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| <u>1 Related Work</u> | .1 Refer to other specification sections for related work. |
| | .2 Refer to Section 01 33 00 for Shop Drawings/Submission requirements. |
| <u>2 Codes and Standards</u> | .1 Do complete installation to CSA C22.1-2012 except where specified otherwise. |
| | .2 CSA Electrical Bulletins in force at time of tender submission, while not identified and specified by number in this Division, are to be considered as forming part of related CSA Part II standard and must be complied with. |
| <u>3 Permits, Fees</u> | .1 Submit to Electrical Inspection Department and Supply Authority the necessary number of drawings and specifications for examination and approval prior to commencement of work. |
| | .2 Pay all fees levied by the Supply Authority for upgrade and extension of power to the site and/or connection of the project to their system; for existing redundant overhead power cable removals; for pole adjustments and removals, and all other costs levied by utility for completion project. |
| | .3 Co-ordinate and meet requirements of power supply authority. Ensure availability of power when required. |
| <u>4 As-Built Drawings</u> | .1 During progress of the work keep a record of all variations from the working drawings. At completion of the project submit a set of prints showing variations neatly marked in red to the Departmental Representative. Refer to Section 01 33 00 for more specific requirements. |
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- 5 Work Included .1 Provide all labour and materials and everything that is required for a complete electrical installation, all in accordance with but not necessarily restricted to the following items, specification, and the accompanying drawings.
- .2 The work is to include but not necessarily be limited to the:
- .1 Coordination with Newfoundland power for the delivery of electrical power to the site.
 - .2 Construction of new electrical equipment sheds, the equipment therein, the electrical service to each building and the supply and distribution to the individual campsite power centres.
 - .3 Construction and installation of campsite power centres.
 - .4 Construction and installation of direct buried conduits and cables.
 - .5 Grubbing and clearing of all natural areas that are required for the complete installation.
 - .6 All wiring and cabling.
- 6 Minimum Standards .1 The standard established by the drawings and specifications shall not be reduced by any of the codes referred to in 2, and in no instance, will a standard be accepted lower than that established by the Canadian Electrical Code.
- 7 Supervision .1 The Contractor shall provide supervision and a sufficiently qualified foreman to insure that the job proceeds in a proper and efficient manner. If in the opinion of the Departmental Representative, such personnel are not competent to carry out their work, the Contractor shall replace these men immediately upon written request of the Departmental Representative.
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- 8 Materials and Equipment
- .1 All material shall be new unless designated existing to be reused, of the best available quality and CSA/ULC approved for their respective use.
 - .2 Where there is no alternative to supplying equipment which is not CSA certified, obtain special approval from the local Inspection Department.
- 9 Tests
- .1 Test all wiring, included in the contract, to ensure there are no shorts or grounded conductors and that insulation values are as required by the Canadian Electrical Code.
 - .2 Provide instruments, meters, equipment and personnel required to conduct tests during and at conclusion of project.
 - .3 Submit test results for Departmental Representative's review.
 - .4 Megger line voltage circuits, feeders and equipment up to 350 V with 500 V instrument; feeders and equipment to to 600 V with 1000 V instruments.
 - .5 Replace conductors that fail insulation test.
- 10 Protective Devices
- .1 Ensure circuit protective devices such as over-current trips, relays, and fuses are installed to values and settings as indicated, or required by the Canadian Electrical Code, Part I.
- 11 Nameplates
- .1 Lamacoid nameplates shall be permanently fixed to loadcentre, junction and pull boxes, enclosures and receptacles.
 - .2 Nameplates:
 - .1 Lamacoid 2 mm thick plastic engraving sheet, black face, white core, mechanically attached.
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- 11 Nameplates
(Cont'd) .3 Identification to be English and French.
Provide one nameplate for each language.
- .4 Size 2 nameplates for pull boxes and junction
boxes to indicate circuit numbers contained
within.
- .5 Affix Size 5 nameplates to each site mini
panel according to panel designation and
circuit number as indicated on drawing.

NAMEPLATE SIZES

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|--------|-------------|---------|--------------------|
| Size 1 | 10 x 50 mm | 1 line | 3 mm high letters |
| Size 2 | 12 x 70 mm | 1 line | 5 mm high letters |
| Size 3 | 12 x 70 mm | 2 lines | 3 mm high letters |
| Size 4 | 20 x 90 mm | 1 line | 8 mm high letters |
| Size 5 | 20 x 90 mm | 2 lines | 5 mm high letters |
| Size 6 | 25 x 100 mm | 1 line | 12 mm high letters |
| Size 7 | 25 x 100 mm | 2 lines | 6 mm high letters |

- 12 Wiring
Identification .1 Maintain phase sequence and colour coding
throughout.
- .2 Colour code to CSA C22.1 1998.

- 13 Wiring
Terminations .1 Lugs, terminals, screws used for termination
of wiring to be suitable for either copper
conductors.

- 14 Manufacturers
and CSA Labels .1 Manufacturers nameplates and CSA labels to be
visible and legible after equipment is
installed.

- 15 Completion of
Work .1 On completion of the project, the Contractor
shall remove all debris, and equipment made
redundant by new work, and leave the site neat
and tidy. Equipment shall be checked for
proper fitting and alignment, adjusted as
required, cleaned and repainted where
necessary.
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PWGSC
Newman Sound
Campground,
Electrical Upgrade
Parks Canada, NL
Proj No R.066138.001

Common Work Results -
Electrical

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15 Completion of Work
(Cont'd) .2 Furnish a Certificate of Acceptance from the local inspection authority on completion of work to the Departmental Representative.