ENGINEERS SURVEYORS BUILDING CODE INSPECTORS MUNICIPAL SERVICES

LIGHT-HEIGEL

& ASSOCIATES, INC.

A full service provider of Pennsylvania Uniform Construction Code (UCC) services.

# **Uniform Construction Code**

# PARTIAL OCCUPANY PERMIT

# **Gratz Borough**

LOCAL LIGHT-HEIGEL OFFICE CONTACT INFORMATION:

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# **PARTIAL OCCUPANCY PERMIT:**

## **Application Requirements**

The UCC regulation at 403.46(c) authorizes the issuance of certificate for partial occupancy of a building, if that portion independently complies with all UCC requirements.

A request for a partial occupancy certificate will be treated as a Plan Revision. To obtain a certificate, the following must be submitted for each portion of a floor or for an entire floor of a multi-story building:

- 1. A completed UCC APPLICATION FOR BUILDING PERMIT.
  - In the "Application Type" section, check the box next to "Plan Revision or Partial Occupancy Request."
  - Please fill out the entire form. If an informational item does not apply, indicate this by writing "NA."
  - Please be sure to include the previously approved UCC permit information.
- 2. Payment in full of the amount(s) determined on the COMMERCIAL FEE SCHEDULE.
- Two (2) copies of floor plans identifying the full extent of the interior space to be
  occupied in relationship to the remainder of the building or structure that may be
  currently occupied under a previous permit or is concurrently undergoing
  construction or renovation.

These plans must also identify all available exits and the travel distances to reach these exits within the requested area.

Should the application be approved, all inspections needed to demonstrate compliance with all UCC requirements applicable to the space must be passed, before issuance of the certificate of occupancy.

# Uniform Construction Code (UCC) APPLICATION FOR BUILDING PERMIT

	☐ Accessibility Only Review		☐ Addition		
Application	☐ Alteration or Renovation		☐ New Building		
Туре	□ New Structure/Facility		☐ Phased Approval		
	☐ Plan Revision or Partial Oc	cupancy Reques	t		
Use/Occupancy	☐ A-1 ☐ A-2 ☐ A	-3	□ A-5 □ B □ E		
Classification: Check box to <u>left</u> of	☐ F-1 ☐ F-2 ☐ H	-1 □ H-2	☐ H-3 ☐ H-4 ☐ H-5		
applicable group.	☐ I-1 ☐ I-2 ☐ I-	3 □ I-4	☐ M ☐ R-1 ☐ R-2		
Check all that apply.	☐ R-3 Adult Care ☐ R	-3 □ R-4	☐ S-1 ☐ S-2 ☐ U		
Site Information	Project Name				
(Political Subdivision & County names are	Street Name and #				
required.)	City	State	Zip Code County		
0	Political Subdivision	41 4 - 11 - 5 41 5 - 11			
Special Requirements &	Two (2) site plans		owing will be submitted with this application: vo (2) complete sets of construction drawings		
Documentation	☐ One (1) completed copy of the	UCC PLAN REV	EW CHECKLIST		
	One (1) set of specifications (c	only if <u>Addition</u> , <u>A</u>	<u>lteration, New Building</u> or <u>New Structure/Facilit</u>	V)	
	Does this co nstruction involve	☐ Yes ☐ No	If "Yes," submit 1 copy of a letter from a licensed	_	
	modular units built in a factory?		design professional certifying that construction		
			within the modular units (or the fully assembled		
			modular building) and hidden from view will fully comply with all requirements of the UCC.		
	Is this construction regulated by	☐ Yes ☐ No	If "Yes," submit 1 copy of approval letter from the	<u>,</u>	
	the Health Care Facilities Act?		Pennsylvania Department of Health.	_	
	Is this construction exempt from energy code requirements?	☐ Yes ☐ No	If "Yes," submit 1 copy of letter indicating that that the building or structure will use neither electricity		
	chergy code requirements:		nor fossil fuels, and thus is exempt per ASHRAE		
	90.1, §2.3(B).  If "No," submit 1 copy of the CO Certificate or the ENERGY CODE PRES				
			COMPLIANCE REPORT.		
	Is project in flood hazard area?	☐ Yes ☐ No	If "Yes," submit 1 copy of one of the flood hazard		
			certifications mandated in section 1612.5 of the <i>International Building Code</i> .	<b>;</b>	
	Are any of the International	☐ Yes ☐ No	If "Yes," submit 1 copy of the SPECIAL	_	
	Building Code (Chapter 17)		INSPECTIONS OBSERVATIONS STATEMENT.		
	special inspection or structural observations required?				
	Will an alternative construction	☐ Yes ☐ No	If "Yes," submit a signed statement indicating that	_ f	
	method or material be used on		the proposed method or material meets the		
	this project?		requirements of 34 PA Code §403.44.		
	Is this application for "phased approval"?	☐ Yes ☐ No	If "Yes," submit a letter sign ed by the desi gn professional and owner acknowledging that the		
	αρριοναι :		issuance of a permit for pha sed construction		
			provides no assurance th at the municipa lity wil	l	
			grant approval of any UCC permits needed to complete the construction, and that the design		
			professional and owner will ensure that the		
			building/structure fully complies with all UCC		
			requirements before occupancy.		

Project Data	Lot Number: Block Number:
	Does municipality have a zoning ordinance? ☐ Yes ☐ No If "Yes," has permit been acquired? ☐ Yes ☐ No If "Yes," list date acquired:
	Minimum setbacks required by municipal zoning ordinance (in feet):  Front: Rear: Right Side: Left Side:
	Sq. ft. of conditioned space Sq. ft. of unconditioned space
	Number of stories above grade  Does it have a basement?  Total floor area (sq. ft.)  Yes No
	Floor area <b>new</b> construction (sq. ft.)  Floor area of <b>addition</b> (sq. ft.)  Floor area <b>renovated</b> (sq. ft.)
	# of multi-family dwelling units # of accessible dwelling units
	Type(s) of construction per Chapter 6 of the <i>International Building Code</i> (check all that apply):
	Fire suppression: ☐ Full ☐ Partial ☐ None
	If application applies to an existing building that is "legally occupied", indicate permits held:  Fire and Panic Occupancy Permit  Municipal Occupancy Permit  Municipality Name  L&I UCC Certificate of Occupancy  File number:  File number:
	If "legally occupied," you must select which code requirements the building will comply with (choose only one):
	☐ International Existing Building Code ☐ Chap. 34, International Building Code
	Tax Parcel ID #: Cost of Construction:
Professional In Responsible Charge Seal must be in space to right of name & address.	Name: Address:  PA License #: E-Mail: Phone: Fax:

			Permit #:	:
			Date:	
Owner	Owner Name			
Information	Street Address			
	City	State	Zip Co	de
	Phone Number		_	
Deferred Submission		plans and other documentat propriate box below <u>and</u> indi ☐ Truss Shop Drawin	icate this on the fi	irst page of each building
Fees: Refer to CC	OMMERCIAL FEE SCHEDUL			
Applicant'	's Certification:			
	er or the authorized agent of t			
	The estimated construction of building permit is correct.	ost and all other information	provided as part	of this application for a
	The building or structure desc	cribed in this application will	not be occupied	until all known code
	violations are corrected and a			
	This project will be constructed			
	(including any required non-d			
	specified in 34 PA Code Cha			
	Any changes to the approved		n the municipal U	CC Building Code Official.
5.	If the licensed architect or ennotice of the change will be p	gineer in responsible charge	of this construct	ion should change, written
6.	When required, up to 20% of	the total cost of any work pe	erformed on an ar	rea of primary function in an
	existing building will be exper			
	No error or omission in either			
	shall permit or relieve me from Code Chapters 401-405.	in constructing the work in a	ny manner other	man provided for in 34 PA
Applicant N	Name			
Street Add				-
		State	Zin C	ode
Phone Nur				
THORIC ITAL		<del></del>		
Applicant S				

## Uniform Construction Code (UCC)

# **COMMERCIAL FEE SCHEDULE**

for

# Pennsylvania UCC Municipal Enforcement Program

<u>SERVICE</u>	<b>UNIT PRICE</b>				
New Construction and Additions - Base Fee					
2. Remodeling (see definition below) - Base Fee	\$0.21/ SqFt				
All Plan Reviews and Inspections required on the standard Commercial Suare included in these permit fees.	ıbmittal Sheet				
Note: Special Inspections required by IBC are at Owners Expense.					
See Worksheet below to calculate Building Permit and Sub-category	fees.				
3. Alterations or Repairs to electrical, gas, mechanical or plumbing installation	ns.				
a. Single Event Permit (one inspection only)	\$200.00				
<ul> <li>b. Annual Permit         (Inspections in each appropriate discipline are also required)</li> </ul>	\$200.00				
<ol> <li>Follow-up Inspections for Incomplete or Compliance Inspections for Annual Permit or Single Event Permits requiring additional inspections (per trip)</li> </ol>	\$100.00				

Meeting attendance/Hearing attendance

\$102.00

6. Next Day Mail Service

\$25.00

7. Other services - Provided at No Charge to the Client: Telephone calls, correspondence, mileage, postage

## **DEFINITIONS:**

Remodeling is work that includes none of the following:

- (1) Change in Occupancy/Use Group.
- (2) Modify Structural or Firewalls.
- (3) Addition or upgrade of electrical, plumbing, or HVAC services.
- (4) Addition to structure of any kind.

**Annual Permit** – as allowed in the UCC regulation (403.42(f)). Applicant must regularly employ qualified tradespeople. Applicant must keep detailed records of all alterations made under the permit. Applicant will submit copies to the BCO on a predetermined time schedule. BCO will schedule appropriate inspections for modifications made in the previous timeframe. Applicant will be billed for each required Compliance Inspection(s) at the time of inspection.

## **Instructions for Completing the Permit Fee Worksheet**

- 1. Insert **Proposed Total Building Area** in Position A of Worksheet.
  - a. If building is new, use Total Building Area.
  - b. If work is addition or remodel, use Total Construction Area.
  - c. Minimum is 3000 SqFt.
- 2. Choose Proper Usage Group Code Factor from the Chart below and insert in Position B of Worksheet.
  - a. If multiple Usage building, select Primary Usage.
- 3. Multiply the <u>Area</u> and <u>Usage Factor</u> with the <u>Base Fee</u> to obtain the Building Permit Fee amount for Position D.
- 4. Calculate Permit Fees for Mechanical, Plumbing, Accessibility/Energy at 25% of the Building Permit Fee. The Electrical Permit is calculated at 30% of the Building Permit Fee. Insert the amounts in Positions E H as necessary.

## **COMMERCIAL BUILDING PERMIT FEE WORKSHEET**

A.	Project or Building Area (Minimum 3000SqFt)				SqF	-̄t
В.	Usage Group Factor				x	
C.	Base Fee				X \$	
D.	Building Permit Fee (BPF)				\$	_
Ε.	Mechanical Permit Fee	0.25 X	\$(BPF)	_ =	\$	_
F.	Plumbing Permit Fee	0.25 X	\$(BPF)	. =	\$	_
G.	Accessibility/Energy Permit	Fee 0.25 X	,	=	\$	_
Н.	Electrical Permit Fee	0.30 X	\$(BPF)	=	\$	_
			State Fee	+	\$	
TO <sup>-</sup>	TAL COMMERCIAL BUILDI	NG PERI	MIT FEE	=	\$	_
	Check made payable to: <i>LI</i> FOR OFFICE USE CHECK #	ONIL VA			C. BY	
MU	INICIPAL FEE Make <u>additional</u> check made				<b>\$</b> Borough	
	FOR OFFICE USE CHECK #		RECEIVED ON		BY	

**Usage Group Factors** 

Factor	Usage Group	
2.0	12	
1.6	A1	
1.5	(A3-Churches), I3	
1.2	A2, A4, (A3-nonchurch), A5	
	B, E, H5, I1, I4, R1, R4	
1.0	R2, R3	
0.9	М	
0.7	F1, F2, H1, H2, H3, H4, S1, S2	
0.5	U	

## Usage Group definitions per Chapter 3 of current International Building Code.

Α	Assembly	<u>l</u>	<u>Institutional</u>
A-1	Theaters	Ī-1	Ambulatory
A-2	Restaurants	I-2	Hospital
A-3	Worship, recreation and amusement	I-3	Prison
	Indoor Sports	I-4	Day Care
A-5	Outdoor Sports		-
<u>B</u>	Business	M	Mercantile

## **E** Education

<u>F</u>	<b>Factory</b>
F-1	Moderate Hazard
F-2	Low Hazard

## **H** High Hazard H-1 Detonation Hazard H-2 Deflagration or Accelerated burning H-3 Readily support combustion H-4 Health hazards H-5 Semiconductor fabrication

# Mercantile

R	Residential
R-1	Hotel
R-2	<b>Apartment House</b>
R-3	One & Two Family
R-4	Assisted Living
	_
S	Storage

# S-2 Low Hazard U Utility & Misc

S-1 Moderate Hazard

## Uniform Construction Code (UCC)

## **UCC PLAN REVIEW CHECKLIST**

This checklist must accompany permit applications for new buildings/structures, additions and renovation projects (those which exceed the scope of ALTERATIONS-LEVEL 1)			
ALL INFORMATION MUST BE FILLED IN, CHECK	KED OR MARKED "N/A"		
Project Name:			
Project Address:			
Owner/Agent:	Telephone:		
Design professional or other person we can contact about info on this form and other project details (if same as Owner/Agent, just provide fax # and e-mail address):	Telephone:		
	F-mail:		

## **General Requirements:**

All drawings shall be sealed, signed, and dated by a design professional (licensed architect or engineer). The only exception is when all of the following apply:

- a) The proposed work only involves remodeling or alterations of an existing building or structure.
- b) The proposed work does not change the building's structure or means of egress.
- c) The person preparing the plans is not compensated for the preparation of the drawings.

All drawings must be neatly drawn with clean, crisp lettering --- they must remain legible after reduction for microfilming.

Computer-generated vicinity maps obtained from web-based services (such as *MapQuest*) are acceptable, as long as the roadways or street names are legible and will remain that way after reduction for microfilming.

When photographs (including digital ones) are submitted to show building elevations, the images must be in focus and correctly exposed.

A Pennsylvania Department of Tra nsportation (PennDOT) permit allowing access to a highway under its jurisdiction is not required at the time t hat application is made for a UCC building permit. If the highway occupancy permit issued by PennDOT requires a location o f the building/structure differing from that approved under the UCC buildingpermit, applicants must send the municipal UCC BCO a letter requesting a determination whether a revision of approved plans will be required.

While we understand t hat many it ems on this checklist may not be included in some alteration or renovation projects, we request that all applicant s work through the entire checklist to ensure that any necessary items are included. If any item is <u>not necessary</u>, <u>please check N/A</u> ("not applicable"). This will greatly facilitate review and approval of projects.

If any of the non-mandatory sections (any sections other than Site Plans and Architectural Plans) in this document do not apply to the proposed work, please check the "N/A" box beside the section title (rather than fill in "N/A" next to each item in that section.

SITE PI	LANS:		
☐ Yes	□ N/A	a.	1 1 7 7
☐ Yes	□ N/A	b.	separate vicinity (site location) map.  Show the correct street address, parcel number and required municipal zoning (if there is local zoning ordinance) on the site plans.
☐ Yes	□ N/A	C.	Show and identify all property lines a nd rights-of-way, with distance from property lines and adjacent buildings on site plans.
☐ Yes	□ N/A	d.	Show all a ccessible parking spaces and sig nage per ICC/A NSI A117.1 and the <i>International Building Code</i> on site plan.
Yes	□ N/A	e.	Show accessible curb cuts, ramps and access ways to the building.
Yes	□ N/A	f.	Show all existing and proposed driveway entrances.
Yes	□ N/A	g.	Identify adjacent land uses and zoning.
∐ Yes	☐ N/A	h.	Show all easements, flood ways, and required buffers.
☐ Yes	☐ N/A	i.	Show existing and proposed utilities (with backflow preventers) to serve the site.
☐ Yes	□ N/A	j.	Show existing and proposed finish grades.
☐ Yes	□ N/A	k.	Show details, sections, and elevations needed for construction.
☐ Yes	□ N/A	I.	Show all buffer and screening landscaping.
☐ Yes	☐ N/A		Show all required parking and loading spaces and calculations.
ARCHIT	ECTURAL	_ PL	ANS:
☐ Yes	□ N/A	a.	Show architectural floor plans of each floor. These pages must be at least 18" x 24" in size (but not more than 36" x 42"), drawn to a scale of not less than 1/8" = 1'. Indicate (or reproduce) the approved, tested hourly rating, number, and location of all rated members and assemblies (walls, columns, beams, floor and ceiling, and ceiling and roof fire-rated
	□ <b>.</b>		design assemblies).
Yes	□ N/A	b.	
Yes Yes	☐ N/A	C.	Identify the names and uses of each room.
Yes Yes	□ N/A	d.	Furnish door schedule(s), including size, type, rating (if any) and hardware.
☐ Yes	□ N/A	e.	Provide all glazing schedules.
☐ Yes	□ N/A	f.	Show elevations with dimensions defining overall building height, floor-to-floor heights, or heights to ridge and eave as applicable to the type of building construction listed on the UCC application. (Note: Where an existing building is involved, photographs of all sides of the building may be submitted to show elevations. These will be acceptable only if they show all elements necessary to determine compliance with the UCC.)
☐ Yes	■ N/A	g.	Provide basement percentage-below-grade calculations.
☐ Yes	□ N/A	h.	Indicate roof slopes, drainage system and sized through wall scupper, if applicable to the
			project.
☐ Yes	□ N/A	i.	Show fixed seating for a ssembly occupancy to allow determination of occupancy posting required by <i>International Building Code</i> .
☐ Yes	□ N/A	j.	Show wall sections with proposed material sizes, construction, and fire-rated assemblies.
☐ Yes	□ N/A	k.	Show proposed plumbing fixtures and privacy screens on the plans.
T Yes	□ N/A	I.	If masonry construction is proposed, include the following information:
			Type of brick ties and spacing of weep holes Control joints Placement of wall flashing and reinforcement
☐ Yes	□ N/A	m.	If appropriate for the proposed occupancy, plans should identify all hazardous material
☐ Yes	□ N/A	n.	control areas, fire barriers, and the required fire-resistance ratings for these barriers. All identified control areas shall list the name, class, quantity and method of storage of all hazardous materials processed, manufactured or used in a man ufacturing process and contained within its fire ba rriers. Provide a Material Safety Data Sheet for each liste d hazardous material. See sections 414 and 415 of the <i>International Building Code</i> . Show the floor slab vapor barrier.
☐ Yes	☐ N/A	0.	Show foundation waterproofing, if applicable.
Yes	□ N/A	p.	All penetrations of fire-rated construction must be per manufacturer's details. The details
	<u> </u>	1	shall meet or exceed the rating of construction being penetrated. The penetration details shall be exactly as tested by an approved testing laboratory or agency and shall include

☐ Yes☐ Yes☐ Yes	□ N/A □ N/A	q. r. s.	be shown with appropriate designs. Show penthouse drawings. Provide on the drawings the calculations for the means of egress widths for the entire floor occupancy load and the existing capacity of all exits including all stairs, doors, corridors and ramped exits. Show required ventilation louvers and vent sizes.
STRUCT	TURAL PI	LANS	: N/A
☐ Yes	□ N/A	a.	1
☐ Yes ☐ Yes	□ N/A □ N/A	b.	(i.e., mat foundation, caissons, spread footings, etc.) Provide preliminary soil analysis data done by a licensed engineer, if required. Indicate dimensions of foundations.
Yes	□ N/A	c. d.	Show type, size and location of piling and pile caps for pile foundation.
Yes	□ N/A	e.	Indicate grade beam sizes.
Yes	□ N/A	f.	Indicate a footing schedule defining footing sizes and the required reinforcing.
Yes	☐ N/A	g.	Show the established footing depth below grade and method of frost protection allowed in section 1805.2.1 of the <i>International Building Code</i> .
☐ Yes	□ N/A	h.	Indicate the thickness of the floor slab, size of reinforcing, slab elevations, and type and details of foundations.
☐ Yes	☐ N/A	i.	Indicate location, size, and amount of reinforcing steel.
☐ Yes	□ N/A	j.	Show foundation corner reinforcing b ars and minimum overlapping (as applicable to project structure).
☐ Yes ☐ Yes	☐ N/A ☐ N/A	k. I.	Provide strength of concrete according to designed soil reports. Show beams, joists, girde rs, rafters, and/or truss layouts and details of connections,
_	_		structural steel stud gage, gage size, and connections.
∐ Yes	□ N/A	m.	Indicate the sizes and species of all wood members and their respective design strength.
Yes	□ N/A	n.	Show all columns, girders, joists, purlins, beams, and base plates; for wood construction show all headers.
Yes	□ N/A	0.	Provide a complete lintel schedule.
Yes	□ N/A	p.	Indicate the type of anchoring for steel bearing directly on masonry.
∐ Yes	∐ N/A	q.	Indicate design dead and live, wind, snow, seismic loads for floor areas, roofs, balconies, porches, breezeways, corridors, stairs, mezzanines, and platforms. Show con centrated loads, i.e. file room s, machinery and forklift areas, if greater than those shown on the Code Summary Sheet. Identify shear walls, bracing, strapping, fastening, reinforcement and any special anchoring required.
☐ Yes	□ N/A	r.	Where applicable, indicate on roof framing plan where concentrated loads (mechanical equipment, cranes, etc.) will be placed.
☐ Yes	□ N/A	S.	Indicate on foundation and framing plans the location and lateral load re sisting system. (Show walls, braced frames, moment connections, etc.)
FIRE PR	OTECTIO	ON PL	ANS: N/A
☐ Yes	□ N/A	a.	Complete a sprinkler design data sheet and include it on the first plan of the sprinkler drawings.
☐ Yes	□ N/A	b.	

Often, these shop drawings are not available at the time of initial plan submission. If this is the case, write in "NA," but note the following:

- These shop drawings must be submitted for review and approval at least two weeks before the projected installation date.
- Failure to obtain approval of these drawings before installation could result not only in delay of the final inspection and issuance of an occupancy permit, but also in rem oval and reconstruction of installations which fail to meet UCC requirements.

	∐ N/A	О.	Show ceiling plans with sprinkler head(s) layout, walls, soffits, openings, doors,
□ Voo	□ N/A	٨	dimensions and room identities.  Verify system design by providing bydraulic calculations along with the following:
☐ Yes	∐ IN/A	d.	Verify system design by providing hydraulic calculations along with the following:  Recent water flow test
			10 percent safety margin
			Type of backflow-preventer or reduced pressure zone showing equivalent foot loss
			Fire pump summary
☐ Yes	□ N/A	e.	Note the type of sprinkler system used (e.g. 13, 13D, or 13R)
☐ Yes	☐ N/A	f.	For residential occupancies such as apartments and condominiums, show sprinkler head
			locations at breezeways, if applicable.
☐ Yes	□ N/A	g.	Indicate the certified testing laboratory agency (e.g. U.L.), their test number and hourly ratings of all new and/or affected rated members and assemblies (i.e. columns, beams, floor/ceiling and ceiling/roof fire-rated design assemblies). Show all new and/or affected fire-rated walls with their ratings, if not show elsewhere.
☐ Yes	□ N/A	h.	All penetrations of fire-rated construction must be per manufacturer's details. Details shall meet or exceed ratings of construction being penetrated. Penetration details shall be exactly as tested by a certified testing laboratory or agency and shall i nclude their system numbers. All new penetrations of existing fire-rated walls and assemblies shall be shown with appropriate designs.
☐ Yes	□ N/A	i.	Provide a fire alarm ri ser showing connection to a UL-app roved central station. Show tamper switcher on both OS and Y valves of backflow prevention device, unless shown
☐ Yes	□ N/A	j.	elsewhere. Indicate commodity class (per section 2303 of the <i>International Fire Code</i> ) and height of
☐ Yes	□ N/A	k.	
☐ Yes	□ N/A		"Architectural Plans").
<u> </u>	□ IN/A	l.	Where special temperature-rated or high-temperature sprinklers are required, show sprinkler type(s) per area, office size, cut sheets with K-factor, water requirements, spray pattern, coverage and other pertinent data.
SYSTEM	M CALCUI	LATI	ONS (FIRE PROTECTION):
Hydrauli	cally calcu	ulated	ONS (FIRE PROTECTION): N/A  d and pipe schedule fire systems should be designed with a 10 percent safety margin for all tions to existing buildings. Calculations for hydraulic systems should include:
Hydrauli	cally calcu	ulated	d and pipe schedule fire systems should be designed with a 10 percent safety margin for all
Hydrauli new buil Yes Yes	cally calcudings and N/A N/A	ılated addi a. b.	d and pipe schedule fire systems should be designed with a 10 percent safety margin for all tions to existing buildings. Calculations for hydraulic systems should include:  Flow and pressure at each flowing sprinkler head Flow diagram for a grid system.
Hydrauli new buil Yes Yes	cally calcudings and	ılated addi a. b.	d and pipe schedule fire systems should be designed with a 10 percent safety margin for all tions to existing buildings. Calculations for hydraulic systems should include:  Flow and pressure at each flowing sprinkler head
Hydrauli new buil Yes Yes	cally calcudings and N/A N/A	ulated addit a. b.	d and pipe schedule fire systems should be designed with a 10 percent safety margin for all tions to existing buildings. Calculations for hydraulic systems should include:  Flow and pressure at each flowing sprinkler head Flow diagram for a grid system.  N/A  Show a site utilities plan, if not provided with the civil drawings.  1. Show the domestic water, fire, and irrigation services.  2. Show the location of water meters, backflow protection type and location.
Hydrauli new buil  Yes Yes PLUMB	cally calcudings and N/A N/A	ulated addit a. b.	and pipe schedule fire systems should be designed with a 10 percent safety margin for all tions to existing buildings. Calculations for hydraulic systems should include:  Flow and pressure at each flowing sprinkler head Flow diagram for a grid system.  N/A  Show a site utilities plan, if not provided with the civil drawings.  1. Show the domestic water, fire, and irrigation services.  2. Show the location of water meters, backflow protection type and location.  3. Show the sanitary sewer service from building to public sewer or approved private
Hydrauli new buil  Yes Yes PLUMB	cally calcudings and N/A N/A	ulated addit a. b.	and pipe schedule fire systems should be designed with a 10 percent safety margin for all tions to existing buildings. Calculations for hydraulic systems should include:  Flow and pressure at each flowing sprinkler head Flow diagram for a grid system.  N/A  Show a site utilities plan, if not provided with the civil drawings.  1. Show the domestic water, fire, and irrigation services.  2. Show the location of water meters, backflow protection type and location.  3. Show the sanitary sewer service from building to public sewer or approved private sewage disposal system.  Show interceptors as applicable to project and size by flow rate. (i.e. grease, oil, lint,
Hydrauli new buil Yes Yes PLUMB	cally calcudings and  N/A N/A  ING PLAN	alated addit a. b. <b>IS:</b> a.	and pipe schedule fire systems should be designed with a 10 percent safety margin for all tions to existing buildings. Calculations for hydraulic systems should include:  Flow and pressure at each flowing sprinkler head Flow diagram for a grid system.  N/A  Show a site utilities plan, if not provided with the civil drawings.  1. Show the domestic water, fire, and irrigation services.  2. Show the location of water meters, backflow protection type and location.  3. Show the sanitary sewer service from building to public sewer or approved private sewage disposal system.  Show interceptors as applicable to project and size by flow rate. (i.e. grease, oil, lint, acid, sand)  Provide plumbing plan layouts for each floor. These should show the water distribution and drain-waste-vent piping, and all details, notes, legends and schedules necessary to
Hydrauli new buill  Yes Yes  PLUMBI  Yes  Yes  Yes  Yes	cally calcudings and  N/A N/A N/A  ING PLAN N/A  N/A  N/A	alated addif a. b. <b>IS:</b> a. ———————————————————————————————————	and pipe schedule fire systems should be designed with a 10 percent safety margin for all tions to existing buildings. Calculations for hydraulic systems should include:  Flow and pressure at each flowing sprinkler head Flow diagram for a grid system.  N/A  Show a site utilities plan, if not provided with the civil drawings.  1. Show the domestic water, fire, and irrigation services.  2. Show the location of water meters, backflow protection type and location.  3. Show the sanitary sewer service from building to public sewer or approved private sewage disposal system.  Show interceptors as applicable to project and size by flow rate. (i.e. grease, oil, lint, acid, sand)  Provide plumbing plan layouts for each floor. These should show the water distribution and drain-waste-vent piping, and all details, notes, legends and schedules necessary to define the system being installed.  Show the location of all major components required for a complete system.
Hydrauli new buil  Yes Yes PLUMB Yes Yes Yes	cally calcudings and  N/A N/A N/A N/A N/A N/A N/A	alated addif a. b. <b>IS:</b> a. ———————————————————————————————————	and pipe schedule fire systems should be designed with a 10 percent safety margin for all tions to existing buildings. Calculations for hydraulic systems should include:  Flow and pressure at each flowing sprinkler head Flow diagram for a grid system.  N/A  Show a site utilities plan, if not provided with the civil drawings.  1. Show the domestic water, fire, and irrigation services.  2. Show the location of water meters, backflow protection type and location.  3. Show the sanitary sewer service from building to public sewer or approved private sewage disposal system.  Show interceptors as applicable to project and size by flow rate. (i.e. grease, oil, lint, acid, sand)  Provide plumbing plan layouts for each floor. These should show the water distribution and drain-waste-vent piping, and all details, notes, legends and schedules necessary to define the system being installed.  Show the location of all major components required for a complete system.  Provide fixture and equipment schedule showing fixture number, detailed description, hot
Hydrauli new buill  Yes Yes  PLUMBI  Yes  Yes  Yes  Yes	cally calcudings and  N/A N/A N/A  ING PLAN N/A  N/A  N/A	alated addif a. b. <b>IS:</b> a. ———————————————————————————————————	and pipe schedule fire systems should be designed with a 10 percent safety margin for all tions to existing buildings. Calculations for hydraulic systems should include:  Flow and pressure at each flowing sprinkler head Flow diagram for a grid system.  N/A  Show a site utilities plan, if not provided with the civil drawings.  1. Show the domestic water, fire, and irrigation services.  2. Show the location of water meters, backflow protection type and location.  3. Show the sanitary sewer service from building to public sewer or approved private sewage disposal system.  Show interceptors as applicable to project and size by flow rate. (i.e. grease, oil, lint, acid, sand)  Provide plumbing plan layouts for each floor. These should show the water distribution and drain-waste-vent piping, and all details, notes, legends and schedules necessary to define the system being installed.  Show the location of all major components required for a complete system.  Provide fixture and equipment schedule showing fixture number, detailed description, hot water, cold water, waste and vent connection sizes and other pertinent data.
Hydrauli new buil  Yes Yes PLUMB  Yes  Yes  Yes  Yes	cally calcudings and  N/A N/A ING PLAN N/A N/A N/A N/A N/A	alated addit a. b. <b>IS:</b> a. ———————————————————————————————————	and pipe schedule fire systems should be designed with a 10 percent safety margin for all tions to existing buildings. Calculations for hydraulic systems should include:  Flow and pressure at each flowing sprinkler head Flow diagram for a grid system.  N/A  Show a site utilities plan, if not provided with the civil drawings.  1. Show the domestic water, fire, and irrigation services.  2. Show the location of water meters, backflow protection type and location.  3. Show the sanitary sewer service from building to public sewer or approved private sewage disposal system.  Show interceptors as applicable to project and size by flow rate. (i.e. grease, oil, lint, acid, sand)  Provide plumbing plan layouts for each floor. These should show the water distribution and drain-waste-vent piping, and all details, notes, legends and schedules necessary to define the system being installed.  Show the location of all major components required for a complete system.  Provide fixture and equipment schedule showing fixture number, detailed description, hot

☐ Yes	□ N/A	h.	On buildings two stories and above, provide isometric diagrams and/or schematic riser diagrams for Supply and Waste/Vent piping and identify the risers by numb er (e.g. R1, R2, etc.). Show where all riser base terminations connect to the building drain, along with all interpretated piping and only the classification.
☐ Yes	□ N/A	i.	with all interconnected piping on each floor plan. All pipe sizes shall be clearly defined. Show the water, sani tary drain-waste-vent piping and storm leaders/drains. Indi cate sizes and materials for above/below grade.
☐ Yes	□ N/A	j.	Show slope of horizontal sanitary and storm drains that equal or exceed 3" diameter, if less than 1/8" per foot.
☐ Yes	□ N/A	k.	Indicate roof drains and emergen cy roof drains/scuppers with the areas they impact.  Note that "emergency" = "secondary" = "overflow." See following roof drainage examples:  Roof Drain – 6" RD (16880 SF)  Emergency Roof Drain – 6" ERD (8180 SF)  Parapet Wall Scupper – 8" x 5" WS (4000 SF)  Emergency Scupper – 8" x 7" ES (4200 SF)
Yes	□ N/A	I.	Show toilet room layouts with minimum of $\frac{1}{4}$ " = 1 foot scale.
☐ Yes ☐ Yes	□ N/A □ N/A	m. n.	Show drinking fountain locations.  All penetrations of fire-rated construction must be per manufacturer's details. The details shall meet or exceed ratin g of construction being penetrated. The penetration details shall be exactly as tested by an approved testing laboratory or agency and shall include their system numbers.
Yes	□ N/A	0.	Room names and numbers for each floor should be on a floor plan for each level.
☐ Yes ☐ Yes	□ N/A □ N/A	p. q.	Provide minimum facilities calculations.  Column line notations, if provided on the architectural/structural plans, shall be indicated on the plumbing plans.
MECHA	NICAL PL	ANS	:: □ N/A
☐ Yes	☐ N/A	a.	Show all required wall louvers, penetrations and fans.
☐ Yes ☐ Yes	☐ N/A ☐ N/A	b. c.	Show all mechanical equipment, piping, ductwork (above/below slab) on the mechanical
☐ Yes	□ N/A	d.	floor and/or roof plan.  Provide mechanical plans for each floor and the roof. These shall show the ductwork layouts, schedules, notes, legends, piping schematics, and details necessary to define the system being installed.
Yes	□ N/A	e.	Indicate air distribution devices and show cfm for all supply, return and exhaust devices.
Yes	□ N/A	f.	Indicate the location of all equipment components required for a complete system.
☐ Yes	□ N/A □ N/A	g. h.	Show the smoke ventilation of atriums and pressurization of high-rise stairwells. Show condensation drains, primary and secondary, from the unit to the point of discharge.
Yes	□ N/A	i.	Indicate toilet exhaust requirements.
Yes	□ N/A	j.	Show mechanical room layouts at sufficient scale for di mensions and details to be ascertained.
☐ Yes	☐ N/A	k.	Show the size of duct runs.
☐ Yes	□ N/A	I.	Indicate controls for fan shutdown: emergency manual and automatic smoke detection.
☐ Yes	☐ N/A	m.	Show the location of all UL 555-certified fire dampers, ceiling radiation dampers, smoke dampers, and fire doors.
☐ Yes	□ N/A	n.	Show all fire-rated walls (both existing and new) with their ratin gs on the mechanical plans.
☐ Yes	☐ N/A	0.	All penetrations of fire-rated construction must be per manufacturer's details.
T Yes	☐ N/A	p.	Room names and numbers for each floor should be on a floor plan for each level.
☐ Yes	☐ N/A	q.	Provide outside air ventilation rate per the International Mechanical Code.
Yes	☐ N/A	r.	Column line notations, if provided on the architectural/structural plans, shall be identified on the mechanical plans.
☐ Yes	□ N/A	S.	Provide gas piping layout on the floor plan for each floor. If it is a m ulti-story building, all gas piping shall be shown per floor. Include pipe sizes, water column, and type of material. Provide a sch edule of connected equipment, total BTUH dem and, total equivalent length, and most remote gas appliance.

ELECTR	ICAL PLA	NS:	□ N/A
☐ Yes	□ N/A	a.	Provide panel schedules with circuit and feeder loading, overcurrent protection, and NEC load summaries for all new and/or affected panels and services (loading has to be evaluated by highest phase); include fault current data, short circuit ratings and fault current protection co-ordination.
☐ Yes	□ N/A	b.	Provide a single line riser diagram showing all new and/or affected services, feeders, wire sizes and insulation types, and conduit sizes and types.
☐ Yes	□ N/A	C.	Indicate number of services and their physical lo cations; clearly indicate mains and characteristics.
☐ Yes	□ N/A	d.	Indicate the grounding electrode conductor size with new and/or affected services and transformers; where necessary provide details or notes on methods.
☐ Yes ☐ Yes	☐ N/A ☐ N/A	e. f.	Show physical locations of all new and/or affected panels and switchgear (indicate front). Indicate receptacle plans with circuitry.
Yes Yes	☐ N/A	g.	Indicate lighting plans with circuitry.
Yes Yes	☐ N/A	h.	Show electrical plans for each affected floor, including the roof.
☐ Yes	□ N/A	i.	Show wiring method(s), conduit sizes and types, termination temperature (60, 75, 90) requirements, conductor sizes and insulation types.
☐ Yes	□ N/A	j.	Indicate the design and/or operation for a ny of the following applicable life safety systems: emergency generators, smoke evacuation, shaft p ressurization and relief, smoke detection, egress and emergency lighting, and fire alarms.
Yes	□ N/A	k.	Indicate how special needs such as classified (hazardous), corrosive and patient care are treated. Provide detailed plan of classified areas, the classifications and how complied with (i.e. han gers, waste treatment and collection, flammable dusts, gases or liquids, spray booths, vehicle servicing and parking, etc.).
☐ Yes	□ N/A	l.	Provide all HVAC nameplate data, including MCA and MOCP. List all oth er appliance and/or equipment (other than those which will be connected to a general use receptacle) with nameplate data (i.e. voltage, phasing, HP, KVA, FLA, RLA, etc.).
☐ Yes	☐ N/A	m.	Indicate all motor horsepower ratings, if not supplied elsewhere.
☐ Yes	□ N/A	n.	Indicate the certified testing laboratory or agency (e.g. UL), their test # and hourly ratings of all new and/or affected rated members and assemblies (i.e. columns, beams, floor/ceiling, and ceiling/roof fire-rated design assemblies). Show all new and/or affected fire-rated walls with their ratings, if not shown elsewhere.
☐ Yes	□ N/A	0.	All penetrations of fire-rated construction must be per manufacturer's details. The details shall meet or exceed ratings of construction being penetrated. Penetration details shall be exactly as tested by an approve d testing laboratory or agency and shall include their system numbers. New penetrations of existing fire-rated walls and assemblies shall be shown with appropriate designs.
☐ Yes	□ N/A	p.	Provide all applicable <i>International energy Conservation Code</i> compliance data on the Building Code Summary sheet or on the electrical plans.
☐ Yes	□ N/A	q.	All submittals should include a listing and labeling statement. (All electrical materials, devices, appliances and equipment shall be la beled and listed by a certified testing laboratory or agency.)

Uniform Construction Code (UCC)

# SPECIAL INSPECTIONS AND OBSERVATIONS STATEMENT

This statement must accompany permit applications for all construction for which special inspections and observations are required in section 1704 and 1709 of the <i>International Building Code 2003</i> .	ction for which special 19 of the <i>International Building</i>
Project Name:	
Project Address:	
Owner:	Telephone:

This is to certify that all the inspections and observations that I have checked on pages 2-3 **and** on page 4 of this statement are required for the project named above and will be performed by the designated individuals or firms. By signing this statement, I also acknowledge that:

- these inspections and observations must be performed by competent individuals in accordance with sections 1704 and 1709 (as applicable) and that the construction work must comply with the approved plans and specifications and all applicable provisions of the Uniform Construction Code;
- records of all required special inspections and testing observations (including any discrepancies and methods of correction of these discrepancies) will be retained and made available to municipal UCC Officials, upon request; and,
  - the Final Report section of this statement must be signed by me and a copy of this statement submitted to the municipal UCC inspector, at the time that the final inspection is performed and before a certificate of occupancy is issued.

Name of Design Professional in Responsible Charge

Signature of Design Professional in Responsible Charge

PA License Number Date signed (Month/Day/Year)
PLEASE AFFIX SEAL IN SPACE TO THE LEFT.

CHECK EACH THAT APPLIES	TYPE OF SPECIAL INSPECTION OR OBSERVATION	NAME AND ADDRESS OF INDIVIDUAL AND/OR FIRM PERFORMING INSPECTION OR OBSERVATION	CREDENTIALS (Enter acronym from page 4. If "Other," please specify special training or basis for competency to perform work.)
	Inspection of Fabricators		
	Inspection of Steel Construction		
	Inspection of Concrete Construction		
	Inspection of Masonry Construction		
	Inspection of Wood Construction		
	Inspection of Soil Conditions		

CHECK EACH THAT APPLIES	TYPE OF SPECIAL INSPECTION OR OBSERVATION	NAME AND ADDRESS OF INDIVIDUAL AND/OR FIRM PERFORMING INSPECTION OR OBSERVATION	CREDENTIALS (Enter acronym from page 4. If "Other," please specify special training or basis for competency to perform work.)
	Inspection of Pile Foundations		
	Inspection of Pier Foundations		
	Inspection of Wood Panels and Veneers		
	Inspection of Sprayed Fire-Resistant Materials		
	Inspection of Smoke Control		
	Inspection of Exterior Insulation & Finish System (EIFS)		
	Structural Observations		

	Required Special Inspections or Observations:	or Observations:		
FINAL	Inspection of Fabricators Inspection of Steel Construction Inspection of Masonry Construction Inspection of Wood Construction Inspection of Soil Conditions Structural Observations	uction nstruction nstruction ruction ns	Inspection of Pile Foundations Inspection of Pier Foundations Inspection of Wood Panels and Veneers Inspection of Sprayed Fire-Resistant Materials Inspection of Smoke Controls Inspection of Exterior Insulation & Finish System (EIFS)	
	I certify that I have reviewed the repor is in compliance with the approved pla	t on each of the inspectins and specifications a	I certify that I have reviewed the report on each of the inspections or observations checked above. These reports indicate that the covered work is in compliance with the approved plans and specifications and all applicable provisions of the Uniform Construction Code.	
		O)	Signature of Design Professional in Responsible Charge:	
			Date signed (Day/Month/Year):	
		ACI	American Concrete Institute Certified Concrete Field Testing Technician	
		AWS	American Welding Society Certified Welding Inspector	
		ASNT	American Society of Non-Destructive Testing	
		AWCI	Association of Wall and Ceiling Industries	
콨	KEY for use in <b>CREDENTIALS</b> column:	MCA	Model code agency (ICC, BOCA, SBCCI, ICBO) special inspection certification	
	(on pages 2 and 3)	PA	Professional Architect (currently licensed)	I
		R	Professional Engineer (currently licensed)	
		OTHER	Specialized training coursework or other basis for competency deemed acceptable	$\neg$

# Uniform Construction Code (UCC) ENERGY CODE PRESCRIPTIVE COMPLIANCE REPORT

PROJECT INFORMATION			
Project Name:		IECC	ASHRAE/IESNA
		Climate	90.1
Street Number and Name:		Zone	Table
<del></del>			
City:	Zip Code:	Zone 10B	☐ B-13
		Zone 11B	□ B-14
Political Subdivision:	County:	Zone 12A Zone 12B	│
		Zone 13B	☐ B-17
		Zone 14A	
		Zone 15	
PROJECT DESCRIPTION			
TROOLOT BLOOKII HOR			
Building floor area: squa	are feet		
☐ New construction	Addition (conditioned)	Alteration	
Unconditioned shell	Unconditioned addition	Alteration	
	_	_	
If using ASHRAE/IESNA 90.1 prescri	iptions, indicate if Semi-heated Space of	or if  Cooled Sp	pace
APPLICABLE STANDARDS			
Check which standards will be used f	or each component listed below.		
	IECC CHAPTER 8	ASHRAE/IE	SNA 90.1
Building Envelope			
Mechanical Systems			
Electrical/Lighting Systems			
If no Building Envelope box was checenergy conservation requirements:	cked above, please indicate why the buildi	ng envelope is ex	empt from the
☐ Peak design rate of energy us	age will be less than 3.4 Btu/h/sq. ft.		
☐ Building or structure will be ne	either heated nor cooled		
Building of structure will be no	The realed for cooled.		
Attach either the IECC Cha	pter 8 or the ASHRAE/IESNA "F	Prescriptive F	Report" for
each of the components ch	=		<u></u>
<u> </u>			

# IECC Prescriptive Report: <u>BUILDING ENVELOPE</u>

Window and Glazed Door	Area/Abo	ove Grade Wall A	rea Ratio:		%
Skylights  R value of slab or below-grade wal				square feet	
Windows and Glass Door	s (list ind				
Number/Location		PF	=	SHGC	U
Doof Accombly (list cook	turns of o				
Roof Assembly (list each Elements of Roof Assem		Insulation Bet	ween Framing alue)	Co	ontinuous Insulation (R-Value)
Floors Over Outdoor Air		ditioned Spaces (	list each type of a		
Elements Of Floor Assem	iblies		ween Framing alue)	Co	ontinuous Insulation (R-Value)
		<b>\</b>			(1111111)
Above-Grade Walls (list	each type	of assembly use	d):		
Elements of Wall		o Framing	Metal Fram	ing	Wood Framing
Assembly Used	(	R-Value)	(R-Value	)	(R-Value)

## IECC BUILDING ENVELOPE CHECKLIST (requirements that will also be checked during inspection process):

- All joints and penetrations caulked, gasketed, weather-stripped, or otherwise sealed.
- Windows, doors, and skylights certified as meeting leakage requirements.
- All component R-values and U-factors labeled as certified.
- Stair, elevator shafts, vents and other dampers integral to building envelope are equipped with motorized dampers. (Gravity dampers may be used in buildings less than 3-stories in height.)
- Cargo/loading dock doors weather sealed.
- Recessed lighting fixtures installed per Section 802.3.7
- Vestibule provided at building entrances, with self-closing doors.
- Vapor retarder installed.

# IECC Prescriptive Report: <u>MECHANICAL</u> <u>SYSTEMS</u>

Fill in all the requested information for either a simple or complex HVAC system.

Heatin	design loads calculated g Load =	· 	ndamentals Handbook are	<b>:</b> :
Coolin	g Load =	<del></del>		
803.2.2 HVAC Equip				
Manufacturer Model Number	Capacity	Equipment Efficiency	Table used from Section 803	Required Efficiency
Heatin Coolin	design loads calculated g Load = g Load =	<u> </u>	ndamentals Handbook are	<b>)</b> :
803.2.1 HVAC Equip	ment Performance  Capacity	Equipment	Table used from	Required
Model Number	Capacity	Efficiency	Section 803	Efficiency
	on requested below for  Nater Heating Equipme		ating system.	
Manufacturer	Capacity	Equipment	Equipment	Required
Model Number	. ,	Efficiency	Туре	Efficiency

# IECC Building Mechanical Systems & Service Water Heater Requirement Checklist (requirements that will also be checked during inspection process):

- Load calculations per ASHRAE Fundamentals Handbook-2001.
- Plant Equipment and system capacity not greater than needed to meet loads.
- Minimum one temperature control device per zone.
- Stair and elevator shaft vents are equipped with motorized dampers
- Discharge dampers prohibited on constant volume fans & variable volume fans with motors >25hp.
- Balancing and pressure test connections on all hydronic terminal devices.
- Single-duct Variable Air Volume (VAV) terminals reduce primary air before reheating.
- Dual-duct (VAV) mixing boxes installed to minimize mixing.
- Controls capable of resetting supply air temperature (SAT) by 25% of SAT-room temperate difference.
- Minimum one humidity control device per installed humidification/dehumidification system.
- Automatic Controls: Setback to 55 degrees F (heat) & 85 degrees F (cool)
- Outside air supply and exhaust ducts equipped with gravity or motorized dampers with automatic shut off.
- Duct insulation: R-5 unconditioned spaces, R-8 outside building, R-8 between duct and exterior envelope.
- Duct construction per *International Mechanical Code* (IMC).
- Balancing devices provided in accordance with IMC.
- Minimum pipe insulation per Table 803.3.
- Heat traps in inlet/outlet fittings for service water heating.
- Pipe insulation for Service Water Heating per Section 804.5
- Water temperature controls: 110 degrees F for dwelling units, or 90 degrees F for other occupancies.
- Hydronic three-pipe systems not used.
- Operation and maintenance manual provided to building owner.

# IECC Prescriptive Report: <u>Electrical Power & Lighting Systems</u>

Fill in all the requested information for either the entire building method or the tenant portion/portion of the building method.

Entire Building Method:	
Building Use or Area Type from Table 805.5.2:	
Total Area of the Building (Sq. Ft.): Total Interior Light Power (Watts):	

Tenant Area or Portion of Building Method:

Tenant Area/ Building Portion	Use From Table 805.5.2	Total Area sq.ft.	Total Interior Lighting Power (Watts)

# IECC Electrical Power & Lighting Systems Requirements Checklist requirements that will also be checked during inspection process):

- Exterior Lighting: Efficacy greater than 45 lumens/W
- Independent controls for each space (switch/occupancy sensor).
- Master switch at entry to hotel/motel guest rooms.
- Individual dwelling units separately metered.
- Each space provided with a manual control to provide uniform light reduction capability.
- If area is corridor, storeroom, restroom, or lobby; area must be continuously illuminated; areas greater than 250 sq. ft. or use less than 0.6 watts/sq. ft.
- Photocell/astronomical time switch on exterior lighting.
- Tandem wired one-lamp & 3-lamp ballasted luminaries.

# ASHRAE/IESNA 90.1 Prescriptive Report: <u>Electrical Power & Lighting Systems</u>

Fill in all the requested information for either the entire building method or the tenant portion/portion of the building method.

Entire Building Method:			
Building Use or Area Type f	rom Table 9.3.1.1:		
Total Area of the	Building (Sq.Ft.):		
Total Interior Lig	ht Power (Watts):		
Tenant Area or Portion of Building	Method:		
<b>T</b>		T ( ) A	T ( 11 ( '

Tenant Area/ Building Portion	Use From Table 9.3.1.2	Total Area Sq. Ft.	Total Interior Lighting Power (Watts)

# ASHRAE/IESNA 90.1 Electric Power & Lighting Requirements Checklist (requirements that will also be checked during inspection process):

- Minimum Efficacy of 60 lumens/watts for lamps greater than 100W used for exterior lighting.
- Lighting power for freestanding canopy areas for building entrances with canopies less than or equal to 3 watts per square foot.
- Lighting power for building entrances without a canopy less than or equal to 33 watts per linear foot of exterior door width.
- Lighting power for buildings exits less than or equal to 20 watts per linear foot of exit door width.
- Lighting power for building facades less than or equal to 0.25 watts per square foot of the illuminated area.
- Independent manual or occupancy sensing controls for each space (remote switch with indicator allowed for safety or security).
- Automatic shutoff control for lighting in > 5000 sq.ft. buildings by time-of-day device, occupant sensor or other automatic control.
- Master switch at entry to hotel/motel guest room.
- Photocell/astronomical time switch on exterior lights (except areas requiring lighting during daylight hours).
- Tandem wired one-lamp and three-lamp ballasted luminaries (except high-frequency ballasts; luminaries not on same switch).
- Feeder conductors have been designed for a maximum voltage drop of 2 percent.
- Branch circuit conductors have been designed for a maximum voltage drop of 3 percent.

# ASHRAE/IESNA 90.1 Prescriptive Report: <u>Building Envelope</u>

AS	SHRAE/IES	5NA 90.1 Pre	escriptive Report:	<u>Building</u> <u>E</u>	<u>nvelope</u>	
Roof Assembly (I	ist each type	of assembly u	sed per table 5.3)			
List Building Envel	ope Option:	-	Opaque Eleme		Assembly	Insulation
Residential Non	-residential	Semi-heated		!	Max. U	Min. R
		type of assemi	bly used per table 5.3)			
List Building Envel		Carri baatad	Opaque Eleme		Assembly	Insulation
Residential Non	-residentiai	Semi-heated			Max. U	Min. R
	_					
		e of assembly u	ised per table 5.3)		A l. l	1
<u>List</u> Building Envel <b>Residential Non</b>		Semi-heated	Opaque Eleme		Assembly Max. U	Insulation Min. R
Residential Hon	-residential	Ocim-neated		-	viax. O	WIIII. IX
Slab on Grado Ele	oore (list oor	h type of accor	nbly used per table 5.3)			
List Building Envel		ii type or assen	Opaque Eleme	nts	Assembly	Insulation
Residential Non-		Semi-heated	Opaquo Eleme		Max. U	Min. R
Wall. Below Grad	e (list each t	vpe of assembl	y used per table 5.3)			
List Building Envel		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Opaque Eleme	nts	Assei	mbly
Residential Non-	-residential	Semi-heated			Max	. U
				-		
Opaque Doors (li	st each type	of assembly us	sed per table 5.3)			
List Building Envel	ope Option:	-	Opaque Element	is .	Assem	
Residential Non-	residential	Semi-heated			Max.	U

# ASHRAE/IESNA 90.1 Prescriptive Report: <u>Building Envelope</u> (Continued)

Fenestration (list each type of assembly used per table 5.3)

<u>List</u> Building Envelope Option:	% Vertical	SHGC	Assembly	SHGC	SHGC
Residential Non-residential Semi-heated	Glazing	Multiplier	Max. U	North	All

Skylights (list each type of assembly used per table 5.3)

List Building Envelope Option: Residential Non-residential Semi-heated	Туре	% of Roof	Assembly Max.	SHGC Max.
_				

# ASHRAE/IESNA 90.1 Building Envelope Requirements Checklist (requirements that will also be checked during inspection process):

- Open-blown or poured loose-fill insulation has not been used in attic roof spaces with ceiling slope greater than 3 in 12.
- Wherever vents occur, vents are baffled to deflect incoming air above the insulation.
- Recessed lights, equipment and ducts are not affecting insulation thickness.
- No roof insulation is installed on a suspended ceiling with removable ceiling panels.
- All exterior insulation is covered with protective material.
- Cargo and loading dock doors are equipped with weather seals.
- Windows & skylights are labeled & certified by the manufactures for U-factor & SHGC.
- Fixed windows & skylights unlabeled by manufacturer have been site labeled using the default U-factor & SHGC.
- Other unlabeled vertical fenestration, operable and fixed, not labeled by the manufacturer, has been site labeled using the default U-factor and SHGC.
- All joints & penetrations are caulked, gasketed, weather-stripped, or otherwise sealed.
- Windows, doors, and skylights certified as meeting leakage requirements.
- Components R-values & U-factors labeled as certified.
- Building entrance doors have a vestibule and equipped with closing devices.

# ASHRAE/IESNA 90.1 Prescriptive Report: Mechanical Systems (Simple)

A building that is <u>less than 2 stories in height</u>, and, <u>has less than 25,000 total square feet floor area</u>, and, <u>has a single HVAC zone</u>, must meet the requirements for a simple mechanical system.

If the requirements for a **simple mechanical system** apply, fill in all of the following information.

Cooling (if provided)			
Manufacturer Nam	ne		
Mfg'er Specified Efficiend	cy		
	Air Conditioner   Min. Efficiency (Table 6.2.1A)		
	Heat Pump Min. Efficiency (Table 6.2.1B)		
	Packaged Terminal & Room AC & Heat Pump   Min. Efficiency (Table 6.2.1D)		
	Is Economizer required per Table 6.1.3?		
Heating			
Manufacturer Nam	ne		
Mfg'er Specified Efficiend	cy		
	Heat Pump   Min. Efficiency (Table 6.2.1A)		
	Heat Pump   Min. Efficiency (Table 6.2.1D)		
	Fuel Fired Furnace   Min. Efficiency (Table 6.2.1E)		
	Fuel Fired Boiler   Min. Efficiency (Table 6.2.1F)		
	Electric Resistance Heat		
Service Hot Water			
Manufacturer Nam	ne		
Mfg'er Specified Efficiend	cy		
	Load calculated per 7.2.1		
	Efficiency/Performance Requirements per 7.2.2		
	Prescriptive Path per 7.3, if combined		
	boiler/service hot water		

# ASHRAE/IESNA 90.1 Mechanical Systems (Simplified) Requirements Checklist (requirements that will also be checked during inspection process):

- Energy recovery ventilation required if outside air quality supplied by the system is greater than 3000 cfm & greater than 70% of the supply air quantity at min. outside air designs.
- Manual change over or dual set-point thermostat supplied.
- Heat pump controls to prevent supplemental heater operation.
- Systems controls to prevent reheat or any other form of simultaneous heating & cooling for humidity control supplied.
- Programmable time clock on HVAC systems greater than 15,000 BTU/H & supply fan greater than 3/4/hp.
- HVAC piping shall be insulated in accordance with Table 6.2.4.1.3 insulation suitable for outdoor service.
- Ductwork & plenums insulated in accordance with Table 6.2.4.1.2A & 6.2.4.1.2B and ducted systems air balanced.
- Thermostats shall be interconnected to prevent simultaneous heating & cooling.

## ASHRAE/IESNA 90.1 Mechanical Systems (Simple) Requirements Checklist (continued)

- Dampers automatically shut on systems greater than 300 cfm.
- Optimum start controls supplied on systems with capacities greater than 10,000 cfm.

# ASHRAE/IESNA 90.1 Service Hot Water Systems Requirements Checklist (<u>requirements that will also be checked during inspection process</u>):

- Service Hot Water Piping Insulation meets 7.2.3
- Temperature maintenance automatic time switches installed (7.2.4.2)
- Outlet temperature controls installed (7.2.4.4)
- Circulating pump controls installed (7.2.4.4)
- Storage temperature controls installed (7.2.4.1)
- Heat traps installed (7.2.6)

# ASHRAE/IESNA 90.1 Prescriptive Report: Mechanical Systems (Complex)

If the requirements for a complex med	chanical system apply, fill in all of the following information.
Heating System Design Load: Cooling System Design Load:	

**HVAC Equipment Performance per section 6.2.1** 

Manufacturer/ Model #	Capacity	Equipment Efficiency	Table used from Section 6.2.1	Required Efficiency	1992 Epact

Service Hot Water		
Manufacturer Name		
Mfg'er Specified Efficiency		
	Load calculated per 7.2.1	
	Efficiency/Performance Requirements per 7.2.2	
	Prescriptive Path per 7.3, if combined	
	boiler/service hot water	

# ASHRAE/IESNA 90.1 Mechanical Systems (Complex) Requirements Checklist (requirements that will also be checked during inspection process):

- Economizers per 6.3.1
- Simultaneous heating & cooling limitations per 6.3.2
- Air system design & condoles per 6.3.3
- Hydronic system design & control 6.3.2.2.3
- Heat rejection equipment per 6.3.5
- Energy recovery per 6.3.6.
- Exhaust Hoods per 6.3.7
- Radiant Heating systems per 6.3.8
- Hot gas bypass limitations per 6.3.9
- Service hot water piping insulation meets 7.2.3
- Temperature maintenance automatic time switches installed per 7.2.4.2
- Outlet temperature controls installed per 7.2.4.3
- Circulating pump controls installed per 7.2.4.4
- Storage temperature controls installed per 7.2.4.1
- Heat traps installed per 7.2.6