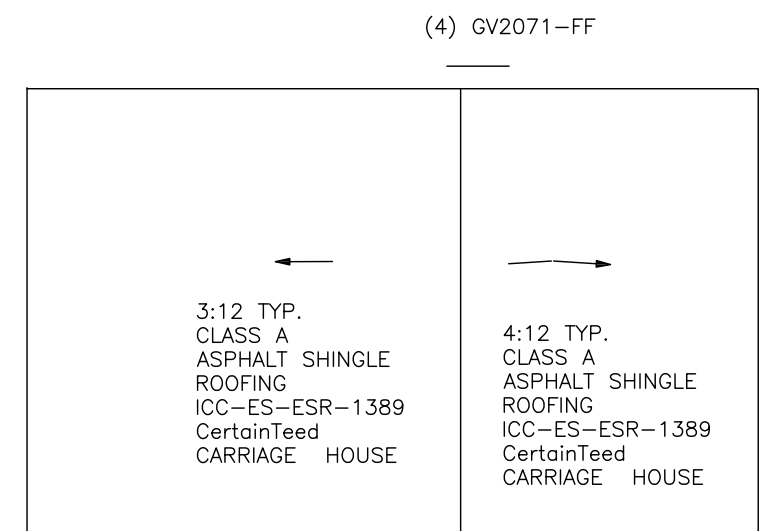


(e) paving/driveway:4000 sf
 (e) GARAGE footprint: 539 sf
 total (e) impervious area: 4539 sf
 new impervious area: 451 sf
 total disturbed area: 451 sf

BASELINE BMPs FOR POLLUTANT-GENERATING SOURCES	
SC-A	OVERHEAD COVERING
SC-B	SEPARATION OF FLOWS FROM ADJACENT AREAS
SC-C	WIND PROTECTION
SC-D	SANITARY SEWER
SC-E	CONTAINMENT SYSTEM
POTENTIAL RUNOFF POLLUTANTS:	
A	TRASH & REFUSE STORAGE
B	MATERIALS & EQUIPMENT STORAGE
C	LOADING & UNLOADING
D	FUELING
E	MAINTENANCE & REPAIR
F	VEHICLE & EQUIPMENT CLEANING
G	OTHER

In roof coverings where the profile creates space between the roof covering and combustible roof decking:
 PROVIDE Fire-stopping with approved materials (e.g., non-combustible birdstops for curved tile)
 ANY ROOF GUTTERS SHALL BE PROVIDED WITH MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS.
 paints, coatings, stains, or other surface treatments are not acceptable means of compliance with any wildfire-resistive construction requirement.



ROOF PLAN
 SCALE: 1"=10'

BMP LEGEND	
PDS 659	BROW DITCH
PDS 659	BERM
DIRECTION OF LOT DRAINAGE	
MATERIALS & WASTE MANAGEMENT BMPs:	
WM-1	MATERIAL DELIVERY & STORAGE
WM-4	SPILL PREVENTION AND CONTROL
WM-8	CONCRETE WASTE MANAGEMENT
WM-5	SOLID WASTE MANAGEMENT
WM-9	SANITARY WASTE MANAGEMENT
WM-6	HAZARDOUS WASTE MANAGEMENT
TEMPORARY RUNOFF CONTROL BMPs:	
SS-2	PRESERVATION OF EXISTING VEGETATION
SS-3	BONDED OR STABILIZED FIBER MATRIX (WINTER)
SS-4	HYDROSEEDING (SUMMER)
SS-8	STRAW OR WOOD MULCH
SS-7	PHYSICAL STABILIZATION (WINTER)
SS-10	ENERGY DISSIPATOR
SC-1	SILT FENCE
SC-2	SEDIMENT / DESILTING BASIN
SC-5	FIBER ROLLS
SC-6	GRAVEL OR SAND BAGS
SC-7	STREET SWEEPING AND VACUUMING
SC-10	STORM DRAIN INLET PROTECTION
NS-2	DEWATERING FILTRATION
TC-1	STABILIZED CONSTRUCTION ENTRANCE
TC-2	CONSTRUCTION ROAD STABILIZATION
TC-3	ENTRANCE / EXIT TIRE WASH
BASELINE BMPs FOR EXISTING AND PROPOSED SITE FEATURES	
SD-B	DIRECT RUNOFF TO PERVIOUS AREAS
SD-C	INSTALL GREEN ROOF
SD-E	INSTALL RAIN BARRELS
SD-G	CONSERVE NATURAL FEATURES
SD-H	PROVIDE BUFFERS AROUND WATER BODIES
SD-I	CONSTRUCT SURFACES FROM PERMEABLE MATERIALS
SD-K	SUSTAINABLE LANDSCAPING

SOILS:
 THE STRUCTURE WILL BE LOCATED ENTIRELY ON NATIVE UNDISTURBED SOIL. IF THE BUILDING INSPECTOR SUSPECTS FILL EXPANSIVE SOILS OR ANY GEOLOGIC INSTABILITY BASED UPON OBSERVATION OF THE FOUNDATION EXCAVATION, A SOILS OR GEOLOGICAL REPORT & RESUBMITTAL OF PLANS TO PLAN CHECK TO VERIFY THAT REPORT RECOMMENDATIONS HAVE BEEN INCORPORATED MAY BE REQUIRED.

occupancy:R-3
Number of stories:1
year built of existing house: 1950
OWNER: JG FITNESS CORPORATION INC
TEL: 619-558-4944

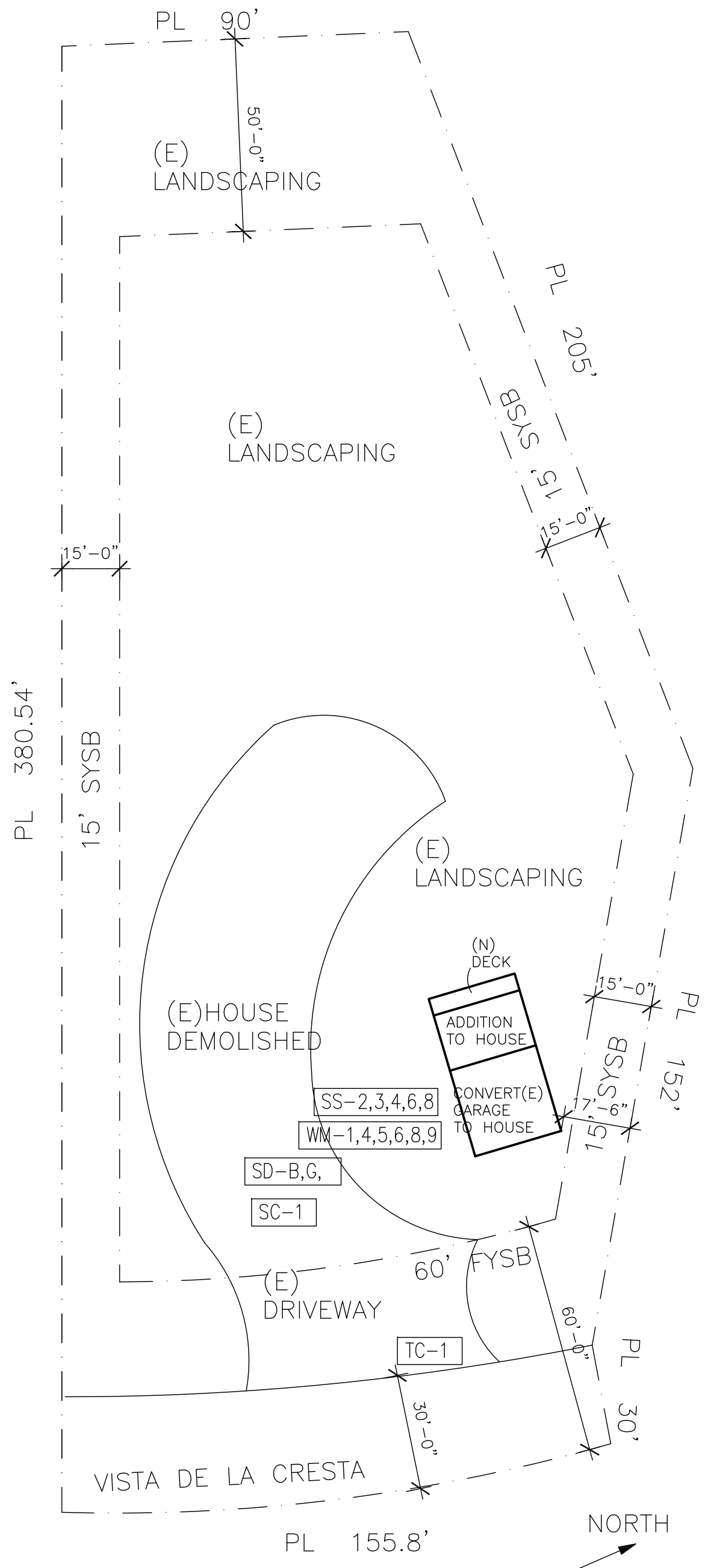
TOTAL SQUARE FOOTAGE OF LAND DISTURBANCE ACTIVITY: 451 SF

THE PROPERTY IS SERVICED BY PROPANE TANK

NO LANDSCAPING PROPOSED

THE INSPECTOR WILL RECHECK FOR EXPANSIVE SOILS AND/OR GRADING REQUIREMENTS AT FIRST FOUNDATION INSPECTION

SURFACE WATER WILL DRAIN AWAY FROM BUILDING AND SHOW DRAINAGE PATTERN. THE GRADE SHALL FALL A MINIMUM OF 6" WITHIN THE FIRST 10 FEET. IT DOES NOT APPLY WHEN STRUCTURE IS AT 5' FROM PROPERTY LINE



SITE PLAN
 SCALE: 1"=30'

SCOPE OF WORK:

CONVERT (E) garage TO HOUSE,
 ADDITION TO HOUSE, NEW DECK

A.P.N # 270-362-05-00
 ADDRESS:
 3381 VISTA DE LA CRESTA, ESCONDIDO, CA 92029
 CONSTRUCTION TYPE: V-B
 ZONING: RS

SITE DATA:
 existing lot: 52708 sq ft
 existing GARAGE : 539 sf
 CONVERT GARAGE TO HOUSE: 539 SF
 ADDITION TO HOUSE: 346 SF
 TOTAL HOUSE : 885 sf
 new DECK: 105 sf

THE CALCULATION IS BASED ON THE EXTERIOR DIMENSION OF THE OUTSIDE WALLS

EAVE PROJECTIONS MAY NOT ENCR OACH MORE THAN 2' INTO ALL REQUIRED YARDS

ALL PROPOSED BUILDINGS, STRUCTURES, ADDITIONS, MODIFICATIONS TO BUILDINGS/STRUCTURES MUST COMPLY WITH THE APPROVED LOCATION, AS SHOWN ON THE COUNTY APPROVED PLOT PLAN. AT THE DISCRETION OF THE COUNTY, THE PROPERTY OWNER MAY BE REQUIRED TO PROVIDE PROOF OF CURRENT PLACEMENT OF EACH ON THE PARCEL. THIS MAY INCLUDE A STAMPED AND SIGNED SETBACK CERTIFICATE PREPARED BY A CALIFORNIA LICENSED SURVEYOR OR CIVIL ENGINEER. (COUNTY BUILDING CODE 91.1.107.2)

Properly completed and signed Certificates of Installation (CF2R forms) shall be provided to the inspector in the field. For projects requiring HERS verification, the CF2R forms shall be registered with a California-approved HERS provider data registry.
 Properly completed Certificates of Verification (CF3R forms) shall be provided to the inspector in the field for items requiring HERS verification. CF3R forms shall be registered with a California-approved HERS provider data registry

SHEET INDEX

- A1 SITE PLAN / TITLE SHEET
- A2 FLOOR PLANS
- A3 ELEVATIONS
- A4 MANDATORY MEASURES
- T24 TITLE 24
- SN STRUCTURE NOTES
- S-1 STRUCTURE PLANS
- CS-1 COUNTY SPEC

THIS PROJECT SHALL COMPLY WITH THE FOLLOWING CODES AND ASSOCIATED COUNTY OF SAN DIEGO AMENDMENTS:

- 2022 California Residential Code
- 2022 CALIFORNIA BUILDING CODE
- 2022 California Electrical Code (CEC)..... Part 3, Title 24, CCR)
- 2022 California Mechanical Code (CMC)..... (Part 4, Title 24, CCR)
- 2022 California Plumbing Code (CPC).....(Part 5, Title 24, CCR)
- 2022 California Fire Code (CFC)..... (Part 9, Title 24, CCR)
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE(CALGREEN)
- 2022 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS

STORM WATER QUALITY NOTES

- CONSTRUCTION BMP'S**
 THIS PROJECT SHALL COMPLY WITH ALL REQUIREMENTS OF THE MUNICIPAL PERMIT ISSUED BY SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD (SDRWQCB) AND MUNICIPAL STORM WATER NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT ON JANUARY 24, 2007.
 (HTTP://DOCS.SANDIEGO.GOV/MUNICOCODE/MUNICOCODECHAPTER14/CH14/CH14ART02DIVISION02.PDF & STORM WATER MANUAL
 HTTP://WWW.SANDIEGO.GOV/DEVELOPMENT-SERVICES/PDF/NEWS/STORMWATERMANUAL.PDF)
 NOTES BELOW REPRESENT KEY MINIMUM REQUIREMENTS FOR CONSTRUCTION BMP'S.
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF ALL SILT & MUD ON ADJACENT STREET(S), DUE TO CONSTRUCTION VEHICLES OR ANY OTHER CONSTRUCTION ACTIVITY, AT THE END OF EACH WORK DAY, OR AFTER A STORM EVENT THAT CAUSES A BREACH IN INSTALLED CONSTRUCTION BMP'S WHICH MAY COMPROMISE STORM WATER QUALITY WITHIN ANY STREET (S). A STABILIZED CONSTRUCTION EXIT MAY BE REQUIRED TO PREVENT CONSTRUCTION VEHICLES OR EQUIPMENT FROM TRACKING MUD OR SILT ONTO THE STREET.
 2. ALL STOCKPILES OF SOIL &/OR BUILDING MATERIALS THAT ARE INTENDED TO BE LEFT FOR A PERIOD GREATER THAN 7 CALENDAR DAYS ARE TO BE COVERED. ALL REMOVABLE BMP DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN 5 DAY RAIN PROBABILITY FORECAST EXCEEDS 40%.
 3. A CONCRETE WASHOUT SHALL BE PROVIDED ON ALL PROJECTS WHICH PROPOSE THE CONSTRUCTION OF ANY CONCRETE IMPROVEMENTS WHICH ARE TO BE POURED IN PLACE ON SITE.
 4. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER AFTER EACH RUN-OFF PRODUCING RAINFALL OR AFTER ANY MATERIAL BREACH IN EFFECTIVENESS.
 5. ALL SLOPES THAT ARE CREATED OR DISTURBED BY CONSTRUCTION ACTIVITY MUST BE PROTECTED AGAINST EROSION AND SEDIMENT TRANSPORT AT ALL TIMES.
 6. THE STORAGE OF ALL CONSTRUCTION MATERIALS AND EQUIPMENT MUST BE PROTECTED AGAINST ANY POTENTIAL RELEASE OF POLLUTANTS INTO THE ENVIRONMENT.
- UPDATED 10/04/2013

ALL EXISTING "NONCOMPLIANT" FIXTURES (TOILETS THAT USE MORE THAN 1.6 GALLONS OF WATER PER FLUSH, URINALS THAT USE MORE THAN ONE GALLON OF WATER PER FLUSH, SHOWERHEADS THAT HAVE A FLOW CAPACITY OF MORE THAN 2.5 GALLONS OF WATER PER MINUTE, AND INTERIOR FAUCETS THAT EMIT MORE THAN 2.2 GALLONS OF WATER PER MINUTE) SHALL BE REPLACED. CERTIFICATION OF COMPLIANCE SHALL BE GIVEN TO THE BUILDING INSPECTOR PRIOR TO FINAL PERMIT APPROVAL. CALIFORNIA SB407



VICINITY MAP

PROJECT TITLE					
CONVERT GARAGE TO HOUSE					
3381 Vista De La Cresta, Escondido, CA 92029					
NO.	REVISIONS	DATE	NO.	REVISIONS	DATE
DRAWING TITLE					

PROJECT DATA/ SITE PLAN

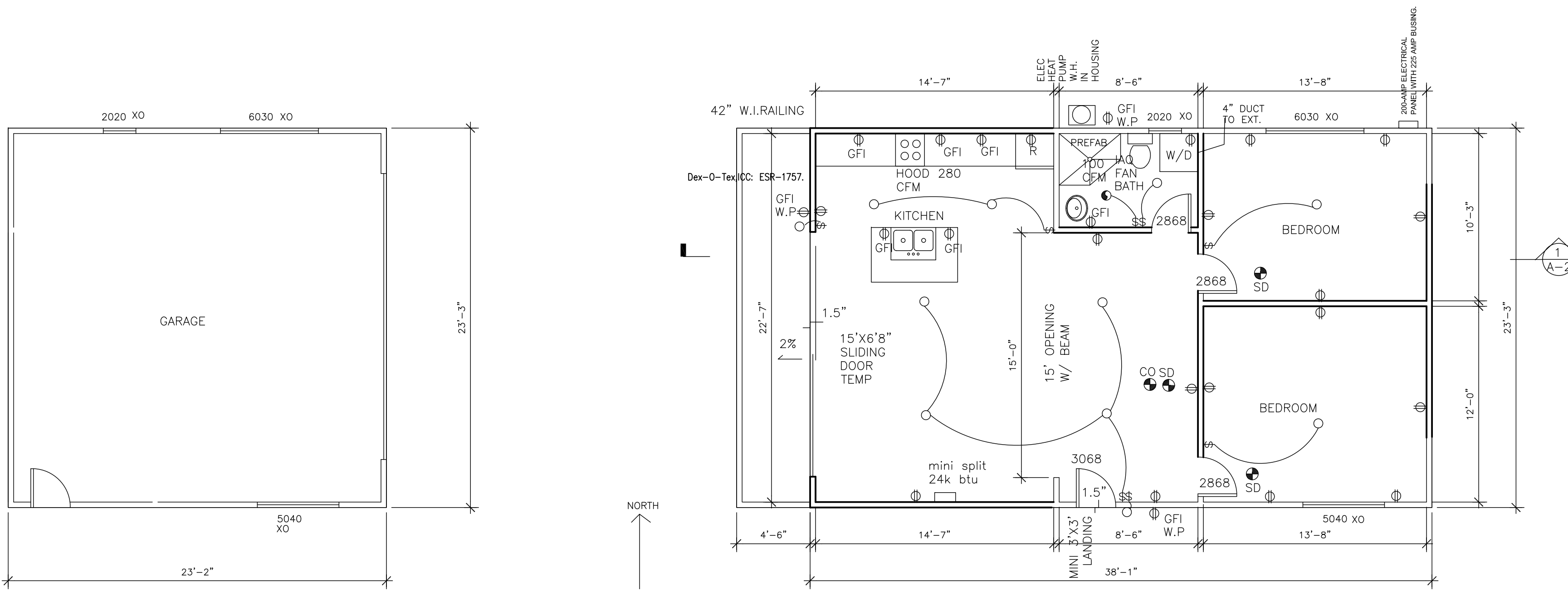
DESIGNED	PROJECT NO.
DRAWN	Project Number
Prod. Team	SCALE
CHECKED	DRAWING NO.
QC	A-1
DATE	
Submittal Date	OF --

"Provide Solar PV system under separate permit. System size to comply with energy compliance documentation."

PROPERTY IS CONNECTED TO ELECTRICAL GRID

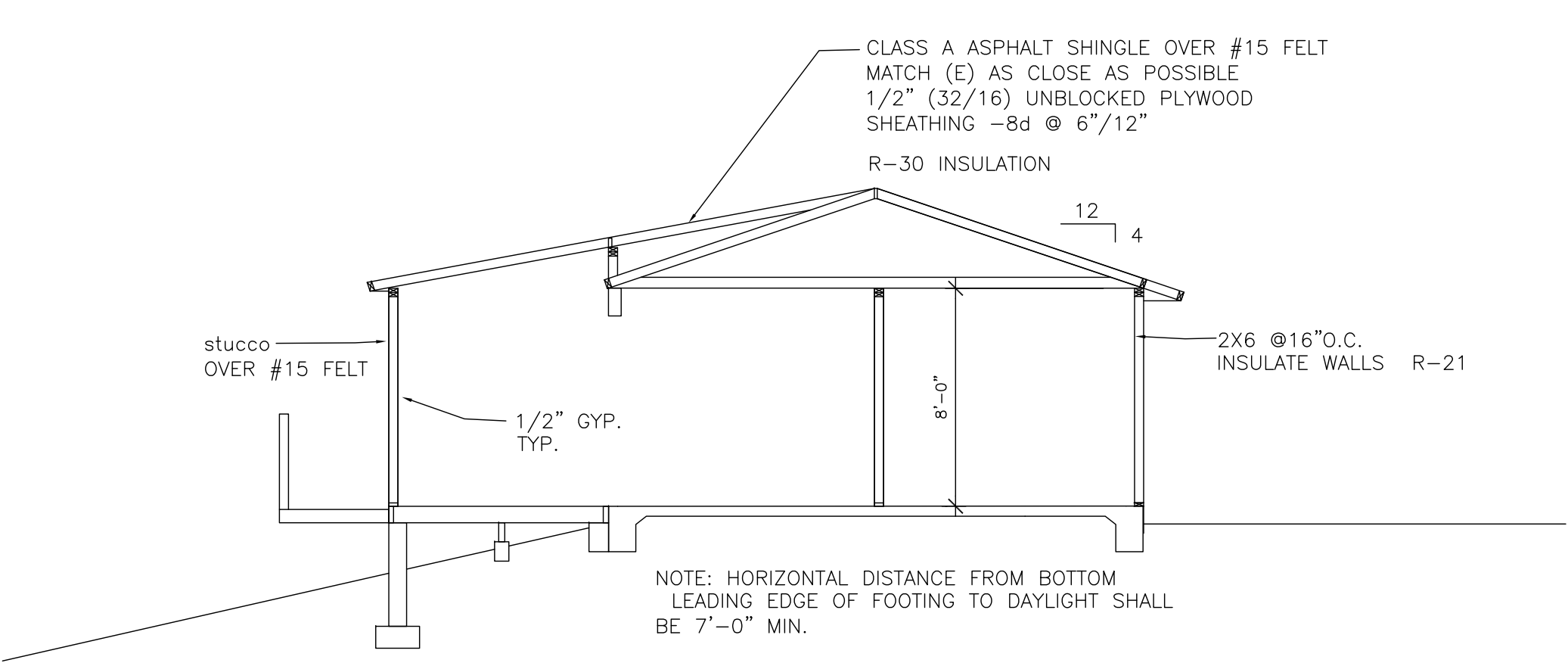
REQUIRED SPECIAL FEATURES FOR ADU:
 insulation below roof deck
 NORTHWEST ENERGY EFFICIENCY ALLIANCE RATED
 HEAT PUMP WATER HEATER, SPECIFIC BRAND/MODEL
 OR EQUIVALENT MUST BE INSTALLED.

HERS FEATURE SUMMARY FOR ADU:
 INDOOR AIR QUALITY VENTILATION
 KITCHEN RANGE HOOD
 VERIFIED HEAT PUMP RATED HEATING CAPACITY



EXISTING FLOOR PLAN
3/16"=1'-0"

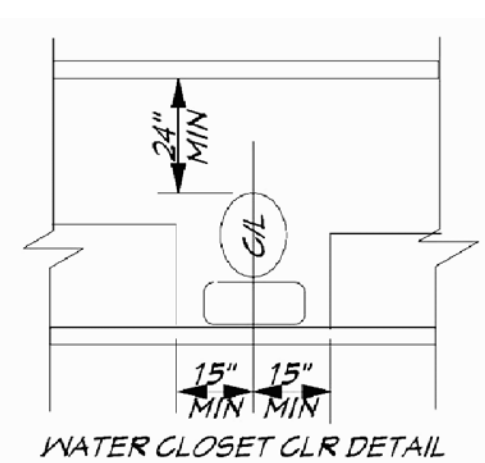
EXISTING FLOOR PLAN
3/16"=1'-0"



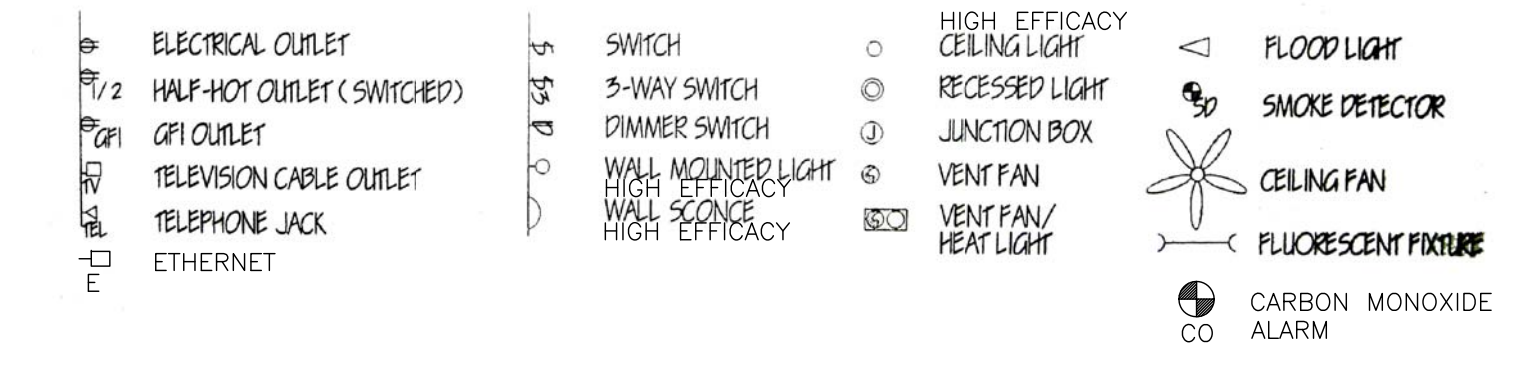
BUILDING SECTION
SCALE: 3/16"=1'-0"

- All luminaires shall be high-efficacy in accordance with CBEES Table 150.0.A
 - All LED luminaires and lamps shall be marked "JA8-2019" and listed in the California Energy Commission database at <https://cacerappliances.energy.ca.gov/Pages/ApplianceSearch.aspx>
 - All recessed downlight and enclosed luminaires shall be marked "JA8-2019-E" and listed in the California Energy Commission database at <https://cacerappliances.energy.ca.gov/Pages/ApplianceSearch.aspx>
 - Recessed downlight luminaires in ceilings shall not be screw-based
 - Bathrooms, garages, laundry rooms, and utility rooms: At least one luminaire in each space shall be controlled by a vacancy sensor
 - All luminaires requiring "JA8-2019" or "JA8-2019-E" marking shall be controlled by a dimmer or vacancy sensor
- Exception: Closets less than 70 sq ft
Exception: Hallways
- Outdoor lighting permanently mounted to building shall be controlled by One of the following:
 - Photocontrol and motion sensor
 - Photocontrol and automatic time-switch control
 - Astronomical time clock
 - Energy management control system per CBEES 150.0(4)(A)(iii)

NEW WINDOWS U VALUE: 0.30
SHGC: 0.23
RADIANT BARRIER SHALL BE INSTALLED BELOW ROOF DECK AND ON ALL GABLE END WALLS



ELECTRICAL LEGEND



27. AUTOMATIC IRRIGATION SYSTEMS CONTROLLERS INSTALLED AT THE TIME OF FINAL INSPECTION SHALL BE WEATHER-BASED.

28. ALL WATER CLOSETS SHALL HAVE AN EFFECTIVE FLUSH VOLUME OF NOT MORE THAN 1.28 GALLONS PER FLUSH. TANK TYPE WATER CLOSET SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR TANK-TYPE TOILETS. URINALS, SHALL HAVE AN EFFECTIVE FLUSH VOLUME NOT TO EXCEED 0.5 GALLONS PER FLUSH

29. FAUCETS, RESIDENTIAL LAVATORY FAUCETS SHALL HAVE A MAXIMUM RATE OF 1.2 GALLONS PER MINUTE AT 60 PSI AND A MINIMUM FLOW RATE OF NOT LESS THAN 0.8 GALLONS PER MIN. AT 20 PSI. FAUCET IN COMMON AND PUBLIC USE AREAS (OUTSIDE OF DWELLINGS OR SLEEPING UNITS) IN RESIDENTIAL BUILDINGS MUST HAVE A MAXIMUM FLOW RATE OF 0.5 GALLONS PER MINUTE AT 60 PSI. METERING FAUCETS WHEN INSTALLED IN RESIDENTIAL BUILDINGS MUST NOT DELIVER MORE THAN 0.25 GALLONS PER CYCLE.

30. A PLUMBING FIXTURE CERTIFICATION MUST BE COMPLETED AND SIGNED BY EITHER A LICENSED GENERAL CONTRACTOR, OR A PLUMBING SUBCONTRACTOR, OR THE BUILDING OWNER CERTIFYING THE FLOW RATE OF THE FIXTURES INSTALLED. A COPY OF THE CERTIFICATION CAN BE OBTAINED FROM THE DEVELOPMENT SERVICES DEPARTMENT

31. JOINTS AND OPENINGS, ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS, OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY

32. A MINIMUM OF 65 PERCENT OF THE CONSTRUCTION WASTE GENERATED AT THE SITE IS DIVERTED TO RECYCLE OR SALVAGE PER SECTION 4.408.1 AND CITY ORDINANCE

33. BEFORE FINAL INSPECTION, A COMPLETE OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OCCUPANT OR OWNER. CONTRACTOR OR OWNER SHALL SUBMIT AN AFFIDAVIT THAT CONFIRMS THE DELIVERY OF SUCH. (SECTION 4.410.1). A SAMPLE OF THE MANUAL IS AVAILABLE ON THE HOUSING AND COMMUNITY DEVELOPMENT (HCD) WEB SITE

34. LIGHTING IN BATHROOMS SHALL HAVE ALL HIGH EFFICACY LUMINAIRE AND AT LEAST ONE LUMINAIRE MUST BE CONTROLLED BY A VACANCY SENSOR.

35. KITCHENS: ALL THE INSTALLED WATTAGE OF LUMINAIRES IN KITCHENS SHALL BE HIGH EFFICACY AND SHALL HAVE A MANUAL ON/OFF IN ADDITION TO A VACANCY SENSOR OR DIMMER. UNDER CABINET LIGHTING SHALL BE SWITCHED SEPARATELY.

36. ALL PLUMBING FIXTURES AND FITTINGS WILL BE WATER CONSERVING AND WILL COMPLY WITH THE 2022 CGBSC

37. PROVIDE LAVATORY FAUCETS WITH A MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE

38. EXHAUST DUCTS AND DRYER VENTS SHALL BE EQUIPPED WITH BACK DRAFT DAMPERS.

39. VENTS PROHIBITED IN EAVES. EAVE OVERHANGS, SOFFITS, OR CORNICES, (COUNTY BUILDING CODE 92.1.706A.2) EXCEPTION: APPROVED VENTS RESISTING INTRUSION OF FLAMES AND EMBERS
EXCEPTION: GABLE-END VENTS ALLOWED IF LOCATED MINIMUM 12 INCHES BELOW LOWEST EAVE/RAKE PROJECTION
EXCEPTION: AS ALLOWED BY BUILDING OFFICIAL AND LOCAL FIRE AUTHORITY AND PER EAVE DETAILS IN FORM PDS #198

40. EXTERIOR WINDOWS, EXTERIOR GLAZED DOORS, GLAZED OPENINGS WITHIN EXTERIOR DOORS, AND GLAZED OPENINGS WITHIN EXTERIOR GARAGE DOORS COMPLYING WITH ONE OF THE FOLLOWING (COUNTY BUILDING CODE 92.1.708A.2)

- a. MULTI-PANED GLAZING WITH A MINIMUM ONE TEMPERED PANE (GLAZING FRAMES MADE OF VINYL MATERIALS SHALL HAVE WELDED CORNERS, METAL REINFORCEMENT IN INTERLOCK AREA, AND BE CERTIFIED TO ANSI AAMA NW 1011 / S.2-97 STRUCTURAL REQUIREMENTS)
- b. GLASS BLOCK UNITS
- c. MINIMUM 20-MINUTE FIRE-RATED (PROVIDE LISTING OR TEST REPORT)
- d. MEET PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-2

41. EXTERIOR DOORS COMPLYING WITH ONE OF THE FOLLOWING: (COUNTY BUILDING CODE 92.1.708A.3)

- a. EXTERIOR SURFACE OR CLADDING OF NONCOMBUSTIBLE OR IGNITION-RESISTANT MATERIAL
 - b. SOLID-CORE WOOD MINIMUM 1-3/8 INCH THICK
 - c. MINIMUM 20-MINUTE FIRE-RATED
- MEET PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-1

42. exposed valley flashings shall be constructed with not less than 0.019-inch (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide underlayment consisting of one layer of No. 72 ASTM cap sheet running the full length of the valley. (County Building Code 92.1.705A.3)

43. gage corrosion-resistant metal installed over a minimum 36-inch-wide underlayment consisting of one layer of No. 72 ASTM cap sheet running the full length of the valley. (County Building Code 92.1.705A.3)

44. skylights shall be tempered glass. (County Building Code 92.1.705A.5)

45. all vents (roof, foundation, combustion-air, etc.) shall resist the intrusion of flames and embers. (County Building Code 92.1.706A.1)

46. Ventilation openings for enclosed attics, eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, underfloor ventilation openings, and vent openings in exterior walls and exterior doors shall be listed to ASTM E 2886 and comply with all of the following: (County Building Code 92.1.706A.2, 92.1.707A.5)

- a. There shall be no flaming ignition of the carbon material during the Ember Intrusion Test.
 - b. There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test.
- The maximum temperature of the unexposed side of the vent shall not exceed 662 degrees Fahrenheit (350 degrees Celsius)

47. exterior windows, exterior glazed doors, glazed openings within exterior doors, glazed openings within exterior garage doors, and exterior structural glass veneer complying with ONE OF THE FOLLOWING (County Building Code 92.1.708A.2):

- a. Multi-pane glazing with a minimum of one tempered pane meeting the requirements of Section 2406 Safety Glazing, and where any glazing frames made of vinyl materials shall have welded corners, metal reinforcement in interlock area, and be certified to AAMA NWDM/CSA 1011 / S.2A440.
- b. Glass block units
- c. Minimum 20-minute fire-resistance-rated (provide listing or test report)
- d. Meet performance requirements of SFM Standard 12-7 A-2

48. exterior doors complying with One of the following (County Building Code 92.1.708A.3):

- a. Exterior surface or cladding of noncombustible or ignition-resistant material
- b. Solid-core wood minimum 1-3/8 inches thick complying with the following:
 1. Sillies and rails minimum 1-3/8 inches thick.
 2. Raised panels minimum 1-1/4 inches thick.

Exception: Exterior perimeter of raised panels may taper to a tongue minimum 3/8 inches thick.
c. Minimum 20-minute fire-resistance-rated when tested per NFPA 252.

d. Meet performance requirements of SFM Standard 12-7A-1

49. paper-faced insulation prohibited in attics or other ventilated spaces

50. any portion of a fence or other structure within five feet of building shall be constructed per one of the following (County Building Code 92.1.712A.1):

- Exception: Vinyl fencing as allowed by building official
- a. Noncombustible material
- b. Approved exterior fire-retardant treated wood
- c. Material meeting same fire-resistive standards as exterior walls of building

51. paints, coatings, stains, or other surface treatments are not acceptable means of compliance with any wildfire-resistive construction requirement.

52. exterior garage doors shall resist the intrusion of embers into the garage by limiting the size of any gaps at the bottom, sides, and top of the door to 1/8 inch or less using one of the following methods: (CRC R337.8.1, CBC 708A.4)

- a. Weather-stripping products with tensile strength and flammability rating per CBC 708A.4
- b. Door overlaps onto jambs and headers.
- c. Garage door jambs and headers covered with metal flashing.

NOTE:
1. IN SHOWERS AND TUB-SHOWER COMBINATIONS, CONTROL VALVES MUST BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES. 1.8 GPM.

2. NEW WATER CLOSET AND ASSOCIATED FLOWMETER VALVES, SHALL USE NO MORE THAN 1.28 GALLONS PER FLUSH AND SHALL MEET PERFORMANCE STANDARDS ESTABLISHED BY ANSI STANDARD A112.19.2

3. o) IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS ALL FIXTURES MUST BE HIGH EFFICACY STYLE OR BE CONTROLLED BY A MANUALLY-ON OCCUPANCY SENSOR.
NOTE: GENERALLY A HIGH EFFICACY STYLE OF FIXTURE IS FLOURESCENT COMPLETE WITH ELECTRONIC BALLASTS. REGULAR INCANDESCENT, QUARTZ HALOGEN AND HALOGEN MR LAMPS DO NOT COMPLY.

4. ALL ABS AND PVC PIPING AND FITTINGS SHALL BE ENCLOSED WITHIN WALLS AND FLOORS COVERED WITH TYPE X GYP. BD. OR SIMILAR ASSEMBLIES THAT PROVIDES THE SAME LEVEL OF FIRE PROTECTION. PROTECTION OF MEMBRANE PENETRATIONS IS NOT REQUIRED.

5. SMOKE ALARM WILL BE INSTALLED ACCORDING TO THE 2022 CRC SECTION R314

6. CARBON MONOXIDE ALARMS WILL BE INSTALLED ACCORDING TO THE 2022 CRC SECTION 315

7. TAMPER RESISTANT RECEPTACLES ARE REQUIRED EVERYWHERE IN DWELLING UNITS PER THE 2022 CEC ARTICLE 406.11 TAMPER RESISTANT RECEPTABLES IN DWELLING UNITS.

8. PLUMBING FIXTURES MUST MATCH THE CURRENT 2022 CPC SECTION 402 WATER-CONSERVING FIXTURES AND FITTINGS.

9. NOT USED
10. Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower compartments shall be finished with a nonabsorbent surface. Such wall surfaces shall extend to a height of not less than 6 feet above the floor.

11. provide landing to all exterior doors. The minimum depth is 36" the minimum width is equal to the width of the door; and the maximum drop is 7/16". Exterior landings shall have a slope not to exceed 1/4 units vertical in 12 units horizontal (2-percent).

12. All smoke alarms shall be listed in accordance with UL 217 and shall be in accordance with the provisions of the governing CRC and the household fire warning equipment provisions of NFPA 72. Systems and components shall be California State Fire Marshal listed and approved in accordance with CCR, Title 19, Division 1 for the purpose for which they are installed.

13. Single- and multiple-station carbon monoxide alarms shall be listed as complying with the requirements of UL 2034. Carbon monoxide detectors shall be listed as complying with the requirements of UL 2075.

14. where more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit

15. Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit the alarm shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.

16. Smoke alarms shall receive their primary power from the building wiring provided that such wiring is served from a commercial source and shall be equipped with a battery back-up. Smoke alarms with integral strobes that are not equipped with battery back-up shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low

17. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery back-up. Alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection

18. Provide lavatory faucets with a maximum flow of 1.2 gallons per minute (GPM)

19. Provide shower heads with a maximum flow of 1.8 gallons per minute (GPM)

20. Permanent vacuum breakers shall be included with all new hose bibbs.

21. Provide ultra low flush toilets

22. Provide 5 air changes per hour for bathroom and laundry room ventilation.

24. all Plumbing Fixtures and Fittings will be water conserving and will comply with the 2022 CGBSC Sec. 4.303.1

25. PER 2016 CGBSC, PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE (CPC).

26. PER 2016 GREEN CODE, MECHANICAL EXHAUST FANS WHICH EXHAUST DIRECTLY FROM BATHROOMS SHALL COMPLY WITH THE FOLLOWING:
1. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING.
2. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDISTAT WHICH SHALL BE READILY ACCESSIBLE. HUMIDISTAT CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 TO 80 PERCENT."

26. ALL LUMINAIRES SHALL EITHER BE HIGH EFFICACY OR SHALL BE CONTROLLED BY AN OCCUPANT SENSOR OR DIMMER. CLOSET THAT ARE LESS THAN 70 SQUARE FOOT ARE EXEMPT FROM THIS REQUIREMENTS.

27. OUTDOOR LIGHTING: ALL LUMINAIRES MOUNTED TO THE BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY LUMINAIRES OR MUST BE CONTROLLED BY A MOTION SENSOR AND CONTROLLED BY ONE OF THESE: PHOTOCONTROL OR ASTRONOMICAL TIME CLOCK OR ENERGY MANAGEMENT CONTROL SYSTEM

PROJECT TITLE

CONVERT GARAGE TO HOUSE

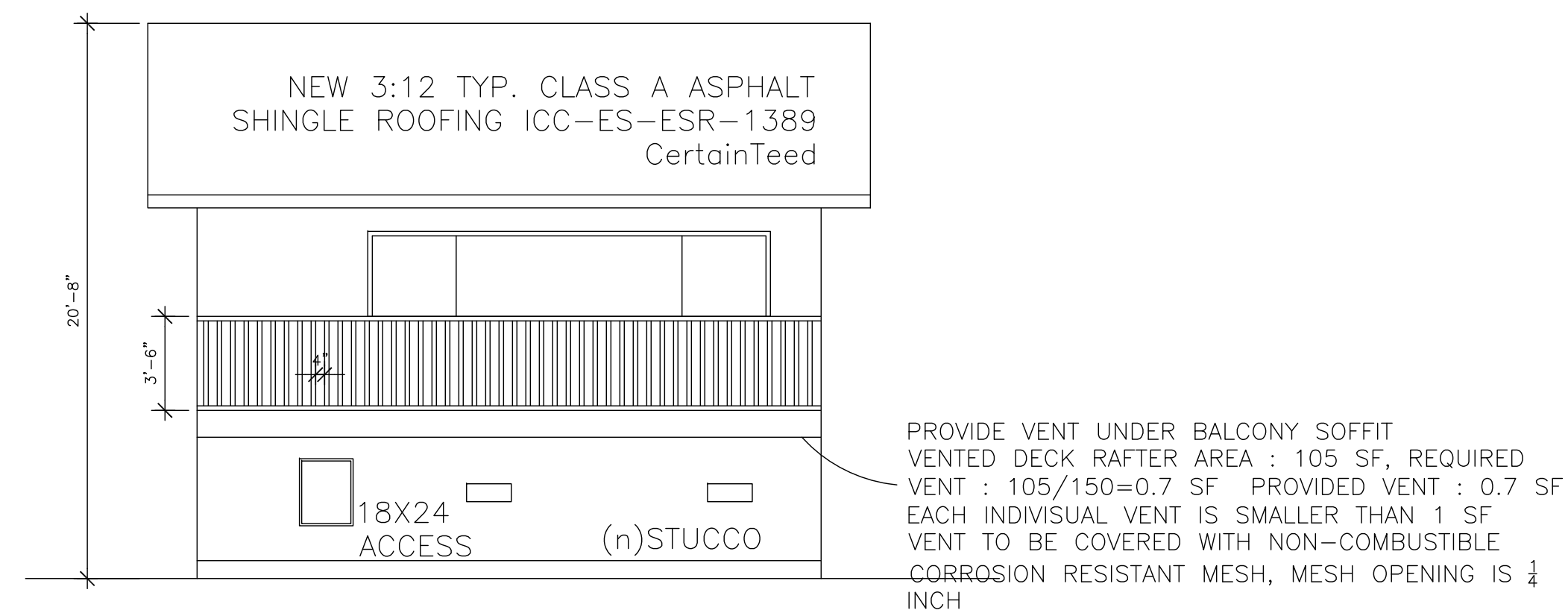
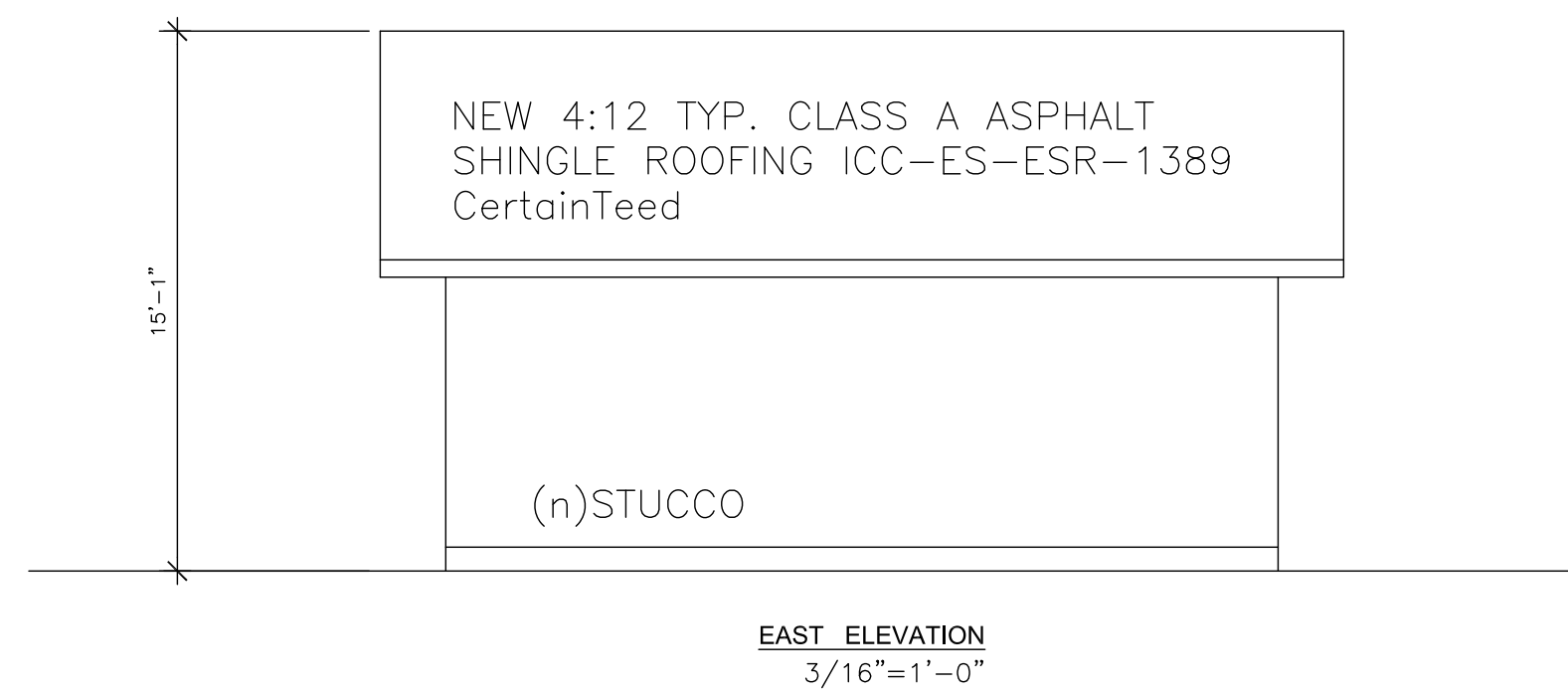
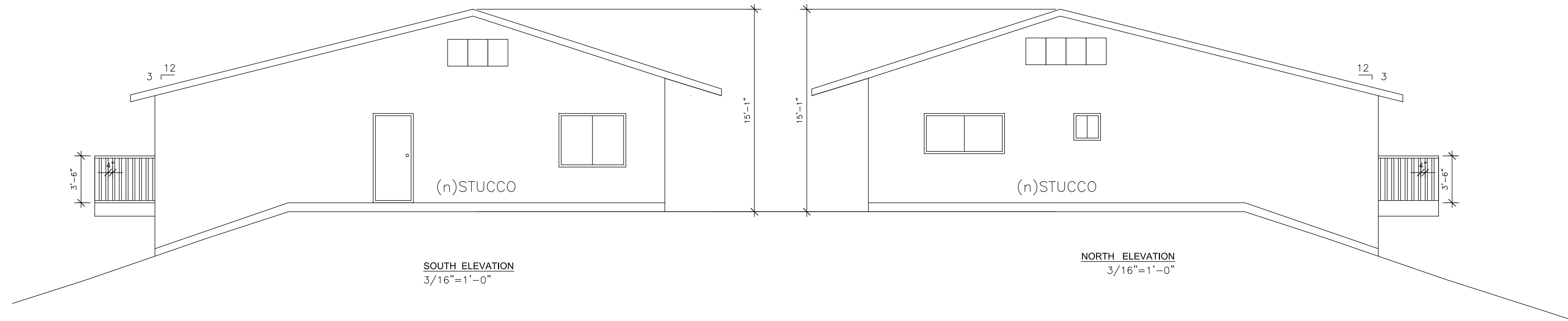
3381 Vista De La Cresta, Escondido, CA 92029

NO.	REVISIONS	DATE	NO.	REVISIONS	DATE

DRAWING TITLE

FLOOR PLANS

DESIGNED	PROJECT NO.
	Project Number
DRAWN	SCALE
Prod. Team	
CHECKED	DRAWING NO.
QC	A-2
DATE	OF --
Submittal Date	



WEST ELEVATION
3/16"=1'-0"

VENTED CRAWL SPACE AREA : 346 SF, REQUIRED VENT : 346/150=2.3 SF PROVIDED VENT : 2.3 SF EACH INDIVIDUAL VENT IS SMALLER THAN 1 SF VENT TO BE COVERED WITH NON-COMBUSTIBLE CORROSION RESISTANT MESH, MESH OPENING IS 1/4 INCH

13. AGING-IN-PLACE AND FALL PREVENTION DESIGN:

a. REINFORCEMENT FOR GRAB BARS: AT LEAST ONE BATHROOM ON THE ENTRY LEVEL SHALL BE PROVIDED WITH REINFORCEMENT INSTALLED IN ACCORDANCE WITH SECTION R327.1.1. REINFORCEMENT SHALL BE MINIMUM 2X8 SOLID LUMBER, LOCATED BETWEEN 32" AND 39-1/2" ABOVE THE FINISHED FLOOR FLUSH WITH WALL FRAMING ON BOTH SIDE WALLS OF THE FIXTURE.

b. ELECTRICAL OUTLETS, SWITCH, AND CONTROL HEIGHTS SHALL BE LOCATED NO MORE THAN 48" MEASURED FROM THE TOP OF THE OUTLET BOX AND NOT LESS THAN 15" MEASURED FROM THE BOTTOM OF THE OUTLET BOX ABOVE THE FINISHED FLOOR (SECTION R327.1.2). SHOW DIMENSION ON ELEVATION.

c. DOORBELL BUTTONS SHALL NOT EXCEED 48" ABOVE EXTERIOR FLOOR OR LANDING. (SECTION R327.1.4). SHOW DIMENSION ON ELEVATION.

D. INTERIOR DOORS EFFECTIVE JULY 1, 2024, AT LEAST ONE BATHROOM AND ONE BEDROOM ON THE ENTRY LEVEL SHALL PROVIDE A DOORWAY WITH A NET CLEAR OPENING OF NOT LESS THAN 32 INCHES, MEASURED WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM THE CLOSED POSITION; OR, IN THE CASE OF A TWO- OR THREE-STORY SINGLE FAMILY DWELLING, ON THE SECOND OR THIRD FLOOR OF THE DWELLING IF A BATHROOM OR BEDROOM IS NOT LOCATED ON THE ENTRY LEVEL

ENERGY STORAGE SYSTEMS (ESS) READY. APPLIES TO ALL SINGLE-FAMILY RESIDENCES THAT INCLUDE ONE OR TWO DWELLING UNITS.

a. MANDATORY (CBEEES 150.0(S)):

: NOTE ON PLANS THE FOLLOWING: ENERGY STORAGE SYSTEMS (ESS) SHALL MEET THE FOLLOWING:

1. AT LEAST ONE OF THE FOLLOWING SHALL BE PROVIDED:
 - A. ESS READY INTERCONNECTION EQUIPMENT WITH A MINIMUM BACKED-UP CAPACITY OF 60 AMPS AND A MINIMUM OF FOUR ESS-SUPPLIED BRANCH CIRCUITS, OR
 - B. A DEDICATED RACEWAY FROM THE MAIN SERVICE TO A PANELBOARD (SUBPANEL) THAT SUPPLIES THE BRANCH CIRCUITS IN SECTION 150.0(S)(2). ALL BRANCH CIRCUITS ARE PERMITTED TO BE SUPPLIED BY THE MAIN SERVICE PANEL PRIOR TO THE INSTALLATION OF AN ESS. THE TRADE SIZE OF THE RACEWAY SHALL BE NOT LESS THAN ONE INCH. THE PANELBOARD THAT SUPPLIES THE BRANCH CIRCUITS (SUBPANEL) MUST BE LABELED "SUBPANEL SHALL INCLUDE ALL BACKED-UP LOAD CIRCUITS."
2. A MINIMUM OF FOUR BRANCH CIRCUITS SHALL BE IDENTIFIED AND HAVE THEIR SOURCE OF SUPPLY COLLOCATED AT A SINGLE PANELBOARD SUITABLE TO BE SUPPLIED BY THE ESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS, AND AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.
3. THE MAIN PANELBOARD SHALL HAVE A MINIMUM BUSBAR RATING OF 225 AMPS.
4. SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEM ISOLATION EQUIPMENT TRANSFER SWITCH WITHIN 3 FEET OF THE MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD AND THE SYSTEM ISOLATION EQUIPMENT TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF BACKUP POWER SOURCE.

PROJECT TITLE

CONVERT GARAGE TO HOUSE

3381 Vista De La Cresta, Escondido, CA 92029

NO.	REVISIONS	DATE	NO.	REVISIONS	DATE

DRAWING TITLE

ELEVATIONS

DESIGNED	PROJECT NO. Project Number
DRAWN Prod. Team	SCALE
CHECKED QC	DRAWING NO. A-3
DATE Submittal Date	OF --



2022 Single-Family Residential Mandatory Requirements Summary

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.

Table with 2 columns: Code Reference and Requirement Description. Includes sections for Building Envelope, Fireplaces, Space Conditioning, and Solar Readiness.

5/6/22



2022 Single-Family Residential Mandatory Requirements Summary

Table with 2 columns: Code Reference and Requirement Description. Includes sections for Electric and Energy Storage Ready, and Solar Readiness.

5/6/22



2022 Single-Family Residential Mandatory Requirements Summary

Table with 2 columns: Code Reference and Requirement Description. Includes sections for Pilot Lights, Building Cooling and Heating Loads, Clearances, Liquid Line Drier, Water Piping, Insulation Protection, Gas or Propane Water Heating Systems, Solar Water Heating Systems, Ducts and Fans, CMC Compliance, UV Light, Backdraft Damper, Gravity Ventilation Devices, Protection of Insulation, Prewire Inner Core Fix Duct, Duct System Sealing and Leakage Test, Air Filtration, and Electric Clothes Dryer Ready.

5/6/22



2022 Single-Family Residential Mandatory Requirements Summary

Table with 2 columns: Code Reference and Requirement Description. Includes sections for Energy Storage System (ESS) Ready, Heat Pump Space Heater Ready, Electric Cooktop Ready, and Electric Clothes Dryer Ready.

*Exceptions may apply.



2022 Single-Family Residential Mandatory Requirements Summary

Table with 2 columns: Code Reference and Requirement Description. Includes sections for Space Conditioning System Airflow Rate and Fan Efficacy, Ventilation and Indoor Air Quality, Pool and Spa Systems and Equipment, and Lighting.

5/6/22

Table with 2 columns: PROJECT TITLE and DRAWING TITLE. PROJECT TITLE: CONVERT GARAGE TO HOUSE. DRAWING TITLE: MANDATORY MEASURES.

Table with 2 columns: DESIGNED and CHECKED. Includes fields for Project No., Scale, Drawing No., and Date.

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: NEW HOUSE Calculation Date/Time: 2024-06-15T18:21:15-07:00 (Page 1 of 10)
Calculation Description: Title 24 Analysis Input File Name: 3381 VISTA DE LA CRESTA, ESCONDIDO CA 92029 NEW HOUSE.rbd22x

GENERAL INFORMATION table with 12 columns and 22 rows detailing project location, standards, climate zone, building type, and construction details.

COMPLIANCE RESULTS table with 3 rows detailing building compliance with computer performance and field testing requirements.

Registration Number: 224-P010076077A-000-000-0000000-0000 Registration Date/Time: 2024-06-17 12:41:44 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-06-15 18:21:45

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: NEW HOUSE Calculation Date/Time: 2024-06-15T18:21:15-07:00 (Page 4 of 10)
Calculation Description: Title 24 Analysis Input File Name: 3381 VISTA DE LA CRESTA, ESCONDIDO CA 92029 NEW HOUSE.rbd22x

ENERGY USE INTENSITY table with 5 columns: Standard Design, Proposed Design, Compliance Margin, and Margin Percentage.

Notes: 1. Gross EUI is Energy Use Total (not including PV) / Total Building Area. 2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED PV SYSTEMS table with 12 columns detailing DC System Size, Exception, Module Type, Array Type, Power Electronics, and other PV system parameters.

REQUIRED SPECIAL FEATURES: The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

HERS FEATURE SUMMARY: The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis.

Registration Number: 224-P010076077A-000-000-0000000-0000 Registration Date/Time: 2024-06-17 12:41:44 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-06-15 18:21:45

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: NEW HOUSE Calculation Date/Time: 2024-06-15T18:21:15-07:00 (Page 7 of 10)
Calculation Description: Title 24 Analysis Input File Name: 3381 VISTA DE LA CRESTA, ESCONDIDO CA 92029 NEW HOUSE.rbd22x

OPAQUE SURFACE CONSTRUCTIONS table with 8 columns detailing Construction Name, Surface Type, Construction Type, Framing, Total Cavity R-value, and Assembly Layers.

BUILDING ENVELOPE - HERS VERIFICATION table with 5 columns detailing Quality Insulation Installation (QII), High R-value Spray Foam Insulation, and Building Envelope Air Leakage.

WATER HEATING SYSTEMS table with 9 columns detailing Name, System Type, Distribution Type, Water Heater Name, Number of Units, Solar Heating System, Compact Distribution, HERS Verification, and Water Heater Name (H).

Registration Number: 224-P010076077A-000-000-0000000-0000 Registration Date/Time: 2024-06-17 12:41:44 HERS Provider: CalCERTS Inc.
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: NEW HOUSE Calculation Date/Time: 2024-06-15T18:21:15-07:00 (Page 2 of 10)
Calculation Description: Title 24 Analysis Input File Name: 3381 VISTA DE LA CRESTA, ESCONDIDO CA 92029 NEW HOUSE.rbd22x

ENERGY DESIGN RATINGS table with 7 columns detailing Energy Design Ratings and Compliance Margins for Standard and Proposed Design.

RESULT: PASS
Efficiency EDR includes improvements like a better building envelope and more efficient equipment. Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries.

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CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-06-15 18:21:45

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: NEW HOUSE Calculation Date/Time: 2024-06-15T18:21:15-07:00 (Page 5 of 10)
Calculation Description: Title 24 Analysis Input File Name: 3381 VISTA DE LA CRESTA, ESCONDIDO CA 92029 NEW HOUSE.rbd22x

BUILDING - FEATURES INFORMATION table with 7 columns detailing Project Name, Conditioned Floor Area, Number of Dwelling Units, Number of Bedrooms, Number of Zones, Number of Ventilation Cooling Systems, and Number of Water Heating Systems.

ZONE INFORMATION table with 7 columns detailing Zone Name, Zone Type, HVAC System Name, Zone Floor Area, Avg. Ceiling Height, Water Heating System 1, and Status.

OPAQUE SURFACES table with 8 columns detailing Name, Zone, Construction, Azimuth, Orientation, Gross Area, Window and Door Area, and Tilt.

ATTIC table with 8 columns detailing Name, Construction, Type, Roof Rise, Roof Reflectance, Roof Emittance, Radiant Barrier, and Cool Roof.

Registration Number: 224-P010076077A-000-000-0000000-0000 Registration Date/Time: 2024-06-17 12:41:44 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-06-15 18:21:45

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: NEW HOUSE Calculation Date/Time: 2024-06-15T18:21:15-07:00 (Page 8 of 10)
Calculation Description: Title 24 Analysis Input File Name: 3381 VISTA DE LA CRESTA, ESCONDIDO CA 92029 NEW HOUSE.rbd22x

WATER HEATERS - NEEA HEAT PUMP table with 8 columns detailing Name, # of Units, Tank Vol., NEEA Heat Pump Brand, NEEA Heat Pump Model, Tank Location, Duct Inlet Air Source, and Duct Outlet Air Source.

WATER HEATING - HERS VERIFICATION table with 7 columns detailing Name, Pipe Insulation, Parallel Piping, Compact Distribution, Compact Distribution Type, Recirculation Control, and Shower Drain Water Heat Recovery.

SPACE CONDITIONING SYSTEMS table with 9 columns detailing Name, System Type, Heating Unit Name, Heating Equipment Count, Cooling Unit Name, Cooling Equipment Count, Fan Name, Distribution Name, and Required Thermostat Type.

HVAC - HEAT PUMPS table with 13 columns detailing Name, System Type, Number of Units, Heating Efficiency Type, HSPF/HSP2/SEER2, Cap 47, Cap 17, Cooling Efficiency Type, SEER/SEER2, EER/EEER2/CEER, Zonally Controlled, Compressor Type, and HERS Verification.

Registration Number: 224-P010076077A-000-000-0000000-0000 Registration Date/Time: 2024-06-17 12:41:44 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-06-15 18:21:45

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: NEW HOUSE Calculation Date/Time: 2024-06-15T18:21:15-07:00 (Page 3 of 10)
Calculation Description: Title 24 Analysis Input File Name: 3381 VISTA DE LA CRESTA, ESCONDIDO CA 92029 NEW HOUSE.rbd22x

ENERGY USE SUMMARY table with 7 columns detailing Energy Use, Standard Design Source Energy, Standard Design TDV Energy, Proposed Design Source Energy, Proposed Design TDV Energy, Compliance Margin (EDR1), and Compliance Margin (EDR2).

Registration Number: 224-P010076077A-000-000-0000000-0000 Registration Date/Time: 2024-06-17 12:41:44 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-06-15 18:21:45

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: NEW HOUSE Calculation Date/Time: 2024-06-15T18:21:15-07:00 (Page 6 of 10)
Calculation Description: Title 24 Analysis Input File Name: 3381 VISTA DE LA CRESTA, ESCONDIDO CA 92029 NEW HOUSE.rbd22x

FINESTRATION / GLAZING table with 14 columns detailing Name, Type, Surface, Orientation, Azimuth, Width, Height, Mult., Area, U-factor, U-factor Source, SHGC, SHGC Source, and Exterior Shading.

SLAB FLOORS table with 8 columns detailing Name, Zone, Area, Perimeter, Edge Insul. R-value and Depth, Edge Insul. R-value and Depth, Carpeted Fraction, and Heated.

OPAQUE SURFACE CONSTRUCTIONS table with 8 columns detailing Construction Name, Surface Type, Construction Type, Framing, Total Cavity R-value, Interior / Exterior Continuous R-value, U-factor, and Assembly Layers.

Registration Number: 224-P010076077A-000-000-0000000-0000 Registration Date/Time: 2024-06-17 12:41:44 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-06-15 18:21:45

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: NEW HOUSE Calculation Date/Time: 2024-06-15T18:21:15-07:00 (Page 9 of 10)
Calculation Description: Title 24 Analysis Input File Name: 3381 VISTA DE LA CRESTA, ESCONDIDO CA 92029 NEW HOUSE.rbd22x

HVAC HEAT PUMPS - HERS VERIFICATION table with 9 columns detailing Name, Verified Airflow, Airflow Target, Verified EER/EEER2, Verified SEER/SEER2, Verified Refrigerant Charge, Verified HSPF/HSPF2, Verified Heating Cap 47, and Verified Heating Cap 17.

INDOOR AIR QUALITY (IAQ) FANS table with 9 columns detailing Dwelling Unit, Airflow (CFM), Fan Efficacy (W/CFM), IAQ Fan Type, Includes Heat/Energy Recovery?, IAQ Recovery Effectiveness - SRE/ASRE, Includes Fault Indicator Display?, HERS Verification, and Status.

Registration Number: 224-P010076077A-000-000-0000000-0000 Registration Date/Time: 2024-06-17 12:41:44 HERS Provider: CalCERTS Inc.
CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-06-15 18:21:45

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Lei Huang	Documentation Author Signature: <i>Lei Huang</i>
Company: Ray Drafting	Signature Date: 2024-06-17 12:41:44
Address: 1619 Golden Gate Ave	CAU/HERS Certification Identification (if applicable):
City/State/Zip: Chula Vista, CA 91913	Phone: 858-380-6125

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury under the laws of the State of California:

- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
- I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: Lei Huang	Responsible Designer Signature: <i>Lei Huang</i>
Company: Ray Drafting	Date Signed: 2024-06-17 12:41:44
Address: 1619 Golden Gate Ave	License: 074599
City/State/Zip: Chula Vista, CA 91913	Phone: 858-380-6125

Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.



Registration Number: 224-PO10076077A-000-000-0000000-0000

Registration Date/Time: 2024-06-17 12:41:44

HERS Provider: CalCERTS Inc.

CA Building Energy Efficiency Standards - 2022 Residential Compliance

Report Version: 2022.0.000
Schema Version: rev 20220901

Report Generated: 2024-06-15 18:21:45

GENERAL STRUCTURAL NOTES

GENERAL

- CONTRACTORS AT THE JOB SITE, AND SHALL BE RESPONSIBLE FOR CONDITIONS OF ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY SUB-CONTRACTORS. STRUCTURAL ENGINEER OF RECORD SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- ALL MATERIALS AND WORKMANSHIP SHALL BE PERFORMED IN ACCORDANCE WITH 2022 CALIFORNIA BUILDING CODE.
- ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS.
- NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
- WHERE NO DETAILS SHOWN OR NOTED ON THE DRAWINGS, THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
- OPENINGS, POCKETS, SLEEVES, ETC., SHALL NOT BE PLACED IN SLABS, BEAMS, WALLS, COLUMNS AND FOOTINGS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS.
- CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOADS SHALL NOT EXCEED DESIGN LIVE LOADS FOR EACH PARTICULAR LEVEL. PROVIDE ADEQUATE SHORING AND BRACING IF LOAD EXCEED DESIGN LIVE LOAD OR WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
- THIS SET OF DRAWINGS REPRESENT THE FINISHED STRUCTURE. METHOD OF CONSTRUCTION NOT NECESSARILY INDICATED. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO BRACING, SHORING, SCAFFOLDING, ETC.

STRUCTURAL DESIGN CRITERIA

- NO SOILS REPORT:
ASSUME SOILS BEARING PRESSURE = 1,500 p.s.f.
FOUNDATION DESIGN SHALL BE 18" MIN. DEPTH OF FOOTING BELOW LOWEST ADJACENT FINISH GRADE. AND 12" MIN. WIDTH FOR 1ST STORY; 15" MIN. WIDTH FOR 2-STORY. BEAR ON FIRM NATIVE OF PROPERLY COMPACTED SOILS.

2. DESIGN LOADS:

	DEAD (PSF)	LIVE (PSF)
ROOF	15	20

3. LATERAL LOADS

WIND DESIGN DATA:
BASIC WIND SPEED 96 MPH
IMPORTANCE FACTOR I 1.0
OCCUPANCY CATEGORY I
WIND EXPOSURE C

EARTHQUAKE DESIGN DATA:

IMPORTANCE FACTOR I 1.0
SITE CLASS D (ASSUME STIFF SOIL PROFILE)
Ss 1.273
S1 0.455
SDs 0.018
SD1 0.560
SEISMIC DESIGN CATEGORY D
BASIC SEISMIC FORCE-RESISTING SYSTEM 15-WOOD STRUCTURAL PANEL (ASCE 7-16 TABLE 12.2-1)
DESIGN BASE SHEAR 0.71=0.110*W (ASD LEVEL)
Cs 0.157
R 6.5
USE EQUIVALENT LATERAL FORCE PROCEDURE

4. LUMBER GRAGES (U.N.O.)

6X & 8X POSTS /BEAMS /HEADERS: DFL#1
4X POSTS /BEAMS / HEADERS: DFL #2
2X JOISTS /RAFTERS: DFL #2
STUDS: DFL #2
TOP PLATES & MUD SILLS: DFL CONSTRUCTION GRADE OR BETTER
SEE STRUCTURAL WOOD NOTE #11 FOR ADDITIONAL MUD SILL REQUIREMENTS

- THE FOLLOW BEAMS / HEADERS / RIMS CAN BE FROM ANY MANUFACTURER WITH CURRENT ICC ES-EVALUATION REPORT WITH THE FOLLOWING MECHANICAL PROPERTIES:
FOR "PSL" BEAM / HEADERS:
3½" & WIDER: Fb = 2900 PSI (MIN.), Fv = 290 PSI (MIN.) E = 2.9 X 10⁶ PSI (MIN.)
1½" & 2½": Fb = 2900 PSI (MIN.), Fv = 290 PSI (MIN.) E = 2.9 X 10⁶ PSI (MIN.)

REINFORCING STEEL

- ALL REINFORCING STEEL SHALL BE AS FOLLOWS
A. NO. 4 BARS AND SMALLER - INTERMEDIATE GRADE CONFORMING TO A615-60
B. NO. 5 BARS AND LARGER - HARD GRADE CONFORMING TO A615-60
C. ALL MASONRY WALL REINFORCING, INCLUDING MASONRY WALL FOOTINGS, SHALL BE INTERMEDIATE GRADE CONFORMING TO A615-60
D. ALL BARS EXCEPT NO. 2 BARS SHALL BE DEFORMED AS PER ASTM A305
E. WIRE MESH SHALL CONFORM TO ASTM A185
F. REBARS TO BE WELDED SHALL BE CONFORMING TO ASTM A-706, GRADE 60
2. GRADE 60 BARS SHALL BE MARKED SO ITS IDENTIFICATION CAN BE MADE WHEN THE FINAL IN PLACE INSPECTION IS MADE.
3. REINFORCING STEEL AT THE TIME OF THE CONCRETE IS PLACED SHALL BE FREE FROM MUD, OIL, OR OTHER NON METALLIC COATINGS THAT ADVERSELY AFFECT BONDING CAPACITY.
4. BAR SUPPORTS SHALL CONFORM TO THE "BAR SUPPORT SPECIFICATIONS CONTAINED IN THE "MANUAL OF STANDARD PRACTICE" BY ACI.
5. A CERTIFIED COPY OF MILL TEST ON EACH HEAT OF REINFORCING STEEL DELIVERED SHOWING PHYSICAL AND CHEMICAL ANALYSIS SHALL BE PROVIDED UPON REQUEST AT THE TIME OF SHIPMENT.
6. ALL REQUIREMENT OF CONCRETE REINFORCEMENT NOT COVERED ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH ACI "MANUAL OF STANDARD PRACTICE".
7. BARS SHALL BE SECURELY TIED TO PREVENT DISPLACEMENT DURING THE CONCRETE OPERATION AND ALL DOWNELS SHALL BE WIRED IN PLACE BEFORE DEPOSITING CONCRETE.
8. REINFORCING BARS SHALL CONFORM ACCURATELY TO THE DIMENSIONS SHOWN ON THE DRAWINGS WITH THE FABRICATING TOLERANCES PER ACI "MANUAL OF STANDARD PRACTICE."
9. REINFORCING BARS SHALL NOT BE BENT OR STRAIGHTENED IN A MANNER THAT WILL INJURE THE MATERIAL.

STRUCTURAL WOOD

MINIMUM QUALITY

- ALL STRUCTURAL WOOD SHALL BE DOUGLAS FIR LARCH SPECIES, (19% MAXIMUM MOISTURE CONTENT AT THE TIME OF CONSTRUCTION U.N.O.)
- ALL MACHINE BOLTS SHALL CONFORM TO ASTM A307. HOLES FOR BOLTS SHALL BE DRILLED ⅛" LARGER THAN BOLT DIAMETER.
- FOR NON-SHEAR WALL APPLICATIONS, ROUND WASHERS SHALL BE USED ON ALL BOLTS AND SHOULD CONFORM WITH ANSI/ASME B 18.22.1. USE MIN. 1⅝" Ø X ¼" THICK WASHER FOR ½" Ø BOLT, 1½" Ø X ¼" THICK WASHER FOR ¾" Ø BOLT AND 2½" Ø X ¼" THICK WASHER FOR 1" Ø BOLT, U.N.O.
- ALL NAILS SHALL BE SINKER NAILS AND STAGGERED U.N.O., EXCEPT AS SHOWN ON NAILING SCHEDULE.
- ADHESIVE USED TO ATTACH FLOOR SHEATHING TO FRAMING ELEMENT SHALL CONFORM WITH APA SPECIFICATION AFG-01
- MANUFACTURED HARDWARE SPECIFIED ON THE DRAWINGS ARE TO BE SIMPSON STRONG TIE (UNLESS SPECIFICALLY AUTHORIZED IN WRITING BY E.O.R., FOLLOW ALL MANUFACTURER'S & RECOMMENDATIONS FOR INSTALLATION & HANDLING OF THE PRODUCT.
- DO NOT BEND THE SIMPSON PA STRAPS.
FRAMING:
8. ALL FRAMING, BRACING, NAILING, NOTCHING, DRILLING OR BORING SHALL BE ACCORDANCE WITH BUILDING CODE UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED OR REQUIRED BY THE LOCAL JURISDICTION.
9. FABRICATION AND HANDLING OF GLUE-LAM BEAMS SHALL BE PER ANSI/AITC 190.1. STANDARD BEAMS TO BEAR LEGIBLE APA-ENS OR AITC GRADE STAMP. AN APA-EWS GRAN AITC CERTIFICATE OF CONFORMANCE FOR GLUED-LAMINATED MEMBERS SHOULD BE SUBMITTED TO THE FIELD INSPECTOR PRIOR TO INSTALLATION AND GLUE-LAM MEMBERS SHALL BE 24F-V4, DF/DF WITH STANDARD CAMBER ON ROOF BEAMS EXCEPT CANTILEVER END (U.N.O.). ALL CANTILEVER ENDS AND FLOOR BEAMS SHALL HAVE ZERO CAMBER U.N.O. ALL BEAMS SHALL BE FABRICATED USING WATERPROOF GLUE.
10. FASTENERS IN CONTACT WITH PRESERVATIVE TREATED LUMBER AND FIRE RETARDANT TREATED WOOD SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS, SILICON BRONZE OR COPPER. EXCEPTION: PLY CARBON STEEL FASTENERS IN SBX/DOE AND ZINC BORATE PRESERVATIVE-TREATED WOOD IN AN INTERIOR, DRY ENVIRONMENT SHALL BE PERMITTED.
11. STUD WALLS PERPENDICULAR TO A CONCRETE OR MASONRY WALL SHALL BE BOLTED TO THE CONCRETE OR MASONRY WALL WITH ¾" Ø X 8" A307 BOLTS AT TOP, MID-HEIGHT AND BOTTOM.
12. STRUCTURAL INFORMATION SHOWN ON FRAMING PLANS IS FOR THE MAIN STRUCTURAL ELEMENTS. NON-STRUCTURAL ELEMENTS SHALL BE CONSTRUCTED PER APPROVED CODE REQUIREMENTS.
13. CONVENTIONAL LIGHT FRAMED CONSTRUCTION REQUIREMENTS OF CHAPTER 23 SHOULD BE FOLLOWED AS REQUIRED.
14. WEIGHT OF THE ROOF TILE IS CONSIDERED TO BE 10PSF MAX. (TOTAL ROOF DEAD LOAD OF 19 PSF). IF ROOFING MATERIAL EXCEEDS THIS LOAD, THE FRAMING CONTRACTOR SHOULD NOTIFY E.O.R. IN WRITING PRIOR TO CONSTRUCTION.
15. TOP PLATES OF ALL WOOD STUD WALLS TO CONSIST OF (2) 2x's THE SAME WIDTH AS THE STUDS U.N.O. TOP PLATE SHALL LAP A MIN. OF 48" AND BE SPLICES WITH NOT LESS THAN 6-16 NAILS SPACED NOT MORE THAN 12" O.C.
16. ALL SHEAR PANELS SHALL HAVE CONTINUOUS SHEATHING MATERIAL FROM ONE END TO THE OTHER AND FROM PLATE TO PLATE AS SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL COORDINATE FRAMING SUCH THAT CONTINUITY OF SHEAR PANELS IS ASSURED.
17. ALL LEDGERS SHALL BE SPLICES WITH ST22 STRAP, UNLESS NOTED OTHERWISE.
18. ALL SHEAR TRANSFER NAILING SHALL BE PER DRAWINGS, AND CONTRACTOR SHALL PROVIDE PROPER NOTIFICATION FOR INSPECTIONS TO REVIEW THE SAME.
19. PROVIDE POST/MULTIPLE STUDS AT LOWER FLOOR UNDER POST/MULTIPLE STUDS ABOVE. EACH POST/STUD SHALL BE FASTENED BY CYP/SUM WALL BOARD W/5d COOLER NAILS Ø 7" O.C. U.N.O ON PLAN. PROVIDE FULL WIDTH AND DEPTH COMPRESSION BLOCK BETWEEN FLOORS AS SUCH LOCATIONS.
20. ALL JOIST HANGERS SHALL BE SIMPSON U HANGER, ALL BEAM HANGERS SHALL BE SIMPSON HU HANGER U.N.O. ON PLAN OR DETAIL. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.
21. IF A DOUBLE SILL PLATE IS USED AT LIGHT-WEIGHT CONCRETE FLOORING, THEN THE FRAMING CONTRACTOR SHALL APPLY SILL PLATE NAILING TO BOTH SILL PLATES, AT 16" O.C MAX. OR SPECIFIED PER SCHEDULE.
22. USE THIS SPAN TABLE FOR STUD SPACING (U.N.O.)

STUD SIZES	BEARING WALLS							NON-BEARING/NON-SHEAR WALLS	
	STUD HEIGHTS	5TH TO 5TH ROOF	4TH TO 4TH FL	3RD TO 4TH FL	2ND TO 3RD FL	1ST TO 2ND FL	STUD HEIGHTS	FEET	MAXIMUM SPACING
2X4	10	16	12					14	24
3X4	10	24	24	16				14	24
2X6	10	24	24	16	16	16		20	24
2-2X4	10			16	12				
2-2X6	10			24	24	24			

•• SHALL NOT BE USED IN EXTERIOR WALLS
•• REFER TO PLANS FOR STUD HEIGHTS EXCEEDING THIS TABLE
••• FOR MAXIMUM SPACING AT SHEAR WALLS SEE S.W. SCHEDULE TABLE MOST RESTRICTIVE LIMIT SHALL GOVERN

- HEADERS: USE MINIMUM 4X4 FOR OPENINGS LESS THAN 16" AT BEARING WALLS WITHOUT POINT LOADS. FOR NON-BEARING WALLS USE 2X4 FOR OPENINGS UP TO 3'-0" MAX. USE (2) 2X4 FOR OPENING UP TO 6'-0" MAX. USE 4X6 FOR OPENINGS UP TO 12'-0" MAX. U.N.O (2-2X ON EDGE CAN BE SUBSTITUTED FOR 4X MEMBERS)
- WOOD TRUSS MANUFACTURER SHALL SUPPLY TO THE ENGINEER AND THE BUILDING DEPARTMENT CALCULATIONS AND SHOP DRAWINGS FOR APPROVAL OF DESIGN LOADS, CONFIGURATION (2 OR 3 POINT BEARING), AND SHEAR TRANSFER, PRIOR TO FABRICATION, IT SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER TO OBTAIN BUILDING DEPARTMENT APPROVAL OF CALCULATIONS AND SHOP DRAWINGS PRIOR TO FABRICATION.
25. TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE CURRENT BUILDING CODE FOR ALL LOADS IMPOSED, INCLUDING LATERAL LOADS AND MECHANICAL EQUIPMENT LOADS.

CEILING JOIST

- USE THIS SPAN TABLE FOR CEILING JOISTS GIVEN THE FOLLOW CONDITIONS (U.N.O. ON PLANS)

- A) DEAD LOAD = 6 PSF
B) LIVE LOAD = 10 PSF
C) TOTAL DEFLECTION = L/240
D) WITH ONE LAYER DRYWALL
E) USE DFL#2

SPACING	2X4		2X6		2X8	
	MAX. SPAN		MAX. SPAN		MAX. SPAN	
12"	9'-10"	12"	16'-0"	12"	20'-5"	
16"	8'-10"	16"	14'-5"	16"	18'-4"	
24"	7'-7"	24"	12'-6"	24"	15'-9"	

FASTENING SCHEDULE (2022 CBC TABLE 2304.10.1)			
	ELEMENT / CONNECTION	FASTENERS	LOCATION
ROOF			
1	BLOCKING BETWEEN CEILING JOIST, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	3-8d	TOENAIL EA. END
	BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	2-8d 2-16d	TOENAIL EA. END EA. END
	FLAT BLOCKING TO TOP PLATE	16d Ø 6" O.C	FACE NAIL
2	CEILING JOISTS TO TOP PLATE	3-8d	TOENAIL EA. JOIST
3	CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS	3-16d	FACE NAIL
4	CEILING JOISTS ATTACHED TO PARALLEL RAFTER	TABLE 2308.7.3.1	FACE NAIL
5	COLLAR TIE TO RAFTER	3-10d	FACE NAIL
6	RAFTER OR ROOF TRUSS TO TOP PLATE	3-10d	TOENAIL ³
7	ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS, OR ROOF RAFTER TO 2" RIDGE VEAM	2-16d 3-10d	END NAIL TOENAIL
	WALL		
8	STUD TO STUD	16d	24" O.C FACENAIL
9	STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS	16d	16" O.C FACENAIL
10	BUILT-UP HEADER	16d	16" O.C FACENAIL
11	CONTINUOUS HEADER TO STUD	4-8d	TOENAIL
12	TOP PLATE TO TOP PLATE	16d	16" O.C FACENAIL
13	TOP PLATE TO TOP PLATE, AT END JOISTS	8-16d	ED. SIDE OF END JOINT, FACE NAIL
14	BOTTOM PLATE TO JOIST, RIM JOIST, BEND JOIST OR BLOCKING	16d	16" O.C FACENAIL
15	BOTTOM PLATE TO JOIST, RIM JOIST, BEND JOIST OR BLOCKING AT BRACED WALL PLATES	2-16d	16" O.C FACENAIL
16	STUD TO TOP OR BOTTOM PLATE	4-8d 2-16d	TOENAIL END NAIL
	TOP OR BOTTOM PLATE TO STUD	2-16d	FACE NAIL
18	TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	2-16d	FACE NAIL
19	1" BRACE TO EACH STUD AND PLATE	2-8d	FACE NAIL
20	1'X6" SHEATHING TO EACH BEARING	2-8d	FACE NAIL
21	1'X6" SHEATHING TO EACH BEARING	2-8d	FACE NAIL
FLOOR			
22	JOIST TO SILL, TOP PLATE, OR GIRDER	3-8d	TOENAIL
23	RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8d	6" O.C TOENAIL
24	1'X6" SUBFLOOR OR LESS TO EACH JOIST	2-8d	FACE NAIL
25	2" SUBFLOOR TO JOIST OR GIRDER	2-16d	FACE NAIL
26	2" PLANK	2-16d	EA. BEARING, FACE NAIL
27	BUILT UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	20d	3½" O.C FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
28	LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	3-16d	EA. JOIST OR RAFTER, FACE NAIL
29	JOIST TO BAND JOIST OR RIM JOIST	3-16d	END NAIL
30	BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	2-8d	EA. END TOENAIL
WOOD STRUCTURAL PANELS, SUB FLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING ¹			
31	¾" - ½"	6d	6" EDGE 12" INTERMEDIATE SUPPORTS
32	1½" - ¾"	8d	
33	¾" - ½"	10d	
OTHER EXTERIOR WALL SHEATHING			
34	½" FIBERBOARD SHEATHING	1 ½" GALVANIZED ROOF NAIL	3" EDGE 6" INTERMEDIATE SUPPORTS
35	¾" FIBERBOARD SHEATHING	1 ½" GALVANIZED ROOF NAIL	
WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING			
36	¾" AND LESS	8d	6" EDGE 12" INTERMEDIATE SUPPORTS
37	¾" - 1"	8d	
38	1 ¼" - 1 ½"	10d	
PANEL SIDING TO FRAMING			
39	½" OR LESS		6" EDGE 12" INTERMEDIATE SUPPORTS
40	¾"		
INTERIOR PANELING			
41	½"		6" EDGE 12" INTERMEDIATE SUPPORTS
42	¾"		

- NAILS SPACED AT 6" AT INTERMEDIATE SUPPORTS WHERE SPANS ARE 48" OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS. REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
- SPACING SHALL BE 6" O.C ON THE EDGES AND 12" O.C AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS. PANELS SUPPORTS AT 16" (20" IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
- WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE CEILING JOIST IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE. THE NUMBER OF TOENAILS IN THE RAFTERS SHALL BE PERMITTED TO BE REDUCED BY ON NAIL.
- FASTENERS FOR PRESERVATIVE-TREATED OR FIRE-RETARDANT-TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL IN ACCORDANCE WITH ASTM A153.

FOUNDATION

- ALL CONTINUOUS FOOTINGS TO HAVE ¾" Ø X MIN. 12" ANCHOR BOLTS, MIN. 7" EMBEDMENT IN TO CONCRETE FOOTING AT 72" O.C. UNLESS NOTED OTHERWISE ON PLANS. ONE ANCHOR BOLT SHOULD BE LOCATED MAX. 12" AWAY AND MIN. 9" FROM THE END OF THE SILL PLATES. MIN. (2) A.Bs. PER SILL PLATE/SHEAR PANEL. SILL PLATE UNDER SHEAR WALLS OF UP TO 4'-0" IN LENGTH MUST BE CONTINUOUS. SEE NOTE 2 FOR SILL PLATE FASTENERS AT INTERIOR NON-SHEAR WALLS.
1a. ANCHOR BOLTS AT SHEAR WALLS SHALL BE INSTALLED WITH PLATE WASHERS OF MIN. 3" sq. X 0.229" THICK BETWEEN SILL PLATE AND NUT. EDGE(S) OF PLATE WASHERS SHALL BE ½" MAX. FROM INSIDE FACE OF SHEAR PANEL(S).
1b. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO ¾" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1 ¼", PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT.
2. FOR INTERIOR NON-SHEAR WALLS, USE SIMPSON POPWAM SERIES 0.157" Ø PINS WITH A PENETRATION OF ¾" INTO SLAB AT 16" O.C. TO BE INSTALLED IN ACCORDANCE WITH ICC ESR-2138. ACTUAL SLAB THICKNESS TO BE MINIMUM 4". ALL INTERIOR SHEAR WALLS TO HAVE A.Bs. PER FOUNDATION PLAN.
3. ALL HOLDDOWNS AND POST ANCHORS TO BE INSTALLED ACCORDING TO MOST CURRENT SIMPSON STRONG TIE SPECIFICATIONS AND REQUIREMENTS OF ICC-ER REPORTS & SHALL BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION. DIMENSIONS ARE NOT FURNISHED TO SIMPSON HOLDDOWNS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR'S SUPERINTENDENT, THE FRAMING CONTRACTOR AND THE CONCRETE CONTRACTOR TO LOCATE THESE ANCHORS IN THE EXACT LOCATION. REFER TO DETAILS FOR PROPER INSTALLATION.
4. MIN. CONCRETE WIDTH TO BE 8" FOR RECEIVING PA, HPA, & STD's. VERIFY LOCATIONS OF HOLDDOWNS AND ANCHOR BOLTS WITH ROUGH FRAMING TO ASSURE ACCURATE INSTALLATION.
5. PROVIDE #3 X 24" DOWELS AT 24" O.C AND 12" FROM THE CORNER AT ALL CONCRETE STOODS AND PORCHES.
6. PROVIDE MIN. (1) #4 REINFORCING FOR ELECTRICAL GROUND, LOCATION TO BE VERIFIED WITH THE ELECTRICAL CONTRACTOR.
7. VERIFY MIN. FOUNDATION DEPTH, WIDTH, REINFORCING STEEL AND ADDITIONAL EXPANSIVE SOIL REQUIREMENTS WITH VALID SOILS REPORT (IF IT HAS) AND IF MORE STRINGENT. THEY SHALL SUPERSEDE THE ABOVE MINIMUM REQUIREMENTS.
8. ADMIXTURES IN CONCRETE MIX. CONTAINING CALCIUM CHLORIDES SHALL NO BE USED.
9. CONCRETE SHALL BE TO THE STRENGTH AND SLUMP AS SPECIFIED PER STRUCTURAL DESIGN, AND CONSIST OF PORTLAND CEMENT ASTM C-150 TYPE V PER SOILS ENGINEER'S RECOMMENDATIONS AND BUILDING CODESECTION 1904 (ACI 138 SECTION 19.1.2) WHEN EXPOSED TO SULFATE CONTAINING SOLUTIONS. AGGREGATES SHALL BE PER ASTM C-33. WATER TO BE CLEAN AND POTABLE.
10. WAITING PERIOD FOR CONCRETE SLABS-ON-GRADE PRIOR TO START OF CONSTRUCTION IS AS FOLLOWS:
a. DO NOT WALK ON SLAB UNTIL 24 HOURS AFTER CONCRETE HAS BEEN POURED.
b. BEGIN ROOF/FLOOR FRAMING 4-5 DAYS AFTER CONCRETE POURED.
c. BEGIN ROOF/FLOOR FRAMING 7-10 DAYS AFTER CONCRETE POURED.
d. DO NOT LOAD ROOF PRIOR TO 14 DAYS AFTER CONCRETE POURED.
11. NO PIPES OR CONDUITS SHALL EXTEND UNDER ISOLATED COLUMN FOOTING OR UNDER CONTINUOUS WALL FOOTINGS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ARCHITECT, STRUCTURAL ENGINEER AND THE BUILDING OFFICIAL.
12. CONTRACTOR SHALL PROVIDE TEMPORARY AND PERMANENT DEWATERING FOR EITHER SURFACE WATER, GROUND WATER OR SEEPAGE WATER
13. CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATIONS AND BACKFILLING.
14. CONTRACTOR SHALL PROVIDE AND INSTALL ALL CRIBBING SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANK.
15. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL SHALL BE PROPERLY COMPACTED.
16. NO VERTICAL EXCAVATIONS 4'-0" OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESEND SHALL BE PERMITTED.
17. EXCAVATION FOR ANY PURPOSE SHALL NOT REMOVE LATERAL SUPPORT FROM ANY FOUNDATION WITHOUT FIRST UNDERPINNING OR PROTECTING THE FOUNDATION AGAINST SETTLEMENT OR LATERAL TRANSLATION. (2019 CBC, 1804.1)
18. THE EXCAVATION OUTSIDE THE FOUNDATION SHALL BE BACKFILL WITH SOIL THAT IS FREE OF ORGANIC MATERIAL, CONSTRUCTION DEBRIS COBBLES AND BOULDERS OR WITH A CONTROLLED LOW-STRENGTH MATERIAL (CLSM). THE BACKFILL SHALL BE PLACED IN LIFTS AND COMPACTED IN A MANNER THAT DOES NOT DAMAGE THE FOUNDATION OR THE WATERPROOFING OR DAMPPROOFING MATERIAL. (2022 CBC, 1804.2)

CONCRETE

- ALL CONCRETE SHALL BE NORMAL WEIGHT CONFORMING TO THE FOLLOWING:
LOCATION
A. SLAB ON GRADE
B. FOOTING
* W/5.25 SACKS CEMENT (MIN.)
* WHERE SULFATE EXPOSURE LEVEL IS SEVERE USE 5000 psi WITH W/C RATIO OF 0.45 (MAX) W/5.5 SACKS CEMENT (MIN) FOR 5000 PSI
2. ALL SAW CUTS IN SLAB ON GRADE SHALL BE MADE NOT LATER THAN 24 HOURS AFTER PLACING CONCRETE.
3. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II CEMENT.
4. AGGREGATE SHALL CONFORM TO ASTM C-33.
5. WATER SHALL BE CLEAN, FREE FROM DELETERIOUS AMOUNTS OF ACIDS, ALKALIS OR ORGANIC MATERIALS, OILS, SALTS AS PER ACI 318.
6. CONCRETE MIXING OPERATIONS, ETC. SHALL CONFORM TO ASTM C-94. WATER-CEMENT RATIO IS LESS THAN 0.50
7. UNLESS SHOWN OR NOTED OTHERWISE, CONCRETE COVERAGE FOR
A. CONCRETE IN CONTACT WITH EARTH, UNFORMED 3"
B. CONCRETE IN CONTACT WITH EARTH, FORMED 2"
C. WALLS 1.5"
D. BEAMS, GIRDERS & COLUMNS (TO TIES OR STIRRUPS) 1.5"
8. CONCRETE SHALL BE CURED IN ACCORDANCE WITH SECT 5.11 OF ACI 318-11.
9. CONSTRUCTION JOINTS:
THE SURFACES OF ALL CONSTRUCTION JOINTS SHALL BE CLEAN, FREE FROM LOOSE DEBRIS, IMMEDIATELY BEFORE NEW CONCRETE IS PLACED. ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.

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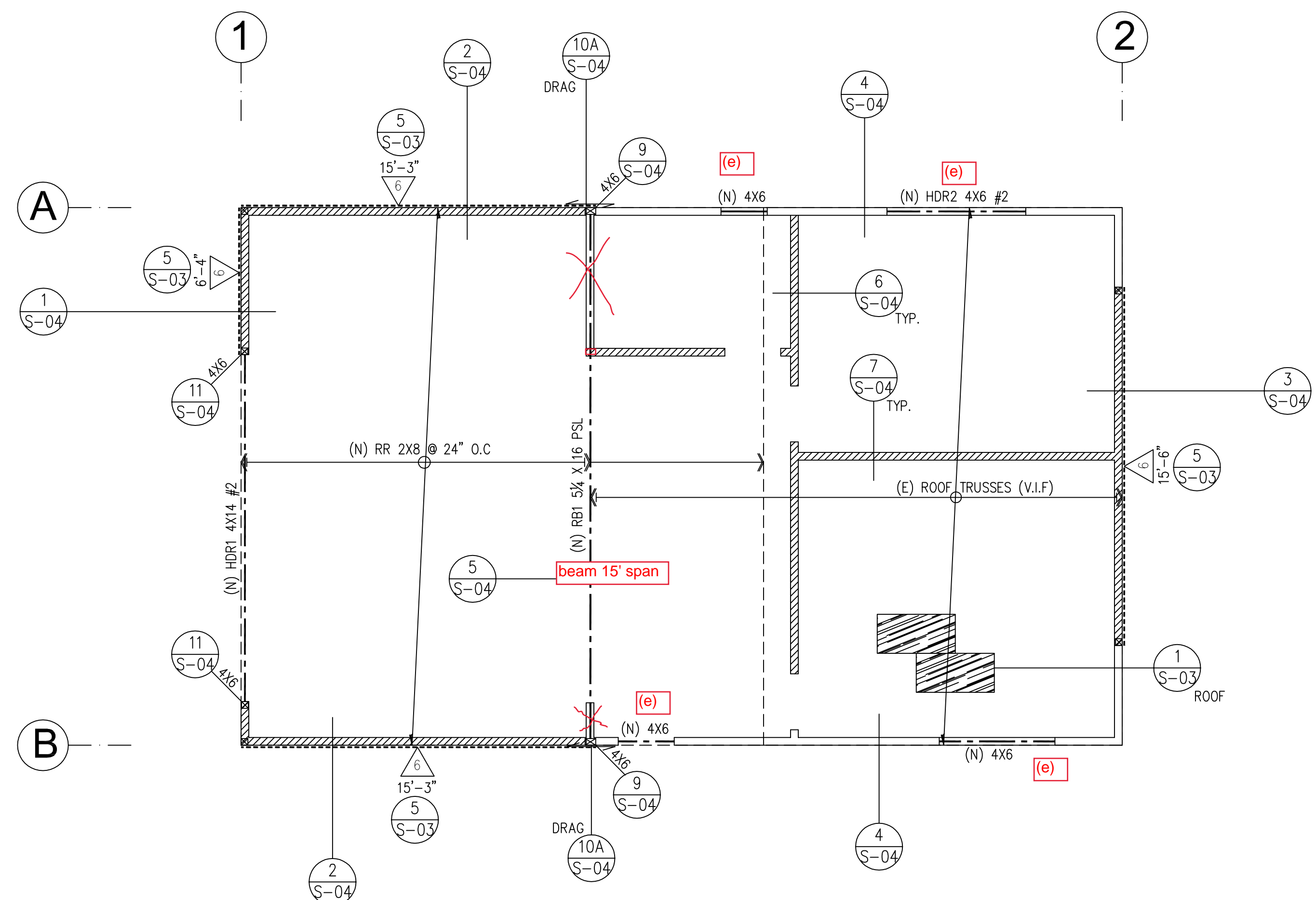
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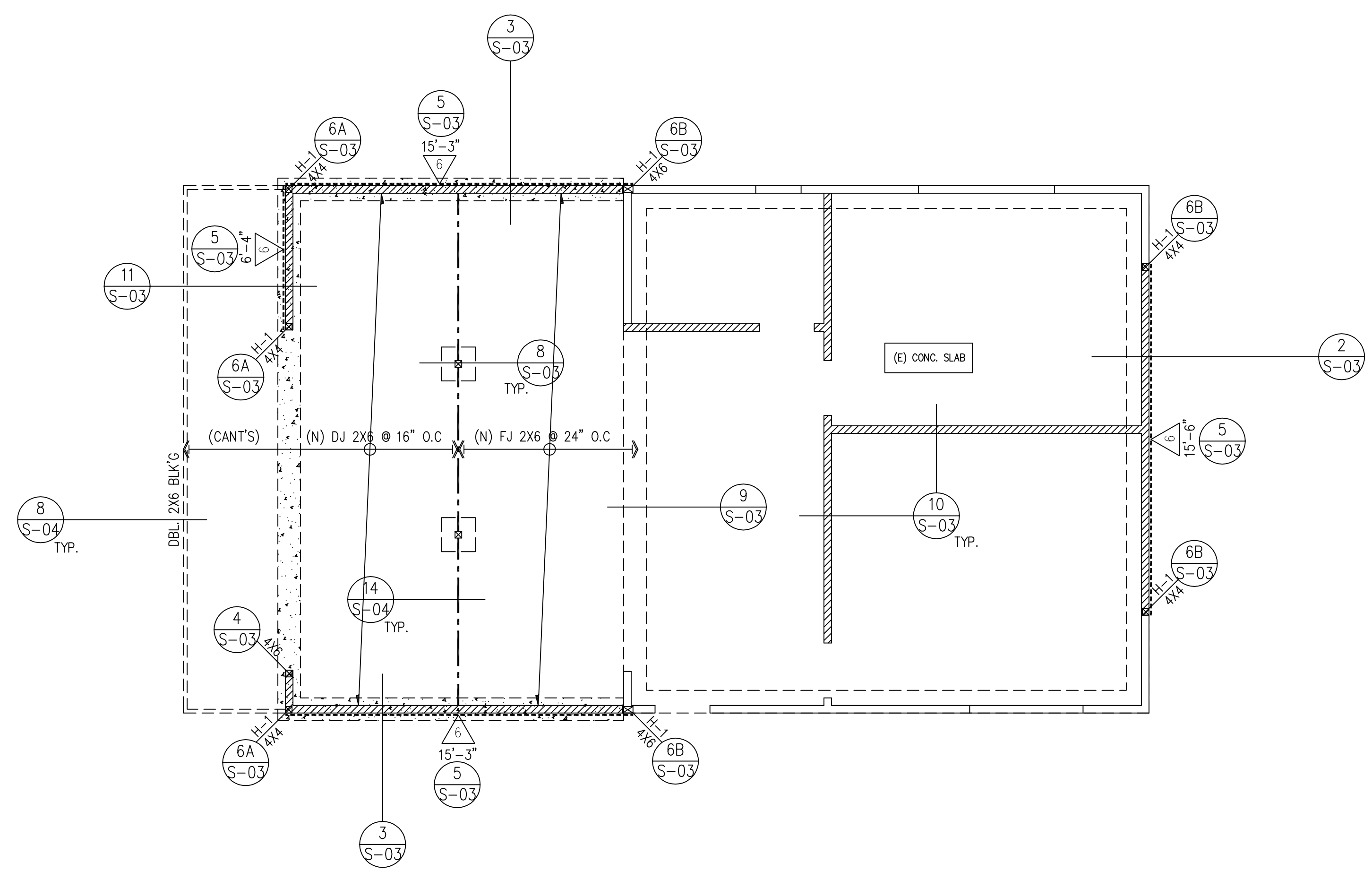
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06-17-2024

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



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

SYMBOLS LEGEND

- INDICATES EXISTING 12" WIDE X 12" DEEP WALL FOOTING
- - - - - INDICATES NEW 12" WIDE X 12" THICK WALL FOOTING
- ⊠ 4x4 INDICATES SHEAR WALL HOLDOWN PER SCHEDULE 6 W/MIN. 4X4 WOOD POST (U.N.O)
- ▨ INDICATES NEW 2X4 WALL STUD @ 16" O.C
- ===== INDICATES EXISTING WALL STUDS
- 4'-0" INDICATES SHEAR WALL MARK FROM THIS LEVEL TO LEVEL ABOVE PER SHEAR WALL SCHEDULE ON 5/S-03. NON-SHEAR PLYWOOD ADJACENT TO SHEAR PANELS IN ORDER TO PROVIDE A FLUSH FINISH.
- △ INDICATES SHEAR WALL PANEL APPROX. MIN. LENGTH IF NOT SHOWN, THEN PROVIDE PLYWOOD ON ENTIRE FACE. PER DETAIL 5/S-03

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ROOF FRAMING PLAN
FOUNDATION PLAN

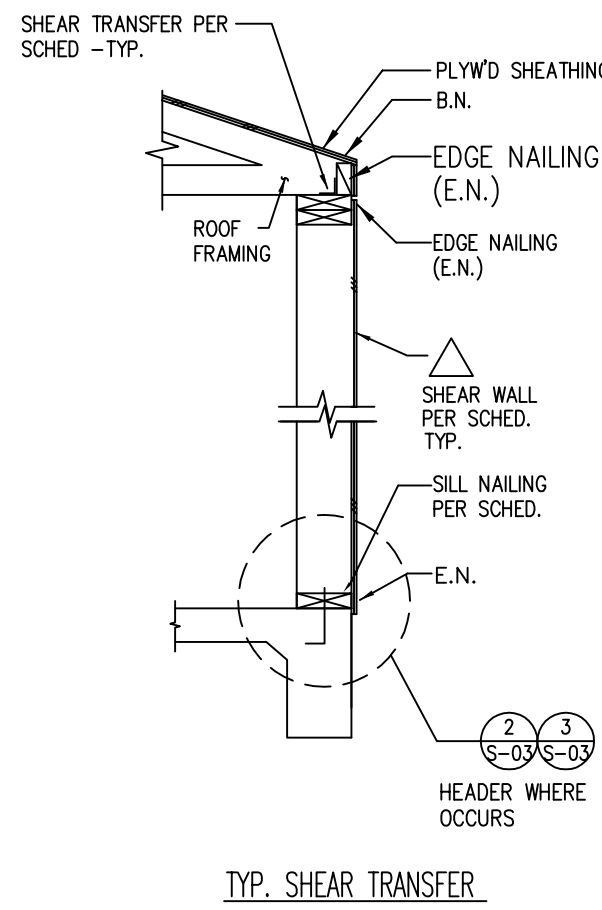
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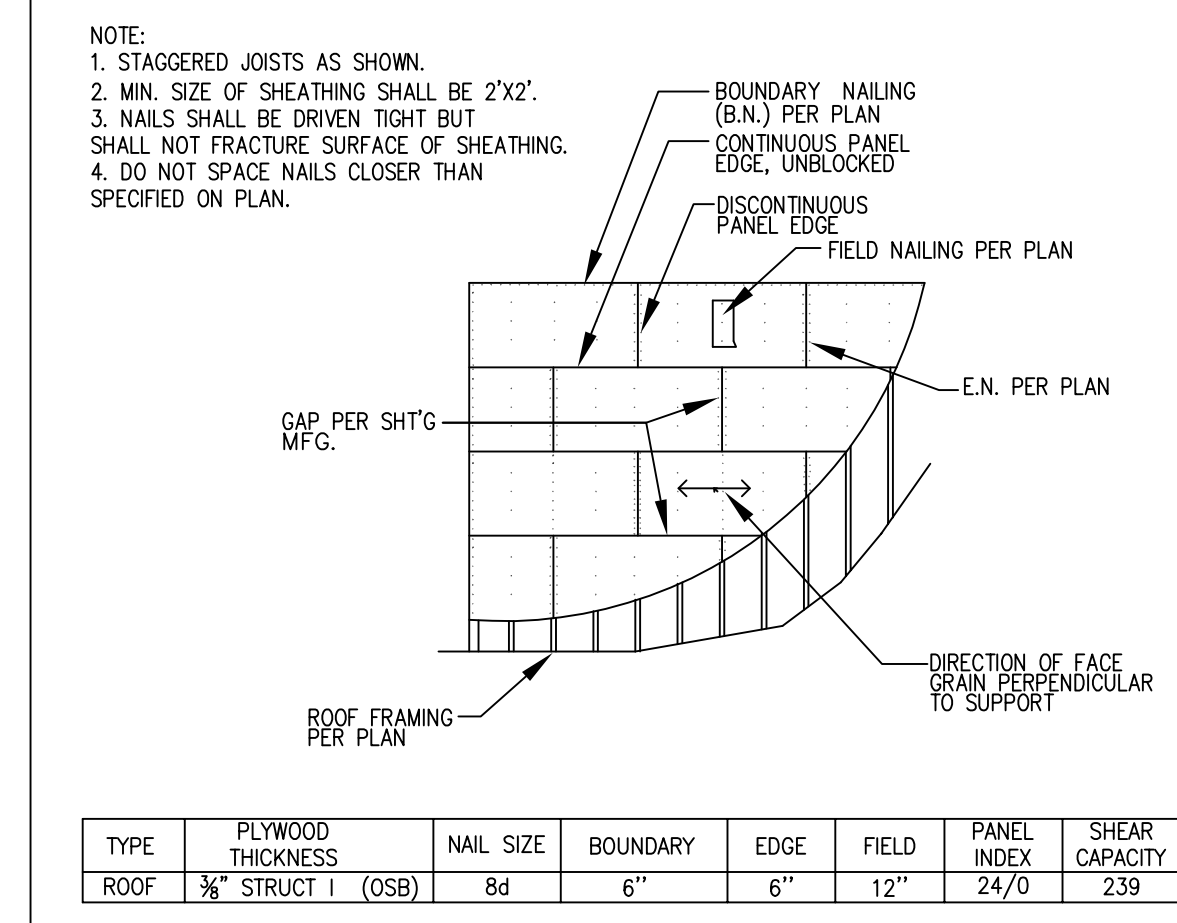
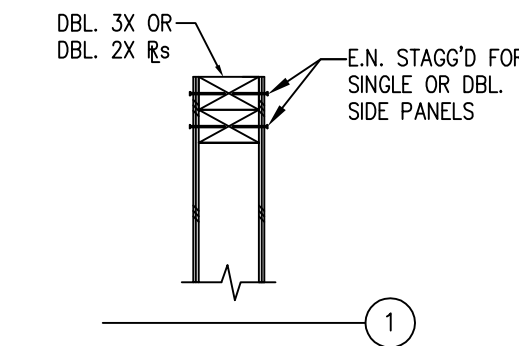
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NOTES:

- ALL SUPPORTS FOR GYPSUM BOARD TO BE NAILED COOLER NAILS.
- PLYWOOD FIELD NAILING @ 12" O.C.
- (1) EXTERIOR STUCCO WHERE OCCURS SHALL BE WOVEN OR WELDED WIRE LATH WITH 3/4" PORTLAND CEMENT PLASTER WITH #11 GAUGE X 1 1/2" LONG X 3/4" DIA. HEAD NAILS OR #16 GAUGE X 3/4" LONG LEG STAPLES @ 6" O.C.
- (2) (BLK'D) = ALL EDGES BLOCKED
- CN = COOLER NAIL
- N = COMMON NAIL
- (3) MINIMUM OF (3) 3/8" DIA. ANCHORS PER SHEAR WALL. FOR SHEAR PANELS ON TWO SIDES OF WALL, USE ONE-HALF THE ANCHOR BOLT, SILL NAILING AND TOE NAILING SPACING GIVEN IN THE SCHEDULE.
- (4) A35 INDICATES "SIMPSON" A35 FRAMING ANCHOR.
- (5) 2X STUDS
- (6) 2X SILL



MARKS	SHEATHING MATERIAL (INDEX)	CAPACITY (PLF)	SPECIAL DETAIL	MINIMUM FRAMING UNLESS OTHERWISE NOTED								EDGE NAIL (E.N.)	FIELD NAIL (F.N.) (1)	ANCHOR BOLT (3)	SILL (4)(5) NAILING	ALTERNATE SILL LATH'S BOLTS (6)	SHEAR TRANSFER NAILING (6)
				TOP R.	BOTT R.	SILL R. TO CONC.	SILL R. TO WOOD	FIELD STUD	PANEL JOINT STUD	PANEL JOINT BLK'G							
1	3/8" STRUCT I (24/0)	230	1	2x	2x	2x	2x	2x	2x	2x	2x	8d @ 6" o.c.	8d @ 12" o.c.	5/8" A.B. x 12" @ 48" O.C.	16d @ 6" o.c.	3/8" @ 16"	A35/LTP4 @ 16" O.C.
2	3/8" STRUCT I (24/0)	361	1	2x	2x	3x	2x	2x	2x	3x	3x	8d @ 4" o.c.	8d @ 12" o.c.	5/8" A.B. x 12" @ 32" O.C.	16d @ 4" o.c.	3/8" @ 12"	A35/LTP4 @ 12" O.C.
3	3/8" STRUCT I (24/0)	461	1	2x	2x	3x	2x	2x	2x	3x	3x	8d @ 3" o.c.	8d @ 12" o.c.	5/8" A.B. x 12" @ 24" O.C.	16d @ 3" o.c.	3/8" @ 10"	A35/LTP4 @ 8" O.C.
4	3/8" STRUCT I (24/0)	611	2	3x	2x	3x	3x	2x	2x	3x	3x	8d @ 2" o.c.	8d @ 12" o.c.	5/8" A.B. x 12" @ 16" O.C.	20d @ 1/4" o.c.	3/8" @ 8"	A35/LTP4 @ 6" O.C.



TYPE	PLYWOOD THICKNESS	NAIL SIZE	BOUNDARY	EDGE	FIELD	PANEL INDEX	SHEAR CAPACITY
ROOF	3/8" STRUCT I (OSB)	8d	6"	6"	12"	24/0	239

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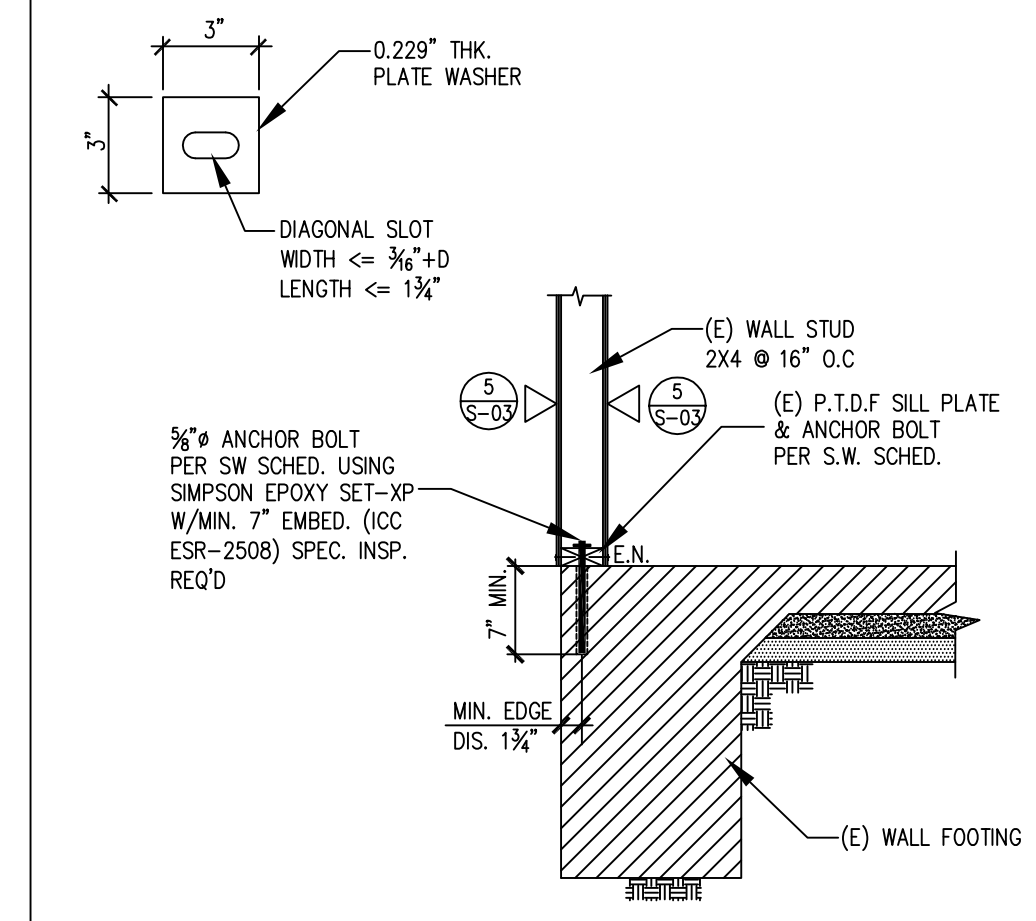
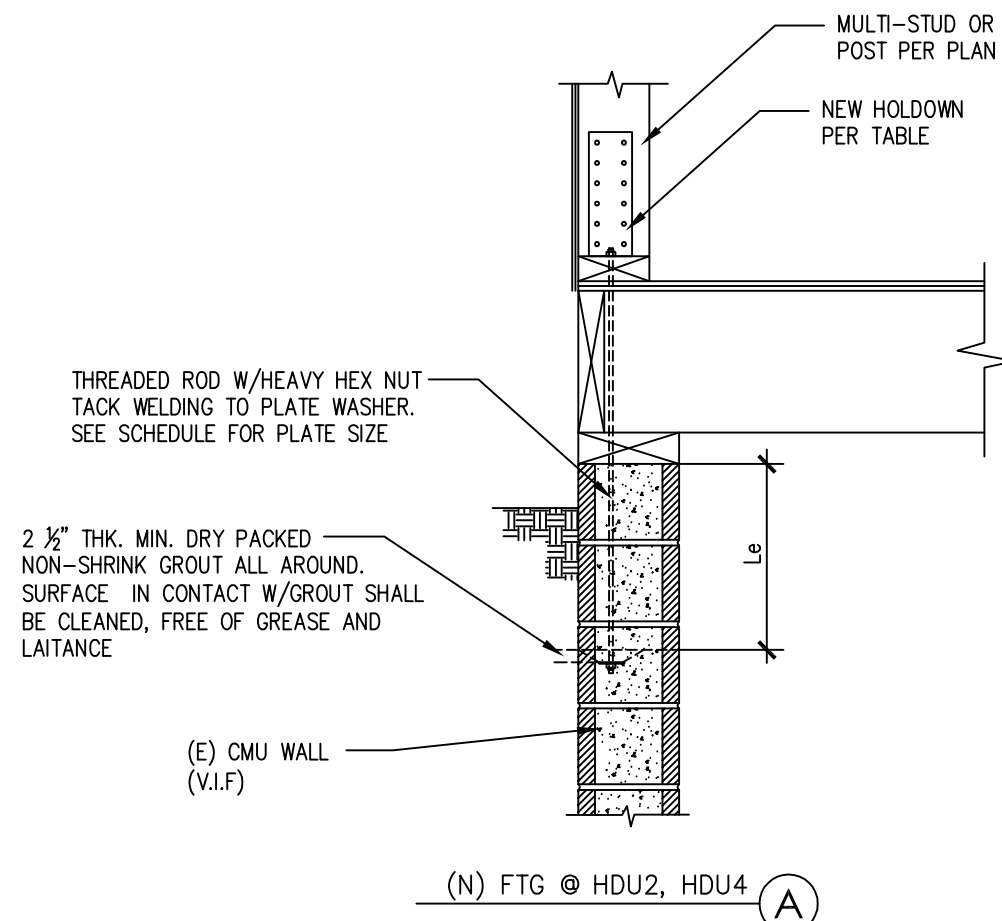
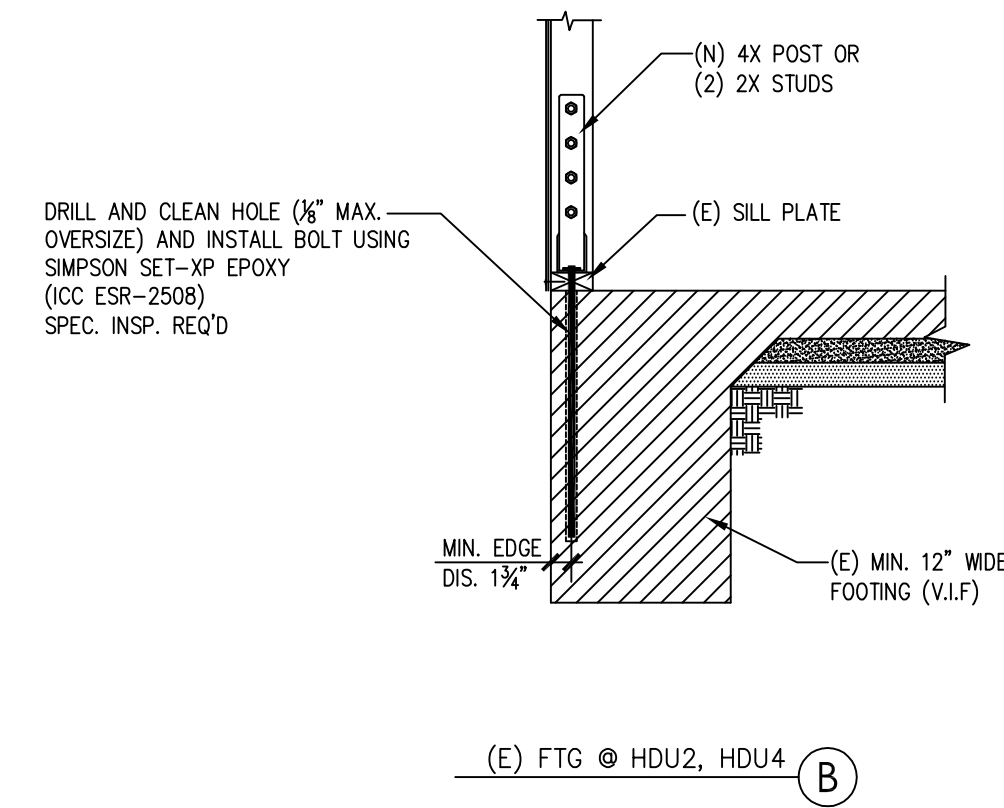


SHEAR WALL SCHEDULE

5 ROOF DIAPHRAGM (UNBLOCKED)

1

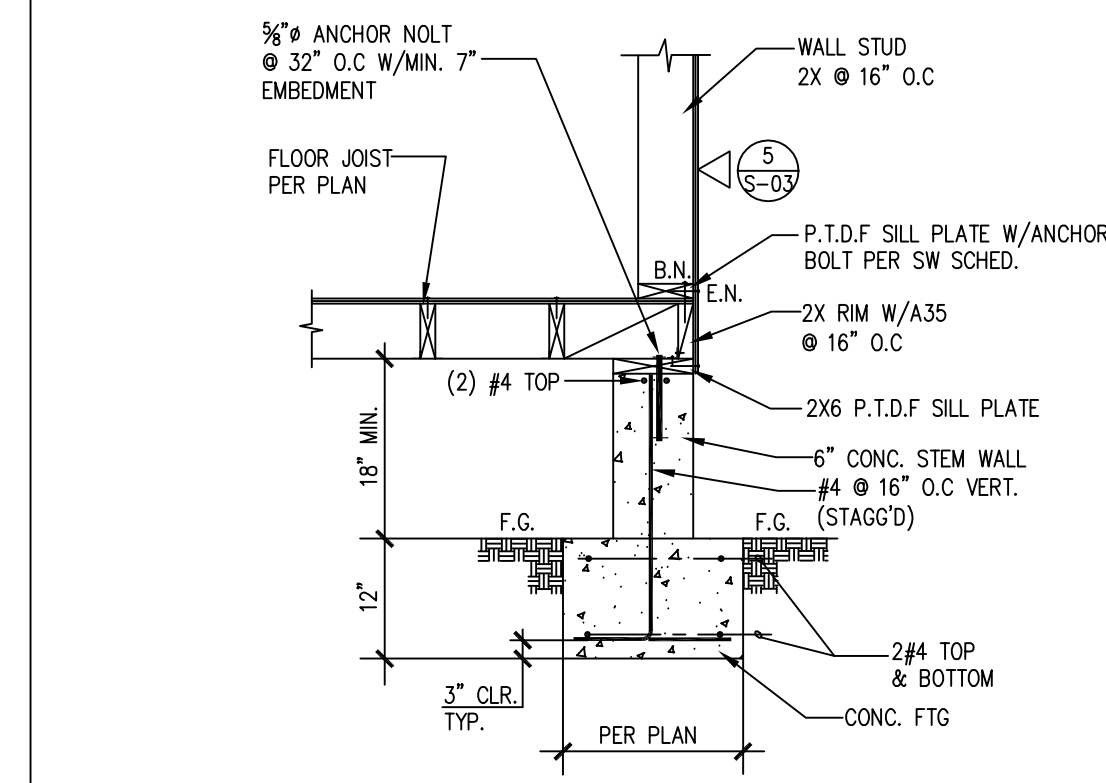
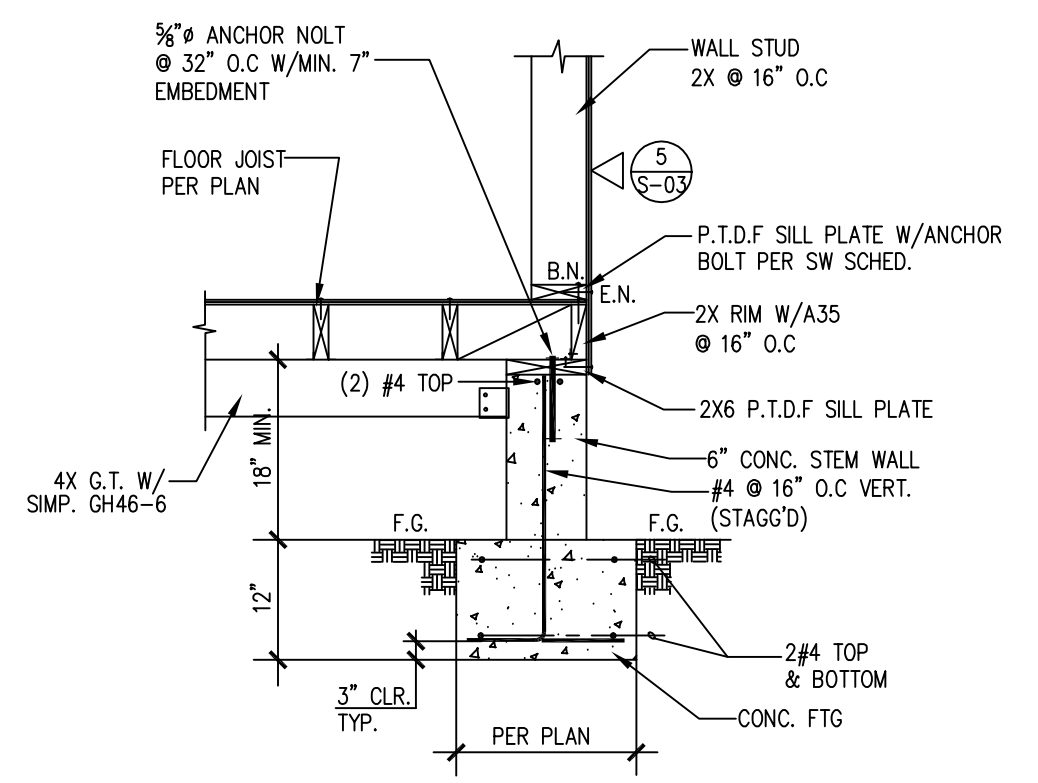
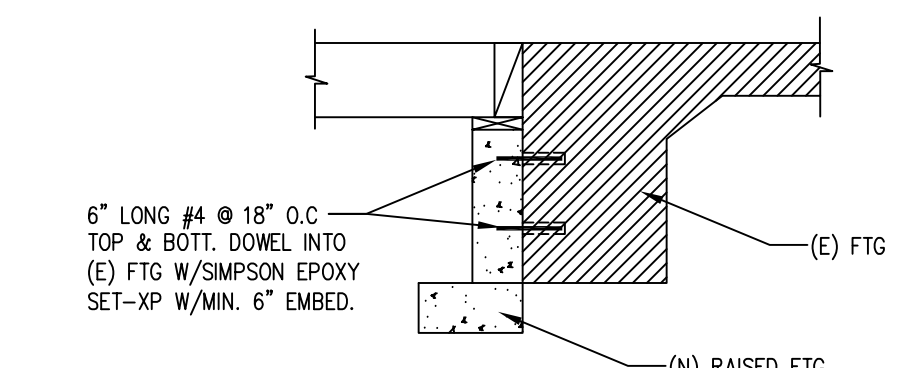
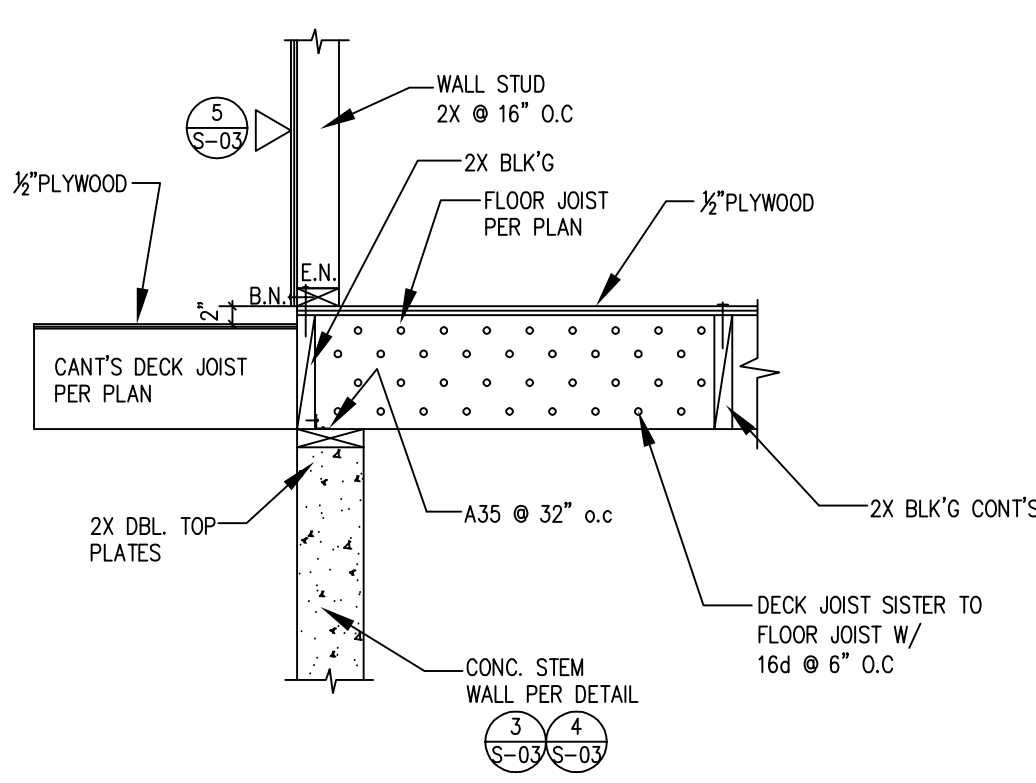
POST-INSTALLED BOLT (FOR MIN. 2500 PSI CONCRETE)			
	SIMPSON HOLDOWN	ANCHOR BOLT	MIN. EMBD.
H-1	HDU2	3/8" F1554 GR. 36 ROD	12"
H-2	HDU4	3/8" F1554 GR. 36 ROD	12"



13 HOLDOWN SCHEDULE

6 (N) SHEAR WALL TO (E) FTG

2



14 EXT. WALL CANTILEVER DECK JOIST TO FLOOR

11 (N) RAISED FTG TO (E) FTG

9 RAISED FLOOR FTG. (WITH G.T.)

7 RAISED FLOOR FTG. (EXTERIOR WALL)

3

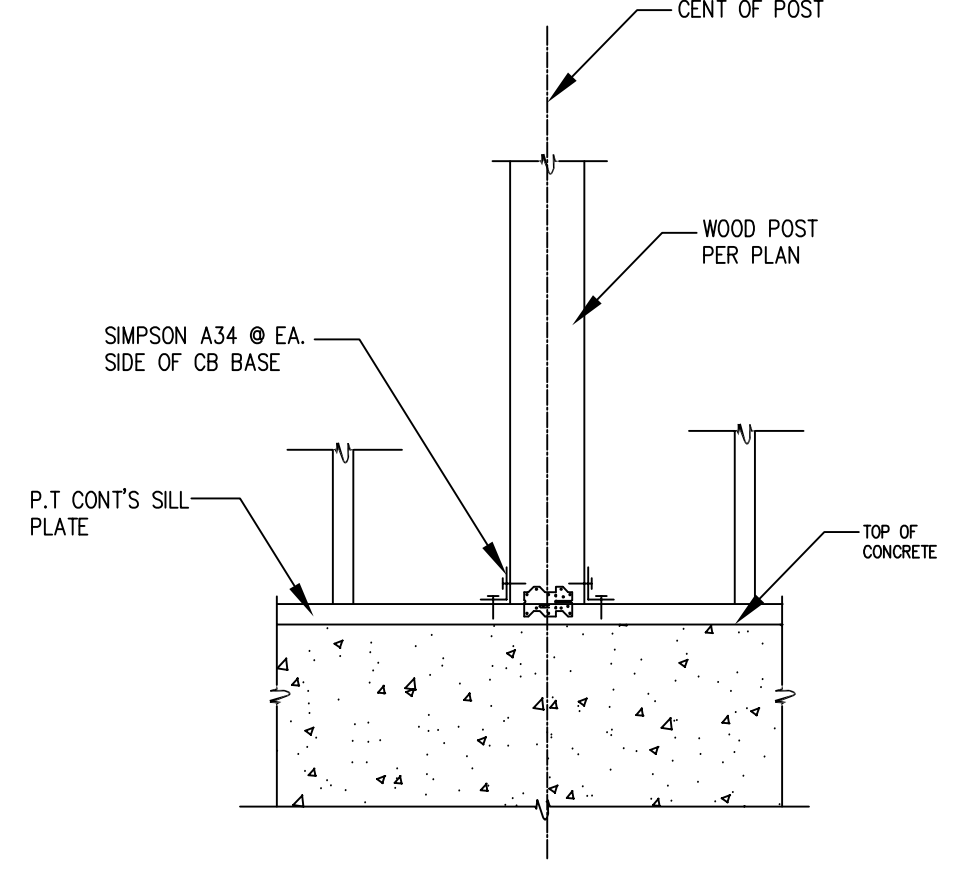
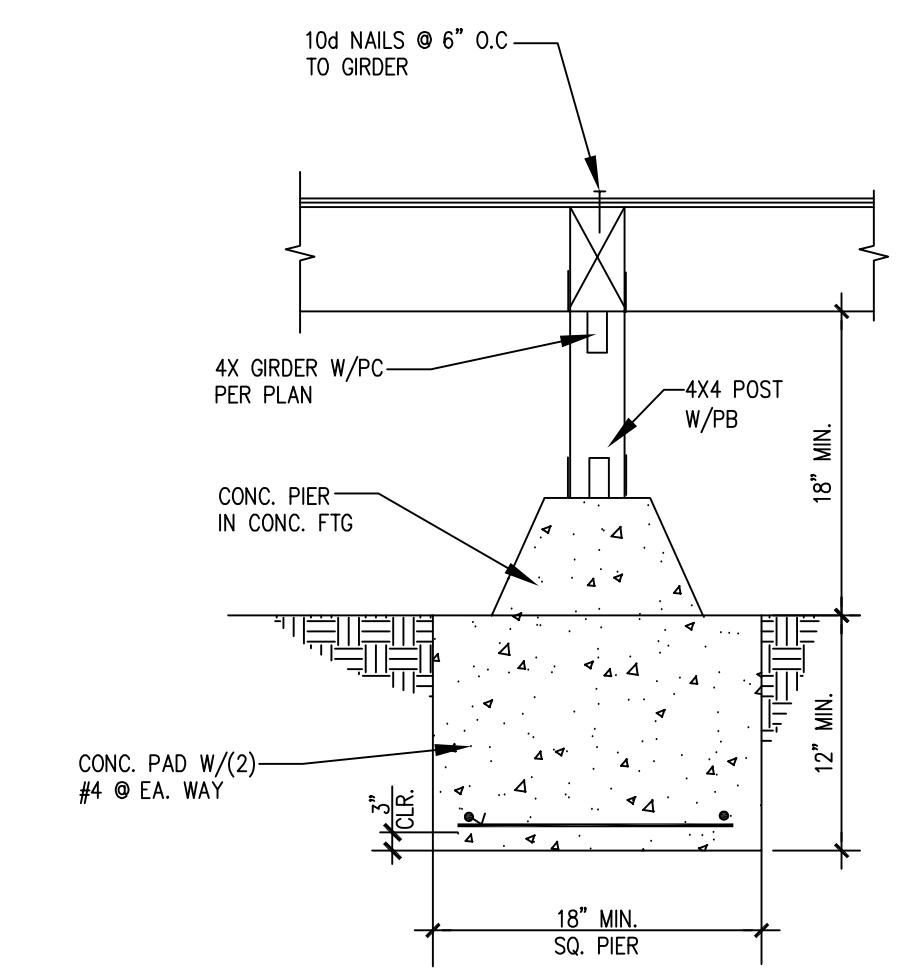
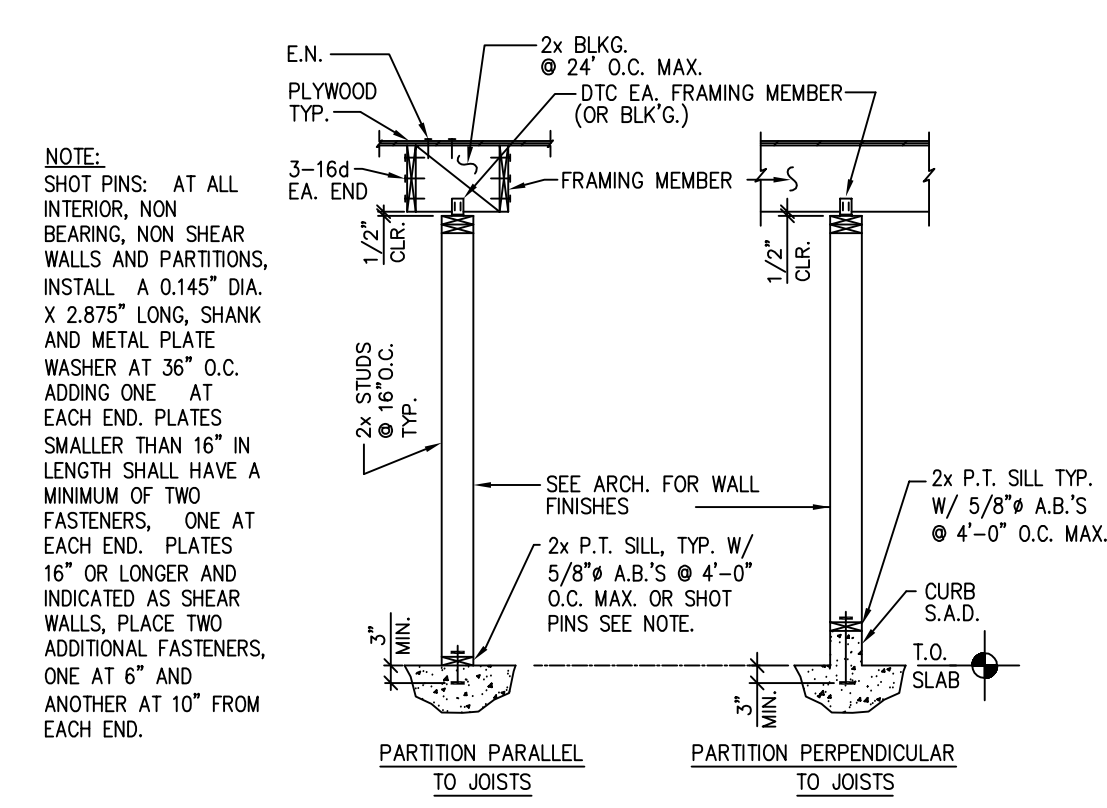
15

12 TYP. INTERIOR NON-BEARING WALL TO SLAB

10 TYP. CONC. PIER (RAISED FLOOR)

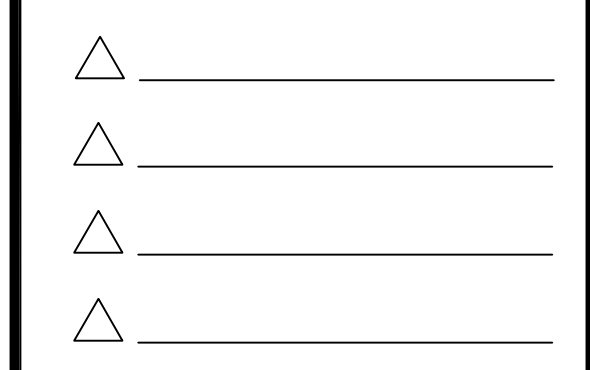
8 WOOD POST ON SILL PLATE

4



ADU

FOUNDATION DETAILS

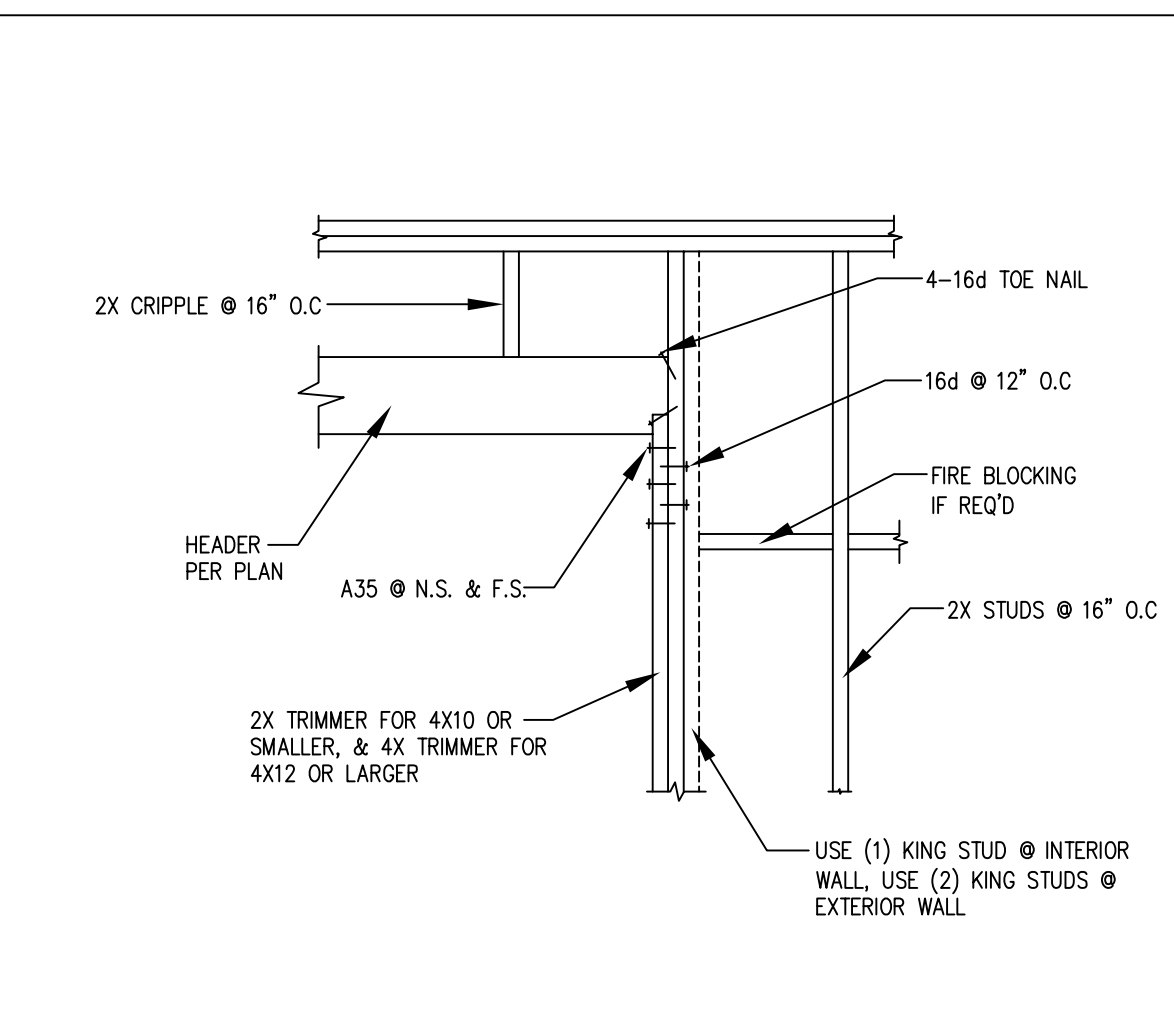


DRAWN BY: X.Q
PROJECT NO. 2495

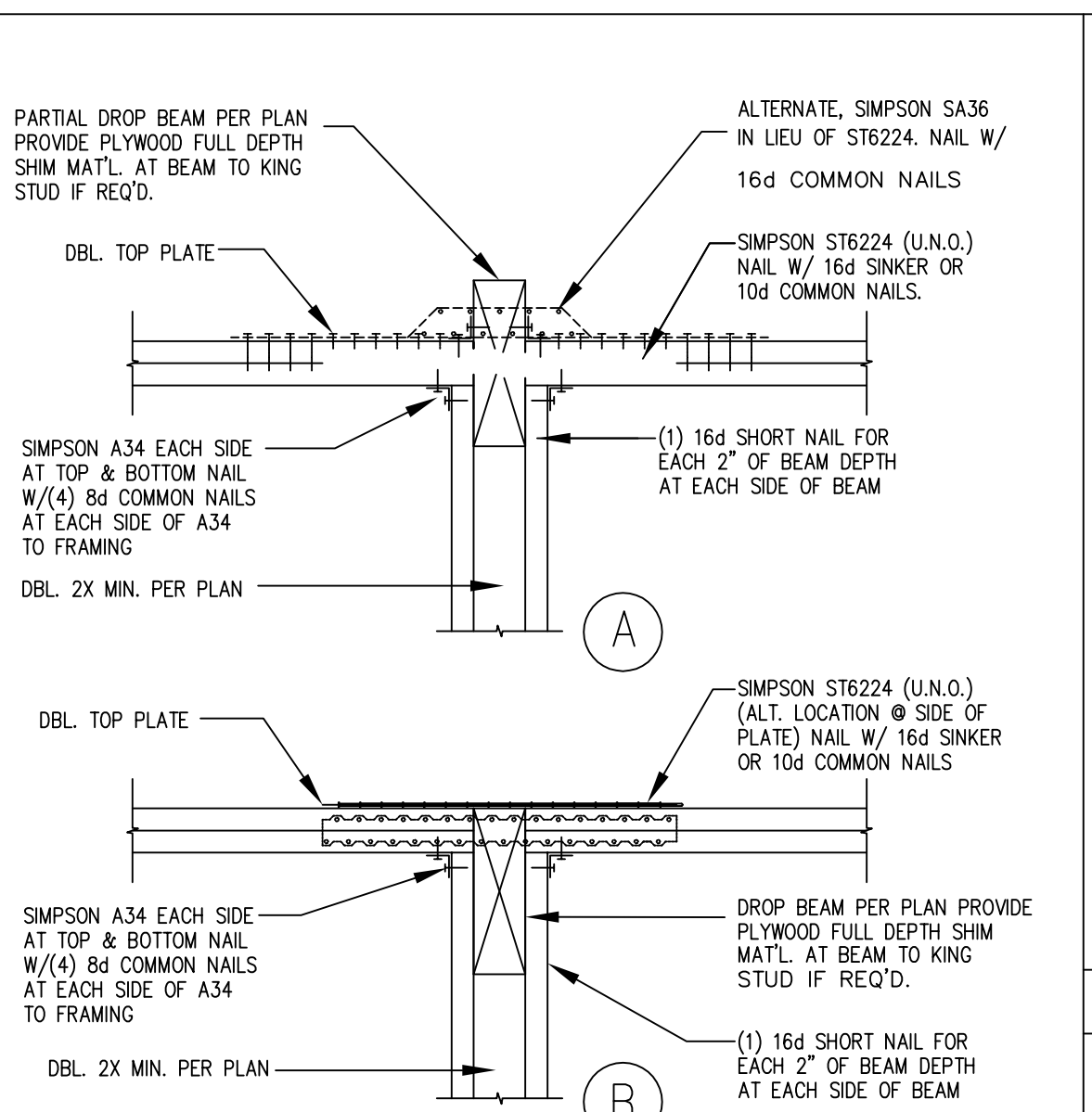
ISSUE DATE:
06-17-2024



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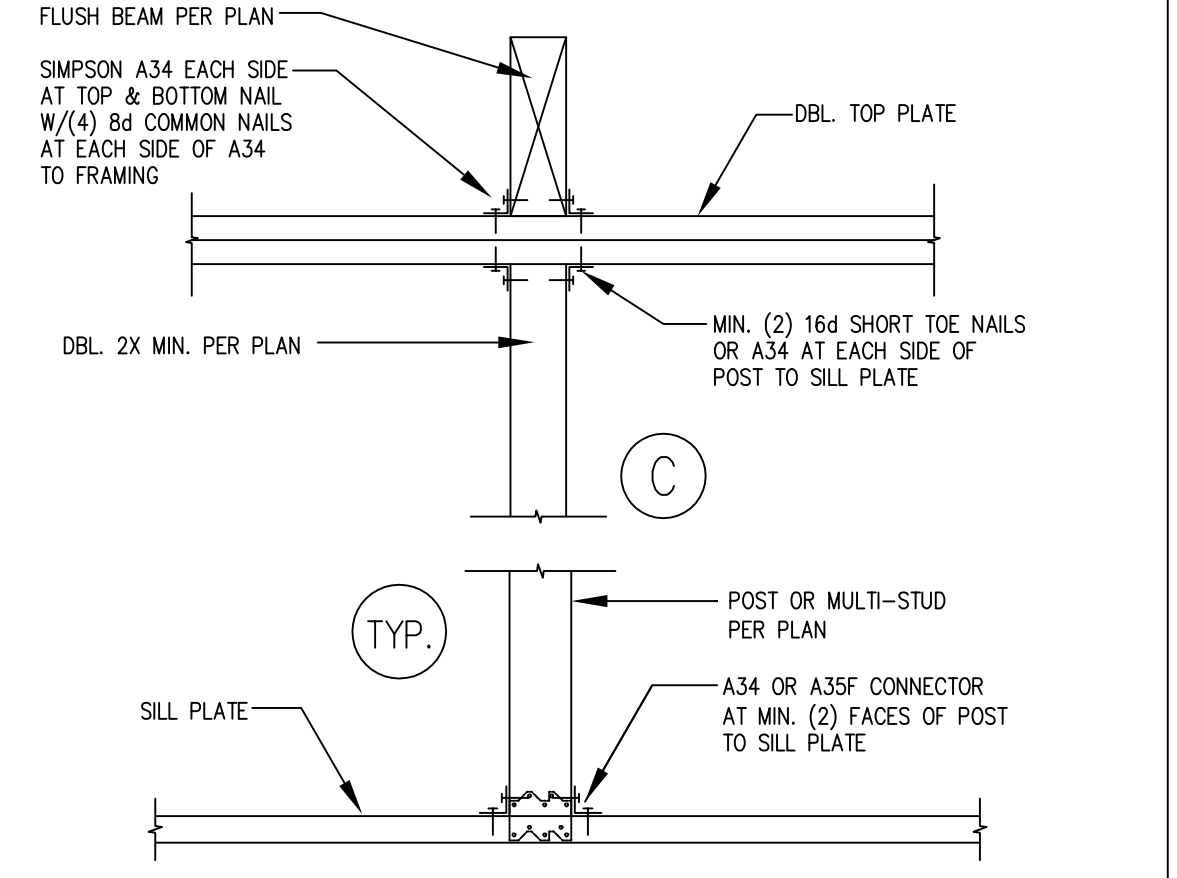
17 DROPPED HEADER DETAIL 12



SCHEDULE

TYPE	NO. NAILS OR BOLTS EACH SIDE OF JOINT	PLATE SIZE UNO
A	8 - 16d NAILS	2 - 2x
B	12 - 16d NAILS	2 - 2x
C	16 - 16d NAILS	2 - 2x
D	22 - 16d NAILS	2 - 2x
E	3 - 3/4" # BOLTS OR M5760	2x 2x

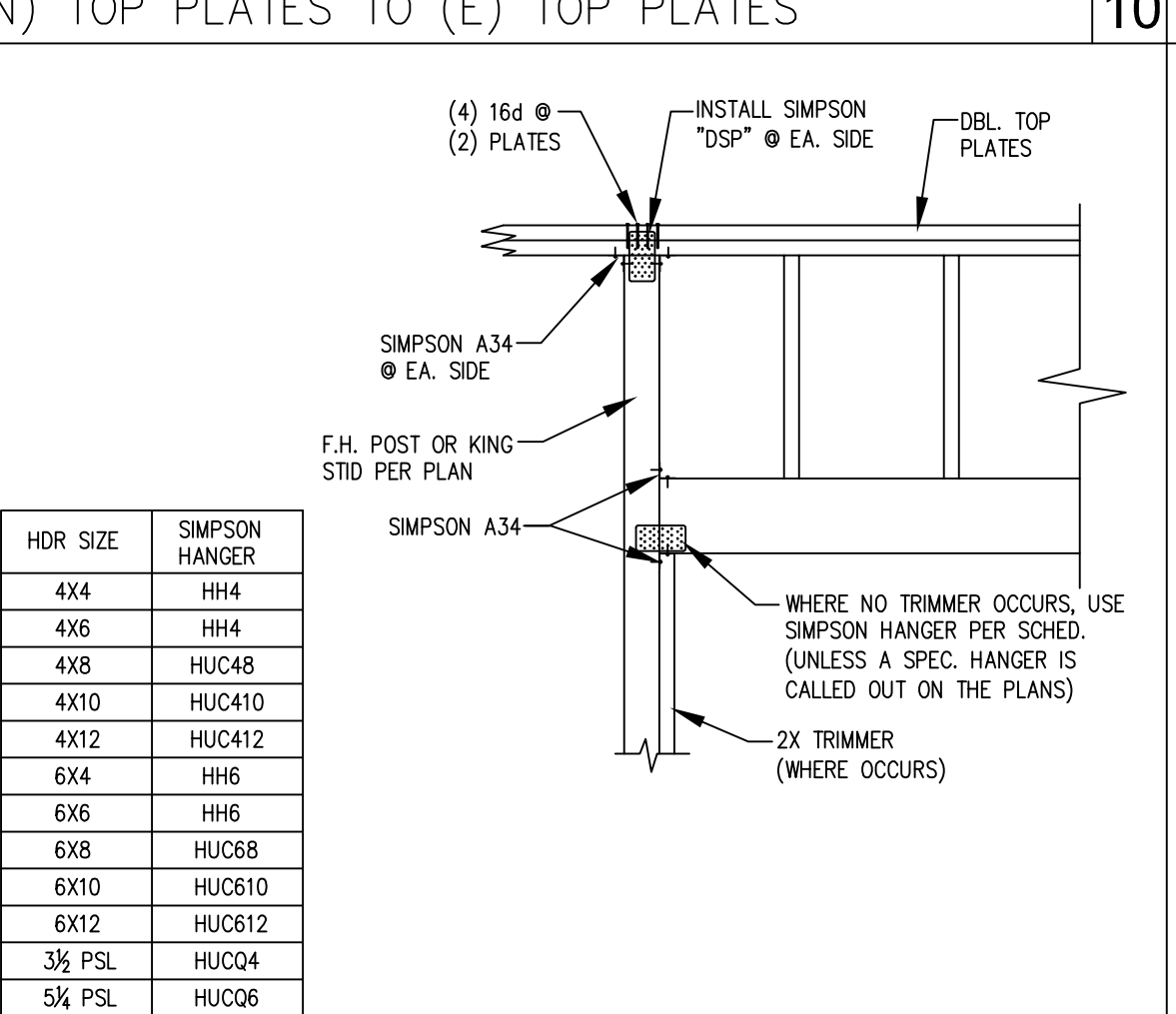
18 TOP PLATE SPLICE 13



19 TYP. BEAM TO POST WITH TOP PLATE 9

#	STRAP	NAILS SIZE AND SPACING	CAPACITY (LBS)	END LENGTH
A	(1) CS16	8d @ 2 1/2"	1650	3'-6"
B	(2) CS16	8d @ 2 1/2"	3300	3'-6"

19 TYP. JOISTS CONN. 14



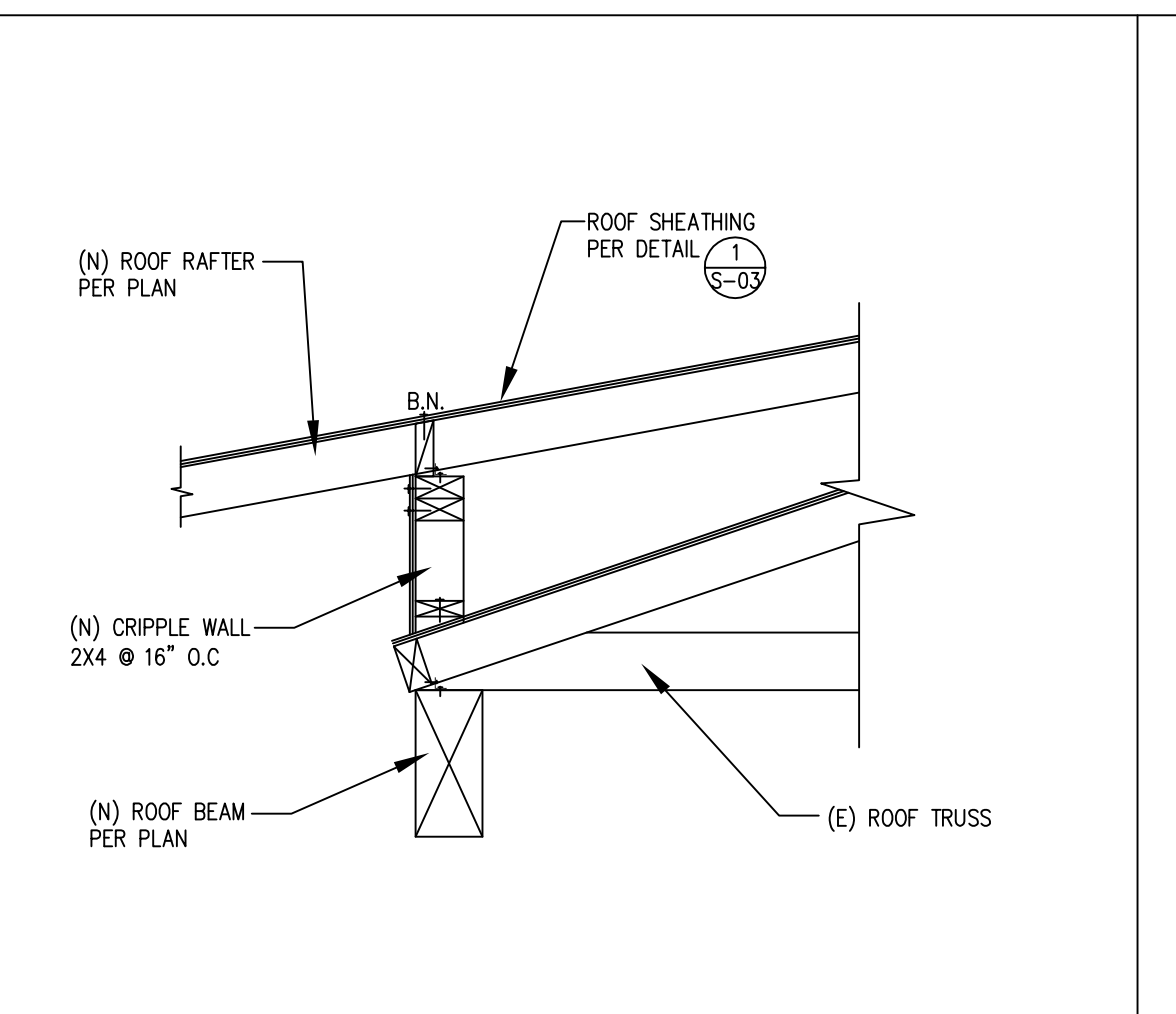
20 (N) TOP PLATES TO (E) TOP PLATES 10

HDR SIZE	SIMPSON HANGER
4X4	HH4
4X6	HH4
4X8	HUC48
4X10	HUC410
4X12	HUC412
6X4	HH6
6X6	HH6
6X8	HUC68
6X10	HUC610
6X12	HUC612
3 1/2" PSL	HUC04
5 1/4" PSL	HUC06

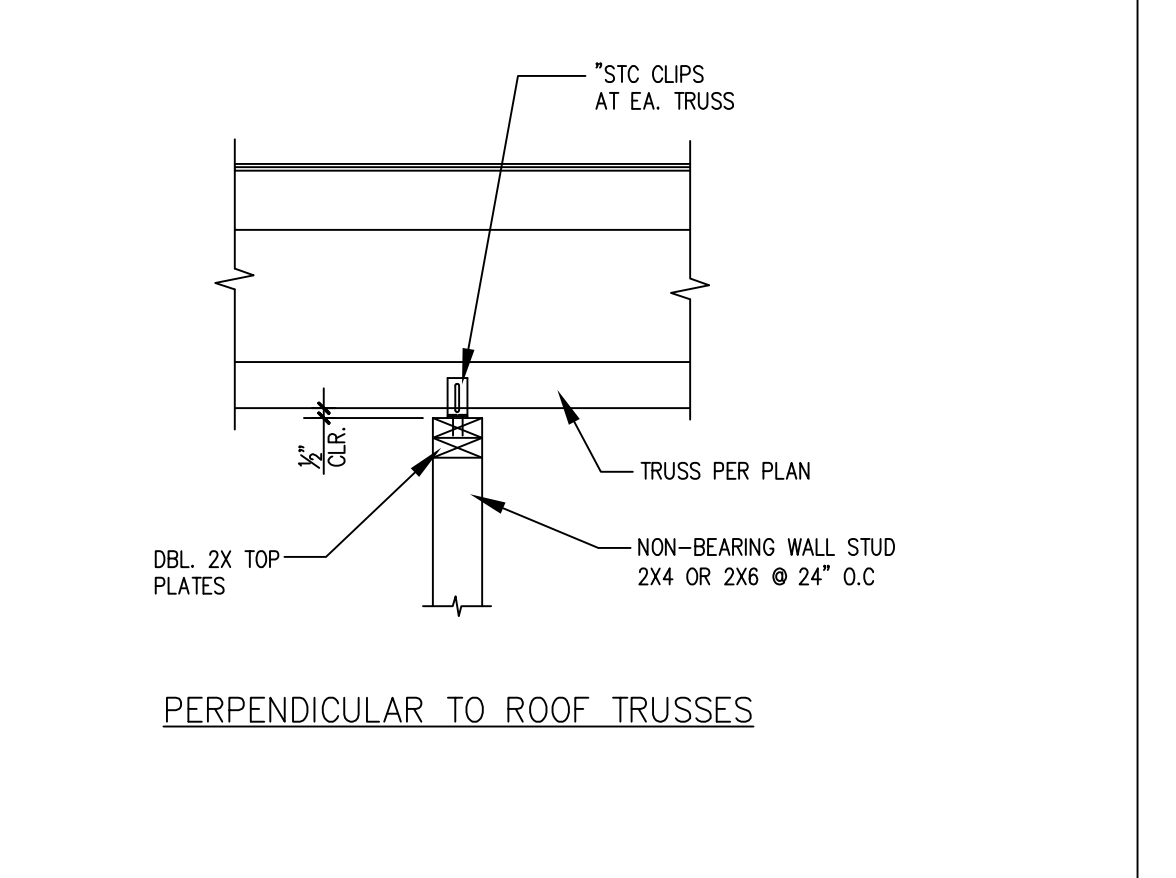
15 HEADER TO FULL HEIGHT POST CONN. DETAIL 11



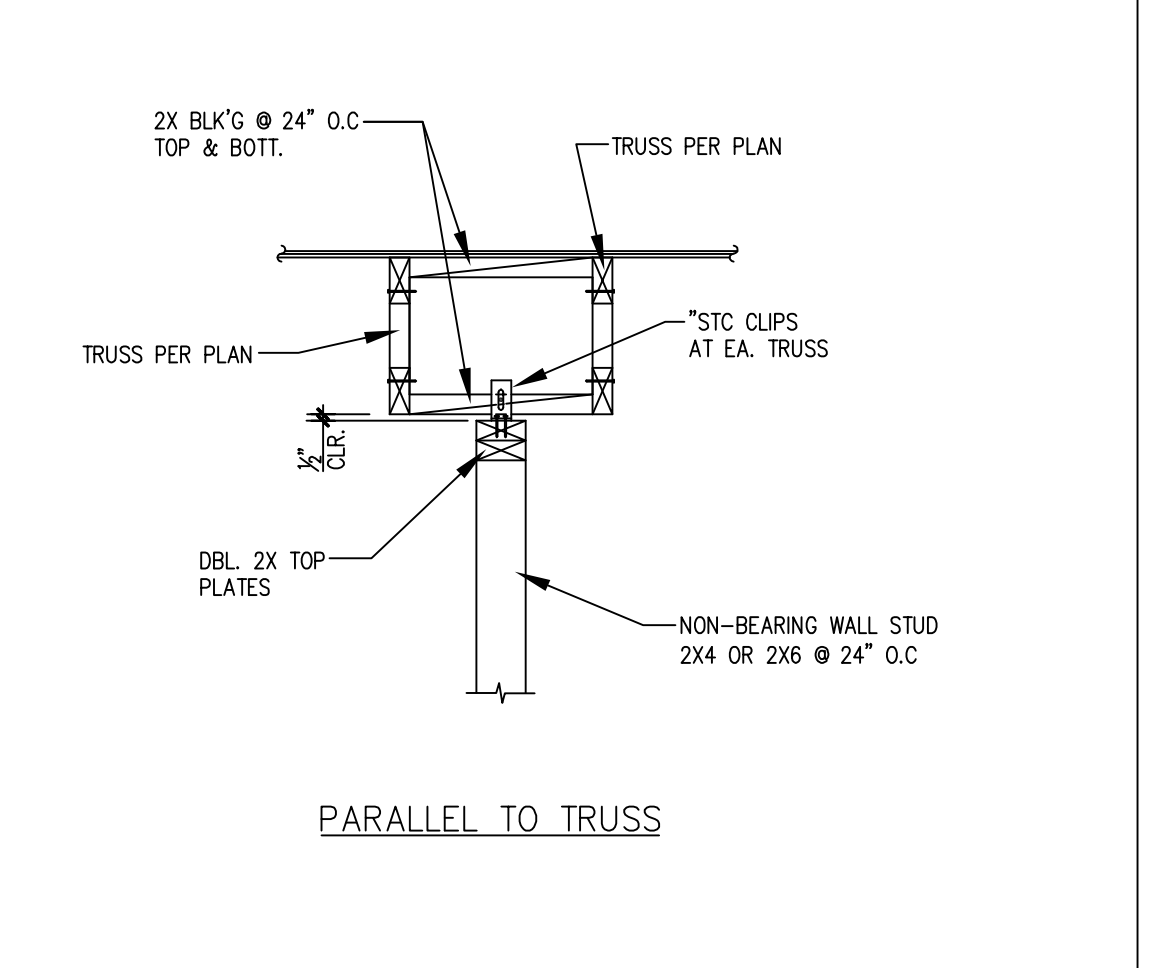
21 GUARDRAIL DETAIL (WOOD) 7



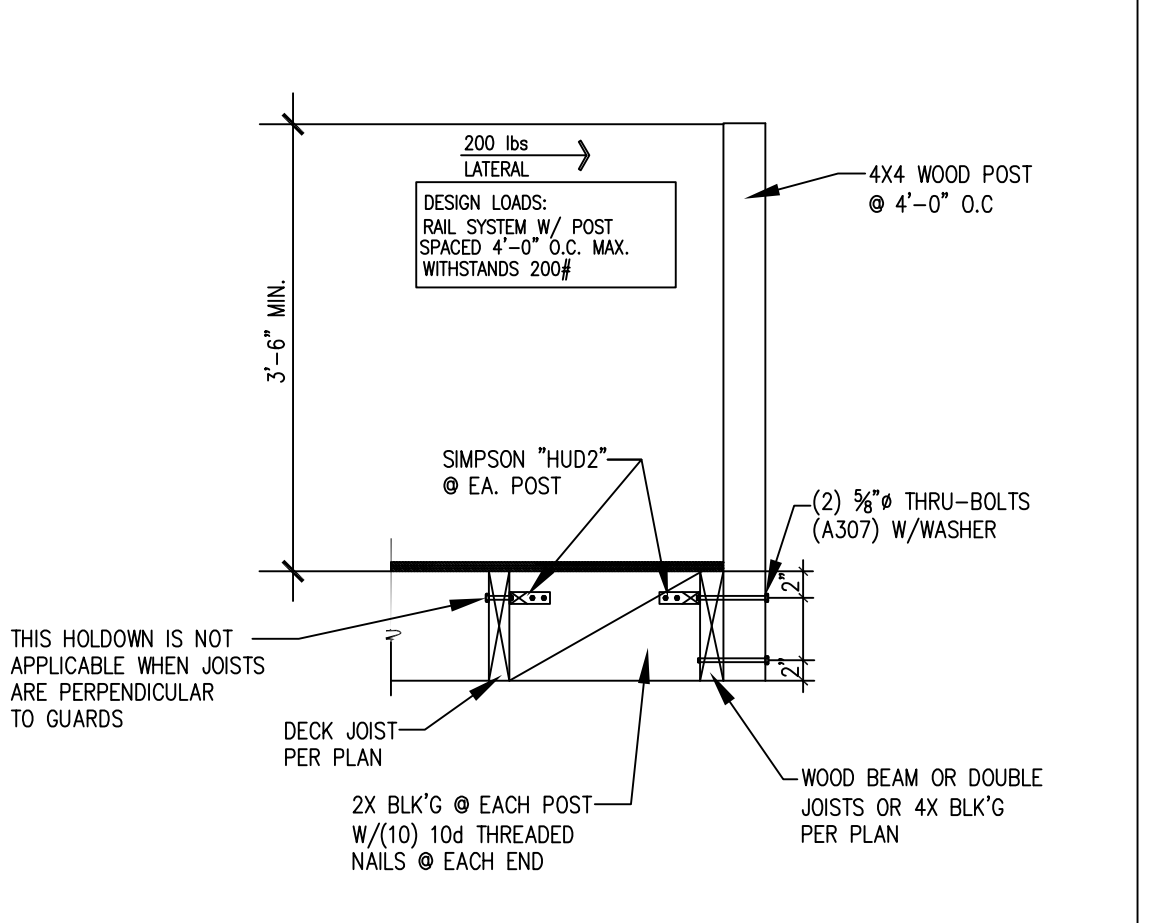
2 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



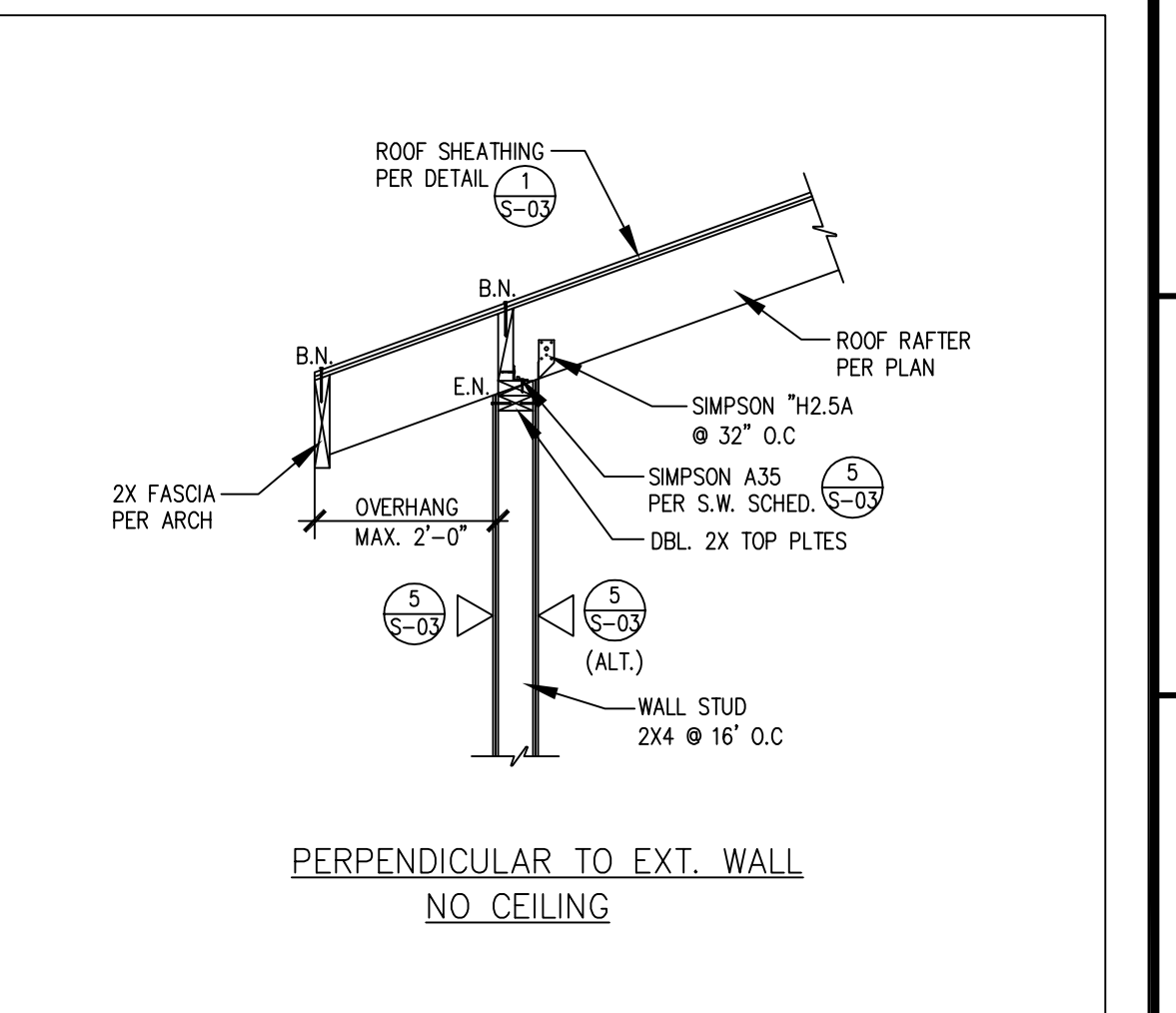
3 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



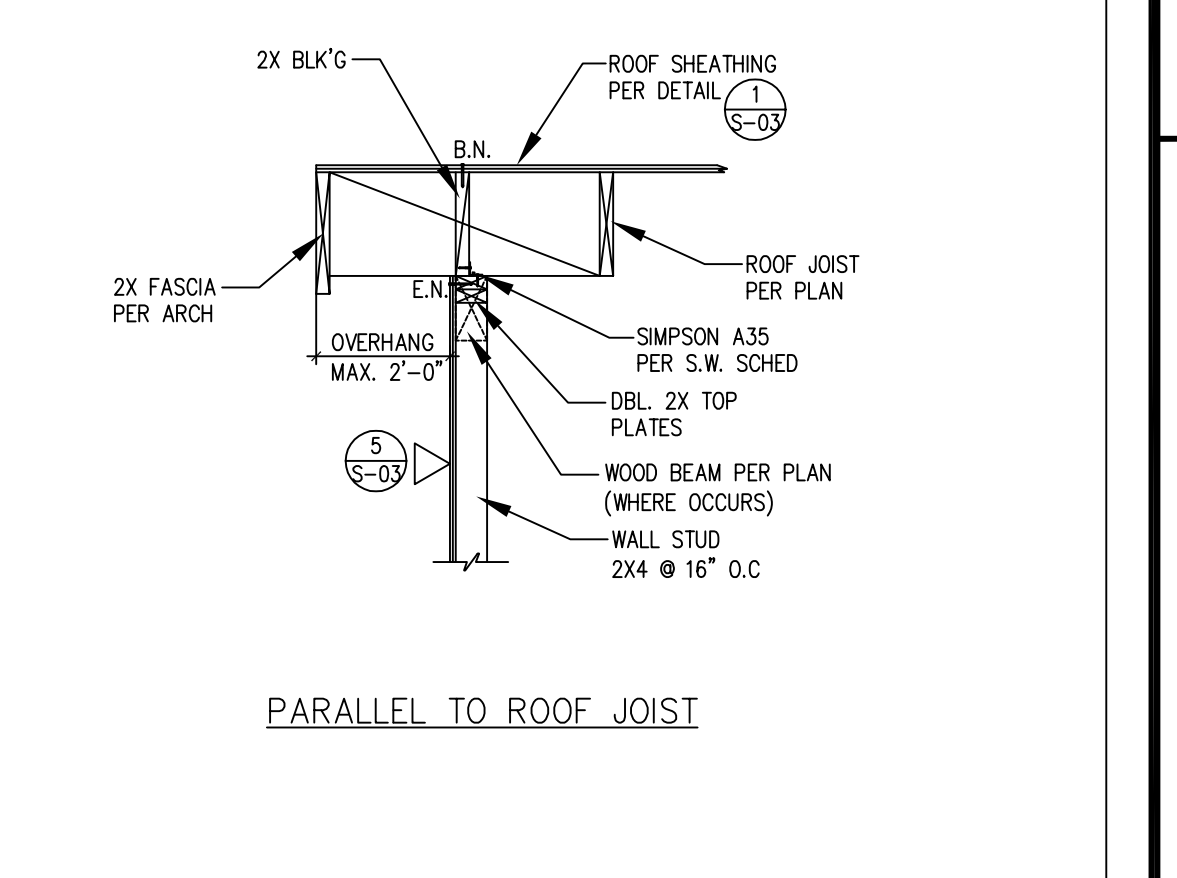
4 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



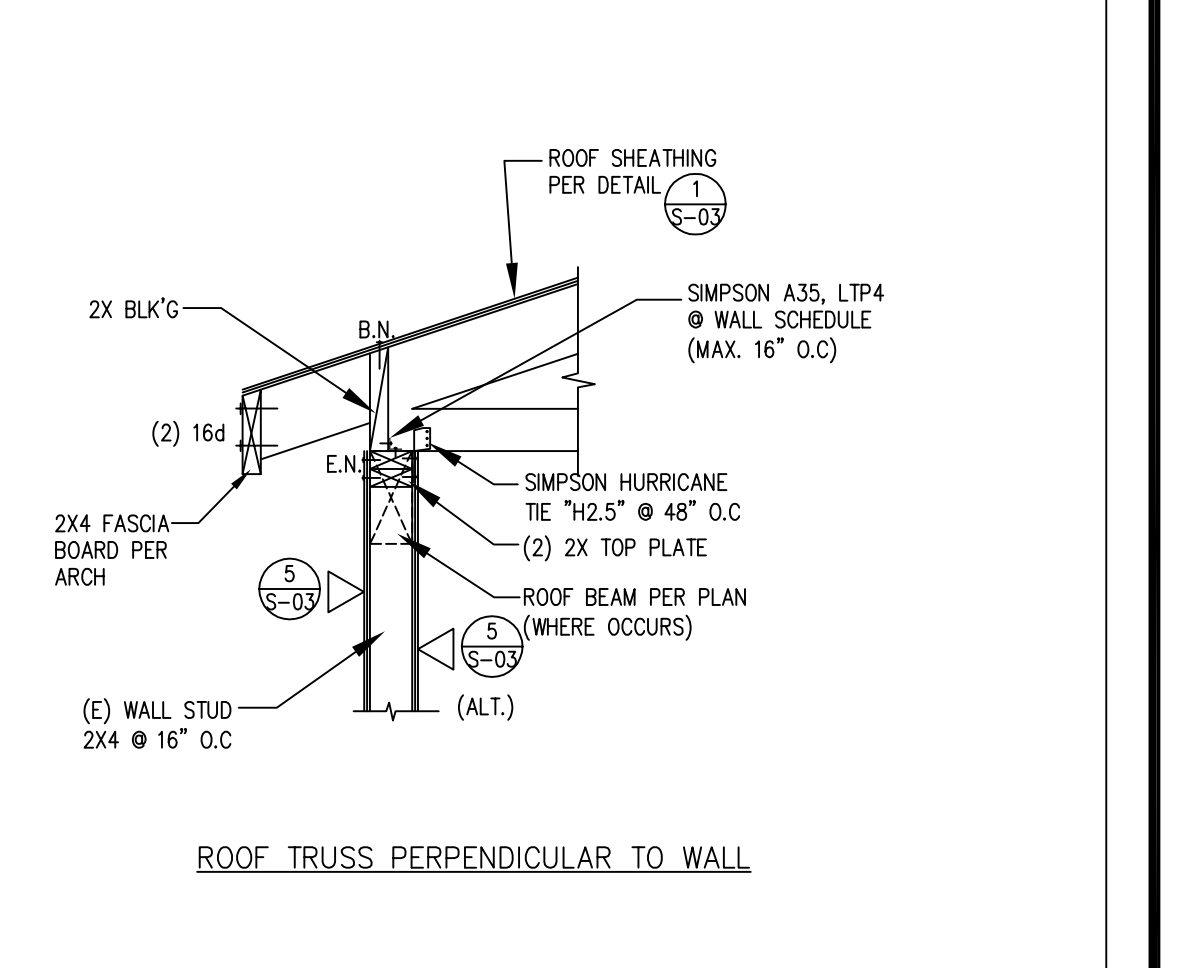
5 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



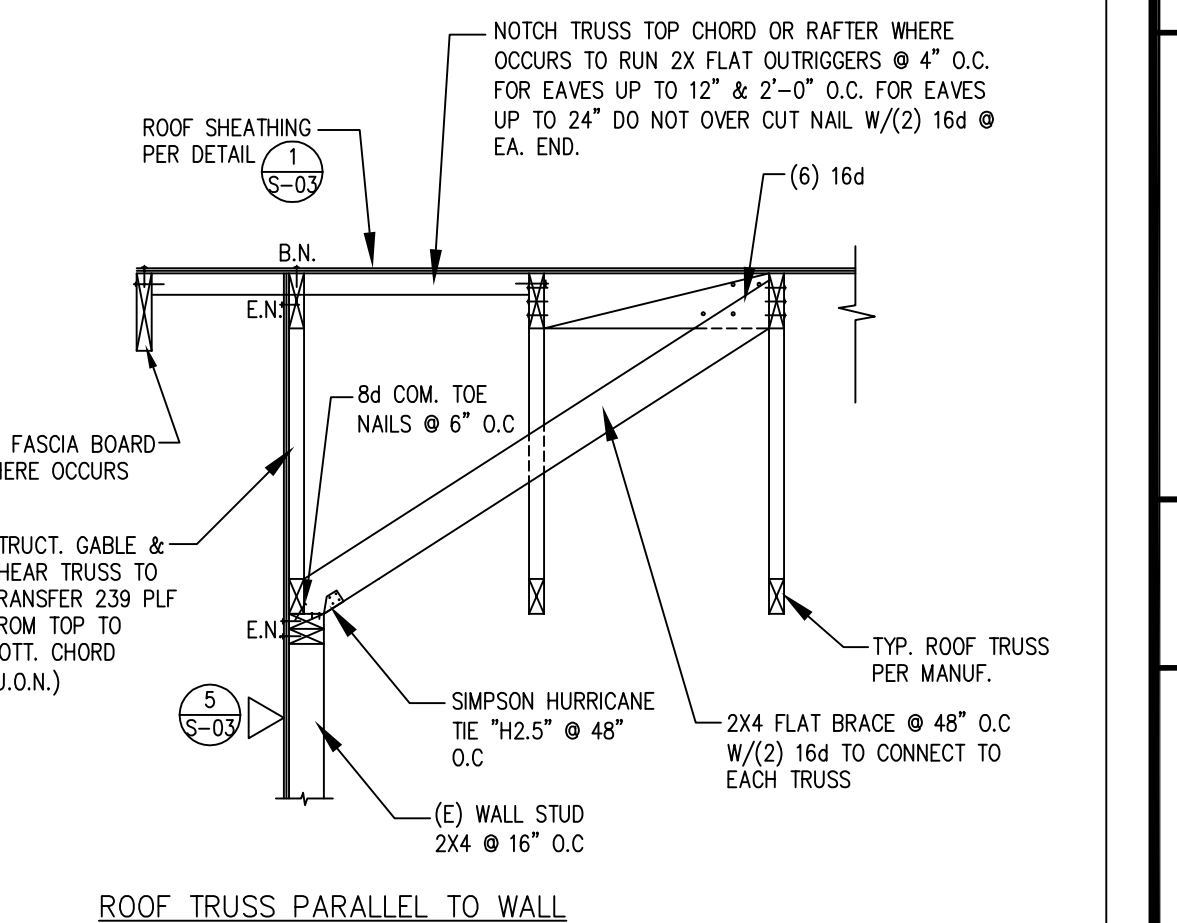
6 SHEAR TRANSFER-CONVENTIONAL ROOF 2



7 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



8 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



9 TOP CONN. NON-BEARING WALL 10



10 TOP CONN. NON-BEARING WALL 10



11 GUARDRAIL DETAIL (WOOD) 7



12 SHEAR TRANSFER-CONVENTIONAL ROOF 2



13 TYP. BEAM TO POST WITH TOP PLATE 9



14 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



15 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



16 SHEAR TRANSFER-CONVENTIONAL ROOF 2



17 DROPPED HEADER DETAIL 12



18 TOP PLATE SPLICE 13



19 TYP. BEAM TO POST WITH TOP PLATE 9



20 (N) TOP PLATES TO (E) TOP PLATES 10



21 GUARDRAIL DETAIL (WOOD) 7



22 SHEAR TRANSFER-CONVENTIONAL ROOF 2



23 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



24 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



25 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



26 SHEAR TRANSFER-CONVENTIONAL ROOF 2



27 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



28 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



29 SHEAR TRANSFER-CONVENTIONAL ROOF 2



30 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



31 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



32 SHEAR TRANSFER-CONVENTIONAL ROOF 2



33 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



34 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



35 SHEAR TRANSFER-CONVENTIONAL ROOF 2



36 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



37 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



38 SHEAR TRANSFER-CONVENTIONAL ROOF 2



39 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



40 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



41 SHEAR TRANSFER-CONVENTIONAL ROOF 2



42 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



43 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



44 SHEAR TRANSFER-CONVENTIONAL ROOF 2



45 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



46 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



47 SHEAR TRANSFER-CONVENTIONAL ROOF 2



48 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



49 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



50 SHEAR TRANSFER-CONVENTIONAL ROOF 2



51 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



52 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



53 SHEAR TRANSFER-CONVENTIONAL ROOF 2



54 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



55 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



56 SHEAR TRANSFER-CONVENTIONAL ROOF 2



57 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



58 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



59 SHEAR TRANSFER-CONVENTIONAL ROOF 2



60 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



61 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



62 SHEAR TRANSFER-CONVENTIONAL ROOF 2



63 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



64 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



65 SHEAR TRANSFER-CONVENTIONAL ROOF 2



66 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



67 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



68 SHEAR TRANSFER-CONVENTIONAL ROOF 2



69 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



70 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



71 SHEAR TRANSFER-CONVENTIONAL ROOF 2



72 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



73 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



74 SHEAR TRANSFER-CONVENTIONAL ROOF 2



75 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



76 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



77 SHEAR TRANSFER-CONVENTIONAL ROOF 2



78 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



79 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



80 SHEAR TRANSFER-CONVENTIONAL ROOF 2



81 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



82 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



83 SHEAR TRANSFER-CONVENTIONAL ROOF 2



84 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



85 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



86 SHEAR TRANSFER-CONVENTIONAL ROOF 2



87 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 3



88 ROOF TRUSS SHEAR TRANSFER - EXTERIOR 4



89 SHEAR TRANSFER-CONVENTIONAL ROOF 2