<table>
<thead>
<tr>
<th>SHEET INDEX</th>
<th>SHEET INDEX</th>
<th>SHEET INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHT. NO.</td>
<td>DESCRIPTION</td>
<td>SHT. NO.</td>
</tr>
<tr>
<td>01</td>
<td>COVER SHEET</td>
<td>43</td>
</tr>
<tr>
<td>02</td>
<td>INDEX TO DRAWINGS</td>
<td>44</td>
</tr>
<tr>
<td>03</td>
<td>ABBREVIATIONS, SYMBOLS AND LEGEND</td>
<td>45</td>
</tr>
<tr>
<td>04</td>
<td>GENERAL NOTES</td>
<td>46</td>
</tr>
<tr>
<td>05</td>
<td>SITE SURVEY AND SURVEY CONTROLS I</td>
<td>47</td>
</tr>
<tr>
<td>06</td>
<td>SITE SURVEY AND SURVEY CONTROLS II</td>
<td>48</td>
</tr>
<tr>
<td>07</td>
<td>EXITING UTILITIES PLAN</td>
<td>49</td>
</tr>
<tr>
<td>08</td>
<td>EXITING SITE LAYOUT PLAN AT NEW PUMP STATION</td>
<td>50</td>
</tr>
<tr>
<td>09</td>
<td>PUMP STATION SITE GENERAL DEMOLITION PLAN</td>
<td>51</td>
</tr>
<tr>
<td>10</td>
<td>PUMP STATION SITE GENERAL FINISHED LAYOUT PLAN</td>
<td>52</td>
</tr>
<tr>
<td>11</td>
<td>PUMP STATION LOCATION AND DIMENSIONS PLAN</td>
<td>53</td>
</tr>
<tr>
<td>12</td>
<td>PUMP STATION SITE FINISHED GRADING AND PVMT. PLAN</td>
<td>54</td>
</tr>
<tr>
<td>13</td>
<td>PUMP STATION BUILDING LAYOUT PLAN</td>
<td>55</td>
</tr>
<tr>
<td>14</td>
<td>PUMP STATION BUILDING AND VICINITY PIPING LAYOUT PLAN</td>
<td>56</td>
</tr>
<tr>
<td>15</td>
<td>TYPICAL PUMPS P1 AND P2 PIPING SECTION</td>
<td>57</td>
</tr>
<tr>
<td>16</td>
<td>FIRE PUMP P3 PIPING SECTION</td>
<td>58</td>
</tr>
<tr>
<td>17</td>
<td>PUMP BARREL AND BARREL ENCASEMENT DETAILS</td>
<td>59</td>
</tr>
<tr>
<td>18</td>
<td>PUMP STATION PIPING SECTIONS</td>
<td>60</td>
</tr>
<tr>
<td>19</td>
<td>BLDG. FLOOR DRAIN OUTLET BOX AND FLOOR DRAIN DETAILS</td>
<td>61</td>
</tr>
<tr>
<td>20</td>
<td>SURGE RELIEF PIPING PLAN AND PROFILE</td>
<td>62</td>
</tr>
<tr>
<td>21</td>
<td>DISCHARGE SURGE TANK DETAILS I</td>
<td>63</td>
</tr>
<tr>
<td>22</td>
<td>DISCHARGE SURGE TANK DETAILS II</td>
<td>64</td>
</tr>
<tr>
<td>23</td>
<td>18-INCH PUMP DISCHARGE WATERLINE PLAN AND PROFILE</td>
<td>65</td>
</tr>
<tr>
<td>24</td>
<td>18-INCH CONNECTION AND MIS. DETAILS</td>
<td>66</td>
</tr>
<tr>
<td>25</td>
<td>18-INCH DISCHARGE PIPE BLOW-OFF AND AVARV DETAILS</td>
<td>67</td>
</tr>
<tr>
<td>26</td>
<td>EXIST 14-INCH RES. INLET-OUTLET MODIFICATION DETAILS</td>
<td>68</td>
</tr>
<tr>
<td>27</td>
<td>PIPING MISCELLANEOUS TYP. DETAILS I</td>
<td>69</td>
</tr>
<tr>
<td>28</td>
<td>PIPING MISCELLANEOUS TYP. DETAILS II</td>
<td>70</td>
</tr>
<tr>
<td>29</td>
<td>BUILDING FOUNDATION, WALL AND FLOOR PLANS</td>
<td>71</td>
</tr>
<tr>
<td>30</td>
<td>BUILDING ROOF AND ROOF FRAMING PLANS</td>
<td>72</td>
</tr>
<tr>
<td>31</td>
<td>BUILDING ELEVATIONS</td>
<td>73</td>
</tr>
<tr>
<td>32</td>
<td>BUILDING SECTIONS AND WALL REINFORCEMENT ELEVATION</td>
<td>74</td>
</tr>
<tr>
<td>33</td>
<td>WALL REINFORCEMENT ELEVATIONS</td>
<td>75</td>
</tr>
<tr>
<td>34</td>
<td>BUILDING WALL FOUNDATION AND FLOOR SLAB DETAILS</td>
<td>76</td>
</tr>
<tr>
<td>35</td>
<td>PLASTER AND PLASTER FOUNDATION DETAILS</td>
<td>77</td>
</tr>
<tr>
<td>36</td>
<td>ROOF FRAMING DETAILS</td>
<td>78</td>
</tr>
<tr>
<td>37</td>
<td>INTERMEDIATE WALL AND TROLLEY STEEL BEAM DETAILS</td>
<td>79</td>
</tr>
<tr>
<td>38</td>
<td>RETAINING WALL DETAILS</td>
<td>80</td>
</tr>
<tr>
<td>39</td>
<td>STRUCTURAL MISCELLANEOUS TYP. DETAILS I</td>
<td>81</td>
</tr>
<tr>
<td>40</td>
<td>STRUCTURAL MISCELLANEOUS TYP. DETAILS II</td>
<td>82</td>
</tr>
<tr>
<td>41</td>
<td>ARCHITECTURAL MISCELLANEOUS TYP. DETAILS</td>
<td>83</td>
</tr>
<tr>
<td>42</td>
<td>ELECTRICAL SYMBOLS, LEGEND AND NOTES</td>
<td>84</td>
</tr>
<tr>
<td>84</td>
<td>10-INCH PIPE PLAN AND PROFILE - PIPE STA 12+00 TO STA 24+00</td>
<td>86</td>
</tr>
<tr>
<td>87</td>
<td>10-INCH CONNECTIONS AND BLOW-OFF NO 1 PLANS AND PROFILE</td>
<td>88</td>
</tr>
<tr>
<td>89</td>
<td>CONNECTION NO 4, AVARV NO. 1, BLOW-FF NO 2 PLAN AND PROFILES</td>
<td></td>
</tr>
</tbody>
</table>
GENERAL ABBREVIATIONS

SOW - Mainline Sewer Line
SCW - Mainline Sewer Curb
SM - Mainline Service Mains

SYMBOLS AND LEGEND

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>Property Line</td>
</tr>
<tr>
<td>T</td>
<td>New Water Pipe</td>
</tr>
<tr>
<td>E</td>
<td>New Electrical Conduit</td>
</tr>
<tr>
<td>P</td>
<td>Force Main</td>
</tr>
<tr>
<td>V</td>
<td>Water Main</td>
</tr>
<tr>
<td>F</td>
<td>Storm Drain</td>
</tr>
<tr>
<td>L</td>
<td>Light Pole</td>
</tr>
<tr>
<td>TC</td>
<td>Telephone/Television Cable</td>
</tr>
<tr>
<td>PWC</td>
<td>Power Pole</td>
</tr>
<tr>
<td>CP</td>
<td>Concrete Pipe</td>
</tr>
<tr>
<td>CPVC</td>
<td>Concrete Pipe (Polyvinyl Chloride)</td>
</tr>
<tr>
<td>PVC</td>
<td>Plastic Pipe</td>
</tr>
</tbody>
</table>

ABBREVIATIONS, SYMBOLS AND LEGEND

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA GRANADA PUMP STATION</td>
<td></td>
</tr>
</tbody>
</table>

CITY OF THOUSAND OAKS

CLIFFORD G. FINLEY, CITY ENGINEER

REVIEWED BY:
APPROVED BY:
DATE:

PROJECT ENGINEER

REVISED

SYMBOL
DESCRIPTION OF CHANGE

REV.

NOTE:
1. Some abbreviations, symbols, and legend may not be used in this drawing.
Know what's below. Call before you dig.
CALL 811
AT LEAST TWO DAYS
BEFORE YOU DIG.
UNDERGROUND SERVICES AHEAD IN SOUTHERN CALIFORNIA

CITY OF THOUSAND OAKS
LA GRANADA PUMP STATION
EXISTING UTILITIES PLAN
PREPARED BY:

CITY OF THOUSAND OAKS
CLIFFORD G. FINLEY, CITY ENGINEER
DATE
ENGINEERING DIVISION MANAGER
DATE
REVIEWED BY:
APPROVED BY:
DATE
PROJECT ENGINEER
REVIEWED BY:

EXISTING UTILITIES PLAN

CITY OF THOUSAND OAKS
CLIFFORD G. FINLEY, CITY ENGINEER
DATE
ENGINEERING DIVISION MANAGER
DATE
REVIEWED BY:
APPROVED BY:
DATE
PROJECT ENGINEER
REVIEWED BY:

EXTENDED UTILITIES PLAN

CALL 811
AT LEAST TWO DAYS
BEFORE YOU DIG.
UNDERGROUND SERVICES AHEAD IN SOUTHERN CALIFORNIA

CITY OF THOUSAND OAKS
LA GRANADA PUMP STATION
EXISTING UTILITIES PLAN
PREPARED BY:

CITY OF THOUSAND OAKS
CLIFFORD G. FINLEY, CITY ENGINEER
DATE
ENGINEERING DIVISION MANAGER
DATE
REVIEWED BY:
APPROVED BY:
DATE
PROJECT ENGINEER
REVIEWED BY:

EXISTING UTILITIES PLAN

CALL 811
AT LEAST TWO DAYS
BEFORE YOU DIG.
UNDERGROUND SERVICES AHEAD IN SOUTHERN CALIFORNIA

CITY OF THOUSAND OAKS
LA GRANADA PUMP STATION
EXISTING UTILITIES PLAN
PREPARED BY:

CITY OF THOUSAND OAKS
CLIFFORD G. FINLEY, CITY ENGINEER
DATE
ENGINEERING DIVISION MANAGER
DATE
REVIEWED BY:
APPROVED BY:
DATE
PROJECT ENGINEER
REVIEWED BY:
NOTE:
1. Install new asphalt concrete and aggregate base where shown on the detail.
2. Minimum thickness of asphalt concrete shall be 4-1/2 inches. Minimum thickness of aggregate base shall be 2-1/2 inches.
3. Pour new concrete pavement, including aggregate base where new pavement is to be placed.
4. Install new concrete curbs and gutters where shown on the detail.
5. Pour new concrete curbs and gutters where new curbs and gutters are to be placed.
6. Match existing elevations at connection locations.
7. See Sheet 79 for access road modification details.
8. See sheet 79 for existing pavement around existing tank area.
TYPICAL PUMPS P1 AND P2 PIPING SECTION

COMM: 1. Section for Pump P1 is shown. Section for pump P2 is similar.
     2. The Contractor is solely responsible for proper fit and installation of the pump,
        pump motor assembly, and piping.
     3. See Sheet 14 for additional piping notes.
     4. Strip of concrete encasement/foundation for pump base shall be as required to
        provide specified cover for elevation of the pump discharge pipes.

SCALE 1" = 1'-0"
1. The Contractor is solely responsible for proper  fit and installation of the pump, pump base, and piping.
2. See Sheet 14 for additional piping notes.
3. Top of concrete enclosure/foundation of pump base shall be in line with the specified center line elevation of the pump discharge pipe.

FIRE PUMP P3 PIPING SECTION

CITY OF THOUSAND OAKS

LA GRANADA PUMP STATION

CALL 811
811 CALL BEFORE YOU DIG

UNDERGROUND SERVICE ADO OF SOUTHERN CALIFORNIA

PREPARED BY

CITY OF THOUSAND OAKS

FIRE PUMP P3 PIPING SECTION
1. All piping shall be Type L hard copper.
2. All valves and fittings shall be brass.
3. All components shall be rated for pressures equal to or more than the peak design of the building or surge tank I is connected to.

**PRESS, CAUSE ASSEMBLY**

**CITY OF THOUSAND OAKS**

**LA GRANADA PUMP STATION**

**DISCHARGE SURGE TANK DETAILS I**
1. Floor glass walls shall have aluminum framing and 1/4" thick minimum glass. For additional requirements, see Section 15-22.00.

2. See Notes on Sheet 33.
RETIWING WALL ELEVATION

RETIWING WALL PLAN

NOTES:

1. Unit block shall be split into two edges and each edge shall be sealed with a weatherproof sealant as required by the City of Thousand Oaks. The top and bottom edges shall be sealed with a weatherproof sealant as required by the City of Thousand Oaks.

2. Excavation shall be performed in accordance with the City of Thousand Oaks' recommendations.

3. Cut back of retaining wall to align with the building. Do not cut below grade. All excavations shall be level at least three inches from the bottom of the wall's face to the base of the building.

4. Wall drain pipe shall be shaped to drain. Drainage wall drain pipe shall be located at least three inches above the finished grade.
**TYPICAL CB WALL, HORIZONTAL, AND VERTICAL TIE, AND MISCELLANEOUS DETAILS**

**STANDARD LAP SPLICE, STANDARD HOOK & EMBEDMENT LENGTH IN INCHES FOR CONCRETE MEMBERS**

<table>
<thead>
<tr>
<th>Bar Size</th>
<th>Ø Standard Hook #8</th>
<th>Ø Standard Hook #10</th>
<th>Ø Standard Hook #12</th>
<th>Embedment (Min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#8</td>
<td>11/16&quot;</td>
<td>11/8&quot;</td>
<td>15/32&quot;</td>
<td>3&quot;</td>
</tr>
<tr>
<td>#10</td>
<td>11/16&quot;</td>
<td>11/8&quot;</td>
<td>11/16&quot;</td>
<td>3&quot;</td>
</tr>
<tr>
<td>#12</td>
<td>11/8&quot;</td>
<td>11/8&quot;</td>
<td>11/8&quot;</td>
<td>3&quot;</td>
</tr>
</tbody>
</table>

**NOTES:**
1. Use big splice lengths, standard 90° hook and embedment length as determined from the table above above otherwise.
2. Hook Length = Length of embedment+insertment provided beyond a critical section.
3. Embedment Length = Length of embedment+insertment provided beyond a critical section.
4. Top bar in the bar width minus 0.5" of space, second space in one bar bottom.
5. The values shown are for f = 4000 psi and f = 5000 psi.
6. Class 5 tension bar 1.0x Min. - 1.5x Class-4 Splices.
7. When bar of different sizes are top-spliced, bar length shall be the larger of the two bars.
8. All stud bars shall extend an embedment length into another member or across a connection plane where short to splice with other bars or to extend to the top of the member and end with a standard hook.

**CONC. SLAB JOINT DETAIL**

**CONCRETE CHAMBERS**

**TYPICAL ANCHOR BOLT FRACING AT CB WALL**
Electrical Demolition and Modification Plan

LA GRANADA PUMP STATION

1. Not all required details and modifications are shown in this sheet. See Sheet 39 "Site General" for additional requirements for descriptions and modifications.

2. Unless otherwise noted, removal of components shall be complete, including concrete post foundations, rebar, mechanical, electrical, etc.

3. All above ground conduits indicated to be removed shall be completely removed, including valves, clamps, and supports.

4. Helix in the ground indicated to be removed shall be removed up to the helix head.

5. All underground conduits in the ground shall be removed up to the helix head and all underground main and all underground main shall be removed usinging open main flanges and taps.

6. All underground conduits shall be united to avoid disconnecting main conduit from the underground power supply equipment. Notes to Sheet 49.

7. Steel muddy conduits will not be used in the existing conduit protection conduit up to termination of existing conduit.

8. From existing mud support, raised, and removed conduits.

CLIFFORD G. FINLEY, CITY ENGINEER

DATE

ENGINEERING DIVISION MANAGER

DATE

REVIEWED BY:

APPROVED BY:

DATE

PROJECT ENGINEER

REVIEWED BY:
NOTES

1. Equipment layout and locations shown on the drawing are approximate and may differ from the actual location of the approved equipment.

2. The Contractor shall contact the equipment manufacturer to ensure that all specified and required components are within the available space and as approved by the Owner.

3. The Contractor shall obtain contact information as required to fill the approved equipment.

4. The Contractor shall coordinate with the equipment manufacturer for required conduit sizes and termination locations prior to start of conduit installations.

SWITCHBOARD, MCC, AND CONTROL CABINET ELEVATION

MANUFACTURER SCHEDULE

| Item | Description | Size
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LA GRANADA 400 KVA TRANSFORMER</td>
<td>5 x 2 1/2&quot;</td>
</tr>
<tr>
<td>2</td>
<td>BREAKER PANEL BOX</td>
<td>4 x 2&quot;</td>
</tr>
<tr>
<td>3</td>
<td>VACUUM BREAKER</td>
<td>4 x 2&quot;</td>
</tr>
<tr>
<td>4</td>
<td>ATS</td>
<td>5 x 2&quot;</td>
</tr>
<tr>
<td>5</td>
<td>MAIN DIP FUSE</td>
<td>4 x 2&quot;</td>
</tr>
<tr>
<td>6</td>
<td>TRANSFORMER</td>
<td>4 x 2&quot;</td>
</tr>
<tr>
<td>7</td>
<td>MAIN BUS</td>
<td>3 x 1&quot;</td>
</tr>
<tr>
<td>8</td>
<td>TRANSFORMER CONTROL</td>
<td>4 x 1&quot;</td>
</tr>
<tr>
<td>9</td>
<td>PUMP 175 HP</td>
<td>4 x 1&quot;</td>
</tr>
<tr>
<td>10</td>
<td>PUMP 75 HP</td>
<td>4 x 1&quot;</td>
</tr>
<tr>
<td>11</td>
<td>AIR COMPRESSOR</td>
<td>5 x 1&quot;</td>
</tr>
<tr>
<td>12</td>
<td>SWR</td>
<td>3 x 1&quot;</td>
</tr>
<tr>
<td>13</td>
<td>FIRE PUMP 3PH</td>
<td>4 x 1&quot;</td>
</tr>
<tr>
<td>14</td>
<td>CONTROL PANEL 3&quot; x 120/208 MCC</td>
<td>4 x 1&quot;</td>
</tr>
<tr>
<td>15</td>
<td>25 KVA TRANSFORMER</td>
<td>4 x 1&quot;</td>
</tr>
<tr>
<td>SYMBOL</td>
<td>DESCRIPTION OF CHANGE</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td>AMS/CR</td>
<td>DAA100</td>
<td></td>
</tr>
<tr>
<td>AMS/CJ</td>
<td>DAA100</td>
<td></td>
</tr>
</tbody>
</table>

**CONDUIT SCHEDULE**

<table>
<thead>
<tr>
<th>#</th>
<th>FROM</th>
<th>TO</th>
<th>DIA [&quot;]</th>
<th>CONNECTION</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LV 1</td>
<td>LV 1</td>
<td>3/4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>LV 1</td>
<td>LV 1</td>
<td>3/4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>LV 1</td>
<td>LV 1</td>
<td>3/4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>LV 1</td>
<td>LV 1</td>
<td>3/4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>LV 1</td>
<td>LV 1</td>
<td>3/4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES**

1. Provide required conduit as required to connect to equipment and devices.
2. Size of conduits shown are minimum. The Contractor shall provide larger conduit if required by the project specifications. Where crossing the requirements of NEC.
3. Install pull boxes at all splices and supply conduits. All spur leads of supply conduit shall be spliced.
4. Contractor shall provide all required pull box covers, junction boxes, and necessary conduit boxes as required.
5. See additional notes on Sheets 48 and 49.
1. PORTAL CONDUIT:
   a. The Contractor shall ensure that all work including unobstructed of conduit shop drawings, the Contractor shall provide existing utilities and submit report to the
      Engineer in accordance with Section 02 02 00.
   b. Contractor shall submit elevations of conduits accordingly to avoid conflict with any existing utilities as approved by the Engineer and O2A (where applicable).

2. Work Schedule and Timeline of Construction:
   a. Contractor shall complete installation of conduits as scheduled in Exhibit 2 and at intervals not to exceed 20 calendar days during
      the construction period. The Work Schedule shall be subject to the discretion of the Engineer and O2A.
   b. At such time that the Engineer shall determine that the work is substantially completed, the Contractor shall give written notice
      to the Engineer and City of Thousand Oaks of the completion of the work, and the Engineer shall inspect the work.

3. Drawings and Specifications:
   a. Contractor shall coordinate with O2A for all work proceeding under the City, but not limited to, installation of new SCE conduit lines,
      valves, fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment,
      and inspection of existing conduits and associated items.
   b. All work shall be performed in accordance with the City's specifications, the requirements of Exhibit 2, and the各项
      exhibits and specifications applicable to the work.
   c. The Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit
      lines, valves, fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and
      inspection of existing conduits and associated items. SCE shall be notified in writing by the Contractor of all work proceeding
      under the City, but not limited to, installation of new SCE conduit lines, valves, fittings, and associated items, including boreholes,
      piping, appurtenances, connections to electrical equipment, and inspection of existing conduits and associated items.
   d. The Contractor shall coordinate with the Engineer and O2A for all work proceeding under the City, but not limited to, installation of new SCE
      conduit lines, valves, fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and
      inspection of existing conduits and associated items. The Contractor shall be responsible for all work proceeding under the City, but
      not limited to, installation of new SCE conduit lines, valves, fittings, and associated items, including boreholes, piping, appurtenances,
      connections to electrical equipment, and inspection of existing conduits and associated items.
   e. The Contractor shall coordinate with SCE and the Engineer and O2A for all work proceeding under the City, but not limited to, installation of new SCE
      conduit lines, valves, fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and
      inspection of existing conduits and associated items. The Contractor shall be responsible for all work proceeding under the City, but
      not limited to, installation of new SCE conduit lines, valves, fittings, and associated items, including boreholes, piping, appurtenances,
      connections to electrical equipment, and inspection of existing conduits and associated items.
   f. The Contractor shall coordinate with SCE and the Engineer and O2A for all work proceeding under the City, but not limited to, installation of new SCE
      conduit lines, valves, fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and
      inspection of existing conduits and associated items. The Contractor shall be responsible for all work proceeding under the City, but
      not limited to, installation of new SCE conduit lines, valves, fittings, and associated items, including boreholes, piping, appurtenances,
      connections to electrical equipment, and inspection of existing conduits and associated items.

4. Miscellaneous:
   a. Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit lines, valves,
      fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and inspection of existing conduits
      and associated items.
   b. The Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit lines, valves,
      fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and inspection of existing conduits
      and associated items.
   c. The Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit lines, valves,
      fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and inspection of existing conduits
      and associated items.
   d. The Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit lines, valves,
      fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and inspection of existing conduits
      and associated items.
   e. The Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit lines, valves,
      fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and inspection of existing conduits
      and associated items.
   f. The Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit lines, valves,
      fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and inspection of existing conduits
      and associated items.

5. Drawings and Specifications:
   a. The Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit lines, valves,
      fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and inspection of existing conduits
      and associated items.
   b. The Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit lines, valves,
      fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and inspection of existing conduits
      and associated items.
   c. The Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit lines, valves,
      fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and inspection of existing conduits
      and associated items.
   d. The Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit lines, valves,
      fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and inspection of existing conduits
      and associated items.
   e. The Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit lines, valves,
      fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and inspection of existing conduits
      and associated items.
   f. The Contractor shall coordinate with SCE for all work proceeding under the City, but not limited to, installation of new SCE conduit lines, valves,
      fittings, and associated items, including boreholes, piping, appurtenances, connections to electrical equipment, and inspection of existing conduits
      and associated items.
CONDUIT SMALLER THAN 3 1/2"

CONCRETE FLOOR AREAS

NOTES
1. Vertical trench walls are required to protect parallel utilities and or exterior traffic.
2. Trench walls shall be extended 1' below the top of conduit, except for location where Note 1 exists.
3. Trench surface shall be removed.
4. Clear distance (d) shall be 1/2' minimum between power and communication conduit and 2' minimum between two power and two communication conduits.
5. Reinforcement bars shall have 1.5 inches of concrete per cubic yard of required amount of pea gravel and water and red sticks.
6. On-site duct or preformed conduit shall be specified to be at least 1/2' of minimum Rohr distance for all power and communication conduits specified in the project.
7. Concrete base shall be formed to the required Rohr distance for all power and communication conduits specified in the project.
8. Thickness of invert concrete shall be 1" and 2" more than the opening invert concrete, but in no case shall it be less than 5 inches.
9. Provide Himing as required.
10. For 5" conduits, plumbing and conduits 6" and larger, see Small C or Sheet 27.

TYPE CONDUIT TRENCH DETAILS

NOT TO SCALE

ELECTRICAL SERVICE GROUND WELT DETAIL

NOTES
1. Type B pull box shall be 30" wide x 36" long x 36" deep (inside dimensions) x 10 gauge.
2. Hole size shall be determined to accommodate required lines and conductors or conduits, but shall not be less than specified in Note 1.
3. Pull boxes with raised and paved areas shall be N-20 traffic rated. Pull boxes in other areas shall be N-20 traffic rated.

TYPE B PULL BOX
NOT TO SCALE
NOTES:
1. See Notes on Sheet 47.
2. Generator shall be weatherproofed with an insulated, waterproof cover. Provide 150-gallon concrete basin for the condenser inside the battery panel.
3. Generator shall be installed on a poured concrete slab using rebar, galvanized anchor plates, and earthquake isolation hardware. Slab shall be extended 2'-10" from the side of the building.

CALL 811
AT LEAST TWO DAYS BEFORE YOU DIG.
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

CLIFFORD G. FINLEY, CITY ENGINEER
ENGINEERING DIVISION MANAGER
DATE
REVIEWED BY:
APPROVED BY:
DATE
PROJECT ENGINEER
REVIEWED BY:
**PLC CONTROL PANEL - SYMBOLS AND LEGEND**

**LEGEND**

- TGGLE SWITCH (ON/OFF)
- LIQUID LEVEL SWITCH
- TEMPERATURE SWITCH
- CONTROL POWER TRANSFORMER VOLTAGES & VOLT-AMP INDICATED
- CURRENT TRANSFORMER AMPERAGE RATIO INDICATED
- POTENTIAL, CONTROL OR LIGHTING TRANSFORMER
- PRESSURE SWITCH
- AC SERVICE DISCONNECT
- BLOWER STARTER
- PRESS RELEASE RELAY
- BLOWER PRESS RELEASE RELAY
- LAMP
- STARTER COIL
- BUS DUCT
- REVERSING OR TWO-SPEED MOTOR STARTER
- VIBRATION SWITCH
- RELAY

**POWER DISTRIBUTION DEVICES**

- POWER TRANSFORMER VOLS, VOLTAGES AND PHASE INDICATED
- POWER CIRCUIT BREAKER DRAW OUT TYPE 5 KV OR HIGHER CLASS AMPERAGE INDICATED
- MINI CLASS CIRCUIT BREAKER (P/F-WINDOW SIZE, AMPERAGE)
- DRAW OUT AIR CIRCUIT BREAKER (P/F-WINDOW SIZE, AMPERAGE)
- MEDIUM VOLTAGE CURRENT LIMITING FUSIBLE STARTER AMPERAGE INDICATED
- REVERSING OR TWO-SPEED MOTOR STARTER
- HIGH VOLTAGE PRIMARY FUSE CUTOUT, DRY TYPE OR FUSE DISCONNECTING SWITCH AMPERAGE INDICATED
- ISOLATOR SWITCH, AMPEREAGE INDICATED
- VARIABLE FREQUENCY DRIVE

**POWER DISTRIBUTION DEVICES (CONT.)**

- SHORTING BAR (COLOR AS INDICATED)
- LAMP
- BUS DUCT
- INSTRUMENT ISOLATOR SWITCH
- KEYED INTERLOCK
- INTERLOCK MANUAL

**AUXILIARY DEVICES**

- PLANT TELEPHONE OUTLET
- HORN (1-440KHZ, 1 ELECTRIC)
- INSTRUMENT
- BUZZER
- PHOTO-ELECTRIC CONTROL

**GROUNDING**

- #4 AWG BARE COPPER STRANDED (UNINSULATED)
- #2 AWG BARE COPPER STRANDED (UNINSULATED)
- EXOTHERMIC WELD "TEE" TAP CONNECTION
- UFER GROUND TEE CONNECTION
- #2 AWG BARE CONNECTION

**LIGHTING, SWITCHES & OUTLES**

- INCANDESCENT LIGHTING FIXTURE
- LIGHTING ARRESTER
- RESISTANCE GROUNDING
- BATTERY (POLARITY AS INDICATED)
- RESISTOR
- HEATING ELEMENT
- POTENTIOMETER OR RHODESTAT
- VARISTOR
- CABLE TERMINATOR
- BUS DUCT
- INSTRUMENT ISOLATOR SWITCH
- KEYED INTERLOCK
- INTERLOCK MANUAL

**CONDUIT AND WIRING**

- INSTRUMENT
- EXPOSED CONDUIT (ABOVE GROUND)
- UNDERGROUND CONDUIT, BURIED 18" MIN.
- FLEXIBLE STEEL CONDUIT
- CONDUIT STUB-UP
- CONDUIT DROP
- CONDUIT BELOW
- CONDUIT "TEE"
- SEAL FITTING
- CONDUIT "TEE" SEAL FITTING

**WIRE CABLE COLOR TABLE FOR CONTROL CABLES**

<table>
<thead>
<tr>
<th>WIRE NO.</th>
<th>WIRE COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BLACK</td>
</tr>
<tr>
<td>2</td>
<td>RED</td>
</tr>
<tr>
<td>3</td>
<td>BLUE</td>
</tr>
<tr>
<td>4</td>
<td>WHITE</td>
</tr>
<tr>
<td>5</td>
<td>GREEN</td>
</tr>
<tr>
<td>6</td>
<td>ORANGE</td>
</tr>
<tr>
<td>7</td>
<td>BLACK</td>
</tr>
<tr>
<td>8</td>
<td>RED</td>
</tr>
<tr>
<td>9</td>
<td>BLUE</td>
</tr>
<tr>
<td>10</td>
<td>WHITE</td>
</tr>
<tr>
<td>11</td>
<td>GREEN</td>
</tr>
<tr>
<td>12</td>
<td>ORANGE</td>
</tr>
<tr>
<td>13</td>
<td>BLACK</td>
</tr>
<tr>
<td>14</td>
<td>RED</td>
</tr>
<tr>
<td>15</td>
<td>BLUE</td>
</tr>
<tr>
<td>16</td>
<td>WHITE</td>
</tr>
<tr>
<td>17</td>
<td>GREEN</td>
</tr>
<tr>
<td>18</td>
<td>ORANGE</td>
</tr>
<tr>
<td>19</td>
<td>BLACK</td>
</tr>
<tr>
<td>20</td>
<td>RED</td>
</tr>
<tr>
<td>21</td>
<td>BLUE</td>
</tr>
<tr>
<td>22</td>
<td>WHITE</td>
</tr>
<tr>
<td>23</td>
<td>GREEN</td>
</tr>
<tr>
<td>24</td>
<td>ORANGE</td>
</tr>
<tr>
<td>25</td>
<td>BLACK</td>
</tr>
<tr>
<td>26</td>
<td>RED</td>
</tr>
<tr>
<td>27</td>
<td>BLUE</td>
</tr>
<tr>
<td>28</td>
<td>WHITE</td>
</tr>
<tr>
<td>29</td>
<td>GREEN</td>
</tr>
<tr>
<td>30</td>
<td>ORANGE</td>
</tr>
<tr>
<td>31</td>
<td>BLACK</td>
</tr>
<tr>
<td>32</td>
<td>RED</td>
</tr>
<tr>
<td>33</td>
<td>BLUE</td>
</tr>
<tr>
<td>34</td>
<td>WHITE</td>
</tr>
<tr>
<td>35</td>
<td>GREEN</td>
</tr>
<tr>
<td>36</td>
<td>ORANGE</td>
</tr>
</tbody>
</table>

**SERVICE DESIGNATIONS**

- H = POWER ABOVE 600V
- P = POWER 600V ABOVE 600V
- L = LIGHTING
- C = CONTROL
- A = ALARM AND COMMUNICATION
- J = INSTRUMENTATION (PNEUMATIC OR ELECTRIC)
- T = TEMPERATURE MEASUREMENT
- S = SPARE
ENCLOSURE LAYOUT

<table>
<thead>
<tr>
<th>NO.</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4 1/2&quot; x 1 1/2&quot;</td>
<td>LA GRANADA P.S. CONTROL CABINET &amp; RTU</td>
</tr>
<tr>
<td>2</td>
<td>3&quot; x 3/4&quot;</td>
<td>UNDERWATER DISPLAY PANEL</td>
</tr>
<tr>
<td>3</td>
<td>3&quot; x 3/4&quot;</td>
<td>FLOW TOTALIZER</td>
</tr>
<tr>
<td>4</td>
<td>3&quot; x 3/4&quot;</td>
<td>PUMP STATION/RESET</td>
</tr>
<tr>
<td>5</td>
<td>3&quot; x 3/4&quot;</td>
<td>PUMP PI</td>
</tr>
<tr>
<td>6</td>
<td>3&quot; x 3/4&quot;</td>
<td>PUMP PO</td>
</tr>
<tr>
<td>7</td>
<td>3&quot; x 3/4&quot;</td>
<td>FUEL PUMP PS</td>
</tr>
<tr>
<td>8</td>
<td>3&quot; x 3/4&quot;</td>
<td>MASTER RESET PUSHBUTTON</td>
</tr>
</tbody>
</table>

**LEGEND**

- PUMP STATION/DISPLAY PANEL
- FLOW TOTALIZER
- MULTICOLOR INDICATOR W/ INSCRIPTIONS
  - A - "PUMP CALL", WHITE
  - B - "PUMP RUN", GREEN
  - C - "VALVE CLOSED", RED
  - D - "VALVE OPEN", GREEN
- NAMEPLATE, TYP.
- HAND-OFF-AUTO SELECTOR SWITCH W/ INSCRIPTIONS
  - A - "HAND-OFF-AUTO"
  - B - BLANK
- RESET PUSHBUTTON
- ELAPSED TIME TIMER (HOURMETER)
- EXHAUST FAN
- INTAKE LOUVER WITH FILTER
- LIGHT PACKAGE WITH 120V, 15A RECEPTACLE
- MASTER RESET PUSHBUTTON

**NAMEPLATE SCHEDULE**

<table>
<thead>
<tr>
<th>NO.</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4 1/2&quot; x 1 1/2&quot;</td>
<td>LA GRANADA P.S. CONTROL CABINET &amp; RTU</td>
</tr>
<tr>
<td>2</td>
<td>3&quot; x 3/4&quot;</td>
<td>UNDERWATER DISPLAY PANEL</td>
</tr>
<tr>
<td>3</td>
<td>3&quot; x 3/4&quot;</td>
<td>FLOW TOTALIZER</td>
</tr>
<tr>
<td>4</td>
<td>3&quot; x 3/4&quot;</td>
<td>PUMP STATION/RESET</td>
</tr>
<tr>
<td>5</td>
<td>3&quot; x 3/4&quot;</td>
<td>PUMP PI</td>
</tr>
<tr>
<td>6</td>
<td>3&quot; x 3/4&quot;</td>
<td>PUMP PO</td>
</tr>
<tr>
<td>7</td>
<td>3&quot; x 3/4&quot;</td>
<td>FUEL PUMP PS</td>
</tr>
<tr>
<td>8</td>
<td>3&quot; x 3/4&quot;</td>
<td>MASTER RESET PUSHBUTTON</td>
</tr>
</tbody>
</table>
CONTROL PANEL LAYOUT

CONTROL PANEL TERMINAL BLOCK DESIGNATION

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB1</td>
<td>AC POWER DISTRIBUTION</td>
</tr>
<tr>
<td>TB2</td>
<td>DC POWER DISTRIBUTION</td>
</tr>
<tr>
<td>TB3</td>
<td>DIGITAL INPUT</td>
</tr>
<tr>
<td>TB4</td>
<td>DIGITAL OUTPUT &amp; RELAYS</td>
</tr>
<tr>
<td>TB5</td>
<td>ANALOG INPUT</td>
</tr>
</tbody>
</table>

PANEL WIRE AND TERMINAL COLOR GUIDE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>WIRE TERMINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>120VAC (H)</td>
<td>BLACK, GRAY</td>
</tr>
<tr>
<td>120VAC (N)</td>
<td>WHITE, BLUE</td>
</tr>
<tr>
<td>24VDC (+)</td>
<td>ORANGE, GREEN/YELLOW</td>
</tr>
<tr>
<td>24VDC (-)</td>
<td>YELLOW, GREEN/YELLOW</td>
</tr>
<tr>
<td>120VAC INPUTS</td>
<td>BLUE, GRAY</td>
</tr>
<tr>
<td>ANALOG INPUTS</td>
<td>GRAY</td>
</tr>
<tr>
<td>120VAC OUTPUTS</td>
<td>BROWN, RED</td>
</tr>
<tr>
<td>ANALOG OUTPUTS</td>
<td>BROWN, RED</td>
</tr>
</tbody>
</table>

INPUT AND OUTPUT MODULE WIRING

<table>
<thead>
<tr>
<th>TYPE</th>
<th>WIRE TERMINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SERVOC INPUTS</td>
<td>BLUE, GRAY, RED</td>
</tr>
<tr>
<td>SERVOC OUTPUTS</td>
<td>RED, GRAY, BLACK</td>
</tr>
<tr>
<td>ANALOG INPUTS</td>
<td>GRAY, BLACK, RED</td>
</tr>
<tr>
<td>ANALOG OUTPUTS</td>
<td>GRAY, BLACK, RED</td>
</tr>
</tbody>
</table>

CITY OF THOUSAND OAKS
LA GRANADA PUMP STATION
PLC CONTROL PANEL - CONTROL PANEL LAYOUT
NON-UPS AC POWER DISTRIBUTION

RECEPTACLE FOR LAPTOP

PUMP 1 CONTROL CIRCUIT

PUMP 2 CONTROL CIRCUIT

PUMP 3 CONTROL CIRCUIT

NOTE:
1. USE 15 AMP FUSES FOR ALL 120 VAC POWER
2. RELAY COIL TERMINALS 1 & 10 FOR NEMA

LEGEND

CONT. AT RIGHT

CONT. AT LEFT

CITY OF THOUSAND OAKS
LA GRANADA PUMP STATION
PLC CONTROL PANEL - NON UPS AC POWER DIST.
NOTE:
USE SLO-BLO FUSES FOR ALL 120 VAC POWER

LEGEND:
STARTER OR PANEL WIRING
FIELD WIRING

NOTE:
USE SLO-BLO FUSES FOR ALL 120 VAC POWER

LEGEND:
STARTER OR PANEL WIRING
FIELD WIRING
DC POWER DISTRIBUTION

- POWER SUPPLY 480V - 24VDC, 20A PS48-20A
- DIGITAL INPUT 1789-DI16 SLOT 1
- DIGITAL INPUT 1789-DI16 SLOT 2
- DIGITAL INPUT 1789-DI16 SLOT 3
- DIGITAL OUTPUT 1789-DQ16 SLOT 4

**FIELD POWER**
- DIGITAL INPUT 1789-DI16 SLOT 5
- DIGITAL OUTPUT 1789-DQ16 SLOT 6
- ANALOG INPUT 1789-DI8 SLOT B

**MODULE POWER**
- DIGITAL INPUT 1789-DI16 SLOT C
- DIGITAL OUTPUT 1789-DQ16 SLOT D
- DIGITAL INPUT 1789-DI16 SLOT E

**PUMP**
- PUMP P-1
- PUMP P-1 DISCHARGE VALVE: OPEN STATUS ZS-104A
- PUMP P-1 DISCHARGE VALVE: CLOSE STATUS ZS-104B
- PUMP P-1 DISCHARGE PRESSURE SWITCH
- PUMP P-1 START/STOP COMMAND
- PUMP LOW SUCTION PILOT LIGHT
- PUMP P-1 CALL PILOT LIGHT
- PUMP P-1 RUN STATUS

**RESERVED FOR COMM DEVICE**
- SPARE
- RESERVE FOR COMM DEVICE

**LEGEND**
- STARTER OR PANEL, 1769-IF8
- FIELD VERSION

**NOTE:** Use FAST-BLO fuses for all 24 VDC circuits.

**Hirschmann PLC Fiber Switch**
- FG6M3
- 24VDC

**RESERVED FOR COMM DEVICE**
- SPARE
- SPARE

**FAULT**
- +24VDC

**LIMITS**
- IN-1, Slot 1
- IN-2, Slot 1
- IN-3, Slot 1
- IN-4, Slot 1
- IN-5, Slot 1
- IN-6, Slot 1
- IN-7, Slot 1
- IN-8, Slot 1
- IN-9, Slot 1
- IN-10, Slot 1
- IN-11, Slot 1
- IN-12, Slot 1
- IN-13, Slot 1
- IN-14, Slot 1
- IN-15, Slot 1
- IN-16, Slot 1
- IN-17, Slot 1
- IN-18, Slot 1
- IN-19, Slot 1
- IN-20, Slot 1
- IN-21, Slot 1
- IN-22, Slot 1
- IN-23, Slot 1
- IN-24, Slot 1

**RESERVED FOR PLC**
- CR103
- CR104B
- CR102
- CR101
- CR002

**DI DIGITAL INPUT**
- ZS-104A
- ZS-104B

**ANALOG INPUT**
- ZSL104A

**DI DIGITAL OUTPUT**
- ZSL104B

**RFM CONTROL PANEL - DC POWER DISTRIBUTION**

CITY OF THOUSAND OAKS
LA GRANADA PUMP STATION
PLC CONTROL PANEL - DC POWER DISTRIBUTION

PREPARED BY:
CITY OF THOUSAND OAKS

PROJECT #211259-00

Northern Digital Inc.

CALL 811
AT LEAST 72 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

PREPARED BY:
CITY OF THOUSAND OAKS

PROJECT #211259-00

CITY OF THOUSAND OAKS
DC POWER DISTRIBUTION (CONT.)

NOTE:
- Use FAST-ALLOY WIRING FOR ALL 24VDC CIRCUITS.

LEGEND:
- FIELD WIRING
DC DIGITAL INPUT - SLOT 3

- UPS TROUBLE UX-006B
- PUMP ROOM INTRUSION ZS-007A
- ELECTRICAL ROOM INTRUSION ZS-007B
- GENERATOR RUNNING ER-020
- GENERATOR ALARM XA-032
- GENERATOR WARNING XA-033
- ATS NORMAL STATUS ER-034
- ATS EMERGENCY ER-035
- RESET PUSHBUTTON HS-014
- ETHERNET SWITCH FALSTATUS
- MASTER RESET PUS BUTTON HS-015
- SPARE
- SPARE
- SPARE
- SPARE
- NOTE:
  1. USE FAST-BLO FUSES FOR ALL 24 VDC CIRCUITS

LEGEND:
- STARTER OR PANEL WIRING
- FIELD WIRING

ALLEN BRADLEY
(1769-IQ16)
DC DIGITAL OUTPUT - SLOT 4

ALLEN BRADLEY (1769-OV16)

PLC CONTROL PANEL - DC DIGITAL OUTPUT - SLOT 4

NOTE:
- USE FAST BLO FUSES FOR ALL 24 VDC CIRCUITS
- RACK 0 SLOT 5

LEGEND:
- STARTER OR PANEL WIRING
- FIELD WIRING

SEE DWG. SHT. 71 FOR DETAILS

SEE DWG. SHT. 72 FOR DETAILS

NOTE:
- CALL 811 PRIOR TO DIGGING FOR ANY UG PLANS
- UNDERGROUND SERVICE AUDIT OF SOUTHERN CALIFORNIA

CALL 811 48 HOURS BEFORE YOU DIG

811 OR 1-811-3000

PLC CONTROL PANEL - DC DIGITAL OUTPUT - SLOT 4

Northern Digital, Inc.

PROJECT #21169-00

CALL 811 FOR UG PLANS

811 OR 1-811-3000

PLC CONTROL PANEL - DC DIGITAL OUTPUT - SLOT 4

Northern Digital, Inc.

PROJECT #21169-00

CALL 811 FOR UG PLANS

811 OR 1-811-3000

PLC CONTROL PANEL - DC DIGITAL OUTPUT - SLOT 4

Northern Digital, Inc.

PROJECT #21169-00

CALL 811 FOR UG PLANS

811 OR 1-811-3000

PLC CONTROL PANEL - DC DIGITAL OUTPUT - SLOT 4

Northern Digital, Inc.

PROJECT #21169-00

CALL 811 FOR UG PLANS

811 OR 1-811-3000

PLC CONTROL PANEL - DC DIGITAL OUTPUT - SLOT 4

Northern Digital, Inc.

PROJECT #21169-00

CALL 811 FOR UG PLANS

811 OR 1-811-3000

PLC CONTROL PANEL - DC DIGITAL OUTPUT - SLOT 4

Northern Digital, Inc.

PROJECT #21169-00

CALL 811 FOR UG PLANS

811 OR 1-811-3000

PLC CONTROL PANEL - DC DIGITAL OUTPUT - SLOT 4

Northern Digital, Inc.

PROJECT #21169-00

CALL 811 FOR UG PLANS

811 OR 1-811-3000

PLC CONTROL PANEL - DC DIGITAL OUTPUT - SLOT 4

Northern Digital, Inc.

PROJECT #21169-00

CALL 811 FOR UG PLANS

811 OR 1-811-3000
DC DIGITAL OUTPUT - SLOT 4 (CONT.)

ALLEN BRADLEY
(1769-OV16)

24VDC POWER SUPPLY

OUT 3

SPARE

OUT 4

SPARE

OUT 5

SPARE

OUT 6

SPARE

OUT 7

SPARE

OUT 8

SPARE

OUT 9

SPARE

OUT 10

SPARE

OUT 11

SPARE

OUT 12

SPARE

OUT 13

SPARE

OUT 14

SPARE

OUT 15

SPARE

OUT 16

SPARE

LEGEND:

= STARTER OR PANEL WIRING

= FIELD WIRING

ALLEN BRADLEY
(1769-OV16)

PLC CONTROL PANEL - DC DIGITAL OUTPUT - SLOT 4 (CONT.)

VAC-VDC 2

OUT 9

OUT 8

OUT 11

OUT 10

OUT 13

OUT 12

OUT 15

OUT 14

ALLEN BRADLEY
(1769-OV16)

24VDC POWER SUPPLY

OUT 3

SPARE

OUT 4

SPARE

OUT 5

SPARE

OUT 6

SPARE

OUT 7

SPARE

OUT 8

SPARE

OUT 9

SPARE

OUT 10

SPARE

OUT 11

SPARE

OUT 12

SPARE

OUT 13

SPARE

OUT 14

SPARE

OUT 15

SPARE

OUT 16

SPARE

LEGEND:

= STARTER OR PANEL WIRING

= FIELD WIRING

ALLEN BRADLEY
(1769-OV16)
IRRIGATION PIPE CONNECTION DETAILS

1. Unless otherwise shown, all piping shall be copper, type K.
2. All riser, riser, riser, and valves shall be rated for 100 psi working pressure minimum.
3. Screen or filter irrigation matrix.

CAUTION: Call before you dig.