8761 Hoffman Street, Buena Park, CA 90620

Tuesday, May 7, 2024 9:38 AM

Copied below is a summary of what the sellers received from their architect regarding building on Hoffman. This is for information only, Buyers are advised to verify with the city, county and/or state.

Kind regards, Tony



Harcourts Hunter Mason Realty 1617 S. Pacific Coast Highway Ste D Redondo Beach, CA, 90277



The seller provided a summary and discussion with the architect based on his exchange with BP planning/building departments.

Summary:

Under a detached duplex concept, architecture firm believed "to set expectations, per BP's zoning formula in relation to the 0.512 acre lot, it's possible that they will only allow 5 regular dwelling units plus the 2 ADUs, totaling 7x units" Garage ADU conversion got planning approval but needs building approval/permit. ADU plans ready for submission attached (8761a hoffman...).

Taken from email exchange with LJ Cao with Housable:

"I think we want to first present 8 full units and one ADU and keep the 7 full units with 2

plans ready for submission attached (8761a hoffman...).

Taken from email exchange with LJ Cao with Housable:

"I think we want to first present 8 full units and one ADU and keep the 7 full units with 2 ADUs as a fall back position.

• We can show the desired number of units x9

 $_{\odot}\,$ to set expectations, per BP's zoning formula in relation to the 0.512 acre lot, it's possible that they will only allow 5 regular dwelling units plus the 2 ADUs, totaling 7x units."

Note, This is for information only, Buyers are advised to verify with the city, county and/or state.

BUILDING ENERGY ANALYSIS REPORT

PROJECT:

Hoffman Street ADU 8761a Hoffman Street Buena Park , CA

Project Designer:

Report Prepared by:

Timothy Carstairs CEA, HERS, GPR Carstairs Energy Inc. 2238 Bayview Heights Drive Suite E Los Osos, CA 93402 (805) 904-9048



Job Number:

22-061711

Date:

6/24/2022

The EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 2019 Building Energy Efficiency Standards.

This program developed by EnergySoft Software - www.energysoft.com.

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Project Name: Hoffman Street ADU

Calculation Description: Title 24 Analysis

(Page 1 of 8)

Input File Name: Hoffman Street ADU (8761a).ribd19x

GENER	RAL INFORMATION											
01	Project Name	Hoffman Street ADU										
02	Run Title	Title 24 Analysis	24 Analysis									
03	Project Location	8761a Hoffman Street	a Hoffman Street									
04	City	Buena Park	05	Standards Version	2019							
06	Zip code		07	Software Version	EnergyPro 8.3							
08	Climate Zone	8	09	Front Orientation (deg/ Cardinal)	90							
10	Building Type	Single family	11	Number of Dwelling Units	1							
12	Project Scope	AdditionOnly	13	Number of Bedrooms	4							
14	Addition Cond. Floor Area (f <mark>t²)</mark>	567	15	Number of Stories	1							
16	Existing Cond. Floor Area <mark>(ft²)</mark>	1092	17	Fenestration Average U-factor	0.3							
18	Total Con <mark>d. Floor Area (</mark> ft ²)	1659	19	Glazing Percentage (%)	11.22%							
20	ADU Bedroom Count		21	ADU Conditioned Floor Area	567							
22	Is Natural Gas A <mark>va</mark> ilable?	Yes	Y									

Addition Alone Project Analysis Parame <mark>ter</mark>	S HEI	RS PROV			
01	02	03	04	05	06
Existing Area (excl. new addition) (ft2)	Addition Area (excl. existing) (ft2)	Total Area (ft2)	Existing Bedrooms	Addition Bedrooms	Total Bedrooms
1092	567	1659	3	1	4

COMPLIANCE R	COMPLIANCE RESULTS									
01	Building Complies with Computer Performance									
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.									
03	This building incorporates one or more Special Features shown below									

Registration Number:

222-P010125983A-000-000-0000000-0000

CA Building Energy Efficiency Standards - 2019 Residential Compliance

Registration Date/Time: 2022-06-24 11:10:48

HERS Provider:

CalCERTS inc.

Report Version: 2019.2.000 Schema Version: rev 20200901

Project Name: Hoffman Street ADU

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2022-06-24T10:21:51-07:00

Input File Name: Hoffman Street ADU (8761a).ribd19x

	ENERGY USE SUMMARY												
Energy Use (kTDV/ft ² -yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement									
Space Heating	2.96	6.33	-3.37	-113.9									
Space Cooling	19.43	20.48	-1.05	-5.4									
IAQ Ventilation	4.63	4.63	0	0									
Water Heating	29.8	24.32	5.48	18.4									
Self Utilization/Flexibility Credit	n/a	0	0	n/a									
Compliance Energy Total	56.82	55.76	1.06	1.9									

REQUIRED SPECIAL FEATURES

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

- Insulation below roof deck
- Exposed slab floor in conditioned zone

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the buildng tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

Building-level Verifications:

- Indoor air quality ventilation
- Kitchen range hood
- Cooling System Verifications:
- -- None --
- Heating System Verifications:
- -- None --
- HVAC Distribution System Verifications:
- -- None --
- Domestic Hot Water System Verifications:
- -- None --

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Input File Name: Hoffman Street ADU (8761a).ribd19x

ZONE INFORMATIO	N																	
01			02			03		0)4			05			06			07
Zone Name		Z	Zone Typ	be	HV	AC System Nan	ne Zo	ne Floo	or Area (f	t ²)	Avg. C	eiling He	eight	Water H	leating Syst	em 1	Water He	eating System 2
New Living Are	ea	C	ondition	ied		HVAC System1		5	67			8			HW Sys 1			N/A
OPAQUE SURFACES	DPAQUE SURFACES																	
01		02		(03	04	05		0	6		07		08		09		10
Name	2	Zone		Const	truction	Azimuth	Orienta	tion	Gross A	rea (ft ²)	Wind	ow and I rea (ft2)	Door	Tilt (deg) Wa	ll Except	tions	Status
Front Wall	New L	iving Area	a 🗌	R-15	5 Wall	90	Fron	t	16	68		52		90	E	k. w/ Sid	ing	New
Left Wall	New L	iving Area	a	<mark>R-1</mark> 5	5 Wall	180	Left	:	22	16		0		90	E	k. w/ Sid	ing	New
Rear Wall	New L	iving Area	a	R-15	5 <mark>W</mark> all	270	Back	<	16	58		21.1		90	E	k. w/ Sid	ing	New
Right Wall	New L	iving Area	a	R-15	5 Wall	0	Righ	t	2:	216		10.5		90	E	Ex. w/ Siding		New
Roof	New L	iving Area	a 📄	R-38 H	8 HP Attic n/a		n/a		56	57		n/a		n/a				New
ΑΤΤΙΟ			_	-				-	-		· ·		IV.					
01		0	12			03 H E	RS		R	Q5 \	1	DI	06 R		07			08
Name		Consti	ruction			Tvpe	Roof Rise	e (x in 1	2) Roo	f Reflect	ance	Roof	Emittan	ce	Radiant Ba	rrier		Cool Roof
Attic New Living A	rea [/]	Attic Roof Ar	New Livi rea	ing	Vei	ntilated		5	,	0.1			0.85		No			No
FENESTRATION / G	LAZING															_		
01			02		03		04		05	06	07	08	09	10	11	12	13	14
Name		Т	уре		Surfa	ce	Orientatio	on A:	zimuth	Width (ft)	Height (ft)	Mult.	Area (ft ²)	U-factor	U-factor Source	SHG	SHGC Sourc e	Exterior Shading
1		Wi	ndow		Front V	Vall	Front		90			1	16	0.3	NFRC	0.23	NFRC	Bug Screen
1 2		Wi	ndow		Front V	Vall	Front		90			1	16	0.3	NFRC	0.23	NFRC	Bug Screen
3		Wi	ndow		Rear W	/all	Back		270			1	12.3	0.3	NFRC	0.23	NFRC	Bug Screen
4		Wi	ndow		Rear W	/all	Back		270			1	8.8	0.3	NFRC	0.23	NFRC	Bug Screen

Registration Number:

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Calculation Description: Title 24 Analysis

FENESTRATION / GLAZIN	IG													
01	02	03	04	05	06	07	08	09	10	11	12	13	14	
Name	Туре	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft ²)	U-factor	U-factor Source	SHGC	SHGC Sourc e	Exterior Shading	
2	Window	Right Wall	Right	0			1	10.5	0.3	NFRC	0.23	NFRC	Bug Screen	
OPAQUE DOORS														
01	1	C	2			(03				0	4		
Nar	ne	Side of	Building			Area	a (ft ²)				U-factor			
Doo	r 1	Fron	t Wall			2	20				0.2			
SLAB FLOORS		A												
01	02	03	04		05			06		07	07 08			
Name	Zone	Area (ft ²)	Perimeter (ft)	Edge a	Insul. R and Dept	-value th	Edge a	Insul. R-v nd Depth	alue	Carpeted Fra	arpeted Fraction Heat			
Slab	New Living Are	a 567	96		none			0	•	0%			No	
			LINU		<u> </u>	v .								
01		03	04		0	5	()6	07			08		
Construction Name	Surface Ty	De Construction Type	Framing		Total (R-va	Cavity Alue	Interior Conti R-v	/ Exterior nuous alue	U-facto	r	Asser	mbly Lay	ers	
R-15 Wall	Exterior Wa	Ils Wood Framed Wall	2x4 @ 16 in. C	D. C.	R-:	15	None	/ None	0.095	Ins Ca Ext	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Exterior Finish: 3 Coat Stucco			
Attic RoofNew Living Area	Attic Roof	s Wood Framed Ceiling	2x4 @ 24 in. C	D. C.	R-:	19	None	/ None	0.059	Roofing Si Ca Arou	g: Light F Roof I iding/sho vity / Fra und Roof	Roof (Asp Deck: Wo eathing/o ame: R-13 f Joists: R	halt Shingle) ood decking 3.0 / 2x4 -6.0 insul.	

Registration Number:

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CA Building Energy Efficiency Standards - 2019 Residential Compliance

Registration Date/Time: 2022-06-24 11:10:48

HERS Provider:

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Report Version: 2019.2.000 Schema Version: rev 20200901

Project Name: Hoffman Street ADU

Calculation Description: Title 24 Analysis

Calculation	Date/Time	2022-06-	-24T10-2	1.21-02.00

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Input File Name: Hoffman Street ADU (8761a).ribd19x

OPAQUE SURFACE CONSTR	PAQUE SURFACE CONSTRUCTIONS											
01	02	03	04	05	06	07	08					
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value R-value R-value U-fac		U-factor	Assembly Layers					
R-38 HP Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-38	None / None	0.025	Over Ceiling Joists: R-28.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board					

BUILDING ENVELOPE - HERS VERIFICATION	3UILDING ENVELOPE - HERS VERIFICATION											
01	02	03	04									
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50									
Not Required	Not Required	Not Required	n/a									

WATER HEATING SYSTEM	ATER HEATING SYSTEMS											
01	02	03	04	05	06	07						
Name	System T <mark>ype</mark>	Distribution Type	Water Heater Name (#)	Solar Heating System	Compact Distribution	HERS Verification						
DHW Sys 1	Domestic Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	n/a R	None	n/a						

WATER HEAT	ERS												
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition	Status	Verified Existing Condition
DHW Heater 1	Gas	Consumer Instantaneous	1	0	0.97-UEF	<= 200 kBtu/hr	0	n/a	n/a	n/a	n/a	New	n/a

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CA Building Energy Efficiency Standards - 2019 Residential Compliance

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Input File Name: Hoffman Street ADU (8761a).ribd19x

WATER HEATING - HERS	VERIFICATION											
01	02	03		04		05	06		07		08	
Name	Pipe Insulation	Parallel	Piping	Compact Distribut	ion Compact T	Distribution ype	Recirculation Cor	ntrol	Central DHV Distributior	N S	Shower Drain Water Heat Recovery	
DHW Sys 1 - 1/1	Not Required	Not Req	uired	Not Required	N	one	Not Required		Not Require	d	Not Required	
SPACE CONDITIONING	SYSTEMS											
01	02		03	04	05	05 06		08	3 09			11
Name	System	Гуре	Heating L Name	Unit Cooling Unit Name	Fan Name	Distributio Name	n Required Thermostat Type	Status	Verified Existing Condition	Heati Equipn Cour	ing nent nt	Cooling Equipment Count
HVAC System1	Heating and control othe	olin <mark>g</mark> system r	Heatin Compone 1	g Cooling ent Component 1	HVAC Fan 1	n/a	Non-setback thermostat	New	NA	1		1
HVAC - HEATING UNIT T	YPES		C	alCF	-RT	5	Inc					
0	1								04			
Na	me		System Type			Number of Units			He	eating Eff	iciency	
Heating Co	mponent 1		Gas wall furnace			1			AFUE-81			
HVAC - COOLING UNIT	ГҮРЕЅ				•							
01	02	03		04		05	06		07			08
Name	System Type	Number o	of Units	Efficiency EER/CE	ER Efficie	ncy SEER	Zonally Control	led	Mulit-speed Compresso	d r	HERS	Verification
Cooling Component 1	No Cooling	1		n/a		n/a	Not Zonal		Single Spee	ed n/a		
HVAC - FAN SYSTEMS												
	01			02			03				04	
	Name			Туре		Fan Power (Watts/CFM)		/CFM)	i) Nan		Name	
	HVAC Fan 1		HVAC Fan			0.58				n/a		
Registration Number: 2	22-P010125983A-000-000-0	00000-0000		Reg	istration Date/T	ime: 2022-06-24 1	1:10:48	HE	RS Provider:			CalCERTS ir

CA Building Energy Efficiency Standards - 2019 Residential Compliance

Report Version: 2019.2.000 Schema Version: rev 20200901

Project Name: Hoffman Street ADU

Calculation Description: Title 24 Analysis

LAG (INDOOR AIR OLIALITY) FANS

Calculation Date/Time: 2022-06-24T10:21:51-07:00

Input File Name: Hoffman Street ADU (8761a).ribd19x

01	02	03	04	05	06	07			
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness - SRE	IAQ Recovery Effectiveness - ASRE	HERS Verification			
SFam ADU IAQVentRpt	32	0.35	Exhaust	n/a	n/a	Yes			



Registration Number:

222-P010125983A-000-000-0000000-0000

CA Building Energy Efficiency Standards - 2019 Residential Compliance

Registration Date/Time: 2022-06-24 11:10:48 HERS Provider:

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Report Version: 2019.2.000 Schema Version: rev 20200901 Report Generated: 2022-06-24 10:22:08

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Project Name: Hoffman Street ADU

Calculation Description: Title 24 Analysis

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Input File Name: Hoffman Street ADU (8761a).ribd19x

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT			
1. I certify that this Certificate of Compliance documentation is accurate and complete.			
Documentation Author Name:	Documentation Author Signature:		
Cobe Villa	Cobe Villa		
Company:	Signature Date:		
Carstairs Energy Inc.	2022-06-24 10:58:17		
Address:	CEA/ HERS Certification Identification (If applicable):		
2238 Bayview Heights Drive, Suite E	r160610042		
City/State/Zip:	Phone:		
Los Osos, CA 93402	805-904-9048		
RESPONSIBLE PERSON'S DECLARATION STATEMENT	·		
 I certify the following under penalty of perjury, under the laws of the State of California: I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the I certify that the energy features and performance specifications identified on this Certificate of C The building design features or system design features identified on this Certificate of Compliance calculations, plans and specifications submitted to the enforcement agency for approval with this 	building design identified on this Certificate of Compliance. ompliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. are consistent with the information provided on other applicable compliance documents, worksheets, building permit application.		
Responsible Designer Name: Patrick Collins	Responsible Designer Signature: Patrick Collins		
Company: HERSP Hausable	Date Signed: 2022-06-24 11:10:48		
Address: 21 Buena Vista Ave E	License: na		
City/State/Zip: San Francisco, CA 94117	Phone: 628-256-5665		

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

Registration Provider responsibility for the accuracy of the information.

Registration Number:

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CA Building Energy Efficiency Standards - 2019 Residential Compliance

Registration Date/Time: 2022-06-24 11:10:48

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CalCERTS inc.

Easy to Verify at CalCERTS.com

Report Version: 2019.2.000 Schema Version: rev 20200901

RESI	DENT	IAL MEA	SURES S	UMM	ARY						R	MS-1
Project N Hoffma	lame an Stree	t ADU		Buil	ding Type	⊠ Sing ⊡ Mul	gle Fami ti Family	ily ☑ Addit / □ Exist	tion Alone ing+ Additio	n/Alteration	Dat 6/	^{te} '24/2022
Project A	ddress	Street Bi	iona Dark	Cali	fornia Ene	ergy Clima	te Zone	Total Conc	I. Floor Area	Addition		# of Units
INCLI			iella Park				e 00	5	07	507		I
Const	_AIION			Ca	vitv	Area (ff ²)	S	nocial F	oaturos		Sta	atus
Wall	Wood E	ramed		R 15	/ity	116	0	pecial I	catures		Nev	
Door	Opaque	Door		R-5		20					Nev	
Wall	Wood F	ramed		R 15		216					Nev	v
Wall	Wood F	ramed		R 15		147					Nev	V
Wall	Wood F	ramed		R 15		206					Nev	v
Roof	Wood F	ramed Attic		R 38		567	Add=R	-19.0			Nev	v
Slab	Unheate	ed Slab-on-Grad	le	- no in	sulation	567	Perim	= 96'			Nev	v
FENE	STRAT	ION	Total Area:	64	⁴ Glazing	Percenta	ge: 1	1.2 % New	Altered Aver	age U-Factor:		0.30
Orient	tation	Area(ft ²)	U-Fac S	HGC	Overl	nang	Sidef	ins Ex	terior Sh	ades	Sta	atus
Front (E)		32.0	0.300	0.23	none		none	N/A			Nev	N
Rear (W)		21.1	0.300	0.23	none		none	N/A			Nev	N
Right (N)		10.5	0.300	0.23	none		none	N/A			Nev	N
HVAC	SYSTI	EMS		•				= ((T 1		01	
Qty.	Heatin	<u>g</u>	Min. Eff	00	oling		Min	h. Eff	Ine	rmostat	Sta	atus
1	Gravity W	all Furnace	81% AFUE	No	Cooling		14.0	SEER	Setback	(Ne	W
HVAC	, DISTR		ooting	6	oling	Duc	+ 1	otion			C+	atuo
Local		<u>П(</u>	Jaung		onng			ation	r		312	ilus
HVAC Sy	'stem	Ducti	ess / No Fan	Duc	tiess	n/a				n/a	Ive	N
		TINC										
Otv			Gal	lons	Min	Fff	Dietri	hution			Sta	atus
1	Small Ins	tantaneous Gas		10113	0.97		Standar	rd			Nev	M
1	Onian ins		0		0.37		otandar	u			7407	v
EneravP	ro 8.3 by F	neravSoft U	ser Number [.] 6249					ID.	22-061711		Pa	ae 11 of 16



2019 Low-Rise Residential Mandatory Measures Summary

<u>NOTE:</u> Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. *Exceptions may apply. (01/2020)

Building Envelop	e Measures:
§ 110.6(a)1:	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.*
§ 110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.*
§ 110.7:	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	Ceiling and Rafter Roof Insulation. Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.*
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.*
§ 150.0(d):	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.*
§ 150.0(f):	Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).
§ 150.0(g)2:	Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.*
Fireplaces, Decor	ative Gas Appliances, and Gas Log Measures:
§ 110.5(e)	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.*
§ 150.0(e)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.*
Space Conditioni	ng, Water Heating, and Plumbing System Measures:
§ 110.0-§ 110.3:	Certification. Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.*
§ 110.2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-K.*
§ 110.2(b):	Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for
<u>8 110 2(a)</u> :	compression heating is higher than the cut-off temperature for supplementary heating.* Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a
3 1 10.2(0).	setback thermostat. Water Heating Recirculation Loops Serving Multiple Dwelling Units. Water heating recirculation loops serving multiple dwelling units must
§ 110.3(c)4:	meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4.
§ 110.3(c)6:	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
§ 110.5:	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters.*
§ 150.0(h)1:	Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.



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§ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer
§ 150.0(h)3B:	Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the
§ 150.0(j)1:	Storage Tank Insulation. Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§ 150.0(j)2A:	Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is: associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.*
§ 150.0(j)3:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour.
§ 150.0(n)2:	Recirculating Loops. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 150.0(n)3:	Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the Executive Director.
Ducts and Fans M	leasures:
§ 110.8(d)3:	Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	CMC Compliance . All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.*
§ 150.0(m)2:	Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	Protection of Insulation. Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.
§ 150.0(m)10:	Porous Inner Core Flex Duct. Porous inner core flex ducts must have a non-porous layer between the inner core and outer vapor barrier.
§ 150.0(m)11:	Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11 and Reference Residential Appendix RA3.
§ 150.0(m)12:	Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Pressure drops and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.*
§ 150.0(m)13:	Space Conditioning System Airflow Rate and Fan Efficacy. Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be \geq 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy \leq 0.45 watts per CFM for gas furnace air handlers and \leq 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow \geq 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy \leq 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.*



Requirements for	Ventilation and Indoor Air Quality:
§ 150.0(o)1:	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1.
§ 150.0(o)1C:	Single Family Detached Dwelling Units. Single family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C.
§ 150.0(o)1E:	Multifamily Attached Dwelling Units. Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be \leq 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8.
§ 150.0(o)1F:	Multifamily Building Central Ventilation Systems. Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance.
§ 150.0(o)1G:	Kitchen Range Hoods. Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
§ 150.0(o)2:	Field Verification and Diagnostic Testing. Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.
Pool and Spa Sys	stems and Equipment Measures:
§ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.*
§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.*
Lighting Measure	s:
§ 110.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.*
§ 150.0(k)1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A.
§ 150.0(k)1B:	Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.
§ 150.0(k)1C:	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C.
§ 150.0(k)1D:	Electronic Ballasts for Fluorescent Lamps. Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
§ 150.0(k)1E:	Night Lights, Step Lights, and Path Lights. Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.
§ 150.0(k)1F:	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).*
§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*
§ 150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems.*
§ 150.0(k)2C:	Interior Switches and Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.*
§ 150.0(k)2D:	Interior Switches and Controls. Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.0(k)2E:	Interior Switches and Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k).
§ 150.0(k)2F:	Interior Switches and Controls. Lighting controls must comply with the applicable requirements of § 110.9.



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§ 150.0(k)2G:	Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e); and meets all other requirements in § 150.0(k)2.
§ 150.0(k)2H:	Interior Switches and Controls. A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.
§ 150.0(k)2I:	Interior Switches and Controls. In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2C.
§ 150.0(k)2J:	Interior Switches and Controls. Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.*
§ 150.0(k)2K:	Interior Switches and Controls. Under cabinet lighting must be controlled separately from ceiling-installed lighting systems.
§ 150.0(k)3A:	Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either § 150.0(k)3Aii (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aii (astronomical time clock), or an EMCS.
§ 150.0(k)3B:	balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3C:	Residential Outdoor Lighting. For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)4:	Internally illuminated address signs. Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c).
§ 150.0(k)5:	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)6A:	Interior Common Areas of Low-rise Multifamily Residential Buildings. In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor.
§ 150.0(k)6B:	Interior Common Areas of Low-rise Multifamily Residential Buildings. In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must: i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.
Solar Ready Buil	dings:
§ 110.10(a)1:	Single Family Residences. Single family residences located in subdivisions with 10 or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b) through § 110.10(e).
§ 110.10(a)2:	Low-rise Multifamily Buildings. Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d).
	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access,
§ 110.10(b)1:	pathway, smoke ventilation, and spacing requirements as specified in 11te 24, Part 9 or other parts of 11te 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.*
§ 110.10(b)1: § 110.10(b)2:	a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy."
§ 110.10(b)1: § 110.10(b)2: § 110.10(b)3A:	 patrway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.* Azimuth. All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north. Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.*
§ 110.10(b)1: § 110.10(b)2: § 110.10(b)3A: § 110.10(b)3B:	 patrway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.* Azimuth. All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north. Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.* Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.*
§ 110.10(b)1: § 110.10(b)2: § 110.10(b)3A: § 110.10(b)3B: § 110.10(b)4:	 patrway, smoke vertuation, and spacing requirements as specified in The 24, Part 9 or other parts of The 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building project, and have a total area no less than 15 percent of the total roof area of the building any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy." Azimuth. All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north. Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment." Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane." Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(b)1: § 110.10(b)2: § 110.10(b)3A: § 110.10(b)3B: § 110.10(b)4: § 110.10(c):	pathway, smoke ventuation, and spacing requirements as specified in 11te 24, Part 9 or other parts of 11te 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For isse multi-family buildings the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy." Azimuth. All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north. Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.* Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.* Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents. Interconnection Pathways. The construction documents must indicate: a location reserv
§ 110.10(b)1: § 110.10(b)2: § 110.10(b)3A: § 110.10(b)3B: § 110.10(b)4: § 110.10(c): § 110.10(d):	pathway, smoke vehilation, and spacing requirements as specified in Title 24, Part 9 or other parts or Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy." Azimuth . All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north. Shading . The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment." Shading . Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane." Structural Design Loads on Construction Documents . For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents. Interconnection Pathways. The construction documents must indicat
§ 110.10(b)1: § 110.10(b)2: § 110.10(b)3A: § 110.10(b)3B: § 110.10(b)4: § 110.10(c): § 110.10(d): § 110.10(e)1:	patiway, smoke ventuation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24, or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building, and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, area. The solar zone requirement is applicable to the entire building, including mixed occupancy. [*] Azimuth. All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north. Shading . The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment. [*] Shading . Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. [*] Structural Design Loads on Construction Documents . For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents. Interconnection Pathways . The construction documents undicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconn

ROOM LOAD	SUMMARY										
Project Name								Date	6/04/0	000	
System Name	0							Floor	0/24/2022 Floor Area		
HVAC Svstem								1 1001	56	7	
ROOM LOAD SUM	MARY							1			
			ROO	M COOLIN	G PEAK	COIL	COOLING	PEAK	COIL H	TG. PEAK	
Zone Name	Room Name	Mult.	CFM	Sensible	Latent	CFM	Sensible	Latent	CFM	Sensible	
New Living Area	1st Floor ADU	1	221	4,765	259	221	4,765	259	182	7,268	
	1		1	I	1		·			I	
				PAGE TOT	TAL	221	4,765	259	182	7,268	
				ΤΟΤΑ	\L *	221	4,765	259	182	7,268	
* Total includes ventilation	on load for zonal systems.										

BEFORE COMMENCING ANY SITE PREPARATION, MATERIAL ORDERS OR CONSTRUCTION ACTIVITY: ALL LEVELS, DIMENSIONS AND NACLES HAVE TO BE CHECKED AND VERIFIED, CALL BIT TO VERIFY LOCATIONS OF EXISTING UTILITIES, VERIFY ACCURACY AND COMPLETENESS OF THE FLANS, AND APPROVILO FPRINTS NECESSARTY FOR

Issue Date

1/2" = 1'-0"

358

A0.0

Scale

ADU

ABBREVI @ At # Pound or Nur A.B. Anchor Bo ADU Accessor (Seconda A.F.F. Above F A.F.G. Above A.F.G. Above F BLDG. Building BLKG. Blocking BM. Beam B.O. Bottom O CERT. Certifica C.I. Contractor C.F. Contractor C.P. Concractor C.F. Contractor CLR. Clear C.L. Center Lin CLNG. Ceiling CONT. Continu COL. Column DIA. Diameter DET. Detail D.F-L. Douglas D.F-L. Douglas DBL. Double (E) Existing EA. Each EQ. Equal E.W. Each Wa FIN. Finish 3.0 F.O. Face Of

CONSTRUCTION TYPE: VB OCCUPANCY TYPE: R-3 APN: 260-031-02 ZONING DISTRICT: RM-10

CONSTRUCTION LOCATION: 8761a Hoffman St Buena Park Ca 90620

PROJECT CONTACT:

FIRE SPRINKLERS: N/A (Existing primary home is not equipped with fire sprinklers)

GROSS FLOOR AREA: EXISTING: 567 sqft PROPOSED: 567 sqft

BLDG. HEIGHT: EXISTING: 13 ft PROPOSED: 13 ft

 LOT COVERGE:
 22,339 sqft

 LOT:
 22,339 sqft

 PRIMARY DWELLING FOOTPRINT:
 1,092 sqft

 PROPOSED ADU FOOTPRINT:
 567 sqft

 COVERAGE:
 8%

PROJECT SCOPE: CONVERSION OF EXISTING DETACHED GARAGE INTO ONE-STORY ACCESSORY DWELLING UNIT.

	_					
Ļ						
	APPL	ICABLE CODES				
	BUILDIN	G CODE:				
	2019 CA	LIFORNIA BUILDING CODE				
	2019 CA	LIFORNIA RESIDENTIAL CODE				
	ENERGY CODE:					
	CODE CALIFORNIA ERERGI EFFICIENCI STANDARDS					
	CODE					
	MECHAN	NICAL CODE:				
	2019 CA	LIFORNIA MECHANICAL CODE				
	2019 CA	LEORNIA ELECTRICAL CODE				
	PLUMBI	NG CODE:				
	2019 CA	LIFORNIA PLUMBING CODE				
	FIRE PR	OTECTION:				
	2019 CA	LIFORNIA FIRE CODE				
		A0 DRAWING INDEX				
	Choot					
	Number	Sheet Name				
		Glicot Hallo				
	A0.0	COVER				
	A1.0	SITE PLAN				
	A2.0	FLOOR PLAN, ROOF PLAN				
	A3.0	ELEVATIONS, SECTIONS				
	A4.0	TYPICAL ASSEMBLIES, SCHEDULES				
	A5.0	ELECTRICAL				
	A6.0	PLUMBING, MECHANICAL				
	A7.0	TYPICAL DETAILS				
	S0.0	STRUCTURAL COVER				
	S0.2	APPLIED VAPOR BARRIER OPTIONS				
	S0.4	SPRAY-FOAM INSULATION				
	S1.0	STRUCTURAL PLANS				
	IS2.1	STRUCTURAL DETAILS				

S2.2 STRUCTURAL DETAILS T24-1 CERT. TITLE 24 ENERGY COMPLIANCE T24-2 CERT. TITLE 24 ENERGY COMPLIANCE

ABBREVIATIONS	ANNOTATION	IS
@ At # Pound or Number A.B. Anchor Bolt ADU Accessory Dwelling Unit	1 A101	DETAIL MARK – Number – Sheet Number
(Secondary Dwelling Unit) A.F.F. Above Finished Floor A.F.G. Above Finished Grade BLDG. Building BLKG. Blocking BM. Beam B.O. Bottom Of CEDT. Certificate	Ref 1 A101 1 20 Ref	ELEVATION MARK – Direction – Number – Sheet Number
C.I. Contractor Installed C.F. Contractor Furnished C.F. Clear C.L. Center Line CLNG. Ceiling CONT. Continuous	1 A101	SECTION MARK - Direction - Number - Sheet Number
COL. Column DIA. Diameter DET. Detail D.F-L. Douglas Fir-Larch	Name Elevation	LEVEL MARK
DBL. Double (E) Existing EA. Each EQ. Equal	•	SPOT ELEVATION MARK
E.W. Each Way FIN. Finish 3.0 F.O. Face Of FT. Foot or Feet	(1) View Name 1/8" = 1'-0"	VIEW REFERENCE
HDR. Header HT. Height JST. Joist MAX. Maximum M.B. Machine Bolt	Room name	ROOM MARK – Room Designation – Size
MIN. Minimum MTD. Mounted N.I.C. Not In Contract (N) New NOM. Nominal	Ň	NORTH ARROW
N.T.S. Not To Scale O/ Over O/A Overall O.F. Outside Face.	٥	GRID LINE MARK
Owner Furnished O.C.(E.W.)On Center (Each Way)	ti>	WALL TYPE MARK
OPP. Opposite (P) Proposed	(1)	WINDOW TYPE MARK
PLY. Plywood PTD. Painted P T. Pressure Treated		REVISION MARK
REINF. Reinforced RET. Retaining R.F. Roof Framing	(101)	DOOR TYPE MARK
R.O. Rough Opening S.F. Square Feet S.S.D. See Structural Drawings	K1	KEYNOTE
SHTG. Sheathing SHT. Sheet SIM. Similar	C8	CEILING TYPE MARK
SQ. Square STD. Standard STR. Structural T.B.D. To be determined T.O. Ton Of	F8	FLOOR / FOUNDATION MARK
TYP. Typical V.I.F. Verify In Field W.F. Wall Framing W/ With W.O. Where Occurs W/O Without		SHEAR WALL MARK – Identifier
U.O.N. Unless Otherwise Noted NOTE: Not all abbreviations and symbols shown here are used		

		ACCURACY AND COMPLETENESS OF THE PLAN AND APPROVAL OF PERMITS NECESSARY FOR
GENERAL NO	TES	THE PROJECT.
GENERALING		Project Notes
1. CONSTRUCTIO DOCUMENTS.	N WORKMANSHIP AND MATERIALS SHALL CONFORM TO: NOTES IN THIS SET OF CONSTRUCTION LL APPLICABLE LOCAL CODES AND ORDINANCES AS NOTED THROUGHOUT THESE DRAWINGS.	
2. IN THE EVENT SPECIFICATIO	OF CONFLICT BETWEEN PERTINENT CODES AND REGULATIONS AND REFERENCED STANDARDS OF THESE	
3. THE PROJECT	CONTACT SHALL POSSESS ALL APPROVALS AND PERMITS PRIOR TO COMMENCING ANY SITE	
DETERMINING	MATERIAL ORDERS OR CONSTRUCTION ACTIVITY. THE PROJECT CONTACT IS RESPONSIBLE FOR AND COORDINATING THE SCHEDULE FOR ALL PROJECT ACTIVITY.	
4. PROJECT SCC	THE IS LIMITED TO WHAT IS LISTED IN THE PROJECT SCOPE SECTION OF THE COVER SHEET.	
ASSUMES FUL	RESPONSIBILITY AND ANY RISKS ASSOCIATED WITH DEVIATION FROM STANDARD ON-SITE	
6 DIMENSIONS	N METHODS.	
INDICATED FA	E OF STUD, CENTER LINE, GRID LINE, TOP OF CONCRETE SLAB OR FOUNDATION, TOP OF PLYWOOD, ETC.	
DRAWINGS SH	ALL NOT BE SCALED TO DETERMINE ANY DIMENSIONS, REFER ONLY TO WRITTEN INFORMATION AND JOS, OR USE FIGURED DIMENSIONS, DIMENSIONAL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION	
OF THE PROJE	T CONTACT PRIOR TO CONSTRUCTION.	
7. BUILDING INSP NOTIFY ALL O	ECTORS MAY APPROVE DEVIATION FROM THESE PLANS. IN SUCH CASE, THE PROJECT CONTACT SHALL HERS OF SUCH DEVIATION AND SHALL ASSUME ALL RISKS AND RESPONSIBILITIES ARISING FROM SUCH	
DEVIATION.	THE EVENT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS	
THEIR CONSTI	UCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN. IF	
9 THE PROJECT	STILL UNCLEAR, CONTACT THE PROJECT CONTACT FOR CLARIFICATION.	
CONSTRUCTIO	NAT ALL TIMES WHILE WORK IS IN PROGRESS.	
10. THE PROJECT CONSTRUCTIO	V OF THIS PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY CONTINUOUSLY AND NOT	
LIMITED TO NO	RMAL WORKING HOURS. THE PROJECT CONTACT SHALL DEFEND, INDEMNIFY, AND HOLD THE DESIGNER	
SHALL BE NAM	ED AS AN ADDITIONAL INSURED ON THE PROJECT CONTACT'S LIABILITY INSURANCE COVERAGE.	
11. PROJECT CON DIMENSIONS	ACT SHALL OBSERVE THE CONSTRUCTION OF THIS PROJECT AND SHALL BE RESPONSIBLE FOR FINAL	
STANDARDS F	IN THE PROJECT.	
PREMISES JOI	SITE CLEAN OF SUCH WASTE AND SHALL FROPERLY DISPOSE OF ALL WASTE CAUSED BY THEIR WORK, REEP	
13. THE PLAN SET	PROVIDED SHOULD ONLY BE MODIFIED UPON DIRECTION OF THE PROJECT CONTACT.	
REFERENCE C	VILY. THE PROJECT CONTACT SHALL PROVIDE AND OR SOURCE DESIGN/BUILD DOCUMENTATION FOR	
THESE ITEMS DRAWINGS AN	IRECTLY FROM SUPPLIERS OR FROM THEIR SUBCONTRACTORS IN ACCORDANCE WITH THESE CRITERIA AND IN CONFORMANCE WITH ALL CODES AND ORDINANCES, AND SHALL ORDAIN PERMITS	
FOR THIS WOR		
15. EXISTING SITE	INFORMATION FOR THESE DRAWINGS SHALL BE DEEMED TO BE ACCURATE BY THE PROJECT CONTACT. START OF WORK, THE PROJECT CONTACT SHALL COMPARE AND COORDINATE STRUCTURAL AND DESIGN	
DRAWINGS WI	H EXISTING FIELD CONDITIONS. THE PROJECT CONTACT IS RESPONSIBLE FOR CODE-COMPLIANT	
NO DEVIATION	FROM THESE PLANS SHALL BE MADE AND BE ACCEPTED EXCEPT UPON WRITTEN APPROVAL FROM THE	
17 ALL WORK SH	ACT.	
APPLICABLE C	DDES. THE PROJECT CONTACT SHALL BE RESPONSIBLE FOR THE SATISFACTORY COMPLETION OF THE	Li Cao LJ@housable.com
TERMITE AND	IDISTURE PROTECTION AS REQUIRED BY CODE.	1161 Mission St. San Francisco, CA 94103 4 0 (213) 577 1557 C (213) 787-7578
18. THE PROJECT	CONTACT SHALL BE RESPONSIBLE FOR WORKING CONDITIONS AT THE JOB SITE, INCLUDING THE SAFETY	
19. IT SHALL BE T	E PROJECT CONTACT'S RESPONSIBILITY TO ASCERTAIN THE EXISTENCE AND LOCATION OF ANY AND ALL	
OPERATIONS.) UTILITIES AND FACILITIES WHICH MAY BE SUBJECT TO DAMAGE OR INTERRUPTION AS A RESULT OF ITS "HE PROJECT CONTACT SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THESE UNDERGROUND	Revisions
UTILITIES / FA	ILITIES, AND TO MAINTAIN SERVICE TO THE PROPERTY, AND SHALL BE RESPONSIBLE FOR REPAIR TO	No. Description
20. ANY EXCAVAT	DN MUST COMPLY WITH EXCAVATION SAFETY IN ACCORDANCE WITH GOVERNMENT CODE 4216.	
21. ANY FOUNDAT	ON AND OR UTILITY TRENCHES SHALL BE CLEAN AND FREE OF LOOSE MATERIAL AT THE TIME OF	
EXCAVATIONS	REMAIN OPEN FOR A MINIMAL AMOUNT OF TIME BEFORE CONCRETE IS CAST AND OR UTILITY	
22. NO PERSON(S	S INSTALLED. SHALL USE ANY PUBLIC ACCESS ROAD OR FIRE TRAIL FOR THE STORAGE OF ANY CONSTRUCTION	
MATERIAL, ST.	TIONARY CONSTRUCTION EQUIPMENT, CONSTRUCTION OFFICE, PORTABLE REFUSE CONTAINER, OR	
23. THE PROJECT	CONTACT SHALL BE SOLELY RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL DRAWINGS AND	
SPECIFICATIO	IS PROVIDED THROUGHOUT THIS PLAN SET. ANY MATERIAL OMISSIONS OR UPDATES WHICH REQUIRE HALL BE IDENTIFIED BY THE PROJECT AND THE APPROPRIATE REQUESTS FOR CORRECTIONS SHALL BE	
MADE IN AN E	PEDITED MANNER AT THE EARLIEST AVAILABLE OPPORTUNITY.	
24. IT SHALL BE N WHILE THE DF	WINGS ARE INTENDED TO ACCOUNT FOR ALL REQUIRED BUILDING CODES, LOCAL ZONING AND	
PLANNING CO	ES, AND SITE SPECIFIC ISSUES, MATERIAL OMISSIONS OR INACCURACIES MAY EXIST. THEREFORE, IT IS	
PRIOR TO SUP	DIETT OF THE FROMEOR CONTROL TO VEHILL THE ROOOTROL AND COMILECTENESS OF THESE LANS	
	ISSION FOR PLANNING AND BUILDING APPROVAL, THE COMMENCEMENT OF PROJECT CONSTRUCTION	
AND DURING O AND OR ADDIT	MISSION FOR PLANNING AND BUILDING APPROVAL, THE COMMENCEMENT OF PROJECT CONSTRUCTION DNSTRUCTION. WHEN INACCURACIES OR OMISSIONS ARE FOUND BY THE PROJECT CONTACT, UPDATES ONS TO THE PLANS SHOULD BE MADE TO REMEDY THEM.	
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PROJECT CONTACT TERMS: THE PROJECT CONTACT HAS THE DRAWINGS AND SPECIFICATIONS BUT SHALL BE RESI MOST CURRENT VERSIONS OF THESE DOCUMENTS.

2019 CALGREEN RESIDENTIAL OC SECT Effective HCD SHL	CUPANCI ION A4.60 January 1 515C (New 0	ES AP 2 , 2020	PLICA	TION CHE	CKLIST	
	APPLICA	EVELS NT TO SE TE MEASL	LECT	VE ENFOR SPECIFY VE	RIFICATIONS CING AGENCY IRIFICATION N	то
FEATURE OR MEASURE		Prerec and Ek	uisites ectives'	Enforcing Agency	Installer or Designer	Third
	Mandatory	Tier 1	Tier 2	All	All	
PLANNING AND DESIGN						
Site Selection						
A4.103.1 A site which complies with at least one of the following characteristics is selected: 1. An infil site is selected. 2. A grayfield site is selected. 3. An EPA-recognized Brownfield site is selected.						
A4.103.2 Facilitate community connectivity by one of the following methods: 1. Locate project within a 1/4-mile true walking distance						
of at least 4 basic services; 2 Locate project within 1/2-mile true walking distance						
of at least 7 basic services; or 3. Other methods increasing access to additional resources.						
Site Preservation						-
A4.104.1 An individual with oversight responsibility for the project has participated in an educational program promoting environmentity intendy design or development and has provided training or instruction to appropriate entities.		D				
Deconstruction and Reuse of Existing Materials			-			-
At 1952 Existing buildings are disastembed for neura or respring of building matches, The proposed sinuture utilities at least one of the bibliowing materials which can be easily resulted 1. Light bisures 2. Puncting fotores 3. Biotrical devices 6. Replances 7. Foundations or portions of foundations						
Site Development						
4.106.2 A plan is developed and implemented to manage storm water drainage during construction.						
4.106.3 Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings.	⊠					
4.106.4 Provide capability for electric vehicle charging for one- and two-family dwellings; townhouses with attached private garages; multifamily dwellings; and hotels/motels in accordance with Section 4.108.4.1, 4.106.4.2, or 4.106.4.3, as applicable.						

	APPLICA ELECTIV	EVELS NT TO SE E MEASL	LECT	VE ENFOR SPECIFY VE	RIFICATIONS CING AGENCY RIFICATION N	то
FEATURE OR MEASURE		Prerect and El	uísites ectives*	Enforcing Agency	IFICATIONS INDA ADENTI- SECANDIN M ANDA ANDA ANDA ANDA ANDA ANDA ANDA AND	Third
	Mandatory	Tier 1	Tier 2			
A4.106.1 Reserved.						
A4.106.2.1 Soil analysis is performed by a licensed design professional and the findings are utilized in the structural design of the building.						
A4.106.2.2 Soil disturbance and erosion are minimized by at least one of the following: Natural drainage patterns are evaluated and erosion controls are implemented to minimize erosion during 						
 Site access is accomplished by minimizing the amount of cut and fill needed to install access roads 						
and driveways. Underground construction activities are coordinated to utilize the same trench, minimize the amount of time the disjurbed soil is exposed and the soil is replaced using accepted compaction methods. 						
A4.106.2.3 Topscil shall be protected or saved for reuse as specified in this section. Ther 1.0 signated topscil shall be stockpiled for reuse in a designated area and covered or protected from erosion. Ther 2. The construction area shall be identified and delineated by fencing or flagging to limit construction activity to the construction area.		Ø	Ø' Ø'			
A4.106.3 Postconstruction landscape designs accomplish one or more of the following:						
 Areas disrupted during construction are restored to be consistent with native vegetation species and 						
 Utilize at least 75% native California or drought tolerant plant and tree species appropriate for the climate zone region. 						

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2019 CALGREEN RESIDENTIAL OC SECT Effective . HCD SHL	CUPANCI ION A4.60 January 1 815C (New 0	ES AP 2 2020	PLICA	TION CHE	CKLIST							
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FEATURE OR MEASURE		Prerequisites and Electives ¹		Prerequisites and Electives ¹		Preret and Ele		Prereq and Ele		Enforcing Agency	Installer or Designer	Third Party
	Mandatory	Tier 1	Tier 2	All		밂						
A4.106.4 Permeable paving is utilized for the parking, walking or patio surfaces in compliance with the following:												
Tier 1. Not less than 20% of the total parking, walking or patio surfaces shall be permeable.		\boxtimes^2										
Tier 2. Not less than 30% of the total parking, walking or patio surfaces shall be permeable.			⊠ ²									
A4.106.5 Roofing materials shall have a minimum 3-year aged solar reflectance and thermal emittance or a minimum Solar Reflectance Index (SR) equals to or greater than the values specified in the applicable tables.												
Low-Rise Residential												
Tier 1. Roof covering shall meet or exceed the values contained in Table A4.105.5.1(1).		⊠ ²										
Tier 2. Roof covering shall meet or exceed the values contained in Table A4.105.5.1(2).			⊠²									
High-Rise Residential, Hotels and Motels												
Tier 1. Roof covering shall meet or exceed the values contained in Table A4.106.5.1(3).		Ø										
Tier 2. Roof covering shall meet or exceed the values contained in Table A4.105.5.1(4).			⊠2									
A4.106.6 Install a vegetated roof for at least 50% of the roof area. Vegetated roofs shall comply with requirements for roof gardens and landscaped roofs in the California Building Code, Chapters 15 and 16.												
A4.106.7 Reduce nonroof heat islands for 50% of sidewalks, patios, driveways or other paved areas by using one or more of the methods listed.												
A4.106.8.1 Tier 1 and Tier 2. For one- and two-family dwellings and bowhouses with attached private garages. Install a dedicated 2052/20-cell beanch circuit, including an overcurrent protective device rated at 40 amperes minimum per dwelling unit.		₿ ⁹	⊠²		٥							
A4.106.8.2 Provide capability for future electric vehicle charging in new multifamily dwellings, as specified.												
Tier 1. In 15% of total parking spaces.		\boxtimes^2										
Tier 2. In 20% of total parking spaces.			10 ²									

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2019 GALGREEN RESIDENTIAL OC SECT Effective	ION A4.60 January 1, 315C (New C	2 2020 1/20)	FLICA	TION CHE	UKLIST			
	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VE ENFOR SPECIFY VE	VERIFICATIONS ENFORCING AGENCY SPECIFY VERIFICATION M			
FEATURE OR MEASURE		Prerect and El	uisites ictives*	Enforcing Agency	Installer or Designer	Third- Party		
	Mandatory	Tier 1	Tier 2	All				
4.303.2 Plumbing fixtures and fittings required in Section 4.303.1 shall be installed in accordance with the California Plumbing Code, and shall meet the applicable referenced standards.	Ø							
A4.303.1 The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 psi. Kitchen faucets may temporarily increases the flow above the maximum rate, but not to exceed 2.2 galtons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi.					0	•		
or other means may be used to achieve reduction.								
4.303.1.4.3 Metering faucets in residential buildings shall not deliver more than 0.2 gallons per cycle.	8							
A4.303.2 Alternate water source for nonpotable applications. Alternate nonpotable water sources are used for indoor potable water reduction. Alternate nonpotable water sources shall be installed in accordance with the California Pluming Code.		٥						
A4.303.3 Install at least one qualified ENERGY STAR dishwasher or clothes washer.								
A4.303.4 Norwater urinals or waterless tollets are installed.								
A4.303.5 One- and two-family dwellings shall be equipped with a demand hot water recirculation system.								
Outdoor Water Use								
4.304.1 Residential developments shall comply with a local water efficient landscage ordinance or the current California Department of Water Resources' Model Water Efficient Landscage Ordinance (MWELO), whichever is more stringent.	Ø							
A4.304.1 A rainwater capture, storage and re-use system is designed and installed.								
A4.304.2 A landscape design is installed, which does not utilize potable water.								
A4.304.3 For new water service connections, landscaped intigated areas less than 5,000 square feet shall be provided with separate submeters or metering devices for outdoor potable water use.		D				•		
Water Reuse Systems								
A4.305.1 Piping is installed to permit future use of a graywater irrigation system served by the clothes washer or other fidures.								
A4.305.2 Recycled water piping is installed.								

BEFORE COMMENCING ANY SITE PREPARATION, MATERIAL ORDERS OR CONSTRUCTION ACTIVITY: ALL LEVELS, DIMENSIONS AND ANGLES NAVE TO LOCATIONS OF EXISTING UTILITIES, VERIFY ACCURACY AND COMPLETENESS OF THE PRANS, AND APPROVAL OF PERMITS NECESSARY FOR THE PROJECT.

Project Notes

Green building measures listed in this table may be mandatory if adopted by a city, county, or city and county as specified in Section 101.7.

² Required prerequisite for this Tier.

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FEATURE OR MEASURE		Preret and El	uisites ectives ¹	Enforcing Agency	Installer or Designer	Third Party	
	Mandatory	Tier 1	Tier 2	All			
A4.106.8.3 Provide electric vehicle charging spaces for new hotels and motels.							
Tier 1. Install EV spaces per Table A4.106.8.3.1.		⊠²					
Tier 2. Install EV spaces per Table A4.106.8.3.2.			⊠,				
A 108.6 Provide Strugbe parking locatiles are noted below or the at locat advances, witchware is more dimonst. Namber of bicycle parking spaces may be reflaced, as general by the effort games, due to bidling allo approximation of the structure of the structure of the of eventogeneral. 1. Provide bench strum licycle parking, per 1. Provide bench strum licycle parking, per 1. Provide bench strum licycle parking for hotel and hotel of eventogeneral bench All 108.2 2. Provide long-term licycle parking to hotel and motel budling, per station All 108.2 3. Provide long-term licycle parking to hotel and motel budling, per station All 108.2 3. Provide long-term licycle parking to hotel and motel budling, per station All 108.2 3. Provide long-term licycle parking to hotel and motel budling, per station All 108.2 3. Provide long-term licycle parking to hotel and motel budling, per station All 108.2 3. Provide long-term licycle parking to hotel and motel budling, per station All 108.2 3. Provide long-term licycle parking to hotel and motel budling, per station All 108.2 3. Provide long-term licycle parking to hotel and motel budling, per station All 108.2 3. Provide long-term licycle parking to hotel and motel budling per station All 108.2 3. Provide long-term licycle parking to hotel and motel budling per station All 108.2 3. Provide long-term licycle parking to hotel and motel budling per station All 108.2 3. Provide long-term licycle parking to hotel and motel budling per station All 108.2 3. Provide long-term licycle parking to hotel and motel budling per station All 108.2 3. Provide long-term licycle parking to hotel and hotel per station All 108.2 3. Provide long-term licycle parking to hotel and hotel long per station All 108.2 3. Provide long-term licycle parking to hotel and hotel per station All 108.2 3. Provide long-term licycle parking to hotel and hotel per station All 108.2 3. Provide long-term licycle parking to hotel and hotel per station all 108.2 3. Provide long-term licycle parking							
A4.106.10 [HR] Outdoor lighting systems shall be designed and insoluted to comply with: Orde for Uping Zonson 1-4.1 and 2000 [Host Sonsy 1- Ocode for Uping Zonson 1-4.1 and 2. Backlight, Unjight and Gfare (BUG) ratings as defined in 162 Min-15-11; and 3. Allowable BUG ratings not exceeding those shown in Table A4.100.1 ct; or Comply with a lawfully seatcled local ordinance, whichever is more samplers.		•	•			•	
Innovative Concepts and Local Environmental Conditions							
A4.108.1 Items in this section are necessary to address innovative concepts or local environmental conditions.							
ltem 1							
Hern 2							
liem 3							
ENERGY EFFICIENCY (LOW-RISE RESIDENTIAL)	-	1.00	-		-	10	
General							
4.201.1 Building meets or exceeds the requirements of the California Building Energy Efficiency Standards ² .	Ø	ز	⊠2		0		

³ These measures are currently required elsewhere in statute or in regulation.

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FEATURE OR MEASURE		Preros and El	uisites Ictives ¹	Enforcing Agency	Installer or Designer	Third- Party
	Mandatory	Tier 1	Tier 2	All		
Performance Approach for Newly Constructed Buildings						
A4.203.1.1.1 Tier 1 and Tier 2. Total Energy Design Rating (Total EDR) and Energy Efficiency Design Rating (Efficiency EDR) for the Proposed Design Bulding is included in the Certificate of Compliance documentation.		₿²	₿2			
A4.203.1.1.2 Tier 1 and Tier 2. Quality Insulation Installation procedures specified in the Building Energy Efficiency Standards Reference Appendices RA3.5 are completed.		⊠²	₿²	٥		
A4.203.1.2 Tier 1 and Tier 2 prerequisite options. One of the following options is required: Roof deck insulation or dutts in conditioned space. High performance wals. HERS-wonfied compat the water distribution system. HERS-winfied dain water heat recovery.		₿²	₿²			
A4.203.1.3.1 Ther 1. Buildings complying with the first level of advanced energy efficiency shall have additional integrated efficiency and cosite enerwable energy generation to achieve a Total EDR for Tier 1 as specified in Table A4.203.1.1 or lower as calculated by Time 24, Part 6 Compliance Software approved by the Energy Commission. This Total EDR is in addition to meeting the Efficience EDR.		₿ ²			٥	
A4.203.1.3.2 Tier 2. Buildings complying with the second level of advanced energy efficiency shalt have additional integrated efficiency and crafte enerwable energy generation to achieve a Total EDR for Tier 2 as specified in Table A4.203.1.1 or lower as calculated by Time 2.4. Part 6 Compliance Schwara approved by the Energy Commission This Total EDR is in addition to meeting the Efficience EDR.			82			
A4.203.1.4 Local jurisdictions adopting Tier 1 or Tier 2, or considering community shared solar or storage options as specified, shall consult with the local electric service for acceptance.		⊠²	⊠²		0	0
WATER EFFICIENCY AND CONSERVATION						
Indoor Water Use		-				
4.303.1 Plumbing focures (water closeds and urinals) and fittings (faucets and showerheads) installed in residential buildings shall comply with the prescriptive requirements of Sections 4.303.1.1 through 4.303.1.4.4.	⊠					

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FEATURE OR MEASURE		Prerect and Ele	uisites ictives ¹	Enforcing Agency	Installer or Designer	Third- Party
	Mandatory	Tier 1	Tier 2	All	All	
A4.305.3 Recycled water is used for landscape irrigation. Innovative Concepts and Local Environmental Conditions						
A4.306.1 Items in this section are necessary to address innovative concepts or local environmental conditions.						
Norm 1 Norm 2						
MATERIAL CONSERVATION AND RESOURCE EFFICIENCY						
A4.403.1 A Frost-Protected Shallow Foundation (FPSF) is designed and constructed.						
A4.403.2 Cement use in foundation mix design is reduced. Tiler 1. Not less than a 20% reduction in cement use. Tiler 2. Not less than a 25% reduction in cement use.		⊠°	152			
Efficient Framing Techniques						
A4.404.1 Beams, headers and trimmers are the minimum size to adequately support the load.						
A4.404.2 Building dimensions and layouts are designed to minimize waste.						
A4.404.3 Use premanufactured building systems to eliminate solid sawn lumber whenever possible.						
A4.404.4 Material lists are included in the plans which specify material quantity and provide direction for on-site cuts.						
Material Sources Ac403.1 One or more of the following building materials that do not require additional resources for finishing are used. 1. Esterior trim not requiring paint or statin. 2. Windows not requiring paint or statin. 3. Siding or exterior wall coverings which do not require paint or statin.		0	0	0	0	
A4.405.2 Floors that do not require additional coverings are used including but not limited to stained, natural or stamped concrete floors.					0	
A4.405.3 Postconsumer or preconsumer recycled content value (RCV) materials are used on the project. Tier 1. Not less than a 10% RCV. Tier 2. Not less than a 15% RCV.		⊠²	₿ ²			
A4.405.4 Renewable source building products are used.						

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Third- Party	FEATURE OR MEASURE		Preret and El	uisites ectives ¹	Enforcing Agency	Installer or Designer
		Mandatory	Tier 1	Tier 2	All	
	Enhanced Durability and Reduced Maintenance					
_	4.406.1 Annular spaces around pipes, electric cables, conduits or other openings in plates at estenior walls shall be protected against the paissage of rodents by doains guth openings with cament motifar, concrete masonry or a similar method acceptable to the enforcing agency.	Ø				
	Water Resistance and Moisture Management					
	A4.407.1 Install foundation and landscape drains.					
_	A4.407.2 Initial gutter and downsport systems to route water at least 5 feet away from the foundation or connect to landscape drains which discharge to a dry well, sump, bioswale, rainwater capture system or other approved on- site location.					
	A4.407.3 Provide flashing details on the building plans and comply with accepted industry standards or manufacturer's instructions.					
_	A4.407.4 Protect building materials delivered to the construction site from rain and other sources of moisture.					
	A4.407.5 In Climate Zone 16, an ice/water barrier is installed at roof valleys, eaves and wall to roof intersections.					
	A4.407.6 Exterior doors to the dwelling are protected to prevent water intrusion.					
-	A4.407.7 A permanent overhang or awning at least 2 feet in depth is provided at all exterior walls.					
	Construction Waste Reduction, Disposal and Recycling	-				
	4.408.1 Recycle and/or salvage for reuse a minimum of 65% of the nonhizardous construction and demoktion waste is accordance with one of the following:					
0	 Comply with a more stringent local construction and detrollation useds management construction and detrollation useds management construction. or 2. Accion 4.400.2: complexity of the construction 3. A waster management company, per Baccion 4.400.3: or 4. The waste stream reduction alternative, per Section 4.400.4: complexity of the complexity of the Section 4.400.4: complexity of the complexity of the Section 4.400.4: complexity of the complexity of the Section 4.400.4: complexity of the complexity of the complexity of the Section 4.400.4: complexity of the complexity of the complexity of the section 4.400.4: complexity of the complexity o	ø				

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FEATURE OR MEASURE		Prerect and Ek	uisites ectives	Enforcing Agency	Installer or Designer	Third- Party
	Mandatory	Tier 1	Tier 2			
A4.408.1 Construction waste generated at the site is diverted to recycle or salvage in compliance with one of the following: Tier 1. At least a 65% reduction with a third-party		Ø,				
ventication. Tier 2. At least a 75% reduction with a third-party vertication.			⊠2			
Exception: Equivalent waste reduction methods are developed by working with local agencies.						
Building Maintenance and Operation						-
4.410.1 An operation and maintenance manual shall be provided to the building occupant or owner.	⊠					
4.410.2 Where 5 or more multifamity detelling units are constructed on a building site, provide resdly accessible areas that serve the entre building and are identified for the depositing, storage and collection of nonhazandous materials for recycling, including (sit a minimum) paper, corrugated cardinolar, disas, plastics, corganic waska, and motals or meet a lawfully enacted local recycling ordinanco; if more restrictive.	Ø				0	
Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82(a)(2)(A) et seq. will also be exempt from the organic waste portion of this section.						
Innovative Concepts and Local Environmental						
Conditions A4.411.1 Items in this section are necessary to address innovative concepts or local environmental conditions						
Item 1						
Item 2		П	П	П	п	п
ltern 3		n			1	n n
ENVIRONMENTAL QUALITY						
Fireplaces						
4.403.1 Any installed gas freglace shall be a direct-vert sealed-combaint page. Any installed woodstraw or pellet store shall comply with U.S. EPA New Source Performance Standards (NPSP) emission limits as applicable, and shall have a permanent label indicating they are cetified to met- te emission limits. Woodsbows, pellet stores and frequence shall also comply with applicable local originances.	⊠					
Pollutant Control						
4.504.1 Duct openings and other related air distribution component openings shall be covered during construction.	⊠					

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FEATURE OR MEASURE		Preros and Ele	uisites ictives ¹	Enforcing Agency	Installer or Designer	Third Party
	Mandatory	Tier 1	Tier 2			
4.504.2.1 Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.	ø				٥	
4.504.2.2 Paints, stains and other coatings shall be compliant with VOC limits.	ø					
4.504.2.3 Aerosol paints and coatings shall be compliant with product-weighted MIR Limits for ROC and other taxic compounds.	Ø			٥	٥	•
4.594.2.4 Documentation shall be provided to verify that compliant VOC limit finish materials have been used.	ø					
4.994.3 Carpet and carpet systems shall be compliant with VOC limits.	⊠					
4.504.4 80% of floor area receiving resilient flooring shall comply with specified VOC criteria.	ø				٥	
4.594.5 Particleboard, medium density fiberboard (MDF) and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards.	Ø				٥	
A4.504.1 Use composite wood products made with either California Air Resources Board approved no-added formaldehyde (NAF) reeins or ultra-low emitting formaldehyde (ULEF) resins.						
A4.504.2 Install VOC compliant resilient flooring systems. Ther 1. At least 90% of the resilient flooring installed shall comply. Ther 2. At least 100% of the resilient flooring installed shall comply.		Ø	Ø,			

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FEATURE OR MEASURE		Prerequisites and Electives ¹		Enforcing Agency	Installer or Designer	Third Party
	Mandatory	Tier 1	Tier 2	All		
A4.504.3 Thermal insulation installed in the building shall meet the following requirements: Tier 1. Install thermal insulation in compliance with VOC limits. Tier 2. Install insulation which contains no-added formalating/s (APE) and is in compliance with Tier 1.		⊠²	⊠²			
Interior Moisture Control						
4.505.2 Vapor retarder and capillary break is installed at slab on-grade foundations.						
4.505.3 Moisture content of building materials used in wall and floor framing is checked before enclosure.	Ø					
Indoor Air Quality and Exhaust						-
4.506.1 Each bathroom shall be provided with the following: 1. ENERGY STAR fans ducted to terminate outside the building. 2. Separate or building: OR functioning as a component or building: OR functioning as a component or a whole house werefallion system. 3. Humidity controls with manual or automatic means of autostanter, Legable of adjustment between a reliable to function years of s0% to a maximum of 80%.	Ø					0
A4.506.1 Reserved.						
A4.506.2 [HR] Provide filters on return air openings rated MERV 8 or higher during construction when it is necessary to use HVAC equipment.					•	
A4.506.3 Direct-vent appliances shall be used when equipment is located in conditioned space or the equipment must be installed in an isolated mechanical room.		•				
Environmental Comfort						
4.597.2 Duct systems are sized, designed, and equipment is selected using the following methods: in or ANSI/CCCA 2 Manual - 2016 or equivalent. 5. Size duct systems according to ANSI/ACCA 1 Manual 0 - 2016 or equivalent. 6. Select hearing and cooling equipment according to ANSI/ACCA 1 Manual 0 - 2016 or equivalent.	8					

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FEATURE OR MEASURE		Prerequisites and Electives ¹		Enforcing Agency	Installer or Designer	Third Party	
	Mandatory	Tier 1	Tier 2				
Outdoor Air Quality Reserved							
Innovative Concepts and Local Environmental Conditions							
A4.509.1 Items in this section are necessary to address innovative concepts or local environmental conditions.							
Item 1							
Item 2							
Item 3							
INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS							
Qualifications							
702.1 HVAC system installers are trained and certified in the proper installation of HVAC systems.							
702.2 Special inspectors employed by the enforcing agency must be qualified and able to demonstrate competence in the discipline they are inspecting.							
Verifications						-	
703.1 Verification of compliance with this code may include construction documents, plans, specifications, builder or installer certification, insports, or other methods acceptable to the enforcing agency which show substantial conformance.							

BEFORE COMMENCING ANY SITE PREPARATION, MATERIAL ORDERS OR CONSTRUCTION ACTIVITY-LIL LEVELS OMNESIONS AND ANGLES HAVE TO LOCATIONS OF EXISTING UTILITIES. VERIFY ACCURACY AND COMPLETENESS OF THE PLANS, AND APPROVAL OF PERMITS NECESSARY FOR THE PROJECT.

Project Notes

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ss	5	SEWER LINES - EXISTING AND PROPOSED NEW LINES: 4" PVC SANITARY LINE WITH 1/4" - 1" MIN. FALL. JOINTS AND INSPECTIONS POINTS TO COMPLY WITH APPLICABLE CODES
w	w	WATER LINES - EXISTING AND PROPOSED NEW LINES: 3/4" PVC WATER LINE. PIPES, JOINTS AND CONNECTIONS TO COMPLY WITH APPLICABLE CODES
G	G	GAS LINES - EXISTING AND PROPOSED NEW LINES: 3/4" NATURAL GAS SUPPLY LINES. PIPES, JOINTS AND CONNECTIONS TO COMPLY WITH RELEVANT CODES
-E - E -	- E-	ELECTRICAL SERVICE LINE TO ADU
		EXISTING WALLS TO REMAIN
		PROPOSED WALLS
*****	, * ,	LANDSCAPE (PERMEABLE)
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WE	G	UTILITY METERS AND SHUT-OFFS: WATER, ELECTRICAL, GAS
		SHUT-OFF VALVE
Φ		WASTE LINE CLEANOUT

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GENERAL SITE PLAN NOTES:

- PROPOSED ADU TO BE LOCATED WITHIN THE FOOTPRINT OF THE EXISTING GARAGE AS INDICATED ON THE SITE PLAN.
- ALL LEVELS, DIMENSIONS AND ANGLES HAVE TO BE CHECKED AND VERIFIED 2 PRIOR TO COMMENCING ANY WORK ON SITE. VERIFICATION SHALL INCLUDE BUT NOT BE LIMITED TO: A. EXISTING SPACE AND EXISTING FRAMING:
- EXISTING UTILITIES AND VIABLE CONNECTION ROUTES.
 SMOKE AND CARBON MONOXIDE ALARMS ARE REQUIRED TO BE INSTALLED IN 3 SIMILATION INFORMATION AND A STATEMENT ALTERATIONS, REPAIRS, OR RESIDENTIAL GROUP R OCCUPANCIES WHEN ALTERATIONS, REPAIRS, OR ADDITIONS REQUIRING A BUILDING PERMIT OCCUR. SMOKE AND CARBON MONOXIDE ALARMS SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS, AND APPLICABLE PROVISIONS OF CBC, CRC, CFC, AND COUNTY OR MUNICIPAL STANDARDS.
- THE PROJECT DOES NOT INCLUDE ANY LANDSCAPE DESIGN.

ADDRESS IDENTIFICATION NOTES: 1. ADU ADDRESS IDENTIFICATION TO BE ASSIGNED ADDRESS SPEC - THE ADDRESS IDENTIFICATION CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND. AND EACH CHARACTER SHALL BE NOT LESS THAN 4-INCHES IN HEIGHT WITH A STROKE WIDTH OF NOT LESS THAN

0.5-INCH PUBLIC RIGHT OF WAY:

THERE IS AN EXISTING CURR CUT FOR THE PROPERTY. TO REMAIN. THE PROJECT DOES NOT INCLUDE ANY WORK IN THE PUBLIC RIGHT OF WAY.

UTILITIES

- UTILITY CONNECTIONS ARE INDICATED ON THE SITE PLAN AND LABELED. THE PROJECT CONTACT AND/OR THEIR LICENSED CONTRACTOR SHALL CONFIRM THE LOCATION, SIZE AND CAPACITY OF ALL UTILITY LINES
- INCLUDING, BUT NOT LIMITED TO, GAS SERVICE, WATER SERVICE, SEWERWASTE SERVICE, ELECTRICITY AND DATA SERVICE. THE PROPOSED SERVICE CONNECTIONS FOR THE ADU SHALL BE VERIFIED AND DETERMINED TO BE VIABLE CONNECTION PATHS PRIOR TO COMMENCING WORK ON THE PROJECT. IF ANY REQUIRED UTILITY LINE OR CONNECTION IS MISSING. DISPLACED OR OTHERWISE INACCURATE, THE CONTRACTOR AND/OR PROJECT CONTACT SHALL NOTIFY ALL PARTIES AND A REVISION TO THE PLANS SHALL BE MADE. WATER SUPPLY: ADU TO BE CONNECTED TO THE COLD WATER SUPPLY TO
- 3. THE PRIMARY DWELLING SEWER: ADU TO BE CONNECTED THE SEWER LINE ON THE PROPERTY.
- ELECTRICAL ENERGY: PROVIDE MAIN SWITCH FOR THE ADU IN THE MAINDWELLINGELECTRICAL PANEL BOARD. INSTALL ELECTRICAL SUBPANEL
- IN THE ADU GAS: ADU TO BE CONNECTED TO THE GAS SUPPLY TO THE PRIMARY DWELLING.
- NO GAS SUPPLY IN THE ADU (ADU HOT WATER SUPPLY WILL BE CONNECTED TO THE PRIMARY DWELLING WATER HEATER).
- WATER MAINS AND SERVICES. INCLUDING METERS. MUST BE LOCATED AT LEAST 10' HORIZONTALLY FROM OR AT LEAST 1' VERTICALLY ABOVE ANY PARALLEL PIPELINE CONVEYING UNTREATED SEWAGE (SEWER LATERAL) CALIFORNIA WATERWORKS STANDARDS, TITLE 22, CHAPTER 16, SECTION 64572

DRAINAGE NOTES:

EXISTING GUTTERS, DOWNSPOUTS AND SITE DRAINAGE TO REMAIN. NO CHANGE.

STRUCTURE CONVERSION NOTES:

- REMOVE COMPONENTS OF EXISTING CONSTRUCTION WHERE INDICATED ON DRAWINGS OR AS REQUIRED TO COMPLETE NEW WORK SHOWN OR IF EXISTING STRUCTURE REQUIRES REPLACEMENT.
- PROVIDE ADEQUATE TEMPORARY SUPPORT FOR ALL PORTIONS OF THE EXISTING STRUCTURE WHICH MAY BE AFFECTED BY THE REMOVAL OF ADJACENT OR CONNECTION COMPONENTS, UNTIL PERMANENT SUPPORT AND BRACING HAS BEEN INSTALLED. DO NOT DRILL OR CUT EXISTING JOISTS BEAMS, COLUMNS OR OTHER STRUCTURAL ELEMENTS UNLESS SPECIFICALLY INDICATED.
- TAKE NECESSARY PRECAUTIONS TO MINIMIZE DAMAGE TO EXISTING COMPONENTS AND 3 FINISHES TO REMAIN. SALVAGE EXISTING MATERIALS WHICH ARE TO BE RELISED IN THE NEW CONSTRUCTION
- PROPERLY DISPOSE OF ALL REMOVED MATERIALS WHICH WILL NOT BE REUSED IN THE NEW CONSTRUCTION
- WHERE PORTIONS OF THE STRUCTURE HAVE BEEN EXPOSED TO THE WEATHER AS A RESULT OF THE REQUIRED DEMOLITION, TEMPORARY WEATHER PROTECTION SHALL BE 6 PROVIDED UNTIL THE EXPOSED PORTIONS HAVE BEEN ENCLOSED BY THE NEW CONSTRUCTION.
- PROTECT EXISTING SURFACES TO MINIMIZE REPAIR OF FANING AND REFINISHING RESTORE SURFACES DISTURBED BY DEMOLITION TO ORIGINAL CONDITION AND PATCH SURFACES VISIBLE AFTER DEMOLITION TO MATCH ADJACENT FINISH CONDITIONS.
- ANY EXISTING ELECTRICAL AND OR PLUMBING WORK WHICH IS NOT COMPLIANT WITH CURRENT CODES SHALL BE REMOVED.
- ANY EXISTING PLUMEING WORK THAT IS TO BE ABANDONED SHALL BE CAPPED OFF WITHIN EXISTING WALLS SO THAT FINISH SURFACE IS SMOOTH AND UNINTERRUPTED.

SITE PREPARATION NOTES:

- TAKE NECESSARY PRECAUTIONS TO MINIMIZE DISTURBANCE OF EXISTING VEGETATION TO REMAIN.
- SOIL DISTURBANCE SHALL BE LIMITED TO THAT WHICH IS NECESSARY FOR SITE PREPARATION AS DESCRIBED IN THIS SECTION INCLUDING UTILITY CONNECTIONS. PREVENT WATER FROM RUNNING INTO EXCAVATED AREAS. 3
 - BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATTER AND ROCKS OR LUMPS OVER 6 INCHES (2 INCHES AT UTILITY TRENCHES). COMPACT BACKFILL TO AT LEAST 90 PERCENT RELATIVE COMPACTION PER ASTM D-1557; IN LIFTS NOT EXCEEDING 8 INCHES UNCOMPACTED. DEPRESSION FROM REMOVAL OF OBSTRUCTIONS SHALL BE OPENED TO WORKING SIZE:
- 4 REMOVE DEBRIS AND SOFT MATERIAL; BACKFILL AND COMPACT AS NECESSARY. TRENCHING SHALL BE TRUE TO GRADES INDICATED. EXTEND UTILITY TRENCHES TO BE
- 5 SUFFICIENT DEPTH STANDARDS AND LOCAL CODES. PROPERLY SUPPORT TRENCHES. UNUSUAL CONDITIONS NOT COVERED IN THE PROJECT. IF ENCOUNTERED. SHALL BE
- 6 BROUGHT TO THE ATTENTION OF THE PROJECT'S CONTACT AND RESOLVED ACCORDING
- TO APPLICABLE CODES. IF DEEMED NECESSARY, HAZARDOUS WASTE TESTING SHALL BE CONDUCTED INCLUDING 7
- ASBESTOS TESTING & REMEDIATION. AVOID LAND-DISTUBBING WORK DURING ANY WET WEATHER SEASON. PROJECT CONTACT 8 TO VERIFY CLIMATE AND WEATHER FORECASTS PRIOR TO COMMENCING THE LAND
- DISTURBING WORK EXISTING VEGETATION TO REMAIN SHALL BE PROTECTED, INSTALL APPROPRIATE/PROTECTIVE FENCING/PERIMETER CONTROLS PRIOR TO COMMENCING 9.
- WORK 10.
- ALL IMPERVIOUS SURFACES SHALL BE SWEPT (NOT WASHED OR HOSED DOWN), AND MAINTAINED FREE OF DEBRIS AND ACCUMULATIONS OF DIRT.
- ALL CONSTRUCTION WASTE SHALL BE CONTAINED ON SITE AND COVERED, INCLUDING TRASH, PAINT, GROUT, CONCERTE, ETC, ANY WASH OUT FACILITY SHALL BE CONTAINED. MAINTAINED, AND ITS CONTENTS DISPOSED OF PROPERLY; NO MATERIAL SHALL BE WASHED INTO THE STREET. 12.
- PROJECT CONTACT AND SUBCONTRACTORS MUST ENSURE ALL CONSTRUCTION VEHICLES AND EQUIPMENT ARE MAINTAINED IN WORKING ORDER, AND WILL NOT CAUSE DIRT, MUD, OLL, GREASE, OR FUEL TO BE DISCHARGED OR TRACKED OFF-SITE INTO THE STREET.

Housable DRAFTING SERVICES

Revisions

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_ ADU Date 6/27/2022 5:29:00 PM Issue Date SITE PLAN A1.0

As indicated

REVENCES OF ACT DEPARTURE OF ACT DEPARTURE OF A REPORT OF A DEPARTURE DEPARTURE DEPARTURE DE ALTO DO MANAGEME AND CONCIDENTING, ALLE CONCIDENTING, ECT CONTROL HIS PRIVACE AND THE PARA DET ADDRESS AND SHALL BE REPORTED FOR THE VARIANCE AND DESCRIPTION OF ALL SPECIFIC PROPOSED THROUGHOUT, THE PRACE CONTROL THRU AND THE VARIANCE AND ON REPORTED THROUGHOUT THRU AND TH Scale

REFORE COMMENCING ANY SITE PREPARATION MATERIAL ORDERS OR CONSTRUCTION ACTIVITY ALL LEVELS, DIMENSIONS AND ANGLES HAVE TO BE CHECKED AND VERIFIED, CALL 811 TO VERIFY LOCATIONS OF EXISTING UTILITIES. VERIFY ACCURACY AND COMPLETENESS OF THE PLANS AND APPROVAL OF PERMITS NECESSARY FOR THE PROJECT

Project Notes

Construction Best Management Practices (BMPs)

Paving/Asphalt Work

seal. etc.

or wash it into outters.

Sawcutting & Asphalt/Concrete Removal

concrete pavement

drain system.

immediately.

3

2

3

Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep

Do not use water to wash down fresh asphalt

Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters.

or gravel bags to keep slurry out of the storm

Shovel abosorb or vacuum saw-cut slurry and

in one location or at the end of each work day

(whichever is sooner!). If sawcut slurry enters a catch basin, clean it up

dispose of all waste as soon as you are finished

Materials & Waste Management

Non-Hazardous Materials

- Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 dave
- Use (but don't overuse) reclaimed water for dust 2. control

Hazardous Materials

- Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, colvente, fuel oil and antifreeze) in accordance with city, county, state and federal regulations. 2 Store hazardous materials and wastes in water
- tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- 3 Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours. 4 Arrange for appropriate disposal of all hazardous

Waste Management

- Cover waste disposal containers securely with tarps at the end of every work day and during wet weather
- 2 Check waste disposal containers frequently for leaks and to make sure they are not overfilled Never hose down a dumpster on the construction
- 3 Clean or replace portable toilets, and inspect them frequently for leaks and spills. Dispose of all wastes and debris properly. 4.
- Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gvp board, pipe, etc.)
- 5. Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous

Construction Entrances and Perimeter

- Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off
- 2 Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking

Pollutant Control

- 1 Duct openings and other related air distribution component openings shall be covered during construction. Adhesives, sealants and caulks shall be
- 2. compliant with VOC and other toxic compound
- Paints, stains and other coatings shall be 3 compliant with VOC limits. 4. Aerosol paints and coatings shall be compliant
- with product weighted MIR limits for ROC and other toxic compounds. 5 Documentation shall be provided to verify that
- compliant VOC limit finish materials have been
- 6. Carpet and carpet systems shall be compliant with VOC limits. 7.
- 80 percent of floor area receiving resilient flooring shall comply with specified VOC criteria.

Farthmoving 2

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4

- Maintenance and Parking 1. Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage. Perform major maintenance, repair jobs, and vehicle and equinment washing off site If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of
 - fluids as hazardous waste If vehicle or equipment cleaning must be done onsite, clean with water only in a hermed area that will not allow rinse water to run into gutters.
- streets storm drains or surface waters. Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment

Spill Prevention and Control

Equipment Management & Spill Control

2.

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5

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2

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- Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times. 2
- and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- Clean up spills or leaks immediately and dispose of cleanup materials properly. Do not hose down surfaces where fluids have
- materials, cat litter, and/or rags). Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury
- Clean up spills on dirt areas by digging up and 6.
- required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800)

- All MEP systems including but not limited to electrical, solar, plumbing, gas, HVAC installers are trained and certified in the proper installation
- Special inspectors employed by the enforcing agency must be qualified and able to demonstrate competence in the discipline they
- may include construction documents, plans, specifications builder or installer certification, inspection reports, or other methods accentable to the enforcing agency which show substantia conformance

Annular spaces around pipes, electric cables mortar, concrete masonry or similar method acceptable to the enforcing agency.

INDUCT CONTACT DEVINCED TO THE INDUCT CONTACT SHULL BE THE SOLIT RESPONDED. FAITHY FOR MANAGINA COORDINATING AND MANAGINA

- Schedule grading and excavation work during dry Stabilize all denuded areas install and maintain temporary erosion controls (such as erosion runoff. control fabric or bonded fiber matrix) until 2 Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog
- vegetation is established. Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned
- Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining
- 5

Contaminated Soils

weather

- Inspect vehicles and equipment frequently for
- spilled. Use dry cleanup methods (absorbent
- properly disposing of contaminated soil. Report significant spills immediately. You are 7
- 852-7550 (24 hours)

Installer and Special Inspector Qualifications

- of such systems.
- are inspecting. Verification of compliance with applicable codes

Enhanced Durability and Reduced Maintenance

conduits or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement

appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.. Keep excavated soil on site and transfer it to dump trucks on site not in the streets

If any of the following conditions are observed,

- test for contamination and contact the Begional Water Quality Control Board: A. Unusual soil conditions, discoloration, or Abandoned underground tanks.
 - Abandoned wells. Buried barrels, debris, or trash.

Construction Waste Reduction Disposal and Recycling

A minimum of 65% of the non-hazardous construction waste generated at the site shall be diverted to recycle or salvaged. This is achieved by submitting a Waste Management Plan for approval by the Building and Safety Department prior to construction or demolition permit issuance and providing documentation to demonstrate compliance with the Waste Management Plan after completion of construction or demolition and/or prior to final permit inspection.

Concrete, Grout & Mortar Application

- Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind. Avoid paying and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater
 - Wash out concrete equipment/trucks offsite or in a designated washout
 - area, where the water will flow into a temporary waste pit, and in a manner
 - that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage
 - When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas or drain onto a bermed surface to be pumped and disposed of properly.

Landscaping

- Protect stocknilled landscaping materials from wind and rain by storing them under tarps all vear-round
- Stack bagged material on pallets and under cover з
- Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather

Painting & Paint Removal

Painting Cleanup and Removal Never clean brushes or rinse paint containers

- into a street gutter storm drain or stream For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes
- to the sanitary sewer. Never pour paint down a storm drain. For oil-based paints, paint out brushes to the 3
- extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste
- Paint chips and dust from non-hazardous dry stripping and sand blasting may be swent up or collected in plastic drop cloths and disposed of as trash.
- Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, 5. mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state- certified contractor.

Dewatering

- Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant. Divert run-on water from offsite away from all
- 2 disturbed areas. 3 When dewatering, notify and obtain approval
- from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- In areas of known or suspected contamination Λ call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and
- hauled off-site for treatment and proper disposal Sweep or vacuum any street tracking immediately and secure sediment source to 5
- prevent further tracking. Never hose down streets to clean up tracking. 6 Storm drain polluters may be liable for fines.
- Check with the local Planning Office or applicable Water Pollution Prevention Organization for more information

Housable DRAFTING SERVICES

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Revisions



ADU

Date 6/27/2022 5:29:00 PM Issue Date CONSTRUCTION BMP'S

A1.1

Scale











(1)

1/4" = 1'-0"

- ELEVATIONS GENERAL NOTES: 1. THE ADU SHALL RESEMBLE THE PRIMARY DWELLING IN TERMS OF STYLE, INCLUDING, BUT NOT LIMITED TO MATERIALS, COLORS AND SHAPE OF
- WALLS, ROOF, DOORS, WINDOWS AND TRIMS. SEE SHEET AS FOR DETAILS OF ALL EXTERIOR LIGHTS, ELECTRICAL APPLIANCES AND OUTLETS. 2.

ROOFING:

- ASPHALT SHINGLES, COLOR TO MATCH THE PRIMARY DWELLING. THE EXACT COLOR SELECTION TO BE CONFIRMED WITH PROJECT CONTACT DURING CONSTRUCTION. 1
- BOOF GUTTERS SHALL BE PROVIDED WITH THE MEANS TO PREVENT THE ACCUMULATION OF LEAVES AND DEBRIS IN THE GUTTER. 2

- FASCIA, GUTTER, DOWNSPOUTS: 1. FASCIA AND GUTTER TO MATCH THE PRIMARY DWELLING. THE EXACT COLOR SELECTION TO BE CONFIRMED WITH PROJECT CONTACT DURING CONSTRUCTION.
- USE DIA 5" GUTTER AND DOWNSPOUTS, 26 GA. GALV. AS REQUIRED. INSTALL CONCRETE SPLASH BLOCKS AT DOWNSPOUT LOCATIONS FOR 2. DRAINAGE AWAY FROM STRUCTURE.

FLASHING AT ROOF TO WALL, ROOF VALLEY & RIDGE CONNECTIONS, ROOF PENETRATIONS: 1. USE 26 GA. GALV.

T.O. Building

T.O. Plate

Finish Floor 0"

N.G.

TANKLESS GAS WATER HEATER

FLASHING/DRIP EDGE/ WEEP SCREED AT THE CONNECTION WALL TO FOUNDATION: 1. USE 26 GA. GALV.

EXTERIOR WALLS:

EXTERIOR FINISH: TO MATCH THE PRIMARY DWELLING. THE EXACT COLOR SELECTION TO BE CONFIRMED WITH PROJECT CONTACT DURING CONSTRUCTION.

DOOR AND WINDOW TRIMS: 1. TO MATCH THE PRIMARY DWELLING. THE EXACT COLOR SELECTION TO BE CONFIRMED WITH PROJECT CONTACT DURING CONSTRUCTION.

- CONCRETE LANDING/PATIO:
- CRETE LANDING/PATIO: DECK TILES (OPTIONAL) AND UNDERLAYMENT (OPTIONAL) SHALL BE TYPE AND COLOR AS SELECTED BY PROJECT CONTACT. DECK TO SLOPE 110" 1' AWAY FROM THE ADU TO ALLOW WATER FLOW AWAY FROM THE WALLS.







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O TYPICAL ASSEMBLIES

A4 ROOM FINISH SCHEDULE							
Number	Name	Area	Ceiling Finish	Wall Finish	Floor Finish		

1	KITCHEN / LIVING	325 SF	White Paint	White Paint	Laminate Plank Floor
2	BEDROOM	122 SF	White Paint	White Paint	Laminate Plank Floor
3	CLOSET	12 SF	White Paint	White Paint	Laminate Plank Floor
4	BATH	53 SF	White Paint	White Paint	Ceramic Tiles
		512 SF			

A4 DOOR SCHEDULE								
Type Mark	Count	Function	Operation	Height	Width	Type Comments		
1	1	Exterior	Swing	6*-8*	3'-0"	EXISTING DOOR TO REMAIN		
2	2	Interior	Swing	6"-8"	2'-6"			
3	1	Interior	Sliding	6'-8"	4'-0"			

A4 WINDOW SCHEDULE								
Type Mark	Count	Operation	Sill Height	Head Height	Height	Width	Comments	
						•		
1	2	Sliding	3'-2"	7'-2"	4'-0"	4'-0"	EXISTING WINDOW TO REMAIN	
2	1	Single-Hung	3'-2"	6'-8"	3'-6"	3'-0"	EXISTING WINDOW TO REMAIN	
3	1	Single-Hung	3'-8"	6'-8"	3'-0"	3'-0"	EXISTING WINDOW TO REMAIN	
4	1	Sliding	4'-8"	6'-8"	2'-0"	3'-0"	EXISTING WINDOW TO BEMAIN	

- ROOM FINISHES NOTES: 1. BATHROOM TILES AND UNDERLAYMENT SHALL BE TYPE AND COLOR AS SELECTED BY PROJECT CONTACT. FLOORING SHALL BE TYPE AND COLOR AS SELECTED BY PROJECT CONTACT. KITCHEN COUNTER-TOPS, SPLASH AND CABINETRY SHALL BE COLOR AND FINISH AS SELECTED BY PROJECT CONTACT.
- CONSULT PROJECT CONTACT FOR ALL INTERIOR TRIM INCLUDING. BUT NOT LIMITED TO, CEILING MOLDINGS, LIGHTING MOLDINGS WOOD BASES AND DOOR AND WINDOW CASINGS

DRYWALL

- USE 58" GYPSUM BOARD THROUGHOUT THE BUILDING
- DRYWALL (SHEETROCK) IS THE INTERIOR FINISH MOST COMMONLY USED IN RESIDENTIAL CONSTRUCTION. THE FOLLOWING GUIDELINES PERTAIN TO ITS APPLICATION. SAME APPLIES TO WATERPROOF CEMENT WALL BOARDS.
- WALLBOARD SHALL NOT BE AFFLICATION. SAME AFFLIES TO WATER FROOF GEMENT WALL BOARDS. WALLBOARD SHALL NOT BE INSTALLED UNTIL WEATHER PROTECTION FOR THE INSTALLATION IS PROVIDED. WHEN PRACTICAL, WALLBOARD SHOULD BE APPLIED FIRST TO THE CEILINGS, AND THEN TO WALLS. SHEETS SHOULD BE BROUGHT INTO CONTACT BUT NOT FORCED INTO PLACE, SPACES BETWEEN SHEETS SHOULD NOT EXCEED 1/4" AND TAPERED EDGES SHOULD
- BE PLACED NOT FORCED INTO FORCE INTO FERCES BEACES BETWEEN SHEETS SHOULD NOT EXCEED 114 AND TAFERED EDGES SHOULD BE PLACED NEXT TO EACH OTHER WHEREVER POSSIBLE. CUTOLITS FOR FLECTRICAL OUTLIETS, PIPES FIXTURES OR OTHER SMALL OPENINGS SHOULD BE CUT OUT NEATLY WITH A MAXIMUM 5 CLEARANCE OF 1/4". IF THERE ARE ANY GAPS EXCEEDING 1/4", THEY MUST BE FILLED WITH TAPING COMPOUND AND DRYWALL TAPE

6.

- AILING: A. NAILS SHOULD BE DRIVEN SO THAT THE HEAD LIES IN A SMALL DIMPLE FORMED BY THE LAST BLOW OF THE HAMMER. TAKE CARE NOT TO FRACTURE THE BOARD WHEN NAILING. FRACTURES OF THE WALLBOARD CAUSED BY OVER DRIVING MUST BE CORRECTED BY ADDITIONAL NAILING. NAILS MUST BE BETWEEN 38" AND 1" FROM THE EDGES. AND NAILS ON ADJACENT EGGES SHOULD BE OPPOSITE EACH OTHER. IF YOU ARE USING THE SINGLE NALING SYSTEM, THE NALS SHOULD BE SPACED 7' ON CENTER ON THE CEILINGS AND 8' ON CENTER ON THE WALLS. THE DOUBLE NAILING SYSTEM IS ALSO PERMITTED. GROUPS OF TWO NAILS 2 - 2 1/2" APART ARE SPACED 12" ON CENTER IN THIS SYSTEM. APPROVED SCREWS MAY ALSO BE USED TO APPLY WAILBOARD. SCREWS MUST BE PLACED 3/8° FROM THE END OR EDGES OF THE BOARD AND SPACED 12° ON CENTER. SCREWS MUST BE SCREWS MUST BE PLACED 3/8° FROM THE END OR EDGES OF THE BOARD AND SPACED 12° ON CENTER. SCREWS MUST BE
- в USED FOR FASTENING WALLBOARD AT POCKET DOORS. FASTENING WALLBOARD AT POCKET DOORS. FASTENERS AT THE TOP AND BOTTOM PLATES OF VERTICAL ASSEMBLIES. OR THE EDGES AND ENDS OF HORIZONTAL
- С ASSEMBLIES PERPENDICULAR TO SUPPORTS, AND AT THE WALL LINE MAY BE OMITTED EXCEPT ON SHEAR-RESISTING ELEMENTS OR FIRE RESISTIVE ASSEMBLIES. ALL EDGES OF BRACED WALL PANELS AND FIREWALLS MUST BE NAILED TO EDAMING

CORNERS: 7.

- ALL METAL REINFORCED CORNERS MUST FIT SNUGLY AGAINST WALLBOARD AND SHOULD BE NAILED APPROXIMATELY 12" ON Δ ALL 11 FOGE METAL TRIM SHOULD BE NAILED EVERY 6" PAPERBACK CORNER BEAD IS ACCEPTABLE IF INSTALLED IN в
- ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. BATHROOM 8
- WATERPROOF CEMENT WALL BOARD SHALL BE USED IN THE BATHROOM AND BACKED WITH A VAPOR BARRIER.
- DRYWALL FASTENERS 9. 6D CEMENT-COATED BOX NAIL OB 1 7/8" DRYWALL NAIL
 - SCREWS SHALL BE LONG ENOUGH FOR THE FULL-DIAMETER PORTION TO PENETRATE INTO WOOD FRAMING NOT LESS THAN 5/8 INCH AND THROUGH METAL FRAMING NOT LESS THAN 1/4 INCH

DOORS AND WINDOWS SCHEDULE NOTES:

- ALL MOUNTING ACCESSORIES SHALL BE PROVIDED ACCORDING TO MANUFACTURER'S REQUIREMENTS. AND MUST COMPLY WITH CBC 1010.1.9 DOORS/WINDOWS MANUFACTURER, MODEL AND DETAILS ARE FOR DESIGN PURPOSES AND SHALL BE VERIFIED WITH THE PROJECT 2 CONTACT
- DURING CONSTRUCTION AND INSTALLATION ANY DOORS AND WINDOWS CAN BE REPLACED WITH EQUIVALENT BRAND AND MODEL 3 PROVIDED IT MEETS ALL THE REQUIREMENTS FOR
 - ENERGY PERFORMANCE
 - EGRESS (IF APPLICABLE); TEMPERED GLAZING (IF APPLICABLE);

 - SIZE (GLAZED AREA FOR NATURAL LIGHT ACCESS); DOES NOT IMPACT THE STRUCTURAL PLAN.
- PROJECT CONTACT AND/OR THEIR LICENSED CONTRACTOR TO VERIFY MANUFACTURER'S RECOMMENDATIONS FOR, BUT NOT 4. LIMITED TO, ROUGH OPENING SIZES AND INSTALLATION PRIOR TO VERIFY ANNOVACIONES S RECOMMENDATIONS FOR, BUT NOT LIMITED TO, ROUGH OPENING SIZES AND INSTALLATION PRIOR TO COMMENCING THE FRAMING. PROJECT CONTACT AND/OR THEIR LICENSED CONTRACTOR TO VERIFY ALL WINDOW DIMENSIONS MODELS ROUGH OPENINGS IN
- 5 THE FRAMING DURING CONSTRUCTION AND TEMPERED GLAZING REQUIREMENTS PRIOR TO ORDERING DOORS AND WINDOWS FOR THE PROJECT
- THE FROECUT. ALL DOORS AND WINDOWS SHALL BE INSTALLED AND WATERPROOFED ACCORDING TO THESE PLANS AND MANUFACTURER'S RECOMMENDATIONS. TYPICAL FLANGED WINDOW AND DOOR SHALLED BE WATERPROOFED WITH HUBER ZIP SYSTEM OR SIMILAR SILL PANS SILL JAMB AND HEADER FLASHING
- 7 ALL WINDOWS AND DOORS WITH GLAZING SHALL HAVE THE CERTIFYING LABEL ATTACHED, SHOWING U-VALUE. THE LABEL SHALL BE NOT REMOVED UNTIL THE FINAL INSPECTION.

EMERGENCY ESCAPE (EGRESS) WINDOWS (CBC 1030 and CRC R310.1) 1. AT LEAST ONE WINDOW IN EACH BEDROOM IS REQUIRED TO MEET THESE REQUIREMENTS:

- MINIMUM NET 5.7 SOFT OF OPENABLE AREA
- MINIMUM NET 20" CLEAR WIDTH WHEN OPEN; MINIMUM NET 20" CLEAR HEIGHT WHEN OPEN;
- Ď. MAXIMUM HEIGHT OF 44" FROM THE FINISHED FLOOR TO THE BOTTOM OF THE CLEAR OPENING;

TEMPERED GLAZING REQUIREMENTS (CBC 2406 and CRC 308.1, R308.4) 1. ALL DOORS WITH GLAZING SHALL BE OF TEMPERED GLAZING.

- WINDOW GLAZING REQUIREMENTS ARE INDICATED ON THE FLOOR PLAN SHEET A2.0. PROJECT CONTACT AND/OR THEIR LICENSED CONTRACTOR TO VERIFY TEMPERED GLAZING REQUIREMENTS PRIOR TO WINDOW ORDERING AND INSTALLATION SEE THE REQUIREMENTS BELOW.
- TEMPERED GLAZING SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS: A. WITHIN A 2' ARC OF EITHER THE EDGE OF A DOOR AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN. 60° ABOVE THE WALKING SURFACE. ADJACENT TO A BOTTOM STAIR LANDING WHERE GLAZING IS LESS THAN 36 INCHES ABOVE THE LANDING AND WITHIN 60
- в INCHES HORIZONTALLY OF THE LANDING. ADJACENT TO STAIRS WHERE GLAZING IS LOCATED LESS THAN 36 INCHES ABOVE THE PLANE OF THE ADJACENT
- C. WALKING SUBFACE
- WITHIN A PORTION OF WALL ENCLOSING A TUB/SHOWER WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE STANDING SURFACE AND DRAIN INLET. D
- WITHIN 60 INCHES OF A TUB/SHOWER WHERE THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE. ANY GLAZING MEETING ALL THE FOLLOWING CONDITIONS:
- EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9 SQUARE FEET EXPOSED BOTTOM EDGE IS LESS THAN 18 INCHES ABOVE THE FINISHED FLOOR
- EXPOSED TOP EDGE IS GREATER THAN 36 INCHES ABOVE THE FINISHED FLOOR WHERE A WALKING SURFACE IS WITHIN 36 INCHES HORIZONTALLY OF THE GLAZING
- WHERE REQUIRED, TEMPERED GLAZING EXCEPT TEMPERED SPANDREL GLASS) SHALL BE PERMANENTLY IDENTIFIED BY A MANUFACTURER MARKING THAT IS PERMANENTLY APPLIED AND CANNOT BE REMOVED WITHOUT BEING DESTROYED (E.G. SAND BLASTED, ACID ETCHED, CERAMIC FIRED, LASSE TECHED, OR EMBOSSED) A LABEL SHALL BE PERMITTED IN LIEU OF THE MANUFACTURER'S DESIGNATION

		usable	
Lj Cao	LJ@HOUSABI	LE.COM	k
1161 N	lission St. San Fr	rancisco, CA 94103	
O:(213) 577 1557 C:(2	13)787-7578	

REFORE COMMENCING ANY SITE PREPARATION MATERIAL ORDERS OR CONSTRUCTION ACTIVITY ALL LEVELS, DIMENSIONS AND ANGLES HAVE TO BE CHECKED AND VERIFIED, CALL 811 TO VERIFY LOCATIONS OF EXISTING UTILITIES. VERIFY ACCURACY AND COMPLETENESS OF THE PLANS

AND APPROVAL OF PERMITS NECESSARY FOR THE PROJECT

Project Notes

	Revisions	
No.	Description	Dat
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Date 6

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A4.0 Scale

PROJECT CONTACT DENETED TO THE PROJECT CONTACT SHALL BE THE SOLE RESPONDED ENTRY TO INMANDIAL AND COORDINATING ALL INCIDENCE CONTACT DENETED TO THE PROJECT CONTACT DENETED AT A PROJECT CONTACT DENTE AT A PROJECT DENTE AT A PROJECT DENTE AT A PROJECT DENTE AT A PROJECT DENTE AT A PRO

1 1/2" = 1'-0'

FOAM-LOK" 2000 **Closed-Cell Spray Insulation**

Product Use and Design FOAM-D07*2000 is a Gosed-Cell spray applied foam, which was developed using a ID% approach energy energiation between generative thirth when installed following application guidelines achieves tenacicosty for familing members and substates TCAMILON*2000 CDeadCell Sergia Nam provides appendie energy recommy and clandibility while significantly reducing unmanaged motivate and art Afficiation. As a component of a "systems approach" to proper building envelope construction, FOAM-LOK" 2000 Closed-Cell spray from provides

TYPE : (, II, III, IV, V (A&B)	Constru	action	
Recommended Product	Applica	tions	
- Walls	- Unve	need Attics	Ceilings
Floors	-Vente	ed Attics	Piping
Unvented Crawl Spaces	-Vente	d Crawl Spaces	 Foundations
Concrete Slabs	· Ducts		Tanks
Cold Storage	· Freez	REFS.	Coolers
Recommended Processi	ng Parai	meters	
Processing Designa	tion		Regular
		20.002	

95%- and above FOCM-LOK" 2000 is a Class I formulation, as Tested per ASTM E84, and at a thickness of 4.0 inches possesses the flammability characteristics shown below: (UL 723, NEPA 255, UBC 8-1) ptimum hose pressure and temperature may vary as a function of the type of quipment, ambient and substrate conditions, and the specific application. It theresponsibility of the applicator to properly interpret quipment technical tenture, particularly information that relates acceptable conditinations of un chamber size, reportions on output, and material pressures.

Fourment Danamir Pressure	
enderden der aufenden eine eine einen eine	1,000 - 1,400 psi
Preheat Temperature	125 - 135 °F
	(52 - 57° C)
Hose Heat Temperature	125 - 135 'F
	(52 - 57" CI
Drum Storage Temperature	65 - 85 'F
	(18-30°C)
Shelf Life:	12 months when stored propert
to the proportioner.	ended for material transfer from con
CAUTION: Extreme care must b drum transfer pumps so as NOT t	nded for material transfer from con e taken when removing and reinst o reverse the "A" and "B" componen
2.1 charsee pumps are recommended to the proportioner. • CAUTION: Extreme care must b drum transfer pumps so as NOT to Donotcisculateormixothersupplic containers.	eded for material transfer from cont e taken when removing and reinst o reverse the "X" and "B" component ers" "A" or "B" component into FOAM- I
2.1 draineer pumps are recommended to the proportioner. CAUTION: Extreme care must be drum transfer pumps so as NOT to Donot circulate ormix other supplic containers. The plural component proportio component within ± 2% of the drained component within ± 2% of the drained pumps and the plural component proportion.	edied for material transfer from con e taken when removing and reinst o reverse the "A" and "B" component erst" "A" or "B" component into FOAM - oner must be capable of supplying sited 1:1 mixing ratio by volume.

LAPOLLA Lapolla Industries, Inc. | 15402 Vanlage Parkway East, Suite 322 Houston, Texas 77032 | (888) 4-Lapolla | lapolla.com

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Deduction Term Time. Terminal lateral density of the second second second second second second second ty as approximation of the manufacture transmission and compound and a quadrate transmission and and the second second second second (1) Colds and the second second second second second second second (1) Colds and the second secon

The analysis occurates percented the monetonic Disca.com/RF The data presented herein is not intended for use by non-professional applicators, or how persons who on cp jurchase or utilize this product in the normal course of their busines. The potential user must perform any pertimeters in order to determine the poducity performance and atalability in the minored application; since that determination of finess of the product for any particulation is in the responsibility of the lower. In the layer in the U.S. is addenied in 2004 segmenters the WC failer 1011 2. Setty and Houssim and A this creates the and during the particulation of any torus particular and a this creates the and during the particulation of any torus particular bulk of the creates the and during the particular of any torus particular bulk of the theorem is the setty of the setty of the setty of the createst of the theorem is the setty of the setty of the setty of the particular theorem is the setty of the setty of the setty of the setty of the theorem is the setty of the setty of the setty of the setty of the theorem is the setty of the setty of the setty of the setty of the theorem is the setty of th have only those guarantees and warranties expressed in writing by the man-ufacturer. The buyers sole remody as to any material claims will be against the app-licator of the product. The aforementioned data on this product is to be used as a guide and is subject to change without notice. The information herein is believed GUIDE AIDS & ULERCET DE CHANGE VITIGUE INCLUE INE INSTRUMENTA INSEET & DERIVING to be relisies, but vincourn risks may be present. NO WARRANTIES OF OR IMPLIED, INCLUDING PATENT WARRANTIES OF WARRANTES OF MERCHANTABILITY OR FITNESS FOR USE, ARE MADE BY LAPOLLA WITH RESPECT TO OUR PRODUCTS OR INFORMATION SET FORTH HEREIN.



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FOAM-LOK

SPRAY FOAM INSULATION

Properties Test Method/ Value

ASTM D1622 2.0-2.3 lbs/ft3

Sound Transmission Class 38

ASTM [1332-90 Class 28

≤25 ≤450

ASTM C423-02a Noise Reduction Coefficient 0.10

Aged 'R' Value/K Factor ASTM CS18 6.3 per inclv/0.1587 Compressive Strength ASTM D1621 25-30 psi

Air Leakage ASTM E283-04 <0.02L/s/M2 at 2.0 in Closed-Cell Content ASTM D2856 >90% ASTM F283-04

ASTM 6413-2004

Flammability NFPA 259 1885 Bhuffri 21.5 MJ/m² Structural Performance Modified Modified

ASTIN E-119 2 Hour Non-Load Bearing - Wood Stud 2 Hour Non-Load Bearing - Wood Stud Hour Non-Load Bearing - Steel Stud produce with faither operations are - -----

Hour Non-Load Bearing - Steel Stud
 Complex with testing per NFPA 285 maximum thickness 3 1/2" in specify
structions

*Diversified Testing Modified NF A 286 PER AC 377 Appendix X

For specific construction requirement of ASTM E119 and NFPA 285 testing please contact Lapolla Technical Group or your sales representative.

In Case of spalls or Leaks Utilize appropriate personal protective equipment Ventilate area to remove vapors Contain and cover spilled material with a loose, absorbent material such as oil-dry, vermiculite, sawdouts of Fuller's anth Shovel absorbent waster material into poper waste containers Wash the containistated areas thoroughly with hot, soapy water Report sakable spills to propre wrise environmental agencies

In Case of Fire Extraguishing Media: Dry cherrical ordinguishers such as mono ammorium phosphate, potassium sulida, and potassium chloride. Additionally, carbon cloude, high expansion (protekis) chemical form, or water spray for large fires.

All guarantees and warranties as to products supplied by Lapolla industries shall

SP# Thickness * 10.1/2 (266mm) inches

Up to 12 in (305mm) Up to 12 in (305mm)

Physical Properties

Core Density

perm inch Dimensional Stability 28 days at 160°F, 100%/RH

Credentials/Certifications

ASTM Method E84

Credentials/Ce

Location Wall Cavities

Room Corner Fire Testing* With 1/2* Thermal Barrier (Sheetrock) *NFPA 286 Location SPF Thickness * Wall Cavities Up to 12 in (305m)

FROTH-PAK[™] Foam Sealant

1. PRODUCT NAME FROTH-PAK" Foam Sealant	Basic Use FROTH-PAK" Foam Sealant can be used in	4. TECHNICAL DATA Applicable Standards
2. MANUFACTURER The Dow Chemical Company Dow Building Solutions 200 Larkin Center, 1603 Joseph Drive Midland, MI 48674 1866-1881-18UJE (2001) Fast 1409-823-1465	Interior or exterior commercial, residential, agricultural, industrial and institutional settings." If used in an exterior setting, a croating must be applied for ultraviolet (UV) protection. Typical commercial applications include spray polyurchune foam roof repair and	ASTM International • CSI8 – Standard Test Method for Steady- State Thermal Transmission Properties by Means of the Heat How Meter Apparatus • CZT3 – Standard Test Method for Shear Properties of Standwich Core Materials • DRSL – Standard Test Method for Commencement Research or Relied Collubor
Dow Chemical Canada ULC Dow Building Solutions 490 – 184 S. W. Sinite 2100 Calgary, AB T2P SH1 1866/58304ULE (2581) [English] 1860/363420 [French] dowbuildingsolutions.com	scaling roof perimeters and parapet walls. Residential uses include: • Roof and wall junctions • Wall and artic penetrations • Wall and artic penetrations • Untertrain, mechanical and planthing penetrations • Other gaps, catchs or crevices in the building envelope	 Omigressive Properties of agar Centar Plastics DR62 – Standard Test Method for Apparent Density of Rigid Cellular Plastics DR62 – Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics D2126 – Standard Test Method for Respons
3. PRODUCT DESCRIPTION FROTH-PAR' Fount Sealant is a two- component, quick-cure polyurethane foam that fills cavities, penetrations and cracks. ROTH-PAR' Found Sealant is a chemically cured foam, significantly reducing curing time, it dispenses, expensible and becomes tack- free in seconds. The penduct will skin over in	Sizes RHOTH-FMK' Foarm Scalarst is typically sold as a complete kit that includes pressurized "A" and "B" cylinders, plus dispensing gun/ hore assembly and accessories. FROTH+PMC Form Scalarst is also available in refliable, returnable tanks for applications requiring a large annount of foarm, such as positive houses.	of Rigid Cellular Pasters to Thermal and Humid Aging Test Method for Water Absreption of Rigid Cellular Plastics 9 596 – Sandard Test Methods for Water Vapor Transmission of Materials Cal20 – Standard Test Methods for Reeskin Load and Flexural Properties of Biock-Type Thermal Invaluation
TABLE 1- SIZES AND THEODETICAL VIELDS	See Table 1 for size and yield information.	Physical Properties FROTH-PAK" Foam Sealant exhibits the typical properties and characteristics indicated in Table 2 when tested as represented.

ABLE 1: SIZES AND THEORETI	CAL YIELDS FOR FROTH-PAK" FOAM SEALANT	Table 2 when tested as represented.
		Fire Information
835		FROTH-PAK" feam is combustible and will burr
FROTH-PAK" 12	12 (0.03)	if exposed to open flame or sparks from high-
FROTH-PAK" 12D	120(0.28)	energy sources. Do not expose to temperatures
FROTH-PAK" 200	200-(0.46)	above 240 P (105 C).
PROTH-PAK* 620	020(1.46)	Code Compliances
Refileble Cylinders		FROTH-PAK" Foam Sealant complies with the
FROTH-PAK" 17 (ps)	206014.85	following codes:
FROTH-PAK" 27 [gal]	3240(7.65)	CONC 194471 Indemniter Internity Inc. (III) Classifier
FROTH-PAK* 60 [gal]	6960(16.3)	see Classification Certificate R3655
FROTH-FNK" 120 kps0	15430(36.4)	
FROTH-PAK" 350 (pal)	43890 (103.6)	Contact your Dow sales representative or

PRODUCT INFORMATION | United States/Canada | COMMERCIAL/RESIDENTIAL

These properties are typical but do not constitute specifications. Instructions. Instructions. Second Test Method Second Test Method Second Test Method Second Seco

			0.000	PADIFILI I
Plane Spread/Smeke Developed, ^{c1} ASTM	E84/UL728 g 4" wide by 2" thick	25/106	FROTH	PAK" Foam Insulation is distributed
Nominal Density, ASTM D1622, Ib/11		1.75	through	an extensive network. For more
Thermal Resistance ¹⁰ per inch. ASTM CS1 bitfal Aged LTTR measured at 2° bick Aged LTTR measured at 1° bick	R, ft2+t+*F/Bba, R-value, min.	6.8 5.5 5.3	inform. 5-800-23 5-800-56	ition, call: 12-2436 (English) 15-1255 (Prench)
Water Vapor Permeance, ASTM E96, perm	8 T'Bick	3.18	7. WAR	RANTY
Water Absorption, ASTM D2042, % by vol-	Te	5.44	Not app	licable.
Air Permeability, ASTM E2178 air leahage at	1" Inicia, Linvin dji 76 Pa	0	8. MAI	TENANCE
Air Permeability, ASTM E283 air leakage at C	15" thick, 83 (min+11" @ 75 Pa	0	Not app	licable.
Dimensional Stability, ASTM D2126, 19 vol 558/F/10096, RH g 1 vik 158/F/10096, RH g 2 viks -40/F/amb RH g 2 viks -40/F/amb RH g 2 viks	ume change	0.10 -0.06 0.02 0.36	9. TECH Dow car to help FROTH	INICAL SERVICES n provide technical information address questions when using PAC [®] Four Scalart Technical
Compressive Strength, ASTM D1621, Ib/i	n', parallel	23.4	personr	el are available to assist.
Pleound Strength, ASTM C203, Ib/Inf, part	allel	22.7	For tech	inical assistance, call:
Tensile Strength, ASTM 01623, bv/m ¹ , par	afiel	36	1866-58	3-BLUE (2583) (English)
Shear Strength, ASTM C278, Bu/in ² , parall	4	12.7	1-800-36	3-6210 (French)
Maximum Service Temperature, "F		240	10. FIL	ING SYSTEMS
"Walkes may differ for FIDCD1 FINC" 12 and specially kits. " This numerical films special rating is not intended to refe " A means residence to head fees. The higher the Privates."	Contact a Dow representative for more internation, of invands presented by this or any other meterial under actual the greater the invusiting power.	Tre conditions	dowbui	blingsolutions.com
In the U.S.	In Canada	Technical Infor	mation	www.dowbuildingsolutions.co
The Dow Chemical Company	Dow Chemical Canada ULC	1-866-583-25	B3 (English)	www.sprayfoamatdow.com
Dow Building Solutions	Dow Building Solutions	1-800-363-62	10 (French)	

in one erer	THE CONTRACTOR	rectification theorem and the	nnn.doneanangreaden.cen
The Dow Chemical Company	Dow Chemical Canada ULC	1-866-583-2583 (English)	www.sprayfoamatdow.com
Dow Building Solutions	Dow Building Solutions	1-800-363-6210 (French)	
200 Larkin Center, 1605 Joseph Drive	450 - 1st St. SW, Suite 2100	Sales Information	
Midland, MI 48674	Calgary, AB T2P 5H1	1-800-232-2436 (English)	
		1-800-565-1255 (French)	

DE Schedung von der Kennen und eine Andere Schwart der Schedung von der Schwart der Schwart aus der Schedung von Schedu	neither and may change with time, Castoner is responsible to determining whether compliance with applications and other government errorments. The product and for an is a subdivision applies, Directowership will be a build be inter- result to 2004/021 AVAR METERS ARE DUNN IDENT FOR MY APPLICABLE VIENTICULAR/INVECIDE ARE DUPSIDE FOR UNIV. DOES IN TARGET AND VIENTICULAR/INVECIDE ARE DUPSIDE FOR UNIV. DOES IN 1995
Polyanshana Feara Insulation and Backania Chr. Phon Land, Theoremolutic and anished and withour Engenedito spon fastes or space, from high-energy saurose, Donot expose to temp and 1. 0469-051, 02,052 Control and control shaftespreaector, in an emergency, cell 1. 049-050-0430.	pentures above 2408F. For more information, consult Material Safety Esta Streets,
or analogical dega, sesser that conduction appliances, such as larvares, such rivaties, socializaring sitives, gas shows and gas dyres are properly or address. Http://active.sec.co.co.co.co.reg/do/ec/do/HD reaces-welldater.Mrst.	enden för free sudsiden. Toter verkinden. Hölps J varvar opsagtav for på sommen fröpr verskilation å det
H PRC* Specy Polyarethana Peamontains toccaneds, hyboficorecentor/blowing agent and polysi. Reatthe inductions and Matanial Selety D spiggles or safety plasans, and proper respiratorypolitection.	Ma Sheris carefully before use. Wear protective circling in clusting long aboves).
It built in opera in nat, the only with adopted in initiation. It is incommonded that applications in others experience in a party service were implicitly on the party service were the application of the	protection, the vacable workfolder significantly reduces the potential the isocianate to maintain exposure levels below RCBH, 0594, MEEL or other applicable limits, sprater lan lime smarth contained leveling appendixal. Spraying large amounts at
rg and to condructor practices annihilaets building materials could greatly affect moisture and Preputantial for moid ternadiae. No material augulier fot an Older galatrines at dealeutotry activitiers com	including Dow can give assurance that mold will not develop in any specific system.
ademark of The Dow Chernical Company ("Dow") or an altituded company of Dow.	Form No. 172-050448-0614-001

REFORE COMMENCING ANY SITE PREPARATION MATERIAL ORDERS OR CONSTRUCTION ACTIVITY ALL LEVELS, DIMENSIONS AND ANGLES HAVE TO ALC LEVELS, DIMENSIONS AND ANGLES HAVE TO BE CHECKED AND VERIFIED, CALL 811 TO VERIFY LOCATIONS OF EXISTING UTILITIES. VERIFY ACCURACY AND COMPLETENESS OF THE PLANS ACCURACY AND COMPLETENESS OF THE PLAN AND APPROVAL OF PERMITS NECESSARY FOR THE PROJECT

Project Notes



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		A5 /	APPLIANCE SCHEDULE	
Type Mark	Count	Description	Model Comments	Comments
1	1	Gas Range - 30" W w/ Oven, 29" D	13,000 BTU burner / Electrical: 120V, 60Hz, 15A	
2	1	24" Built-In Microwave w/ 30" Trim Kit Faceplate	2.2 Cu. Ft. capacity / Black Stainless Steel / Stainless Steel	
3	2	Combination Smoke and Carbon Monoxide Alarm	Combo, alarms shall be listed in accordance with UL 217 and UL 2034. Systems and components shall be California State Fire Marshal listed and approved in accordance with California Code of Regulations, Title 19, Division 1 for the purpose for which they are installed.	
4	1	Bath Fan w/ Humidity Sensor w/ Movement Sensor	110CFM / 0.3 SONE / White	
5	1	Dishwasher 24"	120 V / Black / White / Stainless Steel	
6	1	Washer-Dryer (Gas) Combo Stacked 24" W	White / 2.3 cu. ft. Washer / 4.4 cu. ft. Gas Dryer / 120 V	
7	1	French Door Refridgerator w/ Bottom Freezer 36" W, 28.5" D	Stainless Steel / Black Stainless Steel	
8	1	Indoor Tankless Gas Water Heater	8.4 GPM / Natural Gas / Flow Rate @ 65 F Rise: 4.4 GPM (Hot Water) / UEF 0.93 / Ultra LoNox	
9	1	Surface-Mount Gas Wall Heater	BtuH Output 14,000 \ BtuH Output 9,800 \ direct vent \ 26.5x18x7 125 \ Gravity Convection	

	A5 SWITCH, OUTLET	SCHEDULE
Count	Item	Item Comments
7	Outlet Duplex	AFCI / Tamper Resistant
1	Single Switch	
4	Switch w/ Dimmer	

ľ						
	-	Washer Dryer		A5 LIGH	ITING FIX	TU
			Count	Description	Wattage	
	ļ		14	6" Recessed Ceiling Light	5 W	LE ma W
	ПĒ		1	Exterior Wall Mounted Lamp	9 W	W
ŀ	-4-		1	Wall Mounted Bathroom Light		LE
(2)			*	*	ghest point	in
	1/4" : ELE CIRC 1. 2. 3. 4. 5. 6. 7	E 1-0" CTRICAL SYSTEM TO BE INSTALLED WITH SEPARATE SUITS FOR: FRIDGE (20 AMP) COOKTOPRANGE (40 AMP, 120/240V) RANGE HOOL (5:20 AMP) COUNTERTOP RECEITACLES (20 CIRCUITS, 20 AMP) KITCHEN LIGHTING (15:20 AMP) E OF LIGHTIS AND RECEITACLES (20 AMP) WALL INCINTED AID CONDERS (20 AMP) WALL INCINTED AID CONDERS (20 AMP) CONTRESS OF A CONTRESS OF A CONTRESS (20 AMP) CONTRESS OF A CONTRESS OF A CONTR	Min. 71 - 6) ets
	7. 8. 9. 10.	BATHROOM RECEPTACLES AND LIGHTS (20 AMP) BATHROOM FAN (20 AMP) DINING ROOM: SEPARATE (20 AMP) CIRCUIT FOR ENTERTAINMENT CENTER			IG HEIGH	rs

11. WASHER AND DRYER (GAS: 20 AMP OR ELECTRIC: 30 AMP)

Count	Description	Wattage	Lamp	Model Comments	Comments
14	6" Recessed Ceiling Light	5 W	LED / max. 7.6 W	6" / White	
1	Exterior Wall Mounted Lamp	9 W	W27		
1	Wall Mounted Bathroom Light		LED	LED Light	
	*				ical
in 7'- 6'	* 	, д ц С		Electr Panel	ical
Min.7'-6'	* I	۲ ۳ ۲	Outline -	Electr Panel Thermostat lets 8" min. a countertop witches	ical
Min.7'-6'	* * I		Outl the Light S	Electr Panel Thermostat lets 8" min. a countertop witches the floor	ical bove

LE	¶®.	SINGLE 220V OUTLET, AFCI
odel ments Comments	φ	SINGLE 120V OUTLET, AFCI
Vhite	P	DOUBLE 120V OUTLET, AFCI
	\$¶%	WATERPROOF OUTLET (EXTERIOR), GFCI
Light	₽ŝ	DOUBLE 120V OUTLET WITH GROUND FAUL CIRCUIT INTERRUPTION PROTECTION
	\$	SWITCH
	Ş.	SWITCH WITH DIMMER
	Şıs	SWITCH WITH DIMMER WITH VACANCY SENSOR
	Şar	SWITCH WITH ASTRONOMICAL TIMER
1	Ş.	MOTION ACTIVATED SWITCH
Ŭ	Ş.	3-WAY SWITCH
Electrical	•	COMBINATION PHOTOELECTRIC SMOKE AND CARBON MONOXIDE ALARM
mostat		FLUSH MOUNTED PANELBOARD
	0	RECESSED LIGHT
min. above ertop		UNDER-THE-CABINET STRIP LIGHT
s		LED TAPE LIGHTS
or	0	PENDANT LIGHT, SEE LIGHTS SCHEDULE FOR DETAILS
loor	Q	EXTERIOR LIGHT, WALL MOUNTED
	NOTE: No	all fixtures shown here are used in the project
	O ELECTR	RICAL FIXTURES LEGEND
Electrical Panel mostat min, above rtop or or	\$" \$" \$" \$ 0 0 0 0 0 0 0 0 0 0 0 0 0	SWITCH WITH DIMMER WITH VACANCY SENSOR SWITCH WITH ASTRONOMICAL TIMER MOTON ACTIVATES SWITCH 3 WAY SWITCH COMBINATION PHOTOELECTRIC SMOKE AND CARBON MONOXIDE ALARM FLUSH MOUNTED PANELBOARD RECESSED LIGHT UNDER-THE-CABINET STRIP LIGHT LED TAPE LIGHTS FOR DETAILS EXTERIOR LIGHT, SEE LIGHTS SCHEDUL FOR DETAILS EXTERIOR LIGHT, WALL MOUNTED at all fatures shown here are used in the proje

GENERAL ELECTRICAL NOTES:

- ERAL ELECTRICAL NOTES: THE PROJECT CONTACT AND/OR THEIR LICENSED CONTRACTOR SHALL CONFIRM THE LOCATION, SIZE AND CAPACITY OF THE EXISTING ELECTRICAL SERVICE ON THE PROPERTY. THE PROPOSED SERVICE CONNECTIONS FOR THE ADU SHALL BE VERIFIED AND DETERMINED TO BE VIABLE CONNECTION PATHS PRIOR TO COMMENCING WORK ON THE PROJECT. IF THE UTILITY LINE OR CONNECTION IS MISSING, DISPLACED OR OTHERWISE INACCURATE. THE CONTRACTOR AND/OR PROJECT CONTACT SHALL NOTIFY ALL PARTIES AND A REVISION TO THE PLANS SHALL BE MADE. 2
- THE PROJECT CONTACT AND/OR THEIR LICENSED CONTRACTOR SHALL CONFIRM THE PROPOSED ADU ELECTRICAL SERVICE LINE'S CAPACITY TO SERVE ALL APPLIANCES AND ELECTRICAL FIXTURES IN THE UNIT. IF THE PROPOSED ELECTRICAL CONNECTION LINE TO THE UNIT AND INSIDE THE UNIT ARE MISSING, DISPLACED, INCORRECT CAPACITY OR OTHERWISE INNACURATE, THE CONTRACTOR AND/OR PROJECT CONTACT SHALL NOTIFY ALL PARTIES AND
- 3 CAPACITY FOR ADDITIONAL LOAD (FOR ADU). ELECTRICAL PANELBOARD SCHEDULE, CIRCUITS, WIRING DIAGRAM, POWER PLAN
- ELECTRICAL PANEL GROUNDING ACCORDING TO 2019 CALIFORNIA ELECTRICAL CODE.
- ALL APPLIANCES AND ELECTRICAL FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND 2019 CALIFORNIA ELECTRICAL CODE.
- 2019 CALIFORNIA ELECTRICAL CODE AND MEET OR EXCEED ALL APPLICABLE ENERGY STANDARDS IN THE TITLE 24 REPORT FOR THE PROJECT.
- q EXTERIOR WALLS, FOUNDATION, FLOOR OR ROOFTOP SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SICH OPPNINGS WITH CEMENT MORTAB CONCEPTE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY. UFER GROUND TO BE INSTALLED (CEC 250)

- NOT CIRCUIT NOTES A DEDICATED 20-AMP CIRCUIT FOR THE REQUIRED BATHROOM BATHROOM REQUIRES A DEDICATED 20-AMP CIRCUIT FOR THE REQUIRED BATHROOM OUTLETS. THIS CIRCUIT CANNOT SUPPLY ANY OTHER RECEPTACLES, LIGHTS, FANS, ETC... (EXCEPTION: WHERE THE CIRCUIT SUPPLIES A SINGLE BATHROOM, OUTLETS FOR OTHER
- EQUIPMENT WITHIN THE SAME BATHROOM SHALL BE PERMITTED TO BE SUPPLIED.) ALL 120-VOLT. SINGLE PHASE. 15- AND 20- AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS 2 INSTALLED IN DWELLING UNIT KITCHEN, DINING ROOMS, LIVING ROOMS, BEDROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. CEC 210.12 A 40- OR 50-AMPERE BRANCH CIRCUIT SHALL BE PERMITTED TO SUPPLY COOKING
- 3 APPLIANCES THAT ARE FASTENED IN PLACE IN ANY OCCUPANCY CEC 210.23(C)

- OCATION IN KITCHENS, FAMILY ROOMS, DINING, LIVING ROOMS, LIBRARIES DENS, LAUNDRY OR SIMILAR ROOMS AND AREAS.
- 3 LESS ABOVE THE FINISHED FLOOR, AND IN ANY OF THE FOLLOWING LOCATIONS: KITCHENS, FAMILY ROOMS, DINING, LIVING ROOM, LIBRARIES DENS, BEDROOMS, RECREATION ROOMS.

LIGHTING NOTES:

- MUST BE JA8 CERTIFIED AND IS REQUIRED TO HAVE A MANUAL ON/OFF SWITCH PLUS EITHER
- IN EACH OF THESE SPACES SHALL BE CONTROLLED BY A VACANCY SENSOR. VACANCY SENSORS SHALL BE INSTALLED IN ALL OF THE ROOM TYPES LISTED, IF APPLICABLE TO THE PROJECT
- ALL LIGHT MOUNTING ACCESSORIES SHALL BE PROVIDED ACCORDING TO LIGHTING FIXTURE'S 3
- CAN BE REPLACED WITH EQUIVALENT BRAND/MODEL PROVIDED THEY MEET 2019 CALIFORNIA ELECTRICAL CODE

- EXTERIOR LUMINAIRES: 1. ALL EXTERIOR LUMINARIES TO BE HIGH EFFICACY AND SHALL MEET THE FOLLOWING REQUIREMENTS, AS APPLICABLE PER CEC 150.0(K)(3): A. CONTROLLED BY A MANUAL ON AND OFF SWITCH THAT DOES NOT OVERRIDE TO ON THE
 - AUTOMATIC ACTIONS OF ITEMS BJ OR CJ BELOW, AND CONTROLLED BY PHOTOCELL AND MOTION SENSOR. CONTROLS THAT OVERRIDE TO ON SHALL NOT BE ALLOWED UNLESS THE OVERRIDE AUTOMATICALLY REACTIVATES THE

 - - HOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL.
 ASTRONOMICAL TIME CLOCK.
 - (3) ENERGY MANAGEMENT CONTROL SYSTEM.

RECESSED DOWNLIGHT LUMINAIRES IN CEILINGS (T24): 1. ALL RECESSED LUMINAIRES IN CEILINGS SHALL COMPLY WITH ALL OF THE FOLLOWING:

- BE SEALED WITH A GASKET OR CAULK BETWEEN THE LUMINAIRE HOUSING AND CEILING,
- SPACES SEALED WITH A GASKET OR CAULK;
- SHALL ONLY CONTAIN "HIGH EFFICACY" LIGHT SOURCES OR BE MARKED AS 'JA8-2019-E'

REFORE COMMENCING ANY SITE PREPARATION MATERIAL ORDERS OR CONSTRUCTION ACTIVITY ALL LEVELS, DIMENSIONS AND ANGLES HAVE TO BE CHECKED AND VERIFIED, CALL 811 TO VERIFY LOCATIONS OF EXISTING UTILITIES. VERIFY ACCURACY AND COMPLETENESS OF THE PLANS AND APPROVAL OF PERMITS NECESSARY FOR THE PROJECT

Project Notes

A REVISION TO THE PLANS SHALL BE MADE. SUBFED FROM EXISTING MAIN SERVICE TO PROPERTY: CONTRACTOR TO VERIFY AVAILABLE

- PERFORMED BY LICENSED ELECTRICTIAN DURING CONSTRUCTION IN ACCORDANCE TO 2019 CALIFORNIA ELECTRICAL CODE.
- UNLESS SPECIFIED IN THE SCHEDULE, AN APPLIANCE'S BRAND AND MODEL TBD DURING CONSTRUCTION, PROVIDED IT MEETS 2019 CALIFORNIA ELECTRICAL CODE.
- DURING CONSTRUCTION AND INSTALLATION OF THE ELECTRICAL SYSTEM ANY APPLIANCES LISTED MAY BE REPLACED WITH AN EQUIVALENT MODEL AND BRAND PROVIDED THEY MEET
- ANNUL AR SPACES AROUND FLECTRIC CARLES CONDUITS OR OTHER OPENINGS IN PLATES AT

BRANCH CIRCUIT NOTES:

RECEPTACLE NOTES:

- PROVIDE TAMPER RESISTANT RECEPTACLES, ARCH-FAULT AND GFCI AS REQUIRED BY APPLICABLE CODES. PROVIDE AFCI PROTECTION FOR ALL OUTLETS OR DEVICES IN A READILY ACCESSIBLE 2
- TAMPER-RESISTANT RECEPTACIES ARE REQUIRED FOR RECEPTACIES THAT ARE 66" AND

LAUNDRY, OR SIMILAR ROOMS OR WALL SPACE. RECEPTACLES IN A DEDICATED SPACE FOR A REFRIGERATOR, DISHWASHER, OR WASHER/DRYER ARE EXEMPT.

- ALL LIGHTING SHALL BE HIGH EFFICACY. LAMPS DEEMED AUTOMATICALLY HIGH EFFICACY NEED ONLY MANUAL ON/OFF SWITCH. IF THE LAMP IS NOT AUTOMATICALLY HIGH EFFICACY. IT A VACANCY SENSOR OR DIMMER CONTROL
- IN BATHROOMS GARAGES LAUNDRY BOOMS AND LITHITY BOOMS AT LEAST ONE LUMINAIRE 2
- MANUFACTURER'S REQUIREMENTS. IF NOT SPECIFIED IN THE SCHEDULE LIGHT'S BRAND AND MODEL TBD DURING 4
- CONSTRUCTION, PROVIDED IT MEETS 2019 CALIFORNIA ELECTRICAL CODE. DURING CONSTRUCTION AND INSTALLATION OF THE ELECTRICAL SYSTEM ANY LIGHTS LISTED 5.

- R
- MOTION SENSOR WITHIN 6 HOURS; OR CONTROLLED BY ONE OF THE FOLLOWING METHODS: C.

- BE LISTED FOR 'ZERO CLEARANCE INSULATION CONTACT (IC)' BY UL (UNDERWRITERS LABORATORIES) OR OTHER NATIONALLY RECOGNIZED TESTING/RATING LABORATORIES;
- HAVE A LABEL THAT THE LUMINAIRE IS AIRTIGHT
- AND SHALL HAVE ALL AIR LEAK PATHS BETWEEN CONDITIONED AND UNCONDITIONED
- D SHALL NOT CONTAIN SCREW BASE SOCKETS

ELECTRICAL

Issue Date

As indicated

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Revisions







PLUMBING PLAN - WATER SUPPLY

		A6 PL	UMBING FIXTURE SCHEDULE	
Type Mark	Count	Description	Model Comments	Comments
1	1	Kitchen Faucet	1.80 GPM / 60 PSI / Polished Chrome	
2	1	Bathroom Faucet	1.20 GPM / 60 PSI / Polished Chrome	
3	1	Toilet	1.28 GPF / White, Dual Flush, Toilet seat sold separately (compatible with model 5055B60CH.020)	
4	1	Shower Set (2 Heads)	1.8 GPM (Combined) / 80 PSI / Polished Chrome	
		4" PVC OR ABS SA	ANITARY LINE WITH 1/4" - 1' MIN. FALL.	

	- s s -	JOINTS AND INSPECTIONS POINTS TO COMPLY WITH APPLICABLE CODES
	- w w -	3/4* COPPER OR PVC WATER LINE. PIPES, JOINTS AND CONNECTIONS TO COMPLY WITH APPLICABLE CODES
		1 1/2" PVC FIXTURE DRAIN WITH 1/4" - 1' MIN FALL TO SANITARY DRAIN. PIPES, VENTS AND CONNECTIONS TO COMPLY WITH APPLICABLE CODES
		1/2" PEX COLD WATER SUPPLY LINES. PIPES, JOINTS AND CONNECTIONS TO COMPLY WITH APPLICABLE CODES
ĺ		1/2" PEX HOT WATER SUPPLY LINES. PIPES, JOINTS AND CONNECTIONS TO COMPLY WITH APPLICABLE CODES
		•

O PLUMBING LEGEND



CONNECT TO MAIN

HOUSE GAS SUPPLY

GAS PLAN 1/4" - 1'-0"

			A6 GAS APP	LIANCE SCHEDUL	E	
Type Mark	Count	Description	Model	Manufacturer	Model Comments	Commen
1	1	Gas Range - 30" W w/ Oven, 29" D	GE	JGBS30DEKWW	13,000 BTU burner / Electrical: 120V, 60Hz, 15A	
6	1	Washer-Dryer (Gas) Combo Stacked 24" W	GUD24GSSMWW	GE	White / 2.3 cu. ft. Washer / 4.4 cu. ft. Gas Dryer / 120 V	
8	1	Indoor Tankless Gas Water Heater	ECOH160DVLN-2	Rheem	8.4 GPM / Natural Gas / Flow Rate @ 65 F Rise: 4.4 GPM (Hot Water) / UEF 0.93 / Ultra LoNox	
9	1	Surface-Mount Gas Wall Heater	Surface-Mount Gas Wall Heater	Williams Comfort Products	BtuH Output 14,000 \ BtuH Output 9,800 \ direct vent \ 26.5x18x7.125 \	

Gravity Convection

	3/4" NATURAL GAS SUPPLY LINES. PIPES, JOINTS AND CONNECTIONS TO COMPLY WITH RELEVANT CODES

GAS LEGEND

GENERAL PLUMBING (WATER DRAIN GAS) NOTES:

THE PROJECT CONTACT AND/OR THEIR LICENSED CONTRACTOR SHALL CONFIRM THE LOCATION, SIZE AND CAPACITY OF THE EXISTING WATER, SEWER AND GAS SERVICE ON THE PROPERTY. THE PROPOSED SERVICE CONNECTIONS FOR THE ADU SHALL BE VERIFIED AND DETERMINED TO BE VABLE CONNECTION PATHS PRIOR TO COMMENCING WORK ON THE PROJECT. IF THE UTILITY LINE OR CONNECTION IS MISSING, DISPLACED OR OTHERWISE INACCURATE, THE CONTRACTOR AND/OR PROJECT CONTACT SHALL

NOTIFY ALL PARTIES AND A REVISION TO THE PLANS SHALL BE MADE. THE PROJECT CONTACT AND/OR THEIR LICENSED CONTRACTOR SHALL CONFIRM THE 2. PROPOSED ADU WATER. SEWER AND GAS SERVICE LINES CAPACITY TO SERVE ALL PLUMBING FIXTURES, APPLIANCES W/ WATER SUPPLY, AND APPLIANCES W/ GAS SUPPLY IN THE INIT IF THE PROPOSED WATER SEWER GAS CONNECTION PIPES TO SUPPLY IN THE UNIT. IF THE PROPOSED WATER, SEWER, GAS CONNECTION PIPES TO THE UNIT AND INSIDE THE UNIT ARE MISSING, DISPLACED, MICORRECT CAPACITY OR OTHERWISE INNACURATE, THE CONTRACTOR AND/OR PROJECT CONTACT SHALL NOTIFY ALL PARTIES AND A REVISION TO THE PLANS SHALL BE MADE. ALL PLUMBING FIXTURES AND PIPING SHOULD BE INSTALLED IN ACCORDING TO

- 3. MANUFACTURER'S SPECIFICATIONS, RECOMMENDATIONS AND 2019 CALIFORNIA PLUMBING CODE
- VENT PLAN PERFORMED BY LICENSED PLUMBER DURING CONSTRUCTION IN 4
- VENT FLAN FERFORMED BY LICENSED PLUMBER DURING CONSTRUCTION IN ACCORDANCE TO 2019 CALIFORNIA FLUMBING CODE. FLOW RATE SHOWN IN THE PLUMBING FIXTURE SCHEDULE IS THE MAXIMUM, ANY FIXTURE'S FLOW RATE SHOULD BE VERIFIED WITH THE FIXTURE'S SPECIFICATIONS AND FLOW RATE REGULATOR SHOULD BE INSTALLED NOT TO EXCEED THE MAXIMUM FLOW 5 DATE
- ANY PLUMBING FIXTURE IN SPECIFIED SCHEDULE MAY BE SUBSTITUTED WITH AN FOULVELANT MODEL AND BRAND SOLIONG AS IT DOES NOT EXCEED THE FLOW BATE. 6 SHOWN IN PLUMBING FIXTURE SCHEDULE OR FLOW RATE REGULATORS ARE INSTALLED TO ADJUST THE FLOW RATE TO THE VALUE SHOWN IN THE SCHEDULE.
- ALLOWABLE PLUMBING PRESSURE RANGE: 15-80 PSI. MAXIMUM ALLOWABLE SERVICE LENGTH: 150 FT.
- MAXIMUM ALLOWABLE SERVICE LENGI F. 100 F. I. ANNULAR SPACES AROUND PIPES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS, FOUNDATION, FLOOR OR ROOFTOP SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR.
- CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY SCALDING PROTECTION: SHOWERS AND TUB-SHOWER COMBINATIONS IN BUILDINGS 10 SALUNG FROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE, THERMOSTATIC, OR COMBINATION PRESSURE BALANCE/THERMOSTATIC MIXING VALVE MANUFACTURER'S INSTRUCTIONS TO DELIVER A MAXIMUM MIXED WATER SETTING OF 120 DEGREES. THE WATER HEATER THERMOSTAT SHALL NOT BE CONSIDERED A SUITABLE CONTROL FOR MEETING THIS PROVISION. ALL GAS APPLIANCES, FIXTURES, PIPING, EXHLAST SHOULD BE INSTALLED IN
- 11. ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND 2019 CALIFORNIA PLUMBING AND MECHANICAL CODE.
- ANY GAS APPLIANCE, FIXTURE, EXHUAST CAN BE REPLACED WITH A DIFFERENT MODEL AND BRAND PROVIDED IT MEETS THE REQUIREMENTS OF 2019 CALIFORNIA PLUMBING 12. AND MECHANICAL CODE AND HAS CAPACITY TO SERVE THE ADU.

- GENERAL MECHANICAL NOTES: 1. ALL DUCT LONGITUDINAL AND TRANSVERSE JOINTS, SEAMS AND CONNECTIONS SHALL BE SEALED IN ACCORDANCE WITH THE INTERNATIONAL ENERGY CONSERVATION CODE AND MC 603.9
- DUCTS SHOULD BE SUPPORTED BY APPROVED HANGERS AT INTERVALS NOT EXCEEDING 2 10. IF FLEXIBLE THEY SHALL BE SUPPORTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ALL DUCTING SYSTEM ITEMS SHOULD BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND 2019 CALIFORNIA MECHANICAL CODE 3
- ANNULAR SPACES AROUND VENTS, DUCTS, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS, FOUNDATION, FLOOR OR ROOFTOP SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY. DUCTS INSIDE CONDITIONED SPACE SHALL BE INSULATED WITH R-4.2 AND WHEN IN
- 5.
- UNCONDITIONED SPACE IT SHALL BE INSULATED WITH R-6. 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.

DRYER NOTES

- IF INSTALLING A DRYER PROVIDE TYPE 1 CLOTHES DRYER EXHAUST DUCT (MIN. 4" DIA. AND 0.016" THICK RIGID METAL) TO THE OUTSIDE OF THE BUILDING AND EQUIPPED WITH BACK-DRAFT DAMPER. EXHAUST DUCT LENGHT IS LIMITED TO 14 FT WITH 2 ELBOWS.
- IF INSTALLING A DRYER PROVIDE 100 SQUARE INCHES OF MAKEUP AIR FOR CLOTHES DRYER CLOSET
- 3 IF INSTALLING A DRYER TYPE 1 CLOTHES DRYER EXHAUST DUCT SHALL BE PROVIDED WITH MAKEUP AIR IN ACCORDANCE WITH THE MANUFACTERER INSTRUCTIONS.

BATHROOM FAN NOTES:

EXHAUST FANS PROVIDED FOR HUMIDITY CONTROL SHALL MEET THE FOLLOWING: A. ENERGY STAR COMPLIANT, AND

- CONTROLLED BY A HUMIDITY CONTROL UNLESS FUNCTIONING AS A COMPONENT a. OF A WHOLE HOUSE VENTILATION SYSTEM. HUMIDITY CONTROL SHALL OPERATE AS FOLLOWS (CGBC4.506.1):
- HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF A GREATER THAN OR EQUAL TO 50% TO A MAXIMUM OF 80%. THE HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT AND.
- A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN C. AND IS NOT REQUIRED TO BE INTEGRAL LIGHTING INTEGRAL TO BATHROOM EXHAUST FANS SHALL COMPLY WITH THE
- d. CALIFORNIA ENERGY CODE.

- METHOD OF VENTILATION: 1. VENTILATION PER ASHRAE STANDARD 62.2, SOLUTION: EXHAUST VENTILATION THRO BATHROOM FAN(S)
- THE BATH FAN(S) RUNS INTERMITTENTLY ON A TIMER (100 CFM EVERY 4 HOURS FOR HOUR, WITH MANUAL OVERRIDE) AND WHILE IT IS RUNNING, FRESH AIR SHALL BE PI FROM THE OUTSIDE.

HEATING AND COOLING:

THE FOR VERYON AND ADDRESS OF ADD

3

- WALL MOUNTED GAS HEATERS
 - UNITS LOCATION PER PLAN. INSTALLATION, PIPING AND CLEARANCES ACCORDING TO MANUFACTURER'S
- RECOMMENDATIONS

Housable DRAFTING SERVICES

REFORE COMMENCING ANY SITE PREPARATION

MATERIAL ORDERS OR CONSTRUCTION ACTIVITY ALL LEVELS, DIMENSIONS AND ANGLES HAVE TO

BE CHECKED AND VERIFIED, CALL 811 TO VERIFY LOCATIONS OF EXISTING UTILITIES. VERIFY ACCURACY AND COMPLETENESS OF THE PLANS AND APPROVAL OF PERMITS NECESSARY FOR THE PROJECT

Project Notes

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PROJECT CONTACT EXPERIENCE ON A TAYLE IS THE SCALE REPORTABLE PARTY TOO INANGAR AND COORDINATING ALL RECOLDED COMMUNICATION AND AND INVOLVED TO THE FASELITY. DESIDE TO ANNAL DE ADMENTION OF THE PROJECT CONTACT IN AND CONTRACT TO AND ADDRESS ON AND ADDRESS ON ADDRE

GENERAL STRUCTURAL NOTES:

- ALL CONSTRUCTION SHALL MEET THE MINIMUM BEQUIREMENTS OF 2019 CBC. ALL METHODS AND TRENCHING PRACTICES SHALL MEET CAL OSHA REQUIREMENTS FOR
- 2 UNITESS OTHERWISE NOTED ALL NEW ERAMING REPLACEMENT FRAMING HOLD. DOWNS AND STRUCTURAL BRACING ARE DESIGNED AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH 2019 CBC PRESCRIPTIVE METHODS: 2019 CALIFORNIA BUILDING CODE VOL 2 CHAPTER 23 WOOD: CONVENTIONAL LIGHT-FRAME CONSTRUCTION IN ACCORDANCE WITH SECTIONS 2304 AND 2308
- 3 ANY HARDWARE OR STRUCTURAL MEMBERS SHOWN ANYWHERE SHALL BE INCLUDED, EVEN IF THEY ARE NOT SHOWN IN ANOTHER DETAIL OR PLAN, CONFLICT OR UNCERTAINITY RESOLUTION SHALL MEET THE REQUIREMENTS OF 2019 CBC AND HAS O BE APPROVED BY PROJECT CONTACT
- STELL ELEMENTS CORROSION: Anchor bolts and any type of anchoring hardware, plain steel or galvanized, shall not be left in unprotected contact with pressure treated or redwood lumber. 4 Hardware shall be isolated from contact with such lumber, or other corrosive environments, with an applied barrier coating such as urethane, polymer, epoxy, or coal tar. The efficacy of the coating chosen is the responsibility of the project contact. Also, nail or screw fasteners, of required fastening, into such lumber shall be hot-dip galvanized or of equivalent treatment, and if also in contact with the exterior environment, these fasters shall be of stainless steel.

FOUNDATION NOTES:

- EXISTING FOUNDATION SLAB TO REMAIN. REPAIR IF NEEDED UPON PROJECT
- CONTACT'S OR SUBCONTRACTOR'S DISCRETION. BOLTS AND ANCHOR BOLTS INSTALLED SHALL BE HOT-DIP GALVANIZED OR OF EQUIVALENT TREATMENT TO PREVENT CORROSION. IF IN CONTACT WITH EXTERIOR ENVIRONMENT, THESE ELEMENTS SHALL BE OF STAINLESS STEEL.
- 3 IF A NEW CONCRETE IS USED, ALL CONCRETE BATCHING AND CONSTRUCTION SHALL BE ACCORDING TO ACI-318 PRACTICES. ALL CONCRETE SHALL BE 2500 PSI MINIMUM MIX DESIGN - MINIMUM 5 SACKS OF CEMENT PER YARD OF CONCRETE WITH 3/4 ROCK, AND 6 SACKS OF 1/2" ROCKS OR PEA GRAVEL. MAXIMUM 7 GALLONS OF WATER PER SACK OF CEMENT - 5" SLUMP MAXIMUM UNLESS CHEMICALLY PLASTICIZED, MIXTURE OF WATER SHALL BE FREE OF SULFITES. CALCIUM CHLORIDE SHALL NOT BE USED. ALL CONCRETE IN FORMS SHALL BE PLACED WITH ASSISTANCE FROM A VIBRATOR.
- 4 THE MINIMUM YIELD STRENGTH OF REINFORCING STEEL SHALL BE 40,000 PSI (GRADE

WOOD FRAMING NOTES:

- IF ANY STRUCTURAL ELEMENT IS NOT IN A CONDITION TO MEET STRUCTURAL 1 REQUIREMENTS, IT SHALL BE REPLACED WITH AN ELEMENT MEETING CONDITION REQUIREMENTS FOR STRUCTURAL ELEMENTS AND REQUIREMENTS OF 2019 CBC.
- ALL SAWN LUMBER SHALL BE NO. 2 GRADE (OR BETTER) DOUGLAS FIR-LARCH. STRUCTURAL LUMBER IN PERMANENT CONTACT WITH CONCRETE, OR BOTTOM PLATE AND WHERE EXPOSED TO WEATHER, SHALL BE NO. 2 GRADE PRESSURE-TREATED DOUGLAS FIR-LARCH
- 3 MOISTURE CONTENT OF LUMBER AT THE TIME OF INSTALLATION SHALL NOT EXCEED 19 DEDCENI
- TYPICAL ROOF AND WALL SHEATING: 1/2" CD-X APA-RATED, 8D COMMON NAILS @ 6" ON 4 EDGES, 12' IN FIELD, U.O.N... INSTALL PLY-CLIPS MID- SPAN ALONG ALL UNSUPPORTED PLYWOOD EDGES, STAGGER
- 5 SHEETS BY ONE-HALF PANEL ALONG ABUTTING PANEL ROWS. LAY UP PLYWOOD SHEETS LENGTHWISE PERPENDICULAR TO DIRECTION OF ROOF RAFTERS. SHEATING SHALL BE CAULKED FOR AIR TIGHTNESS.
- ALL HARDWARE SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE COMPANY UNLESS OTHERWISE NOTED. THE HARDWARE PROCURED AND INSTALLED SHALL MEET OR EXCEED THE REQUIREMENTS OF THE HARDWARE SPECIFIED WITHIN THESE DESIGN DOCUMENTS. REQUIREMENTS OF THE MANUFACTURER SHALL BE FOLLOWED, AND ALL HOLES SHALL BE FILLED WITH THE MANUFACTURER'S SPECIFIED NAILING REQUIREMENTS
- NAILING (WHERE NOT SHOWN ON THE PLANS) SHALL BE EXECUTED IN ACCORDANCE WITH TABLE 2304.10.1 OF THE CALIFORNIA BUILDING CODE.
- ANCHOR BOLTS AND ALL HOLD DOWNS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE WIDTH OF THE SILL PLATE. A RIDGE BOARD, VALLEY AND HIP MEMBERS NOT LESS IN DEPTH THAN THE CUT END OF q
- THE BAFTER IS BEOUIBED ICBC 8802 31 RAFTERS SHALL BE FRAMED NOT MORE THAN 1 1/2" OFFSET FROM EACH OTHER TO 10
- RIDGE BOARD, ICRC R802.31.

EXISTING FOUNDATION NOTES: EXISTING FOUNDATION TO REMAIN.

HOLD DOWN NOTES:

- EXISTING ANCHOR BOLTS AND HOLD DOWNS TO REMAIN. ADD NEW ANCHOR BOLTS AND HOLD DOWNS PER FOUNDATION AND HOLD DOWN PLAN.
- AND KEYNOTES

WALL FRAMING NOTES:

EXISTING WALL FRAMING TO REMAIN NEW OPENINGS AND IN-FILL FRAMING PER WALL FRAMING PLAN AND KEYNOTES.

FLOOR FRAMING NOTES:

- EXISITING FLOOR FRAMING TO REMAIN

CEILING FRAMING NOTES: EXISTNG CEILING FRAMING TO REMAIN

BOOF FRAMING NOTES:

EXISTING ROOF FRAMING TO REMAIN.

BRACED WALL PANEL SCHEDULE FOOTNOTES

- ALL PANEL EDGE SHALL BE BACKED BY 2 INCH NOMINAL OR WIDER FRAMING. WHERE PANELS ARE APPLIED TO BOTH SIDES OF WALL, OFFSET PANEL JOINTS FROM EACH SIDE
- DOUBLE 2X BOUNDARY MEMBERS SHALL BE PRESENT AT EACH END OF SHEARWALL ALL BRACED WALLLINES HAVING SHEARWALLS SHALL HAVE A DOUBLE TOP PLATE
- ALL ANCHOR BOLTS SHALL HAVE A MINIMUM OF A 3"X3"X1/4" PLATE WASHER PER CBC 2305 3 11
- WHERE THE ALLOWABLE SHEAR EXCEEDS 350 PLF, FOUNDATION SILL PLATES AND MEMBERS RECEIVING EDGE NAILING FROM ADJOINING PANELS SHALL BE NOT LESS 6 THAN 3 INCH NOMINAL EBAMING, NAILS SHALL BE STAGGEBED.
- ALL NAILS SHALL BE COMMON OR HOT DIPPED GALVANIZED
- FRAMING CLIPS PER THIS SCHEDULE ARE ONLY REQUIRED AT LOCATIONS WHERE THE 8 SHEARWALL PLYWD IS INTERRUPTED.

TABLE R593.2.1.1(1) ALLOWABLE SPANS AND LOADS FOR WOOD STRUCTURAL PANELS FOR ROOF AND SUBFLOOR SHEATHING AND COMBINATION SUBFLOOR UNDERLAYMENT^{A A 4}

SPAN RATING	MINIMUM NOMINAL PANEL THICKNESS (inch)	ALLOWABI LOAD (psf) ^{1,1}	LE LIVE	MAXIMUM S (inches)	PAN	LOAD (p per squa foot, at maximus	ounds re m span)	MAXIMUM SPAN (inches)
		SPAN @ 16" o.c.	SPAN @ 24" o.c.	With edge support ^e	Without edge support	Total load	Live load	
Sheathing	i'			Roof				Subfloor
16/0	37,6	30	-	16	16	40	30	0
20/0	γ,	50	-	20	20	40	30	0
24/0	η,	100	30	24	20 ⁴	40	30	0
24/16	74.6	100	40	24	24	50	40	16
32/16	94 ₅₀ , 9 ₂	180	70	32	28	40	30	16"
40(20	$\gamma_{y_{0}},\gamma_{y}$	305	130	40	32	40	30	20%.1
48/24	$n_{_{\rm ID}}\eta_4$	-	175	48	36	45	35	24
60/32	76	-	305	60	48	45	35	32
Underlay plugged,	mont, C-C single floor*			Roof				Combination subfloor underlayment*
16 o.c.	$\gamma_{g_2} \gamma_{g}$	100	40	24	24	50	40	16'
20 o.c.	$\eta_{g_2} \eta_{g}$	150	60	32	32	40	30	2011
24 o.c.	v_{l_N}, v_4	240	100	48	36	35	25	24
32 o.c.	⁷ 4 ₈	-	185	48	40	50	40	32
48 o.c.	12/32.17/	-	290	60	48	50	40	43

fer St. 1 mb = 25.4 mm, 1 pound per square ficel = 0.0478 MPa. 1. The all-waller bial loads were determined using a deal biad of 10 ppt. If the deal load exceeds 10 ppt, then the live load shall be whole according). 1. Plantia continuou over how or more spans with long dimension (plangth axis) perpendicular to <u>instorch</u>. Spans shall be limited to values thom because of possible effect of concentrative loads.

- The section of the sect

BRACED WALL PANEL NOTES

- ALL NEW PLYWOOD USED FOR BRACED WALLS SHALL BE 1/2" THICK CD-X GRADE APA-RATED PLYWOOD OR OSB SHEATHING. EDGE NAILING SHALL BE AS SHOWN ON THE DRAWINGS. FIELD NAILING SHALL BE 10D @ 12" UNO. EDGE NAILS SHALL BE NO CLOSER THAN 3/8" FROM THE EDGE OF THE INDIVIDUAL PLYWOOD PIECES, EXACT LOCATION OF BRACED WALLS MAY VARY AS LONG AS OVER ALL LENGTHS AND A HEIGHT TO WIDTH RATIO OF 2 TO 1 IS MAINTAINED.
- STUDS SHALL BE SPACED AT 16" O.C. MAXIMUM (PLYWOOD MAY BE 2
- INSTALLED EITHER VERTICALLY OR HORIZONTALLY) 3 ALL UNSUPPORTED PANEL EDGES SHALL BE BLOCKED AND EDGE-NAILED
- USE ONLY COMMON OR GALVANIZED BOX NAILS FOR ALL PANEL AND SILL 4.
- PLATE NAILING (GALVANIZED NAILS SHALL BE HOT-DIPPED OR TUMBLED) ALL BRACED WALL PANELS ARE TO BE CONTINUOUS BETWEEN HORIZONTAL DIAPHRAGMS (ROOF TO FLOOR, FLOOR TO FLOOR, FLOOR TO
- FOUNDATION) ANCHOR BOLTS SHALL BE 10" LONG (MIN.) FOR 2X SILL PLATES AND 12" 6
- LONG (MIN.) FOR 3X SILL PLATES, WI 7" MIN. EMBEDMENT. WHERE 3X EDGE MEMBERS ARE REQUIRED. STUDS AND/OR BLOCKING AT ADJOINING PANEL EDGES SHALL BE 3X MINIMUM AND NAILS SHALL BE
- STAGGEBEL WHERE SILL PLATES ARE 3X MINIMUM, SILL PLATE NAILING SHALL BE 8
- STAGGERED.
- 2X SILL PLATES AT EXISTING WALLS MAY BE UPGRADED BY ADDING 2X
- BLOCKING BETWEEN STUDS AND NAILING WITH (4)10D PER BLOCK 10. FOR SDS 1/4X6: SIMPSON STRONG-DRIVE WOOD SCREWS INTO JOIST OR BLOCKING BELOW, PREDRILLING MAY BE REQUIRED DEPENDING ON MOISTURE CONTENT OF WOOD. STAGGER SCREWS IN TWO ROWS (1 3/4) APART) INTO 4X JOIST OR BLOCKING WHERE SPACING IS LESS THAN 6" ON

CS-WSP SCHEDULE FOOTNOTES:

9

- ALL PANEL EDGE SHALL BE BACKED BY 2 INCH NOMINAL OR WIDER
- FRAMING
- WHERE PANELS ARE APPLIED TO BOTH SIDES OF WALL, OFFSET PANEL JOINTS FROM FACH SIDE
- DOUBLE 2X BOUNDARY MEMBERS SHALL BE PRESENT AT EACH END OF BRACED WALL PANEL. 3
- 4 ALL BRACED WALL LINES HAVING BRACED WALL PANEL SHALL HAVE A
- DOUBLE TOP PLATE ALL ANCHOR BOLTS SHALL HAVE A MINIMUM OF A 3"X3"X1/4" PLATE 5
- WASHER WHERE THE ALLOWABLE SHEAR EXCEEDS 350 PLF, FOUNDATION SILL 6
- PLATES AND MEMBERS RECEIVING EDGE NAILING FROM ADJOINING
- PANELS SHALL BE NOT LESS THAN 3 INCH NOMINAL FRAMING. NAILS SHALL BE STAGGEBED
- ALL NAILS SHALL BE COMMON OR HOT DIPPED GALVANIZED FRAMING CLIPS PER THIS SCHEDULE ARE ONLY REQUIRED AT LOCATIONS WHERE THE BRACED WALL PANEL PLYWD IS INTERRUPTED.

TABLE DROD 2(1) EASTENING SOLIEDUIL

Floar I	AGE/OFFICEN OF BUILDING ELEM	awi\$	FASTENER	SPACING O	+ FASTENERS
, .	Rocking between initials or patient to	too state. Ine and	4-8d box (2 % x 0.113")er 3-8d (2");" = 0.113"); or	Toe sal	
	www.y.denneen.joons.or.nilliers.loi	ny pole, ne nai	3-100 box (3'x0-128') or 3-3'x0.131' nails	. ce nor	
2 1	Ceiling joists to plate, toe nail		3-6d box (2 % x 0.113*)er 3-6d (2*);* x 0.113*); or 3-10d box (2*x); 12**	Per joint, tor	e nail
	Ceiling joists not attached to waratter	safter, laps conr	3-3'x0.131' sails 4-150 box (2'x0.128') or		
	sertitions, face (see Sections RIN32.3 Table RIN2.5.1(9)	2, FISC2 3.2 and	3-16d common (3 %" x 0.162");or 4-3'x0.131" sals	Face nail	
	Selling joint attached to parallel rafe (see Sections R802.3.1 and R802.3	Eteel joint 12 and Table	Table R802.5.1(2)	Face rail	
	nous di 7/761 Collar de la rañer, face nail or 11/7 ×	20 gage ridge	4-10d box (3"x0.128"); er	Commer-	
s	strap to rafter		3-13d common (2" + 0.548"); or 4-3"x2.131 nails	Face nail e	ach tafter
	Rafter or roof truss to plate		3-15d bor nails (310" × 0.135") or 3-13d common nails (3" × 0.148"); or	2 toe nails o	s one side and 1 toe sail on o
			4-3'x2 131' sals	10000	Taraki di Kossi
			3-10d common (3" + 0.146"); or 4-30d bre (3"x0.128"); or	Toe nall	
	Roof rathers to ridge, valley or hip rat minimum 2° ridge beam	ters or roof rafter to	4-3" x 0.131 nails		
			3-16d common (31/5" + 0.148"); or 3-10d box (3"x8 128"); or	End relis	
Nal			[3-3" x 0.131 nals		
	Stud to stud (not at braced wall pane	60	16d common (3 % " + 0.162") 10d bex (3" x 0.128"); or	24" o. c. faci	nal
			3's 0.131' nails 16d box (3'// + 0.135'); or	16" o. c. faci 12" o.c.	r sal
9	sole to sole and debring states at the corners (at braced wall panels)	ersecond war	3" x 0.131" nails 16d common (3 1/ x 0.162")	10" e.c. tace	nai
10	Juib up header (2° to 2° header with	V ₂ * spacer	16d common (31/," × 0.162") 16d box (31/," x 0.135")	10" p.r. each 12" p.r. each	n edge face nail n edge face nail
11 0	Continuous header to stud		5-8d box (215" × 0.113"); or 4-8d common (2.15"× 0.131"); or	Toe nail	
			16d common (3 1/ x 0.1621)	16" e.c. face	nel
2	Tap plate ta top plate		10d box (3" = 0.128"); or 3" x 0.131" nalls	12" e.c. tace	nal
	Double tog plate splice		8-16d common (31/y" × 0.162"); or 12-16d bex (31/y" × 0.138"); or	Face not on	each side of end joint (minim
-			12-108 bix (3" x 0.128"); or 12-3" x 0.131 melts	spice sings	each side of end joint)
			16d common (3 1/* x 0.162")	10.05.00	124
9	ut braced wall panels)	and of Diocking (hol	16d box (3 %' x 0.136'); or 3" x 0.131" nails	1.4 ° 0.6. faoi	
TEM	DESCRIPTION OF BUILDING FLA	MENTS	NUMBER AND TYPE OF	SPACING	OF FASTENERS
			3.56 bax (3/v* x 0.536*) ~	Seath 10	o.c. face call
15	peuton plate to joist, rim joist, band braced well panels)	yout or blocking (a	2-16d common (31)," = 0.162"); or 4-3" x 0.131 nails	2 each 15" 4 each 16"	o.c. face nall o.o. face nall
			4-8d box (2 %" x 0.113"); or	1	
			5-766 bex (31)" × 0.736"); er 4-8d cemmen (21)" × 0.731"); er	Toe rail	
16	Top or bottom plane to stud		6-10d box (3" x 0.128"); or		
	Two shakes have at several and interesting				
	A COMPANY AND INCOME AND INCOME		3-3" x 0.131 rails 3-81 box (2"/" x 0.112") or		
18	1" brace to each stud and plate		2-8d common (2 %'x 0.131'); or 2010d bex (3' x 0.128'); or	Face noil	
			2 stopies 1 %/ + 3-8d box (2%/ × 0.113%); or	+	
19	1" + 6" sheathing to each bearing		2-8d common (2 %' ± 0.121'); or 2-10d box (3' ± 0.128'); or	Face nall	
			2 stapes, 1° crown, 16 ga., 1 %/ kor 3-8d box (2%)* = 0.113*); or	-	
			3-8d common (2 %" x. 0.131"); or 3-50d bex (3" x 0.128"); or		
20	1" × 8" and wider sheathing to each	bearing	Wider than 1' x 8'	Face nell	
			3-80 661 (2 % \$ 0.113); 67 3-84 common (2 % \$ 0.131'); or 3-304 common (2 % \$ 0.131'); or		
and the second s			4 staples, 1° crown, 16 ga., 5% long		
			4-8d box (2%)* = 0.113*); or 3-8d common (2.16" = 0.113*); or		
21	Joiat to aill, top plate or pirder		3-106 bex (3"x 0.128"); er 3-3" x 0131" nals	Toe nail	
	Rim joist, band joist or blocking to a	all or top plate	8d bax (21/y1 × 0.1137) 8d common (21/y1 × 0.1317) or	4" 0.0. 100 6" 0.0. 100	nail
-	(reof application also)		16d box (3" x 0.128"); or 3" x 0.131" nolls		
23	1" × 6" subfloor or less to each join		3-8d box (210" x 0.1137); or 2-8d common (2 10" x 0.1371"; or 3.200 box (2 10" x 0.1371"; or	Face nall	
			2 staples, 1° crown, 56 ga., 1 %/ lot	4	
24	2º subfloor to joist or girder		2-16d common (3 % * x 0.162*) 3-16d bey (3% * x 0.162*)	Blind or to	ice rail
25	2" planka (plank & beam - floor & m	xal)	2-16d common (3 N° x 0.1621)	At each be	aring
26	Band or rim joint to joint		4-10 box (3" x 0.128"), or 4-3" x 0.131" nalis ~	End nail	
			4-3" x 14 ga. staples, 3/15" crown	No. or h	nar a blogs 22 c.c. at to
			20d common (4" x 0.792"); or	bottom and	staggered.
27	Sull-up girders and beams. 2-inch	lumber layers	108 box (3" x 0.128"); or 3" x 0.131" nails	24" o.c. fee opposite si	e nail at top and bottom stag des.
			And: 2-20d common (4" x 0.1820; or	com.	ands and at cost and
			3-106 bex(3 ½" x 0.128"); or 3-3" x 0.131" nails	rend rails	
	Ledger strip supporting joists ~ ref	les	6-196 bex (3 %" x 0.136"); or 3-166 common (3 %" = 0.162"); or 4-106 bex (3 % = 0.162"); or	At each ive	at or rafter, face nall
			4-3" x 0.131 nails		
8	Bridging to joint		2-10d (2" x 0.128"), or 2-8d common (2 %" x 0.131"; or 2-3" x 0.131") nell	s cach end.	and man
	MATERIALS			Edges	Intermediate support
	Wood structural panels, subfloo (see Table Dil	r, roof and interior v 02.3/31 for work etc.	wall sheathing to harning and particlebo schula cares extensor wall sheathing	and wall should	thing to framing
30	44° - 40°	6d common (2" + 0 8d common (2")	1113") nai (subfloor wall) 0.131") nai (roef) or RSRS-81/21v" v	6	12
	No. 1	0.113" nail (reof) i 8d common nail (2	1/* = 0.131"); or R\$R\$-81; (2%' a		17
21	1997-11	0.113") nail (1005) 10d common (3" ×	0.148') not or		12
ĸ	DEFEN	84(21/2+0.1017)	deformed nail		
22	%* structural collulosic	11/2" gatvanized to	Other wall sheathing? ofing nail. The' head diameter or	2	6
34	Therboard sheathing	11v long 15 ga. 5 11v galvanized to	ope with 716° or 1° orden oling sail, 15% head diameter or	-	
	Therboard sheathing	111" long 18 ga. 84 111" galvanized to	ope with 7116" or 1" crown ofing nail, staple galvanized,	7	ž I
	1/2" gyptum sheathirwi	110" long, 114 sore 134" galvanized to	ws. Type W or 8 ofing not, staple palvanized.	7	7
25		Wood structural p	nivis, 13pe Wor.5 anels, combination subfloor underlaym	ent to transing	
35		5d deformed (2" = 8d common (2 \y"	0.129") nall or < 0.131") nall	6	12
35	Ni" and less		0.1315 nail or		12
36 37 38	³ /μ" and less //μ" = 1"	8d cemmon (21);* 8d deformed (21);*	- 50, Tala (Tala	0	12
35 36 37 38 38	34" and less 54" - 5" 134" - 134"	8d common (21) ⁺ 8d deformed (21) ⁺ 10d common (31 +	0.145") nal or	6	
35 36 37 38 39 For St 11 3, Nails a hove min larger the b. Stagier c. Nails 9 d. Fourful	³ /4° and less ³ /4° and less ³ /4° - 1° - ³ /4° - 1°/4° ³ /40° - 25.4 mm, 1 fact = 304.8 mm es smooth-common, baix or obtion mmon average bending joint smoot mmon average bending joint smooth mmon average bending	Bd centered (21); Bd deformed (21); Tod common (3* e Bd deformed (21); t, 1 mile per hour r ed shanks except gits as shown: 80 177 inch, and 100 imum 7/w-inch on notes on center a els shall be applie	 Course y Hall Hall In the Hall Hall Hall In the Hall Hall Hall Hall In the Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall Hall	6 6 20d common or less.	ed sheathing connections is nail, 90 ksi for shork dan K
25 26 27 28 29 For St 11 a. Naite a Powe mini larger tha b. Staget d. Founds d. Founds d. Founds d. Space founds f. Where I space founds f. Where I space founds f. Space founds f. Space founds f f. Space founds f f. Space founds f f. Space f f. Space f. Space f f. Space f f f f f f. Space	Not and two Not-of- This-of- This-of- this	Int common (2111) Red deformed (2111) Tod common (2111) Red deformed (2111) Red deformed (2111) Red deformed (2111) Red deformed (2111) Red shart be applie able shart be applied able shart be applied a	0.147 may - 0.147 may - 146 = 6.866 MPa, where otherwise states / table used 10.477 ms; 146 = 6.866 MPa, where otherwise states of 142 and 161 bit bask states and of 0.142 and 161 bit bask states and of 0.142 and 161 supports where spans are 45 ino 161 support where spans are 45 ino 161 support support spans are 45 ino 161 support spans are	o for froming an 20d comment 20d comment	d sheathing connections st naill, 90 kis for shark dan 4. Assessing to rearring shall be absenting to rearring shall be absenting to rearring shall be do, and 4 inches on center wird sheathing shall conform of required blocking and at st

 Uniform load deflection limitation: Y_{an} of span under live load plus dead load, Y_{an} of span under live load only. Maximum areas 24 listing to the span of the limit operation. 				3-3" x 0.131 nails					
b. National spin 24 inches where y _i -inch wood finish flooring is installed at right angles to joists.	17	Top plates, lags at comers and in	ersections	3-10d bex (2" x 0.128"); or 2 -16d common (3 1/2" x 0.162"); or	Face nail				
 Maximum spen 24 inches where 1.5 inches of lightweight commute or approved outlate commute is placed over the subface. It is increasing advance whet have there are a factors and the increasing with Maximum previous V sub-thick 	-			3-3" x 0.131 nails 3-84 box (2"//" x 0.112"); or					
) wood panel-type underlayment, there-correct underlayment of the order depictes under not least than 2 inches of 1/2 inches of	18	1" brace to each stud and plate		2-8d common (2 %'x 0.131'); or 2010d bex (3' x 0.128'); or	Face roll				
Epithweight concerning or approved cellular concerning is placed over the subfloor, or ³ / ₄ -inch wood finish flooring is installed at right models the maximum. These ensembles and observation with models are subfloor, or ³ / ₄ -inch wood finish flooring is installed at right				2 atopies 1 1/2 ×					
ASTM C1288 or 180 8396 Category C. Allowable uniform live load at maximum span, based on deflection of V _{ee} of span, is 100 pst.	19	1" + 6" sheathing to each bearing		2-8d common (2 %" x 0.131"); or	Face nell				
k. Unsupported edges shall have torgue-and groove joints or shall be supported by blocking unless nominal V_inch-fluks wood aneal two underlands. Block and an and an and and and and and and a				2 staples, 1° crown, 16 ga., 1 %/ long					
Booing is installed at right angles to the supports. Fiber cement underfarment shall comply with ASTM C1288 or ISO 8336 Category				3-8d box (2%)" = 0.113"); or 3-8d common (2%" x: 0.131"); or					
C. Allowable uniform live load at maximum span, based on deflection of U _{asc} of span, is 100 pat, except panels with a span rating of				3-10d bex (3" x 0.128"); or 3 staples 1" crown, 16 ga., 1 h" long					
-es on center are limited to be particular uniform total at maximum span. I. Altowalin live load values at scans of 16 inches on center and 24 inches on center taken from reference standard APA E30. APA	20	1" × 8" and wider sheathing to ear	th bearing	Wider than 1" x 8" 4 Million (2 W a 8 1137) or	Pace nell				
Engineered Wood Construction Guide. Refer to reference standard for allowable spans not listed in the table.				3-8d common (2 %' x 0.131'); or 3-30d common (7 x 0.128'); or					
	-			d staples, 1° crown, 16 ga., 1% long					
PRACED WALL DANEL NOTES				4-8d box (2%)* + 0.113"); or	I				a
BRACED WALL PANEL NOTES	21	Joiat to sill, top plate or girder		3-506 bex (3"x 0.128"); er	Toe noil				=
ALL NEW PLYWOOD USED FOR BRACED WALLS SHALL BE 1/2 THICK CD-X				8d bex (21// × 0.113/)	4" o.c. toe n	al		DRAFTING SERVICE	s
GRADE APA-RATED PLY WOOD OR OSB SHEATHING. EDGE NAILING SHALL	22	Rim joist, band joist or blocking to (roof application also)	sill or top plate	8d common (2 1/1 x 0.1317); or 10d box (21 x 0.1287); or	6" e.c. toe n	al			
BE AS SHOWN ON THE DRAWINGS. HELD NAILING SHALL BE 10D @ 12"				3" x 0.131" nails					
UNO. EDGE NAILS SHALL BE NO CLOSER THAN 3/8" FROM THE EDGE OF THE	23	1" × 6" subfloor or less to each joi		2-8d common (2 %" x 0.131"); or 3-304 herx (3" x 0.128"); cr	Face nall		LiCa	to LJ@HOUSABLE.COM	$\sqrt{2}$
INDIVIDUAL PLYWOOD PIECES. EXACT LOCATION OF BRACED WALLS MAY				2 staples, 1° crown, 16 ga., 1 %/ long			1161	Mission St. San Francisco, CA 9410	J3/A
VARY AS LONG AS OVER ALL LENGTHS AND A HEIGHT TO WIDTH RATIO OF	24	2° subfloor to joist or girder		2-16d common (3 % " x 0.162")	Blind or fac	ce rail	O:(21	13) 577 1557 C:(213)787-7578	0 /
2 TO 1 IS MAINTAINED.	25	2" planks (plank & beam - floor &	(100	3-16d box (31)/* × 0.135*); or 2-16d common (31)* × 0.162*)	At each bea	ring			~
STUDS SHALL BE SPACED AT 16" O.C. MAXIMUM (PLYWOOD MAY BE				3-16d common (3 1/1 x 0.162") 4-10 bos (2" x 0.528"), or					
INSTALLED EITHER VERTICALLY OR HORIZONTALLY)	<u></u>	taland or tim joint to joint		4-3" x 0.131" nalis, or 4-3" x 14 ga. stacles, 7/15" crown	Lind has				
ALL UNSUPPORTED PANEL EDGES SHALL BE BLOCKED AND EDGE-NAILED				The summer of the diversion of	Nail each la	yer as follows: 32" o.c. at top and		Revisions	
(EN)						sayla er	No.	Description	Date
 USE ONLY COMMON OR GALVANIZED BOX NAILS FOR ALL PANEL AND SILL 	27	Suit-up girders and beams, 2-inc	lumber layers	10d Box (J* x 0.128*); er 3* x 0.131* nalls	opposite aid	e nair at top and bottom staggered on les.			
PLATE NAILING (GALVANIZED NAILS SHALL BE HOT-DIPPED OR TUMBLED)				And: 2-20d common (4" x 0.1820; or		and and as such as fee			
5. ALL BRACED WALL PANELS ARE TO BE CONTINUOUS BETWEEN				3-10d bex(3 1/1 x 0.128'); or 3-3" x 0.131" nails	- automation	In the later at the state space			
HORIZONTAL DIAPHRAGMS (ROOF TO FLOOR, FLOOR TO FLOOR, FLOOR TO				4-194 bex (3 %' x 0.135'); or					
FOUNDATION)	28	Ledger strip supporting joists or n	hes	6-106 bex (2" x 0.128"); or 6-37 x 0.131 cm/s	At each job!	t or rafter, face nail			
ANCHOR BOLTS SHALL BE 10" LONG (MIN.) FOR 2X SILL PLATES AND 12"				2-10d (2" x 0.128"), or 2-8d common	Each end, to	lien ee			
LONG (MIN) FOR 3X SILL PLATES, WL7" MIN, EMBEDMENT	r"	landping to joint		(2 % x 0.131); or 2-3" x 0.131") nails					
WHERE 3X EDGE MEMBERS ARE BEOLIBED, STUDS AND/OB BLOCKING AT		MATERIALS			Edges (inches)	Intermediate supports - *			
ADJOINING PANEL EDGES SHALL BE 3X MINIMUM AND NAUS SHALL BE		Wood structural panels, subfic	or, roof and interior wa	I sheathing to fisming and particleboar	d wall sheath	ling to framing			
STAGGEBED		peer raue r	5d common (2" = 0.1	13") nail (subfloor wall)	-				
WHERE SILL PLATES ARE 3X MINIMUM, SILL PLATE NAILING SHALL BE	~	74 - 10	0.113' nail (120)	(131) Hel (100) Of Hohole (2N X	•	1e			<u> </u>
STAGGEBED	31	"ftu" - 1*	8d common nail (21) (2.1137) nail (1006)	* 0.1311); or RSRS-61; (2%* x	6	12'			
2X SILL PLATES AT EXISTING WALLS MAY BE UPGRADED BY ADDING 2X	32	$1/\delta_{x}^{*} \sim 1/\delta_{x}^{*}$	10d common (3" × 0 8d (21\/" × 0.131") de	148") not or formed nall	.6	12		-	
BLOCKING BETWEEN STUDS AND NAILING WITH (4)10D PEB BLOCK				her wall sheathing?					+
FOR SDS 1/4X6: SIMPSON STRONG DRIVE WOOD SCREWS INTO JOIST OR	23	5" structural cellulosic	11/3" galvenized roof	rig nail, Da" head diameter or	3	6			+
BLOCKING BELOW PREDBILLING MAY BE REQUIRED DEPENDING ON	34	"1'm" structural celulosic	11/4" galvanized roof	ng nail, "he' head diameter or	3	6			
MOISTURE CONTENT OF WOOD, STAGGER SCREWS IN TWO BOWS (1 3/4"		Teerscerc sneering	11/ King IS ga. olda 11/," galvanized roof	ng nail; staple galvanized,					
ADADT INTO AY LOIST OF BLOCKING WHERE SPACING IS LESS THAN 6" ON		o Theory a second	11/5" long: 11/s screw 21/5" categorized and	s. Type W or 8 on early stade onlyanized	-	,			
CENTER	20	of. Oberu metuolo	thy long: 15/8'sow	es, Type W or S	/	1			
Selvien.	32	30" and less	5d deformed (2" = 0.	120") nali or		12			
	18	10.0	gq ceasures (5/2, ×1	1531") rail or	6	*2			
SS-WSF SCIEDOLE FOOTHOTES.			8d deformed (21/2" = 10d common (3" = 0	0.120') nal 148') nal or					
ALL DANEL EDGE SHALL BE BACKED BY A INCH NOMINAL OD WIDED		154 - 154	Bd deformed (21/2* ×	0.1227) Aail	•	14			
EDAMING	For St 1	nch = 25.4 mm, 1 feet = 304.8 m	n, 1 mile per hour = I	1,447 m/s; 1 Ksi = 6.885 MPa.					
PRAVILING.	a. Nails a have min	e smooth-common, box or defor mum average bending yield stre	ned sharks except v gths as shown: 80 k	here otherwise stated. Nails used for i for shank diameter of 0.192 inch (2)	framing and 5d common	I sheathing connections shall nail, 90 ksi for shark diameters			<u> </u>
where PANELS ARE AFFLIED TO BOTH SIDES OF WALL, OFFSET PANEL	larger the	n 0.142 inch but not larger than 0	177 inch, and 100 k	i for shank diameters of 0.142 inch o	r less.				
JOINTS FROM EACH SIDE.	c. Nails s	all be spaced at not more than 6	inches on center at a	I supports where spans are 48 inche	is or greater				
5. DOUBLE 2X BOUNDARY MEMBERS SHALL BE PRESENT AT EACH END OF	d. Four-fo	at by 8-fact or 4-fact by 9-fact pr	nels shall be applied	vertically.			1.		
BRACED WALL PANEL.	6. opsore	g of reasoners not included in the he ultimate design wind speed is	130 mph or less, noi	on Table Houz.3(2). s for wood situctural panel roof sites	thing to gab!	le end wall framing shall be			
 ALL BRACED WALL LINES HAVING BRACED WALL PANEL SHALL HAVE A 	space 6 i supports	ches on center. Where the ultim shall be spaced 6 inches on cent	ste wind speed is gre er for minimum 48-ine	ster than 130 mph, nails for attaching In distance from ridges, eaves and go	panel roof e	sheathing to intermediate is; and 4 inches on center to			
DOUBLE TOP PLATE.	gable en	wall framing.	MC 1395 and charts	e installed in acceptance with C4 20	3 Eben	of abanthing shall conform to			1
 ALL ANCHOR BOLTS SHALL HAVE A MINIMUM OF A 3"X3"X1/4" PLATE 	ASTM C	108.	are into and man		C. F Denous	re analong and constraints			
WASHER	h. Spacin perimeter	g of fasteriers on floor sheathing s only. Spacing of fasteriers on n	conel edges applies t of sheathing panel e	o panel edge supported by framing in sprs applies to panel edges supports	embers and d by framing	I required blocking and at floor g members and required		4.51.1	
 WHERE THE ALLOWABLE SHEAR EXCEEDS 350 PLF, FOUNDATION SILL 	other pro	Blocking of roof and floor sheath isions of this code. Floor perime	ng panel edges perp er shall be supported	indicular to the training members nee by framing members or solid blockin	id not be pro g.	ovided except as required by	11	ADU	
PLATES AND MEMBERS RECEIVING EDGE NAILING FROM ADJOINING	j. Where	rafter is fastened to an adjacent	parallel celling joist i	accordance with this schedule, pro-	ide two toe	nails on one side of the rafter		-	
PANELS SHALL BE NOT LESS THAN 3 INCH NOMINAL FRAMING. NAILS SHALL	required.	in control composition from the	and an according to an	ning generative. The rate has on the o	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
BE STAGGERED	1 manual	in is a risk and an of the state	k ion needig ne sy	Andreast in Participation					
ALL NAILS SHALL BE COMMON OR HOT DIPPED GALVANIZED							Date	6:07:0000 E-00-09 DM	ceuo Dato
 FRAMING CLIPS PER THIS SCHEDULE ARE ONLY REQUIRED AT LOCATIONS 	 The four 	fastener schedule provides minin ed construction. For wood struct	naming requirem	ents (i.e. size, spacing) for connecting	p building els	ements used in wood	Date	6/2//2022 5:25:06 PMI 18	sue Date
WHERE THE BRACED WALL PANEL PLYWD IS INTERRUPTED.	tall	ng for wood structural panels, fai	terrers are specified t	or gypnum wall sheathing, cellulosic	forstcard w	all sheathing and			
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REFORE COMMENCING ANY SITE PREPARATION

MATERIAL ORDERS OR CONSTRUCTION ACTIVITY ALL LEVELS, DIMENSIONS AND ANGLES HAVE TO

BE CHECKED AND VERIFIED, CALL 811 TO VERIFY LOCATIONS OF EXISTING UTILITIES. VERIFY ACCURACY AND COMPLETENESS OF THE PLANS

AND APPROVAL OF PERMITS NECESSARY FOR

THE PROJECT

Project Notes

ADDI JED VADOD BADDIER TO SEAL EVISTING CONCRETE SLAP **OPTION 1 - PRODUCT SPECIFICATION:**

ADDI JED VADOR RAPPIER REDCARD TOS.104 / JCC-ES 1412 / COMPLIANT WITH ASTM EGG

REFORE COMMENCING ANY SITE PREPARATION MATERIAL ORDERS OR CONSTRUCTION ACTIVITY ALL LEVELS, DIMENSIONS AND ANGLES HAVE TO RedCord® Websersonfing and Crack Descention Manhanes / TDE 104 RedGard® Waterproofing and Crack Prevention Membrane / TDS-104 ES MURA ALC LEVELS, DIMENSIONS AND ANGLES HAVE TO BE CHECKED AND VERIFIED, CALL 811 TO VERIFY LOCATIONS OF EXISTING UTILITIES. VERIFY ACCURACY AND COMPLETENESS OF THE PLANS SUPECPETE - DK 700-RedGard® Waterproofing and Crack Prevention Membrane RedGard® Waterproofing and Crack Prevention Membrane CLASS 1 VAPOR BARRIER QUICK FACTS ICC-ES Evaluation Report ESR-1413 Drains should have a clamping ring with open weep holes for thin-set againzon. Apply the montrare to the bottom of the fange. The disin should be forly supported, whore movement, and should be even with the plane of the subbrails. Apply the Indicard membrane around whith. There and a 12 × 121 ⁻² 23 × 30 cm (Theregians much into the membrane, making sure it does not obstruct the drainage weep holes. After the apply an additional cost of the membrane and some. Thereafore and somewhy. After the apply an additional cost of the membrane and somewhy. After the apply an additional cost of the membrane and somewhy. After the apply an additional cost of the membrane and somewhy. After the apply an additional cost of the membrane and somewhy. After the apply and additional cost of the membrane and somewhy. After the apply and additional cost of the methrane and somewhy. After the apply and additional cost of the methrane and somewhy. After the apply and additional cost of the methrane and somewhy and the additional to the some the additional cost of the methrane and somewhy and the additional cost of the methrane and somewhy and the additional cost of the methrane and somewhy and the additional cost of the methrane and somewhy and additional cost of the methrane and somewhy and additional cost of the methrane and somewhy and the additional cost of the methrane and some additional cost of the methrane and additional cost of the additional cost of the methrane and additional cost of the me Tile and Stone Installation AND APPROVAL OF PERMITS NECESSARY FOR THE PROJECT 1 Product Name RedGard@ Waterp Effective Date: March 2021 Install tile or stone with a Customili Building Products polymer-modified mortar that meets AVSI A118.4 or A118.15 standards. DESCRIPTION This listing is subject to re-examination in one year RedEardly Waterporting and Creck Manufactures Castors Rulling Indiacts Technical Services UNIOD Forces Boalcond, Unit 3 Sciences Statistics Unit 3 Sciences Statistics Unit 3 Facts Biol 2007/RD Technical Services 809-3121-3186 Facts 809-300-7705 Facts 809-300-7705 Facts 809-300-7705 DK 700 is a 2 component solvent-based urethane primer, 97% solids, low VOC (<40 g/L), class 1 vapor barrier that meets ASTM PBS-F93 X0 200 trops water wave transmission. In lass than 1/2 www.icc-es-pmg.org | (800) 423-6587 | (562) 699-0543 A Subsidiary of the International Code Council® Cleaning of equipment 1 gallon (3.8 L) kit 1 gal. Part A (3.8 L) she 1 ot. Part B (.95 L) filled pail containing 3 ots. (2.85 L) BISE33. DK 200 atops water vepor transmission, to less then 17.2 pound per 1,000 as, it. This unique water vapor barrier opens up the possibility of applying high performance metinous counting, including all Duar-Note Systems, to uncured or moissue-lades with the suscellable possible. It can also be used under Oean tools and hands with water before the material dries. Oean all Project Notes I nen apply an additional cost of the membrane and smooth. After curing, damp the upper flange onto the membrane and tighten. Use a silicone could acrond the flange where the membrane and the use are flange make contact. A toilet flange can be handled in much the same memore. ResGend[#] Waterproofing and Crack Prevention Membrane, C-Cure Pto-Red Waterproofing Membrane 963, CBP 232 Waterproofing and Anti-Fracture Membrane and Jamo[®] Waterproofing Membrane are injuri-applied, elestometic waterproofing materials that oure to form a monibilito membrane. DIVISION: 09 00 00—FINISHES Section: 09 30 00—Tilling Health Precautions MIXING RATIO Health Precautions Wear improvise gives and eve pretection while using this product, Avoid corract with year or prokinged contact with skin. Weah thereapily with meeting, if yearcated cocurs, rine castboally with wear for several instrutes, remove contact learnes if early to do: continue rinking, Immediatily weak medical advoid impretances an significant or preside. Do not take internally, KEEP OUT OF REACH OF OHLIDER. concrete that was never before possible. It ca applications of VCT, linoleum, and carpeting. REPORT HOLDER: Dise, No. RedGard() as Crack Prevention Membrane DR 700 presenters without bilitering into the concrete's parcel arbox to generative exclusion instricted, and squareto locality models and the square biliteria of the squares biliteria models and biliteria generatives. JR 700 oftens these advantages when applied in strates of any Dan-Kate Costings: Models biliteria Biliteria method biliteria Biliteria method biliteria biliteria exclusion properties instanjource and wate anyot bicrossed exclusions COVERAGE Varies due to porosity of substrate, approximately 320-400 ft.¹ (28 m²) per gallon (3.8 L) or 3-4 mils wet. Rescaled as LOSA revention Hermitians resonance of the second second second second second second second bank. Using a 12th $^{-1}$ C G is may located to used as 24th $^{-1}$ C S may any second seco CUSTOM BUILDING PRODUCTS, INC. monotonics, seepings.
 3.1 Metanics
 3.2 Metanics
 3.1 Metan Limitations to the Product www.custombuildingproducts.com Do not apply to surfaces that may drop below 40°F (4°C) within 72 sides of the pail, as this will be difficult to mix. Mechanically mix both parts A and B with "JHY" style mixer blade for 5 minutes at motion speed. (JHy syle mixer is blade for 5 minutes at motion speed. (JHy syle mixer is peed with help prevent at instraining. Pour constants completely out is a finity long that for application. May insure protocol that the pail on a work on accodence once EVALUATION SUBJECT: ours of application. to not apply over wet surfaces or surfaces subject to hydrostatic Conformance to Building Code REDGARD[®] WATERPROOFING AND CRACK PREVENTION MEMBERANE, C-CURE PRO-RED WATERPROOFING MEMBERANE 930, CBP 232 WATERPROOFING AND ANTI-FRACTURE MEMBERANE AND JAMO[®] WATERPROOFING MEMBERANE pressure. • De not use to bridge or cover over existing expansion, control, construction, cold or save cut joints, save Crack Buster(9 Pro Membrane for central, cold or save cut joints. • De not use as a ware surface, the membrane must be covered with Installation must comply with the requirements of all applicable local, state and federal code jurisdictions. 6 Availability & Cost SURFACE PREP only indeed particle in the particular out of an accelerated have rendering it useliss.
Do not leave pail qualide down to dealer onto floor. Any unmixed portion of A or B that may have accidentally been placed onto side of pail can new drain down onto the floor, creating a spot that will not cure. The principles for surface preparation for **DX 700** are addressed with the regular datase preparation for the Dua-Kote system selected, see TDS of that system. An enception would be for molitate limits which are addressed by **DX 700**. The surface must be clean, sound, and profiled, as for all specially scalars. This product is not a shortcut for poor surface preparation. RedGard() as General Waterproof Hembrane (ANSI 118.10)
 Location
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 Size
 Color
 Package

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 LQUWF1
 1 gallon (3.78 L)
 Prick
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 USA
 LQUWF1
 1 gallon (13.78 L)
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 USA
 LQUWF3
 3.5 gallon (13.2 L)
 Prick
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 Danada
 CLQUWF1
 1 gallon (13.78 L)
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 Canada
 CLUQUWF3
 3.5 gallon (13.2 L)
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 1.0 EVALUATION SCOPE Key Features Compliance with the following codes: 2021, 2018, 2015, 2012, 2009 and 2006 International Building Code[®] (IRC) tile or other permanent floaring. • Do not use solvents in conjunction with the membrane · Dearly in one - Red It on Killiky to see - Acc. 2 are
 Quick dry formula
 Lated with L4PHO for use as a shower pan liner Matthiam Into the advects to Intercet.
3.2.2 Fibergaless Methi: The reinforcing meth is an alkal-insistant fibergaless fabric that is provided in 2-inch-web-ye-50, 100- and 300-fool-long (51 mm by 152, 30.5 and 91.4 m) or 6-inch-web-ty-50-yard-long (52 mm by 45.7 m) rolls for use as reinforcement in corners, change of plane, around drains and over minor substitle cracks. NOTE: Clean out or replace mixing pails, mixer blades, and roller cov ers in a reasonable fashion, so that the chemistry of A and B remain consistent ensectable case intro prefects Packaging 2021, 2018, 2015, 2012, 2009 and 2006 International Residential Code[®] (IRC) iuitable Substrates 1 gallon (3.78 L) pail
3.5 gallon (13.2 L) pail 2021, 2018, 2015, 2012, 2009 and 2006 International Plumbing Code[®] (IPC) Product Warranhy Cotain the applicable LDMITLD PRODUCT WARRANTY at mena.colorbiol/diffurctiolact.com/index.com/environ. reveets to Outpoint Bolling Product, Inc., Proc. Concurse Nethersy, Advirs, GA 3023, USA Handbourd under the advorted of Cotain Balding Products, Sci. e. D. 2027 Optional International, J. TEMPERATURE/CURE · Coversia contest mostar manners Placement DK 700 may be applied with roller or squeegeed and then back- Concrete, centent mottar, masonny
 Content Backerboard
 Exterior Physical and CSB (Interior, dry areas only)
 Exterior Decis - Contact Technical Services
 Post-Tension Concrete - Chartaet Technical Services
 Liphtweight Concrete (min. 2000 psi compressive strength) Apply when surface and ambient temperatures range between 50 E 00 Cl and 90 E 02 Cl and will remain that was for 24 brans Technical Data Applicable Standards Compliance with the following standards: slied. Select nap size approximately 3/8° or (9.5 mm). Rollers should be premium quality with phenolic core. "De-fuzz" roller by wrapping tightly with making tape and re-Wohrteiter cracks. Joint which which which which which which we have a set of the set AC115, ICC-ES Acceptance Criteria for Waterproof Membranes for Flooring and Shower Liners, approved date June 2020 (editorially revised August 2013) MIXING & APPLICATION American National Standards Institute (ANSE) ANSE A108.01, A108.17, A108.13, A118.10 and A118.12 American National Standards for the Istaliation of Cenamic Tile ASTM International (ASTM) Building Moducts, shir, to 1007 Quarters International, Inc. Wenn Russilland, Wainterproding and Drack Provention Membrane in used as a part of a qualitying full installation system of CUSTOM products, the installation on quality for gal to all lifetime system entrative, OUSTOM will expain and/or replace, at its disordory, the affordata para of the system. For more information, find datalia and imitations to this warmship at qualityibility and particular, and imitations to this warmship at qualityibility and particular. Inning Select appropriate PPE (personal protection equipment). Pro-vide adequate versitation. Refer to SDS. 4. Work across the namowest dimension of an area where practi-5. Control type:
 Control Ligrowegint concrete (min. 2000 psi compressive strength)
 Oyssum Based comont topping (min. 2000 psi compressive strength)
 Exating commit: bit and realisent flooring
 Floor heating systems - contact Technical Services TCNA(ANSI A118.10-2020, Specification for Load Bearing Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimensions Stone Installation . ARTM (1617 Structured Test Mathed for Exclusion Connects Ener Tile Installation Systems Using the Robinson-Type Floor Tester • ASTM D638 Standard Test Method for Tensile Properties of Plastics examples of the second seco Property evaluated: Composition of Product Allow DX 700 to dry to the touch and tack-free (approximately 4 – 6 hourd) before applying Dun-fiele systems or other specially sealer. If allowed to dry part 24 hours, the service must be screened with a 100 grit anding screen on a rotationil floor machine and DX 700 Water resistance Tile Council of North America (TCNA) TCNA Handbook for Cenamic Tile Installation, TCNA Hethod E3171, F125 & F125A RedGardB is a liquid-appled elastometic waterproofing material that cures to form a monolithic membrane. 20 11555 Product Maintenance 4.1 Sense Programmer: All entering and variants must be added for disalogic three constraineds that added for disalogic three three constraineds that added insteam hitse boot. Really represent occurrent and this constrain simulation of 3 days for some many strained and the source of the source free some many. All existing authors shall be 6 of added and the source of the added and the source of the sou 29 USES ReciSed* Writerprofing and Crack Prevention Membrane, C-Cure Pio-Risk Waterprofing Membrane 963, CBP 222 Waterprofing and Art-Frakaus Namethiane and Jamof* Waterprofing Membrane are used on concrete foors, as Jametrio Italyad water magnation, in dimensional stone under the IBC and IRC. The membranes are also used as a shower sub-pan Ining material in accordance with the IPC. Approvals requires no soscial maintenance. Do not use anefits of Product in the Installation Approvem BacGardiji hua Isatel and complex with Uniform Purching Cade and Isternativan Purching Cade advectings for uses as a former pain im-bient and complex with International Baking Cade (IEC). International Residential Cade (IEC) and International Purching Cade (IEC) zarachen is work metabace op actic Celasabasi Sarawa, ESM-ellicit zarachen in work metabace op actic Celasabasi Sarawa, ESM-enational had by the Witcomin Admeniatrative Cade, Chapter Camm 44:30 AC. Curing of Product Curring of Product RacEard(9) is dry when it turns solid red, with no visible pink color. Typicahy, drying time is 1-3.5 hours; depending on ambient conditio drying time can be as much as 12 hours. May the second cost is agained and both coats are fully cured, the application area can be flood tested. · Ency to use and can be needed by allow trough or allow common CLEAN-UP Early to use and cas be applied by roller, trowed or airlies sprayer
 Rated for sutra havey duty service
 Hodoces curing line with quick-dry formula
 Iosiates curies to 1,47° (2 mm)
 Subble for waterproofing pools, spas and water features
 Heats Uniform Plumbing Code specifications for sum as a shower pan Technical Services Information For technical assistance, contact: Custom technical services at 800-272-8786 or visit <u>custombuildingproducts.com</u>. NOTE: Mask all areas requiring protection; product will stick to just DK 700 can be cleaned up with a solvent such as tolene or sostone DISPOSAL 10 Filing System King and surfage
 Constrained
 Cons Protection nformation is available from the manufacturer upon Probaction If the or stans will not be set immediately ofter curring, protect the membrane from rain, indement worther and potential construction traffic damage. If debys larger than 22 hours are operated, cover rain potent the membrane frem solandwid direct surgift (of two spours). Care should be taken to prevent the application from becoming avoid or punctand during and after application. 3.0 DESCRIPTION .1 General: CUSTOM CUSTOM Linkings are not in the constrained on representing aerithetics or any other abritation and specifically addressed, our one likes in the constrained on an andorounder of the malysis of the heiding or a recommendation for its now. There is an warranty by RCC Evaluation Service, EEC, response or supplied, or its many relative constrained by the Alice. Published Date: 10/22/2019 Published Date: 10/22/2019 Conversion ID 2021 ICC Evaluation Service 11.C. All rights reserved SURECRETE" 15246 Cirus Country Drive Dade Ciru R. 33523 02.07.3017 Page 2 of 3 76 200 RedGard® Waterproofing and Crack Prevention Membrane / TDS-104 RedGard® Waterproofing and Crack Prevention Membrane / TDS-104 WARRANTY RedGard® Waterproofing and Crack Prevention Membrane ESD-1413 | Most Wirlaks Accupted and Trasted Page 2 of 2 RedGard® Waterproofing and Crack Prevention Membrane An ASTM moisture Test must be preformed and documented before and after application of this product. for warrenty to be valid. 12 Intermet Applications: All process actives and the dramouth, and all "Next-mediates and the methods and an anti-al process actives and the methods. The comes waters and the seek to apply the methods are comes waters to apply the methods. The methods are comes waters to apply the set of the process and the set of the the set of the 4.2 Membrane Application: 5.3 The membrane must not be used to bridge substrate expansion joints. Housable Coverzo Bonding to Lightweight Cement and Gypsum Surfaces UPG Reading to Lighthomaphil Centers and Organiza functions: Updampiler or generation strends in an other an internation of the control of the co 5.4 The membrane recognized in this report is manufactured by Custom Building Products in Grand Prairie, Teoras and Bail, California under a quality control program with annual inspection by ICC-ES. Narranty of this product, when used according to the directions, Size RedGard as Crack Prevention 1 Gallon (3.781) 3.5 Gallon (13.21) RedGard as Crack Prevention DRAFTING SERVICES Coverage on Membrane: 300 kg, ft (9,3 M2) 350 kg, ft, (32,5 M2) 6.0 IDENTIFICATION 6.3 DENTFICATION Containers of the RedGard[®] Wateproofing and Crack Prevention Membrane, C-Care Pre-Net Wateproofing and Anti-Rachum Membrane and Jame[®] Wateproofing and Anti-Membrane and Jame[®] Wateproofing and Anti-Network and Anti-Membrane and Jame[®] Wateproofing and Anti-Membrane and Jame[®] Wateproofing and Anti-Network and Anti-Membrane and Jame[®] Wateproofing and Anti-Network and A Lj Cao | LJ@HOUSABLE.COM 1161 Mission St. San Francisco, CA 94103 O:(213) 577 1557 | C:(213)787-7578 Membrane meeting ANSI A118.12 CAUTIONS Technical Chart 25 sq. ft. (2.3 M2) 88 sq. ft. (8.2 M M2) KEP OUT OF REACH OF CHUDREN, Intalation: If spraying, avoid prolonged breathing of airborne miat. Use NCOH approved regi-rator for misance if theshold limit values are unade. Skin Contact: Skin contact me gause inflation. Revrow constrainted diothing and vash affected isin with scap and water. Launder dothing before result. Byrophose pensity, assist rescaled althrofice. These: Was asleys
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 RedGard as Waterproof Men 55 sq. ft. (5.1 M2) 292 sq. ft. (17.8 M2 1 Gallon (3.78 L) 55 sq. ft. (5.1 M2) 3.5 Gallon (13.2 L) 192 sq. ft. (17.8 M2 RedGard as IAPHO Pan Liner meeting AMSI A118.10 eye protection when applying. Contact with eyes may cause inita-tion. Flush eyes with water for 15 minutes. If symptoms period Revisions 1 Gallon (3.78 L) 40 sq. ft. (3.7 M2) 3.5 Gallon (13.2 L) 140 sq. ft. (13 M2) 6.1 The report holder's contact information is the following: Vapor Barrier No Description TYPICAL PROPERTIES When used as a vapor barrier, apply one full cost (70 sq. ft. per gallon) where vapor transmission is up to 8 lbs. per 1000 sq. ft. per day and two full costs (70 sq. ft. per galan such cost) where word transmission is sp to 12 lbs. per (100 sq. ft. per day. Refr to ASTM F1869 for more information on Vapor Transmission Testing. Chart for estimating purposes. Coverage may vary based on installation practices and jobsite core Solids VOC's Tack Free Time 96.5% <40 g/L 4 % hours at 78 F (26 CUSTOM BUILDING PRODUCTS, INC. 7711 Center Ave, Suite 500 Huntington Beach, CA 92647 (562) 598-6810 www.custombuildingproducts.com
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Scale







	OF COMPLIANCE							CF1R-PRF-01E
ict Name	: Hoffman Street ADU		-	Calculation Day	te/Time: 2022-06-24710.	21:51-07:00		(Page 1 of 8)
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	Addition Cond. Roor Arei	a (ft²) 567		15	Number of	Stories 1		
	Existing Cond. Floor Are-	a (11 ²) 1092		17	Fenestration Average L	J-factor 0.3		
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sting Area	a (excl. new addition (ft2) A	Addition Area (excl. existing) (ft2)	Total Are	a (f12)	Existing Bedrooms	Addition Bedr	rooms	Total Bedrooms
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PLIANCE R	resours							
10	Building Complies with Coer	nputer Performance						
02	This building incorporates for	eatures that require field testing	and/or verification.	by a certified Ht	RS rater under the supervis	sion of a CEC-appr	roved HERS p	rovider.
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CalCERTS Inc. (0:22:08

Project Name: Hoffman Strey	et ADU			Calcula	tion Dat	c/Time	: 2022	05-24T	0:21:51-0	00:2			(Page 4 of 8
Calculation Description: Title	24 Analysh			Input F	ile Nam	e: Hoffe	main Str	eet ADL	(8761a).r	x61bd			
FENESTRATION / GUAZING													
10	02	60	04	02	90	01	80	8	10	п	77	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Sourc	Exterior Shading
2	Window	Flight Wall	RUCHE	0			-1	10.5	0.3	NFRC	0.23	NFRC	Bug Screen

							1.11		and and a		٠	-
2	Window	Flight Wall	Right	0			1 10.5	0.3	NFRC	0.23	NFRC	Bug Screen
OPAQUE DOORS												
10		10	~			03		┝				
Nam		Side of B	uilding			Area (ft	6	\vdash		9-0	stor	
Door	1	Front	Visit			20		\square		Ŭ	3	
SLAB FLOORS		<										
10	02	03	04		05	-	8	-	07			80
Name	Zone	(fit) sear	Perimeter (ft)	Edge	nsul. R-val	e e	idge Insul. R-va and Depth	fue C	rpeted Fra	ction		Heated
Slab	New Living Area	1 295	38	= 0	none	1		0	0%			No
OPAQUE SURFACE CONST	RUCTIONS			1	>	2						
10	02	03	04		80	┝	90	07	L		8	
Construction Name	Surface Typ	e Construction Type	Framing		Total Cavi R-value	fty Inte	rrior / Exterior Continuous R-value	U-factor		Asse	mbby Lary	ę
II-15 Wall	Exterior Wal	lls Wood Framed Wall	244 @ 16 In. O. I	J	R-15	2	Jone / None	0.095	an C C C	ade Fini avity / F erior Fir	h: Grpsu name: R-I ish: 3 Co	m Board 5 / 244 at Stucco
Attic RoofNew Living Area	Attic Roafs	Wood Framed Celling	2M4 @ 24 m. O. O	J	R-19	2	ione / None	0.059	Roofing Ss Aros	E: Ught Roof dirg/sh vity / Fr and Roo	Ecof (Asp Deck: W(eathing// eme: R-1	halt Shingle) od Secking LO / 2x4 6.0 Insul.

Attic RoofNew Living Area	Attic Roofs	Wood Framed Celling	264 @ 24 in. O. C.	8-19	None / None	0.059	Roofing: Light Roof (Aqehalt Shingle Roof Dect: Wood Siding/Meathing/decking Centry / Freme: R-13.0 / 244 Around Roof Joists: R-6.0 Insul.	تو ا
sgistration Number: 222.PK	3197268634, 000-000 0001 27 Standards - 2019 Res	000-000 sidential Compliance	Registration Dat Report Version: Schema Version	a/Time: 2019.2.000 1 rev 20200901	11:10.48	HER	Provident c.accent t.Generated: 2022-06-24 10:22:08	39.94

tion Number: 222-P019125883A-005-000-00000-0000	Registration Date/Time: 2023/06/24 11:10/48	HBH
ing Energy Ufficiency Standards - 2019 Residential Compliance	Report Version: 2019.2.000 Schema Version: rev 20200901	Rep

UAC (INFODORE ARE CUMULTY) FAMS 01 02 03 04 05	2
01 02 08 04 05	ar 01
	10
Dwelling Unit IAQ CFM IAQ Watts/CFM IAQ Fan Type IAQ Recovery Effectivenes - 546 E	IAQ Recovery Effectiveness - ASRE HERS Verification
SFam ADU IAQVentBpt 32 0.35 Exhaust ry/a	r/a Yes



CERTIFICATE OF COMPLIANCE				CF1R-PRF-01E
Project Name: Hoffman Street ADU		Calculation Date/Time: 2022	06-24710:21:51-07:00	(Page 2 of 8)
Calculation Description: Title 24 Analysis		Input File Name: Hoffman St	reet ADU (8761a).ribd19x	
	ENERGYL	USE SUMWARY		
Energy Use (kTDV/ft ² -yr)	Standard Design	Proposed Design	Compliance Margin	Fercent Improvement
Space Heating	2.96	6.33	3.37	-113.9
Space Cooling	19,43	20.48	-1.05	-5,4
IAQ Ventilation	4.63	4.63	D	0
Water Heating	29.8	24.32	5.48	18.4
Self Utilization/Flexibility Credit	n/a	0	a	n/a
Compliance Energy Total	56.82	55.76	1.06	1.9
ECQUIRED SPECIAL FEATURES				
The following are features that must be installed as con	idition for meeting the modeled energy p	performance for this computer anal	rais.	
Insulation below roof deck Exposed slab floor in conditioned zone				
	101-0	JLU.		
HERS FEATURE SUMMARY			10	
The following is a summary of the features that must b dstail is provided in the building tables below. Registere	e feld-verified by a certified HBRS Rater- d CF2Rs and CF3Rs are required to be co	as a concition for meeting the mod impleted in the HERS Registry	eled energy performance for this co	mputer analysis. Additional
Buildrag dren Vinteriaterios: a listeria equality ventilation isteria nega broad Collan System Ventilationel: adalette System Ventilationel: state Registrem Ventilationel: stateriationelise constructionelise				
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stration Number: 222 P0101256634, 006-009-00000-0000	Registration Date/Time: 2022-05-24 11:10-48	HERS Provider:	CAICERTS INC
uilding Errergy Efficiency Standards - 2019 Residential Compliance	Report Version: 2019.2.000 Schema Version: rev 2020001	Report Generated: 2022-0	36-24 10:22:08

		Interior / Exterior					
08	02	90	05	04	03	02	
						RUCTIONS	COMST.
119x	3761a).ribd	ffman Street ADU (ile Name: Hol	Input F		: Title 24 Analysis	ription.
00 (Page	21:51-07:0	te: 2022-06-24T10	tion Date/Tin	Calcula		Street ADU	loffman
CF1R-F						JANCE	COMPL
			: rev 20200901	Schema Version			

CF1R-PRF-01E (Page 6 of 8)

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Calculation Description	ic Title 24 Analysis				3 =	put File Name:	Hoffman S	treet ADU (8	3761a).rl	x61bd		Page 5 of 8
DPAQUE SURFACE CONST	RUCTIONS											
10	02	┝	03	L	04	50		90	20		88	
Construction Name	Surface Type		onstruction Type		aming	Total Carri R-value	ty Interior Con	r / Exterior tinuous value	U-factor	Ass	eenbly Layer	
R-38 HP Attic	Cellings (below attic)		Wood Framed Celling	204 @	24 In. O. C.	R-38	Non	z / None	0.025	Over Ceilir Cavity / Inside Fi	g Joists: R-28 Frame: R-9.1 Nah: Gypsum	.9 insul. / 2x4 Board
BUILDING ENVELOPE - HE	RS VERIFICATION			2								
10		H		ä	F		03		┝		8	
Quality Insulation	nstallation (QII)		High R-value Spra	w Foam Insula	tion	Building E	rivelope Air	Leakage	\vdash		FMSO	
Not Req	uired		Not B	squired		z	ot Required				ev.	
VATER HEATING SYSTEM			0	1	Ļ		-					
10	02		60		8			50		90		20
Marrie	System Type	ľ	Distribution Typ	2	Jater Heater	Marre (#)	Solar Hea	ting System	Comp	act Distribution	HERS VI	rification
DHW Sys 1	Domestic Hot Wa (DHW)	ł.	Standard Distribut System	de R S	DHW Heate		0	er He		None		e)
MATER HEATERS												
01 02	03	90	05 06	01	88	60	10	11		12	13	1
Name Element Type	Tank Type	a of Units	ank Energy fol. Factor or gal) Efficiency	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	NEEA Heat Brand or h	Pump Aodel	Tank Location or Ambient Condition	Status	Verified Existing Condition
DHW Gas Heater 1 Gas	Consumer	-11	0 0.97-UEF	ce 200 V@ru/hr	D	r/a	e/u	n/a		n/a	New	n/a

HEAT	002												
	02	03	90	SO	90	10	80	60	10	n	12	13	14
8	Heating Element Type	Tank Type	If of Units	Tank Vol. (Iag)	Energy Factor or Efficiency	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Becovery Eff	1st Hr. Rating or Flow Rate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition	Status	Verified Existing Condition
25	Gas	Consumer	-	0	30.97-UEF	<= 200 k8tu/hr	0	e/u	e/u	n/a	₽/u	New	e/u
				1									

ation Number: 222 P0131268834, 056 000-00000-0056	Registration Date/Time: 2022-06-24 11:10-48	HERS Provider:	CalCERTS INC.
diag theregy Ufficiency Standards - 2019 Residential Compliance	Report Version: 2019.2.000 Schema Version: rev 20200901	Report Generated: 2022-06-24	10:22:08
CATE OF COMPUANCE		0	CF1R-PRF-01E
Name: Hoffman Street ADU	Calculation Date/Time: 2022-06-24710:	21:51-07:00	(Page 8 of 8)
ion Description: Title 24 Analysis	Input File Name: Hoffman Street ADU (8	3761a).ribd19x	
ENTATION AUTHOR'S DECLARATION STATEMENT			Γ

TRATISTICATE OF COMPLIANCE	10-300-013J	
Polect Name: Hoffman Street ADU	Calculation Date/Time: 2022-06-24710:21:51-07:00 (Page 8 of	:
Calculation Description: Title 24 Analysis	Input File Name: Hoffman Street ADU (8761a).ribd19x	
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT		
LI certify that this Certificate of Compliance documentation is accurate and complete.		r
becum entration //ut/to: Nume. Cable: VIIIa	Documentation Author Signatures. Cobbo NEClar	<u> </u>
terepresi. Carstairs Energy Inc.	Signalize oute 2022-06-24 10 58 17	_
uderes: 2238 Bayview Heights Drive, Suite E	CEA/ MERS Centil cubion Mentification (Mapplicable): rf 808610042	_
20/3144/2p. Los Osos, CA 93402	Phone 805-904-9048	<u> </u>
65PONSIBLE PERSON'S DECLARATION STATEMENT		г
entity the Storuge under penalty of pelving, under the Bare of the State of Cultimout, under penalty of pelving, under the State of the Storuge L. I. In the Upbe used Pointion 1 of the Bare and Pointian of Calo and Pointian C	building dunge interfated on this Confidence of Campilatone. Interfational conform to the negretorian call first 33, first 1 and Part 5 of the California Cade of Regulation. Juding graymers applications:	
	Rectorshis Daviger Straters Particle Chillers	
Heuseble Heuseble	2022-06-24 11:10-46 E R	<u> </u>
uders: 21 Buena Vista Ave E	Leense Da	<u> </u>

NTATION AUTHOR'S DECLARATION STATEMENT	
that this Certificate of Compliance documentation is accurate and complete.	
ntion Auchor Name. 1188	Decomentation Author Signatures Cobbo Nelllar
s Energy Inc.	Signative Date: 2022-06-24 10:58:17
ayview Heights Drive, Suite E	CEA/ MERS Certification Mentification (Mappletable): r160610042
5pr 06. CA 93402	Phone: 805-904-9048
BLE PERSON'S DECLARATION STATEMENT	
Solowing under pereity of perjury, under the laws of the State of Carlonnia. I am eigbo under Division 1 of the Burness and Perfessions Code to accept responsibility if I certify that the every features and performance specifications identified on this Certificate	cr the building despendentified on this Centrificate of Compliance. A compliances coordism to the requirements of this 3.4, her 1 and Pert 6 of the California Code of Regulations.
The building design features or system design features identified on this Certificate of Comp calculations, plans and specifications submitted to the enforcement-agency for approval with	liance are consistent with the information provided in other applicable compliance documents, worksheets, With guiden greenet application.
	Rectoscile Deligner Spartine Parthaid Childias
* HERS	2022-06-24 11:10-48 E R
na Vista Ave E	License. Da

	Construction registerer. Cable Villa
nergy inc.	Suprative Date: 2022-06-24 10:58:17
iew Heights Drive, Suite E	CIA/ NERS Certification Mentification (Mapplicable): r160610042
CA 93402	Phone 805-904-9048
PERSON'S DECLARATION STATEMENT	
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	Reported a Deligner Sportune Parcheie Chellens
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soo, CA 94117	Phone 628-256-5665

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Open (1) Distribution	5 02 03 03 04 05 7		60	HO	W Sys 1
01 02 03 03 04 05 <th05< th=""> 05 05 05<!--</td--><td>02 03 04 05 Zone Construction Atlenuth Orientation G</td><td></td><td></td><td></td><td></td></th05<>	02 03 04 05 Zone Construction Atlenuth Orientation G				
Main Tarsa Communities Advances Advances <th< td=""><td>Zone Construction Abimuth Orientation G</td><td>90</td><td>20</td><td>80</td><td>-</td></th<>	Zone Construction Abimuth Orientation G	90	20	80	-
Timologie Timologies Timologies <thtimologies< th=""> Timologies Timologie</thtimologies<>		Gross Area (ft ²)	Window and Door Area (ft2)	Tilt (deg)	-
Untrol Untro Untro Untro <td>New Living Area R-15 Wall 90 Front</td> <td>168</td> <td>52</td> <td>8</td> <td>┢</td>	New Living Area R-15 Wall 90 Front	168	52	8	┢
Biology Biology <t< td=""><td>New Uning Area 8-15 Mail 180 Left</td><td>216</td><td>0</td><td>6</td><td>\vdash</td></t<>	New Uning Area 8-15 Mail 180 Left	216	0	6	\vdash
Option/ Instruction/ End NeuroInstruction Nation/ End C Option 231 Filt NeuroInstruction Nation/ End Nation/ En	New Living Area 8-15 Wall 270 Back	168	21.1	06	-
Inside Text Link (sec) (15) <td>New Uning Area R-15 Wall 0 Right</td> <td>216</td> <td>10.5</td> <td>8</td> <td>┢</td>	New Uning Area R-15 Wall 0 Right	216	10.5	8	┢
ATR Attention Atte	New Uning Area 8-38 HP Attac n/a n/a	567	n/a	n/a	┢
an. at. at. <td></td> <td></td> <td></td> <td></td> <td></td>					
Name Contraction Name Dest Name (see 13) Dest N	M R R S A P	ROAV	D D	2	8
Rec Neurolettion Matchebrationed Vanishies 5 11 11 11 Rec Neurolettion ad <	Construction Type Roof Rise (x in 12)	() Roof Reflectas	nce Roof Emitt	Fance	adiant
Trues Trues of true and t	trea Attl: RochNew Living Verblated 5	0.1	0.85		N
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1 Water Free Wat Part 90 1 1 1 1 Water Pred Wat P	Type Surface Orientation Atim	(ft) (ft)	teight Mult. Are (ft) Mult. (ft ²	() U-factor	U-fact
3 Weeker Free Veel Proof Free Veel 1 </td <td>Window Front Wall Front 9</td> <td>8</td> <td>1 16</td> <td>0.3</td> <td>NFR</td>	Window Front Wall Front 9	8	1 16	0.3	NFR
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4 Wordson Rear Wull Back 200 [1 [1 [26] Registration Number: 2.239 procession documentors and another in the intervention OberTrans. And and the interventioner Prevaints, 2010 procession of 2011 (2011)	Window Rear Wall Back 27	270	1 12.	3 0.3	NFR
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CF1R-PRF-O1E (Page 3 of 8)

01 02 Manne Pipe Insulation Dev Ver 1 - 1/1 Mod Required SML CHRONTORMIC SYSTEMS Anne 01 Kunne Sy	0									
Nume Pipe Invulation DNU Sp. 1. J. J. Rut Rupared SMCL CONTINUES SYSTEMS OIL Nume OI Nume Systems	1000		04	o		8	L	20		08
DRVI 5p. 1. 1/1 Mot Required SML COMOTIONING SISTIAS 01 01 50 Name 50 Name 50	n Parallel	Piping Cor	mpact Distribution	Compact D Typ	istribution R	edirculation Contr	10	Central DHM Distribution	Showe	r Drain Water T Recovery
SPACE CONDITIONING PISTERIAS 01 Name 59	Not Rec	quired	Not Required	No	a	Not Required	-	Not Required	Not	: Required
01 Name Sy										
Name Sys	02	σ	90	05	90	07	80	8	10	п
Heating at	stem Type	Heating Unit Name	Cooling Unit F Name	an Name	Distribution	Required Thermostat Type	Status	Verified Existing Condition	Heating Equipment Count	Cooling Equipment Count
HVAC System1	other	Heating Component 1	Cooling Component H	NAC Fan 1	n/a	Non-setback thermostat	Near	NA	1	
		1				-				
HVAC - HEATING UNIT TYPES	-			r	P	LIC				
10	1	02		- 0	60				8	
Name		System Typ	1	2	Number of	Units		He	sting Efficiency	
Heating Component 1		Gas wall furr	lace		1				AFUE-81	
HVAC - COOKING UNIT TYPES										
01 02	03	-	04	0	L	90	_	10		80
Name System Type	Number o	of Units Ef	ficiency EER/CEER	Efficient	cy SEER	Zonally Controlles	-	Mulit-speed Compressor	HERS	Verification
Cooling Component 1 No Cooling			n/a	5		Not Zonal		Single Speed		n/a
HUAC - FAM SYSTEMS										
10			02			03		-	04	
Narrie			Type		2	n Power (Watts/C	(WE		Name	
HVAC Fan 1			HVAC Fan			0.58			n/a	
Registration Number: 222-80101358014.000.	010 010010 0100		Registra	tion Date/Tin	111 70 00 000	0.48	HERO	S Provider:		CMCERTS Inc
C. Building France Hitcheney Standards - 2	010 Basinamial Cou	modiance.	lanore /	Unreiner 2010	000 6		Bare	ort Constate	4C302000-H	10-22-08



Exterior 12 13 SHGC Sourc e 0.23 NFRC 0.23 NFRC 0.23 NFRC 0.23 NFRC

Buena Park CA 3761A Hoffman St Hoffman Street ADU



DRAWN BY: Timothy SCALE: N/A

T24.

Contraction	N				ļ	ŀ					
Structure Structure <t< th=""><th>Project Nam</th><th>street ADU</th><th></th><th></th><th>ping</th><th>ng Type</th><th>El Mult</th><th>Io Family L</th><th>1 Addition Alone 2 Existing+ Additi</th><th>on/Alteration</th><th>6/24/2022</th></t<>	Project Nam	street ADU			ping	ng Type	El Mult	Io Family L	1 Addition Alone 2 Existing+ Additi	on/Alteration	6/24/2022
Construction Description Carvity Area Special Features Statutes construction main model main main main main construction main main main	Project Addr 8761a Ho	oss offman Street	Buena Pa	nrk.	Calfe	A Climat	gy Climat the Zone	e Zone Tota	al Cond. Floor Area 567	567	# cf Units
000 0000000000 000000000000000000000000000000000000	INSULA Constru	TION ction Type			Cavi	ty	Area (ff)	Spec	ial Features		Status
(m) (m) <td>Walt</td> <td>Wood Framed</td> <td></td> <td></td> <td>R 15</td> <td></td> <td>116</td> <td></td> <td></td> <td></td> <td>New</td>	Walt	Wood Framed			R 15		116				New
main main/feature city 101 main/feature 101 main/feature main/feature <td>Door L</td> <td>Opeque Door</td> <td></td> <td></td> <td>R-5</td> <td></td> <td>20</td> <td></td> <td></td> <td></td> <td>New</td>	Door L	Opeque Door			R-5		20				New
0000 00000ment 01000 01000 0100	Wall 1	Nood Framed			R 15		216				New
00 00000000000 0100 0000000000 0100000000 000000000000000000000000000000000000	Well	Wood Framed			R 15		147				New
BUL MARTINEAULICI State 133	Wall	Wood Framed			R 15		206				New
All Unsertition of the sector Constrained of the sector Consector Consector Constrained o	Roof 1	Wood Framed Allic			R 38		295	Add+R-19.0			New
ENERTRATION Internation And and and and and and and and and and a	Stab L	Unheated Slab-on-G	rade		- no insu	nation	202	Penim = 96"			New
Monte Description Monte Monte Monte Monte Monte Option 211 201 201 201 201 201 201 Option 211 201 201 201 201 201 Option 201 201 201 201 201 201 Option Monte Cooling Monte 201 201 201 Option Monte Cooling Duet Location 201 201 Option Cooling Duet Location 201 201 201 Option Coolin	FENEST	RATION	Total	Area:	04	Glazing P	Percembag	0. 11.2%	New/Atered Ave	rage U-Factor:	0.30
MUL00 21 200 23 mod mod <td>Crient (E)</td> <td>1011 Ared(il</td> <td> (</td> <td>200</td> <td>023</td> <td>uvern.</td> <td>ding</td> <td>Dome</td> <td>N/4</td> <td>lidues</td> <td>New</td>	Crient (E)	1011 Ared(il	(200	023	uvern.	ding	Dome	N/4	lidues	New
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1 Canage Mark Frances First ACC No.000 Model	HVAC S Qtv. He	YSTEMS	W	n. Eff	Coc	pling		Min. El	The	ermostat	Status
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vuid future to form the form the second to t	HVAC D	ISTRIBUTIO	N Heating		Co	pling	Duct	t Locatio	e	Duct R-Value	Status
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1 Small historyaevou Gar 0 207 Savolard New	WATER Otv. T	HEATING		Gallo	su	Min. B	1	Distribut	i		Status
	1 8	may instantaneous c	285	0		0.97		Standard			New

2019 Low-Rise Residential Mandatory Measures Summary Ó

Annie or Measures: Air Leakag

The second se § 110.7; § 110.8(a); § 110.8(g); § 110.8(g); § 110.8(g);

110.6(b):

Rafter Roof Insulatio

(50.0(a); 150.0(b): 150.0(c): 150.00):

oor Insulation. Minimum R-19 insul e Insulation. Stab edge insulation m o greater than 0.3 percent, have a w

§ 150.0(d):

ass I or Class II vapor ion to § 150.0(d). od soaco sido of all

 5 (50.0(g)):
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 8 (10.0(g)):
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 1 (50.0(g)):
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50.0(e)2

lency. Equipment must most the applicable officiency requirements r Heat Pumps with Supplementary Electric Resistance Heaters.

heating is higher than the cut of

110.2(b):

110.3(c)4:

110.2(c). 110.3(c)6:

50.0(h)1:

1.0(m)13:

2019 Low-Rise Residential Mandatory Measures Summary

stem Piping, and Space Conditioning System 11 of the California Plumbing Code. In addison. manufacturer 6 instructions. Storage Tank Insulation. Unfil a minimum of R-12 external ins Water Piping, Solar Witherhe

50.0(j.2A. 150.0(h)38: 150.0()1:

150.0()3:

50.0(n)1;

0.0(n)3:

s Measures. I Ducts. I contract

1.0(m)1:

150.0(m)2:

Gravity Ventilistion Dampers. Gravity ventilating manually operated dampers in all openings to the Protection of Insulation. Insulation must be pro

150.0(m)/7: 150.0(m)/7: 150.0(m)/8: 150.0(m)/8: 150.0(m)/10:

(m)12

2019 Low-Rise Residential Mandatory Measures Summary

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[100,000] Control Production and Control Product Stream Control Production and Control P Multitanily Attached Dwelling Units. Multitanily atta § 150.0(o)1E: 150.0(o)1C:

spa heating system or equipment must be installed with at least 36 inches of pi of return lines, or bail in or built up connections to allow for future solar heating deficited i ucitors and intum less, or ball-up corrections to been clubber of the set of the set of the set of the set of Directional littles and Time Seatures for Points (and China Directional littles and Time Seatures for Points (and China Directional littles and Time Seatures (and the set of supervised Point UpML Mutual gas pool and gap handers and not have a out Point Point (and the seature for the seature point point Point Seatures and Equipment literalization. Residential poil system Point Seatures and Equipment literalization. 4 (100,10)2. Approduct in the comparation of the co § 110.4(b)1: § 110.4(b)2: § 110.4(b)3: § 110.5:

2010 Salview Heights Drive, Sulie E 205,004,0048 Hille24@ydhoo.com 805-904-9048 Hille24@ydhoo.com www.carstalrsenergy.com

. Carstairs Energy Inc.

§ 5010(b): doi: plip: plim. nor univ. (applied) Remarkance. Laplaced Remarkance. Laplaced Comparison and Components. In Variang carierd devices and system, building, and drift (16), and drift (16). Cetilings. Luminairea recossed into collings in sance; and socket and light source as desorbe Liamos. Relievels for flucencord lumos relet 1 § 110.9. § 150.00014. § 150.00018: § 150.00018:

output frequency: no less than 0.20 kHz. Market Lights, Skip Lights, and Pahl Lights Woyd light, who highs an combolic by vocancy sectors provided they are rated to consume no m combolic by vocancy sectors provided they are rated to consume no m control from a filter the bitward from the Lights provided they are rated and the sectors in monomenous of \$10,000.

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phing systems. § 150.0(x)2C. § 150.0(x)2D:

Buena Park CA 8761A Hoffman St Hoffman Street ADU ABE Latifornia Pssociation of Building E CERTIFIED ENERGY Timothy Carstali

HERS Testing Call Us for

DRAWN BY: Timothy Carstal SCALE: N/A 24/2022

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r Ready Buildings: Single Fanily Residences. Single Izmly residences located in tudivisions with 10 or more single hamby Single Fanily Residences. Single Izmly residences has been determed in the single residence on tudio and approved by

explositor for a breathing the studius system Loor Hone J. Dolovenskie: System Loor-Hone Multifarmity Building Requestions of 8-10 (1) Fronce Anthiniam Solar Zone Area. Fronce pathonic, marking contraction, and o pathonic, marking and a studied and hone a tradit and a studied to a studied project, and hone a building project, and the studied project, and hone a building project, and the studied project, and hone a building project, and the studied project, and hone a building project, and the studied project, and hone a building buildi 110.10(a)1: 2

(10(b)1:

(110.10(b)2 (110.10(b)34, (110.10(b)38, (110.10(b)4, (110.10(b)4, (110.10(c)

Shading Shading distance,

Pathways. The cor

§ 110.10(0): Docummination. A copy of the construction § 110.10(0): § 110.11(c):must be provided to the cocupact § 110.10(0)1: Main Electrical Service Panel. The main of § 110.10(0)2: Main Electrical Service Panel. The main of becated to a than each clother installation.









