TITLE 24 MANDATORY MEASURES

1. **Building Lighting Shut-off**
   The building lighting shut-off system consists of an automatic time switch, with a zone for each floor:
   or
   The building is separately metered and less than 5,000 square feet; exempt from the shut-off requirement.
2. **Override for Building Lighting Shut-off**
   The automatic building shut-off system is provided with a manual accessible override switch in sight of the lights. The area of override is not to exceed 5,000 square feet.
3. **Automatic Control Devices Certified**
   All automatic control devices specified are certified, all alternate equipment shall be certified and installed as directed by the manufacturer.
4. **Fluorescent Ballast and Luminaries Certified**
   All fluorescent fixtures specified for the project are certified and listed in the Directory. All installed fixtures shall be certified.
5. **Tandem Wiring for Two-Lamp Ballast's**
   All one and three lamp fluorescent fixtures are tandem wired with two (2) lamp ballast where required by Standards §132;
   or
   All three lamp fluorescent fixtures are specified with electronic high-frequency ballast's and are exempt from two-lamp tandem wiring requirements.
6. **Individual Room/Area Controls**
   Each room and area in this building is equipped with a separate switch or occupancy sensor device for each area with floor-to-ceiling walls.
7. **Uniform Reduction for Individual Rooms**
   All rooms and areas greater than 100 square feet and more than 0.8 watts per square foot of lighting load shall be controlled with Bi-level switching for uniform reduction of lighting within the room.
8. **Daylit Area Control**
   All rooms with windows and skylights, that are greater than 250 square feet, and that allow for the effective use of daylight in the area shall have 50% of the lamps in each daylit area controlled by separate switch;
   or
   The effective use of daylight throughout cannot be accomplished because the window are continuously shaded by a building on the adjacent lot. Diagram of shading during different times of year is included on plans.
9. **Control of Exterior Lights**
   Exterior mounted fixtures and served from the electrical panel inside the building are controlled with a directional photo cell control on the roof and a corresponding relay in the electrical panel.

CERTIFICATE OF COMPLIANCE (Part 1 of 3) LTG-1

PROJECT NAME: ROOSEVELT II E.S. - BUILDING C — DATE: 6/9/05
PROJECT ADDRESS: SAN BERNARDINO, CA.
PRINCIPAL DESIGNER-LIGHTING: FBA ENGINEERING — TELEPHONE: 949 852 9995 — Building Permit #
DOCUMENTATION AUTHOR: STEVE ZAJICEK — TELEPHONE — Checked by/Date Enforcement Agency Use

GENERAL INFORMATION

DATE OF PLANS — BUILDING CONDITIONED FLOOR AREA 4700 — CLIMATE ZONE
BUILDING TYPE: ☒ NONRESIDENTIAL ☐ HIGH RISE RESIDENTIAL ☐ HOTEL/MOTEL GUEST ROOM
PHASE OF CONSTRUCTION: ☒ NEW CONSTRUCTION ☐ ADDITION ☐ ALTERATION ☐ UNCONDITIONED (file affidavit)
METHOD OF LIGHTING COMPLIANCE: ☒ COMPLETE BLDG. ☐ AREA CATEGORY ☐ TAILORED ☐ PERFORMANCE

STATEMENT OF COMPLIANCE

This Certificate of Compliance lists the building features and performance specifications need to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to building lighting requirements

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

DOCUMENTATION AUTHOR: STEVE ZAJICEK — SIGNATURE: [signature] — DATE: 6/9/05

The Principal Lighting 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 envelope requirements contained in the applicable parts of Sections 110, 119, 130 through 132, 146 and 149 of Title 24, Part 6.

Please check one:

☐ 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 it the State of California as a civil engineer or 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.

(These sections of the Business and Professions Code are printed in full in the Nonresidential Manual.)

PRINCIPAL LIGHTING DESIGNER-NAME: STEVE ZAJICEK — SIGNATURE: [signature] — DATE: 6/9/05 — LIC. #: E10372

LIGHTING MANDATORY MEASURES

Indicate location on plans of Note Block for Mandatory Measure: E-1.4

INSTRUCTIONS TO APPLICANT

For detailed instruction on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.
LTG-1: Required on plans for all submittals. Part 2 and 3 may be incorporated in schedule on plans.
LTG-2 Required for all submittals.
LTG-3: Optional. Use only if lighting control credits are taken.
LTG-4: Optional. Part 2 and 3 and LTG-5 are optional if Tailored Method is used.

Nonresidential Compliance Form — January 2001

CERTIFICATE OF COMPLIANCE (Part 2 of 3) LTG-1

PROJECT NAME: ROOSEVELT II E.S. - BUILDING B — DATE: 2/25/05

INSTALLED LIGHTING SCHEDULE

Name	LUMINAIRE DESCRIPTION	LAMPS Type DESCRIPTION	LAMPS No. of Lamps	LAMPS Watts Per Lamp	BALLASTS Type DESCRIPTION	BALLASTS No. of Ballast	Luminaire No. of Lumin.	Luminaire Watts/ Lumin.	TOTAL WATTS
1A	RECESSED 2 X 4	F32T8	3	32	E	2	30	93	2190
1B	RECESSED 2 X 4	F32T8	2	32	E	1	6	64	364
3A	STRIP 1 X 4	F32T8	2	32	E	1	4	64	256
7	DOWNLIGHT	TTT	1	42	E	1	22	45	990
9	TRACK	F32T8	2	32	E	1	1	968	968

Lighting Schedule on Plans Shows Exterior Lighting Meets
☐ Efficacy and Control Requirement of § 130(c)
☐ Control Requirements of § 131(f)

SUBTOTAL FROM THIS PAGE	5388
PLUS SUBTOTAL FROM CONTINUATION PAGE	Ø
PORTABLE LIGHTING (From LTG-1 Part 3 of 3)	Ø
LESS CONTROL CREDIT WATTS (From LTG-3)	Ø
ADJUSTED ACTUAL WATTS	5388

MANDATORY AUTOMATIC CONTROLS

CONTROL LOCATION (Room #)	CONTROL IDENTIFICATION	CONTROL TYPE (Auto Time Switch, Exterior, etc.)	SPACE CONTROLLED	NOTE TO FIELD

CONTROLS FOR CREDIT

CONTROL LOCATION (Room # or Dwg. #)	CONTROL IDENTIFICATION	CONTROL TYPE (Occupant, Daylight, Dimming, etc.)	LUMINAIRES CONTROLLED TYPE	LUMINAIRES CONTROLLED # OF LUMINAIRES	NOTE TO FIELD

NOTES TO FIELD - For Building Department Use Only

Nonresidential Compliance Form — August 2001

LIGHTING COMPLIANCE SUMMARY LTG-2

PROJECT NAME: ROOSEVELT II E.S. - BUILDING A — DATE: 6/9/05

ACTUAL LIGHTING POWER

LUMINAIRE	TYPE	NUMBER OF	WATTS PER LUMINAIRE (Including Ballast)	CEC DEFAULT? Y	CEC DEFAULT? N	TOTAL
1A	RECESSED 2 X 4	51	93	☒	☐	4743
2A	SURFACE 1 X 4	5	64	☒	☐	320
3A	SURFACE 1 X 4	5	64	☒	☐	320
6	SURFACE 4'	8	64	☒	☐	512

SUBTOTAL FROM THIS PAGE	5895
PLUS SUBTOTAL FROM CONTINUATION PAGE	Ø
PORTABLE LIGHTING (From LTG-1 Part 3 of 3)	Ø
LESS CONTROL CREDIT WATTS (From LTG-3)	Ø
ADJUSTED ACTUAL WATTS	5895

ALLOWED LIGHTING POWER (Choose One Method)

COMPLETE BUILDING METHOD

BUILDING CATEGORY (From § 146(b) Table 1-M)	WATTS PER SF	COMPLETE BLDG. AREA	ALLOWED WATTS
SCHOOL	1.4	4977	6968

AREA CATEGORY METHOD

AREA CATEGORY (From § 146(b) Table 1-N)	WATTS PER SF	AREA (SF)	ALLOWED WATTS
	TOTALS	AREA	WATTS

TAILORED METHOD

TOTAL ALLOWED WATTS (From LTG-4)

Nonresidential Compliance Form — August 2001

CERTIFICATE OF COMPLIANCE (Part 1 of 3) LTG-1

PROJECT NAME: ROOSEVELT II E.S. - BUILDING A — DATE: 6/9/05
PROJECT ADDRESS: SAN BERNARDINO, CA.
PRINCIPAL DESIGNER-LIGHTING: FBA ENGINEERING — TELEPHONE: 949 852 9995 — Building Permit #
DOCUMENTATION AUTHOR: STEVE ZAJICEK — TELEPHONE — Checked by/Date Enforcement Agency Use

GENERAL INFORMATION

DATE OF PLANS 6/9/05 — BUILDING CONDITIONED FLOOR AREA 4977 — CLIMATE ZONE
BUILDING TYPE: ☒ NONRESIDENTIAL ☐ HIGH RISE RESIDENTIAL ☐ HOTEL/MOTEL GUEST ROOM
PHASE OF CONSTRUCTION: ☒ NEW CONSTRUCTION ☐ ADDITION ☐ ALTERATION ☐ UNCONDITIONED (file affidavit)
METHOD OF LIGHTING COMPLIANCE: ☒ COMPLETE BLDG. ☐ AREA CATEGORY ☐ TAILORED ☐ PERFORMANCE

STATEMENT OF COMPLIANCE

This Certificate of Compliance lists the building features and performance specifications need to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to building lighting requirements

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

DOCUMENTATION AUTHOR: STEVE ZAJICEK — SIGNATURE: [signature] — DATE: 6/9/05

The Principal Lighting 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 envelope requirements contained in the applicable parts of Sections 110, 119, 130 through 132, 146 and 149 of Title 24, Part 6.

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☐ 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 it the State of California as a civil engineer or 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.

(These sections of the Business and Professions Code are printed in full in the Nonresidential Manual.)

PRINCIPAL LIGHTING DESIGNER-NAME: STEVE ZAJICEK — SIGNATURE: [signature] — DATE: 6/9/05 — LIC. #: E10372

LIGHTING MANDATORY MEASURES

Indicate location on plans of Note Block for Mandatory Measure: E-1.4

INSTRUCTIONS TO APPLICANT

For detailed instruction on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.
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LTG-2 Required for all submittals.
LTG-3: Optional. Use only if lighting control credits are taken.
LTG-4: Optional. Part 2 and 3 and LTG-5 are optional if Tailored Method is used.

Nonresidential Compliance Form — January 2001

LIGHTING COMPLIANCE SUMMARY LTG-2

PROJECT NAME: ROOSEVELT II E.S. - BUILDING C — DATE: 6/9/05

ACTUAL LIGHTING POWER

LUMINAIRE	TYPE	NUMBER OF	WATTS PER LUMINAIRE (Including Ballast)	CEC DEFAULT? Y	CEC DEFAULT? N	TOTAL
1A	RECESSED 2 X 4	22	93	☒	☐	2046
2	SURFACE 4'	13	64	☒	☐	832
6B	SURFACE 4'	6	64	☒	☐	192
8	TRACK	8		☒	☐	1200
9	SUSPENDED	--	1736	☒	☐	1736

SUBTOTAL FROM THIS PAGE	6006
PLUS SUBTOTAL FROM CONTINUATION PAGE	Ø
PORTABLE LIGHTING (From LTG-1 Part 3 of 3)	Ø
LESS CONTROL CREDIT WATTS (From LTG-3)	Ø
ADJUSTED ACTUAL WATTS	6006

ALLOWED LIGHTING POWER (Choose One Method)

COMPLETE BUILDING METHOD

BUILDING CATEGORY (From § 146(b) Table 1-M)	WATTS PER SF	COMPLETE BLDG. AREA	ALLOWED WATTS
SCHOOL	1.4	4700	6580

AREA CATEGORY METHOD

AREA CATEGORY (From § 146(b) Table 1-N)	WATTS PER SF	AREA (SF)	ALLOWED WATTS
	TOTALS	AREA	WATTS

TAILORED METHOD

TOTAL ALLOWED WATTS (From LTG-4)

Nonresidential Compliance Form — August 2001

LIGHTING COMPLIANCE SUMMARY LTG-2

PROJECT NAME: ROOSEVELT II E.S. - BUILDING B — DATE: 2/25/05

ACTUAL LIGHTING POWER

LUMINAIRE	TYPE	NUMBER OF	WATTS PER LUMINAIRE (Including Ballast)	CEC DEFAULT? Y	CEC DEFAULT? N	TOTAL
1A	RECESSED 2 X 4	30	93	☒	☐	2790
1B	RECESSED 2 X 4	6	64	☒	☐	384
3A	STRIP 1 X 4	4	64	☒	☐	256
7	DOWNLIGHT	22	45	☒	☐	990
9	TRACK	1	968	☒	☐	968

SUBTOTAL FROM THIS PAGE	5388
PLUS SUBTOTAL FROM CONTINUATION PAGE	Ø
PORTABLE LIGHTING (From LTG-1 Part 3 of 3)	Ø
LESS CONTROL CREDIT WATTS (From LTG-3)	Ø
ADJUSTED ACTUAL WATTS	5388

ALLOWED LIGHTING POWER (Choose One Method)

COMPLETE BUILDING METHOD

BUILDING CATEGORY (From § 146(b) Table 1-M)	WATTS PER SF	COMPLETE BLDG. AREA	ALLOWED WATTS
SCHOOL	1.4	3500	4900

AREA CATEGORY METHOD

AREA CATEGORY (From § 146(b) Table 1-N)	WATTS PER SF	AREA (SF)	ALLOWED WATTS
	TOTALS	AREA	WATTS

TAILORED METHOD

TOTAL ALLOWED WATTS (From LTG-4)

Nonresidential Compliance Form — August 2001

CERTIFICATE OF COMPLIANCE (Part 1 of 3) LTG-1

PROJECT NAME: ROOSEVELT II E.S. - BUILDING B — DATE: 6/9/05
PROJECT ADDRESS: SAN BERNARDINO, CA.
PRINCIPAL DESIGNER-LIGHTING: FBA ENGINEERING — TELEPHONE: 949 852 9995 — Building Permit #
DOCUMENTATION AUTHOR: STEVE ZAJICEK — TELEPHONE — Checked by/Date Enforcement Agency Use

GENERAL INFORMATION

DATE OF PLANS 6/9/05 — BUILDING CONDITIONED FLOOR AREA 3500 — CLIMATE ZONE
BUILDING TYPE: ☒ NONRESIDENTIAL ☐ HIGH RISE RESIDENTIAL ☐ HOTEL/MOTEL GUEST ROOM
PHASE OF CONSTRUCTION: ☒ NEW CONSTRUCTION ☐ ADDITION ☐ ALTERATION ☐ UNCONDITIONED (file affidavit)
METHOD OF LIGHTING COMPLIANCE: ☒ COMPLETE BLDG. ☐ AREA CATEGORY ☐ TAILORED ☐ PERFORMANCE

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PRINCIPAL LIGHTING DESIGNER-NAME: STEVE ZAJICEK — SIGNATURE: [signature] — DATE: 6/9/05 — LIC. #: E10372

LIGHTING MANDATORY MEASURES

Indicate location on plans of Note Block for Mandatory Measure: E-1.4

INSTRUCTIONS TO APPLICANT

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LTG-2 Required for all submittals.
LTG-3: Optional. Use only if lighting control credits are taken.
LTG-4: Optional. Part 2 and 3 and LTG-5 are optional if Tailored Method is used.

Nonresidential Compliance Form — January 2001

CERTIFICATE OF COMPLIANCE (Part 2 of 3) LTG-1

PROJECT NAME: ROOSEVELT II E.S. - BUILDING A — DATE: 6/9/05

INSTALLED LIGHTING SCHEDULE

Name	LUMINAIRE DESCRIPTION	LAMPS Type DESCRIPTION	LAMPS No. of Lamps	LAMPS Watts Per Lamp	BALLASTS Type DESCRIPTION	BALLASTS No. of Ballast	Luminaire No. of Lumin.	Luminaire Watts/ Lumin.	TOTAL WATTS
1A	RECESSED 2 X 4	F32T8	3	32	E	2	51	93	4743
2A	SURFACE 1 X 4	F32T8	2	32	E	1	5	64	320
3A	SURFACE 1 X 4	F32T8	2	32	E	1	5	64	320
6	SURFACE 4'	F32T8	2	32	E	1	8	64	512

Lighting Schedule on Plans Shows Exterior Lighting Meets
☐ Efficacy and Control Requirement of § 130(c)
☐ Control Requirements of § 131(f)

SUBTOTAL FROM THIS PAGE	5895
PLUS SUBTOTAL FROM CONTINUATION PAGE	Ø
PORTABLE LIGHTING (From LTG-1 Part 3 of 3)	Ø
LESS CONTROL CREDIT WATTS (From LTG-3)	Ø
ADJUSTED ACTUAL WATTS	5895

MANDATORY AUTOMATIC CONTROLS

CONTROL LOCATION (Room #)	CONTROL IDENTIFICATION	CONTROL TYPE (Auto Time Switch, Exterior, etc.)	SPACE CONTROLLED	NOTE TO FIELD

CONTROLS FOR CREDIT

CONTROL LOCATION (Room # or Dwg. #)	CONTROL IDENTIFICATION	CONTROL TYPE (Occupant, Daylight, Dimming, etc.)	LUMINAIRES CONTROLLED TYPE	LUMINAIRES CONTROLLED # OF LUMINAIRES	NOTE TO FIELD

NOTES TO FIELD - For Building Department Use Only

Nonresidential Compliance Form — August 2001

Filename: I:\270\032\E-1.4.dwg (jmusick)
Dimscale: 1=1(PS) Date: DEC 07, 2011 Time: 10:14 AM
Xrefs: TITLEBLOCK

LICENSED ARCHITECT — JAMES M. STINSON — C19098 — RENEWAL 02/28/ — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — STEPHEN R. ZAJICEK — No. E 10372 — Exp. 09-30-12 — ELECTRICAL — STATE OF CALIFORNIA

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3420 Irvine Avenue Suite 200
Newport Beach, California 92660-3189
TEL: 949 852 9995 FAX: 949 852 1657
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FBA # 270.032

P S W C GROUP
ARCHITECTS / PLANNERS
1887 BUSINESS CENTER DR., SUITE 3, SAN BERNARDINO, CA. 92408
909/890-2233 FAX. 909/890-2644

DATE | REVISIONS

ROOSEVELT II
ELEMENTARY SCHOOL
SAN BERNARDINO CITY UNIFIED SCHOOL DISTRICT
1261 W. 16TH STREET, SAN BEERNARDINO, CA.

TITLE 24
CALCULATIONS

JOB NO. P520
DRAWN BY FBA
DATE 12/8/2011

E-1.4

RE-BID #F09-02 ROOSEVELT II (HENRY) E.S. NEW CONSTRUCTION BID ISSUANCE SET 12/09/11