CERTIFICATE OF FIELD INSPECTIO					LIST	-	•	Par	t 1 of	(4)		MEC	H-10
Project Name	********		Process (40	OGBOGBOW HARD PRINT	**************************************	entramona de la composición dela composición de la composición de la composición de la composición dela composición dela composición dela composición de la composición dela composición de la composición del composición dela composición dela composición dela composición dela composición dela composic	**************************************	andro poramento d			/gu-lives in 12 to 2 t	Date	3040
BCSD School Bld D Clas Project Address	sroo	ms	-		Clum	ate Zone			Total C	and F	loor Area	1/5/2 Addition F	
Bakersfield					Unite	ate Zune	13			8,44		n/	
GENERAL INFORMATION	****	accessoperate the	1997 (199 8 - 19 98) ₂ 1 - 1997 (1998 - 1998) (1997 (1998 - 1998) (1997 (1998 - 1998) (1997 (1998 - 1998) (1998 - 1998) (1998 - 1998 (1998 - 1998) (1998 -	**************************************		************	***************************************		**********			<u></u>	************
Building Type:	[2]	Nonr	esidential	950 13 10114141414		High-f	Reside	ntial		Hot	el/Motel G	uest Roor	n
☐ Schools (Public School)		Relo	catable Public	Scho	ol Bldg.	. 🖾	Condition	ed Sp	aces		Uncond (affida)	ditioned S	paces
Phase of Construction:	Ø	New	Construction			Additio	on			Alte	ration	<u>/11)</u>	
Approach of Compliance:	п	Com	ponent			Overa	Il Envelope	VQT	П	Uno	onditioned	d (file affid	avit)
	******		·	T		Energ	У						
Front Orientation: N, E, S, W o	*****	egree	s: 0 deg			******							
HVAC SYSTEM DETAIL	.5	I						FIE				RGY CHE	
				_						s Cri		equireme	
Equipment ² Item or System Tags				Inspe	ction C	riteria			Pass		Fall - D	escribe R	eason
(i.e. AC-1, RTU-1, HP-1)			CU/FC D-1,	2	4. <i>0.</i>	w-1							
Equipment Type3:			Split DX										
Number of Systems			2										
Max Allowed Heating Capacity	,1		18,000 Btu/l	hr		******							
Minimum Heating Efficiency ¹			n/a			····							
Max Allowed Cooling Capacity	,1		15,000 Btu/l	hr									
Cooling Efficiency ¹			16.0 SEER	/ 13.0	EER		····				·		
Duct Location/ R-Value			n/a								•		
When duct testing is required, MECH-4A & MECH-4-HERS	mdua	it	No										
Economizer			No Economi	izer									***************************************
Thermostat			Setback Red	guirea	!			T					
Fan Control			Constant Vo	lume									
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							FIE	LD INS	PEC1	TION ENE	RGY CHEC	CKLIST
Equipment ²				Insped	ction C	riteria			Pass		Fall - De	escribe R	eason²
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	~~~~											0	
Equipment Type ³ :													
Number of Systems													*****
Max Allowed Heating Capacity	1										.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Minimum Heating Efficiency ¹													
Max Allowed Cooling Capacity	1												
Cooling Efficiency ¹													~
Duct Location/ R-Value													
When duct testing is required, MECH-4A & MECH-4-HERS	subm	t					·	l					
Economizer													
Thermostat													
Fan Control													
If the Actual installed equipment the building plans) the responsit For additional detailed discrepar Indicate Equipment Type: Gas (le par	ly shall e Page	resubmit energing 2 of the Inspec	gy comp tion Ch	oliance t løcklist F	a includ Form Co	e the new cha ompliance fail	anges.				omittal or fro	om

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST	(F	Part 2 of 4)	MECH-10
Project Name BCSD School Bld D Classrooms	www.co.co.co.co.co.co.co.co.co.co.co.co.co.		Date 1/5/2012
Discrepancies:			
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	Anna (1888)		
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EnergyPro 5 1 by EnergySoft User Number: 5232 RunCode: 2012-0	1-05T13;16:21	ID: 09091	Page 17 of 2

CERTIFICATE OF COMP	LIAN	CE and	FIELD IN	ISPECTI	ON ENE	RGY CH	IECKLIS	ST (F	art 3 of 4	(M	ECH-1
Project Name	**********	**************************************	***************************************) 44***********************************			M ²²⁷⁷⁷¹⁷		Date	- 10 0 1 0
BCSD School Bld D Classrooms	-					***************************************			***************************************	1/3	5/2012
Required Acceptance Tests											
Designer: This form is to be used by the designer aboxes by all acceptance tests that apply the number of systems. The NA number part of the plans, completion of this section.	and liste designa	ed all equipmentes the Section	nt that require: n in the Appen	s an acceptan dix of the Nor	ice test. If all e rresidential R	equiprhent of eference Apr	a certain typ endices Mai	e requires a	test, list the e	quipment des	scription a
Building Departments: Systems Acceptance: Before occupaniormal use, all control devices serving the Systems Acceptance: Before occupant. The MECH-1C form is not considered a	ne buildir cy permi complete	ng or space sha t is granted. All ed form and is	all be certified I newly installe not to be acce	as meeting the did HVAC equi	ne Acceptanci ipment must b uilding depart	e Requireme ne tested usin tment unless	nts for Code ng the Accep the correct t	Compliance tance Requirements on the complex control of the control	ements. ecked. The ea	uinment reau	uirina testi
person performing the test (Example: HV checked-off forms are required for ALL specifications, installation, certificates, a properly filled out and signed forms before the company of th	newly ins nd opera	stalled equipmenting and maint ailding can rece	ent. In additior enance inforn eive final occu	a Certificate nation meet th pancy.	of Acceptanc le requiremen	e forms shall is of §10-103	be submitte 3(b) and Title	d to the build -24 Part 6. T	ing departmen he building in	nt that certifie spector must	es plans, receive th
TEST DESCRIPTION	T	MECH-2A	MECH-3A	MECH-4A	MECH-5A	MECH-6A	MECH-7A	MECH-8A	MECH-9A	MECH-10A Hydronic	MECH-1
Equipment Requiring Testing or Verification	Qty.	Outdoor Ventilation For VAV & CAV	Constant Volume & Single-Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation DCV	Supply Fan VAV	Valve Leakage Test	Supply Water Temp. Reset	System Variable Flow Control	Automa Demar Shed Contro
PUHY-P192 Run as Standard Heal Pump	2	Ø			図	図	Ø				EZ)
Mitsubishi MUY-A15NA / MSY-A15NA	2	Ø	Ø								
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CERTIFICATE OF COM	<u> PLIAN</u>	CE and F	IELD INSP	ECHON E	NEHGY CH	ECKLIST	(Part 4 of 4)	MECH-1
Project Name BCSD School Bld D Classrooms	3							Date 1/5/2012
TEST DESCRIPTION		MECH-12A	MECH-13A	MECH-14A	MECH-15A	######################################	***************************************	J
Equipment Requiring Testing	Qty.	Fault Detection & Diagnostics for DX Units	Automatic Fault Detection & Diagnostics for Air & Zone	Distributed Energy Storage DX AC Systems	Thermal Energy Storage (TES) Systems		Test Performed By.	
PUHY-P192 Run as Standard Heat Pump	2	Ø						***************************************
Mitsubishi MUY-A15NA / MSY-A15NA	2	0						
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EnergyPro 5.1 by EnergySoft Us	er Number:	5232	·	RunCode: 2012-01-	05T13:16:21	ID: 09091	**************************************	Page 19 o

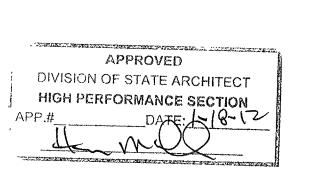
Project Name BCSD School Bld D Classro	ooms			Date 1/5/2012	
riadaministra (1.000 de mente consepto comunicación con 4 est est carcino dissoción con consecuto de la consec	Indica	ite Air Systems Type (Ce	ntral, Single Zone, Package,	VAV, or etc)	
Item or System Tags (i.e. AC-1, RTU-1 HP-1)		HP D-1	HP D-2	CU/FC D-1, 2	
Number of Systems		1	,	2	
	Indicate Pag	e Reference on Plans or	Schedule and Indicate the ap	plicable exception(s)	
MANDATORY MEASURES	T-24 Sections	***************************************			
Heating Equipment Efficiency	112(a)	3 20 COP	3 20 COP	n/a	
Cooling Equipment Efficiency	112(a)	10.6 EER	10 6 EER	16 Q SEER / 13.0 EÉR	
HVAC Heat Pump Thermostat	112(b), 112(c)	Yes	Yes	n/a	
Furnace Controls/Thermostat	112(c), 115(a)	n/a	n/a	n/a	
Natural Ventilation	121(b)				
Mechanical Ventilation	121(b)	1,560 cfm	1,521 cfm	26 cfm	
VAV Minimum Position Control	121(c)	No	No	No	
Demand Control Ventilation	121(c)	Yes	Yes	No	
Time Control	122(e)	Programmable Switch	Programmable Switch	Programmable Switch	
Setback and Setup Control	122(e)	Setback Required	Setback Required	Setback Required	
Outdoor Damper Control	122(f)	Auto	Auto	Auto	
Isolation Zones	122(g)	n/a	n/a	n/a	
Pipe Insulation	123	Refrigerant	Refrigerant		
Duct Location/ R-value	124	Attic, Roof Ins / 4.2	Attic, Roof Ins / 4 2	n/a	
PRESCRIPTIVE MEASURES Calculated Design Heating Load	144(a & b)	n/a	n/a	n/a	
Proposed Healing Capacity	144(a & b)	124,915 Btu/hr	124,915 Btu/hr	0 Btu/hr	
Calculated Design Cooling Load	144(a & b)	n/a	n/a	n/a	
Proposed Cooling Capacity	144(a & b)	190,376 Btu/hr	190,261 Btu/hr	21,198 Blu/hr	
Fan Control	144(c)	Variable Speed	Variable Speed	Constant Volume	
DP Sensor Location	144(c)				
Supply Pressure Reset (DDC only)	144(c)				
Simultaneous Heat/Cool	144(d)	No	No	No	
Economizer	144(e)	Diff, Temp (Integrated)	Diff Temp (Integrated)	No Economizer	
Heat Air Supply Reset	144(1)	Coldest Zone	Coldest Zone	Constant Temp	
Cool Air Supply Reset	144(f)	Warmest Zone	Warmest Zone	Constant Temp	
Electric Resistance Heating ¹	144(g)				
Air Cooled Chiller Limitation	144(i)				
Duct Leakage Sealing, If Yes, a MECH-4-A must be submilted	144(k)	No	No	No	
Total installed capacity (MBtu/hr) explain which exception(s) to §1-	of all electric heat or	n this project exclusive of elec	fric auxiliary heat for heat pumps.	If electric heat is used	

	NICAL VE	VIILATIO	NANL	) HEHE	AT	~#*************	*********************					····	***************************************	<u> </u>
Project Name BCSD Sch	r Tool Bld D Clas	stooms											Date 1/5/2	2012
***************************************	***************************************	MEC	JANICAI	VENTILATION	DN (6121/	k)0\	******************************	***************************************	*****************	DENE	AT I IRÁITA	TIM ISTAA	<u> </u>	<u> </u>
		T	EA BASIS	764111102511		OCCUPANCY BASIS					REHEAT LIMITATION (§144(d))  VAV MINIMUM			
·····	Α	В	c	D	E	F	G	Н	1	J	K	L.	M	N
Zon	ne/System	Condition Area (fl ² )	CFM per tr	Min CFM By Area B X C	Number Of People	CFM per Person	Min CFM by Occupant EXF	REO'D V.A. Max of D or G	Design Ventilation Air CFM	50% of Design Zone Supply CFM	BX0.4 CFM/ft ²	Max. of Columns H, J, K, 300 CFM	Desîgn Minîmum Air Selpoint	Transi Air
Classroom 10	***************************************	963	0.38	366				366	366					
Special Ed 10	1	1,136	0.38	432				432	371	······································				
Classroom 10	2	963	0.38	366				366	356	******************************				
Classroom 10	3	963	0.38	366				366	366					
Work Room 1	ÒS	240	0 38	91				91	91					
HP D-1							l'ota)	1,621	1,550					
Classroom 10	4	963	0.30	366				366	366					
Special Ed 10	5	874	0.38	332				332	332					
Classroom 10	6	963	0.38	366				366	366					
Classroom 10	7	963	0.38	366				366	366	lan di				
Work Room 1	09	240	0.38	91				91	91					
HP 0-2			·				Total	1,521	1,521					
Electrical Roo	ms	176	0.16	26				26	26					
CU/FC D-1,	<u> </u>						Total	26	26				! <del>!</del>	
***************************************				Totals	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					Column I Total	Design Ven	i tilation Air	L	
C	Minimum ventilati	ian rata nac Santi	on 8121 T	ahin fal-A			<del></del>							
£.	Based on fixed s	***************************************		***************************************	of occupant	s and 50%	of the GBC oc	cupant toad	for eares's ou	rooses for space	s without fix	ed seating.	***************************************	************
H	Required Ventilat	***************************************			~~~~~~						***************************************	7. 7. 7. 1		
1	Must be greater t			×	•			aseen tiiritiin kuluta	ameinestamitikare	personal de la termination de la companya de la co				
J	Design fan suppl	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	·····	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	***************************************	,,, <del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>								
К	Condition area (f)													
L	Maximum of Colu	···, ······												
M	This must be less	s than or equal to	Column L	and greater th	an or equal	lo the sum	of Columns H	plus N.						
N	Transfer Air must equal to the differ	l be provided whe rence between th	re the Required	uired Ventilate I Ventilation A	on Air (Colu ir (Column I	mn H) is gr H) and the I	eater than the Design Minimu	Design Min m Air (Colu	imum Air (Col mn M), Colum	umn M). Where i n H minus M.	required, fram	isfer air must		
EnergyPro 5.	1 by EnergySoft	User Num		*********************	*****		le: 2012-01-05			ID: 09091	***************		Pag	je 21 of

Project Name		
ക്കാര് വരവ	hool Bld D Classrooms	Date 1/5/2012
ESCRI		
******	invelope Measures:	
118(a) ⁻	Installed insulating material shall have been certified by the manufacturer to comply with the Calif Standards for insulating material, Title 20 Chapter 4, Article 3.	ornia Quality
118(c) ⁻	All Insulating Materials shall be installed in compliance with the flame spread rating and smoke de Sections 2602 and 707 of Title 24, Part 2.	ensity requirements of
(118(f):	The opaque portions of framed demising walls in nonresidential buildings shall have insulation will of no less than R-13 between framing members.	
§117(a):	All Exterior Joints and openings in the building that are observable sources of air leakage shall be weatherstripped or otherwise sealed.	
§116(a) 1:	Manufactured fenestration products and exterior doors shall have air infiltration rates not exceeding window area, 0.3 cfm/ft.² of door area for residential doors, 0.3 cfm/ft.² of door area for nonresidential goods, 0.3 cfm/ft.² of door area for nonresidential double doors (swinging).	ng 0,3 cfm/ft.² of ntial single doors
§116(a) 2:	Fenestration U-factor shall be rated in accordance with NFRC 100, or the applicable default U-fac	
§116(a) 3:	Fenestration SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestapplicable default SHGC.	
§116(b):	Site Constructed Doors. Windows and Skylights shall be caulked between the unit and the buildin weatherstripped (except for unframed glass doors and fire doors)	g, and shall be

Project Name	NICAL MANDATORY MEASURES: NONRESIDENTIAL	MECH-MM Date				
BCSD Sch	1/5/2012					
<u>Equipme</u>	nt and System Efficiencies					
§111:	Any appliance for which there is a California standard established in the Appliance Efficiency R with the applicable standard.	egulations will comply				
§115(a)·	Fan type central furnaces shall not have a pilot light.					
§123: Piping, except that conveying fluids at temperatures between 60 and 105 degrees Fahrenheit, or within HVAC equipment, shall be insulated in accordance with Standards Section 123.						
§124·	Air handling duct systems shall be installed and insulated in compliance with Sections 601, 602 the CMC Standards.	2. 603, 604. and 605 of				
Controls						
§122(e):	Each space conditioning system shall be installed with one of the following:					
1A.	explicitly exempt from the requirements of Section 112 (d)) shall be installed with an automatic accessible manual override that allows operation of the system during off-hours for up to 4 hou shall be capable of programming different schedules for weekdays and weekends and have procapabilities that prevent the loss of the device's program and time setting for at least 10 hours in the setting for the setting for at least 10 hours in the setting for at least 10 hours in the setting for the set	time switch with an rs. The time switch ogram backup				
	An occupancy sensor to control the operating period of the system; or					
1C.	A 4-hour timer that can be manually operated to control the operating period of the system.	and the second second				
2.	Each space conditioning system shall be installed with controls that temporarily restart and tem system as required to maintain a setback heating and/or a setup cooling thermostat setpoint.					
§122(g)·	Each space conditioning system serving multiple zones with a combined conditioned floor area more than 25,000 square feet shall be provided with isolation zones. Each zone shall not exceed 25,000 square feet; shall be provide with isolation devices, such as valves or dampers that allow the supply of heating or cooling to be setback or shut coindependently of other isolation areas; and shall be controlled by a time control device as described above.					
§122(c):	Thermostats shall have numeric setpoints in degrees Fahrenheit (F) and adjustable setpoint stops accessible only authorized personnel.					
§122(b)·	Heat pumps shall be installed with controls to prevent electric resistance supplementary heater heating load can be met by the heat pump alone					
Each space conditioning system shall be controlled by an individual thermostat that responds to ten zone. Where used to control heating, the control shall be adjustable down to 55 degrees F or lower control shall be adjustable up to 85 degrees F or higher. Where used for both heating and cooling, capable of providing a deadband of at least 5 degrees F within which the supply of heating and cool reduced to a minimum.						
Ventilatio						
§121(e):	Controls shall be provided to allow outside air dampers or devices to be operated at the ventilat on these plans.	lion rates as specified				
§122(f):	All gravity ventilating systems shall be provided with automatic or readily accessible manually openings to the outside, except for combustion air openings.					
§121(f)·	Ventilation System Acceptance. Before an occupancy permit is granted for a newly constructed new ventilating system serving a building or space is operated for normal use, all ventilation systems of space shall be certified as meeting the Acceptance Requirements for Code Compliance.	stems serving the				
Service V	/ater Heating Systems					
§113(c)	Installation					
3.	Temperature controls for public lavatories. The controls shall limit the outlet Temperature to 11	<del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>				
2.	Circulating service water-heating systems shall have a control capable of automatically turning when hot water is not required.	off the circulating pump				

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WILLIAM J. MELBY, AIA ARCHITECT C-16,835



PTN # 63321-112

NEW ELEMENTARY
SCHOOL
9801 HIGHLAND KNOLLS DR
BAKERSFIELD
CALIFORNIA
93306

NEW MIDDLE SCHOOL 4115 VINELAND ROAD BAKERSFIELD CALIFORNIA 93306

FOR:

BAKERSFIELD CITY SCHOOL DISTRICT 1300 BAKER STREET BAKERSFIELD CALIFORNIA

93305

	DATE	DESCRIPTION
$\triangle$		

JOB NUMBER:

200101244

CAD DRAWING FILE

DRAWN BY:

KW

CHECKED BY:

MB

CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH THE WORK.
REPORT DISCREPANCIES TO THE ARCHITECT.

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SHEET TITLE

TITLE 24

BUILDING "D"

SHEET IDENTIFICATION NUMBER

M-521