VILLAGE OF WILLOWBROOK

MUNICIPAL SERVICES DEPARTMENT

"BACK –UP GENERATOR" Plan Review Checklist / Requirements

Project Address: _____

Resident / Business Name: _____

Date: _____ /_____ /_____

Circle and/or Complete all Applicable Sections

- **Plat of Survey Required:** (Circle one)
  - Has a current 'Plat of Survey' been provided: **YES / NO**
  - Is the generator indentified on the 'Plat of Survey': **YES / NO**
  - Have 2 identical copies been provided to the Village: **YES / NO**
  - Has provided an elevation view / photograph of:
    proposed location, in proximity to operable windows in inches/feet: **YES / NO**
- **Building Permit Application:**
  - Submitted: **YES / NO**
  - Completed: **YES / NO**
  - Authorization: Is the "Property Owners" '**Signature** 'on:
    - The application: **YES / NO**
    - A Separate Document: **YES / NO**
- **Zoning:**
  - Use description: **RESIDENTIAL / COMMERCIAL**
  - Proposed Generator location (e.g. side, rear, roof…): _____
    - NOTE: GENERATORS ARE NOT TYPICALLY ALLOWED IN SIDE YARD SETBACKS
    - Proposed Generator setback dimension to Lot line(s): _____'(ft)
  - **Commercial applications**:
    - If generator is visible from an adjacent R.O.W. a screening plan is required; if applicable: Is "1st Day" proposed screening plans attached: **YES / NO**
    - Type of screening proposed (masonry wall / landscaping) : _____
- **Home Owners Association (HOA) Approval:**
  - If the location is part of an HOA; HOA written Approval is required:
    - Applicable: **YES / NO**
    - If 'YES' is approval documentation attached: **YES / NO**
    - If "No" has a document been submitted that verifies this: **YES / NO**

- **Generator Setback Criteria**
  - Generator dimensions: H) _____" L) _____" W) _____"
  - Proposed distance / dimensions from:
    - Primary structure: _____'
    - Nearest openable / operable window: _____'
    - Other appliances (e.g. A/C unit, etc.):
      - Specify type: _____ -- _____'
    - Vegetation (e.g. landscape, trees, bushes, etc.):
      - Specify type: _____ -- _____'
    - Other (e.g. appurtenant structure, shed, deck, etc.):
      - Specify: _____: _____'
    - [Hi efficiency] Furnace/Water Heater intakes: _____'

- **Generator Sizing & Design Criteria**
  - Is generator proposed to supply back-up power to:
    - **"WHOLE HOUSE"**
    - **"PARTIAL HOUSE"**
  - Property Voltage Rating: _____ (e.g. 120/240, 120/208, etc.)
  - Property Amperage Rating: _____ (e.g. 100 / 200 / 400, etc.)
  - List kVa Rating for (note: NG less than LP): _____ (e.g. 70 kVa)
    - ***NOTE***: If generator is to be powered by "Natural Gas" – please note that most manufacturer's list the power output lower than specified on brochures, it is based on the use of an alternate gas source.
  - Are the Manufacturer's Specifications / Owner's Manual attached: **YES / NO**
  - Are the Manufacturer's "Installation Guidelines" attached: **YES / NO**

- **Transfer Switch Design Criteria**
  - Transfer Switch Amp rating: _____
  - Location of the Transfer Switch: **INTERIOR / EXTERIOR**
  - Is the Manufacturer's Specifications / Owner's Manual attached: **YES / NO**
  - Are the Manufacturer's "Installation Guidelines" attached: **YES / NO**
  - Will the residence's A/C unit(s) circuit(s) be connected to the generator: **YES / NO**
  - Is a power management system proposed (e.g. Load Shed Module): **YES / NO**

- **Electrical Design Criteria**
  - Provide a one line diagram been submitted detailing the entire electrical installation (e.g. all raceways, type, size and approximate length, conductor type and size, etc): **YES/NO**
  - Provide a detailed panel schedule and load calculation for the emergency circuits to be protected by the unit to verify that the emergency circuits will be adequately supplied with back-up power. **YES / NO**
  - Provide a load calculation' been submitted: **YES / NO**

- **<u>Generator Fuel Source Criteria</u>**
  - Specify 'fuel' source for generator: _____ (e.g. Nat. Gas. (NG) / LP)
  - Specify fuel line material type; if fuel line is:
    - Black pipe:
      - Location of pipe: _____ (above ground/under ground)
      - Method of attachment: _____
        (e.g. underground, surface mounted-above grade, etc.)
      - "Size" and overall "Length" of pipe: Size: _____" – Length: _____'
      - Is pipe in accordance w/ Manufacturer's Guidelines': **<u>YES / NO</u>**
      - Pitch of pipe: _____
      - Is fuel line protected from corrosion: **<u>YES / NO</u>**
      - Specify corrosion protection type (typically painted): _____
    - Nonmetallic plastic/flexible:
      - Proposed Burial depth: _____"
      - Is a minimum 18 AWG yellow tracer wire proposed: **<u>YES / NO</u>**
  - Verify existing gas line sizing is adequate for proposed unit: **<u>YES / NO</u>**
  - Are both a: 1) Gas shutoff valve, 2) Drip/dirt leg:
    - Proposed within six feet (6') of the generator: **<u>YES / NO</u>**
  - Specify Manufacturer's fuel line flexible link configuration: _____
    - (i.e. <u>must be straight</u>; not bent, offset, kinked, etc…)

- **<u>Generator Permanent Base</u>**
  - Describe the Generator's "permanent" base design: _____

*** THIS CHECKLIST IS <u>NOT</u> ALL INCLUSIVE, REVIEW MAY PRODUCE OTHER REQUIREMENTS.**

BACK-UP GENERATOR WORKSHEET - LOAD CALCULATION - 2008 N.E.C (ART. 220 PT IV)

JOB/PROJECT ADDRESS: _____ DATE: _____

RESIDENT INFORMATION:

NAME: _____

PHONE: _____

E-MAIL: _____

CONTRACTOR INFORMATION:

NAME: _____

PHONE: _____

E-MAIL: _____

SPECIFY FUEL SOURCE:	**NAT. GAS**	**LP**	**OTHER:** _____		
SPECIFY/VERIFY ELECTRIC SERVICE VOLTAGE:	**120/240 - SINGLE PHASE**		**OTHER:** _____		
SPECIFY ELECTRIC SERVICE AMPERAGE:	**100 AMP**	**200 AMP**	**400 AMP**	**800 AMP**	**OTHER:** _____
NET SQUARE FOOTAGE (OF RESIDENCE):	_____ **SQUARE FEET**				

	GENERAL LOADS:	QUANTITY:	RATING (LOAD)	FACTOR:	LOADS (VA)	LOADS (kW) (VA/1,000)
1	**GENERAL LIGHTING & GENERAL USE RECEPTACLES**		3 VA/ft^2	100%		
2	**BRANCH CIRCUITS (1500 VA/ft^2)**					
2.1	SMALL APPLIANCE CIRCUITS (20 AMP)		1500	100%		
2.2	LAUNDRY CIRCUITS		1500	100%		
3	**FIXED APPLIANCES**		FULL CURRENT RATING			
3.1	WELL			100%		
3.2	SUMP PUMP			100%		
3.3	FREEZER			100%		
3.4	MICROWAVES (BUILT-IN, NOT COUNTERTOP MODELS)			100%		
3.5	DISPOSAL			100%		
3.6	DISHWASHER			100%		
3.7	RANGE (SEE TABLE 220.55 FOR MULTIPLE COOKING APPLIANCES)			100%		
3.8	WALL MOUNTED OVEN (BUILT-IN)			100%		
3.9	COUNTER MOUNTED COOKING SURFACE (BUILT-IN)			100%		
3.10	WATER HEATER			100%		
3.11	CLOTHES DRYER			100%		
3.12	GARAGE DOOR OPENER			100%		
3.13	SEPTIC SYSTEM PUMP/GRINDER			100%		
3.14	**OTHER UNSPECIFIED LOADS (PLEASE SPECIFY / LIST BELOW)**					
3.14.1				100%		
3.14.2				100%		
3.14.3				100%		
3.14.4				100%		
3.14.5				100%		
3.14.6				100%		
3.14.7				100%		
3.14.8				100%		
3.14.9				100%		
4	**TOTAL GENERAL LOADS:**				**VA**	**kW**
5	**HEAT - AIR CONDITIONING (AC) LOAD:**					
5.1	A/C COOLING EQUIPMENT:			100%		
5.2	HEAT PUMP					
5.2.1	COMPRESSOR (IF NOT INCLUDED AS AC)			100%		
5.2.2	SUPPLEMENTAL ELECTRIC HEAT			65%		
5.3	ELECTRICAL SPACE HEATING EQUIPMENT					
5.3.1	LESS THAN FOUR (4) SEPARATELY CONTROLLED UNITS			65%		
5.3.2	FOUR (4) OR MORE SEPARATELY CONTROLLED UNITS			40%		
5.4	SYSTEM WITH A CONTINUOUS NAMEPLATE LOAD			100%		
5.5	LARGEST HEAT / AC LOAD (VA) kW					
6	**GENERAL LOADS**					
6.1	1st 10 kW OF GENERAL LOADS @ 100 % kW			100%	kW	
6.2	REMAINING GENERAL LOADS @ 40 % kW			40%	kW	
6.3	CALCULATED GENERAL LOADS kW					kW
6.4	LARGEST HEAT / AC LOAD 100% kW					kW
7	**TOTAL CALCULATED LOAD (NET GENERAL LOADS + HEAT/A/C LOAD)**					**kW**