TROTTER
BUILDING DESIGNS, INC.

A PROPOSED SINGLE FAMILY RESIDENCE FOR

SURFSIDE PROPERTIES

AT 128 21ST ST., MANHATTAN BEACH,CA

PROJECT CONTACTS:

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PROJECT DATA:

OWNER:	SURFSIDE PROPERTIES		
SITE:	128 21st ST. MANHATTAN BEACH,CA		
LEGAL:	LOT 11, BLOCK 7, SUBDIVISION NO. 2 OF NORTH MANHATTAN BEACH M.B. 2-1		
APN:	4178-011-002		
CONSTRUCTION:	V-B (FULLY SPRINKLERED)	AD:	III
OCCUPANCY:	R3/U	ZONING:	RM
STORIES:	3 + BASEMENT		
COMPLYING CODES:	2013 CRC, CBC, CMC, CPC, CEC, CGBC, CA ENERGY EFFICIENCY CODE, & TITLE 24		
MAX. BLDG. HEIGHT:	75.72' + 77.69' + 77.13' + 75.26'= 305.8'/4= 76.45' 76.45' + 30' = 106.45' MAX BUILDING HEIGHT		

LOT COVERAGE: 2,700 {LOT} X 1.6 = 4,320 SF MAX. BFA

3,894 SF (HOUSE) + 65 SF (STAIRS @ BASEMENT) + 76 SF (GARAGE) = 4,035 SF

4,035 SF (PROPOSED) > 4,320 SF (REQUIRED)

AREA BREAKDOWN:

BASEMENT :	1,029 SQ. FT.
1ST FLOOR :	999 SQ. FT.
2ND FLOOR :	1,509 SQ. FT.
3RD FLOOR :	1,386 SQ. FT.
TOTAL LIVING :	4,923 SQ. FT.
GARAGE :	676 SQ. FT.
SUB-GARAGE :	502 SQ. FT.

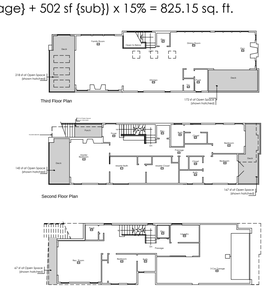
DECKS :

@ 2ND FLR BEDROOMS	167 SQ. FT.
@ MASTER BEDROOM	143 SQ. FT.
@ FAMILY ROOM	218 SQ. FT.
@ DEN	172 SQ. FT.

OPEN SPACE:

Required: (4,923 sf {total living} + 76 sf {garage} + 502 sf {sub}) x 15% = 825.15 sq. ft.

FIRST FLOOR:
67 sf @ Rec Room
SECOND FLOOR:
143 sf @ Master Bedroom
59 sf @ Porch
167 sf @ Bedrooms
369 sf total @ 2nd Floor
THIRD FLOOR:
218 sf @ Family Room
172 sf @ Den
390 sf total @ 3rd Floor
826 sf (Proposed)



INDEX:

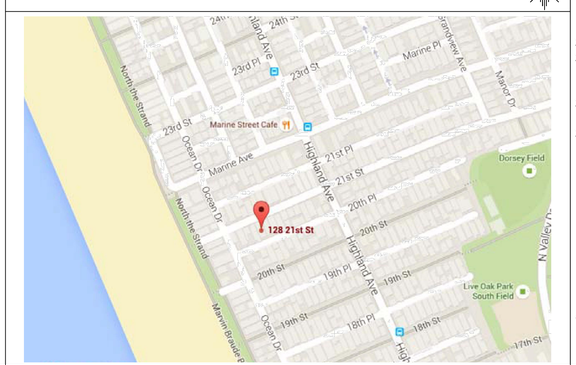
DEFERRED SUBMITTALS:

DEFERRED SUBMITTAL ITEMS SHALL BE REVIEWED BY THE ARCHITECT OR ENGINEER OF RECORD AND SHALL FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL. **ITEMS LISTED BELOW SHALL BE SUBMITTED UNDER SEPARATE PERMIT:**

-HYDROLOGY/SUMP PUMP CALCS
-FIRE SPRINKLER SYSTEM
-SHORING PLANS
-GRADING

-CAR LIFT (SHOP DRAWINGS TO BE STAMPED/SIGNED BY REGISTERED ENGINEER PRIOR TO FABRICATION)

VICINITY MAP:



GENERAL NOTES:

1. PROVIDE 3" CLEARANCE ON ALL SIDES, BACK AND TOP AND 6" IN FRONT OF THE FURNACE AND WATER HEATER.
2. PROVIDE (2) ANCHOR STRAPS FOR WATER HEATER. (CPC-510.5)
3. RECEPTACLE OUTLETS SHALL BE LOCATED WITHIN 12 TO 15 INCHES OFF THE FLOOR. (NEC 210-50 (D)).
4. LIGHT SWITCHES WILL BE INSTALLED WITHIN 34 TO 48 INCHES OFF THE FLOOR.
5. THE USE OF ALUMINUM WIRE IS NOT PERMITTED.
6. GAS FIRED APPLIANCES EQUIPPED WITH INTERMITTENT IGNITION DEVICES.
7. "AN EXCAVATION/CONSTRUCTION" PERMIT SHALL BE OBTAINED PRIOR TO CONSTRUCTION OF ANY IMPROVEMENTS WITHIN PUBLIC RIGHT OF WAY. THIS INCLUDES, BUT IS NOT LIMITED TO, STANDARD SIDEWALKS, CURBS, GUTTERS, DRIVEWAY APPROACHES, OR UNDERGROUNDING OF UTILITIES.
8. BUILDING, GRADING, AND DEMOLITION PERMITS TO COMPLY WITH **MANHATTAN BEACH ZONING CODE**.
9. FACTORY FIREPLACES SHALL HAVE:
   9.1. TIGHT FITTING, CLOSEABLE METAL OR GLASS DOORS.
   9.2. OUTSIDE AIR INTAKE WITH DAMPER AND CONTROL.
   9.3. FLUE DAMPER AND CONTROL.
10. NO CONTINUOUS BURNING GAS PILOTS ALLOWED.
11. 4" DIAMETER SPHERE MAY NOT PASS THROUGH THE INTERMEDIATE RAILS.
12. FENCE HEIGHTS, AS MEASURED FROM THE LOWEST FINISHED GRADE ADJACENT TO EACH SECTION OF THESE STRUCTURES, MAY BE A MAXIMUM OF: 42" IN THE FRONT YARD SETBACK, AND 6' AT OTHER LOCATIONS ON SITE (3' IF OBSTRUCTING DRIVEWAY VISIBILITY).
13. PROVIDE LANDSCAPE IRRIGATION SYSTEM BACK FLOW PREVENTION DEVICE. ONLY LOS ANGELES COUNTY HEALTH DEPARTMENT APPROVED DEVICES MAY BE USED.
14. ALL HOSE BIBS ARE TO PROTECTED BY A BACK FLOW PREVENTION DEVICE.
15. PROVIDE SMOKE DETECTORS IN EVERY LEVEL PER CBC SECTION 310.9. SMOKE DETECTORS SHALL BE ON PERMANENT WIRING WITHOUT AND DISCONNECTING SWITCH OTHER THAN THOSE FOR OVERCURRENT PROTECTION, INTERCONNECTED AND EQUIPPED WITH BATTERY BACK-UP.
16. BUILDING ADDRESS SHALL BE PROVIDED ON THE BUILDING IN SUCH A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET. ADDRESS NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND, 4" HIGH MINIMUM AND WITH A MINIMUM STROKE WIDTH OF 0.5"-PER SECTION. R319.1
17. WATER CLOSETS SHALL BE EQUIPPED WITH "ULTRA LOW FLUSH" TYPE WITH 1.6 GALLONS MAXIMUM PER FLUSH, SHOWER HEADS (2.5 GPM) AND FAUCETS (2.2 GPM).
18. CONTROL VALVE FOR SHOWER SHALL BE OF THE PRESSURE BALANCE OR THERMOSTATIC MIXING VALVE TYPE PER CPC SECTION 410.7.
19. A TWO-STAGE THERMOSTAT, WHICH CONTROLS THE SUPPLEMENTARY HEAT ON ITS SECOND STAGE, SHALL BE PROVIDED FOR HEAT PUMPS. THERMOSTATS SHALL BE EQUIPPED WITH AN AUTOMATIC SETBACK, WHICH THE BUILDING OCCUPANT CAN PROGRAM TO AUTOMATICALLY SET BACK THE THERMOSTAT TWICE IN 24 HOURS.
20. ALL FAN OR BLOWER SYSTEMS THAT EXHAUST AIR FROM THE CONDITIONED BUILDING ENVELOPE TO THE OUTSIDE SHALL BE PROVIDED WITH BACKDRAFT DAMPERS.
21. ELECTRICAL CONTRACTOR SHALL SUBMIT LOAD CALCULATIONS TO BUILDING DEPARTMENT TO JUSTIFY SIZE OF ELECTRICAL SERVICE PRIOR TO ISSUANCE OF ELECTRICAL PERMIT.
22. PROVIDE PEDESTRIAN PROTECTION DURING CONSTRUCTION IF THERE IS A PUBLIC SIDEWALK @ STREET SIDE.
23. ALL WORK SHALL CONFORM TO THE STANDARDS SET FORTH IN THE 2013 CBC, CPC, CMC, CEC , CGBC AND T-24.
24. THIS PROJECT COMPLIES WITH TITLE 24 REQUIREMENTS FOR ZONE 6 USING THE COMPUTER PERFORMANCE METHOD. SEE COMPLIANCE CHECKLIST AND FORM CF-IR.
25. ALL CONTRACTORS SHALL VISIT THE SITE AND EXAMINE ALL DRAWINGS PRIOR TO COMMENCING WORK, AND REPORT ANY DISCREPANCIES TO THIS OFFICE SO THAT THE MATTER MAY BE RESOLVED.
26. ALL PROPERTY LINES, EASEMENTS AND PROPOSED STRUCTURES, OVERHEAD POWER LINES AND ABANDONED OIL WELLS ARE SHOWN ON THE SITE PLAN.
27. AQMD NOTIFICATION IS REQUIRED 10 DAYS PRIOR TO BEGINNING ANY PARTIAL OR COMPLETE DEMOLITION WORK.
28. RECEPTACLE OUTLETS SHALL BE SPACED @ 12" O.C. MAX. AND SHALL BE LOCATED WITHIN 6' OF DOOR OPENINGS (E.G. CLOSET DOORS, ETC.). ALSO, EVERY 2' OR WIDER OF WALLS, OUTLETS ALSO REQUIRED FOR COUNTER TOPS @ 4' O.C. AND WITHIN OF 2' OF ENDS OR BREAKS OR COUNTERS, CEC.
29. USE 2X6 MAXIMUM STUDS FOR PLUMBING WALLS.
30. STUCCO LATH AND DRYWALL SHALL BE NAILED TO ALL STUDS AND TOP-BOTTOM PLATES.
31. USE 2-#15 FELT BACKING WHEN STUCCO IS APPLIED OVER PLYWOOD, CBC SECT.2501.4.
32. FIRE BLOCK STUD WALLS (AT 10' INTERVALS {HORIZONTAL and VERTICAL}. ENCLOSED AND CONCEALED SPACES, AND AT OPENINGS AROUND VENTS, PIPES, DUCTS,CHIMNEYS, BETWEEN ATTIC AND CHIMNEY CHASE, AT STAIR STRINGERS, AND SIMILAR PLACES AT CEILING.
33. CHECK CITY RECORD FOR THE EXISTENCE OF ABANDONED CESSPOOL/SEPTIC TANKS. ANY EXISTING ABANDONED CESSPOOL OR SEPTIC TANK SHALL BE LOCATED, CITY INSPECTION SHALL ALSO BE REQUIRED PRIOR TO THE ISSUANCE OF DEMO OR BUILDING PERMIT.
34. FIRE SPRINKLERS ARE REQUIRED IN GARAGE PER CITY REQUIREMENTS. SUB-CONTRACTOR TO SUBMIT PLANS TO CITY PRIOR TO PULLING A FIRE SPRINKLER PERMIT.
35. BUILDING ADDRESS SHALL BE PROVIDED ON THE BUILDING IN SUCH A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET. ADDRESS NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND, 4" HIGH MINIMUM AND WITH A MINIMUM STROKE WIDTH OF 0.5"-CBC SECT. 501.2
36. DECORATIVE CHIMNEY CAPS SHALL BE A PART OF THE APPROVED CHIMNEY ASSEMBLY.
37. PROVIDED SCREENING OF UTILITY METERS (NEED NOT BE SCREENED IF LOCATED ON INTERIOR SIDE OF A SINGLE FAMILY DWELLING, AND DOES NOT ENCROACH INTO REQUIRED YARDS).
38. INSTALL ON THE COLD WATER SUPPLY PIPE AT THE TOP OF THE WATER HEATER A CAPPED "T" FITTING TO PLUMB FOR FUTURE SOLAR WATER HEATING.
39. A MASONRY OR FACTORY-BUILT FIREPLACE SHALL HAVE THE FOLLOWING: [TITLE 24, PART 6, CHAPTER 7, SECTION 150(E)]
   39.1. CLOSEABLE METAL OR GLASS DOORS COVERING THE ENTIRE OPENING OF THE FIREBOX;
   39.2. A COMBUSTION AIR INTAKE TO DRAW AIR FROM THE OUTSIDE OF THE BUILDING DIRECTLY INTO THE FIREBOX, WHICH IS AT LEAST SIX SQUARE INCHES IN AREA AND IS EQUIPPED WITH A READILY ACCESSIBLE, OPERABLE, AND TIGHT-FITTING DAMPER OR COMBUSTION-AIR CONTROL DEVICE (EXCEPTION: AN OUTSIDE COMBUSTION -AIR INTAKE IS NOT REQUIRED IF THE FIREPLACE WILL BE INSTALLED OVER CONCRETE SLAB FLOORING AND THE FIREPLACE WILL NOT BE LOCATED ON AN EXTERIOR WALL.); AND
   39.3. A FLUE DAMPER WITH A READILY ACCESSIBLE CONTROL.
40. ALL UTITILIES SERVING THE SITE SHALL BE INSTALLED PER **CITY OF MANHATAN BEACH** "STANDARD UNDERGROUND CONNECTION," SUBJECT TO FIELD INSPECTION AND VERIFICATION. (MCMB 9.12.140)

PLANNING NOTES:

1. SEPARATE PERMITS AND PLANS ARE REQUIRED FOR SPAS, POOLS, SOLAR SYSTEMS, DEMOLITION AND SEWER CAPS OF EXISTING BUILDINGS. IF SUCH IMPROVEMENTS OR DEMOLITION IS REQUIRED AS A CONDITION OF AN APPROVAL FOR DISCRETIONARY ACTIONS OR TO COMMENCE BUILDING, THEN SUCH PERMITS MUST BE OBTAINED BEFORE OR AT THE TIME THIS PROPOSED BUILDING PERMIT IS ISSUED.
2. FENCE, WALL, HANDRAIL HEIGHTS, AS MEASURED FROM THE LOWEST FINISHED GRADE ADJACENT TO EACH SECTION OF THESE STRUCTURES MAY BE A MAXIMUM OF 42" IN HEIGHT IN THE FRONT SETBACK, AND 6'-0" AT ALL OTHER LOCATIONS ON THE SITE (3'-0" IF OBSTRUCTING DRIVEWAY VISIBILITY).
3. ALL ELECTRICAL, TELEPHONE, CABLE TELEVISION SYSTEM AND SIMILAR SERVICE WIRES AND CABLES SHALL BE INSTALLED UNDERGROUND FOR ALL NEW BUILDINGS. (MBMC 9.12.140) UNDERGROUND FUTURE STUB-OUT IS REQUIRED IF REMODEL IS OVER 50% (MBMC 9.12.130)
4. AN APPROVED BACKWATER VALVE IS REQUIRED FOR DRAINAGE PIPING SERVING FIXTURES LOCATED BELOW THE ELEVATION OF THE NEXT UPSTREAM MANHOLE COVER.
5. VISIBILITY OF DRIVEWAY CROSSING A STREET PROPERTY LINE SHALL NOT BE BLOCKED BETWEEN A HEIGHT OF 3 FT. & 9 FT. FOR A DEPTH OF 5FT. FROM THE STREET PROPERTY LINE AS VIEWED FROM THE EDGE OF THE RIGHT-OF-WAY ON EITHER SIDE OF THE DRIVEWAY AT A DISTANCE OF 15 FT. OR AT THE NEAREST PROPERTY LINE INTERSECTION OF THE STREET PROPERTY, WHICHEVER IS LESS (MBMC 10.64.130).
6. REQUIRED PARKING AREA IS TO BE 18'X19' CLEAR OF ANY OBSTRUCTIONS NOT LESS THAN SEVEN (7') ABOVE FINISH FLOOR TO ANY CEILING, BEAM, PIPE, VENT, MECHANICAL EQUIPMENT, OR SIMILAR OBSTRUCTION. (MBMC 10.64.100C)
7. PARKING IS NOT PERMITTED IN REQUIRED YARDS OR OPEN SPACE EXCEPT FOR A 20 FOOT WIDE FRONT YARD DRIVEWAY ACCESSING A GARAGE IN AREA DISTRICTS 1 & II; OR ONE INTERIOR SIDE YARD IN AREA DISTRICTS III & IV.
8. A TREE REMOVAL PERMIT OR TREE PROTECTION PLAN IS REQUIRED FOR THE REMOVAL OR PRESERVATION OF TREES WITHIN THE FRONT YARD (RESIDENTIAL ZONES, AREA DISTRICT II, WEST OF SEPULVEDA BOULEVARD--MBMC 10.52.120.) **SEE TREE PROTECTION REQUIREMENTS NOTES**.
9. AT LEAST 20% OF ALL VISIBLE PORTIONS OF A REQUIRED FRONT OR CORNER SIDE YARD ADJOINING A STREET SHALL BE PLANTING AREA (MBMC 10.12.030 (O)).
10. EXCEPTION: THE DIRECTOR OF COMMUNITY DEVELOPMENT MAY GRANT AN EXCEPTION FOR A PORTION OF THE AMOUNT OF REQUIRED LANDSCAPING, NOT TO EXCEED 75% OF THE TOTAL, IN ORDER TO ACCOMMODATE DRIVEWAYS AND WALKWAYS.
11. NEW UTILITY METER/BOXES/LINES AND SCREENING (METER NEED NOT BE SCREENED IF LOCATED ON THE INTERIOR SIDE OF A DWELLING AND RECESSED BEHIND SETBACK MBMC 10.60.090(B)). PROVIDE GAS COMPANY (310)793 4290) APPROVAL OF METER LOCATIONS IN AREA DISTRICTS III &IV.
12. A NEW 36" BOX TREE TO BE DESIGNATED AS A PROTECTED TREE WITH A NEW TREE PERMIT. (REQUIRED FOR PROJECTS OVER 50% VALUATION UNLESS PLANNING DETERMINES THAT A NEW TREE IS INAPPROPRIATE FOR THE PROPERTY)
13. TREE PERMIT WITH A TREE PROTECTION PLAN:

- PROTECTED TREE(S) MAY NOT BE REMOVED OR RELOCATED WITHOUT PRIOR APPROVAL.
- TREE(S) SHALL BE PROTECTED WITH REQUIRED FENCING AND ADVISORY SIGNS WITH TREE PROTECTION REQUIREMENTS SHALL BE CLEARLY POSTED ON THE SITE AND PROPERLY MAINTAINED.
- NO TRASH, CONSTRUCTION MATERIAL OR DEBRIS, DIRT, PORTABLE TOILETS, OR ANY OTHER MATERIAL SHALL BE PLACED WITHIN THE PROTECTIVE FENCING AREA.
- PROVIDE 2" MULCH IN PROTECTIVE AREA.
- PROVIDE IRRIGATION (SOAKER HOSE) CIRCLING AROUND PROTECTIVE AREA STARTING AT A MINIMUM DISTANCE OF 1' AWAY FROM TREE TRUNK.
- NO GRADING WITHIN THE PROTECTIVE FENCING AREA.
- ANY PRUNING OF BRANCHES OR ROOTS MUST COMPLY WITH AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI A300) PRUNING STANDARDS.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROVED PLANS. ANY PROPOSED REVISIONS REQUIRE PRIOR APPROVAL BY THE CITY OF MANHATTAN BEACH.
- A SECURITY DEPOSIT MAY BE REQUIRED TO ENSURE THE EXISTING TREE(S) ARE PROTECTED.
- VIOLATIONS OF THE TREE PRESERVATION REGULATIONS MAY RESULT IN EXTENSIVE FINES.

TROTTER
BUILDING DESIGNS, INC.
1011 MANHATTAN BEACH BLVD. "A"
MANHATTAN BEACH
310•545•2727

CLIENT:
SURFSIDE PROPERTIES

JOB SITE:
128 21st ST.
MANHATTAN BEACH, CA

CC#1: 01-20-2016
CC#2: 02-22-2016
PC#1: 02-25-2016
PC#2: 05-04-2016

REVISIONS:
1 _____
2 _____
3 _____

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JOB NO:
15-019

GREEN BUILDING NOTES

SUSTAINABLE GREEN BUILDING PROGRAM AND ENERGY EFFICIENCY STANDARDS WITH City of Manhattan Beach AMENDMENTS.

Requirements for LOW-RISE RESIDENTIAL BUILDING. A building that is of Occupancy Group R and is six stories or less, or that is a one- or two-family dwelling or townhouse.

301.1 Scope. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

Note: On and after January 1,2014, residential buildings undergoing permitted alterations, additions or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 Low-rise and high-rise residential buildings. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings, high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (RR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

301.3 Nonresidential additions and alterations. [BSC] The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of $200,000 or above (for occupancies within the scope of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.

A code section will be designated by a banner to indicate where the code section only applies to newly constructed buildings [N] or to additions and alterations [AA]. When the code section applies to both, no banner will be used.

301.3.1 Nonresidential additions and alterations that cause updates to plumbing fixtures only:

Note: On and after January 1, 2014, certain commercial real property, as defined in Civil Code Section 1101.3 shall have its compliant plumbing fixtures replaced with appropriate water-conserving plumbing fixtures under specific circumstances. See Civil Code Section 1101.1 et seq. for definitions, types of commercial real property affected.

CALIFORNIA GREEN BUILDING STANDARDS CODE - MATRIX ADOPTION TABLE
CHAPTER 4 - RESIDENTIAL MANDATORY MEASURES
(Matrix Adoption Tables are non-regulatory, intended only as an aid to the user.
See Chapter 1 for state agency authority and building applicaions.)

Adopting agency	BSC	SFM	1	2	1-AC	AC	SS	1	2	3	4	BSCC	DPH	AGR	DWR	CEC	C	SL	SLC
Adopt entire Ca chapter																			
Adopt entire chapter as amended (amended sections listed below)			X																
Adopt only those sections that are listed below																			
Chapter/Section																			
4.1			X																
4.2			†																
4.3			X																
4.4			X																
4.5			X																

The state agency does not adopt sections identified by the following symbol: †

Division 4.1 - PLANNING AND DESIGN
SECTION 4.101
GENERAL

4.101.1 Scope. The provision of this division outline planning, design and development method that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

SECTION 4.106
SITE DEVELOPMENT

4.106.1 General. Preservation and use of available natural resource shall be accomplished through evaluation and careful planning to minimize negative effect on the site and adjacent area. Preservation of slopes, management of storm water drainage and erosion controls shall comply with section.

4.106.2 Storm water drainage and retention during construction. Project which disturb le than one acre of oil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water
drainage during construction, one or more of the following measure hall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

I. Retention basins of , sufficient size hall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.
3. Compliance with a lawfully enacted storm water management ordinance.

4.106.3 Grading and paving. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of method to manage surface water include, but are not limited to, the following:

I. Swales
2. Water collection and disposal system
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alt rations not altering the drainage path.

The Following Requirements Apply to All New SFD and Additions/Renovations that Exceed 50% of the Value of the Existing Building.

Energy performance 4.201.1 *For the purposes of energy efficiency a green building should achieve at least a 15 percent reduction in energy usage when compared to the State's mandatory energy efficiency standards.*

***A4.203.1** [Residential] Energy performance. Using an Alternative Calculation Method (ACM) approved by the California Energy Commission, calculate each building's energy and CO2 emissions, and compare it to the standard or "budget" building to achieve the following:*

Exceed the California Energy Code based on the 2008 energy standards requirements by 15 percent. All projects must demonstrate compliance with 2008 California Energy Efficiency Standards (Title 24, Part 6) by submitting all required forms and calculations for review and approval by the Building Official to demonstrate the base and 15% compliance requirements.

***A4.208** [Residential] Water Heating Design, Equipment and Installation. The following sections are mandatory as per:*

***A4.208.1** Tank type water heater efficiency. The Energy Factor (EF) for a gas-fired storage water heater less than or equal to 75,000 BTU/h shall be higher than .60 and for those exceeding 75,000 BTU/h shall be .84 or higher.*

***A4.208.2** Tankless water heater efficiency. The Energy Factor (EF) for a gas-fired tankless water heater shall be .80 or higher.*

***A4.208.4** Pipe insulation and heat traps. Pipe insulation of not less than R-6 shall be installed at all hot water distribution and re-circulation system piping. Heat traps shall be installed at all noncirculating hot water heaters and tanks.*

***A4.208.5** Solar water heating stub out. Pre-plumb piping and sensor wiring from water heater to roof for future solar water heating.*

***A4.209.1** Each major appliance shall meet ENERGY STAR if an ENERGY STAR designation is applicable for that appliance, including but not limited to: exhaust fans, ceiling fans, clothes washers, refrigerators, freezers, wine coolers, primary space heating - ventilating- and air conditioning equipment, and dishwashers.*

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES
Division 4.3-WATER EFFICIENCY AND CONSERVATION

SECTION 4.301
GENERAL

4.301.1 Scope. The provisions of this chapter shall establish the means of conserving water used indoors, outdoors and in wastewater conveyance.

SECTION 4.303
INDOOR WATER USE

4.303.1 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

4.303.1.1 Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank -type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets. Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

4.303.1.2 Urinals. The effective flush volume of urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads.

4.303.1.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower . When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.

4.303.1.4.1 Residential lavatory faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.5 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory faucets in common and public use areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.25 gallons per cycle.

4.303.1.4.4 Kitchen faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.2 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1401.1 of the California Plumbing Code.

SECTION 4.304
OUTDOOR WATER USE

4.304.1 Irrigation controllers. Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.

Note: More information regarding irrigation controller function and specifications is available from the Irrigation Association.

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES
Division 4.4 - MATERIAL CONSERVATION AND
RESOURCE EFFICIENCY
SECTION 4.401

4.401.1 Scope. The provision of this chapter shall outline means of achieving material conservation and resource efficiency through protection of building from exterior moisture; construction waste diversion; employment of techniques to reduce pollution through r cycling of materials; and building commissioning or testing, adjusting and balancing.

SECTION 4.406
ENHANCED DURABILITY
AND REDUCED MAINTENANCE

4.406.1 Rodent proofing. Annular pace around pipe, electric cable , conduit or other opening in sole/bottom plate at exterior walls shall be protected against the pas age of rodent by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

SECTION 4.408
CONSTRUCTION WASTE REDUCTION,
DISPOSAL AND RECYCLING

4.408.1 Construction waste management. *Construction Waste Reduction of at least **65%** Recycle and/or salvage for reuse a minimum of **65** percent of the nonhazardous construction and demolition debris. See Municipal Code sections: 5.26.010. Definitions: "Diversion Requirements," 5.26.050 Review of Waste Management Plan, and 5.26.060 Compliance with Waste management Plan. A construction waste management plan shall be submitted to the Waste Management Plan compliance Official.*

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsite are located in areas beyond the haul boundaries of the diversion facility.

The Construction waste reduction requirements shall be required for the following projects:

- *All demo permits*
- *All re-roofing projects.*
- *All remodeling projects where valuation exceed $100,000.*

4.408.2 Construction waste management plan. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be avail able during construction for examination by the enforcing agency.

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specify tl construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
3. Identify diversion facilities where the construction and demolition waste material will be taken.
4. Identify construction method employed to reduce the amount of construction and demolition waste generated.
5. Specify that the amount of construction and demolition waste materials diverted hall be calculated by weight or volume, but not by both.

The following **COMPLETED** forms shall be presented to the Inspector: (CGBSC 4.408.2.1)
-Construction Waste Management Plan
-Construction Waste Management Worksheet
-Construction Waste Management Acknowledgement

4.408.3 Waste management company. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.

Note: The owner or contractor may make the determination if the construction and demolition waste material will be diverted by a waste management company.

4.408.4 Waste stream reduction alternative [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfill , which do not exceed four (4) lbs/sq. ft. of the building area shall meet the minimum 50 percent construction waste reduction requirement in Section 4.408. I.

4.408.4.1 Waste stream reduction alternative. Projects that generate a total combined weight of construction and demolition waste disposed of in landfill , which do not exceed two (2) pound per square foot of the building area, shall meet the minimum 50-percent construction waste reduction requirement in Section 4.408.1.

4.408.5 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2. Items I through 5. S ction 4.408.3 or Section 4.408.4.

Notes:

Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.htmlmay be used to a list in documenting compliance with this section.
2. Mixed construction and demolition debris. (C&D) processor can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

SECTION 4.410
BUILDING MAINTENANCE AND OPERATION

4.410.1 Operation and maintenance manual. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual hall remain with the building throughout the life cycle of the structure.
2. Operation and maintenance instructions for the following:
a. Equipment and appliance , including water-saving devices and system, HVAC systems, water-heating systems and other major appliance and equipment.
b. Roof and yard drainage, including gutters and down pouts.
c. Space conditioning systems, including condensers and air filters.
d. Land cape irrigation systems.
e. Water reuse system .
3. Information from local utility, water and waste recovery provider on methods to further reduce resource consumption, including recycle program and location.
4. Public transportation and/or carpool option available in the area.
5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving land cape and irrigation design and controllers which conserve water.
7. Instruction for maintaining gutter and down spouts and the importance of diverting water at last 5 feet away from the foundation.
8. Information on required routine maintenance measure, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspection verifications required by the enforcing agency or this code.

Division 4.5 - ENVIRONMENTAL QUALITY
SECTION 4.501

4.501.1 Scope. The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502
DEFINITIONS

4.502.1 Definitions. The following terms are defined in Chapter 2.
AGRIFIBER PRODUCTS.
COMPOSITE WOOD PRODUCTS.
II DIRECT-VENT APPLIANCE.
MAXIMUM INCREMENTAL REACTIVITY (MIR).
MOISTURE CONTENT.
PRODUCT-WEIGHTED MIR (PWMIR).
REACTIVE ORGANIC COMPOUND (ROC).
VOC.

SECTION 4.503
FIREPLACES

4.503.1 General. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA Phase II emission limits where applicable. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

SECTION 4.504
POLLUTANT CONTROI

4.504.1 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust and debris, which may enter the system.

4.504.2 Finish material pollutant control. Finish materials shall comply with this section.

4.504.2.1 Adhesives, sealants and caulks. Adhesives, sealants and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations,Title 17, commencing with Section 94507.

4.504.2.2 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-high Gloss coating, based on its gloss, as defined in subsections 4.21, 4,36, and 4.3 7
of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-high Gloss VOC limit in Table 4,504.3 shall apply.

4.504.2.3 Aerosol paints and coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction
of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of
product limits of Regulation 8, Rule 49.

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification.
2. Field verification of on-site product containers.

VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]
Grams of VOC per Liter of Coating.
Less Water and Less Exempt Compounds

COATING CATEGORY [2,3]	CURRENT LIMIT
Flat Coatings	50
Nonflat coatings	100
Nonflat high gloss coatings	150
SPECIALTY COATINGS	
Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	50
Dry fog coatings	150
Faux finishing coatings	350
Fire resistive coatings	350
Floor coatings	100
Form-release compounds	250
Graphic arts coatings (sign paints)	500
High temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings[1]	120
Magnesite cement coatings	450
Mastic texture coatings	100
Metallic pigmented coatings	500
Multicolor coatings	250
Pretreatment wash primers	420
Primers, sealers, and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Shellacs	
Clear	730
Opaque	550
Specialty primers, sealers & undercoaters	100
Stains	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub and tile refinish coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

[1] Grams of VOC per liter of coating, including water and including exempt compounds

[2] The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.

[3] Values in this table are derived from those specified by the California Air Resources Board. Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

FORMALDEHYDE LIMITS[1]
Maximum Formaldehyde Emissions in Parts per Million

PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard[2]	0.13

[1] Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E 1333. For additional information, see California Code of Regulations, Title 17, Sections 93120 through 93120.12.

[2] Thin medium density fiberboard has a maximum thickness of 5/16 inches (8 mm).

4.504.3 Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the following:

1. Carpet and Rug Institute's Green Label Plus Program.
2. California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February2010 (also known as Specification 01350.)
3. NSF/ANSI 140 at the Gold level.
4. Scientific Certifications Systems Indoor Advantage™ Gold.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 Resilient flooring systems. Where resilient flooring is I I installed, at least 80 percent of floor area receiving resilient flooring shall comply with one or more of the following:

1. VOC emission limits defined in the Collaborative for High Perlormance Schools (CHPS) High Performance Products Database.
2. Products compliant with CHPS criteria certified under the Greenguard Children & Schools program.
3. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program.
4. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350).

4.504.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5.

4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian ASINZS 2269 or European 636 3S standards.
5. Other methods acceptable to the enforcing agency.

ADHESIVE VOC LIMIT[1,2]
Less Water and Less Exempt Compounds in Grams per Liter

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesives not specifically listed	50
SPECIALTY APPLICATIONS	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

[1] If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.

[2] For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168, http://www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF.

SEALANT VOC LIMIT
Less Water and Less Exempt Compounds in Grams per Liter

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
SEALANT PRIMERS	
Architectural	
Nonporous	250
Porous	775
Modified bituminous	500
Marine deck	760
Other	750

Note: For additional information regarding methods to measure the VOC content specified in these tables, see South Coast Air Quality Management District Rule 1168.

TABLE 4.504.5
FORMALDEHYDE LIMITS
Maximum Formaldehyde Emissions in Parts per Million

PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard	0.13

1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTME 1333. For additional information, see California Code of Regulations, Title 17, Sections 93120 through 93120.12.
2. Thin medium density fiberboard has a maximum thickness of 5/ 16 inch (8 mm).

SECTION 4.505
INTERIOR MOISTURE CONTROL

4.505.1 General. Buildings shall meet or exceed the provisions of the California Building Standards Code.

4.505.2 Concrete slab foundations. Concrete slab foundations required to have a vapor retarder by the California Building Code, Chapter 19 or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code, Chapter 5, shall also comply with this section.

4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following:

1. A 4-inch-thick (101.6 mm) base of l/zinch (12.7 mm) or larger clean aggregate shall be provided with a vapor retarder in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

4.505.3 Moisture content of building materials . Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19-percent moisture content. Moisture content shall be verified in compliance with the following:

1. Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.
2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece to be verified.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.

Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet -applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

SECTION 4.506
INDOOR AIR QUALITY AND EXHAUST

4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and 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 humidity contol.
a. Humidity controls shall be capable of adjustment between a relative humidity range of s 50 percent
to a maximum of 80 percent. A humidity control may utilize manual or automatic means of adjustment.
b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in).

Notes:

1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower, or tub/shower combination.
2. Lighting integral to bathroom exhaust fans shall comply with the California Energy Code.

SECTION 4.507
ENVIRONMENTAL COMFORT

Whole house exhaust fans shall have insulated louvers or covers which close when the fan is off. Covers or louvers shall have a minimum insulation value of R-4.2.

Whole-Building Ventilation Requirements (From ASHRAE 62.2)

At least one mechanical ventilation system in the building must be designated for use in compliance with the Whole-Building Ventilation Requirement. Alternatively, the sum of the rated airflows from multiple fans can be utilized to meet the required Whole-Building Ventilation airflow. The system(s) must deliver continuous ventilation airflow at a rate greater than or equal to the rate specified in equation 4.1a, and fan Sone ratings must not exceed 1.0 for dwelling occupant densities known to be greater than (N +1), the rate shall be increased by 7.5 CFM for each additional person.

4.507.2 Heating and air-conditioning system design. Heating and air-conditioning systems shall be sized, designed and have their equipment selected using the following methods:

1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J-2004 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ANSI/ACCA 1 Manual D-2009 (Residential Duct Systems), ASHRAE
handbooks or other equivalent design software or methods.
3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2004 (Residential Equipment Selection) or other equivalent design software or methods.

Exception: Use of alternate design temperatures necessary to ensure the systems function are acceptable.

(Eq. 4.1a) Q_{fan}= 0.01A_{floor} +7.5 (N_{br}+1)	Where:
107.31 CFM = 0.01(6,231)+7.5(5+1)	A_{floor} = conditioned floor area, ft^2
Whole-House Ventilator = 107.31 CFM	N_{br} = number of bedrooms; not to be less than one
	Q_{fan} = ventilation air requirement = fan flow rate, (cfm)

Building Maintenance and Operation

*At final inspection Complete and submit the form: "**BUILDING MAINTENANCE AND OPERATION MANUAL CHECK LIST**", and submit to the Building Inspector.*

***The Builder shall prepare a property Manual for the building owner or tenant, that includes the following information**:*

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life-cycle of the structure.
2. Operation and maintenance instructions for all equipment and appliances.
3. Roof and yard drainage including gutters and downspouts.
4. Space conditioning systems including condensers and air filters.
5. Landscape and irrigation systems.
6. Water reuse systems.
7. Recycle programs and locations.
8. Public transportation and carpool options.
9. Educational material on the positive impacts of maintaining indoor relative humidity between 30 and 60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
10. Information about water conserving landscape and irrigation design and controllers which conserve water.
11. Importance of gutters and downspouts and importance of diverting water at least 5 ft. from the buildings foundations.
12. Information on routine maintenance such as caulking, painting, grading, etc.
13. Information about state solar energy and incentive programs.
14. A copy of all special inspection verifications required by the enforcing agency or this code.

4. POOLS AND SPAS

TITLE 24, PART 6 Efficiency Standards:

114 (a) 4. Electric resistance heating. No electric resistance heating; solar collectors shall provide not less than 60% of the energy for heating swimming pools and spas.
·Exception 1 to Section 114 (a) 4: Listed package units with fully insulated enclosures, and with tight-fitting covers that are insulated to at least R-6.
·Exception 2 to Section 114 (a) 4: Pools or spas deriving at least 60 percent of the annual heating energy from site solar energy or recovered energy. 114 (a) 2. Pool Covers. A thermal cover or blanket rated at not less than R-15 for outdoor pools or outdoor spas that have a heat pump or gas heater.

TROTTER
BUILDING DESIGNS, INC.
1011 MANHATTAN BEACH BLVD. "A"
MANHATTAN BEACH
310•545•2727

CLIENT:
SURFSIDE PROPERTIES

JOB SITE:
128 21st ST.
MANHATTAN BEACH, CA

REVISIONS:
1
2
3

ENGINEER:
BRIAN B. KHOURY
ENGINEERING STRUCTURES, INC.
P: (909) 615-6962
F: (949) 203-6214
e-mail: brian@engineering-structures.com

PAGE:
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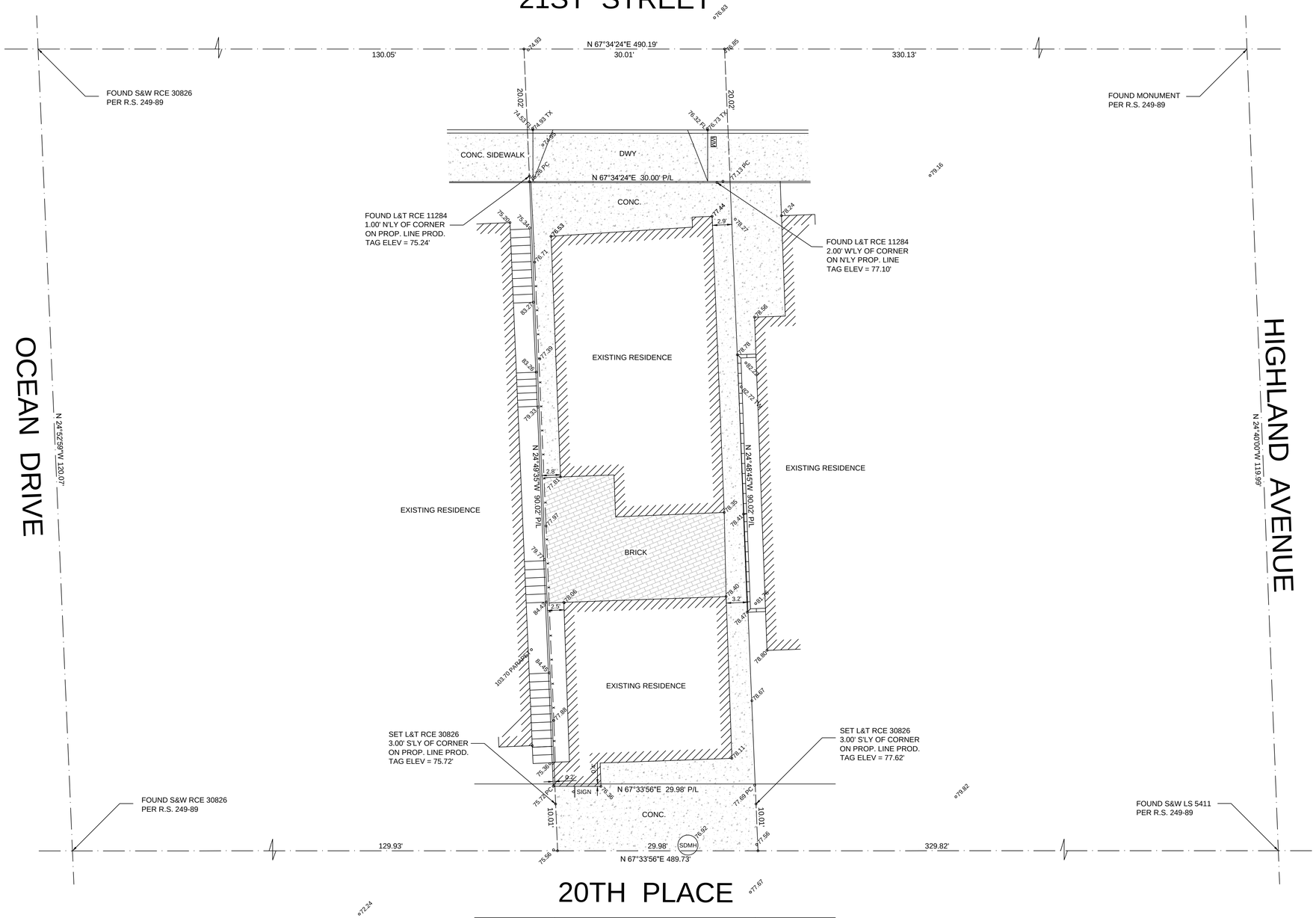
JOB NO:
15-019



NOTE:
A TITLE POLICY HAS BEEN PROVIDED AND REVIEWED BY DENN ENGINEERS AT THE TIME OF THIS SURVEY. ANY READILY AVAILABLE ITEMS AFFECTING THIS PROPERTY HAVE BEEN PLOTTED BASED ON PROVIDED DOCUMENTS.

PROVIDENT TITLE COMPANY
ORDER NO. 10377260
DATED JUNE 25, 2015

SCALE 1" = 8'

DENN ENGINEE

3914 DEL AMO BLVD, SUITE 921
TORRANCE, CA 90503 (310) 542-94

SURVEY AND TOPOGRAPHY

FOR
MIKE CLELAND
SURFSIDE PROPERTIES, INC
P.O. BOX 95
MANHATTAN BEACH, CA 902
310-890-4908

JOB ADDRESS

128 21ST STREET
MANHATTAN BEACH, CA 90266

LEGAL DESCRIPTION

LOT 11, BLOCK 7
SUBDIVISION NO. 2 OF
NORTH MANHATTAN BEACH
M.B. 2-1
APN 4178-011-002

THIS MAP CORRECTLY REPRESENTS A SUR
MADE BY ME OR UNDER MY DIRECTION I
CONFORMANCE WITH THE REQUIREMENTS
PROFESSIONAL LAND SURVEYORS' ACT

REGISTERED PROFESSIONAL ENGINEER
GARY J. ROEHL
No. 30826
Exp. 03-31-16
CIVIL
STATE OF CALIFORNIA

GARY J. ROEHL R.C.E. 3082

DRAWN BY KW CHECK BY TS

DRAWN ON 7-31-201

REVISIONS
REVISIONS

LEGEND

EXISTING BUILDING
BRICK
CONCRETE
WOOD DECK
106.76 EXISTING ELEVATION
100 EXISTING CONTOUR
BLOCK WALL
X EXISTING FENCE

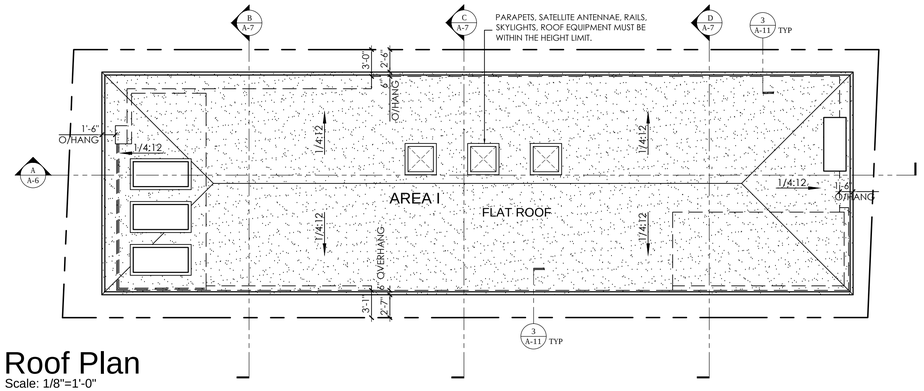
BCR	BEGINNING OF CURB RETURN
C/L	CENTERLINE
C.L.F.	CHAIN-LINK
E'LY	EASTERLY
EM	ELECTRIC METER
FD	FOUND
FE	FENCE
FF	FINISH FLOOR
FH	FIRE HYDRANT
FL	FLOW LINE
GFF	GARAGE FINISH FLOOR
GM	GAS METER
GW	GUY WIRE
L&T	LEAD AND TAG
MH	MANHOLE
N'LY	NORTHERLY
PC	PROPERTY CORNER / PROP. CORNE
PL, P/L	PROPERTY LINE / PROP. LINE
PP	POWER POLE
PPT	PARAPET
S&W	SPIKE AND WASHER
S'LY	SOUTHERLY
SPK	SPIKE
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
STK	STAKE
ST.LT	STREET LIGHT
TC	TOP OF CURB
TW	TOP OF WALL / T.O.W.
TX	TOP OF DRIVEWAY APRON
W'LY	WESTERLY
WM	WATER METER

NOTE: ALL SETBACK DIMENSIONS SHOWN ARE MEASURED TO EXTERIOR SURFACE OF BUILDINGS UNLESS OTHERWISE NOTED.

BOUNDARY MONUMENTS ARE NOT NECESSARI SET ON PROPERTY CORNERS. PLEASE REFER THE NOTATION ON THE PLANS FOR OFFSET DISTANCES. IF THERE ARE ANY QUESTIONS, PLEASE DO NOT HESITATE TO CONTACT DENN ENGINEERS FOR CLARIFICATION AT : (310) 542-9433, M-F 8:00 AM TO 5:00 PM.

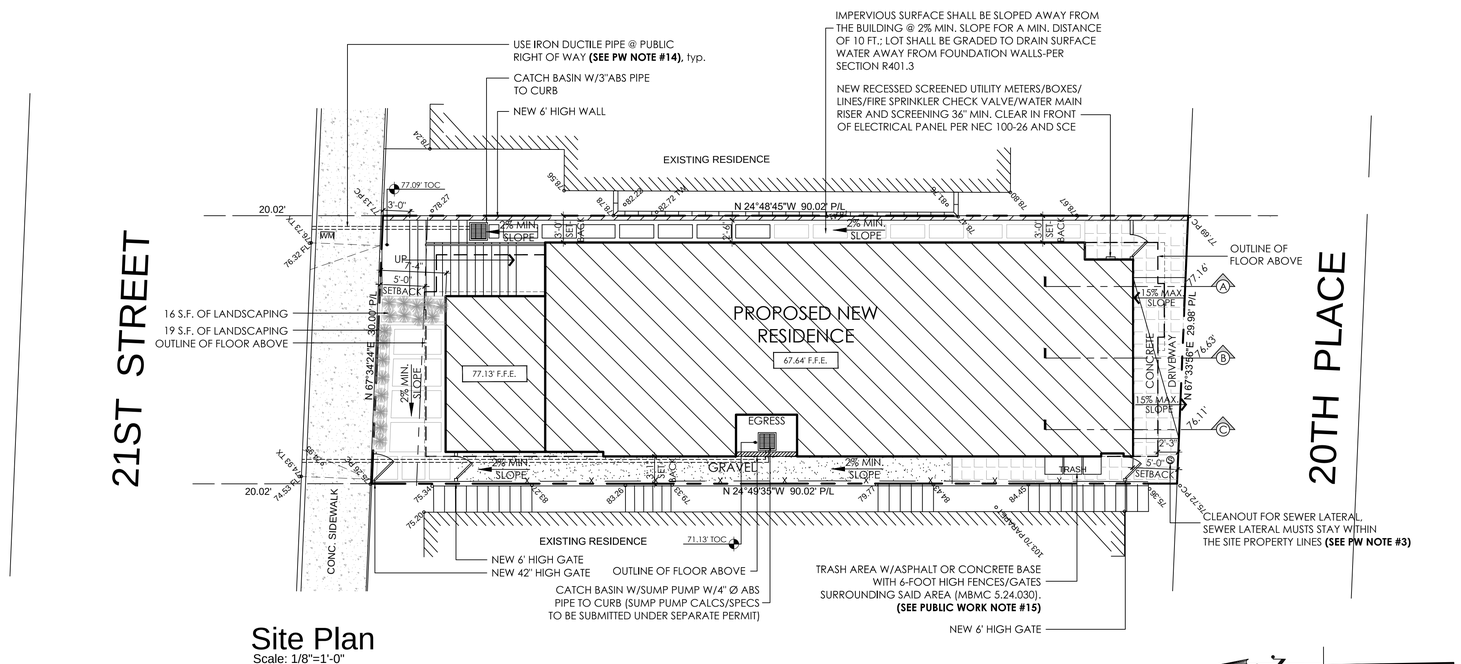
SHEET 1 OF 1

JOB NO. 15-382



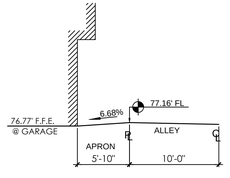
Roof Plan

Scale: 1/8"=1'-0"



Site Plan

Scale: 1/8"=1'-0"



DRIVEWAY PROFILE (A)

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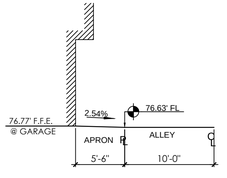

DRIVEWAY PROFILE (B)

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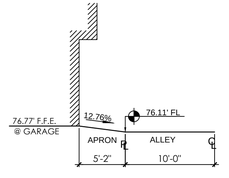

DRIVEWAY PROFILE (C)

Scale: 1/8"=1'-0"

NOTE:
A TITLE POLICY HAS BEEN PROVIDED AND REVIEWED BY DENN ENGINEERS AT THE TIME OF THIS SURVEY. ANY READILY AVAILABLE ITEMS AFFECTING THIS PROPERTY HAVE BEEN PLOTTED BASED ON PROVIDED DOCUMENTS.

PROVIDENT TITLE COMPANY
ORDER NO. 10377260
DATED JUNE 25, 2015

ROOF NOTES

ROOF MATERIAL @ FLAT (1/4:12 MIN.):
-3-LAYERS OF 15# FELT LAID W/19" OVERLAP, PER SECT. R905.2.2. HOT MOPPED THROUGHOUT W/GAFGLAS ENERGY CAP BUR MINERAL SURFACED CAP SHEET (WHITE)
-NAIL BASE SHEET PER CBC TABLE 15-E
-(MINIMUM CLASS "A" ROOF REQUIRED)

NON-VENTED ROOF

AREA I: SPRAY FOAM INSULATION (AIR-IMPERMEABLE INSULATION) INSULATION SHALL BE APPLIED IN DIRECT CONTACT WITH THE UNDERSIDE OF THE STRUCTURAL ROOF SHEATHING FOR CONDENSATION CONTROL (SPRAY INSULATION THICKNESS TO ACHIEVE MIN. REQUIREMENTS PER T24) COMPLY WITH CRC SECTION R806.5 FOR UNVENTED RAFTER ASSEMBLIES.

"CONTRACTOR TO CONSULT WITH INSULATION MANUFACTURER FOR BEST USE/TYPE OF SPRAY FOAM INSULATION FOR REQUIRED AREAS".

PUBLIC WORKS NOTES

1. ALL LANDSCAPE IRRIGATION BACKFLOW DEVICES MUST MEET CURRENT CITY REQUIREMENTS FOR PROPER INSTALLATION.
2. NO DISCHARGE OF CONSTRUCTION WASTEWATER, BUILDING MATERIALS, DEBRIS, OR SEDIMENT FROM THE SITE IS PERMITTED. NO REFUSE OF ANY KIND GENERATED ON A CONSTRUCTION SITE MAY BE DEPOSITED IN RESIDENTIAL, COMMERCIAL, OR PUBLIC REFUSE CONTAINERS AT ANY TIME. THE UTILIZATION OF WEEKLY REFUSE COLLECTION SERVICE BY THE CITY'S HAULER FOR ANY REFUSE GENERATED AT THE CONSTRUCTION SITE IS STRICTLY PROHIBITED. FULL DOCUMENTATION OF ALL MATERIALS/IRASH LANDFILLED AND RECYCLED MUST BE SUBMITTED TO THE PERMITS DIVISION IN COMPLIANCE OF THE CITY'S CONSTRUCTION AND DEMOLITION RECYCLING ORDINANCE.
3. A CLAY 6" PROPERTY LINE CLEANOUT MUST BE INSTALLED ON A CLAY 6" SANITARY SEWER LATERAL. IF THERE IS NO 6" SEWER LATERAL, THEN A NEW ONE MUST BE INSTALLED. THE PROPERTY LINE CLEANOUT MUST STAY WITHIN THE JOB SITE'S PROPERTY LINES. SEE CITY STANDARD PLAN ST-5. CLEANOUT MUST BE ADDED TO THE SITE PLAN.
4. A BACKWATER VALVE IS REQUIRED ON THE SANITARY SEWER LATERAL IF THE DISCHARGES FROM FIXTURES WITH FLOOD LEVEL RIMS ARE LOCATED BELOW THE NEXT UPSTREAM MANHOLE COVER OF THE PUBLIC SEWER. SEE CITY STANDARD PLAN ST-24. MUST BE SHOWN ON THE PLAN IF APPLICABLE.
5. IF ANY EXISTING SEWER LATERAL IS USED, IT MUST BE TELEVISED TO CHECK ITS STRUCTURAL INTEGRITY. THE TAPE MUST BE MADE AVAILABLE FOR REVIEW BY THE PUBLIC WORKS DEPARTMENT. THE PUBLIC WORKS DEPARTMENT WILL REVIEW THE TAPE AND DETERMINE AT THAT TIME IF THE SANITARY LATERAL NEEDS REPAIRING, REPLACED, OR THAT IT IS STRUCTURALLY SOUND AND CAN BE USED IN ITS PRESENT CONDITION. THE SYSTEM MUST BE IN ITS ORIGINAL STATE AND MAY NOT BE FLUSHED, CLEANED, OR ALTERED PRIOR TO VIDEOING.
6. ANY UNUSED WATER OR SANITARY SEWER LATERALS MUST BE ABANDONED AT THE CITY MAIN.
7. RESIDENTIAL PROPERTIES MUST PROVIDE AN ENCLOSED STORAGE AREA FOR REFUSE CONTAINERS. THESE AREAS MUST BE CONSTRUCTED TO MEET THE REQUIREMENTS OF M.B.M.C. 5.24.030. THE AREA MUST BE SHOWN IN DETAIL ON THE PLANS BEFORE A PERMIT IS ISSUED.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL THE STREET SIGNS, STREET LAMPS/LIGHTS, PARKING METERS, AND/OR TREES AROUND THE PROPERTY. IF THEY ARE DAMAGED, LOST OR REMOVED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE THEM AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ANY STREET MARKINGS THAT ARE DAMAGED OR REMOVED BY THE CONTRACTOR'S OPERATIONS. CONTACT THE PUBLIC WORKS INSPECTOR FOR SIGN SPECIFICATION AND SUPPLIERS.
9. THE BACK OF DRIVEWAY APPROACH MUST BE SIX INCHES HIGHER THAN THE FLOW LINE ON THE STREET, M.B.M.C. 9.76.030.
10. SIDEWALK, DRIVEWAY, CURB, AND GUTTER REPAIRS OR REPLACEMENT MUST BE COMPLETED PER PUBLIC WORKS SPECIFICATIONS. SEE CITY STANDARD PLANS ST-1, ST-2, AND ST-3. THE PLANS MUST HAVE A PROFILE OF THE DRIVEWAY, PERCENTAGE (%) OF SLOPE ON DRIVEWAY, AND DRIVEWAY ELEVATIONS FOR EACH SIDE AND THE MIDDLE. IN THE CASE WHERE THE GARAGE LEVEL IS BELOW THE STREET DRAINAGE FLOW LINES, THE COMBINED SLOPE OF PUBLIC AND PRIVATE APPROACH SHALL NOT EXCEED 15%. PLANS/SURVEY MUST SHOW ELEVATIONS FOR EACH ADJOINING PROPERTY. NO DEVIATIONS IN ELEVATIONS BETWEEN PROPERTIES OF MORE THAN ½".
11. WATER METERS MUST REMAIN ACCESSIBLE FOR METER READERS DURING CONSTRUCTION. WATER METERS SHALL BE PLACED NEAR THE PROPERTY LINE AND OUT OF THE DRIVEWAY APPROACH WHENEVER POSSIBLE. WATER METER PLACEMENT MUST BE SHOWN ON THE PLANS.
12. THE WATER METER BOX MUST BE PURCHASED FROM THE CITY, AND MUST HAVE A TRAFFIC RATED LID IF THE BOX IS LOCATED IN THE DRIVEWAY.
13. EROSION AND SEDIMENT CONTROL DEVICES BMPs (BEST MANAGEMENT PRACTICES) MUST BE IMPLEMENTED AROUND THE CONSTRUCTION SITE TO PREVENT DISCHARGES TO THE STREET AND ADJACENT PROPERTIES. BMPs MUST BE IDENTIFIED AND SHOWN ON THE PLAN. CONTROL MEASURES MUST ALSO BE TAKEN TO PREVENT STREET SURFACE WATER ENTERING THE SITE.
14. ALL STORM WATER, NUISANCE WATER, ETC. DRAIN LINES INSTALLED WITHIN THE STREET RIGHT-OF-WAY MUST BE CONSTRUCTED OF DUCTILE IRON PIPE. DRAINS MUST BE SHOWN ON PLANS.
15. ALL RUNOFF WATER FROM THE ROOF AND SIDE YARDS AND PATIOS MUST DISCHARGE ONTO 21ST ST. DRAINS MUST BE SHOWN ON THE PLANS.
16. PLAN HOLDER MUST HAVE THE PLANS RECHECKED AND STAMPED FOR APPROVAL BY THE PUBLIC WORKS DEPARTMENT BEFORE THE BUILDING PERMIT IS ISSUED.
17. IT SHALL BE THE DUTY OF EVERY PERSON CUTTING OR MAKING AN EXCAVATION IN OR UPON ANY PUBLIC PLACE, TO PLACE, AND MAINTAIN BARRIERS AND WARNING DEVICES FOR THE SAFETY OF THE GENERAL PUBLIC. M.B.M.C. 17.16.80. IF ANY EXCAVATION IS MADE ACROSS ANY PUBLIC STREET, ALLEY, OR SIDEWALK, ADEQUATE CROSSINGS SHALL BE MAINTAINED FOR VEHICLES AND PEDESTRIANS. M.B.M.C. 17.16.100.

BEST MANAGEMENT PRACTICES

1. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSE OR WIND.
2. STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY WIND OR WATER.
3. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL NOR THE SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
4. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON-SITE UNTIL THEY CAN BE DISPOSED OF AS SOILED WASTE.
5. TRASH AND CONSTRUCTION-RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
6. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAYS. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR BY ANY OTHER MEANS.

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1011 MANHATTAN BEACH BLVD, "A"
MANHATTAN BEACH
310-545-2727

CLIENT:

SURFSIDE PROPERTIES

JOB SITE:

128 21st ST.
MANHATTAN BEACH, CA

CC#1: 01-20-2016

CC#2: 02-22-2016

PC#1: 02-25-2016

PC#2: 05-04-2016

REVISIONS:

1 _____

2 _____

3 _____

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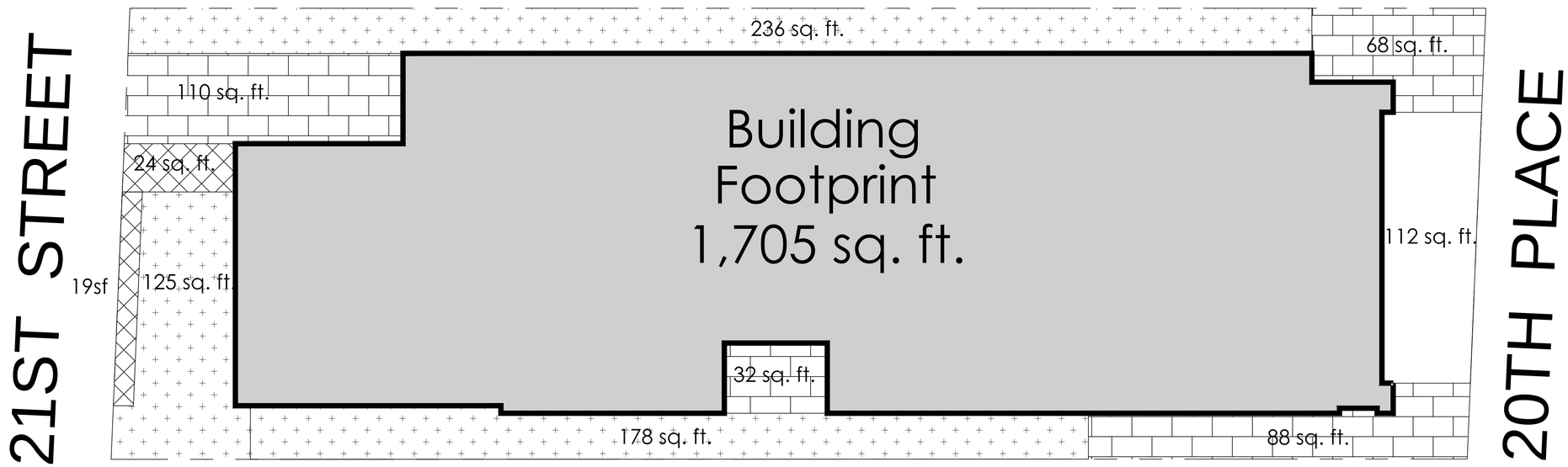
A-1

JOB NO:

15-019



Categories of Water Needs

VL = Very Low

L = low

= gravel walkway/permeable areas

= patio/walkways (hardscape)

= landscaping/non-high water use plants

Ceanothus spp (California Lilac).....L
Galvezia Speciosa Firecracker (Island Snapdragon).....L
Agave Shawii (Shaw's Agave).....L
Pavonia Lasiopetala (Rock Rose).....VL
Festuca Rubra (Creeping Red Fescue).....L

City of Manhattan Beach Planning Requirements

Sustainable Landscaping

For new projects and projects exceeding 50% building valuation, landscape plans must be submitted showing no more than 20% of the landscape/hardscape area containing high water use plants as defined by Water Use Classification of Landscape Species (WUCOLS) for Region 3 (MBMC 10.60.070 A). For more information on WUCOLS, visit http://www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf.

Lot Square Footage:	*2,697. sq. ft.
Building Footprint:	1,705 sq. ft.
Driveway:	112 sq. ft.

Landscape/Hardscape Area = Lot Sq. Ft. - Building Footprint - Driveway
= 2,697 sq. ft. - 1,720 sq. ft. - 112 sq. ft.
= **865 sq. ft.**

A maximum 20% of *landscape/hardscape area* can have high water usage plants as defined by Water Use Classification of Landscape Species (WUCOLS) for Region 3.

Max Area of High Water Use Plants = Landscape/Hardscape Area x 20%
= 865 sq. ft.x 20%
= **173 sq. ft.**

0 sq. ft. < 173 sq. ft. max. OK

Hardscape:	298	sq. ft.
Non-landscaped/permeable area:	539	sq. ft.
Landscaping/Low Water Area:	43	sq. ft.
High Water Use Area:	0	sq. ft.
Building Footprint:	1,705	sq. ft.
Driveway:	112	sq. ft.
	*2,697 sq. ft. (lot area)	

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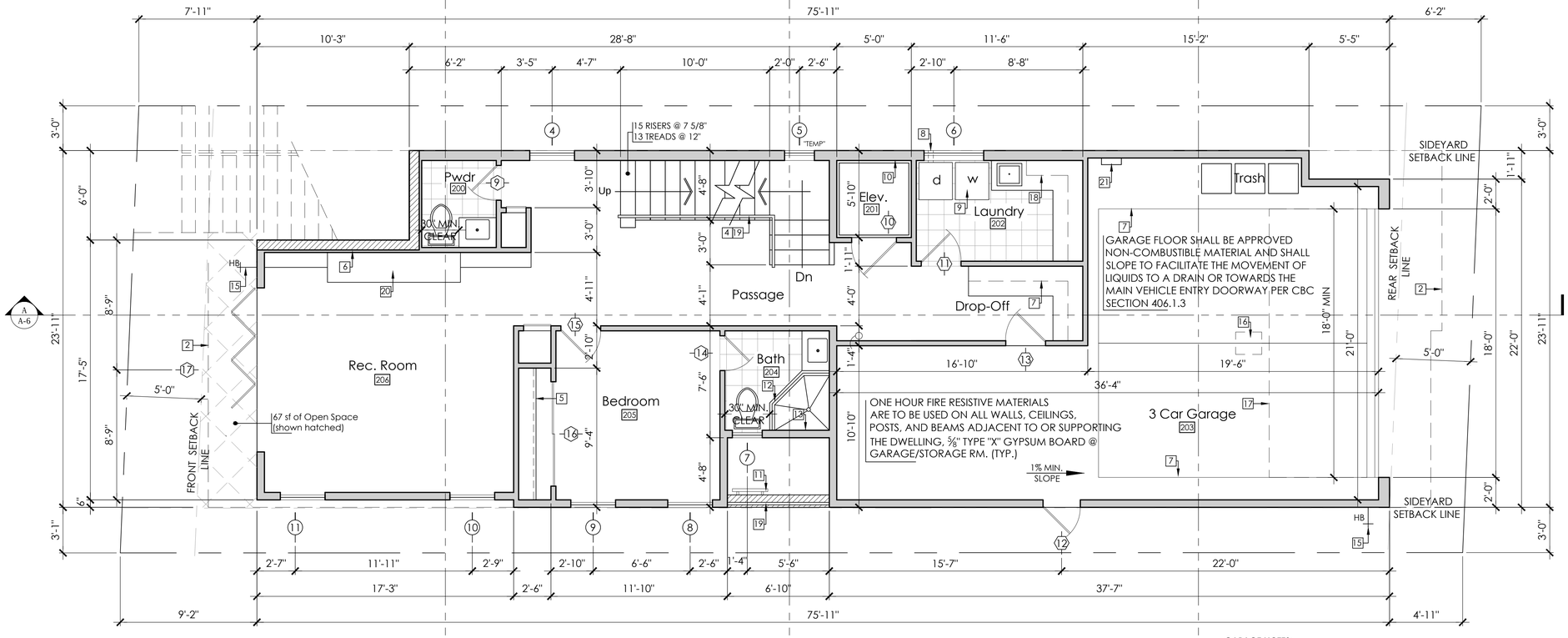


First Floor Plan

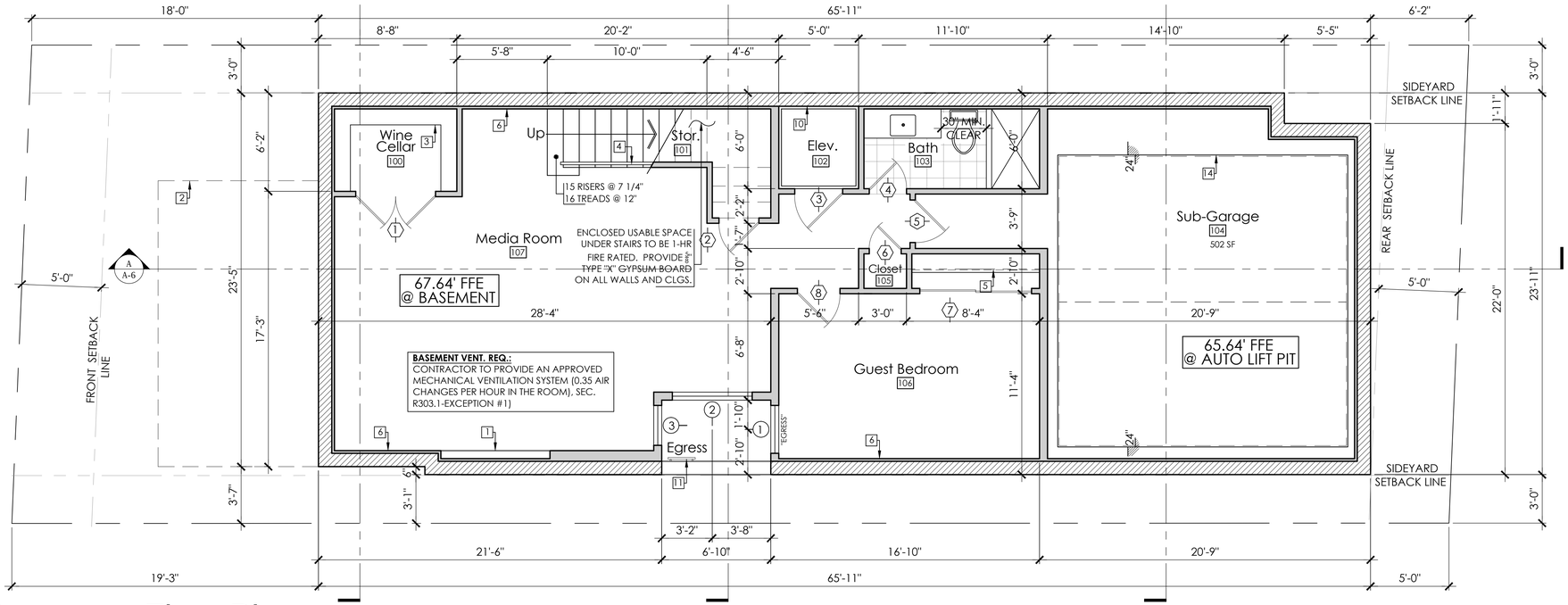
Scale: 1/4"=1'-0"

GARAGE NOTES:

"REQUIRED PARKING AREA IS TO BE 9'X19'4 & 9'X36' CLEAR OF ANY OBSTRUCTIONS NOT LESS THAN SEVEN (7) FEET ABOVE THE FINISH FLOOR TO ANY CEILING, BEAM, PIPE, MECHANICAL EQUIPMENT OR SIMILAR CONSTRUCTION" (MBMC 10.64.100 C)

EXCEPTION: AUTOMATIC GARAGE DOOR OPENING EQUIPMENT AND THE GARAGE DOOR ENTRANCE MAY BE 6.67 FEET.

ELECTRIC VEHICLE CHARGING SYSTEMS & TEMPORARY STORAGE IMPROVEMENTS, (WALL-MOUNTED SHELVES OR CABINETS) MAY ENCROACH INTO THE VERTICAL CLEARANCE, PROVIDED A MINIMUM 4.5 FEET VERTICAL CLEARANCE IS MAINTAINED ABOVE THE FINISH FLOOR OF THE GARAGE WITHIN THE FRONT 5 FEET OF A PARKING SPACE (MBMC 10.64.100 C, NOT FOR REQUIRED STORAGE)



Basement Floor Plan

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

ALL EXTERIOR WALLS TO BE 2X6 WALLS TO ACCOMMODATE R-19 INSULATION

FLOOR PLAN NOTES:

1. FACTORY-BUILT FIREPLACE HEARTHS, MANTLE AND CLEARANCES SHALI CONFORM WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CONDITIONS OF LISTING. (LABC 2008, 3102.1, 3102.5.1 & 2)
2. WINDOWS IN ALL BEDROOMS MUST PROVIDE: MINIMUM 5.7 SQUARE FEET OF OPENABLE AREA, MINIMUM CLEAR WIDTH OF 20" MINIMUM CLEAR HEIGHT OF 24" AND HAVE A FINISHED SILL HEIGHT NOT MORE THAN 44" ABOVE THE FLOOR.
3. GAS-FIRED WATER HEATERS REQUIRE TWO 100 SQUARE INCHES NET AIR OPENINGS EACH WITHIN 12' OF FLOOR AND CEILING AND MINIMUM 2' WIDE DOOR.
4. GUTTERS AND DOWNSPOUTS SHALL BE INSTALLED AS REQUIRED TO REDUCE ADDITIONAL RUN OFF ONTO NEIGHBORING PROPERTIES AND REDUCE UNDER FLOOR INFILTRATION. (CBC 1506)
5. RETURN AND SUPPLY DUCTS IN GARAGES THAT PENETRATE WALLS OR CEILING BETWEEN GARAGE AND DWELLING SHALL BE 26 GA. STEEL MINIMUM OR SHALL HAVE LISTED FIRE AND SMOKE DAMPERSAND SHALL BE EITHER INTERNALLY OR EXTERNALLY INSULATED WITH A MINIMUM OF R-4.2 INSULATION WITH NO OPENING INTO THE GARAGE PER SECTION R302.5.2 (LABC 2008, EXCEPTION 3)
6. A FURNACE OR HOT WATER HEATER "B" VENT FLUE PASSING THROUGH WALLS OR CEILINGS SHALL NOT BE CLOSER THAN 1" TO COMBUSTIBLES INCLUDING SHEETROCK AND SHALL BE INSTALLED WITH A METAL COLLAR AROUND THE FLUE AT THE POINT OF PASSAGE THROUGH WALL OR CLG. (CBC 710.2)
7. SEAL ALL PENETRATIONS IN WALLS BETWEEN GARAGES AND DWELLING WITH NON-COMBUSTIBLE FIRE RATED MATERIAL. (CBC 709.6)
8. ALL GLAZING WITHIN DOORS AND PANELS IN SHOWER AND TUB ENCLOSURES AND WINDOWS LESS THAN 60" ABOVE A STANDING SURFACE OR DRAIN INLET SHALL DISPLAY A SAFETY OR TEMPERED LABEL. (CBC 2406.2 & 4.5)
9. STAIRWAY HANDRAIL HEIGHT SHALL BE 34" TO 38" MEASURED FROM THE STAIR NOSING: RAIL ENDS SHALL TERMINATE AT POSTS OF SAFETY TERMINALS. (CBC 1003.3.3.6)
10. GUARDRAILS 42" HIGH MIN. SHALL BE INSTALLED AT ANY DECK, PORCH, OR OTHER ELEVATED AREA HIGHER THAN 30". PER LABC 2008
11. CERTIFICATES OF INSTALLATION (CF2R-ENV, CF2R-LTG AND CF2R-MECH) SHALL BE COMPLETED BY THE APPLICABLE CONTRACTORS INSTALLING ENERGY FEATURES. WHEN COMPLIANCE REQUIRES ***HERS*** FIELD VERIFICATION AND/OR TESTING, ALL CF2R FORMS SHALL BE SUBMITTED ELECTRONICALLY TO AN APPROVED ***HERS*** PROVIDER DATA REGISTRY. THE CF2R FORMS SHALL BE POSTED AT THE JOB SITE IN A CONSPICUOUS LOCATION.
12. CERTIFICATE OF VERIFICATION (CF3R) SHALL BE COMPLETED, REGISTERED, AND SIGNED/CERTIFIED BY THE ***HERS RATER***. THE REGISTERED CF3R FORM SHALL BE MADE AVAILABLE TO THE BUILDING DEPARTMENT AND BUILDER.
13. CONTRACTOR SHALL PROVIDE COPIES OF THE CA GUIDE TO HOME COMFORT & ENERGY SAVINGS, CF-1R, MF-1R & CF-6R & IC-1 FORMS TO THE BUILDING OWNER.
14. COMPARTMENT DIMENSIONS 12" WIDER THAN UNIT, 3" MIN. CLR. ON SIDES AND BACK, 6" MIN. CLR. FROM FRONT TO COMBUSTION AIRINTAKE. [315.1 CMC].
15. W/H: AREA OF COMBUSTION AIR OPENINGS 1 SQ. INCH PER 5,000 BTU. 1 SQ. INCH PER 1,000 BTU [100 MIN.] IN CONFINED SPACES. HALF OF OPENING AREA WITHIN 12" OF CEILING AND HALF 12" FROM FLOOR. (LABC 2008)
16. COMBUSTION AIR FROM ATTIC THROUGH 26-GA. GALVANIZED STEEL SLEEVE TO 6" ABOVE CEILING JOISTS WITHOUT A SCREEN. PROVIDE ADEQUATE OPENINGS TO ATTIC [704 CMC].
17. COMBUSTION AIR DIRECTLY FROM OUTSIDE WITH ¼" SCREEN [707 UMC], ONE SQUARE INCH PER 4,000 BTU AND ONE SQUARE INCH PER 2,000 FOR HORIZONTAL DUCTS, NOT ALLOWED IN ANY BEDROOM, BATHROOM, OR CLOSET THAT OPENS INTO ONE OF THESE.
18. COOKING EQUIPMENT MUST BE LISTED FOR RESIDENTIAL USE.
19. A FACTORY BUILT FIREPLACE SHALL HAVE THE FOLLOWING:

19.1. CLOSEABLE METAL OR GLASS DOORS COVERING THE ENTIRE OPENING OF THE FIREBOX;

19.2. A COMBUSTION AIR INTAKE TO DRAW AIR FROM THE OUTSIDE OF THE BUILDING DIRECTLY INTO THE FIREBOX, WHICH IS AT LEAST SIX SQUARE INCHES IN AREA AND IS EQUIPPED WITH A READILY ACCESSIBLE, OPERABLE, AND TIGHT-FITTING DAMPER OR COMBUSTION-AIR CONTROL DEVICE

(EXCEPTION: AN OUTSIDE COMBUSTION-AIR INTAKE IS NOT REQUIRED IF THE FIREPLACE WILL BE INSTALLED OVER CONCRETE SLAB FLOORING AND THE FIREPLACE WILL NOT BE LOCATED ON AN EXTERIOR WALL.); AND

19.3. A FLUE DAMPER WITH A READILY ACCESSIBLE CONTROL. (TITLE 24, PART 6, CHAPTER 7, SECTION 150 (E))

20. INSTALL ENERGY STAR RATED APPLIANCES
21. PENETRATIONS IN FIRE-RESISTANCE-RATED WALLS SHALL COMPLY WITH CRC R302.4. PENETRATIONS SHALL BE FIRE-STOPPED BY A SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479, AND SHALL HAVE AN F RATING OF NOT LESS THAN THE REQUIRED FIRE-RESISTANCE-RATING OF THE WALL PENETRATED. (CRC R302.4.1.2)
22. JOINTS INSTALLED IN OR BETWEEN FIRE-RESISTANCE-RATED WALLS, FLOOR OR FLOORCEILING ASSEMBLIES AND ROOFS OR ROOF/CEILING ASSEMBLIES SHALL BE PROTECTED AN APPROVED FIRE-RESISTANT JOINT SYSTEM WITH A FIRE-RESISTASNCE RATING NOT LESS THAN THAT OF THE ASSEMBLY IN WHICH IT IS INSTALLED. (CBC 714.1)

FLOOR PLAN KEYNOTES:

1. WALL NICHE
2. OUTLINE OF FLOOR/DECK ABOVE
3. WINE RACKS
4. HANDRAIL, HEIGHT OF HANDRAIL TO BE BETWEEN 34"-38" ABOVE NOSING LINE OF STAIRS. ALSO SEE FOOTNOTE #8 **(SEE DETAIL 6/A-10)**
5. SHELF & POLE AS REQUIRED
6. 2X FURRING @ BASEMENT RETAINING WALLS
7. OUTLINE OF DBL. CAR LIFT PLATFORMS **(SEE SHEETS A-12 & A-13)**
8. DRYER VENT TO OUTSIDE
9. PROVIDE DRIP PAN/FLOOR DRAIN PER CPC SECTION 804.1
10. ELEVATOR SHAFT WALLS TO BE 1-HR FIRE RATED, PROVIDE 5/8" TYPE "X" GYPSUM BOARD ON ALL WALLS. **(SEE DETAIL 4/A-11)**
11. EGRESS WELL W/FIXED EGRESS LADDER **(SEE DETAIL 5/A-11)**
12. TEMPERED SHOWER ENCLOSURE, GLASS TO BE PERMANENTLY LABELED AS SUCH.
13. 72" HIGH TILE SURROUND
14. 24" DEEP AUTO LIFT PIT **(SEE MANUF. SPECS, SHEETS A-12 & A-13)**
15. ANTI-SIPHON HOSE BIB
16. AUTO GARAGE DOOR OPENER
17. 18'-0"X7'-0" WOOD SECTIONAL GARAGE DOOR
18. UPPER CABINETRY WITH ADJUSTABLE SHELVES.
19. GUARDRAIL TO BE 42" HIGH , HANDRAIL TO BE LOCATED 34"-38" ABOVE NOSING OF STAIRS INTERMEDIATE RAILS SHALL BE SPACED SUCH THAT A 4" Ø SPHERE MAY NOT PASS THROUGH. **(SEE DETAIL 10/S1.4)**
20. BUILT-IN CABINETRY
21. TANKLESS WATER HEATER

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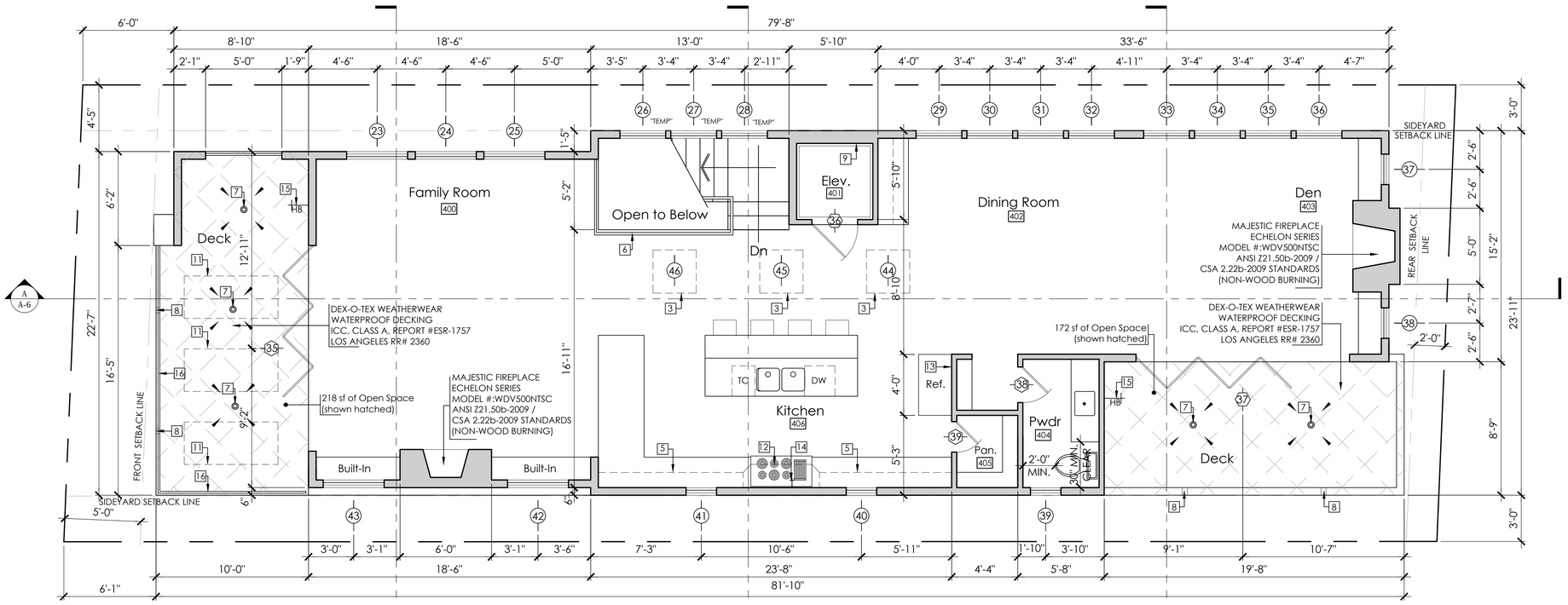
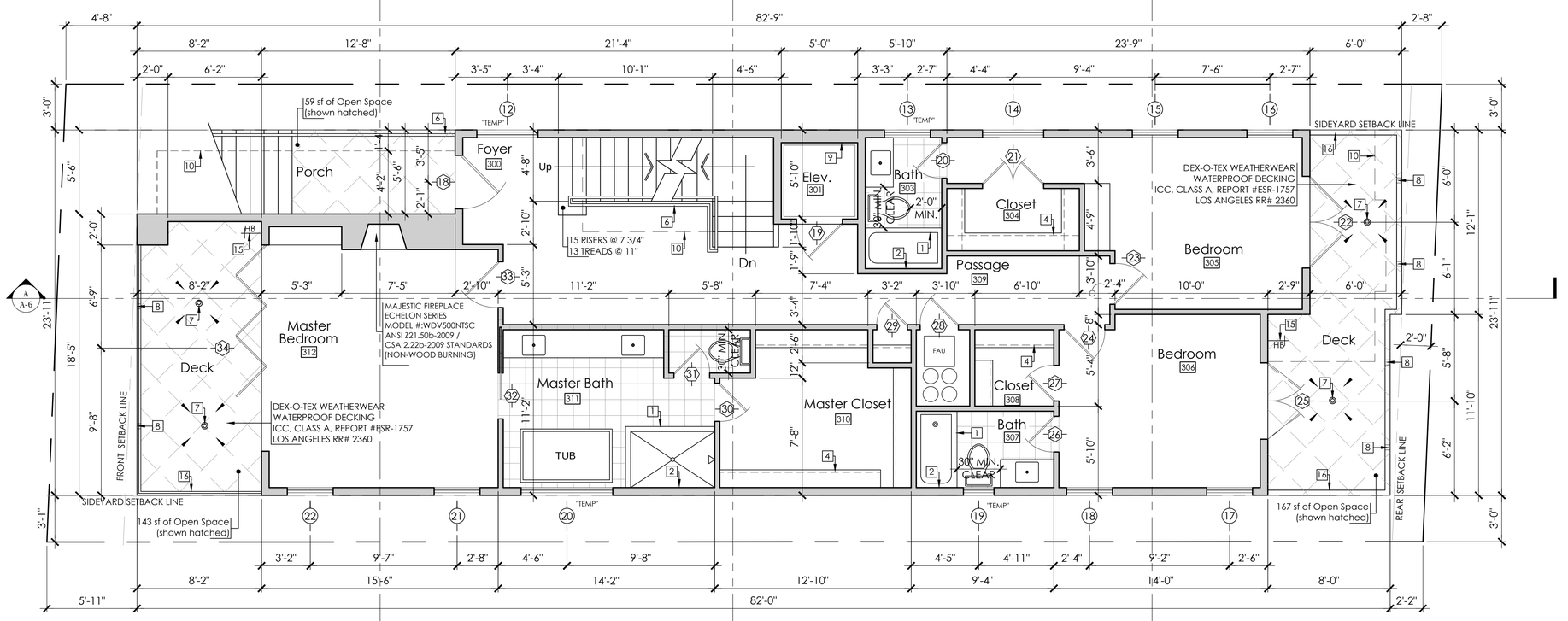


Third Floor Plan

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



Second Floor Plan

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

ALL EXTERIOR WALLS TO BE 2X6 WALLS TO ACCOMMODATE R-19 INSULATION

FLOOR PLAN NOTES CONT:

23- FIREBLOCKING SHALL BE INSTALLED IN COMBUSTIBLE CONCEALED LOCATIONS IN ACCORDANCE WITH CRC R302.11 IN THE FOLLOWING LOCATIONS:

A. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS:
  i. VERTICALLY AT THE CEILING AND FLOOR LEVELS.
  ii. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10'
B. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL STUD WALL OR PARTITION SPACES AND CONCEALED HORIZONTAL SPACES CREATED BY AN ASSEMBLY OF FLOOR JOISTS, AND BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS, COVE CEILINGS AND SIMILAR LOCATIONS.
C. WHERE ANNULAR SPACE PROTECTION IS PROVIDED IN ACCORDANCE WITH CRC R302.4 FIRE BLOCKING SHALL BE INSTALLED AT OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS AND FIREPLACES WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION. (CBC 717.2.5, R1003.19)

24- WALL, AND CEILING SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATIONS IN CRC R302.9.

25- GARAGE DOOR SPRINGS:
SPRING SHALL BE FABRICATED FROM EITHER HARD-DRAWN SPRING WIRE (PER ASTM A227-21) OR OIL-TEMPERED WIRE (PER ASTM A229-71).

MINIMUM DESIGN STANDARD SHALL BE 9,000 CYCLES.

PHYSICAL CYCLING TESTS SHALL BE PERFORMED AND CERTIFIED BY AN APPROVED TESTING AGENCY.

EACH SPRING SHALL BE EQUIPPED WITH AN APPROVED DEVICE CAPABLE OF RESTRAINING THE SPRING OR ANY PART THEREOF IN THE EVENT IT BREAKS. CONTAINMENT DEVICE SHALL BE TESTED AND CERTIFIED BY AN APPROVED TESTING AGENCY.

26- STAIR TREADS AND RISERS SHALL BE DETAILED AS FOLLOWS:

A) THE TOLERANCE BETWEEN THE LARGEST AND SMALLEST RISER HEIGHT OR TREAD DEPTH SHALL NOT EXCEED 0.375" IN ANY FLIGHT OF STAIR. (CRC R3.117.4.3)

B) THE RADIUS OF CURVATURE AT THE LEADING EDGE OF THE TREAD OR BEVELING OF NOSING SHALL NOT EXCEED 0.5" (CRC R311.7.4.3)

C) RISERS SHALL BE VERTICAL OR SLOPED A MAX. 30 DEGREES FROM THE VERTICAL. (CRC R311.7.4.3)

D) LEADING EDGE OF TREAD SHALL NOT PROJECT MORE THAN 1.25" BEYOND TREAD BELOW. (CRC R311.7.4.3)

E) OPENING BETWEEN TREADS SHALL NOT PERMIT THE PASSAGE OF A 4" DIAMEPHETER SPHERE. (CRC R311.7.4.3)

27- THE WALKING SURFACE OF TREADS AND LANDINGS SHALL NOT BE SLOPED STEEPER THAN 2% (1:48) IN ANY DIRECTION. (CRC R311.7.6)

28- CEMENT, FIBER-CEMENT OR GLASS MAT GYPSUM BACKERS IN COMPLIANCE WITH ASTM C1178, C1288 OR C1325 SHALL BE USED AS A BASE FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL AND CEILING PANELS IN SHOWER AREAS. WATER-RESISTANCE GYPSUM BACKING BOARD SHALL BE USED AS A BASE FOR TILE IN WATER CLOSET COMPARTMENT WALLS WHEN INSTALLED IN ACCORDANCE WITH GA-216 OR ASTM C840. REGULAR GYPSUM WALLBOARD IS PERMITTED UNDER TILE OR WALL PANELS IN OTHER WALL AND CEILING AREAS WHEN INSTALLED IN ACCORDANCE WITH GA-216 OR ASTM C840. WATER-RESISTANT GYPSUM BOARD SHALL NOT BE USED IN THE FOLLOWING LOCATIONS: (CRC R702.3.8)

  A- VAPOR RETARDER
  B- ON CEILINGS WHERE FRAME SPACING EXCEEDS 12" O.C. FOR ½" THICK AND MORE THAN 16" O.C. FOR ⅜" THICK.

29- BATHING ROOM FLOORS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE SUCH AS PORTLAND CEMENT, CERAMIC TILE OR OTHER APPROVED MATERIALS. (CRC R307.2)

30- SHOWER COMPARTMENTS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS SHALL BE FINISHED WITH A SMOOTH AND NONABSORBENT SURFACE TO A HEIGHT NOT LESS THAN 6' ABOVE THE FLOOR. USE OF WATER-RESISTANT GYPSUM BACKING BOARD SHALL BE PER CBC 2509.2

31- BUILT-IN TUBS WITH SHOWERS SHALL HAVE WATERPROOF JOINTS BETWEEN THE TUB AND ADJACENT WALL. (CBC 1210.4)

32- ATTIC ACCESS, SERVICE SPACE (C.M.C 304, CRC R807) & VENTILATION:

A) 30X22X30 INCH HIGH MINIMUM UNOBSTRUCTED ACCESS, BUT NOT LESS THAN THE LARGEST EQUIPMENT SIZE.

B) 30X30 INCH MINIMUM UNOBSTRUCTED PASSAGE TO REMOVE EQUIPMENT, BUT NOT LESS THAN THE LARGEST EQUIPMENT & MAXIMUM 20' DISTANCE FROM ACCESS TO UNIT.

C) 30X30 INCH DEEP LEVEL SERVICE SPACE LOCATED AT THE EQUIPMENT SERVICE SIDE.

D) PROVIDE ADDITIONAL COMBUSTION AIR IN ATTIC SPACE WHERE FAU IS LOCATED AS REQUIRED PER C.M.C. CHAPTER 7 OR NOTE SPECIAL COMBUSTION AIR VENTING PER MANUFACTURES DESIGN (VERIFY AVAILABILITY FROM MANUFACTURE).

E) FAU ACCESS FLOORING SHALL PROVIDE A MINIMUM 24 WIDE SOLID SURFACE TO & A LEVEL 30"X30" SURFACE IN FRONT OF SERVICE SIDE.

F) MECHANICAL EQUIPMENT AREA SHALL HAVE REQUIRED SWITCHING & LIGHTING.

FLOOR PLAN KEYNOTES:

1. TEMPERED SHOWER ENCLOSURE, GLASS TO BE PERMANENTLY LABELED AS SUCH.
2. 72" HIGH TILE SURROUND
3. SKYLIGHTS **(SEE DETAIL 6/A-11)**
4. SHELF & POLE AS REQUIRED
5. UPPER CABINETRY WITH ADJUSTABLE SHELVES.
6. GUARDRAIL TO BE 42" HIGH ***(DETAIL 10/S1.4)***, HANDRAIL TO BE LOCATED 34"-38" ABOVE NOSING OF STAIRS ***(DETAIL 6/A-10)***. INTERMEDIATE RAILS SHALL BE SPACED SUCH THAT A 4" Ø SPHERE MAY NOT PASS THROUGH.
7. DECK DRAIN **(SEE DETAIL 8/A-10)**
8. SCUPPERS W/OVERFLOWS **(SEE DETAILS 1 & 2/A-11)**
9. ELEVATOR SHAFT WALLS TO BE 1-HR FIRE RATED. PROVIDE ⅝" TYPE "X" GYPSUM BOARD ON ALL WALLS. **(SEE DETAIL 4/A-10)**
10. OUTLINE OF FLOOR ABOVE
11. OPENING AT ROOF
12. RANGE HOOD (100 CU. FT. PER MIN. MINIMUM)
13. REF/FREEZER: PROVIDE PURIFIED COLD WATER SUPPLY LINE TO ICEMAKER W/RECESSED SHUTOFF VALVE
14. POT FILLER FAUCET
15. ANTI-SIPHON HOSE BIB
16. 42" HIGH GLASS GUARDRAIL **(SEE DETAIL 16/S1.4)**

TROTTER
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1011 MANHATTAN BEACH BLVD, "A"
MANHATTAN BEACH
310-545-2727

CLIENT:

SURFSIDE PROPERTIES

JOB SITE:

128 21st ST.
MANHATTAN BEACH, CA

CC#1: 01-20-2016

CC#2: 02-22-2016

PC#1: 02-25-2016

PC#2: 05-04-2016

REVISIONS:

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2 _____

3 _____

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PAGE:

A-3

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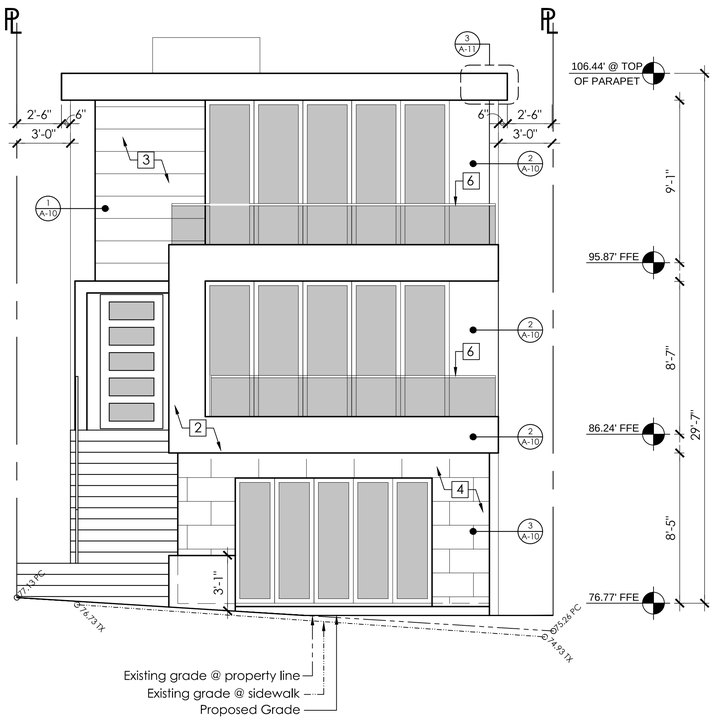
15-019



North Elevation

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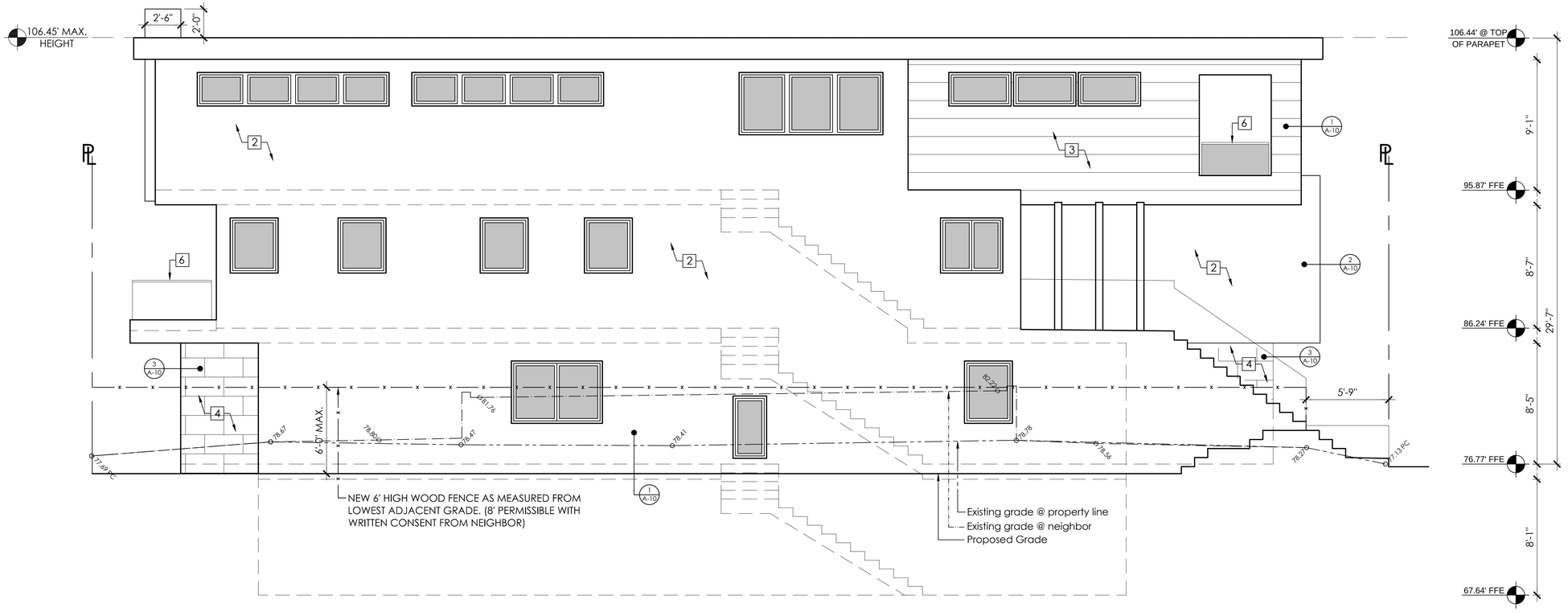

East Elevation

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GENERAL NOTES:

1. PARAPETS, SATELLITE ANTENNAE, RAILS, SKYLIGHTS, ROOF EQUIPMENT MUST BE WITHIN THE HEIGHT LIMIT.
2. GUARDRAILS TO BE 42" HIGH MIN. HANDRAILS TO BE 34"-38" HIGH. NEITHER SHALL HAVE OPENING LARGER THAN $3\frac{15}{16}$".
3. GLASS ON ALL SWINGING DOORS: GLAZING WITHIN 18" OF THE ADJACENT FLOOR WALKING SURFACE SHALL BE FULLY TEMPERED.

ELEVATION KEYNOTES:

1. PROVIDE CBC APPROVED SPARK ARRESTORS AT TOPS OF ALL FIREPLACE CHIMNEYS.
2. SMOOTH STUCCO FINISH
3. JAMESHARDIE ARTISAN LAP SIDING
4. CULTURED STONE
5. DECORATIVE LIGHT FIXTURE
6. 42" HIGH GLASS GUARDRAIL **(SEE DETAIL 16/S1.4)**
7.
8.
9.

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PAGE:

A-4

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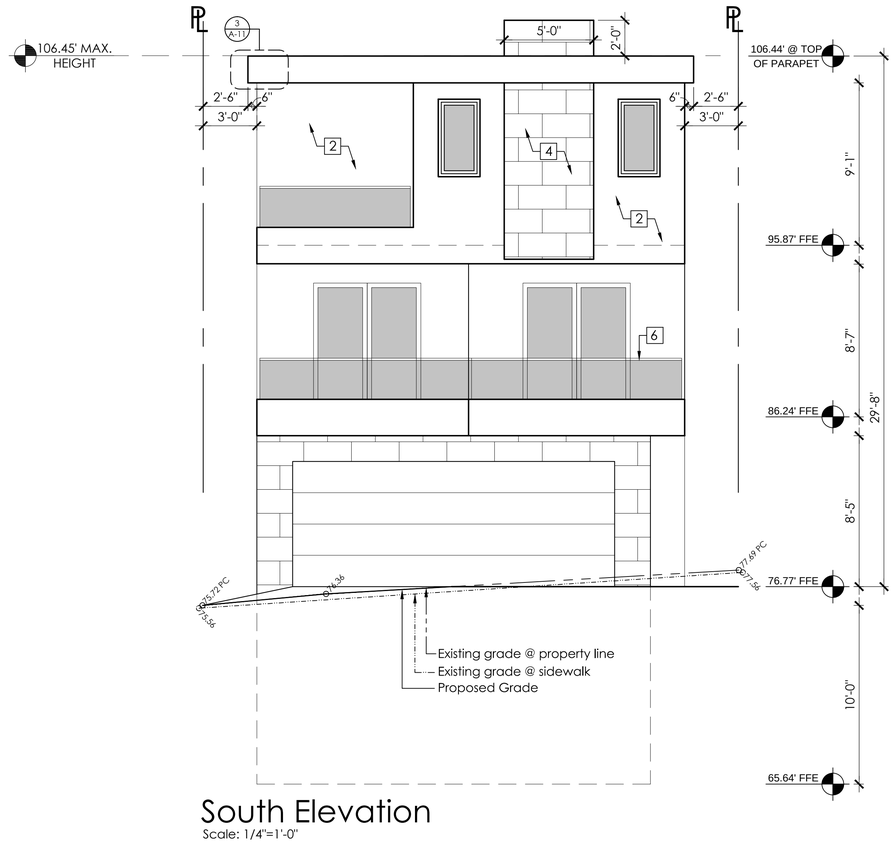

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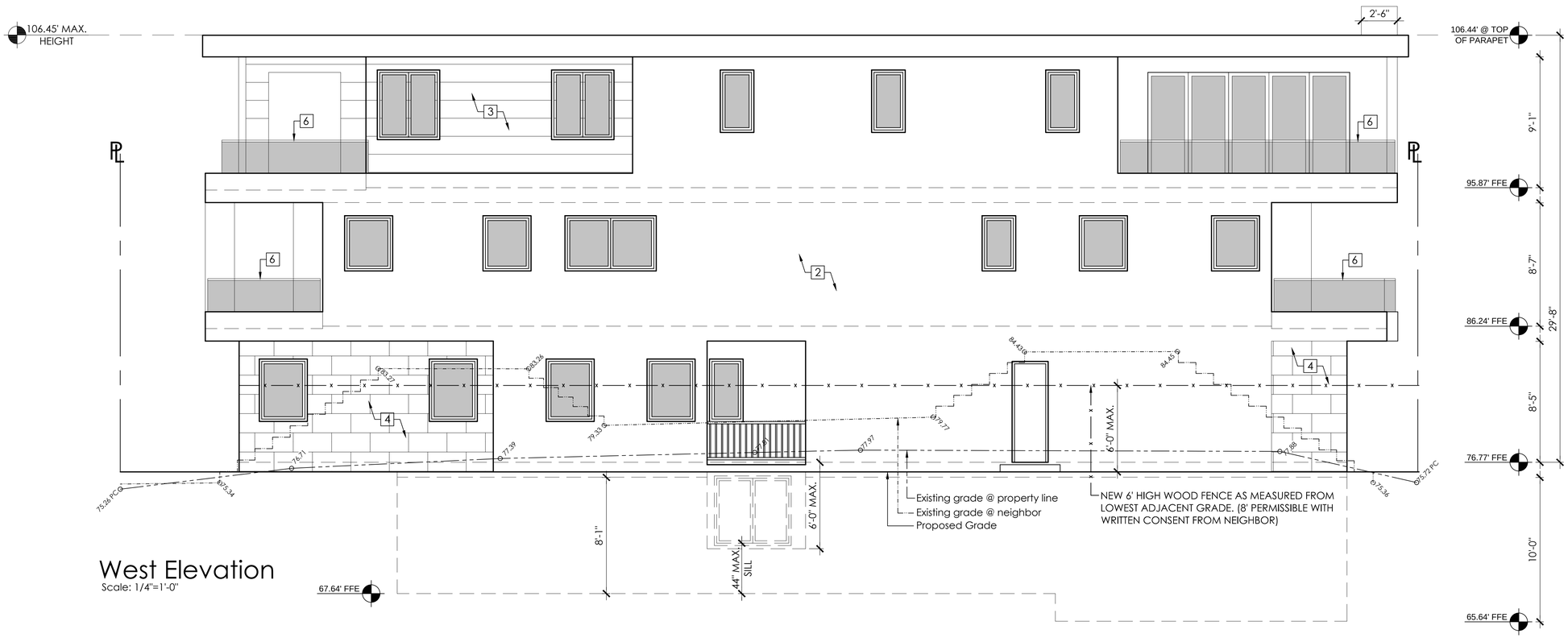

West Elevation
Scale: 1/4"=1'-0"

GENERAL NOTES:

1. PARAPETS, SATELLITE ANTENNAE, RAILS, SKYLIGHTS, ROOF EQUIPMENT MUST BE WITHIN THE HEIGHT LIMIT.
2. GUARDRAILS TO BE 42" HIGH MIN. HANDRAILS TO BE 34"-38" HIGH. NEITHER SHALL HAVE OPENING LARGER THAN $3\frac{15}{16}$".
3. GLASS ON ALL SWINGING DOORS: GLAZING WITHIN 18" OF THE ADJACENT FLOOR WALKING SURFACE SHALL BE FULLY TEMPERED.

ELEVATION KEYNOTES:

1. PROVIDE CBC APPROVED SPARK ARRESTORS AT TOPS OF ALL FIREPLACE CHIMNEYS.
2. SMOOTH STUCCO FINISH
3. JAMESHARDIE ARTISAN LAP SIDING
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PAGE:
A-5

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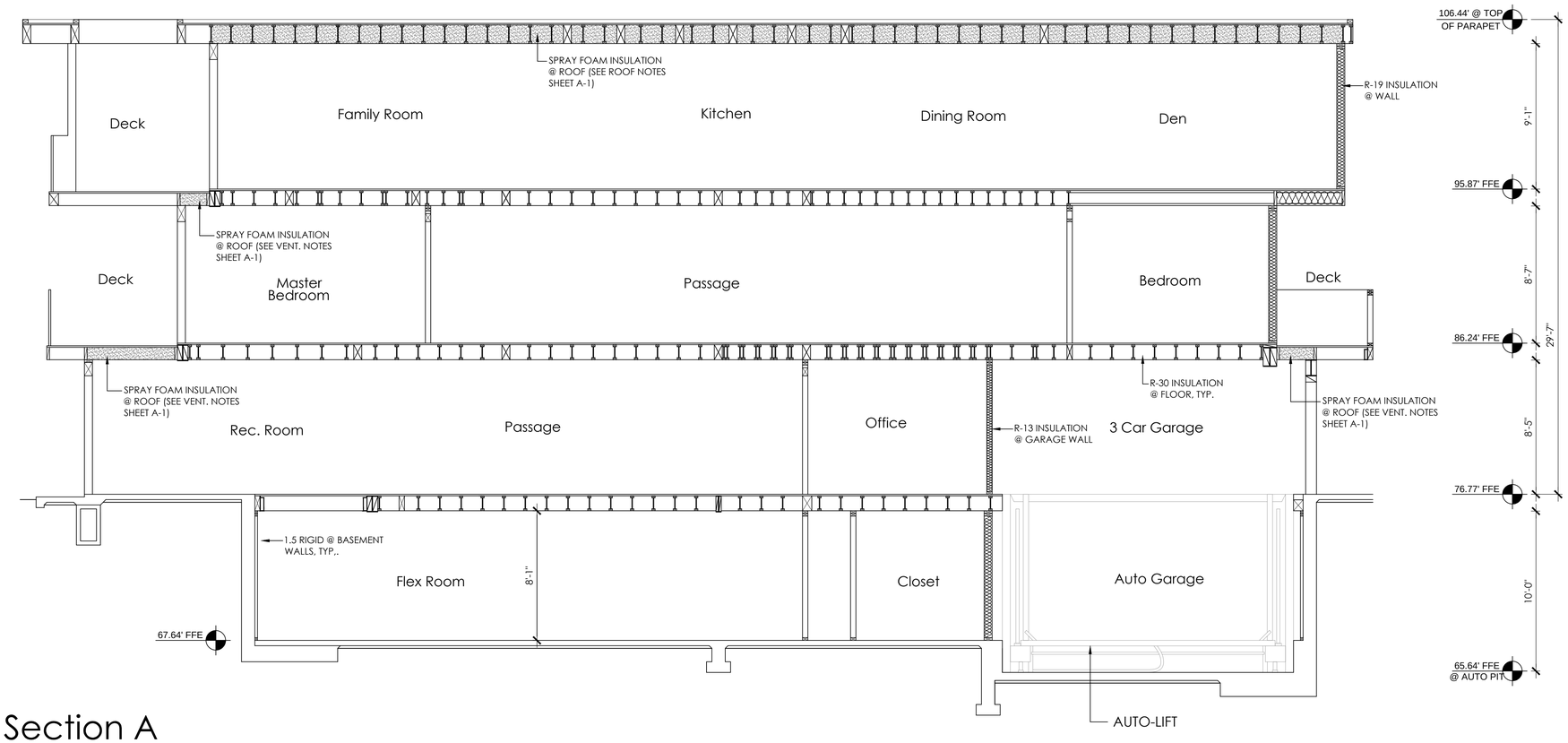

Section A

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

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PAGE:

A-6

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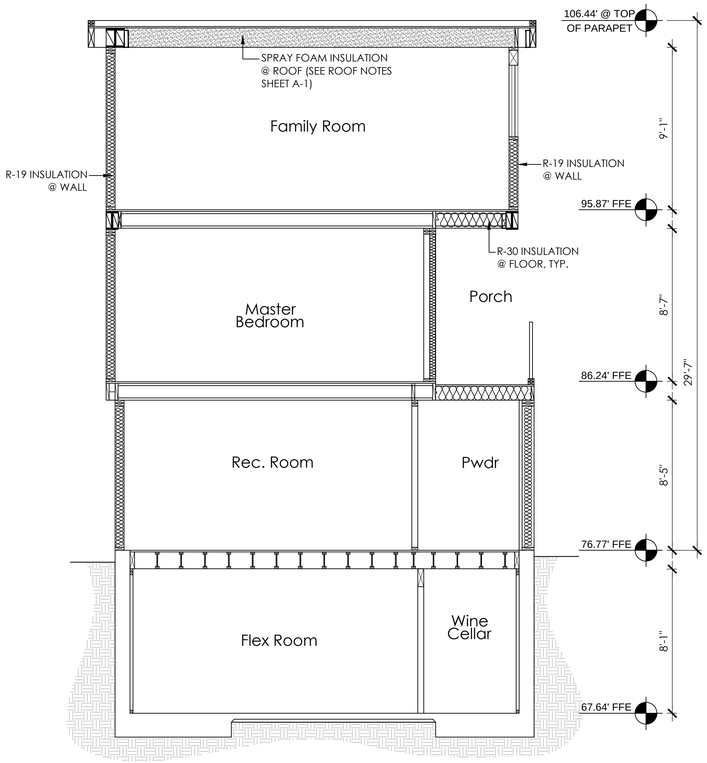

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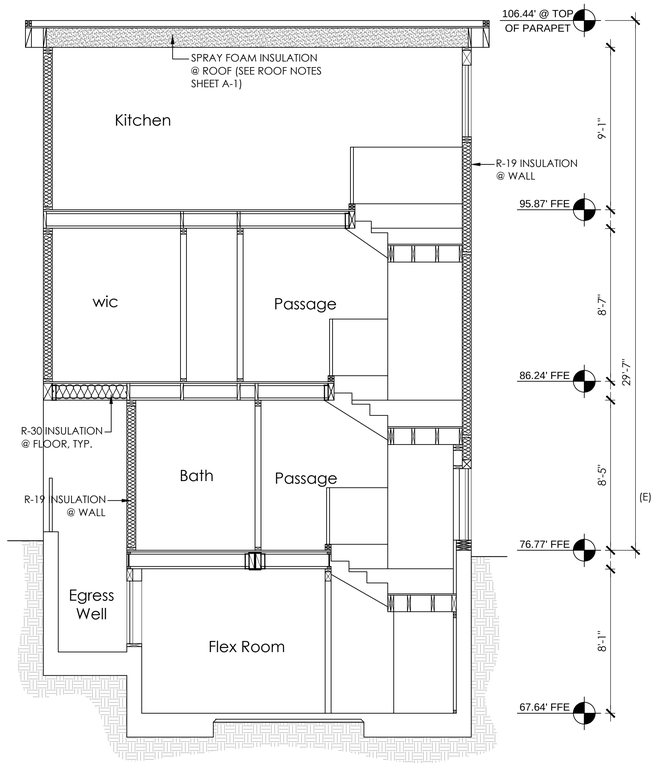

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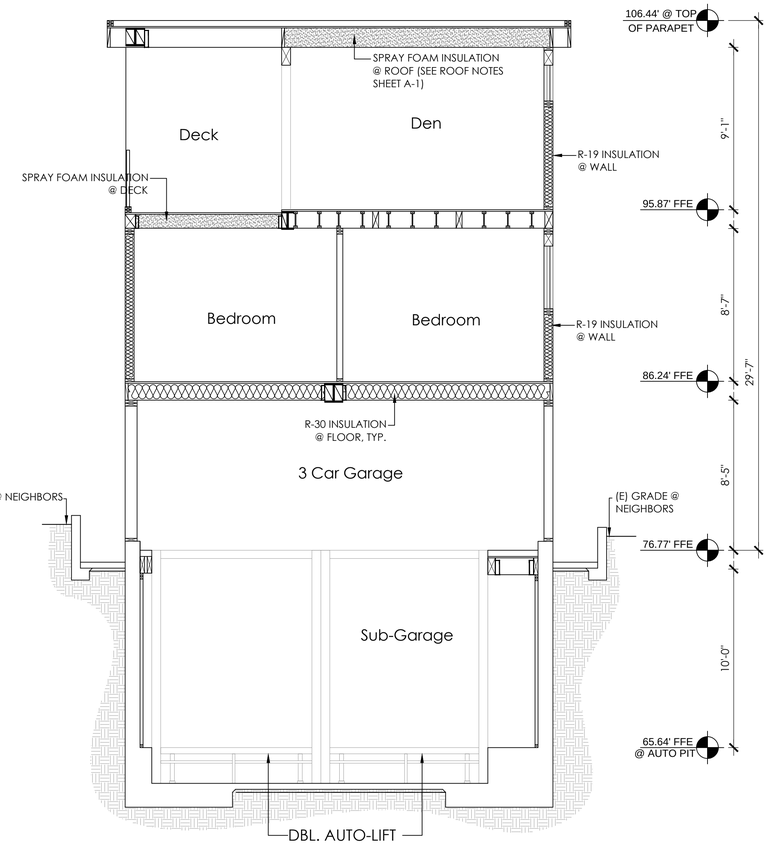

Section D
Scale: 1/4"=1'-0"

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PAGE:
A-7

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