Electrical Service Upgrade

ADDRESS: Date Received:
Applicant Name: Check in by:
Applicant Daytime Phone: Date Returned to Applicant:
Applicant Email Address:

I understand that any missing or incomplete items or failure to clearly describe the proposed scope of work will cause this plan review to be delayed until the submittal is complete and/or the work is correctly described. Upon submittal of the remaining items, I understand that the plans are still subject to review by the Village and that corrective measures and/or additional information may be required.

Applicant Signature Date

Submittal Checklist, minimum requirements:

<table>
<thead>
<tr>
<th>OK</th>
<th>N/A</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>Homeowners Association approval letter, if required</td>
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<tr>
<td></td>
<td></td>
<td>Completed electrical permit application</td>
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<tr>
<td></td>
<td></td>
<td>Detailed scope of work and equipment information</td>
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<td>Electricians must be registered with the Village</td>
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<td>Electricians must submit a copy of their electrician’s license from an Illinois Municipality that administers an electrical license examination</td>
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<td>Basic competency is expected of homeowners performing their own work</td>
</tr>
</tbody>
</table>

Type of Electrical Service:
- [ ] Overhead/Drop or [ ] Service Lateral/Underground

Size of Upgrade Request:
- [ ] 100A - min  [ ] 150A  [ ] 200A  [ ] Other______(400A - max)

*Electric service upgrade shall be provided with an external electrical main disconnect/over current device - the main disconnect can be an integral part of the meter socket cabinet or in a separate outdoor panel and labeled for the application. Bonding and grounding shall take place at the first means of main disconnect*
**General Information:**
Inside wiring shall be copper and installed in EMT.
Smoke detectors shall be hard wired, interconnected with a battery back up in each sleeping room, on each level and within 15' outside of the sleeping rooms. Carbon Monoxide detector outside the sleeping room is a requirement.
GFCI and ARC fault protections are required where code requires.

**Minimum Required Inspections:**
Final inspection is required when all work is completed.

**Schedule Inspections With:**
Community Development Department

**Helpful Contact Information:**
J.U.L.I.E. 811
Com Ed (800) 344-7661
Community Development (847) 551-3478
1. **MAST OR SERVICE RUN**

- Comply with service-entrance conductors
  
  Clearances— based on particular site conditions select:

  □ RMC or IMC Mast or

  □ RMC, IMC or EMT Service Run

  □ Clearances required by code that apply to both Mast and Service Run

    □ Service conductors lowest point of bottom of drip loop ≥ 10 ft. to ground below—same as areas accessible only to pedestrians
    □ Service conductors ≥ 12 ft. above residential driveways

    □ Service conductors ≥ 18 ft. above public streets

    □ Service conductors ≥ 8 ft. above roofs with $\leq 4:12$

    □ Service conductors ≥ 3 ft. above roofs with $\geq 4:12$
      (including garage roofs)

    □ Provide a service clearance area 30 in. wide by 36 in. measured from front edge of panel

    □ Above decks and balconies—10 ft. out to 3 ft. horizontal

    □ Other clearances may apply (to pool, hot tub, A/C condenser, gas meter, venting pipes —contact Building Inspector for details

  □ Metal Mast additional code requirements when it is used as the attachment point:

    □ Provide Vertical and Horizontal clearances—

    □ Service conductors lowest point of bottom of drip loop ≥ 18 in. above roof shingles

    □ Metal Mast size according to size of overhead electrical service—

      □ For a 100A service, the size of mast is 2.5 in—RMC or IMC

      □ For larger services, use 3.0 in—RMC or IMC

    □ Metal Mast equipment/devices—

      Service head; service attachment; mounting clamps with $\frac{1}{2}$ in. bolts, nuts and washers; roof flashing

    □ Metal Service Run—if the particular site condition clearances allow this type of installation—
Provide additional vertical and horizontal clearances—

- ≥ 6 in. horizontal clearance from roof eave(s) or gutter(s) to service head
- ≥ 3ft. below or to sides of open able windows

Metal Service Run size according to size of overhead electrical service—

- Size of service run for 100A service is 1 ¼ in. in RMC; IMC; or EMT with rain tight couplings and connectors
- Size of service runs for larger electrical services depends of size of service; the type of conduit, and the type of conductor insulation selected

2. ELECTRIC METER AND EXTERIOR MAIN SERVICE DISCONNECT/ OVERCURRENT DEVICE ENCLOSURE(S)

- Select one of the following configurations or describe other selected configuration for plan review—

- Combination enclosure rated for wet location—containing the meter socket & main service disconnect/overcurrent device or

- Electrical meter and main service disconnect/overcurrent device enclosures. Both enclosures rated for wet location and properly interconnected

- Other configuration selected—describe:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Service Equipment Location—code requirements apply to all equipment configurations:

- Must be readily accessible
- Electric Meter mid-point elevation shall be 30in to 60in above finished grade
- Maximum height permitted for the grip of the operating handle of the main disconnect above finished grade/floor is 6ft.-7in. (same for main breaker pole)
- Must be ≥ 36in. from gas meter—from service equipment enclosure edge to gas meter edge
- Must be ≥ 36in. radius from any equipment venting outlet
- Any equipment, such as, A/C condenser must be so located to allow a service area ≥ 36in. from the service enclosure cover by ≥ 30in.
3. PANEL BOARD

- Select one of the following configurations or describe other selected configuration for plan review—
  - Subpanel board with enclosure rated for dry location—containing a 2nd main service disconnect/over current device (breaker) or
  - Main Lugs Panel with enclosure rated for dry location or
  - Other configuration selected—describe:
    -
    -
    -

- Service Panel Board Location—code requirements apply to all equipment configurations:
  - Must be readily accessible
  - Working space in front of panel board is 36in. from panel board cover by 30in. wide with 6.5ft. head room
  - Maximum height permitted for the 2nd main service disconnect/over current device (breaker) is 6ft.-7in.
  - Provide dedicated electrical space per code requirements
  - Panel board shall not be installed in a bathroom, or in a clothes closet.

4. GROUNDING AND BONDING CODE REQUIREMENTS

- Among others:
  - Bonding and grounding shall take place at the first means of main disconnect
  - Provide a permanent and effective grounding path
  - Grounding electrode conductor shall be shall be connected to the Water supply pipe (grounding electrode), street side of water meter within 5ft. of entry point to the building
  - Provide two-5/8in by 8ft long ground rods install @ 6ft o.c. (min.)—ground clamps to connect grounding conductors to ground rods shall be listed & labeled for direct burial type
5. OTHER CODE REQUIREMENTS:

- Among others:
  - Work shall be in compliance with the 2005 National Electrical Code, the Municipal Code and ComEd requirements
  - Equipment and materials shall be listed and labeled for the application
  - Inside wiring shall be copper and installed in EMT
  - Smoke detectors shall be installed as part of the service upgrade—hardwired, interconnected with a battery back up in each sleeping room, one outside of each separated sleeping area in the immediate vicinity of the bedrooms, on each level story of the dwelling
  - Carbon Monoxide (CO2) detector(s) shall be installed outside of each separated sleeping area within 15ft. from each sleeping room
  - GFCI & ARC-FAULT protection devices are required where code requires
### DESCRIBE SERVICE EQUIPMENT:

<table>
<thead>
<tr>
<th>SIZE</th>
<th>CONFIGURATION:</th>
<th>MAIN DISCONNECT</th>
<th>OVERCURRENT DEVICE</th>
<th>AIC-rating For:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>COMBINED/SINGLE ENCLOSEURE</td>
<td>INDIVIDUAL ENCLOSEURES</td>
<td>OTHERS</td>
<td>SWITCH DISCONNECT</td>
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<tr>
<td>100A</td>
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<tr>
<td>150A</td>
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<td>OTHER</td>
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### DESCRIBE PANEL BOARD EQUIPMENT:

<table>
<thead>
<tr>
<th>SIZE</th>
<th>CONFIGURATION:</th>
<th>MAIN-LUGS PANEL</th>
<th>GROUNDED CONDUCTORS MUST BE ISOLATED FROM GES—grounding electrode system</th>
<th>EQUIPMENT GROUNDING BUS BAR REQUIRED</th>
<th>NOTES:</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>SUBPANEL WITH 2(^{nd}) MAIN BREAKER</td>
<td>(for 100A—w/20 slots min)</td>
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<tr>
<td></td>
<td>SIZE</td>
<td>AIC RATING</td>
<td>(for 100A—w/20 slots min)</td>
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<td>100A</td>
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### DESCRIBE EQUIPMENT:

<table>
<thead>
<tr>
<th>SERVICE SIZE</th>
<th>MAST SIZE</th>
<th>SERVICE RUN SIZE</th>
<th>MAIN FEEDER SIZE</th>
<th>SERVICE CONDUCTORS SIZE</th>
<th>GROUNDING ELECTRODE CONDUCTORS TO WATER METER SIZE</th>
<th>BONDING CONDUCTORS TO GROUND RODS SIZE</th>
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<tbody>
<tr>
<td>100A</td>
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DEPARTMENT OF CODE ENFORCEMENT
APPLICATION FOR ELECTRICAL WORK

Date__________________ Fee__________________ Permit # P-_______________

Cost__________________

LIGHTING CIRCUITS AND OUTLETS

<table>
<thead>
<tr>
<th>SERVICE SIZE</th>
<th>2 WIRE</th>
<th>3 WIRE</th>
<th>4 WIRE</th>
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<tbody>
<tr>
<td>15 AMP. CIRCUIT</td>
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<tr>
<td>20 AMP. CIRCUIT</td>
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<tr>
<td>30 AMP. CIRCUIT</td>
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<tr>
<td>OUTLETS ON EXISTING CIRCUITS</td>
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POWER

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<thead>
<tr>
<th>NUMBER</th>
<th>TOTAL H.P.</th>
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<tr>
<td>AIR CONDITIONERS</td>
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<td>APPLIANCES</td>
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<td>MOTORS</td>
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SINGLE FAMILY DWELLING

<table>
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<tr>
<th>NO OF SQ FT.</th>
<th>NO OF OPENINGS</th>
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Describe Work:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

NOTE: COPY OF ELECTRICAL LICENSE MUST BE PROVIDED WITH THIS APPLICATION.

APPLICANT'S SIGNATURE

________________________________________________________________________

SIGNATURE OF ELECTRICAL INSPECTOR

________________________________________________________________________

White-Code Enforcement
Yellow-Auditor
Pink-Assessor
Goldencd-Customer