

STATE OF CALIFORNIA

MECHANICAL SYSTEMS

NRCC-MCH-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-MCH-E

This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

Project Name: La Mirada High School New Football Stadium

Report Page: (Page 1 of 18)

Project Address: 13520 Adelfo Dr.

Date Prepared: 2/11/2020

A. GENERAL INFORMATION

01 Project Location (city)		04 Total Conditioned Floor Area	4849
02 Climate Zone	9	05 Total Unconditioned Floor Area	0
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	1
<input checked="" type="checkbox"/> Office (B)	<input type="checkbox"/> Retail (M)	<input type="checkbox"/> Non-refrigerated Warehouse (S)	
<input type="checkbox"/> Hotel/ Motel Guest Rooms (R-1)	<input type="checkbox"/> School (E)	<input type="checkbox"/> Healthcare Facility (H)	
<input type="checkbox"/> High-Rise Residential (R-2/R-3)	<input type="checkbox"/> Relocatable Class Bldg (E)	<input checked="" type="checkbox"/> Other (write in)	See Table J

B. PROJECT SCOPE

This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

01	02	03
Air System(s)	Wet System Components	Dry System Components
<input checked="" type="checkbox"/> Heating Air System	<input type="checkbox"/> Water Economizer	<input type="checkbox"/> Air Economizer
<input checked="" type="checkbox"/> Cooling Air System	<input type="checkbox"/> Pumps	<input type="checkbox"/> Electric Resistance Heat
<input type="checkbox"/> Mechanical Controls	<input type="checkbox"/> Hydronic System Piping	<input checked="" type="checkbox"/> Fan Systems
<input checked="" type="checkbox"/> Mechanical Controls	<input type="checkbox"/> Cooling Towers	<input type="checkbox"/> Ductwork
	<input type="checkbox"/> Chillers	<input checked="" type="checkbox"/> Ventilation
	<input type="checkbox"/> Boilers	<input type="checkbox"/> Zonal Systems/ Terminal Boxes

Registration Number:

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Registration Provider: EnergySoft

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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
FC-3 - Ticketbooth	65,000		HSPF	8.2	11.5	SEER	13.0	20.5
FC-4 - Electrical Room	65,000		HSPF	8.2	9.8	SEER	13.0	16.7

G. PUMPS

This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS

This table is used to demonstrate compliance with prescriptive requirements found in §140.4(c), §140.4(e) and §140.4(m) for fan systems. Fan systems serving healthcare facilities, or those serving only process loads, are exempt from these requirements and do not need to be included in Table H.

System Name	FC-1 - Fieldhouse (Home)	Economizer ¹	Differential Temperature	Economizer Controls	Designed per and (m)	System Fan Type:	Fixed Flow
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4.8	Design Airflow through Device (CFM)
SF	Supply	1	0	BHP	0		
Total System Design Supply Airflow (CFM):			0	Total System Design (BHP):		Maximum System Fan Power (BHP):	0

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Date Prepared: 2/11/2020

J. VENTILATION AND INDOOR AIR QUALITY

04	05	06	07
System Name	FC-1 - Fieldhouse (Home)	System Design OA CFM Airflow ¹	Air Filtration per §120.1(c) and §141.0(b)2 ²
08	09	10	11
Space Name or Item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets
Team Room	Locker room (athletic facility)	1044	0
Concessions	Kitchenettes	288	0

Registration Number:

Registration Date/Time:

Registration Provider: EnergySoft

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C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicated as not compliant for guidance.

01	02	03	04	05	06	07	08	09
System Summary	Pumps	Fans/ Economizers	System Controls	Ventilation	Terminal Box Controls	Distribution	Cooling Towers	Compliance Results
§110.1, §110.2, §140.4	§140.4(h)	§140.4(c), §140.4(e)	§110.2, §120.2, §140.4(i)	§120.1	§140.4(i)	§120.3, §140.4(i)	§110.2(a)2	
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	
Yes	AND	AND	Yes	AND	Yes	AND	AND	COMPLIES
Mandatory Measures Compliance (See Table Q for Details)								
COMPLIES								

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in §110.1, and §110.2(a), and prescriptive requirements found in §140.4(a), §140.4(b), and §140.4(k), or §141.0(b)2 for alterations.

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available §140.4(a)	Equipment Sizing per Mechanical Schedule (Btu/h)						
				Heating Output ^{2,3}			Cooling Output ^{2,3}			
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load	Total Sensible Cooling Load

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Date Prepared: 2/11/2020

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	FC-2 - Fieldhouse (Visitor)	Economizer ¹	Differential Temperature	Economizer Controls	Designed per and (m)	System Fan Type:	Fixed Flow
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit ²	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4.8	Design Airflow through Device (CFM)
SF	Supply	1	0	BHP	0		
Total System Design Supply Airflow (CFM):			0	Total System Design (BHP):		Maximum System Fan Power (BHP):	0

I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in §110.2 and §120.2, and prescriptive controls in §140.4(f) and (n) or requirements in §141.0(b)2E for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft ²)	Thermostats §110.2(b) & (c) ¹ , §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(a)	Isolation Zone Controls §120.2(a)	Demand Response §140.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
FC-1 - Fieldhouse (Home)	Multi-zone w/ DDC to zone	25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
FC-2 - Fieldhouse (Visitor)	Multi-zone w/ DDC to zone	25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
FC-3 - Ticketbooth	Single zone	25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
FC-4 - Electrical Room	Single zone	25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided

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J. VENTILATION AND INDOOR AIR QUALITY

04	05	06	07
System Name	FC-1 - Fieldhouse (Home)	System Design OA CFM Airflow ¹	Air Filtration per §120.1(c) and §141.0(b)2 ²
08	09	10	11
Space Name or Item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets
Team Room	Locker room (athletic facility)	1044	0
Concessions	Kitchenettes	288	0
Storage	All others	119	0

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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

FC-1 - Fieldhouse (Home)	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	104632	108000	0	84487	80000	101463	76598
FC-2 - Fieldhouse (Visitor)	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	104632	108000	0	84487	80000	101463	76463
FC-3 - Ticketbooth	Unitary Heat Pumps	Air-cooled, split (3 phase)	Yes	13378	18800	0	18653	16000	31679	22334
FC-4 - Electrical Room	Unitary Heat Pumps	Air-cooled, split (3 phase)	Yes	18786	26400	0	23527	21000	28940	20144

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01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft ²)	Thermostats §110.2(b) & (c) ¹ , §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(a)	Isolation Zone Controls §120.2(a)	Demand Response §140.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
FC-1 - Fieldhouse (Home)	Multi-zone w/ DDC to zone	25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
FC-2 - Fieldhouse (Visitor)	Multi-zone w/ DDC to zone	25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
FC-3 - Ticketbooth	Single zone	25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
FC-4 - Electrical Room	Single zone	25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided

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J. VENTILATION AND INDOOR AIR QUALITY

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System Name	FC-1 - Fieldhouse (Home)	System Design OA CFM Airflow ¹	Air Filtration per §120.1(c) and §141.0(b)2 ²
08	09	10	11
Space Name or Item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft ²)	# of Shower heads/ toilets
Team Room	Locker room (athletic facility)	1044	0
Concessions	Kitchenettes	288	0
Storage	All others	119	0

Registration Number:

Registration Date/Time:

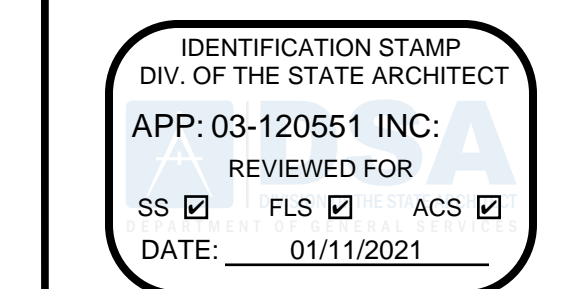
Registration Provider: EnergySoft

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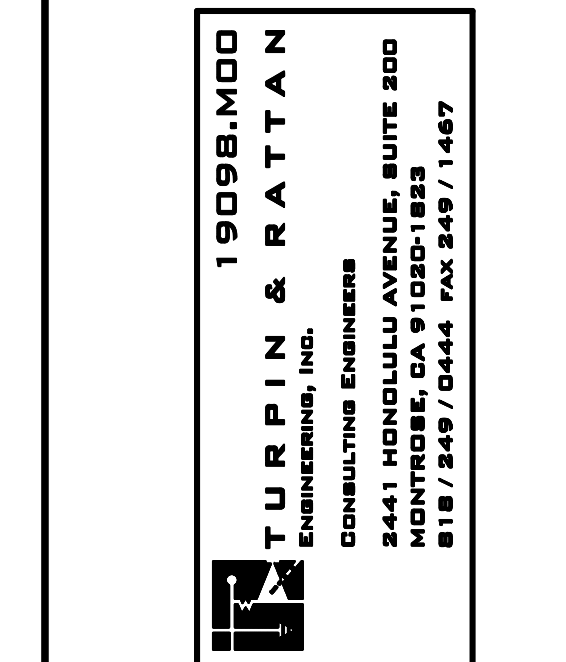
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REVISIONS



NORWALK LA MIRADA UNIFIED SCHOOL DISTRICT
LA MIRADA HIGH SCHOOL NEW FOOTBALL STADIUM PROJECT
13520 ADELEA DRIVE, LA MIRADA, CA 90638

DSA # 03-120551



DSA BACKCHECK SUBMISSION

TITLE 24 DOCUMENTATION

M0.11