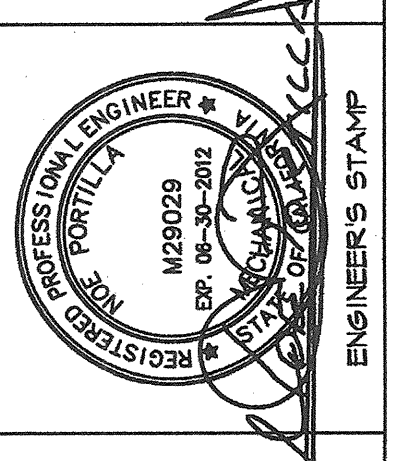
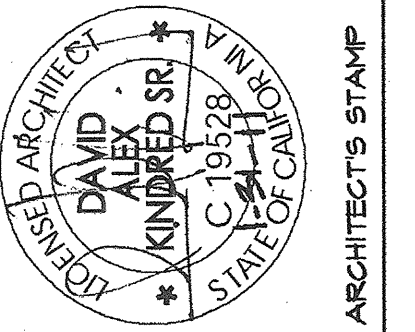


WALL MOUNTED PACKAGED AIR-CONDITIONING UNIT SCHEDULE																							
ITEM NUMBER	MANUFACTURER AND MODEL NO.	LOCATION AND AREA SERVED	NOMINAL TONS	AIR QUANTITY CFM	EXT. S.P. IN W.G.	ENTERING AIR DB/WB	FAN DATA			COOLING (98° D.B. AMB)		SEER (IEER)	EER	AFUE %	ELECTRICAL DATA			HEATING SECTION		MIN. O.S.A. CFM	OPER. WEIGHT LBS.	ANCHORAGE DETAIL	REMARKS
							HP	FAN RPM	MOTOR RPM	TOTAL MBTUH	SENSIBLE MBTUH				V-Ø-HZ	MCA	MOCP	TOTAL MBTUH	ELECTRIC HEAT KW				
HP R1	BARD 49H1A05VP4XXX	RELOCATABLE 1	4	1600	0.5	80.0/67.0	0.75	825	-	45.5	34.6	-	10.0	81%	208-1-60	21.0	30	45.5	10	200	510	(8/M4.2)	(1) (2)
HP R2	BARD 49H1A05VP4XXX	RELOCATABLE 2	4	1600	0.5	80.0/67.0	0.75	825	-	45.5	34.6	-	10.0	81%	208-1-60	21.0	30	45.5	10	200	510	(8/M4.2)	(1) (2)
HP R3	BARD 49H1A05VP4XXX	RELOCATABLE 3	4	1600	0.5	80.0/67.0	0.75	825	-	45.5	34.6	-	10.0	81%	208-1-60	21.0	30	45.5	10	200	510	(8/M4.2)	(1) (2)
HP R4	BARD 49H1A05VP4XXX	RELOCATABLE 4	4	1600	0.5	80.0/67.0	0.75	825	-	45.5	34.6	-	10.0	81%	208-1-60	21.0	30	45.5	10	200	510	(8/M4.2)	(1) (2)
HP R5	BARD 49H1A05VP4XXX	RELOCATABLE 5	4	1600	0.5	80.0/67.0	0.75	825	-	45.5	34.6	-	10.0	81%	208-1-60	21.0	30	45.5	10	200	510	(8/M4.2)	(1) (2)
HP R6	BARD 49H1A05VP4XXX	RELOCATABLE 6	4	1600	0.5	80.0/67.0	0.75	825	-	45.5	34.6	-	10.0	81%	208-1-60	21.0	30	45.5	10	200	510	(8/M4.2)	(1) (2)
HP R7	BARD 49H1A05VP4XXX	RELOCATABLE 7	4	1600	0.5	80.0/67.0	0.75	825	-	45.5	34.6	-	10.0	81%	208-1-60	21.0	30	45.5	10	200	510	(8/M4.2)	(1) (2)
HP R8	BARD 49H1A05VP4XXX	RELOCATABLE 7	4	1600	0.5	80.0/67.0	0.75	825	-	45.5	34.6	-	10.0	81%	208-1-60	21.0	30	45.5	10	200	510	(8/M4.2)	(1) (2)

REMARKS:

- ① -
- ② -



Oak Park Unified School District
School District
Brookside Elementary School
Modernization
 UNIFIED SCHOOL DISTRICT

KPI Architects Inc.
 501 East Partridge Avenue, Suite 105
 Glendora, CA 91740
 Phone: (800) 368-6881 Fax: (677) 483-2059
barnhart, inc.
 A HERY INTERNATIONAL COMPANY

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APPL 03-113415
 AC _____ FLS _____ SS _____
 DATE: 10/20/10
 DSA STAMP

PROJECT NO.: 234800 DATE: 09-02-09
MECHANICAL EQUIPMENT SCHEDULE

13-01R
MO.3

PBS ENGINEERS
 2100 East Route 66, Suite 101
 Glendora, California 91740-4823
 Tel: (626) 650-0350
 Fax: (626) 650-0352
 WWW.PBSENGINEERS.COM
 Job No. 2010-014-00
 Mechanical and Electrical Consulting Engineers

MECHANICAL EQUIPMENT SCHEDULE

PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 1 of 3) PERF-1C

Project Name: **BROOKSIDE ELEMENTARY SCHOOL BUILDING-A** Date: **4/29/2010**

Project Address: **165 Satinwood Avenue Oak Park** Climate Zone: **CA Climate Zone 09** Total Cond. Floor Area: **6,372** Addition Floor Area: **n/a**

GENERAL INFORMATION

Building Type: Nonresidential High-Rise Residential Hotel/Motel Guest Room
 Relocatable - indicate specific climate zone all climates

Phase of Construction: New Construction Addition Alteration

STATEMENT OF COMPLIANCE

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to a Building using the performance compliance approach.

The documentation author hereby certifies that the documentation is accurate and complete.

Documentation Author

Name: **Nishikumar Patel** Signature: **N. Patel**

Company: **PBS Engineers** Date: **4/29/2010**
Address: **2100 E Route 66** Phone: **626-350-0350**
City/State/Zip: **Glendora, CA 91740**

The Principal Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the energy efficiency requirements contained in sections 110, 116 through 118, and 140 through 149 of Title 24, Part 6. Please check one:

ENV. LTG. MECH.

I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation, and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.

I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation, and that I am a licensed contractor performing this work.

I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

Principal Envelope Designer

Name: **KPI Architects Inc.** Signature: **KPI**

Company: **KPI Architects Inc.** Date: **04/29/2010**
Address: **650 E Parking Avenue** License #: **M29029**
City/State/Zip: **Corona, CA 92619** Phone: **800-366-6381**

Principal Mechanical Designer

Name: **Nishikumar Patel** Signature: **N. Patel**

Company: **PBS Engineers Inc.** Date: **04/29/2010**
Address: **2100 E Route 66 Ste 101** License #: **M29029**
City/State/Zip: **Glendora, CA 91740** Phone: **626-450-0350**

Principal Lighting Designer

Name: **Lighting Compliance Not In The Scope Of This Submittal** Signature:

Company: **Lighting Compliance Not In The Scope Of This Submittal** Date:
Address: License #:
City/State/Zip: Phone:

INSTRUCTIONS TO APPLICANT COMPLIANCE & WORKSHEETS (check box if worksheets are included)

ENV-1C Certificate of Compliance, Required on plans. MECH-1C Certificate of Compliance, Required on plans.
 LTG-1C Certificate of Compliance, Required on plans. MECH-2C Air/Water Side/Service Hot Water & Pool Requirements.
 LTG-2C Lighting Controls Checklist. MECH-3C Mechanical Ventilation and Restart.
 LTG-3C Indoor Lighting Power Allowance. MECH-6C Mechanical Equipment Details.

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PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 2 of 3) PERF-1C

Project Name: **BROOKSIDE ELEMENTARY SCHOOL** Date: **4/29/2010**

ANNUAL TDV ENERGY USE SUMMARY (kBtu/sqft-yr)

Energy Component	Standard Design	Proposed Design	Compliance Margin
Space Heating	2.67	2.54	0.34
Space Cooling	152.43	120.89	31.55
Indoor Fans	0.00	0.00	0.00
Heat Rejection	0.00	0.00	0.00
Pumps & Misc.	0.00	0.00	0.00
Domestic Hot Water	0.00	0.00	0.00
Lighting	83.70	83.70	0.00
Receptacle	61.88	61.88	0.00
Process	0.00	0.00	0.00
Process Lighting	0.00	0.00	0.00
TOTALS	300.89	289.00	31.88

Percent better than Standard: **10.6%** (10.6% excluding process)

BUILDING COMPLIES

GENERAL INFORMATION

Building Orientation: **00 0 deg** Conditioned Floor Area: **6,372** sqft.
Number of Stories: **1** Unconditioned Floor Area: **0** sqft.
Number of Systems: **2** Conditioned Footprint Area: **6,288** sqft.
Number of Zones: **10** Natural Gas Available On Site: **Yes**

Orientation

Orientation	Gross Area	Glazing Area	Glazing Ratio
00	977	55	5.6%
05	828	60	7.2%
15	1,248	73	5.8%
45	414	0	0.0%
Total	3,467	188	5.4%

Lighting Power Density

Standard	Proposed
1.185 W/sqft.	0.571 W/sqft.

Prescriptive Envelope TDV Energy

Standard	Proposed
117.023	203.625

Remarks:

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PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 3 of 3) PERF-1C

Project Name: **BROOKSIDE ELEMENTARY SCHOOL** Date: **4/29/2010**

ZONE INFORMATION

System Name	Zone Name	Occupancy Type	Floor Area (sqft.)	Inst. LPD (W/sqft)	Chl. Credits (W/sqft)	Allowed LPD Tailored (W/sqft)	Proc. Loads (W/sqft)
AC-2 HVAC System	Equipment - A08 MDF	Electrical, Mechanical Room	138	0.700			
	Teachers Dining	Dining	340	0.000			
	Office A-07	Office > 250 sqft	138	0.000			
	Telephone And Work R	Office > 250 sqft	481	0.000			
	Kindergarten A-17	Classroom, Lecture, Training	1,190	0.000			
	Teacher's Lounge	Lounge, Recreation	175	0.000			
	Kindergarten A-21	Classroom, Lecture, Training	1,190	0.000			
AC-1 Multi-Use HVAC System	Restrooms Room	Conductor/Restrooms/Support	250	0.600			
	Multi-Use Zone	Convention/Conference/Mea	2,388	1.400			

EXCEPTIONAL CONDITIONS COMPLIANCE CHECKLIST

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification to be used with the performance approach. The local enforcement agency determines the adequacy of the justifications, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

The HVAC System AC-2 HVAC System incorporates NERS Verified Duct Leakage. Target leakage is calculated and documented on the MECH-4-A.

The HVAC System AC-1 Multi-Use HVAC System includes Demand Control Ventilation per Standards Section 121.

The HVAC System AC-1 Multi-Use HVAC System incorporates NERS Verified Duct Leakage. Target leakage is calculated and documented on the MECH-4-A.

The exceptional features listed in this performance approach application have specifically been reviewed. Adequate written justification and documentation for their use have been provided by the applicant.

Authorized Signature or Stamp: _____

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CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C

Project Name: **BROOKSIDE ELEMENTARY SCHOOL** Date: **4/29/2010**

Project Address: **165 Satinwood Avenue Oak Park** Climate Zone: **9** Total Cond. Floor Area: **6,372** Addition Floor Area: **n/a**

GENERAL INFORMATION

Building Type: Nonresidential High-Rise Residential Hotel/Motel Guest Room
 Schools (Public School) Relocatable Public School Bldg Conditioned Spaces Unconditioned Spaces (Attic/Driv)

Phase of Construction: New Construction Addition Alteration

Approach of Compliance: Component Overall Envelope TDV Energy Unconditioned (file affidavit)

Front Orientation: N, E, S, W or in Degrees: **0 deg**

HVAC SYSTEM DETAILS

Equipment	Inspection Criteria	Pass	Fail - Describe Reason
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	AC-2 HVAC System	<input type="checkbox"/>	<input type="checkbox"/>
Equipment Type	Packaged DX	<input type="checkbox"/>	<input type="checkbox"/>
Number of Systems	1	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Heating Capacity	283,500 Btu/hr	<input type="checkbox"/>	<input type="checkbox"/>
Minimum Heating Efficiency	80% TE	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Cooling Capacity	301,120 Btu/hr	<input type="checkbox"/>	<input type="checkbox"/>
Cooling Efficiency	11.4 EER	<input type="checkbox"/>	<input type="checkbox"/>
Duct Location/ R-Value	R-8.0	<input type="checkbox"/>	<input type="checkbox"/>
When duct testing is required, submit MECH-4A & MECH-4-BERS	Yes	<input type="checkbox"/>	<input type="checkbox"/>
Economizer	No Economizer	<input type="checkbox"/>	<input type="checkbox"/>
Thermostat	Setback Required	<input type="checkbox"/>	<input type="checkbox"/>
Fan Control	Constant Volume	<input type="checkbox"/>	<input type="checkbox"/>

FIELD INSPECTION ENERGY CHECKLIST

Equipment	Inspection Criteria	Pass	Fail - Describe Reason
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	AC-1 Multi-Use HVAC System	<input type="checkbox"/>	<input type="checkbox"/>
Equipment Type	Packaged DX	<input type="checkbox"/>	<input type="checkbox"/>
Number of Systems	1	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Heating Capacity	283,500 Btu/hr	<input type="checkbox"/>	<input type="checkbox"/>
Minimum Heating Efficiency	80% TE	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Cooling Capacity	301,120 Btu/hr	<input type="checkbox"/>	<input type="checkbox"/>
Cooling Efficiency	11.4 EER	<input type="checkbox"/>	<input type="checkbox"/>
Duct Location/ R-Value	R-8.0	<input type="checkbox"/>	<input type="checkbox"/>
When duct testing is required, submit MECH-4A & MECH-4-BERS	Yes	<input type="checkbox"/>	<input type="checkbox"/>
Economizer	No Economizer	<input type="checkbox"/>	<input type="checkbox"/>
Thermostat	Setback Required	<input type="checkbox"/>	<input type="checkbox"/>
Fan Control	Constant Volume	<input type="checkbox"/>	<input type="checkbox"/>

1. If the Actual installed equipment performance efficiency and capacity is less than the Proposed (from the energy compliance submittal or from the building plans) the responsible party shall resubmit energy compliance to include the new changes.
2. For additional detailed discrepancy use Page 2 of the Inspection Checklist Form. Compliance fails if a Fail box is checked.
3. Indicate Equipment Type: Gas (Pkg or Split), VAV, HP (Pkg or split), Hydronic, PTAC, or other.

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ENVELOPE MANDATORY MEASURES: NONRESIDENTIAL ENV-MM

Project Name: **BROOKSIDE ELEMENTARY SCHOOL** Date: **4/29/2010**

DESCRIPTION

Building Envelope Measures:

§110(a): Installed insulating material shall have been certified by the manufacturer to comply with the California Quality Standards for insulating material, Title 20 Chapter 4, Article 3.

§110(c): All Insulating Materials shall be installed in compliance with the flame spread rating and smoke density requirements of Sections 2602 and 707 of Title 24, Part 2.

§110(d): The opaque portions of frames consisting walls in nonresidential buildings shall have insulation with an installed R-value 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 caulked, gasketed, weatherstripped or otherwise sealed.

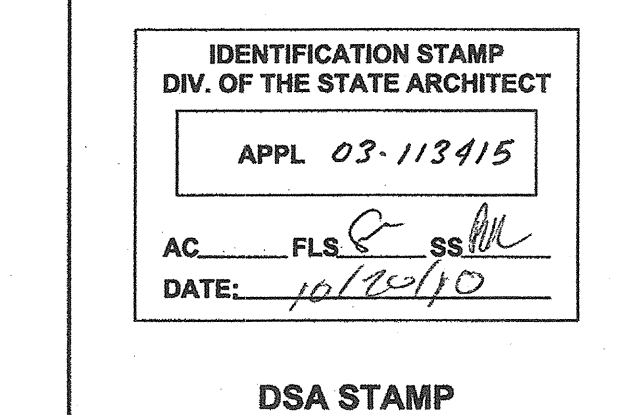
§116(a) 1: Manufactured fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 cfm/ft² of window area, 0.3 cfm/ft² of door area for residential doors, 0.3 cfm/ft² of door area for nonresidential single doors (swinging and sliding), and 1.0 cfm/ft² for nonresidential double doors (swinging).

§116(a) 2: Fenestration U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor.

§116(a) 3: Fenestration SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration, or the applicable default SHGC.

§116(b): Site Constructed Doors, Windows and Skylights shall be caulked between the unit and the building, and shall be weatherstripped (except for unframed glass doors and fire doors).

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PROJECT NO.: 234800 DATE: 09-02-09

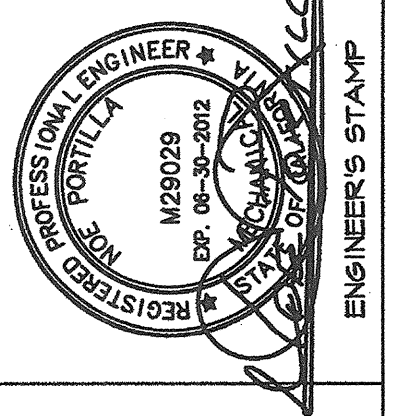
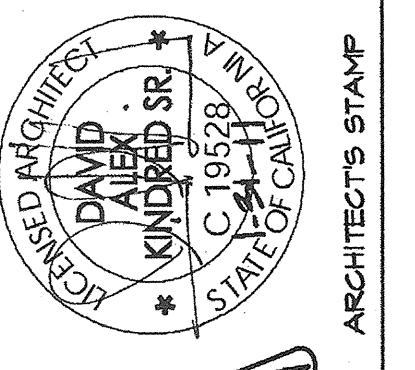
MECHANICAL TITLE-24 ENERGY COMPLIANCE

13-02R

MEMO.4

FOR PLAN REVIEW ONLY

PBS ENGINEERS
2100 East Route 66, Suite 101
Glendora, California 91740-4623
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WWW.PBSENGINEERS.COM
Job No. 2010-014-00
Mechanical and Electrical Consulting Engineers



Oak Park UNIFIED SCHOOL DISTRICT BROOKSIDE ELEMENTARY SCHOOL MODERNIZATION

Oak Park
UNIFIED SCHOOL DISTRICT

KPI Architects Inc.
10000 Wilshire Blvd, Suite 105
Beverly Hills, CA 90210
Phone: (800) 366-6381 Fax: (877) 463-2059

barnhart, inc.
A HERY INTERNATIONAL COMPANY

MECHANICAL MANDATORY MEASURES: NONRESIDENTIAL MECH-MM

Project Name: **BROOKSIDE ELEMENTARY SCHOOL** Date: **4/25/2010**

Equipment and System Efficiencies

§111: Any appliance for which there is a California standard established in the Appliance Efficiency Regulations will comply with the applicable standard.

§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, 603, 604, and 605 of the CMC Standards.

Controls

§122(e): Each space conditioning system shall be installed with one of the following:

- Each space conditioning system serving building types such as offices and manufacturing facilities (and all others not explicitly exempt from the requirements of Section 112 (c)) shall be installed with an automatic time switch with an accessible manual override that allows operation of the system during off-hours for up to 4 hours. The time switch shall be capable of programming different schedules for weekdays and weekends and have program backup capabilities that prevent the loss of the device's program and time settings for at least 10 hours if power is interrupted; or
- An occupancy sensor to control the operating period of the system; or
- A 4-hour timer that can be manually operated to control the operating period of the system.

§122(g): Each space conditioning system shall be installed with controls that temporarily restart and temporarily operate the system as required to maintain a setback heating and/or a setback cooling thermostat setpoint.

§122(h): 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 provided with isolation devices, such as valves or dampers that allow the supply of heating or cooling to be setback or shut off independently of other isolation areas; and shall be controlled by a time control device as described above.

§122(i): Thermostats shall have numeric setpoints in degrees Fahrenheit (°F) and adjustable setpoint stops accessible only to authorized personnel.

§122(j): Heat pumps shall be installed with controls to prevent electric resistance supplementary heater operation when the heating load can be met by the heat pump alone.

§122(k): Each space conditioning system shall be controlled by an individual thermostat that responds to temperature within the zone. Where used to control heating, the control shall be adjustable down to 55 degrees F or lower. For cooling, the control shall be adjustable up to 85 degrees F or higher. Where used for both heating and cooling, the control shall be capable of providing a deadband of at least 5 degrees F within which the supply of heating and cooling is shut off or reduced to a minimum.

Ventilation

§121(e): Controls shall be provided to allow outside air dampers or devices to be operated at the ventilation rates as specified on these plans.

§122(f): All gravity ventilating systems shall be provided with automatic or readily accessible manually operated dampers in all openings to the outside, except for combustion air openings.

§121(f): Ventilation System Acceptance. Before an occupancy permit is granted for a newly constructed building or space, or a new ventilating system serving a building or space is operated for normal use, all ventilation systems serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.

Service Water Heating Systems

§113(c): Installation

- Temperature controls for public lavatories. The controls shall limit the outlet temperature to 110°F.
- Circulating service water-heating systems shall have a control capable of automatically turning off the circulating pump when hot water is not required.

EnergyPro 3.0 by EnergySoft User Number: 8159 RunCode: 2010-04-25T14:48:38 ID: 2010-014-00 Page 18 of 19

PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 1 of 3) PERF-1C

Project Name: **BROOKSIDE ELEMENTARY SCHOOL BUILDING-B** Date: **4/30/2010**

Project Address: **165 Satinwood Avenue Oak Park** Climate Zone: **CA Climate Zone 09** Total Cond. Floor Area: **10,492** Addition Floor Area: **n/a**

GENERAL INFORMATION

Building Type: Nonresidential High-Rise Residential Hotel/Motel Guest Room
 Relocatable - indicate specific climate zone all climates
Phase of Construction: New Construction Addition Alteration

STATEMENT OF COMPLIANCE

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to a Building using the performance compliance approach.

The documentation author hereby certifies that the documentation is accurate and complete.

Documentation Author

Name: **Nishikumar Patel** Signature: **N PATEL**
Company: **PBS Engineers** Date: **4/30/2010**
Address: **2100 E Route 66** Phone: **626-350-0350**
City/State/Zip: **Glendora, CA 91740**

The Principal Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the energy efficiency requirements contained in sections 110, 116 through 118, and 140 through 149 of Title 24, Part 6. Please check one:

ENW, LTG, MECH. I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.
 I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 6597.2 or 6737.2 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.
 I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

Principal Envelope Designer

Name: **KPI Architects Inc.** Signature: _____ Date: **04/30/2010**
Company: **KPI Architects Inc.** License #: _____
Address: **650 E Parking Avenue** Phone: **626-366-6361**
City/State/Zip: **Corona, CA 92679**

Principal Mechanical Designer

Name: **Noe Portilla** Signature: _____ Date: **04/30/2010**
Company: **PBS Engineers Inc.** License #: **M29029**
Address: **2100 E Route 66 Ste 101** Phone: **626-650-0350**
City/State/Zip: **Glendora, CA 91740**

Principal Lighting Designer

Name: _____ Signature: _____ Date: _____
Company: **Lighting Compliance Not in the Scope of This Submittal** License #: _____
Address: _____ Phone: _____
City/State/Zip: _____

INSTRUCTIONS TO APPLICANT COMPLIANCE & WORKSHEETS (check box if worksheets are included)

ENW-1C Certificate of Compliance. Required on plans. MECH-1C Certificate of Compliance. Required on plans.
 LTG-1C Certificate of Compliance. Required on plans. MECH-2C Air/Water Side/Service Hot Water & Pool Requirements.
 LTG-2C Lighting Controls Credit Worksheet. MECH-3C Mechanical Ventilation and Exhaust.
 LTG-3C Indoor Lighting Power Allowance. MECH-4C Mechanical Equipment Details.

EnergyPro 3.0 by EnergySoft User Number: 8159 RunCode: 2010-04-30T11:27:37 ID: 2010-014-00 Page 3 of 28

PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 2 of 3) PERF-1C

Project Name: **BROOKSIDE ELEMENTARY SCHOOL** Date: **4/25/2010**

ANNUAL TDV ENERGY USE SUMMARY (kBtu/sqft-yr)

Energy Component	Standard Design	Proposed Design	Compliance Margin
Space Heating	2.93	36.93	-34.00
Space Cooling	127.95	70.72	57.23
Indoor Fans	45.71	81.13	-15.42
Heat Rejection	0.00	0.00	0.00
Pumps & Misc.	1.90	0.00	1.90
Domestic Hot Water	35.85	35.85	0.00
Lighting	60.69	60.69	0.00
Receptacle	62.80	62.80	0.00
Process	0.00	0.00	0.00
Process Lighting	0.00	0.00	0.00
TOTALS	357.92	348.20	9.71

Percent better than Standard: **2.7%** (2.7% excluding process)

BUILDING COMPLIES

GENERAL INFORMATION

Building Orientation: **0 deg** Conditioned Floor Area: **10,492** sqft.
Number of Stories: **1** Unconditioned Floor Area: **0** sqft.
Number of Systems: **2** Conditioned Footprint Area: **10,492** sqft.
Number of Zones: **17** Natural Gas Available On Site: **Yes**

Orientation	Gross Area	Glazing Area	Glazing Ratio
Front Elevation	(N) 1,070 sqft.	80 sqft.	5.6%
Left Elevation	(E) 966 sqft.	90 sqft.	9.3%
Rear Elevation	(S) 1,070 sqft.	80 sqft.	5.6%
Right Elevation	(W) 965 sqft.	90 sqft.	9.3%
Total	4,071 sqft.	300 sqft.	7.4%
Roof	10,492 sqft.	0 sqft.	0.0%

Lighting Power Density: Standard **1.152** W/sqft. Proposed **1.152** W/sqft.
Prescriptive Envelope TDV Energy: **183,077** Proposed **317,897**

Remarks:

EnergyPro 3.0 by EnergySoft User Number: 6159 RunCode: 2010-04-25T14:48:38 ID: 2010-014-00 Page 2 of 24

PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 3 of 3) PERF-1C

Project Name: **BROOKSIDE ELEMENTARY SCHOOL** Date: **4/25/2010**

ZONE INFORMATION

System Name	Zone Name	Occupancy Type	Floor Area (sqft)	Inst. LPD (W/sqft)	Ctrl. Credits (W/sqft)	Allowed LPD (W/sqft)	Proc. Loads (W/sqft)
AC-2 Building-B HVAC System	Classroom B-04	Classroom, Lecture, Training	850	*1.200			
	Classroom B-03	Classroom, Lecture, Training	900	*1.200			
	Classroom B-02	Classroom, Lecture, Training	900	*1.200			
	Classroom B-01	Classroom, Lecture, Training	850	*1.200			
	Computer Lab B-07	Classroom, Lecture, Training	883	*1.200			
AC-1 Building-B HVAC System	Library B-18	Library, Reading Area	887	*1.200			
	Junior B-07	Commercial, Industrial Store	42	*0.600			
	Work Room B-06	Classroom, Lecture, Training	485	*1.200			
	Hallway B-08	Corridor/Restroom/Support	140	*0.600			
	Classroom B-09	Classroom, Lecture, Training	850	*1.200			
	Classroom B-10	Classroom, Lecture, Training	900	*1.200			
	Classroom B-11	Classroom, Lecture, Training	900	*1.200			
	Classroom B-12	Classroom, Lecture, Training	850	*1.200			
	Hallway B-13	Corridor/Restroom/Support	143	*0.600			
	Boy's Restroom B-14	Corridor/Restroom/Support	240	*0.600			
	Equipment Room B-15	Electrical, Mechanical Room	32	*0.700			
	Girl's Restroom B-16	Corridor/Restroom/Support	240	*0.600			

Notes: 1. See LTG-1C (Items marked with asterisk are LTG-1-C by other). 2. See LTG-3C (by other). 3. See LTG-4C (by other). 4. See LTG-4C (by other). Items above require special documentation.

EXCEPTIONAL CONDITIONS COMPLIANCE CHECKLIST

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification to be used with the performance approach. The local enforcement agency determines the adequacy of the justifications, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

The Room/Junior B-07 has a Heating Indoor Design Temperature of 85 degrees F.
The Room/Junior B-07 has a Cooling Indoor Design Temperature of 85 degrees F.
The Room/Boy's Restroom B-14 has a Heating Indoor Design Temperature of 85 degrees F.
The Room/Boy's Restroom B-14 has a Cooling Indoor Design Temperature of 85 degrees F.
The Room/Girl's Restroom B-16 has a Heating Indoor Design Temperature of 85 degrees F.
The Room/Girl's Restroom B-16 has a Cooling Indoor Design Temperature of 85 degrees F.
The HVAC System SEASONS4 6MBJ23-0202-TN4 0-06SE A Premium Efficiency 1.50 BHP Supply Fan Motor has been specified.
The HVAC System SEASONS4 6MBJ23-0202-TN4 0-06SE A Premium Efficiency 1.50 BHP Return Fan Motor has been specified.

The exceptional features listed in this performance approach application have specifically been reviewed. Adequate written justification and documentation for their use have been provided by the applicant.

Authorized Signature or Stamp

EnergyPro 3.0 by EnergySoft User Number: 8159 RunCode: 2010-04-25T14:48:31 ID: 2010-014-00 Page 3 of 24

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C

Project Name: **BROOKSIDE ELEMENTARY SCHOOL** Date: **4/25/2010**

Project Address: **165 Satinwood Avenue Oak Park** Climate Zone: **9** Total Cond. Floor Area: **10,492** Addition Floor Area: **n/a**

GENERAL INFORMATION

Building Type: Nonresidential High-Rise Residential Hotel/Motel Guest Room
 Schools (Public School) Relocatable Public School Bldg Conditioned Spaces (Unconditioned Spaces (Attic/Split))
Phase of Construction: New Construction Addition Alteration
Approach of Compliance: Component Overall Envelope TDV Energy Unconditioned (file affidavit)

Front Orientation: N, E, S, W or in Degrees: **0 deg**

HVAC SYSTEM DETAILS

Equipment ¹	Inspection Criteria	Meets Criteria or Requirements	Pass	Fail - Describe Reason ²
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	AC-2 Building-B HVAC System		<input type="checkbox"/>	<input type="checkbox"/>
Equipment Type ³ :	Packaged MZ		<input type="checkbox"/>	<input type="checkbox"/>
Number of Systems:	1		<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Heating Capacity ⁴ :	160,000 Btu/hr		<input type="checkbox"/>	<input type="checkbox"/>
Minimum Heating Efficiency ⁵ :	85% AFUE		<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Cooling Capacity ⁶ :	237,513 Btu/hr		<input type="checkbox"/>	<input type="checkbox"/>
Cooling Efficiency ⁷ :	8.4 kW		<input type="checkbox"/>	<input type="checkbox"/>
Duct Location/ R-Value:	R-8.0		<input type="checkbox"/>	<input type="checkbox"/>
When dust testing is required, submit MECH-4A & MECH-4-BERS:	Yes		<input type="checkbox"/>	<input type="checkbox"/>
Economizer:	No Economizer		<input type="checkbox"/>	<input type="checkbox"/>
Thermostat:	Setback Required		<input type="checkbox"/>	<input type="checkbox"/>
Fan Control:	Constant Volume		<input type="checkbox"/>	<input type="checkbox"/>

FIELD INSPECTION ENERGY CHECKLIST

Equipment ¹	Inspection Criteria	Meets Criteria or Requirements	Pass	Fail - Describe Reason ²
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	AC-1 Building-B HVAC System		<input type="checkbox"/>	<input type="checkbox"/>
Equipment Type ³ :	Packaged MZ		<input type="checkbox"/>	<input type="checkbox"/>
Number of Systems:	1		<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Heating Capacity ⁴ :	160,000 Btu/hr		<input type="checkbox"/>	<input type="checkbox"/>
Minimum Heating Efficiency ⁵ :	85% AFUE		<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Cooling Capacity ⁶ :	237,513 Btu/hr		<input type="checkbox"/>	<input type="checkbox"/>
Cooling Efficiency ⁷ :	8.4 kW		<input type="checkbox"/>	<input type="checkbox"/>
Duct Location/ R-Value:	R-8.0		<input type="checkbox"/>	<input type="checkbox"/>
When dust testing is required, submit MECH-4A & MECH-4-BERS:	Yes		<input type="checkbox"/>	<input type="checkbox"/>
Economizer:	No Economizer		<input type="checkbox"/>	<input type="checkbox"/>
Thermostat:	Setback Required		<input type="checkbox"/>	<input type="checkbox"/>
Fan Control:	Constant Volume		<input type="checkbox"/>	<input type="checkbox"/>

1. If the Actual installed equipment performance efficiency and capacity is less than the Proposed (from the energy compliance submittal or from the building plans) the responsible party shall resubmit energy compliance to include the new changes.
2. For additional detailed discrepancy use Page 2 of the Inspection Checklist Form. Compliance fails if a Fail box is checked.
3. Indicate Equipment Type: Gas (Pkg or Split), VAV, HP (Pkg or Split), Hydronic, PTAC, or other.

EnergyPro 3.0 by EnergySoft User Number: 6159 RunCode: 2010-04-25T14:48:31 ID: 2010-014-00 Page 15 of 24

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT

APPL 03-113415

AC FLS S SS
DATE: 10/20/10

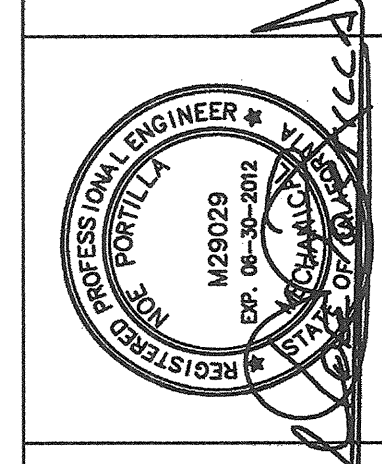
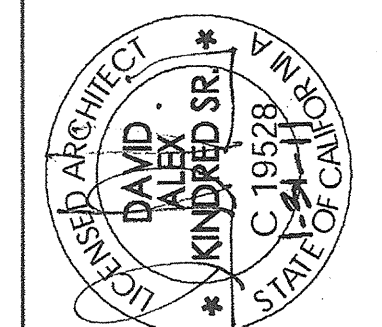
DSA STAMP

PROJECT NO.: 234900 DATE: 09-02-09

MECHANICAL TITLE-24 ENERGY COMPLIANCE

13-01R

PBS ENGINEERS
2100 East Route 66, Suite 101
Glendora, California 91740-4623
Tel: (626) 650-0350
Fax: (626) 650-0352
WWW.PBSENGINEERS.COM
Job No. 2010-014-00
Mechanical and Electrical Consulting Engineers



OAK PARK UNIFIED SCHOOL DISTRICT
BROOKSIDE ELEMENTARY SCHOOL
MODERNIZATION

Oak Park UNIFIED SCHOOL DISTRICT

KPI Architects Inc.
440 E. Main Street, Suite 105
Corona, California 92719-1002
Phone: (951) 366-6361 Fax: (977) 483-2059

KPI barnhart, inc.
A HERY INTERNATIONAL COMPANY

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C

Project Name: BROOKSIDE ELEMENTARY SCHOOL Date: 4/25/2010
 Project Address: 165 Satinwood Avenue Oak Park Climate Zone: 9 Total Cond. Floor Area: 2,600 Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: Nonresidential High-Rise Residential Hotel/Motel Guest Room
 Schools (Public School) Relocatable Public School Bldg Conditioned Spaces Unconditioned Spaces (attic/dwv)

Phase of Construction: New Construction Addition Alteration
 Approach of Compliance: Component Overall Envelope TDV Energy Unconditioned (file affidavit)

Front Orientation: N, E, S, W or in Degrees: 0 deg

HVAC SYSTEM DETAILS

Equipment ¹	Inspection Criteria	FIELD INSPECTION ENERGY CHECKLIST	
		Pass	Fail - Describe Reason ²
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	Building-D AC-3 HVAC System	<input type="checkbox"/>	<input type="checkbox"/>
Equipment Type ³	Packaged DX	<input type="checkbox"/>	<input type="checkbox"/>
Number of Systems	1	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Heating Capacity ⁴	73,000 Btu/hr	<input type="checkbox"/>	<input type="checkbox"/>
Minimum Heating Efficiency ⁴	80% AFUE	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Cooling Capacity ⁴	41,570 Btu/hr	<input type="checkbox"/>	<input type="checkbox"/>
Cooling Efficiency ⁴	14.0 SEER / 11.4 EER	<input type="checkbox"/>	<input type="checkbox"/>
Duct Location/ R-Value	R-8.0	<input type="checkbox"/>	<input type="checkbox"/>
When duct testing is required, submit MECH-4A & MECH-4-HERS	Yes	<input type="checkbox"/>	<input type="checkbox"/>
Economizer	No Economizer	<input type="checkbox"/>	<input type="checkbox"/>
Thermostat	Setback Required	<input type="checkbox"/>	<input type="checkbox"/>
Fan Control	Constant Volume	<input type="checkbox"/>	<input type="checkbox"/>

1. If the Actual installed equipment performance efficiency and capacity is less than the Proposed (from the energy compliance submittal or from the building plans) the responsible party shall resubmit energy compliance to include the new changes.
 2. For additional detailed discrepancy use Page 2 of the Inspection Checklist Form. Compliance fails if a Fail box is checked.
 3. Indicate Equipment Type: Gas (Pkg or Split), VAV, HP (Pkg or split), Hydraulic, PTHC, or other.
 4. Indicate Equipment Type: Gas (Pkg or Split), VAV, HP (Pkg or split), Hydraulic, PTHC, or other.

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CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C

Project Name: BROOKSIDE ELEMENTARY SCHOOL Date: 4/25/2010
 Project Address: 165 Satinwood Avenue Oak Park Climate Zone: 9 Total Cond. Floor Area: 2,600 Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: Nonresidential High-Rise Residential Hotel/Motel Guest Room
 Schools (Public School) Relocatable Public School Bldg Conditioned Spaces Unconditioned Spaces (attic/dwv)

Phase of Construction: New Construction Addition Alteration
 Approach of Compliance: Component Overall Envelope TDV Energy Unconditioned (file affidavit)

Front Orientation: N, E, S, W or in Degrees: 0 deg

HVAC SYSTEM DETAILS

Equipment ¹	Inspection Criteria	FIELD INSPECTION ENERGY CHECKLIST	
		Pass	Fail - Describe Reason ²
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	Building-D AC-3 HVAC System	<input type="checkbox"/>	<input type="checkbox"/>
Equipment Type ³	Packaged DX	<input type="checkbox"/>	<input type="checkbox"/>
Number of Systems	1	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Heating Capacity ⁴	73,000 Btu/hr	<input type="checkbox"/>	<input type="checkbox"/>
Minimum Heating Efficiency ⁴	80% AFUE	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Cooling Capacity ⁴	41,570 Btu/hr	<input type="checkbox"/>	<input type="checkbox"/>
Cooling Efficiency ⁴	14.0 SEER / 11.4 EER	<input type="checkbox"/>	<input type="checkbox"/>
Duct Location/ R-Value	R-8.0	<input type="checkbox"/>	<input type="checkbox"/>
When duct testing is required, submit MECH-4A & MECH-4-HERS	Yes	<input type="checkbox"/>	<input type="checkbox"/>
Economizer	No Economizer	<input type="checkbox"/>	<input type="checkbox"/>
Thermostat	Setback Required	<input type="checkbox"/>	<input type="checkbox"/>
Fan Control	Constant Volume	<input type="checkbox"/>	<input type="checkbox"/>

1. If the Actual installed equipment performance efficiency and capacity is less than the Proposed (from the energy compliance submittal or from the building plans) the responsible party shall resubmit energy compliance to include the new changes.
 2. For additional detailed discrepancy use Page 2 of the Inspection Checklist Form. Compliance fails if a Fail box is checked.
 3. Indicate Equipment Type: Gas (Pkg or Split), VAV, HP (Pkg or split), Hydraulic, PTHC, or other.
 4. Indicate Equipment Type: Gas (Pkg or Split), VAV, HP (Pkg or split), Hydraulic, PTHC, or other.

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ENVELOPE MANDATORY MEASURES: NONRESIDENTIAL ENV-MM

Project Name: BROOKSIDE ELEMENTARY SCHOOL Date: 4/25/2010

DESCRIPTION

Building Envelope Measures:

§118(a): Installed insulating material shall have been certified by the manufacturer to comply with the California Quality Standards for insulating material, Title 20 Chapter 4, Article 3.
 §118(c): All Insulating Materials shall be installed in compliance with the flame spread rating and smoke density requirements of Sections 2602 and 707 of Title 24, Part 2.
 §118(f): The opaque portions of framed demising walls in nonresidential buildings shall have insulation with an installed R-value 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 caulked, gasketed, weatherstripped or otherwise sealed.
 §116(a) 1: Manufactured fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 cfm/ft² of window area, 0.3 cfm/ft² of door area for residential doors, 0.3 cfm/ft² of door area for nonresidential single doors (swinging and sliding), and 1.0 cfm/ft² for nonresidential double doors (swinging).
 §116(a) 2: Fenestration U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor.
 §116(a) 3: Fenestration SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration, or the applicable default SHGC.
 §118(b): Site Constructed Doors, Windows and Skylights shall be caulked between the unit and the building, and shall be weatherstripped (except for unframed glass doors and fire doors).

EnergyPro 5.0 by EnergySoft User Number: 8159 RunCode: 2010-04-25T14:48:22 ID: 2010-014-00 Page 20 of 24

MECHANICAL MANDATORY MEASURES: NONRESIDENTIAL MECH-MM

Project Name: BROOKSIDE ELEMENTARY SCHOOL Date: 4/25/2010

Equipment and System Efficiencies

§111: Any appliance for which there is a California standard established in the Appliance Efficiency Regulations will comply with the applicable standard.
 §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, 603, 604, and 605 of the CMC Standards.

Controls

§122(e): Each space conditioning system shall be installed with one of the following:
 1A. Each space conditioning system serving building types such as offices and manufacturing facilities (and all others not explicitly exempt from the requirements of Section 112 (d)) shall be installed with an automatic time switch with an accessible manual override that allows operation of the system during off-hours for up to 4 hours. The time switch shall be capable of programming different schedules for weekdays and weekends and have program backup capabilities that prevent the loss of the device's program and time settings for at least 10 hours if power is interrupted, or
 1B. 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.
 2. Each space conditioning system shall be installed with controls that temporarily restart and temporarily operate the system as required to maintain a setback heating and/or a setup cooling thermostat setpoint.
 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 provided with isolation devices, such as valves or dampers that allow the supply of heating or cooling to be setback or shut off independently 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 to authorized personnel.
 §122(b): Heat pumps shall be installed with controls to prevent electric resistance supplementary heater operation when the heating load can be met by the heat pump alone.
 §122(a&b): Each space conditioning system shall be controlled by an individual thermostat that responds to temperature within the zone. Where used to control heating, the control shall be adjustable down to 55 degrees F or lower. For cooling, the control shall be adjustable up to 65 degrees F or higher. Where used for both heating and cooling, the control shall be capable of providing a deadband of at least 5 degrees F within which the supply of heating and cooling is shut off or reduced to a minimum.

Ventilation

§121(e): Controls shall be provided to allow outside air dampers or devices to be operated at the ventilation rates as specified on these plans.
 §122(f): All gravity ventilating systems shall be provided with automatic or readily accessible manually operated dampers in all openings to the outside, except for combustion air openings.
 §121(f): Ventilation System Acceptance. Before an occupancy permit is granted for a newly constructed building or space, or a new ventilating system serving a building or space is operated for normal use, all ventilation systems serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.

Service Water Heating Systems

§113(c): Installation
 3. Temperature controls for public lavatories. The controls shall limit the outlet Temperature to 110°F.
 2. Circulating service water-heating systems shall have a control capable of automatically turning off the circulating pump when hot water is not required.

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PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 1 of 3) PERF-1C

Project Name: BROOKSIDE ELEMENTARY SCHOOL RELOCATABLE Date: 4/30/2010
 Project Address: 165 Satinwood Avenue Oak Park Climate Zone: CA Climate Zone 09 Total Cond. Floor Area: 897 Addition Floor Area: n/a

GENERAL INFORMATION

Building Type: Nonresidential High-Rise Residential Hotel/Motel Guest Room
 Relocatable - indicate specific climate zone all climates
 Phase of Construction: New Construction Addition Alteration

STATEMENT OF COMPLIANCE

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to a Building using the performance compliance approach.
 The documentation author hereby certifies that the documentation is accurate and complete.

Documentation Author

Name: Nishwaner Patel Signature: N PATEL
 Company: PBS Engineers Date: 4/30/2010
 Address: 2100 E Route 66 Phone: 626-650-0350
 City/State/Zip: Glendora, CA 91740

The Principal Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the energy efficiency requirements contained in sections 110, 116 through 118, and 140 through 149 of Title 24, Part 6. Please check one:
 ENV, LTG, MECH.

I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.
 I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 6557.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.
 I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

Principal Envelope Designer

Name: KPI Architects Inc. Signature: _____ Date: 04/30/2010
 Company: KPI Architects Inc. License #: _____
 Address: 650 E Parking Avenue Phone: 626-650-6381
 City/State/Zip: Corona, CA 92729

Principal Mechanical Designer

Name: Nishwaner Patel Signature: _____ Date: 04/30/2010
 Company: PBS Engineers Inc. License #: M29029
 Address: 2100 E Route 66 Ste 101 Phone: 626-650-0350
 City/State/Zip: Glendora, CA 91740

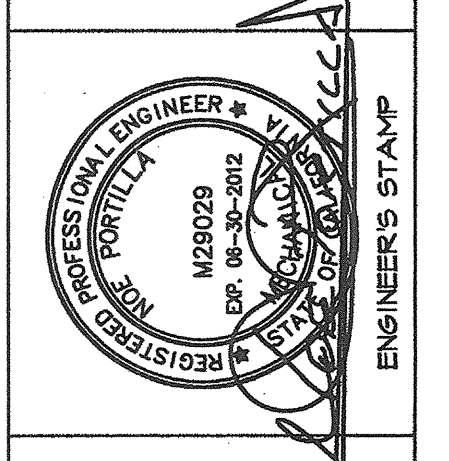
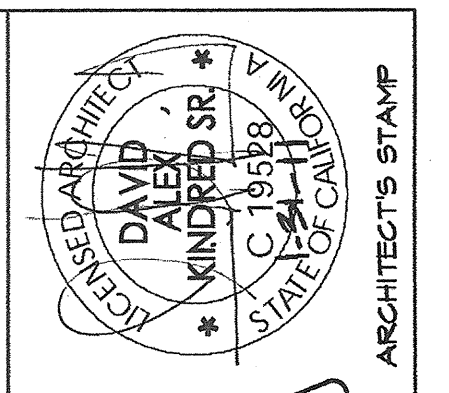
Principal Lighting Designer

Name: _____ Signature: _____ Date: _____
 Company: _____ License #: _____
 Address: _____ Phone: _____
 City/State/Zip: _____

INSTRUCTIONS TO APPLICANT COMPLIANCE & WORKSHEETS (check box if worksheets are included)

ENV-1C Certificate of Compliance. Required on plans. MECH-1C Certificate of Compliance. Required on plans.
 LTG-1C Certificate of Compliance. Required on plans. MECH-2C Air/Water Side/Service Hot Water & Pool Requirements.
 LTG-2C Lighting Controls Credit Worksheet. MECH-3C Mechanical Ventilation and Exhaust
 LTG-3C Indoor Lighting Power Allowances. MECH-5C Mechanical Equipment Details.

EnergyPro 5.0 by EnergySoft User Number: 8159 RunCode: 2010-04-25T14:48:22 ID: 2010-014-00 Page 3 of 20

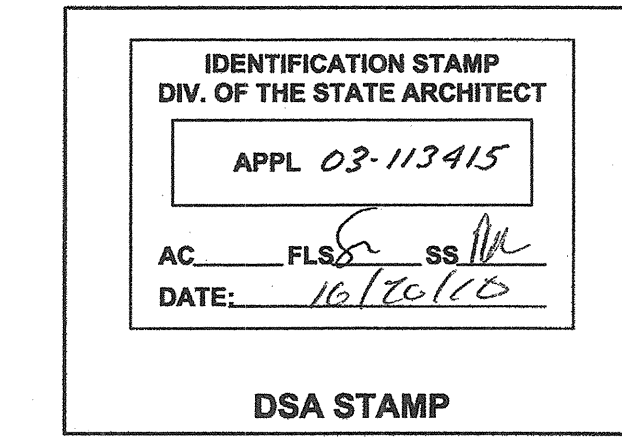


Oak Park Unified School District
 Brookside Elementary School
 Modernization

Oak Park
 UNIFIED SCHOOL DISTRICT

KPI Architects Inc.
 650 East Parking Avenue, Suite 105
 Corona, California 92729-1092
 Phone: (800) 366-6381 Fax: (877) 493-2059

barnhart, inc.
 A HEERY INTERNATIONAL COMPANY



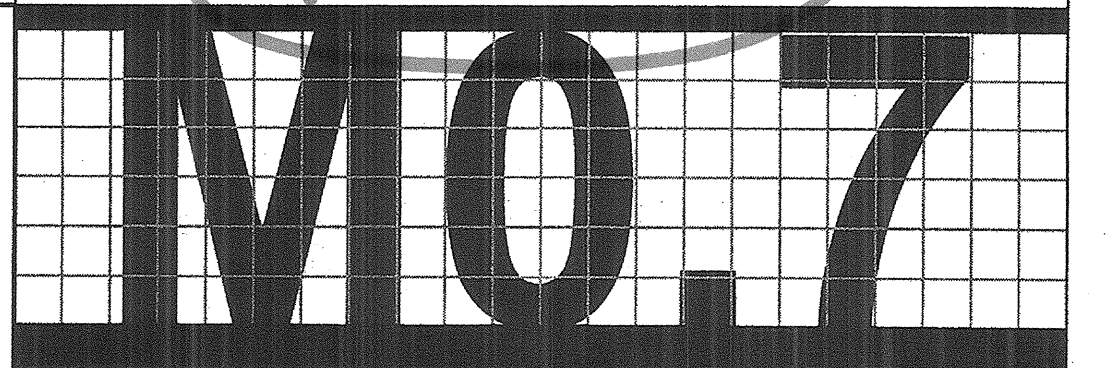
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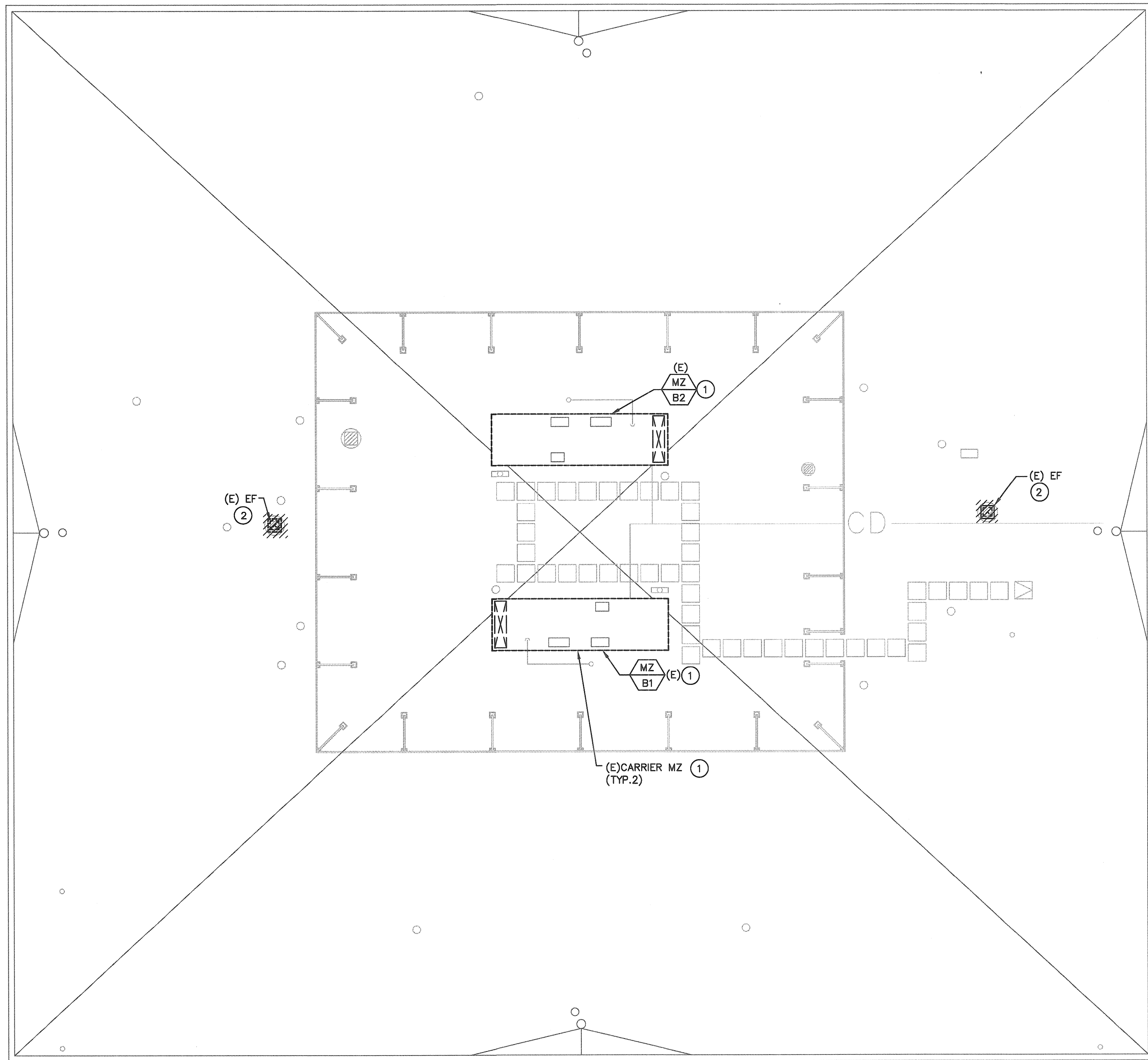
MECHANICAL TITLE-24 ENERGY COMPLIANCE

13-03R

PBS ENGINEERS
 Mechanical and Electrical Consulting Engineers

2100 East Route 66, Suite 101
 Glendora, California 91740-4623
 Tel: (626) 650-0350
 Fax: (626) 650-0352
 WWW.PBSENGINEERS.COM
 Job No. 2010-014-00

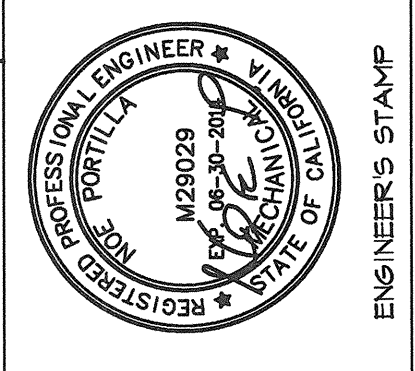
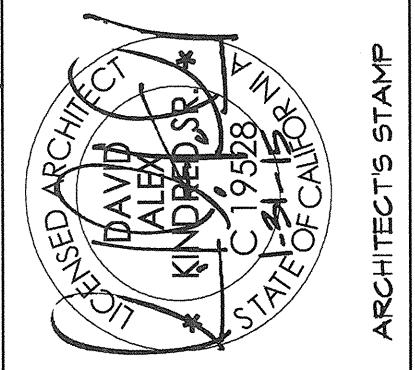




1 DEMOLITION ROOF PLAN
 SCALE: 1/8" = 1'-0" BUILDING B
 NORTH

KEY NOTES

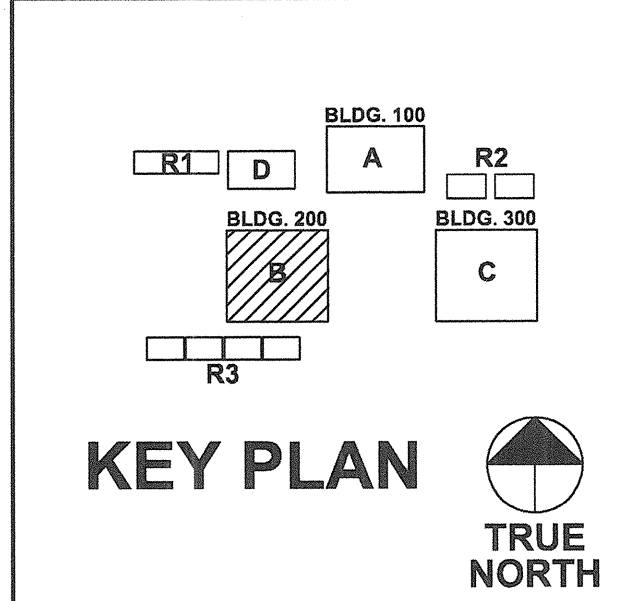
- 1 PROVIDE CLEAN COILS AND REPLACE FILTERS AT EXISTING AC UNITS.
- 2 REMOVE EXISTING EXHAUST FAN. KEEP EXISTING ROOF CURB INTACT.



OAK PARK UNIFIED SCHOOL DISTRICT
BROOKSIDE ELEMENTARY SCHOOL
BUILDING B/200 (BID AND CA)

KPI Architects Inc.
 450 East Main Street, Suite 105
 Corona, California 92719-1092
 Phone: (951) 366-6381 Fax: (951) 483-2059

barnhart, inc.
 A HEERY INTERNATIONAL COMPANY



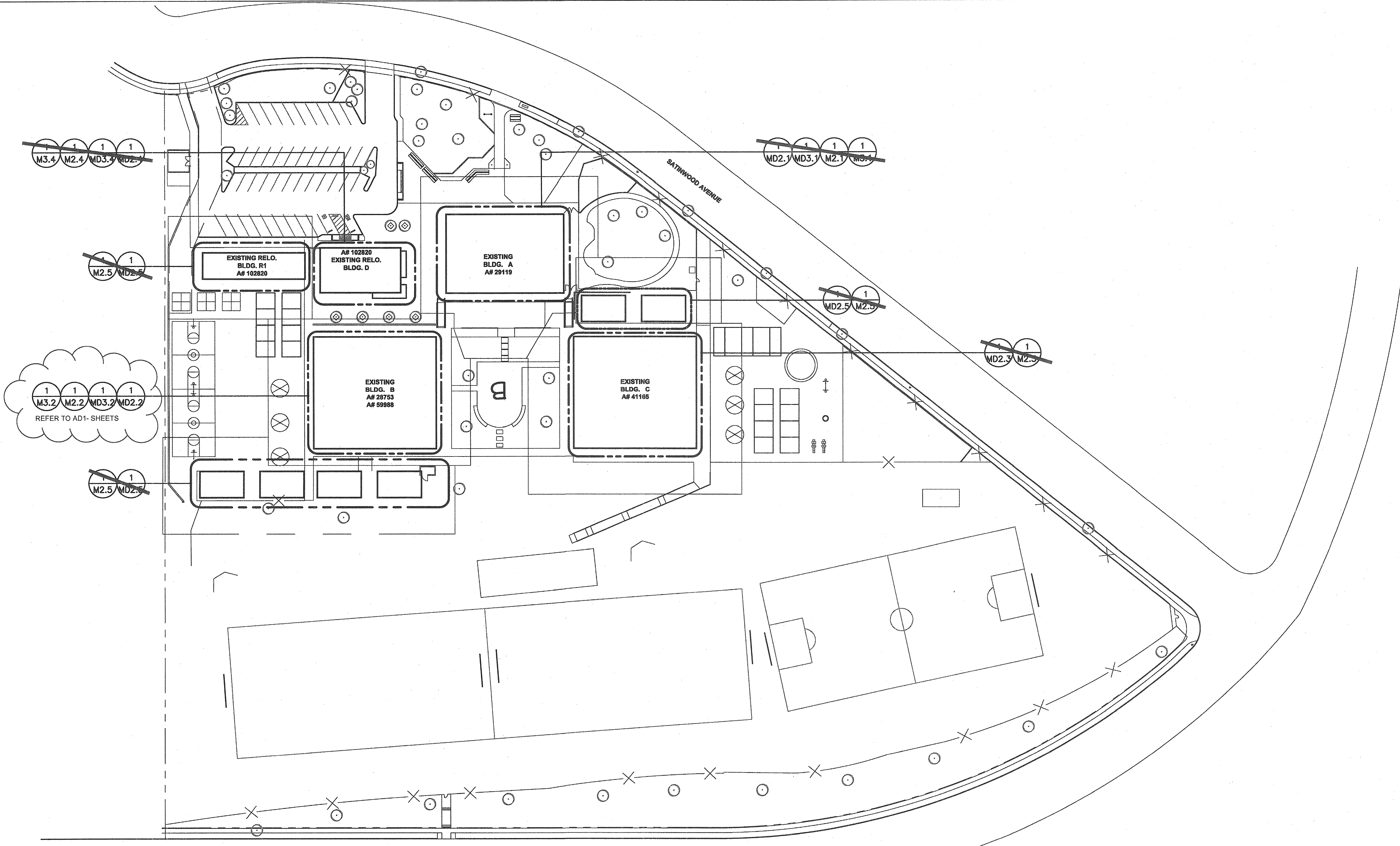
IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APPL 03-113415
 AC _____ FLS _____ SS _____
 DATE: _____
 DSA STAMP

PROJECT NO. : 234808	DATE: 01-07-13
DEMOLITION ROOF PLAN - BUILDING B	

PBS ENGINEERS
 2100 East Route 66, Suite 101 Glendora, CA 91740
 T 626-600-0300 F 626-600-0352
 Job No. 2010-01401 www.pbsengineers.com
 Mechanical Electrical Plumbing | Consulting Engineers
 QA/QC BY: _____

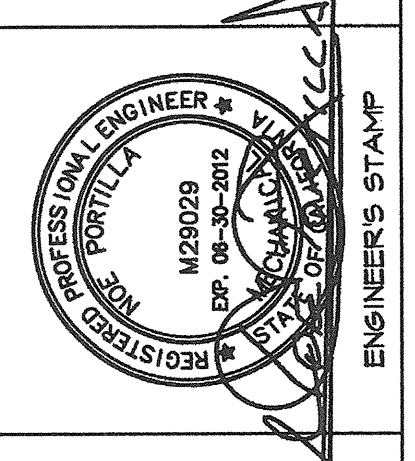
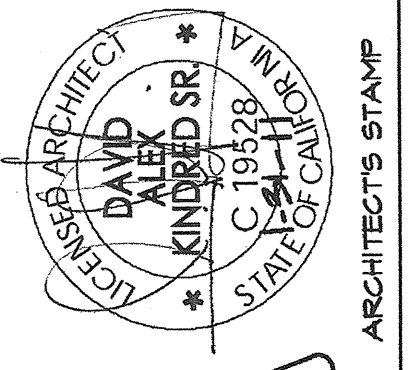
13-01R

AD1-MD3.2



SCOPE OF WORK

- BUILDING-A**
1. RESTROOMS- REPLACE EXHAUST FANS AND DUCTWORK.
 2. REPLACE EXISTING ROOF MOUNTED MECHANICAL HVAC UNITS AND CONTROLS.
 3. T-24 FORMS.
 4. CLEAN EXISTING DUCTWORK,DIFFUSERS AND REGISTERS, INSULATE AND ENCAPSULATE EXISTING DUCTWORK AFTER CLEANING.
 5. PROVIDE AIR BALANCE FOR ALL HVAC EQUIPMENT.
- BUILDING-B**
1. RESTROOMS- REPLACE EXHAUST FANS AND DUCTWORK.
 - ~~2. REPLACE EXISTING ROOF MOUNTED MECHANICAL HVAC UNITS AND CONTROLS.~~
 3. T-24 FORMS.
 4. CLEAN EXISTING DUCTWORK,DIFFUSERS AND REGISTERS, INSULATE AND ENCAPSULATE EXISTING DUCTWORK AFTER CLEANING.
 5. PROVIDE AIR BALANCE FOR ALL HVAC EQUIPMENT.
- BUILDING-C**
1. RESTROOMS- REPLACE EXHAUST FANS AND DUCTWORK.
 2. CLEAN EXISTING DUCTWORK,DIFFUSERS AND REGISTERS, INSULATE AND ENCAPSULATE EXISTING DUCTWORK AFTER CLEANING.
 3. PROVIDE AIR BALANCE FOR ALL HVAC EQUIPMENTS.
- BUILDING-D**
1. RESTROOMS- REPLACE EXHAUST FANS AND DUCTWORK.
 2. REPLACE EXISTING ROOF MOUNTED MECHANICAL HVAC UNITS AND CONTROLS.
 3. T-24 FORMS.
 4. CLEAN EXISTING DUCTWORK,DIFFUSERS AND REGISTERS, INSULATE AND ENCAPSULATE EXISTING DUCTWORK AFTER CLEANING.
 5. PROVIDE AIR BALANCE FOR ALL HVAC EQUIPMENT.
- RELOCATABLES R-1 TO R-7**
1. REPLACE EXISTING MECHANICAL HVAC UNITS AND CONTROLS.
 2. T-24 ENERGY ANALYSIS.
 3. PROVIDE NEW DUCTWORK,DIFFUSERS AND REGISTERS,
 4. PROVIDE AIR BALANCE FOR HVAC EQUIPMENTS.



OAK PARK UNIFIED SCHOOL DISTRICT
BROOKSIDE ELEMENTARY SCHOOL
MODERNIZATION
 UNIFIED SCHOOL DISTRICT

KPI Architects Inc.
 650 East Partridge Avenue, Suite 105
 Corona, California 92718-1092
 Phone: (800) 366-8381 Fax: (977) 493-2059
barnhart, inc.
 A HERY INTERNATIONAL COMPANY

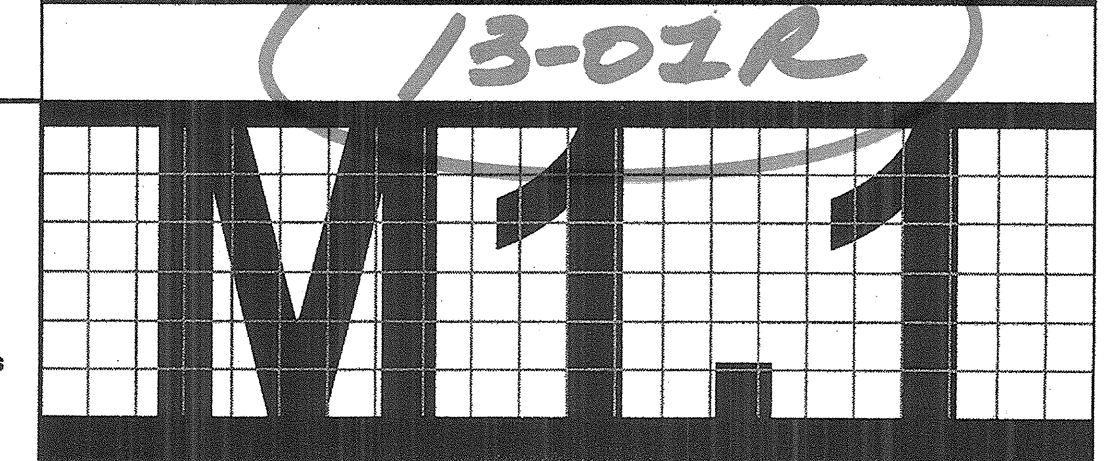
1 CAMPUS SITE PLAN
 SCALE: 1" = 50'-0"
 TRUE NORTH

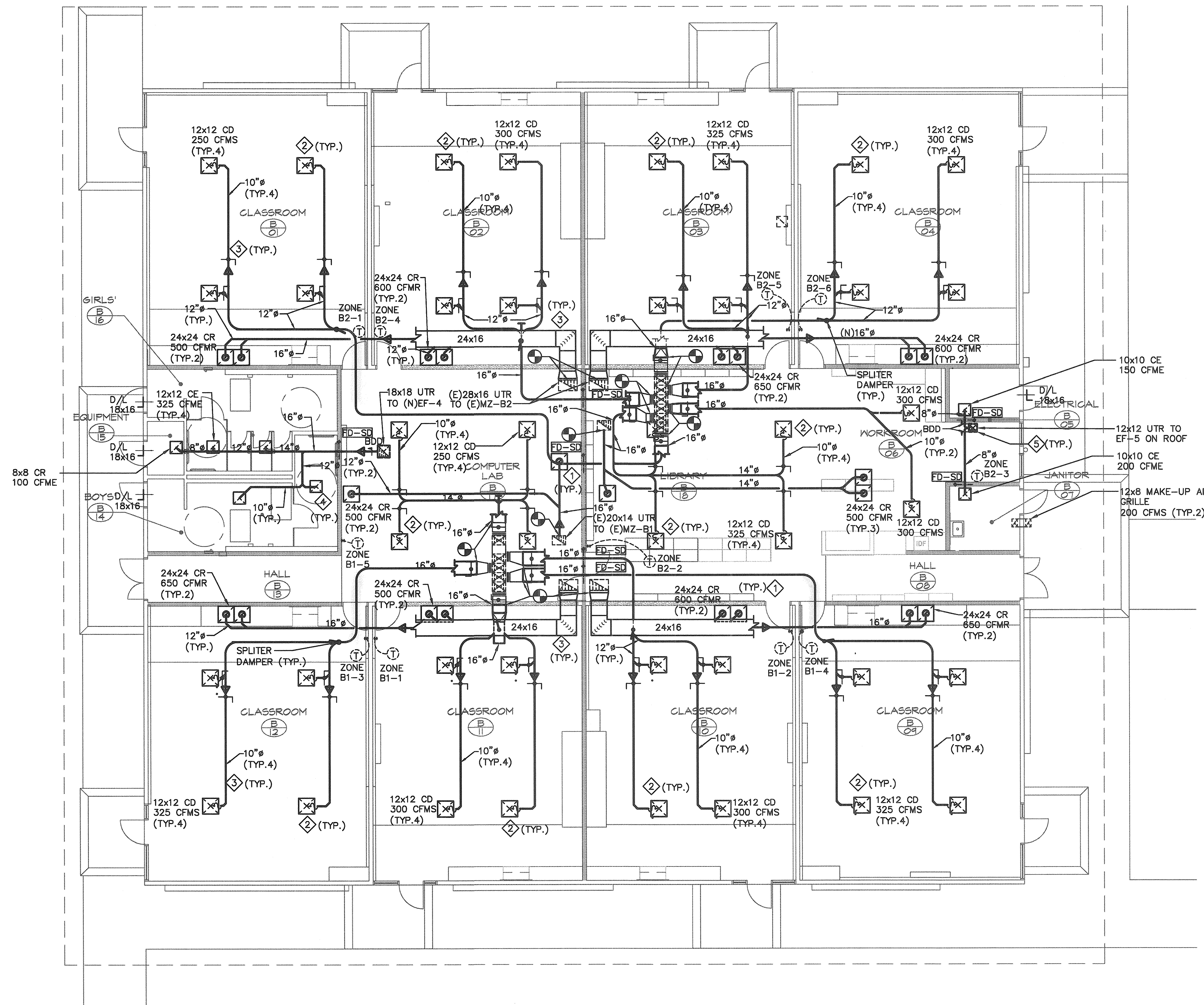
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 DIV. OF THE STATE ARCHITECT
 APPL 03-113415
 AC: FLS SS
 DATE: 10/20/10
 DSA STAMP

PROJECT NO.: 234800 DATE: 09-02-09

CAMPUS SITE PLAN
 13-01R

PBS ENGINEERS
 2100 East Route 66, Suite 101
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 Job No. 2010-014-00
 Mechanical and Electrical Consulting Engineers



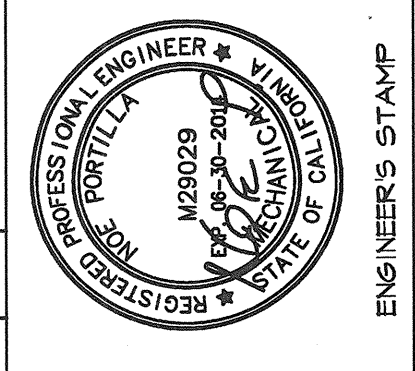
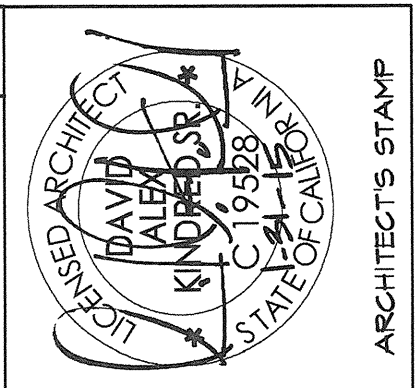


1 REMODEL FLOOR PLAN
SCALE: 1/8" = 1'-0" BUILDING B



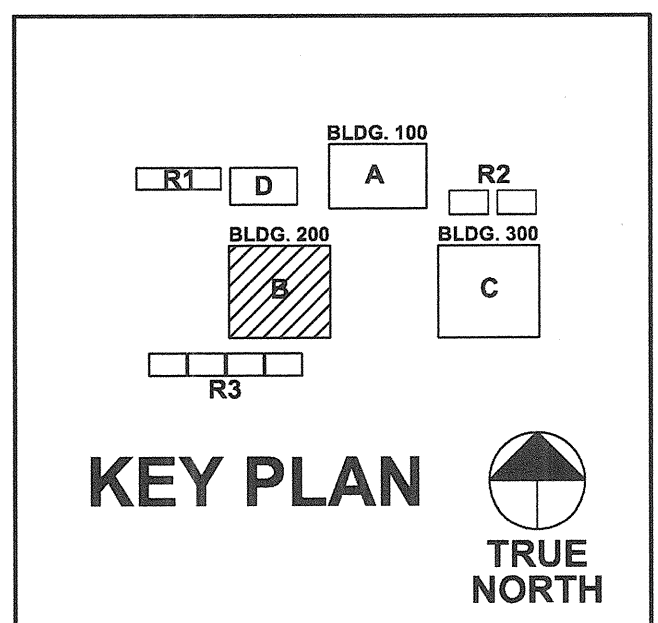
- ### KEY NOTES
1. PROVIDE NEW COMBINATION FIRE SMOKE DAMPERS AT FIRE RATED WALL AND SHOWN LOCATION ON PLANS.
 2. PROVIDE NEW DIFFUSERS AND GRILLES WITH SUPPORTS AT SHOWN LOCATION ON PLANS.
 3. PROVIDE NEW SUPPLY AIR AND RETURN AIR DUCT CONNECT TO POINT OF CONNECTION.
 4. PROVIDE NEW EXHAUST AIR GRILLES WITH SUPPORTS AT SHOWN LOCATION ON PLANS.
 5. PROVIDE NEW EXHAUST GRILLE, FIRE SMOKE DAMPERS, AND DUCT UTR TO EF-5.
 6. PROVIDE NEW EXHAUST AIR DUCT UTR TO EXHAUST FAN ON ROOF.

- ### GENERAL NOTES
1. REUSE (E) T'STAT, ASSOCIATED WIRING AND CONDUITS. REPLACE AS REQUIRED.
 2. PROVIDE AIR-BALANCE FOR ALL DIFFUSERS, REGISTERS AND GRILLES TO AIRFLOW VALUES SHOWN ON PLANS. PROVIDE MANUAL VOLUME DAMPERS AT ALL BRANCH DUCTS THAT SERVE DIFFUSERS, REGISTERS AND GRILLES.
 3. CONTRACTOR TO FIELD VERIFY LOCATIONS OF DIFFUSERS, REGISTERS GRILLES AND DUCTWORK.
 4. CONTRACTOR SHALL FIELD VERIFY EXISTING DUCTWORK OPENINGS AND NUMBER OF ZONES PRIOR TO DUCT FABRICATION AND INSTALLATION.
 5. CONTRACTOR SHALL PROVIDE SEISMIC BRACING AND DUCT SUPPORT PER CURRENT CODE. FLEXIBLE DUCTS SHALL NOT BE MORE THAN 6'-FEET FOR DIFFUSERS AND GRILLES.
 6. SUPPLY AND RETURN CFMS SHOWN ARE BASED ON AS-BUILT DRAWINGS. CONTRACTOR TO COORDINATE WITH A/E TEAM PRIOR TO PERFORM FINAL AIR BALANCING FOR SUPPLY AND RETURN AFTER THE REMODEL WORK.



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APPL 03-113415

AC: _____ FLS: _____ SS: _____
DATE: _____

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PROJECT NO.: 234808 DATE: 01-07-13

REMODEL FLOOR PLAN - BUILDING B

13-01R

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Mechanical Electrical Plumbing Consulting Engineers
QA/QC BY: _____

AD1-M2.2