

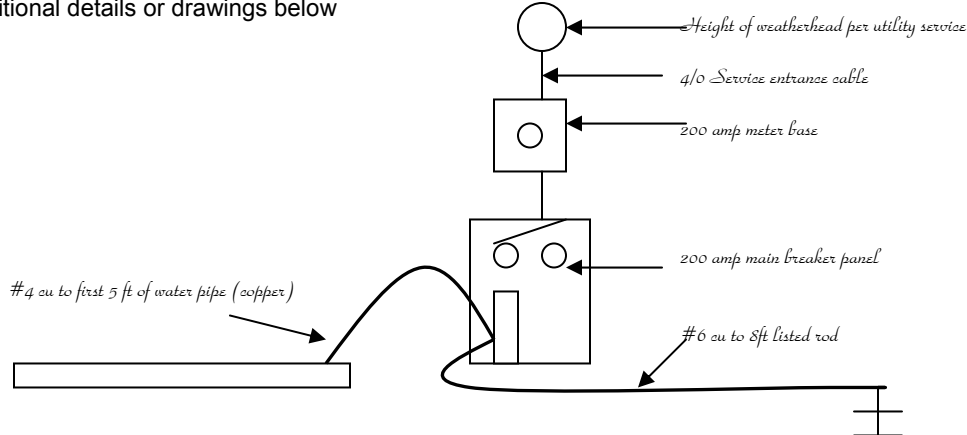
Ohio Residential Plan Submittal Form *Part A*

| Address of Project | City/Township | Project Description | | |
|----------------------|-----------------------------|-----------------------------|---------------------|---------------------|
| <i>200 N Main St</i> | <i>Clifton</i> | <i>New electric service</i> | | |
| Contractor/DBA | Address | State License No | Phone No | Cell Phone No |
| <i>Ray Electric</i> | <i>10 North St, Clifton</i> | <i>58975</i> | <i>937-555-1111</i> | <i>937-605-4545</i> |
| Owner | Address | Phone No | | Cell Phone No |
| <i>John Doe</i> | <i>101 Western, Clifton</i> | <i>937-555-4545</i> | | <i>937-565-8989</i> |

Electrical Design

| Service Size | Panel Location in dwelling | Size of Service Entrance Cable | <input checked="" type="checkbox"/> Overhead <input type="checkbox"/> Underground |
|----------------|----------------------------|--------------------------------|--|
| <i>200 amp</i> | <i>Open basement</i> | <i>4/0 ac service cable</i> | |

Provide additional details or drawings below



HVAC Design

| Equipment Type/Size | Location of Equipment | Type of Fuel | Heat Loss/Gain |
|---------------------|-----------------------|--------------|----------------|
| | | | |

Provide additional details or drawings below

As the legal owner/agent of the property above, I am performing the electrical/HVAC work described above.

Jerry Ray

Date **4/26/06**

NOTE: Per section 106.1 the Residential Building Official may require additional drawings, technical data or documentation in order to verify compliance.

Building Department Only

| Residential Plans Examiner/Building Official | Date of Approval | Application/Permit No |
|--|------------------|-----------------------|
| <i>Bob Jones</i> | <i>04/26/06</i> | <i>20060236</i> |

Ohio Residential Plan Submittal Form *Part B*

Referenced Code Text

| ELECTRICAL | | | | MECHANICAL | | | | | | | | | | | | | | | | | | | | | |
|---|--------------------|--------------------------|------------------------------|---|--------|----------|----------------|---|--------------------------|---------------|--------------------------|------------------------------|-----------------------------|------------------------------------|--------------------|----------------|--------------------------|----------|---------------------------|--------------------|--|----------|----------|--|--|
| <p>NEC 110.3 All electrical equipment shall be installed and used in accordance with the listing requirements and manufacturer's instructions.</p> | | | | <p>M1401.1 Heating and cooling equipment and appliances shall be installed in accordance with the manufacturer's installation instructions and the requirement's of the Residential Code.</p> | | | | | | | | | | | | | | | | | | | | | |
| Service | | | | Sizing | | | | | | | | | | | | | | | | | | | | | |
| <p>Size of Service in Amperes:</p> <table border="1"> <thead> <tr> <th></th> <th>Copper</th> <th>Aluminum</th> <th>Service Rating</th> <th rowspan="4"> NEC 310-15 Conductor Sizes 120/240 VOLT 3-Wire, Single-Phase, Dwelling Services/Feeders </th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td>4 AWG</td> <td>2 AWG</td> <td>100 Amps</td> </tr> <tr> <td><input type="checkbox"/></td> <td>1 AWG</td> <td>2/0 AWG</td> <td>150 Amps</td> </tr> <tr> <td><input type="checkbox"/></td> <td>2/0 AWG</td> <td>4/0 AWG</td> <td>200 Amps</td> </tr> </tbody> </table> | | | | | Copper | Aluminum | Service Rating | NEC 310-15 Conductor Sizes 120/240 VOLT 3-Wire, Single-Phase, Dwelling Services/Feeders | <input type="checkbox"/> | 4 AWG | 2 AWG | 100 Amps | <input type="checkbox"/> | 1 AWG | 2/0 AWG | 150 Amps | <input type="checkbox"/> | 2/0 AWG | 4/0 AWG | 200 Amps | <p>M1401. 3 Heating and cooling equipment shall be sized based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies.</p> | | | | |
| | Copper | Aluminum | Service Rating | NEC 310-15 Conductor Sizes 120/240 VOLT 3-Wire, Single-Phase, Dwelling Services/Feeders | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | 4 AWG | 2 AWG | 100 Amps | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | 1 AWG | 2/0 AWG | 150 Amps | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | 2/0 AWG | 4/0 AWG | 200 Amps | | | | | | | | | | | | | | | | | | | | | | |
| <p>NEC 250.50 All grounding electrodes that are present at each building or structure served shall be bonded together to form the grounding electrode system. Conductor size per NEC 250.66.</p> <p>NEC 250.52 Permitted Electrodes include:</p> <ol style="list-style-type: none"> 1. Metal underground water pipe in direct contact with earth for 10 feet or more 2. Metal frame of the building 3. Concrete-encased electrode 4. Rod, pipe & plate electrodes | | | | <p style="text-align: center;">Gages of Metal Ducts & Plenums Used for Htg/Cooling</p> <table border="1"> <thead> <tr> <th>Types of Ducts</th> <th>Size (inches)</th> <th>Minimum Thickness (inch)</th> <th>Equiv. Galvanized Sheet Gage</th> <th>Approx. Aluminum B & S Gage</th> </tr> </thead> <tbody> <tr> <td>Round Ducts & Enclosed Rectangular</td> <td>14 or less over 14</td> <td>0.013 0.016</td> <td>30 28</td> <td>26 24</td> </tr> <tr> <td>Exposed Rectangular Ducts</td> <td>14 or less over 14</td> <td>0.016 0.019</td> <td>28 26</td> <td>24 22</td> </tr> </tbody> </table> | | | | | Types of Ducts | Size (inches) | Minimum Thickness (inch) | Equiv. Galvanized Sheet Gage | Approx. Aluminum B & S Gage | Round Ducts & Enclosed Rectangular | 14 or less over 14 | 0.013 0.016 | 30 28 | 26 24 | Exposed Rectangular Ducts | 14 or less over 14 | 0.016 0.019 | 28 26 | 24 22 | | |
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| General Circuitry | | | | Access & Installation | | | | | | | | | | | | | | | | | | | | | |
| <p>NEC 210.11 and 422.12 In addition to the branch circuits installed to supply general illumination and receptacle outlets in dwelling units, the following minimum requirements apply: Two 20-amp circuits for the kitchen receptacles, One 20-amp circuit for the laundry receptacles, One 20-amp circuit for the bathroom receptacles and One separate, individual branch circuit for central heating equipment</p> | | | | <p>M1401.2 Heating and cooling equipment shall be located with respect to building construction and other equipment to permit maintenance, servicing and replacement. Clearances shall be maintained to permit cleaning of heating and cooling surfaces; replacement of filters, blowers, motors, controls and vent connections; lubrication of moving parts; and adjustments</p> | | | | | | | | | | | | | | | | | | | | | |
| <p>NEC 210.52 Receptacles installed in the kitchen to serve countertop surfaces shall be supplied by not less than two separate small appliance branch circuits.</p> | | | | <p>M1601.3.2 Metal ducts shall be supported by 0.5-inch (12.7 mm) wide 18-gage metal straps or 12-gage galvanized wire at intervals not exceeding 10 feet (3048 mm) or other approved means. Nonmetallic ducts shall be supported in accordance with manufacturer's installation instructions.</p> | | | | | | | | | | | | | | | | | | | | | |
| <p>NEC 210.52 Generally, receptacle outlets in habitable rooms shall be installed so that no point measured horizontally along the floor line in any wall space is more than 6' from a receptacle outlet. A receptacle shall be installed in each wall space 2 feet or more in width.</p> | | | | <p>M1401.4 Equipment installed outdoors shall be listed and labeled for outdoor installation.. Supports and foundations shall prevent excessive vibration, settlement or movement of equipment. Supports and foundations shall be level and conform to manufacturer's installation instructions.</p> | | | | | | | | | | | | | | | | | | | | | |
| <p>NEC 210.52 At kitchen countertops, receptacle outlets shall be installed so that no point along the wall line is more than 24 inch measured horizontally from a receptacle outlet in that space. Countertop spaces separated by range tops, sinks or refrigerators are separate spaces.</p> | | | | <p style="text-align: center;">Plumbing</p> <p>Provide layout of plumbing fixtures on floor plan. Plumbing shall conform to the Residential Code.</p> | | | | | | | | | | | | | | | | | | | | | |
| <p>NEC 210.52 & 406.8 At least one receptacle, accessible at grade level and no more than 6.5' above grade, shall be installed at the front and back of a dwelling</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>NEC 210.12 All branch circuits supplying 125-volt, 15 and 20 ampere outlets in dwelling unit bedrooms shall be protected by a listed arc-fault circuit interrupter device.</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>NEC 210.8 Ground-fault circuit-interrupter (GFCI) protection shall be provided for all 125-volt, 15 and 20 amp receptacle outlets installed outdoors, in boathouses, garages, unfinished accessory buildings, crawl spaces at or below grade level, unfinished basements, bathrooms, at kitchen countertops and within 6' of the outside edge of the sink in laundry rooms, utility rooms, and at wet-bars.</p> | | | | | | | | | | | | | | | | | | | | | | | | | |