GENERAL INFORMATION

01	Project Name	Residential Building			
02	Calculation Description	Title 24 Analysis			
03	Project Location	14825 Morningside Dr			
04	City	Poway	05	Standards Version	Compliance 2015
06	Zip Code	92064	07	Compliance Manager Version	BEMCmpMgr 2013-3c (710)
08	Climate Zone	CZ10	09	Software Version	EnergyPro 6.5
10	Building Type	Single Family	11	Front Orientation (deg/Cardinal)	90
12	Project Scope	Newly Constructed	13	Number of Dwelling Units	1
14	Total Cond. Floor Area (ft²)	498	15	Number of Zones	1
16	Slab Area (ft²)	498	17	Number of Stories	1
18	Addition Cond. Floor Area	N/A	19	Natural Gas Available	Yes
20	Addition Slab Area (ft²)	N/A	21	Glazing Percentage (%)	35.5%

This compliance analysis is valid only for permit applications through July 31, 2015

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

ENERGY USE SUMMARY

04	05	06	07	08
Energy Use (kTDV/ft²-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	5.90	3.31	1.69	33.6%
Space Cooling	46.67	48.93	-2.86	-6.2%
IAQ Ventilation	1.79	1.79	0.00	0.0%
Water Heating	39.06	18.21	20.85	53.4%
Photovoltaic Offset	---	0.00	0.00	---
Compliance Energy Total	91.92	72.24	19.68	21.4%

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REQUIRED SPECIAL FEATURES

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

- **Cathedral Ceiling**

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 building components tables below.

Building-level Verifications:
- IAQ mechanical ventilation

Cooling System Verifications:
- -- None --

HVAC Distribution System Verifications:
- -- None --

Domestic Hot Water System Verifications:
- -- None --

ENERGY DESIGN RATING

This is the sum of the annual TDV energy consumption for energy use components included in the performance compliance approach for the Standard Design Building (Energy Budget) and the annual TDV energy consumption for lighting and components not regulated by Title 24, Part 6 (such as domestic appliances and consumer electronics) and accounting for the annual TDV energy offset by an on-site renewable energy system.

	Reference Energy Use	Energy Design Rating	Margin	Percent Improvement
Total Energy (kTDV/f2-yr)*	193.18	173.50	19.68	10.2%

* Includes calculated Appliances and Miscellaneous Energy Use (AMEU)

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft2)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Residential Building	498	1	1	1	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
1st Floor	Conditioned	HVAC System1	498	11	DHW Sys 1	

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OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window & Door Area (ft²)	Tilt (deg)
Front Wall	1st Floor	R-13 Wall	90	Front	275	141	90
Left Wall	1st Floor	R-13 Wall	180	Left	220	16	90
Rear Wall	1st Floor	R-13 Wall	270	Back	275		90
Right Wall	1st Floor	R-13 Wall	0	Right	220	16	90

OPAQUE SURFACES -- Cathedral Ceilings

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Type	Orientation	Area (ft²)	Skylight Area (ft2)	Roof Rise (x in 12)	Roof Pitch	Roof Tilt (deg)	Roof Reflectance	Roof Emittance	Framing Factor
Roof	1st Floor	R-30 Flat roof	Right	498	0	0	0	0	0.1	0.85	0.1

WINDOWS

01	02	03	04	05	06	07	08	09	10
Name	Type	Surface (Orientation-Azimuth)	Width (ft)	Height (ft)	Multiplier	Area (ft²)	U-factor	SHGC	Exterior Shading
Window	Window	Front Wall (Front-90)	---	---	1	141.0	0.29	0.25	Insect Screen default)
Window 2	Window	Left Wall (Left-180)	---	---	1	16.0	0.29	0.25	Insect Screen default)
Window 3	Window	Right Wall (Right-0)	---	---	1	16.0	0.29	0.25	Insect Screen default)

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Winter Design U-value	Assembly Layers
R-13 Wall	Exterior Walls	Hollow Unit Masonry			0.070	• Inside Finish: Gypsum Board • Insulation/Furring: R-13 / 4 in. mtl • Mass Layer: 8 in. LW CMU Solid Grout • Exterior Finish: Wood Siding/sheathing/decking
R-30 Flat roof	Cathedral Ceilings	Wood Framed Ceiling	2x12 @ 16 in. O.C.	R 30	0.038	• Inside Finish: Gypsum Board • Cavity / Frame: R-30 / 2x12 • Roof Deck: Wood Siding/sheathing/decking • Roofing: Light Roof (Asphalt Shingle)

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SLAB FLOORS

01	02	03	04	05	06	07
Name	Zone	Area (ft²)	Perimeter (ft)	Edge Insul. R-value & Depth	Carpeted Fraction	Heated
Slab	1st Floor	498	90	None	0.8	No

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04
Quality Insulation Installation (QII)	Quality Installation of Spray Foam Insulation	Building Envelope Air Leakage	ACH @ 50 Pa
Not Required	Not Required	Not Required	---

WATER HEATING SYSTEMS

01	02	03	04	05	06
Name	System Type	Distribution Type	Water Heater	Number of Heaters	Solar Fraction (%)
DHW Sys 1 - 1/1	DHW	Pipe Insulation: All Lines	DHW Heater 1	1	0%

WATER HEATERS

01	02	03	04	05	06	07	08
Name	Heater Element Type	Tank Type	Tank Volume (gal)	Energy Factor or Efficiency	Input Rating	Tank Exterior Insulation R-value	Standby Loss (Fraction)
DHW Heater 1	Natural Gas	Small Instantaneous	0	0.96	185000-Btu/hr	0	0

WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Point-of Use	Recirculation Control	Central DHW Distribution
DHW Sys 1 - 1/1	---	---	---	---	---	---

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SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06
SC Sys Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name
HVAC System1	Other Heating and Cooling System	Heating Component 1	---	None	None
HVAC System1	Other Heating and Cooling System	---	Cooling Component 1	None	None

HVAC - HEATING UNIT TYPES

01	02	03
Name	Type	Efficiency
Heating Component 1	RoomHeater - Ductless (No central space heater	95 AFUE

HVAC - COOLING UNIT TYPES

01	02	03	04	05	06	07
Name	System Type	Efficiency EER	Efficiency SEER	Zonality Controlled	Multi-speed Compressor	HERS Verification
Cooling Component 1	NoCooling			Not Zonal	Single Speed	

IAQ (Indoor Air Quality) FANS

01	02	03	04	05	06
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness(%)	HERS Verification
SFam IAQVentRpt	19.86	0.25	Default	0	Required

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Frank V. le	Documentation Author Signature: Frank Le
Company: TITLE24.NET	Signature Date: 7/20/2015
Address: 14211 Riata Street	CEA/HERS Certification Identification (If applicable): CABEC CERTIFIED ENERGY ANALYST
City/State/Zip: Westminster, CA 92683	Phone: 714-600-7955

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

Responsible Designer Name:	Responsible Designer Signature:
Company: Mar-co house plan design	Date Signed:
Address:	License:
City/State/Zip: ,	Phone:

This Certificate of Compliance is not registered

Certified Energy Analyst
14211 Riata st, Westminster, CA. 92683
Tel: 714-600-7955
TITLE24.NET

Title 24 Analysis
Guest house Addition
Morningside Dr, Poway, CA.

FRANK LE, CEA, CEPE

DATE : 7-18-2015
JOB NO. : 85-02
NO. DESCRIPTION / DATE

CERTIFICATE OF COMPLIANCE

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