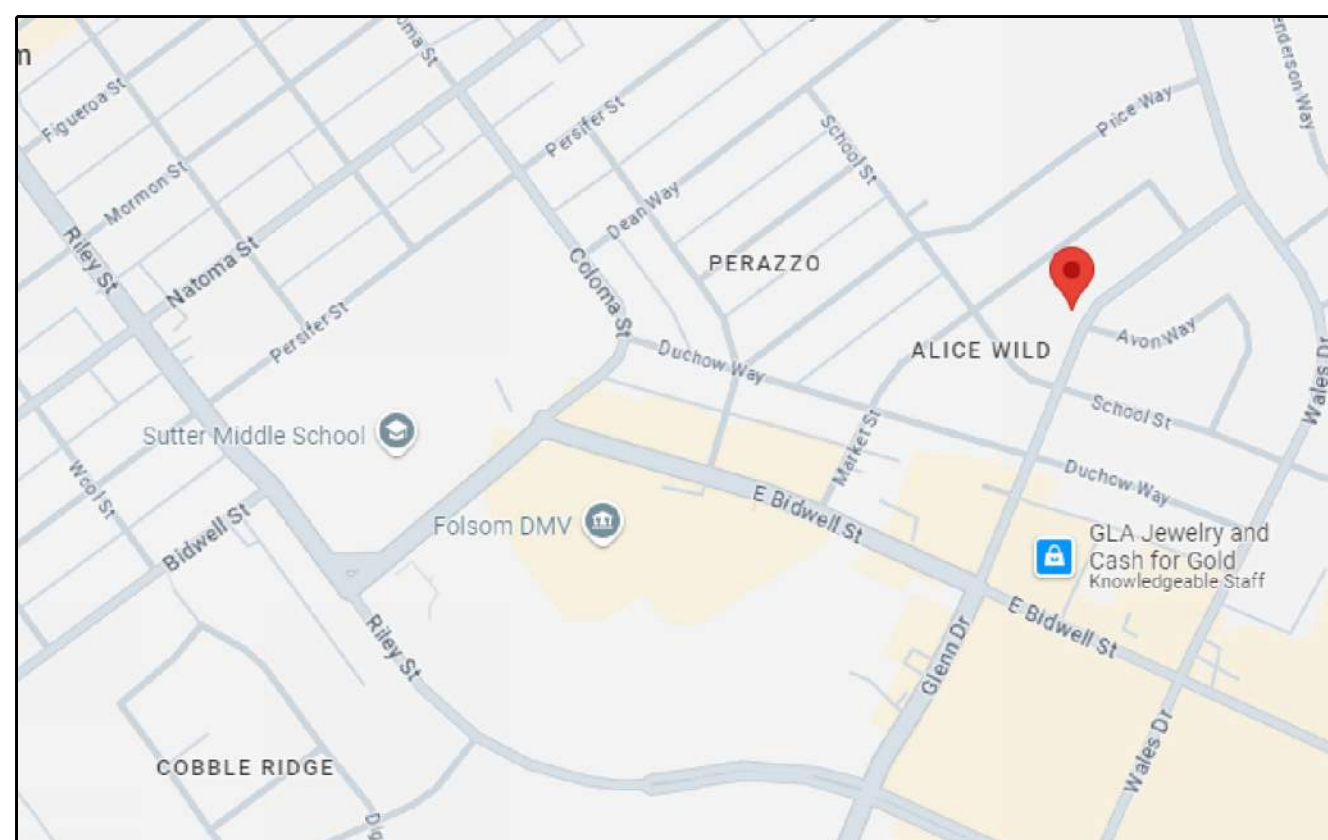


-- GLENN DR. --



VICINITY MAP NTS

PROJECT CONTACTS

OWNERS: CARROLLYNN BROWN
(916) 798-5896

DESIGNER: VITALIY LESCHIK
(916) 390-2724
noveldd@gmail.com

DESIGNED BY:
NOVEL DESIGN
& DRAFTING
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PROJECT DESCRIPTION & SCOPE OF WORK

SCOPE OF WORK:

ADDITION TO EXISTING SINGLE FAMILY DWELLING OF 399 SF OF LIVING SPACE AND 264 SF SUNROOM (UNCONDITIONED SPACE)

SQUARE FOOTAGE BREAKDOWN			
	EXISTING (SF)	NEW / ADDITION (SF)	TOTAL (SF)
LIVING SPACE	1105	399	1504
SUNROOM	0	264	264
EXISTING COVERED PATIO	431	-431 (DEMOLISHED)	0
GARAGE	500	0	500

GENERAL INFO.

APN	071-0103-018-0000
OCCUPANCY GROUP	R-3
CONSTRUCTION TYPE	V8
NUMBER OF STORIES	1
BUILDING HEIGHT	15'-9"
LOT AREA	0.206 ACRES / (8,990 SF)
LOT COVERAGE	25.00%
FIRE SPRINKLERS	NO
SOLAR PANELS	NO

GENERAL NOTES

- CONSTRUCTION SHALL CONFORM TO THE 2022 CALIFORNIA BUILDING CODE (CBC), 2022 CALIFORNIA MECHANICAL CODE (CMC), 2022 CALIFORNIA PLUMBING CODE (CPC), 2022 CALIFORNIA ELECTRICAL CODE (CEC), 2022 CALIFORNIA ENERGY STANDARDS (CES), 2022 CALIFORNIA RESIDENTIAL CODE (CRC), 2022 CALIFORNIA GREEN STANDARDS CODE (CGSC), AND 2022 CALIFORNIA FIRE CODE WITH CITY AMENDMENTS.
- NOTES AND DETAILS ON TYPICAL SHEETS SHALL APPLY UNLESS OTHERWISE SHOWN OR NOTED ON PLANS.
- DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITION.
- SAFETY NOTE:
(A) IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA, LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
(B) THE DESIGNER, ENGINEER, AND THE OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
(C) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS AND SHORING REQUIRED.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, MINIMUM CLEARANCES, ELEVATIONS, PROPERTY LINES, SETBACKS, ETC. ON THE JOB. CONTRACTOR TO NOTIFY DESIGNER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL VERIFY ROOF AND/OR FLOOR TRUSSES SPANS AS WELL AS ROOF PITCH AND HEEL HEIGHT PRIOR TO ORDERING TRUSSES IF APPLICABLE.
- CONTRACTOR SHALL NOTIFY THE DESIGNER AND ENGINEER OF RECORD WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DRAWINGS OR DOCUMENTS. CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE BUILDING THAT IS IN CONFLICT BEFORE CONFLICT IS RESOLVED WITH THE AFFECTED PARTIES.

SHEET INDEX

SHEET	DESCRIPTION
C-1	COVER PAGE & SITE PLAN
A-1	EXISTING FLOOR & ROOF PLAN
A-2	NEW FLOOR PLAN
A-3	FOUNDATION PLAN
A-4	NEW ROOF & CEILING PLAN
A-5	ELEVATIONS
E-1	ELECTRICAL PLAN
T-24	TITLE 24
T-24	TITLE 24
CG-1	CAL GREEN BUILDING STANDARDS CODE
CG-1	CAL GREEN BUILDING STANDARDS CODE

NO.	REVISIONS	DATE

BROWN RES. ADDITION
170 GLENN DR. FOLSOM, CA 95630

COVER PAGE

09/09/2024

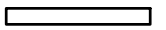
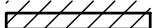
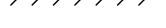
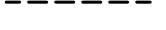
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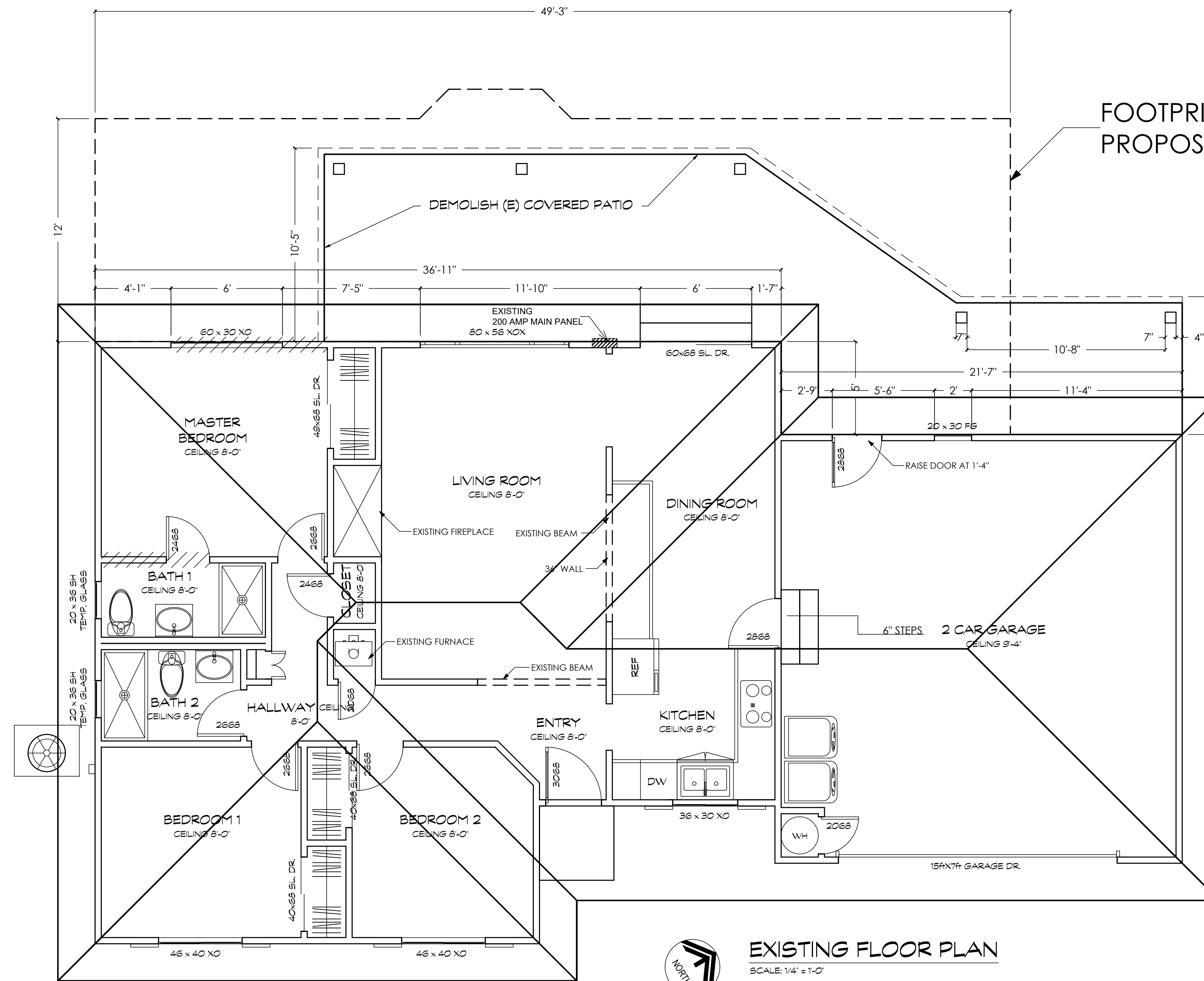
C-1

GENERAL NOTES:

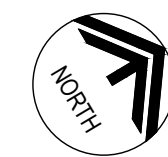
- ON SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE SUB-CONTRACTORS. NOTED DIMENSIONS TAKE PRECEDENT OVER SCALE. EACH CONTRACTOR OR SUB-CONTRACTOR SHALL REPORT TO ENGINEER/DESIGNER ALL CONDITIONS WHICH PREVENT THE PROPER EXECUTION OF THEIR WORK.
- ENGINEER/DESIGNER TO BE NOTIFIED IMMEDIATELY BY CONTRACTOR OR SUB-CONTRACTOR SHOULD ANY DISCREPANCY OR OTHER QUESTION ARISE PERTAINING TO THE WORKING DRAWINGS AND /OR SPECIFICATIONS. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WHICH THE CONTRACTOR FAILED TO NOTIFY THE ENGINEER/DESIGNER OF BEFORE CONSTRUCTION AND/OR FABRICATION OF THE WORK.
- ALL CONSTRUCTION SHALL COMPLY WITH THE LATEST CALIFORNIA BUILDING CODES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE BUILDING DURING CONSTRUCTION AND SHALL PROVIDE ADEQUATE SHORING AND BRACING DURING CONSTRUCTION. CONTRACTOR SHALL COMPLY WITH APPLICABLE SAFETY REGULATIONS.
- DETAILS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO DETAILS FOR SIMILAR CONSTRUCTION SHOWN ON THESE DRAWINGS.

WALL LEGEND

-  EXISTING WALL 2X4 @ 16" O.C.
-  EXISTING WALLS TO BE DEMOLISHED
-  FOOTPRINT OF PROPOSED ADDITION
-  EXISTING ROOF OUTLINE



FOOTPRINT OF PROPOSED ADDITION



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

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NO.	REVISIONS	DATE

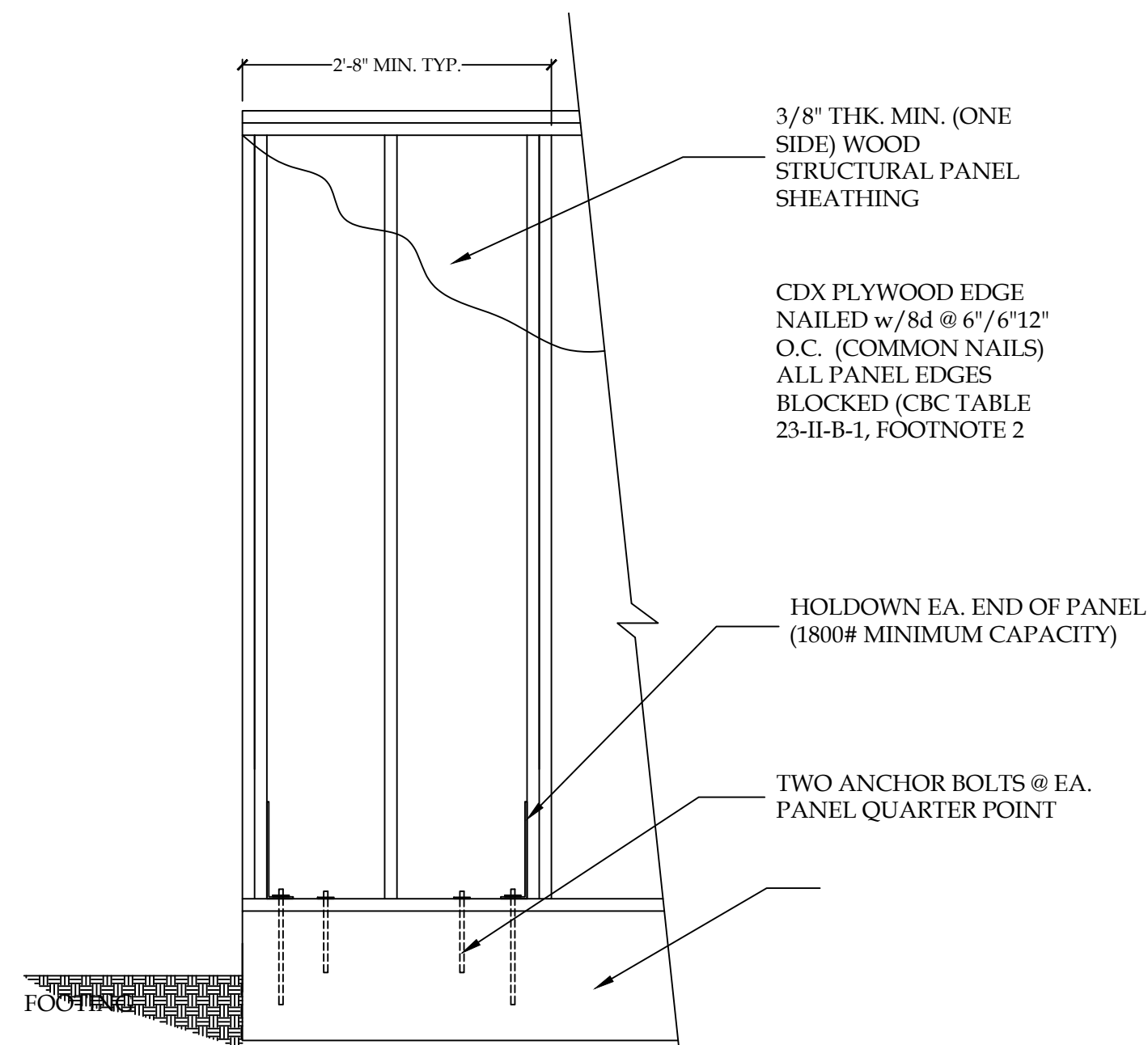
BROWN RES. ADDITION
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EXISTING FLOOR & ROOF PLAN

09/09/2024

SHEET NO.

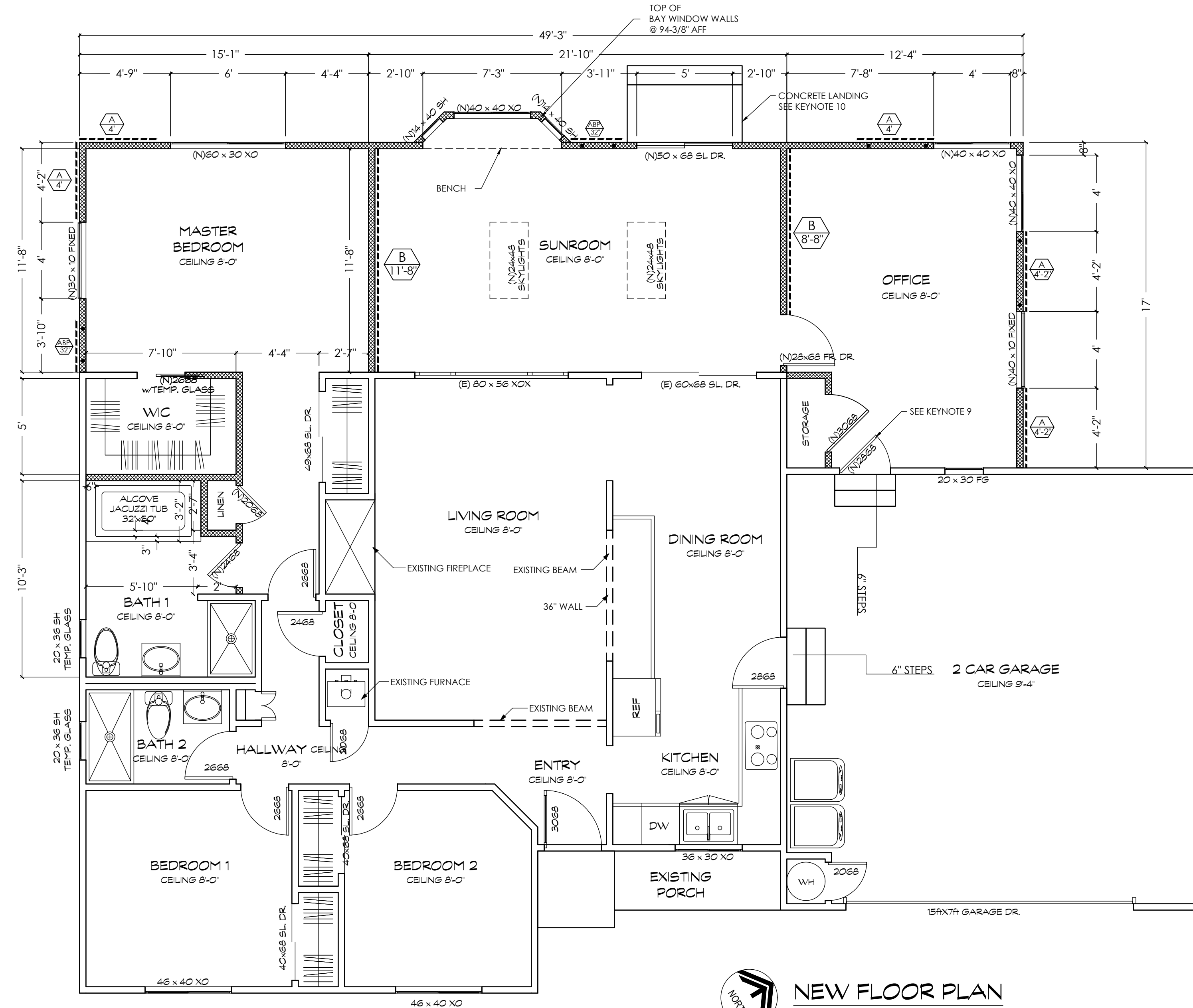
A-1



BRACED WALL PANELS

- A**
4' 3/8" OSB 8d COMMON NAILS AT 6" O.C. EDGES AND 12" O.C. FIELD
2-1/2X10 AB W/3X3X.229 SQUARE WASHERS
- B**
8' 1/2" GYPSUM BD. W/5d COOLER NAILS AT 7" O.C.
1/2X10 AB @ 32" O.C.
- C**
4' 4" OF GYPSUM BOARD APPLIED TO BOTH SIDES
1/2" GYPSUM BD. W/5d COOLER NAILS AT 7" O.C.
1/2X10 AB @ 32" O.C.
- ABP**
32' ALTERNATE BRACED WALL PANELS. SEE DETAIL, THIS SHEET
- DT12 HOLDOWNS OR APPROVED EQUIVALENT

ALTERNATE BRACED WALL PANEL:
(ONE STORY ELEVATION)



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

GENERAL KEYNOTES:

1. CONTRACTOR TO VERIFY ALL DIMENSIONS & EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION
2. DOORS & WINDOW SIZES ARE GIVEN IN FEET AND INCHES IN WIDTH & HEIGHT RESPECTIVELY.
 - 2.1. DOOR EXAMPLE: 3068 = 3'-0" WIDE BY 6'-8" TALL.
 - 2.2. WINDOW EXAMPLE: 2840 = 2'-8" WIDE BY 4'-0" TALL.
3. DOORS ARE NOTED WITHOUT FRAME. CONTRACTOR TO VERIFY WITH MANUFACTURER FOR DOOR FRAME SIZE PRIOR TO FRAMING DOOR OPENINGS.
4. CONTRACTOR SHALL VERIFY ALL INTERIOR FINISHES, FLOOR COVERINGS, AND TRIM SIZES, MATERIAL, & CONFIGURATION WITH OWNER PRIOR TO CONSTRUCTION.
5. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY CLEARANCES OF THE ITEMS MENTIONED ABOVE PRIOR TO CONSTRUCTION.
6. DO NOT SCALE OFF PLANS.
7. ALL DIMENSIONS ARE TO FACE OF FRAMING, UNO
8. WALL INSULATION TO BE A MINIMUM OF R-13 BATTING AND ATTIC INSULATION TO BE R-38 BLOWN IN OR BATT. SEE TITLE 24 REPORT FOR REQUIREMENTS.
9. DOOR OPENINGS BETWEEN A PRIVATE GARAGE AND THE DWELLING UNIT SHALL BE EQUIPPED WITH EITHER SOLID WOOD DOORS OR SOLID OR HONEYCOMB CORE STEEL DOORS NOT LESS THAN 1 3/8 in. THICK OR 20-MINUTE FIRE-RATED DOORS. DOORS SHALL BE SELF-CLOSING AND SELF-LATCHING.
10. FLOORS AND LANDINGS AT EXTERIOR DOORS.
 - 10.1. THERE SHALL BE A LANDING OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SERVED. EVERY LANDING SHALL HAVE A DIMENSION OF NOT LESS THAN 36 INCHES MEASURED IN THE DIRECTION OF TRAVEL. THE SLOPE AT EXTERIOR LANDINGS SHALL NOT EXCEED 1/4" UNIT VERTICAL IN 12 UNITS VERTICAL.
 - 10.2. FLOOR ELEVATIONS AT THE REQUIRED EGRESS DOORS, LANDINGS OR FINISHED FLOORS AT THE REQUIRED DOOR SHALL NOT BE MORE THAN 1 1/2 INCHES LOWER THAN THE TOP OF THE THRESHOLD. EXCEPTION: THE LANDING OR FLOOR ON THE EXTERIOR SIDE SHALL NOT BE MORE THAN 7 3/4 INCHES BELOW THE TOP OF THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING OR FLOOR.

WINDOWS - GENERAL NOTES

1. EVERY SLEEPING ROOM MUST HAVE AT LEAST ONE OPENABLE WINDOW OR DOOR APPROVED FOR EMERGENCY RESCUE WITH A MINIMUM NEW CLEAR OPENING OF 5.7 SQ.FT., EXCEPT THAT WINDOWS AT THE GRADE FLOOR SHALL HAVE A MINIMUM NET OPENING OF 5 SQ. FT. THE MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24". THE MINIMUM NET CLEAR OPENING WIDTH DIMENSION SHALL BE 20". THE BOTTOM OF THE CLEAR OPENING SHALL BE NO MORE THAN 44" FROM THE FLOOR.
2. ALL WINDOWS WITHIN 5 FT OF SHOWER/TUB ENCLOSURES AND WITHIN 2 FT OF DOORS (LESS THAN 60 INCHES ABOVE THE FLOOR) TO BE TEMPERED GLAZING.
3. WINDOW ABBREVIATIONS:
SH = SINGLE HUNG
XO = SLIDER
FG = FIXED GLASS
4. TEMPERED GLASS SHALL BE PROVIDED AT HAZARDOUS LOCATIONS AND LOCATIONS SUBJECT TO HUMAN IMPACT LOADS PER CRC R308.3. THESE INCLUDE
 - 4.1. GLAZING IN ALL FIXED AND OPERABLE PANELS SWINGING, SLIDING AND BI-FOLD DOORS
 - 4.2. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR, WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE FLOOR OR WALKING SURFACE AND MEETS EITHER OF THE FOLLOWING CONDITIONS:
 - 4.2.1. WHERE THE GLAZING IS WITHIN 24" OF EITHER SIDE OF THE DOOR IN THE PLANE OF DOOR IN THE CLOSED POSITION
 - 4.2.2. WHERE THE GLAZING IS ON A WALL PERPENDICULAR TO THE PLANE OF THE DOOR IN A CLOSED POSITION AND WITHIN 24" OF THE HINGE SIDE OF AN INSWING
 - 4.3. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
 - 4.3.1. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQUARE FEET
 - 4.3.2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18" ABOVE FLOOR
 - 4.3.3. THE TOP EDGE OF THE GLAZING IS MORE THAN 36" ABOVE FLOOR
 - 4.3.4. ONE OR MORE WALKING SURFACES ARE WITHIN 36" OF THE GLAZING AS MEASURED HORIZONTALLY

BATHROOM NOTES:

1. SURFACES IN TUB & SHOWER COMPARTMENTS SHALL HAVE TILE OR EQUAL NONABSORBENT SURFACES FOR NOT LESS THAN 72" ABOVE DRAIN.
2. THE BASE FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL AND CEILING PANELS IN SHOWER AREAS SHALL BE GLASS MAT GYPSUM PANEL, FIBER-REINFORCED GYPSUM PANELS, NON-ASBESTOS FIBER-CEMENT BACKER BOARD, NON-ASBESTOS FIBER-CEMENT REINFORCED CEMENTITIOUS BACKER BOARD. INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
3. SHATTER-RESISTANT MATERIAL TO BE USED FOR SHOWER ENCLOSURE.

WALL LEGEND

- EXISTING WALL 2X4 @ 16" O.C.
- ▨ NEW WALL 2X4 @ 16" O.C.

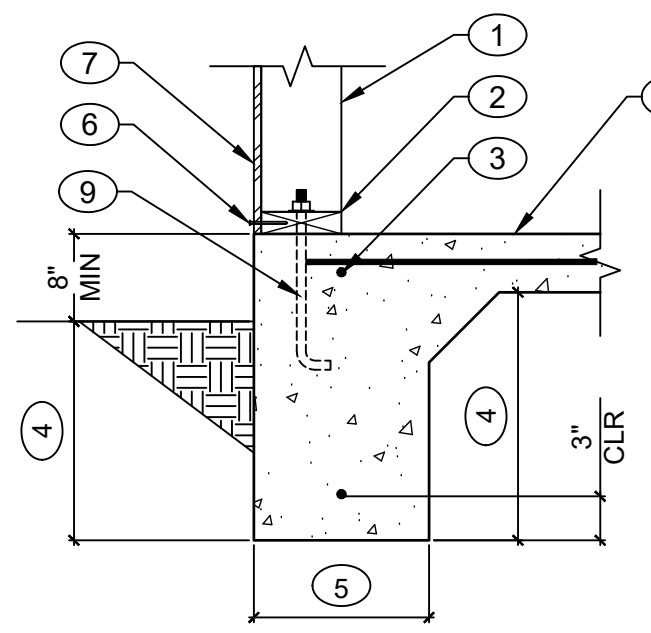
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NEW FLOOR PLAN
09/09/2024

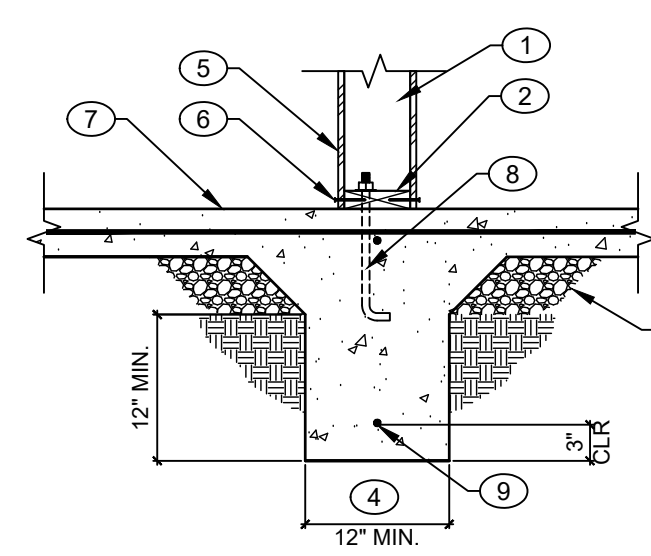
SHEET NO.
A-2



- KEYNOTES**
- 2x STUD WALL, SEE PLAN.
 - CONT. BOTTOM PLAT, w/ 5/8" ANCHORS @ 48" C.
 - #4 BAR CONTINUOUS, TOP & BOTTOM
 - MIN EMBEDMENT 12"
 - CONT FOOTING, 12" WIDE X 12" DEEP
 - EDGE NAILING, SEE BRACED WALL REQUIREMENTS
 - WALL SHEATHING AS OCCURS
 - SLAB, SEE PLAN FOR THICKNESS & REINFORCING.
 - ANCHOR BOLTS, 5/8" Ø, w/MIN. 7" EMBEDMENT @ 48" O.C.

1 STRIP FOOTING AT WOOD STUD WALL

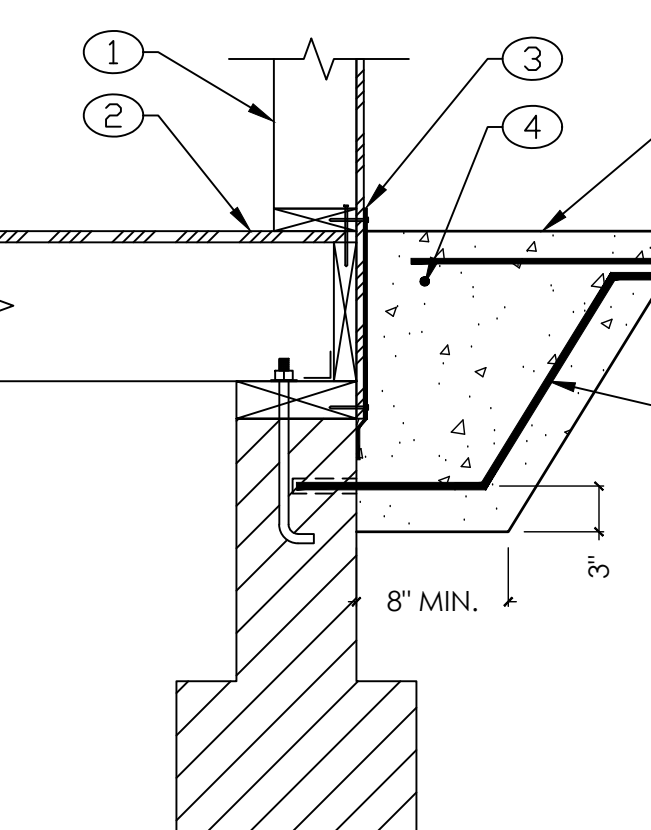
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- KEYNOTES**
- 2x STUD WALL, SEE PLAN.
 - CONT. BOTTOM PLAT, w/ 5/8" ANCHORS @ 48" C.
 - 4" MIN. ROCK FILL.
 - CONT FOOTING, 12" WIDE X 12" DEEP
 - WALL SHEATHING AS OCCURS
 - EDGE NAILING, SEE BRACED WALL REQUIREMENTS, (6" O.C. MAX)
 - SLAB, SEE PLAN FOR THICKNESS & REINFORCING.
 - ANCHOR BOLTS, 5/8" Ø, w/MIN. 7" EMBEDMENT @ 48" O.C.
 - #4 BAR CONTINUOUS, TOP & BOTTOM

2 INTERIOR STRIP FOOTING

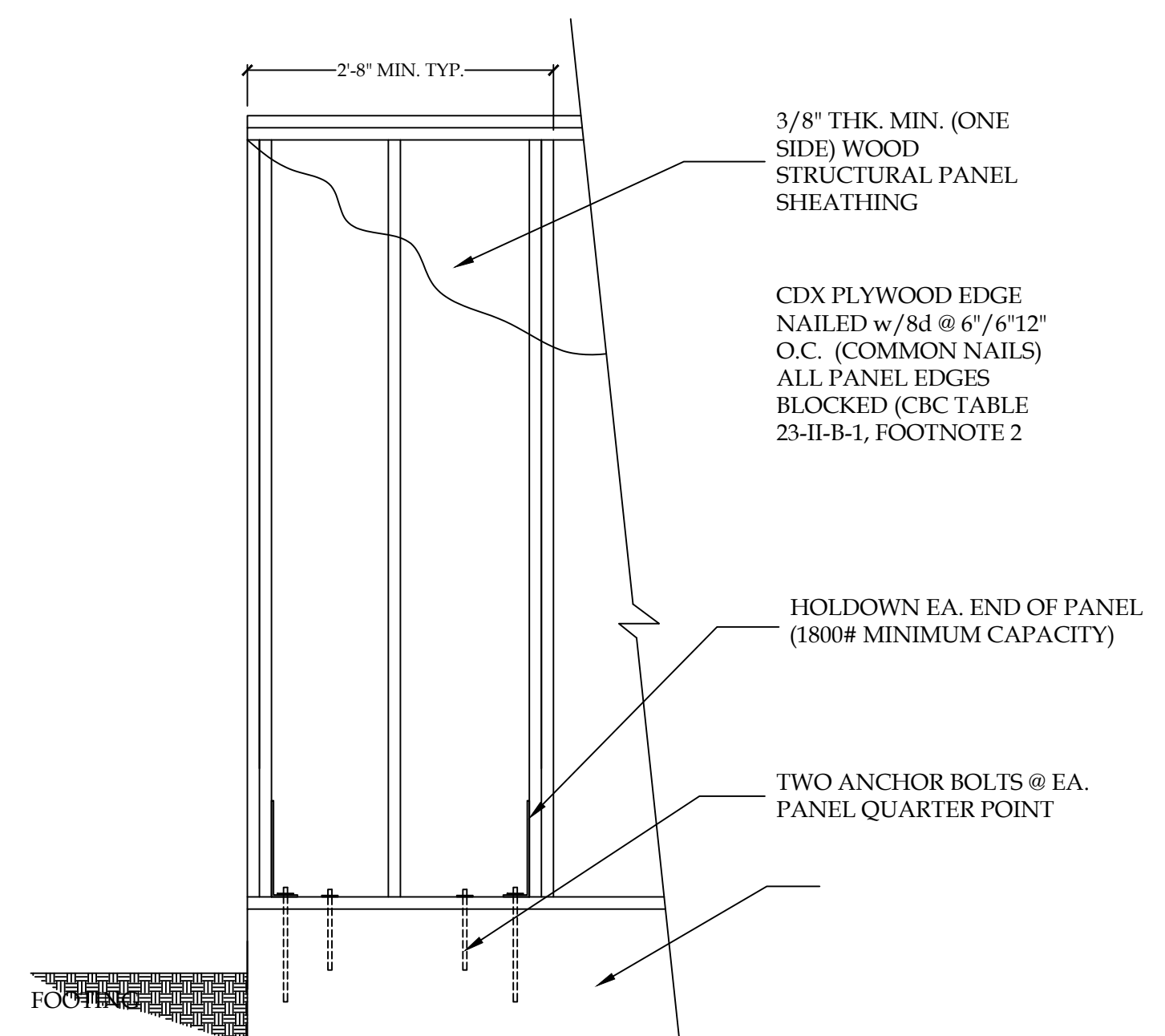
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- KEYNOTES**
- EXISTING 2x STUD WALL
 - EXISTING FLOOR STRUCTURE
 - ADHESIVE WATER PROOF MEMBRANE (W.R. GRACE ICE & WATER SHEILD OR EQUIV)
 - #4 BAR CONT
 - MATCH SLAB ELEVATION TO WOOD FLOOR ELEVATION
 - #4 "Z" BAR @ 24" O.C. EPOXY SET INTO (E) STEM WALL. (3" MIN EMBEDMENT)

3 (N) SLAB AT (E) RAISED FLOOR

REF: SCALE: NO SCALE

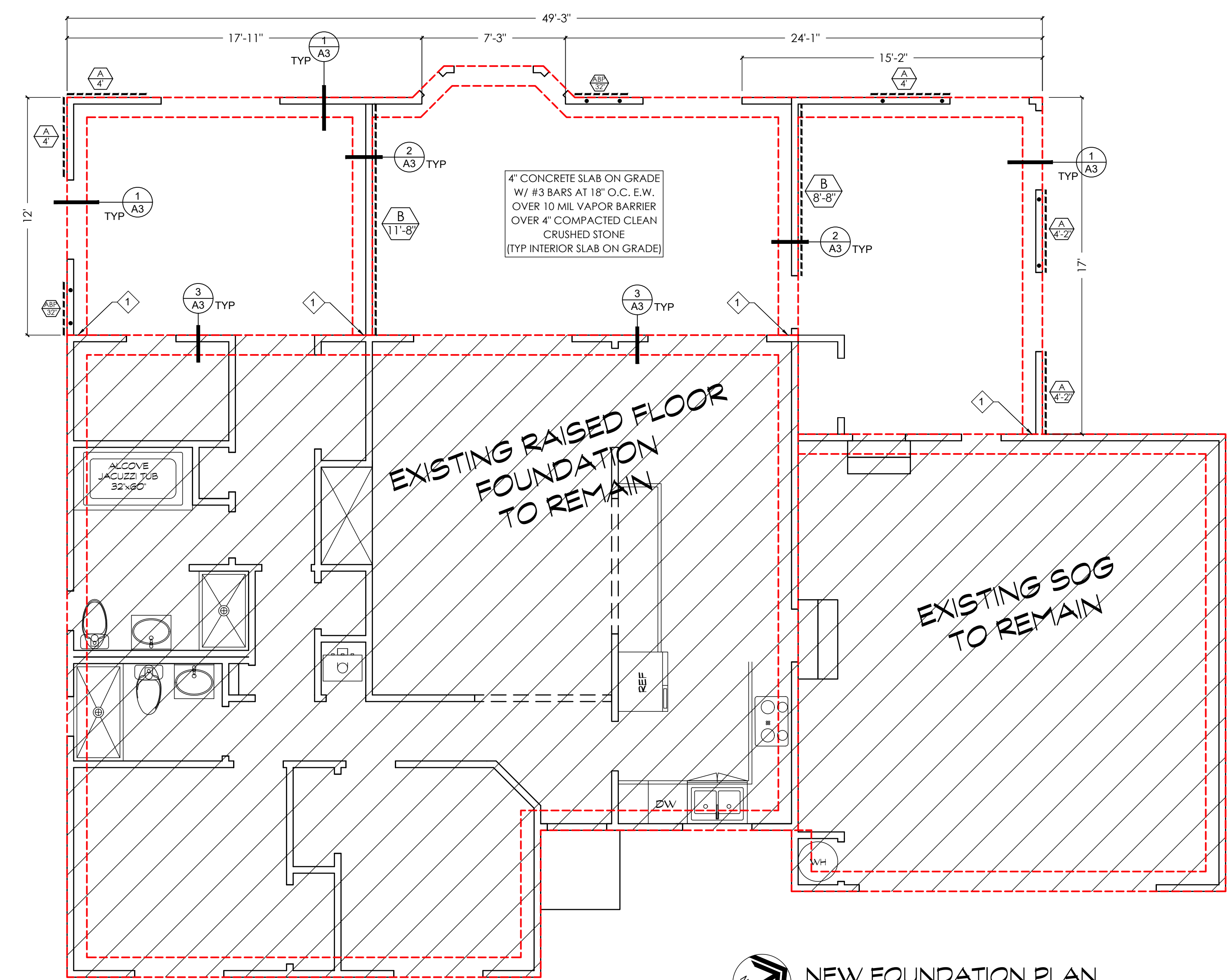


ALTERNATE BRACED WALL PANEL:
(ONE STORY ELEVATION)

- BRACED WALL PANELS**
- A** 3/8" OSB 8d COMMON NAILS AT 6" O.C. EDGES AND 12" O.C. FIELD
2-1/2X10 AB W/3X3X.229 SQUARE WASHERS
 - B** 1/2" GYPSUM BD. W/5d COOLER NAILS AT 7" O.C.
1/2X10 AB @ 32" O.C.
 - C** 4ft OF GYPSUM BOARD APPLIED TO BOTH SIDES
1/2" GYPSUM BD. W/5d COOLER NAILS AT 7" O.C.
1/2X10 AB @ 32" O.C.
 - ABP** ALTERNATE BRACED WALL PANELS. SEE DETAIL, THIS SHEET
 - DTT** DTT2 HOLDOWNS OR APPROVED EQUIVALENT

- FOUNDATION PLAN NOTES**
- A. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO START OF CONSTRUCTION. DISCREPANCIES SHALL BE RESOLVED WITH DESIGNER PRIOR TO CONSTRUCTION.
- B. ALL 9'-0" EXTERIOR WALLS SHALL BE 2x4 DF #2 STUDS @ 16" O.C. W/ THE FOLLOWING TRIMMERING STUDS:
- | OPENING | TRIMMERS | KINGS |
|---------|----------|-------|
| 3'-0" | 1 | 1 |
| 6'-0" | 1 | 2 |
- C. ALL SLABS SHALL BE 4" THICK SLABS W/ #3 BARS @ 18" O.C. EACH WAY, ALT 6X6 WWF OVER 10 MIL VAPOR BARRIER OVER 4" CLEAN CRUSHED STONE
- D. ALL FOOTINGS SHALL BE EMBEDDED 12" MIN BELOW LOWEST ADJACENT GRADE W/IN 6'-0" HORIZONTAL MEASUREMENT OF THE NEW CONSTRUCTION.
- G. DEEPEN FOOTINGS AS REQUIRED AT HOLD DOWNS TO ALLOW FOR INSTALLATION OF SIMPSON SSTB ANCHORS

- STRUCTURAL PLAN KEYNOTES**
- 1 EPOXY NEW FOOTING/STEM WALL REINFORCEMENT 4" MIN W/ SIMPSON SET-XP EPOXY.



NEW FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

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NO.	REVISIONS	DATE

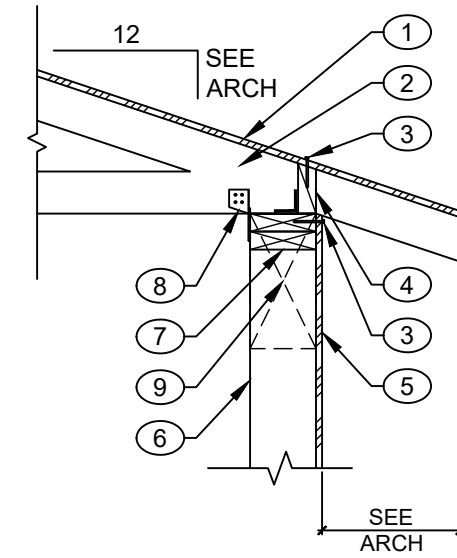
BROWN RES. ADDITION
170 GLENN DR. FOLSOM, CA 95630

FOUNDATION PLAN
09/09/2024

SHEET NO.
A-3

KEYNOTES:

1. ROOF SHEATHING, SEE PLAN
2. PREFAB ROOF TRUSS (OR WOOD JOIST, WHERE OCCURS)
3. EDGE NAILING
4. 2x BLOCKING W/ SIMPSON A35 CLIP @ 24" O.C.
5. WALL SHEATHING AS OCCURS, SEE PLAN
6. 2x STUD WALL, SEE PLAN
7. DOUBLE TOP PLATE, SPLICE PER TYPICAL DETAILS
8. SIMPSON H5 CLIP EACH TRUSS
9. BEAM, WHERE OCCURS

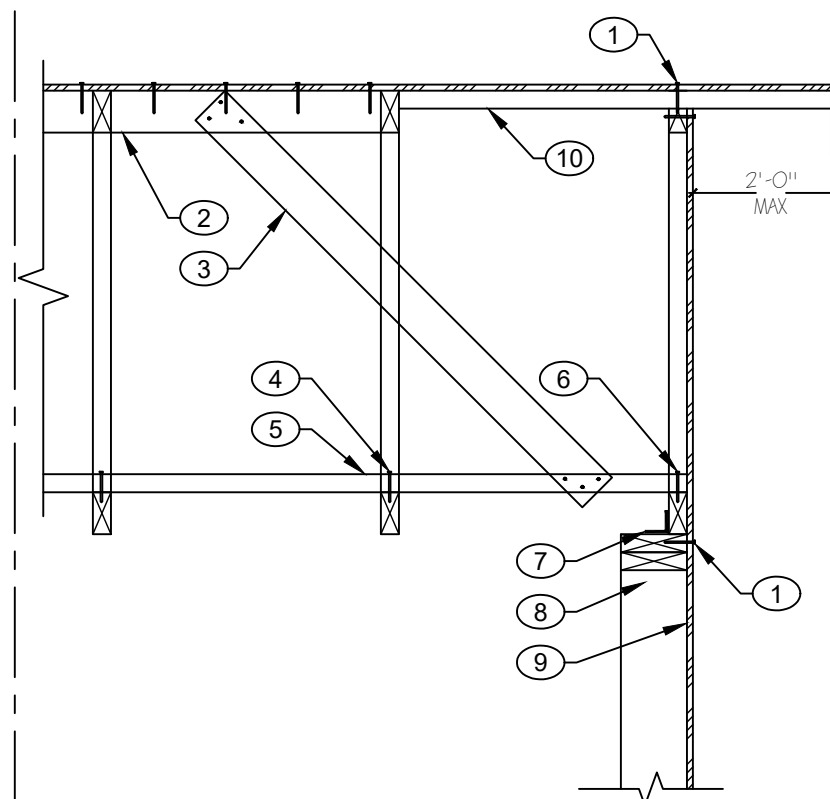


1 ROOF TRUSS AT BEARING WALL

REF: SCALE: NO SCALE

KEYNOTES:

1. EDGE NAILING
2. 2x4 BLOCK TO RECIEVE EDGE NAILING
3. 2x4 KICKER BRACE @ 48" O.C. W/ (3)16d NAILS EACH END
4. (3) 16d NAILS INTO EA TRUSS
5. 2x6x4'-0" (MIN) BRACE @ 48" O.C.
6. (4) 16d NAILS INTO TRUSS CHORD
7. SIMPSON A35 @ 24" O.C.
8. DOUBLE 2x TOP PLATE, SPLICE PER TYPICAL DETAILS
9. WALL SHEATHING, SEE PLAN
10. 2x4 OUTRIGGER @ 24" O.C. NOTCH END TRUSS TOP CHORD PER TRUSS MANUFACTURER



2 ROOF TRUSS AT GABLE END

REF: SCALE: NO SCALE

ROOFING NOTES:

1. ROOF UNDERLAYMENT: PROVIDE ONE LAYER OF No. 30 ASPHALT FELT. UNDERLAYMENT SHALL BE APPLIED SHINGLE FASHION, PARALLEL TO AND STARTING FROM THE EAVE AND LAPPED 2 INCHES FASTENED SUFFICIENTLY TO HOLD IN PLACE. END LAPS SHALL BE OFFSET BY 6 FEET. CRC R305.2.7
2. ALL ROOF FLASHING TO BE 26 GAUGE GALVANIZED IRON, COPPER OR ALUMINUM
3. CONTRACTOR TO VERIFY LOCATION AND SIZE OF ALL ROOF OPENINGS AND EQUIPMENT PLATFORMS WITH MECHANICAL CONTRACTOR.
4. ROOFING MATERIAL SHALL BE CLASS A MINIMUM
5. INSTALL VALLEY LININGS PER CRC R305.2.8.2

ATTIC VENTILATION

ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES SHALL HAVE CROSS VENTILATION FOR EACH SEPERATE SPACE BY VENTILATION OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN AND SNOW. THE NET FREE VENTILATING AREA (NFA) SHALL BE NOT LESS THAN 1/150 OF THE AREA OF THE SPACE VENTILATED. PROVIDE 50 PERCENT OF THE REQUIRED VENTILATING AREA BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS. THE OPENINGS SHALL BE COVERED WITH CORROSION-RESISTANT METAL MESH WITH OPENINGS OF 1/4 INCH IN DIMENSION. DO NOT BLOCK VENTS WITH INSULATION.

PROVIDE APPROVED DAMS OR BAFFLES BETWEEN ROOF FRAMING MEMBERS (TRUSSES/RAFTERS) TO PREVENT VENT HOLES BEING BLOCKED BY INSULATION.

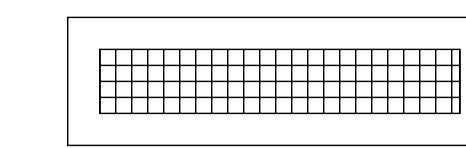
ROOF TOTAL 510 SQ.FT:
663 sq.ft. /150 = 4.4 NFA X 144 = 637 sq.in. /2 =
318 sq.in INTAKE & 318 sq.in EXHAUST

PROPER ATTIC VENTILATION:

LOWER VENTS MIN. NFA = 318 SQ.IN. NSTALL MIN. 7 VENT BLOCKS
UPPER VENTS MIN. NFA = 318 SQ.IN. NSTALL MIN. 4 LOW PROFILE DORMER VENTS

1. MANUFACTURED GALVANIZED SCREENED VENT

TYPICAL ATTIC - 1 VENT BLOCK AT EVERY THIRD BAY.



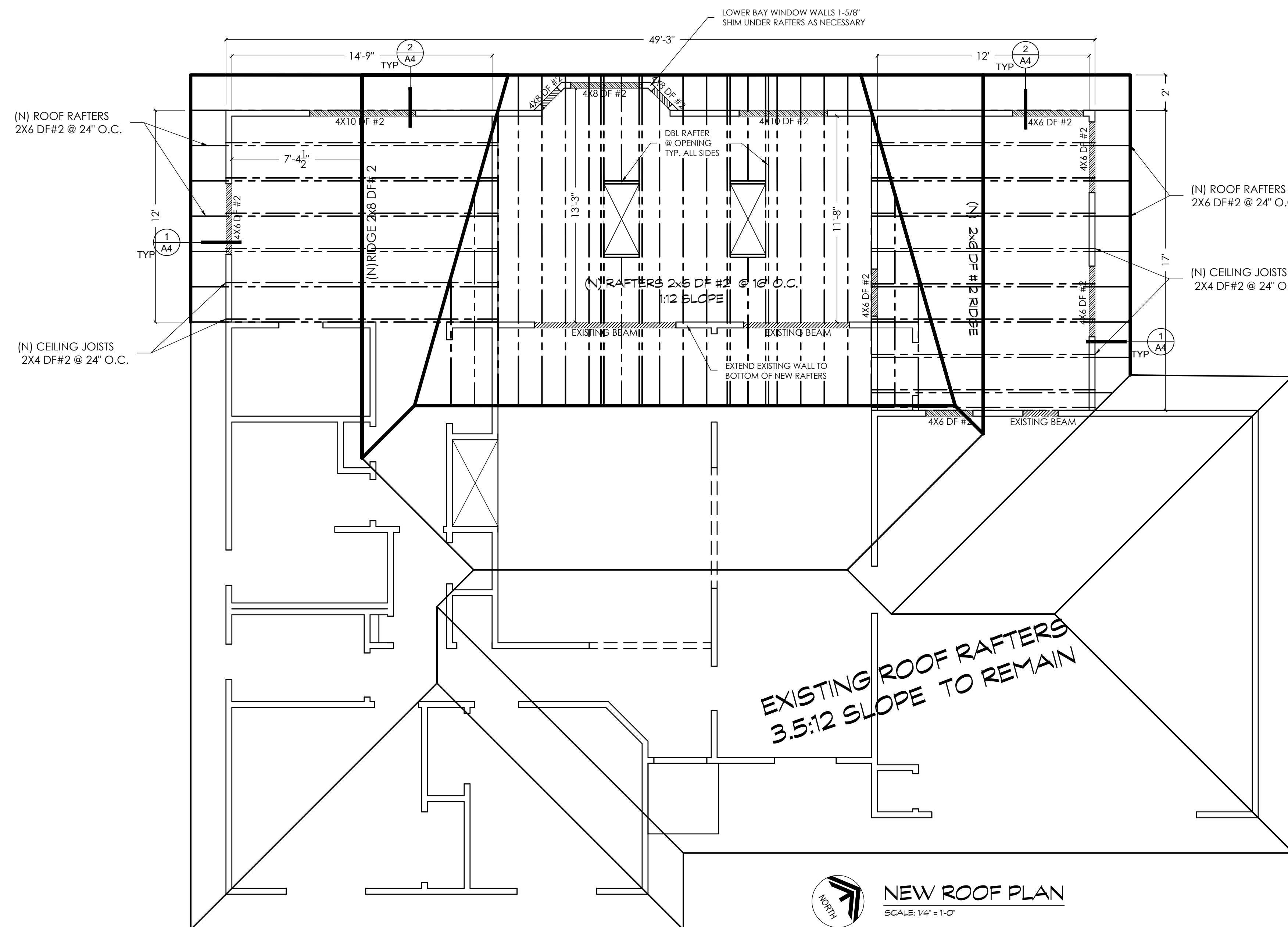
ELEVATION

PROVIDES APPROX. 47 SQ. INCHES VENT AREA PER BLOCK

VENT BLOCK SIZE 2 X 4 22 X 1/2"

LOW PROFILE DORMER VENTS

BY GIBRALTAR INDUSTRIES OR EQUAL GALVANIZED STEEL 30 INCH SUBBASE ROUGH OPENING SIZE 22" x 10" 100 sq. inches NFVA



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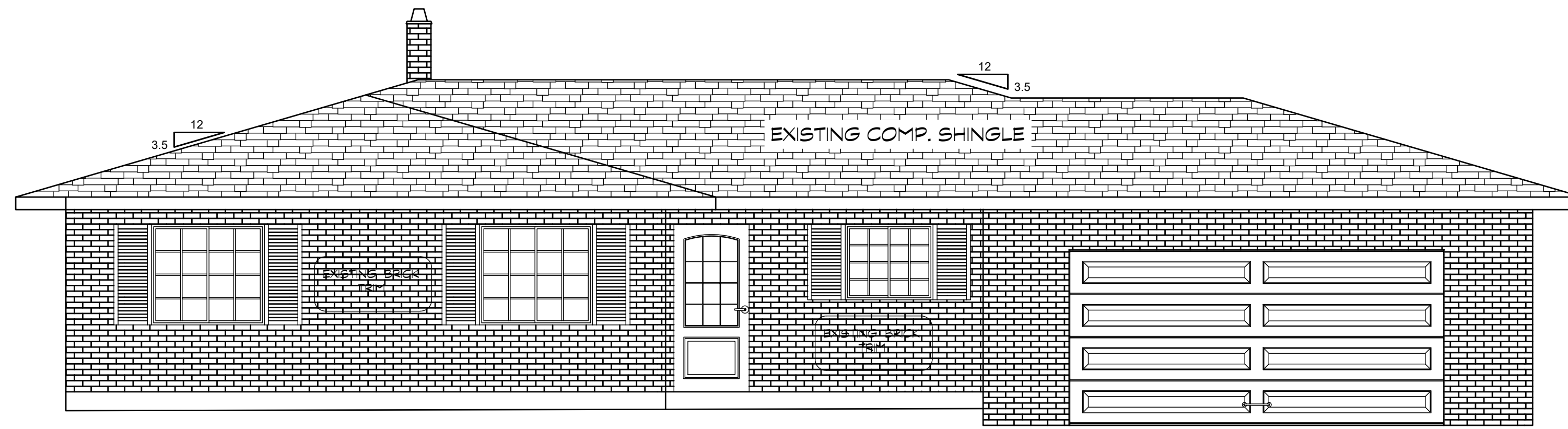
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BROWN RES. ADDITION
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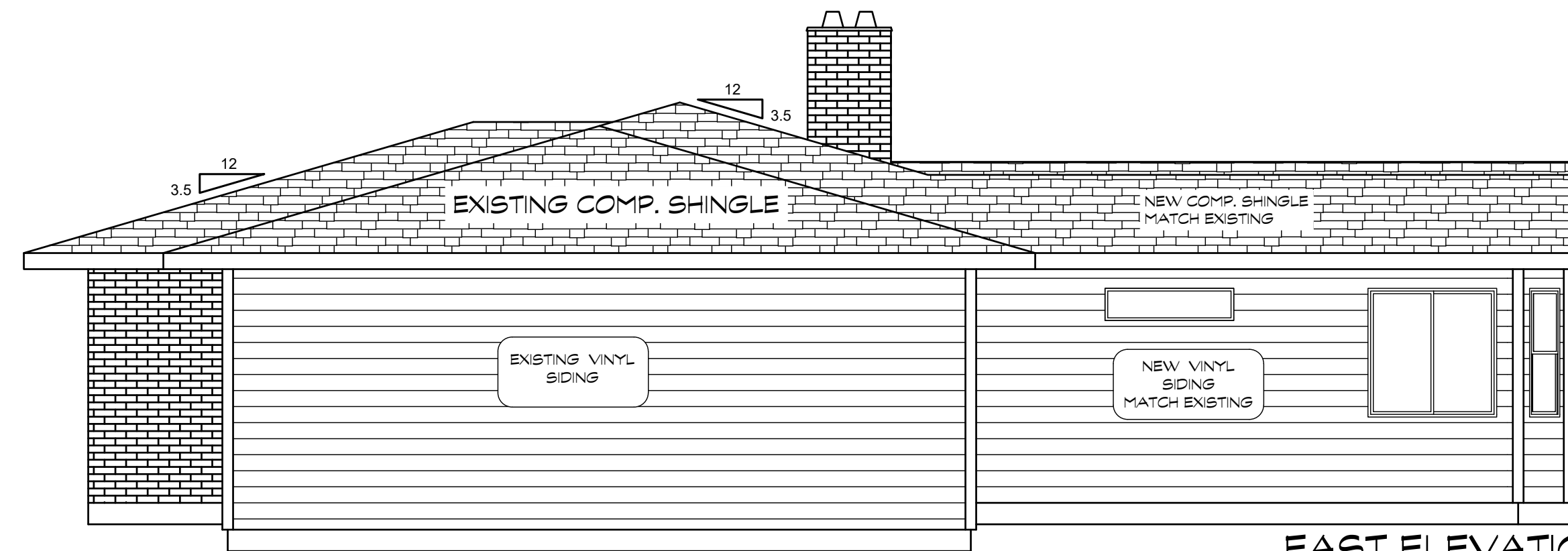
ROOF PLAN
09/09/2024

SHEET NO.
A-4

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



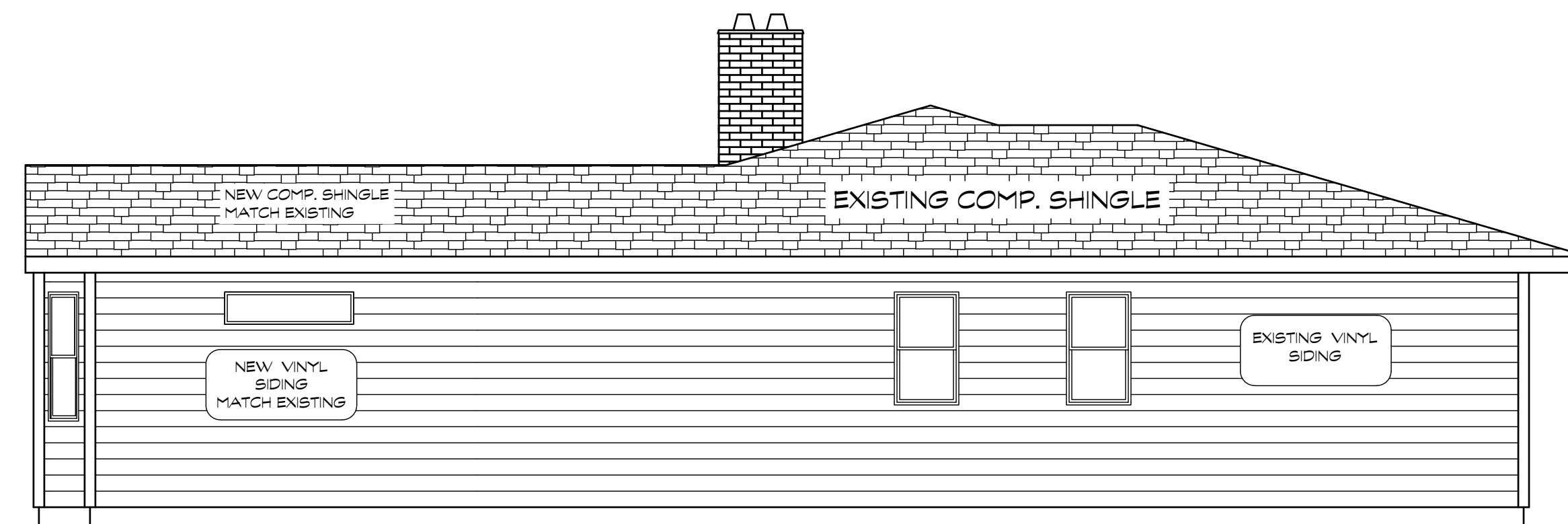
SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



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



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



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

WATER-RESISTIVE BARRIER

1. PROVIDE ONE LAYER OF No. 15 ASPHALT FELT, FREE FROM HOLES AND BREAKS, COMPLYING WITH ASTM D226 FOR TYPE 1 FELT OR OTHER APPROVED WATER-RESISTIVE BARRIER SHALL BE APPLIED OVER STUDS OR SHEATHING OF ALL EXTERIOR WALLS. SUCH FELT OR MATERIAL SHALL BE APPLIED HORIZONTALLY, WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2 INCHES. WHERE JOINTS OCCUR, FELT SHALL BE LAPPED NOT LESS THAN 6 INCHES. CRC R703.2
2. AN APPROVED CORROSION-RESISTANT FLASHING SHALL BE INSTALLED AT ALL OF THE FOLLOWING LOCATIONS (CRC R703):
 - 2.1. EXTERIOR WINDOW AND DOOR OPENINGS
 - 2.2. AT THE INTERSECTION OF CHIMNEYS OR OTHER MASONRY CONSTRUCTION WITH FRAME OR STUCCO WALLS, WITH PROJECTING LIPS ON BOTH SIDES UNDER STUCCO COPINGS
 - 2.3. UNDER AND AT THE ENDS OF MASONRY, WOOD OR METAL COPINGS AND SILLS
 - 2.4. CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM
 - 2.5. WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH TO A WALL OR FLOOR ASSEMBLY OF WOOD-FRAME CONSTRUCTION
 - 2.6. AT WALL AND ROOF INTERSECTIONS

ROOFING NOTES:

1. ROOF UNDERLAYMENT: PROVIDE ONE LAYER OF No. 30 ASPHALT FELT. UNDERLAYMENT SHALL BE APPLIED SHINGLE FASHION, PARALLEL TO AND STARTING FROM THE EAVE AND LAPPED 2 INCHES FASTENED SUFFICIENTLY TO HOLD IN PLACE. END LAPS SHALL BE OFFSET BY 6 FEET. CRC R905.2.7
2. ALL ROOF FLASHING TO BE 26 GAUGE GALVANIZED IRON, COPPER OR ALUMINUM
3. CONTRACTOR TO VERIFY LOCATION AND SIZE OF ALL ROOF OPENINGS AND EQUIPMENT PLATFORMS WITH MECHANICAL CONTRACTOR.
4. ROOFING MATERIAL SHALL BE CLASS A MINIMUM

DESIGNED BY:

**NOVEL DESIGN
& DRAFTING**
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Vitaly N. Leschik

NO.	REVISIONS	DATE

BROWN RES. ADDITION
170 GLENN DR. FOLSOM, CA 95630

ELEVATIONS

09/09/2024

SHEET NO.

A-5

- ELECTRICAL SYMBOLS**
- S SWITCH
 - S₂ SWITCH 3 WAY
 - S₃ SWITCH 3 WAY
 - S_D DIMMER SWITCH
 - S_V MANUAL ON VACANCY SENSOR
 - ⊖ DUPLEX RECEPTACLE
 - ⊖_{USB} DUPLEX RECEPTACLE WITH BUILT IN USB PORT
 - ⊖_{WP} WEATHER PROOF GFCI
 - ⊖ 120V GROUND FAULT CIRCUIT-INTERRUPTER (GFCI) DUPLEX RECEPTACLE
 - ⊕ WALL MOUNTED LIGHT FIXTURE
 - ⊕_{EXT} EXTERIOR GRADE WALL MOUNTED LIGHT FIXTURE, RATED FOR WET LOCATIONS
 - ⊕_{CEILING} CEILING MOUNTED LIGHT FIXTURE
 - ⊕_{RECESSED} RECESSED-HIGH EFFICACY (LED) LIGHT FIXTURE
 - ⊕_{EXHAUST} EXHAUST VENT: EXHAUST FANS SHALL HAVE INTEGRATED HUMIDISTAT AND BE CAPABLE OF PRODUCING 50 CFM MINIMUM.
 - ⊕_{CM} CARBON MONOXIDE ALARM
 - ⊕_{SD} SMOKE DETECTOR
 - ⊕_{FAN} FAN WITH LIGHTS

SMOKE DETECTOR/ALARM NOTES:

- CARBON MONOXIDE ALARMS TO BE INSTALLED:
 - OUTSIDE OF EACH SEPERATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S), AND ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS
- SMOKE ALARMS TO BE INSTALLED:
 - IN EACH SLEEPING ROOM,
 - OUTSIDE EACH SEPERATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S) AND
 - ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS AND UNHABITABLE ATTICS, BUT NOT INCLUDING CRAWL SPACES AND UNHABITABLE ATTICS, IN DWELLINGS OR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AND INTERVENING DOOR BETWEEN THE ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL SUFFICE FOR THE ADJACENT LOWER LEVEL PROVIDED THAT THE LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW THE UPPER LEVEL.
- SMOKE ALARMS AND CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND SHALL BE EQUIPPED WITH A BATTERY BACKUP [SMOKE ALARMS/CARBON MONOXIDE ALARMS SHALL HAVE A 10-YEAR SEALED BATTERY], WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN AS REQUIRED FOR OVERCURRENT PROTECTION [CRC R314.6]
- WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING OR SLEEPING UNIT, THE SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT. THE ALARM SHALL BE CLEARLY AUDIBLE IN ALL BEDROOMS OVER BACKGROUND NOISE LEVELS WITH ALL INTERVENING DOORS CLOSED, [CRC R314.4]
- SMOKE AND CARBON MONOXIDE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT [CRC R314.4 & R315.5]

GENERAL ELECTRICAL NOTES:

- ALL ELECTRICAL INSTALLATION SHALL COMPLY WITH 2022 CALIFORNIA ELECTRICAL CODE & 2022 ENERGY CODE.
- AFCI-ARC-FAULT CIRCUIT INTERRUPTER IN DWELLING UNITS
 - ALL 120-volt, SINGLE PHASE, 15 AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROVIDED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.
- TAMPER RESISTANT RECEPTACLES IN DWELLING UNITS CEC 406.11, CEC 210.52
 - IN ALL AREAS SPECIFIED IN 210.52 EVERY KITCHEN, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEN, BEDROOMS, SUNROOMS, RECREATION ROOMS, BATHROOM, GARAGE, BASEMENT, LAUNDRY AND OUTDOOR AREA, ALL 125-VOLT, 15- AND 20- AMPERE RECEPTACLES SHALL BE LISTED TAMPER RESISTANT RECEPTACLES.
- ALL PERMANENTLY INSTALLED LUMINAIRES SHALL BE HIGH-EFFICACY IN ACCORDANCE WITH TABLE 150.0A PER 2019 CEC § 150.0(k), NO LOW-EFFICACY LIGHTING PERMITTED.
- ALL LIGHT FIXTURES RECESSED INTO INSULATED CEILINGS SHALL BE APPROVED FOR ZERO-CLEARANCE INSULATION COVER (I.C.) BY U.L.
- GFCI OUTLETS ARE REQUIRED: FOR ALL KITCHEN RECEPTACLES THAT ARE DESIGNED TO SERVE COUNTERTOP SURFACES, DISHWASHERS, BATHROOMS, IN UNDER-FLOOR SPACES OR BELOW GRADE LEVEL, IN UNFINISHED BASEMENTS, CRAWL SPACE LIGHTING OUTLETS, IN EXTERIOR OUTLETS, WITHIN 6' OF A LAUNDRY/UTILITY/WET BAR SINKS, LAUNDRY AREAS, AND IN ALL GARAGE OUTLETS INCLUDING OUTLETS DEDICATED TO A SINGLE DEVICE OR GARAGE DOOR OPENER. [CEC 210.8]
- THE RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6FT FROM A RECEPTACLE. ANY WALL SPACE 2FT OR MORE IN WIDTH AND UNBROKEN ALONG THE FLOOR LINE BY DOORWAYS AND SIMILAR OPENINGS SHALL HAVE A RECEPTACLE

BATHROOM ELECTRICAL NOTES:

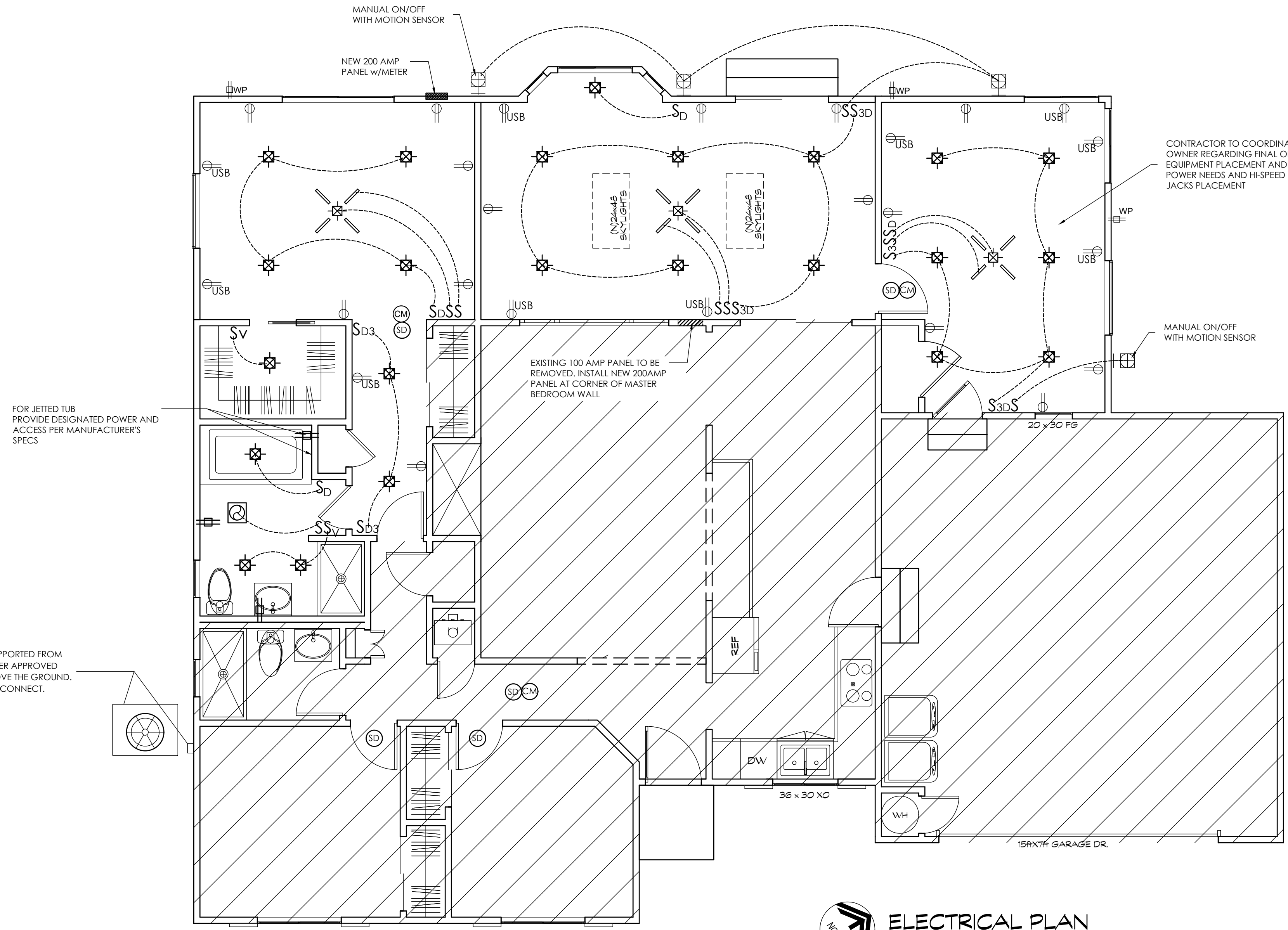
- IN ALL BATHROOMS PROVIDE AN OUTLET ON A DEDICATED 20 AMP CIRCUIT.
- LIGHT FIXTURES IN DAMP SPACES I.E. OVER THE TUB/SHOWER ARE TO BE SUITABLE FOR DAMP SPACES.
- BATHROOM EXHAUST FANS MUST BE CONTROLLED BY A HUMIDISTAT CONTROL CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50% TO 80%.

TITLE-24 NOTES:

- LIGHTING IN BATHROOMS, GARAGES, LAUNDRY ROOMS AND UTILITY ROOMS SHALL BE HIGH EFFICACY. AT LEAST ONE INSTALLED LUMINAIRE SHALL BE CONTROLLED BY AN OCCUPANCY OR VACANCY SENSOR PROVIDING AUTOMATIC-OFF FUNCTIONALITY
- OTHER ROOMS LUMINAIRES (HALLWAYS, DINING ROOMS, FAMILY ROOMS AND BEDROOMS), SHALL BE HIGH EFFICACY OR SHALL BE CONTROLLED BY AN MANUAL-ON OCCUPANT SENSOR OR DIMMER
 - PERMANENTLY INSTALLED FIXTURES THAT ARE NOT HIGH EFFICACY ARE ALLOWED IN CLOSETS LESS THAN 70 SQUARE FEET. THESE FIXTURES MAY BE CONTROLLED BY A SIMPLE TOGGLE SWITCH, MANUAL-ON OCCUPANT SENSOR, OR AN AUTOMATIC-ON OCCUPANT SENSOR.
- ALL EXTERIOR OUTDOOR LIGHTS SHALL BE HIGH-EFFICACY LUMINAIRES OR BE CONTROLLED BY A MANUAL-ON/OFF SWITCH THAT DOES NOT OVERRIDE TO ON, CONTROLLED BY A PHOTOCELL AND MOTION SENSOR.
- LUMINAIRES THAT ARE RECESSED INTO INSULATED CEILINGS ARE REQUIRED TO BE RATED FOR INSULATION CONTACT (IC-RATED) SO THAT INSULATION CAN BE PLACED OVER THEM. THE HOUSING OF THE LUMINAIRES SHALL BE AIRTIGHT TO PREVENT CONDITIONED AIR ESCAPING INTO THE CEILING CAVITY OR ATTIC, UNCONDITIONED AIR INFILTRATING FROM THE CEILING OR ATTIC INTO THE CONDITIONED SPACE.

EXTERIOR LIGHTING:

- ALL OUTDOOR LIGHTING SHALL BE HIGH EFFICACY
- WALL MOUNTED LIGHTING SHALL BE CONTROLLED BY ONE OF THE FOLLOWING COMBINATIONS:
 - PHOTOCELL AND MOTION SENSOR
 - PHOTOCELL AND TIME SWITCH
 - ASTRONOMICAL TIME CLOCK
 - EMCS WITH FEATURES OF ASTRONOMICAL TIME CLOCK, DOES NOT ALLOW THE LUMINAIRE TO BE ON DURING THE DAY AND MAY BE PROGRAMMED TO AUTOMATICALLY TURN LIGHTING OFF AT NIGHT
- ALL EXTERIOR 120-VOLT, 15 AND 20 AMP RECEPTACLES TO BE LISTED AS WEATHER-RESISTANT, TAMPER RESISTANT AND GFCI PROTECTED.
- WATER PROOF GFCI REQUIRED AT ALL OUTDOOR ELECTRICAL OUTLETS



(N) A/C CONDENSERS

- A/C CONDENSER UNIT SHALL BE SUPPORTED FROM THE GROUND ON A CONCRETE OR OTHER APPROVED BASE EXTENDING NOT LESS THAN 3" ABOVE THE GROUND.
- PROVIDE REQUIRED ELECTRICAL DISCONNECT.

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

DESIGNED BY:
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NO.	REVISIONS	DATE

BROWN RES. ADDITION
170 GLENN DR. FOLSOM, CA 95630

ELECTRICAL PLAN
09/09/2024

SHEET NO.
E-1

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
 Project Name: 170 Glenn Dr Addition
 Calculation Date/Time: 2024-09-17T09:03:39-07:00
 Calculation Description: Input File Name: 170 Glenn Dr Addition.rbd22

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01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
GENERAL INFORMATION	Project Name	170 Glenn Dr Addition	Run Title	170 Glenn Dr	City	Folsom, CA	Zip code	95630	Climate Zone	12	Building Type	Single family	Project Scope	Addition and/or Alteration	13	Existing Cond. Floor Area (ft ²)	1504	Total Cond. Floor Area (ft ²)	1504	ADU Bedroom Count	n/a	Fuel Type	Natural gas
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	

Registration Number: 424-P010215358A-000-000-0000000-0000
 Report Version: 2022.0.000
 Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
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ENERGY USE SUMMARY	Standard Design Source Energy (EOR1) (kBtu/ft ² -yr)	Standard Design TDV Energy (EOR2) (kWh/ft ² -yr)	Proposed Design Source Energy (EOR1) (kBtu/ft ² -yr)	Proposed Design TDV Energy (EOR2) (kWh/ft ² -yr)	Compliance Margin (EOR1)	Compliance Margin (EOR2)
Space Heating	0	110.76	0	110.96	0	-0.2
Space Cooling	0	115.43	0	115.22	0	1.21
Water Heating	0	37.19	0	37.19	0	0
Efficiency Compliance Total	0	263.38	0	263.37	0	1.01
Photovoltaics	0	0	0	0	0	0
Battery	0	0	0	0	0	0
Indoor Lighting	0	7.53	0	7.53	0	0
Appl. & Cooking	0	24.21	0	24.22	0	0
Plug Loads	0	37.79	0	37.79	0	0
Outdoor Lighting	0	1.76	0	1.76	0	0
TOTAL COMPLIANCE	0	335.69	0	334.67	0	0

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ENERGY USE INTENSITY	Standard Design (kBtu/ft ² -yr)	Proposed Design (kBtu/ft ² -yr)	Compliance Margin (kBtu/ft ² -yr)	Margin Percentage
Gross EUJ	57.23	57.16	0.07	0.12
Net EUJ	57.23	57.16	0.07	0.12

REQUIRED SPECIAL FEATURES

HERS FEATURE SUMMARY

BUILDING - FEATURES INFORMATION

Project Name	Conditioned Floor Area (ft ²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
170 Glenn Dr Addition	1504	1	3	2	0	1

ZONE INFORMATION

Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft ²)	Avg. Ceiling Height	Water Heating System 1	Status
Existing House	Conditioned	HVAC System 1	1105	8	DHW System 1	Existing/Unchanged
Addition	Conditioned	HVAC System 1	399	8	DHW System 1	New

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OPaque SURFACES	01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Orientation	Area (ft ²)	Window and Door Area (ft ²)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition		
Exterior Wall Front	Existing House	(e) 2x4 Walls + Wood Siding	Front	325	393	66.5	0	none	Existing	No	
Exterior Wall Left	Existing House	(e) 2x4 Walls + Wood Siding	Left	225	216	14	0	none	Existing	No	
Exterior Wall Right	Existing House	(e) 2x4 Walls + Wood Siding	Right	45	216	0	0	none	Existing	No	
Exterior Wall Back	Existing House	(e) 2x4 Walls + Wood Siding	Back	315	172	84.02	0	none	Existing	No	
Exterior Wall B	Addition	2x4 Exterior Walls + R15 + Wood Siding	Back	315	240	34	0	none	New	n/a	
Exterior Wall R	Addition	2x4 Exterior Walls + R15 + Wood Siding	Right	45	136	32	0	none	New	n/a	
Exterior Wall L	Addition	2x4 Exterior Walls + R15 + Wood Siding	Left	225	136	3	0	Extension	New	n/a	
Interior Wall 1	Existing House+Addition	Interior walls connecting to main house	n/a	n/a	282	0	0	n/a	New	n/a	
Ceiling (below attic)	Existing House	(e) 2x6 Ceiling	n/a	1105	n/a	n/a	n/a	n/a	Existing	No	
Ceiling (below attic) 2	Addition	2x6 Ceiling + R10	n/a	n/a	399	n/a	n/a	n/a	New	n/a	
Floor Over Crawlspace 1	Existing House	(e) 2x6 Floor	n/a	n/a	1105	n/a	n/a	n/a	Existing	No	

ATTIC

01	02	03	04	05	06	07	08	09	10
Name	Construction	Type	Roof Slope (ft in 12)	Reflectance	Emittance	Natant Barrier	Cool Roof	Status	Verified Existing Condition
(E) Attic	(e) Asphalt Shingles Roof	Ventilated	3.5	0.1	0.85	No	No	Existing	No

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IMPORTANT: ALL PLANS MUST BE APPROVED BY THE CITY, COUNTY, OR THE DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT PRIOR TO CONSTRUCTION. THE DRAFTSMAN ASSUMES NO RESPONSIBILITY FOR ANY UNAPPROVED PLANS.

REVISIONS

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
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 Calculation Date/Time: 2024-09-17T09:03:39-07:00
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01	02	03	04	05	06	07	08	09	10
Name	Construction	Type	Roof Slope (ft in 12)	Reflectance	Roof Emittance	Radiant Barrier	Cool Roof	Status	Verified Existing Condition
(N) Attic	(n) Asphalt Shingles roof	Ventilated	3.5	0.1	0.85	No	No	New	n/a

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Area (ft ²)	U-factor	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition					
(E) Window 4	Window	Exterior Wall Front	Front	135	0.79	0.71	NFRC	Bug Screen	Existing	No					
(E) Window 2	Window	Exterior Wall Front	Front	135	0.79	0.71	NFRC	Bug Screen	Existing	No					
(E) Window 3	Window	Exterior Wall Front	Front	135	0.79	0.71	NFRC	Bug Screen	Existing	No					
(E) Window 4	Window	Exterior Wall Left	Left	225	0.79	0.71	NFRC	Bug Screen	Existing	No					
(E) Window 5	Window	Exterior Wall Left	Left	225	0.79	0.71	NFRC	Bug Screen	Existing	No					
(E) Window 6	Window	Exterior Wall Back	Back	315	0.79	0.71	NFRC	Bug Screen	Existing	No					
(E) SCD 1	Window	Exterior Wall Back	Back	315	0.79	0.71	NFRC	Bug Screen	Existing	No					
(N) Window 2	Window	Exterior Wall B	Back	315	0.22	0.22	NFRC	Bug Screen	New	NA					
(N) Window 3	Window	Exterior Wall B	Back	315	0.22	0.22	NFRC	Bug Screen	New	NA					

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01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Area (ft ²)	U-factor	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition					
(N) Window 4	Window	Exterior Wall R	Right	45	0.3	0.22	NFRC	Bug Screen	New	NA					
(N) Window 5	Window	Exterior Wall R	Right	45	0.3	0.22	NFRC	Bug Screen	New	NA					
(N) Window 3	Window	Exterior Wall L	Left	225	0.3	0.22	NFRC	Bug Screen	New	NA					

OPaque DOORS

01	02	03	04	05	06
Name	Size of Building	Area (ft ²)	U-factor	Status	Verified Existing Condition
Front door	Exterior Wall Front	20	0.5	Existing	No

SLAB FLOORS

01	02	03	04	05	06	07	08	09	10
Name	Zone	Area (ft ²)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated	Status	Verified Existing Condition
Slab On Grade 1	Addition	399	67.18	none	0	80%	No	New	n/a

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01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior/Exterior Continuous R-value	U-factor	Assembly Layers
2x4 Exterior Walls + R15 + Wood Siding	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O.C.	R-15	None / 9	0.046	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Sheathing / Insulation: R-15 Sheathing Exterior Finish: Wood Siding/Sheathing/Decking
(e) 2x4 Walls + Wood Siding	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O.C.	R-0	None / None	0.302	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: Wood Siding/Sheathing/Decking
Interior walls connecting to main house	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O.C.	R-0	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board
(e) Asphalt Shingles Roof	Attic Roofs	Wood Framed Ceiling	2x6 @ 16 in. O.C.	R-0	None / None	0.624	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/Sheathing/Decking Cavity / Frame: no insul. / 2x6
(e) Asphalt Shingles Roof	Attic Roofs	Wood Framed Ceiling	2x4 @ 16 in. O.C.	R-15	None / 9	0.042	Roofing: Light Roof (Asphalt Shingle) Above Deck Insulation: R-15 Sheathing Roof Deck: Wood Siding/Sheathing/Decking Cavity / Frame: no insul. / 2x6 Around Roof Joists: R-2.0 insul.
(e) 2x6 Floor	Floors Over Crawlspace	Wood Framed Floor	2x6 @ 16 in. O.C.	R-0	None / None	0.22	Floor Surface: Carpeted Floor Deck: Wood Siding/Sheathing/Decking Cavity / Frame: no insul. / 2x6
(e) 2x6 Ceiling	Ceilings (below attic)	Wood Framed Ceiling	2x6 @ 16 in. O.C.	R-0	None / None	0.467	Cavity / Frame: no insul. / 2x6 Inside Finish: Gypsum Board

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01	02	03	04	05	06	07	08	09	10	11	12
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior/Exterior Continuous R-value	U-factor	Assembly Layers				
2x6 Ceiling + R10	Ceilings (below attic)	Wood Framed Ceiling	2x6 @ 16 in. O.C.	R-10	None / None	0.032	Over Ceiling Joists: R-15.7 Insul. Cavity / Frame: R-10.3 2x6 Inside Finish: Gypsum Board				

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04	05
Quality Insulation Installation (DI)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50
Not Required	Not Required	n/a	n/a	n/a

WATER HEATING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (H)	Status	Verified Existing Condition	Existing Water Heating System
DHW System 1	Domestic Hot Water (DHW)	Standard	Water Heater 1	1	n/a	None	n/a	Water Heater 1 (1)	Existing	No	

WATER HEATERS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Heating Efficiency	Input Type	Rated Input	Input Rating or Pilot	Standby Loss or Recovery Eff.	1st Hrs. Rating or Flow Rate	Tank Location	Status	Verified Existing Condition	
Water Heater 1	Gas	Small Storage	1	50	EF	0.6	800/yr	75000	0	70	n/a	Existing	No	

Registration Number: 424-P010215358A-000-000-0000000-0000
 Report Version: 2022.0.000
 Schema Version: rev 20220901

PROJECT LOCATION:
 170 GLENN DR
 FOLSOM, CA
 95630


CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
 Project Name: 170 Glenn Dr Addition
 Calculation Date/Time: 2024-09-17T09:03:39-07:00
 Calculation Description: Input File Name: 170 Glenn Dr Addition.rbd22


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01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution	Recirculation Control	Shower Drain Water Heat Recovery
DHW System 1 - 1/2"	Not Required	Not Required	Not Required	None	Not Required	Not Required


SPACE CONDITIONING SYSTEMS


01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat	Status	Verified Existing Condition	Existing HVAC System
HVAC System 1	Central heating and										

 2022 Single-Family Residential Mandatory Requirements Summary	
<p><i>NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.</i> (04/2022)</p>	
<p>Building Envelope:</p>	
§ 110.6(a)1:	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 1011.5.2/440-2011. *
§ 110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped. *
§ 110.7:	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per § 10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	Roof Deck, Ceiling and Rafter Roof Insulation. Roof decks in newly constructed attics in climate zones 4 and 5: 16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Oppaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	Vapor Retarder. In climate zones 1 through 16, the earth floor or unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(g).
§ 150.0(g)2:	Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(g):	Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45.
<p>Fireplaces, Decorative Gas Appliances, and Gas Log:</p>	
§ 110.5(e)	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(a)1:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(a)2:	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device. *
§ 150.0(a)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *
<p>Space Conditioning, Water Heating, and Plumbing System:</p>	
§ 110.0-§ 110.3:	Certification. Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.
§ 110.2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *
§ 110.2(b):	Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c):	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.
§ 110.3(c)3:	Insulation. Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
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 2022 Single-Family Residential Mandatory Requirements Summary	
§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinet or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	Multiple Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	Energy Management Control Systems. An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	Automatic Shutoff Controls. In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	Dimmers. Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	Independent controls. Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	Internally illuminated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
<p>Solar Readiness:</p>	
§ 110.10(a)1:	Single-family Residences. Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§ 110.10(b)1A:	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
§ 110.10(b)2:	Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B:	Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.
§ 110.10(b)4:	Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	Documentation. A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."
<p>Electric and Energy Storage Ready:</p>	
5/6/22	

 2022 Single-Family Residential Mandatory Requirements Summary	
§ 110.5:	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters. *
§ 150.0(h)1:	Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)3B:	Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	Water Piping, Solar Water-Heating System Piping and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2' higher than the base of the water heater.
§ 150.0(n)3:	Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.
<p>Ducts and Fans:</p>	
§ 110.8(d)3:	Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	CMC Compliance. All air-distribution system ducts and plenums must meet CMC §§ 801.0-805.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than 1/4". If mastic or tape is used, Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. *
§ 150.0(m)2:	Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	Protection of Insulation. Insulation must be protected from damage due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	Porous Inner Core Flex Duct. Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *
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 2022 Single-Family Residential Mandatory Requirements Summary	
§ 150.0(s)	Energy Storage System (ESS) Ready. All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated connection from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	Heat Pump Space Heater Ready. Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	Electric Cooktop Ready. Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v)	Electric Clothes Dryer Ready. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
<p>*Exceptions may apply.</p>	
5/6/22	

 2022 Single-Family Residential Mandatory Requirements Summary	
§ 150.0(m)13:	Space Conditioning System Airflow Rate and Fan Efficacy. Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 250 CFM per ton of normal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.38 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *
<p>Ventilation and Indoor Air Quality:</p>	
§ 150.0(o)1:	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	Central Fan Integrated (CFI) Ventilation Systems. Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per § 150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed and uncontrolled per § 150.0(o)1B(i)&(iv). CFI ventilation systems must have controls that track outdoor air-ventilation run time, and either open or close the motorized damper(s) for compliance with § 150.0(o)1C.
§ 150.0(o)1C:	Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses. Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1C(ii).
§ 150.0(o)1G:	Local Mechanical Exhaust. Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of § 150.0(o)1G(i), enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting § 150.0(o)1G(ii)-v. Airflow must be measured by the installer per § 150.0(o)1G(v), and rated for sound per § 150.0(o)1G(v).
§ 150.0(o)1H&I:	Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems. The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 § 7.2 at no less than the minimum airflow rate required by § 150.0(o)1C.
§ 150.0(o)2:	Field Verification and Diagnostic Testing. Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per § 150.0(o)1G.
<p>Pool and Spa Systems and Equipment:</p>	
§ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDBS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *
<p>Lighting:</p>	
§ 110.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.
§ 150.0(k)1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, built-in mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting integral to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(k)1B:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).
5/6/22	

Green Solutions
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IMPORTANT:
ALL PLANS MUST BE APPROVED BY THE CITY, COUNTY, OR THE DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT PRIOR TO CONSTRUCTION. THE DRAFTSMAN ASSUMES NO RESPONSIBILITY FOR ANY UNAPPROVED PLANS.

REVISIONS

PROJECT LOCATION:

170 GLENN DR
FOLSOM, CA
95630

TITLE 24: MANDATORY MEASURES SUMMARY

DATE: 09/17/2024

SHEET NUMBER

T-24B

