

**COMcheck Software Version 4.1.1.0**  
**Interior Lighting Compliance Certificate**

**Project Information**  
 Energy Code: 90.1 (2007) Standard  
 Project Title: G Bldg, Wisteria Ridge  
 Project Type: New Construction

Construction Site: Watkinsville, GA  
 Owner/Agent:  
 Designer/Consultor: Timothy S. Lee, Lastinger & Associates, Inc., 6290 Abbots Bridge Road, Suite 402, Johns Creek, GA 30092

**Allowed Interior Lighting Power**

A	B	C	D
Area Category	Floor Area (SQ)	Allowed Watts / FT <sup>2</sup>	Allowed Watts (B X C)
1-Multitenant	36700	0.75	27525
		Total Allowed Watts = 27525	

**Proposed Interior Lighting Power**

A	B	C	D	E
Fixture ID - Description / Lamp / Wattage Per Lamp / Ballast	Lamp / Fixture	# of Fixtures	Watt	(C X D)
1-Multitenant				
LED 1 A: Other	1	32	55	1760
LED 1 copy 2: B: Other	1	8	85	680
LED 1 copy 3: C: Other	1	72	72	72
LED 1 copy 4: D: Other	1	35	25	750
LED 1 copy 5: F: Other	1	37	25	925
		Total Proposed Watts = 3337		

**Interior Lighting Compliance Statement**  
 Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 90.1 (2007) Standard requirements in COMcheck Version 4.1.1.0 and to comply with any applicable nomenclature requirements listed in the Inspector Checklist.

**TIMOTHY S. LEE, P.E.**  
 Name - Title: Signature: Date: 04-02-19

Project Title: G Bldg, Wisteria Ridge  
 Data filename: Z:\0219\19130\COMCHECK\_G\_bldg Page 1 of 5

**LOADCENTER SCHEDULE - G1**

MARKS	TRIP	VOLTAGE	PHASE	WIRE	CONNECTIONS	FLUSH	ENCLOSURE	NEMA
#	POLE	DESCRIPTION	PHASE A	PHASE B	DESCRIPTION	TRIP	POLE	CT
1	201*	KITCHEN RECEPTACLES	1.50	4.00	RANGE	50/2	2	2
3	201*	KITCHEN RECEPTACLES	1.50	4.00	RANGE	50/2	2	4
5	201*	DISHWASHER/ DISPOSAL	1.30	2.50	DRYER	30/2	6	6
7	201*	WASHING MACHINE	1.50	2.50	DRYER	30/2	6	8
9	201*	BATH RECEPTACLES	2.25		WATER HEATER	25/2	10	10
11	201*	HVAC	1.50	2.25	WATER HEATER	25/2	10	12
13	151*	LIGHTS & RECEPTACLES				30/2	14	14
15	151*	LIGHTS & RECEPTACLES			AHU-A	30/2	16	16
17	151*	LIGHTS & RECEPTACLES			HPU-A	20/2	20	20
19	151*	SPARE					22	22
21	151*	SPARE					24	24
23	151*	SPARE					26	26
25	151*	SPARE					28	28
27	151*	SPARE					30	30

SEE UNIT PANEL CALCULATIONS.  
 NOTES:  
 \*PROVIDE AFCI TYPE CIRCUIT BREAKER, CKT # 1, 3, 5, 11, 13, 15, 17, 19, 21  
 \*PROVIDE AFCI/FP TYPE CIRCUIT BREAKER, CKT # 7

**UNIT G1**

LIGHTING/RECEPTACLES: 730 # @ 3 VA/ft <sup>2</sup> =	2190
APPLIANCE CIRCUITS: 2 @ 1500 EACH =	3000
LAUNDRY CIRCUIT =	1500
DRYER =	5000
RANGE =	8000
WATER HEATER =	4500
DISHWASHER =	800
DISPOSAL =	500
HOOD =	1500
SUBTOTAL (VA) = 26990	
10% 10,000 @ 100% =	10000
REMAINDER @ 40% =	8766
COOLING =	2928
HEATING =	5856
TOTAL (VA) = 47540	
TOTAL AMPS @ 240 V =	198.1
PANEL & FEEDER SIZE =	110 AMP

**LOADCENTER SCHEDULE - G2**

MARKS	TRIP	VOLTAGE	PHASE	WIRE	CONNECTIONS	FLUSH	ENCLOSURE	NEMA
#	POLE	DESCRIPTION	PHASE A	PHASE B	DESCRIPTION	TRIP	POLE	CT
1	201*	KITCHEN RECEPTACLES	1.50	4.00	RANGE	50/2	2	2
3	201*	KITCHEN RECEPTACLES	1.50	4.00	RANGE	50/2	2	4
5	201*	DISHWASHER/ DISPOSAL	1.30	2.50	DRYER	30/2	6	6
7	201*	WASHING MACHINE	1.50	2.50	DRYER	30/2	6	8
9	201*	BATH RECEPTACLES	2.25		WATER HEATER	25/2	10	10
11	201*	HVAC	1.50	2.25	WATER HEATER	25/2	10	12
13	151*	LIGHTS & RECEPTACLES				30/2	14	14
15	151*	LIGHTS & RECEPTACLES			AHU-B	30/2	16	16
17	151*	LIGHTS & RECEPTACLES			HPU-B	25/2	18	18
19	151*	SPARE					20	20
21	151*	SPARE					22	22
23	151*	SPARE					24	24
25	151*	SPARE					26	26
27	151*	SPARE					28	28
29	151*	SPARE					30	30

SEE UNIT PANEL CALCULATIONS.  
 NOTES:  
 \*PROVIDE AFCI TYPE CIRCUIT BREAKER, CKT # 1, 11, 13, 15, 17, 19, 21, 23, 25  
 \*PROVIDE AFCI/FP TYPE CIRCUIT BREAKER, CKT # 7

**UNIT G2**

LIGHTING/RECEPTACLES: 1025 # @ 3 VA/ft <sup>2</sup> =	3075
APPLIANCE CIRCUITS: 2 @ 1500 EACH =	3000
LAUNDRY CIRCUIT =	1500
DRYER =	5000
RANGE =	8000
WATER HEATER =	4500
DISHWASHER =	800
DISPOSAL =	500
HOOD =	1500
SUBTOTAL (VA) = 27675	
10% 10,000 @ 100% =	10000
REMAINDER @ 40% =	7150
HVAC =	5856
COOLING =	2928
HEATING =	5856
TOTAL (VA) = 48565	
TOTAL AMPS @ 240 V =	202.4
PANEL & FEEDER SIZE =	125 AMP

**LOADCENTER SCHEDULE - G3**

MARKS	TRIP	VOLTAGE	PHASE	WIRE	CONNECTIONS	FLUSH	ENCLOSURE	NEMA
#	POLE	DESCRIPTION	PHASE A	PHASE B	DESCRIPTION	TRIP	POLE	CT
1	201*	KITCHEN RECEPTACLES	1.50	4.00	RANGE	50/2	2	2
3	201*	KITCHEN RECEPTACLES	1.50	4.00	RANGE	50/2	2	4
5	201*	DISHWASHER/ DISPOSAL	1.30	2.50	DRYER	30/2	6	6
7	201*	WASHING MACHINE	1.50	2.50	DRYER	30/2	6	8
9	201*	BATH RECEPTACLES	2.25		WATER HEATER	25/2	10	10
11	201*	HVAC	1.50	2.25	WATER HEATER	25/2	10	12
13	151*	LIGHTS & RECEPTACLES				30/2	14	14
15	151*	LIGHTS & RECEPTACLES			AHU-C	30/2	16	16
17	151*	LIGHTS & RECEPTACLES			HPU-C	30/2	18	18
19	151*	LIGHTS & RECEPTACLES					20	20
21	151*	LIGHTS & RECEPTACLES					22	22
23	151*	SPARE					24	24
25	151*	SPARE					26	26
27	151*	SPARE					28	28
29	151*	SPARE					30	30

SEE UNIT PANEL CALCULATIONS.  
 NOTES:  
 \*PROVIDE AFCI TYPE CIRCUIT BREAKER, CKT # 1, 3, 5, 11, 13, 15, 17, 19, 21, 23, 25  
 \*PROVIDE AFCI/FP TYPE CIRCUIT BREAKER, CKT # 7

**UNIT G3**

LIGHTING/RECEPTACLES: 1400 # @ 3 VA/ft <sup>2</sup> =	4200
APPLIANCE CIRCUITS: 2 @ 1500 EACH =	3000
LAUNDRY CIRCUIT =	1500
DRYER =	5000
RANGE =	8000
WATER HEATER =	4500
DISHWASHER =	800
DISPOSAL =	500
HOOD =	1500
SUBTOTAL (VA) = 29100	
10% 10,000 @ 100% =	10000
REMAINDER @ 40% =	7672
HVAC =	5856
COOLING =	4272
HEATING =	8684
TOTAL (VA) = 55836	
TOTAL AMPS @ 240 V =	232.6
PANEL & FEEDER SIZE =	150 AMP

**METERCENTER MC1**

UNIT NAME	QUANTITY	SERVICE SIZE
G1	0	110A
G2	4	125A
G3	7	150A

LIGHTING/RECEPTACLES: 14200 # @ 3 VA/ft<sup>2</sup> = 42600  
 APPLIANCE CIRCUITS: 22 @ 1500 EACH = 33000  
 LAUNDRY CIRCUIT = 15000  
 DRYER = 11 x 5000 = 55000  
 RANGE = 11 x 8000 = 88000  
 DISHWASHER = 11 x 800 = 8800  
 DISPOSAL = 11 x 500 = 5500  
 HOOD = 11 x 1500 = 16500  
 WATER HEATERS @ 100% = 48500  
 HVAC @ 100% = 12945  
 SUBTOTAL (VA) = 445184  
 DESIGN LOAD @ 42% (PER NEC TABLE 220.84) = 186977

PANEL NAME: BREAKER SIZE: CONNECTED LOAD  
 HP1 40/2 53.772KVA  
 HOUSE PANELS DEMAND LOAD (KVA) = 55.45  
 TOTAL (KVA) = 192.42  
 TOTAL AMPS @ 240V = 799.6  
 METERCENTER & FEEDER SIZE = 100 AMP

**FAULT ANALYSIS**

POINT A: UTIL. CO. PAD TRANS. 1  
 POINT B: METERCENTER MC1  
 DISTANCE: 25'  
 ISCA: 34782  
 ISCB = 8 x ISCA  
 10 LINE-TO-LINE: I=L2 x 25 x 34782/1000 = 4240 @ 0.095  
 10 LINE-TO-NEUTRAL: I=L2 x 25 x 34782/1000 = 4240 @ 0.254  
 10 LINE-TO-GROUND: I=L1/10 @ 0.095 @ 0.92  
 10 LINE-TO-NEUTRAL: I=L1/10 @ 0.095 @ 0.92  
 ISCB = 0.81 x 34782 = 28207

**PANELBOARD SCHEDULE - HP1**

MARKS	TRIP	VOLTAGE	PHASE	WIRE	CONNECTIONS	FLUSH	ENCLOSURE	NEMA
#	POLE	DESCRIPTION	PHASE A	PHASE B	DESCRIPTION	TRIP	POLE	CT
1	201*	LIGHTING EXTERIOR	0.20	2.50	SPARE	30/2	2	2
3	201*	CATV	0.20	2.50	SPARE	30/2	4	4
5	201*	RECEPTS	0.30	2.50	SPARE	30/2	6	6
7	201*	LIGHTING CORRIDOR	0.81	2.50	SPARE	30/2	10	10
9	201*	LIGHTING CORRIDOR	0.81	2.50	SPARE	30/2	12	12
11	201*	LIGHTING	1.31	1.83	AHU-A	30/2	14	14
13	201*	LIGHTING	0.81	1.46	HPU-A	20/2	16	16
15	201*	RECEPTS	1.06	1.46		20/2	18	18
17	201*	RECEPTS	0.50	1.84		30/2	20	20
19	201*	RECEPT KITCHEN	1.30	2.02		30/2	22	22
21	201*	RECEPT KITCHEN	1.50	2.02		30/2	24	24
23	201*	SPARE	1.50	2.02		30/2	26	26
25	201*	SPARE	1.50	2.02		30/2	28	28
27	201*	SPARE	1.50	2.02		30/2	30	30
29	201*	SPARE	1.50	2.02		30/2	32	32
31	201*	SPARE	1.50	2.02		30/2	34	34
33	201*	SPARE	1.50	2.02		30/2	36	36
35	201*	SPARE	1.50	2.02		30/2	38	38
37	201*	SPARE	1.50	2.02		30/2	40	40
39	201*	SPARE	1.50	2.02		30/2	42	42
41	201*	SPARE	1.50	2.02		30/2	44	44

MIN. BREAKER A.I.C. 22000  
 LIGHTING: 5.99 RECEPTACLES: 1.44 SINGLE @ MOTORS:  
 HVAC: 24.83 WTR HEATERS: 1.50 OTHER CONTINUOUS: 0.96 OTHER NON-CONTINUOUS: 19.50  
 TOTAL DEMAND LOAD: 95.45 KVA  
 TOTAL DEMAND AMPS: 231.03 A

NOTES:

**METERCENTER MC2**

UNIT NAME	QUANTITY	SERVICE SIZE
G1	1	110A
G2	4	125A
G3	7	150A

LIGHTING/RECEPTACLES: 15000 # @ 3 VA/ft<sup>2</sup> = 45150  
 APPLIANCE CIRCUITS: 24 @ 1500 EACH = 36000  
 LAUNDRY CIRCUIT = 12 x 1500 = 18000  
 DRYER = 12 x 5000 = 60000  
 RANGE = 12 x 8000 = 96000  
 DISHWASHER = 12 x 800 = 9600  
 DISPOSAL = 12 x 500 = 6000  
 HOOD = 12 x 1500 = 18000  
 WATER HEATERS @ 100% = 54000  
 HVAC @ 100% = 13245  
 SUBTOTAL (VA) = 485985  
 DESIGN LOAD @ 41% (PER NEC TABLE 220.84) = 197196

PANEL NAME: BREAKER SIZE: CONNECTED LOAD  
 HP2 125/2 20.26KVA  
 HOUSE PANELS DEMAND LOAD (KVA) = 21.86  
 TOTAL (KVA) = 219.16  
 TOTAL AMPS @ 240V = 913.15  
 METERCENTER & FEEDER SIZE: 1000 AMP

**FAULT ANALYSIS**

POINT A: UTIL. CO. PAD TRANS. 1  
 POINT B: METERCENTER MC2  
 DISTANCE: 25'  
 ISCA: 34782  
 ISCB = 8 x ISCA  
 10 LINE-TO-LINE: I=L2 x 25 x 34782/1000 = 4240 @ 0.103  
 10 LINE-TO-NEUTRAL: I=L2 x 25 x 34782/1000 = 4240 @ 0.309  
 10 LINE-TO-GROUND: I=L1/10 @ 0.103 @ 0.91  
 10 LINE-TO-NEUTRAL: I=L1/10 @ 0.103 @ 0.91  
 ISCB = 0.81 x 34782 = 28207

**PANELBOARD SCHEDULE - HP2**

MARKS	TRIP	VOLTAGE	PHASE	WIRE	CONNECTIONS	FLUSH	ENCLOSURE	NEMA
#	POLE	DESCRIPTION	PHASE A	PHASE B	DESCRIPTION	TRIP	POLE	CT
1	201*	SPARE	1.50	2.64		30/2	2	2
3	201*	CATV	0.20	2.64		30/2	4	4
5	201*	RELE	0.30	2.64		30/2	6	6
7	201*	RECEPTS	0.30	2.64		30/2	8	8
9	201*	LIGHTING CORRIDOR	0.81	2.64		30/2	10	10
11	201*	LIGHTING CORRIDOR	0.81	2.64		30/2	12	12
13	201*	LIGHTING	1.15	2.64		30/2	14	14
15	201*	RECEPTS	0.30	2.64		30/2	16	16
17	201*	RECEPTS	0.30	2.64		30/2	18	18
19	201*	RECEPT KITCHEN	1.00	2.64		30/2	20	20
21	201*	RECEPT KITCHEN	1.00	2.64		30/2	22</	