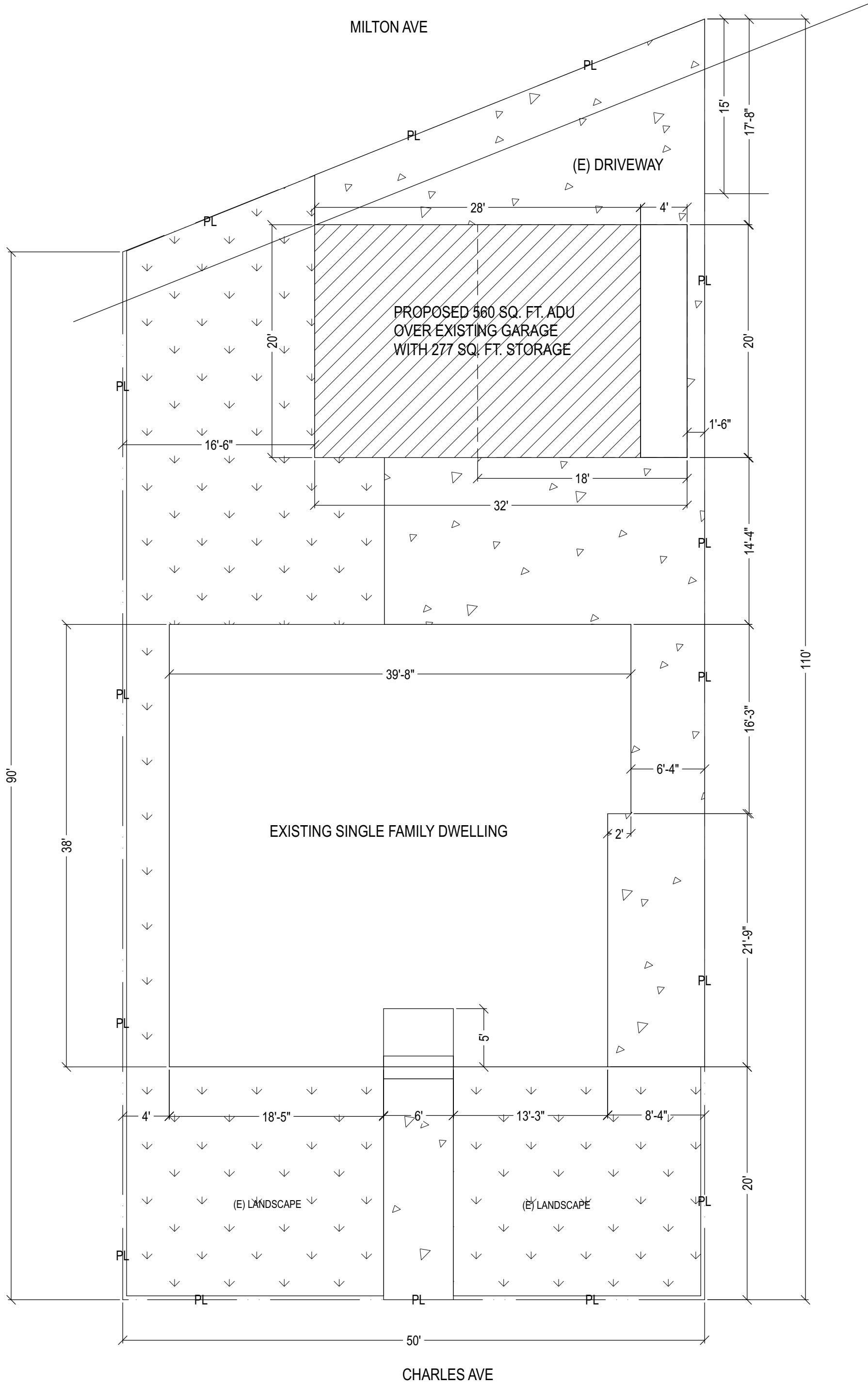


LEGAL NON - CONFORMING PROPERTY



PROPOSED PLOT PLAN  
SCALE 1/8" = 1' - 0"

SCOPE OF WORK

PROPOSED 560 SQ. FT. ADU OVER EXISTING GARAGE WITH 277 SQ. FT. STORAGE

BUILDING CONTRACTOR/HOME OWNER TO REVIEW AND VERIFY ALL DIMENSIONS, SPECS, AND CONNECTIONS BEFORE CONSTRUCTION BEGINS.

To the best of my knowledge these plans are drawn to comply with owner's and/ or builder's specifications and any changes made on them after prints are made will be done at the owner's and / or builder's expense and responsibility. The contractor shall verify all dimensions and enclosed drawing. BARBOSA DESIGN, LLC., is not liable for errors once construction has begun. While every effort has been made in the preparation of this plan to avoid mistakes, the maker can not guarantee against human error. The contractor of the job must check all dimensions and other details prior to construction and be solely responsible thereafter.

BEST MANAGEMENT PRACTICE

STORM WATER POLLUTION CONTROL REQUIREMENTS FOR CONSTRUCTION ACTIVITIES MINIMUM WATER QUALITY PROTECTION REQUIREMENT FOR ALL DEVELOPMENT CONSTRUCTION PROJECTS/CERTIFICATION STATEMENT

THE FOLLOWING IS INTENDED AS AN ATTACHMENT FOR CONSTRUCTION AND GRADING PLANS AND REPRESENT THE MINIMUM STANDARDS OF GOOD HOUSEKEEPING WHICH MUST BE IMPLEMENTED ON ALL CONSTRUCTION SITES REGARDLESS OF SIZE.

- 1 ERODED SEDIMENTS AND POLLUTANTS SHALL BE RETAINED ON SITE AND SHALL NOT BE TRANSFORMED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE OR WIND.
- 2 STOCKPILES OF EARTH AND OTHER CONSTRUCTION - RELATED MATERIALS SHALL BE COVERED AND/OR PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY WIND OR WATER.
- 3 FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIAL MUST BE STORE DIN ACCORDANCE WITH THEIR LISTINGS AND SHALL NOT CONTAMINATE THE SOIL NOT THE SURFACE WATERS. ALL APPROVED TOXIC STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WATER. SPILLS MUST BE CLEARED UP IMMEDIATELY AND DISPOSED OFF PROPERTY AND SHALL NOT BE WASHED INTO THE DRAINAGE SYSTEM.
- 4 NON - STORM WATER RUNOFF FROM EQUIPMENT AND VEHICLE WASHING AND ANY OTHER ACTIVITY SHALL BE CONTAINED ON THE PROJECT SITE.
- 5 EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTER ON SIRE UNTIL IT CAN BE APPROPRIATELY DISPOSED OF OR RECYCLED.
- 6 TRASH AND CONSTRUCTION - RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF STORM WATER AND DISPERSAL BY WIND.
- 7 SEDIMENTS AND OTHER MATERIAL SHALL NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENT FROM BEING DEPOSITED INTO THE STREET/ PUBLIC WAYS. ACCIDENTAL DEPOSITIONS MUST BE SWEEPED UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR BY ANY OTHER MEANS.
- 8 RETENTION BASINS OF SUFFICIENT SIZE SHALL BE PROVIDED TO RETAIN STORM WATER RUNOFF ON SITE AND SHALL BE PROPERLY LOCATED TO COLLECTED ALL TRIBUTARY SITE RUNOFF.
- 9 WHERE RETENTION OF STORM WATER RUNOFF ON SITE IS NOT FEASIBLE DUE TO THE SITE CONSTRAINTS, RUNOFF MAY BE CONVEYED TO THE STREET AND THE STORM DRAIN SYSTEM PROVIDED THAT AN APPROVED FILTERING SYSTEM IS INSTALLED AND MAINTAIN DON SITE DURING THE CONSTRUCTION DURATION.
- 10 ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER
- 11 OTHER \_\_\_\_\_

AS THE PROJECT OWNER OR AUTHORIZED AGENT OF THE OWNER, I HAVE READ AND UNDERSTAND THE REQUIREMENTS LISTED ABOVE, NECESSARY TO CONTROL STORM WATER POLLUTION FROM SEDIMENTS, EROSION, AND CONSTRUCTION MATERIALS, AND I CERTIFY THAT I WILL COMPLY WITH THESE REQUIREMENTS.

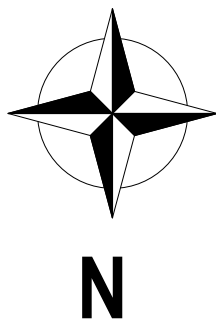
PRINT NAME: MARISOL XOCHILT BARBOSA  
(OWNER OR AUTHORIZED AGENT OF THE OWNER)

SIGNATURE: \_\_\_\_\_  
(OWNER OR AUTHORIZED AGENT OF THE OWNER)

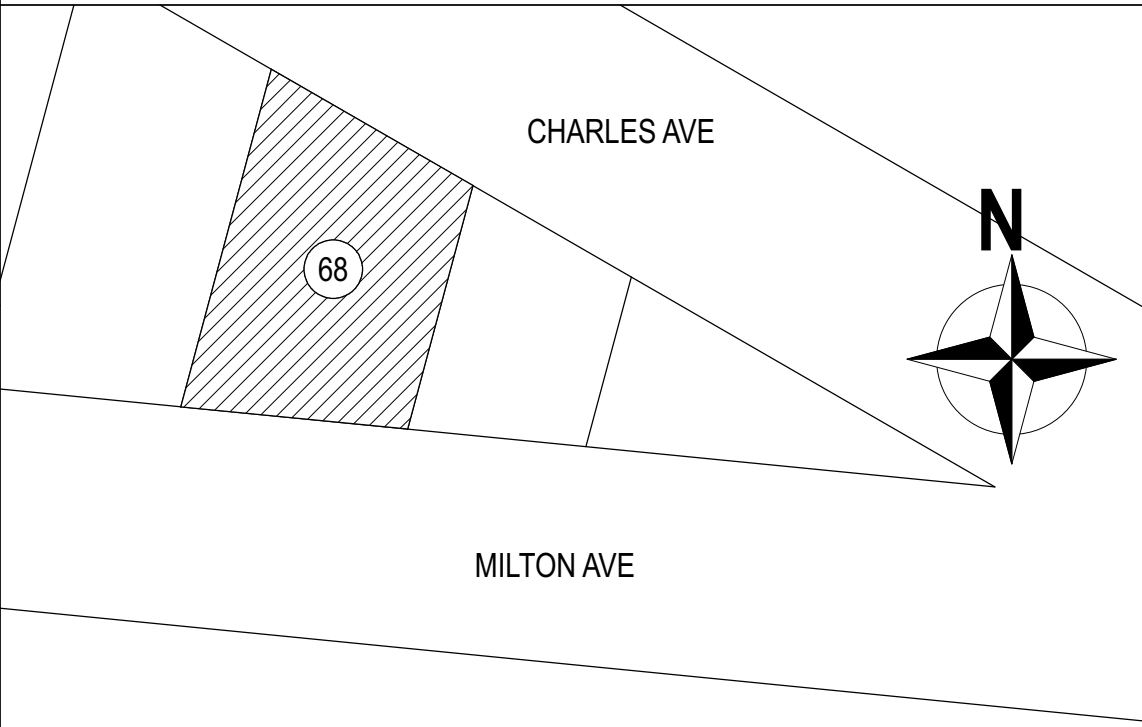
DATE: \_\_\_\_\_

COMPLY WITH BUILDING CODES

2020 CALIFORNIA BUILDING CODE  
2020 CALIFORNIA ELECTRICAL CODE  
2020 CALIFORNIA PLUMBING CODE  
2020 CALIFORNIA MECHANICAL CODE  
2020 CALIFORNIA GREEN BUILDING STANDARDS CODE  
2020 CALIFORNIA FIRE CODE



VICINITY MAP



BARBOSA DESIGN, LLC  
1619 BRYCEDALE AVE  
DUARTE, CA 91010  
MARISOL X. BARBOSA  
(323) 717 - 3736

SCOPE OF WORK:

PROPOSED 560 SQ. FT. ADU  
OVER EXISTING GARAGE  
WITH 277 SQ. FT. STORAGE

LEGAL DESCRIPTION

APN# 4208 - 025 - 021  
PROPERTY TYPE: SINGLE FAMILY DWELLING  
TRACT NO: 7432  
LOT: 68  
BLOCK:  
ZONING:  
OCCUPANCY:

LOT COVERAGE

EXISTING SINGLE FAMILY DWELLING	1,118	SQ. FT.
EXISTING GARAGE	363	SQ. FT.
WORK AREA/STORAGE	277	SQ. FT.
ACCESSORY DWELLING UNIT (ADU)	560	SQ. FT.
TOTAL	2,318	SQ. FT.
LOT AREA	5,000	SQ. FT.

LIST OF DRAWINGS

A1 PROPOSED PLOT PLAN  
A2 PROPOSED 1ST AND 2ND FLOOR PLAN  
A3 PROPOSED ELEVATION PLAN  
A4 PROPOSED CROSS SECTION PLAN  
S1 FOUNDATION/CEILING/ROOF PLAN  
D1 DETAILS  
D2 DETAILS  
N1 NOTES  
N2 NOTES

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NOTES

OWNER SHALL REPAIR OR REPLACE ANY DAMAGED, DEFECTIVE, OFF-GRADE, OR ANY NON-CONFORMING SIDEWALK, DRIVEWAY APPROACH, OR NON - CONFORMING CONDITIONS THAT EXIST IN THE PUBLIC RIGHT OF WAY AND BE CONSIDERED HAZARDOUS BY THE CITY ENGINEER (MUNICIPAL ORDINANCE 9.08.415). THIS WORK WILL REQUIRE A SEPARATE PERMIT THROUGH ENGINEERING DIVISION AND MUST BE OBTAINED BY A LICENSED CONTRACTOR AND COMPLETED PRIOR TO FINAL INSPECTION.

PLOT PLAN LEGEND

NEW CONSTRUCTION	
PROPERTY LINE	
LANDSCAPE	
CONCRETE	

ARDITO RESIDENCE  
4121 CHARLES AVE  
CULVER CITY, CA 90232

REVISIONS:

DATE: APRIL 2015

DESIGNED BY: MXB

SCALE: SEE PLAN

JOB NUMBER: 16 - 2050

A1

SCOPE OF WORK:

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ARDITO RESIDENCE  
4121 CHARLES AVE  
CULVER CITY, CA 90232

OWNER:

REVISIONS:

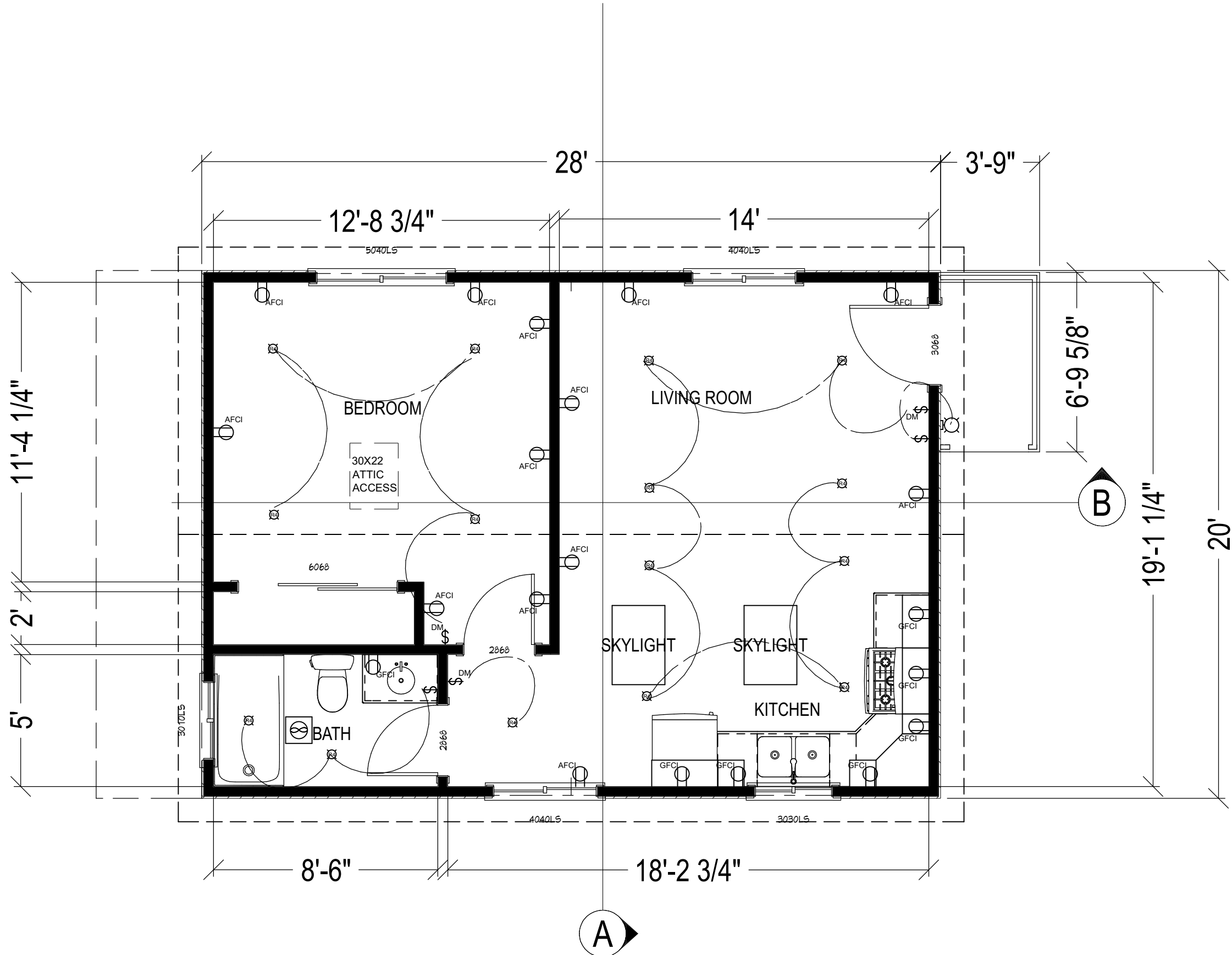
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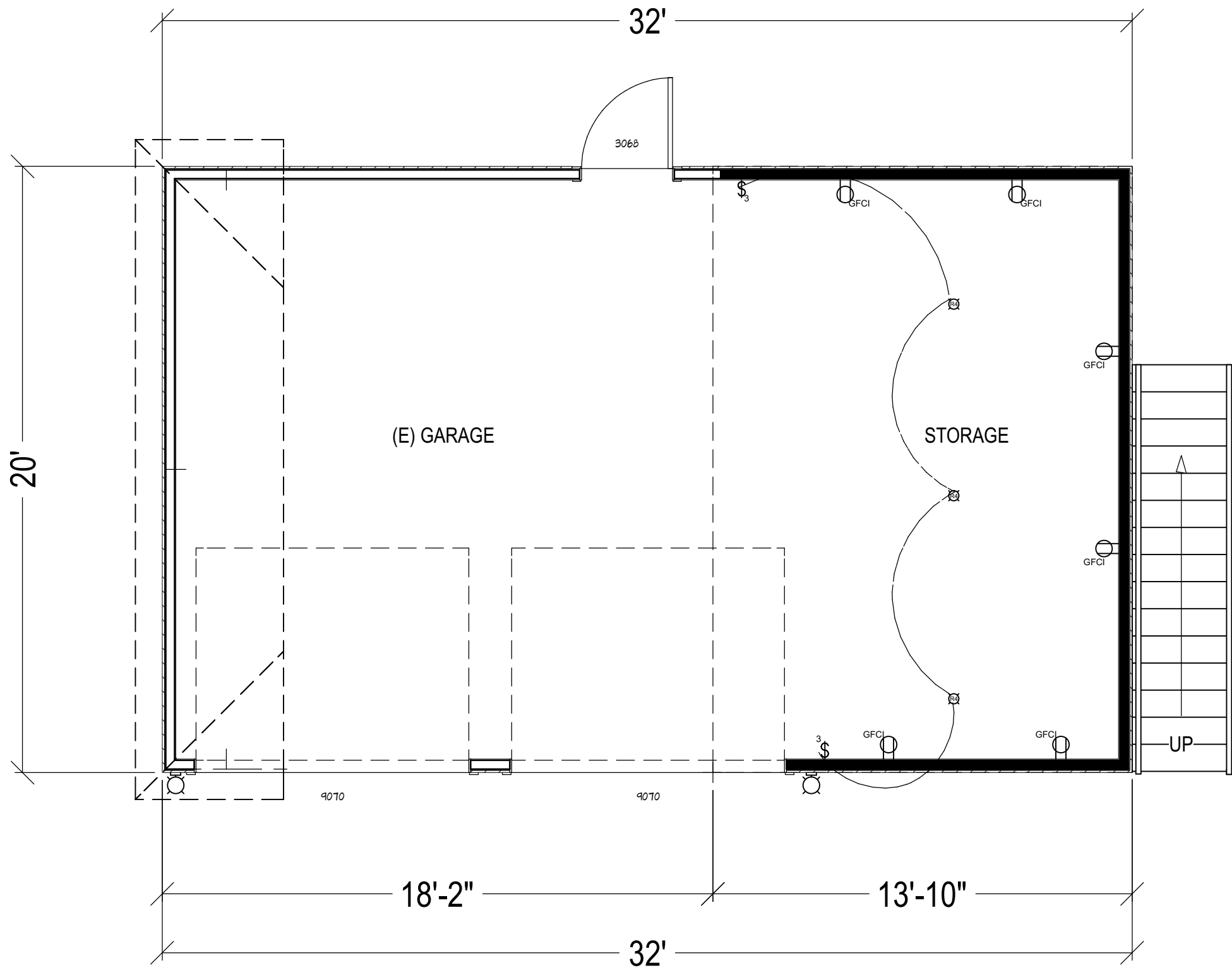
DESIGNED BY: MXB

SCALE: SEE PLAN

JOB NUMBER: 16 - 2050



PROPOSED 2ND FLOOR PLAN  
SCALE 1/4" = 1' - 0"



PROPOSED 1ST FLOOR PLAN  
SCALE 1/4" = 1' - 0"

NOTES:

1. AN APPROVED SMOKE ALARM SHALL BE INSTALLED IN EACH SLEEPING ROOM & HALLWAY OR AREA GIVING ACCESS TO A SLEEPING ROOM & HALLWAY AND ONE ON EACH STORY AND BASEMENT FOR DWELLING WITH MORE THAN ONE STORY. SMOKE ALARMS SHALL BE INTERCONNECTED SO THAT ACTUATION OF ONE ALARM WILL ACTIVATE ALL THE ALARMS WITHIN THE INDIVIDUAL DWELLING UNIT. IN NEW CONSTRUCTION SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER SOURCE FROM THE BUILDING WIRING AND SHALL BE EQUIPPED WITH BATTERY BACK UP AND LOW BATTERY SIGNAL.
2. AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED IN DWELLING UNIT AND IN SLEEPING UNITS WITHIN WHICH FUEL BURNING APPLIANCE ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. CARBON MONOXIDE ALARM SHALL BE PROVIDED OUTSIDE OF EACH SEPARATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM AND ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS.
3. SMOKE DETECTORS SHALL BE PROVIDED FOR ALL DWELLING UNITS INTENDED FOR HUMAN OCCUPANCY UPON THE OWNERS APPLICATION FOR A PERMIT FOR ALTERATIONS, REPAIRS, OR ADDITION, EXCEEDING ONE THOUSAND DOLLARS (\$1,000.00)
4. ALL SHOWERS AND TUB SHOWERS SHALL HAVE A PRESSURE BALANCE, THERMOSTATIC MIXING VALVE, OR A COMBINATION PRESSURE BALANCE/ THERMOSTATIC MIXING TYPE VALVE.

FLOOR PLAN LEGEND

(N) WALL	
(E) WALL	
WINDOWS	
DOORS	
CROSS SECTION	
DEMO WALLS	
ATTIC ACCESS 5' X 6'	
1ST FLOOR FOOT PRINT	

WINDOW SCHEDULE

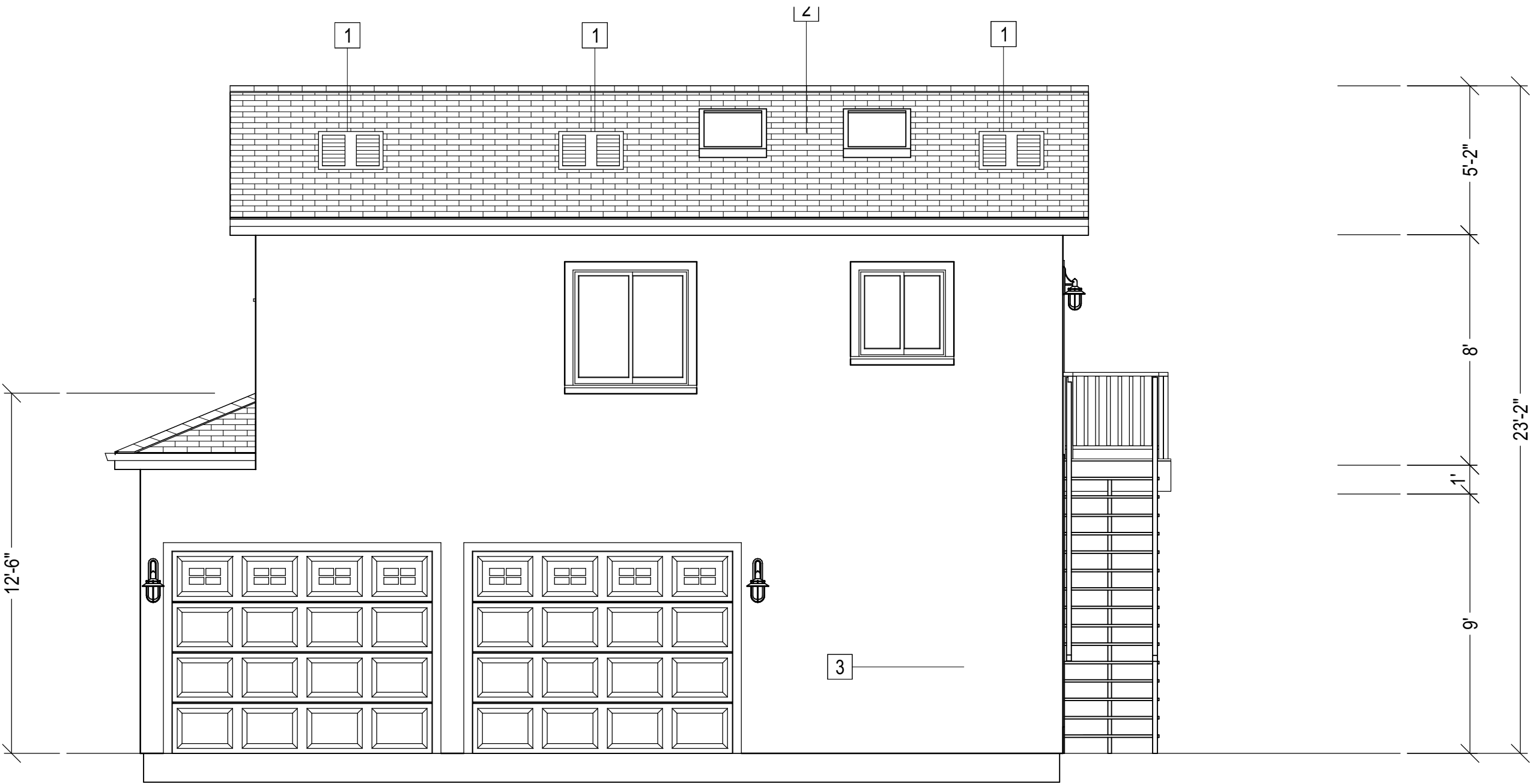
QTY.	SIZE	DESCRIPTION	U FACTOR	SHGC
1	3' - 0" X 1' - 0"	LEFT SLIDING W/ BUG SCREEN	0.32	0.21
1	3' - 0" X 3' - 0"	LEFT SLIDING W/ BUG SCREEN	0.32	0.21
3	4' - 0" X 4' - 0"	LEFT SLIDING W/ BUG SCREEN	0.32	0.21
1	5' - 0" X 4' - 0"	LEFT SLIDING W/ BUG SCREEN	0.32	0.21
2		SKYLIGHTS		

DOOR SCHEDULE

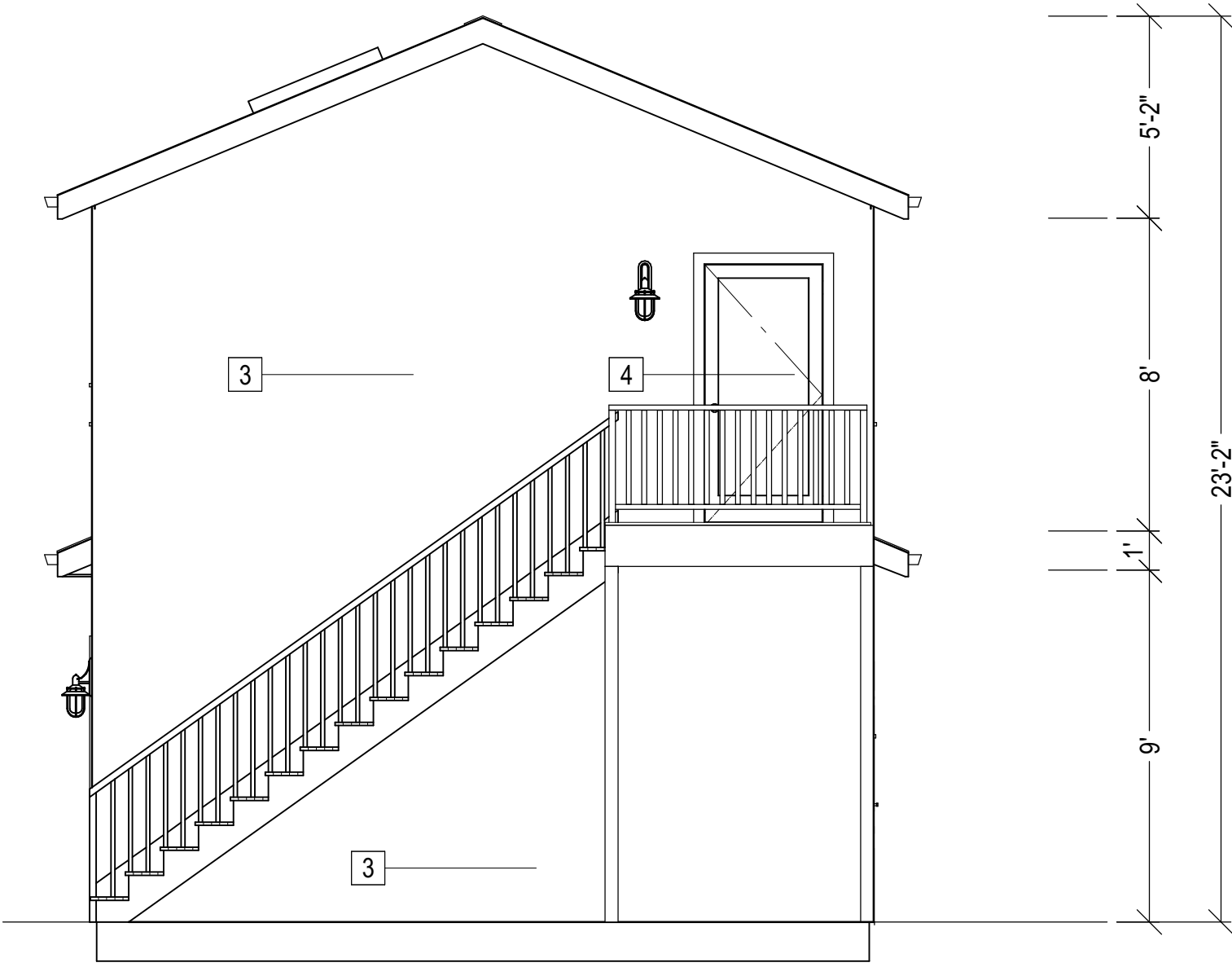
QTY.	SIZE	DESCRIPTION
1	2' - 8" X 6' - 8"	DOUBLE HUNG
2	3' - 0" X 6' - 8"	DOUBLE HUNG
2	8' - 0" X 7' - 0"	GARAGE DOOR

ELECTRICAL - DATA - AUDIO LEGEND

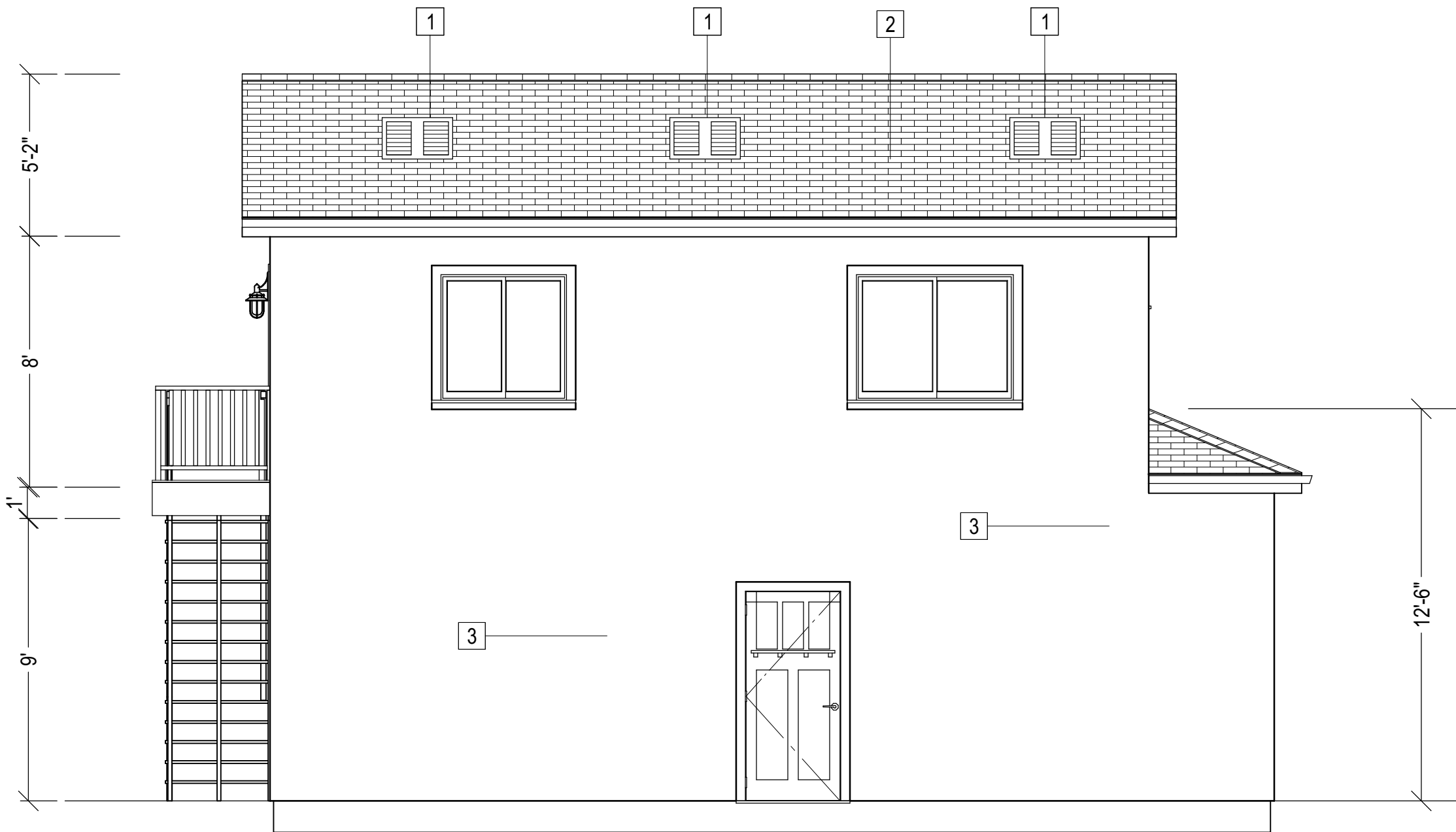
SYMBOL	DESCRIPTION
	Ceiling Fan
	Ventilation Fans: Ceiling Mounted, Wall Mounted
	Ceiling Mounted Light Fixtures: Surface/Pendant, Recessed, Heat Lamp, Low Voltage
	Wall Mounted Light Fixtures: Flush Mounted, Wall Sconce
	Chandelier Light Fixture
	Fluorescent Light Fixture
	240V Receptacle
	110V Receptacles: Duplex, Weather Proof, GFCI
	Switches: Single Pole, Weather Proof, 3-Way, 4-Way
	Switches: Dimmer, Timer
	Audio Video: Control Panel, Switch
	Speakers: Ceiling Mounted, Wall Mounted
	Wall Jacks: CAT5, CAT5 + TV, TV/Cable
	Telephone Jack
	Intercom
	Thermostat
	Door Chime, Door Bell Button
	Smoke Detectors: Ceiling Mounted, Wall Mounted
	Electrical Breaker Panel



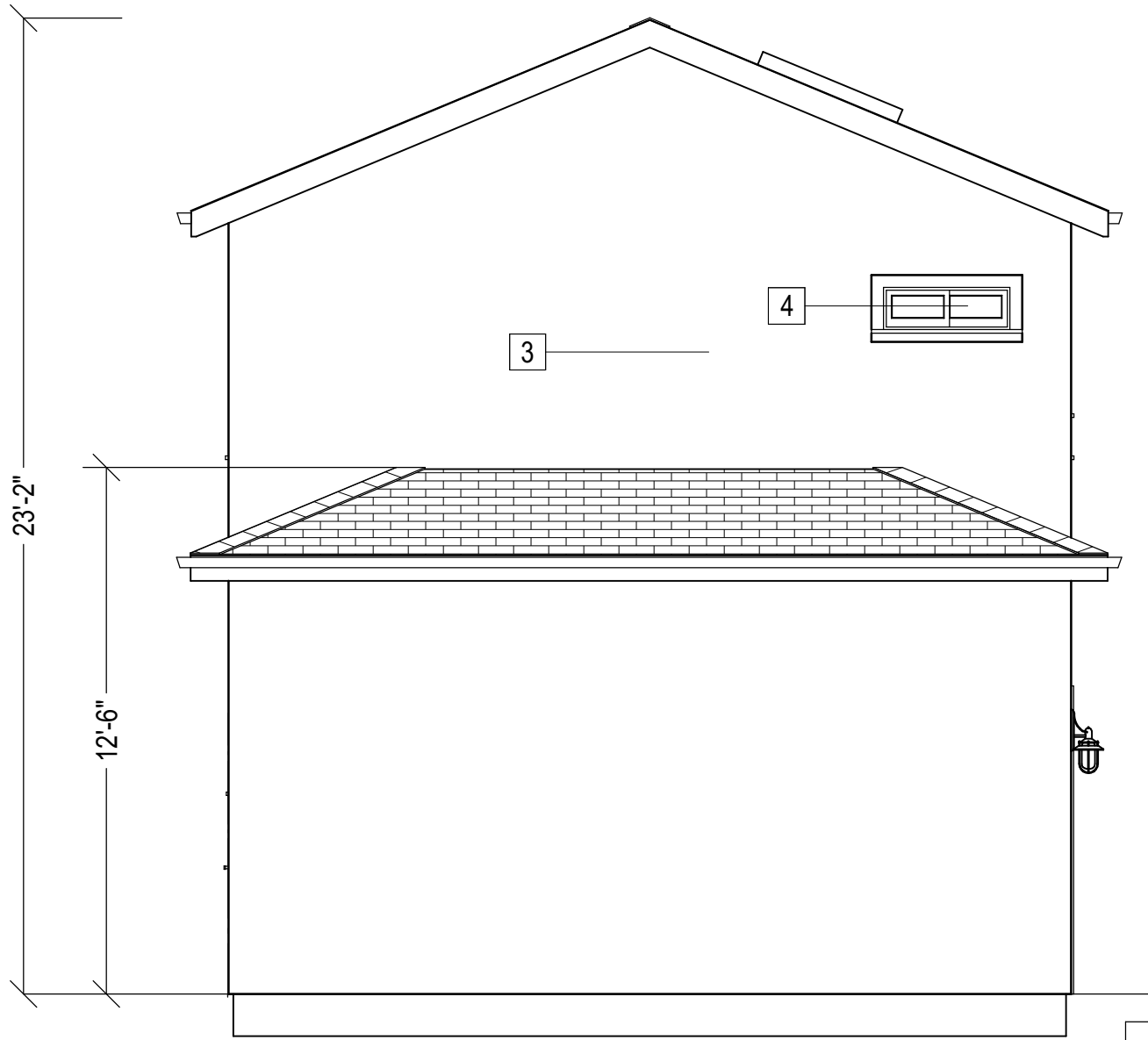
**PROPOSED SOUTH ELEVATION**  
SCALE 1/4" = 1' - 0"



**PROPOSED EAST ELEVATION**  
SCALE 1/4" = 1' - 0"



**PROPOSED NORTH ELEVATION**  
SCALE 1/4" = 1' - 0"



**PROPOSED WEST ELEVATION**  
SCALE 1/4" = 1' - 0"

**ELEVATION PLAN**

- 1 LOW PROFILE ATTIC VENTS
- 2 CLASS "A" SHINGLE
- 3 7/8" STUCCO FINISH
- 4 TEMPERED WINDOWS

ROOFING INFORMATION:  
MANUFACTURER: OWENS CORNING  
MODEL: OAKRIDGE  
COLOR: AMBER  
ICC - ES AC438 SRI 21

**BARBOSA DESIGN, LLC**

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DUARTE, CA 91010  
MARISOL X. BARBOSA  
(323) 717 - 3736

**SCOPE OF WORK:**

PROPOSED 560 SQ. FT. ADU  
OVER EXISTING GARAGE  
WITH 277 SQ. FT. STORAGE

**OWNER:**

ARDITO RESIDENCE  
4121 CHARLES AVE  
CULVER CITY, CA 90232

**REVISIONS:**

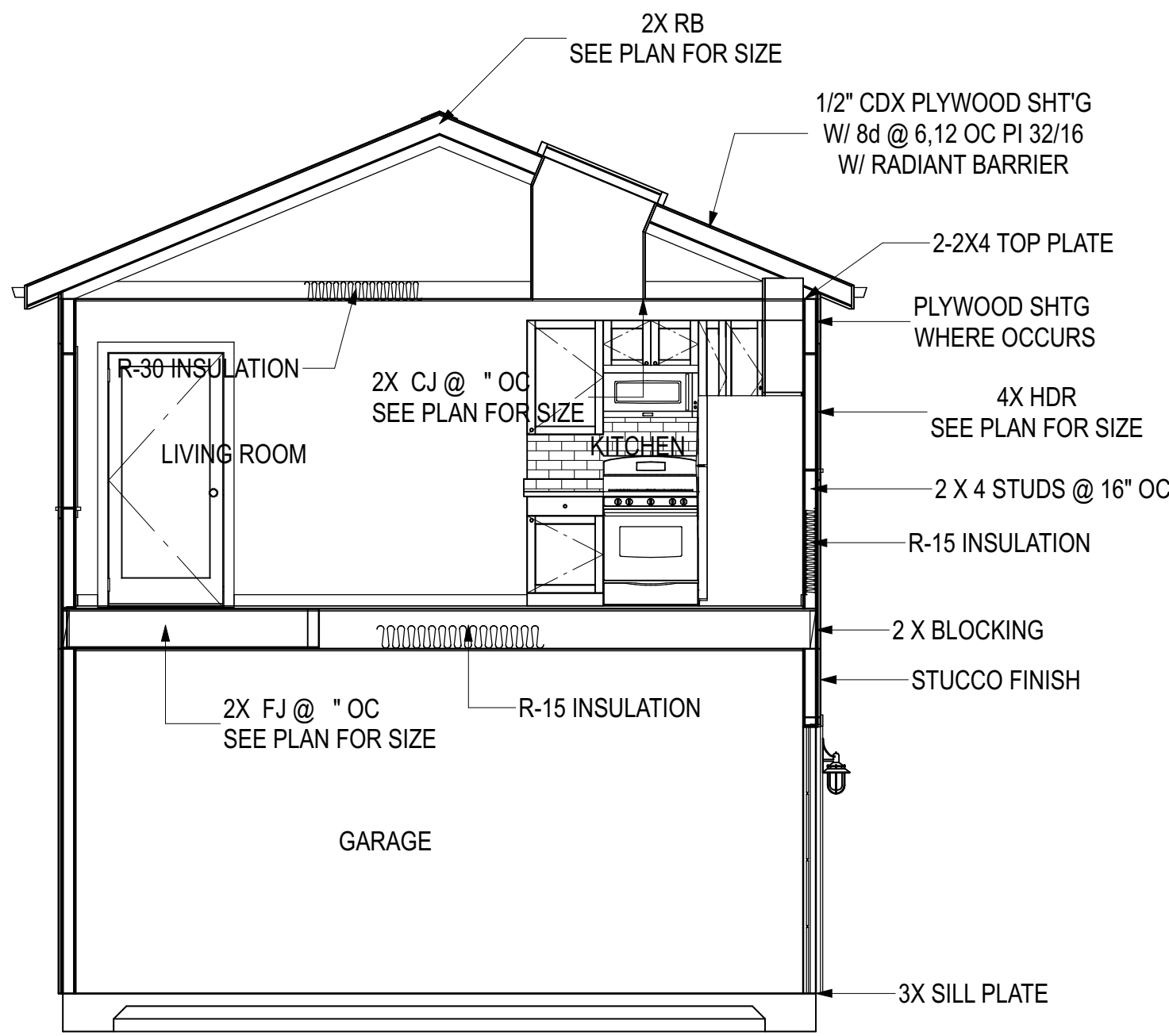
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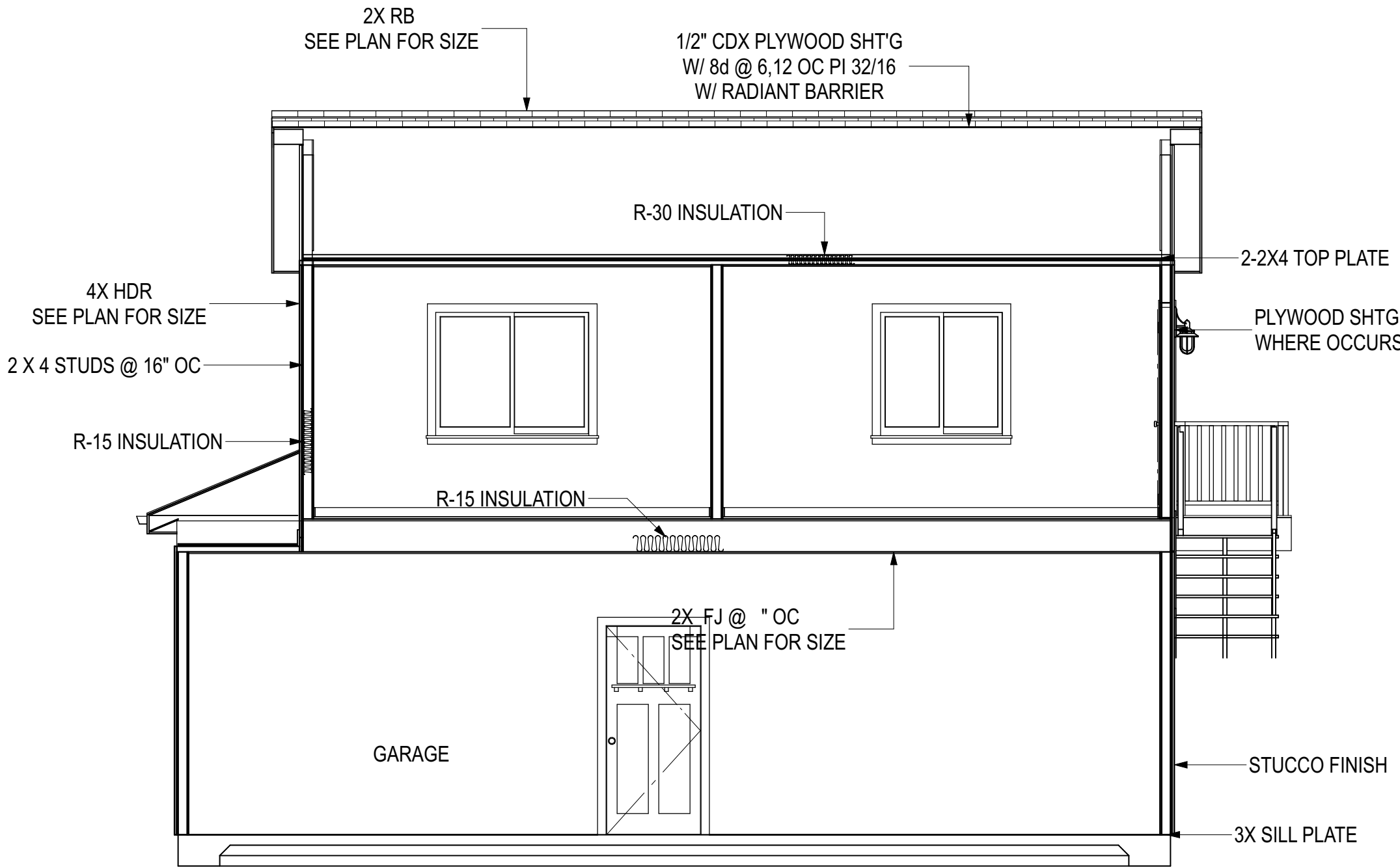
DESIGNED BY: MXB

SCALE: SEE PLAN

JOB NUMBER: 16 - 2050



**CROSS SECTION A**  
SCALE 1/4" = 1' - 0"



**CROSS SECTION B**  
SCALE 1/4" = 1' - 0"

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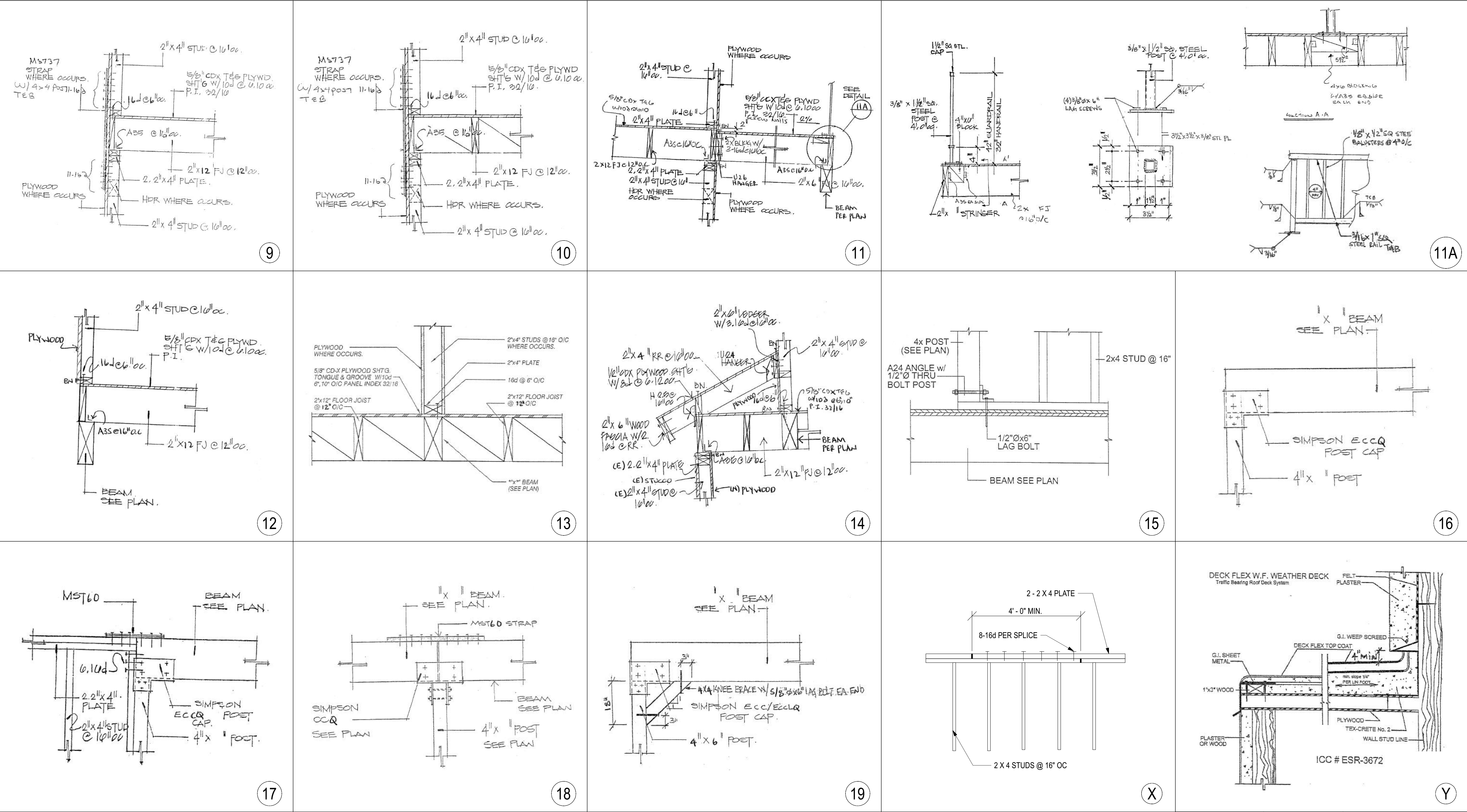












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SCALE: SEE PLAN

JOB NUMBER: 16 - 2050

ITEM	ICC	LARR
A35 CLIP	ESR - 3096	25716
HD'S	ESR - 2330	25720
METAL STRAPS	ESR - 2105	25713
JOIST HANGERS	ESR - 2549	25807
EPOXY ANCHORS	ESR - 2508	25744
COLUMN CAPS	ESR - 3050	25714
PARALLAM PSL BEAMS	ESR - 1387	25202
HARDY FRAMES	ESR - 2089	25759
COLUMN BASES	ER-5952	25552
SSTB BOLTS	ESR - 2611	25827

REGISTERED PROFESSIONAL ENGINEER

EDDY ALEXANDER GARDNER

S 6159

EXP 06/30/23

STRUCTURAL

STATE OF CALIFORNIA

D2



STRUCTURAL DESIGN DATA:

Roof live load:	20 psf
Floor live load:	40 psf
Ground snow load:	N/A

WIND DESIGN DATA:

Ultimate wind design speed:	110 mph
Nominal wind design speed:	85 mph
Risk Category:	II
Wind exposure:	B
Internal pressure coefficient:	0.180
Components and Cladding design pressure:	16 psf

Analysis procedure used: Envelope procedure ASCE 7-16 chapter 28

EARTHQUAKE DESIGN DATA:

Seismic importance factor I <sub>e</sub> :	1.00
Risk Category:	II
Mapped spectral response acceleration S <sub>s</sub> :	1.943
Mapped spectral response acceleration S <sub>1</sub> :	0.888
Site class:	C
Spectral response coefficient S <sub>ds</sub> :	1.555
Spectral response coefficient S <sub>d1</sub> :	0.842
Seismic design category:	D
Basic seismic-force-resisting system:	Wood shearwalls
Design base shear:	10437 lbf
Total weight of building:	43616 lbf
Seismic response coefficient C <sub>s</sub> :	0.239
Response modification factor R:	6.5
Analysis procedure used:	Equivalent lateral force procedure ASCE 7-16 section 12.8
Redundancy factor used:	1.3
Design load bearing of soil:	1500 psf

GENERAL NOTES:

- Provide smoke detectors in all bedrooms and entrances. See plan for location.
- See Detail X for cord splices and detail 17 for shear wall drag struts.
- An approved Selmco Gas Shutoff Valve will be installed on the fuel gas line on the down stream side of the utility meter and be rigidly connected to the exterior of the building or structure containing the fuel gas piping. (Per Ordinance 170,168) Not required for existing dwellings, or apt's.
- Stucco and/or stucco with veneer over a plywood shear wall will be waterproofed with a minimum of (2) 15# felt underlayments.
- Only common nails will be used for all plywood shear walls and nail guns using "Clipped Head" or "sinker" nails are not acceptable.
- All bolt holes to be drilled 1/32" min. to 1/16" max. oversized.
- Douglas-Fir (Group II Lumber) pressure treated sill plates will be used; Engineer to be notified for redesign if other species sills are delivered to the site (or are part of existing building).
- The following applies to all shear walls with a listed design load greater than 350 PLF:
  - Provide 3x Sill plates for sills that rest on concrete or masonry.
  - Provide 3 x studs between adjacent panels. If it is necessary to use 2-2X members between panels, specify 16d nails with staggered nailing, and spacing no greater than the required plywood edge nailing.
  - Provide 1/2" Edge Distance for the plywood boundary nailing.
  - Plate washers are to be used with anchor bolts.

5/8" bolt - 3"x3"x1/4"  
3/4" bolt - 3"x3"x5/16"      5/8" bolt - 3"x3"x1/4"  
7/8" bolt - 3"x3"x3/8"

SHEAR WALL NOTES:

- Provide 3x Sill plates for sills that rest on concrete or masonry.
- Provide 3 x studs between adjacent panels. If it is necessary to use 2-2X members between panels, specify 16d nails with staggered nailing, and spacing no greater than the required plywood edge nailing.
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3/4" bolt - 3"x3"x5/16"      5/8" bolt - 3"x3"x1/4"  
7/8" bolt - 3"x3"x3/8"

HOLD DOWN CONNECTORS

- Plate washers are to be used on the back side of the HD post. See 6a. above for required sizes.
- HD anchor nut to be tightened just prior to covering the wall framing.
- Provide Deputy Inspection for hold down anchor bolts in tension. Unless the lower design values allowed by Table 26-E for bolts in tension are shown on the plans as the design allowable HD loads.
- See HD straps detail 9, 10 for number of nails and framing member sizes. See detail B, E.

MATERIAL SPECIFICATIONS

- Plywood: Product Standard PS 1-09 Douglas fir-larch, Structural I (or CDX) Particleboard: ANSI A209.1-2-09. Note: Particleboard must be protected from moisture.
- Wood Framing members: Douglas fir-larch Grades NO. 1, F&M. Notify Engineer if other species of lumber are delivered to the site or are part of the existing construction.
- Steel: Structural steel ASTM A36, Structural Pipe ASTM A53 Gd B, Tubing ASTM A 501. Reinforcing bars ASTM A615. LA City Bldg Dept licensed shop required for shop welds.
- Concrete: Standard 2500 psi concrete. 3000 psi for Grade Beams and columns.

DESIGN CRITERIA

TIMBER:	Douglas Fir Larch 2 x 4 and 4 x 4	(per grading rules 16) Standard Grade (Vertical Members) No. 2 Grade (Horizontal Members)
	2 x 6 and Larger 4 x 6 and Larger	No. 2 Grade (Horizontal and Vertical Members) No. 1 Grade (Horizontal and Vertical Members)

Maximum moisture content shall be 19%

PLYWOOD: PS 1-09 Per APA Standard. Pl. 32/16

STRUCTURAL STEEL: ASTM A-36 STEEL, Per AISC Standards  
Pipe and Tubing, Grade B type E or type S, ASTM A-501

WELDING: AWS-E70XX, Per American Welding Society Standards

CONCRETE: (Strength @ 28 days) Per ACI 318 specifications.  
Foundation ----- f<sub>c</sub> = 2500 psi  
Precast ----- f<sub>c</sub> = 3000 psi  
Columns ----- f<sub>c</sub> = 3000 psi  
Struct. Slabs ----- f<sub>c</sub> = 3000 psi

MASONRY: Hollow Concrete  
ASTM C - 90, ASTM and IBC Standards  
Type N units, Type S Mortar, 2,000 psi, grout  
f<sub>m</sub> = 1,350 psi (partially grouted) f<sub>m</sub> = 225 psi  
f<sub>m</sub> = 1,500 psi (solid grouted) f<sub>m</sub> = 250 psi

REINFORCING STEEL: ASTM A-615 Per CRSI Standards  
# 6 and Smaller ----- Grade 40  
# 7 and Larger ----- Grade 60

Allowable Soil Bearing Value (F<sub>brg</sub>) = 1500 psf  
Per Soil Report By: Table 1806.2  
Type of Soil: Sandy Clay

SHOT PINS: Simpson 0.145"Øx3" @ 24" O.C.

" All Framing Connectors to be Simpson Strong-Tie or Equal "

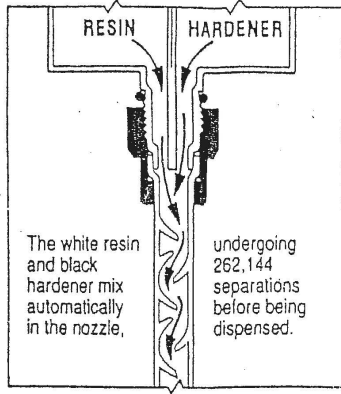
Note: General contractor to review structural plans and structural details before given any bids to property owner. Any discrepancies shall be notified to engineer and/or designer before final bids.



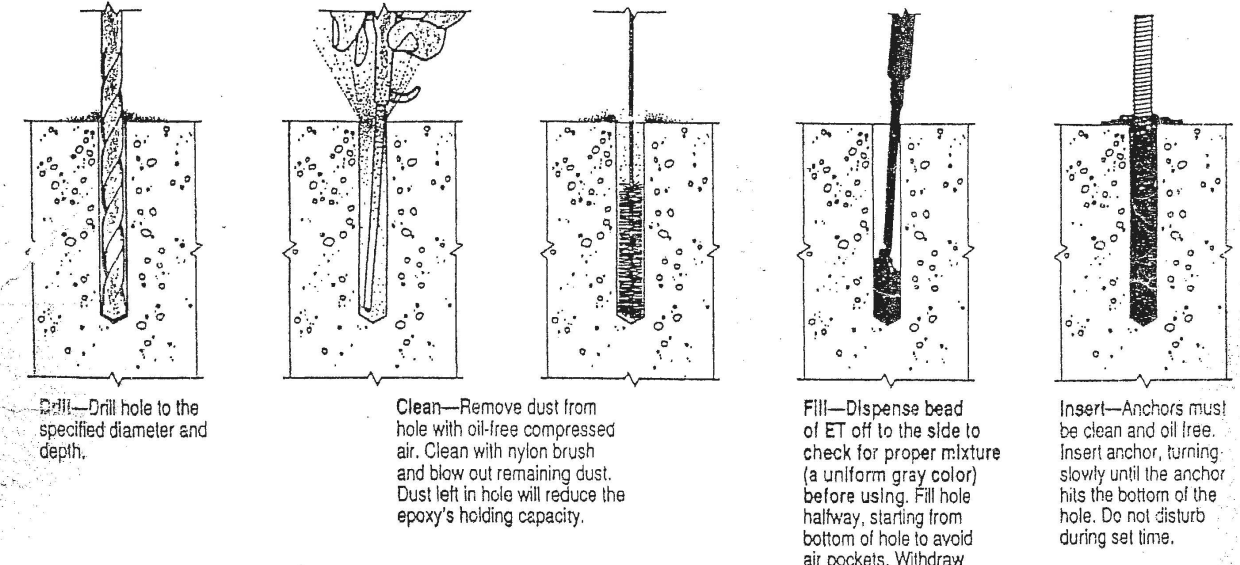
Epoxy-Tie

Epoxy-Tie Preparation

- Insert cartridge into dispensing tool.
- Remove plugs from cartridge and attach a mixing nozzle. Before injecting, check that nozzle is free of gelled or hardened material.
- Dispense bead of Epoxy-Tie off to the side to check for proper mixture (a uniform gray color) before using.
- Tighten retaining nut on nozzle. DO NOT OVER-TIGHTEN.
- Caution: Epoxy will start to harden in the mixing nozzle after 7-8 minutes. Epoxy will harden faster as the air temperature increases. Replace nozzle to avoid blowouts
- If using a pneumatic dispensing tool, air pressure must be regulated at 80-100 psi.
- A partially-used cartridge may be stored up to one year for future use. Store at a temperature above 45°F.



Installation into CONCRETE



ICC # ESR-2508  
LARR # 25744

WOOD

WOOD

WOOD

WOOD

TABLE 2304.10.1—continued FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
<b>Roof</b>		
1. Blocking between ceiling joists, rafters or trusses to top plate or other framing below	3-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each end, toenail
Blocking between rafters or truss not at the wall top plate, to rafter or truss	2-8d common (2 1/2" x 0.131") 2-3" x 0.131" nails 2-3" 14 gage staples	Each end, toenail
Flat blocking to truss and web filler	2-16 d common (3 1/2" x 0.162") 3-3" x 0.131" nails 3-3" 14 gage staples	End nail
2. Ceiling joists to top plate	16d common (3 1/2" x 0.162") @ 6" o.c. 3" x 0.131" nails @ 6" o.c. 3" x 14 gage staples @ 6" o.c.	Face nail
3. Ceiling joist not attached to parallel rafter, laps over partitions (no thrust) (see Section 2308.7.3.1, Table 2308.7.3.1)	3-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each joint, toenail
4. Ceiling joist attached to parallel rafter (heel joint) (see Section 2308.7.3.1, Table 2308.7.3.1)	3-16d common (3 1/2" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
5. Collar tie to rafter	3-10d common (3" x 0.148"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
6. Rafter or roof truss to top plate (See Section 2308.7.5, Table 2308.7.5)	3-10 common (3" x 0.148"); or 3-16d box (3 1/2" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131 nails; or 4-3" 14 gage staples, 7/16" crown	Toenail
7. Roof rafters to ridge valley or hip rafters; or roof rafter to 2-inch ridge beam	2-16d common (3 1/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown; or 3-16d box (3 1/2" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	End nail

(continued)

TABLE 2304.10.1—continued FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
<b>Wall</b>		
8. Stud to stud (not at braced wall panels)	16d common (3 1/2" x 0.162"); or 10d box (3" x 0.128"); or 3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	24" o.c. face nail
9. Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d common (3 1/2" x 0.162"); or 16d box (3 1/2" x 0.135"); or 3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	16" o.c. face nail
10. Built-up header (2" to 2" header)	16d common (3 1/2" x 0.162"); or 16d box (3 1/2" x 0.135")	12" o.c. face nail
11. Continuous header to stud	4-8d common (2 1/2" x 0.131"); or 4-10d box (3" x 0.128")	Toenail
12. Top plate to top plate	16d common (3 1/2" x 0.162"); or 10d box (3" x 0.128"); or 3" x 0.131" nails; or 3" 14 gage staples, 7/16" crown	16" o.c. face nail
13. Top plate to top plate, at end joints	8-16d common (3 1/2" x 0.162"); or 12-10d box (3" x 0.128"); or 12-3" x 0.131" nails; or 12-3" 14 gage staples, 7/16" crown	Each side of end joint, face nail (minimum 24" lap splice length each side of end joint)
14. Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d common (3 1/2" x 0.162"); or 16d box (3 1/2" x 0.135"); or 3" x 0.131" nails; or 3" 14 gage staples, 7/16" crown	12" o.c. face nail
15. Bottom plate to joist, rim joist, band joist or blocking at braced wall panels	2-16d common (3 1/2" x 0.162"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	16" o.c. face nail
16. Stud to top or bottom plate	4-8d common (2 1/2" x 0.131"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown; or 2-16d common (3 1/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Toenail
17. Top or bottom plate to stud	2-16d common (3 1/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	End nail
18. Top plates, laps at corners and intersections	2-16d common (3 1/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	End nail

(continued)

TABLE 2304.10.1—continued FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
<b>Wall</b>		
19. 1" brace to each stud and plate	2-8d common (2 1/2" x 0.131"); or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, 7/16" crown	Face nail
20. 1" x 6" sheathing to each bearing	2-8d common (2 1/2" x 0.131"); or 2-10d box (3" x 0.128")	Face nail
21. 1" x 8" and wider sheathing to each bearing	3-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128")	Face nail
<b>Floor</b>		
22. Joist to sill, top plate, or girder	3-8d common (2 1/2" x 0.131"); or floor 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Toenail
23. Rim joist, band joist, or blocking to top plate, sill or other framing below	8d common (2 1/2" x 0.131"); or 10d box (3" x 0.128"); or 3" x 0.131" nails; or 3" 14 gage staples, 7/16" crown	6" o.c., toenail
24. 1" x 6" subfloor or less to each joist	2-8d common (2 1/2" x 0.131"); or 2-10d box (3" x 0.128")	Face nail
25. 2" subfloor to joist or girder	2-16d common (3 1/2" x 0.162")	Face nail
26. 2" planks (plank & beam - floor & roof)	2-16d common (3 1/2" x 0.162")	Each bearing, face nail
27. Built-up girders and beams, 2" lumber layers	20d common (4" x 0.192") 10d box (3" x 0.128"); or 3" x 0.131" nails; or 3" 14 gage staples, 7/16" crown And: 2-20d common (4" x 0.192"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	32" o.c., face nail at top and bottom staggered on opposite sides 24" o.c. face nail at top and bottom staggered on opposite sides Ends and at each splice, face nail
28. Ledger strip supporting joists or rafters	3-16d common (3 1/2" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Each joist or rafter, face nail
29. Joist to band joist or rim joist	3-16d common (3 1/2" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	End nail
30. Bridging or blocking to joist, rafter or truss	2-8d common (2 1/2" x 0.131"); or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, 7/16" crown	Each end, toenail

(continued)

TABLE 2304.10.1—continued FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
<b>Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing</b>		
31. 1/4" - 1/2"	6d common or deformed (2" x 0.113") (subfloor and wall)	6 12
	8d box or deformed (2 1/2" x 0.113") (roof)	6 12
	2 1/2" x 0.113" nail (subfloor and wall)	6 12
	1 1/2" 16 gage staple, 7/16" crown (subfloor and wall)	4 8
	2 1/2" x 0.113" nail (roof)	4 8
32. 3/16" - 1/4"	1 1/2" 16 gage staple, 7/16" crown (roof)	3 6
	2 1/2" x 0.113" nail; or 2" 16 gage staple, 7/16" crown	4 8
33. 1/4" - 1 1/2"	8d common (2 1/2" x 0.131"); or 6d deformed (2" x 0.113")	6 12
	2 1/2" x 0.113" nail; or 2" 16 gage staple, 7/16" crown	4 8
34. 1/2" fiberboard sheathing <sup>a</sup>	10d common (3" x 0.148"); or 8d deformed (2 1/2" x 0.131")	6 12
	1 1/2" 16 gage staple with 7/16" or 1" crown	3 6
35. 3/16" fiberboard sheathing <sup>a</sup>	1 1/2" galvanized roofing nail (1/8" diameter head); or 1 1/2" 16 gage staple with 7/16" or 1" crown	3 6
	1 1/2" galvanized roofing nail (1/8" diameter head); or 1 1/2" 16 gage staple with 7/16" or 1" crown	3 6
<b>Wood structural panels, combination subfloor underlayment to framing</b>		
36. 1/4" and less	8d common (2 1/2" x 0.131"); or 6d deformed (2" x 0.113")	6 12
37. 1/4" - 1"	8d common (2 1/2" x 0.131"); or 8d deformed (2 1/2" x 0.131")	6 12
38. 1 1/8" - 1 1/2"	10d common (3" x 0.148"); or 8d deformed (2 1/2" x 0.131")	6 12
<b>Panel siding to framing</b>		
39. 1/2" or less	6d corrosion-resistant siding (1 1/2" x 0.106"); or 6d corrosion-resistant casing (2" x 0.099")	6 12
40. 1/2"	8d corrosion-resistant siding (2 1/2" x 0.128"); or 8d corrosion-resistant casing (2 1/2" x 0.113")	6 12

(continued)

TABLE 2304.10.1—continued FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
<b>Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing</b>		
41. 1/4"	4d casing (1 1/2" x 0.080"); or 4d finish (1 1/2" x 0.072")	6 12
	6d casing (2" x 0.099"); or 6d finish (Panel supports at 24 inches)	6 12

For SI: 1 inch = 25.4 mm.

- Nails spaced at 6 inches at intermediate supports where spans are 48 inches 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 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications. Panel supports at 16 inches (20 inches 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 rafter shall be permitted to be reduced by one nail.

BARBOSA DESIGN, LLC

1619 BRYCEDALE AVE  
DUARTE, CA 91010  
MARISOL X. BARBOSA  
(323) 717 - 3736

SCOPE OF WORK:

PROPOSED 560 SQ. FT. ADU  
OVER EXISTING GARAGE  
WITH 277 SQ. FT. STORAGE

OWNER:

REVISIONS:

THESE PLANS AND ANY ATTACHED DOCUMENTS ARE WORK AND PROPERTY OF BARBOSA DESIGN, LLC. WHICH SHALL NOW BE REFERRED TO AS "THE COMPANY". THE DUPLICATION AND USE OF THESE DOCUMENTS SHALL BE DONE ONLY WITH AN AGREEMENT AND WRITTEN CONCENT FROM THE COMPANY AND SHALL BE PURSUANT TO APPLICABLE LAWS. ANY ALTERATIONS OF THESE DOCUMENTS SHALL VOID THEIR USE IF NOT DONE WITH PERMISSION FROM THE COMPANY.

DATE: APRIL 2015

DESIGNED BY: MXB

SCALE: SEE PLAN

JOB NUMBER: 16 - 2050



N1



Design Properties

2.0E Parallam® PSL Headers and Beams

Allowable Design Stresses

(100% Load Duration)

Shear modulus of elasticity

$G = 125,000 \text{ psi}$

Modulus of elasticity

$E = 2.0 \times 10^6 \text{ psi}$

Flexural stress

$F_b = 2,900 \text{ psi}^{(1)}$

Tension stress

$F_t = 2,025^{(3)} \text{ psi}$

Compression perpendicular to grain

$F_{c\perp} = 750 \text{ psi}^{(3)}$

Compression parallel to grain

$F_{c\parallel} = 2,900 \text{ psi}$

Horizontal shear parallel to grain

$F_v = 290 \text{ psi}$

(1) For 12" depth. For others, multiply by  $\left[\frac{d}{12}\right]^{0.111}$

(2)  $F_b$  has been reduced to reflect the volume effects of length, width and thickness for a range of common application conditions.

(3)  $F_{c\perp}$  shall not be increased for duration of load.

Allowable Design Properties

(100% Load Duration)

1¾" 2.0E Parallam® PSL

Design Property	9¼"	9½"	Depth	11¼"	11¾"	14"
Moment (ft-lbs)	6,210	6,530	8,983	9,950	13,580	
Shear (lbs)	3,130	3,215	3,809	4,020	4,735	
Moment of Inertia (in <sup>4</sup> )	115	125	208	244	400	
Weight (plf)	5.1	5.2	6.2	6.5	7.7	

2¼/16" 2.0E Parallam® PSL

Design Property	9¼"	9½"	11¼"	11¾"	14"	16"	18"
Moment (ft-lbs)	15,535	16,025	13,800	15,280	20,855	26,940	33,550
Shear (lbs)	4,805	4,935	5,845	6,170	7,275	8,315	9,350
Moment of Inertia (in <sup>4</sup> )	175	192	319	375	615	917	1,305
Weight (plf)	7.8	8.0	9.5	10.8	11.8	13.4	15.1

3½" 2.0E Parallam® PSL

Design Property	9¼"	9½"	11¼"	11¾"	14"	16"	18"
Moment (ft-lbs)	12,415	13,055	17,970	19,900	27,160	34,955	43,665
Shear (lbs)	6,260	6,430	7,615	8,035	9,475	10,825	12,180
Moment of Inertia (in <sup>4</sup> )	231	250	415	488	800	1,195	1,701
Weight (plf)	10.1	10.4	12.3	13.0	15.3	17.5	19.7

5¼" 2.0E Parallam® PSL

Design Property	9¼"	9½"	11¼"	11¾"	14"	16"	18"
Moment (ft-lbs)	18,635	19,585	26,955	29,855	40,740	52,430	65,495
Shear (lbs)	9,390	9,695	11,420	12,055	14,210	16,240	18,270
Moment of Inertia (in <sup>4</sup> )	346	375	623	733	1,201	1,792	2,552
Weight (plf)	15.2	15.6	18.5	19.5	23.0	26.3	29.5

7" 2.0E Parallam® PSL

Design Property	9¼"	9½"	11¼"	11¾"	14"	16"	18"
Moment (ft-lbs)	24,830	26,115	33,240	35,805	48,325	60,905	77,325
Shear (lbs)	12,520	12,855	15,225	16,070	18,945	21,655	24,360
Moment of Inertia (in <sup>4</sup> )	462	500	831	977	1,601	2,389	3,402
Weight (plf)	20.2	20.8	24.6	26.0	30.6	35.0	39.4

General Assumptions for Non-Treated Parallam® PSL

Lateral support required at bearing and at 24" on-center maximum.

Bearing lengths are based on Parallam® PSL's bearing stress of 750 psi.

No camber.

Tables on pages 4-7 include load reductions applied in accordance with code.

1½" x 16" and 1½" x 18" beams require multiple piles.

See page 17 for multiple member beam connections.

Non-treated Parallam® PSL is intended for dry-use applications

ICC # ESR-1387

LARR # 25202

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OVER EXISTING GARAGE  
WITH 277 SQ. FT. STORAGE

OWNER:

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CULVER CITY, CA 90232

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DATE: APRIL 2015

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SCALE: SEE PLAN

JOB NUMBER: 16 - 2050

N2