



**- PURPOSE -**

Planning, Assessing,  
 Zoning & Code Enforcement

This checklist was developed by the Durham Energy Committee together with the Durham Planning Board. It is intended to encourage developers, applicants for Site Plan Review, applicants for building permits, and members of the Durham Planning Board to consider and discuss optional energy efficiency measures appropriate to a specific application rather than to mandate general requirements. Discussion at early stages may result in opportunities for energy and cost savings.

**Project name** Kappa Delta Sorority Parking expansion  
**Date of Submittal** 9-4-2013  
**Applicant name** MJS Engineering, PC  
**Engineer name** Same  
**Architect name** N/A

New Construction       Re-Development, Addition or Renovation

**PART I. BUILDING CONSTRUCTION, SYSTEMS AND MATERIALS**

**National Accredited Rating for Building Energy System**

**Check one box:**

1 Does your building meet standards for:

- Passive House Institute\* <<http://www.passivehouse.us/passiveHouse/PHIUSHome.html>>
- International Living Building Institute/Living Building Challenge\* <<http://living-future.org/lbc>>
- LEED\* (Platinum, Gold, Silver) <<http://www.usgbc.org/>>
- Energy Star\* <<http://www.energystar.gov/>>
- Other \_\_\_\_\_  
 [please indicate Internet address or other reference]

*\* These organizations have established energy-efficiency criteria. Qualifying applicants are encouraged to complete and attach the checklist from that certification (to be used for informational purposes only) and may then skip to Part IV, "Consultation with Director of Zoning, Building Codes & Health."*

None of the above

Yes	No	N/A	Energy performance and insulation
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2 Attic or ceiling insulation exceeds Town code (R value proposed = _____) (see Chapter 38)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3 Walls insulation exceeds Town building code (R value proposed = _____) (see Chapter 38)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4 Air sealing: passive air infiltration rate proposed*: _____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5 Slabs: R value proposed _____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6 Basement foundation: R value proposed _____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7 Hot water pipes: R value proposed _____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8 Heating ducts: R value proposed _____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9 Plans to commission the building to confirm performance

\* "Tight" envelopes require ventilation, typically with the use of energy or heat recovery ventilation systems.

Yes	No	N/A	<b>Construction methods and materials</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10	Net zero construction, i.e., building(s) uses less than or same amount of energy it generates
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11	Energy efficient doors and windows (including screens)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12	Recycled content materials

Yes	No	N/A	<b>Internal systems</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13	Low-flow plumbing fixtures
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14	Lighting: high efficiency
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15	Energy usage monitoring system(s)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	16	Energy-efficient appliances (refrigerators, stoves, air conditioners, ceiling fans, etc.)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17	Energy-efficient HVAC system (proposed efficiency level _____)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	18	Renewable HVAC system (e.g., biomass boiler or furnace) or geothermal
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	19	Renewable hot water system (e.g., solar thermal)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20	Photovoltaic renewable electricity generation system (i.e., solar panels)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	21	Window technology or design that adjusts shading (active or passive, e.g., film, sensors)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	22	Ability to charge electric vehicles
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	23	Grey-water system (e.g., to capture water from sinks or showers to use for toilets or flower gardens)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	24	Mechanical ventilation: Energy Recovery Ventilator efficiency proposed = _____
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	25	Water usage monitoring system(s)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	26	Cooling load reduction features, e.g., ceiling fans, solar-ray-blocking blinds

**PART II. SITE AND SITING CONSIDERATIONS (if not applicable, check here \_\_\_\_\_)**

Yes	No	N/A	<b>Solar lighting, heating and cooling (passive and active)</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	27	Passive solar lighting design (optimizes natural illumination for interiors)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	28	Solar access: availability of, or access to, unobstructed, direct sunlight, usually south-facing
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	29	Preservation of abutting solar rights, e.g., solar skyspace easements applicable to all plots within a subdivision or to your neighbors
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	30	Orientation of internal streets allows solar access
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	31	Deciduous trees that provide shade in summer and do not block solar gain in winter
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	32	Window placement maximizes winter solar penetration and minimizes solar penetration in summer
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	33	Vegetated rooftop(s), also known as a "green roof"

Yes	No	N/A	<b>Parking</b>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	34	Incentives for tenants without cars ("no free parking")
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	35	Compact car space designation
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	36	Advanced technology and/or alternative fuel car space designation (e.g., hybrids; "E85")

Yes	No	N/A	<b>Transportation, accessibility, connectivity</b>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	37	Pedestrian sidewalk network within the project area
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	38	Bicycle lane or path network within project area
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	39	Storage for bicycles outdoors (covered/uncovered) (secured/unsecured) <please circle
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	40	Storage for bicycles indoors (secured/unsecured) <please circle

**PART III. OPERATIONS AND MAINTENANCE (if not applicable, check here )**

Yes	No	N/A	Landscaping
<i>Lower Town water use results in lower electricity demand at water and wastewater treatment plants.</i>			
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	41 Rainwater storage, e.g., cisterns
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	42 Existing vegetation or native species plantings
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	43 Xeriscaping (low-water-demand plants)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	44 Low-nitrogen-demand turf grass
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	45 Rain garden ("bioretention system") to manage stormwater runoff from roofs, driveways, parking areas
<b>Covenant terms (e.g., for homeowner associations) allow:</b>			
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	46 Outdoor clotheslines
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	47 Installation of outdoor energy-efficiency devices, such as solar panels

**PART IV. CONSULTATION WITH DIRECTOR OF ZONING, BUILDING CODES & HEALTH**

*Preliminary and follow-up consultations help solve problems and reduce costs*

Yes	No	N/A	Met with Town's Director of Zoning, Building Codes & Health
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	48 Date:

*Notes from consultation:*

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*Signature of Town's Director of Zoning, Building Codes & Health:*

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