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)
  o Has a current ‘Plat of Survey’ been provided: YES / NO
  o Is the generator identified on the ‘Plat of Survey’: YES / NO
  o Have 2 identical copies been provided to the Village: YES / NO
  o Has provided an elevation view / photograph of:
    proposed location, in proximity to operable windows in inches/feet: YES / NO

• Building Permit Application:
  o Submitted: YES / NO
  o Completed: YES / NO
  o Authorization: Is the “Property Owners” ‘Signature’ on:
    ▪ The application: YES / NO
    ▪ A Separate Document: YES / NO

• Zoning:
  o Use description: RESIDENTIAL / COMMERCIAL
  o 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)
  o 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:
  o 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**
  o Generator dimensions: H) _______”  L) _______”  W) _______
  o 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**
  o Is generator proposed to supply back-up power to:
    ▪ ”WHOLE HOUSE”
    ▪ ”PARTIAL HOUSE”
  o Property Voltage Rating: ______________________ (e.g. 120/240, 120/208, etc.)
  o Property Amperage Rating: ______________________ (e.g. 100 / 200 / 400, etc.)
  o 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.
  o Are the Manufacturer’s Specifications / Owner’s Manual attached: **YES / NO**
  o Are the Manufacturer’s “Installation Guidelines” attached: **YES / NO**

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

• **Electrical Design Criteria**
  o 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**
  o 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**
  o Provide a load calculation’ been submitted: **YES / NO**
• **Generator Fuel Source Criteria**
  o Specify ‘fuel’ source for generator: ____________________ (e.g. Nat. Gas. (NG) / LP)
  o 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’: YES / NO
    ➢ Pitch of pipe: ____________________
    ➢ Is fuel line protected from corrosion: YES / NO
    ➢ Specify corrosion protection type (typically painted): ____________________
  ▪ Nonmetallic plastic/flexible:
    ➢ Proposed Burial depth: _______
    ➢ Is a minimum 18 AWG yellow tracer wire proposed: YES / NO
  o Verify existing gas line sizing is adequate for proposed unit: YES / NO
  o Are both a: 1) Gas shutoff valve, 2) Drip/dirt leg:
    ▪ Proposed within six feet (6’) of the generator: YES / NO
  o Specify Manufacturer’s fuel line flexible link configuration: ____________________
    ▪ (i.e. must be straight; not bent, offset, kinked, etc...)

• **Generator Permanent Base**
  o Describe the Generator’s “permanent” base design: ____________________

* THIS CHECKLIST IS NOT ALL INCLUSIVE, REVIEW MAY PRODUCE OTHER REQUIREMENTS.
### BACK-UP GENERATOR WORKSHEET - LOAD CALCULATION - 2008 N.E.C (ART. 220 PT IV)

**JOB/PROJECT ADDRESS:**

**RESIDENT INFORMATION:**

**NAME:**

**PHONE:**

**E-MAIL:**

**DATE:**

**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):

<table>
<thead>
<tr>
<th>GENERAL LOADS:</th>
<th>QUANTITY:</th>
<th>RATING (LOAD)</th>
<th>FACTOR:</th>
<th>LOADS (VA)</th>
<th>LOADS (KW) (VA/1,000)</th>
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<tbody>
<tr>
<td>1 GENERAL LIGHTING &amp; GENERAL USE RECEPTACLES</td>
<td>3 VA/H²</td>
<td>100%</td>
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<td>2 BRANCH CIRCUITS (1500 VA/ft²)</td>
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<td>2.1 SMALL APPLIANCE CIRCUITS (20 AMP)</td>
<td>1500</td>
<td>100%</td>
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<td>2.2 LAUNDRY CIRCUITS</td>
<td>1500</td>
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<td>3 FIXED APPLIANCES</td>
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<td>3.1 WELL</td>
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<td>3.2 SUMP PUMP</td>
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<td>3.3 FREEZER</td>
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<td>3.4 MICROWAVES (BUILT-IN, NOT COUNTERTOP MODELS)</td>
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<td>3.5 DISPOSAL</td>
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<td>3.6 DISHWASHER</td>
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<td>3.7 RANGE (SEE TABLE 220.55 FOR MULTIPLE COOKING APPLIANCES)</td>
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<td>3.8 WALL MOUNTED OVEN (BUILT-IN)</td>
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<td>3.9 COUNTER MOUNTED COOKING SURFACE (BUILT-IN)</td>
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<td>3.10 WATER HEATER</td>
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<td>3.11 CLOTHES DRYER</td>
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<td>3.12 GARAGE DOOR OPENER</td>
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<td>3.13 SEPTIC SYSTEM PUMP/GRINDER</td>
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<td>3.14 OTHER UNSPECIFIED LOADS (PLEASE SPECIFY / LIST BELOW)</td>
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<td>4 TOTAL GENERAL LOADS:</td>
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<td>VA</td>
<td>kW</td>
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<td>5 HEAT - AIR CONDITIONING (AC) LOAD:</td>
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<td>5.1 A/C COOLING EQUIPMENT:</td>
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<td>5.2 HEAT PUMP</td>
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<td>5.2.1 COMPRESSOR (IF NOT INCLUDED AS AC)</td>
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<td>5.2.2 SUPPLEMENTAL ELECTRIC HEAT</td>
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<td>5.3 ELECTRICAL SPACE HEATING EQUIPMENT</td>
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<td>5.3.1 LESS THAN FOUR (4) SEPARATELY CONTROLLED UNITS</td>
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<td>5.3.2 FOUR (4) OR MORE SEPARATELY CONTROLLED UNITS</td>
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<td>5.4 SYSTEM WITH A CONTINUOUS NAMEPLATE LOAD</td>
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<td>5.5 LARGEST HEAT / AC LOAD (VA) kW</td>
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<tr>
<td>6 GENERAL LOADS</td>
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<td>6.1 1st 10 kW OF GENERAL LOADS @ 100 % kW</td>
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<td>6.2 REMAINING GENERAL LOADS @ 40 % kW</td>
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<td>6.3 CALCULATED GENERAL LOADS kW</td>
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<tr>
<td>6.4 LARGEST HEAT / AC LOAD 100% kW</td>
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<tr>
<td>7 TOTAL CALCULATED LOAD (NET GENERAL LOADS + HEAT/A/C LOAD)</td>
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<td>kW</td>
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**SPECIFY/VERIFY ELECTRIC SERVICE VOLTAGE**: 120/240 SINGLE PHASE (ART. 220 PT IV)