE, SECTION 312, SHALL BE PERFORMED:

SEWER SYSTEM:

WATER TEST - FILL SYSTEM WITH WATER AND HOLD FOR 45 MINUTES WITHOUT DROP IN WATER LEVEL.

MINIMUM HEAD SHALL BE 10 FEET OF WATER.

BALL TEST - PASS A WOODEN SEWER BALL THROUGH THE SYSTEM USING ONLY WATER TO ASSIST.

WATER SYSTEM

IMPOSE 150 PSI WATER PRESSURE ON THE SYSTEM WITH SYSTEM FULL OF WATER AND HOLD FOR FOUR HOURS WITHOUT PRESSURE DROP. IN FREEZING WEATHER ONLY, USE 150 PSI AIR PRESSURE AND HOLD FOR 8 HOURS WITHOUT DROP IN PRESSURE BEYOND THAT EXPECTED FROM TEMPERATURE CHANGES. INSTALL PRESSURE GAUGE FOR EITHER TEST AND LEAVE IN PLACE UNTIL WATER SUPPLY IS CONNECTED.

22. SCREWED PIPE FITTINGS

CUT THREADS TO FULL DEPTH AND MAKE UP USING TEFLON TAPE. USE DRAINAGE PATTERN FITTINGS FOR WASTE AND VENT SYSTEMS.

23. CAST IRON PIPE FITTINGS

FITTINGS MAY BE NO-HUB, PUSH TYPE, OR LEAD AND OAKUM. INSTALL AS RECOMMENDED BY THE MANUFACTURER USING TOOLS AS RECOMMENDED BY THEM. CARE SHALL BE TAKEN TO PREVENT SHIFTING OR SETTLING OF PIPE.

24. SOLDER TYPE FITTINGS

BRAZE USING J.W. HARRIS "DYNAFLOW" 6% SILVER BRAZING ALLOY.

CLEAN PIPE AND FITTINGS BRIGHT WITH SAND PAPER OR WIRE BRUSH AND APPLY PASTE FLUX (LIQUID FLUX IS NOT ACCEPTABLE) AND ASSEMBLE JOINT. APPLY HEAT EVENLY TO THE PIPE AND FITTINGS AND APPLY SOLDER TO FILL THE JOINT BY CAPILLARY ACTION. CLEAN JOINT OF EXCESS SOLDER BEFORE IT COOLS. FITTINGS DISCOLORED BY HEAT SHALL BE REMOVED AND THE JOINT REMADE.

25. GRADES

PIPE SHALL GRADE IN DIRECTION OF FLOW NOT LESS THAN THE FOLLOWING
BUILDING SEWER AND BUILDING DRAIN- 1/8" PER FOOT.
WASTE AND VENT 2-1/2" AND SMALLER- 1/4" PER FOOT.
WASTE AND VENT 3" AND LARGER- 1/8" PER FOOT.

26. PIPE SLEEVES

TIGHTLY CAULK ALL ANNULAR SPACES BETWEEN PIPES (OR INSULATION) AND SLEEVES WITH SILICONE TYPE SEALANT.

SLEEVES PASSING THROUGH FLOORS SHALL EXTEND 2" ABOVE THE FLOOR LEVEL TO PREVENT WATER PENETRATION AROUND PIPE. THE SLEEVE SHALL ALSO BE SEALED TO THE FLOOR.

27. PROTECTION OF PIPE BELOW SLABS.

ALL STEEL AND COPPER PIPES INSTALLED BELOW A FLOOR SLAB AND NOT INSULATED SHALL BE GIVEN ONE HEAVY TROWEL COAT OF MASTIC EQUIVALENT TO KOPPERS NO. 50. THE THREADS SHALL BE GIVEN A SECOND COAT.

28. INSTALLATION OF PIPES

ALL THREADED PIPES SHALL BE REAMED TO REMOVE ALL CUTTING LIPS FROM THE INSIDE EDGE AND SHALL BE THREADED WITH CLEAN DIES TO THE PROPER DEPTH. CUTS SHALL BE CLEAN AND NOT GOUGED OR ROUGH. APPLY LUBRICANT TO MALE THREAD ONLY.

ALL COPPER PIPES SHALL BE REAMED TO REMOVE ALL CUTTING LIPS FROM INSIDE EDGE.

PIPE SHALL BE LAID OR SUPPORTED IN A STRAIGHT AND TRUE MANNER WITH FITTINGS USED TO MAKE ALL CHANGES IN DIRECTION.

ALL PIPE SHALL BE CUT CLEAN AT PRECISE ANGLE, HAND CUTTING OF PVC PIPE SHALL NOT BE ACCEPTABLE.

29. PIPE HANGERS AND SUPPORTS

SUPPORT ALL SUSPENDED PIPE WITH PROPER ADJUSTABLE SWIVEL HANGERS WITH MAXIMUM SPACING AS FOLLOWS:

CAST IRON - ONE HANGER FOR EACH SECTION OF CAST IRON PIPE.
SCREWED AND SOLDER PIPE - 6 FOOT SPACING FOR PIPE 1-1/2" AND SMALLER AND 10 FEET FOR LARGER.

ALL THREAD HANGER RODS SHALL BE USED AS FOLLOWS:
PIPE 2" AND SMALLER - 3/8"
PIPE 2-1/2 TO 4" - 1/2"
PIPE ABOVE 4" - 5/8"

SUPPORT ALL VERTICAL PIPE WITH KNEE ANCHORS OR FLOOR CLAMPS AND BRACE AS REQUIRED.

CLAMPS AND HANGERS ON INSULATED PIPE SHALL BE PROVIDED WITH A HEAVY GALVANIZED BEARING PLATE NOT LESS THAN FOUR INSULATION DIAMETERS LONG.

BARE COPPER PIPES SHALL BE SUPPORTED WITH COPPER PLATED HANGERS.

SUPPORT HANGERS FROM BEAM CLAMPS, INSERTS IN CONCRETE, JOIST CLAMPS, ETC. AS NECESSARY TO SUPPORT THE WEIGHT. NO WIRE OR STRAPS ARE TO BE USED FOR HANGERS.

30. PROTECTION DURING CONSTRUCTION

INSTALL TEST PLUGS, WOOD PLUGS OR CAPS IN ALL OPEN PIPES AT TIME OF INSTALLATION AND DO NOT REMOVE UNTIL PIPE IS CONNECTED.

MAINTAIN PRESSURE AND PRESSURE GAUGE ON ALL WATER LINES DURING CONSTRUCTION. USE WATER EXCEPT IN COLD WEATHER.

DRAIN ALL WATER FROM LINES TO PREVENT FREEZING.

PROTECT ALL FINISHED SURFACES OF FIXTURES AND BRASS FROM ANY DAMAGE. FIXTURES OR BRASS OF ANY TYPE THAT IS DAMAGED, SCRATCHED, DISCOLORED SHALL BE REMOVED AND REPLACED AT THIS CONTRACTOR'S EXPENSE.

31. NAUTRAL GAS SYSTEM

GAS PIPING ROUTED WITHIN THE BUILDING, 2" AND BELOW, SHALL BE BLACK STEEL SCHEDULE 40 WITH MALLEABLE FITTINGS, GAS PIPING 2 1/2" AND ABOVE SHALL BE BLACK STEEL SCHEDULE 40, WITH WELD FITTINGS. GAS PIPING INSTALLATION SHALL CONFORM IN ALL RESPECT TO APPLICABLE BUILDING CODES. PROVIDE DRIP LEGS WHERE EVER DIRECTION CHANGES FROM HORIZONTAL TO VERTICAL. GAS PLUG COCKS SHALL BE ROCKWELL, NORDSTRUM, DEZURICK OR APPROVED EQUAL.

VENT ALL GAS REGULATORS TO OUTDOORS.

EACH PIECE OF EQUIPMENT TO BE PROVIDED W/ GAS COCK AND UNION IN ACCORDANCE TO CODE.

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PLUMBING SPECS

P003

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FIRE SPRINKLER SYSTEMS

32. PROVIDE NEW FIRE SPRINKLER SYSTEMS SPECIFIED HEREIN.

OBTAIN FULL APPROVAL OF THE REVIEWING AUTHORITY BEFORE INSTALLING ANY PART OF THE SYSTEM. COMPLY WITH ALL CODES AND REGULATIONS INCLUDING: NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), OWNER'S INSURER, AND GOVERNING LOCAL, STATE, AND FEDERAL CODES.

PROVIDE SHOP DRAWINGS, DESIGN CALCULATIONS AND DATA SHEETS TO MEET ALL REQUIREMENTS OF STATE FIRE MARSHAL. VISIT THE JOB SITE AND REVIEW ALL CONSTRUCTION DOCUMENTS IN ORDER TO SATISFY ALL STATE FIRE MARSHAL REQUIREMENTS. PROVIDE ALL NECESSARY SHOP DRAWINGS WITH CALCULATIONS AND MATERIAL CUT SHEETS. PROVIDE NECESSARY AND REQUIRED REVIEW AND SUBMITTAL FEES AND PAY PACKAGE DELIVERY COSTS FOR THE STATE FIRE MARSHAL REVIEW PACKAGE(S), INCLUDING ANY RESUBMITTAL REVIEW AND DELIVERY COSTS. PROVIDE OVERNIGHT DELIVERY COSTS TO EXPEDITE DELIVERY, AS DIRECTED BY THE OWNER, ARCHITECT, OR ENGINEER, WHEN NECESSARY.

INSTALL ALL WORK AND PROVIDE ALL NECESSARY EQUIPMENT, INCLUDING, BUT NOT NECESSARILY LIMITED TO, FIRE PUMPS, SPRINKLER HEADS, PIPING, VALVES, CONTROLS, IN ACCORDANCE WITH ALL APPLICABLE NFPA STANDARDS, U.L., STATE AND LOCAL FIRE SPRINKLER CODES AND REQUIREMENTS, HEREIN REFERRED TO AS THE CODE OR CODES.

PERFORM A FIRE SPRINKLER WATER FLOW TEST BEFORE ANY CALCULATIONS ARE COMPLETED. USING THE RESULTS OF THIS TEST, DETERMINE THE NECESSITY OF INSTALLING AND INSTALL A FIRE PUMP WITH NECESSARY CONTROLLER, JOCKEY PUMP, VALVES, ETC.

PROVIDE AND INSTALL NECESSARY FIRE PUMP ASSOCIATED CONTROLLER, JOCKEY PUMP, VALVES, ETC. PER CODE.

ALL PIPING IN AREAS HAVING CEILING SHALL BE CONCEALED.

AVOID INTERFERENCES WITH AIR CONDITIONING DUCTS, LIGHTS, AND MECHANICAL PIPING AND EQUIPMENT. IT IS NOT THE INTENT OF DRAWINGS TO SHOW CLEARANCES.

ALL EQUIPMENT SHALL BE U.L. LISTED.

USE SCREW FITTINGS FOR THE SPRINKLER HEADS, PIPING, 2 INCHES AND SMALLER. USE FLANGED JOINTS OR GROOVED JOINTS WITH U.L. LISTED COUPLINGS, FOR PIPING 2 1/2 INCHES AND LARGER, AT RISERS.

FASTEN ALL PIPING SECURELY USING U.L. APPROVED HANGERS AS REQUIRED BY CODE.

INSTALL ON EACH SYSTEM AN INSPECTOR'S TEST CONNECTION FOR THE PURPOSE OF ALLOWING AN INSPECTOR TO OPEN INSPECTOR'S TEST VALVE AND PROVE THAT SPRINKLER SYSTEM IS OPERATING CORRECTLY.

PROVIDE IDENTIFICATION SIGNS AND TAGS FOR ALL CONTROL VALVES, DRAINS, TEST VALVES AND OTHER ITEMS AS REQUIRED CODE.

AS REQUIRED BY CODE, PROVIDE A U.L. LISTED SHUTOFF VALVES WITH TAMPER SWITCH AND A U.L. FLOW SWITCH WITH RETARD FEATURE. CONNECT THESE SWITCHES TO THE FIRE ALARM SYSTEM.

AFTER THE FIRE SPRINKLER SYSTEM HAS BEEN COMPLETELY APPROVED, SECURE A LETTER OF FINAL ACCEPTANCE FROM THE FIRE RATING BUREAU HAVING JURISDICTION, AND DELIVER THREE (3) COPIES OF THE LETTER TO THE OWNER.

33. IF REQUESTED, JCAA CONSULTING ENGINEERS, INC. WILL PROVIDE ELECTRONIC COPY OF THE DIVISION 15 AND 16 SYSTEMS RELATED TO THIS PROJECT FOR THE PURPOSES OF PREPARATION OF SHOP DRAWINGS BY THE CONTRACTOR OR HIS SUB-CONTRACTORS. COPY WILL BE PROVIDED AT A COST OF $45.00 PER FILE, PAYABLE AT TIME OF

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PLUMBING
SPECS

P004

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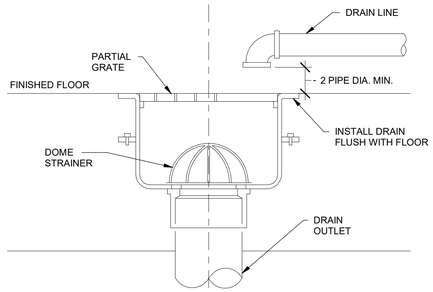
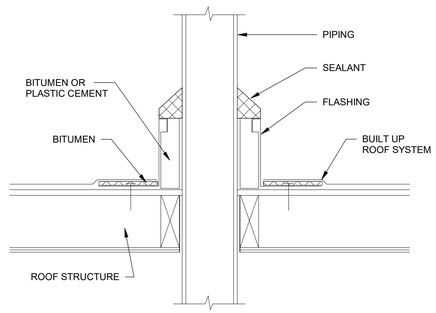


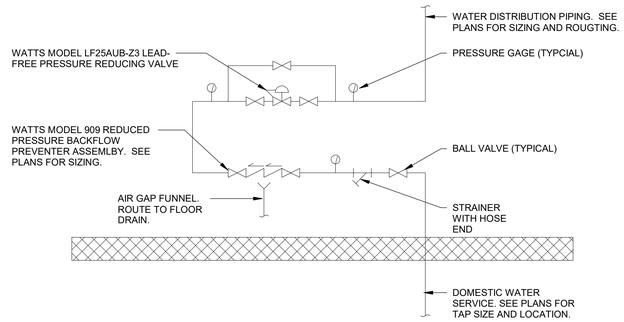
1 Floor Sink Detail

SCALE : NOT TO SCALE



2 Pipe Through Roof Detail

SCALE : NOT TO SCALE



3 Water Entry Detail

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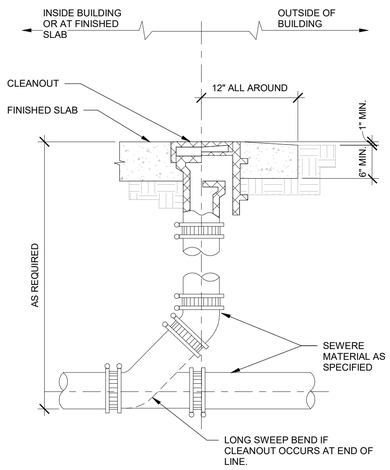
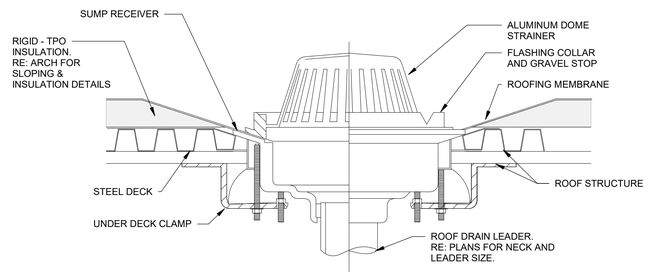


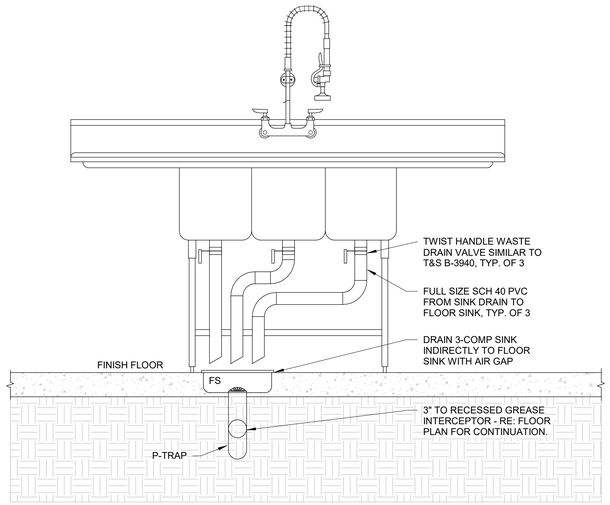
4 GRADE CLEANOUT DETAIL

SCALE : NOT TO SCALE



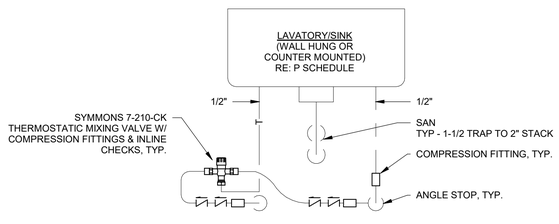
5 ROOF DRAIN DETAIL

SCALE : NOT TO SCALE



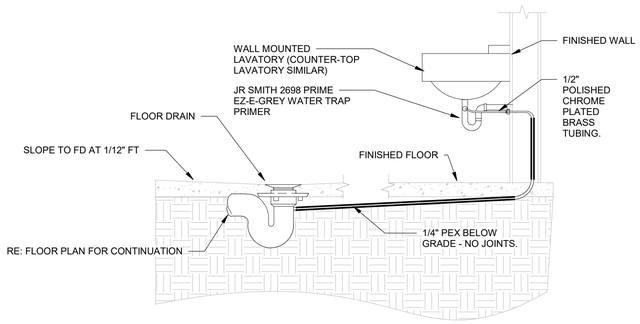
6 3-COMP SINK

SCALE : NOT TO SCALE



7 U.C. TEMPERING VALVE DETAIL

SCALE : NOT TO SCALE



8 GREY WATER TRAP PRIMER

SCALE : NOT TO SCALE

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PLUMBING DETAILS

P005

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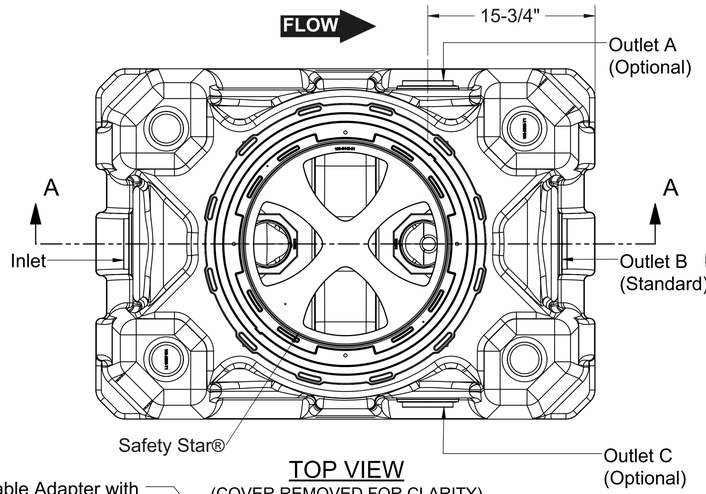
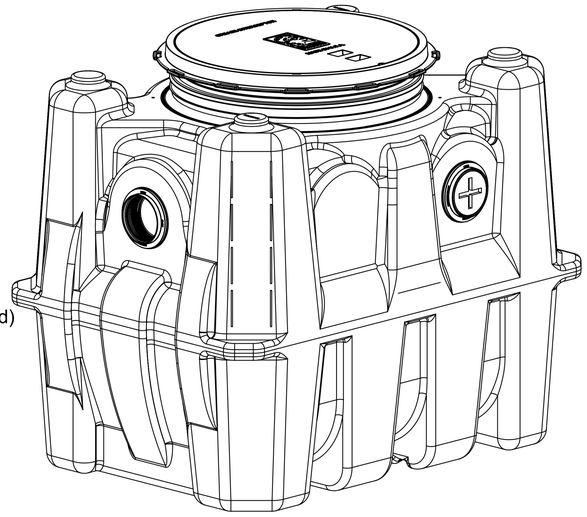
SPECIFICATIONS

Notes:

1. 4" FPT inlet/outlet with 4" plain end adapters, single inlet and triple outlet.
2. Unit weight - w/ cast iron covers: 190 lbs. (For wet weight add 1,043 lbs.)
3. Maximum operating temperature: 150º F continuous
4. Capacities - Liquid: 125 gal.
   Grease: 861 lbs. (118 gal.) @75 GPM
   Solids: 31 gal.
5. For gravity drainage applications only.
6. Do not use for pressure applications.
7. Cover placement allows full access to tank for proper maintenance.
8. Vent not required unless per local code.
9. Engineered inlet and outlet diffusers with inspection ports are removable to inspect / clean piping.
10. Integral air relief / Anti-siphon / Sampling access.
11. Adjustable cover adapter provides up to 4" of additional height.
12. Designed for below-grade, above-grade, indoor and outdoor installations.
13. Safety Star®, access restrictor built into cover adapter, prevents accidental entry to tank (450 lb rating).

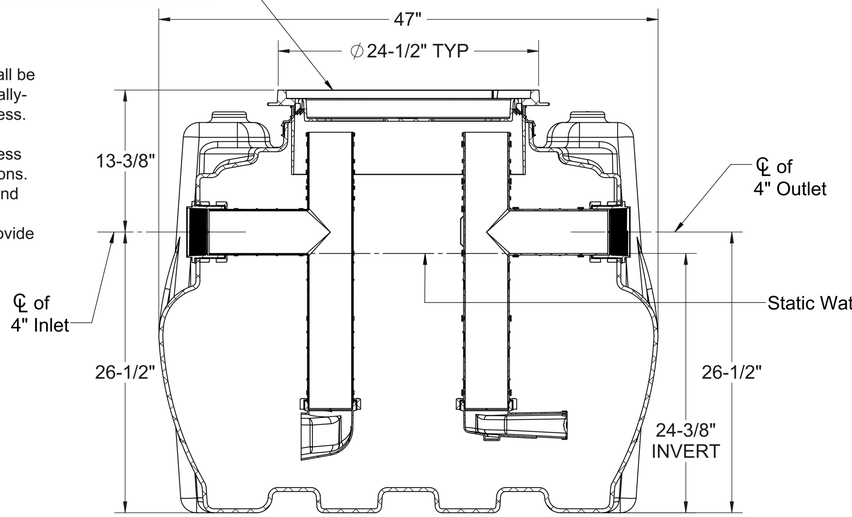


TOP VIEW
(COVER REMOVED FOR CLARITY)

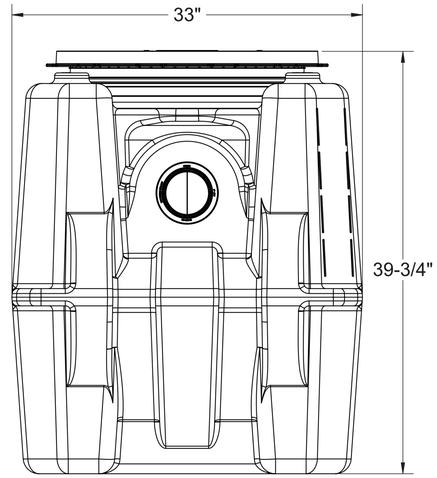


ISOMETRIC VIEW

Adjustable Adapter with
H-20 rated cast iron cover



SECTION A-A



END VIEW

ENGINEER SPECIFICATION GUIDE

Schier Great Basin™ grease interceptor model # GB-75 shall be lifetime guaranteed and made in USA of seamless, rotationally-molded polyethylene with minimum 3/8" uniform wall thickness. Interceptor shall be furnished for above or below-grade installation with adjustable cover adapter, Safety Star® access restrictor built into each cover adapter, and three outlet options. Interceptor shall be certified to ASME A112.14.3 (Type D) and CSA B481.1. Interceptor flow rate shall be 75 GPM. Interceptor grease capacity shall be 861 lbs. Cover shall provide water/gas-tight seal and have minimum 16,000 lbs. load capacity.

CERTIFIED PERFORMANCE

Great Basin™ hydromechanical grease interceptors are third party performance-tested and listed by IAPMO to ASME #A112.14.3 and CSA B481.1 grease interceptor standards and greatly exceed requirements for grease separation and storage. They are compliant to the Uniform Plumbing Code and the International Plumbing Code.

Type D certification does not require a flow control

SPECIFICATION SHEET

MODEL NUMBER: GB-75

PART NUMBER: 4045-007-02

DESCRIPTION: GB-75 GREASE INTERCEPTOR 75 GPM, 4" INLET/OUTLET, H-20 RATED CAST IRON COVER

DWG BY:	DATE:	REV:	ECO:
C. BUSENITZ	4/14/2022	-	-

SCHIER

6455 Woodland Dr
Shawnee, KS 66218
Tel: 913-951-3300
Fax: 913-951-3399
schierproducts.com

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PLUMBING DETAILS

P006

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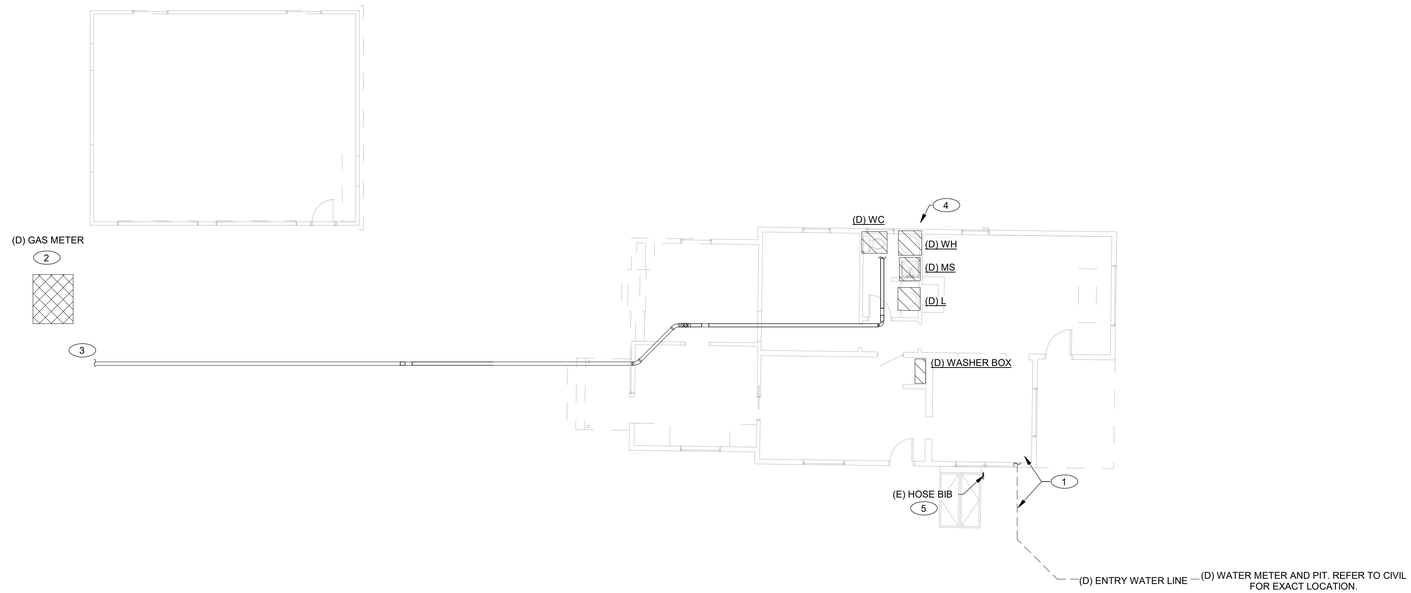
DEMO PLAN KEY NOTES

KEY NOTES:

1. (D) 3/4" WATER METER AND UPSIZE TO NEW 1" TAP AND METER. WATER ENTRY AND ASSOCIATED EQUIPMENT TO BE UPSIZED TO 1 1/4".
2. PER CONVERSATION WITH BLACKHILLS ENERGY, EXISTING GAS METER CAN SERVE UP TO 200 MBH. EXISTING METER TO BE DEMOLISHED AND UPSIZED TO ACCOMODATE NEW DESIGN.
3. (E) SANITARY OUT TO MAIN. REFER TO CIVIL. TO BE DEMOED AND UPSIZED TO 6"
4. (E) IRRIGATION CONTROL BOX & BACKFLOW PREVENTOR. EQUIPMENT TO REMAIN.
5. (E) HOSE BIB TO REMAIN.

2 DEMO PLAN KEY NOTES

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



1 DEMO PLUMBING PLAN

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

NORTH

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PLUMBING DEMO PLAN

PD100

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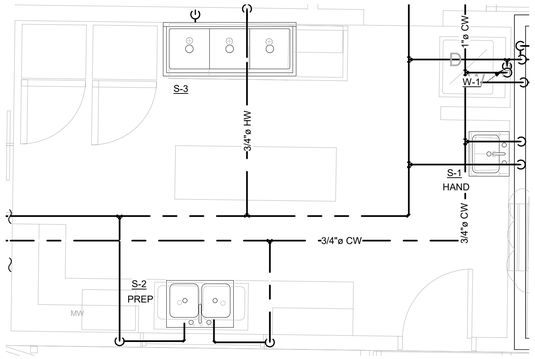
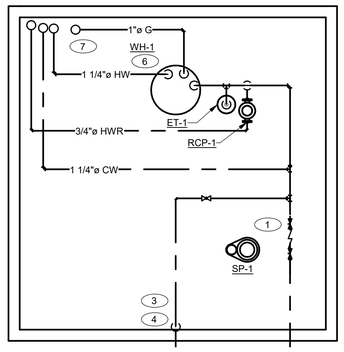


2 ENLARGED PANTRY AREA WATER PLUMBING PLAN

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



3 ENLARGED CRAWL SPACE WATER PLUMBING PLAN

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

SHEET NOTES

1. CONTRACTOR TO PROVIDE MIXING VALVES AT EACH LAVATORY,SINKS AND HAND SINK SET AT 110° F. ALL FIXTURES CONNECTED TO EWH-2 SHALL HAVE MIXING VALVES SET AT 140°F. COORDINATE WITH AUTHORITY HAVING JURISDICTION.

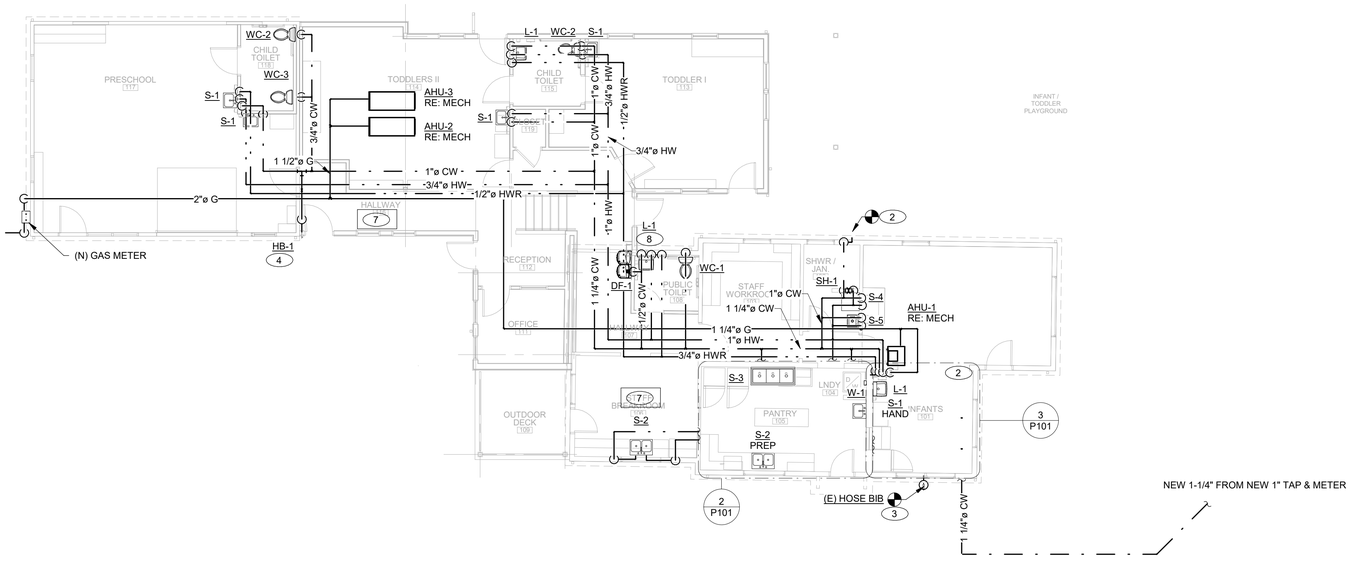
2. REFER TO COUNTER HEIGHTS IN ARCHITECTURAL MILLWORK DETAILS FOR COUNTER-MOUNTED SINK ROUGH-INS

KEY NOTES

1. LOCATE NEW 1 1/4" WATER ENTRY AND ASSOCIATED EQUIPMENT IN CRAWL SPACE. REPLACE EXISTING EQUIPMENT IN CURRENT LOCATION. NEW BACKFLOW PREVENTER TO DRAIN INTO DIRT.
2. RECONNECT NEW WATER LINE TO (E) IRRIGATION CONTROL BOX & BACKFLOW PREVENTER. VERIFY PIPE SIZE. PROVIDE BACKFLOW PREVENTOR AND SHUTOFF VALVE.
3. RECONNECT NEW WATER LINE TO (E) LINE OUT TO (E) HB.
4. PROVIDE TEE AND SHUTOFF VALVE. OUTDOOR PIPING SHALL BE DRAINED PRIOR TO WINTER SEASON.
5. NEW GAS PIPING ROUTED IN CEILING TO EQUIPMENT. REFER TO P300 FOR SIZING AND LOADS.
6. NEW TANK GAS WATER HEATER. ROUTE T&P RELIEF VALVES TO DRAIN ONTO DIRT GROUND.
7. ATTIC ACCESS - NO PLUMBING LINES TO BE LOCATED IN THESE LOCATIONS.
8. LOCATE PLUMBING ON WARM SIDE OF INSULATION. TYP FOR ALL PIPING ALONG EXTERIOR WALLS.

NOTES:

ALL PLUMBING LINES SHOWN OFFSET FOR CLARITY OF DRAWING. ALL LINES ARE NEW UNLESS OTHERWISE NOTED



1 WATER & GAS PLUMBING PLAN

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

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RETROFIT & ADDITION FOR:
THE LITTLE SCHOOL ON PERRY STREET
DAYCARE FACILITY
203 PERRY STREET
CASTLE ROCK , CO 80104

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WATER & GAS PLUMBING PLAN
P101

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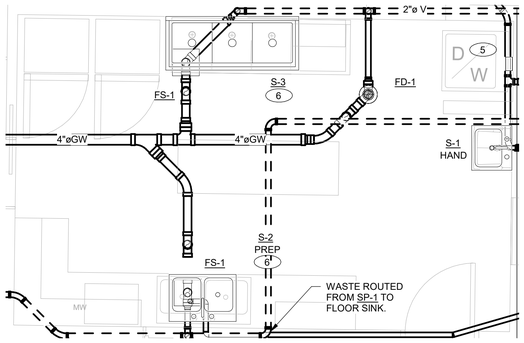
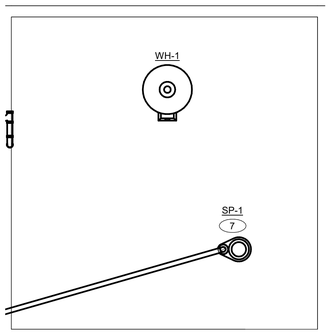


2 ENLARGED PANTRY AREA SANITARY PLUMBING PLAN

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



3 ENLARGED CRAWL SPACE SANITARY PLUMBING PLAN

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

NOTES:

ALL PLUMBING LINES SHOWN OFFSET FOR CLARITY OF DRAWING. ALL LINES ARE NEW UNLESS OTHERWISE NOTED

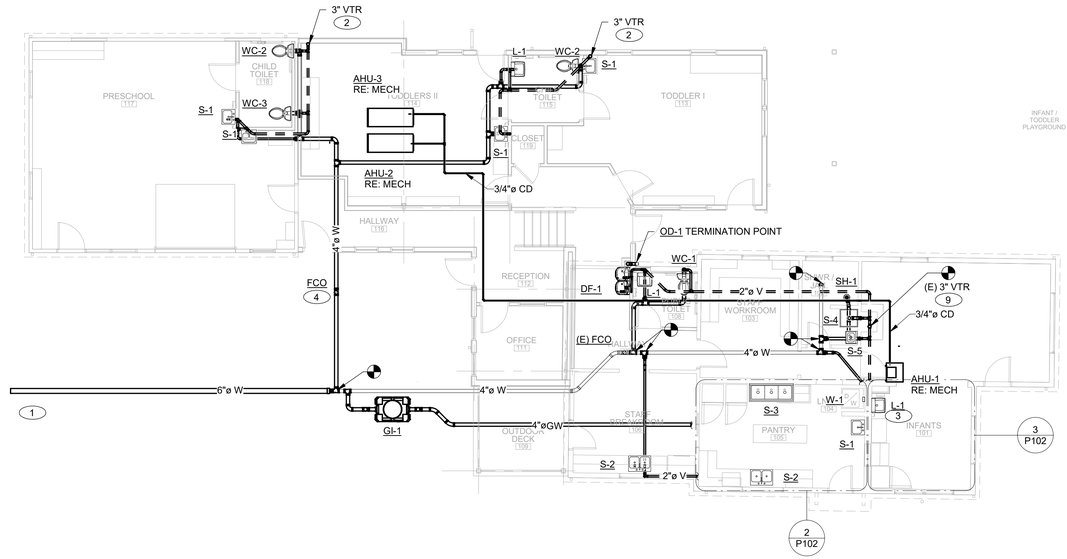
SANITARY SEWER KEY NOTES

KEY NOTES:

1. NEW 6" SANITARY SEWER DRAIN LINE BELOW GRADE. SEE CIVIL UTILITIES PLAN FOR CONTINUATION.
2. SANITARY VENT UP THRU GABLED ROOF DECK. INSTALL WITH ROOF FLASHING PER LOCAL CODE.
3. P-TRAP ON LAVATORY /SINK WITH GREY WATER TRAP PRIMER CONNECTION TO CONNECT TO FLOOR DRAIN PER MANUFACTURER'S SPECIFICATIONS AND LOCAL CODE REGULATIONS. REFER TO DETAIL.
4. SANITARY CLEAN-OUT FLUSH WITH TOP OF GRADE. IN CASE OF SANITARY PIPE BELOW CONCRETE, PROVIDE CLEAN-OUT WITH DECK PLATE.
5. CLOTHES WASHING MACHINE CONNECTION BOX RECESSED IN WALL W/2 INCH DIAMETER P-TRAP AS REQUIRED BY BUILDING CODE.
6. PROVIDE INDIRECT WASTE CONNECTION AT SINK.
7. SP-1 TO SERVE WATER ENTRY EQUIPMENT AND WATER HEATER. T&P RELIEF VALVE TO DRAIN INTO DIRT. SP-1 TO EJECT SANITARY AT PANTRY FLOOR SINK SERVING S-2. COORDINATE EXACT PUMP LOCATION IN FIELD.
8. ROUTE CONDENSATE FROM AHU'S TO S-4.
9. ROUTE NEW VENTING IN HISTORICAL BUILDING TO (E) ROOF PENETRATION. CONTRACTOR TO VERIFY EXACT LOCATION OF (E) VTR.

NOTE:
SANITARY CLEAN-OUTS BELOW LAVATORIES & SINKS MAY BE P-TRAPS WITH CLEAN-OUTS PER LOCAL CODE REGULATIONS
REFER TO COUNTER HEIGHTS IN ARCHITECTURAL MILLWORK DETAILS FOR COUNTER-MOUNTED SINK ROUGH-INS

2" MIN. SIZE UNDER SLAB DRAIN.
2" OR LESS DRAIN @
1
4" DROP
3" @ 18"
4" @ 18"
ALL FLOOR DRAINS W/TRAP-PRIMERS
ALL VTR'S 10'-0" MIN. FROM ANY FRESH AIR INTAKE



1 SANITARY PLUMBING PLAN

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

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SANITARY PLUMBING PLAN
P102

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TABLE 1106.6 HORIZONTAL GUTTER SIZING

GUTTER DIMENSIONS[a] (inches)	SLOPE (inch per foot)	CAPACITY (gpm)
$1^1/_2 \times 2^1/_2$	$^1/_4$	26
$1^1/_2 \times 2^1/_2$	$^1/_2$	40
4	$^1/_8$	39
$2^1/_4 \times 3$	$^1/_4$	55
$2^1/_4 \times 3$	$^1/_2$	87
5	$^1/_8$	74
$4 \times 2^1/_2$	$^1/_4$	106
$3 \times 3^1/_2$	$^1/_2$	156
6	$^1/_8$	110
3×5	$^1/_4$	157
3×5	$^1/_2$	225
8	$^1/_{16}$	172
8	$^1/_8$	247
$4^1/_2 \times 6$	$^1/_4$	348
$4^1/_2 \times 6$	$^1/_2$	494
10	$^1/_{16}$	331
10	$^1/_8$	472
5×8	$^1/_4$	651
4×10	$^1/_2$	1055

TABLE 1106.2 STORM DRAIN PIPE SIZING

PIPE SIZE (inches)	CAPACITY (gpm)				
	VERTICAL DRAIN	SLOPE OF HORIZONTAL DRAIN			
		$^1/_{16}$ inch per foot	$^1/_8$ inch per foot	$^1/_4$ inch per foot	$^1/_2$ inch per foot
2	34	15	22	31	44
3	87	39	55	79	111
4	180	81	115	163	231
5	311	117	165	234	331
6	538	243	344	487	689
8	1,117	505	714	1,010	1,429
10	2,050	927	1,311	1,855	2,623
12	3,272	1,480	2,093	2,960	4,187
15	5,543	2,508	3,546	5,016	7,093

ROOF PLAN KEY NOTES

KEY NOTES:

1. (E) DOWNSPOUTS TO BE REUSED. CONNECT TO NEW UNDERGROUND STORM DRAINAGE. TYP. FOR ALL (E) DOWNSPOUTS.
2. 3" OVERFLOW DRAIN. TERMINATE WITH LAMBS TONGUE FITTING.
3. TERMINATE STORM PIPING WITH DAYLIGHT TO ADJACENT ALLEY. EXTEND 3.5' FROM FOUNDATION MINUMUM.
4. (E) VTR. VERIFY EXACT LOCATION.

STORM CALCULATIONS

GUTTERS & DOWNSPOUTS:

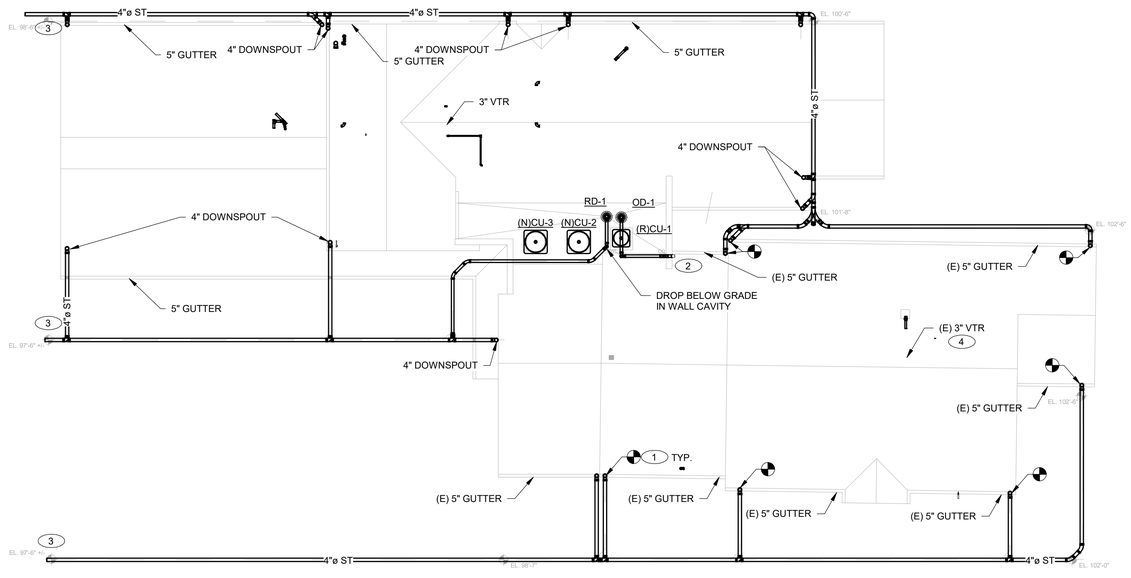
- ROOF 1 IS 1600 SQFT
- ROOF 2 IS 1860 SQFT
- FOURIER CONNECTING ROOF 3 IS 140 SQFT
- RATE OF RAINFALL FOR AREA IS 2.4 IN/HR

ROOF 1
- (1600 SQFT) X (2.4 IN/HR) X 0.0104 = 41.6 GPM
- 41.6 GPM / 8 DOWNSPOUTS = 5.2 GPM/ LEADER
- 41.6 GPM / 7 GUTTER SYSTEMS = 5.9 GPM PER GUTTER

ROOF 2
- (1860 SQFT) X (2.4 IN/HR) X 0.0104 = 46.4 GPM
- 46.4 GPM / 8 DOWNSPOUTS = 5.8 GPM/ LEADER
- 46.4 GPM / 4 GUTTER SYSTEMS = 11.6 GPM PER GUTTER

ROOF 3
- (140 SQFT) X (2.4 IN/HR) X 0.0104 = 3.5 GPM
- 3.5 GPM / 1 ROOF DRAIN = 3.5 GPM/ ROOF DRAIN

- (E) 5" GUTTERS, 4" DOWNSPOUTS, AND 3" ROOF DRAIN ARE SUFFICIENT FOR ROOF DRAINAGE. PER TABLE 1106.2 AND 1106.6 IN IPC 2018



1 ROOF PLUMBING PLAN

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

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ROOF PLUMBING PLAN

P200

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IFGC PIPE SIZING CALCULATOR FOR PRESSURES LESS THAN 1.5 PSI	
Meter Discharge Pressure ("W.C.)=	**7**
Allowable Pressure Drop ("W.C.)=	**0.5**
Total Equivalent Length of Pipe (feet)=	**180**
Delivery Design Pressure("W.C.)=	**6.5**
Schd. 40 Steel Pipe size (inches)	**(CFH)**
0.5	36
0.75	75
1	142
1.25	291
1.5	437
2	841
2.5	1340
3	2369
4	4832
5	8743
6	14156

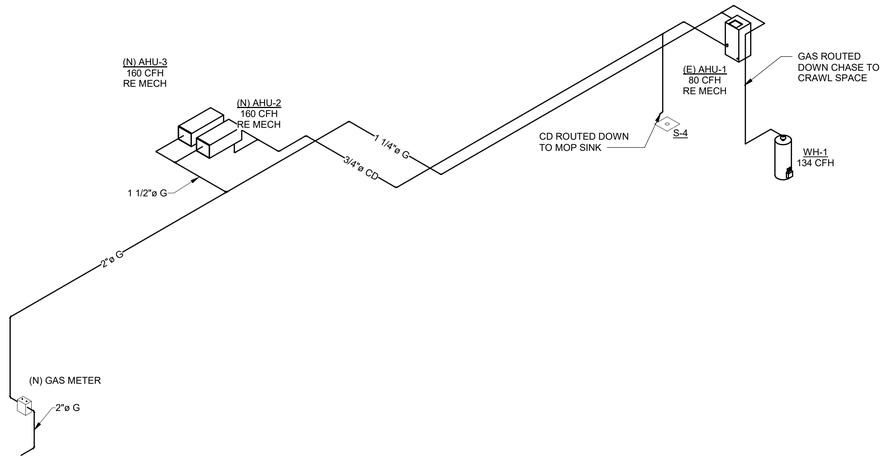
*Pipe capacity is calculated using formula for low gas (1.5 psi and less) located in IFGC Appendix A
Q = 2313*D^2.623*((ΔH)/(Cr*L))^.541

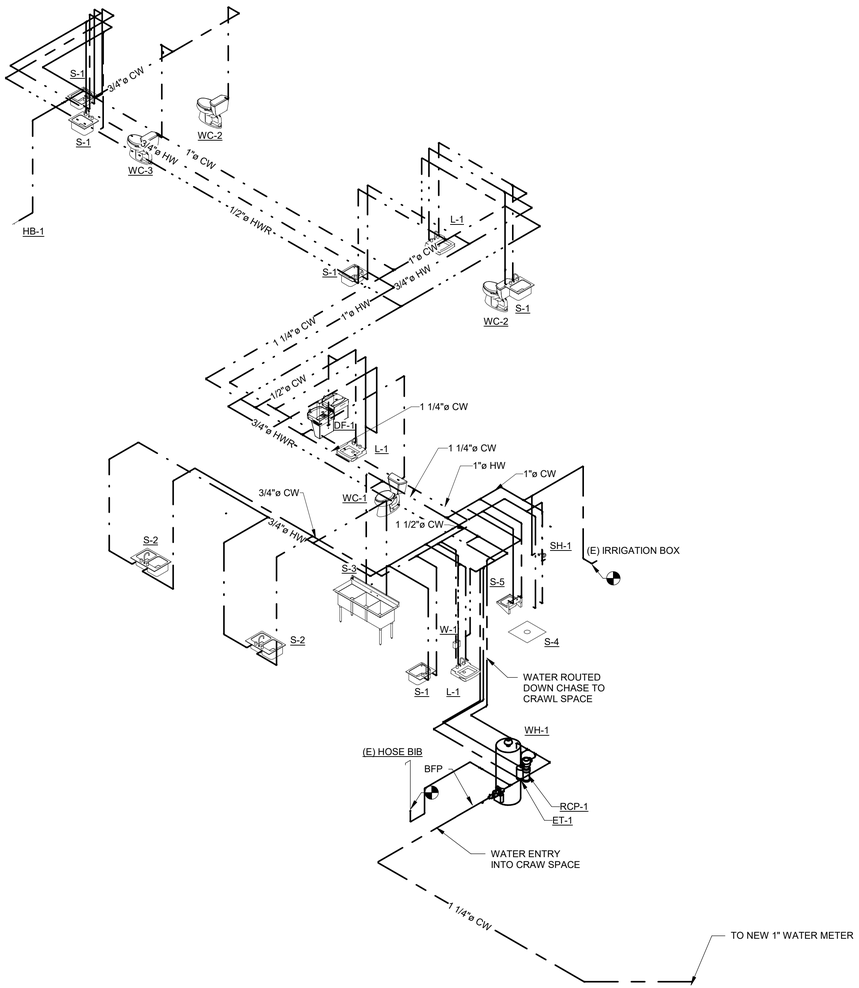
Q = Capacity (cfh)
D = Inside Pipe Diameter
ΔH = Allowable Pressure Drop ("W.C.)
Cr = Factor For Viscosity, Density, and Temp. =
L = Length of Pipe (feet)

CONNECTED GAS LOAD CHART

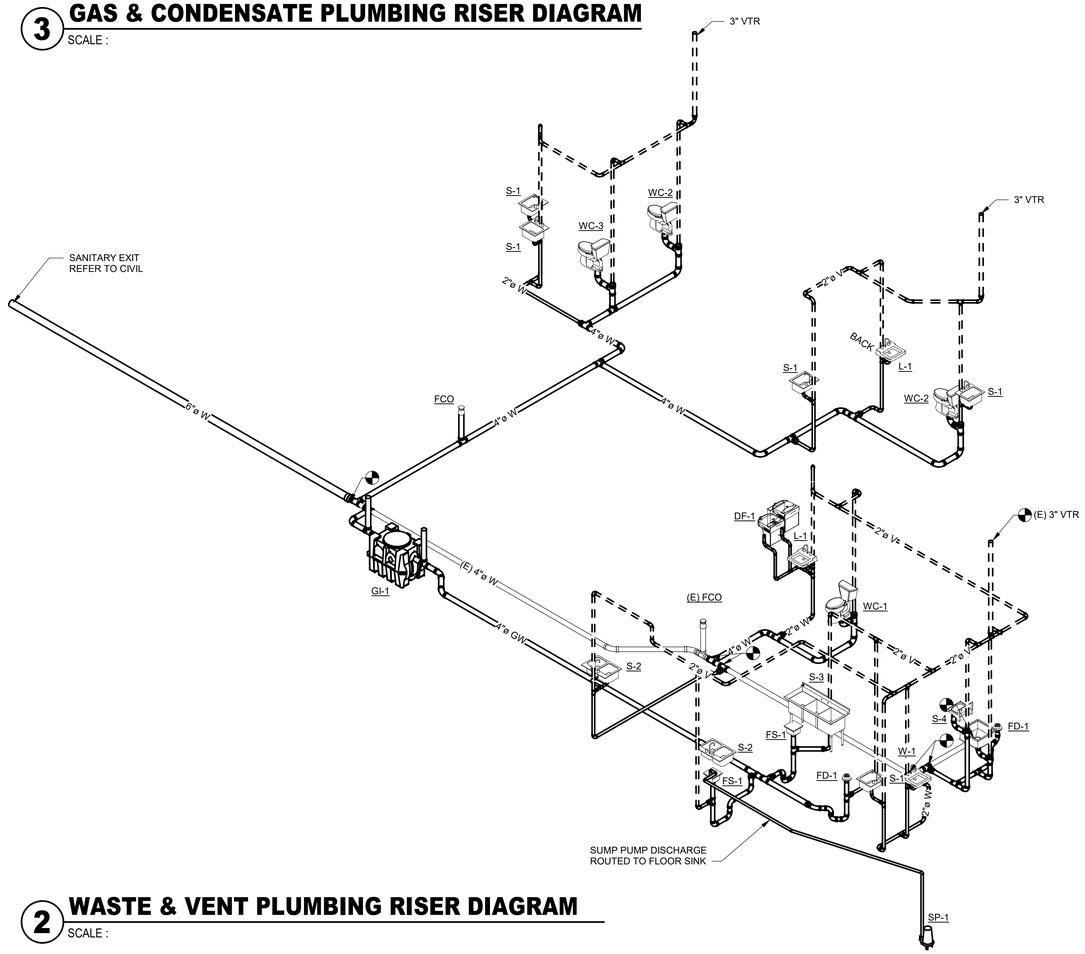
MARK	MBTU	CFH	#	TOTAL CFH
(E) AHU-1	60	79.8892203	1	79.8892203
(N)AHU-2	120	159.778441	1	159.778441
(N)AHU-3	120	159.778441	1	159.778441
WH-1	100	133.1487	1	133.1487
TOTAL	400	532.594802		532.594802

NOTES:
1. Typ. all gas connections with union, gas cock & dirtleg. All cooking appliances with quick connect.





1 COLD & HOT PLUMBING RISER DIAGRAM
SCALE :



2 WASTE & VENT PLUMBING RISER DIAGRAM
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PLUMBING RISER DIAGRAMS
P300

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