

ENERGY COMPLIANCE



COMcheck Software Version 3.4.0 Lighting and Power Compliance Certificate

90.1 (2004) Standard
Report Date: 02/16/10
Data filename: P:\0978F9-1.039\DRAWINGS\ELECTR-1\ENERGY-1060394-1.CCK

Section 1: Project Information

Project Title: Saenger Theatre
Construction Site: 142 North Rampart Street, New Orleans, LA
Owner/Agent: Dianne Higgins
Designer/Contractor: JBA Consulting Engineers

Section 2: General Information

Building Use Description by Project Type	Activity Type	Floor Area
Performing Arts Theater	New Construction	12254
Performing Arts Theater:Lobby		16636
Performing Arts Theater:Audience/Seating Area		4008
Common Space Types:Dressing/Locker/Fitting Room		2609
Common Space Types:Lounge/Recreation		2448
Common Space Types:Workshop		2916
Common Space Types:Office - Enclosed		6837
Common Space Types:Corridor/Transition		10167
Common Space Types:Stairs-Active		6524
Common Space Types:Active Storage		1334
Common Space Types:Restrooms		5906
Common Space Types:Electrical/Mechanical		6633
Warehouse:Medium/Bulky Material Storage		643

Section 3: Requirements Checklist

- Interior Lighting:**
- Total actual watts must be less than or equal to total allowed watts.
 - Exit signs 5 Watts or less per side.
- Exterior Lighting:**
- Comply with Sections 9.4.4 and 9.4.5 of 90.1-2004 and attach documentation.
- Controls, Switching, and Wiring:**
- Independent manual or occupancy sensing controls for each space (remote switch with indicator allowed for safety or security).
 - Occupant sensing control in class rooms, conference/meeting rooms, and employee lunch and break rooms.
 - Exceptions: Spaces with multi-scene control; shop classrooms, laboratory classrooms, and preschool through 12th grade classrooms.
 - Automatic shutoff control for lighting in >5000 sq ft buildings by time-of-day device, occupant sensor, or other automatic control.
 - Exceptions: 24 hour operation lighting; patient care areas; where auto shutoff would endanger safety or security.

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SD3: Surface Wall: Steplight / Other	1	19	7	133
SD4: Surface Wall: Steplight / Other	1	6	7	42
SR: Surface Wall: Historic Sconce / Incandescent 25W	2	18	50	900
SR1: Surface Wall: Historic Sconce / Incandescent 25W	1	4	25	100
SR2: Surface: Historic Pendant / Incandescent 25W	1	1	25	25
SR3: Surface: Historic Pendant / Incandescent 25W	6	6	150	900
SR4: Surface: Historic Sconce / Incandescent 25W	1	10	25	250
SR5: Surface: Historic Pendant / Incandescent 25W	1	1	25	25
SR6: Surface: Historic Pendant (12) 25W / Incandescent 25W	8	1	300	300
SR7: Surface: Historic Pendant / Incandescent 60W	4	13	150	2080
SR8: Surface: Historic Pendant / Incandescent 25W	1	2	50	100
SR9: Surface: Historic Pendant / Incandescent 25W	3	1	75	75
SR10: Surface: Historic Pendant / Incandescent 25W	6	4	150	600
SR11: Surface: Historic Pendant / Incandescent 25W	1	2	25	50
SR12: Surface: Historic Pendant / Incandescent 25W	1	2	25	50
SR13: Surface: Historic Pendant / Incandescent 25W	3	1	75	75
SR16: Surface: Historic Sconce / Incandescent 25W	1	2	25	50
SR19: Surface: Historic Sconce / Incandescent 40W	1	2	40	80
SR20: Surface: Historic Ceiling / Incandescent 25W	6	2	150	300
SR24: Surface: Historic Ceiling / Incandescent 50W	1	1	50	50
SS: Surface: LED Linear / Other	1	95	3	285
SS1: Surface: LED / Other	1	3	25	75
SS3: Surface: LED Linear / Other	1	280	24	6740
SS4: Surface: LED / Other	1	24	50	1200
ST1: Surface: MR-16 Halogen / Incandescent 50W	1	2	50	100
ST2: Surface: MR-16 Halogen / Incandescent 50W	1	30	50	1500
ST3: Surface: MR-16 Halogen / Incandescent 50W	1	10	50	500
ST4: Surface: MR-16 Halogen / Incandescent 50W	1	15	50	750
SV1: Surface: Blue Ceiling / Other	1	18	575	10350
SV2: Surface: Clouds / Other	1	4	575	2300
SV3: Surface: House / Other	1	2	575	1150
Common Space Types:Dressing/Locker/Fitting Room (4008 sq.ft.)				
SA: Recessed: Downlight / Twin Tube 18W / Electronic	1	9	25	225
SL: Surface: 4'-0" Wraparound / 48" T8 32W / Electronic	2	4	64	256
SM: Recessed: 2x4 Lensed / 48" T8 32W / Electronic	2	16	64	1024
SN: Surface: Dressing Room Vanity / Incandescent 60W	1	285	60	17100
Common Space Types:Lounge/Recreation (2609 sq.ft.)				
SB1: Recessed: Downlight / Incandescent 50W	1	7	50	350
SB3: Recessed: Downlight / Incandescent 50W	1	13	50	650
SC14: Surface Wall: Historic Sconce / Incandescent 60W	3	12	180	2160
SC6: Surface: Pendant / Incandescent 60W	6	7	360	2520
SR47: Surface Wall: Historic Sconce / Incandescent 40W	1	6	40	360
SS2: Surface: LED / Other	1	60	12	720
SV1: Surface: LED Linear / Other	1	400	1	400
SW1: Surface: Pendant / Incandescent 40W	8	3	320	960
Common Space Types:Workshop (2448 sq.ft.)				
C: Surface-Suspended: 4'-0" Strip Light w/wireguard / 48" T8 32W / Electronic	2	15	64	960
D: Surface: 4'-0" Wraparound / 48" T8 32W / Electronic	2	2	64	128
SG1: Surface: Track / Incandescent 75W	1	6	75	450
SL: Surface: 4'-0" Wraparound / 48" T8 32W / Electronic	2	8	64	512
SL3: Surface: Downlight / Triple 4-pin 32W / Electronic	2	3	64	192
Common Space Types:Food Preparation (2916 sq.ft.)				
A2: Recessed: 2x4 Lensed / 48" T8 32W / Electronic	2	10	64	640
A3: Recessed: 2x4 Lensed / 48" T8 32W / Electronic	3	3	96	288
B: Recessed: 2x4 Lensed / 48" T8 32W / Electronic	3	16	96	1536
H: Recessed: 2x2 Lensed / 24" T8U 32W / Electronic	2	3	64	192
SB1: Recessed: Downlight / Incandescent 50W	1	2	50	100
SB3: Recessed: Downlight / Incandescent 50W	1	5	50	250
SB4: Recessed: Downlight / Incandescent 50W	1	5	50	250
SC14: Surface Wall: Sconce / Incandescent 60W	1	2	60	120
SS2: Surface: LED / Other	1	10	12	120

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- 7. Master switch at entry to hotel/motel guest room.
- 8. Separate control device for display/accent lighting, case lighting, task lighting, nonvisual lighting, lighting for sale, and demonstration lighting.
- 9. Photoelectric/astrometric time switch on exterior lights.
Exceptions:
Covered vehicle entrance/exit areas requiring lighting for safety, security and eye adaptation.
- 10. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).
Exceptions:
Electronic high-frequency ballasts;
Luminaires not on same switch;
Recessed luminaires 10 ft. apart or surface/pendant not continuous;
Luminaires on emergency circuits.

- Voltage Drop:**
- 11. Feeder conductors have been designed for a maximum voltage drop of 2 percent.
 - 12. Branch circuit conductors have been designed for a maximum voltage drop of 3 percent.

Section 4: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 90.1 (2004) Standard requirements in COMcheck Version 3.4.0 and to comply with the mandatory requirements in the Requirements Checklist.

Dianne Higgins, Designer
Signature: [Signature]
Date: 2-16-2010

Section 5: Post Construction Compliance Statement

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Common Space Types:Office - Enclosed (6837 sq.ft.)				
A2: Recessed: 2x4 Lensed / 48" T8 32W / Electronic	2	24	64	1536
A3: Recessed: 2x4 Lensed / 48" T8 32W / Electronic	3	53	96	5088
A4: Recessed: 2x4 Lensed / 48" T8 32W / Electronic	3	6	96	576
J: Recessed: Compact Fluorescent / Triple 4-pin 26W / Electronic	2	15	55	825
SA: Recessed: Downlight / Twin Tube 18W / Electronic	1	6	25	150
SB1: Recessed: Downlight / Incandescent 50W	1	4	50	200
SM: Recessed: 2x4 Lensed / 48" T8 32W / Electronic	2	4	64	256
Common Space Types:Corridor/Transition (10167 sq.ft.)				
A2: Recessed: 2x4 Lensed / 48" T8 32W / Electronic	2	29	64	1856
D: Surface-Suspended: 4'-0" Wraparound / 48" T8 32W / Electronic	2	30	64	1920
F: Surface Wall: 4'-0" Wall Bracket / 48" T8 32W / Electronic	2	5	64	320
SA: Recessed: Downlight / Twin Tube 18W / Electronic	1	7	25	175
SB3: Recessed: Downlight / Incandescent 50W	1	3	50	150
SL: Surface-Suspended: 4'-0" Wraparound / 48" T8 32W / Electronic	2	16	64	1024
SC6: Pendant: Historic Pendant / Incandescent 60W	1	5	60	300
SR18: Surface Wall: Historic Sconce / Incandescent 40W	1	6	40	240
SS4: Surface Wall: LED Steplight / Incandescent 50W	1	13	50	650
Common Space Types:Stairs-Active (6524 sq.ft.)				
F: Wall: 4'-0" Strip Light / 48" T8 32W / Electronic	2	25	64	1600
B: Recessed: 2x4 Lensed / 48" T8 32W / Electronic	3	2	96	192
SD3: Surface Wall: LED Steplight / Incandescent 50W	1	20	50	1000
SL2: Surface: Wall Bra cket / 48" T8 32W / Electronic	2	17	64	1088
SL3: Surface: Compact Fluorescent / Triple 4-pin 32W / Electronic	2	9	64	576
Common Space Types:Active Storage (1334 sq.ft.)				
A2: Recessed: 2x4 Lensed / 48" T8 32W / Electronic	2	2	64	128
C: Surface-Suspended: 4'-0" Strip Light wireguard / 48" T8 32W / Electronic	2	7	64	448
G: Surface: 12" Square / Quad 2-pin 22W / Electronic	1	4	25	100
SA: Recessed: Downlight / Triple 4-pin 18W / Electronic	1	1	25	25
SL: Surface: 4'-0" Wraparound / 48" T8 32W / Electronic	2	4	64	256
Common Space Types:Restrooms (5906 sq.ft.)				
D: Surface-Suspended: 4'-0" Wraparound / 48" T8 32W / Electronic	2	1	64	64
E: Recessed: 1x4 Lensed / 48" T8 32W / Electronic	2	17	64	1088
SA: Recessed: Downlight / Twin Tube 18W / Electronic	1	6	25	150
SA1: Recessed: Downlight / Twin Tube 18W / Electronic	1	11	25	275
SB3: Recessed: Downlight / Incandescent 50W	1	5	50	250
SC: Wall: Wall Bracket Above Mirror / 24" T8 17W / Electronic	1	5	20	100
SC1: Wall: Wall Bracket Above Mirror / 48" T8 28W / Electronic	1	3	30	90
SC2: Wall: Sconce / Incandescent 60W	1	3	60	180
SC3: Wall: Sconce / Incandescent 60W	1	9	60	540
SC4: Wall: Sconce / Incandescent 60W	1	18	60	1080
SC8: Wall: Sconce / Twin Tube 18W / Electronic	1	4	25	100
SC9: Wall: Sconce / Twin Tube 18W / Electronic	1	6	25	150
SC10: Wall: Sconce / Twin Tube 18W / Electronic	1	3	25	75
SC11: Wall: Sconce / Twin Tube 18W / Electronic	1	3	25	75
SK: Cove: 176 Linear Feet / 48" T8 32W / Electronic	2	176	8	1408
SG: Surface: Historic Pendant / Incandescent 40W	3	10	120	1200
SG1: Surface: Historic Pendant / Twin Tube 36/39W / Electronic	1	2	40	80
SG2: Surface: Historic Pendant / Twin Tube 36/39W / Electronic	1	3	40	120
SW: Pendant: Pendant / Incandescent 60W	1	1	60	60
SW2: Pendant: Pendant / Incandescent 60W	1	1	60	60
Common Space Types:Electrical/Mechanical (6633 sq.ft.)				
A2: Recessed: 2x4 Lensed / 48" T8 32W / Electronic	2	2	64	128
C: Surface: 4'-0" Strip Light wireguard / 48" T8 32W / Electronic	2	51	64	3264
D: Surface-Suspended: 4'-0" Wraparound / 48" T8 32W / Electronic	2	11	64	704
SL: Surface-Suspended: 4'-0" Wraparound / 48" T8 32W / Electronic	2	2	64	128
SL4: Surface-Suspended: 4'-0" Wraparound / 48" T8 32W / Electronic	2	5	64	320
Warehouse:Medium/Bulky Material Storage (643 sq.ft.)				
D: Surface-Suspended: 4'-0" Wraparound / 48" T8 32W / Electronic	2	6	64	384
Total Actual Watts = 127371				

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COMcheck Software Version 3.4.0 Lighting Application Worksheet

90.1 (2004) Standard
Report Date:
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Section 1: Allowed Lighting Power Calculation

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B x C)
Performing Arts Theater:Lobby	12254	3.3	40438
Performing Arts Theater:Audience/Seating Area	16636	2.6	43254
Common Space Types:Dressing/Locker/Fitting Room	4008	0.6	2405
Common Space Types:Lounge/Recreation	2609	1.2	3131
Common Space Types:Workshop	2448	1.5	4651
Common Space Types:Food Preparation	2916	1.2	3499
Common Space Types:Office - Enclosed	6837	1.1	7521
Common Space Types:Corridor/Transition	10167	0.5	5084
Common Space Types:Stairs-Active	6524	0.6	3314
Common Space Types:Active Storage	1334	0.8	1067
Common Space Types:Restrooms	5906	0.9	5315
Common Space Types:Electrical/Mechanical	6633	1.5	9950
Warehouse:Medium/Bulky Material Storage	643	0.9	579
Total Allowed Watts = 130207			

Section 2: Actual Lighting Power Calculation

A Fixture ID: Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C x D)
Performing Arts Theater:Lobby (12254 sq.ft.)				
SA: Recessed: Downlight / Twin Tube 18W / Electronic	1	6	25	150
SB1: Recessed: Downlight / Incandescent 50W	1	30	50	1500
SB3: Recessed: Downlight / Incandescent 50W	1	12	50	600
SC6: Wall: Sconce / Incandescent 40W	1	10	40	400
SC13: Wall: Sconce / Incandescent 60W	1	2	60	120
SD4: Surface: Wall Lights / Incandescent 25W	1	1	100	100
SO3: Pendant: Pendant / Incandescent 25W	4	1	100	100
SO4: Pendant: Pendant / Incandescent 25W	4	1	100	100
SR22: Semi Recessed: Historic Plaster (40) 25W / Incandescent 25W	8	1	1000	1000
SR27: Pendant: Historic Pendant / Incandescent 25W	4	3	100	300
SR28: Pendant: Historic Chandelier (70) 25W / Incandescent 25W	8	3	1750	5250
SR29: Pendant: Historic Chandelier (70) 25W / Incandescent 25W	8	4	1750	7000
SR38: Pendant: Historic Pendant / Incandescent 40W	3	1	120	120
SR48: Surface Ceiling: Historic Ornamental / Incandescent 40W	6	1	240	240
SS2: Surface: LED Linear / Other	1	32	384	12288
ST: Pendant: Pendant Accent / Incandescent 60W	1	2	50	100
SW: Pendant: Pendant / Incandescent 60W	1	16	60	960
SW5: Pendant: Historic Pendant / Incandescent 40W	6	2	240	480
Performing Arts Theater:Audience/Seating Area (16636 sq.ft.)				
SB3: Recessed: Downlight / Incandescent 50W	1	16	50	800
SD: Recessed Wall: Steplight / Other	1	2	7	14
SD1: Recessed Wall: Steplight / Other	1	2	7	14

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Section 3: Compliance Calculation

If the Total Allowed Watts minus the Total Actual Watts is greater than or equal to zero, the building complies.
Total Allowed Watts = 130207
Total Actual Watts = 127371
Project Compliance = 2836

Lighting PASSES: Design 2% better than code.

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THE SAENGER THEATRE RENEWAL PROJECT

142 North Rampart Street
New Orleans, LA

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Saenger Theatre Redevelopment Company
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